POWER RESOURCES

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March 15, 2006

**ATTN: Document Control Desk**
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U.S. Nuclear Regulatory Commission
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Rockville, MD 20852-2738

RE: Smith Ranch-Highland Uranium Project
NRC License SUA-1548, Docket No. 40-8964
License Amendment Request- Reynolds Ranch Amendment Area, Responses to NRC Requests for Additional Information

Dear Mr. Janosko:

In correspondence dated September 8, 2005 from Mr. Paul Michalak of your staff, the NRC requested additional information to complete the review for the License SUA-1548 Reynolds Ranch Amendment Area. In response to that request, Power Resources, Inc. (PRI) is providing herein the additional information and responses to the requests described in that correspondence. This submittal includes written responses to NRC request for additional information and subsequently revised portions of the Reynolds Ranch Amendment Application. Only the portions of the application that were revised are included with this submittal for replacement in the original Reynolds Ranch Amendment Application.

Further revisions were also made to the Reynolds Ranch Amendment Application in addition to the information requested by the NRC. These additional changes consisted of the following:

1) Volume I was updated to reflect the new Wyoming Department of Environmental Quality-Land Quality Division (WDEQ-LQD) Non-Coal Rules and Regulations, Chapter 11, In Situ Mining, which were issued in May of 2005. The revisions to Volume I as a result of these new rules were mainly focused on sections covering the following areas: well construction Requirements; mechanical integrity testing, requirements for plugging of drill holes and repair, and plugging of wells; and noncompliance and excursion reporting.

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2) Specifications and designs were included in Chapter 3 for the Southwest Area Satellite (SR-2) for review and approval by the NRC in accordance with License Condition 10.1.5. This included a description of flow capacity and pressure limits, and also a diagram showing the Satellite layout (Figure 3-14). The design of the Southwest Area Satellite is similar in nature to existing Satellites within the License Area. Plate 1 was also revised to show the planned location of this Satellite. Also, the layout for the Reynolds Ranch Satellite was revised to replicate the Southwest Area Satellite since it is anticipated that the designs for these two Satellites will be largely the same. In Addition, a correction was made to the flow capacity of Satellite No. 3. The flow capacity for Satellite No. 3 was previously described in Chapter 3 as 4,000 gpm, when in fact, the flow capacity for Satellite No. 3 is approximately 5,000 gpm.

3) Figure 3-13, "Estimated Time Table of Mining Related Activities" was updated to reflect the startup of operations in the southwest portion of the License Area (Mine Unit-9).

4) Table 9-1 was revised to reflect License Condition 11.3, which requires reporting to the NRC for urinalysis results greater than 35 µg/L for two consecutive samples.

5) Chapter 5 was updated to reflect current monitor well spacing distances used at Smith Ranch-Highland of 500 feet between monitor wells and 500 feet between monitor wells and the production pattern.

PRI appreciates your attention in this matter. Please call me at 307-358-6541 ext. 46 if you or your staff has any questions on the responses or revisions provided.

Sincerely,

Ken Milmine

Ken Milmine
Manager-Health, Safety
& Environmental Affairs

KLM

Enclosure

cc: File SR-4.6.4
S. P. Collings w/o atta
C. Foldenauer w/o atta

# POWER RESOURCES, INC.
# REYNOLDS RANCH AMENDMENT
# LICENSE SUA-1548
# SMITH RANCH-HIGHLAND URANIUM PROJECT
# RESPONSES TO NRC REQUEST FOR ADDITIONAL INFORMATION

## SITE CHARACTERIZATION

**NRC Comment No. 1**. On Plate 1, please define/label the following items:

- The orange dots labeled "GW" (they appear to coincide with some of the existing stock and domestic wells shown on Figure D6.1).
- Exclusion area boundaries and fences.
- Indicate and label the location of the Mason House

Basis: NUREG-1569 (page 2-2) acceptance criteria states that the application should contain maps that provide the location of exclusion area boundaries, and fences. Acceptance criteria also states (page 2-5) that for maps showing groundwater supply wells, a 2-mile distance from the site boundary is an acceptable area for which land and water use should be collected.

**PRI Response:**

- The orange dots labeled "GW" are existing stock and domestic groundwater monitoring well locations that are located within ½-mile of an existing or proposed wellfield. The wells currently being monitored were already numbered on the map and the other locations simply labeled "GW" are locations that will be monitored once operations begin in those areas, which are typically labeled in the order that monitoring begins. In response to the first bullet above, all "GW" wells were numbered and Plate 1 was revised.

- The large black rectangle shown on Plate 1 for the proposed Satellite IX Plant Location represents the approximate area for controlled access and the area that will be fenced. Plate 1 was also revised to show the location of the unoccupied Mason House.

A revised Plate 1 has been included with this submittal.

**NRC Comment No. 2**. On Figure A-2 (Mineral Ownership Map), please correct the following omissions:

- Township and Range designations were omitted.
- Surface owner on T37N, R74W, Section 25 was omitted.

**PRI Response:**

Figure A-2 was revised to show Township and Range designations and is included with this submittal. *The surface owners for Section 25, NW¼ and N ½ of the NE ¼ is* Hornbuckle Ranch Inc. (as labeled in Section 30 on Figure A-1) and the south half of Section 25 surface owner is Duck Creek Ranches (as labeled in Section 31 on Figure A-1).

**NRC Comment No. 3**. For Figure D-1.1 (Appendix D1), it is not clear which land use categories are defined for the Reynolds Ranch Project (or the Smith Ranch - Highland Projects). Please clearly indicate land use on the figure.

Basis: NUREG-1569 (page 2-4) acceptance criteria states that information is presented in detail sufficient to understand the surrounding land uses.

**PRI Response:**

The land use for the Reynolds Ranch and Smith Ranch-Highland Projects is "Dryland Grazing". The symbol for Dryland Grazing and the defined project areas were revised on Figure D-1.1 to make this designation more visible. A new Figure D-1.1 is included with this submittal.

**NRC Comment No. 4**. Please address the following issues:

- Expand Figure D6-1 and Table D6-2 to include water use within a 2-mile distance from the proposed license amendment boundary.
- Please provide footnotes indicating the definition of abbreviations used in Tables D6-2, and D6-3.
- Please provide a tabular summary for each 221/2-degree sector centered on the 16 cardinal compass points for the following items: human residences and nearest site boundary(ies) to residences within a 2-mile distance.
- Provide projected ground and surface water use (including descriptions of methodology and sources used to make projections) within a 2-mile distance from the proposed license amendment boundary. In addition, page 2-4 indicates that water wells (only water for plant operations and sanitary) are present at other PRI

Satellite facilities. Please provide well construction specifications (well diameter, depth, and screened interval) and projected water use.

Basis: NUREG-1569 (page 2-5) acceptance criteria states that for maps showing ground water supply wells, a 2-mile distance from the site boundary is an acceptable area for which land and water use should be collected. In addition, projected water use, with descriptions of methodology and sources used to make projections, should be provided for the same 2-mile distance from boundary area.

**PRI Response:**

- Tables D-2 and D-3 and Figure D-2 were expanded to include water use within a 3-mile distance.

- An additional table was added providing descriptions of the abbreviations used in Table D-2 and D-3.

- The only residence within 2 miles of the Reynolds Ranch Project Permit Boundary is the Vollman residence. This residence is located within the current Smith Ranch-Highland Permit boundary and discussed in previous License material. Therefore a tabular summary of residences within 2 miles of the Reynolds Ranch Permit Boundary was not developed.

- The projected groundwater and surface water use within a 2-mile radius of the Reynolds Ranch Permit Area (aside from the domestic usage at the Vollman residence) is stock watering wells and surface impoundments and in situ uranium mining. This information was added to Section 2.2. Water wells for Satellite plant operations and sanitary uses are typically constructed of 4.5-inch PVC casing and are screened in aquifers overlying or underlying the mining zone. These wells are typically capable of supplying 15 to 25 gpm to the Satellite facilities. This information was also added to Section 2.2.

**NRC Comment No. 5**. With respect to abandoned drill holes:

- The data base in Appendix D5 does not contain any entries past 1999. Please verify that no additional borings in the proposed amendment area have been advanced and/or abandoned in the years subsequent to 1999.

- Page D5-3 indicates that to the best of PRI's knowledge, all holes drilled prior to 1997 have been properly sealed and surface plugged. Please consider the presence of pre-1997 boreholes when designing and collecting pre-operational hydraulic test data in the proposed amendment area.

Basis: NUREG-1569 (page 2-5) acceptance criteria states that the location of abandoned wells and drill holes including the depth, type of use, condition of closing, plugging procedure used, and date of completion for each well or drill hole with the site area should be provided.

**PRI Response:**

- At the time of the submittal of the Reynolds Ranch Amendment Application, there were no drilling activities subsequent to 1999. However, PRI conducted drilling activities in 2005 and the drill hole table and map contained in Appendix D5 were updated, and are provided with this submittal.

- A statement was added to Section 3.0 in Appendix D5 that PRI will consider the presence of pre-1997 drill holes when designing and running wellfield pump tests.

**NRC Comment No. 6.** Please provide the following population related information:

- Population/demographic information on minority and low-income populations.

- A map of suitable scale, centered on the proposed ISL facility, marked with concentric circles at 1, 2, 3, 4, 5, 10, 20, 30, 40, 50, 60, 70, and 80 km divided into 221/2-degree sectors centered on one of the 16 compass points. A table keyed to this map showing separate and cumulative population totals for each sector and annular ring is provided.

- Projections of population, visitor, and food production over the life of the Reynolds Ranch Satellite facility.

Basis: NUREG-1569 (page 2-8) acceptance criteria states that the license application should contain demographic information on minority and low-income populations; a suitably scaled concentric circle map as described above; and projections of population, visitor, and food production for the life of the in situ leach facility.

**PRI Response:**

- Section 2.3 of Volume I was updated to reflect current population estimates for Converse and Natrona Counties. Also, other demographic information such as minority and low income populations was updated. Tables 2-2A, 2-2B, and 2-2C were added to provide statistical summaries of this data.
- A Population Density Map for Wyoming was obtained from the Wyoming Department of Administration and Information. The ISL facility location was placed on the map and a concentric circle was placed at a radius of 80 km centered on the approximate proposed facility location. This map provides adequate representation of the

population density in all directions around the proposed facility.

- Due to the remote location of the proposed facility, there are no significant changes in population anticipated within 10 km of the SR-HUP and Reynolds Ranch permit areas in the near future. Population estimates in the surrounding communities of Glenrock, Douglas, and Casper are expected to increase in the near future due to the increased energy production in the area. Visitors to SR-HUP and Reynolds Ranch areas are expected to be limited mainly to vendors, contractors, agency personnel, and associated tours to members of the public. There is no known source of mass food production for human consumption within 10 km of the SR-HUP and Reynolds Ranch and this is not anticipated to change in the near future. Section 2.3 in Volume I was revised to reflect this information.

**NRC Comment No. 7**. Please provide or revise the text concerning the following missing items:

- Section 2.4.1 (page 2-7) references Appendix D-3, which is not present in Appendix D.
- Addenda D3-1, D3-2, D3-3A, and D3-3B (Section 2.4.2, page 2-7) and Addendum D3-3C (Section 2.4.2, page 2-8) are referenced, but are not present in Appendix D.

**PRI Response:**

Documents contained in Appendix D-3 were submitted to the NRC under cover dated July 19, 2005 along with an affidavit to withhold cultural resource information from Public Disclosure.

**NRC Comment No. 8**. Wind Rose data presented in Figure 2-3 is over 34 years old. Please substantiate that these data are consistent\` with recent wind direction and speed trends.

Basis: NUREG-1569 (page 2-11) acceptance criteria states that "data periods should cover a sufficient time period to constrain long-term trends and support atmospheric dispersion modeling."

**PRI Response:**

A new Figure 2-3, wind rose for Casper/Natrona County International Airport, has been included in Chapter 2 of Volume I that covers the period of 1961 through 1990. The wind rose was obtained from the Wyoming Climate Atlas and the data is consistent with the previous wind rose.

**NRC Comment No. 9**. On Figures D-2 and D-3, please define/label the following items:

- The type of wireline geophysical methods represented by pink and blue logs.
- The definition of the green designations (they appear to coincide with uranium ore bodies).
- Low permeable units located above and below ore bodies.
- Deep well injection zone.

Basis: NUREG-1569 (page 2-18) acceptance criteria states that in local stratigraphic sections, all mineralized horizons, confining units, and other important units such as drinking water aquifers and deep well injection zones are clearly shown.

**PRI Response:**

Figures D5-1 and D5-2 were revised to reflect the items described in the first three bullets shown above and the revised figures are included with this submittal. The deep well injection zone is several thousand feet lower (Tecla, Teapot, and Parkman Formations) than what is reflected in Figures D5-1 and D5-2 and therefore cannot be included on those figures. Information and Geological cross sections can be found in the WDEQ-WQD UIC Facility WYS 009-044, Permit UIC 04-611 Application Materials.

**NRC Comment No. 10.** Attachment D6-1 U/S-sand pump test discussion is confusing. The discussion on page D6-A1-2 notes that "the interlying shale aquitard is, in fact, discontinuous shale parting," while on page D6-A1-10, it indicated that well 1062 is "completed in the sandstone aquifer above the H-sand aquifer (i.e., U/S sand) aquifer." Please clarify the stratigraphic location of well 1062 with respect to mineralized and confining stratigraphic units.

Basis: NUREG-1569 (page 2-18) acceptance criteria states that in local stratigraphic sections, all mineralized horizons, confining units, and other important units such as drinking water aquifers and deep well injection zones are clearly shown.

**PRI Response:**

As noted on page D6-A1-11, the H-sand consists of an upper and lower zone separated by a discontinuous shale layer. These two zones of the H-sand are referred to as the U and S-sand respectively under current PRI terminology (U is the upper zone and S is the lower zone). Monitor well 1062 is completed in the U-sand, which is overlying the S-sand. As noted, the aquitard separating these sands (T-shale) is in fact discontinuous in areas as shown Figures D5-1 and D5-2 leading to communication between these zones. This explains the slight drawdown in well 1062 from pumping well 1054. The pumping well (1054) is located in the S-sand. Figures D5-1 and D5-2 in Appendix D-5 were revised to show the approximate referenced pump locations and Section 1.5.1 of Appendix D-6 was revised to include the above information.

**NRC Comment No. 11**. Please address the following seismological issues:

- The quality of Figure 2-5 is poor, please provide a clearer version of the figure. Also please provide a definition for the hatched area in Figure 2-5.
- Please note that more recent reference material concerning seismology in Converse County is available (e.g. Case et. al. 2002. *Basic Seismological Characterization for Converse County, Wyoming).*

Basis: NUREG-1569 (page 2-2) acceptance criteria states that all maps previously submitted should be legible. In addition, NUREG-1569 (page 2-18) acceptance criteria states that a description of the regional geologic structure, including folds and faults, and a discussion of the seismicity and the seismic history of the region should be provided.

**PRI Response:**

- A clearer version of Figure 2-5 has been included in Chapter 2 of this submittal. The hatched area in the figure represents an approximate 200-mile radius from the License area as labeled.
- Attachment 2-1 was also added to Chapter 2 containing the Basic Seismological Characterization for Converse and Natrona Counties developed by the Wyoming State Geological Survey.

**PRI Comment No. 12**. Appendix D-6, Section 1.2, page D6-1 and Section 2.2, page D6-6 indicates that Figure D6-1 contains the locations of baseline water quality sampling (Attachment D6-2); however, the correlation between wells and surface water sampling locations depicted on Figure D6-1 and baseline sample designation is unclear. Please clarify the correlation between map locations and baseline sampling locations.

Basis: NUREG-1569 (page 2-24) acceptance criteria states that baseline water quality should be determined for mineralized and surrounding aquifers. Consequently, identifying the location of the sample is imperative in meeting this criteria.

**PRI Response:**

Figure D6-1 has been revised to clearly show the locations of the baseline sampling locations and is included in this submittal with the revisions to Appendix D6.

<u>**DESCRIPTION OF PROPOSED FACILITY**</u>

**NRC Comment No. 13**. Please provide a more detailed discussion concerning the ventilation system discussed in Section 4.1.1 and the system shown in Figure 3.11. This discussion should include the size and function of venting from the IX tanks, sump, waste disposal well tanks, and resin transfer tanks.

Basis: NUREG-1569 (page 3-9) acceptance criteria states that all ventilation, filtration, confinement, dust collection, and radiation monitoring equipment are described as to size, type, and location. In addition, NUREG-1569 (page 4-1) acceptance criteria states that the application provides a demonstration that adequate ventilation systems are planned for process buildings to avoid radon gas buildup.

**PRI Response:**

The venting system from all tanks and sumps consists of 4 to 6-inch PVC piping and function to vent radon gas to the outside atmosphere (see Figures 3-6 through 3-12 for schematic of ventilation systems for CPP and Satellites). Where needed, exhaust fans can pull the air from the top of the tanks or from a sump and discharge the air with any gases and fumes to a vent placed on the outside of the building near the roof level Section 4.1.1 was revised to show this information and included in the revised Chapter 4 of this submittal.

**NRC Comment No. 14**. Please specify the range of flow rates and pressures that will be monitored by ion exchange circuit instrumentation.

Basis: NUREG-1569 (page 3-9) acceptance criteria states that operating conditions (i.e., flow rates, pressures, etc.) of radioactive materials and those materials with the potential to impact radiological safety, are clearly identified together with the hazards associated with these materials.

**PRI Response:**

Flow rates and pressure ranges monitored by IX circuit instrumentation is contained in sections 3.2.1 and 3.2.3 of Chapter 3. These sections were updated to include the maximum pressure range of 150 psi for IX circuit vessels.

**EFFLUENT CONTROL SYSTEMS**

**NRC Comment No. 15**. Please identify the disposition of development/pumping test water generated during anticipated Hydraulic Testing of individual mine units.

Basis: NUREG-1569 (page 4-4) states that common liquid effluents, including well development water and pumping test water, are required to be properly controlled (i.e., diversion to surface impoundments, deep well injection, or land application/irrigation).

**PRI Response:**

The water generated during preoperational pump testing typically meets WDEQ-WQD Class IV (Livestock) standards at a minimum and has minimal potential radiological impact on soils or surface water. Therefore, water generated during preoperational pump testing is pumped onto the ground and no alternate handling or disposal method is required. Volume I, Chapter 4, Section 4.2 was updated to reflect this information.

**NRC Comment No. 16.** Section 7.5 - Effects of Accidents (pages 7-10 to 7-18) contains a listing of the likely consequences of any failures in process or well field equipment and measures for quickly containing and mitigating the impacts of released materials. Please expand the section to address the following issues concerning plans and procedures for reasonably expected system failures:

- *Identification of appropriate plant and corporate personnel to be notified.*
- Provisions for issuing radiation work permits for workers to mitigate impacts.

Basis: NUREG-1569 (page 4-8) states that plans and procedures should be provided for addressing contingencies for all reasonably expected system failures including identification of appropriate plant and corporate personnel to be notified and provisions for issuing radiation work permits for workers to mitigate impacts.

**PRI Response:**

Appropriate site personnel, including mine supervisors and managers, and corporate personnel, including the Senior Vice President and President will be notified immediately if an event described in section 7.5 occurs and corrective actions will be determined and implemented in accordance with established corporate and site emergency response procedures. Procedures for issuing Radiation Work Permits for workers to mitigate the effects of radiological incidents have been established and are described in Chapter 9. Section 7.5.9 was developed to include this information in Chapter 7 of Volume I.

**OPERATIONS**

**NRC Comment No. 17.** Section 5.1 (pages 5-1 through 5-6) discusses the pre-operational assessment of wellfields. Please revise text to include the following information in your preoperational assessment of wellfields:

The relationship between well field operating pressures (projected down-hole injection pressures), the hydrostatic pressure of the fluid column, sustainable well casing pressures, and formation rupture pressures.

An impact analysis that includes:

- The ability to control the migration of lixiviant from the production zones to surrounding environs.
- Ground- and surface-water pathways that might transport extraction solutions offsite in the event of an uncontrolled excursion, surface piping leak, or incomplete restoration.
- The impact of in situ leach operations on ground-water flow patterns and aquifer levels.
- The expected post-extraction impact on geochemical properties and water quality.

Basis: NUREG-1569 (pages 3-5 and 3-6) acceptance criteria states that injection pressures with hydrostatic pressure of the fluid column should be demonstrated to be maintained below casing failure pressures and formation fracture pressures, to avoid hydrofracturing the aquifer and promoting leakage into the overlying units. In addition, an analysis of the effects that in situ leach operations are likely to have on surrounding water users should be provided.

**PRI Response:**

The information shown above was added to Chapter 5, Section 5.14, in Volume I.

**NRC Comment No. 18**. Sections 9.5.4 (page 9-13) and 9.16 (page 9-25) contain the proposed record keeping and retention procedures for SR-HUP and Reynolds Ranch Satellite. Please provide record keeping and retention procedures and the current locations of these records for the following items important to decommissioning and reclamation:

- As built drawings or photographs of structures, equipment, restricted areas, well fields, and modifications showing the locations of these structures and system through time.

  Drawings of areas of possible inaccessible contamination, including features such as pipes or pipelines.

Basis: NUREG-1569 (page 5-6) acceptance criteria states that records containing information important to decommissioning and reclamation should be permanently maintained and retained until license termination.

**PRI Response:**

Section 9.16 was revised to include the record items listed above as types of records that are stored in record storage areas on site.

**NRC Comment No. 19**. Sections 9.1 through 9.3 (pages 9-1 to 9-5) provides an adequate description of corporate organization from the Board of Directors through Safety Supervisor. However, since Reynolds Ranch will be a new facility, please discuss the integration between satellite construction and plant management in terms of operation and management of the facility.

Basis: NUREG-1569 (page 5-1) acceptance criteria states that for new facilities, for groups that support the operation and maintenance of the facility, the integration between plant construction and plant management should be detailed.

**PRI Response:**

Since the Reynolds Ranch Satellite area is an associated operation to SR-HUP, management of the construction and operation of the Satellite Facility and associated wellfields will be also be performed with the organizational components currently in place for SR-HUP as described in Chapter 9 of Volume I. Section 9.2 was revised to reflect this information.

**NRC Comment No. 20**. Section 9.6 identifies employee training with respect to the basic principles of radiation safety, health hazards of exposure to uranium, personal hygiene practices for uranium facilities, radiation safety procedures, and responses to emergencies or accidents involving radioactive materials. Please provide more detail concerning how the present radiation safety training program is consistent (or applicable) with Regulatory Guide 8.31, Section 2.5 (Radiation Safety Training), Regulatory Guide 8.13 (Instructions Concerning Prenatal Radiation Exposure, Revision 3), and Regulatory Guide 8.29 (Instructions Concerning Risks for Occupational Radiation Exposure, Revision 1).

Basis: NUREG-1569 (page 5-13) criteria states that a radiation training program is acceptable if it is consistent with Regulatory Guides 8.31 (Section 2.5, 8.13, and 8.29).

**PRI Response:**

The radiation safety training program at SR-HUP and Reynolds Ranch for newly hired permanent employees is conducted in accordance with Regulatory Guide 8.31 Section 2.5 and Regulatory Guide 8.29 including: (1) Fundamentals of Health Protection; (2) Personal Hygiene at UR Facilities; (3) Facility-Provided Protection; (4) Health Protection Measures; (5) Radiation Protection Regulations. All declared pregnant females are also given training on prenatal radiation exposure in accordance with Regulatory Guide 8.13. Section 9.6 was revised to reflect this.

**NRC Comment No. 21**. Section 9.17 (page 9-25) provides a discussion of security measures at SRHUP; however, planned measures at Reynolds Ranch are not discussed. Please provide a discussion of planned security measures at the Reynolds Ranch satellite facility.

Basis: NUREG-1569 (page 5-14) criteria states that a security program is acceptable if the applicant has acceptable passive controls, such as fencing for well fields, and active controls, such as daily inspections and locks for plant buildings.

**PRI Response:**

Operating facilities at the Reynolds Ranch Satellite area will be manned 24 hours per day, 7 days per week, and surveillance will be maintained through the presence of operators on site. All visitors will be required to check and sign in at the main office before being allowed to enter the controlled access areas at Reynolds Ranch. Section 9.17 was updated to reflect these security measures at the Reynolds Ranch area.

**NRC Comment No. 22**. Section 9.8 (page 9-15) discusses quarterly gamma surveys at specified locations throughout the Satellite buildings and Central Processing Facilities to assure that areas requiring posting as "Radiation Areas" are identified, posted, and monitored to assess external radiation conditions. Please provide more detail (i.e., a summary table and/or map(s)) specifying the locations of these surveys.

Basis: NUREG-1569 (page 5-20) acceptance criteria states that the application should contain one or more drawings that depict the facility layout and the location of monitors for external radiation.

**PRI Response:**

Gamma survey locations for the Satellites and CPP were added to the facility layout figures in Chapter 3. Section 9.8 was revised to reference these figures.

**NRC Comment No. 23**. Section 9.11 (page 9-19) discusses airborne uranium, radon daughter, and total effective dose equivalent exposure calculations. Please provide calculations and guidance for prenatal and fetal radiation exposure or explain why they have not been included in the application.

Basis: NUREG-1569 (page 5-25) acceptance criteria states that calculations and guidance for prenatal and fetal radiation exposure should be consistent with Regulatory Guide 8.36 "Radiation Dose to the Embryo/Fetus" and Regulatory Guide 8.13 "Instruction Concerning Prenatal Radiation Exposure."

**PRI Response:**

Section 9.11 was revised to include verification that the total effective dose for prenatal and fetus exposure will be determined on a monthly basis for the period of declared pregnancy in accordance with Regulatory Guide 8.36. Guidance and dose limits set forth in Regulatory Guide 8.13 will also be followed for prenatal radiation exposure. The exposure limit to the fetus is 0.5 rem for the period of declared pregnancy. PRI shall also make efforts to avoid substantial variation above a uniform monthly exposure rate to a declared pregnant woman so as to satisfy the 0.5 rem limit.

**NRC Comment No. 24**. Please provide a summary table containing the following information: radiation survey and monitoring equipment by type, specification of the range, sensitivity, calibration methods and frequency, availability, and planned use.

Basis: NUREG-1569 (page 5-31) acceptance criteria states monitoring equipment by type, specification of the range, sensitivity, calibration methods and frequency, availability, and planned use should be adequately described.

**PRI Response:**

A summary table of radiation survey and monitoring equipment was completed and included in Chapter 9 as Table 9-3.

**NRC Comment No. 25**. Section 9.13.4 (page 9-24) discusses surveys for release of potentially contaminated materials and equipment. Please verify that these surveys include the interior surfaces of pipes, drain lines, or duct work.

Basis: NUREG-1569 (page 5-31) acceptance criteria states that the radioactivity of the interior surfaces of pipes, drain lines, or duct work will be determined by making measurements at all traps and other appropriate access points, provided that the contamination at these locations is likely to be representative of contamination.

**PRI Response:**

Potentially contaminated materials that cannot be completely surveyed, such as the interior of pipes, will not be released from the site and will be stored and/or disposed of as bi-product waste. Section 9.13.4 was revised to clarify this.

**NRC Comment No. 26**. Section 9.10.1.4 discusses Radon Daughter Monitoring. Please provide more detail (i.e., type of monitoring device, location within Satellite facility, etc.) concerning the monthly radon daughter monitoring at the Reynolds Ranch Satellite facility.

Basis: NUREG-1569 (page 4-1) states that monitors used to assess worker exposures should be placed in locations where maximum concentrations are anticipated and that monitoring systems should be appropriate to the types of effluents generated.

**PRI Response:**

Radon daughter samples are collected on a fiberglass or membrane filters using a lapel sampler or equivalent pump pulling a minimum of 2 liters per minute for 5 minutes. The sample filter is allowed to decay between 40 and 90 minutes prior to counting with a scaler rate meter and an alpha scintillation detector. Radon sampling locations are shown on Figure 3-4 and Figures 3-6 through 3-11 shown in Chapter 3. Section 9.10.1.4 was revised to reflect the types of monitoring devices used and sampling locations for radon monitoring.

**Comment No. 27.** Section 5.3.12 discusses Spill Reporting Requirements. Please provide detail concerning appropriate plant and corporate personnel to be notified in the event of a liquid release.

Basis: NUREG-1569 (page 4-8) states that identification of appropriate plant and corporate personnel to be notified in the event of a liquid release due to system failure should be provided.

**PRI Response:**

Appropriate site personnel, including applicable supervisors, Environmental and Radiation Safety personnel, and site Managers are immediately notified of any wellfield spill and containment or fluid recovery measures are implemented if practicable. Appropriate corporate personnel, including the President and Sr. Vice President of operations, are notified of reportable spills in accordance with corporate internal notification procedures. Section 5.3.12 was revised to include this information.

**GROUND-WATER QUALITY RESTORATION, SURFACE RECLAMATION, AND PLANT DECOMMISSIONING**

Comment No. 28. With respect to conducting post-reclamation and decommissioning radiological surveys, please provide confirmation that the survey method for verification of soil cleanup will be designed to provide 95-percent (i.e., statistical) confidence that the survey units meet the cleanup guidelines.

Basis: NUREG-1569 (page 6-22) acceptance criteria states that survey method for verification of soil cleanup should be designed to provide 95-percent confidence that the survey units meet the cleanup guidelines.

**PRI Response:**

Section 6.2.5 was revised to confirm that the survey method for verification of soil cleanup will be designed to provide 95-percent (i.e., statistical) confidence that the survey units meet the cleanup guidelines.

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# CHAPTER 2
# SITE CHARACTERIZATION

## 2.1 SITE LOCATION AND LAYOUT

The SR-HUP permit area for the uranium mining project is located in the North Platte River drainage of the southern Powder River Basin, Converse County, Wyoming. The Main Office and the Central Processing Plant (CPP) complex located at Smith Ranch is approximately 17 air miles (22 road miles) northeast of the town of Glenrock, Wyoming and 23 air miles (25 road miles) northwest of Douglas, Wyoming. Access to the site from the intersection of State Highway 93 and Highway 95 is by Ross Road, a paved county road. The Reynolds Ranch amendment area is located in the Little Cheyenne River drainage of the southern Powder River Basin and is located directly north of, and adjacent to, the current SR-HUP permit area. Figure 2-1 shows the general location and access to the project area.

Plate 1 shows the lands controlled by the SR-HUP and the locations of facilities, including; Satellite buildings, wellfields, major roads, the Main Office, Central Processing Plant area, and the proposed Reynolds Ranch amendment area. Currently, four Satellite facilities and one Central Plant are located at the SR-HUP. One Satellite facility will be located at the Reynolds Ranch amendment area, which will accommodate eight planned wellfields. The SR-HUP mine permit area encompasses approximately 30,760 acres (approximately 14,560 acres in the former HUP area and 16,200 acres in the former SR area). The combined acreage of 30,760 acres for the SR-HUP mine permit area differs slightly from the historic acreage for the individual operations as the operations previously shared "over-lapping" mine permit areas. The Reynolds Ranch Amendment area will add approximately 8,704 acres to the current SR-HUP license area.

The current land surface ownership of SR-HUP includes approximately 22,660 acres of private ownership, 3,300 acres of State of Wyoming ownership, 3,075 acres of U.S. Government ownership (administered by the Bureau of Land Management (BLM)), and 1,725 acres directly owned by PRI. The Reynolds Ranch amendment area contains approximately 720 acres of U.S. Government ownership (administered by the BLM), 640 acres of State of Wyoming ownership, 240 acres directly owned by PRI, and 7,135 acres of other private ownership. Names and addresses of the surface and mineral owners of record within the current SR-HUP permit area were previously provided in Appendix A, B, and C of previous applications. Names and addresses of the surface and mineral owners of record within and around the proposed Reynolds Ranch amendment area are listed in Appendix A and surface and mineral owners of record within one-half mile of the permit area are listed in Appendix B of this amendment application. Figures A-1 and A-2 show the surface and mineral owners within the amendment area and within one-half mile of the amendment area. These appendices also list owners of record with valid legal estate in the permit area and on adjacent lands. Appendix C shows the location of lands by legal subdivision, section, township, range, county, and municipal corporation.

The Main Office and Central Processing Plant are located at the former Bill Smith underground mine site in the NW ¼ Section 36, T36N, R74W. The HUP Office/Central Plant complex, which went on "standby" status in late 2002, is located in the NW ¼ Section 29, T36N, R72W.

## 2.2 USES OF ADJACENT LANDS AND WATERS

### 2.2.1 General

Lands contained within the SR-HUP mine permit and Reynolds Ranch amendment area have historically been used for sheep and cattle grazing. PRI controls mineral and surface rights in the areas scheduled for uranium mining and development. The only residential site within the mine permit area is the Vollman Ranch, which is located in the NW ¼ Section 27, T36N, R73W (see Plate 1). The ranch house is located approximately 2000 ft from the F-Wellfield and 2.1 and 1.5 miles from Satellite Nos. 2 and 3, respectively. The only other residential sites near the SR-HUP include the Sundquist (Smith) Ranch and Fowler Ranch, Reynolds Ranch, Hornbuckle Ranch, Lenzen Ranch, and Baker Ranch, which are all located outside the current mine permit area and Reynolds Ranch amendment area.

The proposed use of the land for the immediate future includes continued livestock grazing and in situ uranium mining on a commercial scale. Currently, approximately 1200 acres at the SR-HUP have been excluded from livestock by fencing. The majority of the excluded acreage results from fencing of wellfield and Satellite areas and the two land application (irrigation) facilities. A breakdown of the current approximate acreage of fenced areas is as follows:

| Area | Acres |
|---|---|
| Wellfields/Satellites | 800 |
| Satellite No. 1 Irrigation Facilities/Reservoir | 125 |
| Satellite No. 2 Irrigation Facilities/Reservoir | 180 |
| Smith Ranch Main Office/Central Plant Area | 45 |
| Highland Main Office/Central Plant Area | 50 |

A maximum of 325 acres of Wellfields/Satellite are expected to be excluded from livestock at the Reynolds Ranch amendment area.

After mining activities are completed, the land will be returned to the pre-mining use of livestock grazing and wildlife use. The Reclamation Plan included in

Chapter 6 of this application describes how affected areas will be decommissioned and reclaimed after the completion of mining activities.

### 2.2.2 Agricultural Activity

Livestock grazing is the main source of food production and agricultural activity on the permit area and the adjacent lands. Due to the short growing season, the forage provided by natural vegetation, although nutritious, is sparse. According to personnel from the U.S.D.A. Soil Conservation Service Office in Douglas (November 10, 1986), the stocking rate in the vicinity of the mine site averages one-fourth to one-third of an animal unit per acre, per month, on range that is in good condition. In the past, some isolated areas were homesteaded and dry farmed. Most of these dry farms ultimately were abandoned and left to revegetate by natural processes, or seeded with crested wheat grass or other grasses for grazing purpose.

### 2.2.3 Recreation

Major recreational activities within a fifty mile radius of the proposed mine site are mostly outdoor activities, such as camping, hunting, picnicking, hiking, skiing and snowmobiling. Water sports, such as water skiing, boating, canoeing and fishing are popular in public use areas designated by the state and counties along the North Platte River and at Alcova Lake and the Glendo Reservoir. In addition to State and Community designated parks and recreation areas, a portion of the Medicine Bow National Forest, approximately forty miles south of the site, provides additional area for recreational activities. Figure 2-2 shows the approximate location of these major facilities and points of interest in the general area.

### 2.2.4 Water Rights

Appendix D-6 (Hydrology) of the previous License Application lists surface and ground water rights for the SR-HUP area. Adjudicated surface water rights are limited to several stock ponds and ditches that retain surface water runoff on a limited basis. The majority of ground water rights in the SR-HUP area are associated with monitoring wells and the production areas at the ISL mining operations. For the Reynolds Ranch amendment area, records on file in the Office of the Wyoming State Engineer indicate that there is one adjudicated water right in the permit area or within one half mile of the permit boundary. PRI does not hold any adjudicated water rights within the permit area. The majority of the wells within the Reynolds Ranch amendment area were installed by Solution Mining Corp., Rio Algom Mining Corp., and PRI for the purpose of collecting ground water quality data and to determine ground water aquifer characteristics. Appendix D-6 submitted with this amendment application shows the location of adjudicated water rights and all known wells inside and within ½ mile of the Reynolds Ranch amendment area.

As is the case with many of the intermontane basins in Wyoming, water in the vicinity of the permit area is available primarily from ground water. The ground water sources may receive sporadic recharge due to runoff from the limited precipitation in the region. However, this quantity of this recharge is relatively insignificant since it can only occur at sandstone surface outcrops of the aquifers that constitute a very limited receiver relative to the entire Powder River Basin. None of the principle sources of ground water outcrop or receive recharge within the permit area.

The SR-HUP and permit area and proposed Reynolds Ranch amendment area have several known stock ponds consisting of small earthen dams across dry stream channels that collect the small quantities of runoff. Two of these ponds are supplemented by ground water pumped from a well by a windmill. Some water also accumulates in small excavations or natural depressions at low points in the Sage Creek and Duck Creek drainage. No other significant waterbodies are present in the permit area. During underground mining the local rancher constructed a small reservoir to collect water discharged from the Bill Smith Mine and used the water for irrigating approximately 160 acres of alfalfa and native grass. However, with the absence of pumping from the mine after it was reclaimed and abandoned, the reservoir is dry most of the time but is still used as a stock pond when there is runoff.

Wells in the vicinity of the current and proposed permit areas, excluding those monitoring wells owned by PRI, are rather uniformly distributed over the area. Most of these wells are associated with windmills used for livestock watering. As such, these wells are usually shallow, less than 180 feet in depth. Only four wells in the current SR-HUP permit area, Reynolds Ranch amendment area, and on adjacent lands are known to be used for domestic water supply.

These wells include the water well at the Sundquist (Smith) Ranch located approximately 2.6 miles southwest of the Smith Ranch Main Office/CPP site, the Vollman Ranch well located approximately 1.5 miles east of Satellite No. 3, the Fowler Ranch well located just north of the permit area approximately 2.5 miles north of the Highland Central Plant, and the Mason House (unoccupied) located near the proposed Reynolds Ranch Satellite Facility. Plate 1 shows the locations of these dwellings. Water wells at the Satellite buildings, the Highland Central Plant, and the Smith Ranch Main Office/CPP site only supply water for plant operations and washing purposes. These water supplies are not used for drinking as bottled water is supplied for this purpose. These water wells are typically constructed of 4.5-inch casing and are screened in aquifers overlying or underlying the mining zone. These wells are typically capable of supplying 15 to 25 gpm to the Satellite.

The four ranch wells in the area are all completed (screened) at depths stratigraphically above the zones planned for ISL mining and are also located distant from planned wellfield areas. The Sundquist (Smith) Ranch well is 105 ft in depth, the Vollman Ranch well is 180 ft in depth, the Fowler Ranch well (used very intermittently as fulltime residents do not reside at the site) is 212 ft deep, and the Mason House (unoccupied) is 118 ft deep. No mining is planned for the zones these wells are completed in as there is no uranium mineralization of economic significance in these zones. Since these wells are located laterally from proposed mine areas and are vertically separated from the ore zones by at least 300 to 400 ft of alternating layers of shale, siltstone, and sandstone, it is very unlikely that the wells will be affected by mining related activities. The intensive ground water monitoring program utilized during operation would detect any problems prior to these wells being adversely affected.

The projected water groundwater and surface water useage within 2 miles of the Reynolds Ranch Amendment area boundary, aside from the domestic useage described above, is wells and surface water impoundments for livestock watering, and ISL production and monitoring.

Appendix D-6 of this amendment application contains a detailed Hydrologic analysis of the proposed Reynolds Ranch amendment area.

## 2.3 POPULATION DISTRIBUTION

The population within fifty miles of the Smith Ranch Main Office/CPP site is centered within the communities of Casper, Douglas and Glenrock, Wyoming as shown on Figure 2-2. These urban areas are significant in that they provide the major locations of public services such as schools, churches, medical care facilities, and public parks. These communities also provide the majority of the cultural and scenic attractions for the residents of Converse and Natrona Counties.

Casper, Wyoming is the County Seat of Natrona County. In 1986 Casper claimed to be the largest city in the state. Casper has developed into a regional retail trade center serving a 150 mile radius which includes all or part of seven counties. Its regional prominence as a retail center is supported by the Eastridge Mall, which opened in the Fall of 1982. The Casper labor force and population peaked in Spring of 1982 and has declined since that time.

Casper doubled its acre size during the ten years between 1975 and 1985. This growth can be contributed to the energy boom in the late 1970s and early 1980s. From 1970 to 1980 the city experienced a 30% increase in its population. Decreases in the price and demand for both oil and uranium have contributed to a population loss between 1980 and 1990. As can be seen on Table 2-1, the population in Casper fell from 51,016 in 1980 to 46,742 by 1990 – a loss of 4274 people. After 1990, the Casper area began to recover from the energy-related population decline. Between 1990 and 1995, the population increased by 2041, bringing the population total to 48,783 (see Table 2-1). However, referring to

Table 2-1 again, will show that another population decline occurred between 1995 and 1999. During this period, the population fell by 500, resulting in the 1999 total of 48,283. Casper population estimates as of July 1, 2004 is 51,240 and estimates for all of Natrona County is 69,010. This is an increase of approximately 3% and 3.7% respectively since population estimates in 2000. Table 2-1A shows 2004 population information for places located in Natrona County.

Douglas is the County Seat of Converse County. Glenrock, also in Converse County, is the closest town to the SR-HUP/Reynolds Ranch site with the site being approximately 22 road miles northeast of the town. Between 1970 and 1980 both Glenrock and Douglas experienced phenomenal growth, 80.6% and 136.9%, respectively. However, with the change in energy demand, through 1984 Glenrock lost 27% of its population and Douglas lost 17% of its population. Although Glenrock and Douglas experienced population changes similar to those in Casper between the years 1970 and 1995, population growth continued in Glenrock and Douglas between 1995 and 1999 (see Table 2-1). Glenrock and Douglas population estimates as of July 1, 2004 are 2,300 and 5,489 respectively and estimates for all of Converse County is 12,515. This is an increase of approximately 2.6%, 3.7%, and 3.8% respectively since population estimates in 2000. Table 2-1A shows 2004 population information for places located in Converse County.

The reduction in employment in 1984 in the area of uranium operations illustrates the loss of jobs to the area. In March 1980, uranium producers reported 1,264 people directly employed in the uranium mining and milling operations in Converse County. In September 1987 the same uranium producers reported less than 100 employees in Converse County with many of these employees working on reclamation projects that were completed within 2 years. Startup of this uranium mining project has increased company employment in the area to about 80 people and provided jobs for 20 to 40 contractor employees. Most of the new positions were filled from the local population. Likewise, the growth experienced from the 2,000 census can be largely attributed to growth in employment for energy related industries such coal, oil and gas, coal bed methane, and uranium development.

Demographic information for Natrona and Converse Counties is shown in Table 2-1B and 2-1C respectively. These tables show information on minority populations, household income and poverty levels, age groups, and business information. Additionally, Figure 2-2A shows the population density within an 80-km radius of the Smith Ranch-Highland and Reynolds Ranch Uranium Projects. As previously noted, this map shows most of the population centered around the towns of Casper, Glenrock, and Douglas with just scattered population outside of those areas.

The only occupied dwelling within the permit area is the Vollman Ranch, which is located approximately 1.5 miles east of Satellite No. 3 and 4.2 miles east-northeast of the Smith Ranch Main Office/CPP site. The nearest dwelling to the Smith Ranch Main Office/CPP site is the Sundquist (Smith) Ranch located 2.6 miles to the southwest. A total of seven people normally reside at these ranch homes for an occupational density of 0.09 persons per square mile for the area within a five mile radius of the plant. There are no permanent residences in the proposed Reynolds Ranch amendment area or within 5 miles of the amendment area. The nearest dwellings are the Reynolds Ranch site (5.6 miles northeast of the Satellite), the Hornbuckle Ranch site (6.2 miles northeast of the Satellite), the Lenzen Ranch site (5.6 miles southwest of the Satellite), the Baker Ranch site (6.8 miles northeast of the Satellite) and the Vollman Ranch (6.8 miles southeast of the Satellite). A total of thirteen people normally reside at these ranch homes.

There are no significant changes anticipated within 10 km of the SR-HUP and Reynolds Ranch permit areas in the near future. Population estimates in surrounding communities of Glenrock, Douglas, and Casper are expected to increase due to the increase energy production in the area. Visitors to the SR-HUP and Reynolds Ranch areas are expected to be limited to mainly vendors, contractors, agency personnel, and associated tours to members of the public.

## 2.4 HISTORIC, SCENIC AND CULTURAL RESOURCES

Six Cultural Resource Surveys have been conducted on lands comprising the SR-HUP. These surveys are included in Appendix D-3 of the application and are summarized as follows:

### 2.4.1 Smith Ranch Area

A Class III Cultural Resource Inventory for the proposed permit area was completed in November 1985 by Frontier Archaeology of Worland, Wyoming. These data are presented in Appendix D-3. Eighteen sites were located. Ten of the sites are historic and eight are prehistoric. Following review of these sites by the BLM and the Wyoming State Archives, Museums and Historical Department during the Spring of 1986, it was determined that only two sites could be potentially affected by the project. The mitigation and protection of these sites are discussed in Chapter 5. Appendix D-3 contains the Cultural Resource Class III Survey plus the appropriate letters from the SHPO, etc. The report also includes a listing of cultural resource (i.e. The Bozeman Trail) sites known in the vicinity of the permit area. This list was compiled through review of the State Archives, WSHPO and Casper BLM office.

Another Cultural Resource Class III Survey was conducted in December 1998 by Pronghorn Archeological Services of Mills, Wyoming. The scope of the survey covered the areas within the permit area not previously surveyed in the 1985 survey. The 1998 survey identified three new historic sites, thirteen prehistoric sites, and twenty-two isolated artifacts. Of those, twelve of the prehistoric sites were considered to be eligible for inclusion to the National Register of Historic Places, and none of those sites are located where mining activities are planned. The BLM and WSHPO have reviewed the report. Appendix D-3 contains this report and supporting correspondence. A significant portion of Appendix D-3 contains information that falls under the confidentiality requirement for archeological resources under 43 CFR 7.18, "Confidentiality of archaeological resource information". Therefore, PRI requests that all portions of Appendix D-3 remain "CONFIDENTIAL" for the purpose of Public Disclosure of this application.

### 2.4.2 Highland Uranium Project Area

Several detailed archeological surveys have been conducted on lands comprising the Highland Uranium Project and adjacent areas. Surveys for the original permit area (1985 Everest Minerals permit application), the Section 14 Amendment area and the West Highland Amendment area are included as Addenda D3-1, D3-2 and D3-3A respectively.

The North Morton Ranch property was acquired from the Tennessee Valley Authority in September, 1985. Much of the northern portion of the Highland area lies within the former North Morton Ranch permit area. The cultural resource inventory performed as a part of the North Morton application (Permit No. 230C) is provided as Addendum D3-3B.

The extreme western portion of the Highland area was previously surveyed by Kerr McGee Nuclear in 1985 as a part of the South Powder River Basin Solution Mining Project application submitted to WDEQ in April, 1988. Appropriate portions of this cultural resources inventory are provided as Addendum D3-3C.

All addenda are included in a separate binder in order that the information can be kept confidential. It is concluded in all surveys within the Highland area that the sites mapped are of no significant historical or archeological value.

### 2.4.3 Reynolds Ranch Amendment Area

A Class III Cultural Resource Inventory for the proposed permit area was completed in September, 1997 by Pronghorn Archaeological Services of Mills, Wyoming. This data is presented in Appendix D-3. Thirteen sites were located. Six of the sites are historic and seven are prehistoric. In addition, eighteen isolated artifacts were recorded. All of the sites are considered not eligible for inclusion to the National Register of Historic Places and no further work was recommended for any of the sites. If during mining operations any cultural or significant paleontological evidence are exposed during any excavation or other installation work in the permit area, such activities will be delayed until the appropriate state office has been notified and a qualified person has examined the evidence.

In addition, another assessment of the potential impacts to the Bozeman Trail and other historical sites within the Reynolds Ranch area was conducted by Rosenberg Historical Consultants of Cheyenne, Wyoming in 1997. The assessment included a 3.3-mile long segment of the Bozeman Trail known as the Holdup Hollow Segment (T36N, R74W, Sec. 15,10, and 3), as well as 2.5 miles of trail just North of the Permit Area. The Holdup Hollow Segment is listed in the National Register of Historic Places.

It was recommended in the assessment that no ground disturbing activity of any kind associated with in situ mining should occur within the recognized boundaries of the Holdup Hollow Segment, as well as no exploratory drilling. As a result of this recommendation, the sections of land in which the Holdup Hollow Segment is located were not included in the proposed permit area for Reynolds Ranch. Therefore, no ground disturbing activities, in situ mining activities, or exploratory drilling will occur in that area.

The segment located just north of the Reynolds Ranch amendment area was considered noncontributing. A No Effect determination was recommended and no further historical work was believed necessary. A cultural clearance is recommended for this area with no stipulations.

In addition to the Bozeman Trail, three historic period dry land homesteads were recorded and evaluated. All of these sites are considered to be ineligible to the National Register of Historic Places and a determination of No Effect is recommended. A cultural clearance is recommended for this area with no stipulations.

## 2.5 METEOROLOGY

### 2.5.1 <u>General</u>

The project permit area is located in eastern Wyoming, where climate can generally be classified under the Koppen System (C. R. Itchfield, 1974) as semiarid and cool. The climate in the area is rather dry due to the effective barrier to moisture from the Pacific Ocean offered by the Cascades, Sierra Nevada, and the Rocky Mountains when winds are from the west and northwest. The mountain ranges in the west-central portion of the state, which are oriented in a general north-south direction, are perpendicular to the prevailing winds. These ranges also tend to restrict the passage of storms and thus restrict precipitation in the eastern part of Wyoming.

The official weather station closest to the permit area is located at the Natrona County International Airport near Casper, Wyoming. Meteorological data (wind speed, wind direction, and temperature) for the project area are taken from the Natrona County International Airport near Casper, Wyoming. Figure 2-3 includes southwest. The highest mean monthly wind speed occurs in January and is 16.4 miles per hour from a west-southwesterly direction. The lowest mean monthly wind speed occurs in July and is reported as 10.1 miles per hour from the west-southwesterly direction. The maximum observed wind speed maintained for longer than one minute was 81 mph from the southeast during March, 1956. Figure 2-3 is a wind rose diagram for the Casper area indicating that the prevailing winds are from the southwest. See Appendix D-4 for more detailed climatology data.

## 2.6 GEOLOGY AND SEISMOLOGY

### 2.6.1 Regional Geology

The permit area is located in the southern portion of the Powder River Basin, which is in the unglaciated Missouri Plateau section of the Great Plains physiographic province (Thornbury, 1969). The Missouri Plateau includes the part of the Great Plains north of the northern boundary of Nebraska, with the exception of the Black Hills. It is bounded by the Pine Ridge Encarpment to the south, the Bighorn and Laramie mountains to the west, the Missouri Escarpment to the east, and the glacial moraine plains north of the Missouri River to the north. The Missouri Plateau has often been mistakenly classified as a plain, in fact, it comprises a number of basins separated by uplifts.

The Powder River Basin, named after the north-flowing Powder River covers approximately 2000 square miles. It is bounded on the west by the Bighorn Mountains and the Casper Arch and on the south by the Laramie Range-Hartville Uplift. The northern and eastern margins of the basin are less distinct. The broad Black Hills Uplift forms the eastern demarcation. The Miles City Arch forms the northern boundary.

The Powder River Basin is synclinal, with the synclinal axis oriented in a general northwest-southeast direction along the western margin of the basin. East of the axis, the sedimentary rock strata exposed at the surface dip gently (about 1° to 2°) to the west. West of the axis, the strata dip more steeply (as much as 20°) to the east.

The basin incorporates a sedimentary rock sequence that has a maximum thickness of about 15,000 feet along the synclinal axis. The sediments range in age from Recent (Holocene) to early Paleozoic (Cambrian) (500 million to 600 million years ago) and overlie a basement complex of Precambrian-age (more than a billion years old) igneous and metamorphic rocks. Of particular interest in the permit area are the Tertiary-age formations:

| Formation | Age (Years) |
|---|---|
| White River (Oligocene) | 25-40 million |
| Wasatch ( Eocene) | 40-60 million |
| Fort Union (Paleocene) | 60-70 million |

The uranium-bearing sandstones to be mined lie within the Fort Union and Wasatch formations. With the exception of the Quaternary sediments in the drainage valleys, these are the only formations that crop out in the permit area.

The Powder River Basin represents a localized depression in what was, for long geologic time, a large basin extending from the Arctic to the Gulf of Mexico. During Paleozoic and Mesozoic time, the configuration of this expansive basin changed as the result of uplifts on its margins. The northern and southern connections of the basin to the open ocean also changed position several times before they both finally closed. By the end of the Cretaceous, many intrusive uplifts had occurred and the remaining portions of the large basin were well removed from connections to the sea.

In the late Paleocene marked uplift, inland masses surrounding the Powder River Basin and accelerated subsidence in the southern portion of the basin resulted in thich sequences of arkosic sediments being deposited. Arkosic sediments were derived from the granitic cores of the Laramie and Granite Mountains exposed to weathering and erosion by the Laramide uplift. Uranium mineralization contained in these arkosic facies constitute the oldest ore zones in the permit area.

Continued acceleration of uplift in the Laramie and Granite Mountains in central Wyoming resulted in further deposits of coarse clastic sediments. Since drainage was generally northward, the finer sediments were carried north toward the center of the basin.

Rapidly flowing streams cut channels through the accumulating sediments near the basin margins. These streams eventually filled with coarse clastic sediments, providing zones of high transmissivity for mineralizing solutions that entered the area later. During that time, and well into the Eocene, the Powder River Basin remained largely flat and portions of it were intermittently cut off from the main channels of surface water flows. However, ample water, provided by runoff from the mountainous uplifts, produced substantial swamps that eventually became large coal deposits.

The Eocene deposits (Wasatch Formation) in the Powder River Basin characteristically consist of nearly 1000 feet of clays and siltstones containing widespread discontinuous lenses of coarse, cross-bedded arkosic sandstones. The coarsest of these are to be found in the southwestern portion of the basin and are the host rock for the uranium deposits to be mined. These sediments gradually diminish in size northward. North of Pumpkin Buttes, the Wasatch sediments become markedly finer-grained and similar in appearance to the Fort Union Formation.

Near the end of the Eocene, northward tilting and deep weathering with minor erosion took place in the basin. Uranium migration and concentrations occurred at that time. Subsidence resumed in the late Oligocene and continued through the Miocene and Pliocene. A great thickness of tuffaceous sediments was deposited in the basin during at least a part of this period of subsidence. By the late Pliocene, regional uplift was taking place, leading to a general rise in elevation of several thousand feet. The massive erosional pattern that characterizes much of the Powder River Basin began with this Pliocene uplift and continues to the present.

The tectonic change at the end of the Paleocene is reflected in some locations by either a depositional or an erosional disconformity between the Fort Union Formation and the overlying Wasatch Formation. As uplift of the highlands continued into the Eocene epoch, the Fort Union Formation was eroded at the margins of the basin and the material redeposited toward the center. The rapidly accumulating sediments of the Wasatch Formation were deposited increasingly farther out into the basin.

### 2.6.2 Site Geology

The Wasatch Formation is the youngest bedrock unit throughout most of the permit area. It consists of interbedded claystones, silty sandstones, and relatively clean sandstones. In the vicinity of the Pumpkin Buttes, approximately 40 miles north of the permit area, the Wasatch Formation is known to be 1575 feet thick (Sharp and Gibbons, 1964). However, active stream erosion has left only about 500 feet of the formation in the central and east-central portions of the permit area and none of the formation in the southwestern portion of the area. The surface contact between the Wasatch Formation and the underlying Fort Union Formation roughly parallels the axis of the Powder River Basin through the southwestern portion of the permit area. The interbeded claystones, siltstones, and relatively clean sandstones in the Wasatch vary in degree of lithification from uncemented to moderately well cemented sandstones, and from weakly compacted and cemented claystones to fissile shales.

The Fort Union Formation in the Powder River Basin is lithologically similar to the Wasatch Formation. Throughout the permit area, the Fort Union includes interbedded silty claystones, sandy siltstones, relatively clean sandstones, and claystones with a few thin coal seams occurring locally. The degree of lithification is quite variable, ranging from virtually uncemented sands to moderately well cemented siltstones and sandstones. The total thickness of the Fort Union in the area is approximately 3000 feet.

Both the Wasatch and Fort Union strata are highly lenticular, with numerous facies changes within short lateral distances. In some cases it is essentially impossible to trace even relatively thick stratigraphic units more than a few thousand feet. On the other hand, some units can be traced for miles.

One shale, marking the top of the Fort Union Formation, is believed to persist throughout the permit area. This shale, designated locally as the "P" shale, averages over 60 feet thick. Approximately 500 feet of alternating sandstones and shales of the Wasatch Formation overlie the "P" shale in the vicinity of the Smith Ranch Main Office/CPP. The sandstone beds generally are 40 to 100 feet thick and alternate with shales that range from 20 to 50 feet thick. Some of the lower sands in the Wasatch are mineralized. Below the "P" shale are about 400 feet of sediments, largely sandstone, that include the mineralized zones to be mined. See Appendix D-5 for additional regional and site geological data for the Reynolds Ranch amendment area.

### 2.6.3 Seismology

The area of east central Wyoming, where the project site is situated, lies in a seismically relatively quiet region of the United States. Although distant earthquakes may produce shocks strong enough to be felt on the Powder River Basin, the region is ranked to be one of minor seismic risk, as shown on Figure 2-4. Few earthquakes capable of producing damage have originated in this region as indicated on the Regional Seismicity Map provided on Figure 2-5. The seismically active region closest to the site is the Intermountain Seismic Belt of the Western United States, which extends in a northerly direction between Arizona and British Columbia. It is characterized by shallow earthquake foci between 10 and 25 miles in depth, and normal faulting. Part of this seismic belt extends along the Wyoming-Idaho border, more than 250 miles west of the permit area, and would be the most probable source of earthquakes affecting the project site.

Table 2-2 lists the largest recorded earthquakes that have occurred within 300 miles of the SR-HUP site and gives the maximum ground acceleration that would be realized at the site as a result of these disturbances from a period of 1870 through 1995 (Source USGS, 2000). The earthquake of highest intensity that occurred nearest the site is presumed to be the Casper, Wyoming earthquake of 1897. This earthquake has been assigned a probably maximum intensity of VII, based on damage incurred. Figure 2-6 provides a means for estimating the intensity of earth tremors at the Smith Ranch site originating from such an epicentral intensity 47 miles away. The small figure insert shows that the probable magnitude for an earthquake with an epicentral intensity of VII is 5.67 on the Richter Scale. Assuming that the distance from the CPP to the epicenter is approximately 47 miles, then the acceleration of the ground at the site would be 0.04 g, or slightly greater than intensity V.

No faulting in the project area has been reported, nor is any faulting evident from geophysical log interpretations. The ground accelerations reported in Table 2-2 (.01 g to .04 g) are not considered to be of a magnitude that would disturb the operations or facilities in the unlikely event that an earthquake occurred during the life of the mine.

More detailed seismological characterizations for Converse County and Natrona County are contained in Attachment 2-1.

## 2.7 HYDROLOGY

### 2.7.1 Surface Waters

The SR-HUP permit area is located in the southern part of the Powder River Basin in the Sage Creek drainage of North Platte River drainage system and the Box Creek drainage of the Cheyenne River drainage system. The only natural surface water in the permit area is ephemeral runoff in response to limited rainfall and snowmelt. Surface runoff is very limited, as reflected by a 1957-1958, USGS survey of the Box Creek drainage system which starts near the center of the permit area and flows east. The recorded mean flow from the 109 square mile drainage for 1957 and the first half of 1958 was 1.79 CFS (Table 2-3). Stock ponds collect some runoff for watering livestock, however, these ponds are dry much of the time.

The proposed Reynolds Ranch amendment area is located in the Duck Creek, Willow Creek, and Brown Springs Creek drainages all attendant to the Dry Fork drainage of Little Cheyenne River. The Little Cheyenne River is part of the Cheyenne River drainage system in the southern part of the Powder River Basin. The only natural surface water in the permit area is emphemeral runoff in response to intermittent precipitation and seepage into small basins at low points in the Duck Creek, Willow Creek, and Brown Springs Creek drainages. Surface runoff is very limited, surrounding stock ponds collect some runoff for livestock and wildlife consumption, but are dry most of the year. Some stock ponds on the permit area are fed by a pumped well and will contain water for longer durations.

### 2.7.2 Ground Water

Descriptions of the geologic formations of the Powder River Basin and their hydrologic properties have been discussed in numerous publications (Hodson, et al., 1973; Hodson, 1971; Whitcomb, et al., 1958; Huntoon, 1976; Davis, 1976) and summarized in Appendix D-5 (Geology). The primary hydrologic units beneath the permit area include alluvial deposits, the Wasatch Formation, the Fort Union Formation, and the Cretaceous-age Lance and Fox Hills formations (see Table D-6.1 of Appendix D-6). Some of these units are classified as aquifers and can yield ground water to wells and springs. The locations of ground water sources in the SR-HUP area are shown in Appendix D-6 submitted with the previous License Application. The locations of ground water sources in the proposed Reynolds Ranch amendment area are shown in Appendix D-6 of this application.

Alluvium. The alluvial deposits within the permit area consist of thin, unconsolidated, poorly stratified clays, silts, sands, and gravels. The total thickness of these deposits is estimated to range from less than 1 foot to 30 feet. There are no known wells within the permit area less than 30 feet deep and only three wells less than 100 feet deep, therefore very little information on water in the alluvial deposits, if any, is available.

Small amounts of precipitation infiltrate the alluvium during part of the year and the intermittent flow in drainage channels across the alluvium may provide some recharge to localized perched water tables in the alluvium. However, since the water table is typically more than 100 feet below the land surface throughout the permit area, most of the recharge flows through the alluvium to the Wasatch formation. In a drainage in the southwest portion of the area, a shallow water table appears to be the source of water for a small water hole but the potential for the development of the alluvium as a ground water supply is not promising.

Wasatch Formation. The Wasatch Formation typically is lenticular fine- to coarse-grained sandstones with interbedded claystones and siltstones. This formation ranges from 0 to approximately 500 feet thick in the permit area and includes some of the more important shallow aquifers in the Powder River Basin.

Most properly constructed wells completed in a Wasatch aquifer yield from 5 to 15 gallons per minute (gpm). However, the water supply well (WW-103) for the SR-HUP located at the Smith Ranch Main Office/CPP can produce 140 gpm from a completion interval of approximately 120 feet containing four separate lenses. This well is 474 feet deep.

For the most part, the upper Wasatch aquifers occur under water table (unconfined) conditions. Artesian (confined) aquifers near the base of the formation are separated from overlying formations and from each other by impermeable claystone or mudstone layers.

The Wasatch formation is considered a good water supply for limited development, however, the formation does crop out in the permit area and the amount of ground water available is difficult to assess. Hydrologic characteristics calculated from the Q-Sand pump test are believed representative of the deeper Wasatch aquifers.

Fort Union Formation. The Fort Union Formation underlies the Wasatch Formation beneath most of the permit area but in the southwestern portion of the area, the Fort Union lies directly beneath the surface. Typically, it is comprised of lenticular sandstones with interbedded claystones and siltstones. The Fort

Union is as much as 3000 feet thick beneath the Smith Ranch Main Office/CPP site.

The Fort Union Formation also include important aquifers in the Powder River Basin, and most of the wells in the vicinity of the plant site penetrate this formation. While most wells tap these aquifers for small (5 to 20 gpm) water volumes, test wells completed in the Fort Union have produced as much as 560 gpm.

The Wasatch and Fort Union aquifers are separated by a relatively thick impermeable shale (locally designated the "P" shale). Similar separation of aquifers within the Fort Union are common, and wells completed in these layers are often found to be under artesian pressure.

Substantial volumes of water can be produced from the Fort Union in the Southern Powder River Basin as demonstrated by the Bill Smith Mine. The mine produced 1500 to 1700 gpm from initial development until the mine was allowed to flood, a period of several years. Hydrologic characteristics of the Fort Union have been illustrated by previous pump tests at the SR-HUP provided in the previous application, and O-Sand and U/S-Sand pump tests summarized in Appendix D-6 of this application.

Lance and Fox Hills Formations. These formations underlie the Fort Union Formation beginning at depths of about 3000 feet in the permit area. Data from other areas indicate well yields seldom exceed 100 gpm from these aquifers, and the ground water reserves may not be large. Little is known of their hydrologic characteristics, as no water wells are known to tap these aquifers in the vicinity of the permit area. It appears unlikely that these formations will be tapped for water supply in the near future because of depth and availability of water from the Wasatch and Fort Union Formation.

The Wasatch and the Fort Union aquifers are of the greatest importance to the proposed mining activities since they contain all the mineralized zones currently proposed for development. Results of the initial pump tests conducted in these formations were included in Appendix D-6 submitted previously. Results of pump tests conducted at the Reynolds Ranch amendment area are provided in Appendix D-6 of this amendment application.

## 2.8 ECOLOGY

Topography in the SR-HUP permit area has a general gradient from northwest to the southeast. The northern and southwestern portions of the permit area contain the higher ground. The ephemeral channel of Sage Creek runs to the southeast while the ephemeral channel of Box Creek drains to the east.

Topography in the Reynolds Ranch amendment area has a general gradient from southwest to northeast. The northern and southwestern portions of the permit area contain the higher ground. The ephemeral drainages of Duck Creek, Willow Creek, and Brown Springs Creek run to the northwest. The Duck Creek drainage begins in the permit area from two areas, Section 35 and 36, T37N, R74W, and Section 12, T36N, and R74W, and runs northeasterly exiting in the northeast portion of Section 31, T37N, R73W. Willow Creek enters the permit area in Section 13, T36N, R74W and runs northeasterly exiting the permit area in the middle of Section 7, T36N, R37W. Brown Springs Creek runs outside the northwest corner of the permit boundary, however, two ephemeral tributaries starting in Sections 26 and 35, T37N, R74W flow northeast directly into Brown Springs Creek. Brown Springs Creek runs in a northwest direction. The Reynold's Ranch Satellite Plant will be located in the Duck Creek drainage.

Soils on the hilltops and higher areas are shallow and sometimes associated with materials from rock outcrops. The soils become deeper on the side slopes of the hills and in the lower areas and drainages. Soils in the permit area generally pose no special problems and are rated as good for reclamation purposes. A low intensity soil survey, as well as detailed soils information for SR-HUP has been submitted previously. Soil survey results as well as detailed soils information for the Reynolds Ranch amendment area is contained in Appendix D-7 of this amendment application.

Vegetation is a typical northern plains short grass prairie forage characteristic of areas of low annual precipitation. Dominant plant species present are Sage brush, Western Wheatgrass, Needlegrasses, Blue Gramma and Threadleaf Sedge. Detailed vegetation information for the SR-HUP has been previously submitted. A vegetation study conducted for the Reynolds Ranch amendment area is presented in Appendix D-8 and provides details such as productivity and cover information.

The wildlife in the area is typical for the region. Studies and observations of wildlife on the SR-HUP permit area and in the surrounding vicinity have been previously submitted. Results of wildlife studies conducted at the Reynolds Ranch amendment area are presented in Appendix D-9 of this amendment application. Important game species include the Pronghorn Antelope, Cottontail Rabbit, Sage Grouse, Mourning Dove and Mule Deer. Non-game species are typical of the sage brush grassland habitat in the region. No rare or endangered species have been observed in the SR-HUP or Reynolds Ranch areas.

## 2.9 BACKGROUND RADIOLOGICAL CHARACTERISTICS

A background pre-mining radiological survey of the O-Sand pilot area was conducted and results were submitted in previous applications. Background radiation for the surface was normal and no anomalies were found. Background gamma surveys were conducted on a 200 foot grid pattern for Wellfield Nos. 1

through 4. The results of these surveys show that the average background gamma radiation levels range from 10 to 17 μR/hr. Comparison of these data with historic background data collected from the Smith Ranch and HUP Air Monitoring Stations shows that the gamma levels are in close agreement.

A description of air particulate, radon-222, and gamma radiation background data from the Air Monitoring Stations is provided in Chapter 5. Radiological data concerning ground water in the vicinity are reported in the baseline water quality data previously submitted for SR-HUP and in Appendix D-6 of this application for the Reynolds Ranch amendment area.

A background pre-mining radiological survey of a portion of the Reynolds Ranch amendment area was conducted by Solution Mining Corporation as part of efforts to develop a mine permit application for the area (referred to as the Blizzard Heights Project). Background radiological surveys conducted included surface gamma radiation survey, soil radionuclide analysis, ground water and surface water radionuclide analysis in locations in the vicinity of the proposed Satellite Plant and wellfield areas. Surface gamma levels determined during this survey is consistent with surface gamma surveys conducted for the SR-HUP and therefore can be considered representative of the entire Permit Area. This survey is contained in Appendix D-10 of this application

Background gamma and radon-222 data has been collected at the Reynolds Ranch amendment area since April of 2004 using a gamma ball and radon cup placed near the proposed location of the Reynolds Ranch Satellite Plant. This data is summarized in Table 2-4 along with data from a background location. The background location is referred to as "Dave's Water Well" and is considered the background air monitoring station for the SR-HUP, and also considered a representative background station for the Reynolds Ranch area. As shown in Table 2-4, radon-222 and gamma data for these two areas are very consistent with each other.

## 2.10 BACKGROUND NON-RADIOLOGICAL CHARACTERISTICS

Background non-radiological characteristics of the site are discussed in the applicable sections of Appendix D. Ground water background concentrations of substances that could potentially be mobilized by leaching such as trace metals are presented with other baseline values as part of the ground water quality data in Appendix D-6.

Because of the relatively low surface disturbance necessary to construct the wellfield and recovery facilities, no additional atmospheric pollution in the form of dust is anticipated resulting in significant change to the existing air quality.

# TABLE 2-1A

## Wyoming Incorporated Place Population Estimates: April 1, 2000 to July 1, 2004

| Place | Census 2000 Population | April 1, 2000 Population Estimates Base | July 1, 2001 Population | July 1, 2002 Population | July 1, 2003 Population | July 1, 2004 Population | % Change April, 2000 to July 1, 2004 |
|---|---|---|---|---|---|---|---|
| **Wyoming** | **493,782** | **493,782** | **494,118** | **499,192** | **502,111** | **506,529** | **2.6** |
| **Converse County** | **12,052** | **12,052** | **12,100** | **12,359** | **12,314** | **12,515** | **3.8** |
| Douglas city | 5,288 | 5,301 | 5,325 | 5,432 | 5,396 | 5,489 | 3.5 |
| Glenrock town | 2,231 | 2,242 | 2,243 | 2,291 | 2,284 | 2,300 | 2.6 |
| Lost Springs town | 1 | 1 | 1 | 1 | 1 | 1 | 0.0 |
| Rolling Hills town | 449 | 449 | 450 | 460 | 460 | 460 | 2.4 |
| Balance of Converse County | 4,083 | 4,059 | 4,081 | 4,175 | 4,173 | 4,265 | 5.1 |
| **Natrona County** | **66,533** | **66,533** | **66,899** | **67,523** | **68,236** | **69,010** | **3.7** |
| Bar Nunn town | 936 | 936 | 944 | 955 | 971 | 1,140 | 21.8 |
| Casper city | 49,644 | 49,747 | 49,863 | 50,244 | 50,766 | 51,240 | 3.0 |
| Edgerton town | 169 | 169 | 169 | 170 | 171 | 172 | 1.8 |
| Evansville town | 2,255 | 2,255 | 2,270 | 2,286 | 2,299 | 2,306 | 2.3 |
| Midwest town | 408 | 408 | 408 | 411 | 417 | 428 | 4.9 |
| Mills town | 2,591 | 2,632 | 2,740 | 2,831 | 2,868 | 2,875 | 9.2 |
| Balance of Natrona County | 10,530 | 10,386 | 10,505 | 10,626 | 10,744 | 10,849 | 4.5 |

Note: The April 1, 2000 Population Estimates Base reflects modifications to the Census 2000 population as documented in the Count Question Resolution program, updates from the Boundary and Annexation Survey, and geographic program revisions. An "(X)" in the Census 2000 field indicates a locality that was formed or incorporated after Census 2000 or was erroneously omitted from Census 2000. Additional information on these localities can be found in the Geographic Change Notes (see "boundary changes" under the Geographic Topics section of the Estimates page). Dash (-) represents zero or rounds to zero.

*Source: Population Division, U.S. Census Bureau*

*Release Date: June 30, 2005*

# TABLE 2-1B

## Natrona County, Wyoming

| People QuickFacts | Natrona County | Wyoming |
|---|---|---|
| Population, 2004 estimate | 69,010 | 506,529 |
| Population, percent change, April 1, 2000 to July 1, 2004 | 3.7% | 2.6% |
| Population, 2000 | 66,533 | 493,782 |
| Population, percent change, 1990 to 2000 | 8.7% | 8.9% |
| Persons under 5 years old, percent, 2000 | 6.5% | 6.3% |
| Persons under 18 years old, percent, 2000 | 26.0% | 26.1% |
| Persons 65 years old and over, percent, 2000 | 12.7% | 11.7% |
| Female persons, percent, 2000 | 50.6% | 49.7% |
| White persons, percent, 2000 (a) | 94.2% | 92.1% |
| Black or African American persons, percent, 2000 (a) | 0.8% | 0.8% |
| American Indian and Alaska Native persons, percent, 2000 (a) | 1.0% | 2.3% |
| Asian persons, percent, 2000 (a) | 0.4% | 0.6% |
| Native Hawaiian and Other Pacific Islander, percent, 2000 (a) | Z | 0.1% |
| Persons reporting some other race, percent, 2000 (a) | 1.9% | 2.5% |
| Persons reporting two or more races, percent, 2000 | 1.7% | 1.8% |
| White persons, not of Hispanic/Latino origin, percent, 2000 | 91.7% | 88.9% |
| Persons of Hispanic or Latino origin, percent, 2000 (b) | 4.9% | 6.4% |
| Living in same house in 1995 and 2000', pct age 5+, 2000 | 51.0% | 51.3% |
| Foreign born persons, percent, 2000 | 1.8% | 2.3% |
| Language other than English spoken at home, pct age 5+, 2000 | 5.1% | 6.4% |
| High school graduates, percent of persons age 25+, 2000 | 88.3% | 87.9% |
| Bachelor's degree or higher, pct of persons age 25+, 2000 | 20.0% | 21.9% |
| Persons with a disability, age 5+, 2000 | 11,579 | 77,143 |
| Mean travel time to work (minutes), workers age 16+, 2000 | 16.7 | 17.8 |
| Housing units, 2002 | 30,212 | 227,941 |
| Homeownership rate, 2000 | 69.9% | 70.0% |
| Housing units in multi-unit structures, percent, 2000 | 16.3% | 15.2% |
| Median value of owner-occupied housing units, 2000 | $84,600 | $96,600 |

# TABLE 2-1B (Cont.)

| | | |
|---|---|---|
| Households, 2000 | 26,819 | 193,608 |
| Persons per household, 2000 | 2.42 | 2.48 |
| Median household income, 1999 | $36,619 | $37,892 |
| Per capita money income, 1999 | $18,913 | $19,134 |
| Persons below poverty, percent, 1999 | 11.8% | 11.4% |
| **Business QuickFacts** | **Natrona County** | **Wyoming** |
| Private nonfarm establishments with paid employees, 2001 | 2,644 | 18,453 |
| Private nonfarm employment, 2001 | 27,774 | 178,299 |
| Private nonfarm employment, percent change 2000-2001 | 0.8% | 2.1% |
| Nonemployer establishments, 2000 | 4,672 | 35,651 |
| Manufacturers shipments, 1997 ($1000) | 328,274 | 2,955,070 |
| Retail sales, 1997 ($1000) | 645,634 | 4,530,537 |
| Retail sales per capita, 1997 | $10,135 | $9,438 |
| Minority-owned firms, percent of total, 1997 | 2.7% | 4.3% |
| Women-owned firms, percent of total, 1997 | 19.7% | 22.6% |
| Housing units authorized by building permits, 2002 | 150 | 2,045 |
| Federal funds and grants, 2002 ($1000) | 318,023 | 3,666,151 |
| **Geography QuickFacts** | **Natrona County** | **Wyoming** |
| Land area, 2000 (square miles) | 5,340 | 97,100 |
| Persons per square mile, 2000 | 12.5 | 5.1 |
| FIPS Code | 025 | 56 |
| Metropolitan or Micropolitan Statistical Area | Casper, WY Metro Area | |

(a) Includes persons reporting only one race.
(b) Hispanics may be of any race, so also are included in applicable race categories.

FN: Footnote on this item for this area in place of data
NA: Not available
D: Suppressed to avoid disclosure of confidential information
X: Not applicable
S: Suppressed; does not meet publication standards
Z: Value greater than zero but less than half unit of measure shown
F: Fewer than 100 firms

Source U.S. Census Bureau: State and County QuickFacts. Data derived from Population Estimates, 2000 Census of Population and Housing, 1990 Census of Population and Housing, Small Area Income and Poverty Estimates, County Business Patterns, 1997 Economic Census, Minority- and Women-Owned Business, Building Permits, Consolidated Federal Funds Report, 1997 Census of Governments

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**Census Bureau Links:** • • • • • • • • •

# TABLE 2-1C

## Converse County, Wyoming

| People QuickFacts | Converse County | Wyoming |
|---|---|---|
| Population, 2004 estimate | 12,515 | 506,529 |
| Population, percent change, April 1, 2000 to July 1, 2004 | 3.8% | 2.6% |
| Population, 2000 | 12,052 | 493,782 |
| Population, percent change, 1990 to 2000 | 8.3% | 8.9% |
| Persons under 5 years old, percent, 2000 | 6.4% | 6.3% |
| Persons under 18 years old, percent, 2000 | 28.5% | 26.1% |
| Persons 65 years old and over, percent, 2000 | 11.0% | 11.7% |
| Female persons, percent, 2000 | 50.2% | 49.7% |
| White persons, percent, 2000 (a) | 94.7% | 92.1% |
| Black or African American persons, percent, 2000 (a) | 0.1% | 0.8% |
| American Indian and Alaska Native persons, percent, 2000 (a) | 0.9% | 2.3% |
| Asian persons, percent, 2000 (a) | 0.3% | 0.6% |
| Native Hawaiian and Other Pacific Islander, percent, 2000 (a) | Z | 0.1% |
| Persons reporting some other race, percent, 2000 (a) | 2.5% | 2.5% |
| Persons reporting two or more races, percent, 2000 | 1.5% | 1.8% |
| White persons, not of Hispanic/Latino origin, percent, 2000 | 91.9% | 88.9% |
| Persons of Hispanic or Latino origin, percent, 2000 (b) | 5.5% | 6.4% |
| Living in same house in 1995 and 2000', pct age 5+, 2000 | 56.4% | 51.3% |
| Foreign born persons, percent, 2000 | 1.9% | 2.3% |
| Language other than English spoken at home, pct age 5+, 2000 | 5.6% | 6.4% |
| High school graduates, percent of persons age 25+, 2000 | 86.4% | 87.9% |
| Bachelor's degree or higher, pct of persons age 25+, 2000 | 14.7% | 21.9% |
| Persons with a disability, age 5+, 2000 | 1,889 | 77,143 |
| Mean travel time to work (minutes), workers age 16+, 2000 | 25.9 | 17.8 |
| Housing units, 2002 | 5,718 | 227,941 |
| Homeownership rate, 2000 | 74.0% | 70.0% |
| Housing units in multi-unit structures, percent, 2000 | 13.8% | 15.2% |
| Median value of owner-occupied housing units, 2000 | $84,900 | $96,600 |

# TABLE 2-1C (Cont.)

| | | |
|---|---|---|
| Households, 2000 | 4,694 | 193,608 |
| Persons per household, 2000 | 2.55 | 2.48 |
| Median household income, 1999 | $39,603 | $37,892 |
| Per capita money income, 1999 | $18,744 | $19,134 |
| Persons below poverty, percent, 1999 | 11.6% | 11.4% |
| **Business QuickFacts** | **Converse County** | **Wyoming** |
| Private nonfarm establishments with paid employees, 2001 | 384 | 18,453 |
| Private nonfarm employment, 2001 | 2,780 | 178,299 |
| Private nonfarm employment, percent change 2000-2001 | 4.3% | 2.1% |
| Nonemployer establishments, 2000 | 881 | 35,651 |
| Manufacturers shipments, 1997 ($1000) | NA | 2,955,070 |
| Retail sales, 1997 ($1000) | 64,226 | 4,530,537 |
| Retail sales per capita, 1997 | $5,208 | $9,438 |
| Minority-owned firms, percent of total, 1997 | F | 4.3% |
| Women-owned firms, percent of total, 1997 | 28.7% | 22.6% |
| Housing units authorized by building permits, 2002 | 16 | 2,045 |
| Federal funds and grants, 2002 ($1000) | 67,800 | 3,666,151 |
| **Geography QuickFacts** | **Converse County** | **Wyoming** |
| Land area, 2000 (square miles) | 4,255 | 97,100 |
| Persons per square mile, 2000 | 2.8 | 5.1 |
| FIPS Code | 009 | 56 |
| Metropolitan or Micropolitan Statistical Area | None | |

(a) Includes persons reporting only one race.
(b) Hispanics may be of any race, so also are included in applicable race categories.

FN: Footnote on this item for this area in place of data
NA: Not available
D: Suppressed to avoid disclosure of confidential information
X: Not applicable
S: Suppressed; does not meet publication standards
Z: Value greater than zero but less than half unit of measure shown
F: Fewer than 100 firms

Source U.S. Census Bureau: State and County QuickFacts. Data derived from Population Estimates, 2000 Census of Population and Housing, 1990 Census of Population and Housing, Small Area Income and Poverty Estimates, County Business Patterns, 1997 Economic Census, Minority- and Women-Owned Business, Building Permits, Consolidated Federal Funds Report, 1997 Census of Governments

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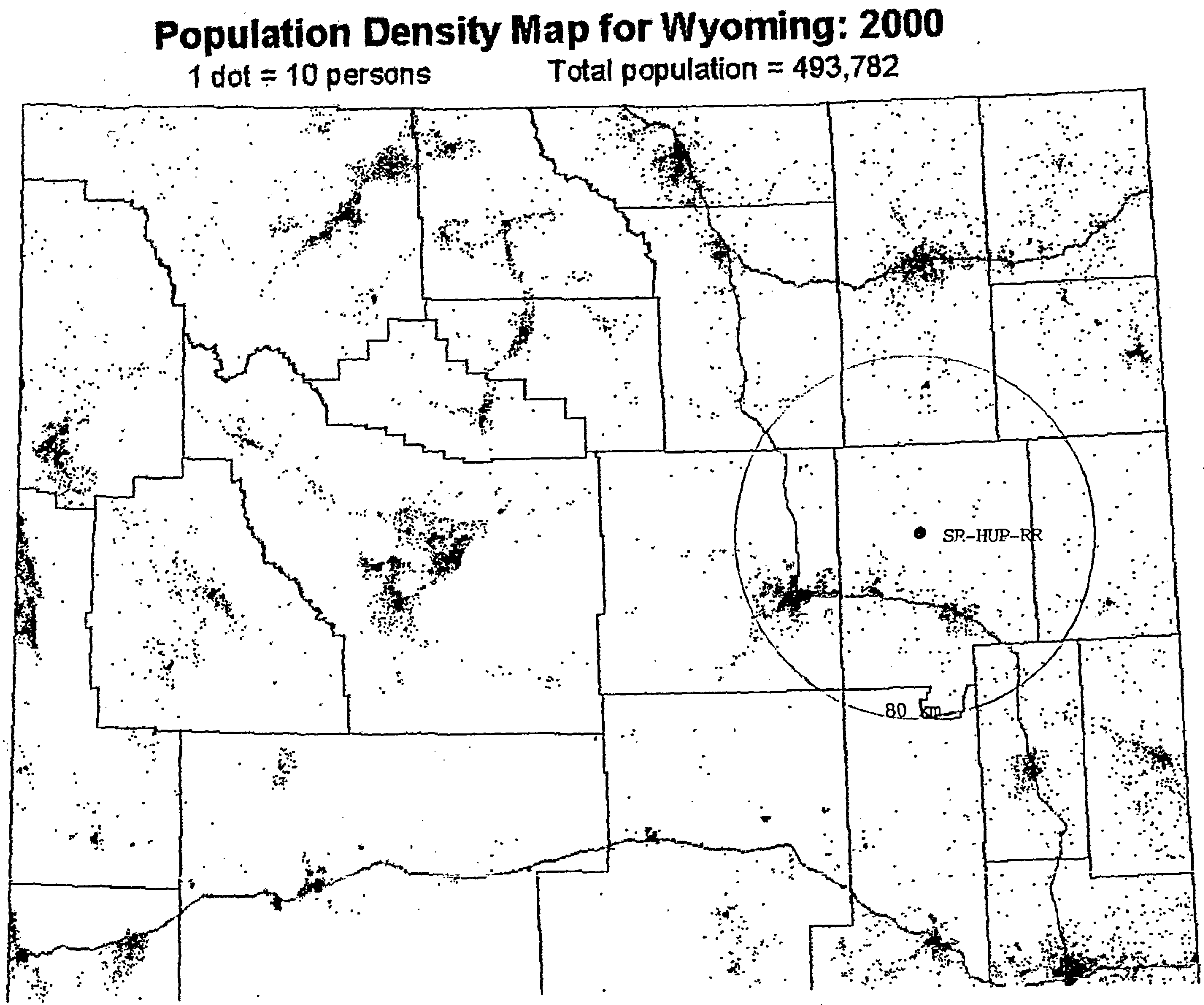
FIGURE 2-2A


Population Density Map for Wyoming: 2000
1 dot = 10 persons
Total population = 493,782
SP-HUP-RR
80 km

# FIGURE 2-3

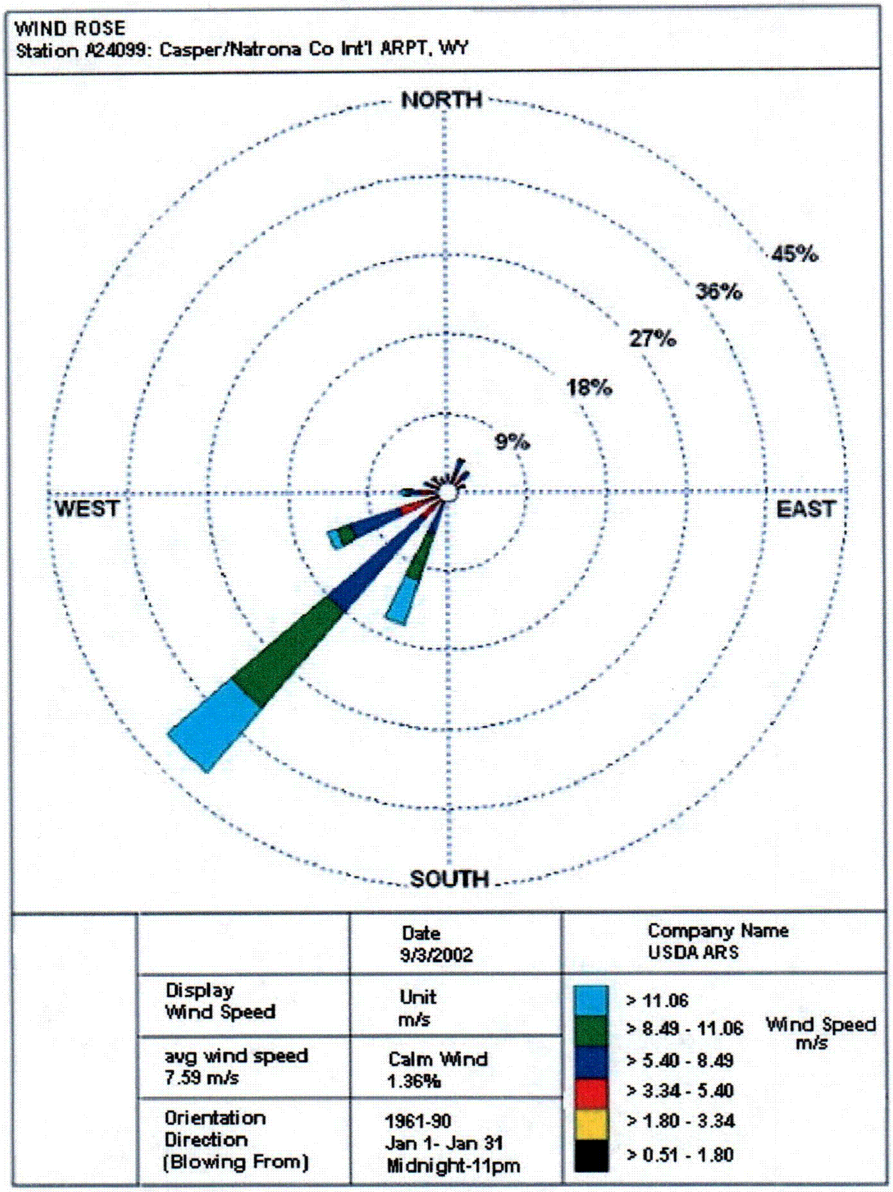



**Figure 11.8**. Casper January wind rose based upon observations taken between 1961-90. Speeds are measured in m $s^{-1}$. Double the values to approximate mph.

C01

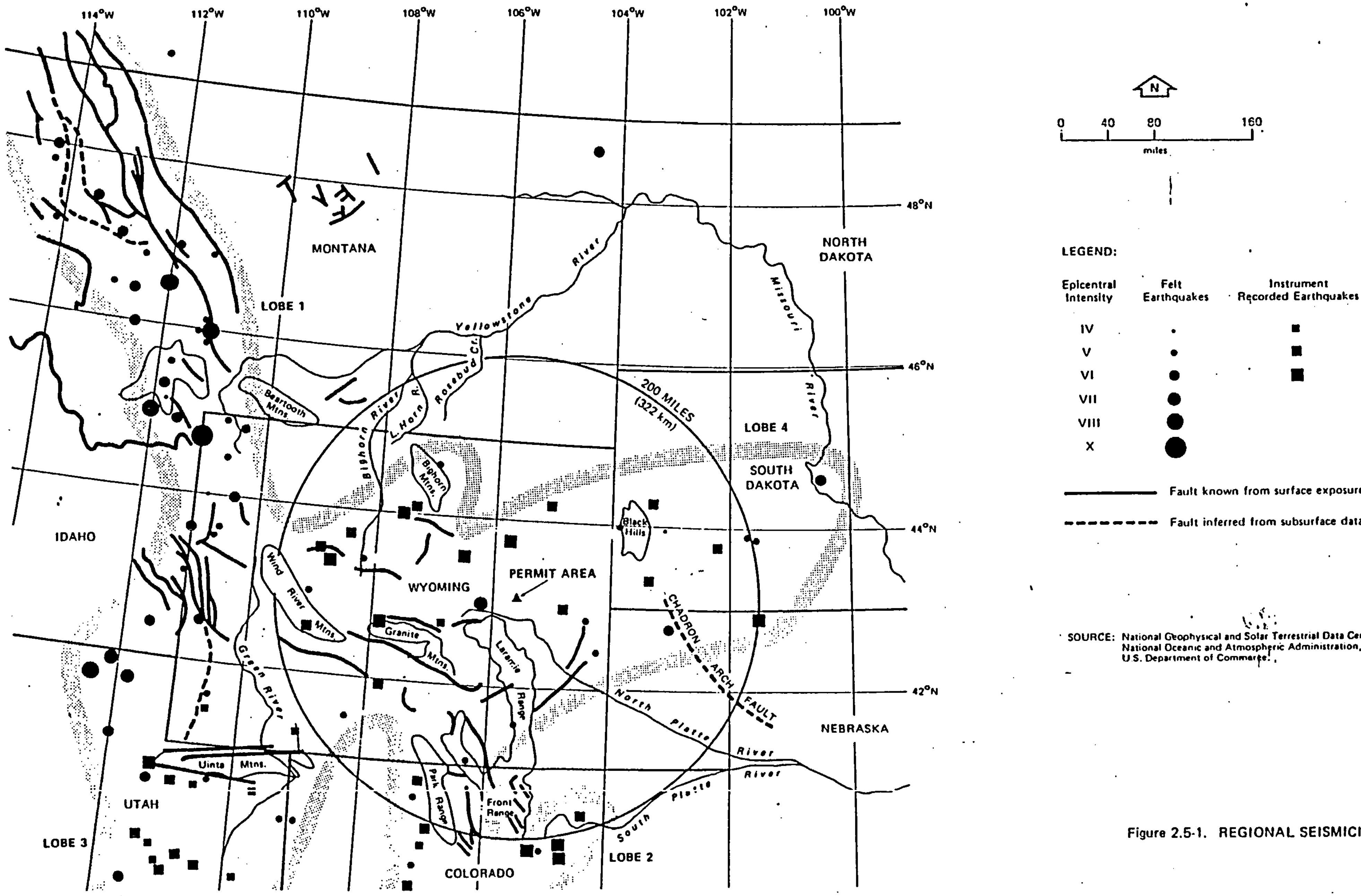



FIGURE 2-5

Figure 2.5-1. REGIONAL SEISMICITY

# ATTACHMENT 2-1

Siesmological Characteristics of Converse and Natrona Counties

# ATTACHMENT 2-1

**Basic Seismological Characterization**
**for**
**Converse County, Wyoming**

by

James C. Case, Robert Kirkwood, and Rachel N. Toner
Wyoming State Geological Survey
September 2002

## BACKGROUND

Seismological characterizations of an area can range from an analysis of historic seismicity to a long-term probabilistic seismic hazard assessment. A complete characterization usually includes a summary of historic seismicity, an analysis of the Seismic Zone Map of the Uniform Building Code, deterministic analyses on active faults, "floating earthquake" analyses, and short- or long-term probabilistic seismic hazard analyses.

Presented below, for Converse County, Wyoming, are an analysis of historic seismicity, an analysis of the Uniform Building Code, deterministic analyses of nearby active faults, an analysis of the maximum credible "floating earthquake", and current short- and long-term probabilistic seismic hazard analyses.

### Historic Seismicity in Converse County

The enclosed map of "Earthquake Epicenters and Suspected Active Faults with Surficial Expression in Wyoming" (Case and others, 1997) shows the historic distribution of earthquakes in Wyoming. Twelve magnitude 3.0 and greater earthquakes have been recorded in Converse County. These earthquakes are discussed below.

The first earthquake recorded in Converse County occurred on April 14, 1947. The earthquake had an intensity of V, and was felt near LaPrele Creek southwest of Douglas. The earthquake was felt by everyone in a ranch house, and by a few outdoors. Windows were rattled, chairs were moved, and buildings shook (Murphy, 1950).

On August 21,1952, an intensity IV earthquake occurred approximately 7 miles north-northeast of Esterbrook, in Converse County. It was felt by several people in the area, and was reportedly felt 40 miles to the southwest of Esterbrook (Murphy and Cloud, 1954). Three additional earthquakes have occurred in the same location as the August 21, 1952 event. The first, a small magnitude event with no associated magnitude or intensity, occurred on September 2, 1952. The second, an intensity III event, occurred on January 5, 1957. The most recent, an intensity IV event, occurred on March 31, 1964. No damage was reported for any of the events. On January 15, 1978, a magnitude 3.0, intensity III earthquake occurred approximately 3 miles northeast of Esterbrook, in Converse County. No damage was reported.

Two earthquakes occurred in Converse County in the 1980's. On November 15, 1983, a magnitude 3.0, intensity III earthquake occurred approximately 15 miles northeast of Casper in western Converse County. No damage was reported. On December 5, 1984, a non-damaging magnitude 2.9 earthquake occurred in the Laramie Range in southern Converse County.

Four earthquakes occurred in Converse County in the 1990's. On June 30, 1993, a magnitude 3.0 earthquake was located approximately 15 miles north of Douglas. No damage was reported. On July 23, 1993, a magnitude 3.7, intensity IV earthquake occurred in southern Converse County, approximately 13 miles north-northwest of Toltec in northern Albany County. This event was felt as far away as Laramie. On December 13, 1993, another earthquake occurred approximately 8 miles east of Toltec. This non-damaging event had a magnitude of 3.5. Most recently, on October 19, 1996, a magnitude 4.2 earthquake was recorded approximately 15 miles northeast of Casper in western Converse County. No damage was reported, although the event was felt by many Casper residents.

## Regional Historic Seismicity

Many earthquakes in the area have originated in the Laramie Range in southern Converse County and northern Albany County. The first earthquake recorded in this area occurred on August 27, 1938. This intensity III earthquake was recorded in northern Albany County near Marshall. No damage was associated with the event (Neumann, 1940).

As mentioned in the previous section, earthquakes have occurred in this region on August 21,1952, September 2, 1952, January 5, 1957, March 31, 1964, and January 15, 1978.

In the 1980's, there were a series of relatively significant earthquakes in northern Albany County that were felt over a wide area. On February 13, 1983, a magnitude 4.0, intensity IV event occurred approximately 6 miles southwest of Toltec. This non-damaging earthquake was felt in Laramie, Casper, Wheatland, and Medicine Bow (Laramie Daily Boomerang, February 15, 1983). The most significant earthquake to occur in the area, a magnitude 5.5, intensity VI event, occurred on October 18, 1984. That earthquake, with an epicenter located approximately 4 miles west-northwest of Toltec, was felt in Wyoming, South Dakota, Nebraska, Colorado, Utah, Montana, and Kansas. Stover (1985) reports that cracks were found in the exterior brick walls of the Douglas City Hall and a public school in Medicine Bow. Chimneys were cracked at Casper, Douglas, Guernsey, Lusk, and Rock River. A wall in a Laramie-area school was slightly cracked by the earthquake. The earthquake was one of the largest felt in eastern Wyoming. There were a number of aftershocks to the main event, with the most significant being a magnitude 4.5, intensity IV event, and a magnitude 3.8 event occurring on October 18, 1984; a magnitude 3.5 event on October 20, 1984; magnitude 3.3 events on October 19, November 6, and December 17, 1984; a magnitude 3.1 event on October 22, 1984; a magnitude 3.2 event on October 24, 1984; and a magnitude 2.9 event on December 5, 1984. On June 12, 1986, a magnitude 3.0 earthquake occurred in the same general area.

In 1993, there were a series of non-damaging earthquakes recorded in Northern Albany and southern Converse Counties. On July 23, 1993, a magnitude 3.7, intensity IV earthquake occurred in southern Converse County, approximately 13 miles north-northwest of Toltec in northern Albany County. This event was felt as far away as Laramie. On October 9, 1993, a magnitude 3.7, intensity IV earthquake occurred approximately 9 miles north of Marshall. The earthquake was felt in Garrett. On December 13, 1993, another earthquake occurred approximately 8 miles east of Toltec. This non-damaging event had a magnitude of 3.5.

The most recent earthquake event in the region occurred on April 13, 2000. This magnitude 3.3 earthquake was located in northern Albany County, approximately 2 miles southwest of Warbonnet Peak. No damage was reported.

## Uniform Building Code

The Uniform Building Code (UBC) is a document prepared by the International Conference of Building Officials. Its stated intent is to "provide minimum standards to safeguard life or limb, health, property, and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location and maintenance of all buildings and structures within this jurisdiction and certain equipment specifically regulated herein."

The UBC contains information and guidance on designing buildings and structures to withstand seismic events. With safety in mind, the UBC provides Seismic Zone Maps to help identify which design factors are critical to specific areas of the country. In addition, depending upon the type of building, there is also an "importance factor". The "importance factor" can, in effect, raise the standards that are applied to a building.

The current UBC Seismic Zone Map (Figure 1) (1997) has five seismic zones, ranging from Zone 0 to Zone 4, as can be seen on the enclosed map. The seismic zones are in part defined by the probability of having a certain level of ground shaking (horizontal acceleration) in 50 years. The criteria used for defining boundaries on the Seismic Zone Map were established by the Seismology Committee of the Structural Engineers Association of California (Building Standards, September-October, 1986). The criteria they developed are as follows:

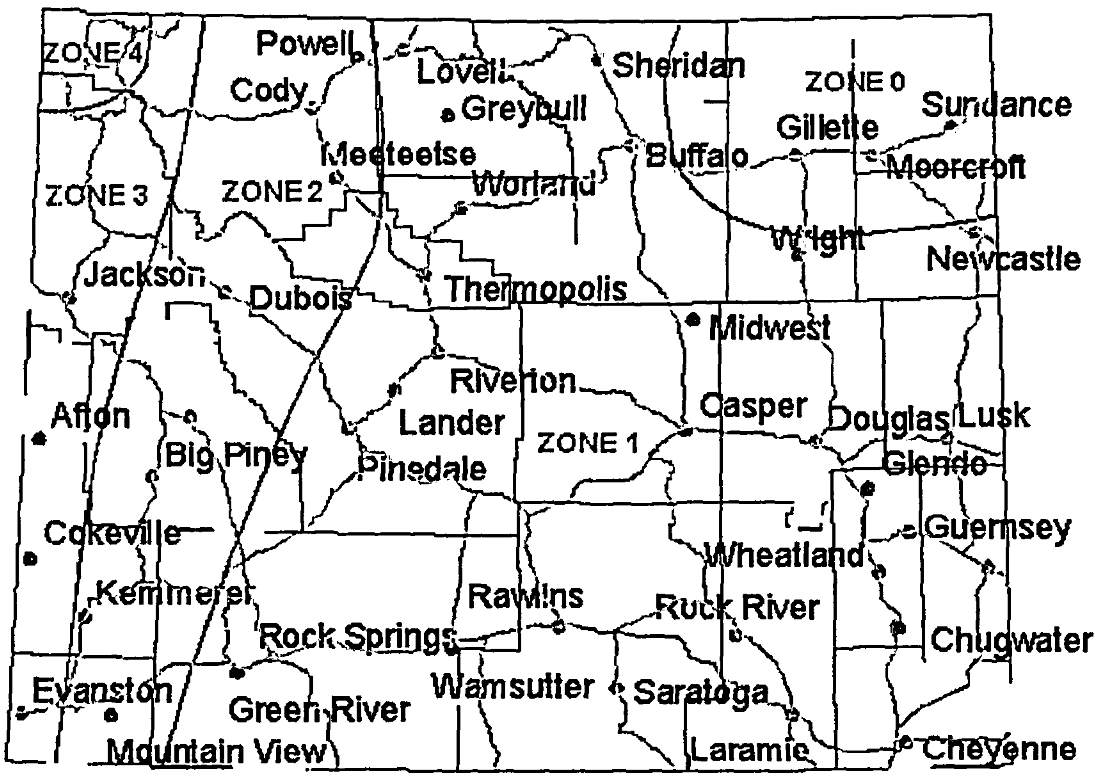



**Figure 1.** UBC Seismic Zone Map.

| Zone | Effective Peak Acceleration, % gravity (g) |
|---|---|
| 4 | 30% and greater |
| 3 | 20% to less than 30% |
| 2 | 10% to less than 20% |
| 1 | 5% to less than 10% |
| 0 | less than 5% |

The committee assumed that there was a 90% probability that the above values would not be exceeded in 50 years, or a 100% probability that the values would be exceeded in 475 to 500 years.

Converse County is in Seismic Zone 1 of the UBC. Since effective peak accelerations (90% chance of non-exceedance in 50 years) can range from 5%-10%g in Zone 1, and there has been significant historic seismicity in the county, it may be reasonable to assume that an average peak acceleration of 10.0%g could be applied to the design of a non-critical facility located in the county if only the UBC were used. Such an acceleration, however, is significantly less than would be suggested through newer building codes.

Recently, the UBC has been replaced by the International Building Code (IBC). The IBC is based upon probabilistic analyses, which are described in a following section. Converse County still uses the UBC, however, as do most Wyoming counties as of September 2002.

## Deterministic Analysis Of Regional Active Faults With A Surficial Expression

There are no known exposed active faults with a surficial expression in Converse County. As a result, no fault-specific analysis can be generated for Converse County.

## Floating or Random Earthquake Sources

Many federal regulations require an analysis of the earthquake potential in areas where active faults are not exposed, and where earthquakes are tied to buried faults with no surface expression. Regions with a uniform potential for the occurrence of such earthquakes are called tectonic provinces. Within a tectonic province, earthquakes associated with buried faults are assumed to occur randomly, and as a result can theoretically occur anywhere within that area of uniform earthquake potential. In reality, that random distribution may not be the case, as all earthquakes are associated with specific faults. If all buried faults have not been identified, however, the distribution has to be considered random. "Floating earthquakes" are earthquakes that are considered to occur randomly in a tectonic province.

It is difficult to accurately define tectonic provinces when there is a limited historic earthquake record. When there are no nearby seismic stations that can detect small-magnitude earthquakes, which occur more frequently than larger events, the problem is compounded. Under these conditions, it is common to delineate larger, rather than smaller, tectonic provinces.

The U.S. Geological Survey identified tectonic provinces in a report titled "Probabilistic Estimates of Maximum Acceleration and Velocity in Rock in the Contiguous United States" (Algermissen and others, 1982). In that report, Converse County was classified as being in a tectonic province with a "floating earthquake" maximum magnitude of 6.1. Geomatrix (1988b) suggested using a more extensive regional tectonic province, called the "Wyoming Foreland Structural Province", which is approximately defined by the Idaho-Wyoming Thrust Belt on the west, 104° West longitude on the east, 40° North latitude on the south, and 45° North latitude on the north. Geomatrix (1988b) estimated that the largest "floating" earthquake in the "Wyoming Foreland Structural Province" would have a magnitude in the 6.0 – 6.5 range, with an average value of magnitude 6.25.

Federal or state regulations usually specify if a "floating earthquake" or tectonic province analysis is required for a facility. Usually, those regulations also specify at what distance a floating earthquake is to be placed from a facility. For example, for uranium mill tailings sites, the Nuclear Regulatory Commission requires that a floating earthquake be placed 15 kilometers from the site. That earthquake is then used to determine what horizontal accelerations may occur at the site. A magnitude 6.25 "floating" earthquake, placed 15 kilometers from any structure in Converse County, would generate horizontal accelerations of approximately 15%g at the site. That acceleration would be adequate for designing a uranium mill tailings site, but may be too large for less critical sites, such as a landfill. Critical facilities, such as dams, usually require a more detailed probabilistic analysis of random earthquakes. Based upon probabilistic analyses of random earthquakes in an area distant from exposed active faults (Geomatrix, 1988b), however, placing a magnitude 6.25 earthquake at 15 kilometers from a site will provide a fairly conservative estimate of design ground accelerations.

**Probabilistic Seismic Hazard Analyses**

The U.S. Geological Survey (USGS) publishes probabilistic acceleration maps for 500-, 1000-, and 2,500-year time frames. The maps show what accelerations may be met or exceeded in those time frames by expressing the probability that the accelerations will be met or exceeded in a shorter time frame. For example, a 10% probability that acceleration may be met or exceeded in 50 years is roughly equivalent to a 100% probability of exceedance in 500 years.

The USGS has recently generated new probabilistic acceleration maps for Wyoming (Case, 2000). Copies of the 500-year (10% probability of exceedance in 50 years), 1000-year (5% probability of exceedance in 50 years), and 2,500-year (2% probability of exceedance in 50 years) maps are attached. Until recently, the 500-year map was often used for planning purposes for average structures, and was the basis of the most current Uniform Building Code. The new International Building Code, however, uses a 2,500-year map as the basis for building design. The maps reflect current perceptions on seismicity in Wyoming. In many areas of Wyoming, ground accelerations shown on the USGS maps can be increased due to local soil conditions. For example, if fairly soft, saturated sediments are present at the surface, and seismic waves are passed through them, surface ground accelerations will usually be greater than would be experienced if only bedrock was present. In this case, the ground accelerations shown on the USGS maps would underestimate the local hazard, as they are based upon accelerations that would be expected if firm soil or rock were present at the surface. Intensity values can be found in Table 1.

Based upon the 500-year map (10% probability of exceedance in 50 years) (Figure 2), the estimated peak horizontal acceleration in Converse County ranges from 4%g in the northeastern portion of the county to greater than 7%g in the southwestern portion of the county. These accelerations are roughly comparable to intensity V earthquakes (3.9%g – 9.2%g). These accelerations are comparable to the low end of accelerations to be expected in Seismic Zone 1 of the Uniform Building Code. Intensity V earthquakes can result in cracked plaster and broken dishes. Douglas would be subjected to an acceleration of approximately 6%g or intensity V.

Based upon the 1000-year map (5% probability of exceedance in 50 years) (Figure 3), the estimated peak horizontal acceleration in Converse County ranges from 7%g in the northeastern part of the county to greater than 10%g in the southwestern corner of the county. Those accelerations are roughly comparable to intensity V earthquakes (3.9%g – 9.2%g) to intensity VI earthquakes (9.2%g – 18.0%g). Intensity V earthquakes can result in cracked plaster and broken dishes. Intensity VI earthquakes can result in fallen plaster and damaged chimneys. Douglas would be subjected to an acceleration of approximately 10 - 11%g or intensity VI.

Based upon the 2500-year map (2% probability of exceedance in 50 years) (Figure 4), the estimated peak horizontal acceleration in Converse County ranges from 11%g in the northeastern corner of the county to over 20%g in the southwestern quarter of the county. Those accelerations are roughly comparable to intensity VI earthquakes (9.2%g – 18.0%g) to intensity VII earthquakes (18.0%g – 34.0%g). Intensity VI earthquakes can result in fallen plaster and damaged chimneys. Intensity VII earthquakes can result in slight to moderate damage in well-built ordinary structures, and considerable damage in poorly built or badly designed structures. Chimneys may be broken. Douglas would be subjected to an acceleration of approximately 20%g or intensity VII.

As the historic record is limited, it is nearly impossible to determine when a 2,500-year event last occurred in the county. Because of the uncertainty involved, and based upon the fact that the new International Building Code utilizes 2,500-year events for building design, it is suggested that the 2,500-year probabilistic maps be used for Converse County analyses. This conservative approach is in the interest of public safety.

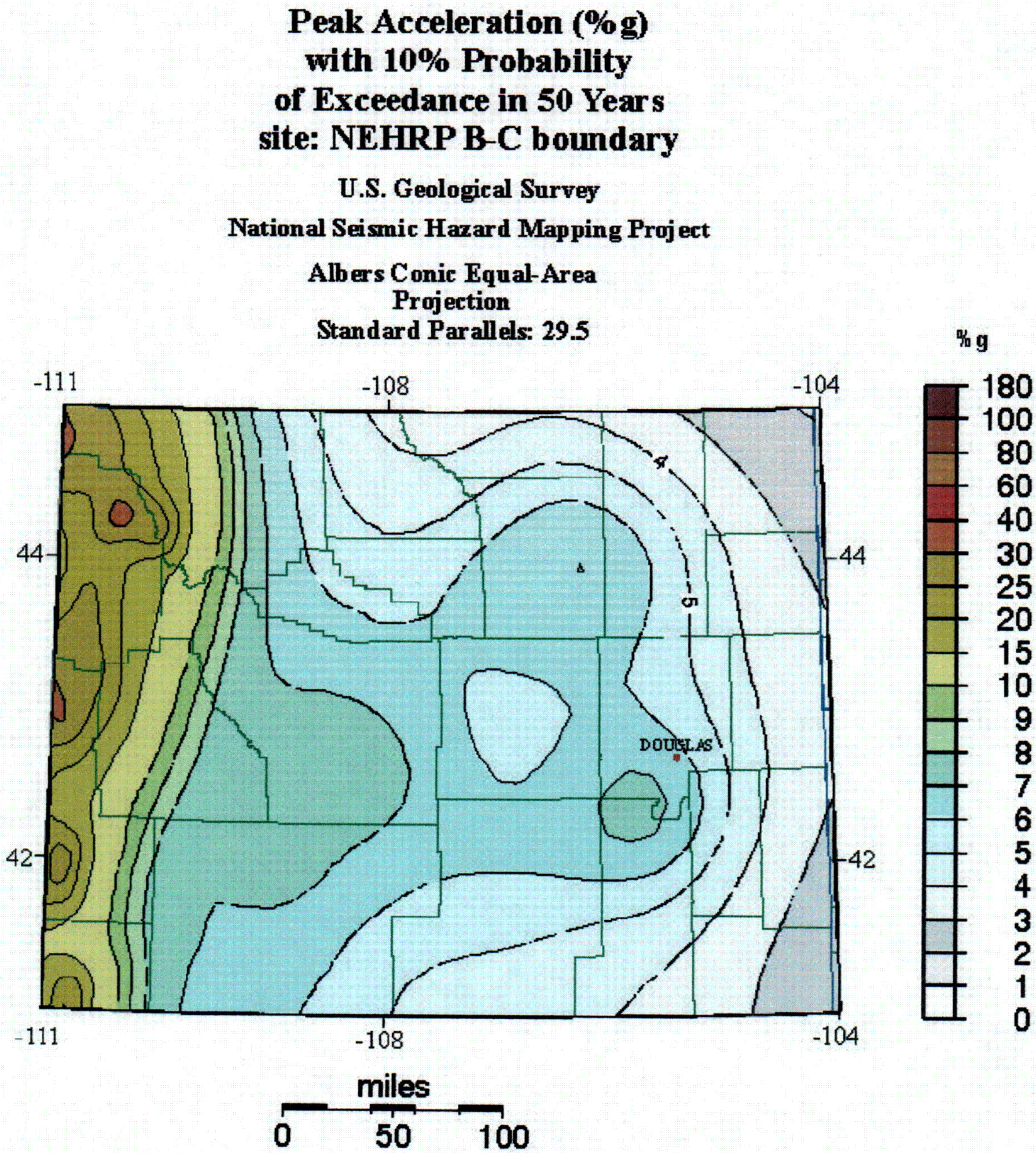



**Figure 2.** 500-year probabilistic acceleration map (10% probability of exceedance in 50 years).



CO2

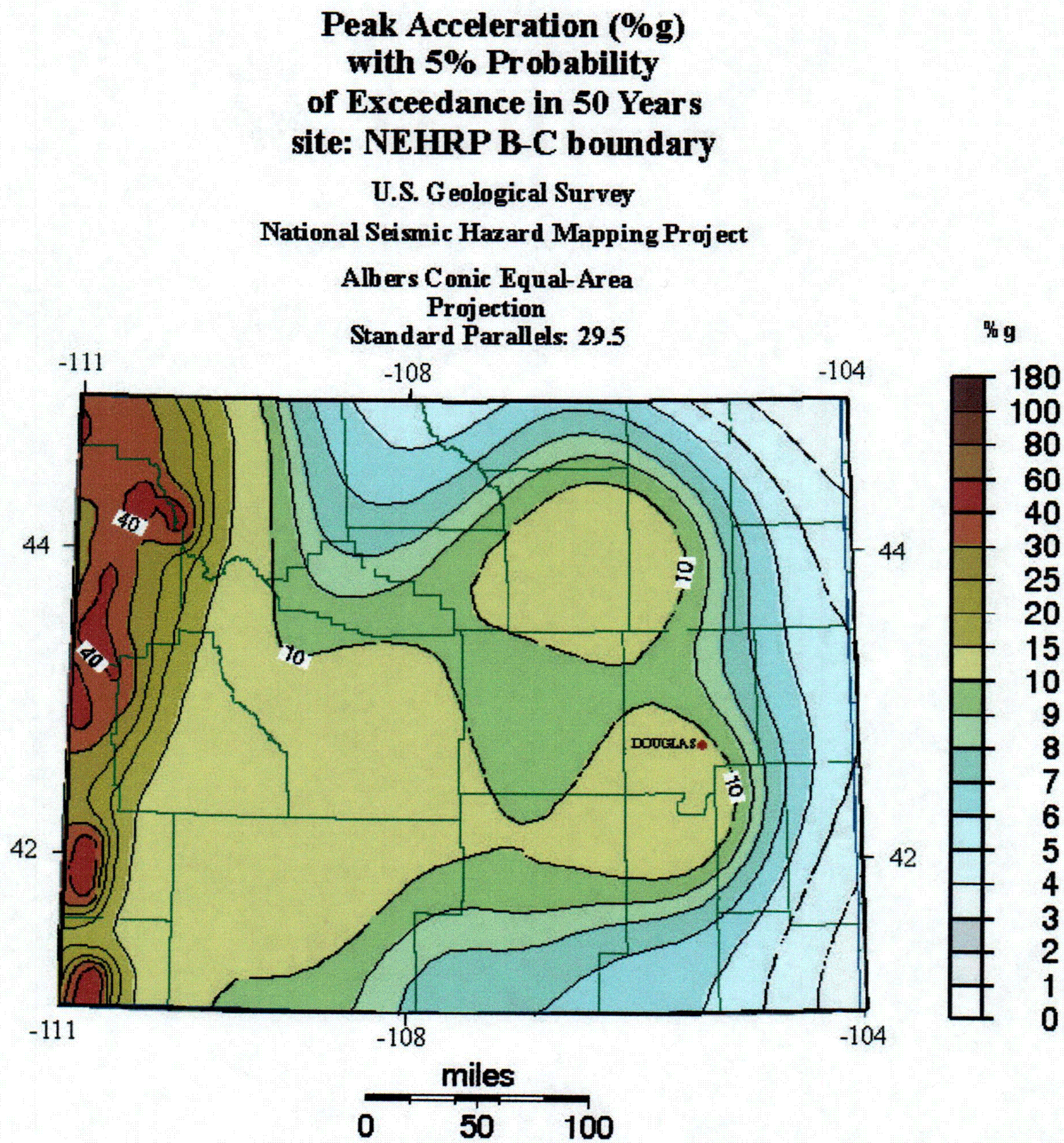



**Figure 3.** 1000-year probabilistic acceleration map (5% probability of exceedance in 50 years).



C03

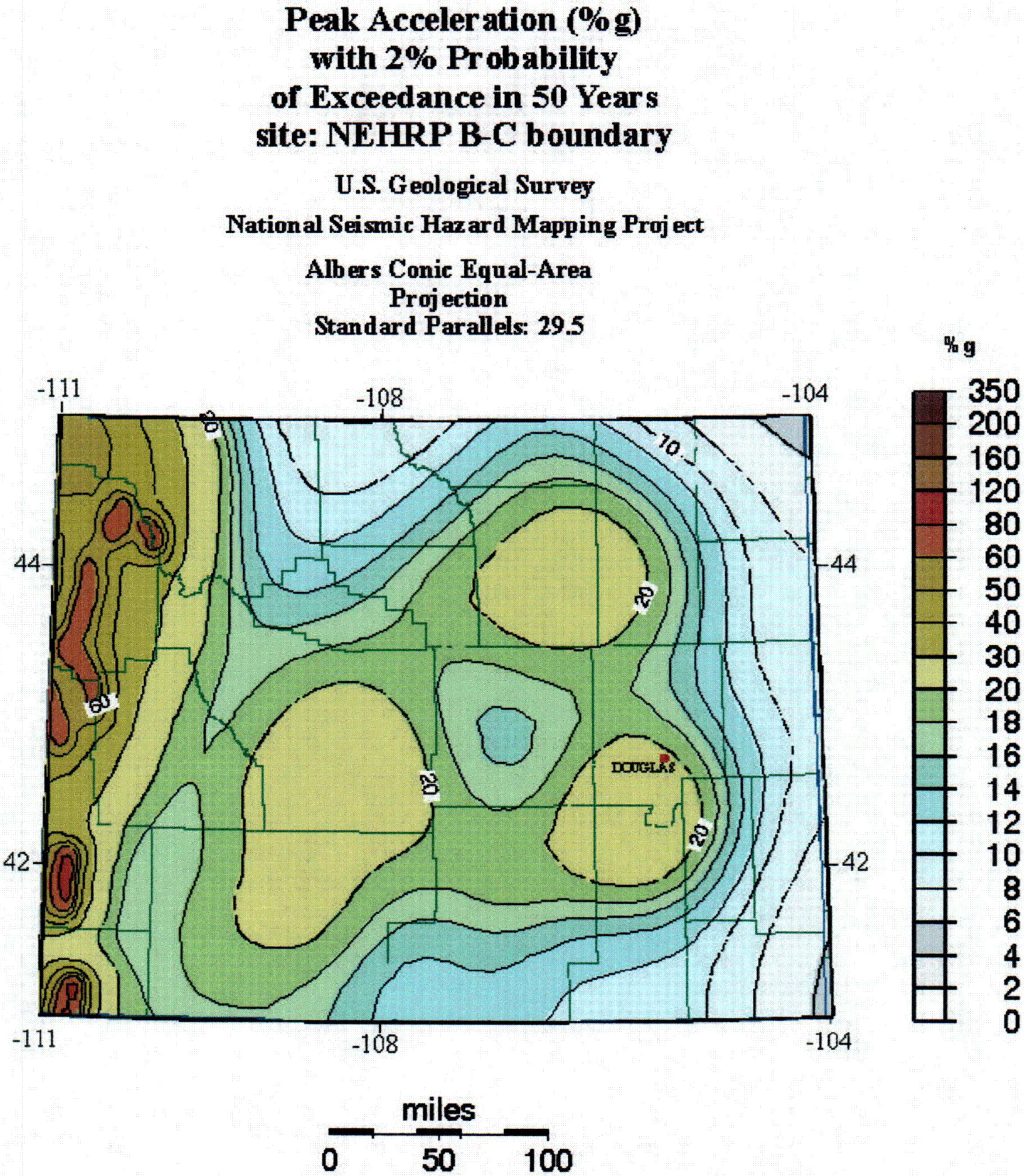



**Figure 4.** 2500-year probabilistic acceleration map (2% probability of exceedance in 50 years).



C04

**Table 1:**

| Modified Mercalli Intensity | Acceleration (%g) (PGA) | Perceived Shaking | Potential Damage |
|---|---|---|---|
| I | <0.17 | Not felt | None |
| II | 0.17 – 1.4 | Weak | None |
| III | 0.17 – 1.4 | Weak | None |
| IV | 1.4 – 3.9 | Light | None |
| V | 3.9 – 9.2 | Moderate | Very Light |
| VI | 9.2 – 18 | Strong | Light |
| VII | 18 – 34 | Very Strong | Moderate |
| VIII | 34 – 65 | Severe | Moderate to Heavy |
| IX | 65 – 124 | Violent | Heavy |
| X | >124 | Extreme | Very Heavy |
| XI | >124 | Extreme | Very Heavy |
| XII | >124 | Extreme | Very Heavy |

**Modified Mercalli Intensity and peak ground acceleration (PGA) (Wald, et al 1999).**

## Summary

There have been twenty-nine historic earthquakes with magnitudes greater than 3.0 recorded in or near Converse County. Because of the limited historic record, it is possible to underestimate the seismic hazard in Converse County if historic earthquakes are used as the sole basis for analysis. Earthquake and ground motion probability maps give a more reasonable estimate of damage potential in areas without exposed active faults at the surface, such as Converse County.

Current earthquake probability maps that are used in the newest building codes suggest a scenario that would result in moderate damage to buildings and their contents, with damage increasing from the northeast to the southwest. More specifically, the probability-based worst-case scenario could result in the following damage at points throughout the county:

Intensity VII Earthquake Areas

Boxelder
Douglas
Glenrock
Orin
Orpha
Rolling Hills

In intensity VII earthquakes, damage is negligible in buildings of good design and construction, slight-to-moderate in well-built ordinary structures, considerable in poorly built or badly designed structures such as unreinforced masonry buildings. Some chimneys will be broken.

Intensity VI Earthquake Areas

Bill
Lost Springs
Shawnee

In intensity VI earthquakes, some heavy furniture can be moved. There may be some instances of fallen plaster and damaged chimneys.

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**Basic Seismological Characterization**
**for**
**Natrona County, Wyoming**

by

James C. Case, Rachel N. Toner, and Robert Kirkwood
Wyoming State Geological Survey
January 2003

## BACKGROUND

Seismological characterizations of an area can range from an analysis of historic seismicity to a long-term probabilistic seismic hazard assessment. A complete characterization usually includes a summary of historic seismicity, an analysis of the Seismic Zone Map of the Uniform Building Code, deterministic analyses on active faults, "floating earthquake" analyses, and short- or long-term probabilistic seismic hazard analyses.

Presented below, for Natrona County, Wyoming, are an analysis of historic seismicity, an analysis of the Uniform Building Code, deterministic analyses of nearby active faults, an analysis of the maximum credible "floating earthquake", and current short- and long-term probabilistic seismic hazard analyses.

### Historic Seismicity in Natrona County

The enclosed map of "Earthquake Epicenters and Suspected Active Faults with Surficial Expression in Wyoming" (Case and others, 1997) shows the historic distribution of earthquakes in Wyoming. Twelve magnitude 2.5 or intensity III and greater earthquakes have been recorded in Natrona County. These earthquakes are discussed below.

The first earthquake that occurred in Natrona County took place on December 10, 1873, approximately 2 miles south of Powder River. People in the area reported feeling the earthquake as an intensity III event. Two of the earliest recorded earthquakes in Wyoming occurred near Casper. On June 25, 1894, an estimated intensity V earthquake was reported approximately 3 miles southwest of Evansville. Residents on Casper Mountain reported that dishes rattled to the floor and people were thrown from their beds. Water in the Platte River changed from fairly clear to reddish, and became thick with mud due to the riverbanks slumping into the river during the earthquake (Mokler, 1923). An even larger earthquake was felt in the same area on November 14, 1897. This intensity VI-VII earthquake, one of the largest recorded in central and eastern Wyoming, caused considerable damage to a few buildings. As a result of the earthquake, a portion of the Grand Central Hotel was cracked from the first to the third story. Some of the ceilings in the hotel were also severely cracked. In another part of Casper, a person sitting in a chair was thrown to the floor (Mokler, 1923).

On October 25, 1922, an intensity IV-V earthquake was detected approximately 6 miles north-northeast of Barr Nunn. The event was felt in Casper; at Salt Creek, 50 miles north of Casper; and at Bucknum, 22 miles west of Casper. Dishes were rattled and hanging pictures were tilted near Salt Creek. No significant damage was reported at Casper (Casper Daily Tribune, October 26, 1922).

One of the first earthquakes recorded near Midwest occurred on December 11, 1942. The intensity IV-V event occurred approximately 14 miles south of Midwest. Although no damage was reported, the event was felt in Casper, Salt Creek, and Glenrock (Casper Tribune-Herald, December 12, 1942). On August 27, 1948, another intensity IV earthquake was detected approximately 6 miles north-northeast of Bar Nunn. No damage was reported (Casper Tribune-Herald, August 27, 1948).

In the 1950's, two earthquakes caused some concern among Casper residents. On January 23, 1954, an intensity IV earthquake occurred approximately 7 miles northeast of Alcova. Although this event did not result in any reported damage, one area resident reported that he thought that an intruder in the attic of his house had fallen down (Casper Tribune-Herald, January 24, 1954). On August 19, 1959, an intensity IV earthquake was recorded north of Casper, approximately 6 miles north-northeast of Bar Nunn. People in Casper reported feeling this event (Reagor, Stover, and Algermissen, 1985). It is uncertain if this earthquake actually occurred in the Casper area, as it coincides with the Hebgen Lake, Montana, earthquakes that initiated on August 17, 1959.

Only one earthquake was reported in Natrona County in the 1960s. On January 8, 1968, a magnitude 3.8 earthquake occurred approximately 10 miles north-northwest of Alcova. No damage was reported.

An earthquake of no specific magnitude or intensity occurred approximately 13 miles southeast of Ervay on June 16, 1973. No one felt this earthquake and no damage was reported.

No other earthquakes occurred in Natrona County until March 9, 1993, when a magnitude 3.2 earthquake was recorded 17 miles west of Midwest. No damage was reported. A magnitude 3.1 earthquake also occurred in the far northwestern corner of the county on November 9, 1999. No one reported feeling this earthquake that was centered approximately 32 miles northwest of Waltman.

Most recently, on February 1, 2003, a magnitude 3.7 earthquake occurred approximately 16 miles north-northeast of Casper. Numerous Casper residents felt this event. One person reported feeling two jolts in rapid succession.

## Regional Historic Seismicity

Several earthquakes have also occurred near Natrona County. The first took place on August 11, 1916, in eastern Fremont County. No damage was reported from this intensity III event, which was centered approximately 39 miles southwest of Ervay (Reagor, Stover, and Algermissen, 1985).

On August 27, 1938, an intensity III earthquake was recorded in northern Albany County, approximately 45 miles southeast of Casper. No damage was associated with the event (Neumann, 1940).

A magnitude 4.7 earthquake occurred in southwestern Johnson County on June 3, 1965. No one reported feeling this event, which was centered approximately 17 miles northwest of Midwest (U.S.G.S. National Earthquake Information Center). On May 11, 1967, a magnitude 4.8 earthquake occurred in southwestern Campbell County, approximately 24 miles northeast of Edgerton. No one felt this earthquake and no damage was reported.

Several earthquakes were recorded in the region in the 1970s. The first occurred in Fremont County on April 22, 1973, approximately 28 miles southwest of Ervay. This magnitude 4.8, intensity V earthquake rattled dishes and disturbed pictures on walls in Jeffrey City (Casper Star-Tribune, April 24, 1973). On May 29, 1973, an earthquake of no specific magnitude or intensity occurred near the Ferris Mountains in Carbon County, approximately 23 miles southwest of Alcova. This earthquake was not felt (Reagor, Stover, and Algermissen, 1985). In December 1975, two earthquakes occurred in eastern Fremont County. A magnitude 3.5 earthquake occurred on December 19, 1975, approximately 13 miles west-southwest of Ervay (Reagor, Stover, and Algermissen, 1985). This earthquake did not cause any damage. Later the same month, on December 30, 1975, an earthquake of no specific magnitude or intensity was recorded approximately 24 miles northwest of Ervay. No one reported feeling this event. On June 6, 1978, a magnitude 4.0 earthquake was recorded in southeastern Hot Springs County, approximately 50 miles northwest of Waltman (Reagor, Stover, and Algermissen, 1985). No damage was associated with this earthquake.

On November 15, 1983, a magnitude 3.0, intensity III earthquake occurred in western Converse County, approximately 15 miles northeast of Casper. No damage was reported. In 1984, a series of earthquakes were recorded in northern Albany County. The most significant earthquake to occur in the area occurred on October 18, 1984. This magnitude 5.5, intensity VI event was centered approximately 44 miles southeast of Casper. It was felt in Wyoming, South Dakota, Nebraska, Colorado, Utah, Montana, and Kansas. Stover (1985) reports that cracks were found in the exterior brick walls of the Douglas City Hall and a public school in Medicine Bow. Chimneys were cracked at Casper, Douglas, Guernsey, Lusk, and Rock River. A wall in a Laramie-area school was slightly cracked by the earthquake. The earthquake was one of the largest felt in eastern Wyoming. A number of aftershocks occurred in the same area; the most significant were magnitude 4.5, intensity IV and magnitude 3.8 events occurring on October 18, 1984; a magnitude 3.5 event on October 20, 1984; magnitude 3.3 events on October 19, November 6, and December 17, 1984; a magnitude 3.1 event on October 22, 1984; a magnitude

3.2 event on October 24, 1984; and a magnitude 2.9 event on December 5, 1984. On June 12, 1986, a magnitude 3.0 earthquake occurred in the same general area.

Four earthquakes occurred near Natrona County in the 1990s. A magnitude 3.8, intensity III earthquake occurred near Bairoil in southeastern Fremont County on June 1, 1993. No damage was reported from this earthquake, which was centered approximately 41 miles south-southwest of Ervay (Case, 1994). On October 9, 1993, a magnitude 3.7, intensity IV earthquake occurred in northern Albany County, approximately 37 miles southeast of Casper. The earthquake was felt in Garrett. A magnitude 4.2 earthquake was recorded in western Converse County on October 19, 1996. Its epicenter was located approximately 15 miles northeast of Casper. No damage was reported, although many Casper residents reported feeling the earthquake. On December 11, 1996, a magnitude 3.4 earthquake occurred in Fremont County, approximately 38 miles south-southwest of Ervay. No damage was associated with this earthquake.

A magnitude 3.0 earthquake was recorded in northern Carbon County on February 1, 2000. No one reported feeling this event, which was centered approximately 22 miles south of Alcova (U.S.G.S. National Earthquake Information Center). On April 13, 2000, a magnitude 3.3 earthquake occurred in northern Albany County, approximately 39 miles southeast of Casper. No damage was reported. In 2000, two earthquakes occurred in northeastern Sweetwater County near the town of Bairoil (approximately 47-48 miles south-southwest of Ervay). A magnitude 4.00 event was recorded on May 26, 2000, and a magnitude 3.2 event was recorded four days later on May 30, 2000. People reported feeling both earthquakes (U.S.G.S. National Earthquake Information Center). Most recently, a magnitude 3.0 earthquake occurred on November 8, 2000, in northeastern Fremont County. This event was centered approximately 36 miles northwest of Waltman. No one reported feeling this earthquake (U.S.G.S. National Earthquake Information Center).

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The UBC contains information and guidance on designing buildings and structures to withstand seismic events. With safety in mind, the UBC provides Seismic Zone Maps to help identify which design factors are critical to specific areas of the country. In addition, depending upon the type of building, there is also an "importance factor". The "importance factor" can, in effect, raise the standards that are applied to a building.

The current UBC Seismic Zone Map (Figure 1) (1997) has five seismic zones, ranging from Zone 0 to Zone 4, as can be seen on the enclosed map. The seismic zones are in part defined by the probability of having a certain level of ground shaking (horizontal acceleration) in 50 years. The criteria used for defining boundaries on the Seismic Zone Map were established by the Seismology Committee of the Structural Engineers Association of California (Building Standards, September-October, 1986). The criteria they developed are as follows:

| Zone | Effective Peak Acceleration, % gravity (g) |
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| 4 | 30% and greater |
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The committee assumed that there was a 90% probability that the above values would not be exceeded in 50 years, or a 100% probability that the values would be exceeded in 475 to 500 years.

Natrona County is in Seismic Zone 1 of the UBC. Since effective peak accelerations (90% chance of non-exceedance in 50 years) can range from 5%-10%g in this zone, and there has been some significant historic seismicity in the county, it may be reasonable to assume that an average peak acceleration of 7.5%g could be applied to the design of a non-critical facility located in the county if only the UBC were used. Such an acceleration is significantly less than would be suggested through newer building codes.

Recently, the UBC has been replaced by the International Building Code (IBC). The IBC is based upon probabilistic analyses, which are described in a following section. Natrona County still uses the UBC, however, as do most Wyoming counties as of January 2003.

## Deterministic Analysis Of Regional Active Faults With A Surficial Expression

A suspected active fault system called the Cedar Ridge/Dry Fork fault system is present in northwestern Natrona County and northeastern Fremont County. The 35-mile long Cedar Ridge fault comprises the western portion of the fault system, and the 15-mile long Dry Fork fault makes up the eastern portion. The only Pleistocene-age movement on the fault system was found in northeastern Fremont County (T39N R92W NE ¼ Section 10). A short scarp on the Cedar Ridge fault, approximately 0.8 miles long, was identified at that location. Since the entire fault system is approximately 50 miles long, and only one small active segment was discovered, Geomatrix (1988a) stated that the "age of this scarp and the absence of evidence for late Quaternary faulting elsewhere along the Cedar Ridge/Dry Creek fault suggest that this fault is inactive." As a result of this assessment, it is not possible to conduct a reliable deterministic analysis on the fault system; however, general estimates can be made.

Although there is no compelling reason to believe that the Dry Fork fault system is active, if it did activate as an isolated system, it could potentially generate a magnitude 6.7 earthquake. This is based upon a postulated fault rupture length of 15 miles (Wells and Coppersmith, 1994; Wong et al., 2001). A magnitude 6.7 earthquake on the fault system could generate peak horizontal

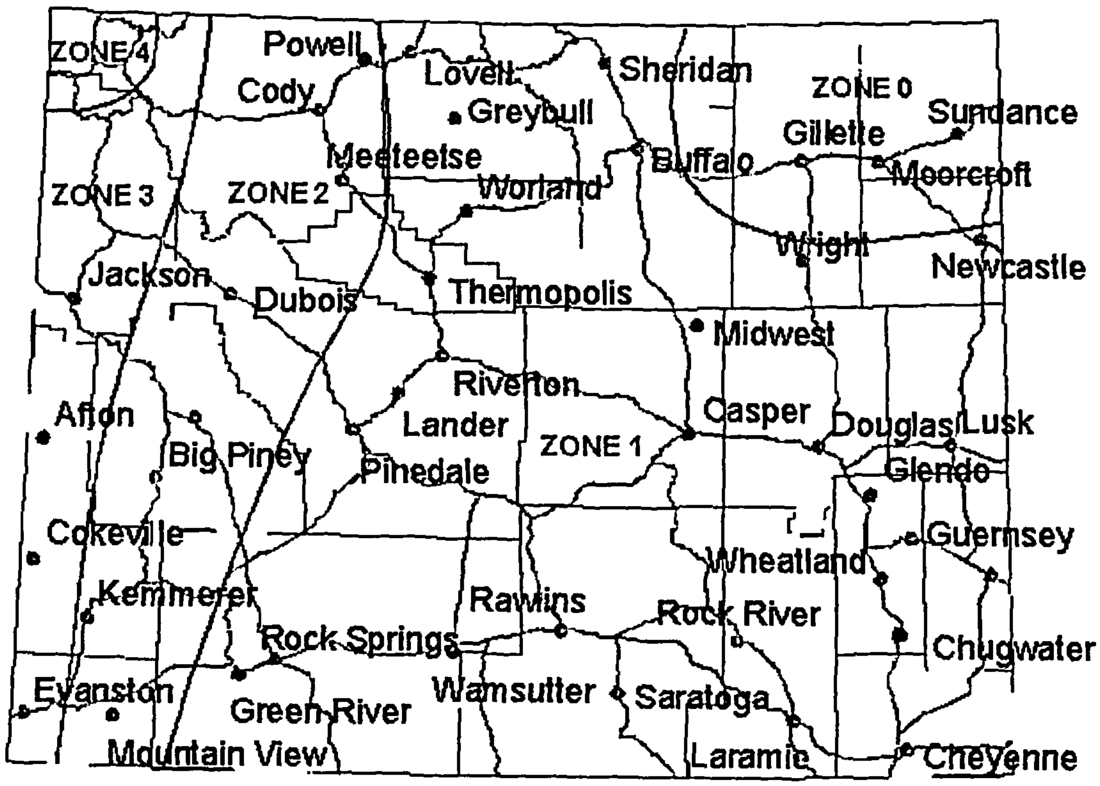


**Figure 1.** UBC Seismic Zone Map.

accelerations of approximately 1.9%g at Alcova, approximately 16%g at Arminto, approximately 2.0%g at Casper, approximately 2.3%g at Edgerton, approximately 5.7%g at Ervay, approximately 7.8%g at Hells Half Acre, approximately 14%g at Hiland, approximately 2.4%g at Midwest, approximately 4.4%g at Natrona, approximately 1.8%g at Pathfinder Reservoir Dam, approximately 7.2%g at Powder River, and approximately 11%g at Waltman, (Campbell, 1987). These accelerations would be roughly equivalent to intensity VI earthquakes at Arminto, Hiland, and Waltman, intensity V earthquakes at Ervay, Powder River, Hells Half Acre, and Natrona, and intensity IV earthquakes at Alcova, Casper, Edgerton, Midwest, and Pathfinder Reservoir Dam. Light damage could occur at Arminto, Hiland, and Waltman, and very light damage could be sustained at Ervay, Powder River, Hells Half Acre, and Natrona. No damage should occur at Alcova, Casper, Edgerton, Midwest, or Pathfinder Reservoir Dam. Again, there is no compelling reason to believe that the Dry Fork fault system is active.

There is also no compelling reason to believe that the entire Cedar Ridge fault system is active. Based upon its fault rupture length of 35 miles, however, if the fault did activate it could potentially generate a maximum magnitude 7.1 earthquake (Wells and Coppersmith, 1994; Wong et al., 2001). A magnitude 7.1 event could generate peak horizontal accelerations of approximately 2.4%g at Alcova, approximately 17%g at Arminto, approximately 2.3%g at Casper, approximately 2.6%g at Edgerton, approximately 7.6%g at Ervay, approximately 8.5%g at Hells Half Acre, approximately 18%g at Hiland, approximately 2.7%g at Midwest, approximately 4.7%g at Natrona, approximately 2.3%g at Pathfinder Reservoir Dam, approximately 7.8%g at Powder River, and approximately 12%g at Waltman (Campbell, 1987). These accelerations would be roughly equivalent to an intensity VI-VII earthquake at Hiland, intensity VI earthquakes at Arminto and Waltman, intensity V earthquakes at Ervay, Natrona, and Powder River, and intensity IV earthquakes at Alcova, Casper, Midwest, Edgerton, Pathfinder Reservoir Dam. Hiland could sustain moderate to light damage, and light damage could occur at Arminto and Waltman. Very light damage could occur at Ervay, Natrona, and Powder River, but no damage should occur at Alcova, Casper, Midwest, Edgerton, Pathfinder Reservoir Dam.

The South Granite Mountain fault system is a known active fault system located in southeastern Fremont County and northwestern Carbon County. The fault system is composed of several west-northwest-trending faults that border the northern flanks of the Seminoe Mountains, Ferris Mountain, Green Mountain, and Crooks Mountain. Geomatrix (1988b) divided the South Granite Mountain fault system into five segments. The segments, from east to west, are the Seminoe Mountains segment, the Ferris Mountains segment, the Muddy Gap segment, the Green Mountain segment, and the Crooks Mountain segment. Geomatrix (1988b) discovered evidence of late-Quaternary faulting on the Ferris Mountains and Green Mountain segments of the fault system. They concluded that the Ferris Mountains segment was capable of generating a maximum credible earthquake of magnitude 6.5 – 6.75 with a recurrence interval of 5,000 to 13,000 years. They also concluded that the Green Mountain segment was capable of generating a maximum credible earthquake of magnitude 6.75 with a recurrence interval of 2,000 to 6,000 years (1988b). Geomatrix (1988b) did not find evidence of late-Quaternary movement on the Seminoe Mountains, Muddy Gap, and Crooks Mountain fault segments. These segments, however, may be extensions of the known active faults in the South Granite Mountain fault system. These segments should therefore be considered to be potentially active. Geomatrix (1988b) estimated the length of the Seminoe Mountains segment to be 22.5 miles (36 km). Such a fault length would result in a magnitude 6.85 earthquake if the entire length ruptured (Wells and Coppersmith, 1994). The length of the Crooks Gap fault segment was estimated to be 21.25 miles (34 km) (Geomatrix, 1988b). This fault length could generate a magnitude 6.86 earthquake if the entire length ruptured (Wells and Coppersmith, 1994). The Muddy Gap fault system is approximately 14.4 miles (23 km) in length (Geomatrix, 1988b). If the entire fault ruptured, a magnitude 6.66 earthquake could be generated (Wells and Coppersmith, 1994).

There are two approaches to doing a deterministic analysis on a segmented fault system such as the South Granite Mountain fault system. The first approach involves finding the shortest distance from the area of interest to a specific fault segment. A deterministic analysis is then applied to each individual fault segment. The second approach involves measuring the distance from the area of interest to the closest point on the fault system as a whole. An average magnitude is then used for activation anywhere along the entire fault. For the purposes of this report, the second, more conservative approach will be used. Because the active segments of the South Granite Mountain fault system have been assigned a maximum magnitude of 6.75, it may be reasonable to assume that a magnitude 6.75 earthquake could be generated anywhere along the length of the fault system. A magnitude 6.75 earthquake could generate peak horizontal accelerations of approximately 6.6%g in the Alcova area, approximately 2.5%g at Casper, approximately 4.6%g at Ervay, approximately 2.5%g at Hiland, Powder River, and Waltman, approximately 2.2%g at Arminto and Natrona, and approximately 9.4%g at Pathfinder Reservoir Dam (Campbell, 1987). These accelerations would be roughly equivalent to an intensity VI earthquake at Pathfinder Reservoir Dam, intensity V earthquakes at Alcova and Ervay, and intensity IV earthquakes at Arminto, Casper, Hiland, Natrona, Powder River, and Waltman. The Pathfinder Reservoir Dam could sustain some light damage and very light damage could occur at Alcova and Ervay. No damage should occur at Arminto, Casper, Hiland, Natrona, Powder River, and Waltman. Midwest and Edgerton would be subjected to ground accelerations of less than 1.5%g, which should also not cause any damage. Pipelines crossing the South Granite Mountain Fault System could also be damaged or ruptured if the segment activates.

The Stagner Creek fault system is an east-west trending system located near Boysen Reservoir on the south flank of the Owl Creek uplift. Geomatrix (1988a) determined that the maximum length of the fault is 24 miles (38 km), with Quaternary-age displacement found along a 17 mile (27 km) segment of the fault between Mexican Pass and Tough Creek. The maxiumum credible earthquake was determined to be a magnitude 6.75 event with a recurrence interval of between 8,000 to 20,000 years (Geomatrix, 1988a). A magnitude 6.75 earthquake originating on the Stagner Creek fault system could generate peak horizontal accelerations of approximately 2.6%g at Ervay, approximately 3.2%g at Hiland, approximately 2.8%g at Arminto, approximately 2.5%g at Waltman, and approximately 1.9%g at Powder River. These accelerations would be roughly equivalent to intensity IV earthquakes, which should not cause any damage. Alcova, Casper, Midwest, Edgerton, Pathfinder Reservoir Dam, and Natrona would be subjected to ground accelerations of less than 1.5%g, which should also not cause any damage.

## Floating or Random Earthquake Sources

Many federal regulations require an analysis of the earthquake potential in areas where active faults are not exposed, and where earthquakes are tied to buried faults with no surface expression. Regions with a uniform potential for the occurrence of such earthquakes are called tectonic provinces. Within a tectonic province, earthquakes associated with buried faults are assumed to occur randomly, and as a result can theoretically occur anywhere within that area of uniform earthquake potential. In reality, that random distribution may not be the case, as all earthquakes are associated with specific faults. If all buried faults have not been identified, however, the distribution has to be considered random. "Floating earthquakes" are earthquakes that are considered to occur randomly in a tectonic province.

It is difficult to accurately define tectonic provinces when there is a limited historic earthquake record. When there are no nearby seismic stations that can detect small-magnitude earthquakes, which occur more frequently than larger events, the problem is compounded. Under these conditions, it is common to delineate larger, rather than smaller, tectonic provinces.

The U.S. Geological Survey identified tectonic provinces in a report titled "Probabilistic Estimates of Maximum Acceleration and Velocity in Rock in the Contiguous United States" (Algermissen and others, 1982). In that report, Natrona County was classified as being in a tectonic province with a "floating earthquake" maximum magnitude of 6.1. Geomatrix (1988b) suggested using a more extensive regional tectonic province, called the "Wyoming Foreland Structural Province", which is approximately defined by the Idaho-Wyoming Thrust Belt on the west, 104° West longitude on the east, 40° North latitude on the south, and 45° North latitude on the north. Geomatrix (1988b) estimated that the largest "floating" earthquake in the "Wyoming Foreland Structural Province" would have a magnitude in the 6.0 – 6.5 range, with an average value of magnitude 6.25.

Federal or state regulations usually specify if a "floating earthquake" or tectonic province analysis is required for a facility. Usually, those regulations also specify at what distance a floating earthquake is to be placed from a facility. For example, for uranium mill tailings sites, the Nuclear Regulatory Commission requires that a floating earthquake be placed 15 kilometers from the site. That earthquake is then used to determine what horizontal accelerations may occur at the site. A magnitude 6.25 "floating" earthquake, placed 15 kilometers from any structure in Natrona County, would generate horizontal accelerations of approximately 15%g at the site. Critical facilities, such as dams, usually require a more detailed probabilistic analysis of random earthquakes. Based upon probabilistic analyses of random earthquakes in an area distant from exposed active faults (Geomatrix, 1988b), however, placing a magnitude 6.25 earthquake at 15 kilometers from a site will provide a fairly conservative estimate of design ground accelerations.

**Probabilistic Seismic Hazard Analyses**

The U.S. Geological Survey (USGS) publishes probabilistic acceleration maps for 500-, 1000-, and 2,500-year time frames. The maps show what accelerations may be met or exceeded in those time frames by expressing the probability that the accelerations will be met or exceeded in a shorter time frame. For example, a 10% probability that acceleration may be met or exceeded in 50 years is roughly equivalent to a 100% probability of exceedance in 500 years.

The USGS has recently generated new probabilistic acceleration maps for Wyoming (Case, 2000). Copies of the 500-year (10% probability of exceedance in 50 years), 1000-year (5% probability of exceedance in 50 years), and 2,500-year (2% probability of exceedance in 50 years) maps are included. Until recently, the 500-year map was often used for planning purposes for average structures, and was the basis of the most current Uniform Building Code. The new International Building Code, however, uses a 2,500-year map as the basis for building design. The maps reflect current perceptions on seismicity in Wyoming. In many areas of Wyoming, ground accelerations shown on the USGS maps can be increased due to local soil conditions. For example, if fairly soft, saturated sediments are present at the surface, and seismic waves are passed through them, surface ground accelerations will usually be greater than would be experienced if only bedrock was present. In this case, the ground accelerations shown on the USGS maps would underestimate the local hazard, as they are based upon accelerations that would be expected if firm soil or rock were present at the surface. Intensity values can be found in Table 1.

Based upon the 500-year map (10% probability of exceedance in 50 years) (Figure 2), the estimated peak horizontal acceleration in Natrona County ranges from approximately 5%g in the central portion of the county to greater than 6%g near the borders of the county. These accelerations are roughly comparable to intensity V earthquakes (3.9%g – 9.2%g). Intensity V earthquakes can result in cracked plaster and broken dishes. Casper and Midwest would be subjected to accelerations of 6%g and greater, or intensity V.

Based upon the 1000-year map (5% probability of exceedance in 50 years) (Figure 3), the estimated peak horizontal acceleration in Natrona County ranges from approximately 9%g in the central, south-central, and northwestern portions of the county to greater than 10%g in the northeastern, southeastern, and southwestern parts of the county. These accelerations are roughly comparable to intensity V earthquakes (3.9%g – 9.2%g) and intensity VI earthquakes (9.2%g – 18%g). Intensity V earthquakes can result in cracked plaster and broken dishes. Intensity VI earthquakes can result in fallen plaster and damaged chimneys. Casper and Midwest would be subjected to accelerations of approximately 10%g or intensity VI.

Based upon the 2500-year map (2% probability of exceedance in 50 years) (Figure 4), the estimated peak horizontal acceleration in Natrona County ranges from approximately 14%g in the central portion of the county to greater than 20%g in the northeastern and southeastern corners of the county. These accelerations are roughly comparable to intensity VI earthquakes (9.2%g – 18%g) and intensity VII earthquakes (18%g – 34%g). Intensity VI earthquakes can result in fallen plaster and damaged chimneys. Intensity VII earthquakes can result in slight to moderate damage in well-built ordinary structures, and considerable damage in poorly built or badly designed structures, such as unreinforced masonry. Chimneys may be broken. Casper and Midwest would be subjected to accelerations of 18%g (intensity VI-VII) and 20%g (intensity VII), respectively.

As the historic record is limited, it is nearly impossible to determine when a 2,500-year event last occurred in the county. Because of the uncertainty involved, and based upon the fact that the new International Building Code utilizes 2,500-year events for building design, it is suggested that the 2,500-year probabilistic maps be used for Natrona County analyses. This conservative approach is in the interest of public safety.

**Table 1:**

| Modified Mercalli Intensity | Acceleration (%g) (PGA) | Perceived Shaking | Potential Damage |
|---|---|---|---|
| I | <0.17 | Not felt | None |
| II | 0.17 – 1.4 | Weak | None |
| III | 0.17 – 1.4 | Weak | None |
| IV | 1.4 – 3.9 | Light | None |
| V | 3.9 – 9.2 | Moderate | Very Light |
| VI | 9.2 – 18 | Strong | Light |
| VII | 18 – 34 | Very Strong | Moderate |
| VIII | 34 – 65 | Severe | Moderate to Heavy |
| IX | 65 – 124 | Violent | Heavy |
| X | >124 | Extreme | Very Heavy |
| XI | >124 | Extreme | Very Heavy |
| XII | >124 | Extreme | Very Heavy |

Modified Mercalli Intensity and peak ground acceleration (PGA) (Wald, et al 1999).

## Abridged Modified Mercalli Intensity Scale

**Intensity value and description:**

I Not felt except by a very few under especially favorable circumstances.

II Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing.

III Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing automobiles may rock slightly. Vibration like passing of truck. Duration estimated.

IV During the day felt indoors by many, outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls make creaking sound. Sensation like heavy truck striking building. Standing automobiles rocked noticeably.

V Felt by nearly everyone, many awakened. Some dishes, windows, and so on broken; cracked plaster in a few places; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.

VI Felt by all, many frightened and run outdoors. Some heavy furniture moved; a few instances of fallen plaster and damaged chimneys. Damage slight.

VII Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving cars.

VIII Damage slight in specially designed structures; considerable in ordinary substantial buildings with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving cars disturbed.

IX Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.

X Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed, slopped over banks.

XI Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.

XII Damage total. Waves seen on ground surface. Lines of sight and level distorted. Objects thrown into the air.

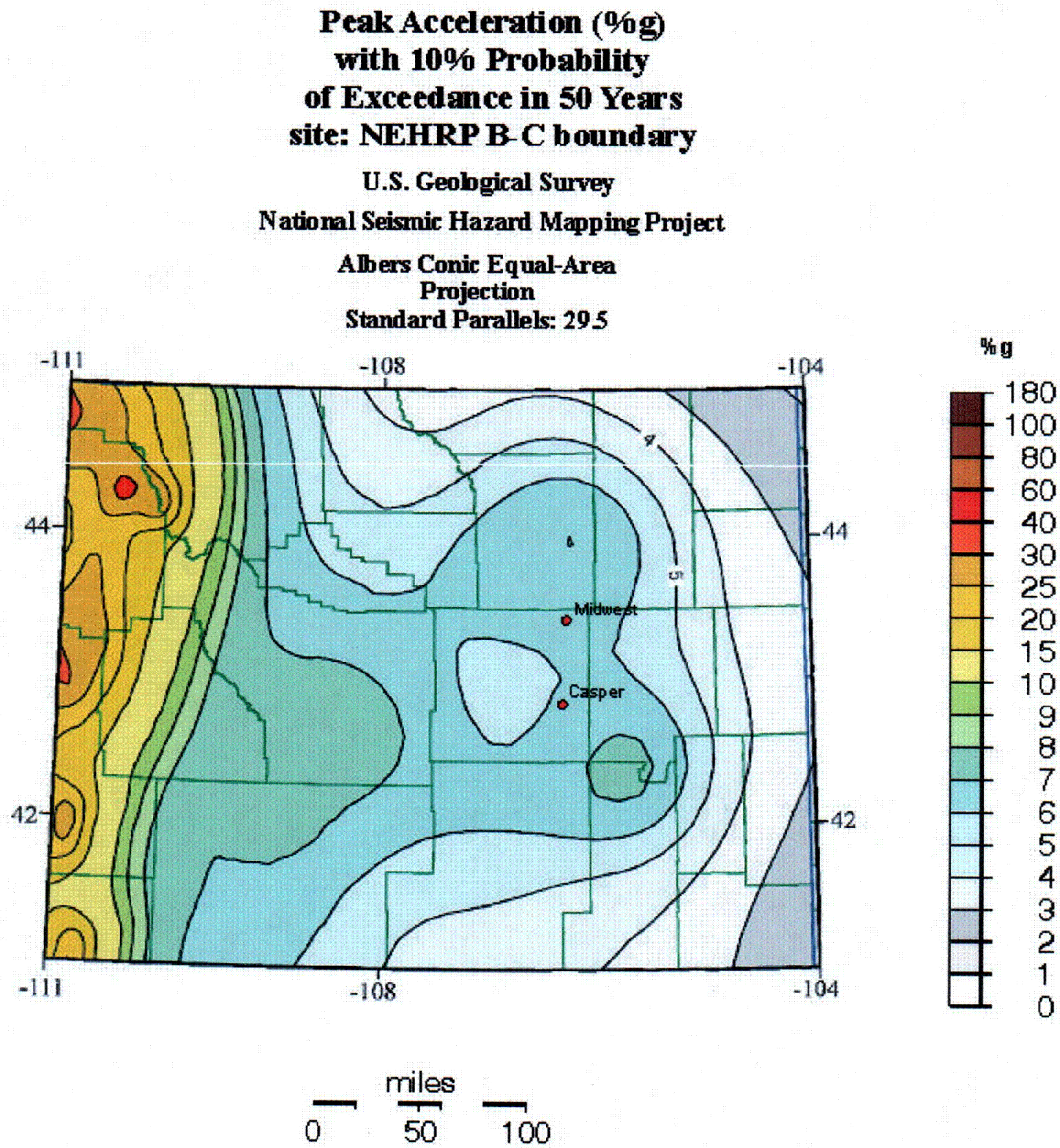


**Figure 2.** 500-year probabilistic acceleration map (10% probability of exceedance in 50 years).



C05

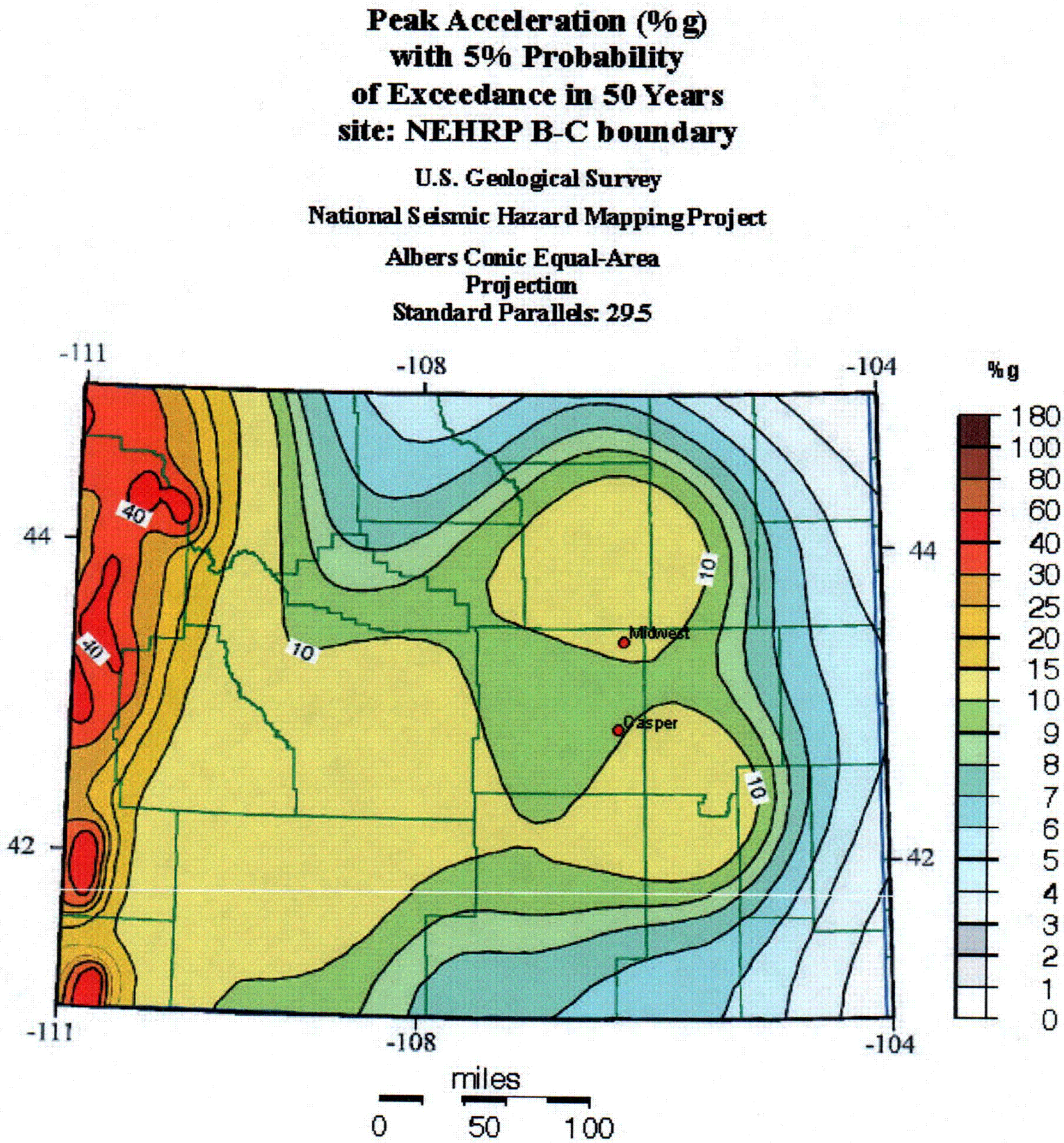


**Figure 3.** 1000-year probabilistic acceleration map (5% probability of exceedance in 50 years).



C06

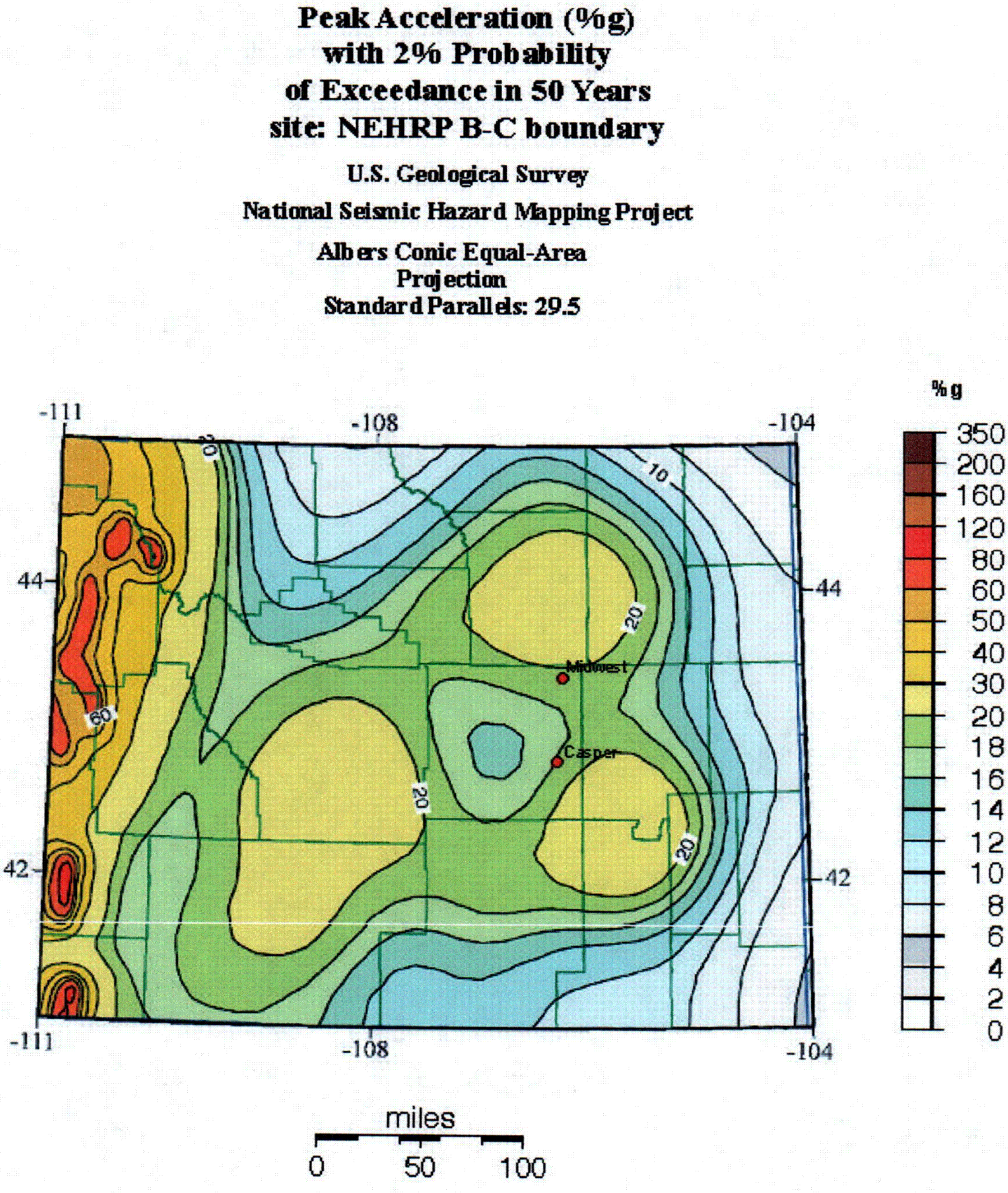


**Figure 4.** 2500-year probabilistic acceleration map (2% probability of exceedance in 50 years).



C07

## Summary

There have been over forty historic earthquakes of magnitude 2.5 or intensity III and greater recorded in or near Natrona County. Because of the limited historic record, it is possible to underestimate the seismic hazard in Natrona County if historic earthquakes are used as the sole basis for analysis. Earthquake and ground motion probability maps and specific fault analyses give a more reasonable estimate of damage potential in Natrona County.

Current earthquake probability maps that are used in the newest building codes suggest a scenario that would result in moderate damage to buildings and their contents, with damage increasing from the central to the northeast and southeast areas of the county. More specifically, the probability-based or fault activation-based worst-case scenario could result in the following damage at points throughout the county:

<u>Intensity VII Earthquake Areas</u>

Casper
Edgerton
Midwest
Bar Nunn
Mills
Evansville
Hiland
Ervay

In intensity VII earthquakes, damage is negligible in buildings of good design and construction, slight-to-moderate in well-built ordinary structures, considerable in poorly built or badly designed structures such as unreinforced masonry buildings. Some chimneys will be broken.

<u>Intensity VI Earthquake Areas</u>

Alcova
Arminto
Natrona
Powder River
Waltman

In intensity VI earthquakes, some heavy furniture can be moved. There may be some instances of fallen plaster and damaged chimneys.

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# CHAPTER 3
# DESCRIPTION OF THE FACILITIES

The permit area for the combined SR-HUP properties contains 30,760 acres. The total surface area to be affected by the proposed operation is within the permit area and will total approximately 1,800 acres. The Reynolds Ranch amendment area will add 8,704 acres and the total surface area to be affected will total approximately 300 acres.

The wellfields, two purge storage reservoirs and two irrigators, the two Office/Processing Plant areas, six Satellite facilities, and evaporation ponds are the significant surface features associated with the uranium in situ leaching mining operation.

The total wellfield area to be used for the injection and recovery of leaching solution over the twenty-five year mine life will be approximately 1,020 acres, including the Reynolds Ranch amendment area. The areas fenced to limit access by livestock to wellfield areas will be slightly greater than that encompassed by the areas to be mined. The main facilities at the SR-HUP, besides the wellfields, include the two yellowcake processing plant sites and related facilities that are located within the former Bill Smith Mine Site (Smith Ranch Main Office CPP Complex) and the former Exxon Highland Mine Site (HUP Central Plant/Office Complex). Currently (March 2006) the HUP facilities remain on stand-by status, with all yellowcake processing, office and related activities occurring at Smith Ranch.

In association with the Smith Ranch CPP is a lined, two-celled evaporation pond to assist with wastewater disposal. Additional lined evaporation ponds consisting of 5 to 15 acre cells may be constructed as needed. Wastewater is also disposed at two deep disposal wells at Smith Ranch and one deep disposal well at Highland. One deep disposal well is planned for the Southwest Satellite Area and one is planned for Reynolds Ranch amendment area.

Currently, there are four Satellite IX facilities constructed and three in operation. Satellite Nos. 1, 2 and 3 are located at Highland and Satellite No. SR-1 is located at Smith Ranch. It is likely that one additional Satellite facility will require construction at Smith Ranch in order that existing uranium reserves can be recovered. One Satellite facility is planned for the Southwest Area and one Satellite is planned for the Reynolds Ranch amendment area. These Satellites will be very similar to in design to existing Satellites.

## 3.1 IN SITU LEACHING PROCESS AND EQUIPMENT

The SR-HUP uses processes and technology developed and demonstrated during Q-sand and O-sand R&D programs conducted at Smith Ranch, R&D Programs conducted at Highland, as well as techniques and processes developed at other ISL facilities that utilize best practices and industry experience. The Reynolds Ranch Satellite and wellfields will be operated consistent with operations at SR-HUP.

### 3.1.1 Uranium Dissolution

In Situ Leach (ISL) mining of uranium requires the circulation of a solution that will oxidize the uranium to a soluble state and form stable uranium complexes that can easily be recovered from the ore body. The project uses a carbonate leaching solution consisting of varying concentrations and combinations of sodium carbonate ($Na_2CO_3$), sodium bicarbonate ($NaHCO_3$), oxygen, hydrogen peroxide ($H_2O_2$), and carbon dioxide ($CO_2$) added to the native ground water. The carbonate/bicarbonate leaching solution is used because of its selectivity for uranium and minor reaction with the gangue minerals. The pilot tests were conducted using sodium bicarbonate, carbon dioxide, hydrogen peroxide, and oxygen in the leaching solutions. When the leaching solution is injected into the ore zone, the dissolved oxidant reacts with the uranium mineral and brings the uranium to the $U^{+6}$ oxidation state.

The $U^{+6}$ species form complexes with some of the carbonates in the leaching solution to create uranyldicarbonate ions $(UO_2\ (CO_3)_2)^{-2}$ and/or an uranyltricarbonate ion $(UO_2\ (CO_3)_3)^{-4}$, both of which are soluble and stable species in solution. When the uranium is removed by leaching, a small portion of the radium content also is mobilized. Depending on site conditions, contaminants such as selenium, and/or vanadium, may also be oxidized and mobilized in low concentrations. Results from the ISL pilot operations in the project area and operating wellfields have shown elevated selenium values but no evidence of other trace elements being significantly mobilized during leaching. Figure 3-1 shows the primary chemical reactions expected to occur in the Production Zone.

The dissolution and complexing of uranium occur as the leaching solution flows through the ore body from the injection wells to the production wells. Leaching solutions will continue to be circulated through a given area of the production zone as long as uranium recovery from that area is economically attractive.

### 3.1.2 Resin Loading/Elution Circuit

The uranium-bearing solution or pregnant leaching solution pumped from the wellfield is piped to the ion exchange plant for extraction of the uranium by use of ion exchange units. As the solution passes through the IX resin in the IX columns the uranyldicarbonate and uranyltricarbonate are preferentially removed from the solution. The barren solutions leaving the ion exchange units normally contain less than 2 ppm of uranium. After the resin in a column is "loaded" with uranium, the vessel is isolated from the normal process flow and the resin is removed from the column for elution. For Satellite IX facilities, this transfer is performed by moving the uranium loaded resin from the Satellite to the CPP using truck transport. In the elution process the resin is contacted with a strong sodium-chloride salt solution, which regenerates the resin in a process very similar to regenerating a conventional home water softener. The eluted resin is then placed back in service for additional uranium recovery. For Satellite facilities, freshly eluted resin is transferred from the Central Processing Plant to the IX facility using truck transport.

After the barren solution leaves the ion exchange columns, carbon dioxide and/or carbonate/bicarbonate is added as necessary to return the carbonate/bicarbonate concentration to the desired operating level. The solution is then pumped back to the wellfield, with the oxidant ($O_2$ gas and/or $H_2O_2$) added either as it leaves the CPP or Satellite, or just before the solution is re-injected into the Production Zone.

The piping and metering system for production and injection leaching solutions consists of buried trunk lines between the recovery plant and the operating wellfield areas with metering and flow distribution headers in the wellfield header buildings. The individual well flows and pressures are adjusted and controlled within the header buildings.

### 3.1.3 Precipitation Circuit

In the elution circuit, the uranyldicarbonate and uranyltricarbonate ions are removed from the loaded resin by a relatively small volume of strong chloride/carbonate solution providing a solution (rich eluate) from which the uranium can be precipitated.

The rich eluate containing the uranium is routed to tankage for temporary storage in front of the batch or small continuous precipitation circuit. To initiate the precipitation cycle hydrochloric or sulfuric acid is added to the uranium bearing solution to breakdown the uranyl carbonate present in the solution. Hydrogen peroxide or ammonia is then added to the acidified eluate to effect precipitation of the uranium as uranyl peroxide or ammonium diuranate. The addition of hydrogen peroxide drives the pH of the solution down, and to optimize crystal growth and settling, a base (e.g. sodium hydroxide or ammonia) is added as a pH adjustment. The uranium precipitate is allowed to settle. The uranium depleted supernate solution is removed and stored for re-use in future elutions or disposed. Sodium chloride and sodium carbonate are added to the clean eluate as needed for reconstitution.

Deep injection wells and/or lined evaporation ponds are used to collect and dispose process wastewaters such as the excess eluate. The evaporation ponds may have multiple cells and each cell will be lined with a hypalon or similar membrane liner. A system of perforated pipes will be installed in a sand bed under the pond liner and will be monitored to ensure that if a leak were to occur, it would be quickly detected.

The precipitation cycle procedures and methods to be employed for this project have been used extensively in ISL programs and in conventional uranium milling operations.

### 3.1.4 Product Filtering, Drying and Packaging

After precipitation, the settled yellowcake is prepared for drying and product packaging. The yellowcake from the elution/precipitation circuit is washed with fresh water to remove excess chlorides and other soluble contaminants and then de-watered. This slurry may be routed to holding tanks in the precipitation area prior to filtering and drying. The yellowcake is dried and packaged in 55 gallon steel drums for storage and shipment.

Currently (March 2006) the yellowcake is dried in a vacuum dryer at the SR CPP. With this type of dryer, the off-gases generated during drying are filtered and scrubbed to remove entrained particulates. The water sealed vacuum system provides ventilation while the dryer is being loaded and unloaded into drums. This type of dryer minimizes airborne effluents. The drying system is described in more detail in Chapter 4.

An enclosed warehouse, adjacent to the yellowcake drying area, is provided for the storage of yellowcake. Onsite inventory of drummed yellowcake typically is less than 200,000 lbs. However, in periods of inclement weather or other interruptions in product shipments, all production will be stored on-site in designated storage areas.

The drummed yellowcake is shipped by exclusive use transport to another licensed facility for further processing. All yellowcake shipments are made in compliance with applicable regulations. A flow diagram showing the major process components of the uranium recovery plant is included as Figure 3-2.

### 3.1.5 Major Process Equipment

Principal equipment used in the process consists of surge tanks (optional), ion exchange vessels, elution/precipitation tanks, vacuum drying systems, and the piping, pumps and valves required to control and move the solutions among the various process components. The continuous flow portion of the circuit (the ion exchange circuit) has instrumentation designed to monitor key fluid levels, flow rates and pressures. The elution/precipitation portion of the recovery plant circuit is designed for batch and semi-continuous operations. The number of batch cycles are increased as uranium production increases. The elution circuit operates under automated controls.

## 3.2 SITE FACILITIES LAYOUT

Major existing surface facilities at the SR-HUP are shown on Plate 1 and include the Smith Ranch Main Office-Central Processing Plant (CPP) and associated facilities, the Highland Office-Central Processing Facility Complex (on stand-by status as of March 2003), operating wellfields, potential future wellfields, Satellite Building Nos. 1, 2, 3, SR-1, the Southwest Satellite (SR-2), the proposed Reynolds Ranch Satellite, the Boner Storage Building, five deep disposal well facilities, the Satellite No. 1 Radium Settling Basin, Purge Storage Reservoir Nos. 1 and 2, and Irrigation Area Nos. 1 and 2.

### 3.2.1 Smith Ranch Main Office-Central Processing Plant

The Smith Ranch Main Office-Central Processing Plant (CPP) is located within the 30 acre fenced area in the NE¼ , NW¼, Section 36, T36N, R74W (see Plate 1). The northern end of the CPP houses IX facilities while the remainder of the building contains the resin elution and yellowcake processing and drying/packaging areas. The yellowcake drying/packaging area may process 9,750 pounds $U_3O_8$ per day (3.5 million pounds per year). However, normal operations are expected to be about 1 to 2 million pounds per year. The CPP IX facilities currently (March 2006) serve Wellfield 1, Wellfield 2, and portions of Wellfield 4. The CPP IX facility is designed to operate at a maximum through-flow of 4500 gpm and vessel pressures of 150 psi. This area also contains the Evaporation Ponds, Pilot Plant Building, Construction and Maintenance Shops, and Warehouse facilities. Figure 3-3 shows the plan view of these facilities. Figure 3-4 shows the general layout of the process equipment in the CPP.

In concert with the acquisition of the Smith Ranch operation by PRI in July 2002, all resin and yellowcake processing operations were moved to the Smith Ranch CPP in September 2002, with the Highland Central Plant and associated facilities being placed on stand-by status at that time. It is anticipated that all resin and yellowcake processing will continue to be conducted only at the Smith Ranch CPP until the uranium market improves such that additional yellowcake processing capacity is needed, or if a major shutdown condition occurred at the Smith Ranch CPP.

### 3.2.2 Highland Central Processing Facility

The Highland Central Processing Facility (CPF) is located within the 40 acre fenced area in the NE¼ NW¼, Section 29, T36N, R72W (see Plate 1). Currently (March 2006), the Highland CPF remains on stand-by status. The Central Plant building houses the majority of the process equipment, such as the uranium extraction circuit, yellowcake precipitation, dewatering, drying and packaging equipment. All buildings at the CPF were obtained from the previous Exxon open pit uranium mine/mill operation. The yellowcake drying/packaging area at the Highland CPF may process up to 2 million pounds $U_3O_8$ per year. However, when operational, production has typically been less than 1.5 million pounds per year. The general layout of the CPF area is shown on Figure 3-5. The process equipment layout is shown on Figure 3-6.

### 3.2.3 Satellite Buildings

The Satellite buildings house the ion exchange columns, water treatment equipment, resin transfer facilities, pumps for injection of lixiviant, a small laboratory and an employee break room. Bulk carbon dioxide and oxygen are stored in compressed form adjacent to each Satellite building or in the wellfield. Gaseous carbon dioxide is added to the lixiviant as the fluid leaves the Satellite building for the wellfield or at headerhouses.

The locations of Satellite buildings and associated structures are shown on Plate 1. There are four Satellite buildings in operation and one more Satellite planned in the Southwest area for the combined SR-HUP. There is one Satellite building planned for the Reynolds Ranch amendment area. Satellite No. 1 is located in the NW ¼ Section 21, T36N, R72W. The building occupies approximately 8,000 $ft^2$. The layout of Satellite No. 1 is shown on Figure 3-7. Satellite No. 1 serves the A and B-Wellfields (Section 21, 20-Sand and Section 21, 30-Sand Wellfields, respectively). Since July 1991 Satellite No. 1 has only been used for ground water restoration activities at the A and B-Wellfields. During production operations this facility had a capacity of approximately 1800 gpm.

Satellite No. 2 is located in the NE ¼ Section 14, T36N, R73W (see Plate 1). The building occupies approximately 13,000 $ft^2$. Satellite No. 2 serves the C-Wellfield (Section 14, 50-Sand Wellfield), D-Wellfield (Section 22/23, 40-Sand Wellfield), E-Wellfield, and the H-Wellfield, and the I-Wellfield. The Satellite No. 2 facility is designed to operate with a maximum through-flow of 3200 gpm and vessel pressures of 150 psi during production operations. As of March 2003 the A, B, and C-Wellfields are undergoing ground water restoration while the D, D-Extension, E, F, and H, and I-Wellfields are still in production. The layout of Satellite No. 2 is shown on Figure 3-8.

Satellite No. 3 is located in the SE ¼, Section 20, T36N, R73W (see Plate1). Satellite No. 3 and associated facilities serve the D-Extension and F-Wellfields and additional wellfields proposed for western portions of the permit area. The building occupies approximately 13,000 $ft^2$. The Satellite No. 3 facility is designed to operate with a maximum through-flow of 5,000 gpm and vessel pressures of 150 psi during production operations. The layout of Satellite No. 3 is shown on Figure 3-9.

Satellite No. SR-1 is located in the SE ¼ Section 27, T36N, R74W (see Plate 1). The building occupies approximately 13,000 $ft^2$. Currently (March 2006), this facility serves Wellfield 3, portions of Wellfield No. 4 and planned future wellfield areas. The Satellite No. SR-1 facility is designed to operate with a maximum through-flow of 4500 gpm and vessel pressures of 150 psi during production operations. The layout of Satellite No. SR-1 is shown on Figure 3-10.

The proposed Reynolds Ranch Satellite will be located in the SE 1/4 of Section 35, T37N, R74W. The building will occupy approximately 19,000 $ft^2$. This Satellite will serve *all* wellfields planned for the Reynolds Ranch amendment area. This Satellite facility is designed to operate with a maximum through-flow of 4500 gpm and vessel pressures of 150 psi during production operations. The layout of the Reynolds Ranch Satellite is shown on Figure 3-11.

An additional Satellite, Satellite SR-2, is planned for the southwest corner of the current SR-HUP permit area. This Satellite will serve three future wellfields (Wellfields 9, 10, and 11). Construction of this Satellite will be in conjunction with development of these wellfields and begin in the Fall of 2006. It is anticipated that Satellite SR-2 will be located in the SW ¼ NE ¼ Section 17, T35N, R74W (see Plate 1). The building and ancillary facilities will occupy approximately 19,000 $ft^2$. The Satellite No. SR-2 facility is designed to operate with a maximum through-flow of 4500 gpm and vessel pressures of 150 psi during production operations. The layout of Satellite No. SR-2 is shown on Figure 3-17.

The Boner storage building, which covers approximately 5,000 $ft^2$, is located just east of Satellite No. 2 (see Plate 1) and is used for wellfield equipment and materials storage and fabrication of various structures predominately used in the construction of wellfields.

### 3.2.4 Wellfields

#### 3.2.4.1 Ore Deposits

The ore deposits in the SR-HUP and Reynolds Ranch amendment area generally occur at depths of 450 feet to 1,000 feet below the surface in long narrow trends varying from a few hundred to several thousand feet long and 20 to 300 feet wide. The depth depends on the local topography, the dip of the formation and stratigraphic horizon. At Smith Ranch, the shallower ore deposits are contained within the Q-Sand and the mineable ore in this sand occurs at depths of 450 to 500 feet. At the Reynolds Ranch amendment area, the shallower ore deposits are contained within the U/S-Sand and the mineable ore in this sand occurs at approximate depths of 380 to 525 feet. Most of the remaining uranium mineralization at the Smith Ranch and Reynolds Ranch occurs in the O-sand formation at a depth of 700 to 900 feet. The Q-Sand pilot and O-Sand pilot were conducted at depths of approximately 500 feet and 750 feet respectively. These ore body sands are synonymous with the 30, 40, 50, and 60-Sands located at Highland.

A typical stratigraphic interval to be mined by the in situ mining method is shown by the geologic cross sections of the Production Wellfields as found in the Wellfield #1, #3, #4, and #4A Pre-Operational Data Submittals, dated May 27, 1999, June 1, 1998, April 26, 1999, and July 18, 2000, respectively. The designations of the intervals identified on the cross sections are Company designations. For an ISL wellfield, the production zone is the geological sandstone unit where the leaching solutions are injected and recovered.

### 3.2.4.2 Wellfield Areas

Wellfield areas are developed as needed to meet production requirements and are generally about 50 acres each. Injection and recovery wells in a wellfield are completed in the mineralized intervals of only one production zone at any one time. Injection and recovery wells are completed as described in Section 3.2.4.5 to isolate the open hole or screened ore bearing interval from all other aquifers. Production zone monitor wells are located in a ring around the wellfield units. Monitor wells for overlying and underlying aquifers are installed at a density of one for each four acres of wellfield area. The distance between overlying or underlying monitor wells in the same zone shall not exceed 1,000 feet and all such wells are installed within the confines of the wellfield unit area.

When areas within a prospective wellfield are encountered which exhibit very thin or absent vertical confining layers, PRI evaluates the local stratigraphy and may adjust the monitoring and operating programs to account for such a situation. These adjustments may include placement of the overlying/underlying monitor wells in different stratigraphic horizons within the same wellfield, and perhaps in the same sandstone unit containing the mineralized intervals (at different horizons), or in some instances overlying or underlying wells may not be needed. Additional operational controls may also be instituted in the absence or breach of a confining layer, such as localized increased rates of over-recovery.

There are currently 14 wellfields installed at the SR-HUP. Locations of the wellfields are shown on Plate 1. Wellfields A, B, C, D, E, F, D-Extension, H, and I are located at Highland. The A and B-Wellfields were the first wellfields installed at Highland in 1987 and are currently in ground water restoration status. Active ground water restoration was completed in the A-Wellfield in 1999 and approved by WDEQ in 2003, and the NRC in 2004. Ground water restoration in the B-Wellfield was completed in 2005 and approval is expected from the WDEQ-LQD in 2006. It is anticipated that the surface reclamation will follow soon after the regulatory agencies concur with ground water restoration. The C-Wellfield was installed in 1989 and is currently undergoing ground water restoration as well.

The D-Wellfield was installed in 1990 and 1991 and started production in mid-1991. The D-Wellfield is currently in production. The E-Wellfield was installed in 1991 and 1992 and started production in February, 1992. The E-Wellfield is currently in production. The F-Wellfield was sequentially installed during 1993-1996, with production beginning in May 1994. The F-Wellfield is currently in production. The H-Wellfield was sequentially installed during 1996 and 1997 with production beginning in 1997. The H-Wellfield is currently in production. The D-Extension Wellfield was installed during 2000 and is currently in production. The

I-Wellfield is the newest wellfield at the Highland Project and was installed in 2004 and put in operation in 2004.

There are currently (March 2006) six wellfields (Mine Units 1, 2, 3, 4, 4A, and 15) installed and in production at Smith Ranch. No wellfields at Smith Ranch are currently in ground water restoration, however restoration is planned to begin in 2006 for Mine Unit 1. Production operations began at Mine Unit 1 in 1997, Mine Unit 3 in 1998, Mine Unit 4 in 1999, Mine Unit 4A in 2001, Mine Unit 2 in March 2003, and Mine Unit 15 in 2005. Currently, production operations are occurring in all of these wellfields. Plate 1 also shows planned wellfield areas that will be potentially mined, dependent on uranium market conditions and economic feasibility.

There are currently 8 wellfields planned for the Reynolds Ranch amendment area. Anticipated locations of these wellfields are shown on Plate 1. Delineation drilling is anticipated to continue in 2006, and construction of the Satellite is anticipated to begin in 2007 along with construction of the first Mine Unit. At this time, Mine Unit 21 is anticipated to be the first wellfield in production at the Reynolds Ranch Satellite. Production at this wellfield is anticipated to begin in 2008.

#### 3.2.4.3 Wellfield Injection/Production Patterns

The wellfield injection/production pattern employed is based on the conventional square five spot pattern which is modified as needed to fit the characteristics of the orebody (see Figure 3-12). The standard production cell for the five spot pattern contains four injection wells surrounding a centrally located well. The cell dimensions vary depending on the formation and the characteristics of the orebody. The injection wells in a normal pattern are expected to be between 75 feet and 150 feet apart. All wells are expected to be completed so they can be used as either injection or recovery wells, so that wellfield flow patterns can be changed as needed to improve uranium recovery and restore the ground water in the most efficient manner. During operations, leaching solution enters the formations through the injection wells and flows to the recovery wells. Within each wellfield, more water is produced than injected to create an overall hydraulic cone of depression in the production zone. Under this pressure gradient the natural ground water movement from the surrounding area is toward the wellfield providing additional control of the leaching solution movement. The difference between the amount of water produced and injected is the wellfield "bleed."

The minimum over production or bleed rates will be a nominal 0.5% of the total wellfield production rate and the maximum bleed rate typically approaches 1.5%. Over-production is adjusted as necessary to ensure that the perimeter ore zone monitor wells are influenced by the cone of depression resulting from the wellfield production bleed.

Each injection well and recovery well is connected to the respective injection or recovery manifold in a wellfield Headerhouse building. The manifolds deliver the leaching solutions to the pipelines carrying the solutions to and from the ion exchange facilities. Flow meters and control valves are installed in the individual well lines to monitor and control the individual well flow rates and pressures. Wellfield piping is high density polyethylene (HDPE) pipe, PVC and/or steel. The wellfield piping will typically be designed for an operating pressure of 150 psig, and it will be operated at pressures equal to or less than the rated operating pressure of the pipe and other in-line equipment. If a higher design pressure is needed, the pressure rating of the materials will be evaluated and if necessary, materials with a higher pressure rating will be used.

The individual well lines and the trunk lines to the ion exchange facilities are buried to prevent freezing. The use of field header buildings and buried lines is a proven method for protecting pipelines. A typical wellfield development pattern is illustrated in Figure 3-12.

#### 3.2.4.4 Wellfield Operations

The production areas have been divided into wellfields for scheduling development plans and for establishing baseline data, monitoring requirements, and restoration criteria. A wellfield will consist of a reserve block generally about 50 acres and will represent an area that is expected to be developed, produced and restored as a unit. Up to 20 such units may be required to develop the total project area. A wellfield will typically have a flow rate in the 1000-4000 GPM range. Aquifer restoration of a wellfield will begin as soon as practical after mining in the unit is complete. If a mined out unit is adjacent to another unit being mined, restoration of a portion of the unit may be deferred to minimize interference with the mining operation. The wellfields as currently projected are shown in Plate 1. However, the size and location of the wellfields will be modified as needed based on final delineation of the ore deposit, performance of the area and development requirements.

The projected mining schedule for existing and proposed wellfields along with the anticipated ground water restoration and decommissioning schedule is provided in Figure 3-13. It should be realized that it is not possible to determine a precise schedule of future operating wellfields due to the types of activities involved and the over-riding fluctuating uranium market conditions. As a result, the only proposed wellfield shown on Figure 3-13 is Wellfield 15A at the Smith Ranch Project, J-Wellfield at the Highland Project, and Wellfield 21 at the Reynolds Ranch amendment area. It is anticipated that Wellfield 15A will be the next wellfield to go into production at the combined SR-HUP. The exact schedule for other proposed wellfields (as shown in Plate 1) will depend on future economic analyses of ore reserves and anticipated production costs.

The development schedule provided in Figure 3-13 is affected by various factors. These factors typically involve adjustments as necessary to meet production schedules and contractual agreements, longer (or shorter) than predicted mining or restoration times or delays in wellfield installations. To account for such changes, PRI provides an Annual Report to the WDEQ with a map of the permit area showing the wellfields being developed, in production, in restoration, and areas where restoration has been completed. New areas where production or restoration is expected to begin in the subsequent year will also be identified in the Annual Report.

### 3.2.4.5 Well Completion

Pilot holes for monitor, production, and injection wells are drilled through the target completion interval with a small rotary drilling unit using native mud and a small amount of commercial drilling fluid additive for viscosity control. The hole is logged, reamed, casing set, and cemented to isolate the completion interval from all other aquifers. The cement will be placed by pumping it down the casing and forcing it out the bottom of the casing and back up the casing-drill hole annulus. The Pilot holes will be large enough in diameter to provide at least three inches of annulus space.

Typical well completion schematics for production wells, injection wells, and monitor wells are shown on Figures 3-14 through 3-16, respectively. The well casing will be fiberglass or PVC. A typical fiberglass casing will be Centron's 2.1 pound per foot well casing with a 0.175 inch wall thickness or similar casing. The Centron casing has a standard joint length of 30 feet and is rated for 950 pounds per square inch operating pressure. PVC well casing is typically 4.5-inch SDR-17 (or equivalent). The PVC casing joints normally have a length of approximately 20 feet each. When SDR-17 PVC casing is used, each joint is connected by a water tight o-ring seal which is located with a high strength nylon spline. Currently, all production and injection wells are constructed with SDR-17 PVC casing that utilizes the o-ring seal and nylon spline.

Casing centralizers, located approximately every 40 feet above the casing shoe, are normally run on the casing to ensure it is centered in the drill hole. Effective sealing materials shall consist of neat cement slurry, sand-cement grout, or bentonite clay mixtures meeting State requirements described in Section 6, Chapter 11 of the LQD Non Coal Rules and Regulations unless a variance is obtained from the LQD Administrator. The purpose of the cement is to stabilize and strengthen the casing and plug the annulus of the hole to prevent vertical migration of solutions. The volume of cement used in each well is determined by estimating the volume required to fill the annulus and ensure cement returns to the surface. In almost all cement jobs, returns to the surface are observed. In rare instances, however, the drilling may result in a larger annulus volume than anticipated and cement may not return all the way to the surface. In these cases the upper portion of the annulus will be cemented from the surface to backfill as much of the well annulus as possible and stabilize the wellhead. This procedure is called "topping off". Tremie pipes cannot be used to top off a well in cases where the cement return to the surface is more than 40 feet from the top. This is due to the fact that centralizers are place every 40 feet and it is not possible to place a tremie pipe past the centralizers. In these instances, protection of ground waters of the state is documented through mechanical integrity testing.

After the well is cemented to the surface and the cement has set, the well is drilled out and completed either as an open hole or it is fitted with a screen assembly (slotted liner), which may have a sand filter pack installed between the screen and the underreammed formation. The well may then be air lifted for about 30 minutes to remove any remaining drilling mud and/or cuttings. A submersible pump is frequently run in the well for final clean-up and sampling.

#### 3.2.4.6 Well Casing Integrity

After an injection or production well has been completed, and before it is made operational, a Mechanical Integrity Test (MIT) of the well casing is conducted. In the integrity test, the bottom of the casing adjacent to or below the confining layer above the production zone is sealed with a plug, downhole packer, or other suitable device. The top of the casing is then sealed in a similar manner or with a sealed cap, and a pressure gauge is installed to monitor the pressure inside the casing. The pressure in the sealed casing is then increased to 125% of the maximum operating wellhead casing pressure. A well must maintain 90% of this pressure for 10 minutes to pass the test.

If there are obvious leaks, or the pressure drops by more than 10% during the 10 minute period, the seals and fittings will be reset and/or checked and another test is conducted. If the pressure drops less than 10% the well casing is considered to have demonstrated acceptable mechanical integrity.

If a well casing does not meet the MIT criteria, the well will be placed out of service and the casing may be repaired and the well re-tested or abandoned. The WDEQ-LQD Administration will be notified of any well that fails the MIT. If a repaired well passes the MIT, it will be employed in its intended service following approval from the LQD Administrator that the well has demonstrated mechanical integrity. If the well defect occurs at depth, the well may be plugged back and re-completed for use in a shallower zone provided it passes the MIT. If an acceptable test cannot be obtained after repairs, the well will be plugged and abandoned.

During wellfield operations, injection pressure at the injection well heads will not exceed the integrity test pressure. In no event will injection wells be used for injection purposes if they do not demonstrate mechanical integrity.

The MIT of a well is documented to include the well designation, date of the test, test duration, beginning and ending pressures, and the signature of the individual responsible for conducting the test. Results of the MITs are maintained on site and are available for inspection by NRC and WDEQ. In accordance with WDEQ and EPA requirements, the results of MITs are reported to the WDEQ on a quarterly basis. In accordance with WDEQ and EPA requirements, MITs are repeated once every five years for all wells used for injection of lixiviant, or injection of fluids for restoration operations.

Additionally, a MIT will be conducted on any well to be used for injection purposes after any well repair where a downhole drill bit or underreaming tool is used. Any injection well with evidence of suspected subsurface damage will require a new MIT prior to the well being returned to service.

3.2.4.7 Monitoring of Wellfield Flow and Pressure

Injection well and production well flow rates and pressures are monitored in order that injection and production can be balanced for each pattern and the entire wellfield. This information is also needed for assessing operational conditions and mineral royalties. The flow rate of each production and injection well is determined by monitoring individual flow meters in each wellfield headerhouse. Production well flow rates are determined on a daily basis. Injection well flow rates are determined at least every three days. Injection well flow rates are monitored less often than production well flow rates as there are no royalty considerations with injection wells. Additionally, through operating experience and the fact that injection pressures remain relatively constant, PRI has found that monitoring injection well flow rates at least every three days is more than adequate to ensure that wellfield patterns are adequately balanced.

The pressure of each production well and the production trunk line are determined in each wellfield headerhouse on a daily basis. The pressure of the injection trunk line is also determined daily in each wellfield headerhouse. The surface injection pressures will not exceed the maximum surface pressures posted in each headerhouse.

Data records for these monitoring activities are maintained on-site.

3.2.4.8 Pipeline Monitoring

Pressure and flow indicators on the main pipelines to and from the recovery plant will also be recorded daily to ensure the pressures and flows are maintained within the safe working limits of the pipeline.

3.2.5 <u>Chemical Storage Facilities</u>

Chemical storage facilities at the SR-HUP include both hazardous and non-hazardous material storage areas. Bulk hazardous materials, which have the potential to impact radiological safety, are stored outside and segregated from areas where licensed materials are processed and stored. Other non-hazardous bulk process chemicals (sodium chloride, sodium carbonate) that do not have the potential to impact radiological safety are stored within the Central Plant facilities.

Chemical storage facilities at the Reynolds Ranch Satellite will include bulk carbon dioxide and oxygen storage tanks. Also, bulk fuel storage facilities for vehicles may be constructed at the Reynolds Ranch Satellite.

### 3.2.5.1 Process Related Chemicals

Hazardous materials, which have the potential to impact radiological safety, include anhydrous ammonia, hydrogen peroxide, and acid (sulfuric and/or hydrochloric). Anhydrous ammonia and hydrogen peroxide are used for pH control in the precipitation circuit at the Smith Ranch CPP. Sulfuric acid is also used at the CPP to initiate the precipitation cycle. These hazardous materials are stored outside of the CPP in a chemical tank farm area where they are segregated from process areas until their point of use within the process system. All outside bulk liquid storage tanks are contained within concrete curbed secondary containment structures. A similar setup for bulk process chemicals is utilized at the Highland CPF. Currently, the Highland CPF is on standby status and no bulk process chemicals are used and/or stored in this area. The locations of existing chemical storage areas at the Smith Ranch CPP and Highland CPF are shown in Figures 3-3 and 3-5, respectively.

Additional process-related chemicals stored in bulk at the SR-HUP include carbon dioxide and oxygen. Carbon dioxide is typically stored adjacent to the Central Plant and/or Satellite facilities where it is added to the lixiviant prior to leaving the IX facilities. Oxygen is also typically stored at the Central Plant and Satellite facilities, or within wellfield areas, where it is centrally located for addition to the injection stream in each header house. Currently, carbon dioxide is stored at the Smith Ranch CPP and Satellite Nos. 2, 3, and SR-1, while oxygen is stored at the Smith Ranch CPP, Satellite Nos. 2 and Mine Unit 15, and at a storage pad at the east end of the F-Wellfield. Carbon dioxide and oxygen is also anticipated to be stored at the Reynolds Ranch Satellite. The locations of existing carbon dioxide and oxygen storage tanks are shown on Plate 1.

Hazardous materials typically used during ground water restoration activities include the use of an acid (hydrochloric acid) for pH control and the addition of a chemical reductant (sodium sulfide or hydrogen sulfide gas). To minimize potential impacts to radiological safety, these materials are stored outside of process areas. Currently, bulk hydrochloric acid is stored at Satellite No. 2. Additional hydrochloric acid tanks may be located near other Satellite facilities as ground water restoration commences in other wellfield areas. All hydrochloric acid tanks will be contained within sufficient secondary containment structures.

Sodium sulfide is currently available at the SR-HUP as a chemical reductant for ground water restoration. The material consists of a dry flaked product and is typically purchased on pallets of 55-pound bags or super sacs of 1,000 pounds. The bulk inventory is stored outside of process areas in a cool, dry, clean environment to prevent contact with any acid, oxidizer, or other material that may react with the product. No hydrogen sulfide gas is currently (March 2006) stored at the site. In the event that hydrogen sulfide is used as a chemical reductant, proper safety precautions will be taken to minimize potential impacts to radiological and chemical safety. Additionally, bioremediation is also used during ground water restoration. Chemicals utilized for bioremediation include methanol, molasses, and phosphoric acid. Methanol is stored in bulk at the Satellite area (where restoration is occurring) in 500 or 2000-gallon tanks. Molasses and phosphoric acid are stored inside the restoration Satellite in small quantities.

As part of the EHS Management System, a risk assessment was completed to recognize potential hazards and risks associated with chemical storage facilities (and other processes) and to mitigate those risks to acceptable levels. The risk assessment process identified anhydrous ammonia as the most hazardous chemical with the greatest potential for impacts to chemical and radiological safety. The anhydrous ammonia storage and distribution system at the Smith Ranch CPP (see Figure 3-3) has a maximum capacity of approximately 90,000 lbs. Administrative controls limit ammonia storage in the tank to 80% of maximum capacity. Strict loading procedures are utilized to ensure that this limit is not exceeded and that other safety controls are in place during the transfer of anhydrous ammonia. Process safety controls are also in place at the CPP where anhydrous ammonia is added to the precipitation circuit. These safety controls include the installation of a process area ammonia detector and alarm and emergency shut off solenoid for isolation of the ammonia distribution system in the event of a major release.

The ammonia system at the Smith Ranch CPP is covered under the EPA's Risk Management Program (RMP) regulations. The RMP regulations require certain actions by covered facilities to prevent accidental releases of hazardous chemicals and minimize potential impacts to the public and environment. These actions include measures such as accidental release modeling, documentation of safety information, hazard reviews, operating procedures, safety training, and emergency response preparedness.

#### 3.2.5.2 Non-Process Related Chemicals

Non-process related chemicals that are stored at the SR-HUP and Reynolds Ranch Satellite include petroleum (gasoline, diesel) and propane. Due to the flammable and/or combustible properties of these materials, all bulk quantities are stored outside of process areas at the CPP and Satellite facilities. All gasoline and diesel storage tanks are located above ground and within concrete curbed secondary containment structures.

## 3.3 INSTRUMENTATION AND CONTROL

Smith Ranch CPP monitoring and alarm instrumentation are employed to provide centralized monitoring of key process components. Operator control of key elements will be maintained with a series of remotely controlled valves and power switches. In addition to alerting the operations personnel of upset conditions within the facility, the instrumentation also monitors the operations and records routine operational data for both production and regulatory reporting requirements.

When operating parameters move outside specified normal operating ranges, an alarm will notify the operator to initiate corrective action to alleviate the problem. Excessively high or low levels or pressure alarms activate automatic shutdown of the related equipment. Operational areas such as pipelines, headerhouses, and the disposal wells comprise a significant component of the automatic shutdown system since those areas provide the greatest risk to large spills of source and byproduct material to the environment. These systems use high and low pressure alarms to automatically shutdown headerhouses, wellfields, and/or ion exchange facilities depending on the location and scale of the alarms. The CPP also has alarms for high/low pressures, high/low flow, or low vacuum (in the case of the rotary vacuum dryers) that will alert the operator of the upset condition to either initiate a corrective action or shutdown that operational area.

Alarm responses as well as recovery from automatic shutdowns will follow designated procedures as provided in the Standard Operating Procedures. The system was designed and installed to minimize the risk of uncontrolled releases of leaching solutions or other fluids and provide maximum safety and protection for the CPP Operators and Maintenance personnel.

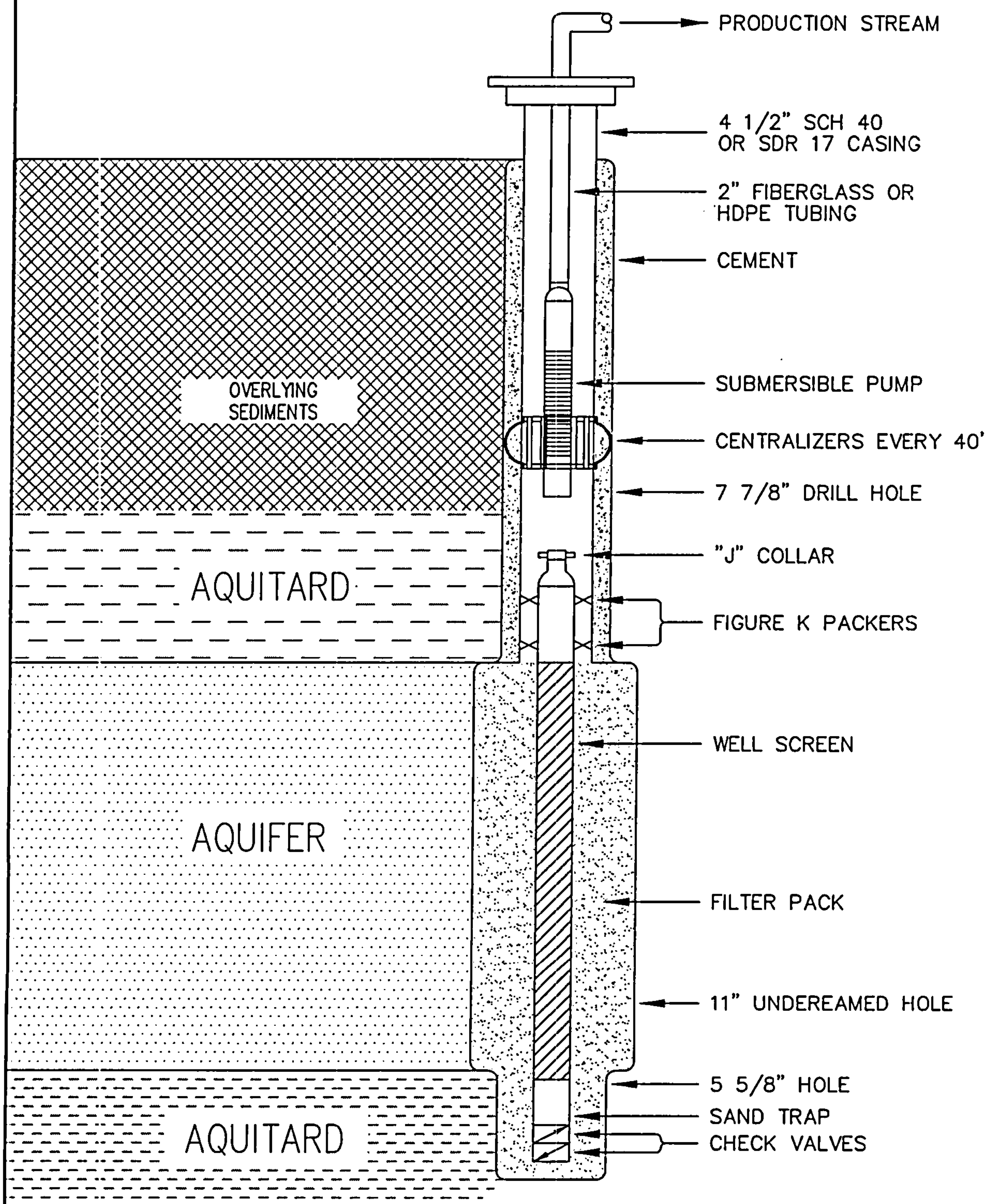


FIGURE 3-14

**POWER RESOURCES, INC.**

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| NO. | DATE | BY |
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**SMITH RANCH–HIGHLAND–REYNOLDS RANCH PROJECTS**
**TYPICAL PRODUCTION WELL**

CONVERSE COUNTY, WYOMING

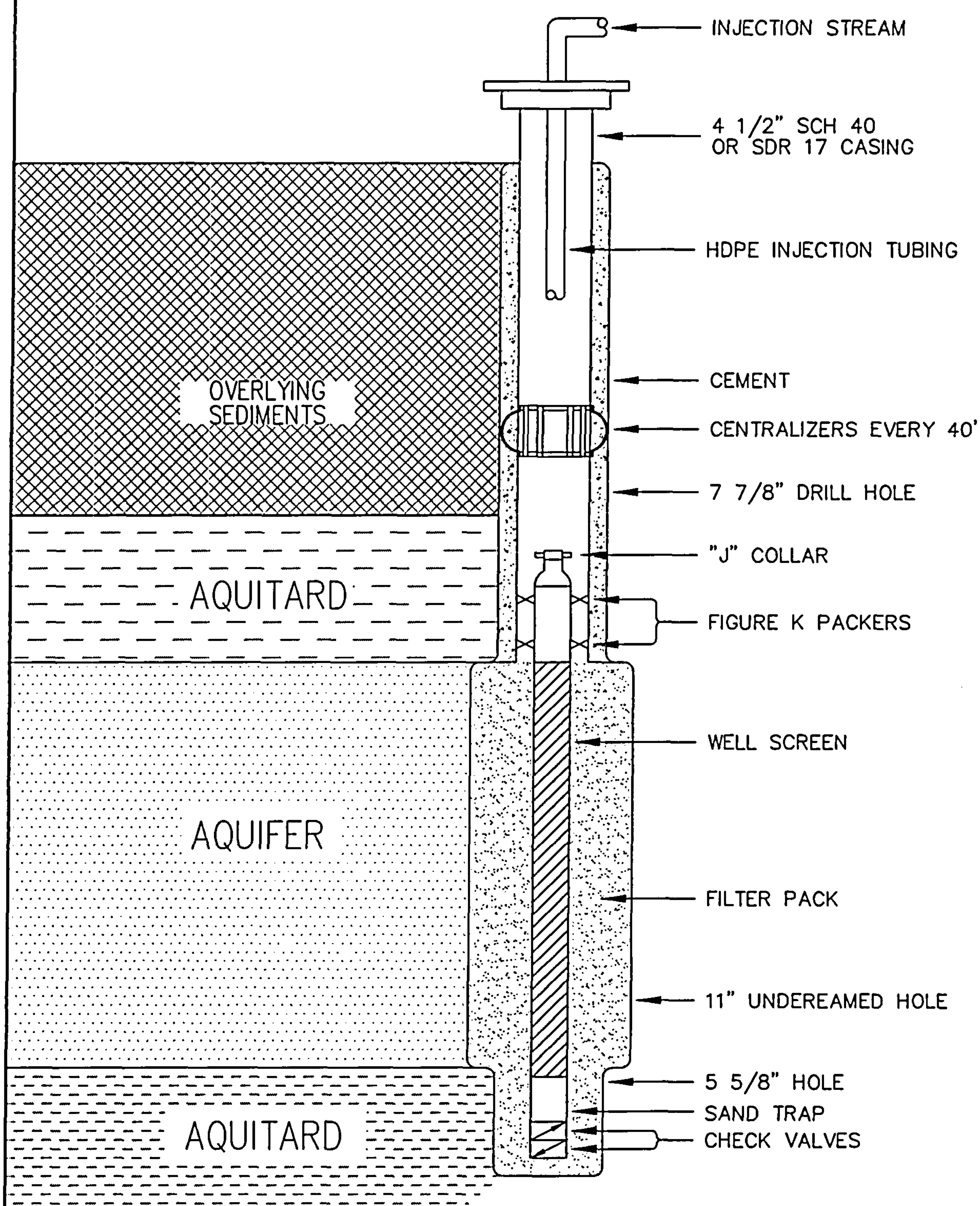


FIGURE 3-15

**POWER RESOURCES, INC.**

P.O. Box 1210

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**SMITH RANCH–HIGHLAND–REYNOLDS RANCH PROJECTS**

**TYPICAL INJECTION WELL**

CONVERSE COUNTY, WYOMING

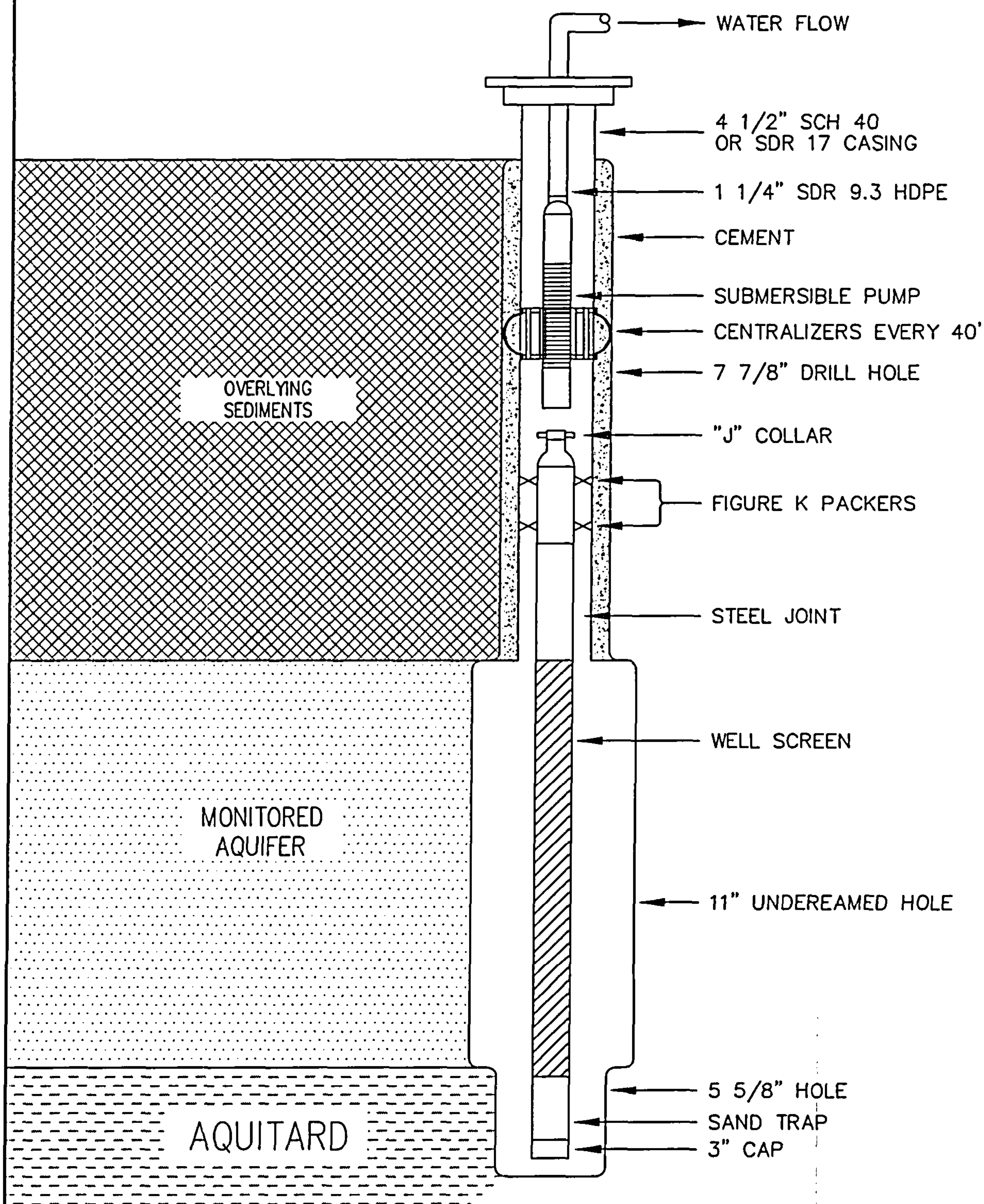


FIGURE 3-16

**POWER RESOURCES, INC.**
P.O. Box 1210 Glenrock, WY 82637 (307) 358-6541 (307) 235-1628

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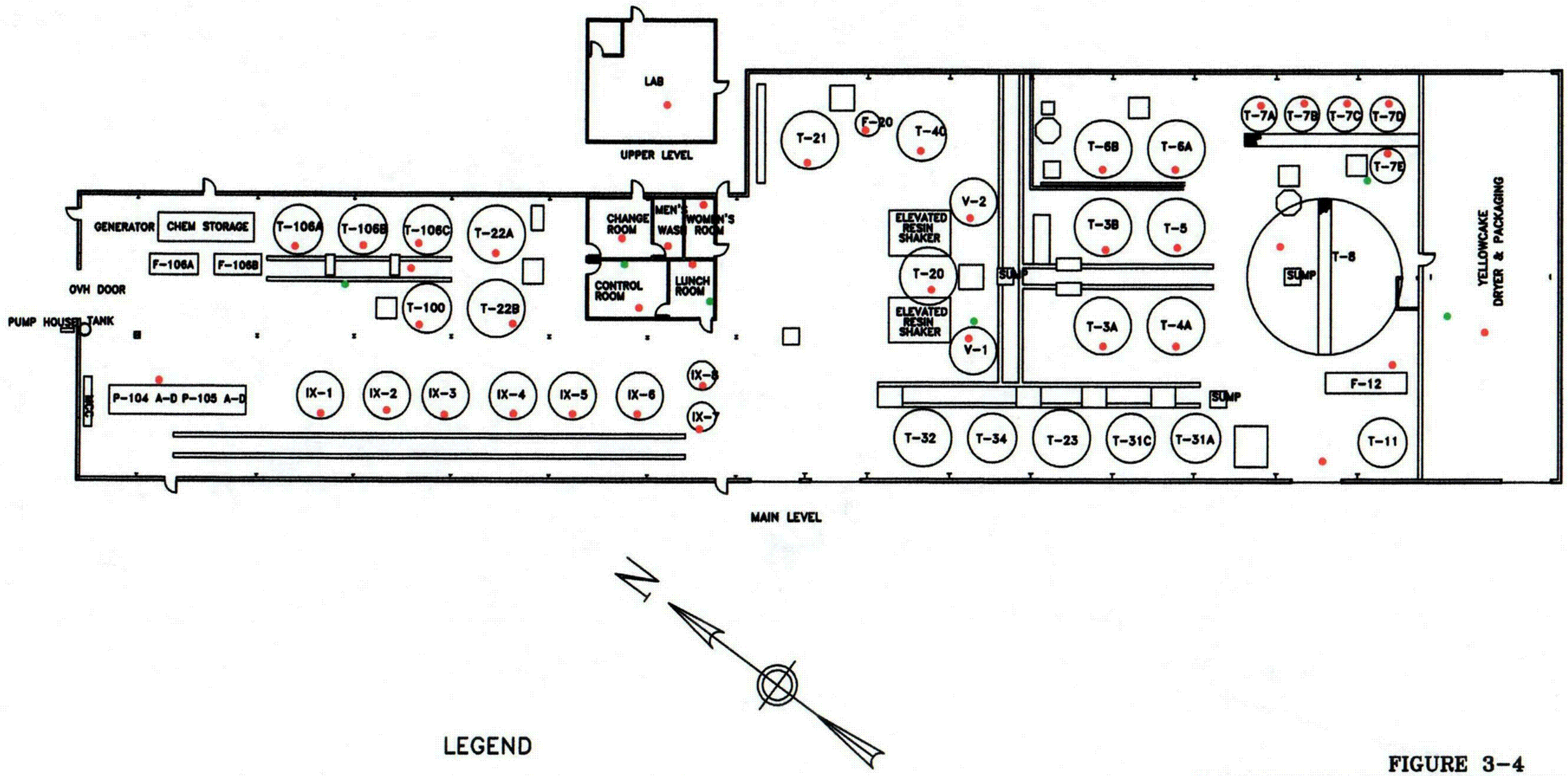
**SMITH RANCH–HIGHLAND–REYNOLDS RANCH PROJECTS**
**TYPICAL MONITOR WELL**
CONVERSE COUNTY, WYOMING




LEGEND

- RADON TESTING LOCATIONS
- GAMMA SURVEY LOCATIONS

FIGURE 3-4

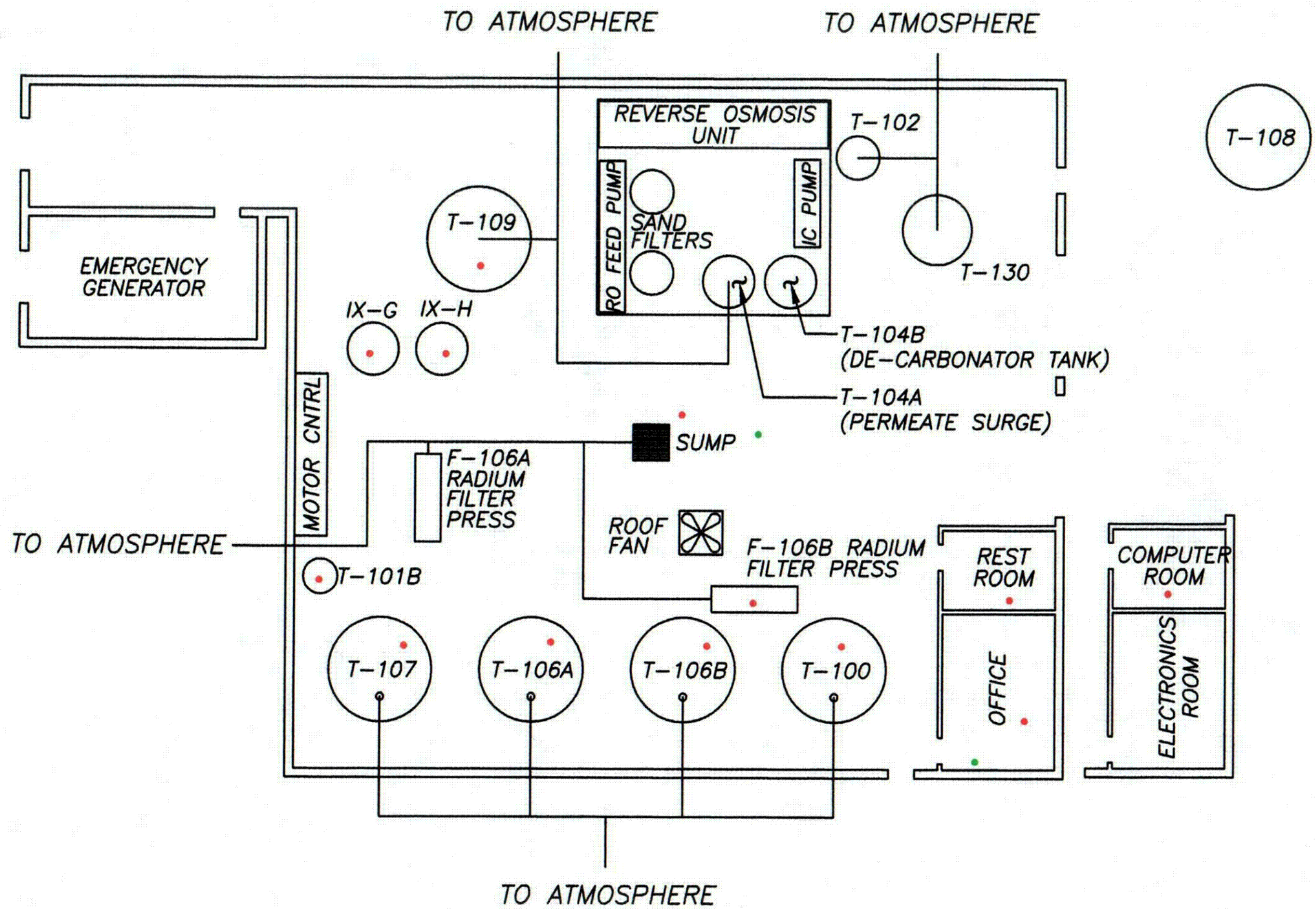
POWER RESOURCES, INC.

HIGHLAND URANIUM OPERATION

SMITH RANCH CENTRAL PLANT PROCESS EQUIPMENT

| REVISIONS | | | DRFT'D BY: | DATE: | CHK'D BY: | DATE: | SHEET |
|---|---|---|---|---|---|---|---|
| DATE | BY | APPR | APPR'D BY: | DATE: | SCALE: AS SHOWN | MAP NO. | |

C08




**LEGEND**

- RADON TESTING LOCATIONS
- GAMMA SURVEY LOCATIONS

0 20 40

FIGURE 3-7

**POWER RESOURCES, INC.**

**HIGHLAND URANIUM OPERATION**

**SATELLITE NO. 1**

**LAYOUT**

REVISIONS

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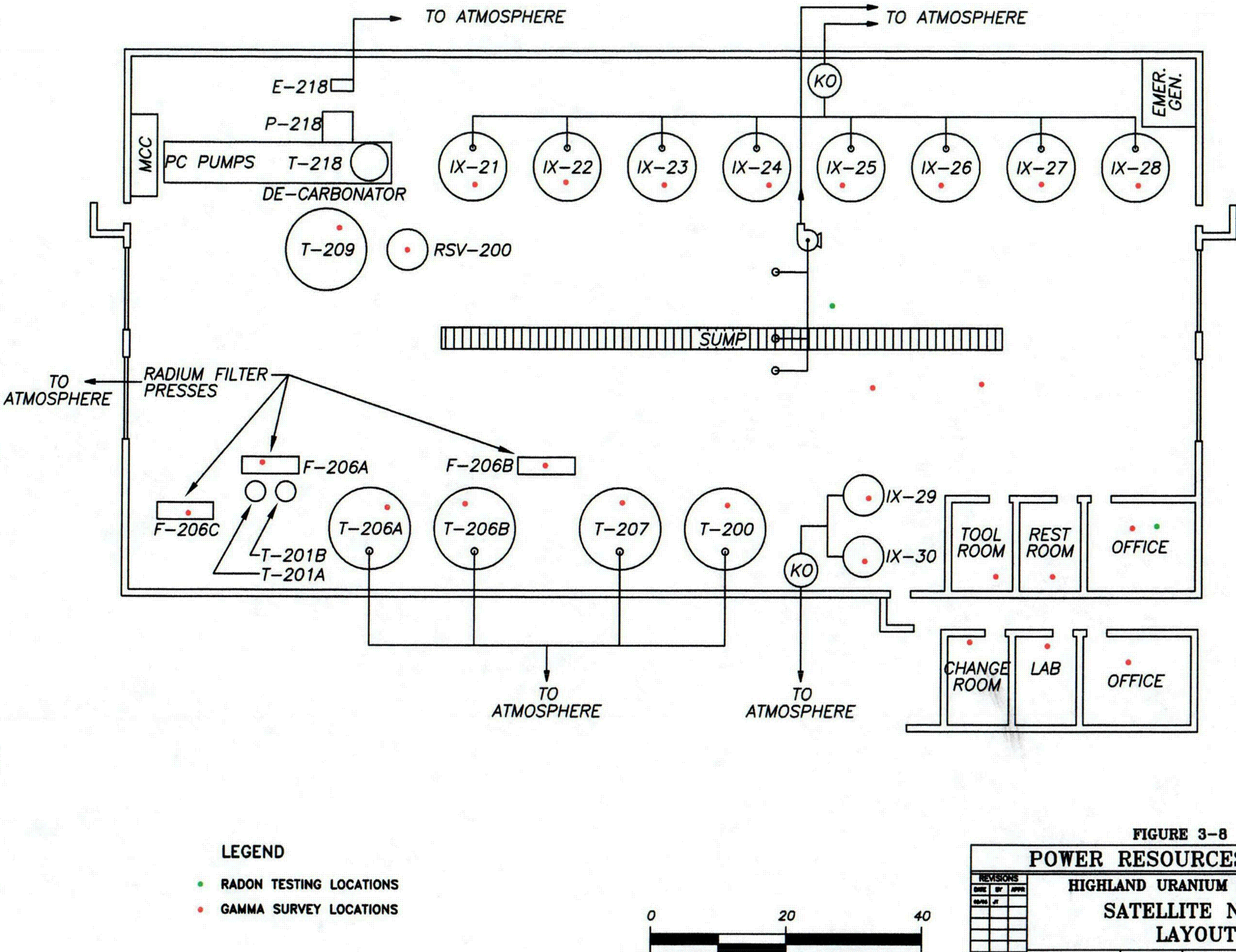
APPR'D BY: DATE: SCALE: AS SHOWN MAP NO. SAT1.DWG

C09




**LEGEND**

- RADON TESTING LOCATIONS
- GAMMA SURVEY LOCATIONS

**FIGURE 3-8**

**POWER RESOURCES, INC.**

**HIGHLAND URANIUM OPERATION**

**SATELLITE NO. 2 LAYOUT**

| REVISIONS | | |
|---|---|---|
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APPR'D BY: ____ DATE: ____ SCALE: AS SHOWN MAP NO. SAT2.DWG

C10

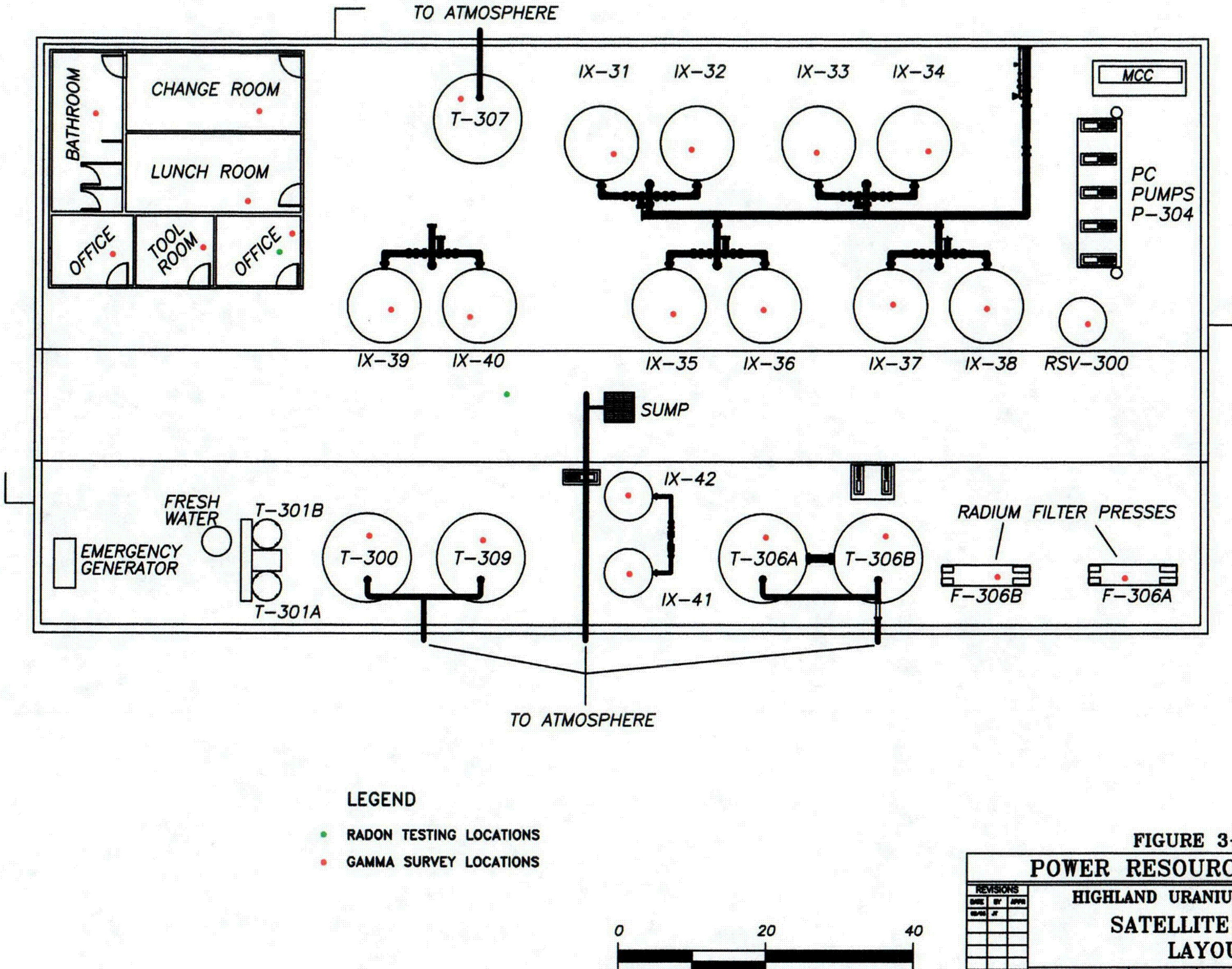



FIGURE 3-9

POWER RESOURCES, INC.

HIGHLAND URANIUM OPERATION

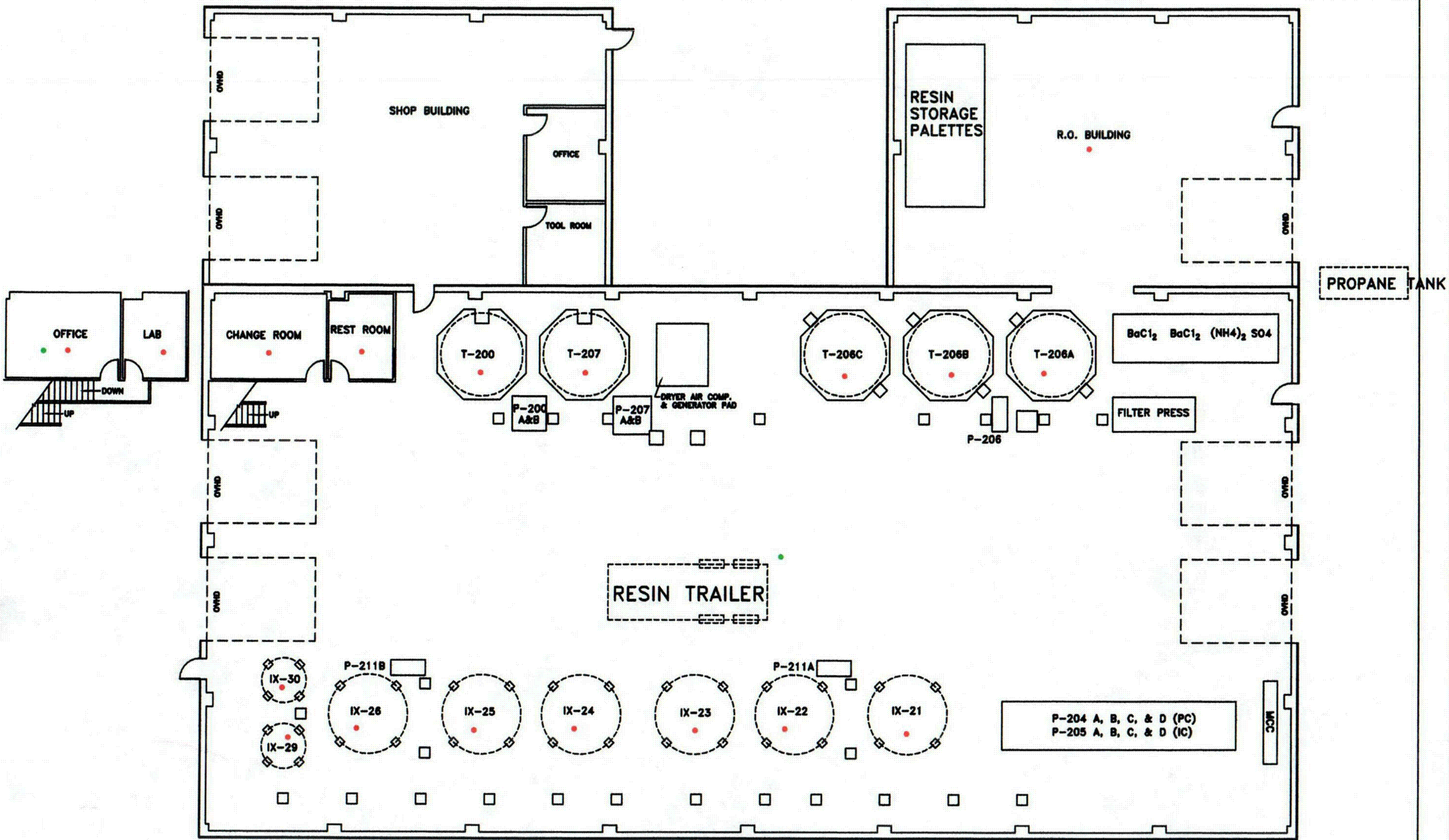
SATELLITE NO. 3

LAYOUT

SCALE: AS SHOWN

MAP NO. SAT3.DWG

C11



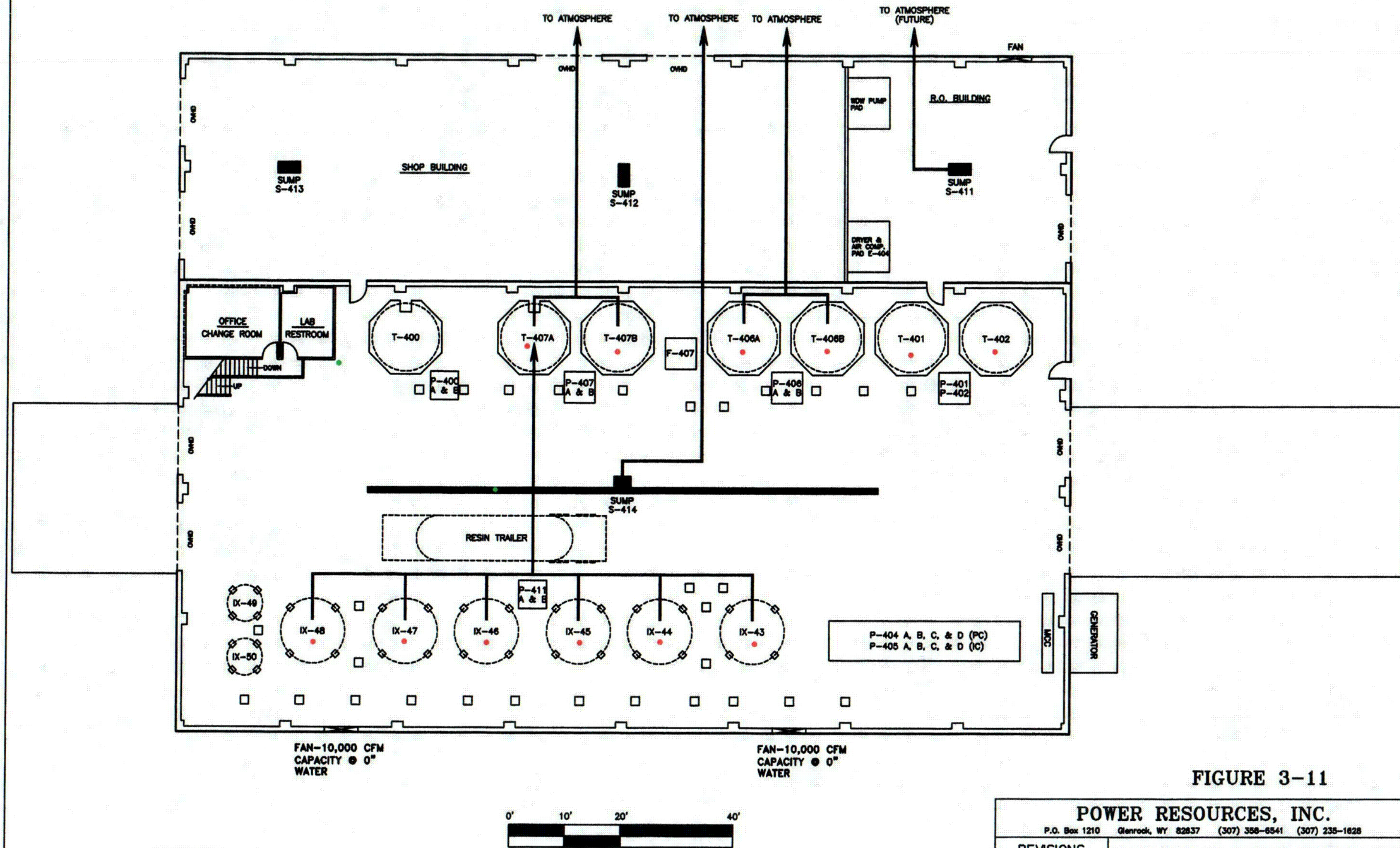

LEGEND

- RADON TESTING LOCATIONS
- GAMMA SURVEY LOCATIONS

FIGURE 3-10

| | |
|---|---|
| | **POWER RESOURCES, INC.** |
| REVISIONS | HIGHLAND URANIUM OPERATION |
| | SATELLITE NO. SR-1 LAYOUT |
| DRFT'D BY: | DATE: |
| CHK'D BY: | DATE: |
| SHEET | |
| APPR'D BY: | DATE: |
| SCALE: AS SHOWN | MAP NO. SAT3.DWG |

C12




LEGEND

- RADON TESTING LOCATIONS
- GAMMA SURVEY LOCATIONS

FIGURE 3-11

POWER RESOURCES, INC.
P.O. Box 1210 Glenrock, WY 82637 (307) 358-6541 (307) 235-1628

REYNOLDS RANCH PROJECT

SATELLITE LAYOUT

CONVERSE COUNTY, WYOMING

| NO. | DATE | BY |
|---|---|---|
| 1 | 02/06 | JT |
| 2 | 03/06 | JT |

C13

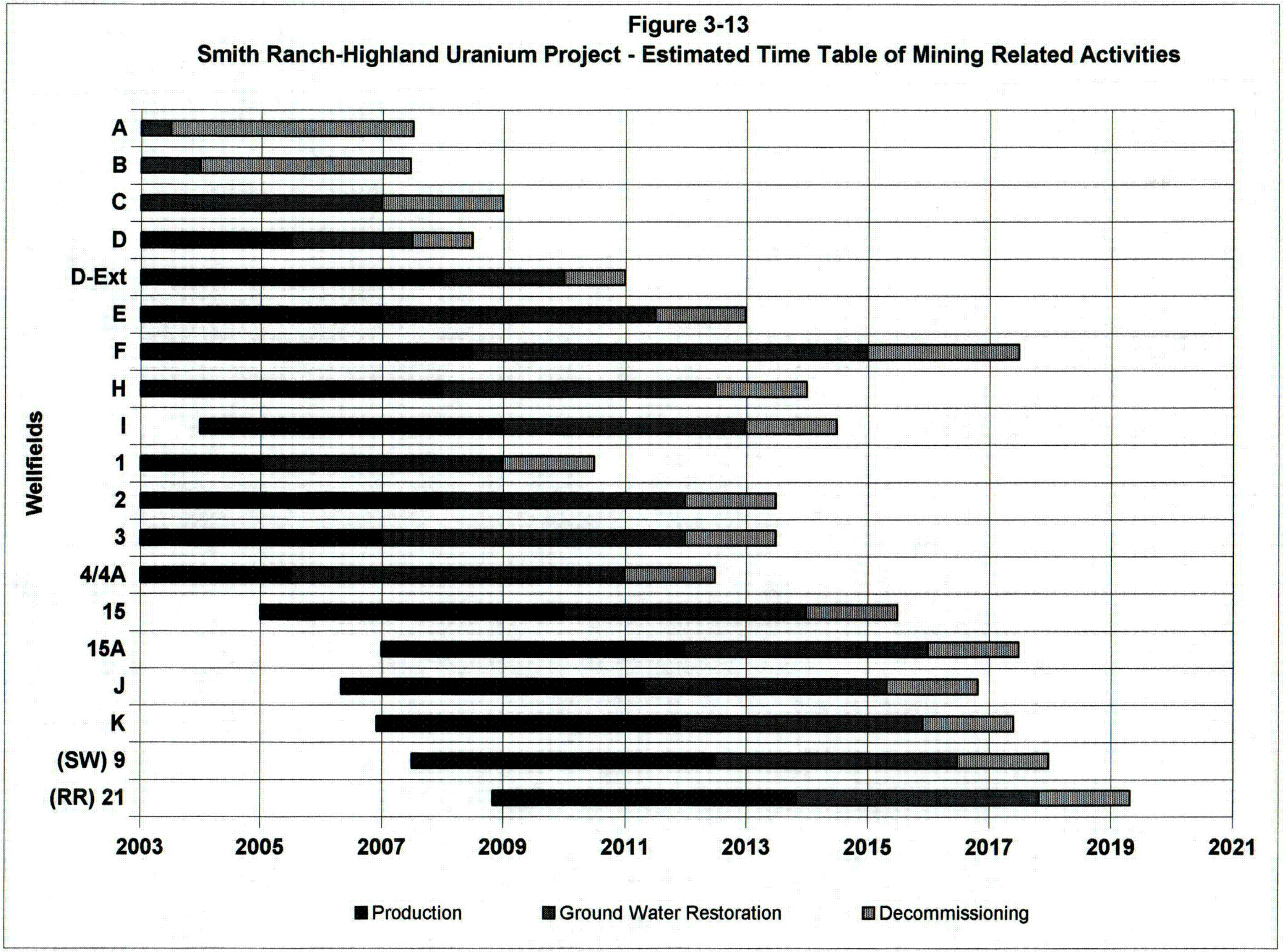
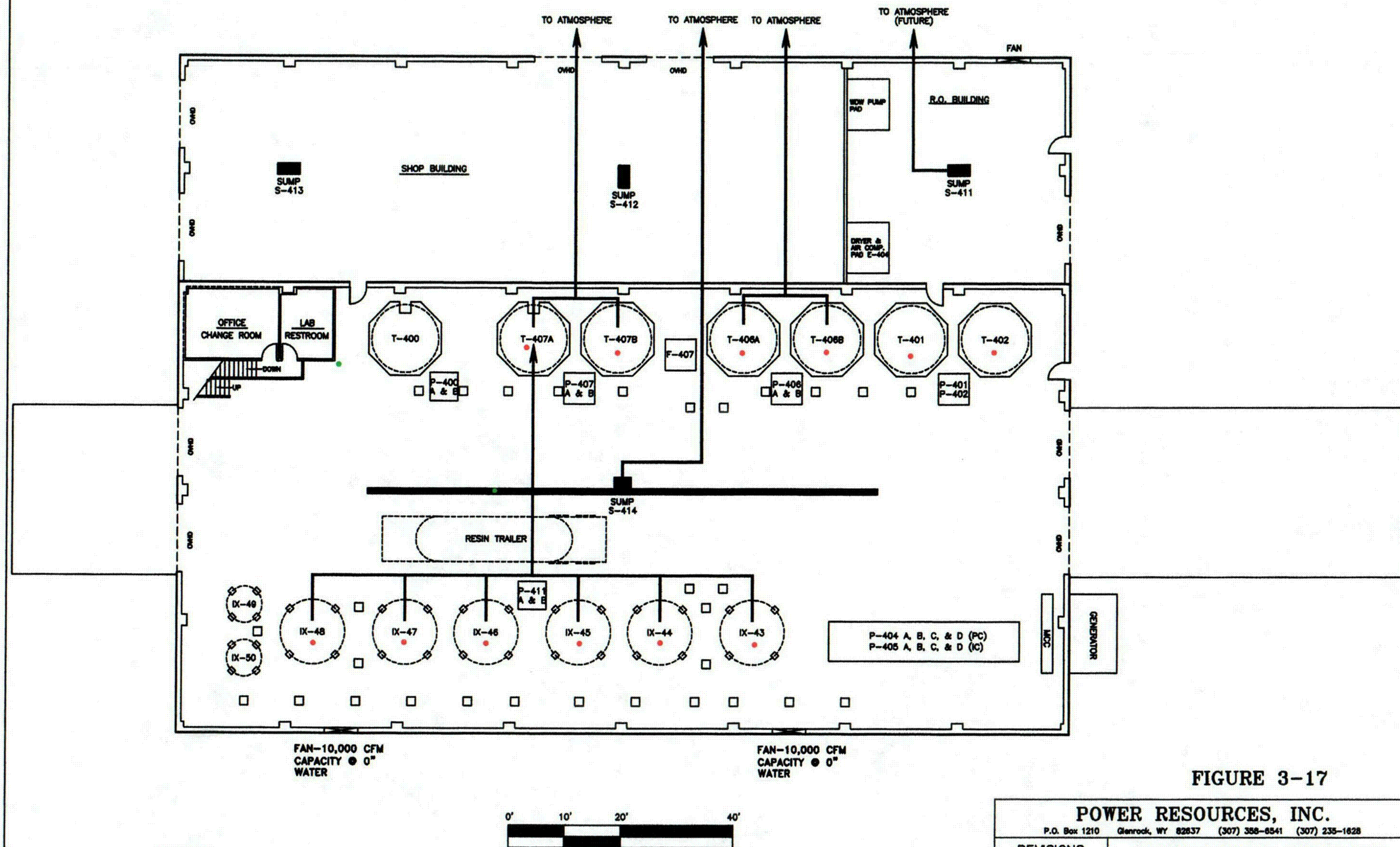


Figure 3-13
Smith Ranch-Highland Uranium Project - Estimated Time Table of Mining Related Activities
Wellfields
A
B
C
D
D-Ext
E
F
H
I
1
2
3
4/4A
15
15A
J
K
(SW) 9
(RR) 21
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021
Production
Ground Water Restoration
Decommissioning

C14




## LEGEND

- RADON TESTING LOCATIONS
- GAMMA SURVEY LOCATIONS

FIGURE 3-17

**POWER RESOURCES, INC.**
P.O. Box 1210 Glenrock, WY 82637 (307) 358-6541 (307) 235-1628

REVISIONS

| NO. | DATE | BY |
|---|---|---|
| 1 | 02/06 | JT |
| 2 | 03/06 | JT |

**SMITH RANCH-HIGHLAND URANIUM PROJECT**

**SW SATELLITE (SR-2) LAYOUT**

CONVERSE COUNTY, WYOMING

C15

# CHAPTER 4
# EFFLUENT CONTROL SYSTEM

This section describes the effluent control systems used at the SR-HUP and proposed Reynolds Ranch Satellite. The effluents of concern at ISL operations include the release or potential release of radon gas (radon-222) and dried yellowcake. Currently, yellowcake processing and drying operations are only conducted at the Smith Ranch CPP as the Highland Central Plant remains on standby status.

The yellowcake drying facilities at the Smith Ranch CPP are comprised of two vacuum dryers that have their own ventilation system. These vacuum dryers do not discharge any uranium when operating. Section 4.1.3 further discusses yellowcake drying at the Smith Ranch CPP. Yellowcake drying at the Highland Central Plant is conducted with a natural gas fired rotary hearth that utilizes a wet scrubber and vacuum system to limit the release of uranium during drying. Section 4.1.4 further discusses the effluent controls for this system.

Routine washdown procedures at both drying facilities keeps work areas clean of accumulating uranium as well as dirt and dust from outside sources.

## 4.1 GASEOUS AND AIRBORNE PARTICULATES

The principal radiological gas representing a potential radiological dose to man is radon-222 gas released to the atmosphere from the circulating leach solution and/or in the elution and precipitation circuit. Some carbon-dioxide gas and some acid fumes will evolve also from the elution/precipitation circuit, but these gases do not present a health problem at the anticipated concentrations. In order to alleviate potential discomfort or health problems due to the in-plant accumulation of gases and fumes, three ventilation systems have been installed. A ventilation system is connected to all process vessels where significant radon-222 or process fumes could reasonably be expected to be released. For the general work areas in the CPP building, a forced air ventilation system is installed for use when the buildings are normally closed due to weather or other factors. A third ventilation system is installed as a part of the yellowcake drying operation.

### 4.1.1 Tank and Process Vessel Ventilation Systems

A separate ventilation system is installed for all indoor non-sealed process tanks and vessels where radon-222 or process fumes would be expected. The system will consist of an air duct or piping system connected to the top of each of the process tanks to exhaust fumes to the outside atmosphere. The venting system from all tanks and sumps consists of 4 to 6-inch PVC piping and function to vent radon gas to the outside atmosphere (see Figures 3-6 through 3-12 for schematic of ventilation systems for CPP and Satellites). Air flow through any openings in the vessel will be from the process area into the vessel and into the ventilation system controlling any releases that occur inside the vessel. Where needed, exhaust fans can pull the air from the top of the tanks or from a sump and discharge the air with any gases and fumes to a vent placed on the outside of the building near the roof level. Separate ventilation systems are used as needed for the functional areas within the CPP.

A tank ventilation system of this type was utilized in the pilot process plant and in-plant monitoring for radon concentrations has proven it to be an effective system for minimizing employee exposure. Operational data collected during operation of the CPP has confirmed that the ventilation system is effective.

### 4.1.2 Work Area Ventilation System

The work area ventilation system is designed to force air to circulate within the separate CPP process areas. The systems for the ion exchange area and for the precipitation area include a minimum of two exhaust fans each. A third system is provided for yellowcake drying and packaging area. The ventilation system exhausts are located on the north or leeward side of the buildings. During favorable weather open doorways and the convection vents in the roof have provided satisfactory work area ventilation.

The maximum calculated annual radon release for the commercial ISL operations is based on NRC procedures used in NUREG-0925 Appendix C assuming all produced fluids are in equilibrium. Using these basis, radon is released at the maximum rate of 6738 Ci/year during the period of maximum production and restoration flows of 11,000 gpm and 3,000 gpm respectively (Table 4-1).

Other emissions to the air are limited to exhaust and dust from limited vehicular traffic and small amounts of process chemicals such as ammonia, carbon dioxide, oxygen, hydrogen peroxide, sodium hydroxide, sulfuric acid and hydrochloric acid. There are no significant combustion related emissions from the process facility as commercial electrical power is available at the site.

### 4.1.3 Yellowcake Drying at the Smith Ranch CPP

The wet yellowcake from the precipitation circuit is vacuum dried and packaged in fifty-five (55) gallon drums for shipment. The vacuum drying system is proven technology, which is being used successfully in several ISL sites where uranium oxide is being produced.

The vacuum drying system consists of the following:

1) Drying Chamber: A S.S. vessel is heated externally and is fitted with a mechanical agitator to stir the yellowcake.

The chamber has a top port for loading the wet cake and a bottom port unloading the dry powder. Additional ports are provided for venting of vapors during the drying procedure.

2) Bag House: This air and vapor filtration unit is mounted directly above the drying chamber so that any dry solids collected on the bag filter surfaces can be batch discharged back to the drying chamber. The bag house is heated to prevent condensation of water vapor during the drying cycle. It is kept under negative pressure by the vacuum system.

3) Condenser: This unit is located downstream of the bag house and is water cooled. It is used to remove the water vapor from the non-condensable gases coming from the drying chamber. The gases are moved through the condenser by the vacuum system. Dust passing through the bag filters is wetted and entrained in the condensing moisture within this unit.

4) Vacuum Producer: The vacuum producer is a water sealed unit that provides a negative pressure on the entire system during the drying cycle. It is also used to provide ventilation during transfer of the dry powder from the drying chamber to fifty-five (55) gallon drums. The water seal captures entrained particulate matter remaining in the gas streams.

5) Packaging: The system is operated on a batch basis. When the yellowcake is dried sufficiently, it is discharged from the drying chamber through a bottom port into drums. A level gauge, a weigh scale, or other suitable device is used to determine when a drum is full. As noted in 4) above, ventilation is provided by the vacuum pump when the powder is being transferred.

6) Heating: The heat for drying is supplied by a heat transfer medium such as Dow-Therm or other suitable heat transfer materials. The yellowcake drying is accomplished under 325° F and at pressures less than atmospheric.

7) Effluent Monitoring: Because of the low, intermittent air flow exiting the vacuum pump, isokinetic sampling of the effluent is not possible. The air flow from the vacuum pump associated with the yellowcake dryer does not exit the building. The water that is collected from the condenser is recycled to the precipitation circuit or filtered and discharged with other process water. Room air will be monitored routinely for airborne dust and radionuclides as described in Chapter 9.

8) Controls: The system is instrumented sufficiently to operate automatically and to shut itself down for malfunctions such as heating or vacuum system failures. The system will alarm if there is an indication that the emission control system is not performing within operational

specifications. If the system is alarmed due to the emission control system, the operator will follow standard operating procedures to recover from the alarm condition, and the dryer will not be unloaded as part of routine operations, if currently loaded, or reloaded, if currently empty, until the emission control system is returned to service within specified operational conditions.

To ensure that the emission control system is performing within specified operating conditions, instrumentation is installed that signal an audible alarm if the air pressure (i.e. vacuum level) falls below specified levels, and the operation of this system is checked and documented during dryer operations. In the event this system fails, the operator will perform and document checks of the differential pressure or vacuum every four (4) hours. Additionally, during routine operations, the air pressure differential gauges for other emission control equipment is observed and documented at least once per shift during dryer operations.

### 4.1.4 Yellowcake Drying at the Highland Central Plant

When operating, the yellowcake drying and packaging facilities at the Highland Central Plant emit minor quantities of radioactive airborne particulates. To ensure adequate building ventilation, the following is utilized as required:

1) CPF building – Five 36 inch hooded axial fans providing a nominal ventilation capacity of 64,000 cfm and one 48 inch wall mounted axial fan providing an additional ventilation capacity of 20,900 cfm.

2) Precipitation area – Ventilation of this area is provided, when needed, by a 42 inch hooded axial roof fan, nominally rated at 15,000 cfm. Design criteria specifies that the system provides not less than 6 air exchanges per hour, approximately 12,900 cfm exhaust capability.

3) Yellowcake Dryer and Packaging Rooms – The exhaust air systems in these areas consist of two separate systems, each equipped with wet scrubbers for dust removal, and each discharging to the atmosphere via separate stacks.

   The Packaging Room scrubber system services the yellowcake drum filling hood, product drum lidding station and the product packaging enclosure. Collected air, fumes, particulates and gases are ducted to the Packaging Room exhaust system scrubber (a wet-baffled orifice unit), and discharged to the atmosphere via a 6 inch diameter stack extending 1 foot above the ridgeline of the building and 60 feet above the ground. The associated air-mover is a centrifugal blower. Design criteria provide for an inlet gas volume of 700 cfm, with a dust loading of 5 grains of yellowcake dust per cubic foot. Fresh water is supplied to the scrubber at about 1.5 gpm.

A second scrubber system services the Yellowcake Dryer. Collected air, fumes, particulates and gases are ducted to a wet scrubber, and discharged to the atmosphere via a 13.5 inch diameter stack extending one foot above the ridgeline of the building and 60 feet above the ground. The associated air-mover is a centrifugal blower. Design intake to the scrubber is 3,300 cfm of air containing 0.73 grains per cubic foot of minus 10 micron yellowcake dust. Water feed to the scrubber is approximately 5-10 gpm. The overall design efficiency of this system at design loading and operating conditions is greater than 99%.

Performance criteria for the Yellowcake Drying and Packaging scrubber systems are as follows:

1. Drafts of 10-15 inches of water are maintained at the intakes of both scrubbers.

2. Pressure drops of not less than 10 inches of water are maintained across both scrubbers.

3. Discharge volumes from 2,000 to 2,500 cfm and from 550 to 900 cfm are maintained from the Dryer and the Packaging exhaust stacks, respectively.

4. Total particulate concentrations of gaseous effluents from the Dryer and Packaging scrubbers normally do not exceed 0.03 grains per cubic foot of air discharged. This exceeds 99.9% scrubber efficiency at 750 pounds per hour throughput.

5. Continuous monitoring instruments are provided for the following at each scrubber system.

   - drafts at the fan intakes
   - pressure drops (differential) across the scrubbers
   - water flow rates

6. The Central Plant Process Computer continuously monitors the Yellowcake Dryer and Packaging scrubber drafts, differential pressures, and water flow rates. The computer records the drafts, differential pressures, and water flow rates every two hours. This data is printed in a daily report which is reviewed by the Central Plant Superintendent, or designee. Any abnormal conditions are noted, and any needed repairs are initiated.

7. The Central Plant Process Computer also continuously controls the Dryer scrubber interlock system which prevents operation if an inadequate scrubber draft, differential pressure, or inadequate water flow to the system is detected. In the event of such a condition, the process computer also sounds an audible alarm in the CPF. The process computer also controls an audible alarm in the case that the Packaging scrubber draft, pressure differential, or water flow are determined to be inadequate.

8. Yellowcake drying and packaging operations are suspended if any of the equipment at the scrubber systems is not operating in accordance with design specifications.

9. As appropriate, specific operating parameter values presented above may be changed; however, they will be selected and used in a manner to maintain or improve the scrubber system efficiency. The appropriate Standard Operating Procedures (SOPs) will be revised to reflect these changes.

10. A stack emissions survey is performed semiannually on the Dryer and Packaging scrubber exhaust stacks to determine the emission rate of particulates, U-natural, radium-226 and thorium-230.

11. The Dryer and Packaging scrubber systems are inspected and cleaned on a routine basis (at least every 14 days of operation).

## 4.2 LIQUIDS AND SOLIDS

Liquid effluents from the operation include the production bleed stream, excess fluids from the elution and precipitation process, regeneration of the water softener system (calcium control), yellowcake rinse water, plant washdown water, restoration equipment (EDR/RO) waste, restoration bleed, analytical laboratory waste, and facility sanitary waste.

The net production bleed stream is approximately one half to one and one half percent of the production. The bleed is taken after the ion exchange units have removed the uranium. The bleed stream and washdown water from the Smith Ranch Satellite IX facilities is transferred to the CPP through a pipeline connecting the two facilities. The bleed is then commingled with the other liquid effluents and either discharged to one of the deep disposal injection wells or alternatively as shown in Figure 4-1 the water may be routed to a reverse osmosis unit. The resulting RO brine may be commingled with other plant water for disposal in a deep disposal injection well. The RO permeate effluent may be used as process water for chemical makeup or returned to the leaching circuit.

The production bleed stream, washdown water, and ground water restoration waste water generated at the Highland Satellites (Satellites Nos. 1, 2 and 3) is treated for removal of uranium and radium-226 and is then pumped to either Purge Storage Reservoir No. 1 or No. 2 prior to disposal via land application (irrigation) at one of the two pivot irrigators.

Excess liquids from the Smith Ranch CPP elution and precipitation circuit and water softener regeneration are expected to average about 60 gallons per minute and will be routed to lined evaporation ponds or to a disposal injection well. Less than 2 gallons per minute of water will result from plant wash water. This water will be commingled with other plant waste water or may be used as process make-up water if it is of satisfactory quality.

The production bleed stream, wash down water, and ground water restoration waste water generated at the proposed Reynolds Ranch Satellite will be disposed through a deep injection well. This deep injection well will be similar in design and depth to the current deep injection wells at Smith Ranch and located near the proposed Reynolds Ranch Satellite area. This deep injection well will be permitted through the WDEQ and operated according to permit requirements.

The water generated during preoperational pump testing typically meets WDEQ-WQD Class IV (Livestock) standards at a minimum and has minimal potential radiological impact on soils or surface water. Therefore, water generated during preoperational pump testing is pumped onto the ground and no alternate handling or disposal method is required.

Excess liquids from the Highland Central Plant are disposed at Morton 1-20 deep disposal well located approximately one mile north of the plant. Currently, no liquids from the Highland Central Plant are disposed of as the facility remains on standby status.

During restoration two additional liquid waste streams are expected at Smith Ranch, Figure 4-2. The operation of electrodialysis (EDR) or reverse osmosis (RO) units will generate a stream in which most of the dissolved solids in the total EDR/RO stream are concentrated in 15% to 30% of the water volume. When operating at full capacity this concentrated stream may be about 250 gallons per minute per ion exchange facility. This stream will be routed to a lined evaporation pond or to a deep waste disposal well. When water quality from restoration areas improve to the point that after uranium and radium removal it is suitable for discharge under an NPDES permit, it may be routed from the separate radium removal settling system to a water treatment system. When the recovery plant is operating at normal capacity it is expected that this stream could be more than 1000 gallons per minute.

A projected water balance for Smith Ranch operating at 12,000 gpm with a one percent production bleed is shown in Figure 4-2. The water balance represents the highest production flowrate matched with the corresponding restoration flowrate from Table 4-1 (ad). These flowrates represent the total water balance with 3 ion exchange facilities and the Central Processing Plant. As capacity is added to the facility to meet these production and restoration levels, disposal capacity will be added in the form of additional deep disposal injection wells, (currently, there are two deep disposal wells at Smith Ranch and one at the HUP). Two more deep wells may be installed at Smith Ranch and one additional well at the HUP) or future evaporation ponds. Additional reductions in wastewater volumes may be obtained by increasing the efficiency of the reverse osmosis process. Figure 4-3, Recovery Plant Flow Rates, provides additional detail on the individual streams of the water going to the deep disposal injection wells.

The future lined evaporation ponds are expected to consist of several cells of five (5) to fifteen (15) acres each. Some waste streams may be routed to selected cells for additional treatment and/or processing. If treatment or processing can improve the water quality such that it meets Wyoming DEQ criteria for NPDES discharge or for irrigation and NRC radionuclide criteria for release to unrestricted areas, the water may be discharged through the water treatment plant or used for irrigation.

### 4.2.1 Deep Disposal Injection Wells

Currently, the SR-HUP utilizes three deep disposal injection wells to dispose of waste water generated by both wellfield and yellowcake processing operations. One well is associated with the Highland facilities and two wells are associated with the Smith Ranch facilities. The locations of the wells are shown on Plate 1. One deep disposal well is planned for the Reynolds Ranch Satellite Facility, which will be located near the Satellite.

The Smith Ranch Facility currently operates two Deep Disposal Injection wells, and these are currently permitted under the Underground Injection Control Program through the Wyoming Department of Environmental Quality – Water Quality Division (WDEQ-WQD). Both of these wells are approved to operate under UIC Permit 99-347 as Class I Non-Hazardous Waste Disposal Wells and authorized by U.S. NRC for the facility under Amendment 16 to Source Material License SUA-1548. PRI currently plans to construct additional deep disposal injection wells during the course of operations as water disposal needs are anticipated and with regulatory approval through WDEQ and U.S. NRC, including the Reynolds Ranch Satellite.

The two Smith Ranch operating disposal wells are designated as WDW #1 and WDW #2, and they are located in Township 36N and Range 74W. WDW #1 is located in the NE¼ Section 35 approximately ½ mile west of the CPP. WDW #2 is located in the NE¼ of Section 27 approximately 800 feet north of Satellite SR-1. The description of the construction and testing of these wells are found in submittals from the original licensee (Rio Algom Mining Corp.) to U.S. Nuclear Regulatory Commission dated October 25, 1995 for WDW #1 and November 22, 1999 for WDW #2. Both wells are permitted to inject into the Parkman, Teapot and Teckla formations, and the permit authorizes injection of up to 432,000 gallons per day of process effluents, laboratory wastes, and production bleed at a maximum injection wellhead pressure of 1,566 psig.

The proposed deep disposal well at the Reynolds Ranch Satellite is very similar in design, depth, and operation to the deep disposal wells at Smith Ranch described above. The operating parameters and design information for the proposed Reynolds Ranch Disposal Well can be found in the permit application submitted to the WDEQ-WQD on October 6, 2004.

The Highland operating Morton 1-20 Disposal Well is also permitted with the WDEQ-WQD UIC Permit 99-347 as a Class I Non-Hazardous Waste Disposal Well. This permit also includes an additional deep disposal well (Vollman 33-27) located near the center of Section 27 T36N, R73W, approximately 1.5 miles east of Satellite No. 3. To date (December 2004) this well has not been constructed. The construction and operation of the Vollman 33-27 well was approved by NRC via License Amendment No. 9. (License SUA-1511), dated December 31, 1998. Similar to the two deep disposal wells associated with Smith Ranch operations, both the existing Morton 1-20 well and the planned Vollman 33-27 are, or will be, completed in a deep injection zone within intervals from 8,629 to 9,141 feet below the surface in the Teapot and Parkman formations.

### 4.2.2 Satellite No. 1 Radium Settling Basins

The Radium Settling Basins consist of two 3 acre feet (AF) clay lined ponds located east of Satellite No. 1. They are used to settle out residual radium-barium sulfate which remains after removal by the radium treatment system and filter presses located in Satellite No. 1. After treated wastewater passes through the Radium Settling Basins, it is transported to the Satellite No. 1 Purge Storage Reservoir where it is stored prior to periodic land application. The Radium Settling Basins are connected to Satellite No. 1 by a 3 inch HDPE pipeline and are connected to the Satellite No. 1 Purge Storage Reservoir by an 8-inch HDPE pipeline.

During early 1988 Everest Minerals Corporation (predecessor to Power Resources, Inc.) notified the NRC that very small quantities of water seepage had been detected in the underdrain system of the Radium Settling Basins. As discussed in the June 1, 1988 correspondence from Everest Minerals Corporation to the NRC, the seepage rates were much lower than the theoretical seepage rates through the clay liner which contained "as-built" permeabilities on the order of 1.0E-7 to 7.8E-7 cm/sec. Upon inspection of the clay liner during 1988 it was determined that erosion protection was needed to protect the sides of the clay liner from wave action. Therefore, a geotextile fabric was installed in September 1988 to protect against future erosion concerns.

The two radium settling basins continued to function as designed, with seepage rates and seepage water quality unchanged from previous periods. The small amount of seepage entering the underdrain system was periodically pumped back to the basins. The geotextile fabric installed to protect against erosion of the clay liner has proven to be very effective. The water quality data resulting from monitoring of the underdrain system was reported to the NRC in the 10 CFR 40.60 Semi-Annual Reports.

During August and September 2002 PRI made modifications to the filtering equipment at Satellite No. 1 in order that continued operation of the Radium Settling Basin was no longer needed. Therefore, they were drained in October 2002. Treated wastewater from Satellite No. 1 is now directly pumped to Purge Storage Reservoir No. 1. This operation is consistent with the treatment systems at Satellite Nos. 2 and 3.

PRI has begun the decommissioning and reclamation of the Radium Settling Basins. Most of the clay liner has been removed and disposed of as "by-product" waste. A small amount of clay liner remains with low levels of uranium and radium-226. PRI intends to dispose of the remaining clay liner during decommissioning activities for Mine Units A and B.

The Radium Settling Basins were originally permitted by the WDEQ-WQD under Permit 93-178 and are currently permitted under the WDEQ/LQD Permit to Mine No. 603. The application package for this facility was submitted to the NRC on February 16, 1987.

### 4.2.3 Satellite No. 1 Purge Storage Reservoir and Irrigation Area

The Satellite No. 1 Purge Storage Reservoir (PSR-1) is located east of Satellite No. 1 and is used to store treated wellfield purge water and treated water from wellfield restoration activities. The reservoir contains 54 AF when at full capacity. Water stored in the reservoir is periodically land applied by sprinkler irrigation on a 58 acre irrigation area when weather conditions permit.

The reservoir is underlain by a natural clay soil that contains an average permeability of approximately 1.8E-8 cm/sec. Use of the reservoir began in January 1988 with the start of production from the Satellite No. 1 area. The reservoir performed as designed until August 1994 at which time a small amount of leakage was discovered seeping at the two ephemeral drainages located immediately east and south of the reservoir. A Corrective Action Plan (CAP), which addressed the conditions at the reservoir and corrective measures to be implemented, including the installation of two pumpback sumps (North and South Pumpback Sumps), was submitted to the NRC in correspondence dated

October 3, 1994. It was determined that the seepage resulted from erosion of the natural clay liner along the eastern most portion of the reservoir. The erosion was caused mostly by wave action. Erosion of the clay liner exposed an underlying sandstone which allowed seepage to move out of the reservoir, to the south and east, where the sandstone outcropped in the ephemeral draws.

On November 9, 1994 all of the treated wastewater was diverted to the Satellite No. 2 Purge Storage Reservoir (PSR-2) in order that the PSR-1 could be dried out and repairs to the liner accomplished. Due to the abnormally wet spring of 1995, construction activities, which included repair of the clay liner and the addition of a geotextile fabric along the eastern side of the reservoir to protect against erosion, were not completed until August 1995. The CAP also included the construction of an 800 foot long Interceptor Trench approximately 300 feet south of PSR-1 in August 1996. The trench captures subsurface seepage from the south side of PSR-1 and pumps it back into the reservoir. The pumping system is fully automatic and continuously operates. To date (December 2004) the Interceptor Trench has been very effective in preventing seepage from PSR-1 from surfacing and entering the drainage south of the system. After the Interceptor Trench went into service, it was no longer necessary to operate the South Pumpback Sump.

As of December 2004, both the Interceptor Trench and North Pumpback Sump are fully operational. It is expected that the system will operate until PSR-1 is no longer used to store treated wastewater. The system is monitored in accordance with requirements of the WDEQ-LQD.

PSR-1 was originally permitted by the WDEQ-WQD under Permit No. 93-178. The PSR-1 and associated pumpback system are currently permitted under the WDEQ-LQD Permit to Mine No. 603. The original application package PSR-1 was submitted to the NRC on February 16, 1987.

The Satellite No. 1 Irrigation Area is located east of Satellite No. 1 near PSR-1. The area consists of a center pivot sprinkler irrigation system which covers 58 acres. Water from PSR-1 is periodically land applied by sprinkler irrigation on this area.

The Satellite No. 1 Irrigation Area was originally permitted by the WDEQ-WQD under Permit No. 92-077 and is currently permitted under the WDEQ-LQD Permit to Mine No. 603. The application package for this facility was submitted to the NRC on July 17, 1986 and approved with the original license approval in July 1987.

### 4.2.4 Satellite No. 2 Purge Storage Reservoir and Irrigation Area

An additional purge storage reservoir and irrigation area were constructed in 1994 northeast of Satellite No. 2. These facilities, known as the Satellite No. 2

Purge Storage Reservoir (PSR-2) and Irrigation Area are used for the storage and disposal of purge and ground water restoration fluids from wellfields served by Satellite Nos. 2 and 3.

The locations of the Satellite No. 2 PSR and Irrigation Area and the 4 inch HDPE pipeline which is used to transport treated wastewater from Satellite No. 3 to the Satellite No. 2 PSR are shown on Plate 1. The facilities are sized, constructed, and operated in a fashion similar to the existing Satellite No. 1 PSR and Irrigation Area. The facilities were originally permitted by the WDEQ-WQD under Permit No. 93-410 and are currently permitted under the WDEQ-LQD Permit to Mine No. 603. On June 10, 1994 the NRC approved Amendment No. 53 which approved the construction and use of these facilities. Similar to PSR-1, PSR-2 is underlain by several low permeability clay units which minimizes seepage to any potential useable aquifer. Use of the Irrigation Area started during September 1995.

### 4.2.5 Existing Lined Evaporation Ponds

Currently, two small, lined solar evaporation ponds are in operation at the Smith Ranch Facility. These ponds were initially constructed in 1981 and authorized under the Q-Sand Pilot Project License SUA-1387. These ponds are located just to the north of the CPP, and they are currently used for limited process effluent disposal and for solids retention prior to transfer to the deep disposal injection wells. The capacity of each pond is 0.78 acre feet of water. Each pond is 100 ft. x 100 ft. and 8 feet deep. During operations, a 3 feet freeboard is maintained in each pond to protect the berms from wave action due to winds.

Each pond is constructed with a compacted sandy clay base overlain by a 30 mil Hypalon liner. The bottom of each pond has a two way slope toward the center. A sand layer is placed over the bottom of the pond with the synthetic liner on top of the sand. For each pond, a perforated PVC pipe is installed in the sand layer parallel to the bottom slope. The perforated pipe is connected to a collection sump. The sumps will be monitored for leaks of process solutions, as described in Chapter 5.

### 4.2.6 Future Solar Evaporation Pond(s)

The future solar evaporation ponds for the SR-HUP will consist of five to fifteen acre cells typically ten to twenty feet deep for holding process waste waters containing high total dissolved solids. The design plan and method of construction for the individual cells will be similar to that used for the pilot plant lined evaporation ponds.

A preliminary subsurface study of potential evaporation pond sites was conducted by Chen & Associates of Casper, Wyoming. Eleven subsurface test holes drilled in the permit area encountered as much as 45 feet of clay and sandy clay material that would be suitable for use in constructing the pond embankments. No water was encountered in any of the test holes, which were 25 to 50 feet deep.

After all topsoil is removed and stockpiled from the area to be disturbed, the evaporation pond cells will be constructed from a combination of cuts and compacted subsoil embankments using the local clays and sandy clays. Embankment slopes will be on the order of 3 horizontal to 1 vertical and the cells will have an eight foot wide or greater crest on all embankments. The material in the bottom of the cell and interior sides of embankments will be compacted to 90 to 95% of maximum standard Proctor density. Material unsuitable for use in construction of soil liners will be identified and segregated. A leak detection system consisting of perforated pipes placed in a sand layer and designed to drain to a common sump will be installed in each cell. The cell will then be lined with an impervious membrane material such as hypalon or high density polyethylene.

The final design and location of each cell will depend on site-specific soils sampling and testing. The embankments will be designed to divert natural run-off away from the pond and the ponds will be located away from significant surface drainage systems. The ponds will be fenced individually to exclude livestock and wildlife such as antelope. The fences around the evaporation ponds will be posted with warning signs for personnel protection. A Permit to Construct will be obtained from the WDEQ prior to beginning construction.

There are no current plans for construction of solar evaporation ponds at the Reynolds Ranch amendment area.

### 4.2.7 Solid Waste

The non-radioactive wastes, such as packing material, are disposed in the site's existing solid waste disposal facility as authorized by the WDEQ. The on-site construction waste landfill site was originally permitted by the WDEQ in 1978 and continues to operate for disposal of construction, shipping, and demolition materials. Public access to the disposal site is prohibited by the facility's fencing. Only those materials generated by the facility or in association with its operation are allowed to be disposed at the site. No hazardous, sanitary, or radioactive contaminated wastes are disposed at this landfill. No impact to ground water is anticipated resulting from this landfill.

The disposal facility is located directly behind the Smith Ranch CPP near the top of a sandstone ridge to prevent run-on from snowmelt and precipitation (see Plate 1). Prior to its original use, topsoil from the site was removed and stockpiled for future use. The disposal site(s) consist of a constructed trench approximately 10-14 feet deep surrounded on either side by litter control fencing. Materials placed within the site are periodically buried in place with sand material originally excavated from the disposal pit. Construction materials, primarily including such items as waste lumber, pallets, or cable spools may be managed by controlled burns authorized by specific county burn permits. Any fugitive materials not managed by the litter fences periodically are collected and placed into the disposal site to assure the litter is appropriately controlled.

## 4.3 CONTAMINATED EQUIPMENT

Solid wastes generated by this project that are contaminated with uranium consist of materials such as rags, trash, packing material, worn or replaced parts from equipment, piping, sediments removed from process pumps and vessels, the solids remaining in the evaporation pond after the liquids have evaporated and sludge from the radium-226 treatment systems at Satellite Nos. 1, 2, and 3. Radioactive solid waste that has a contamination level requiring controlled disposal are isolated in drums or other suitable containers and disposed in a NRC licensed tailings facility or as otherwise approved by the NRC. The combined operations at the SR-HUP will generate between approximately 100 to 300 $yd^3$ of radioactive contaminated waste each year. During final decommissioning of the Central Processing facilities and Satellites, the volume will increase.

# CHAPTER 5
# PRE-OPERATIONAL ASSESSMENT OF WELLFIELDS AND ENVIRONMENTAL MONITORING

The primary objectives for an in situ leaching project monitoring program are protection of existing ground water supplies, keeping employee and public exposure to ALARA, and preventing and/or mitigating the impact of any surface contamination that could result due to a leak or spill of process solutions. The program to keep employee and public exposure to ALARA is discussed in Chapter 9. The remaining pre-operation and operational monitoring programs are discussed in this chapter.

## 5.1 PRE-OPERATIONAL ASSESSMENT OF WELLFIELDS

### 5.1.1 General

Appendix D5 and Appendix D6 of this amendment application contain general baseline geologic and hydrologic information pertaining to the Reynolds Ranch amdendment area. General baseline geologic and hydrologic information pertaining to SR-HUP operations has been previously submitted. Prior to wellfield development it is necessary to collect and assemble very detailed information on geologic and hydrologic conditions in order that ore zones can be defined, geologic and hydrologic parameters quantified, wellfields planned, hydrologic monitoring programs developed, and baseline ground water quality sufficiently determined. To accomplish the above, the operator must conduct a very capital intensive multi-step program which includes interaction with the WDEQ.

Sections 5.1.2 through 5.16 contain a detailed description of the types of geologic and hydrologic data which have been collected for operating wellfields and will be collected for proposed wellfields. Section 5.1.7 contains a description of the baseline gamma surveys that will be conducted at all proposed wellfields.

### 5.1.2 Monitor Well Spacing

The density and spacing of monitor wells are determined during the detailed geologic and hydrologic assessment of a proposed wellfield. Monitor wells are installed in the mineralized area (production pattern area) at a density of one well per three acres of area under the production patterns. A minimum of five of these wells are installed per mine unit. These wells are used to obtain baseline water quality data to characterize the Production Zone and to determine ground water Restoration Target Values (RTVs).

Monitor wells are installed within the Production Zone, outside the mineralized portion of the ore zone and production pattern area in a "ring" around the mine area. These wells are used to obtain baseline water quality data and characterize the area outside the production pattern area. Upper Control Limits (UCL's) are determined for these wells from the baseline water quality data (Section 5.1.5).

The distance between these monitor wells is typically between 300 and 800 feet. The distance between these monitor wells and the production patterns is typically 250 to 600 feet. The acceptable distance between the monitor wells and the production patterns is determined using a ground water flow model and estimated hydraulic properties for the proposed production area. The acceptable distance between monitor wells and the production patterns also takes into account the demonstration that if an excursion were to occur, production fluids can be controlled within 60 days, as required by WDEQ requirements. Based on past modeling and current monitor well spacing at SR-HUP, monitor wells will typically be installed at a distance of 500 feet between monitor wells and 500 feet between the monitor wells and the production pattern (see Figure 3-12).

Monitor wells are installed within the overlying and underlying aquifers at a density of one of each type of well per every three acres of pattern area. These wells are used to obtain baseline water quality data and are used in the development of UCL's for these zones. In the case that no potentially affected overlying and/or underlying aquifer exists, or the confining unit (aquitard) between the production zone and/or the overlying or underlying aquifer is thin (less than 5 feet in thickness), within a part, or entire wellfield, the density and location of such wells will be determined in consultation with the regulatory agencies. In the event that the mineralized area and corresponding production pattern area is very narrow and continuous (i.e. "line drive"), wells monitoring the overlying and underlying aquifers (if present) will not be more than approximately 1,000 ft apart from one another.

### 5.1.3 Hydrologic Testing Proposal

Once an area has been adequately assessed from a geologic and mineability standpoint and the operator determines that it is both feasible and desirable to ISL the area, the limits of the mine area are determined and it becomes a proposed mine unit. A Hydrologic Testing Proposal is then developed to determine the following:

1. Hydrologic characteristics of the Production Zone aquifer.

2. Presence or absence of hydrologic boundaries within the Production Zone aquifer.

3. The degree of hydrologic communication, if any, between the Production Zone and the overlying and underlying aquifers.

4. The vertical permeability of the overlying and underlying confining units which have not already been tested.

5. The degree of hydrologic communication between the Production Zone and the surrounding monitor well ring.

The Hydrologic Testing Proposal is submitted to the WDEQ for review and comment. PRI has a Standard Operating Procedure (SOP) in place which details the contents of the Hydrologic Testing Proposal.

### 5.1.4 Mine Unit Hydrologic Test Document

Following completion of the field data collection, the Mine Unit Hydrologic Test Document is assembled and submitted to the WDEQ for review. In accordance with NRC requirements, the Mine Unit Hydrologic Test Document is reviewed by a Safety and Environmental Review Panel (SERP) to ensure that the results of the hydrologic testing and the planned mining activities are consistent with technical requirements and do not conflict with any requirement stated in the NRC license. A written SERP evaluation will evaluate safety and environmental concerns and demonstrate compliance with applicable NRC license requirements. The written SERP evaluation will be maintained at the site.

The Mine Unit Hydrologic Test Document contains the following:

1. A description of the proposed mine unit (location, extent, etc.).

2. A map(s) showing the proposed production patterns and locations of all monitor wells.

3. Geologic cross-sections and cross-section location maps.

4. Isopach maps of the Production Zone sand, overlying confining unit and underlying confining unit.

5. Discussion of how the hydrologic test was performed, including well completion reports.

6. Discussion of the results and conclusions of the hydrologic test including pump test raw data, drawdown match curves, potentiometric surface maps, water level graphs, drawdown maps and when appropriate, directional transmissivity data and graphs.

7. Sufficient information to show that wells in the monitor well ring are in adequate communication with the production patterns.

8. Any other information pertinent to the area tested will be included and discussed.

Other information that may be evaluated in the pre-operational assessments of wellfields and the Hydrologic Test Report if it is determined that significant differences may exist from previous evaluations. Other evaluations may include:

- The relationship between well field operating pressures (projected down-hole injection pressures), the hydrostatic pressure of the fluid column, sustainable well casing pressures, and formation rupture pressures.

- An impact analysis that includes the ability to control the migration of lixiviant from the production zones to surrounding environs; groundwater and surface water pathways that might transport extraction solutions offsite in the event of an uncontrolled excursion, surface piping leak, or incomplete restoration.

- The impact of in situ leach operations on groundwater flow patterns and aquifer levels.

- The expected post-extraction impact on geochemical properties and water quality.

### 5.1.5 Baseline Water Quality Determination

#### 5.1.5.1 General

The collection of baseline water quality data and determination of baseline water quality conditions is very important as the Upper Control Limits (UCL's) and ground water restoration objectives are based on this data. PRI has Standard Operating Procedures (SOPs) in place that detail acceptable water quality sampling and handling procedures, as well as the statistical assessment of the data.

#### 5.1.5.2 Data Collection

Water quality samples are obtained and analyzed from the above monitor wells to establish baseline (background) ground water quality conditions in each zone. Sampling, preservation and analysis procedures are performed in accordance with accepted procedures. The number of samples collected and the parameters analyzed are as follows:

1) Mineralized Zone (Production Pattern) MP-Wells - Two separate samples, collected at least two weeks apart, are collected for the parameters listed in Table 5-1 The regulatory authorities are contacted in order that they can, if desired, collect split samples from the second field sampling for comparative purposes.

   Two separate samples, collected at least two weeks apart, are analyzed for the following parameters:

- Total alkalinity
- Chloride
- Conductivity
- Sulfate
- TDS
- Fluoride*
- pH
- Selenium
- Uranium
- Radium-226
- Arsenic*

* Arsenic and fluoride are deleted from the above list of parameters if the previous two analyses (conducted for the list of parameters included in Table 5-1) show that arsenic and fluoride are below detection limits.

2) Ore Zone (Monitor Well Ring), M and Trend (T) Wells (if installed) - One sample for the parameters in Table 5-1 and three samples for the UCL parameters chloride, total alkalinity, and conductivity. All samples are collected at least two weeks apart.

3) Overlying and Underlying Zones, MO and MU Wells - Two samples for the parameters in Table 5-1 and two samples for the UCL parameters chloride, total alkalinity, and conductivity. All samples are collected at least two weeks apart.

5.1.5.3 Statistical Assessment of Baseline Water Quality Data

Baseline water quality is determined by averaging the data collected for each parameter, for each zone that is monitored. The variability of the data is also calculated. Outliers are determined in accordance with methods presented in WDEQ-LQD Guideline 4, or other accepted methods. Values determined to be outliers are not used in the baseline calculations. Where wells are not uniformly distributed, the average may be determined by weighting the data according to the fraction of area, or water volume, represented by the data. Baseline conditions are determined as follows:

<u>Mineralized Zone (Production Pattern) Wells</u> - Data for each parameter are averaged. If the data collected for the entire mine unit indicate that waters of different underground water classes (WDEQ-WQD Rules and Regulations, Chapter VIII) exist together, the data are not averaged together, but treated as sub-zones. Data within specific sub-zones are averaged. Boundaries of sub-zones, where required, are delineated at half-way between the sets of sampled wells which define the sub-zones.

<u>Ore Zone (Monitor Well Ring) Wells</u> - Data for each parameter are averaged. As with the mineralized zone wells, if sub-zones are present which differ in underground water classes, data within the specific sub-zones is averaged separately.

Overlying Aquifer - Data for each parameter are averaged.

Underlying Aquifer - Data for each parameter are averaged.

5.1.5.4 Restoration Target Values

The Restoration Target Values (RTV's) are determined from the baseline water quality data and are used to assess the effectiveness of ground water restoration activities. The average and range of baseline values determined for the wells completed in the Production Zone within the wellfield area (i.e. MP-Wells), constitute the RTV's. If the data indicate that waters of significantly different quality exist within the same mine unit, the data will be divided into sub-zones and averaged to determine the RTV's for each subzone.

5.1.6 Upper Control Limits

5.1.6.1 General

Monitor wells are installed within the Production Zone outside and around the pattern area (i.e. monitor well ring) and within overlying and underlying aquifers to document that the lixiviant and production fluids are not leaving the defined Production Zone. The process bleed (wellfield purge), in combination with production activities (pumping and injection rates), assist in keeping production fluids within the Production Zone.

Should production fluids reach a monitor well and its UCLs are exceeded, an "excursion" occurs. If an excursion is determined to have occurred, operational changes are implemented until such time that production fluids are retrieved to the Production Zone and the affected monitor well(s) is no longer on excursion status. As part of the detailed hydrologic assessment, UCLs are determined based on the baseline water quality data. The UCL parameters are chloride, total alkalinity, and conductivity.

It should be noted that the UCLs for Highland wellfields historically used bicarbonate instead of total alkalinity. Given the pH of the ground water UCLs for bicarbonate and total alkalinity are synonymous, except that total alkalinity is expressed as mg/L $CaCO_3$ equivalent instead of mg/L of bicarbonate. As of July 2004 PRI converted all UCLs to total alkalinity using the SERP process for all of Highland wellfields. Such a conversion is necessary to assist laboratory operations and provide consistent reporting requirements throughout the project.

5.1.6.2 Determination of Upper Control Limits

The UCLs are based on the baseline water quality data and determined as follows:

- Chloride UCL - baseline mean plus five standard deviations, or the baseline mean plus 15 mg/L, whichever is greater. Expressed as mg/L chloride.

- Total Alkalinity UCL - baseline mean plus five standard deviations. Expressed as mg/L as $CaCO_3$.

- Conductivity UCL - baseline mean plus five standard deviations. Expressed in μmhos/cm at 25°C.

## 5.2 OPERATIONAL HYDROLOGIC MONITORING PROGRAM

### 5.2.1 General

During operation, the primary purpose of the wellfield monitoring program is to detect and correct any condition which could lead to an excursion of leaching solution or detect such an excursion should one occur. To achieve this objective, flow rates and operating pressures are monitored at individual operating wells and along the main pipelines to and from the recovery plant. Water quality and water levels in the wellfield monitor wells are tested to ensure compliance.

Noncompliances discovered through operational monitoring will be reported and corrective action plans developed in accordance with LQD Rules and Regulations, Chapter 11, Sections 12 and 13.

### 5.2.2 Monitoring Frequency and Reporting

The Production Zone, overlying aquifer, and underlying aquifer monitor wells are sampled semi-monthly at approximately two week intervals (but not less than 10 days apart) and the samples are analyzed for and compared against the excursion parameter UCL values. The excursion parameters shall be chloride, conductivity and total alkalinity. In addition, the water level in each monitor well is measured and recorded prior to each sampling event. Water levels are not used as an excursion indicator. Water level and analytical monitoring data for the UCL parameters are reported to the WDEQ-LQD on a quarterly basis. This data is retained on site for review by the NRC.

### 5.2.3 Water Quality Sampling and Analysis Procedures

Water quality samples are obtained by pumping the monitor wells with permanently installed submersible pumps. To assure that water within the well casing has been adequately displaced and formation water is sampled, wells are pumped a certain amount of time, based on the particular well's performance. A minimum of one (1) casing volume of water is removed from the well prior to sampling. Prior to sampling, the electrical conductivity and pH are measured at periodic intervals and recorded on field data sheets to demonstrate that water quality conditions have stabilized and ensure that formation water is sampled. All data for each well are periodically reviewed to ensure that both sampling and analytical procedures are adequate.

Water quality samples from monitor wells are analyzed for chloride, total alkalinity, and conductivity usually within 48 hours of sampling, at the on-site laboratory. All analyses are performed in accordance with accepted methods. PRI has Standard Operating Procedures (SOPs) in place that detail water sampling and laboratory analysis procedures.

### 5.2.4 Excursions

An excursion is considered to have occurred at a well if any two of the three UCL parameters (chloride, alkalinity, and conductivity) are exceeded. A verification sample is taken within 24 hours of the determination that a sample has exceeded two of the three UCL values. If results of the confirmatory sampling are not complete within 30 days of the initial sampling event, then the excursion will be considered confirmed for the purpose of meeting the reporting requirements described below. The verification sample is split and analyzed in duplicate to assess analytical error. During an excursion all monitoring wells on excursion status are sampled at least every seven days for the UCL parameters and uranium.

Upon verification of an excursion, the WDEQ-LQD will be verbally notified within 24 hours and the NRC Project Manager will be verbally notified within 48 hours. The WDEQ will be notified in writing within five days. The NRC Project Manager will be notified in writing within 30 days. Corrective actions, such as changes in pumping or injection rates are implemented as soon as possible. Corrective actions continue until the excursion is mitigated.

If an excursion is not controlled within 30 days following confirmation of the excursion, a sample must be collected from each of the affected monitoring wells and analyzed for the following parameters: ammonia; antimony; arsenic; barium; beryllium; bicarbonate; boron, cadmium, calcium, carbonate; chloride; chromium; conductivity; copper; fluoride; gross alpha; gross beta; iron; lead; magnesium; manganese; mercury; molybdenum; nitrate + nitrite; pH; potassium; selenium; sodium; sulfate; radium-226 and 228; thallium; TDS; uranium; vanadium; and zinc.

If the concentration of the UCL parameters detected in the monitor well(s) does not begin to decline within 60 days after the excursion is verified, injection into the production zone adjacent to the excursion will be suspended to further increase the net water withdrawals. Injection will be suspended until a declining trend in the concentration of the UCL parameters is established. Additional measures will be implemented if a declining trend does not occur in a reasonable time period. After a significant declining trend is established, normal operations will be resumed with the injection and/or production rates regulated such that net withdrawals from the area will continue. The declining trend will be maintained until the concentrations of excursion parameters in the monitor well(s) have returned to concentrations less than respective UCLs.

If an excursion is controlled, but the fluid which moved out of the production zone during the excursion has not been recovered within 60 days following confirmation of the excursion, the operator will submit within 90 days following confirmation of the excursion a plan and compliance schedule meeting the requirements of LQD Rules and Regulations, Chapter 13, Section 13(b).

A monthly report on the status of an excursion shall be submitted to the administrator beginning the first month the excursion is confirmed and continuing until the excursion is over. The monthly report shall contain the requirements described in LQD Rules and Regulations, Chapter 12, Section 12(e).

## 5.3 EFFLUENT AND ENVIRONMENTAL MONITORING

### 5.3.1 General

PRI maintains a detailed environmental and radiological program to monitor any releases from the SR-HUP and Reynolds Ranch operations to the environment. The program scope encompasses monitoring of air, ground water, surface water, and direct radiation. Soils and vegetation are also monitored at the irrigation facilities. The program is designed to meet the requirements of NRC's 10 CFR 40.65. Monitoring results are reported semi-annually to the NRC in the 40.65 Semi-Annual Reports. PRI has SOPs in place that detail the various monitoring programs. Many years of monitoring data collected at both the Smith Ranch and HUP operations have shown no significant adverse impacts to the environment or any increased health risks to the public.

### 5.3.2 Continuous Air Particulate Monitoring

To ensure compliance with 10 CFR 20.1301, 20.1302 and 20.1501, PRI maintains a continuous air monitoring program at five separate locations. These monitoring locations contain high flow air pumps which continuously collect particulate matter on paper filters. The filters are exchanged weekly, composited for analysis on a quarterly basis, and are analyzed for uranium, radium-226, and thorium-230 and lead-210. Results of the analyses are reported to the NRC in the Semi-Annual Report. The locations of the Air Monitoring Stations are shown on Plate 1 and are as follows:

1. Air Station No. 1 (Dave's Water Well): This station monitors background conditions, upwind of both the Smith Ranch and HUP wellfields and yellowcake processing facilities. The site is located adjacent to Dave's Water Well in the SW¼ NW¼ Section 8, T35N, R74W.

2. Air Station No. 2 (Smith Ranch Restricted Area): This station monitors conditions downwind of the Smith Ranch CPP Restricted Area boundary. The site is located 500 feet northeast of the Smith Ranch CPP in the NW¼ NE¼ Section 36 T36N, R74W.

3. Air Station No. 3 (Vollman Ranch): This station monitors the nearest downwind resident to the Smith Ranch CPP Restricted Area as well as background conditions for the Highland Central Plant Restricted Area. The site is located adjacent to the ranch house in the NW¼ NE¼ Section 27, T36N, R73W.

4. Air Station No. 4 (Overlook): This station monitors conditions downwind of the Highland Central Plant at the Restricted Area boundary. The site is located approximately 400 feet northeast of the Central Plant Facility in the NE¼ NE¼ Section 29, T36N, R72W. This monitoring station is only operated when yellowcake processing operations are active at the Highland Central Plant.

5. Air Station No. 5 (Fowler Ranch): This station monitors conditions at the nearest downwind residence to the Highland Central Plant. The site is located approximately 1200 feet west of the Fowler Ranch house in the SE¼ SE¼ Section 9, T36N, R72W. The ranch house is only occupied for a few months each year. This station is only operated when yellowcake processing operations are active at the Highland Central Plant.

6. Air Station No. 6 (Reynolds Ranch Satellite Area): This station monitors conditions downwind of the Reynolds Ranch Satellite Facility. The site is located approximately 1,100 feet northeast of the Satellite building in the NE¼ SE¼ Section 35 T37N, R74W.

Table 5-2 summarizes the U-Nat, Th-230, and Ra-226 monitoring data collected at the Smith Ranch Air Monitoring Stations for the period 1996 through 2002. Review of the air particulate data shows that all radionuclide concentrations have averaged less than 5% of the respective Effluent Concentration Limits. The data also shows that no significant difference has been determined between background radionuclide concentrations and those determined at the Restricted Area Boundary of the Smith Ranch CPP, or the nearest downwind residence (Vollman Ranch).

Table 5-3 summarizes the U-Nat, Th-230, and Ra-226 monitoring data collected at the Air Monitoring Stations used to monitor the impact of the Highland Central Plant, for the period 1995 through 1999. Review of this data shows that all radionuclide concentrations have averaged less than 5% of the respective Effluent Concentration Limit. A review of this data also shows that no significant difference has been determined between background radionuclide concentrations and those determined at the Restricted Area Boundary at the

HUP Central Plant, or the nearest downwind residence (Fowler Ranch). Comparison of historic radionuclide particulate data from the Smith Ranch and Highland Air Monitoring Stations shows no significant variations.

Since drying operations will not be conducted at the Reynolds Ranch Satellite Facility, continuous air particulate monitoring is not planned. It is anticipated that the Satellite operations at Reynolds Ranch will not have a significant impact on radiological constituents of air particulates, which is supported by the results of air particulate monitoring results for SR-HUP discussed above.

### 5.3.3 Passive Radon Gas Monitoring

Passive radon gas (radon-222) is monitored at the site to assess background conditions and releases from the facilities to the environment. Radon is monitored using Track-Etch type radon cups (detectors) provided by a contractor specializing in radon detection. The radon cups were historically exchanged on a quarterly basis. The frequency of exchange of the cups has been changed to semi-annually (every 6 months) in order that the 0.2 pCi/L sensitivity level recommended in NRC Regulatory Guide 4.14 can be potentially met. Results of the monitoring are reported to the NRC in the Semi-Annual Report. Radon is monitored at the five Air Monitoring Stations described above. Radon is monitored at Air Station Nos. 4 and 5 only when the stations are active in response to yellowcake processing at the Highland Central Plant. Passive radon-222 will be monitored at the Reynolds Ranch Satellite at a background station (Air Station No. 1) and at a station just downwind of the Satellite Facility (Air Station No. 6).

Radon-222 monitoring data collected at the Smith Ranch Air Monitoring Stations for the period 1996 through 2002 is summarized in Table 5-2. Table 5-4 summarizes the radon-222 monitoring data collected at the Highland Air Monitoring Stations and the three Passive Air Stations. A review of these data shows that radon-222 at all sites has averaged less than 20% of the Effluent Concentration Limit. Review of this data also shows that no significant difference has been determined between background radon-222 concentrations and those determined at the Restricted Area Boundary or nearest downwind residence sites. The data from the Highland Passive Air Stations also show that increases in radon-222 adjacent to Satellite No. 2, where radon is routinely vented during operations, has had a minimal impact on ambient air quality. As the monitoring data shows, any increases in radon-222 have been minimal and well below the Effluent Concentration Limit.

Similar radon-222 conditions to that described above for SR-HUP are expected to exist from the Reynolds Ranch Satellite operation.

### 5.3.4 Passive Gamma Radiation Monitoring

Passive gamma radiation is monitored at the five Air Monitoring Stations described above. Passive gamma radiation is monitored using spherical TLD's which are exchanged on a quarterly basis. Results of the monitoring are reported to the NRC in the Semi-Annual Report. Gamma radiation is monitored at Air Station Nos. 4 and 5 only when the stations are active in response to yellowcake processing at the Highland Central Plant. Gamma radiation will be monitored at the Reynolds Ranch Satellite at a background station (Air Station No. 1) and at a station just downwind of the Satellite Facility (Air Station No. 6).

Passive gamma radiation monitoring data collected at the Smith Ranch Air Monitoring Stations for the period 1996 through 2002 is summarized in Table 5-2. Table 5-5 summarizes the passive gamma radiation monitoring at the Highland Air Stations and the three Passive Air Stations. Review of these data show that background gamma radiation levels at the respective upwind and downwind sites for each project range from 33 to 36 mRem per quarter. It should be noted that the downwind sites also represent background due to their distance from any processing areas or gamma radiation sources. In comparison to the background sites, data obtained at the Restricted Area Boundaries of the Smith Ranch CPP and Highland CPF show apparent minimal increases in gamma radiation of only 2 to 5 mRem per quarter.

Similar gamma radiation conditions to that described above for SR-HUP are expected to exist from the Reynolds Ranch Satellite operation.

### 5.3.5 Environmental Ground Water Monitoring Program

The project wide environmental ground water monitoring program includes the quarterly monitoring of operating domestic and stock wells located within 1 km of operating wellfields. Water samples are obtained from these wells for the analysis of uranium and radium-226. The ground water monitoring stations for current operating wellfields are described in Table 5-6 and shown on Plate 1. Plate 1 also shows the locations of other potential ground water monitoring sites near proposed SR-HUP and Reynolds Ranch wellfields that will be added to the monitoring program once wellfield operations commence in those areas.

### 5.3.6 Environmental Surface Water Monitoring Program

The project wide environmental surface water monitoring program includes the quarterly monitoring of Sage Creek when stream flow is present as well as numerous stock ponds that are located down stream of operating wellfields. The surface water monitoring sites are described in Table 5-7 and shown on Plate 1. Water samples are obtained from these sites for the analysis of uranium and radium-226 when adequate water exists to permit sampling.

Surface water sampling for locations for the Reynolds Ranch amendment area will be determined and added to the monitoring plan as wellfield operations commence.

### 5.3.7 Wastewater Land Application Facilities Monitoring Program

#### 5.3.7.1 General

To assist in assessing impacts of irrigating treated wastewater at the Satellite No. 1 and Satellite No. 2 Wastewater Land Application Facilities (Irrigation Areas) the irrigation water, soil, and vegetation are monitored for various constituents including natural uranium and radium-226. This monitoring program has been in place since the start of each facility. Results of the monitoring program are reported to the NRC in the Semi-Annual Report and to the WDEQ-LQD in the Annual Report. The monitoring programs for the Satellite No. 1 and Satellite No. 2 Wastewater Land Application Facilities are shown in Tables 5-8 and 5-9, respectively.

#### 5.3.7.2 Radium Treatment Sampling

Monthly Grab samples are collected from the radium treatment system at each Satellite to assure that the barium chloride treatment system is reducing radium-226 to acceptable concentrations (less than the Effluent Concentration Limit of 60 pCi/L (6.0E-8µCi/mL)). Monitoring data collected throughout the life of the project shows that the treatment system is very effective in reducing radium-226 concentrations to levels below the Effluent Concentration Limit (ECL).

The result of monitoring data for the radium treatment system at Satellite No. 1 for the period 1995 through 1999 shows a mean radium-226 concentration of 9.25 E-9 µCi/mL which is 15% of the ECL. The results of monitoring data for the radium treatment system at Satellite No. 2 for the period 1995 through 1999 shows a mean radium-226 concentration of 2.51 E-8 µCi/mL, which is 42% of the ECL. Monitoring data for the Satellite No. 3 treatment system, which has only been operational since January 1999, shows a mean radium-226 concentration of 2.12 E-8 µCi/mL (35% of the ECL) for the period January 1999 through December 1999.

#### 5.3.7.3 Irrigation Fluid Sampling

The irrigation fluid quality has been monitored at both irrigation facilities since irrigation operations started. Review of the irrigation fluid monitoring results at the Satellite No. 1 facility, for the period 1989 through 1999, shows the following mean concentrations of natural uranium and radium-226 (weighted by volume of water applied):

U-Nat 1.32 mg/L or 9.0 E-7 µCi/mL
Radium-226 5.59 pCi/L or 5.6 E-9 µCi/mL

Results of this monitoring program at the Satellite No. 2 facility for the period 1995 through 1999 show the following mean concentrations of natural uranium and radium-226 (weighted by volume of water applied):

U-Nat 0.79 mg/L or 5.3 E-7 µCi/mL
Radium-226 7.33 pCi/L or 7.3 E-9 µCi/mL

The concentrations of uranium and radium-226 within the treated wastewater applied at both irrigation facilities are within the range of concentrations predicted in the information submitted to the NRC for use of these facilities.

5.3.7.4 Soil Sampling

The monitoring programs for the Satellite No. 1 and Satellite No. 2 Wastewater Land Application Facilities also require that soil samples be collected annually in August at depths of 0-6 inches and 6-12 inches to assess impacts of irrigation on the irrigated soil. Results of the soil monitoring for natural uranium and radium-226 at the Satellite No. 1 and Satellite No. 2 facilities are summarized in Tables 5-10 and 5-11, respectively.

A review of the soils data for the Satellite No. 1 facility shows an increasing trend in natural uranium concentrations within the 0-6 inch soil depth, compared to a background range of 4.4 E-7 to 1.7 E-6 µCi/g (0.7 to 2.5 mg/kg). The most recent data obtained in August 1999 shows a mean natural uranium concentration of 1.1 E-5 µCi/g (16.5 mg/kg) for the 0-6 inch soil depth. Since no discernable increase in radium-226 concentrations have been observed at this same depth, no problems are anticipated in meeting soil radionuclide release criteria.

A review of the natural uranium concentration data for the 6-12 inch soil depth at the Satellite No. 1 facility shows only a minimal increase above background. Since no discernable increase in radium-226 concentrations have been observed at this same depth, no problems are anticipated in meeting soil radionuclide release criteria.

The higher concentrations of uranium in the near surface soil (0-6 inch depth) is attributed to the uranium attaching to soil particles and being more concentrated due to evaporation of soil water towards the surface. If deemed necessary at decommissioning, it would be possible to reduce the near surface concentrations by deep plowing and mixing the soil.

A review of the data for the Satellite No. 2 facility, which has not been in operation as long as the Satellite No. 1 facility, shows that uranium is also increasing slightly in the near surface soil (0-6 inch depth). The most recent data obtained in August 1999 shows a natural uranium concentration of 4.6 E-6 μCi/g (6.9 mg/kg) which is minimally above the background range of 1.8 E-6 to 3.4 E-6 μCi/g (2.7 to 5.0 mg/kg). Data for the 6-12 inch depth shows that soil uranium concentrations are still within the background range.

A review of the radium-226 data for both soil depths at the Satellite No. 2 facility shows that concentrations have not exceeded the background range of radium-226 concentrations. Because no discernable increase in radium-226 has been determined, or is it expected, no problems are anticipated in meeting soil radionuclide release limits.

5.3.7.5 Vegetation Sampling

The vegetation (grass) at both irrigation facilities is also monitored on an annual basis, in August of each year, to determine the potential accumulation of radionuclides in the vegetation. Monitoring of the vegetation started at the Satellite No. 1 facility in 1991 while monitoring of the Satellite No. 2 facility commenced in 1996. The mean natural uranium and radium-226 concentrations in vegetation for the Satellite No. 1 and Satellite No. 2 irrigation facilities are included in Tables 5-12 and 5-13, respectively.

A review of the data for the Satellite No. 1 irrigation facility shows a relatively small increase in uranium concentrations within the vegetation during the period 1991 through 1997. The apparent abrupt increase in uranium in the vegetation in 1998 and 1999 is attributed to a change in sample analysis procedures. At the request of the WDEQ-LQD, starting in 1998, the radionuclide and other parameters were analyzed on a dry weight basis, instead of a wet weight basis. The highest uranium concentrations in the vegetation, which were observed in the 1999 data, are also suspect as the "background" sample also showed anomalously higher uranium concentrations. Monitoring data obtained in August 2000 should help explain this apparent anomally.

A review of the radium-226 data obtained for the vegetation at the Satellite No. 1 facility shows that radium-226 concentrations remain very close to the range of background concentrations.

A review of the data for the Satellite No. 2 irrigation facility shows only minor increases in uranium concentrations within the vegetation. The mean concentration determined for the samples collected in August 1999 was 6.8 E-4 mg/kg (1.00 mg/kg). Radium-226 concentrations in the vegetation showed no discernable increase compared to background concentrations.

5.3.8 <u>Waste Disposal Well Monitoring</u>

The SR-HUP currently utilizes three Class I Non-Hazardous Waste Disposal Wells to dispose of waste water generated by wellfield and yellowcake processing operations. Wells WDW #1 and WDW #2 are associated with the Smith Ranch facilities and Well Morton 1-20 is associated with the Highland facility (see Plate 1). In accordance with the UIC permits issued by the WDEQ-WQD for the disposal wells at each facility, the quality of the injected water is monitored on a quarterly basis. Samples are composited from the waste stream each quarter and analyzed for total dissolved solids, total alkalinity, ammonia, natural uranium, radium-226, and pH.

The quality of waste water injected into the Smith Ranch waste disposal wells and Highland Morton 1-20 Well for the period 1997 through 2002 is summarized in Tables 5-14 and 5-15. The permit limit for uranium is 65 mg/L while pH must be maintained between 2 and 11. Permit limits have not been established for any of the other sample parameters. Review of the data in Tables 5-14 and 5-15 shows that the permit limit for uranium was exceeded at Smith Ranch during the 3rd Quarter 2002 report period and at Highland during the 4th Quarter 2002 report period. The permit limits for uranium and pH were not exceeded during any other report period.

The elevated uranium concentration in the Smith Ranch 3rd Quarter 2002 sample resulted from an upset condition in the CPP Precipitation Circuit during the period August 13 to 26, 2002. Since the 3rd Quarter 2002 composite sample was also collected during this two week period, the sample contained an elevated concentration of uranium. Samples of the waste water obtained on a daily basis and analyzed at the CPP Process Lab showed an average uranium concentration for the three month period of 43.9 mg/L, which is less than the permit limit of 65 mg/L. As evidenced by the results of the 4th Quarter 2002 sample, corrective actions have been implemented to ensure that an upset condition such as that which occurred in August 2002 does not happen again.

For the Highland Morton 1-20 Well, the elevated uranium concentration in the 4th Quarter 2002 sample was a result of tank cleanout procedures that did not allow for normal operation of the uranium removal circuit during preparation of the Highland Central Plant for standby status. Currently, the Morton 1-20 well is also on standby status.

The planned Deep Disposal Well for Reynolds Ranch will be monitored in accordance with the UIC permit issued by the WDEQ-WQD. However, it is anticipated that monitoring of the Reynolds Ranch Deep Disposal Well will be conducted in a similar manner to the Smith Ranch disposal wells. Monitoring information for the proposed Reynolds Ranch Disposal Well can be found in the permit application submitted to the WDEQ-WQD on October 6, 2004.

### 5.3.9 Evaporation Ponds

#### 5.3.9.1 Evaporation Pond Sampling

The evaporation ponds are sampled on a semi-annual basis. Each pond sample is analyzed for bicarbonate, calcium, chloride, sodium, sulfate, TDS, uranium, radium-226 and thorium-230. PRI has SOPs in place that detail the monitoring programs for these ponds.

#### 5.3.9.2 Leak Detection Monitoring

Each lined evaporation or treatment pond at the Smith Ranch CPP is constructed with a leak detection system consisting of a network of perforated pipes in a sand layer beneath the liner with the pipes draining to a collection sump. Should a leak in the liner occur, the water will flow through the sand, enter a perforated pipe, then flow to the sump. PRI has SOPs in place that detail the monitoring program for the leak detection system. The monitoring program for the lined ponds includes either a fluid level sensor in each pond sump with an alarm displayed at the CPP or a daily inspection of each sump by an operator. The evaporation ponds are inspected daily for visual indications of leaks or embankment deterioration by an individual instructed in proper inspection procedures. The pond inspections are recorded and initialed by the inspector.

If six inches or more of fluid is detected in any leak detection system sump, it will be sampled and analyzed for chloride and conductivity. If analyses indicate a pond leak, and the analyses are confirmed, the appropriate agencies will be notified by telephone within 48 hours after receiving the confirming analyses and the water level in the pond with the indicated leak will be lowered by transferring the contents to another cell. If water continues to flow to the sump, samples will be collected every seven days and analyzed for chloride and conductivity. Once per month a sample will be analyzed for bicarbonate, uranium, and sulfate. A written report will be filed with the appropriate agencies within 30 days after the notification of the suspected leak and every 30 days thereafter until the leak is repaired. The reports will include the available analytical data, the corrective actions taken, and results of the actions.

A freeboard of at least three (3) feet will be maintained in each pond to prevent loss of solutions by wave action and to allow for holding the contents of another pond on a temporary basis in the event of a leak.

### 5.3.10 Wildlife Monitoring

#### 5.3.10.1 General

In accordance with WDEQ mine permit requirements, PRI takes various precautions to limit potential adverse impacts to wildlife from in situ mining operations.

Impacts to wildlife as a result of current and proposed operations are insignificant for the following reasons:

1. No unique or critical habitats are present within the permit area.

2. No important wildlife migration routes are contained within the permit area.

3. ISL activities disturb relatively minor amounts of land surface compared to conventional open pit mining methods.

4. Areas disturbed by wellfield activities are quickly revegetated after wellfield construction and are used by wildlife throughout production activities.

5. Restrictive fencing is limited to isolated areas which do not significantly impede wildlife movements.

6. Vehicular traffic is limited and reduced speed limits are utilized for safety purposes and to decrease the potential for vehicle-wildlife collisions.

7. Power lines are constructed using standard practices to minimize the potential electrocution of raptors.

Observations over the 13+ years of operation show that wildlife are not impacted, and both deer and pronghorn readily utilize the fenced operating areas. It is likely that wildlife are attracted to the fenced wellfield areas due to the lack of livestock and the abundant vegetative growth which offers food and cover.

During the initial permitting of both the Smith Ranch Project and the HUP, commitments were made to the WDEQ-LQD and Wyoming Game & Fish Department to monitor for a 3-year period the effects of ISL mine development and operation activities on Pronghorn Antelope and Mule Deer, the big game species of concern in the area. These 3-year monitoring commitments were complete at both operations and the required reports submitted to the WDEQ-LQD. Based on the results of these monitoring programs it was determined that the ISL operations were having no significant negative impact on Pronghorn or Mule Deer. The regulatory agencies agreed that it was not necessary to prolong this monitoring. As a result, this monitoring will not be conducted for the Reynolds Ranch amendment area.

### 5.3.10.2 Threatened and Endangered Species

The baseline studies of the project site identified the three species that were "Threatened" or "Endangered Species" and could possibly be present at the site. These species included the Blackfooted Ferret (Endangered), the Bald Eagle

(Threatened) and the Peregrine Falcon (Threatened). In May 2000 the U.S. Fish and Wildlife Service (USFWS) was contacted to assess the status of these species. It was determined that only the Blackfooted Ferret is still an Endangered Species.

Relative to Blackfooted Ferrets, none have ever been observed on, or near, the project site and the lack of prairie dog colonies anywhere near the site precludes the habitat required by them.

Current (January 2003) information suggests that the Mountain Plover is proposed by the USFWS for listing as a Threatened Species. Although the project site is located in the very broad geographic region where this specie is known to exist, the site does not contain the habitat preferred by them. Field observations throughout the life of the project have resulted in no observations of the Mountain Plover.

In the case that a Threatened or Endangered Species begins to use the license area or adjacent areas, the USFWS Wyoming Field Office, Cheyenne will be notified.

5.3.10.3 Raptor Nest Surveys

It is not anticipated that mining related activities will adversely affect a raptor nest, or disturb a nesting raptor as there is a lack of nesting raptors on and near the permit area due to the lack of trees and other nesting sites. Additionally, mining related activities are limited to relatively small areas for limited periods of time. Known active nest sites are not located within active or proposed wellfield areas.

In accordance with WDEQ-LQD requirements a raptor nest survey is conducted in late April or early May each year to identify any new nests and assess whether known nests are being utilized. The survey covers all areas of planned activity for the life of mine (wellfields, Satellites, CPF, etc.) and a one mile area around the activity. Status and production at known nests will be determined, if possible. This survey program is primarily intended to protect against unforeseen conditions such as the construction of a new nest in an area where operations may take place.

Raptor nest surveys since 1992 has shown that known nest sites are used by Redtailed Hawks, Swainsons Hawks, and great Horned Owls on a seasonal basis. The only Golden Eagles nesting on the project site have nested approximately 2 miles from any project activity.

Activities at the project site have not resulted in the need to disturb or relocate any raptor nest. Due to the location of proposed wellfields, it is very unlikely that any raptor nests will be disturbed in the future. In the very unlikely event that it is necessary to disturb a raptor nest, a permit for a mitigation plan will be acquired from the U.S. Fish and Wildlife Service, Wyoming Field Office, in Cheyenne, Wyoming.

### 5.3.11 Cultural Resources Mitigation

In accordance with WDEQ-LQD and Wyoming State Historic Preservation Office (WSHPO) requirements, cultural resource surveys have been conducted on lands comprising the project area (see Section 2.4 of Chapter 2). These surveys have been approved by the USBLM, WDEQ-LQD, and WSHPO.

In the Smith Ranch area, it was determined that only two sites of significant historical or archaeological value could be potentially affected by the project. These sites included 48C01289 and 48C0352, both of which were considered eligible for the National Register of Historic Places (NRHP) at the time of the initial surveys. Due to the potential for impacts to site 48C01289 during future wellfield operations, additional evaluative testing was conducted in July 1999. As a result of this additional testing, the cultural resource evaluation of 48C01289 has been changed to "ineligible". Currently, no additional evaluative testing has been conducted on site 48C0352. However, no surface disturbing activities will take place within 100 feet of the boundaries of this site until the adverse effects of such disturbance have been mitigated under a plan approved by the USBLM, WDEQ-LQD, and WSHPO.

In the Highland area, it has been concluded in all previous cultural resource surveys that the sites mapped are of no significant historical or archaeological value.

Baseline studies in the Reynolds Ranch amendment area determined that one area, the Holdup Hollow segment of the Bozeman Trail, was listed in the NRHP. As a result of the study, the proposed boundaries for the Reynolds Ranch amendment area were modified to exclude the Holdup Hollow segment. Therefore, no surface disturbing activities will take place within 100 ft of the boundaries of this area.

If any significant cultural materials are discovered during the development and construction of new mining areas, they will be protected and the appropriate federal (USBLM) or state (WSHPO) office notified.

### 5.3.12 Spill Reporting Requirements

Any liquid spill which enters a water of the state, any liquid spill in excess of 420 gallons or any spill that threatens to enter a water of the state, comprised of lixiviant, pregnant liquor, acid, solvent, process waste water or any similar stream, must be reported to the WDEQ/LQD within 24 hours of the incident. A written report is required to be submitted within 7 days. For purposes of this document, a water of the state includes dry draws, playas, and wetlands, as well as streams, rivers and lakes.

All reportable spills are recorded in a spill log or file located at the facility. The NRC Project Manager will be notified within 48 hours for any spill that may have a radiological impact on the environment or is required to be reported to any other State or Federal agency. This notification will be followed within 30 days by a written report to the NRC Project Manager describing the event and corrective actions taken.

Appropriate site personnel, including applicable supervisors, Environmental and Radiation Safety personnel, and site Managers are immediately notified of any wellfield spill and containment or fluid recovery measures are implemented if practicable. Appropriate corporate personnel, including the President and Sr. Vice President of operations, are notified of reportable spills in accordance with corporate internal notification procedures.

# CHAPTER 6
# RECLAMATION PLAN

The objective of the Reclamation Plan is to return the affected ground water and land surface to conditions such that they are suitable for uses for which they were suitable prior to mining. The methods to achieve this objective for both the affected ground water and the surface are described in the following sections.

## 6.1 GROUND WATER RESTORATION

### 6.1.1 Water Quality Criteria

The primary goal of the ground water restoration efforts will be to return the ground water quality of the Production Zone, on a mine unit average, to the pre-injection baseline condition as defined by the baseline water quality sampling program which is performed for each mine unit. Should baseline conditions not be achieved after diligent application of the best practicable technology (BPT) available, PRI commits, in accordance with the Wyoming Environmental Quality Act and WDEQ regulations, to a secondary goal of returning the ground water to a quality consistent with the use, or uses, for which the water was suitable prior to ISL mining.

For the purposes of this application, the use categories are those established by the WDEQ, Water Quality Division. The final level of water quality attained during restoration is related to criteria based on the pre-mining baseline data from that wellfield, the applicable Use Suitability Category and the available technology and economics. Baseline, as defined for this project, shall be the mean of the pre-mining baseline data, taking into account the variability between sample results (baseline mean plus two standard deviations).

### 6.1.2 Restoration Criteria

The restoration criteria for the ground water in a mining unit is based on the baseline water quality data collected for each mine unit from the wells completed in the planned Production Zone (i.e., MP-Wells), on a parameter by parameter basis. All parameters are to be returned to as close to baseline as is reasonably achievable. Restoration Target Values (RTVs) are established for the list of baseline water quality parameters. The RTVs for the mining units shall be the mean plus two standard deviations of the pre-mining values. Table 5-1 of Chapter 5 entitled Baseline Water Quality Parameters lists the parameters included in the RTVs.

Baseline values will not be changed unless the operational monitoring program indicates that baseline water quality has changed significantly due to accelerated movement of ground water, and that such change justifies redetermination of baseline water quality. Such a change would require resampling of monitor wells and review and approval by the WDEQ.

Restoration success will be determined after completion of the stability monitoring period. At the end of stability, all constituent concentrations will meet approved standards and will not show strong trends in groundwater deterioration as a result of ISL activities. Upon regulatory approval of the stability monitoring results, the decommissioning of the wellfield will be started.

### 6.1.3 Ground Water Restoration Method

The commercial ground water restoration program consists of two stages, the restoration stage and the stability monitoring stage. The restoration stage typically consists of three phases:

1) ground water transfer;
2) ground water sweep;
3) ground water treatment.

These phases are designed to optimize restoration equipment used in treating ground water and to minimize the volume of ground water consumed during the restoration stage. PRI will monitor the quality of ground water in selected wells as needed during restoration to determine the efficiency of the operations and to determine if additional or alternate techniques are necessary. Online production wells will be sampled for uranium concentration and for conductivity to determine restoration progress on a pattern-by-pattern basis.

The sequence of the activities will be determined by PRI based on operating experience and waste water system capacity. Not all phases of the restoration stage will be used if deemed unnecessary by PRI.

A reductant may be added at any time during the restoration stage to lower the oxidation potential of the mining zone. Either a sulfide or sulfite compound may be added to the injection stream in concentrations sufficient to reduce the mobilized species. However, PRI will employ bioremediation as a reduction process.

Reductants are beneficial because several of the metals, which are solubilized during the leaching process, are known to form stable insoluble compounds, primarily as sulfides. Dissolved metal compounds that are precipitated by such reductants include those of arsenic, molybdenum, selenium, uranium and vanadium.

Once restoration activities have returned the average concentration of restoration parameters to acceptable levels and following concurrence from the WDEQ that restoration has been achieved in the mining area, the stability monitoring stage will begin. This stage consists of monitoring the restored wellfield for six months following successful completion of the restoration stage. Following the stability monitoring stage, PRI will make a request to the regulatory agencies that the wellfield is restored.

#### 6.1.3.1 Ground Water Transfer

During the ground water transfer phase, water will be transferred between a wellfield commencing restoration and a wellfield commencing mining operations. Also, a ground water transfer may occur within the same wellfield, if one area is in a more advanced state of restoration than another.

Baseline quality water from the wellfield commencing mining will be pumped and injected into the wellfield in restoration. The higher TDS water from the wellfield in restoration will be recovered and injected into the wellfield commencing mining. The direct transfer of water will act to lower the TDS in the wellfield being restored by displacing affected ground water with baseline quality water.

The goal of the ground water transfer phase is to blend the water in the two wellfields until they become similar in conductivity. The water recovered from the restoration wellfield may be passed through ion exchange (IX) columns and/or filtered during this phase if suspended solids are sufficient in concentration to present a problem with blocking the injection well screens.

For the ground water transfer between wellfields to occur, a newly constructed wellfield must be ready to commence mining. Therefore this phase may be initiated at any time during the restoration process. If a wellfield is not available to accept transferred water, ground water sweep or some other activity will be utilized as the first phase of restoration.

The advantage of using the ground water transfer technique is that it reduces the amount of water that must ultimately be sent to the waste water disposal system during restoration activities.

#### 6.1.3.2 Ground Water Sweep

Ground water sweep may be used as a stand-alone process where ground water is pumped from the wellfield without injection causing an influx of baseline quality water from the perimeter of the mining unit, which sweeps the affected portion of the aquifer. The cleaner baseline water has lower ion concentrations that act to strip off the cations that have attached to the clays during mining. The plume of affected water near the perimeter of the wellfield is also drawn inside the boundaries of the wellfield. Ground water sweep may also be used in conjunction with the ground water treatment phase of restoration. The water produced during ground water sweep is disposed of in an approved manner.

The rate of ground water sweep will be dependent upon the capacity of the waste water disposal system and the ability of the wellfield to sustain the rate of withdrawal.

6.1.3.3 Ground Water Treatment

Either following or in conjunction with the ground water sweep phase water will be pumped from the mining zone to treatment equipment at the surface. Ion exchange (IX), reverse osmosis (RO) or Electro Dialysis Reversal (EDR) treatment equipment will be utilized during this phase of restoration.

Ground water recovered from the restoration wellfield will be passed through the IX system prior to RO/EDR treatment, as part of the waste disposal system or it will be re-injected into the wellfield. The IX columns exchange the majority of the contained soluble uranium for chloride or sulfate. Additionally, prior to or following IX treatment, the ground water may be passed through a de-carbonation unit to remove residual carbon dioxide that remains in the ground water after mining.

At any time during the process, an amount of reductant sufficient to reduce any oxidized minerals may be metered into the restoration wellfield injection stream. The concentration of reductant injected into the formation is determined by how the mining zone ground water reacts with the reductant. The goal of reductant addition is to decrease the concentrations of redox sensitive elements through reduction of these elements.

All or some portion of the restoration recovery water can be sent to the RO unit. The use of an RO unit 1) reduces the total dissolved solids in the contaminated ground water, 2) reduces the quantity of water that must be removed from the aquifer to meet restoration limits, 3) concentrates the dissolved contaminates in a smaller volume of brine to facilitate waste disposal, and 4) enhances the exchange of ions from the formation due to the large difference in ion concentration. The RO passes a high percentage of the water through the membranes, leaving 60 to 90 percent of the dissolved salts in the brine water or concentrate. The clean water, called permeate, will be re-injected, stored for use in the mining process, or sent to the waste water disposal system. The permeate may also be de-carbonated prior to re-injection into the wellfield. The brine water that is rejected contains the majority of dissolved salts in the affected ground water and is sent for disposal in the waste system. Make-up water, which may come from water produced from a wellfield that is in a more advanced state of restoration, water being exchanged with a new mining unit, water being pumped from a different aquifer, the purge of an operating wellfield or a combination of these sources, may be added prior to the RO or wellfield injection stream to control the amount of "bleed" in the restoration area.

The reductant (either biological or chemical) added to the injection stream during this stage will scavenge any oxygen and reduce the oxidation-reduction potential

(Eh) of the aquifer. During mining operations, certain trace elements are oxidized. By adding the reductant, the Eh of the aquifer is lowered thereby decreasing the solubility of these elements. Regardless of the reductant used, a comprehensive safety plan regarding reductant use will be implemented.

If necessary, sodium hydroxide may be used during the ground water treatment phase to return the ground water to baseline pH levels. This will assist in immobilizing certain parameters such as trace metals.

The number of pore volumes treated and re-injected during the ground water treatment phase will depend on the efficiency of the RO in removing Total Dissolved Solids (TDS) and the success of the reductant in lowering the uranium and trace element concentrations.

6.1.3.4 Restoration Monitoring

During restoration, lixiviant injection is discontinued and the quality of the ground water is constantly being improved back to near baseline quality, thereby greatly diminishing the possibility and relative impact of an excursion. Therefore, the monitor ring wells (M-Wells), overlying aquifer wells (MO or MS-Wells), and underling aquifer wells (MU or MD-Wells) are sampled once every 60 days and analyzed for the excursion parameters, chloride, total alkalinity and conductivity. Water levels are also obtained at these wells prior to sampling.

In the event that unforeseen conditions (such as snowstorms, flooding, equipment malfunction) occur, the WDEQ will be contacted if any of the wells cannot be monitored within 65 days of the last sampling event.

6.1.4 <u>Restoration Stability Monitoring Stage</u>

Following concurrence from the WDEQ that restoration has been achieved in the mining area, a six month stability period is assessed to show that the restoration goal has been adequately maintained. The following restoration stability monitoring program is performed during the stability period:

1. The monitor ring wells (M-Wells) are sampled once every two months and analyzed for the UCL parameters, chloride, total alkalinity and conductivity; and

2. At the beginning, middle and end of the stability period, the MP-Wells will be sampled and analyzed for the parameters in Table 5-1 of Chapter 5.

In the event that unforeseen conditions (such as snowstorms, flooding, equipment malfunction) occur, the WDEQ will be contacted if any of the M-Wells or MP-Wells cannot be monitored within 65 days of the last sampling event.

### 6.1.5 Well Plugging

Wellfield plugging and surface reclamation will be initiated once the regulatory agencies concur that the ground water has been adequately restored and determined stable. All production, injection and monitor wells and drillholes are abandoned in accordance with WS-35-11-404 and Chapter VIII, Section 8of the WDEQ-LQD Rules and Regulations to prevent adverse impacts to ground water quality or quantity.

Wells will be plugged and abandoned in accordance with the following program.

1. When practicable, all pumps and tubing are removed from the well.
2. All wells are plugged from total depth to within 2 feet of the collar with a nonorganic well abandonment plugging gel formulated for well abandonment and mixed in the recommended proportion of 10 to 20 lbs per barrel of water, to yield an abandonment fluid with a 10 minute gel strength of at least 20 lbs/100 sq ft and a filtrate volume not to exceed 13.5 cc.
3. The casing is cut off at least two feet below the ground surface. Abandonment fluid is topped off to the top of the cut-off casing. . **A steel plate shall be placed atop the sealing mixture showing the permit number, well identification, and date of plugging.**
4. A cement plug is placed at the top of the casing, **(if cement is not within three feet of the surface)** and the area is backfilled, smoothed, and leveled to blend with the natural terrain.

As an alternative method of well plugging, a dual plug procedure may be used where a cement plug will be set using slurry of a weight of no less than 12 lbs/gallon into the bottom of the well. The plug will extend from the bottom of the well upwards across the first overlying aquitard. The remaining portion of the well will be plugged using a bentonite/water slurry with a mud weight of no less than 9.5 lbs/gallon. A 10-foot cement top plug will be set to seal the well at the surface.

## 6.2 SURFACE RECLAMATION AND DECOMMISSIONING

### 6.2.1 Introduction

All lands disturbed by the mining project will be returned to their pre-mining land use of livestock grazing and wildlife habitat unless an alternative use is justified and is approved by the state and the landowner, i.e. the rancher desires to retain roads or buildings. The objectives of the surface reclamation effort is to return the disturbed lands to production capacity of equal to or better than that existing prior to mining. The soils, vegetation and radiological baseline data will be used as a guide in evaluating final reclamation.

Following regulatory approval of ground water restoration in any given wellfield, and at least 12 months prior to the planned commencement of facility decommissioning or surface reclamation in a wellfield area, PRI will submit a final (detailed) decommissioning plan to the NRC for review and approval. This section provides a general description of the proposed facility decommissioning and surface reclamation plans for the SR-HUP and Reynolds Ranch Projects.

### 6.2.2 Surface Disturbance

The primary surface disturbances associated with solution mining are the sites containing the Central Processing Plants, Satellite Facilities, and evaporation ponds. Surface disturbances also occur during the well drilling program, pipeline installations, and road construction. These more superficial disturbances, however, involve relatively small areas or have very short-term impacts.

The Smith Ranch Central Plant and Main Office Complex is located within the historic Bill Smith Mine Site. Therefore, construction of the facilities for ISL mining did not create any new disturbance areas. Disturbances associated with the evaporation ponds, ion exchange Satellites, and field header buildings, will be for the life of those activities and topsoil will be stripped from the areas prior to construction. Disturbance associated with drilling and pipeline installation are limited, and are reclaimed and reseeded as soon as weather conditions permit. Vegetation will normally be reestablished over these areas within two years. Disturbance for access roads at the SR-HUP is also limited as a network of roads is already in place to most wellfield areas and throughout the project area. However, access roads at the Reynolds Ranch amendment area will be constructed, and for new wellfield areas at the SR-HUP.

### 6.2.3 Topsoil Handling and Replacement

In accordance with WDEQ-LQD requirements, topsoil is salvaged from building sites (including Satellite buildings), permanent storage areas, main access roads, graveled wellfield access roads and chemical storage sites. Conventional rubber-tired, scraper-type earth moving equipment is typically used to accomplish such topsoil salvage operations. The exact location of topsoil salvage operations is determined by wellfield pattern emplacement and designated wellfield access roads within the wellfields, which are determined during final wellfield construction activities. It is estimated that a maximum of 250 acres of topsoil will be salvaged, stockpiled, and reapplied throughout the life of the SR-HUP and Reynolds Ranch projects.

As described in Appendix D-7 SOILS previously submitted for SR-HUP and Appendix D-7 of this amendment application for Reynolds Ranch, topsoil thickness varies within the permit area from non-existent to several feet in depth. Topsoil thickness is usually greatest in, and along drainages where material has been deposited and deep soils have developed. Therefore, topsoil stripping depths may vary from 0 to up to several feet in depth, depending on location and the type of structure being constructed. In cases where it is necessary to strip topsoil in relatively large areas, such as a major road or building site, the field mapping and SCS Soil Surveys will be utilized to determine approximate topsoil depths. For small disturbances such as wellfield access roads, trenches, or drill pits only the top 4 to 6 inches of topsoil will be stripped. The extent of topsoil stripping and stockpiling for the remainder of the project's life will be very limited as no new major facilities or roads will require construction.

Salvaged topsoil is stored in designated topsoil stockpiles. These stockpiles are generally located on the leeward side of hills to minimize wind erosion. Stockpiles are not located in drainage channels. The perimeter of large topsoil stockpiles may be bermed to control sediment runoff. Topsoil stockpiles are seeded as soon as possible after construction with the permanent seed mix. In accordance with WDEQ-LQD requirements, all topsoil stockpiles are identified with a highly visible sign with the designation "Topsoil."

During mud pit excavation associated with well construction, exploration drilling and delineation drilling activities, topsoil is separated from subsoil with a backhoe. When use of the mud pit is complete, all subsoil is replaced and topsoil is applied. Mud pits only remain open a short time, usually less than 30 days. Similarly, during pipeline construction, topsoil is stored separate from subsoil and is replaced on top of the subsoil after the pipeline ditch is backfilled. The success of revegetation efforts at the Smith Ranch and Highland sites show that these procedures adequately protect topsoil and result in vigorous vegetation growth.

### 6.2.4 Revegetation Practices

Revegetation practices are conducted in accordance with WDEQ-LQD regulations and the mine permit. During mining operations the topsoil stockpiles, and as much as practical of the disturbed wellfield and pond areas will be seeded with vegetation to minimize wind and water erosion. After topsoiling for the final reclamation, an area will normally be seeded with oats to establish a stubble crop, then reseeded with grasses the next growing season. A long term temporary seed mix may be used in wellfield and other areas where the vegetation will be disturbed again prior to final decommissioning and final revegetation. The long term seed mix consists of one or more of the native wheatgrasses (i.e. Western Wheatgrass, Thickspike Wheatgrass). Typical seeding rates are 12-14 lbs of pure live seed per acre.

Permanent seeding is accomplished with a seed mix approved by the WDEQ-LQD. The permanent mix typically contains native wheatgrasses, fescues, and clovers. Typical seeding rates are 12-14 lbs of pure live seed per acre.

The success of permanent revegetation in meeting land use and reclamation success standards will be assessed prior to application for bond release by utilizing the "Extended Reference Area" method as detailed in WDEQ-LQD Guideline No. 2 - Vegetation (March 1986). This method compares, on a statistical basis, the reclaimed area with adjacent undisturbed areas of the same vegetation type.

The Extended Reference Areas will be located adjacent to the reclaimed area being assessed for bond release and will be sized such that it is at least half as large as the area being assessed. In no case will the Extended Reference Area be less than 25 acres in size.

The WDEQ-LQD will be consulted prior to selection of Extended Reference Areas to ensure agreement that the undisturbed areas chosen adequately represent the reclaimed areas being assessed. The success of permanent revegetation and final bond release will be assessed by the WDEQ-LQD.

### 6.2.5 Site Decontamination and Decommissioning

When ground water restoration in the final mining unit is completed, decommissioning of the Central Processing/Office areas at both Smith Ranch and Highland and the remaining facilities (evaporation ponds, purge storage reservoirs, radium ponds) will be initiated. In decommissioning the Satellite plant, the process equipment will be dismantled and sold to another licensed facility, or decontaminated in accordance with Regulatory Guide 1.86 "Termination of Operating Licenses for Nuclear Reactors" and "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source or Special Nuclear Material". Materials that cannot be decontaminated to an acceptable level will be disposed in an NRC approved facility. After decontamination, materials that will not be reused or that have no resale value, such as building foundations, will be buried on-site.

The Central Processing/Office Areas will be contoured to blend with the natural terrain, surveyed to ensure gamma radiation levels are within acceptable limits, topsoiled, and reseeded per the approved Reclamation Plan.

After all liquids in the evaporation ponds, purge storage reservoirs, and/or radium ponds have evaporated or been disposed via deep disposal well, or irrigation, the precipitated solids and pond liners will be removed and disposed of in a licensed facility. The area will then be contoured to blend with the natural terrain, surveyed to ensure gamma levels are nor exceeded, topsoiled, and reseeded per the approved plan.

Gamma surveys are also conducted during the decommissioning of each wellfield. Material identified during the gamma surveys as having contamination levels requiring disposal in a licensed facility will be removed, packaged (if applicable), and shipped to an NRC approved facility for disposal.

In the event that soil cleanup is required during decommissioning of facilities and wellfield areas, the cleanup criteria for radium and other radionuclides (uranium and thorium) will be based on the radium benchmark dose approach of 10 CFR 40, Appendix A, Criterion 6(6). Post-reclamation and decommissioning radiological survey methods for verification of soil cleanup will be designed to provide 95-percent confidence that the survey units meet cleanup guidelines.

### 6.2.6 Final Contouring

Recontouring of land where surface disturbance has taken place will restore it to a surface configuration that will blend in with the natural terrain and will be consistent with the post mining land use. Since no major changes in the topography will result from the proposed mining operation, a final contour map is not required.

### 6.2.7 Financial Assurance

In accordance with existing NRC license conditions and WDEQ permit requirements, PRI will maintain surety instruments to cover the costs of reclamation of each operation, including the costs of ground water restoration, the decommissioning, dismantling and disposal of all buildings, waste water ponds and other facilities, and the reclamation and revegetation of affected areas. Additionally, in accordance with NRC and WDEQ requirements, an updated Annual Surety Estimate Revision is submitted to the NRC and WDEQ each year to adjust the surety instrument amount to reflect existing operations and those planned for construction or operation in the following year. After review and approval of the Annual Surety Estimate Revision by the NRC and WDEQ, PRI revises the surety instrument to reflect the revised amount.

PRI maintains several approved Irrevocable Letters of Credit in favor of the State of Wyoming for the various operations. Currently (April 2005), the amounts of the surety estimates are as follows:

| | |
|---|---|
| Smith Ranch-Highland Uranium Project | |
| - Smith Ranch Facilities | $15,695,700 |
| - Highland Uranium Project Facilities | $22,402,000 |
| North Butte/Ruth Facilities (non-operating) | $183,400 |
| Gas Hills Facilities (non-operating) | $803,600 |

Reclamation costs for the Reynolds Ranch Operation will be added to the surety estimate for the Smith Ranch Uranium Project one year prior to construction. The estimated reclamation and restoration costs anticipated for the Reynolds Ranch Satellite, associated Mine Unit 21 (anticipated to be the first Mine Unit in production), and the Deep Waste Disposal Well are detailed in Attachment 6-1 of this Chapter. The total estimated surety for these facilities is approximately $3,331,600, which is considered a conservative estimate. The costs are based on estimates for the existing Smith Ranch Satellite, existing Smith Ranch Mine Unit 4, and existing Smith Ranch Deep Waste Disposal Wells since the Reynolds Ranch Satellite, Mine Unit 21, and Deep Waste Disposal Well are anticipated to be similar in all aspects.

Groundwater restoration costs are based on treatment of 1 pore volume for groundwater sweep and 5 pore volumes for reverse osmosis and bioremediation, as is predicted in the current Smith Ranch Surety Estimate. Mine Unit pore volumes are determined using the following equation:

Mine Unit Pore Volume = (Affected Ore Zone Area) x (Average Completed Thickness) x (Flare Factor) x (Porosity)

The flare factor has been determined for Smith Ranch wellfields to be approximately 1.5 to 1.7. This flare factor was estimated using a three dimensional groundwater flow model (MODFLOW) in conjunction with an advective particle tracking technique (MODPATH). The modeling was performed by Lewis Water Consultants in 1999, and the results were summarized in the report "Evaluation and Simulation of Wellfield Restoration and the RAMC Smith Ranch Facility." A detailed sensitivity analysis of the wellfield flare factor was also conducted as part of this work. The results of the sensitivity analyses indicate that the wellfield flare factor is a linear function of the wellfield scale, net production rate, and the ratio of horizontal to vertical hydraulic conductivity of the aquifer. Since the net production and bleed rates are similar for all wellfields, and the hydraulic conductivity of the Fort Union Formation sands are very similar (as demonstrated through aquifer test data), then the differences in flare factor between wellfields should be primarily the result of differences in wellfield scale.

# CHAPTER 7
# ENVIRONMENTAL EFFECTS

The objective of the mining and environmental monitoring program is to conduct a mining operation that is viable and environmentally responsible. The environmental monitoring programs used to ensure that potential sources of pollution are controlled and monitored are presented in Chapter 5. Chapter 7 also discusses and describes the degree of unavoidable environmental change, the short-term and long-term impacts due to the operation and discusses potential impacts of possible accidents associated with the project.

## 7.1 SITE PREPARATION AND CONSTRUCTION

Impacts from site preparation and construction are limited to the local soils and vegetation. The Central Processing/Office complexes at both Smith Ranch and Highland are located within previously constructed uranium mine/mill sites. Therefore, the use or construction of these facilities did not result in new surface disturbance. Implementation of the ISL mining project has extended the operating life of the site and deferred final reclamation. During this period, livestock grazing will continue to be excluded from limited areas where mining related activities are occurring.

Drilling wells and installation of pipelines result in temporary disturbance to the soils and vegetation in those areas; however, as demonstrated by current practices, the impact is minimal. Topsoil is bladed to one side, then re-spread as soon as construction is complete and the area seeded. Vegetation in these areas is normally re-established within two years of disturbance. Implementation of the project resulted in livestock being excluded from some of the wellfield areas, however, this will vary with the grazing level and the landowner's desires.

Surface disturbances associated with the evaporation ponds and access roads is for the life of these activities as the topsoil will be removed from these areas and stockpiled prior to construction. When these facilities are no longer needed for the operation, the areas will be re-contoured, top-soiled and re-seeded. The primary impact of these activities will be the exclusion of livestock and wildlife from the evaporation pond areas for the life of the ponds. It is expected that grazing will be excluded from as much as 1200 to 1400 acres over the life of the project. After the project is complete, all areas will be reclaimed and the pre-mining use restored. Therefore, there will be no long-term surface impact from the operation.

There will be no subsidence as a result of the operation. The proposed in-situ leach process removes uranium minerals from the surfaces of the host formation along with trace quantities of other elements similarly deposited on the host sandstone and clays. The demonstrated nature of this process is that the physical structure of the host matrix is unaffected. For this reason, subsidence does not result from in situ leaching, nor does in situ leaching of uranium alter the potential for subsidence. Because there is no potential for subsidence as a result of the in situ mining process, no subsidence mitigation or control plan has been included with this application.

## 7.2 EFFECTS OF OPERATIONS

As shown by numerous years of monitoring data collected at both the Smith Ranch and Highland operations, no significant or measurable impacts to air or surface water quality are anticipated as a result of the operation.

### 7.2.1 Impact to Ephemeral Drainages

Within the current SR-HUP permit area, the main drainages collect surface precipitation and snowmelt in a roughly northwest to southeast direction along Sage Creek. Within the Reynolds Ranch amendment area, the main drainages collect surface precipitation and snowmelt in a roughly southwest to northeast direction along Duck Creek, Willow Creek, and Brown Springs Creek. All flow within both areas is ephemeral with no intermittent or perennial stream flows. The volume of flow from these ephemeral drainages is seasonal and directly related to local climatic conditions. The climate is semi-arid with an overall precipitation averaging 13 inches per year. Snow accumulations are generally light and overall contribute little to the total annual precipitation. Most of the precipitation comes in the form of local potentially high intensity thunderstorms.

Mining activities may sometimes come in contact with ephemeral drainages as a result of roads or wellfield operations. The travel roads include two track and/or established roadways. To the extent possible, existing travel roads are utilized when traveling within the permit area. In instances where ephemeral drainages may be impacted by mining operations, whether by road or wellfield operations, the appropriate protection measures will be afforded to minimize impact to the drainage including prevention of erosion.

The primary surface disturbances associated with in-situ leaching occur with well drilling, pipeline installations, road and wellfield construction. These disturbances involve relatively small areas and/or have a very short-term impact. Continuing efforts are made to keep short-term disturbances caused by these operations to a minimum.

Activities associated with drilling include construction of drill pits and preparation of drill sites. Once a drill site has been selected, the appropriate topsoil protection methodology is employed. Erosion protection measures which may be taken, based on the site specific requirements, include the placement of hay bales, sedimentation breaks, placement of water contour bars, grading and contouring both before and/or after drilling operations to minimize erosion.

Road construction is kept to a minimum by utilizing existing roads when possible. When designing and constructing new roads, weather, elevation contours, land rights, and drainages are considered. When constructing new roads, efforts are made to cross ephemeral drainages or channels at right angles to enhance erosion protection measures. However, given that each specific site is different, it may not always be feasible or warranted to construct roads or crossings at right angles or along elevation contours. In such cases, appropriate erosional measures are considered, examined, and utilized to minimize erosion.

During the construction of wellfields, many activities are on-going including drilling, casing of wells, well development, pipeline construction, header house construction, lateral pipeline placement, and access road construction. These activities may have a short term or temporary effect on erosion. To reduce the potential impact of these activities, erosion protection measures are employed based on site specific conditions. These measures may include; the placement of hay bales, sedimentation breaks, placement of water contour bars, installing culverts, grading and contouring to help minimize erosion.

In steep grade areas, in addition to the previously noted erosion protection measures, the disturbed areas are re-seeded as soon as possible after construction is completed. This seeding commences at the appropriate time for optimum growth, whether the next spring or fall planting, and weather permitting.

In areas where wells may be constructed in drainage areas, impacts are minimized through the use of necessary erosion protection structures including but not limited to; placement of hay bales; construction of water contour bars; installing culverts; flow diversion structures; grading and contouring; application of rip rap; and designated traffic routes. Traffic within the drainage bottoms is limited to work activities necessary to construct and service wells. Wells that are constructed in significant drainages where runoff has the potential to impact the wellhead will have added wellhead protection. This protection will vary depending on the drainage and its potential for runoff. Protection measures may include barriers surrounding the wellhead, protective steel casing, and cement blocks or other means to protect the wellhead from damage that may be caused by runoff.

### 7.2.2 Surface Water Impacts

The potential impacts to surface waters as a result of operations at the Smith Ranch-Highland Uranium Project and Reynolds Ranch amendment area are considered to be minimal and temporary. There is, however, the potential for impacts to occur during wellfield construction and reclamation activities. During leaching, restoration, and after reclamation, the surface will be vegetated and contoured to minimize temporary effects to surface water quality.

The physical presence of the surface facilities including wellfields and associated structures, access and haul roads, Satellite IX buildings, office buildings, pipelines, Central Processing Plant facilities and other structures associated with the ISL mining and processing of uranium are not expected to significantly change peak surface water flows because of the relatively flat topography of the drainages at the sites, the low regional precipitation, the absorptive capacity of the soils, and the small area of disturbance relative to the large drainage are within and adjacent to the permit area. In areas where these structures may affect surface water drainage patterns, diversion ditches and culverts are used to prevent excessive erosion and control runoff. In areas where runoff is concentrated, energy dissipaters are used to slow the flow of runoff to minimize erosion and sediment loading in the runoff.

During wellfield construction and reclamation, the potential loss of vegetation to those activities may cause increased opportunities for erosion and potential movements of sediments into drainages. Where possible, contouring is used to minimize the potential effects of erosion. Upon completion of construction and reclamation, and as soon as feasible considering growing seasons, re-vegetation work is started using either cover crops or a native seed mix to stabilize the soil and minimize erosion due to runoff.

### 7.2.3 Ground Water Impacts

Over the long-term, the groundwater concentration of some parameters in the ore zone may slightly vary compared with the initial condition; however, any changes are minimal and will not alter the potential use category of these waters as defined by the Wyoming Department of Environmental Quality. The most significant water impact will be the withdrawal and beneficial use of about 20,000 acre feet of groundwater over the life of the project; approximately the same volume as was produced from the Bill Smith Mine between 1974 and 1982. Most of the water removed will be returned to the environment after treatment and discharge or used for irrigation, etc. The remaining water removed from the formation will be evaporated or disposed through authorized deep well injection.

### 7.2.4 Air Quality Impacts

The potential impacts to air quality as a result of ISL mining and processing of uranium are minimal and temporary. During wellfield and plant construction, the principal emissions to air are suspended particulates and gaseous pollutants from vehicle and drill rig exhausts, dust from vehicular traffic on unpaved roads, and dust from disturbed and unprotected soils. Throughout the life of the project, drill rigs and associated mobile equipment will be used during wellfield construction. Diesel powered drill rigs and water trucks associated with wellfield delineation and development, act as non-stationary sources of air pollutants. The drilling activities will proceed through the various wellfields with each drill hole location requiring one to four days of work. Most other equipment associated with wellfield development and construction will experience intermittent use, and its impact on air quality will be negligible. Other mobile vehicles will either be gasoline or diesel powered on-road cars and trucks typically equipped with required emission control devices.

Dust emissions from wind erosion are minimized by promptly reclaiming disturbed soil and establishing vegetative cover to wellfields and soil stockpiles.

Air quality impacts related to operations are largely limited to airborne effluents generated from processing. Air pollution consisting of dust suspended and exhaust emissions by vehicle traffic associated with routine wellfield maintenance is minimal.

Dissolved radon gas, generated by its dissolution from processing solutions, may escape to the atmosphere and potentially adversely impact air quality in the wellfields and immediate vicinity of processing buildings. Radon can be vented to the atmosphere from the wellfields at each wellhead or from the process equipment in the IX facility or the processing plant. PRI is using pressurized downflow IX columns, and therefore radon releases occur only when individual IX columns are disconnected from the circuit and opened to remove the resin for elution. Additionally, the yellowcake dryers could potentially release airborne particulate emissions, including natural uranium and radon daughters, to the environment. Previous modeling of the radiological effects of these emissions upon the local population was completed using the MILDOS-AREA computer code developed by NRC. A more detailed discussion of this model can be found in Section 7.3.

### 7.2.5 Wildlife Impacts

#### 7.2.5.1 Endangered Species

There are no known endangered species or endangered species habitat within the project area. Therefore, there is no impact to endangered species from the proposed project.

#### 7.2.5.2 Wildlife

The species observed on the permit area are common throughout eastern Wyoming and many other areas of the Rocky Mountain region. Many individuals of the small animal species such as the small burrowing mammals, snakes, lizards, and arthropods that now live in areas that will be disturbed by the proposed project will be destroyed when the vegetation is removed. Since a relatively small number of reptiles inhabit the disturbed portion of the permit area, the impact on these animals is relatively minor. Vegetation removal also has a relatively minor effect on insects and other arthropods because of their ability to quickly re-establish populations on reclaimed area. However, the loss of arthropods does decrease the amount of food available to insectivorous animals, including many species of birds. More small mammals (mice, rats, and ground squirrels) are lost as a result of vegetation removal than any other group of vertebrates. The number of animals lost in any area will generally be proportional to the number of acres disturbed. The short average life cycle of small mammals means that the loss in potential biomass accumulates during each year of project operation and rebounds proportionally once project areas are revegetated and released. It is estimated that as much as 8.4 to 120 lbs/yr of rodent biomass may be lost throughout the life of the recovery plant and associated facilities. A total of 84 to 1200 lbs/yr of rodent biomass may be lost as a result of wellfield installation and operation. Construction and operation of the additional Satellite facilities may result in a loss of 4.2 to 60 lb/yr of rodent biomass. While this does not significantly affect the long-term maintenance of small mammal populations in the area, it does reduce the amount of food available to predatory animals such as raptors, coyotes, and badgers. Whittaker (1970) states that the efficiency of food utilization by primary carnivores may be as high as 15 percent. If this figure is used as a rough estimate, then project operations may result in the loss of a maximum of 14 to 198 lbs/yr of carnivore biomass. Construction of the future additional facilities could result in a loss of 1 to 9 lbs/yr of carnivore biomass.

Highly mobile species, such as the larger mammals (Pronghorn Antelope and Mule Deer) and most birds, will be able to escape the disturbed area. However, the movement of those animals into adjacent undisturbed habitat may result in increased competition for food, shelter, territory, mates, and other necessities. This may result in the loss of some of these animals.

In terms of economic value and public interest, the most important wildlife species that utilizes the permit area is probably the Pronghorn Antelope. It is estimated that the density of antelope in this region is five to seven animals per square mile and that they remain in the area throughout the year. Consequently, the loss of 40 acres of vegetation due to the recovery plant and associated facilities may result in a reduction in antelope carrying capacity on the permit area by less than one (1) animal, while mining activities on an average of 40 acres/year may reduce Antelope carry capacity by the same amount. Operation of the additional Satellite facilities (an average of 80 acres/year) could reduce antelope carrying capacity by one (1) animal.

The increased number of people in the permit area could have an additional impact on Antelope and other wildlife populations, since some animals are likely to be killed by increased vehicular traffic. These additional wildlife losses are not expected to result in any long-term decrease in any wildlife populations, including antelope, since the number lost each year is expected to be a very small percentage of the total population.

Other than actual removal of vegetation and the potential of accidents resulting from activity in the area, project activities are not expected to significantly affect the antelope population. These animals do not appear to be disturbed by mining and processing activities similar to those proposed for this project. This has been well documented at the Highland Uranium Project and the Smith Ranch Operations where Antelope and Mule Deer are commonly observed near active mining areas without any noticeable concern. No reduction in the antelope population has been observed in the vicinity of that facility since it was originally constructed by Exxon in the early 1970's. The Mule Deer population of the area has shown a significant increase since the 1970's.

Continued operation of the SR-HUP/Reynolds Ranch should not have a significant effect on raptors utilizing the permit area due to the small percentage of prey that would be lost as a result of vegetation removal.

Wildlife species will re-invade disturbed areas after they are reclaimed. The time required for re-invasion is a function of the habitat requirements of each species. Herbivores capable of feeding on grasses and weedy plant species (e.g., deer mouse, thirteen-lined ground squirrel, mourning dove, and horned lark) would be the first animals to establish themselves on re-vegetated areas. Those animals also nest on the ground and prefer open habitats. Predaceous arthropods, such as ground beetles and assassin bugs, and insectivorous animals, such as the grasshopper mouse, meadowlark, loggerhead shrike, and horned lizard, would also be expected to be early invaders of re-vegetated areas. Several other species of animals (such as sage grouse) that are heavily dependent on sagebrush and other shrubs for food, cover, and/or nesting could take several years to successfully re-invade reclaimed areas because of the time required for shrubs to become re-established.

Although it is likely that noise has some effect on certain species of wildlife, the EPA states that a thorough literature search "revealed an almost complete lack of information concerning the effects of noise on wildlife" (EPA, 1972). Specific effects of mining noise on the wildlife in the permit area cannot be determined; however, from experience at similar mine sites, it is likely that most species will quickly become accustomed to noise from operating machinery. For example, at the SR-HUP, the deer and Pronghorn Antelope are commonly observed within active mining and drilling areas and they display no noticeable concern. Although this does not prove that noise created by mining has no effect on wildlife, it tends to indicate that effects, if any, are minor.

Impacts to wetlands and surface water sources available to wildlife are expected to be minimal during the life of the project. At this time, no disturbances to any wetlands or water sources are planned. If, in the future, a change in the mine plan should involve an impact to a wetlands area or water source, appropriate agencies will be contacted for development of a mitigation plan. All proposed drainage crossings will comply with appropriate regulations.

## 7.3 RADIOLOGICAL EFFECTS

Exposure pathways to radiological materials at ISL mining operations are considerably different from pathways associated with other uranium mining and milling methods. The environmental advantages of the ISL mining method and the processing of uranium for this project are two-fold. First, the majority of the radioactive daughter products remains underground and is not removed with the uranium. Second, the use of modern vacuum dryers reduces the potential radiological air particulate releases typically associated with conventional uranium milling facilities to insignificant levels (FEIS, NUREG-1508, 1997).

### 7.3.1 Exposure Pathways

There are no routine particulate emissions from the facility. Liquids released from the facility are treated on site to reduce radiation/ concentration levels of uranium and radium to levels acceptable for release to unrestricted areas as specified in 10 CFR 20 Appendix B Table II (1992). The only avenue, which is considered a potentially significant radiological exposure pathway for the proposed project, is the release of gaseous radon-222 to the atmosphere.

The effects of radon gas release from wellfields, Satellites, Central Processing Facilities, and ponds during production and restoration were modeled with the use of MILDOS-Area, a dispersion model approved by NRC for estimating potential radiological impacts caused by air emissions. The 1997 version of the model allows comparison of specific receptor site air concentrations with the ALCs given in 10 CFR 20.

### 7.3.2 Background Radiation Exposures to the Population

The major population areas within 50 miles of the recovery plant site are the towns of Glenrock with a population of approximately 2,000 (17 miles SSW), Douglas with a population of approximately 5,000 (23 miles SE), and Casper with a population of approximately 52,000 (36 miles WSW). A regional population within 50 miles of the plant site is approximately 59,000 persons.

In the FEIS for the Teton ISL Project (NUREG-0925, Section 4.5.7), the NRC staff stated the primary sources of radiological exposure to the population in the vicinity of the Teton project were naturally occurring cosmic and terrestrial radiation (174 mRem/yr), naturally occurring radon-222 (up to 625 mRem/yr), and diagnostic medical procedures (75 mRem/yr. Since the Teton ISL project is only some 10 miles from the Smith Ranch Central Processing Facilities, it can be assumed that natural background radiological exposure are similar in nature at Smith Ranch.

### 7.3.3 Annual Population Doses from the Project

Annual population doses computed for the SR-HUP by MILDOS-Area for the period of maximum mine emissions of radon-222 indicated a dose of 0.3 person-Rem/yr from mine activities to persons living within 50 miles of the site. Annual population doses computed by MILDOS-Area for the Reynolds Ranch Satellite operations indicate the highest effective population dose for people within 50 miles (80 km) is 2 person-Rem/yr. This dose is not significantly higher than the dose determined previously for SR-HUP, however, the difference may be accountable to a greater number of people at downwind residences closer to the Reynolds Ranch Satellite area.

### 7.3.4 Dose to Individuals

A series of nearby receptors were assessed in the MILDOS-Area model runs. These receptors included nearby dwellings and ranches, towns as far distant as Casper, and a series of hypothetical receptors placed around the perimeter of the project on the permit boundary. These last receptors included locations downwind of the satellites and the main processing facility.

The highest radon working level at a SR-HUP permit boundary receptor with access to an unrestricted area was 7.99E-05 WL compared to an ALC (allowable concentration) of 1.10E-03 WL.

The Total Effective Dose was predicted to be 2.24 mRem/yr at this receptor (downwind of the main processing facility). Dose to Bronchi at two unrestricted area boundary receptors were more that 25 mRem/yr but within the error of the model. These two locations are monitored for dosage during the period of maximum mine activity.

The maximum annual Total Effective Dose from the Reynolds Ranch Satellite was predicted to be 4 mRem/yr at the nearest occupied, downwind residence (Reynolds Ranch residence) during the estimated period of maximum mine activity. This dose is well below the 10CFR20 limit of 100 mRem/year. The results of the MILDOS-Area conducted for the Reynolds Ranch Satellite area are provided in Attachment 7-1 of this Chapter.

### 7.3.5 Radiological Impacts on Biota Other than Man

Standard Operating Procedures for spill prevention and clean-up, restrictive fencing, and equipment design, restrict contact between native biota and the radioactive materials accumulated during mining. Some small mammals, insects, and birds will have occasional contact with materials containing small amounts of radioactivity. No significant impact is expected from this contact.

The primary radioactive emission from the project is airborne radon-222. Since the levels are closely monitored within the restricted area for worker safety, it is reasonable to assume that wildlife mobility and limited access will lead to lower exposures to wildlife in comparison to workers. In unrestricted areas, radiological impacts on biota other than man should be at least as low as the impacts predicted for man.

## 7.4 NONRADIOLOGICAL EFFECTS

### 7.4.1 Nonradioactive Airborne Effluents

It is not anticipated that there will be a significant environmental impact from the nonradioactive airborne effluent releases. Nonradioactive airborne effluents at the SR-HUP/Reynolds Ranch will be limited to fugitive dust from access roads and wellfield activities and non-radioactive particulate emissions from the Highland Yellowcake Dryer and Packaging Room scrubber exhaust stacks. The project is permitted under WDEQ-AQD Air Quality Permit No. OP-202.

Fugitive dust emissions will be minimal and dust suppressants will only be used if conditions warrant their use. When operational, WDEQ-AQD Permit No. OP-202 requires particulate emission testing of the Yellowcake Dryer (which is fueled with natural gas) and Yellowcake Packaging Room scrubber exhaust stacks annually. Currently (December 2004) the Highland Central Plant is not operational.

### 7.4.2 Nonradioactive Liquid Effluents

It is not anticipated that there will be any nonradioactive liquid effluents discharged to the environment during the operation of the SR-HUP or Reynolds Ranch Satellite other than those discussed in Section 4.2 of Chapter 4. During ground water restoration, treated water may be surface discharged under a National Pollutant Discharge Elimination System (NPDES) permit. In the event that restoration water is surface discharged, the treated water will be monitored to ensure that the NPDES discharge limits are not exceeded.

## 7.5 EFFECTS OF ACCIDENTS

### 7.5.1 Tank Failure

Under normal operating conditions the process fluids are contained in the process vessels and piping circuits within the CPP and Satellite buildings. Alarms and automatic controls are used to monitor and keep levels within prescribed limits. In the unlikely event of a failure of process vessel or tank in a process building, the fluid would be contained within the building, collected in sumps and pumped to other tanks or to a lined evaporation pond. The area would then be washed down with the water contained in a similar manner eliminating any environmental impact from the failure.

Failure of a tank outside the process building could result in the spill of leach solution to a retention or containment system. The liquids would then be pumped to another tank or lined pond. The environmental impact of such an accident could result in some soils being contaminated requiring controlled disposal. All areas affected by such a failure or leak would be surveyed and any contaminated soils or material requiring controlled disposal would be removed and disposed of in accordance with NRC and/or State requirements. Therefore, there would be no long-term impact from such an accident.

### 7.5.2 Pipeline Failure

The rupture of a pipeline between the CPP or a Satellite and a wellfield could result in a loss of either pregnant or barren solutions to the surface. To minimize the volume of fluid that could be lost, the pipeline systems are equipped with high pressure and low pressure shutdown systems and flowmeters. The systems also are equipped with alarms so the operator will be alerted immediately if a major malfunction occurs. If the volume and/or concentration of the solutions released in such an accident did constitute an environmental concern, the area would be surveyed and the contaminated soils would be removed and disposed according to NRC and/or State regulations. The pipelines will normally be buried approximately five feet below the surface and will be of a corrosion free high density polyethylene material. Therefore, the probability of such a failure after the pipelines have been tested and placed in service is considered small.

A worst case scenario for a pipeline would involve a major pipeline rupture going unchecked for an hour at full operating capacity. This event could potentially release 240,000 gallons of barren or pregnant lixiviant to the adjacent environment. Such an event would involve a complete pipeline rupture, and a failure by operators to detect the rupture in a timely manner. The NRC staff in their review of Hydro Resources Inc. Final Environmental Impact Statement for the Crownpoint Uranium Solution Mining Project, (NUREG-1508, 1997),indicate that the industry experience has been that major pipeline ruptures are not complete breaks in the line, but are more likely smaller openings in the pipes such as cracks, punctures and other types of partial line breaks. Monitoring systems typically enable operators to detect a leak, determine its cause, and shut down the appropriate pumps in less than 15 minutes. According to the NRC Staff in the Crownpoint EIS, actual experience for pipeline ruptures often represents less than 25% of the volume of lixiviant within the pipeline is spilled in the worst-case scenario, and in actuality, most leaks and spills occur through minor cracks or disconnection on smaller pipes.

### 7.5.3 Fires and Explosions

The fire and explosion hazard of the CPP will be minimal as the plant does not use flammable liquids in the recovery process. Natural gas used for building heat would be the primary source for a potential fire or explosion. In the CPP the uranium will be in solution, adsorbed on ion exchange resin, wet yellowcake slurry, or as a dried yellowcake powder contained in a sealed drum or the vacuum dryer. An explosion, therefore, would not appreciably disperse the uranium to the environment. Spilled liquids or slurries would be confined to the building sump or to the runoff control system. The sealed drums and Vacuum Dryer at Smith Ranch would contain the dried yellowcake powder, and any potential releases would be contained within the Dryer Building.

In the wellfields, injection and recovery well piping systems are manifolded for ease of operational control. Piping manifolds, submersible pump motor starters/controllers, and gaseous oxygen delivery systems are situated within electrically heated, all weather buildings. These are commonly referred to as "Headerhouses". An accumulation of gaseous oxygen would be the primary source for a potential fire or explosion. Such an event could result in the rupture of a leaching solution pipeline within the building and a spill of leaching solution. Both the gaseous oxygen and primary leaching solution lines entering each headerhouse are equipped with automatic low pressure shut off valves to minimize the delivery of oxygen to a fire or of liquids to a spill. Additionally, each Headerhouse is equipped with a continuously operating exhaust fan that would assist in preventing the build-up of oxygen in the building.

### 7.5.4 Tornadoes

The SR-HUP/Reynolds Ranch amendment area is located in Converse County Wyoming, in which 30 tornado touch downs were recorded in a period from 1950 through 1995. Of those, 14 tornadoes were classified as F0 with wind speeds of 40-72 miles per hour and described as a gale tornado. F1 tornadoes described as moderate with wind speeds of 73-112 miles per hour accounted for 14 tornadoes. Finally, 2 were classified as F2 with wind speeds of 113-157 miles per hour and described as significant tornadoes. (Tornado Project, State Data from the Storm Prediction Service – Wyoming, 1999). The F scales for the tornadoes is based on the Fujita Scale that is commonly used to measure the relative strength of a tornado based on the destruction.

The probability of occurrence of a tornado in the area in which the project is located is about $3 \times 10^{-4}$ per year (NUREG 0706 – Section 7.1.3.1). The area is categorized as Region 3 in relative tornado intensity. For this category, the wind speed of the "design" tornado is 240 mph, of which 190 mph is rotational and 50 mph is translational. None of the plant structures are designed to withstand a tornado of this intensity.

The nature of the operation is such that little more could be done to secure the facility with advance warning than without it. The yellowcake product has the highest specific activity of any material processed at the site. However, since the material would be a wet slurry or as a contained dry powder, the potential environmental effects would be minimal. The strongest tornado recorded in Converse County is an F2. Based on the Fujita Scale, the type of damage that can be expected from an F2 tornado is roof damage, unsecured mobile homes pushed off foundations, and light structures severely damaged or destroyed. At the SR-HUP, all of the dried yellowcake is contained and stored in sealed 55 gallon drums or in the vacuum dryer within an engineered metal building. Because of the density of the material, it is not reasonable to expect the container to become mobile due solely to the winds of the tornado. However, if a portion of the building superstructure were to collapse where the dried yellowcake is stored, there is a possibility that a portion of the drums could be crushed and potentially release yellowcake.

In the Generic Environmental Statement for Uranium Milling, (NUREG-0706, NRC, 1980), NRC staff assumed 25,100 lbs. of dry yellowcake, the equivalent of 26 55-gallon drums, were picked up by a tornado. From the model study, NRC staff concluded the maximum radiation exposure due to the accident would occur at a distance of 2.5 miles from the facility, and the 50 year dose commitment to the lungs of an individual was estimated to be $8.3x10^{-7}$ rem. For the model site, the 50 year dose commitment to an individual of the public at the fenceline, 1,600 feet from the facility, and at the nearest residence, 6,500 feet from the facility, would be estimated to be $2.2x10^{-7}$ rem and $4.8x10^{-7}$ rem, respectively.

### 7.5.5 Well Casing Failure

A casing failure in an injection well would have the potential for the most significant environmental impact because the leaching fluid is being injected under pressure. It is possible that this type failure could occur and continue for several days before being detected by the monitoring system. If such a failure did occur, the defective well would either be repaired or plugged and abandoned. If contamination of another aquifer was indicated, wells would be drilled and completed in the contaminated aquifer then produced until concentrations of leaching solution constituents were reduced to acceptable levels. With proper casing, cementing and testing procedures, the probability of such a failure is very low.

To minimize the risk of a casing failure significantly impacting the environment, should one occur, monitor wells were completed in the aquifers above and below the ore zone. The fluid levels and quality of the water in the adjacent aquifers routinely is monitored during mining to check for fluid movement into these aquifers. In addition, casing integrity tests will be performed on all injection wells prior to using the wells for injection and after any work that involves entering a fiberglass or PVC cased well with a cutting tool, such as a drill bit or underreamer.

Failure of a production well casing would normally not cause fluid migration to overlying aquifers because the production wells operate at pressures lower than the aquifer pressures.

### 7.5.6 Leakage Through Old Exploration Holes

Movement of leaching solution between aquifers through old exploration holes in the project area is very unlikely. The drill holes were left full of bentonite abandonment mud when they were abandoned and the mud is an effective seal against fluid interchange between the various aquifer units penetrated by the drilling. The rapid swelling and bridging of the isolating shales between the sandstone aquifer units provides additional well bore sealing.

However, to ensure there is no communication between aquifers, monitor wells completed in aquifers above and below the ore zone are checked routinely for changes in aquifer pressure and water composition. In addition, pump tests are conducted prior to start-up of a mining unit to demonstrate no significant communication between the aquifers exists. Should leakage between aquifers through old drill holes be indicated during the tests, the old holes would be re-entered and plugged. If contamination of another aquifer was indicated, wells would be drilled and completed in the contaminated aquifer, water samples collected, and, if needed, the wells produced to reduce the concentration of any leaching solution fluids to acceptable levels.

### 7.5.7 Transportation Accidents

Materials transportation to and from the processing sites can be classified into four categories:

1) Shipments of dried yellowcake product from the Central Processing Plant to an offsite licensed facility;

2) Shipments of resin to the Central Processing Plant from the Satellite IX Facilities;

3) Shipments of yellowcake slurry from offsite licensees to the central processing plant for drying; and

4) Shipments of process chemicals from suppliers to the processing facilities.

7.5.7.1 Shipments of Dried Yellowcake Offsite

Yellowcake produced by the SR-HUP, and its shipment for further processing, does not differ significantly from yellowcake produced at a conventional mill. The NRC has evaluated transportation accidents associated with yellowcake shipments from uranium mills and published the results in a generic Environmental Statement, (NUREG-0706, NRC, 1980). The following analysis is based upon that earlier study.

The dried yellowcake is generally packed in 55-gallon, 18-gauge steel drums holding an average of 950 lbs. and classified by the Department of Transportation as Type A packaging (49 CFR Parts 171-189 and 10 CFR part 71). The yellowcake is shipped by truck approximately 1,200 miles to a conversion plant, which processes the yellowcake in the first step of manufacturing reactor fuel. An average truck shipment contains approximately 45 to 52 drums, or up to an average net weight of 42,000-lbs yellowcake. Using an average annual production rate of 2 million lbs. $U_3O_8$ or 2.4 million lbs. yellowcake, approximately 57 such shipments would be required annually. By increasing the annual production rate to 3.5 million lbs. $U_3O_8$ or 4.2 million lbs. yellowcake, approximately 100 such shipments would be required annually.

Based on published accident statistics, the average probability of a truck accident is $2.1\times10^{-6}$/mi (from NUREG-0706). Truck accident statistics include three categories of events: collisions, non-collisions, and other events. Collisions are between the transport vehicle and any other objects, whether moving vehicles or fixed objects. Non-collisions are accidents involving only the one vehicle, such as when it leaves the road and rolls over. Other events include personal injuries suffered on the vehicle, persons falling from or being thrown against the standing vehicle, cases of stolen vehicles, and fires occurring on a standing vehicle. The likelihood that a transport vehicle being involved in an accident of any type during a one-year period is 14 percent.

A generalized accident-risk evaluation was performed by NRC (NUREG-0706) that classified accidents into eight categories, depending upon the combined stresses of impact, puncture, crush and fire. On the basis of this classification scheme, conditional accident probability was developed for eight severity levels (see Table 7-1). The NRC utilized two release models for this analysis. Model I is hypothetical, assuming complete loss of drum contents, and Model II is based on actual tests, assuming a partial loss of drum contents. The quantity estimated to be released in the event of a truck accident was 17,000 lbs. for Model I and 1,200 lbs. for Model II, (NUREG 0706, NRC, 1980). Most of the yellowcake released from the container would be deposited directly on the ground in the immediate vicinity of the accident. Some fraction of the released material would be dispersed to the atmosphere. The NRC used the following expression to estimate material dispersion (NUREG-0706, 1977).

$$F = 0.001 + 4.6\times10^{-4} (1 - e^{-0.15ut})\, u^{1.78}$$

where:

| | | |
|---|---|---|
| F | = | the fractional airborne release |
| u | = | the wind speed at 50ft in m/s |
| t | = | the duration of release (hours) |

The first term represents the initial "puff" immediately airborne when the container falls in an accident. Using an assumed wind speed of 10 mph (5m/s) and a release time of 24 hours, the environmental release fraction would be $9\times10^{-3}$. Since the conversion facility is located in Illinois, a population density of 160 persons/mi$^2$ was used for the eastern U.S. In NUREG-0706, the NRC found that the 50 year dose commitment to the lungs would be about 2 man-Sv (200 man-rem) and 0.14 man-Sv (14 man-rem) for Models I and II respectively. The integrated dose estimate would be lower for more sparsely populated areas.

An accident involving vehicles transporting the yellowcake product could result in some yellowcake being spilled. In the unlikely event of such an accident, all yellowcake and contaminated soils would be removed and processed through a mill or disposed in a licensed facility. All disturbed areas would then be reclaimed in accordance with all applicable State and NRC regulations.

The risk of an accident involving a yellowcake spill will be kept to a minimum by use of Department of Transportation approved containers and exclusive use shipments. To further reduce the environmental impact should an accident occur, a "Transportation Accident Response Guide" for the facility has been prepared and copies of the special instruction are included with every yellowcake shipment. A copy of the current Transportation Accident Response Guide, which will be updated as needed, is included in Appendix G.

Commercial yellowcake shipments are required to meet the fuel needs of the licensed power generation facilities and all risks associated with the transportation of yellowcake cannot be eliminated. However, the potential environmental impacts of an accident involving the shipment of yellowcake can be kept to a minimum by having proper procedures in place to ensure that the yellowcake is contained and the spill area is secure from unauthorized personnel.

7.5.7.2 Shipments of Resin

The operation of Satellite IX facilities requires that the resin used for IX operations be transferred from the Satellite facility to the Central Processing Plant. The resin holds the recovered uranium. While attached to the resin, the uranium will remain fixed until stripped using a strong brine solution. When the resin is transferred, it is moved using barren process water. This process water has uranium concentrations consistent with barren lixiviant (1-3 mg/l $U_3O_8$). The resin is transported in specially designed 500 to 700 ft$^3$ aluminum tanks. The tanker trucks typically haul 500 $ft^3$ of loaded resin. Such tanker trucks would withstand the impact of most collisions.

In the event of an accident that could rupture the tank, a portion of the resin and a small amount of residual water would spill on the ground. Uranium loaded resin is slightly denser than water and settles to the bottom of the tank, and any water decants to the top. Should the tanker truck overturn and rupture, the limited amount of water would carry some of the resin to only a short distance in the proximity of the tank. The risk of environmental impact is slight with respect to uranium loaded resin beads. The beads will retain the uranium, and prevent the contamination of the soil. The resin will typically collect in low places that confines the beads and ensures cleanup. There is no risk of airborne release of uranium since it will remain fixed to the beads.

An accident involving vehicles transporting resin could result in some of the resin being spilled. In the unlikely event of such an accident, all resin and contaminated soils would be removed and processed through the elution circuit or disposed in a licensed facility. All disturbed areas would then be reclaimed in accordance with all applicable State and NRC regulations. There have been no spills from resin transport during operations at the SR-HUP.

7.5.7.3 Yellowcake Slurry Shipments

The SR-HUP facility receives yellowcake slurry shipments for the purposes of drying from other licensed facilities and potentially Satellite facilities such as those planned for the Gas Hills Project and the Ruth/North Butte Project. When yellowcake slurry is transported, it is carried in specifically designed stainless steel tanks or 55-gallon steel drums that are lined with plastic and contain a waterproof seal. Tanker trucks would withstand the impact of most collisions. In the most severe conditions, an accident would result in a rupture of the tank and the release of only a portion of the slurry. During this accident, the slurry would pour onto the ground and thicken as water in the slurry soaked into the ground.

An accident involving vehicles transporting the yellowcake slurry could result in some yellowcake slurry being spilled. In the unlikely event of such an accident, all yellowcake slurry and contaminated soils would be removed and processed through a mill or disposed in a licensed facility. All disturbed areas would then be reclaimed in accordance with all applicable State and NRC regulations.

The risk of an accident involving a yellowcake slurry spill is kept to a minimum by use of Department of Transportation approved containers and exclusive use shipments. To further reduce the environmental impact should an accident occur, PRI has emergency response procedures which would be used in the unlikely occurrence of a spill of yellowcake, resin, or slurry during transportation. In addition, truckers/vendors also carry spill response plans in the truck.

7.5.7.4 Shipment of Chemicals

Accidents involving truck shipments of process chemicals to the project site could result in a local environmental impact. Any spills would be removed and the area would be cleaned and reclaimed. Shipments of the chemicals used in ISL mining in truck load quantities are common to many industries and present no abnormal risk. These chemicals include dry solid sodium carbonate, liquid carbon dioxide, liquid oxygen, concentrated sulfuric acid, liquid (50%) hydrogen peroxide, and dry solid sodium chloride (salt). Since most of the material would be recovered or could be removed no significant long-term environmental impact would result from a shipping accident involving these materials.

The exception to the above chemicals is anhydrous ammonia, which is used at the facility in the precipitation circuit. If involved in an accident, the presence of anhydrous ammonia could result in a significant environmental impact. It is delivered in bulk shipments of 7,500 gallons using a tanker truck. Approximately 12 to 14 shipments are made annually, and the supplier is assumed to be 150 miles away. From the Generic Environmental Impact Statement for Uranium Mills, (NUREG-0706, NRC, 1980), an accident rate of $4.8x10^{-7}$/mile is used for determining risk of a traffic accident.

7.5.8 Evaporation Pond Failure

The evaporation ponds are constructed with leak detection systems and these systems will be monitored daily. If a liner leak were detected, the fluid would be pumped to another pond and the liner repaired as needed. The pond area will be surveyed and reclaimed as part of the final reclamation eliminating any significant long-term impact.

An evaporation pond embankment failure would be the most severe type of evaporation pond failure. To minimize the risk of an embankment failure, the ponds are inspected daily to ensure there is no significant deterioration of the embankments. Should a failure occur, all impacted areas would be surveyed, cleaned up as needed, and reclaimed.

7.5.9 Response Procedures for Reasonably Expected System Failures

Appropriate site personnel, including mine supervisors and managers, and corporate personnel, including the Senior Vice President and President will be notified immediately if an event described in this section occurs and corrective actions will be determined and implemented in accordance with established emergency response procedures. Procedures for issuing Radiation Work Permits for workers to mitigate the effects of radiological incidents have been established and are described in Chapter 9.

## 7.6 SOCIOECONOMIC IMPACTS

Continued operation of the SR-HUP/Reynolds Ranch amendment area will provide jobs for about 100 company employees and 20 to 40 contract employees. The general population of Converse County declined approximately 20 percent between 1980 and 1984 and the overall economy remains depressed; therefore, the impact of the project, although limited, will be beneficial to the local communities. No adverse impact is anticipated as current housing, schools and other support facilities are more than adequate to accommodate the projected employment.

## 7.7 MINERAL RESOURCE IMPACTS

The only mineral known to be present in economically recoverable quantities in the project area is uranium. Oil and gas exploration has been conducted and is expected to continue in the general area. However, exploration and production drilling for oil and gas within the permit area is aimed at pay sands at subsurface depths of 8,000 feet or more. To date, such drilling has been unsuccessful. Extensive drilling and evaluation has shown that economic coal beds that could be conventionally mined are not underlying the SR-HUP/Reynolds Ranch amendment area. Although there has been some very limited activity in the area for coal bed methane prospects, no concerns are anticipated due to the unlikeliness of large-scale development in areas where ISL mining will occur. In the unlikely case that both ISL mining and coal bed methane development occurs in the same area, working agreements between operations will alleviate any concerns.

**Table 7-1**

Fractional Probabilities of Occurrence and Corresponding Package Release Fractions for Each of the Release Models for Low Specific Activity (LSA) and Type A Containers Involved in Truck Accidents (NUREG-0170, NRC, 1977)

| Accident Severity Category | Fractional Occurrence of Accident | Release Fractions | |
|---|---|---|---|
| | | Model I | Model II |
| I | 0.55 | 0.0 | 0.0 |
| II | 0.36 | 1.0 | 0.01 |
| III | 0.07 | 1.0 | 0.1 |
| IV | 0.016 | 1.0 | 1.0 |
| V | 0.0028 | 1.0 | 1.0 |
| VI | 0.0011 | 1.0 | 1.0 |
| VII | $8.5 \times 10^{-5}$ | 1.0 | 1.0 |
| VIII | $1.5 \times 10^{-5}$ | 1.0 | 1.0 |

# CHAPTER 9
# MANAGEMENT ORGANIZATION AND ADMINISTRATIVE PROCEDURES

## 9.1 ENVIRONMENT, HEALTH AND SAFETY MANAGEMENT

Power Resources, Inc. (PRI) will maintain a performance-based approach to the management of the environment, health and safety program, including radiation safety. The Environment, Health and Safety Systems Management Program encompasses licensing, compliance, environmental monitoring, industrial hygiene, and health physics programs under one umbrella, and it includes involvement by the individual worker to the senior management of PRI. This program will allow PRI to operate efficiently and maintain an effective Environment, Health and Safety Program (EHS Program).

## 9.2 ENVIRONMENT, HEALTH AND SAFETY MANAGEMENT ORGANIZATION

Figure 9-1 is a partial organization chart for PRI with respect to the operation of the Smith Ranch – Highland Uranium Project (SR-HUP) and associated operations, and represents the management levels that play a key part in the Environmental, Health and Safety Systems Management Program and may serve a functional part of the Safety and Environmental Review Panel (SERP) described under Section 9.5.2.1. The dashed line of reporting signifies a dual reporting function. This organization allows environmental, health, industrial safety, and radiation safety matters to be considered at any management level. Since the Reynolds Ranch Satellite area is an associated operation to SR-HUP, management of the construction and operation of the Satellite Facility and associated wellfields will be also be performed with the organizational components currently in place for SR-HUP as described in the following sections.

## 9.3 ENVIRONMENT, HEALTH AND SAFETY MANAGEMENT QUALIFICATIONS

### 9.3.1 Board of Directors

The Board of Directors has the ultimate responsibility and authority for radiation safety and environmental compliance for PRI, including the SR-HUP and associated operations. The Board of Directors sets corporate policy and provides procedural guidance in these areas. The Board of Directors directly provides operational direction to the President of PRI.

### 9.3.2 President

The President is responsible for interpreting and acting upon the Board of Directors policy and procedural decisions. The President directly supervises the Senior Vice President of Operations. The President is empowered by the Board of Directors to have the responsibility and authority for the radiation safety and environmental compliance programs. He is responsible for ensuring that Operations staff are complying with all applicable regulations and permit/license conditions through direct supervision of the Senior Vice President of Operations.

### 9.3.3 Senior Vice President of Operations

The Senior Vice President of Operations reports to the President and is directly responsible for ensuring that Corporate Operations personnel (including the Smith Ranch - Highland Uranium Project) comply with Industrial Safety, Radiation Safety, and Environmental Protection Programs as stated in the EHS Management System. The Senior Vice President of Operations is also responsible for company compliance with all regulatory license conditions/stipulations, regulations and reporting requirements. The Senior Vice President of Operations has the responsibility and authority to terminate immediately any activity that is determined to be a threat to employees or public health, the environment, or potentially a violation of state or federal regulations as indicated in reports from the Manager-Health, Safety and Environmental Affairs/CRSO or the RSO.

The Senior Vice President of Operations directly supervises the General Manager of Operations.

### 9.3.4 Mine Manager

The Mine Manager is responsible for managing the day-to-day operations at the SR-HUP/Reynolds Ranch, and reports directly to the Senior Vice President of Operations. The Mine Manager is responsible for ensuring that SR-HUP/Reynolds Ranch personnel comply with Industrial Safety, Radiation Safety, Environmental Protection Programs, and all relevant state and federal regulations.

The Mine Manager has the responsibility and the authority to suspend, postpone or modify, immediately if necessary, any activity that is determined to be a threat to employees, public health, the environment, or potentially a violation of state or federal regulations. The Mine Manager cannot unilaterally override a decision for suspension, postponement or modification if that decision is made by the Senior Vice President of Operations, the Manager-Health, Safety and Environmental Affairs/CRSO, or the RSO.

The position of Mine Manager requires a Bachelor's Degree in engineering or science form an accredited college or university, or equivalent work experience, and a minimum of five years supervisory experience. Work experience will include industrial process/production experience, and industrial process/production management.

### 9.3.5 Manager-Health, Safety and Environmental Affairs

Reporting directly to the Mine Manager, the Manager-Health, Safety and Environmental Affairs/Corporate Radiation Safety Officer (CRSO) oversees all Radiation Protection, Health, and Environmental Programs as stated in the EHS Management System, at company operations, including the SR-HUP/Reynolds Ranch. This position assists in the development and review of radiologic and environmental sampling and analysis procedures and is responsible for routine auditing of the programs. The Manager-Health, Safety and Environmental Affairs/CRSO has the responsibility and authority to suspend, postpone, or modify any activity that is determined to be a threat to employees, public health, the environment or potentially a violation of state or federal regulations. As such, the Manager-Health, Safety and Environmental Affairs/CRSO has a secondary reporting requirement to the Senior Vice President of Operations.

The position of Manager-Health, Safety and Environmental Affairs/CRSO requires a Bachelor's degree in an engineering or science field from an accredited college or university, or an equivalent level of work experience. Additionally, a minimum of five years of experience in environmental and safety management and operations functions will be required as well as the ability to meet the requirements of Regulatory Guide 8.31 for the position of RSO.

### 9.3.6 Senior Environmental Scientist

The Senior Environmental Scientist is primarily responsible for assisting in the implementation of the environmental compliance programs and the compilation of required reports. This position also assists with the industrial and radiation safety programs. This position may supervise the Environmental Specialist or Environmental Technician. This position reports directly to the Manager-Health, Safety and Environmental Affairs/CRSO.

The position of Senior Environmental Scientist requires a minimum of a Bachelor's Degree from an accredited college or university in the physical sciences, biology, engineering or related discipline and must be computer literate and have at least four years experience in environmental compliance and permitting.

### 9.3.7 Environmental Specialist or Environmental Technician

The Environmental Specialist or Environmental Technician assists with the implementation of the environmental compliance programs including maintaining ground water monitoring data bases and waste management programs. This position also assists with the industrial and radiation safety programs and may be used as a training position for Radiation Safety Technician (RST). The position normally reports to the Senior Environmental Scientist, but will report radiation safety items directly to the RSO or CRSO.

The position of Environmental Specialist requires a minimum of a Bachelor's Degree in the physical sciences, environmental science, engineering or a related field. One year of directly related experience is desired, but not required.

The position of Environmental Technician may be utilized in lieu of the Environmental Specialist depending on the level of responsibility given to the position and required qualifications for that level of responsibility. The position of Environmental Technician requires a minimum of an Associates Degree, or relevant experience in physical sciences, environmental science, or related field.

### 9.3.8 Radiation Safety Officer (RSO)

Reporting directly to the Manager-Health, Safety and Environmental Affairs/CRSO, the Radiation Safety Officer (RSO) is responsible for the daily supervision of the radiation safety programs at company operations, including the SR-HUP. Responsibilities include the development and implementation of all radiation safety programs, ensuring that all records are correctly maintained, and assisting the Manager-Health, Safety and Environmental Affairs/CRSO in ensuring compliance with NRC regulations and license conditions applicable to worker health.

The RSO conducts training programs for the supervisors and employees with regard to the proper application of radiation protection procedures. The RSO personally inspects facilities to verify compliance with all applicable radiological health and safety requirements. The RSO has the responsibility and the authority, through appropriate line management, to suspend, postpone, or modify any work activity that is unsafe or potentially a violation of NRC regulations or license conditions, including the ALARA program. Depending on the level of activity at the site, the RSO may also fulfill the responsibilities of the RST.

The position of RSO requires a minimum of a Bachelor's Degree in an engineering or science field from an accredited college or university, or an equivalent level of work experience. Additionally, the position of RSO requires a combination of education, training, and/or experience in applied health physics and radiation protection to meet the requirements of NRC Regulatory Guide 8.31.

### 9.3.9 Radiation Safety Technician (RST)

The Radiation Safety Technician (RST) conducts radiological surveys, collects air, water, soil and vegetation samples, performs analyses and collects data for the radiation safety program, performs calculations of employee radiation exposures, keeps records, and conducts various other activities associated with implementation of the environmental and radiation protection programs. The RST reports directly to the RSO. Depending on the level of activity at the site, the responsibilities of the RST and RSO may be combined.

The position of RST requires a minimum of a high school diploma, or alternatively, an equivalent combination of experience and training in radiation protection at uranium mining and/or processing operations.

### 9.3.10 Safety Supervisor

The Safety Supervisor is responsible for the non-radiation related health and safety programs. Responsibilities include the development and implementation of health and safety programs in compliance with the Wyoming State Mine Inspector Office regulations. Responsibilities include safety training of new and existing employees, and the maintenance of appropriate records to document compliance with regulations. The Safety Supervisor may also be a qualified RST and functions in this capacity when needed. The Safety Supervisor reports directly to the Manager-Health, Safety and Environmental Affairs/CRSO.

In addition to meeting the qualifications and training requirements of the RST (as described in Section 9.3.7 above), the Safety Supervisor should have two (2) years of college in the physical sciences, engineering, or health fields. Two years of applied occupational safety experience may be substituted for each one (1) year of college. In any event, a minimum of a High School Diploma or equivalent is required.

## 9.4 ALARA POLICY

The purpose of the ALARA (As Low As Reasonably Achievable) Policy is to keep exposures to all radioactive nuclides and other hazardous material as low as possible and to as few personnel as possible, taking into account the state of technology and the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to the utilization of atomic energy in the public interest.

In order for an ALARA Policy to correctly function, all individuals including management, supervisors, health physics staff, and workers, must take part and each share in the responsibility to keep all exposures as low as reasonably achievable. This policy addresses this need and describes the responsibilities of each.

### 9.4.1 Management Responsibilities

Consistent with Regulatory Guide 8.31, the licensee Management is responsible for the development, implementation, and enforcing the applicable rules, policies, and procedures as directed by regulatory agencies and company policies. These shall include the following:

1. The development of a strong commitment to and continuing support of the implementation and operations of the ALARA program;

2. An Annual Audit Program which reviews radiation monitoring results, procedural, and operational methods;

3. A continuing evaluation of the Health Physics Program including adequate staffing and support;

4. Proper training and discussions which address the ALARA program and its function to all facility employees and, when appropriate, to contractors and visitors.

9.4.2 Radiation Safety Officer Responsibility

The RSO shall be charged with ensuring technical adequacy, proper radiation protection, and the overall surveillance and maintenance of the ALARA program. The RSO shall be assigned the following:

1. The responsibility for the development and administration of the ALARA program;

2. Sufficient authority to enforce regulations and administrative policies that affect any aspect of the Health Physics Program;

3. Assist with the review and approval of new equipment, process changes or operating procedures to ensure that the plans do not adversely affect the Health Physics Program;

4. Maintain equipment and surveillance programs to assure continued implementation of the ALARA program;

5. Assist with conducting an Annual ALARA Audit with Management to determine the effectiveness of the program and make any appropriate recommendations or changes as may be dictated by the ALARA philosophy;

6. Review annually all existing operating procedures involving or potentially involving any handling, processing, or storing of radioactive materials to ensure the procedures are ALARA and do not violate any newly established or instituted radiation protection practices;

7. Conduct or designate daily inspections of pertinent facility areas to observe that general radiation control practices, hygiene, and housekeeping practices are in line with the ALARA principle.

### 9.4.3 Supervisors Responsibility

Supervisors shall be the front line for implementing the ALARA program. Each shall be trained and instructed in the general radiation safety practices and procedures. Their responsibilities include:

1. Adequate training to implement the general philosophy behind the ALARA program;

2. Provide direction and guidance to subordinates in ways to adhere to the ALARA program;

3. Enforcement of rules and policies as directed by regulatory agencies and company management;

4. Seek additional help from management and the RSO should radiological problems be deemed by the supervisor to be outside their sphere of training.

### 9.4.4 Worker Responsibility

Because success of both the radiation protection and ALARA programs are contingent upon the cooperation and adherence to those policies by the workers themselves, the facility employees must be responsible for certain aspects of the program in order for the program to accomplish its goal of keeping exposures as low as possible. Worker responsibilities include:

1. Adherence to all rules, notices, and operating procedures as established by management and the RSO;

2. Making valid suggestions which might improve the ALARA program;

3. Reporting promptly, to immediate supervisor, any malfunction of equipment or violation of procedures which could result in an unacceptable increased radiological hazard;

4. Proper use and fit testing of any respirator;

5. Proper use and returning of any bioassay sample kit at its required time.

## 9.5 MANAGEMENT CONTROL PROGRAM

### 9.5.1 PRI Environment, Health and Safety Management System

PRI's Environment, Health and Safety (EHS) Management System formalizes the Company's approach to EHS management to ensure a consistency across its operations. The management system is a key element assuring that the management demonstrates "due diligence" in addressing EHS issues and describes how the operations of the facility will comply with the requirements of the PRI EH&S Policy and Regulatory requirements.

The EHS Management System:

- Assures that sound management practices and processes are in place to ensure that strong EHS performance is sustainable.
- Clearly sets out and formalizes the expectations of EHS management.
- Provides a systematic approach to the identification of EHS issues and ensures that a system of risk identification and management is in place.
- Provides a framework for personal, site and corporate EHS responsibility and leadership.
- Provides a systematic approach for the attainment of PRI's EHS objectives.
- Ensures continued improvement of EHS programs and performance.

The EHS Management System has the following characteristics:

- The system is compatible with the ISO 14001 Environment Management System.
- The system is straightforward in design and is intended as an effective management tool for all types of activities and operations, and is capable of implementation at all levels of the organization.
- The system is supported by standards that clearly spell out PRI's expectations, while leaving the means by which these are attained as a responsibility of line management.
- The system is readily auditable.

- The system is designed to provide a practical tool to assist the operations in identifying and achieving their EHS objectives while satisfying PRI's governance requirements.

The EHS Management System uses a series of standards that aligned with specific management processes and sets out the minimum expectations for EHS performance. The standards consist of management processes that consist of assessment, planning, implementation (including training, corrective actions, safe work programs, and emergency response), checking (including auditing, incident investigation, compliance management, and reporting), and management review. PRI has developed procedures consistent with these standards and regulatory requirements to implement these management controls.

9.5.1.1 Historical Management Program Activities

Commercial operations at the Highland Facility were authorized by the NRC in July 1987. Both the Smith Ranch and Highland operations are located at past surface or underground uranium mining operations and substantially use buildings and other facilities remaining from those historic operations. Both operations utilized numerous Standard Operating Procedures (SOPs) to assist with implementation of radiation safety, environmental monitoring, and management procedures.

In July 2000, Rio Algom Mining Corp. (RAMC) finalized the EHS Management System Procedures for the Smith Ranch Facility. The procedures are contained in the following 8 volumes:

Volume 1 – Management System Manual
Volume 2 – Management Procedures
Volume 3 – Operating Procedures (SOPs)
Volume 4 – Health Physics Manual
Volume 5 – Health and Safety Manual
Volume 6 – Environmental Manual
Volume 7 – Training and Awareness Manual
Volume 8 – Emergency Procedure Manual

In July 2002 PRI acquired the Smith Ranch facility and combined operations with the Highland operation into the Smith Ranch – Highland Uranium Project (SR-HUP). Soon after the workforces of both operations were combined and EHS Department personnel were consolidated at the Smith Ranch Main Office complex, activities began to modify the EHS Management System Procedures in order that it could be utilized by PRI Management and the newly combined SR-HUP workforce. The initial focus of these efforts included revising procedures detailing emergency procedures and the processing of resin from the Highland

Satellites at the Smith Ranch CPP. Currently (December 2004), revisions to the EHS Management System are approximately 80% complete.

As committed to the NRC during the license transfer process as well as during the September 9-11, 2002 NRC Inspection for the combined SR-HUP facilities, PRI is committed to revising the EHS Management System Procedures accordingly and utilizing the system to augment the operation of the combined operations. No violations were determined during the latest (August 23-25, 2004) NRC inspection.

9.5.2 Performance Based License Condition

This license application is the basis of the Performance Based License, and under that license PRI may, without prior U.S. Nuclear Regulatory Commission approval or the need to obtain a License Amendment:

1) Make changes to the facility or process, as presented in the license application (as updated).

2) Make changes in the procedures presented in the license application (as updated).

3) Conduct tests or experiments not presented in the license application (as updated).

A License Amendment and/or NRC approval will be necessary prior to implementing a proposed change, test or experiment if the change, test or experiment would:

1. Result in any appreciable increase in the frequency of occurrence of an accident previously evaluated in the license application (as updated);
2. Result in any appreciable increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety previously evaluated in the license application (as updated);
3. Result in any appreciable increase in the consequences of an accident previously evaluated in the license application (as updated);
4. Result in any appreciable increase in the consequences of a malfunction of an SSC previously evaluated in the license application (as updated);
5. Create a possibility for an accident of a different type than any previously evaluated in the license application (as updated);

6. Create a possibility for a malfunction of an SSC with a different result than previously evaluated in the license application (as updated);

7. Result in a departure from the method of evaluation described in the license application (as updated) used in establishing the final safety evaluation report (FSER) or the environmental assessment (EA) or technical evaluation reports (TERs) or other analysis and evaluations for license amendments.

8. For purposes of this paragraph as applied to this license, SSC means any SSC which has been referenced in a staff SER, TER, EA, or environmental impact statement (EIS) and supplements and amendments thereof.

Additionally, the licensee must obtain a license amendment unless the change, test, or experiment is consistent with the NRC conclusions, or the basis of, or analysis leading to, the conclusions of actions, designs, or design configurations analyzed and selected in the site or facility Safety Evaluation Report, TER, and EIS or EA. This would include all supplements and amendments, and TERs, EAs, EISs issued with amendments to this license.

Determination of compliance concerning the above listed conditions will be made by a "Safety and Environmental Review Panel (SERP)." The SERP will consist of a minimum of three individuals. One member of the SERP will have expertise in management and will be responsible for managerial and financial approval for changes; one member will have expertise in operations and/or construction and will have expertise in implementation of any changes; and one member will be the Radiation Safety Officer (RSO), or equivalent. Other members of the SERP may be utilized as appropriate, to address technical aspects of the change, experiment or test, in several areas, such as health physics, ground water hydrology, surface water hydrology, specific earth sciences, and others. Temporary members, or permanent members other than the three identified above, may be consultants.

#### 9.5.2.1 Organization of the Safety and Environmental Review Panel

The composition of the SERP shall be as follows:

Number of Participants: No less than 3 persons. It may consist of more participants.

Required Participants:
Radiation Safety Officer or equivalent (such as the CRSO)

A member of Facility Management
(e.g. Facility General Manager)

A member of Operations Management
(e.g. Plant Manager, Wellfield Manager, etc.)

Other members of the SERP may be utilized as appropriate to address technical aspects described in Section 9.5.2 shown above in several areas of expertise such as health physics, ground water hydrology, surface water hydrology, specific earth sciences, and other areas. Temporary or permanent members other than the three above may be consultants

9.5.3 Safety and Environmental Review Panel Responsibilities

This procedure will be used for the evaluation of all major changes to the facility operations as described in Section 9.5.2 of this chapter. The changes may be derived from operational and/or economic considerations, and can include changes dictated by regulatory requirements including Federal and State agencies outside of the NRC organization. The following reviews shall be carried out by the SERP. The SERP may delegate any portion of these responsibilities to a committee of two or more members of the SERP. This committee will report their findings to the full SERP for a determination of compliance with Section 9.5.2 of this chapter.

1. Operations / Technical Review
   a. Review operating criteria and critical equipment and determine the following:
      i. Does the proposed change impact the operations as described in the license application?
      ii. Does the proposed change significantly change the processes used at the facility as described in the license application?
   b. Review the Standard Operating Procedures, (SOP), for the proposed change and determine the impact on current SOP's. Make the necessary updates to the current SOP's or develop new ones.
   c. If applicable, review the Emergency Response Plan and determine compatibility with it.

2. Environmental / Health Physics / Safety Review

   a. Review the proposed change to determine if any changes in monitoring and record keeping are required to ensure compliance with existing programs.
   b. Review the proposed changes and determine the need for additional training.

c. Review key personnel training records and determine training needs as required by the proposed change.

3. Compliance Review

   a. Review the proposed change and determine whether it will conflict with Corporate or facility policies regarding training, safety, and responsibility concerns.
   b. Review the proposed change and determine compliance with the facility NRC Source Material License.
   c. Review the proposed change and determine compliance with NRC regulations and other Federal and State regulations.

Upon completion of this review, the SERP will determine if the proposed change meets the criteria listed in Section 9.5.2. If the proposed change does meet those criteria, then the SERP may implement the change and provide a record of that change as described in Section 9.5.4 of this chapter. If the proposed change does not meet those criteria, then the change will not be implemented until approval of a License Amendment is received from the U.S. Nuclear Regulatory Commission.

### 9.5.4 Record Keeping and Reporting

Records will be kept of all changes made following the Performance Based License requirements. These records shall include written safety and environmental evaluations, performed by the SERP, that provide the basis for the determination that the change is in compliance with the requirements referred to in Section 9.5.2. These records shall be maintained by the RSO and a copy provided to the facility General Manager and members of the SERP.

An Annual Report will be submitted to the U.S. NRC that provides a description of changes, tests, or experiments made pursuant to the SERP approval process including a summary of the safety and environmental evaluation of each review. Additionally, all pages that reflect a change made to the license application under the Performance Based License Condition will be submitted with this report. Each replacement page shall include both a change indicator for the area of change, (e.g., Bold marking vertically in the margin adjacent to the portion actually change), and a page change identification, (date of change or change number, or both). SERP related records are maintained in the Central File Locations at the Central Office Facility.

## 9.6 EMPLOYEE TRAINING

All newly hired permanent facility employees will attend a training program conducted by the RSO or another qualified individual on the basic principles of radiation safety, health hazards of exposure to uranium, personal hygiene practices for uranium facilities, radiation safety procedures, and responses to emergencies or accidents involving radioactive materials. A written examination will be given at the completion of the training and the instructor will review all questions with incorrect answers with the employees. Each worker must achieve a predetermined passing score before being allowed to work in a controlled or restricted area of the facility. The written examination for these employees shall be maintained on file. The radiation safety training program for newly hired permanent employees is conducted in accordance with Regulatory Guide 8.31 Section 2.5 and Regulatory Guide 8.29 including: (1) Fundamentals of Health Protection; (2) Personal Hygiene at UR Facilities; (3) Facility-Provided Protection; (4) Health Protection Measures; (5) Radiation Protection Regulations. All declared pregnant females are also given training on prenatal radiation exposure in accordance with Regulatory Guide 8.13.

All permanent facility workers will also receive an Annual Refresher Training course that includes a review of any new radiation safety regulations, site safety experience and radiation exposure trends. Radiation safety problems or subjects will also be offered for discussion at least four times per year in the Quarterly Safety Meetings. Safety Meeting subjects and attendance records will be maintained on file at the site. Specialized instruction on the radiation health and safety aspects of jobs involving higher than normal exposure risks will be provided by the RSO, RST and/or Supervisor.

Each worker who may be required to use respiratory protective equipment will receive training in the use of the specific equipment to be used. No person shall use respiratory equipment until they are specifically trained in the use of the equipment.

## 9.7 STANDARD OPERATING PROCEDURES

Written Standard Operating Procedures (SOPs) will be established for all operational activities involving radioactive materials that are handled, processed, stored, or transported by employees. The procedures will enumerate pertinent radiation safety procedures to be followed. Written procedures shall also be established for in-plant and environmental monitoring, bioassay analysis, and instrument calibration for activities involving radiation safety. A copy of the written procedure will be kept in the area where it is used. All procedures involving radiation safety will be reviewed and approved in writing by the RSO or another individual with similar qualifications prior to being implemented. The RSO and/or his designee(s) will review the operating procedures annually.

In the case that employees are required to conduct activities of a non-routine nature where there is the potential for significant exposure to radioactive materials, and no SOPs exist for the activity, a Radiation Work Permit (RWP) will be required. The RWP will describe the scope of the work, precautions necessary to maintain radiation exposures to ALARA, and any supplemental radiological monitoring and sampling to be conducted during the work. The RWP shall be reviewed and approved in writing by the RSO, RST, or a designated supervisor in the absence of the RSO or RST, prior to initiation of the work.

## 9.8 EXTERNAL RADIATION EXPOSURE MONITORING PROGRAM

External radiation exposure was monitored at the Highland Uranium Project during the period 1988 through 1993 by the use of personal radiation dosimeters, such as Thermoluminescent Dosimeter badges (TLDs) or Optically Stimulated Luminescent dosimeter badges (OSLs). All employees, except several office personnel that did not enter areas where potential exposures existed, utilized dosimeters. During the period 1988 through 1993 the monitoring data collected from the dosimeters shows that the annual dose to all workers was less than 10 percent of the 5000 mrem annual limit contained in 10 CFR 20.1201(a). Therefore, consistent with 10 CFR 20.1502, beginning on January 1, 1994, individual monitoring devices, such as TLDs, were only used to monitor occupational exposures to Central Plant Operators because they could potentially exceed 10 percent of the annual limit contained in 10 CFR 20.1201(a) due to the potential exposure to airborne uranium. Accordingly, it is not required that occupational exposures to external radiation be determined or recorded for other workers, although PRI has continued to monitor some additional workers.

To ensure that potential exposures to gamma radiation remain less than 10 percent of the annual limit (or less than 500 mrem), the two work groups with the greatest potential for exposure (Central Plant Operators and Satellite/Restoration Operators) will utilize NRC approved dosimeters. Quarterly monitoring data collected from these badges will be recorded and reviewed annually to ensure that exposures do not exceed 500 mrem.

Additionally, quarterly gamma surveys are performed at specified locations throughout the Satellite buildings and Central Processing Facilities (CPFs) to assure that areas requiring posting as "Radiation Areas" are identified, posted, and monitored to assess external radiation conditions. "Radiation Areas" are those areas exhibiting 5 to 100 mrem per hour at a distance of 30 cm from the source. Radiation Areas are posted at various locations in the yellowcake processing areas of the CPFs and Satellites, and consist of IX columns and, various tanks and filter apparatuses. Both Yellowcake Warehouses, located at each CPF, are posted as Radiation Areas. The locations of the gamma survey areas at the CPFs and Satellites are shown on Figure 3-4 and Figures 3-6 through 3-11 shown in Chapter 3.

## 9.9 BIOASSAY PROGRAM

A Bioassay (urinalysis) Program consistent with the program outlined in Revision 1 of NRC Regulatory Guide 8.22 "Bioassay at Uranium Mills" has been implemented and will be maintained at the SR-HUP. All permanent employees that will handle yellowcake submit a baseline urinalysis prior to their initial assignment at the facility. A urinalysis is also required from all permanent employees at the time of termination of employment if they were recently involved in yellowcake processing activities. Central Plant and Dryer Operators, who are the only workers to routinely work in the yellowcake precipitation, drying and packaging areas, are required to submit monthly urine specimens for uranium analysis. Specimens are collected 2 to 4 days after the employee has left the work area (i.e., after a weekend and prior to entering the work area). Consistent with Regulatory Guide 8.22, quality control of the monthly urinalyses is assured by including one blank and two spiked samples with each month's batch of specimens. The blank and spiked samples are labeled with non-employee names in order that the contract laboratory is not aware of the particular specimens content. Laboratory results for these specimens are compared with known values to ensure that laboratory results are accurate.

Workers potentially exposed to concentrations of uranium above regulatory limits are also required to submit urine specimens for uranium analysis 2 to 4 days following the potential exposures. Workers meeting this requirement are typically working under the direction of a Radiation Work Permit (RWP). This is done even if respiratory protection has been utilized to ensure that the respiratory protection equipment has been worn properly and to ensure that respirators are functioning as designed.

PRI also randomly obtains, on a monthly basis, urine specimens from other workers at the facility to confirm that workers are not subject to an unknown uptake of uranium.

The contract laboratory provides immediate notification (via telephone or fax) of all urinalyses exceeding 15 μg/L uranium. Table 9-1 lists the actions taken for individual urinalysis results.

## 9.10 AIRBORNE RADIATION MONITORING PROGRAM

### 9.10.1 Airborne Uranium Particulate Monitoring

There is no potential for exposure to ore dust at the SR-HUP/Reynolds Ranch since the facility is an ISL uranium mine. However, there is the potential for exposure of workers to yellowcake dust in certain areas of the SR-HUP. In the drying and packaging areas at Highland the potential exists for exposure to yellowcake dust that is classified as "insoluble" since the operating temperature of the Dryer is in excess of 400°C (752°F) The Highland Dryer typically operates at about 600°C (1100°F).

In the drying and packaging areas at Smith Ranch the potential exists for exposure to yellowcake dust that is classified as "soluble" since the operating temperature of the Vacuum Dryer is low (about 77°C or 170°F). In the slurry unloading area the potential for exposure to airborne uranium is considerably less than in the drying and packaging areas. The yellowcake dust is classified as soluble in the slurry unloading area. Slurry unloading is performed on a very infrequent basis.

#### 9.10.1.1 Airborne Uranium Monitoring at the Highland Central Plant

When the Highland Central Plant is operating, there is continuous monitoring of airborne uranium particulates at the drying and packaging areas. During periods of drying and packaging activity, the filters of the continuous air monitors are changed and analyzed daily. During periods that drying and packaging activities are not occurring, the filters are changed and analyzed on a weekly basis.

Exposures to workers are determined from the conservatively estimated uranium particulate concentration data, occupancy time studies, and the application of the Applied Protection Factor (APF) of 100 for the routine use of fullface air purifying respirators. Consistent with the Respiratory Protection Program, all Highland Central Plant Operators utilizing negative pressure respirators are required to pass the quantitative fit test.

When the Highland Central Plant is operating, the Precipitation Area of the plant is monitored on a quarterly basis for airborne uranium. A review of the historic data shows that maximum airborne uranium concentrations were less than 1% of the DAC for soluble uranium (5E-10 µCi/ml).

#### 9.10.1.2 Airborne Uranium Monitoring at the Smith Ranch Central Processing Plant (CPP)

Airborne uranium particulate monitoring at the Smith Ranch CPP and Pilot Building was historically performed on a monthly basis. Given the extensive data base that exists for the Pilot Building that shows the virtual lack of airborne uranium in this area, and the fact that IX equipment and tanks have been removed, it is not necessary to further monitor this area for airborne uranium.

Airborne uranium particulates at the Smith Ranch CPP are monitored to assess any unanticipated occurrence of uranium in the air and provide uranium airborne concentration data used in the exposure determinations for the CPP Operators and the Dryer Operators. The monitoring locations and frequency are as follows:

| Location | Frequency |
|---|---|
| Precipitation Area | Monthly |
| Yellowcake Storage Area | Monthly |
| Dryer Room | Monthly |

To estimate the routine exposure of Dryer Operators to uranium, a high volume sampler is set up in the yellowcake packaging area or representative samples are collected with a Breathing Zone (BZ) sampler. Dryer Operators are required to wear respiratory protection during yellowcake packaging operations because of the potential release of airborne uranium during this procedure.

9.10.1.3 Airborne Uranium Monitoring at Satellites

Due to the fact that the uranium bearing fluids at the Satellite facilities are fully contained within pipes, tanks, and IX vessels the likelihood of any significant quantities of uranium in the air is very remote. This is supported by many years of data collected at both Smith Ranch and Highland Satellites that show virtually no occurrence of airborne uranium at these facilities. Therefore, uranium particulates are not routinely monitored at these facilities.

9.10.1.4 Radon Daughter Monitoring

Radon daughters are routinely monitored on a monthly basis at the Highland CPF (when operating), the Smith Ranch CPP, and Satellite facilities. Routine exposures to radon daughters are only determined for Central Plant Operators. The method of analysis is the modified Kusnetz method or other commonly accepted method of measurement. In the case that radon monitoring determines concentrations above 0.08 WL, the monitoring frequency will be increased to weekly until the following four samples return to less than 0.08 WL. Radon daughter samples are collected on a fiberglass or membrane filters using a lapel sampler or equivalent pump pulling a minimum of 2 liters per minute for 5 minutes. The sample filter is allowed to decay between 40 and 90 minutes prior to counting with a scaler rate meter and an alpha scintillation detector. Radon sampling locations are shown on Figure 3-4 and Figures 3-6 through 3-11 shown in Chapter 3.

During the period 1988 through 1993, weekly and monthly monitoring results at numerous sites throughout the project showed that radon daughter concentrations were routinely less than 10% of the regulatory limit of 0.33 working level. Therefore, it was determined that the routine exposure of workers to radon daughters only needed to be determined for Central Plant Workers (Central Plant and Dryer Operators).

9.10.1.5 Airborne Radioactive Areas

Any area, room, or enclosure will be designated an "Airborne Radioactivity Area" as defined in 10 CFR 20.1003, if at any time the uranium concentration exceeds 5E-10 µCi/ml for soluble uranium or 2E-11 µCi/ml for insoluble uranium.

When operating, both the Yellowcake Dryer Room and Yellowcake Packaging Room at Highland are posted as Airborne Radioactivity Areas as concentrations of insoluble uranium may at times exceed 2E-11 µCi/ml. Because the predominant form of airborne uranium in these areas is comprised of high-fired (above 400°C) dried yellowcake, the insoluble uranium DAC (2E-11 µCi/ml) is used.

Additionally, areas will be posted as "Airborne Radioactivity Areas" in the case that an individual present in the area without respiratory protection could exceed, during the hours an individual is present in a week, an intake of 0.6 percent of the ALI or 12 DAC-hours. Airborne Radioactivity Areas are posted in accordance with 10 CFR 20.1902. PRI will avoid posting radiation hazard signs in areas that do not require them.

## 9.11 EXPOSURE CALCULATION

Employee exposures at the SR-HUP are monitored in accordance with USNRC Regulatory Guide 8.34, "Monitoring Criteria and Methods to Calculate Occupational Radiation Doses." A bioassay program consistent with USNRC Regulatory Guide 8.22, Rev. 1 "Bioassay at Uranium Mills" is utilized as a means of ensuring the adequacy of the monitoring and respiratory protection programs for protection from airborne uranium dust.

Employee exposure to airborne uranium is estimated for routine and non-routine activities. The exposure to dried yellowcake at Highland is considered "insoluble" (Y-Class) and the exposure to dried yellowcake at Smith Ranch is considered "soluble" (D-Class). Exposure to any uranium that has not been through any drying process is considered "soluble" (D-Class).

The exposure estimates are based on exposure times and the concentrations of airborne uranium as determined from routine air monitoring or non-routine air monitoring (i.e. breathing zone monitoring or specific area air monitoring). Routine exposures to uranium and radon daughters are only determined for the Central Plant Workers (Central Plant Operators, Dryer Operators) as, in accordance with 10 CFR 20.1502(b)(1), they are the only workers routinely exposed to airborne radionuclides in concentrations which are likely to result in annual exposures in excess of 10% of the ALI, without respiratory protection. These potential exposures result from the need to work in the yellowcake dryer and yellowcake packaging facilities. Routine exposures are estimated using exposure times generated from Annual Time Studies or actual occupancy times. Time Studies are updated after any significant change in equipment procedures, or job functions.

Non-routine exposures to uranium result from performing non-routine operational or maintenance tasks that have the potential for creating a significant exposure to airborne uranium. These types of exposures are monitored utilizing a Radiation Work Permit (RWP). The RWP specifies the types of radiological monitoring required for the task (soluble or insoluble uranium) and the protective equipment and clothing employees must wear while performing the task. The sampling results are evaluated and documented. This data, together with the employee's time in the area, is used to estimate the non-routine exposure. Each Central Plant Worker's routine and non-routine exposure to soluble and insoluble uranium is recorded at least monthly and summarized annually.

Routine employee exposure to radon daughters is determined for only the Central Plant Workers. Similar to non-routine uranium exposures, non-routine radon daughter exposures are monitored utilizing an RWP. Routine exposure times are determined by annual time studies or actual occupancy times. Time studies are also updated after any significant change in equipment, procedures, or job functions. Each Central Plant Worker's routine and non-routine exposure to radon daughters is recorded monthly and summarized annually.

### 9.11.1 Airborne Uranium Exposure Calculation

The intake of soluble or insoluble yellowcake during the weekly or annual period being evaluated is estimated using the following equation:

$$I_u = \sum_{i=1}^{n} \frac{(x_i)(t_i)}{(DAC)(PF)}$$

Where:

| | | |
|---|---|---|
| $I_u$ | = | uranium intake, DAC-hours |
| $t_i$ | = | time that the worker is exposed to concentration $x_i$, hr |
| $x_i$ | = | average concentration of uranium in the air, µCi/ml |
| DAC | = | the derived air concentration value for uranium (5E-10 µCi/ml for soluble, 2E-11 µCi/ml for insoluble) from Appendix B Table 1 of 10 CFR Part 20 |
| PF | = | respirator protection factor from Appendix A of 10 CFR Part 20 |
| n | = | number of exposures during the period of evaluation |

### 9.11.2 Radon Daughter Exposure Calculation

The modified Kusnetz or equivalent method for determining exposure to radon daughters is utilized at the SR-HUP. From the monitoring data collected, the employees' intake of radon daughters is calculated using the following equation:

$$I_r = \sum_{i=1}^{n} \frac{(w_i)(t_i)}{(DAC)(PF)}$$

Where:

| | | |
|---|---|---|
| $I_r$ | = | radon daughter intake, DAC-hours |
| $t_i$ | = | time of exposure to concentration $W_i$, hr |
| $w_i$ | = | average number of working levels in the air during time $t_i$ |
| DAC | = | the derived air concentration value for radon daughters, (3E-8 µCi/ml or 0.33 WL) from Appendix B of 10 CFR Part 20 |
| PF | = | respirator protection factor |
| n | = | number of exposure periods during the year |

Section 20.2203 of 10 CFR requires that overexposure reports be made to the appropriate NRC Regional Office if the intake of uranium and/or radon exceeds the quantities specified in 10 CFR 20.1201. The following exposure limits require NRC notification:

1. Soluble Uranium - if an employee has an intake of more than 10 mg of soluble uranium in one week. This intake is in consideration of chemical toxicity.

2. Total Effective Dose Equivalent (TEDE) - if an employee exceeds the TEDE annual limit of 5 rem. The annual TEDE is determined by summing annual doses from soluble uranium, insoluble uranium and radon.

9.11.3 Calculation of Total Effective Dose Equivalent (TEDE)

In accordance with 10 CFR 20.1201, the Total Effective Dose Equivalent (TEDE) is determined on an annual basis for each Central Plant Worker by adding the deep dose external gamma exposures for the year to the internal exposures to radon daughters and uranium. The annual limit for the TEDE is 5 rem.

The total effective dose for prenatal and fetus exposure will be determined on a monthly basis for the period of declared pregnancy in accordance with Regulatory Guide 8.36. Guidance and dose limits set forth in Regulatory Guide 8.13 will also be followed for prenatal radiation exposure. The exposure limit to the fetus is 0.5 rem for the period of declared pregnancy. PRI shall also make efforts to avoid substantial variation above a uniform monthly exposure rate to a declared pregnant woman so as to satisfy the 0.5 rem limit.

## 9.12 ADMINISTRATIVE ACTION LEVELS

An administrative action level is set at 2.5 mg of soluble uranium for any calendar week. An administrative action level is set at 125 DAC-hours for exposure to insoluble uranium and/or radon daughters for any calendar quarter. If the action level is exceeded, the RSO will initiate an investigation into the cause of the occurrence, determine any corrective actions that may reduce future exposures and document the corrective actions taken. Results of the investigation will be reported to management within one month of the action level being exceeded.

The results of the personal gamma radiation monitoring from the dosimeters are evaluated on a quarterly basis and an administrative action level is set at 312 mrem per quarter. If an employee's exposure exceeds this level, the RSO will investigate the reason for the exposure and initiate corrective measures to prevent a recurrence.

The results of the bioassay program are also used to evaluate the adequacy of the respiratory protection program at the facility. An abnormally high urinalysis will be investigated both to determine the cause of the high result and determine if the exposure records adequately reflected that such an exposure may have actually occurred.

## 9.13 CONTAMINATION CONTROL PROGRAM

### 9.13.1 General

The primary sources of potential surface contamination at the SR-HUP Project are associated with yellowcake precipitation, drying, and packaging activities. The recovery and elution portions of the process do not present a significant surface contamination problem except for dried spills or when special equipment maintenance is required. The primary method for control of surface contamination is instruction in, and enforcement of, good housekeeping and personal hygiene practices. Any visible yellowcake or production fluid spills will be cleaned up as soon as possible to prevent drying and possible suspension into the air which could pose an inhalation hazard. Plant Operators are instructed in the proper use of equipment and the prevention of spills and solution leaks at various stages of the process. Inadvertent contamination of designated Clean Areas is controlled by instructing employees not to enter such areas with clothing or equipment contaminated with radioactive materials.

### 9.13.2 Surface Contamination Control

To ensure these administrative controls are effective in controlling surface contamination, alpha contamination surveys are performed monthly in Process Areas and weekly in designated Clean Areas. Routine surveys in the Process Areas of the Central Processing Plants and Satellite facilities consist of both a visual inspection for obvious signs of contamination and instrument surveys to determine total alpha contamination. Visible yellowcake, outside the drying and packaging facilities, will require prompt cleanup to minimize the potential for the material to become airborne. If the total alpha survey indicates contamination greater than 200,000 dpm/100 $cm^2$, the area will be cleaned and resurveyed.

In designated Clean Areas, such as Lunch Rooms and offices, the target level of contamination is "nothing detectable". If the total uranium alpha survey in these areas indicates contamination in excess of 250 dpm/100 $cm^2$ (25% of the Table 9-2 Removable Contamination Limits) a smear test will be performed to assess the level of removable alpha activity. If smear test results indicate removable contamination greater than 250 dpm/100 $cm^2$, the area will be cleaned promptly and resurveyed. The RSO will investigate the cause of the contamination and implement corrective action to minimize the potential for a recurrence. Total alpha surface contamination levels exceeding the Table 9-2 limits will also require cleanup and investigation.

Before yellowcake drums leave the packaging area, they are washed to remove all visible yellowcake. Prior to shipment, the drums are surveyed for total alpha contamination. Although the limit for removable contamination on drums shipped in sole use vehicles is 2200 dpm/100 $cm^2$, a target level of 1500 dpm/100 $cm^2$ is used at the SR-HUP. If the total alpha survey results reveal contamination in excess of 1500 dpm/100 $cm^2$, a smear survey is performed. If this survey indicates contamination in excess of 1500 dpm/100 $cm^2$, the drums will be rewashed and resurveyed.

Yellowcake processing equipment that must be removed for maintenance or repair is thoroughly decontaminated prior to its removal from the area to prevent the possibility of contamination in the Maintenance Shop or other areas.

### 9.13.3 Personnel Contamination Control

Change rooms, showers and lockers for clean clothing are provided for employee use. An operable and appropriately calibrated alpha survey meter is made available for employee use at the exit of the Central Processing facilities and at the entrance to the Lunch Room at these facilities.

Employees are instructed in the use of the survey meter, techniques for minimizing contamination, for maintaining good personal hygiene, and in basic decontamination methods. Employees are also instructed on methods and procedures for good housekeeping practices within process areas to minimize the potential for contamination of personnel and equipment. The RSO or designee performs unannounced spot check surveys for alpha contamination on workers leaving the yellowcake production facilities. These unannounced spot check surveys are conducted on at least a quarterly basis.

Employees working in the precipitation, drying and packaging areas, as well as those involved in process equipment maintenance or repair are provided with appropriate protective clothing and equipment. Protective clothing is laundered on site or, if a disposable type, is disposed of in a facility licensed to accept such wastes.

All employees with potential exposure to yellowcake dust can shower and change clothes each day prior to leaving the site. An employee who showers and changes clothes is considered to be free of significant contamination. In lieu of showering, employees are required to survey their clothing, shoes, hands, face and hair with an alpha survey instrument prior to leaving the site. These surveys and/or showers are documented and maintained on site.

### 9.13.4 Surveys for Release of Potentially Contaminated Materials and Equipment

Materials and equipment which have been used or stored in an area where contamination by uranium or uranium daughters could have occurred are surveyed for contamination prior to release from the site. The survey is conducted in accordance with the limits specified in Table 9-2. If the equipment or material does not meet the limits, it will be decontaminated and resurveyed. The survey results are documented and maintained on site. Any material that cannot be completely surveyed (such as the interior surfaces of pipes) is not released and will be properly stored and/or disposed of as by-product waste.

## 9.14 PROTECTIVE EQUIPMENT & PROCEDURES

All process and maintenance workers who work in yellowcake areas or work on equipment contaminated with yellowcake will be provided and required to wear protective clothing including coveralls, boots or shoe covers. Workers who package yellowcake for transport will also be provided gloves. Before leaving the yellowcake processing area, all workers involved in the precipitation or packaging for transport of yellowcake, will, at a minimum, monitor their hands and feet using a calibrated alpha survey instrument. In addition, spot surveys will be performed for alpha contamination at least quarterly on all workers leaving the recovery plant area. The monitoring results are documented and maintained on file.

At the Central Processing Plants, eating is only allowed in designated Lunch Room areas that are separated from the process areas. Eating or smoking in the plant controlled areas is prohibited and violators are subject to disciplinary action.

## 9.15 MANAGEMENT AUDIT AND INSPECTION PROGRAMS

Routine inspections of yellowcake processing areas at the CPP and Satellite facilities are conducted daily by the RST, or trained designee, to ensure that all radiation protection, monitoring, and safety requirements are being followed and/or are properly functioning. The EHS staff performs a Weekly Safety and Environmental Inspection that covers all major facilities at the SR-HUP, including the CPP areas, Satellites, and Wellfields.

In accordance with NRC requirements, an "Annual ALARA Audit" is performed to review the radiation safety program and associated monitoring data and survey results to ensure that the program is acting consistent with the ALARA philosophy. An important part of this audit includes recommendations to further improve the radiation safety and environmental programs.

In accordance with the EHS Management System, audits of the environmental, radiation safety, and industrial safety programs are periodically conducted by PRI's parent company, or outside consultants specializing in these types of operations.

## 9.16 RECORD KEEPING AND RETENTION

PRI, as part of its EHS Management System, maintains a record keeping and retention program that is consistent with requirements of 10 CFR 20 Subpart L, 10 CFR 40.61 (d) and (e). Records of surveys, calibrations, personnel monitoring, bioassays, transfers or disposal of source or byproduct material, and transportation accidents will be maintained on site until license termination. Records containing information pertinent to decommissioning and reclamation such as:

- description of spills,
- excursions, contamination events, etc,
- information related to site and aquifer characterization and background radiation levels
- As built drawings or photographs of structures, equipment, restricted areas, wellfields, and modifications showing the locations of these structures and systems through time.
- Drawings of areas of possible inaccessible contamination, including features such as pipes or pipelines.

These records will be maintained on site until license termination. Duplicates of all significant records will be maintained in the corporate office or other offsite locations.

## 9.17 SECURITY

Measures to secure licensed material from unauthorized removal and access are in place at the SR-HUP. The operating facilities are manned 24 hours per day, 7 days per week, and in controlled and/or unrestricted areas, surveillance is maintained through the presence of the operators and workers on site. Licensed Material in the form of dry and slurry yellowcake is stored at the Smith Ranch Central Processing Plant. Access to both the Smith Ranch and Highland Central Processing Plants by the public is limited by the use of a locked, automatic gate. All visitors are required to check and sign in at the office before being allowed to enter the controlled access areas of the facility. Also, PRI has further increased security at the Smith Ranch CPP/Main Office Complex by installing continuous video surveillance of outside areas.

Operating facilities at the Reynolds Ranch Satellite area will be manned 24 hours per day, 7 days per week, and surveillance will be maintained through the presence of operators on site. All visitors will be required to check and sign in at the main office before being allowed to enter the controlled access areas at Reynolds Ranch.

## 9.18 QUALITY ASSURANCE

PRI has established the following Quality Assurance Program for all radiological, non-radiological effluent and environmental (including ground water) monitoring programs at the SR-HUP. This Quality Assurance Program addresses elements discussed in USNRC Regulatory Guide 4.15, "Quality Assurance for Radiological Monitoring Programs (Normal Operations) – Effluent Streams and the Environment."

Quality assurance comprises those planned and systematic actions which are necessary to provide adequate confidence in the results of a monitoring program. Quality control includes those quality assurance actions that provide a means to control and measure the characteristics of measurement equipment and processes to established requirements. Therefore, quality assurance includes quality control.

The overall objectives of the Quality Assurance program are:

1. *To identify deficiencies in the sampling and measurement processes to* those responsible for these operations so that corrective action can be taken.

2. To obtain a measure of confidence in the results of the monitoring programs to assure regulatory agencies and the public that the results are valid.

The first step of any reliable Quality Assurance Program is a formal delineation of the organization structure, management responsibilities, and training requirements for management personnel. These items have been covered in the previous section. Other components of the program are described below.

### 9.18.1 Radiological and Environmental Monitoring Procedures

A critical step to insuring quality assurance objectives includes written procedures for various aspects of the radiological and environmental monitoring programs. Procedures for radiological and environmental monitoring programs are contained in EMS Manual IV-Health Physics Manual (radiological monitoring program procedures), and EMS Manual VI- Environmental Manual (environmental monitoring program procedures). These manuals describe the procedures used to collect samples, complete laboratory analyses and survey, calibrate equipment, evaluate data, etc. for the radiological and environmental monitoring programs.

Procedures contained in EMS Manual IV-Health Physics Manual include the following programs:

- Airborne Radioactivity Monitoring
- External Radiation Monitoring
- Contamination Control
- Respiratory Protection
- Exposure Monitoring
- Transportation of Radioactive Materials
- Radiological Laboratory Programs

Procedures contained in EMS Manual VI-Environmental Manual include the following programs:

- Liquid Effluent Monitoring
- Air Monitoring
- Soil and Sediment Monitoring
- Vegetation Monitoring
- Wellfield Development and Monitoring
- Waste Management
- Topsoil Management
- Other Management Programs

### 9.18.2 Duplicative Sampling and Inter and Intra Laboratory Analyses

A good Quality Assurance Program provides provisions to ensure that contract and in-house laboratories are accurately analyzing and reporting radiologic and chemical analyses. PRI utilizes an EPA certified laboratory for all off site radiologic and chemical samples.

For every 20 excursion monitor well samples, a duplicate sample and a spiked sample are analyzed by PRI's in-house laboratory. The duplication begins with original sample aliquots and allows the analyst to determine the precision of the analytical result. Standard addition spikes consist of the addition of a known amount of analyte to a duplicate sample aliquot. These spiked samples are useful in estimating the accuracy of an analytical result as well as identifying potential interferences.

In accordance with the applicable SOP's, baseline water quality samples for new wellfield areas are filtered and preserved on site and transported to an EPA approved laboratory for analysis. Additionally, protocols have been established for the storage and shipment of samples, including standard Chain of Custody procedures.

### 9.18.3 Instrument Calibrations

Electronic instruments used to conduct radiologic surveys or determine the concentrations of radiologic material are calibrated by a qualified contractor on a routine basis to ensure that they are operating within specified ranges for the radionuclides being measured. In accordance with SOP's certain instruments, such as alpha and GM probes, are functionally checked with a known radiologic source on a more frequent basis (daily or weekly). Additionally, air pumps used to collect environmental or breathing air samples are routinely calibrated. PRI only utilizes EPA approved laboratories which adhere to strict protocols to ensure that their electronic instruments are properly calibrated to ensure valid results. A list of the survey and monitoring equipment by type, specification of the range, sensitivity, calibration methods and frequency, availability, and planned use is shown in Table 9-3.

### 9.18.4 Records

Records of radiologic surveys, instrument calibrations, radiological and chemical analyses, and employee exposures are retained on site under the direction of the RSO. To maintain the integrity of the program, the RSO and others, through the audit program, periodically review records to ensure that they are complete and accurate, and calculations have been done properly. These types of records are maintained on site until license termination. Critical records are periodically duplicated and stored in a second location in the case of fire or a similar type disaster. Computer programs used to determine employee exposures or other components of the program are verified with hand calculations to ensure that they are accurate.

### 9.18.5 Audits

PRI management periodically conduct audits of the radiation safety and environmental monitoring programs to verify compliance with applicable rules, regulations, license requirements and to ensure that exposures of employees, the public, and the environment are ALARA. Audit teams are comprised of knowledgeable individuals from within the project or from other PRI operations, the parent company, or outside contractors specializing in such audits. The Annual ALARA Audit is conducted on an annual basis to assist with achieving the above objectives.

**Table 9-1**
**Actions Taken for Individual Urinalysis Results**

| Uranium Content of Specimen | Required Action(s) |
|---|---|
| a) Less than 15 µg/L or 9 nCi in vivo | None |
| b) 15 to 35 µg/L or 9 to 16 nCi in vivo | 1) Confirm results (repeat analysis)<br>2) Attempt to identify cause of elevated result<br>3) Take corrective measures and/or limit employee's exposure<br>4) Document corrective actions<br>5) Submit documentation to NRC, as part of required 10 CFR 40.65 report |
| c) Greater than 35 µg/L | 1) Take actions specified for (b) above<br>2) Restrict employee from yellowcake area work until results of subsequent specimens are less than 15 µg/L |
| d) Greater than 35 µg/L for 2 consecutive specimens, or greater than 130 µg/L for any single specimen | 1) Take actions specified for (c) above<br>2) Analyze urine specimens for albuminuria<br>3) Notify NRC in writing within 30 days of exceeding the Action level |

# TABLE 9-3

# RADIATION SURVEY AND MONITORING EQUIPMENT

| Criteria | Alpha Detector | Gamma Detector | Gilair Air pump | Alpha Counter |
|---|---|---|---|---|
| **Equipment Type** | Model 3 43-5 Or Equivalent | Model 3 44-6 Or Equivalent | Basic(3) Or Equivalent | Model 2000 43-9 Or Equivalent |
| **Calibration Frequency** | ANNUAL | ANNUAL | PRIOR TO EACH USE | ANNUAL |
| **Calibration Performed By** | EPA Approved Lab | EPA Approved Lab | Bios DC_HC 1 Dry Cell Calibrator (In house) | EPA Approved Lab |
| **Range** | 0-50,000 CPM | 0-200 MR/HR | 5-500 cc/min | 0-999999 CPM |
| **Sensitivity** | Efficiency As per calibration | Typically 1200 cpm/mR/hr | N/A | Efficiency As per calibration |
| **Availability** | Available at all times | Available at all times | Available monthly Or as needed | Available monthly Or as needed |
| **Planned Use** | Personal Alpha surveys and truck surveys | Truck surveys | Monthly Radon tests or as needed | Analysis for modified Kusnetz method |

# THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

## THAT CAN BE VIEWED AT THE RECORD TITLED: PLATE 1 "SMITH RANCH - HIGHLAND URANIUM PROJECT FACILITIES & MONITOR SITES LOCATION MAP"

## WITHIN THIS PACKAGE

# D-01

**APPENDIX D-5**

GEOLOGY

REYNOLDS RANCH AMENDMENT AREA
CONVERSE COUNTY WYOMING

## 1.0 REGIONAL GEOLOGY

The Reynolds Ranch Amendment area is located in northern Converse County, Wyoming near the southern extent of the Powder River Basin. It is located adjacent to the northern part of the SR-HUP. The Powder River Basin is a late Cretaceous to early Tertiary structural and topographic basin with a regional dip in a northwesterly direction at a rate of approximately one foot per 100 feet.

The Eocene Wasatch Formation outcrops in the area. The Paleocene Fort Union Formation comprises the strata to a depth of at least 1000 meters. The Lance Formation of the Cretaceous age underlies the Fort Union Formation. Most of the economic uranium mineralization occurs within the upper 500 feet of the Fort Union Formation.

Additional information on regional geology can be found in Appendix D-5 of the approved Mine Permit and License Application for the Smith Ranch Uranium Project.

## 2.0 SITE GEOLOGY

The bedrock unit across the Reynolds Ranch Amendment Area is the Eocene Wasatch Formation. It varies in thickness from less than 200 feet to over 400 feet and overlies the Paleocene Fort Union Formation in which the bulk of the economic uranium mineralization occurs. The contact between these two formations is unconformable where seen at the surface (Kent, 1986, Connor 1976, Sharp and Gibbons, 1964) but is not readily identifiable in the subsurface by any characteristic marker. The practical marker horizon separating the two, utilized by many authors, is the School Coal Zone previously mined to the southwest of this area at the Glenrock Coal Mine.

The Wasatch and Fort Union Formations are lithologically indistinguishable from each other in the Project Area. They are both comprised of lenticular fluvial sandstones, siltstones, claystones, and thin lignites. The arkosic sands range from fine to very coarse grained, are sub-angular, exhibit fair to poor sorting, and are poorly to moderately consolidated. Measured permeability of the claystones has been found to be less than 0.1 millidarcies whereas the permeability of the sands average between 500 and 2000 millidarcies.

Figure D5-3 shows a schematic stratigraphic cross section from the Project Area to the nearby Smith Ranch and Highland Project Areas. This section illustrates the correlation of the various sand zones and the nomenclatures utilized for them at each project area. Each of the sands that have been, or will be, mined at each of the mine areas are designated. Currently, the uppermost sand mined at the Highland project – the 50 sand ($O_3$ at Smith Ranch and Reynolds Ranch) – is the deepest anticipated target zone at the Reynolds Ranch Project.

The basal shale which provides the lower confining unit in the Project Area is composed of primarily claystone with minor siltstones. It has a thickness of 10 to 40 feet and averages 30 feet across the Project Area. It is equivalent to the "D" shale in the 1989 SMC pump tests of their proposed production zones. This shale thins to the south and east where it has been eroded by increased "O" sand deposition.

The lowermost sand with economic uranium mineralization in the Reynolds Ranch Amendment Area is an upper portion of the "O" sand, referred to as the "$O_3$" sand. This sand is equivalent to the "E" sand unit of SMC in their 1989 pump tests. This sand varies from 0 to 50 feet in thickness and occurs at depths of up to 800 feet below the ground surface.

The "P" Shale is the overlying confining layer for the "$O_3$" sand. It is composed of highly bentonitic claystones and siltstones with some discontinuous sandstone lenses and minor lignitic stringers. This shale averages 50 feet thick but may be as much as 150 feet thick.

Overlying the "O" sand is the "Q" sand which contains little in the way of economic mineralization. Some mineralization is encountered where the overlying "S" sand scours into the "Q" and provides oxidized, mineralized groundwater flow. The primary mineralized alteration front within this sand occurs to the south on the Smith Ranch Project. The "Q" is rather discontinuous across much of the Area, composed mainly of isolated sand channels.

The "R" shale is the upper confining layer for the "Q" sand and the lower confining layer for the overlying "S" sand. It is similar in composition to the "P" shale and, where the "Q" sand is absent, the two combine with a thickness of up to 150 feet.

The primary mineralized sands within the Reynolds Ranch Amendment Area are the "S" and "U" sands (moving upward stratigraphically). These sands individually range in thickness from 0 to 70 feet thick but, in many places, are in communication as they form one sand unit where significant channel sand deposition has occurred and a continuous sand section of up to 150 feet may occur. In much of the Project Area these two sands are referred to jointly as the "U/S" sand.

The upper confining layer for the "U/S" sand is the V shale which is composed of siltstones and claystones which are highly bentonitic. It ranges in thickness from 20 to 70 feet throughout the Project Area.

The "W" sand is stratigraphically the highest continual sand unit of the Fort Union Formation within the Project Area. It varies in thickness from 0 to 85 feet thick and pinches out in the northwestern portion of the Project Area. Minor economic mineralization has been encountered in this zone to date.

The confining layer above the "W" sand is the "Z" shale which is very similar to the "V" shale in composition and has an average thickness of 20 feet. At the top of the "Z" shale lies the School Coal, the top of Fort Union Formation. The coal varies from 0 to 20 feet in thickness and pinches out to the north and east.

The highest mineralized sands of interest in the Project Area occur in the lowermost section of the Wasatch Formation. These sands are designated the "E" and "G" sands (stratigraphically moving upward). These sands are relatively shallow within the Project Area, with the base of the "E" at an average depth of 350 feet below the ground surface. Much of the uranium mineralization encountered occurs near, or above, the water table and is thus not mineable by current ISL technology. Deposits within these sands have been previously open pit mined north of the Project Area by several operators.

## 3.0 ABANDONED DRILL HOLES

A search of the drill hole database maintained by PRI resulted in a total 6,483 abandoned drill holes located within the Reynolds Ranch Amendment Area boundaries. Holes drilled from 1997 through 1999 were done by Rio Algom Mining Co. under Drilling Notification No. 236 (DN-236) and have been plugged in accordance with current State of Wyoming regulations, as reported in the Annual Drill Hole Reports for DN-236. Reasonable inspection of the Reynolds Ranch Amendment Area shows that these abandoned holes were marked with a stake after plugging was completed.

To the best of PRI's knowledge all holes drilled prior to 1997 were sealed and surface plugged in compliance with the State of Wyoming regulations in effect at the time of drilling. Reasonable inspection of the area did not reveal any surface indications of old holes drilled prior to 1997. No problems are anticipated with past abandoned drill holes since no problems were encountered at SR-HUP under similar conditions. PRI will consider the presence of pre-1997 boreholes when designing and implementing pump testing, and when evaluating pump test results.

PRI conducted drilling activities in 2005 and associated drill hole information is shown in Table D5-1. All of these holes were plugged in accordance with State of Wyoming regulations.

All known abandoned drill holes are listed in Table D5-1 and the location and density is shown on Plate D5-2.

# THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

**THAT CAN BE VIEWED AT THE RECORD TITLED:**
**FIGURE D5-1**
**"REYNOLDS RANCH PROJECT**
**WEST - EAST**
**GEOLOGIC CROSS SECTION**
**LOOKING EAST"**

**WITHIN THIS PACKAGE**

**D-02**

# THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

## THAT CAN BE VIEWED AT THE RECORD TITLED:
## FIGURE D5-2
## "REYNOLDS RANCH PROJECT NORTH - SOUTH GEOLOGIC CROSS SECTION LOOKING SOUTH"

## WITHIN THIS PACKAGE

# D-03

# ABANDONED DRILL HOLES
## REYNOLDS RANCH AMENDMENT AREA

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 11 | 11-66 | 355796 | 887403 | 5606.8 | 1101 | 11/5/1968 |
| 36 | 74 | 11 | 11-52 | 355797 | 889001 | 5605.1 | 1105 | 11/1/1968 |
| 36 | 74 | 11 | 11-38 | 355798 | 890603 | 5634 | 1108 | 10/30/1968 |
| 36 | 74 | 11 | 11-7 | 355798 | 887042 | 5597.2 | 520 | 9/26/1967 |
| 36 | 74 | 11 | 11-4 | 355823 | 890032 | 5597.5 | 601 | 9/28/1967 |
| 36 | 74 | 11 | 11-25 | 356390 | 887600 | 1 | 700 | 12/14/1967 |
| 36 | 74 | 11 | 11-22 | 356398 | 888411 | 5618.7 | 698 | 12/12/1967 |
| 36 | 74 | 11 | 11-19 | 356403 | 889200 | 5592.3 | 688 | 12/12/1967 |
| 36 | 74 | 11 | 11-14 | 356415 | 889975 | 5581.7 | 705 | 12/11/1967 |
| 36 | 74 | 11 | 11-8 | 357003 | 887028 | 5634.6 | 620 | 9/27/1967 |
| 36 | 74 | 11 | 11-5 | 357009 | 890027 | 5564 | 624 | 9/27/1967 |
| 36 | 74 | 11 | 11-23 | 357190 | 888405 | 1 | 700 | 12/13/1967 |
| 36 | 74 | 11 | 11-18 | 357195 | 889655 | 1 | 657 | 12/12/1967 |
| 36 | 74 | 11 | 11-20 | 357195 | 889200 | 1 | 698 | 12/14/1967 |
| 36 | 74 | 11 | 11-28 | 357195 | 887201 | 5616.2 | 703 | 12/12/1967 |
| 36 | 74 | 11 | 11-9 | 357211 | 891617 | 5646.9 | 700 | 12/7/1967 |
| 36 | 74 | 11 | 11-26 | 357217 | 887591 | 5582.6 | 694 | 12/13/1967 |
| 36 | 74 | 11 | 11-11 | 357243 | 890834 | 5601.5 | 670 | 12/11/1967 |
| 36 | 74 | 11 | 11-13 | 357260 | 890400 | 1 | 700 | 12/8/1967 |
| 36 | 74 | 11 | 11-68 | 357396 | 887406 | 5599.8 | 1100 | 11/6/1968 |
| 36 | 74 | 11 | 11-54 | 357397 | 889000 | 5570 | 1108 | 10/31/1968 |
| 36 | 74 | 11 | 11-40 | 357398 | 890602 | 5600.9 | 1107 | 10/29/1968 |
| 36 | 74 | 11 | 11-15 | 357523 | 890169 | 5575.1 | 724 | 12/13/1967 |
| 36 | 74 | 11 | 11-101 | 357899 | 886840 | 5642.7 | 1003 | 1/27/1999 |
| 36 | 74 | 11 | 11-24 | 357992 | 888404 | 5584.9 | 899 | 12/15/1967 |
| 36 | 74 | 11 | 11-10 | 357997 | 891601 | 5638 | 602 | 12/11/1967 |
| 36 | 74 | 11 | 11-12 | 358000 | 890805 | 1 | 700 | 12/8/1967 |
| 36 | 74 | 11 | 11-1 | 358111 | 891555 | 5637.1 | 696 | 7/5/1967 |
| 36 | 74 | 11 | 11-85 | 358181 | 886921 | 5719.4 | 1020 | 5/22/1992 |
| 36 | 74 | 11 | 11-2 | 358205 | 888565 | 1 | 641 | 7/5/1967 |
| 36 | 74 | 11 | 11-90 | 358269 | 892119 | 5630.9 | 1002 | 8/25/1998 |
| 36 | 74 | 11 | 11-81 | 358276 | 887041 | 5635 | 1041 | 7/25/1990 |
| 36 | 74 | 11 | 11-72 | 358409 | 887042 | 5641.8 | 1040 | 5/26/1989 |
| 36 | 74 | 11 | 11-76 | 358410 | 886882 | 5649.4 | 1000 | 9/28/1989 |
| 36 | 74 | 11 | 11-82 | 358508 | 887195 | 5632.7 | 1042 | 7/11/1991 |
| 36 | 74 | 11 | 11-97 | 358843 | 891860 | 5625.4 | 851 | 9/28/1998 |
| 36 | 74 | 11 | 11-84 | 358869 | 892121 | 5634.7 | 880 | 5/27/1992 |
| 36 | 74 | 11 | 11-93 | 358871 | 892069 | 5627 | 882 | 8/21/1998 |
| 36 | 74 | 11 | 11-91 | 358877 | 892020 | 5628.1 | 884 | 8/19/1998 |
| 36 | 74 | 11 | 11-83 | 358890 | 891905 | 5622.2 | 884 | 7/12/1991 |
| 36 | 74 | 11 | 11-78 | 358893 | 891812 | 5616.4 | 862 | 10/5/1989 |
| 36 | 74 | 11 | 11-95 | 358893 | 891864 | 5623.8 | 884 | 9/3/1998 |
| 36 | 74 | 11 | 11-77 | 358895 | 891759 | 5608.2 | 860 | 10/2/1989 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 11 | 11-70 | 359000 | 887410 | 1 | 1095 | 9/18/1968 |
| 36 | 74 | 11 | 11-42 | 359000 | 890605 | 1 | 1107 | 10/29/1968 |
| 36 | 74 | 11 | 11-56 | 359000 | 888998 | 5624.9 | 1109 | 10/25/1938 |
| 36 | 74 | 11 | 11-79 | 359001 | 891915 | 5625.3 | 882 | 7/26/1990 |
| 36 | 74 | 11 | 11-99 | 359051 | 891876 | 5614.6 | 860 | 10/7/1998 |
| 36 | 74 | 11 | 11-98 | 359053 | 891823 | 5607.1 | 863 | 10/1/1998 |
| 36 | 74 | 11 | 11-94 | 359053 | 891723 | 5596.7 | 881 | 9/4/1998 |
| 36 | 74 | 11 | 11-92 | 359055 | 891774 | 5601.2 | 884 | 8/20/1998 |
| 36 | 74 | 11 | 11-96 | 359103 | 891726 | 5593.9 | 862 | 9/25/1998 |
| 36 | 74 | 11 | 11-100 | 359107 | 891828 | 5603.5 | 863 | 10/12/1998 |
| 36 | 74 | 11 | 11-73 | 359113 | 891563 | 5577 | 841 | 8/25/1989 |
| 36 | 74 | 11 | 11-80 | 359156 | 891915 | 5613.3 | 860 | 7/30/1990 |
| 36 | 74 | 11 | 11-75 | 359163 | 891679 | 5584 | 820 | 9/27/1989 |
| 36 | 74 | 11 | 11-71 | 359250 | 889925 | 1 | 976 | 4/9/1969 |
| 36 | 74 | 11 | 11-74 | 359321 | 891731 | 5580.6 | 820 | 9/25/1989 |
| 36 | 74 | 13 | 13-136 | 359977 | 886610 | 5585.5 | 1040 | 5/21/1992 |
| 36 | 74 | 13 | 13-10 | 362197 | 886606 | 5553.4 | 1100 | 8/5/1968 |
| 36 | 74 | 13 | 13-12 | 363800 | 886600 | 5528.8 | 1100 | 8/6/1967 |
| 36 | 74 | 13 | 13-9 | 361400 | 886600 | 1 | 565 | 9/26/1967 |
| 36 | 74 | 13 | 13-127 | 359924 | 886504 | 5578.3 | 1023 | 6/19/1991 |
| 36 | 74 | 13 | 13-140 | 359819 | 886461 | 5588.8 | 1001 | 12/10/1993 |
| 36 | 74 | 13 | 13-115 | 359769 | 886411 | 5590 | 1020 | 9/13/1989 |
| 36 | 74 | 13 | 13-91 | 359914 | 886312 | 5597.7 | 642 | 12/13/1977 |
| 36 | 74 | 13 | 13-95 | 359820 | 886300 | 5598.5 | 652 | 3/20/1980 |
| 36 | 74 | 13 | 13-122 | 359668 | 886291 | 5595.8 | 1020 | 8/14/1990 |
| 36 | 74 | 13 | 13-86 | 359721 | 886216 | 5605.4 | 604 | 12/1/1977 |
| 36 | 74 | 13 | 13-152 | 359771 | 886214 | 5604.9 | 1001 | 12/15/1998 |
| 36 | 74 | 13 | 13-141 | 359670 | 886207 | 5604.9 | 1002 | 12/10/1998 |
| 36 | 74 | 13 | 13-161 | 359723 | 886162 | 5608.9 | 1007 | 12/17/1998 |
| 36 | 74 | 13 | 13-92 | 359898 | 886119 | 5613.3 | 642 | 12/12/1977 |
| 36 | 74 | 13 | 13-137 | 362383 | 886112 | 5527.3 | 1010 | 5/20/1992 |
| 36 | 74 | 13 | 13-87 | 359720 | 886029 | 5618.9 | 604 | 12/1/1977 |
| 36 | 74 | 13 | 13-93 | 359929 | 885961 | 5261.7 | 650 | 3/19/1980 |
| 36 | 74 | 13 | 13-94 | 359737 | 885904 | 5625.7 | 651 | 3/19/1980 |
| 36 | 74 | 13 | 13-153 | 359745 | 885802 | 5631.9 | 1001 | 12/15/1998 |
| 36 | 74 | 13 | 13-130 | 362014 | 885787 | 5539.9 | 603 | 6/18/1991 |
| 36 | 74 | 13 | 13-197 | 360019 | 885724 | 5628 | 1003 | 1/29/1999 |
| 36 | 74 | 13 | 13-162 | 362165 | 885674 | 5538.6 | 999 | 2/1/1999 |
| 36 | 74 | 13 | 13-247 | 359813 | 885639 | 5644.9 | 963 | 3/1/1999 |
| 36 | 74 | 13 | 13-223 | 359885 | 885635 | 5637.5 | 977 | 2/18/1999 |
| 36 | 74 | 13 | 13-166 | 359935 | 885624 | 5636 | 1001 | 1/5/1999 |
| 36 | 74 | 13 | 13-250 | 359813 | 885607 | 5642.1 | 982 | 3/3/1999 |
| 36 | 74 | 13 | 13-219 | 359430 | 885606 | 5635.1 | 983 | 2/26/1999 |
| 36 | 74 | 13 | 13-230 | 359912 | 885588 | 5639.2 | 962 | 2/24/1999 |
| 36 | 74 | 13 | 13-213 | 359865 | 885584 | 5640.6 | 1002 | 2/11/1999 |
| 36 | 74 | 13 | 13-256 | 359767 | 885581 | 5644.9 | 982 | 3/12/1999 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 13 | 13-138 | 362169 | 885580 | 5540.9 | 320 | 5/20/1992 |
| 36 | 74 | 13 | 13-132 | 362064 | 885579 | 5540.9 | 324 | 6/18/1991 |
| 36 | 74 | 13 | 13-119 | 362119 | 885579 | 5540.7 | 363 | 7/24/1990 |
| 36 | 74 | 13 | 13-251 | 359962 | 885567 | 5637.8 | 983 | 3/4/1999 |
| 36 | 74 | 13 | 13-2 | 361492 | 885550 | 5560 | 644 | 9/25/1967 |
| 36 | 74 | 13 | 13-4 | 363895 | 885537 | 5526 | 645 | 9/26/1967 |
| 36 | 74 | 13 | 13-227 | 360093 | 885531 | 5630.7 | 962 | 2/19/1999 |
| 36 | 74 | 13 | 13-102 | 359942 | 885531 | 5638.9 | 1040 | 1/27/1982 |
| 36 | 74 | 13 | 13-142 | 359992 | 885528 | 5635.5 | 1001 | 12/11/1998 |
| 36 | 74 | 13 | 13-126 | 360045 | 885528 | 5628.9 | 1024 | 6/19/1991 |
| 36 | 74 | 13 | 13-204 | 359846 | 885528 | 5642.7 | 1003 | 2/4/1999 |
| 36 | 74 | 13 | 13-1 | 360285 | 885515 | 5629.1 | 623 | 9/25/1967 |
| 36 | 74 | 13 | 13-103 | 359540 | 885515 | 5644.2 | 1042 | 1/27/1982 |
| 36 | 74 | 13 | 13-143 | 359440 | 885503 | 5642.2 | 1042 | 12/11/1998 |
| 36 | 74 | 13 | 13-3 | 362692 | 885498 | 5545.9 | 555 | 9/28/1937 |
| 36 | 74 | 13 | 13-225 | 359947 | 885481 | 5637.9 | 961 | 2/19/1999 |
| 36 | 74 | 13 | 13-217 | 359756 | 885478 | 5647.1 | 1002 | 2/16/1999 |
| 36 | 74 | 13 | 13-200 | 359852 | 885478 | 5642.9 | 1003 | 1/28/1999 |
| 36 | 74 | 13 | 13-205 | 359802 | 885478 | 5644.6 | 1003 | 2/3/1999 |
| 36 | 74 | 13 | 13-160 | 359899 | 885478 | 5640.7 | 1001 | 12/17/1998 |
| 36 | 74 | 13 | 13-224 | 359857 | 885429 | 5641.6 | 963 | 2/23/1999 |
| 36 | 74 | 13 | 13-252 | 359811 | 885426 | 5643.1 | 963 | 3/5/1999 |
| 36 | 74 | 13 | 13-220 | 359447 | 885402 | 5650.6 | 1000 | 2/12/1999 |
| 36 | 74 | 13 | 13-214 | 360011 | 885380 | 5625.1 | 1003 | 2/10/1999 |
| 36 | 74 | 13 | 13-206 | 359842 | 885366 | 5635.8 | 1002 | 2/8/1999 |
| 36 | 74 | 13 | 13-207 | 360063 | 885337 | 5620 | 968 | 2/5/1999 |
| 36 | 74 | 13 | 13-96 | 362238 | 885332 | 5546.7 | 651 | 3/19/1980 |
| 36 | 74 | 13 | 13-199 | 360014 | 885331 | 5621.7 | 967 | 1/21/1999 |
| 36 | 74 | 13 | 13-144 | 359963 | 885326 | 5624.7 | 970 | 12/14/1998 |
| 36 | 74 | 13 | 13-135 | 359912 | 885325 | 5643.4 | 1020 | 5/20/1992 |
| 36 | 74 | 13 | 13-159 | 359868 | 885314 | 5628.3 | 999 | 12/18/1998 |
| 36 | 74 | 13 | 13-164 | 362079 | 885272 | 5542.9 | 580 | 1/25/1999 |
| 36 | 74 | 13 | 13-117 | 362127 | 885271 | 5543.8 | 363 | 7/24/1990 |
| 36 | 74 | 13 | 13-146 | 359774 | 885267 | 5627.2 | 990 | 12/14/1998 |
| 36 | 74 | 13 | 13-218 | 360069 | 885235 | 5613 | 982 | 2/18/1999 |
| 36 | 74 | 13 | 13-215 | 360021 | 885230 | 5613.6 | 968 | 2/9/1999 |
| 36 | 74 | 13 | 13-109 | 359740 | 885218 | 5624.8 | 1043 | 5/22/1989 |
| 36 | 74 | 13 | 13-114 | 359811 | 885218 | 5622 | 1020 | 9/12/1989 |
| 36 | 74 | 13 | 13-145 | 359871 | 885218 | 5619.8 | 1007 | 12/14/1998 |
| 36 | 74 | 13 | 13-123 | 359920 | 885216 | 5619.1 | 1017 | 8/14/1990 |
| 36 | 74 | 13 | 13-156 | 359694 | 885214 | 5626.4 | 987 | 12/16/1998 |
| 36 | 74 | 13 | 13-82 | 362241 | 885214 | 5550.5 | 400 | 11/12/1977 |
| 36 | 74 | 13 | 13-210 | 362293 | 885211 | 5553.8 | 842 | 2/8/1999 |
| 36 | 74 | 13 | 13-155 | 359782 | 885172 | 5620 | 985 | 12/17/1998 |
| 36 | 74 | 13 | 13-198 | 359734 | 885170 | 5621.8 | 1002 | 1/20/1999 |
| 36 | 74 | 13 | 13-125 | 359827 | 885121 | 5640.8 | 1023 | 6/18/1991 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 13 | 13-99 | 362298 | 885120 | 5557.4 | 360 | 3/12/1981 |
| 36 | 74 | 13 | 13-209 | 362351 | 885117 | 5560.1 | 842 | 2/5/1999 |
| 36 | 74 | 13 | 13-163 | 362138 | 885110 | 5548.3 | 580 | 1/22/1999 |
| 36 | 74 | 13 | 13-129 | 362188 | 885107 | 5552.3 | 345 | 6/18/1991 |
| 36 | 74 | 13 | 13-216 | 362315 | 885049 | 5562.3 | 841 | 2/9/1999 |
| 36 | 74 | 13 | 13-253 | 360089 | 885046 | 5601.3 | 924 | 3/17/1999 |
| 36 | 74 | 13 | 13-229 | 360129 | 885046 | 5600.4 | 960 | 3/3/1999 |
| 36 | 74 | 13 | 13-83 | 362250 | 885017 | 5559.9 | 397 | 11/11/1977 |
| 36 | 74 | 13 | 13-22 | 362196 | 885015 | 5556.9 | 1101 | 8/6/1968 |
| 36 | 74 | 13 | 13-165 | 359594 | 885014 | 5618.9 | 1001 | 1/6/1999 |
| 36 | 74 | 13 | 13-105 | 362110 | 885014 | 5551.2 | 354 | 11/3/1982 |
| 36 | 74 | 13 | 13-221 | 359545 | 885011 | 5621.5 | 1002 | 2/16/1999 |
| 36 | 74 | 13 | 13-24 | 363795 | 885010 | 5521.7 | 1089 | 8/7/1968 |
| 36 | 74 | 13 | 13-228 | 359498 | 885010 | 5623.1 | 962 | 2/25/1999 |
| 36 | 74 | 13 | 13-20 | 360592 | 885006 | 5588.6 | 1098 | 8/5/1968 |
| 36 | 74 | 13 | 13-211 | 362317 | 885001 | 5564.6 | 840 | 2/4/1999 |
| 36 | 74 | 13 | 13-48 | 361848 | 884982 | 5551.6 | 1105 | 6/9/1971 |
| 36 | 74 | 13 | 13-222 | 359600 | 884919 | 5614.4 | 999 | 2/17/1999 |
| 36 | 74 | 13 | 13-157 | 359551 | 884916 | 5615.9 | 1001 | 12/16/1998 |
| 36 | 74 | 13 | 13-169 | 362190 | 884853 | 5563.5 | 579 | 1/18/1999 |
| 36 | 74 | 13 | 13-262 | 360091 | 884848 | 5593.5 | 866 | 3/26/1999 |
| 36 | 74 | 13 | 13-154 | 359505 | 884813 | 5612.5 | 1002 | 12/14/1998 |
| 36 | 74 | 13 | 13-202 | 362288 | 884809 | 5573.7 | 580 | 1/22/1999 |
| 36 | 74 | 13 | 13-84 | 362197 | 884809 | 5567.7 | 400 | 11/12/1977 |
| 36 | 74 | 13 | 13-168 | 362142 | 884806 | 5562.2 | 580 | 1/18/1999 |
| 36 | 74 | 13 | 13-170 | 362243 | 884806 | 5570.6 | 580 | 1/19/1999 |
| 36 | 74 | 13 | 13-118 | 362092 | 884803 | 5560 | 363 | 7/24/1990 |
| 36 | 74 | 13 | 13-249 | 360162 | 884800 | 5589.6 | 963 | 3/5/1999 |
| 36 | 74 | 13 | 13-255 | 360118 | 884799 | 5590.8 | 960 | 3/15/1999 |
| 36 | 74 | 13 | 13-167 | 362049 | 884799 | 5555.3 | 577 | 1/21/1999 |
| 36 | 74 | 13 | 13-257 | 360069 | 884795 | 5592.7 | 962 | 3/16/1999 |
| 36 | 74 | 13 | 13-171 | 362202 | 884754 | 5570.1 | 580 | 1/19/1999 |
| 36 | 74 | 13 | 13-134 | 359509 | 884728 | 5620.8 | 1010 | 5/18/1992 |
| 36 | 74 | 13 | 13-148 | 359659 | 884724 | 5603.4 | 1000 | 12/14/1998 |
| 36 | 74 | 13 | 13-147 | 359559 | 884716 | 5606.5 | 1001 | 12/14/1998 |
| 36 | 74 | 13 | 13-97 | 362226 | 884715 | 5575 | 651 | 3/19/1980 |
| 36 | 74 | 13 | 13-49 | 360577 | 884666 | 5574.7 | 1002 | 6/8/1971 |
| 36 | 74 | 13 | 13-124 | 359710 | 884665 | 5589.6 | 1000 | 6/14/1991 |
| 36 | 74 | 13 | 13-121 | 359613 | 884665 | 5604 | 980 | 7/30/1990 |
| 36 | 74 | 13 | 13-172 | 362079 | 884620 | 5568.2 | 580 | 1/21/1999 |
| 36 | 74 | 13 | 13-104 | 362310 | 884611 | 5576.3 | 353 | 11/3/1982 |
| 36 | 74 | 13 | 13-208 | 362237 | 884586 | 5578.2 | 838 | 2/3/1999 |
| 36 | 74 | 13 | 13-100 | 362134 | 884582 | 5575 | 380 | 3/12/1981 |
| 36 | 74 | 13 | 13-139 | 362183 | 884566 | 5580 | 340 | 5/19/1992 |
| 36 | 74 | 13 | 13-131 | 362081 | 884563 | 5574.6 | 625 | 6/17/1991 |
| 36 | 74 | 13 | 13-259 | 360088 | 884557 | 5584.8 | 882 | 3/23/1999 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 13 | 13-258 | 360041 | 884555 | 5586.1 | 942 | 3/18/1999 |
| 36 | 74 | 13 | 13-174 | 362187 | 884534 | 5579.1 | 1000 | 1/28/1999 |
| 36 | 74 | 13 | 13-212 | 362136 | 884528 | 5577.6 | 840 | 2/10/1999 |
| 36 | 74 | 13 | 13-173 | 362085 | 884523 | 5574.9 | 580 | 1/20/1999 |
| 36 | 74 | 13 | 13-201 | 359502 | 884473 | 5599.6 | 1003 | 2/2/1999 |
| 36 | 74 | 13 | 13-226 | 359550 | 884473 | 5598.7 | 1000 | 2/18/1999 |
| 36 | 74 | 13 | 13-98 | 362047 | 884444 | 5573.6 | 652 | 3/20/1980 |
| 36 | 74 | 13 | 13-203 | 362126 | 884424 | 5579 | 579 | 1/27/1999 |
| 36 | 74 | 13 | 13-150 | 359571 | 884405 | 5595.4 | 1006 | 12/15/1998 |
| 36 | 74 | 13 | 13-116 | 359519 | 884400 | 5598.4 | 984 | 7/24/1990 |
| 36 | 74 | 13 | 13-149 | 359471 | 884398 | 5598.4 | 1007 | 12/15/1998 |
| 36 | 74 | 13 | 13-101 | 362129 | 884378 | 5580.7 | 400 | 3/13/1981 |
| 36 | 74 | 13 | 13-175 | 362246 | 884312 | 5582.8 | 580 | 1/25/1999 |
| 36 | 74 | 13 | 13-85 | 362198 | 884311 | 5584.2 | 1101 | 11/12/1977 |
| 36 | 74 | 13 | 13-176 | 362206 | 884229 | 5548.6 | 580 | 1/26/1999 |
| 36 | 74 | 13 | 13-260 | 359928 | 884199 | 5585.6 | 860 | 3/25/1999 |
| 36 | 74 | 13 | 13-151 | 359391 | 884194 | 5595.3 | 1006 | 12/17/1998 |
| 36 | 74 | 13 | 13-254 | 359907 | 884150 | 5582.9 | 902 | 3/19/1999 |
| 36 | 74 | 13 | 13-158 | 359466 | 884148 | 5592.2 | 987 | 12/17/1998 |
| 36 | 74 | 13 | 13-113 | 359414 | 884146 | 5623 | 1023 | 5/23/1989 |
| 36 | 74 | 12 | 12-174 | 359578 | 891367 | 5543.2 | 882 | 8/31/1998 |
| 36 | 74 | 12 | 12-165 | 359629 | 891369 | 5544.5 | 800 | 10/5/1989 |
| 36 | 74 | 12 | 12-76 | 362936 | 891395 | 5528.4 | 511 | 6/14/1977 |
| 36 | 74 | 12 | 12-84 | 363039 | 891401 | 5530.5 | 499 | 6/16/1977 |
| 36 | 74 | 12 | 12-86 | 363091 | 891405 | 5529.6 | 560 | 11/9/1977 |
| 36 | 74 | 12 | 12-13 | 362994 | 891406 | 5528.6 | 1105 | 9/20/1968 |
| 36 | 74 | 12 | 12-171 | 359484 | 891445 | 5559.7 | 810 | 5/27/1992 |
| 36 | 74 | 12 | 12-158 | 359634 | 891447 | 5548.9 | 815 | 9/18/1989 |
| 36 | 74 | 12 | 12-160 | 359582 | 891447 | 5551.1 | 801 | 9/22/1989 |
| 36 | 74 | 12 | 12-178 | 359625 | 891488 | 5549.5 | 803 | 9/28/1998 |
| 36 | 74 | 12 | 12-180 | 359674 | 891490 | 5547.6 | 802 | 9/29/1998 |
| 36 | 74 | 12 | 12-77 | 363188 | 891502 | 5515.5 | 496 | 6/15/1977 |
| 36 | 74 | 12 | 12-5 | 364557 | 891503 | 5594.6 | 504 | 6/29/1967 |
| 36 | 74 | 12 | 12-97 | 363096 | 891504 | 5517 | 564 | 12/1/1977 |
| 36 | 74 | 12 | 12-4 | 363164 | 891506 | 5515.7 | 545 | 6/29/1967 |
| 36 | 74 | 12 | 12-3 | 361674 | 891517 | 5540.1 | 640 | 6/30/1967 |
| 36 | 74 | 12 | 12-148 | 359377 | 891521 | 5562.9 | 840 | 8/11/1989 |
| 36 | 74 | 12 | 12-2 | 360466 | 891533 | 5526.9 | 618 | 6/30/1967 |
| 36 | 74 | 12 | 12-1 | 359270 | 891535 | 5566.6 | 618 | 6/30/1967 |
| 36 | 74 | 12 | 12-126 | 363162 | 891672 | 5500 | 500 | 3/10/1981 |
| 36 | 74 | 12 | 12-56 | 363248 | 891776 | 5490.8 | 1000 | 3/29/1972 |
| 36 | 74 | 12 | 12-55 | 362993 | 891776 | 5492 | 1002 | 3/28/1972 |
| 36 | 74 | 12 | 12-98 | 363150 | 891790 | 1 | 561 | 12/1/1977 |
| 36 | 74 | 12 | 12-179 | 359446 | 891822 | 5584.9 | 861 | 9/30/1998 |
| 36 | 74 | 12 | 12-183 | 359497 | 891824 | 5588.2 | 843 | 10/9/1998 |
| 36 | 74 | 12 | 12-127 | 363236 | 891880 | 5484.3 | 500 | 3/11/1981 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 12 | 12-233 | 364456 | 891887 | 5570.9 | 781 | 3/9/1999 |
| 36 | 74 | 12 | 12-176 | 359434 | 891972 | 5598.1 | 863 | 9/25/1998 |
| 36 | 74 | 12 | 12-122 | 364440 | 892100 | 5562.7 | 595 | 3/5/1980 |
| 36 | 74 | 12 | 12-121 | 364548 | 892102 | 5561.8 | 600 | 3/4/1980 |
| 36 | 74 | 12 | 12-74 | 364140 | 889004 | 5506.6 | 773 | 2/3/1975 |
| 36 | 74 | 12 | 12-60 | 361292 | 889005 | 5555.6 | 1003 | 3/30/1972 |
| 36 | 74 | 12 | 12-31 | 361389 | 889007 | 5546.8 | 1100 | 9/19/1968 |
| 36 | 74 | 12 | 12-35 | 364582 | 889007 | 5500.2 | 1106 | 9/24/1968 |
| 36 | 74 | 12 | 12-79 | 361339 | 889007 | 5551.5 | 501 | 6/16/1977 |
| 36 | 74 | 12 | 12-71 | 364293 | 889008 | 5499.4 | 805 | 1/28/1975 |
| 36 | 74 | 12 | 12-200 | 360903 | 889011 | 5581.3 | 821 | 12/4/1998 |
| 36 | 74 | 12 | 12-153 | 360845 | 889012 | 5588.3 | 822 | 8/23/1989 |
| 36 | 74 | 12 | 12-151 | 360949 | 889014 | 5579.9 | 840 | 8/18/1989 |
| 36 | 74 | 12 | 12-143 | 364445 | 889015 | 5576.8 | 754 | 10/30/1986 |
| 36 | 74 | 12 | 12-209 | 360923 | 889062 | 5577.6 | 801 | 12/8/1998 |
| 36 | 74 | 12 | 12-231 | 361223 | 889079 | 5564.8 | 782 | 3/8/1999 |
| 36 | 74 | 12 | 12-218 | 360968 | 889084 | 5573.6 | 806 | 12/16/1998 |
| 36 | 74 | 12 | 12-228 | 361219 | 889128 | 5564.8 | 803 | 12/18/1998 |
| 36 | 74 | 12 | 12-133 | 361163 | 889174 | 5563.3 | 602 | 1/25/1982 |
| 36 | 74 | 12 | 12-59 | 361392 | 889182 | 5561 | 1627 | 3/29/1972 |
| 36 | 74 | 12 | 12-101 | 361291 | 889186 | 5562.6 | 590 | 11/30/1977 |
| 36 | 74 | 12 | 12-123 | 361464 | 889189 | 5557 | 600 | 3/12/1981 |
| 36 | 74 | 12 | 12-132 | 361669 | 889190 | 5548 | 600 | 1/25/1982 |
| 36 | 74 | 12 | 12-102 | 361035 | 889195 | 5565.1 | 601 | 12/10/1977 |
| 36 | 74 | 12 | 12-208 | 360960 | 889298 | 5558.9 | 801 | 12/8/1998 |
| 36 | 74 | 12 | 12-214 | 361010 | 889301 | 5557.7 | 803 | 12/9/1998 |
| 36 | 74 | 12 | 12-217 | 361108 | 889309 | 5555.1 | 826 | 12/15/1998 |
| 36 | 74 | 12 | 12-51 | 361421 | 889383 | 5549 | 1093 | 9/26/1968 |
| 36 | 74 | 12 | 12-230 | 360952 | 889396 | 5552.6 | 783 | 3/8/1999 |
| 36 | 74 | 12 | 12-107 | 360541 | 889418 | 5559.7 | 604 | 12/10/1977 |
| 36 | 74 | 12 | 12-53 | 364580 | 889421 | 5468.2 | 1187 | 9/27/1968 |
| 36 | 74 | 12 | 12-100 | 360657 | 889476 | 5553.9 | 604 | 11/30/1977 |
| 36 | 74 | 12 | 12-193 | 360797 | 889487 | 5550.3 | 822 | 11/21/1998 |
| 36 | 74 | 12 | 12-199 | 360947 | 889491 | 5547.2 | 781 | 12/4/1998 |
| 36 | 74 | 12 | 12-194 | 360898 | 889491 | 5547.6 | 783 | 12/2/1998 |
| 36 | 74 | 12 | 12-206 | 360999 | 889493 | 5546.1 | 782 | 12/7/1998 |
| 36 | 74 | 12 | 12-201 | 360788 | 889763 | 5546.6 | 782 | 12/4/1998 |
| 36 | 74 | 12 | 12-236 | 364094 | 889785 | 5497.9 | 821 | 3/18/1999 |
| 36 | 74 | 12 | 12-26 | 363007 | 889790 | 5505.6 | 1116 | 9/25/1968 |
| 36 | 74 | 12 | 12-62 | 364201 | 889792 | 5503.3 | 804 | 1/16/1975 |
| 36 | 74 | 12 | 12-70 | 364276 | 889794 | 5505.3 | 804 | 1/24/1975 |
| 36 | 74 | 12 | 12-28 | 364581 | 889795 | 5498.2 | 1095 | 9/27/1968 |
| 36 | 74 | 12 | 12-68 | 364356 | 889795 | 5504.5 | 804 | 1/21/1975 |
| 36 | 74 | 12 | 12-27 | 363791 | 889798 | 5494.1 | 1107 | 10/9/1968 |
| 36 | 74 | 12 | 12-24 | 361400 | 889810 | 1 | 1108 | 9/26/1968 |
| 36 | 74 | 12 | 12-190 | 360761 | 889812 | 5548.6 | 802 | 11/21/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 12 | 12-150 | 360707 | 889832 | 5552.3 | 840 | 8/15/1989 |
| 36 | 74 | 12 | 12-155 | 360810 | 889837 | 5551.9 | 822 | 8/24/1989 |
| 36 | 74 | 12 | 12-195 | 360785 | 889884 | 5552.2 | 783 | 12/3/1998 |
| 36 | 74 | 12 | 12-207 | 360730 | 889932 | 5555.5 | 783 | 12/8/1998 |
| 36 | 74 | 12 | 12-94 | 361274 | 889998 | 5555.3 | 578 | 11/12/1977 |
| 36 | 74 | 12 | 12-134 | 361162 | 890012 | 5557.6 | 600 | 11/3/1982 |
| 36 | 74 | 12 | 12-80 | 361800 | 890043 | 5552.7 | 1035 | 4/9/1969 |
| 36 | 74 | 12 | 12-129 | 361013 | 890105 | 5564 | 700 | 1/22/1982 |
| 36 | 74 | 12 | 12-139 | 361160 | 890126 | 5637.5 | 600 | 10/25/1984 |
| 36 | 74 | 12 | 12-114 | 361418 | 890130 | 5560.9 | 700 | 1/29/1979 |
| 36 | 74 | 12 | 12-119 | 361313 | 890130 | 5562 | 600 | 3/4/1980 |
| 36 | 74 | 12 | 12-67 | 364446 | 890178 | 5531.7 | 805 | 1/21/1975 |
| 36 | 74 | 12 | 12-61 | 364342 | 890178 | 5533.4 | 804 | 1/16/1975 |
| 36 | 74 | 12 | 12-168 | 364494 | 890178 | 5528.2 | 802 | 7/15/1991 |
| 36 | 74 | 12 | 12-69 | 364542 | 890183 | 5522.7 | 804 | 2/6/1975 |
| 36 | 74 | 12 | 12-52 | 364605 | 890189 | 5521.5 | 1126 | 9/27/1968 |
| 36 | 74 | 12 | 12-78 | 361316 | 890216 | 5567.9 | 500 | 6/15/1977 |
| 36 | 74 | 12 | 12-50 | 361373 | 890219 | 5567.4 | 1089 | 9/26/1968 |
| 36 | 74 | 12 | 12-109 | 361517 | 890221 | 5562.5 | 700 | 1/29/1979 |
| 36 | 74 | 12 | 12-89 | 361421 | 890224 | 5566.4 | 600 | 11/10/1977 |
| 36 | 74 | 12 | 12-106 | 360945 | 890225 | 1 | 560 | 12/12/1977 |
| 36 | 74 | 12 | 12-216 | 360650 | 890237 | 5575.2 | 802 | 12/15/1998 |
| 36 | 74 | 12 | 12-110 | 360852 | 890249 | 5573.4 | 700 | 1/26/1979 |
| 36 | 74 | 12 | 12-189 | 360599 | 890260 | 5579 | 861 | 11/21/1998 |
| 36 | 74 | 12 | 12-205 | 360648 | 890263 | 5577.8 | 802 | 12/7/1998 |
| 36 | 74 | 12 | 12-196 | 360698 | 890265 | 5575.8 | 802 | 12/3/1998 |
| 36 | 74 | 12 | 12-112 | 361003 | 890268 | 5575.5 | 691 | 2/1/1979 |
| 36 | 74 | 12 | 12-215 | 360597 | 890281 | 5581.1 | 822 | 12/15/1998 |
| 36 | 74 | 12 | 12-128 | 361240 | 890286 | 5574 | 1000 | 1/25/1982 |
| 36 | 74 | 12 | 12-120 | 361421 | 890317 | 5572.5 | 600 | 3/4/1980 |
| 36 | 74 | 12 | 12-111 | 361378 | 890319 | 5576.4 | 700 | 2/1/1979 |
| 36 | 74 | 12 | 12-118 | 361618 | 890358 | 5563.9 | 600 | 3/3/1980 |
| 36 | 74 | 12 | 12-239 | 364546 | 890399 | 5543.8 | 801 | 3/29/1999 |
| 36 | 74 | 12 | 12-138 | 361546 | 890415 | 5645.5 | 600 | 10/25/1984 |
| 36 | 74 | 12 | 12-204 | 360508 | 890427 | 5583.7 | 802 | 12/8/1998 |
| 36 | 74 | 12 | 12-238 | 364592 | 890452 | 5544.9 | 800 | 3/24/1999 |
| 36 | 74 | 12 | 12-105 | 361618 | 890455 | 5574.4 | 603 | 12/12/1977 |
| 36 | 74 | 12 | 12-117 | 361717 | 890464 | 5567.2 | 598 | 3/3/1980 |
| 36 | 74 | 12 | 12-113 | 361237 | 890473 | 5591.3 | 699 | 2/2/1979 |
| 36 | 74 | 12 | 12-92 | 361276 | 890479 | 5588.5 | 560 | 11/9/1977 |
| 36 | 74 | 12 | 12-80A | 361330 | 890485 | 1 | 502 | 6/15/1977 |
| 36 | 74 | 12 | 12-54 | 361385 | 890485 | 1 | 1107 | 10/1/1968 |
| 36 | 74 | 12 | 12-173 | 364538 | 890499 | 5551.4 | 830 | 5/22/1992 |
| 36 | 74 | 12 | 12-146 | 359688 | 890502 | 5574.9 | 842 | 8/14/1989 |
| 36 | 74 | 12 | 12-237 | 364618 | 890553 | 5546.2 | 801 | 3/18/1999 |
| 36 | 74 | 12 | 12-90 | 361492 | 890589 | 5584.4 | 640 | 11/9/1977 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 12 | 12-82 | 361441 | 890592 | 5583.1 | 501 | 6/15/1977 |
| 36 | 74 | 12 | 12-96 | 361595 | 890595 | 1 | 637 | 11/12/1977 |
| 36 | 74 | 12 | 12-83 | 361331 | 890599 | 5578.3 | 495 | 6/15/1977 |
| 36 | 74 | 12 | 12-91 | 361282 | 890600 | 5576.4 | 640 | 11/10/1977 |
| 36 | 74 | 12 | 12-20 | 363790 | 890601 | 5535.9 | 1104 | 10/8/1968 |
| 36 | 74 | 12 | 12-21 | 364590 | 890602 | 5546.3 | 1105 | 9/23/1968 |
| 36 | 74 | 12 | 12-17 | 361381 | 890602 | 5580 | 1098 | 9/20/1968 |
| 36 | 74 | 12 | 12-19 | 362992 | 890603 | 5550.4 | 1107 | 10/11/1968 |
| 36 | 74 | 12 | 12-144 | 359893 | 890603 | 5569.1 | 882 | 8/8/1989 |
| 36 | 74 | 12 | 12-147 | 360043 | 890604 | 5569 | 820 | 8/9/1989 |
| 36 | 74 | 12 | 12-235 | 364637 | 890604 | 5546.8 | 841 | 3/17/1999 |
| 36 | 74 | 12 | 12-182 | 360143 | 890608 | 5556.3 | 823 | 10/5/1998 |
| 36 | 74 | 12 | 12-15 | 359800 | 890610 | 1 | 1108 | 10/7/1968 |
| 36 | 74 | 12 | 12-186 | 360284 | 890613 | 5555.9 | 841 | 10/8/1998 |
| 36 | 74 | 12 | 12-58 | 364215 | 890615 | 5536.8 | 1000 | 3/30/1972 |
| 36 | 74 | 12 | 12-187 | 360383 | 890617 | 5562.6 | 841 | 10/12/1998 |
| 36 | 74 | 12 | 12-188 | 360431 | 890617 | 5564.8 | 820 | 11/21/1998 |
| 36 | 74 | 12 | 12-198 | 360439 | 890617 | 5565.6 | 801 | 12/3/1998 |
| 36 | 74 | 12 | 12-131 | 361967 | 890674 | 5571.3 | 700 | 1/26/1982 |
| 36 | 74 | 12 | 12-140 | 362073 | 890678 | 5642.1 | 602 | 10/18/1985 |
| 36 | 74 | 12 | 12-130 | 361725 | 890683 | 5583.4 | 703 | 1/26/1982 |
| 36 | 74 | 12 | 12-234 | 364563 | 890781 | 5545.3 | 842 | 3/17/1999 |
| 36 | 74 | 12 | 12-75 | 364616 | 890781 | 5548.4 | 500 | 6/14/1977 |
| 36 | 74 | 12 | 12-85 | 364514 | 890783 | 5544.4 | 501 | 6/15/1977 |
| 36 | 74 | 12 | 12-135 | 361809 | 890795 | 5583.6 | 600 | 11/3/1982 |
| 36 | 74 | 12 | 12-192 | 360069 | 890844 | 5561.7 | 847 | 11/22/1998 |
| 36 | 74 | 12 | 12-197 | 360168 | 890847 | 5548.2 | 803 | 12/4/1998 |
| 36 | 74 | 12 | 12-93 | 361830 | 890892 | 5587.3 | 740 | 11/10/1977 |
| 36 | 74 | 12 | 12-115 | 361725 | 890897 | 5574.7 | 590 | 3/3/1980 |
| 36 | 74 | 12 | 12-95 | 361933 | 890904 | 5590.5 | 685 | 11/14/1977 |
| 36 | 74 | 12 | 12-116 | 362051 | 890915 | 5585.3 | 598 | 3/3/1980 |
| 36 | 74 | 12 | 12-137 | 361893 | 890974 | 5594.7 | 602 | 11/3/1982 |
| 36 | 74 | 12 | 12-169 | 364492 | 890977 | 5563.4 | 845 | 7/15/1991 |
| 36 | 74 | 12 | 12-57 | 364590 | 890979 | 5557 | 997 | 3/29/1972 |
| 36 | 74 | 12 | 12-141 | 361891 | 891087 | 5647.3 | 602 | 10/18/1985 |
| 36 | 74 | 12 | 12-184 | 359893 | 891125 | 5501.1 | 783 | 10/13/1998 |
| 36 | 74 | 12 | 12-88 | 362500 | 891155 | 1 | 745 | 11/14/1977 |
| 36 | 74 | 12 | 12-191 | 359941 | 891179 | 5500.3 | 781 | 11/22/1998 |
| 36 | 74 | 12 | 12-142 | 362848 | 891212 | 5622.9 | 562 | 10/31/1986 |
| 36 | 74 | 12 | 12-159 | 359335 | 891225 | 1 | 798 | 9/19/1989 |
| 36 | 74 | 12 | 12-162 | 359435 | 891261 | 5543.6 | 802 | 10/4/1989 |
| 36 | 74 | 12 | 12-125 | 362948 | 891299 | 5543.9 | 540 | 3/11/1981 |
| 36 | 74 | 12 | 12-87 | 362800 | 891300 | 1 | 560 | 11/9/1977 |
| 36 | 74 | 12 | 12-163 | 359571 | 891315 | 5540.5 | 782 | 10/2/1989 |
| 36 | 74 | 12 | 12-164 | 359628 | 891316 | 5540.9 | 802 | 10/4/1989 |
| 36 | 74 | 12 | 12-175 | 359685 | 891318 | 5539.3 | 867 | 9/1/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 12 | 12-161 | 359480 | 891318 | 5542.2 | 800 | 9/25/1989 |
| 36 | 74 | 12 | 12-181 | 359773 | 891320 | 5534.1 | 782 | 10/1/1998 |
| 36 | 74 | 12 | 12-177 | 359731 | 891322 | 5537.2 | 783 | 9/29/1998 |
| 36 | 74 | 12 | 12-185 | 359823 | 891323 | 5529.4 | 781 | 10/9/1998 |
| 36 | 74 | 12 | 12-170 | 360129 | 886796 | 5576.9 | 1000 | 7/12/1991 |
| 36 | 74 | 12 | 12-157 | 359426 | 887069 | 5613 | 1042 | 8/31/1989 |
| 36 | 74 | 12 | 12-225 | 361494 | 887352 | 5551.3 | 781 | 12/16/1998 |
| 36 | 74 | 12 | 12-145 | 361439 | 887400 | 5553.3 | 802 | 8/21/1989 |
| 36 | 74 | 12 | 12-212 | 361491 | 887401 | 5551.2 | 801 | 12/10/1998 |
| 36 | 74 | 12 | 12-154 | 361336 | 887402 | 5550.6 | 782 | 8/22/1989 |
| 36 | 74 | 12 | 12-45 | 361397 | 887406 | 5549.4 | 1105 | 9/18/1968 |
| 36 | 74 | 12 | 12-49 | 364558 | 887407 | 5504.7 | 1093 | 9/25/1968 |
| 36 | 74 | 12 | 12-66 | 361602 | 887409 | 5549.5 | 805 | 1/24/1975 |
| 36 | 74 | 12 | 12-224 | 361389 | 887418 | 5548.4 | 786 | 12/16/1998 |
| 36 | 74 | 12 | 12-211 | 361335 | 887450 | 5545.2 | 801 | 12/9/1998 |
| 36 | 74 | 12 | 12-223 | 361226 | 887635 | 5531.1 | 783 | 12/16/1998 |
| 36 | 74 | 12 | 12-65 | 363000 | 887773 | 5519.6 | 804 | 1/23/1975 |
| 36 | 74 | 12 | 12-172 | 360777 | 887979 | 5564.3 | 1000 | 5/21/1992 |
| 36 | 74 | 12 | 12-210 | 360977 | 887984 | 5547.2 | 803 | 12/9/1998 |
| 36 | 74 | 12 | 12-222 | 361070 | 887991 | 5540.2 | 782 | 12/16/1998 |
| 36 | 74 | 12 | 12-221 | 361055 | 888206 | 5539.8 | 786 | 12/16/1998 |
| 36 | 74 | 12 | 12-40 | 362993 | 888207 | 5536.8 | 1097 | 9/23/1968 |
| 36 | 74 | 12 | 12-167 | 363746 | 888217 | 5502.3 | 1000 | 7/16/1991 |
| 36 | 74 | 12 | 12-64 | 363596 | 888220 | 5510 | 803 | 1/22/1975 |
| 36 | 74 | 12 | 12-42 | 364600 | 888225 | 1 | 1100 | 10/10/1968 |
| 36 | 74 | 12 | 12-73 | 363859 | 888225 | 5495.8 | 805 | 1/31/1975 |
| 36 | 74 | 12 | 12-72 | 364129 | 888231 | 5489 | 806 | 1/27/1975 |
| 36 | 74 | 12 | 12-38 | 361400 | 888290 | 1 | 1078 | 10/2/1968 |
| 36 | 74 | 12 | 12-213 | 360894 | 888385 | 5557.3 | 801 | 12/9/1998 |
| 36 | 74 | 12 | 12-219 | 360942 | 888388 | 5554.3 | 782 | 12/15/1998 |
| 36 | 74 | 12 | 12-202 | 360993 | 888391 | 5551.6 | 801 | 12/7/1998 |
| 36 | 74 | 12 | 12-152 | 361089 | 888398 | 5549 | 820 | 8/22/1989 |
| 36 | 74 | 12 | 12-8 | 361812 | 888524 | 5518.5 | 601 | 7/5/1967 |
| 36 | 74 | 12 | 12-7 | 360601 | 888528 | 5584.4 | 631 | 7/6/1967 |
| 36 | 74 | 12 | 12-6 | 359410 | 888552 | 5617.3 | 659 | 7/5/1967 |
| 36 | 74 | 12 | 12-104 | 360087 | 888565 | 5614.2 | 604 | 12/7/1977 |
| 36 | 74 | 12 | 12-220 | 360961 | 888713 | 5563.1 | 807 | 12/16/1998 |
| 36 | 74 | 12 | 12-226 | 361226 | 888800 | 5546.1 | 802 | 12/17/1998 |
| 36 | 74 | 12 | 12-108 | 361272 | 888806 | 5542.5 | 600 | 12/12/1977 |
| 36 | 74 | 12 | 12-124 | 361177 | 888806 | 5549.4 | 600 | 3/11/1981 |
| 36 | 74 | 12 | 12-229 | 361217 | 888894 | 5551.7 | 783 | 2/26/1999 |
| 36 | 74 | 12 | 12-232 | 361316 | 888895 | 5544.7 | 782 | 3/22/1999 |
| 36 | 74 | 12 | 12-227 | 361265 | 888896 | 5548.3 | 803 | 1/4/1999 |
| 36 | 74 | 12 | 12-103 | 360461 | 888985 | 5591.9 | 562 | 12/7/1977 |
| 36 | 74 | 12 | 12-149 | 359334 | 888998 | 5522.1 | 877 | 8/16/1989 |
| 36 | 74 | 12 | 12-156 | 359436 | 888999 | 5619.3 | 1000 | 9/6/1989 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 12 | 12-29 | 359795 | 889000 | 5599.8 | 1105 | 9/25/1968 |
| 36 | 74 | 12 | 12-32 | 362205 | 889000 | 1 | 1091 | 9/30/1968 |
| 36 | 74 | 12 | 12-30 | 360592 | 889002 | 5590.6 | 1106 | 9/30/1968 |
| 36 | 74 | 12 | 12-63 | 363987 | 889002 | 5506 | 803 | 1/22/1975 |
| 36 | 74 | 1 | 1-445 | 359421 | 892122 | 5606.7 | 864 | 9/17/1998 |
| 36 | 74 | 1 | 1-402 | 359396 | 892169 | 5609.5 | 861 | 8/26/1998 |
| 36 | 74 | 1 | 1-420 | 359444 | 892172 | 5606.8 | 882 | 9/2/1998 |
| 36 | 74 | 1 | 1-245 | 359570 | 892219 | 5600.8 | 1060 | 6/15/1989 |
| 36 | 74 | 1 | 1-255 | 359420 | 892222 | 5617.9 | 850 | 5/27/1992 |
| 36 | 74 | 1 | 1-400 | 359415 | 892271 | 5610.8 | 862 | 8/19/1998 |
| 36 | 74 | 1 | 1-473 | 359465 | 892278 | 5607.9 | 862 | 10/8/1998 |
| 36 | 74 | 1 | 1-481 | 359394 | 892450 | 5604 | 865 | 10/12/1998 |
| 36 | 74 | 1 | 1-472 | 359366 | 892498 | 5601.3 | 864 | 10/8/1998 |
| 36 | 74 | 1 | 1-442 | 359393 | 892550 | 5595.6 | 865 | 9/17/1998 |
| 36 | 74 | 1 | 1-108 | 364240 | 892583 | 5522.6 | 603 | 7/25/1973 |
| 36 | 74 | 1 | 1-489 | 364564 | 892789 | 5543.1 | 581 | 3/19/1999 |
| 36 | 74 | 1 | 1-91 | 363610 | 893005 | 5507.5 | 960 | 2/17/1970 |
| 36 | 74 | 1 | 1-14 | 363046 | 893011 | 5464.5 | 589 | 6/29/1967 |
| 36 | 74 | 1 | 1-90 | 361448 | 893011 | 5540.7 | 963 | 2/23/1970 |
| 36 | 74 | 1 | 1-13 | 361823 | 893015 | 5521.5 | 634 | 6/29/1967 |
| 36 | 74 | 1 | 1-12 | 360621 | 893028 | 5550.7 | 616 | 6/29/1967 |
| 36 | 74 | 1 | 1-15 | 364236 | 893029 | 5542.9 | 612 | 6/28/1967 |
| 36 | 74 | 1 | 1-11 | 359453 | 893040 | 5610.7 | 718 | 6/29/1967 |
| 36 | 74 | 1 | 1-107 | 364238 | 893077 | 5541.1 | 603 | 7/25/1973 |
| 36 | 74 | 1 | 1-106 | 363611 | 893202 | 5520.7 | 602 | 7/26/1973 |
| 36 | 74 | 1 | 1-64 | 361601 | 893528 | 5559.5 | 660 | 3/27/1972 |
| 36 | 74 | 1 | 1-479 | 360857 | 893547 | 5571.5 | 645 | 10/9/1998 |
| 36 | 74 | 1 | 1-483 | 360905 | 893550 | 5570.5 | 644 | 10/12/1998 |
| 36 | 74 | 1 | 1-467 | 360806 | 893594 | 5570.7 | 644 | 10/2/1998 |
| 36 | 74 | 1 | 1-474 | 360855 | 893599 | 5569.6 | 642 | 10/7/1998 |
| 36 | 74 | 1 | 1-480 | 360901 | 893600 | 5568.8 | 644 | 10/9/1998 |
| 36 | 74 | 1 | 1-466 | 360753 | 893640 | 5570 | 643 | 10/2/1998 |
| 36 | 74 | 1 | 1-465 | 360803 | 893644 | 5569.1 | 641 | 10/1/1998 |
| 36 | 74 | 1 | 1-468 | 360853 | 893648 | 5568.3 | 642 | 10/1/1998 |
| 36 | 74 | 1 | 1-478 | 360900 | 893648 | 5567.7 | 643 | 10/9/1998 |
| 36 | 74 | 1 | 1-258 | 359406 | 893649 | 5608.3 | 926 | 11/5/1997 |
| 36 | 74 | 1 | 1-217 | 361364 | 893658 | 5558.6 | 636 | 3/21/1980 |
| 36 | 74 | 1 | 1-455 | 360559 | 893676 | 5575.4 | 643 | 9/23/1998 |
| 36 | 74 | 1 | 1-459 | 360607 | 893680 | 5573.1 | 644 | 9/25/1998 |
| 36 | 74 | 1 | 1-463 | 360799 | 893693 | 5566.8 | 641 | 9/29/1998 |
| 36 | 74 | 1 | 1-464 | 360849 | 893696 | 5566.9 | 642 | 10/1/1998 |
| 36 | 74 | 1 | 1-470 | 360898 | 893697 | 5566.6 | 642 | 10/7/1998 |
| 36 | 74 | 1 | 1-471 | 361099 | 893705 | 5561.8 | 644 | 10/7/1998 |
| 36 | 74 | 1 | 1-469 | 361378 | 893706 | 5557.3 | 644 | 10/7/1998 |
| 36 | 74 | 1 | 1-462 | 360556 | 893726 | 5572.2 | 639 | 9/29/1998 |
| 36 | 74 | 1 | 1-451 | 360605 | 893729 | 5569.9 | 644 | 9/18/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 1 | 1-453 | 360649 | 893734 | 5568.1 | 637 | 9/23/1998 |
| 36 | 74 | 1 | 1-458 | 360698 | 893737 | 5566.5 | 645 | 9/25/1998 |
| 36 | 74 | 1 | 1-461 | 360747 | 893741 | 5565.4 | 644 | 9/28/1998 |
| 36 | 74 | 1 | 1-476 | 361097 | 893756 | 5562.9 | 641 | 10/9/1998 |
| 36 | 74 | 1 | 1-477 | 361377 | 893758 | 5556.3 | 646 | 10/9/1998 |
| 36 | 74 | 1 | 1-428 | 360552 | 893780 | 5568.3 | 641 | 9/10/1998 |
| 36 | 74 | 1 | 1-435 | 360600 | 893782 | 5566.5 | 641 | 9/17/1998 |
| 36 | 74 | 1 | 1-421 | 360650 | 893784 | 5564.5 | 641 | 9/3/1998 |
| 36 | 74 | 1 | 1-484 | 361373 | 893809 | 5555.7 | 643 | 10/13/1998 |
| 36 | 74 | 1 | 1-422 | 360597 | 893833 | 5561.4 | 640 | 9/2/1998 |
| 36 | 74 | 1 | 1-413 | 360647 | 893834 | 5559.4 | 618 | 8/31/1998 |
| 36 | 74 | 1 | 1-254 | 359392 | 893852 | 5606 | 895 | 5/28/1992 |
| 36 | 74 | 1 | 1-208 | 361376 | 893857 | 5555.1 | 659 | 3/16/1977 |
| 36 | 74 | 1 | 1-103 | 361168 | 893857 | 5561.1 | 603 | 7/26/1973 |
| 36 | 74 | 1 | 1-62 | 361275 | 893858 | 5558 | 651 | 3/27/1962 |
| 36 | 74 | 1 | 1-63 | 361600 | 893864 | 5549.9 | 654 | 3/27/1972 |
| 36 | 74 | 1 | 1-216 | 361909 | 893867 | 5548.6 | 600 | 3/21/1980 |
| 36 | 74 | 1 | 1-354 | 360640 | 893889 | 5550.9 | 623 | 8/25/1998 |
| 36 | 74 | 1 | 1-444 | 360588 | 893967 | 5560.8 | 621 | 9/16/1998 |
| 36 | 74 | 1 | 1-328 | 360637 | 893973 | 5555.9 | 624 | 7/31/1998 |
| 36 | 74 | 1 | 1-60 | 360221 | 893983 | 5578.1 | 651 | 3/24/1972 |
| 36 | 74 | 1 | 1-61 | 360536 | 893990 | 5562.6 | 1000 | 3/24/1972 |
| 36 | 74 | 1 | 1-314 | 360636 | 894007 | 5555.7 | 624 | 7/27/1998 |
| 36 | 74 | 1 | 1-427 | 360310 | 894009 | 5570 | 641 | 9/4/1998 |
| 36 | 74 | 1 | 1-322 | 360711 | 894037 | 5548.6 | 633 | 7/29/1998 |
| 36 | 74 | 1 | 1-436 | 359831 | 894040 | 5589.5 | 644 | 9/11/1998 |
| 36 | 74 | 1 | 1-433 | 359881 | 894044 | 5587.5 | 641 | 9/10/1998 |
| 36 | 74 | 1 | 1-301 | 359981 | 894050 | 5582.6 | 644 | 7/27/1998 |
| 36 | 74 | 1 | 1-316 | 360157 | 894051 | 5574.7 | 642 | 7/28/1998 |
| 36 | 74 | 1 | 1-253 | 359339 | 894052 | 5583.8 | 866 | 7/19/1991 |
| 36 | 74 | 1 | 1-262 | 359388 | 894054 | 5582.7 | 903 | 11/7/1997 |
| 36 | 74 | 1 | 1-419 | 360208 | 894054 | 5571.9 | 640 | 9/3/1998 |
| 36 | 74 | 1 | 1-129 | 360880 | 894055 | 5532.5 | 642 | 5/31/1974 |
| 36 | 74 | 1 | 1-302 | 360634 | 894057 | 5551.9 | 622 | 7/24/1998 |
| 36 | 74 | 1 | 1-431 | 360305 | 894058 | 5566.8 | 646 | 9/9/1998 |
| 36 | 74 | 1 | 1-450 | 360678 | 894059 | 5549.1 | 621 | 9/18/1998 |
| 36 | 74 | 1 | 1-279 | 359878 | 894094 | 5581.5 | 684 | 11/20/1997 |
| 36 | 74 | 1 | 1-285 | 359929 | 894096 | 5580.6 | 645 | 7/21/1998 |
| 36 | 74 | 1 | 1-308 | 360102 | 894100 | 5573 | 625 | 7/24/1998 |
| 36 | 74 | 1 | 1-128 | 360735 | 894100 | 1 | 640 | 5/24/1989 |
| 36 | 74 | 1 | 1-449 | 360580 | 894102 | 5548.9 | 621 | 9/17/1998 |
| 36 | 74 | 1 | 1-324 | 360203 | 894106 | 5568.6 | 644 | 7/29/1998 |
| 36 | 74 | 1 | 1-432 | 359729 | 894106 | 5581.7 | 641 | 9/10/1998 |
| 36 | 74 | 1 | 1-293 | 360630 | 894106 | 5546.5 | 624 | 7/22/1998 |
| 36 | 74 | 1 | 1-360 | 360928 | 894107 | 5528.7 | 622 | 8/24/1998 |
| 36 | 74 | 1 | 1-127 | 360527 | 894108 | 5550.5 | 642 | 5/24/1974 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 1 | 1-443 | 360680 | 894108 | 5544 | 620 | 9/16/1998 |
| 36 | 74 | 1 | 1-275 | 359777 | 894112 | 5581 | 684 | 11/20/1997 |
| 36 | 74 | 1 | 1-294 | 360705 | 894135 | 5540.3 | 621 | 7/22/1998 |
| 36 | 74 | 1 | 1-409 | 360756 | 894137 | 5537.6 | 623 | 8/25/1998 |
| 36 | 74 | 1 | 1-283 | 360100 | 894149 | 5569.4 | 622 | 7/22/1998 |
| 36 | 74 | 1 | 1-437 | 359676 | 894152 | 5577.9 | 644 | 9/11/1998 |
| 36 | 74 | 1 | 1-194 | 360527 | 894152 | 5546.4 | 601 | 6/29/1976 |
| 36 | 74 | 1 | 1-228 | 360627 | 894156 | 5541.2 | 600 | 10/26/1983 |
| 36 | 74 | 1 | 1-58 | 359723 | 894159 | 5577.5 | 661 | 3/24/1972 |
| 36 | 74 | 1 | 1-102 | 359518 | 894159 | 5576.1 | 602 | 7/27/1973 |
| 36 | 74 | 1 | 1-134 | 359773 | 894160 | 5576.9 | 640 | 5/3/1974 |
| 36 | 74 | 1 | 1-59 | 361258 | 894173 | 5532.8 | 661 | 3/27/1972 |
| 36 | 74 | 1 | 1-315 | 360654 | 894182 | 5537 | 629 | 7/27/1998 |
| 36 | 74 | 1 | 1-323 | 360396 | 894184 | 5552.6 | 622 | 7/29/1998 |
| 36 | 74 | 1 | 1-307 | 360703 | 894185 | 5535.2 | 622 | 7/24/1998 |
| 36 | 74 | 1 | 1-345 | 360802 | 894188 | 5530.3 | 622 | 8/21/1998 |
| 36 | 74 | 1 | 1-329 | 360751 | 894189 | 5532.3 | 626 | 7/29/1998 |
| 36 | 74 | 1 | 1-309 | 359912 | 894189 | 5572 | 624 | 7/27/1998 |
| 36 | 74 | 1 | 1-154 | 360527 | 894198 | 5543.5 | 635 | 6/6/1974 |
| 36 | 74 | 1 | 1-439 | 359621 | 894226 | 5572.9 | 645 | 9/14/1998 |
| 36 | 74 | 1 | 1-267 | 359668 | 894231 | 5572.4 | 684 | 11/13/1997 |
| 36 | 74 | 1 | 1-188 | 359810 | 894235 | 5570.8 | 644 | 6/22/1976 |
| 36 | 74 | 1 | 1-284 | 359909 | 894238 | 5568.1 | 623 | 7/21/1998 |
| 36 | 74 | 1 | 1-67 | 360390 | 894244 | 5548.5 | 661 | 3/27/1972 |
| 36 | 74 | 1 | 1-100 | 360188 | 894245 | 5559.5 | 602 | 7/26/1973 |
| 36 | 74 | 1 | 1-189 | 360094 | 894248 | 5562.3 | 642 | 6/29/1976 |
| 36 | 74 | 1 | 1-276 | 359617 | 894276 | 5569.3 | 680 | 11/20/1997 |
| 36 | 74 | 1 | 1-57 | 360704 | 894280 | 5527.6 | 661 | 3/24/1972 |
| 36 | 74 | 1 | 1-101 | 360877 | 894282 | 5517 | 603 | 8/1/1973 |
| 36 | 74 | 1 | 1-56 | 360392 | 894282 | 5546.5 | 651 | 3/24/1972 |
| 36 | 74 | 1 | 1-89 | 363034 | 894282 | 5450 | 956 | 2/18/1970 |
| 36 | 74 | 1 | 1-311 | 360697 | 894286 | 5527.7 | 603 | 7/27/1998 |
| 36 | 74 | 1 | 1-321 | 360748 | 894288 | 5525.2 | 604 | 7/28/1998 |
| 36 | 74 | 1 | 1-148 | 360430 | 894293 | 5543.9 | 640 | 6/4/1974 |
| 36 | 74 | 1 | 1-136 | 360477 | 894295 | 5540.6 | 639 | 5/30/1974 |
| 36 | 74 | 1 | 1-52 | 360527 | 894296 | 5536.8 | 660 | 2/7/1968 |
| 36 | 74 | 1 | 1-344 | 360279 | 894296 | 5552.1 | 614 | 8/5/1998 |
| 36 | 74 | 1 | 1-298 | 359445 | 894317 | 5572 | 644 | 7/22/1998 |
| 36 | 74 | 1 | 1-288 | 359622 | 894326 | 5567.5 | 610 | 7/21/1998 |
| 36 | 74 | 1 | 1-263 | 359661 | 894330 | 5566.1 | 683 | 11/10/1997 |
| 36 | 74 | 1 | 1-51 | 359541 | 894330 | 5569.3 | 653 | 2/1/1968 |
| 36 | 74 | 1 | 1-99 | 359915 | 894332 | 5561.9 | 603 | 7/26/1973 |
| 36 | 74 | 1 | 1-55 | 359711 | 894333 | 5565.4 | 650 | 3/23/1972 |
| 36 | 74 | 1 | 1-440 | 360695 | 894336 | 5518.5 | 602 | 9/18/1998 |
| 36 | 74 | 1 | 1-412 | 360227 | 894337 | 5550.1 | 620 | 8/27/1998 |
| 36 | 74 | 1 | 1-264 | 359761 | 894338 | 5563.6 | 680 | 11/10/1997 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 1 | 1-190 | 359806 | 894341 | 5562.3 | 642 | 6/29/1976 |
| 36 | 74 | 1 | 1-325 | 360275 | 894346 | 5548.8 | 402 | 7/29/1998 |
| 36 | 74 | 1 | 1-296 | 360426 | 894346 | 5541.4 | 604 | 7/23/1998 |
| 36 | 74 | 1 | 1-295 | 360476 | 894348 | 5538.5 | 604 | 7/23/1998 |
| 36 | 74 | 1 | 1-310 | 360573 | 894353 | 5530.2 | 603 | 7/28/1998 |
| 36 | 74 | 1 | 1-343 | 360624 | 894357 | 5524.1 | 602 | 8/24/1998 |
| 36 | 74 | 1 | 1-300 | 359671 | 894360 | 5564.9 | 623 | 7/27/1998 |
| 36 | 74 | 1 | 1-289 | 359620 | 894378 | 5565.9 | 624 | 7/21/1998 |
| 36 | 74 | 1 | 1-230 | 360172 | 894381 | 5542.5 | 600 | 10/27/1983 |
| 36 | 74 | 1 | 1-376 | 360221 | 894387 | 5540.6 | 622 | 8/24/1998 |
| 36 | 74 | 1 | 1-454 | 360717 | 894388 | 5519.1 | 526 | 9/24/1998 |
| 36 | 74 | 1 | 1-153 | 360276 | 894391 | 5538.9 | 639 | 6/6/1974 |
| 36 | 74 | 1 | 1-214 | 362912 | 894393 | 5464.1 | 600 | 3/21/1980 |
| 36 | 74 | 1 | 1-306 | 360422 | 894396 | 5536 | 602 | 7/27/1998 |
| 36 | 74 | 1 | 1-408 | 360672 | 894410 | 5524.3 | 601 | 8/25/1998 |
| 36 | 74 | 1 | 1-312 | 360316 | 894415 | 5536.7 | 604 | 7/29/1998 |
| 36 | 74 | 1 | 1-397 | 360086 | 894417 | 5555.8 | 619 | 8/24/1998 |
| 36 | 74 | 1 | 1-265 | 359618 | 894428 | 5565.6 | 680 | 11/11/1997 |
| 36 | 74 | 1 | 1-226 | 359667 | 894432 | 5564.7 | 621 | 10/29/1982 |
| 36 | 74 | 1 | 1-266 | 359716 | 894437 | 5563.2 | 701 | 11/7/1997 |
| 36 | 74 | 1 | 1-251 | 363146 | 894437 | 5445.1 | 464 | 7/22/1991 |
| 36 | 74 | 1 | 1-249 | 359455 | 894446 | 5570.8 | 646 | 7/18/1991 |
| 36 | 74 | 1 | 1-377 | 360265 | 894447 | 5548.2 | 620 | 8/26/1998 |
| 36 | 74 | 1 | 1-448 | 359381 | 894462 | 5574.9 | 802 | 9/17/1998 |
| 36 | 74 | 1 | 1-393 | 360031 | 894462 | 5564.4 | 643 | 8/21/1998 |
| 36 | 74 | 1 | 1-355 | 360082 | 894466 | 5563.2 | 642 | 8/14/1998 |
| 36 | 74 | 1 | 1-382 | 359534 | 894471 | 5569.6 | 642 | 8/12/1998 |
| 36 | 74 | 1 | 1-353 | 360660 | 894479 | 5532.8 | 621 | 8/6/1998 |
| 36 | 74 | 1 | 1-330 | 360489 | 894481 | 5540.3 | 625 | 8/6/1998 |
| 36 | 74 | 1 | 1-44 | 363427 | 894492 | 5438.6 | 600 | 12/1/1967 |
| 36 | 74 | 1 | 1-39 | 362226 | 894494 | 5520.3 | 660 | 11/30/1967 |
| 36 | 74 | 1 | 1-104 | 362914 | 894497 | 5462.5 | 602 | 8/1/1973 |
| 36 | 74 | 1 | 1-38 | 362003 | 894498 | 5523 | 650 | 11/30/1967 |
| 36 | 74 | 1 | 1-46 | 363819 | 894499 | 5489.1 | 600 | 12/1/1967 |
| 36 | 74 | 1 | 1-41 | 362604 | 894499 | 5495.9 | 600 | 11/30/1967 |
| 36 | 74 | 1 | 1-45 | 363624 | 894500 | 5460.6 | 600 | 12/1/1967 |
| 36 | 74 | 1 | 1-43 | 363221 | 894501 | 5437 | 605 | 12/1/1967 |
| 36 | 74 | 1 | 1-42 | 362830 | 894502 | 5473.5 | 600 | 12/1/1967 |
| 36 | 74 | 1 | 1-37 | 361621 | 894508 | 5508 | 635 | 11/30/1967 |
| 36 | 74 | 1 | 1-36 | 361421 | 894509 | 5508 | 660 | 11/30/1967 |
| 36 | 74 | 1 | 1-424 | 359936 | 894510 | 5568.9 | 636 | 9/2/1998 |
| 36 | 74 | 1 | 1-28 | 359627 | 894512 | 5569.8 | 656 | 11/27/1967 |
| 36 | 74 | 1 | 1-10 | 364237 | 894513 | 5521.2 | 547 | 6/22/1967 |
| 36 | 74 | 1 | 1-438 | 359403 | 894514 | 5576.3 | 858 | 9/14/1998 |
| 36 | 74 | 1 | 1-418 | 359986 | 894514 | 5569.1 | 642 | 8/31/1998 |
| 36 | 74 | 1 | 1-31 | 360216 | 894515 | 5562.6 | 652 | 11/28/1967 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 1 | 1-30 | 360028 | 894517 | 5568.7 | 657 | 11/28/1967 |
| 36 | 74 | 1 | 1-8 | 361836 | 894518 | 5517.4 | 590 | 6/21/1967 |
| 36 | 74 | 1 | 1-49 | 360329 | 894518 | 5554.6 | 660 | 1/6/1968 |
| 36 | 74 | 1 | 1-126 | 360126 | 894519 | 5567.2 | 640 | 5/24/1974 |
| 36 | 74 | 1 | 1-40 | 362426 | 894520 | 5511.2 | 660 | 11/30/1967 |
| 36 | 74 | 1 | 1-29 | 359828 | 894521 | 5568.4 | 640 | 11/28/1967 |
| 36 | 74 | 1 | 1-48 | 359528 | 894521 | 5572.4 | 655 | 2/1/1968 |
| 36 | 74 | 1 | 1-373 | 360279 | 894522 | 5558.6 | 623 | 8/14/1998 |
| 36 | 74 | 1 | 1-50 | 360536 | 894524 | 5545.5 | 660 | 2/5/1968 |
| 36 | 74 | 1 | 1-7 | 360660 | 894528 | 5539.1 | 598 | 6/21/1967 |
| 36 | 74 | 1 | 1-135 | 360487 | 894532 | 5547.6 | 620 | 5/30/1974 |
| 36 | 74 | 1 | 1-32 | 360431 | 894536 | 5549.9 | 660 | 11/29/1967 |
| 36 | 74 | 1 | 1-105 | 363206 | 894549 | 5435.3 | 602 | 8/2/1973 |
| 36 | 74 | 1 | 1-9 | 363048 | 894549 | 5449.3 | 503 | 6/22/1967 |
| 36 | 74 | 1 | 1-6 | 359453 | 894550 | 5575.8 | 639 | 6/20/1967 |
| 36 | 74 | 1 | 1-407 | 359932 | 894561 | 5571.8 | 640 | 8/25/1998 |
| 36 | 74 | 1 | 1-34 | 361020 | 894562 | 5518.4 | 659 | 11/29/1967 |
| 36 | 74 | 1 | 1-35 | 361248 | 894563 | 5500.2 | 642 | 11/30/1967 |
| 36 | 74 | 1 | 1-396 | 359982 | 894564 | 5573 | 640 | 8/20/1998 |
| 36 | 74 | 1 | 1-399 | 360225 | 894567 | 5567 | 620 | 8/21/1998 |
| 36 | 74 | 1 | 1-374 | 360028 | 894569 | 5573.1 | 638 | 8/13/1998 |
| 36 | 74 | 1 | 1-381 | 359525 | 894571 | 5574.1 | 643 | 8/11/1998 |
| 36 | 74 | 1 | 1-303 | 360484 | 894581 | 5550.9 | 624 | 7/23/1998 |
| 36 | 74 | 1 | 1-33 | 360800 | 894583 | 5535.8 | 592 | 1/2/1968 |
| 36 | 74 | 1 | 1-162 | 360718 | 894585 | 5539.7 | 582 | 1/2/1975 |
| 36 | 74 | 1 | 1-225 | 359683 | 894608 | 5573.9 | 620 | 10/29/1982 |
| 36 | 74 | 1 | 1-332 | 360276 | 894610 | 5566.2 | 620 | 8/13/1998 |
| 36 | 74 | 1 | 1-372 | 359735 | 894610 | 5573.4 | 644 | 8/11/1998 |
| 36 | 74 | 1 | 1-417 | 359978 | 894613 | 5573 | 640 | 9/1/1998 |
| 36 | 74 | 1 | 1-274 | 359557 | 894629 | 5575 | 685 | 11/19/1997 |
| 36 | 74 | 1 | 1-272 | 360437 | 894629 | 5557.3 | 684 | 11/17/1997 |
| 36 | 74 | 1 | 1-252 | 362946 | 894648 | 5462.9 | 485 | 7/18/1991 |
| 36 | 74 | 1 | 1-395 | 359879 | 894674 | 5572.7 | 641 | 8/19/1998 |
| 36 | 74 | 1 | 1-371 | 359783 | 894676 | 5574.9 | 643 | 8/13/1998 |
| 36 | 74 | 1 | 1-270 | 359526 | 894677 | 5576.7 | 685 | 11/13/1997 |
| 36 | 74 | 1 | 1-359 | 359929 | 894678 | 5572 | 625 | 8/6/1998 |
| 36 | 74 | 1 | 1-229 | 359839 | 894679 | 5573.7 | 580 | 10/26/1983 |
| 36 | 74 | 1 | 1-268 | 359646 | 894682 | 5575.7 | 684 | 11/19/1997 |
| 36 | 74 | 1 | 1-273 | 360272 | 894684 | 5567.5 | 680 | 11/19/1997 |
| 36 | 74 | 1 | 1-88 | 363048 | 894691 | 5451.7 | 955 | 2/17/1970 |
| 36 | 74 | 1 | 1-386 | 360704 | 894713 | 5544.6 | 619 | 9/1/1998 |
| 36 | 74 | 1 | 1-47 | 360440 | 894717 | 5561.4 | 600 | 2/2/1968 |
| 36 | 74 | 1 | 1-370 | 359877 | 894724 | 5573 | 620 | 8/12/1998 |
| 36 | 74 | 1 | 1-53 | 359781 | 894725 | 5574.7 | 601 | 3/23/1972 |
| 36 | 74 | 1 | 1-356 | 359925 | 894726 | 5572.5 | 643 | 8/3/1998 |
| 36 | 74 | 1 | 1-86 | 359598 | 894726 | 5575.4 | 940 | 2/20/1970 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 1 | 1-146 | 359640 | 894727 | 5575.2 | 639 | 6/3/1974 |
| 36 | 74 | 1 | 1-139 | 359688 | 894728 | 5575.1 | 639 | 5/31/1974 |
| 36 | 74 | 1 | 1-97 | 360171 | 894728 | 5569.4 | 601 | 7/27/1973 |
| 36 | 74 | 1 | 1-151 | 359497 | 894728 | 5576.5 | 634 | 6/4/1974 |
| 36 | 74 | 1 | 1-152 | 359546 | 894728 | 5575.8 | 637 | 6/5/1974 |
| 36 | 74 | 1 | 1-224 | 359736 | 894728 | 5575.2 | 620 | 11/2/1982 |
| 36 | 74 | 1 | 1-54 | 359976 | 894728 | 5571.4 | 650 | 3/23/1972 |
| 36 | 74 | 1 | 1-156 | 359447 | 894729 | 5576.5 | 628 | 6/7/1974 |
| 36 | 74 | 1 | 1-271 | 360269 | 894729 | 5566.7 | 684 | 11/18/1997 |
| 36 | 74 | 1 | 1-98 | 360940 | 894740 | 1 | 602 | 7/31/1973 |
| 36 | 74 | 1 | 1-144 | 360679 | 894762 | 5547.1 | 636 | 6/3/1974 |
| 36 | 74 | 1 | 1-68 | 360635 | 894762 | 5549.8 | 656 | 3/27/1972 |
| 36 | 74 | 1 | 1-195 | 360836 | 894767 | 5543.2 | 627 | 6/29/1976 |
| 36 | 74 | 1 | 1-87 | 360723 | 894767 | 5545.5 | 964 | 1/23/1970 |
| 36 | 74 | 1 | 1-394 | 359874 | 894773 | 5572 | 641 | 8/19/1998 |
| 36 | 74 | 1 | 1-235 | 361063 | 894774 | 5528.7 | 658 | 10/21/1985 |
| 36 | 74 | 1 | 1-278 | 359540 | 894779 | 5573.8 | 677 | 11/20/1997 |
| 36 | 74 | 1 | 1-269 | 359443 | 894779 | 5573.8 | 879 | 11/19/1997 |
| 36 | 74 | 1 | 1-280 | 359396 | 894780 | 5573.9 | 884 | 11/21/1997 |
| 36 | 74 | 1 | 1-384 | 360229 | 894815 | 5567.7 | 640 | 8/12/1998 |
| 36 | 74 | 1 | 1-341 | 360633 | 894840 | 5553.8 | 624 | 7/31/1998 |
| 36 | 74 | 1 | 1-326 | 360683 | 894841 | 5551.8 | 624 | 7/29/1998 |
| 36 | 74 | 1 | 1-240 | 360727 | 894845 | 5549.4 | 602 | 10/31/1986 |
| 36 | 74 | 1 | 1-367 | 359878 | 894905 | 5566.4 | 646 | 8/10/1998 |
| 36 | 74 | 1 | 1-331 | 359930 | 894907 | 5564.1 | 623 | 8/6/1998 |
| 36 | 74 | 1 | 1-138 | 360068 | 894911 | 5562 | 636 | 5/29/1974 |
| 36 | 74 | 1 | 1-66 | 359970 | 894911 | 5562.7 | 662 | 3/28/1972 |
| 36 | 74 | 1 | 1-95 | 360172 | 894912 | 5562.4 | 603 | 7/31/1973 |
| 36 | 74 | 1 | 1-65 | 359778 | 894913 | 5566.6 | 654 | 3/28/1972 |
| 36 | 74 | 1 | 1-94 | 359581 | 894914 | 5564.5 | 601 | 8/1/1973 |
| 36 | 74 | 1 | 1-150 | 359485 | 894915 | 5567.9 | 628 | 6/5/1974 |
| 36 | 74 | 1 | 1-121 | 359387 | 894917 | 5568.1 | 638 | 5/22/1974 |
| 36 | 74 | 1 | 1-236 | 360265 | 894919 | 5561.8 | 662 | 10/18/1985 |
| 36 | 74 | 1 | 1-125 | 361350 | 894960 | 1 | 638 | 5/13/1974 |
| 36 | 74 | 1 | 1-282 | 360683 | 894966 | 5553.7 | 604 | 7/22/1998 |
| 36 | 74 | 1 | 1-122 | 360528 | 894967 | 5554.5 | 639 | 5/16/1974 |
| 36 | 74 | 1 | 1-96 | 360732 | 894968 | 5553.1 | 604 | 7/31/1973 |
| 36 | 74 | 1 | 1-351 | 360891 | 894968 | 5550 | 644 | 8/6/1998 |
| 36 | 74 | 1 | 1-123 | 360943 | 894970 | 5548 | 641 | 5/14/1974 |
| 36 | 74 | 1 | 1-124 | 361154 | 894970 | 5533.6 | 631 | 5/14/1974 |
| 36 | 74 | 1 | 1-250 | 359345 | 894996 | 5558.1 | 846 | 7/18/1991 |
| 36 | 74 | 1 | 1-256 | 359393 | 895000 | 5559.3 | 875 | 10/16/1997 |
| 36 | 74 | 1 | 1-260 | 359921 | 895007 | 5557.1 | 219 | 11/6/1997 |
| 36 | 74 | 1 | 1-390 | 360165 | 895010 | 5556.8 | 632 | 8/17/1998 |
| 36 | 74 | 1 | 1-257 | 359571 | 895013 | 5554.8 | 882 | 10/16/1997 |
| 36 | 74 | 1 | 1-259 | 359670 | 895019 | 5552.7 | 881 | 11/4/1997 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 1 | 1-383 | 360210 | 895065 | 5554.2 | 643 | 8/12/1998 |
| 36 | 74 | 1 | 1-281 | 359667 | 895069 | 5549.3 | 603 | 7/20/1998 |
| 36 | 74 | 1 | 1-143 | 360071 | 895104 | 5553.6 | 636 | 5/31/1974 |
| 36 | 74 | 1 | 1-147 | 359972 | 895105 | 5549.7 | 638 | 6/5/1974 |
| 36 | 74 | 1 | 1-357 | 359916 | 895106 | 5549.1 | 623 | 8/5/1998 |
| 36 | 74 | 1 | 1-115 | 359380 | 895110 | 5552.7 | 640 | 5/20/1974 |
| 36 | 74 | 1 | 1-140 | 359632 | 895112 | 5544.7 | 631 | 5/28/1974 |
| 36 | 74 | 1 | 1-117 | 359777 | 895112 | 5547.9 | 640 | 5/16/1974 |
| 36 | 74 | 1 | 1-141 | 359728 | 895112 | 5547.5 | 633 | 5/31/1974 |
| 36 | 74 | 1 | 1-116 | 359580 | 895113 | 5544.9 | 638 | 5/16/1974 |
| 36 | 74 | 1 | 1-132 | 359681 | 895113 | 5546.2 | 637 | 5/23/1974 |
| 36 | 74 | 1 | 1-227 | 359527 | 895116 | 5546.3 | 621 | 11/2/1982 |
| 36 | 74 | 1 | 1-93 | 360230 | 895120 | 1 | 602 | 7/31/1973 |
| 36 | 74 | 1 | 1-369 | 359913 | 895155 | 5545.8 | 637 | 8/13/1998 |
| 36 | 74 | 1 | 1-118 | 360533 | 895162 | 5542 | 640 | 5/15/1974 |
| 36 | 74 | 1 | 1-119 | 360733 | 895164 | 5541 | 641 | 5/15/1974 |
| 36 | 74 | 1 | 1-299 | 359425 | 895165 | 5545.6 | 843 | 7/28/1998 |
| 36 | 74 | 1 | 1-352 | 360783 | 895166 | 5541.7 | 623 | 8/3/1998 |
| 36 | 74 | 1 | 1-120 | 360944 | 895169 | 5540.9 | 642 | 5/14/1974 |
| 36 | 74 | 1 | 1-234 | 361136 | 895180 | 5539.4 | 650 | 10/18/1985 |
| 36 | 74 | 1 | 1-157 | 359876 | 895203 | 5542.6 | 641 | 6/6/1974 |
| 36 | 74 | 1 | 1-358 | 360064 | 895205 | 5549.1 | 622 | 8/5/1998 |
| 36 | 74 | 1 | 1-184 | 359578 | 895209 | 5536.9 | 605 | 6/22/1976 |
| 36 | 74 | 1 | 1-191 | 359679 | 895210 | 5537.3 | 640 | 6/30/1976 |
| 36 | 74 | 1 | 1-398 | 359422 | 895216 | 5540.5 | 844 | 8/18/1998 |
| 36 | 74 | 1 | 1-342 | 359478 | 895217 | 5538.2 | 603 | 8/6/1998 |
| 36 | 74 | 1 | 1-335 | 361090 | 895232 | 5541.5 | 622 | 7/30/1998 |
| 36 | 74 | 1 | 1-292 | 359578 | 895259 | 5533.3 | 584 | 7/15/1998 |
| 36 | 74 | 1 | 1-403 | 359419 | 895266 | 5535 | 823 | 8/20/1998 |
| 36 | 74 | 1 | 1-212 | 363298 | 895277 | 5430.7 | 562 | 11/17/1977 |
| 36 | 74 | 1 | 1-304 | 360986 | 895278 | 5538 | 624 | 7/23/1998 |
| 36 | 74 | 1 | 1-215 | 363501 | 895279 | 5441.7 | 597 | 3/21/1980 |
| 36 | 74 | 1 | 1-313 | 361037 | 895280 | 5538.6 | 623 | 7/27/1998 |
| 36 | 74 | 1 | 1-80 | 363347 | 895300 | 5439.5 | 960 | 4/10/1969 |
| 36 | 74 | 1 | 1-297 | 359645 | 895306 | 5529.9 | 583 | 7/29/1998 |
| 36 | 74 | 1 | 1-287 | 359701 | 895310 | 5533.9 | 584 | 7/20/1998 |
| 36 | 74 | 1 | 1-159 | 359760 | 895315 | 5539 | 605 | 12/31/1974 |
| 36 | 74 | 1 | 1-161 | 359987 | 895318 | 5546.9 | 607 | 12/30/1974 |
| 36 | 74 | 1 | 1-336 | 361086 | 895333 | 5537.8 | 624 | 7/30/1998 |
| 36 | 74 | 1 | 1-334 | 360990 | 895364 | 5534.6 | 624 | 7/30/1998 |
| 36 | 74 | 1 | 1-130 | 360942 | 895367 | 5533.9 | 640 | 5/15/1974 |
| 36 | 74 | 1 | 1-290 | 359727 | 895367 | 5538.5 | 683 | 7/16/1998 |
| 36 | 74 | 1 | 1-200 | 360827 | 895367 | 5531.3 | 1002 | 3/7/1977 |
| 36 | 74 | 1 | 1-137 | 361040 | 895368 | 5535.1 | 639 | 5/28/1974 |
| 36 | 74 | 1 | 1-133 | 361141 | 895369 | 5538.4 | 640 | 5/23/1974 |
| 36 | 74 | 1 | 1-277 | 359776 | 895370 | 5542.4 | 684 | 11/20/1997 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 1 | 1-131 | 361343 | 895371 | 5533.1 | 639 | 5/15/1974 |
| 36 | 74 | 1 | 1-211 | 359876 | 895380 | 5546.7 | 604 | 11/16/1977 |
| 36 | 74 | 1 | 1-81 | 360525 | 895400 | 1 | 1040 | 4/19/1969 |
| 36 | 74 | 1 | 1-346 | 360934 | 895406 | 5533.9 | 622 | 7/31/1998 |
| 36 | 74 | 1 | 1-160 | 359865 | 895429 | 5547.6 | 606 | 12/30/1974 |
| 36 | 74 | 1 | 1-333 | 359938 | 895435 | 5547 | 621 | 7/31/1998 |
| 36 | 74 | 1 | 1-261 | 359863 | 895479 | 5547.6 | 881 | 11/7/1997 |
| 36 | 74 | 1 | 1-415 | 359914 | 895481 | 5548.4 | 621 | 8/31/1998 |
| 36 | 74 | 1 | 1-85 | 362000 | 895490 | 1 | 955 | 2/18/1970 |
| 36 | 74 | 1 | 1-414 | 361237 | 895521 | 5529.3 | 622 | 8/31/1998 |
| 36 | 74 | 1 | 1-291 | 359810 | 895524 | 5547.4 | 683 | 7/14/1998 |
| 36 | 74 | 1 | 1-237 | 359854 | 895529 | 5549 | 657 | 10/21/1985 |
| 36 | 74 | 1 | 1-362 | 361073 | 895566 | 5534.2 | 620 | 8/14/1998 |
| 36 | 74 | 1 | 1-363 | 361233 | 895571 | 5526 | 620 | 8/26/1998 |
| 36 | 74 | 1 | 1-416 | 359883 | 895579 | 5551.6 | 621 | 9/1/1998 |
| 36 | 74 | 1 | 1-340 | 360923 | 895607 | 5528.4 | 624 | 8/3/1998 |
| 36 | 74 | 1 | 1-185 | 360972 | 895610 | 5528.4 | 605 | 6/18/1976 |
| 36 | 74 | 1 | 1-158 | 361023 | 895611 | 5530.5 | 642 | 6/6/1974 |
| 36 | 74 | 1 | 1-149 | 361097 | 895613 | 5532.5 | 633 | 6/4/1974 |
| 36 | 74 | 1 | 1-145 | 361241 | 895614 | 5523.5 | 643 | 5/31/1974 |
| 36 | 74 | 1 | 1-155 | 361076 | 895615 | 5531.9 | 639 | 6/5/1974 |
| 36 | 74 | 1 | 1-460 | 361279 | 895627 | 5521 | 602 | 9/25/1998 |
| 36 | 74 | 1 | 1-207 | 359964 | 895643 | 5551.7 | 676 | 3/10/1977 |
| 36 | 74 | 1 | 1-142 | 360065 | 895651 | 5544.6 | 599 | 6/4/1974 |
| 36 | 74 | 1 | 1-114 | 360269 | 895654 | 5529.1 | 643 | 5/21/1974 |
| 36 | 74 | 1 | 1-113 | 359854 | 895656 | 5541.2 | 639 | 5/22/1974 |
| 36 | 74 | 1 | 1-187 | 360453 | 895662 | 5530.6 | 606 | 6/21/1976 |
| 36 | 74 | 1 | 1-349 | 361067 | 895665 | 5528.9 | 620 | 8/5/1998 |
| 36 | 74 | 1 | 1-423 | 361177 | 895670 | 5524.4 | 622 | 9/2/1998 |
| 36 | 74 | 1 | 1-434 | 361226 | 895672 | 5521.1 | 602 | 9/11/1998 |
| 36 | 74 | 1 | 1-441 | 361275 | 895675 | 5518 | 601 | 9/15/1998 |
| 36 | 74 | 1 | 1-446 | 361327 | 895678 | 5516.2 | 602 | 9/17/1998 |
| 36 | 74 | 1 | 1-426 | 361126 | 895692 | 5527.3 | 621 | 9/3/1998 |
| 36 | 74 | 1 | 1-429 | 361173 | 895721 | 5523.1 | 622 | 9/9/1998 |
| 36 | 74 | 1 | 1-248 | 359236 | 895723 | 5503.6 | 804 | 6/1/1989 |
| 36 | 74 | 1 | 1-457 | 361221 | 895723 | 5519.5 | 603 | 9/24/1998 |
| 36 | 74 | 1 | 1-238 | 361633 | 895724 | 5498.4 | 600 | 7/7/1987 |
| 36 | 74 | 1 | 1-247 | 359571 | 895724 | 5511.3 | 800 | 5/26/1989 |
| 36 | 74 | 1 | 1-246 | 359453 | 895724 | 5501.7 | 802 | 6/1/1989 |
| 36 | 74 | 1 | 1-447 | 361276 | 895725 | 5515.6 | 602 | 9/17/1998 |
| 36 | 74 | 1 | 1-475 | 361328 | 895728 | 5512.3 | 604 | 10/13/1998 |
| 36 | 74 | 1 | 1-482 | 361328 | 895728 | 5512.3 | 643 | 10/12/1998 |
| 36 | 74 | 1 | 1-485 | 361377 | 895731 | 5513.4 | 601 | 11/20/1998 |
| 36 | 74 | 1 | 1-239 | 361811 | 895736 | 5496.2 | 600 | 7/7/1987 |
| 36 | 74 | 1 | 1-456 | 361224 | 895771 | 5517.5 | 603 | 9/24/1998 |
| 36 | 74 | 1 | 1-452 | 361274 | 895775 | 5514 | 603 | 9/18/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 1 | 1-486 | 361325 | 895778 | 5509.6 | 601 | 11/20/1998 |
| 36 | 74 | 1 | 1-232 | 361624 | 895849 | 5492.2 | 600 | 10/21/1985 |
| 36 | 74 | 1 | 1-233 | 361815 | 895858 | 5483.2 | 602 | 10/22/1985 |
| 36 | 74 | 1 | 1-84 | 363130 | 895876 | 5438.1 | 960 | 2/18/1970 |
| 36 | 74 | 1 | 1-361 | 361042 | 895892 | 5526.3 | 604 | 8/6/1998 |
| 36 | 74 | 1 | 1-327 | 360886 | 895932 | 5521.1 | 602 | 7/30/1998 |
| 36 | 74 | 1 | 1-168 | 360935 | 895934 | 5522.3 | 583 | 1/3/1975 |
| 36 | 74 | 1 | 1-244 | 359224 | 895936 | 5481.2 | 1000 | 10/8/1987 |
| 36 | 74 | 1 | 1-348 | 360985 | 895937 | 5522.8 | 603 | 8/3/1998 |
| 36 | 74 | 1 | 1-163 | 361094 | 895940 | 5524.6 | 584 | 12/30/1974 |
| 36 | 74 | 1 | 1-5 | 364200 | 895950 | 5483.9 | 517 | 6/22/1967 |
| 36 | 74 | 1 | 1-25 | 363631 | 895987 | 5415.3 | 610 | 11/21/1967 |
| 36 | 74 | 1 | 1-347 | 360879 | 895987 | 5515.5 | 604 | 8/5/1998 |
| 36 | 74 | 1 | 1-26 | 363834 | 895987 | 5442.8 | 600 | 11/21/1967 |
| 36 | 74 | 1 | 1-24 | 363449 | 895991 | 5420.7 | 600 | 11/21/1967 |
| 36 | 74 | 1 | 1-1 | 359429 | 895992 | 5484.5 | 559 | 6/19/1967 |
| 36 | 74 | 1 | 1-27 | 364034 | 895998 | 5468.4 | 600 | 11/21/1967 |
| 36 | 74 | 1 | 1-16 | 361432 | 895999 | 5518.3 | 660 | 11/27/1967 |
| 36 | 74 | 1 | 1-204 | 363137 | 896004 | 5449.6 | 538 | 3/10/1977 |
| 36 | 74 | 1 | 1-23 | 363238 | 896004 | 5439.9 | 610 | 11/22/1967 |
| 36 | 74 | 1 | 1-21 | 362628 | 896004 | 5466 | 600 | 11/22/1967 |
| 36 | 74 | 1 | 1-20 | 362428 | 896005 | 5449 | 580 | 11/22/1967 |
| 36 | 74 | 1 | 1-19 | 362228 | 896006 | 5470 | 560 | 11/22/1967 |
| 36 | 74 | 1 | 1-3 | 361828 | 896007 | 5488 | 502 | 6/19/1967 |
| 36 | 74 | 1 | 1-18 | 362028 | 896007 | 5476 | 661 | 11/29/1967 |
| 36 | 74 | 1 | 1-17 | 361628 | 896008 | 5499 | 635 | 11/27/1967 |
| 36 | 74 | 1 | 1-213 | 361808 | 896011 | 5489.2 | 564 | 11/16/1977 |
| 36 | 74 | 1 | 1-205 | 359767 | 896039 | 5513.7 | 662 | 3/9/1977 |
| 36 | 74 | 1 | 1-112 | 360266 | 896040 | 5503 | 642 | 5/20/1974 |
| 36 | 74 | 1 | 1-196 | 359974 | 896041 | 5508.9 | 1003 | 3/7/1977 |
| 36 | 74 | 1 | 1-4 | 363126 | 896043 | 5452.9 | 442 | 6/14/1967 |
| 36 | 74 | 1 | 1-2 | 360669 | 896045 | 5504.7 | 502 | 6/19/1967 |
| 36 | 74 | 1 | 1-111 | 359855 | 896057 | 5512.4 | 643 | 5/20/1974 |
| 36 | 74 | 1 | 1-203 | 362981 | 896063 | 5466.7 | 1003 | 3/8/1977 |
| 36 | 74 | 1 | 1-22 | 362889 | 896063 | 5471.3 | 550 | 11/22/1967 |
| 36 | 74 | 1 | 1-210 | 363027 | 896063 | 5462.3 | 604 | 11/16/1977 |
| 36 | 74 | 1 | 1-243 | 359246 | 896116 | 5464.5 | 1000 | 10/8/1987 |
| 36 | 74 | 1 | 1-305 | 360912 | 896136 | 5504.4 | 564 | 7/24/1993 |
| 36 | 74 | 1 | 1-317 | 361012 | 896139 | 5505.9 | 584 | 7/28/1993 |
| 36 | 74 | 1 | 1-220 | 360964 | 896139 | 5505.3 | 560 | 5/11/1981 |
| 36 | 74 | 1 | 1-83 | 363108 | 896237 | 5466.6 | 959 | 2/18/1970 |
| 36 | 74 | 1 | 1-164 | 361151 | 896282 | 5595.7 | 582 | 12/31/1974 |
| 36 | 74 | 1 | 1-182 | 360995 | 896282 | 5494.4 | 562 | 1/20/1975 |
| 36 | 74 | 1 | 1-167 | 360939 | 896284 | 5493.7 | 584 | 1/3/1975 |
| 36 | 74 | 1 | 1-169 | 361056 | 896284 | 5493.4 | 582 | 1/7/1975 |
| 36 | 74 | 1 | 1-202 | 363259 | 896290 | 5450 | 1003 | 3/11/1977 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 1 | 1-172 | 360825 | 896292 | 5494.1 | 582 | 1/13/1975 |
| 36 | 74 | 1 | 1-109 | 359867 | 896320 | 5488.3 | 636 | 5/23/1974 |
| 36 | 74 | 1 | 1-410 | 360944 | 896415 | 5490.2 | 560 | 8/31/1998 |
| 36 | 74 | 1 | 1-385 | 360992 | 896419 | 5487.3 | 561 | 8/19/1998 |
| 36 | 74 | 1 | 1-219 | 361043 | 896422 | 5487.7 | 560 | 5/11/1981 |
| 36 | 74 | 1 | 1-110 | 360270 | 896438 | 5468.5 | 641 | 5/21/1974 |
| 36 | 74 | 1 | 1-318 | 360883 | 896595 | 5477.4 | 564 | 7/28/1998 |
| 36 | 74 | 1 | 1-176 | 360933 | 896602 | 5475.6 | 543 | 1/13/1975 |
| 36 | 74 | 1 | 1-177 | 361045 | 896607 | 5477.3 | 544 | 1/14/1975 |
| 36 | 74 | 1 | 1-181 | 361103 | 896609 | 5480.3 | 539 | 1/16/1975 |
| 36 | 74 | 1 | 1-180 | 361159 | 896610 | 5483.4 | 543 | 1/15/1975 |
| 36 | 74 | 1 | 1-337 | 360929 | 896625 | 5472.9 | 561 | 8/5/1998 |
| 36 | 74 | 1 | 1-365 | 361156 | 896660 | 5484.2 | 564 | 8/7/1998 |
| 36 | 74 | 1 | 1-82 | 360553 | 896687 | 5465.7 | 963 | 2/20/1970 |
| 36 | 74 | 1 | 1-350 | 361003 | 896806 | 5486.6 | 584 | 8/5/1998 |
| 36 | 74 | 1 | 1-366 | 360839 | 896818 | 5474.8 | 561 | 8/10/1998 |
| 36 | 74 | 1 | 1-392 | 360588 | 896850 | 5458.5 | 541 | 8/19/1998 |
| 36 | 74 | 1 | 1-166 | 360999 | 896857 | 5488.4 | 582 | 1/6/1975 |
| 36 | 74 | 1 | 1-192 | 361051 | 896859 | 5489.9 | 697 | 6/28/1976 |
| 36 | 74 | 1 | 1-165 | 361244 | 896860 | 5501.3 | 581 | 12/31/1974 |
| 36 | 74 | 1 | 1-183 | 361146 | 896860 | 5495.3 | 563 | 1/22/1975 |
| 36 | 74 | 1 | 1-231 | 360681 | 896861 | 5452.5 | 623 | 10/21/1985 |
| 36 | 74 | 1 | 1-170 | 360835 | 896868 | 5473.2 | 541 | 1/9/1975 |
| 36 | 74 | 1 | 1-487 | 360883 | 896870 | 5481.2 | 559 | 3/31/1999 |
| 36 | 74 | 1 | 1-173 | 360922 | 896870 | 5484.4 | 603 | 1/13/1975 |
| 36 | 74 | 1 | 1-319 | 360995 | 896910 | 5484 | 563 | 7/28/1998 |
| 36 | 74 | 1 | 1-411 | 360682 | 896959 | 5451.9 | 541 | 9/1/1998 |
| 36 | 74 | 1 | 1-388 | 360962 | 896997 | 5476.8 | 558 | 8/13/1998 |
| 36 | 74 | 1 | 1-339 | 360887 | 897010 | 5471.5 | 563 | 8/6/1998 |
| 36 | 74 | 1 | 1-206 | 360773 | 897020 | 5460.7 | 602 | 3/9/1977 |
| 36 | 74 | 1 | 1-209 | 361076 | 897043 | 5485.9 | 603 | 5/6/1981 |
| 36 | 74 | 1 | 1-175 | 360982 | 897048 | 5479.6 | 563 | 1/14/1975 |
| 36 | 74 | 1 | 1-389 | 361031 | 897052 | 5483.6 | 580 | 8/13/1998 |
| 36 | 74 | 1 | 1-425 | 360672 | 897059 | 5448.9 | 541 | 9/3/1998 |
| 36 | 74 | 1 | 1-179 | 360908 | 897064 | 5472.9 | 545 | 1/16/1975 |
| 36 | 74 | 1 | 1-404 | 360767 | 897069 | 5460.6 | 541 | 8/21/1998 |
| 36 | 74 | 1 | 1-171 | 360840 | 897075 | 5466.1 | 543 | 1/10/1975 |
| 36 | 74 | 1 | 1-430 | 360671 | 897110 | 5446.5 | 523 | 9/18/1998 |
| 36 | 74 | 1 | 1-391 | 360836 | 897125 | 5461.8 | 561 | 8/18/1998 |
| 36 | 74 | 1 | 1-193 | 360901 | 897127 | 5469 | 562 | 6/28/1976 |
| 36 | 74 | 1 | 1-242 | 359784 | 897202 | 5488.5 | 1000 | 10/15/1987 |
| 36 | 74 | 1 | 1-406 | 360804 | 897240 | 5444.6 | 542 | 8/27/1998 |
| 36 | 74 | 1 | 1-401 | 360855 | 897245 | 5452 | 539 | 8/20/1998 |
| 36 | 74 | 1 | 1-387 | 360903 | 897248 | 5457.3 | 562 | 8/18/1998 |
| 36 | 74 | 1 | 1-199 | 361003 | 897257 | 5463.7 | 1003 | 3/7/1977 |
| 36 | 74 | 1 | 1-320 | 361052 | 897258 | 5465.8 | 543 | 7/28/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 1 | 1-405 | 361076 | 897311 | 5457.4 | 542 | 8/27/1998 |
| 36 | 74 | 1 | 1-201 | 360270 | 897364 | 5478.5 | 1001 | 3/15/1977 |
| 36 | 74 | 1 | 1-198 | 361111 | 897366 | 5450 | 1003 | 3/8/1977 |
| 36 | 74 | 1 | 1-222 | 359787 | 897375 | 5507.8 | 1000 | 5/11/1981 |
| 36 | 74 | 1 | 1-241 | 359685 | 897377 | 5516.8 | 1000 | 10/16/1987 |
| 36 | 74 | 1 | 1-338 | 360998 | 897385 | 5446.8 | 523 | 8/6/1998 |
| 36 | 74 | 1 | 1-174 | 361049 | 897388 | 5446.4 | 544 | 1/14/1975 |
| 36 | 74 | 1 | 1-223 | 359501 | 897420 | 5537.3 | 1000 | 5/11/1981 |
| 36 | 74 | 1 | 1-221 | 360039 | 897463 | 5496.7 | 1000 | 5/12/1981 |
| 36 | 74 | 1 | 1-368 | 361504 | 897472 | 5470.7 | 523 | 8/7/1998 |
| 36 | 74 | 1 | 1-378 | 361554 | 897473 | 5470.9 | 625 | 8/17/1998 |
| 36 | 74 | 1 | 1-197 | 361887 | 897480 | 5492.1 | 1003 | 3/7/1977 |
| 36 | 74 | 1 | 1-364 | 360943 | 897480 | 5429.5 | 524 | 8/7/1998 |
| 36 | 74 | 1 | 1-375 | 360992 | 897486 | 5429.1 | 524 | 8/10/1998 |
| 36 | 74 | 1 | 1-380 | 361044 | 897490 | 5427.9 | 581 | 8/11/1998 |
| 36 | 74 | 1 | 1-379 | 360991 | 897537 | 5421.5 | 586 | 8/11/1998 |
| 36 | 74 | 14 | 14-148 | 357727 | 886946 | 5654.4 | 1000 | 1/13/1999 |
| 36 | 74 | 14 | 14-30 | 356400 | 886800 | 5620.4 | 698 | 12/14/1967 |
| 36 | 74 | 14 | 14-34 | 358000 | 886800 | 5639.3 | 899 | 12/15/1967 |
| 36 | 74 | 14 | 14-33 | 357600 | 886800 | 5651.3 | 686 | 12/14/1967 |
| 36 | 74 | 14 | 14-32 | 357200 | 886800 | 5653.2 | 703 | 12/13/1967 |
| 36 | 74 | 14 | 14-31 | 356800 | 886800 | 5648.8 | 703 | 12/14/1967 |
| 36 | 74 | 14 | 14-190 | 356548 | 886776 | 5625 | 1002 | 1/26/1999 |
| 36 | 74 | 14 | 14-147 | 357990 | 886744 | 5642.9 | 1000 | 1/15/1999 |
| 36 | 74 | 14 | 14-118 | 356654 | 886732 | 5635.3 | 1000 | 10/11/1989 |
| 36 | 74 | 14 | 14-117 | 356548 | 886727 | 5627.6 | 960 | 10/9/1989 |
| 36 | 74 | 14 | 14-129 | 356494 | 886725 | 5626.1 | 882 | 11/12/1989 |
| 36 | 74 | 14 | 14-119 | 356439 | 886723 | 5625.5 | 1001 | 10/13/1989 |
| 36 | 74 | 14 | 14-84 | 357728 | 886703 | 5652.8 | 982 | 4/3/1978 |
| 36 | 74 | 14 | 14-144 | 356554 | 886680 | 5630.1 | 971 | 1/6/1999 |
| 36 | 74 | 14 | 14-20 | 357400 | 886600 | 5659.8 | 1115 | 8/2/1968 |
| 36 | 74 | 14 | 14-22 | 359000 | 886600 | 5627.1 | 1345 | 8/2/1968 |
| 36 | 74 | 14 | 14-18 | 355850 | 886550 | 5580.8 | 1091 | 8/1/1968 |
| 36 | 74 | 14 | 14-149 | 357399 | 886547 | 5661.6 | 999 | 1/12/1999 |
| 36 | 74 | 14 | 14-192 | 358291 | 886536 | 5652.8 | 1003 | 3/2/1999 |
| 36 | 74 | 14 | 14-86 | 357998 | 886491 | 5654.2 | 1001 | 4/3/1972 |
| 36 | 74 | 14 | 14-85 | 357732 | 886421 | 5661.9 | 1003 | 4/3/1972 |
| 36 | 74 | 14 | 14-10 | 357200 | 886400 | 5666.5 | 663 | 12/15/1967 |
| 36 | 74 | 14 | 14-196 | 356625 | 886288 | 5657.9 | 623 | 3/1/1999 |
| 36 | 74 | 14 | 14-143 | 356577 | 886286 | 5655.3 | 995 | 1/5/1999 |
| 36 | 74 | 14 | 14-189 | 356530 | 886280 | 5653 | 1004 | 1/26/1999 |
| 36 | 74 | 14 | 14-191 | 356688 | 886048 | 5664.6 | 991 | 1/22/1999 |
| 36 | 74 | 14 | 14-142 | 356637 | 886043 | 1 | 1007 | 12/18/1998 |
| 36 | 74 | 14 | 14-12 | 357000 | 886000 | 5676.6 | 969 | 12/15/1967 |
| 36 | 74 | 14 | 14-120 | 356662 | 885993 | 5664 | 960 | 11/16/1989 |
| 36 | 74 | 14 | 14-108 | 356980 | 885791 | 5671.8 | 1000 | 5/25/1989 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 14 | 14-116 | 356562 | 885740 | 5634.1 | 962 | 10/6/1989 |
| 36 | 74 | 14 | 14-114 | 356723 | 885739 | 5658.2 | 1000 | 9/29/1989 |
| 36 | 74 | 14 | 14-115 | 356638 | 885738 | 5650.5 | 960 | 10/3/1989 |
| 36 | 74 | 14 | 14-141 | 356727 | 885690 | 5657.1 | 991 | 1/19/1999 |
| 36 | 74 | 14 | 14-2 | 358000 | 885600 | 5687.1 | 690 | 9/25/1967 |
| 36 | 74 | 14 | 14-1 | 356800 | 885600 | 5667.2 | 742 | 9/25/1967 |
| 36 | 74 | 14 | 14-3 | 359200 | 885600 | 5650.7 | 630 | 9/25/1967 |
| 36 | 74 | 14 | 14-15 | 357200 | 885200 | 5688.6 | 995 | 12/15/1967 |
| 36 | 74 | 14 | 14-66 | 355850 | 885050 | 5669.6 | 1457 | 8/1/1968 |
| 36 | 74 | 14 | 14-68 | 357400 | 885000 | 5685.3 | 1100 | 7/31/1968 |
| 36 | 74 | 14 | 14-36 | 359000 | 885000 | 5647.5 | 1100 | 8/1/1968 |
| 36 | 74 | 14 | 14-5 | 355600 | 884800 | 5638.3 | 647 | 9/25/1967 |
| 36 | 74 | 14 | 14-110 | 356420 | 884293 | 5699.2 | 920 | 9/15/1989 |
| 36 | 74 | 14 | 14-140 | 356501 | 884285 | 5693.8 | 1001 | 1/6/1999 |
| 36 | 74 | 14 | 14-109 | 356525 | 884234 | 5707.5 | 915 | 9/7/1989 |
| 36 | 74 | 14 | 14-106 | 356573 | 884234 | 5701.7 | 1000 | 5/24/1998 |
| 36 | 74 | 14 | 14-107 | 356473 | 884232 | 5702.1 | 912 | 9/1/1989 |
| 36 | 74 | 14 | 14-195 | 359188 | 884220 | 5601.2 | 623 | 2/1/1999 |
| 36 | 74 | 14 | 14-198 | 359139 | 884219 | 5602.1 | 622 | 2/4/1999 |
| 36 | 74 | 14 | 14-145 | 359309 | 884172 | 5596.9 | 1001 | 1/8/1999 |
| 36 | 74 | 14 | 14-193 | 359169 | 884170 | 5600.3 | 620 | 1/21/1999 |
| 36 | 74 | 14 | 14-146 | 359215 | 884170 | 5599.4 | 1001 | 1/7/1999 |
| 36 | 74 | 14 | 14-194 | 359117 | 884168 | 5601.7 | 623 | 2/1/1999 |
| 36 | 74 | 14 | 14-197 | 359065 | 884168 | 5602.5 | 621 | 2/8/1999 |
| 36 | 74 | 14 | 14-199 | 359014 | 884166 | 5603.7 | 614 | 2/10/1999 |
| 36 | 73 | 17 | JI-116 | 372052 | 881486 | 5493.8 | 500 | 2/27/2006 |
| 36 | 73 | 17 | JI-117 | 372161 | 881489 | 5487.5 | 495 | 2/28/2006 |
| 36 | 73 | 17 | JI-121 | 371837 | 881494 | 5507.1 | 501 | 2/13/2006 |
| 36 | 73 | 17 | 17-118 | 372198 | 881504 | 5486.9 | 679 | 2/2/1999 |
| 36 | 73 | 17 | 17-108 | 372098 | 881507 | 5492.8 | 681 | 1/26/1999 |
| 36 | 73 | 17 | JP-64 | 371984 | 881507 | 5498.4 | 500 | 2/22/2006 |
| 36 | 73 | 17 | 17-104 | 372053 | 881509 | 5494.9 | 681 | 1/21/1999 |
| 36 | 73 | 17 | 17-70 | 372009 | 881511 | 5497.2 | 681 | 1/14/1999 |
| 36 | 73 | 17 | 17-115 | 372151 | 881512 | 5490.1 | 682 | 1/29/1999 |
| 36 | 73 | 17 | 17-68 | 371821 | 881514 | 5507.8 | 681 | 1/13/1999 |
| 36 | 73 | 17 | 17-67 | 371645 | 881515 | 5508.7 | 680 | 1/11/1999 |
| 36 | 73 | 17 | 17-81 | 371693 | 881515 | 5508.7 | 681 | 1/14/1999 |
| 36 | 73 | 17 | 17-51 | 371595 | 881516 | 5507.7 | 520 | 8/7/1998 |
| 36 | 73 | 17 | 17-66 | 371546 | 881517 | 5507.5 | 681 | 1/8/1999 |
| 36 | 73 | 17 | 17-75 | 371500 | 881518 | 5505.8 | 681 | 1/13/1999 |
| 36 | 73 | 17 | 17-40 | 371402 | 881520 | 5503.2 | 1129 | 3/31/1969 |
| 36 | 73 | 17 | 17-30 | 371301 | 881522 | 5504 | 602 | 10/29/1987 |
| 36 | 73 | 17 | JI-141 | 371698 | 881525 | 5509.2 | 500 | 2/28/2006 |
| 36 | 73 | 17 | JP-65 | 372105 | 881532 | 5493.7 | 500 | 2/24/2006 |
| 36 | 73 | 17 | JI-120 | 371919 | 881533 | 5504.9 | 501 | 2/9/2006 |
| 36 | 73 | 17 | 17-76 | 371209 | 881536 | 5507.7 | 960 | 1/18/1999 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 73 | 17 | JI-153 | 371362 | 881544 | 5504.6 | 515 | 2/24/2006 |
| 36 | 73 | 17 | 17-111 | 372195 | 881550 | 5490.2 | 681 | 1/26/1999 |
| 36 | 73 | 17 | 17-109 | 372145 | 881552 | 5491.8 | 680 | 1/25/1999 |
| 36 | 73 | 17 | 17-96 | 372098 | 881552 | 5494.8 | 681 | 1/21/1999 |
| 36 | 73 | 17 | JI-119 | 372037 | 881552 | 5497.8 | 501 | 2/21/2006 |
| 36 | 73 | 17 | 17-158 | 371960 | 881565 | 5503.1 | 545 | 3/11/2005 |
| 36 | 73 | 17 | JI-140 | 371726 | 881565 | 5509.2 | 500 | 2/6/2006 |
| 36 | 73 | 17 | 17-94 | 371349 | 881566 | 5504.4 | 681 | 1/19/1999 |
| 36 | 73 | 17 | 17-92 | 371398 | 881568 | 5504 | 681 | 1/18/1999 |
| 36 | 73 | 17 | 17-12 | 371819 | 881580 | 5509.1 | 502 | 11/2/1983 |
| 36 | 73 | 17 | 17-9 | 371899 | 881581 | 5507.6 | 500 | 11/2/1983 |
| 36 | 73 | 17 | JP-67 | 371972 | 881581 | 5503.2 | 500 | 2/8/2006 |
| 36 | 73 | 17 | 17-31 | 371470 | 881582 | 5502.9 | 502 | 10/29/1987 |
| 36 | 73 | 17 | JI-122 | 371903 | 881583 | 5507.3 | 500 | 2/14/2006 |
| 36 | 73 | 17 | JP-78 | 371659 | 881584 | 5508.3 | 500 | 2/24/2006 |
| 36 | 73 | 17 | 17-32 | 371596 | 881587 | 5505.3 | 500 | 10/29/1987 |
| 36 | 73 | 17 | JI-148 | 371433 | 881588 | 5504 | 502 | 2/9/2006 |
| 36 | 73 | 17 | JI-118 | 372143 | 881591 | 5494.8 | 500 | 2/23/2006 |
| 36 | 73 | 17 | 17-46 | 372004 | 881592 | 5501.1 | 520 | 8/10/1998 |
| 36 | 73 | 17 | 17-91 | 371666 | 881594 | 5507.9 | 978 | 1/15/1999 |
| 36 | 73 | 17 | 17-45 | 371714 | 881596 | 5507.7 | 541 | 8/7/1998 |
| 36 | 73 | 17 | 17-69 | 372054 | 881597 | 5499.6 | 681 | 1/13/1999 |
| 36 | 73 | 17 | 17-65 | 371764 | 881598 | 5508.3 | 681 | 1/11/1999 |
| 36 | 73 | 17 | 17-90 | 372099 | 881600 | 5497.3 | 681 | 1/15/1999 |
| 36 | 73 | 17 | JI-145 | 371555 | 881602 | 5505.1 | 501 | 2/23/2006 |
| 36 | 73 | 17 | 17-101 | 372142 | 881603 | 5495.4 | 681 | 1/19/1999 |
| 36 | 73 | 17 | JI-154 | 371295 | 881606 | 5505.1 | 537 | 2/9/2006 |
| 36 | 73 | 17 | 17-97 | 372191 | 881608 | 5493.6 | 681 | 1/20/1999 |
| 36 | 73 | 17 | JP-66 | 372075 | 881612 | 5499.3 | 502 | 2/14/2006 |
| 36 | 73 | 17 | JP-84 | 371367 | 881612 | 5504.1 | 537 | 2/23/2006 |
| 36 | 73 | 17 | 17-28 | 371420 | 881614 | 5502.6 | 503 | 7/15/1987 |
| 36 | 73 | 17 | 17-29 | 371301 | 881614 | 5503.6 | 502 | 10/29/1987 |
| 36 | 73 | 17 | 17-77 | 371375 | 881616 | 5504 | 683 | 1/12/1999 |
| 36 | 73 | 17 | JI-133 | 371791 | 881624 | 5507.7 | 500 | 2/7/2006 |
| 36 | 73 | 17 | JP-83 | 371491 | 881627 | 5503.5 | 500 | 2/28/2006 |
| 36 | 73 | 17 | 17-43 | 371227 | 881629 | 5505.6 | 659 | 8/6/1998 |
| 36 | 73 | 17 | 17-146 | 371540 | 881630 | 5503.9 | 543 | 3/10/2005 |
| 36 | 73 | 17 | JP-77 | 371722 | 881635 | 5507 | 496 | 2/27/2006 |
| 36 | 73 | 17 | 17-155 | 371880 | 881635 | 5507.2 | 544 | 3/11/2005 |
| 36 | 73 | 17 | JI-123 | 372011 | 881638 | 5503.7 | 500 | 2/7/2006 |
| 36 | 73 | 17 | JP-68 | 371941 | 881642 | 5506 | 500 | 2/13/2006 |
| 36 | 73 | 17 | 17-113 | 372052 | 881647 | 5502.2 | 681 | 1/29/1999 |
| 36 | 73 | 17 | 17-153 | 371740 | 881650 | 5506.7 | 544 | 3/11/2005 |
| 36 | 73 | 17 | 17-148 | 371650 | 881650 | 5505.5 | 543 | 3/10/2005 |
| 36 | 73 | 17 | 17-114 | 372139 | 881651 | 5498.2 | 680 | 1/28/1999 |
| 36 | 73 | 17 | JI-147 | 371424 | 881653 | 5503.7 | 520 | 2/10/2006 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 73 | 17 | 17-33 | 371826 | 881659 | 5506.4 | 555 | 7/12/1989 |
| 36 | 73 | 17 | 17-144 | 371335 | 881665 | 5504.6 | 683 | 3/9/2005 |
| 36 | 73 | 17 | 17-13 | 371934 | 881666 | 5506.2 | 501 | 11/2/1983 |
| 36 | 73 | 17 | JI-132 | 371875 | 881667 | 5506.5 | 500 | 2/8/2006 |
| 36 | 73 | 17 | 17-10 | 371990 | 881670 | 5505.1 | 500 | 11/2/1983 |
| 36 | 73 | 17 | JP-85 | 371297 | 881673 | 5504.9 | 540 | 2/13/2006 |
| 36 | 73 | 17 | JI-124 | 372093 | 881679 | 5502 | 501 | 2/6/2006 |
| 36 | 73 | 17 | JI-155 | 371365 | 881684 | 5504.1 | 538 | 2/22/2006 |
| 36 | 73 | 17 | 17-78 | 371477 | 881684 | 5503.1 | 680 | 1/12/1999 |
| 36 | 73 | 17 | 17-140 | 371200 | 881685 | 5505.9 | 685 | 2/23/2005 |
| 36 | 73 | 17 | 17-44 | 371522 | 881685 | 5502.5 | 660 | 8/7/1998 |
| 36 | 73 | 17 | 17-38 | 371420 | 881686 | 5507.7 | 685 | 6/13/1991 |
| 36 | 73 | 17 | JMP-6 | 371811 | 881694 | 5505.9 | 582 | 3/23/2005 |
| 36 | 73 | 17 | JI-146 | 371508 | 881696 | 5502.9 | 512 | 3/1/2006 |
| 36 | 73 | 17 | 17-34 | 371698 | 881699 | 5503.8 | 554 | 7/11/1989 |
| 36 | 73 | 17 | 17-103 | 372184 | 881704 | 5499.9 | 681 | 1/20/1999 |
| 36 | 73 | 17 | JP-69 | 372028 | 881707 | 5504 | 500 | 2/9/2006 |
| 36 | 73 | 17 | 17-24 | 371598 | 881707 | 5501.6 | 503 | 7/15/1987 |
| 36 | 73 | 17 | 17-35 | 371298 | 881710 | 5505 | 1005 | 7/12/1998 |
| 36 | 73 | 17 | JI-126 | 371959 | 881710 | 5504.9 | 500 | 3/1/2006 |
| 36 | 73 | 17 | JI-157 | 371240 | 881717 | 5505.3 | 532 | 2/8/2006 |
| 36 | 73 | 17 | 17-156 | 371940 | 881720 | 5505.1 | 545 | 3/17/2005 |
| 36 | 73 | 17 | 17-154 | 371850 | 881720 | 5505.7 | 545 | 3/16/2005 |
| 36 | 73 | 17 | 17-152 | 371770 | 881720 | 5504.4 | 545 | 3/16/2005 |
| 36 | 73 | 17 | 17-52 | 371231 | 881730 | 5504.9 | 658 | 8/11/1998 |
| 36 | 73 | 17 | 17-105 | 371472 | 881730 | 5502.9 | 681 | 1/22/1999 |
| 36 | 73 | 17 | 17-145 | 371372 | 881730 | 5504.3 | 683 | 3/10/2005 |
| 36 | 73 | 17 | 17-89 | 372099 | 881736 | 5502.8 | 681 | 1/14/1999 |
| 36 | 73 | 17 | JI-156 | 371304 | 881744 | 5504.8 | 520 | 2/14/2006 |
| 36 | 73 | 17 | 17-26 | 371419 | 881760 | 5502.3 | 502 | 7/10/1987 |
| 36 | 73 | 17 | 17-25 | 371539 | 881761 | 5501 | 500 | 7/10/1987 |
| 36 | 73 | 17 | 17-21 | 371598 | 881762 | 5501 | 502 | 10/29/1985 |
| 36 | 73 | 17 | 17-143 | 371310 | 881765 | 5504.8 | 675 | 3/9/2005 |
| 36 | 73 | 17 | 17-17 | 371692 | 881767 | 5501 | 500 | 10/29/1984 |
| 36 | 73 | 17 | 17-6 | 371788 | 881772 | 5503 | 800 | 11/30/1981 |
| 36 | 73 | 17 | 17-7 | 371995 | 881777 | 5504.3 | 800 | 11/30/1981 |
| 36 | 73 | 17 | 17-16 | 371885 | 881778 | 5503.1 | 500 | 10/29/1984 |
| 36 | 73 | 17 | 17-8 | 372098 | 881782 | 5503.2 | 701 | 11/4/1982 |
| 36 | 73 | 17 | 17-71 | 372147 | 881784 | 5501.9 | 681 | 1/13/1999 |
| 36 | 73 | 17 | 17-139 | 371200 | 881785 | 5505.7 | 682 | 2/23/2005 |
| 36 | 73 | 17 | JMP-5 | 371249 | 881785 | 5505.2 | 525 | 5/6/2005 |
| 36 | 73 | 17 | JP-75 | 371619 | 881790 | 5502 | 495 | 2/28/2006 |
| 36 | 73 | 17 | JI-137 | 371550 | 881796 | 5502 | 500 | 2/22/2006 |
| 36 | 73 | 17 | 17-63 | 371492 | 881808 | 5502.4 | 681 | 1/8/1999 |
| 36 | 73 | 17 | 17-100 | 371326 | 881811 | 5504.4 | 681 | 1/19/1999 |
| 36 | 73 | 17 | 17-53 | 371541 | 881811 | 5501.6 | 660 | 8/11/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 73 | 17 | 17-79 | 371372 | 881812 | 5503.8 | 681 | 1/12/1999 |
| 36 | 73 | 17 | 17-27 | 371420 | 881815 | 5502.3 | 502 | 1/15/1987 |
| 36 | 73 | 17 | 17-151 | 371740 | 881820 | 5501.3 | 545 | 3/16/2005 |
| 36 | 73 | 17 | 17-147 | 371638 | 881820 | 5501.5 | 545 | 3/15/2005 |
| 36 | 73 | 17 | 17-141 | 371250 | 881830 | 5505.1 | 683 | 2/23/2005 |
| 36 | 73 | 17 | 17-47 | 371942 | 881835 | 5502.1 | 518 | 8/10/1998 |
| 36 | 73 | 17 | JP-74 | 371722 | 881849 | 5500.6 | 500 | 3/1/2006 |
| 36 | 73 | 17 | JI-136 | 371652 | 881851 | 5500.9 | 501 | 2/24/2006 |
| 36 | 73 | 17 | 17-93 | 371336 | 881855 | 5504.1 | 679 | 1/19/1999 |
| 36 | 73 | 17 | JI-159 | 371234 | 881856 | 5504.9 | 520 | 2/21/2006 |
| 36 | 73 | 17 | 17-74 | 371431 | 881857 | 5503.4 | 682 | 1/11/1999 |
| 36 | 73 | 17 | 17-82 | 371383 | 881858 | 5503.3 | 682 | 1/13/1999 |
| 36 | 73 | 17 | 17-36 | 371880 | 881868 | 5496.9 | 682 | 7/16/1990 |
| 36 | 73 | 17 | 17-22 | 371607 | 881870 | 5500.4 | 503 | 10/29/1985 |
| 36 | 73 | 17 | 17-150 | 371790 | 881870 | 5500.2 | 545 | 3/16/2005 |
| 36 | 73 | 17 | 17-48 | 371694 | 881872 | 5500.1 | 657 | 8/7/1998 |
| 36 | 73 | 17 | 17-11 | 372098 | 881875 | 5500.8 | 500 | 11/2/1983 |
| 36 | 73 | 17 | 17-14 | 372019 | 881876 | 5501.8 | 500 | 11/3/1983 |
| 36 | 73 | 17 | 17-20 | 371493 | 881878 | 5499 | 503 | 10/29/1985 |
| 36 | 73 | 17 | 17-138 | 371205 | 881890 | 5505.4 | 685 | 3/14/2005 |
| 36 | 73 | 17 | 17-57 | 371256 | 881891 | 5505 | 680 | 1/7/1999 |
| 36 | 73 | 17 | JM-14 | 372553 | 881904 | 5498.7 | 542 | 3/23/2005 |
| 36 | 73 | 17 | 17-59 | 371380 | 881905 | 5503.8 | 681 | 1/8/1999 |
| 36 | 73 | 17 | 17-106 | 371529 | 881916 | 5502.7 | 681 | 1/21/1999 |
| 36 | 73 | 17 | 17-88 | 371692 | 881918 | 5500.6 | 677 | 1/15/1999 |
| 36 | 73 | 17 | JI-129 | 371725 | 881919 | 5500.3 | 480 | 2/27/2006 |
| 36 | 73 | 17 | 17-149 | 371740 | 881920 | 5500.3 | 544 | 3/15/2005 |
| 36 | 73 | 17 | 17-62 | 371829 | 881920 | 5499.4 | 681 | 1/12/1999 |
| 36 | 73 | 17 | 17-72 | 371254 | 881936 | 5504.5 | 680 | 1/11/1999 |
| 36 | 73 | 17 | 17-142 | 371313 | 881940 | 5504.3 | 685 | 3/15/2005 |
| 36 | 73 | 17 | 17-58 | 371376 | 881956 | 5503.9 | 680 | 1/7/1999 |
| 36 | 73 | 17 | 17-54 | 371425 | 881960 | 5502.9 | 660 | 8/12/1998 |
| 36 | 73 | 17 | 17-23 | 371525 | 881968 | 5501.4 | 504 | 10/29/1985 |
| 36 | 73 | 17 | 17-42 | 371910 | 881969 | 5500.7 | 660 | 5/14/1992 |
| 36 | 73 | 17 | 17-18 | 371819 | 881977 | 5498.9 | 500 | 10/29/1984 |
| 36 | 73 | 17 | 17-19 | 371722 | 881977 | 5499.7 | 500 | 10/29/1984 |
| 36 | 73 | 17 | 17-15 | 372016 | 881977 | 5497.4 | 502 | 11/3/1983 |
| 36 | 73 | 17 | 17-87 | 371351 | 882002 | 5504.1 | 682 | 1/15/1999 |
| 36 | 73 | 17 | 17-83 | 371871 | 882019 | 5500.1 | 682 | 1/13/1999 |
| 36 | 73 | 17 | 17-84 | 371720 | 882023 | 5501.2 | 682 | 1/14/1999 |
| 36 | 73 | 17 | 17-86 | 371471 | 882099 | 5503 | 681 | 1/15/1999 |
| 36 | 73 | 17 | 17-102 | 371715 | 882111 | 5500.2 | 681 | 1/18/1999 |
| 36 | 73 | 17 | 17-73 | 371466 | 882145 | 5503 | 682 | 1/12/1999 |
| 36 | 73 | 17 | 17-107 | 371363 | 882182 | 5503.7 | 681 | 1/22/1999 |
| 36 | 73 | 17 | 17-55 | 371413 | 882186 | 5502.8 | 680 | 8/12/1998 |
| 36 | 73 | 17 | 17-50 | 372132 | 882191 | 5503.1 | 680 | 8/10/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 73 | 17 | 17-60 | 371463 | 882192 | 5502.6 | 681 | 1/7/1999 |
| 36 | 73 | 17 | 17-85 | 371510 | 882197 | 5502.4 | 682 | 1/15/1999 |
| 36 | 73 | 17 | 17-49 | 371929 | 882199 | 5501.6 | 678 | 8/10/1998 |
| 36 | 73 | 17 | 17-110 | 371306 | 882201 | 5503.8 | 681 | 1/25/1999 |
| 36 | 73 | 17 | JM-13 | 372167 | 882223 | 5504.3 | 542 | 3/23/2005 |
| 36 | 73 | 17 | 17-95 | 371409 | 882235 | 5502.8 | 681 | 1/20/1999 |
| 36 | 73 | 17 | 17-99 | 371481 | 882241 | 5502.3 | 683 | 1/18/1999 |
| 36 | 73 | 17 | 17-112 | 371204 | 882248 | 5504.9 | 679 | 1/27/1999 |
| 36 | 73 | 17 | 17-119 | 371255 | 882254 | 5504.5 | 761 | 2/16/1999 |
| 36 | 73 | 17 | 17-123 | 371304 | 882258 | 5503.8 | 681 | 2/26/1999 |
| 36 | 73 | 17 | 17-116 | 371194 | 882296 | 5505 | 681 | 2/1/1999 |
| 36 | 73 | 17 | 17-5 | 370168 | 882304 | 1 | 525 | 9/26/1967 |
| 36 | 73 | 17 | JM-10 | 370740 | 882365 | 5510.5 | 543 | 4/1/2005 |
| 36 | 73 | 17 | 17-98 | 371490 | 882386 | 5501.1 | 682 | 1/18/1999 |
| 36 | 73 | 17 | 17-117 | 370929 | 882426 | 5509.2 | 681 | 2/1/1999 |
| 36 | 73 | 17 | JM-12 | 371719 | 882445 | 5500.9 | 543 | 3/31/2005 |
| 36 | 73 | 17 | JM-11 | 371221 | 882502 | 5505.2 | 543 | 4/1/2005 |
| 36 | 73 | 17 | 17-120 | 370924 | 882526 | 5510 | 781 | 2/16/1999 |
| 36 | 73 | 17 | 17-80 | 371579 | 882573 | 5501.8 | 683 | 1/14/1999 |
| 36 | 73 | 17 | 17-126 | 371012 | 882678 | 5509.9 | 681 | 3/2/1999 |
| 36 | 73 | 17 | 17-61 | 371898 | 882687 | 5498.5 | 681 | 1/11/1999 |
| 36 | 73 | 17 | 17-122 | 371008 | 882726 | 5509.7 | 681 | 2/26/1999 |
| 36 | 73 | 17 | 17-129 | 370713 | 882749 | 5513.3 | 681 | 3/5/1999 |
| 36 | 73 | 17 | 17-4 | 374867 | 882927 | 1 | 455 | 9/27/1967 |
| 36 | 73 | 17 | 17-3 | 373667 | 882948 | 1 | 505 | 9/27/1967 |
| 36 | 73 | 17 | 17-1 | 371577 | 882959 | 1 | 520 | 9/26/1967 |
| 36 | 73 | 17 | 17-2 | 372485 | 882960 | 1 | 515 | 9/26/1967 |
| 36 | 73 | 17 | 17-127 | 369939 | 883844 | 5442.9 | 682 | 3/8/1999 |
| 36 | 73 | 17 | 17-124 | 369934 | 883938 | 5441.6 | 763 | 2/24/1999 |
| 36 | 73 | 17 | 17-121 | 369929 | 884037 | 5441.1 | 762 | 2/17/1999 |
| 36 | 73 | 17 | 17-125 | 369970 | 884134 | 5438 | 722 | 2/24/1999 |
| 36 | 73 | 17 | 17-128 | 369968 | 884183 | 5439.6 | 677 | 3/5/1999 |
| 36 | 73 | 18 | 18-98 | 367692 | 881556 | 5541.4 | 817 | 3/12/1999 |
| 36 | 73 | 18 | 18-85 | 367667 | 881603 | 5541.8 | 820 | 2/19/1999 |
| 36 | 73 | 18 | 18-79 | 367716 | 881607 | 5541 | 818 | 2/12/1999 |
| 36 | 73 | 18 | 18-71 | 367764 | 881611 | 5540.7 | 821 | 2/9/1999 |
| 36 | 73 | 18 | 18-65 | 367813 | 881615 | 5540.2 | 819 | 2/4/1999 |
| 36 | 73 | 18 | 18-84 | 367699 | 881775 | 5534.6 | 821 | 2/22/1999 |
| 36 | 73 | 18 | 18-46 | 365400 | 881800 | 5579.7 | 1090 | 8/6/1968 |
| 36 | 73 | 18 | 18-48 | 367800 | 881800 | 5536.4 | 1200 | 8/7/1968 |
| 36 | 73 | 18 | 18-50 | 369400 | 881800 | 5520 | 1098 | 8/7/1968 |
| 36 | 73 | 18 | 18-68 | 367746 | 881802 | 5532.6 | 816 | 2/9/1999 |
| 36 | 73 | 18 | 18-91 | 369128 | 881804 | 5488.5 | 819 | 3/1/1999 |
| 36 | 73 | 18 | 18-78 | 367794 | 881851 | 5530.1 | 820 | 2/12/1999 |
| 36 | 73 | 18 | 18-52 | 367914 | 881924 | 1 | 1002 | 3/13/1970 |
| 36 | 73 | 18 | 18-51 | 367914 | 881924 | 1 | 1003 | 3/12/1970 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 73 | 18 | 18-83 | 367851 | 881942 | 5526.7 | 821 | 2/19/1999 |
| 36 | 73 | 18 | 18-64 | 367823 | 881991 | 5523.4 | 817 | 2/3/1999 |
| 36 | 73 | 18 | 18-70 | 367876 | 881994 | 5524.5 | 821 | 2/8/1999 |
| 36 | 73 | 18 | 18-92 | 367810 | 882187 | 5521.5 | 821 | 3/3/1999 |
| 36 | 73 | 18 | 18-88 | 367857 | 882189 | 5521.4 | 821 | 3/1/1999 |
| 36 | 73 | 18 | 18-87 | 367957 | 882194 | 5521.1 | 817 | 2/23/1999 |
| 36 | 73 | 18 | 18-95 | 367833 | 882239 | 5522.1 | 820 | 3/9/1999 |
| 36 | 73 | 18 | 18-9 | 368696 | 883131 | 1 | 520 | 9/26/1967 |
| 36 | 73 | 18 | 18-8 | 367482 | 883147 | 1 | 500 | 9/26/1967 |
| 36 | 73 | 18 | 18-7 | 366283 | 883171 | 1 | 570 | 9/26/1967 |
| 36 | 73 | 18 | 18-6 | 365085 | 883200 | 1 | 560 | 9/26/1967 |
| 36 | 73 | 18 | 18-34 | 365400 | 883400 | 5546.8 | 1090 | 8/8/1968 |
| 36 | 73 | 18 | 18-38 | 369400 | 883400 | 5491.8 | 1102 | 8/7/1968 |
| 36 | 73 | 18 | 18-74 | 369448 | 883441 | 5469.7 | 761 | 2/10/1999 |
| 36 | 73 | 18 | 18-69 | 369269 | 883470 | 5483.8 | 761 | 2/5/1999 |
| 36 | 73 | 18 | 18-60 | 369163 | 883517 | 5491.6 | 761 | 1/28/1999 |
| 36 | 73 | 18 | 18-59 | 369264 | 883524 | 5485.3 | 681 | 1/25/1999 |
| 36 | 73 | 18 | 18-75 | 369311 | 883527 | 5481.9 | 759 | 2/10/1999 |
| 36 | 73 | 18 | 18-61 | 369570 | 883542 | 5463 | 681 | 1/27/1999 |
| 36 | 73 | 18 | 18-62 | 369257 | 883572 | 5486.5 | 760 | 2/3/1999 |
| 36 | 73 | 18 | 18-66 | 369356 | 883579 | 5479.2 | 759 | 2/5/1999 |
| 36 | 73 | 18 | 18-80 | 369453 | 883585 | 5472.5 | 761 | 2/18/1999 |
| 36 | 73 | 18 | 18-63 | 369567 | 883592 | 5465.4 | 762 | 2/2/1999 |
| 36 | 73 | 18 | 18-90 | 369159 | 883617 | 5490.9 | 761 | 3/2/1999 |
| 36 | 73 | 18 | 18-72 | 369562 | 883635 | 5468.1 | 760 | 2/8/1999 |
| 36 | 73 | 18 | 18-93 | 369155 | 883666 | 5487.9 | 762 | 3/4/1999 |
| 36 | 73 | 18 | 18-67 | 369559 | 883686 | 5471.4 | 751 | 2/4/1999 |
| 36 | 73 | 18 | 18-94 | 369459 | 883729 | 5476.2 | 761 | 3/4/1999 |
| 36 | 73 | 18 | 18-81 | 369509 | 883732 | 5475.5 | 762 | 2/18/1999 |
| 36 | 73 | 18 | 18-73 | 369556 | 883736 | 5473.7 | 759 | 2/8/1999 |
| 36 | 73 | 18 | 18-77 | 369603 | 883740 | 5472.5 | 760 | 2/11/1999 |
| 36 | 73 | 18 | 18-97 | 369147 | 883757 | 5482.2 | 761 | 3/9/1999 |
| 36 | 73 | 18 | 18-76 | 369554 | 883785 | 5475.3 | 761 | 2/11/1999 |
| 36 | 73 | 18 | 18-82 | 369597 | 883837 | 5473.8 | 760 | 2/17/1999 |
| 36 | 73 | 18 | 18-99 | 369689 | 883845 | 5470.1 | 760 | 3/12/1999 |
| 36 | 73 | 18 | 18-96 | 369737 | 883846 | 5465.3 | 762 | 3/8/1999 |
| 36 | 73 | 18 | 18-86 | 369640 | 883887 | 5471.9 | 761 | 2/23/1999 |
| 36 | 73 | 18 | 18-89 | 369389 | 883891 | 5470.1 | 766 | 3/3/1999 |
| 36 | 73 | 18 | 18-22 | 365400 | 885000 | 5523.6 | 1095 | 8/8/1968 |
| 36 | 73 | 18 | 18-24 | 367000 | 885000 | 5536.1 | 1099 | 8/8/1968 |
| 36 | 73 | 18 | 18-26 | 368600 | 885000 | 5476.6 | 1100 | 8/8/1968 |
| 36 | 73 | 18 | 18-54 | 367575 | 885481 | 5529.4 | 340 | 3/13/1981 |
| 36 | 73 | 18 | 18-58 | 367686 | 885488 | 5530.5 | 353 | 11/4/1982 |
| 36 | 73 | 18 | 18-5 | 369892 | 885493 | 5458 | 480 | 2/26/1967 |
| 36 | 73 | 18 | 18-3 | 367492 | 885504 | 5528 | 540 | 9/26/1967 |
| 36 | 73 | 18 | 18-4 | 368692 | 885519 | 5484 | 520 | 9/26/1967 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 73 | 18 | 18-1 | 365092 | 885524 | 5487 | 500 | 9/26/1967 |
| 36 | 73 | 18 | 18-2 | 366292 | 885529 | 5523 | 540 | 9/26/1967 |
| 36 | 73 | 18 | 18-57 | 367579 | 885610 | 5524.1 | 350 | 11/4/1982 |
| 36 | 73 | 18 | 18-55 | 365203 | 885686 | 1 | 501 | 3/16/1981 |
| 36 | 73 | 18 | 18-56 | 366770 | 886585 | 5481.6 | 360 | 11/4/1982 |
| 36 | 73 | 18 | 18-53 | 366902 | 886590 | 5488.4 | 300 | 3/13/1981 |
| 36 | 73 | 18 | 18-14 | 368600 | 886600 | 5482.4 | 1100 | 8/9/1968 |
| 36 | 73 | 18 | 18-12 | 367000 | 886600 | 5496.7 | 1103 | 8/8/1968 |
| 36 | 73 | 18 | 18-10 | 365400 | 886600 | 5503.9 | 1061 | 8/8/1968 |
| 36 | 74 | 2 | 2-302 | 355480 | 896150 | 5572.4 | 904 | 6/23/1998 |
| 36 | 74 | 2 | 2-310 | 355499 | 896554 | 5552.4 | 885 | 6/29/1998 |
| 36 | 74 | 2 | 2-344 | 355505 | 895647 | 5566.4 | 1010 | 7/20/1998 |
| 36 | 74 | 2 | 2-10 | 355532 | 893032 | 5602.3 | 681 | 9/27/1967 |
| 36 | 74 | 2 | 2-8 | 355536 | 896038 | 5571.2 | 664 | 9/28/1967 |
| 36 | 74 | 2 | 2-303 | 355549 | 896558 | 5551.8 | 908 | 6/23/1998 |
| 36 | 74 | 2 | 2-288 | 355578 | 896154 | 5571.5 | 906 | 6/9/1998 |
| 36 | 74 | 2 | 2-12 | 355595 | 897204 | 5563.8 | 740 | 11/15/1967 |
| 36 | 74 | 2 | 2-289 | 355595 | 895848 | 5564.2 | 908 | 6/2/1998 |
| 36 | 74 | 2 | 2-295 | 355599 | 895797 | 5564.9 | 642 | 6/23/1998 |
| 36 | 74 | 2 | 2-311 | 355603 | 895746 | 5565.2 | 888 | 6/29/1998 |
| 36 | 74 | 2 | 2-322 | 355607 | 895696 | 5565.7 | 909 | 7/6/1998 |
| 36 | 74 | 2 | 2-305 | 355626 | 896154 | 5569.7 | 687 | 6/26/1998 |
| 36 | 74 | 2 | 2-290 | 355649 | 896564 | 5550.8 | 898 | 6/15/1998 |
| 36 | 74 | 2 | 2-336 | 355653 | 895749 | 5566.2 | 905 | 7/15/1998 |
| 36 | 74 | 2 | 2-321 | 355660 | 895644 | 5567.6 | 903 | 7/2/1998 |
| 36 | 74 | 2 | 2-414 | 355662 | 894503 | 5568.4 | 1023 | 8/14/1998 |
| 36 | 74 | 2 | 2-282 | 355672 | 896156 | 5568.8 | 901 | 5/29/1998 |
| 36 | 74 | 2 | 2-286 | 355678 | 897108 | 5563.1 | 906 | 6/16/1998 |
| 36 | 74 | 2 | 2-333 | 355680 | 896103 | 5569.3 | 912 | 7/8/1998 |
| 36 | 74 | 2 | 2-287 | 355686 | 896002 | 5566.8 | 908 | 6/4/1998 |
| 36 | 74 | 2 | 2-338 | 355692 | 895247 | 5547.6 | 905 | 7/17/1998 |
| 36 | 74 | 2 | 2-306 | 355693 | 895952 | 5563.6 | 891 | 6/26/1998 |
| 36 | 74 | 2 | 2-274 | 355696 | 895853 | 5564.8 | 980 | 5/4/1998 |
| 36 | 74 | 2 | 2-312 | 355715 | 895597 | 5568 | 688 | 6/30/1998 |
| 36 | 74 | 2 | 2-296 | 355731 | 896056 | 5567 | 902 | 6/22/1998 |
| 36 | 74 | 2 | 2-319 | 355736 | 896008 | 5565.4 | 906 | 7/2/1998 |
| 36 | 74 | 2 | 2-346 | 355738 | 895348 | 5553.7 | 686 | 7/10/1998 |
| 36 | 74 | 2 | 2-327 | 355739 | 895300 | 5550 | 684 | 7/7/1998 |
| 36 | 74 | 2 | 2-291 | 355742 | 895250 | 5546.4 | 959 | 6/26/1998 |
| 36 | 74 | 2 | 2-294 | 355745 | 895855 | 5563.1 | 909 | 6/10/1998 |
| 36 | 74 | 2 | 2-276 | 355745 | 897212 | 5561.6 | 908 | 5/22/1998 |
| 36 | 74 | 2 | 2-313 | 355748 | 895806 | 5565.5 | 681 | 6/30/1998 |
| 36 | 74 | 2 | 2-369 | 355758 | 895700 | 5568.1 | 623 | 7/16/1998 |
| 36 | 74 | 2 | 2-353 | 355761 | 895650 | 5567.9 | 664 | 7/14/1998 |
| 36 | 74 | 2 | 2-301 | 355765 | 895600 | 5567.8 | 898 | 6/23/1998 |
| 36 | 74 | 2 | 2-326 | 355770 | 894949 | 5541.5 | 1000 | 8/11/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 2 | 2-307 | 355779 | 897116 | 5561.6 | 885 | 6/26/1998 |
| 36 | 74 | 2 | 2-325 | 355782 | 896058 | 5565.9 | 900 | 7/6/1998 |
| 36 | 74 | 2 | 2-308 | 355799 | 895857 | 5562.4 | 799 | 6/25/1998 |
| 36 | 74 | 2 | 2-297 | 355800 | 895808 | 5565.2 | 900 | 6/24/1998 |
| 36 | 74 | 2 | 2-320 | 355803 | 896627 | 5548.1 | 905 | 7/6/1998 |
| 36 | 74 | 2 | 2-293 | 355803 | 896574 | 5548.5 | 897 | 6/24/1998 |
| 36 | 74 | 2 | 2-332 | 355804 | 895758 | 5567.2 | 900 | 7/7/1998 |
| 36 | 74 | 2 | 2-331 | 355806 | 896531 | 5549.6 | 903 | 7/7/1998 |
| 36 | 74 | 2 | 2-383 | 355813 | 895650 | 5567.9 | 623 | 7/20/1998 |
| 36 | 74 | 2 | 2-277 | 355819 | 895554 | 5567 | 1009 | 5/26/1998 |
| 36 | 74 | 2 | 2-283 | 355848 | 895860 | 5562.1 | 906 | 5/29/1998 |
| 36 | 74 | 2 | 2-309 | 355852 | 896575 | 5547.5 | 882 | 6/30/1998 |
| 36 | 74 | 2 | 2-406 | 355863 | 895651 | 5568.2 | 622 | 7/27/1998 |
| 36 | 74 | 2 | 2-398 | 355868 | 895604 | 5567.7 | 623 | 7/22/1998 |
| 36 | 74 | 2 | 2-347 | 355876 | 895507 | 5564.7 | 687 | 7/10/1998 |
| 36 | 74 | 2 | 2-315 | 355881 | 897125 | 5561.2 | 902 | 6/30/1998 |
| 36 | 74 | 2 | 2-334 | 355886 | 897076 | 5560.9 | 905 | 7/10/1998 |
| 36 | 74 | 2 | 2-323 | 355891 | 897026 | 5559.7 | 905 | 7/2/1998 |
| 36 | 74 | 2 | 2-316 | 355924 | 895511 | 5564.5 | 910 | 7/1/1998 |
| 36 | 74 | 2 | 2-328 | 355927 | 895461 | 5561.1 | 677 | 7/7/1998 |
| 36 | 74 | 2 | 2-345 | 355939 | 897029 | 5559.1 | 865 | 7/13/1998 |
| 36 | 74 | 2 | 2-314 | 355944 | 895260 | 5543.6 | 1003 | 7/1/1998 |
| 36 | 74 | 2 | 2-368 | 355975 | 895513 | 5565.5 | 623 | 7/20/1998 |
| 36 | 74 | 2 | 2-280 | 355995 | 895872 | 5563.4 | 905 | 5/22/1998 |
| 36 | 74 | 2 | 2-270 | 356177 | 895827 | 5570.4 | 995 | 5/21/1998 |
| 36 | 74 | 2 | 2-298 | 356227 | 895830 | 5569.5 | 902 | 6/22/1998 |
| 36 | 74 | 2 | 2-278 | 356233 | 895729 | 5569 | 844 | 5/20/1998 |
| 36 | 74 | 2 | 2-264 | 356275 | 895833 | 5569.3 | 842 | 11/13/1997 |
| 36 | 74 | 2 | 2-258 | 356324 | 895833 | 5569.1 | 905 | 11/4/1997 |
| 36 | 74 | 2 | 2-236 | 356423 | 895835 | 5566.5 | 899 | 10/15/1997 |
| 36 | 74 | 2 | 2-234 | 356447 | 896130 | 5555.8 | 903 | 10/15/1997 |
| 36 | 74 | 2 | 2-271 | 356499 | 896085 | 5560.4 | 979 | 5/6/1998 |
| 36 | 74 | 2 | 2-230 | 356520 | 895840 | 5562.7 | 901 | 10/9/1997 |
| 36 | 74 | 2 | 2-232 | 356547 | 896139 | 5556.8 | 901 | 10/10/1997 |
| 36 | 74 | 2 | 2-252 | 356578 | 895740 | 5557.6 | 906 | 10/23/1997 |
| 36 | 74 | 2 | 2-256 | 356597 | 896143 | 5557.6 | 897 | 11/3/1997 |
| 36 | 74 | 2 | 2-250 | 356604 | 896043 | 5565.1 | 904 | 10/22/1997 |
| 36 | 74 | 2 | 2-244 | 356611 | 895944 | 5563.9 | 904 | 10/21/1997 |
| 36 | 74 | 2 | 2-222 | 356619 | 895844 | 5558.9 | 905 | 10/6/1997 |
| 36 | 74 | 2 | 2-246 | 356628 | 895745 | 5556.3 | 888 | 10/21/1997 |
| 36 | 74 | 2 | 2-221 | 356643 | 895545 | 5557.7 | 906 | 10/7/1997 |
| 36 | 74 | 2 | 2-299 | 356647 | 896147 | 5558.1 | 897 | 6/19/1998 |
| 36 | 74 | 2 | 2-259 | 356651 | 896097 | 5561.3 | 902 | 11/4/1997 |
| 36 | 74 | 2 | 2-263 | 356654 | 895697 | 5555.5 | 894 | 11/12/1997 |
| 36 | 74 | 2 | 2-233 | 356673 | 895498 | 5554.7 | 883 | 10/15/1997 |
| 36 | 74 | 2 | 2-235 | 356674 | 895250 | 5531.4 | 860 | 10/15/1997 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 2 | 2-257 | 356676 | 895750 | 5554.7 | 860 | 11/4/1997 |
| 36 | 74 | 2 | 2-229 | 356695 | 895548 | 5558 | 902 | 10/9/1997 |
| 36 | 74 | 2 | 2-304 | 356696 | 896149 | 5558 | 879 | 6/25/1998 |
| 36 | 74 | 2 | 2-300 | 356706 | 896050 | 5562.3 | 891 | 6/17/1998 |
| 36 | 74 | 2 | 2-467 | 356713 | 896248 | 5552.6 | 863 | 8/21/1998 |
| 36 | 74 | 2 | 2-413 | 356716 | 896199 | 5555.7 | 861 | 8/12/1998 |
| 36 | 74 | 2 | 2-162 | 356726 | 895719 | 5554.6 | 864 | 7/22/1991 |
| 36 | 74 | 2 | 2-497 | 356764 | 896251 | 5553.9 | 862 | 9/10/1998 |
| 36 | 74 | 2 | 2-231 | 356771 | 895256 | 5523.9 | 1002 | 10/10/1997 |
| 36 | 74 | 2 | 2-154 | 356881 | 895651 | 5560.8 | 862 | 7/27/1990 |
| 36 | 74 | 2 | 2-5 | 357032 | 893035 | 5639.7 | 717 | 6/30/1967 |
| 36 | 74 | 2 | 2-3 | 357036 | 894545 | 5541.3 | 622 | 6/21/1967 |
| 36 | 74 | 2 | 2-1 | 357046 | 896042 | 5551.5 | 665 | 6/20/1967 |
| 36 | 74 | 2 | 2-107 | 357046 | 896413 | 5545.2 | 701 | 3/15/1977 |
| 36 | 74 | 2 | 2-104 | 357588 | 896146 | 5516.5 | 701 | 3/15/1977 |
| 36 | 74 | 2 | 2-168 | 357932 | 897355 | 5542.8 | 893 | 9/5/1997 |
| 36 | 74 | 2 | 2-613 | 357987 | 896058 | 5479.9 | 779 | 12/9/1998 |
| 36 | 74 | 2 | 2-612 | 357992 | 895954 | 5487.6 | 801 | 12/8/1998 |
| 36 | 74 | 2 | 2-617 | 357995 | 895906 | 5492.4 | 801 | 12/3/1998 |
| 36 | 74 | 2 | 2-572 | 358034 | 897405 | 5540.3 | 644 | 9/24/1998 |
| 36 | 74 | 2 | 2-618 | 358038 | 896061 | 5479.2 | 780 | 12/12/1998 |
| 36 | 74 | 2 | 2-603 | 358041 | 896010 | 5483.8 | 782 | 10/13/1998 |
| 36 | 74 | 2 | 2-581 | 358041 | 897354 | 5541 | 642 | 9/30/1998 |
| 36 | 74 | 2 | 2-608 | 358044 | 895958 | 5486.7 | 782 | 11/20/1998 |
| 36 | 74 | 2 | 2-609 | 358045 | 895910 | 5492.7 | 782 | 11/22/1998 |
| 36 | 74 | 2 | 2-176 | 358085 | 897407 | 5539 | 901 | 9/10/1997 |
| 36 | 74 | 2 | 2-600 | 358091 | 896014 | 5477.4 | 782 | 10/8/1998 |
| 36 | 74 | 2 | 2-450 | 358128 | 895480 | 5537.1 | 843 | 9/10/1998 |
| 36 | 74 | 2 | 2-109 | 358142 | 895424 | 5542 | 662 | 3/15/1977 |
| 36 | 74 | 2 | 2-594 | 358144 | 896071 | 5474.5 | 782 | 10/7/1998 |
| 36 | 74 | 2 | 2-575 | 358146 | 896021 | 5477.4 | 783 | 9/25/1998 |
| 36 | 74 | 2 | 2-528 | 358177 | 895485 | 5535.8 | 845 | 9/9/1998 |
| 36 | 74 | 2 | 2-492 | 358177 | 895369 | 5548.4 | 862 | 8/27/1998 |
| 36 | 74 | 2 | 2-595 | 358183 | 896153 | 5492.8 | 781 | 10/2/1998 |
| 36 | 74 | 2 | 2-188 | 358187 | 897367 | 5532.3 | 877 | 9/24/1997 |
| 36 | 74 | 2 | 2-586 | 358188 | 896081 | 5477.5 | 783 | 9/30/1998 |
| 36 | 74 | 2 | 2-563 | 358197 | 896025 | 5474.2 | 803 | 9/18/1998 |
| 36 | 74 | 2 | 2-558 | 358202 | 895976 | 5480.5 | 803 | 9/16/1998 |
| 36 | 74 | 2 | 2-454 | 358207 | 895927 | 5487.1 | 795 | 9/15/1998 |
| 36 | 74 | 2 | 2-537 | 358212 | 895877 | 5502.6 | 822 | 9/10/1998 |
| 36 | 74 | 2 | 2-525 | 358215 | 895828 | 5509.9 | 841 | 9/8/1998 |
| 36 | 74 | 2 | 2-510 | 358225 | 895423 | 5540.7 | 867 | 9/2/1998 |
| 36 | 74 | 2 | 2-484 | 358227 | 895372 | 5545.2 | 843 | 8/20/1998 |
| 36 | 74 | 2 | 2-519 | 358227 | 895489 | 5534.2 | 864 | 9/4/1998 |
| 36 | 74 | 2 | 2-599 | 358229 | 895321 | 5549.4 | 861 | 10/8/1998 |
| 36 | 74 | 2 | 2-614 | 358230 | 896184 | 5491.7 | 800 | 1/5/1999 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 2 | 2-604 | 358231 | 895270 | 552.1 | 852 | 10/12/1998 |
| 36 | 74 | 2 | 2-6 | 358233 | 893043 | 5640.8 | 708 | 6/30/1967 |
| 36 | 74 | 2 | 2-4 | 358233 | 894534 | 5586.3 | 636 | 6/20/1967 |
| 36 | 74 | 2 | 2-601 | 358245 | 896027 | 5473.8 | 783 | 10/8/1998 |
| 36 | 74 | 2 | 2-2 | 358253 | 896074 | 5475.4 | 565 | 6/19/1967 |
| 36 | 74 | 2 | 2-511 | 358265 | 895832 | 5511 | 879 | 9/3/1998 |
| 36 | 74 | 2 | 2-615 | 358266 | 895783 | 5515.5 | 801 | 12/18/1998 |
| 36 | 74 | 2 | 2-571 | 358273 | 896910 | 5516.4 | 603 | 9/23/1998 |
| 36 | 74 | 2 | 2-470 | 358279 | 895375 | 5541.4 | 843 | 8/14/1998 |
| 36 | 74 | 2 | 2-105 | 358282 | 895498 | 5530.1 | 702 | 3/11/1977 |
| 36 | 74 | 2 | 2-588 | 358284 | 895325 | 5543.8 | 861 | 10/2/1998 |
| 36 | 74 | 2 | 2-596 | 358295 | 896082 | 5475.4 | 783 | 10/2/1998 |
| 36 | 74 | 2 | 2-471 | 358318 | 895787 | 5511.8 | 841 | 8/18/1998 |
| 36 | 74 | 2 | 2-173 | 358319 | 896963 | 5512.1 | 861 | 9/9/1997 |
| 36 | 74 | 2 | 2-187 | 358323 | 896913 | 5519.4 | 843 | 9/15/1997 |
| 36 | 74 | 2 | 2-211 | 358326 | 896862 | 5525.4 | 861 | 9/30/1997 |
| 36 | 74 | 2 | 2-557 | 358327 | 895378 | 5537.6 | 863 | 9/16/1998 |
| 36 | 74 | 2 | 2-421 | 358331 | 895590 | 5519.7 | 844 | 8/6/1998 |
| 36 | 74 | 2 | 2-412 | 358334 | 895538 | 5523.9 | 824 | 7/28/1998 |
| 36 | 74 | 2 | 2-447 | 358336 | 895489 | 5528.1 | 843 | 8/11/1998 |
| 36 | 74 | 2 | 2-464 | 358338 | 895440 | 5532.3 | 844 | 8/13/1998 |
| 36 | 74 | 2 | 2-589 | 358340 | 896078 | 5472.6 | 802 | 10/1/1998 |
| 36 | 74 | 2 | 2-527 | 358350 | 895979 | 5498.3 | 802 | 9/9/1998 |
| 36 | 74 | 2 | 2-152 | 358360 | 892226 | 5628.4 | 1056 | 8/30/1989 |
| 36 | 74 | 2 | 2-578 | 358370 | 895472 | 5527.6 | 842 | 9/25/1998 |
| 36 | 74 | 2 | 2-569 | 358373 | 895422 | 5531.2 | 844 | 9/23/1998 |
| 36 | 74 | 2 | 2-463 | 358375 | 895692 | 5510.1 | 839 | 8/13/1998 |
| 36 | 74 | 2 | 2-445 | 358377 | 895641 | 5513.6 | 842 | 8/11/1998 |
| 36 | 74 | 2 | 2-561 | 358377 | 895381 | 5533.3 | 861 | 9/17/1998 |
| 36 | 74 | 2 | 2-174 | 358388 | 896559 | 5511.4 | 844 | 9/9/1997 |
| 36 | 74 | 2 | 2-597 | 358390 | 896088 | 5479.5 | 783 | 10/9/1998 |
| 36 | 74 | 2 | 2-374 | 358398 | 896461 | 5501.1 | 782 | 7/21/1998 |
| 36 | 74 | 2 | 2-462 | 358400 | 895929 | 5510.2 | 822 | 8/11/1998 |
| 36 | 74 | 2 | 2-518 | 358402 | 895985 | 5498.1 | 825 | 9/4/1998 |
| 36 | 74 | 2 | 2-183 | 358405 | 896263 | 5481.6 | 943 | 9/12/1997 |
| 36 | 74 | 2 | 2-373 | 358414 | 896805 | 5530.7 | 824 | 7/16/1998 |
| 36 | 74 | 2 | 2-593 | 358425 | 895470 | 5524.7 | 842 | 10/1/1998 |
| 36 | 74 | 2 | 2-562 | 358426 | 895384 | 5529.5 | 844 | 9/18/1998 |
| 36 | 74 | 2 | 2-416 | 358432 | 895546 | 5519.1 | 843 | 7/31/1998 |
| 36 | 74 | 2 | 2-607 | 358440 | 896032 | 5495 | 802 | 11/20/1998 |
| 36 | 74 | 2 | 2-448 | 358452 | 895884 | 5504.3 | 820 | 8/11/1998 |
| 36 | 74 | 2 | 2-418 | 358452 | 896414 | 5495 | 563 | 8/3/1998 |
| 36 | 74 | 2 | 2-417 | 358453 | 895835 | 5500.9 | 822 | 7/31/1993 |
| 36 | 74 | 2 | 2-498 | 358462 | 892230 | 5628 | 865 | 8/27/1993 |
| 36 | 74 | 2 | 2-182 | 358464 | 896809 | 5531.7 | 864 | 9/15/1997 |
| 36 | 74 | 2 | 2-161 | 358464 | 896755 | 5530.9 | 844 | 7/19/1991 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 2 | 2-405 | 358472 | 896466 | 5497.5 | 765 | 7/29/1998 |
| 36 | 74 | 2 | 2-381 | 358474 | 896704 | 5522.4 | 562 | 7/20/1998 |
| 36 | 74 | 2 | 2-577 | 358477 | 895475 | 5522 | 825 | 9/24/1998 |
| 36 | 74 | 2 | 2-396 | 358477 | 896653 | 5515.3 | 581 | 7/23/1998 |
| 36 | 74 | 2 | 2-491 | 358479 | 894870 | 5570.8 | 863 | 8/27/1998 |
| 36 | 74 | 2 | 2-570 | 358481 | 895424 | 5524.2 | 842 | 9/23/1998 |
| 36 | 74 | 2 | 2-201 | 358484 | 895573 | 5514.4 | 843 | 9/26/1997 |
| 36 | 74 | 2 | 2-576 | 358484 | 892282 | 5526.7 | 903 | 9/30/1998 |
| 36 | 74 | 2 | 2-208 | 358485 | 895373 | 5525.7 | 835 | 9/29/1997 |
| 36 | 74 | 2 | 2-212 | 358486 | 895325 | 5529 | 859 | 10/1/1997 |
| 36 | 74 | 2 | 2-424 | 358491 | 896037 | 5495.3 | 824 | 8/7/1998 |
| 36 | 74 | 2 | 2-472 | 358504 | 895672 | 5505.4 | 823 | 8/17/1998 |
| 36 | 74 | 2 | 2-209 | 358504 | 895837 | 5495.3 | 822 | 9/29/1997 |
| 36 | 74 | 2 | 2-189 | 358505 | 896271 | 5472.4 | 800 | 9/16/1997 |
| 36 | 74 | 2 | 2-438 | 358506 | 896319 | 5479.1 | 783 | 8/10/1998 |
| 36 | 74 | 2 | 2-422 | 358510 | 895787 | 5496.4 | 822 | 8/7/1998 |
| 36 | 74 | 2 | 2-133 | 358512 | 896812 | 5535.9 | 840 | 6/5/1989 |
| 36 | 74 | 2 | 2-153 | 358513 | 892226 | 5626.5 | 880 | 9/14/1989 |
| 36 | 74 | 2 | 2-587 | 358531 | 895427 | 5521.3 | 862 | 9/30/1998 |
| 36 | 74 | 2 | 2-446 | 358533 | 895624 | 5508.9 | 842 | 8/10/1998 |
| 36 | 74 | 2 | 2-411 | 358534 | 895574 | 5513.6 | 844 | 7/29/1998 |
| 36 | 74 | 2 | 2-457 | 358540 | 896040 | 5499 | 821 | 8/11/1998 |
| 36 | 74 | 2 | 2-196 | 358540 | 895528 | 5516.3 | 840 | 9/19/1997 |
| 36 | 74 | 2 | 2-199 | 358554 | 896273 | 5471.6 | 802 | 9/24/1997 |
| 36 | 74 | 2 | 2-195 | 358555 | 895836 | 5490.3 | 847 | 9/22/1997 |
| 36 | 74 | 2 | 2-351 | 358564 | 896816 | 5536.8 | 904 | 7/13/1998 |
| 36 | 74 | 2 | 2-102 | 358577 | 895233 | 5536.7 | 603 | 6/21/1976 |
| 36 | 74 | 2 | 2-475 | 358579 | 894874 | 5567 | 864 | 8/19/1998 |
| 36 | 74 | 2 | 2-459 | 358583 | 895578 | 5510.9 | 838 | 8/12/1998 |
| 36 | 74 | 2 | 2-86 | 358585 | 895381 | 5522.3 | 563 | 2/12/1975 |
| 36 | 74 | 2 | 2-84 | 358587 | 895431 | 5518.3 | 583 | 2/10/1975 |
| 36 | 74 | 2 | 2-101 | 358592 | 895531 | 5512.9 | 595 | 6/21/1976 |
| 36 | 74 | 2 | 2-375 | 358603 | 896275 | 5470.4 | 763 | 7/30/1998 |
| 36 | 74 | 2 | 2-210 | 358606 | 896239 | 5470.5 | 800 | 9/30/1997 |
| 36 | 74 | 2 | 2-249 | 358621 | 894980 | 5556.9 | 869 | 10/23/1997 |
| 36 | 74 | 2 | 2-410 | 358622 | 895237 | 5535.7 | 846 | 7/28/1998 |
| 36 | 74 | 2 | 2-207 | 358627 | 895140 | 5548.2 | 865 | 9/30/1997 |
| 36 | 74 | 2 | 2-240 | 358629 | 894876 | 5562.6 | 881 | 10/16/1997 |
| 36 | 74 | 2 | 2-536 | 358631 | 894729 | 5566.3 | 863 | 9/10/1998 |
| 36 | 74 | 2 | 2-151 | 358664 | 892223 | 5628.7 | 880 | 8/17/1989 |
| 36 | 74 | 2 | 2-243 | 358666 | 894828 | 5560.3 | 875 | 10/21/1997 |
| 36 | 74 | 2 | 2-214 | 358672 | 894981 | 5553.3 | 884 | 10/2/1997 |
| 36 | 74 | 2 | 2-465 | 358673 | 895240 | 5534 | 843 | 8/13/1998 |
| 36 | 74 | 2 | 2-197 | 358677 | 895190 | 5539.7 | 860 | 9/18/1997 |
| 36 | 74 | 2 | 2-202 | 358677 | 895142 | 5545.7 | 864 | 9/24/1997 |
| 36 | 74 | 2 | 2-227 | 358679 | 894878 | 5558 | 883 | 10/8/1997 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 2 | 2-476 | 358682 | 894731 | 5563.2 | 864 | 8/18/1998 |
| 36 | 74 | 2 | 2-184 | 358683 | 897340 | 5512.7 | 840 | 9/15/1997 |
| 36 | 74 | 2 | 2-520 | 358686 | 894681 | 5566.8 | 864 | 9/8/1998 |
| 36 | 74 | 2 | 2-592 | 358687 | 894627 | 5571.2 | 852 | 10/1/1998 |
| 36 | 74 | 2 | 2-444 | 358700 | 896670 | 5513.5 | 821 | 8/10/1998 |
| 36 | 74 | 2 | 2-125 | 358707 | 897006 | 5531.2 | 999 | 10/13/1987 |
| 36 | 74 | 2 | 2-194 | 358710 | 895840 | 5496.6 | 840 | 9/18/1997 |
| 36 | 74 | 2 | 2-122 | 358711 | 896818 | 5537.3 | 997 | 10/12/1987 |
| 36 | 74 | 2 | 2-118 | 358715 | 896624 | 5507.5 | 1000 | 11/14/1986 |
| 36 | 74 | 2 | 2-477 | 358724 | 894982 | 5549.3 | 863 | 8/19/1998 |
| 36 | 74 | 2 | 2-473 | 358724 | 895243 | 5531.9 | 841 | 8/17/1998 |
| 36 | 74 | 2 | 2-574 | 358731 | 897396 | 5509.4 | 819 | 9/24/1998 |
| 36 | 74 | 2 | 2-253 | 358733 | 894733 | 5560.7 | 884 | 10/30/1997 |
| 36 | 74 | 2 | 2-169 | 358733 | 897346 | 5513.7 | 865 | 9/5/1997 |
| 36 | 74 | 2 | 2-362 | 358734 | 894683 | 5564.9 | 683 | 8/18/1998 |
| 36 | 74 | 2 | 2-513 | 358736 | 894633 | 5569 | 879 | 9/1/1998 |
| 36 | 74 | 2 | 2-350 | 358742 | 897305 | 5517 | 900 | 7/15/1998 |
| 36 | 74 | 2 | 2-348 | 358756 | 896973 | 5535 | 904 | 7/10/1998 |
| 36 | 74 | 2 | 2-171 | 358760 | 897057 | 5532.9 | 881 | 9/8/1997 |
| 36 | 74 | 2 | 2-200 | 358760 | 895839 | 5501.2 | 840 | 9/25/1997 |
| 36 | 74 | 2 | 2-172 | 358761 | 896873 | 5537.8 | 876 | 9/9/1997 |
| 36 | 74 | 2 | 2-436 | 358764 | 895789 | 5505.3 | 824 | 8/7/1998 |
| 36 | 74 | 2 | 2-466 | 358768 | 895037 | 5542.7 | 862 | 8/14/1998 |
| 36 | 74 | 2 | 2-203 | 358773 | 894986 | 5544.5 | 864 | 9/25/1997 |
| 36 | 74 | 2 | 2-213 | 358778 | 894885 | 5549.1 | 862 | 10/2/1997 |
| 36 | 74 | 2 | 2-531 | 358779 | 893596 | 5629.7 | 903 | 9/9/1998 |
| 36 | 74 | 2 | 2-226 | 358780 | 894835 | 5552.1 | 884 | 10/9/1997 |
| 36 | 74 | 2 | 2-238 | 358782 | 894787 | 5555.6 | 884 | 10/16/1997 |
| 36 | 74 | 2 | 2-177 | 358783 | 897350 | 5514.8 | 843 | 9/10/1997 |
| 36 | 74 | 2 | 2-485 | 358785 | 894687 | 5562.9 | 862 | 8/20/1998 |
| 36 | 74 | 2 | 2-573 | 358786 | 897300 | 5518.2 | 825 | 9/23/1998 |
| 36 | 74 | 2 | 2-489 | 358788 | 894636 | 5567.1 | 864 | 8/26/1998 |
| 36 | 74 | 2 | 2-506 | 358792 | 894587 | 5570.8 | 880 | 8/31/1998 |
| 36 | 74 | 2 | 2-123 | 358804 | 896826 | 5534.2 | 1000 | 10/9/1987 |
| 36 | 74 | 2 | 2-352 | 358806 | 896975 | 5537.2 | 825 | 7/16/1998 |
| 36 | 74 | 2 | 2-111 | 358809 | 895842 | 5506.4 | 600 | 10/27/1983 |
| 36 | 74 | 2 | 2-363 | 358809 | 897057 | 5536.1 | 882 | 7/15/1998 |
| 36 | 74 | 2 | 2-474 | 358818 | 895040 | 5540 | 843 | 8/17/1998 |
| 36 | 74 | 2 | 2-488 | 358821 | 892213 | 5626.5 | 885 | 8/24/1998 |
| 36 | 74 | 2 | 2-141 | 358822 | 896624 | 5507.8 | 820 | 6/8/1989 |
| 36 | 74 | 2 | 2-499 | 358829 | 893598 | 5626.9 | 881 | 9/2/1998 |
| 36 | 74 | 2 | 2-452 | 358830 | 893548 | 5625.8 | 902 | 9/11/1998 |
| 36 | 74 | 2 | 2-237 | 358830 | 894837 | 5552.3 | 884 | 10/17/1997 |
| 36 | 74 | 2 | 2-135 | 358830 | 897353 | 5517 | 980 | 6/6/1989 |
| 36 | 74 | 2 | 2-509 | 358831 | 894738 | 5559.7 | 881 | 8/31/1998 |
| 36 | 74 | 2 | 2-490 | 358835 | 894689 | 5562.6 | 863 | 8/26/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 2 | 2-591 | 358849 | 894587 | 5569.7 | 862 | 10/2/1998 |
| 36 | 74 | 2 | 2-132 | 358854 | 896498 | 5497.3 | 815 | 6/5/1989 |
| 36 | 74 | 2 | 2-349 | 358861 | 896827 | 5531.8 | 902 | 7/21/1998 |
| 36 | 74 | 2 | 2-364 | 358867 | 896618 | 5505.7 | 862 | 7/15/1998 |
| 36 | 74 | 2 | 2-72 | 358873 | 894943 | 5546.9 | 582 | 1/13/1975 |
| 36 | 74 | 2 | 2-502 | 358873 | 892219 | 5626.5 | 884 | 8/26/1998 |
| 36 | 74 | 2 | 2-530 | 358875 | 893650 | 5623.3 | 903 | 9/9/1998 |
| 36 | 74 | 2 | 2-514 | 358878 | 894790 | 5556.5 | 883 | 9/2/1998 |
| 36 | 74 | 2 | 2-523 | 358878 | 893601 | 5623.4 | 901 | 9/4/1998 |
| 36 | 74 | 2 | 2-73 | 358878 | 894893 | 5550.5 | 603 | 1/14/1975 |
| 36 | 74 | 2 | 2-75 | 358879 | 894836 | 5553.7 | 603 | 1/15/1975 |
| 36 | 74 | 2 | 2-547 | 358880 | 893550 | 5622.5 | 880 | 9/15/1998 |
| 36 | 74 | 2 | 2-522 | 358883 | 894742 | 5560.5 | 869 | 9/4/1998 |
| 36 | 74 | 2 | 2-106 | 358886 | 895302 | 5523.5 | 701 | 3/10/1977 |
| 36 | 74 | 2 | 2-529 | 358888 | 894689 | 5564.8 | 863 | 9/9/1998 |
| 36 | 74 | 2 | 2-540 | 358891 | 894640 | 5568.4 | 843 | 9/15/1998 |
| 36 | 74 | 2 | 2-559 | 358895 | 894591 | 5570.7 | 844 | 9/17/1998 |
| 36 | 74 | 2 | 2-567 | 358901 | 894541 | 5573.5 | 842 | 9/23/1998 |
| 36 | 74 | 2 | 2-124 | 358901 | 896831 | 5491.8 | 999 | 10/14/1987 |
| 36 | 74 | 2 | 2-180 | 358910 | 896499 | 5493 | 818 | 9/11/1997 |
| 36 | 74 | 2 | 2-365 | 358914 | 896449 | 5489.8 | 861 | 7/16/1998 |
| 36 | 74 | 2 | 2-175 | 358915 | 896620 | 5502.3 | 842 | 9/9/1997 |
| 36 | 74 | 2 | 2-583 | 358916 | 896409 | 5486.7 | 805 | 9/28/1998 |
| 36 | 74 | 2 | 2-382 | 358917 | 896373 | 5483.1 | 762 | 7/23/1998 |
| 36 | 74 | 2 | 2-468 | 358920 | 896571 | 5497.6 | 804 | 8/14/1998 |
| 36 | 74 | 2 | 2-453 | 358924 | 893654 | 5620.3 | 905 | 9/11/1998 |
| 36 | 74 | 2 | 2-521 | 358927 | 894793 | 5559 | 862 | 9/4/1998 |
| 36 | 74 | 2 | 2-219 | 358936 | 895198 | 5528.7 | 859 | 10/6/1997 |
| 36 | 74 | 2 | 2-449 | 358939 | 896676 | 5507.5 | 740 | 8/12/1998 |
| 36 | 74 | 2 | 2-568 | 358943 | 894594 | 5574.5 | 842 | 9/24/1998 |
| 36 | 74 | 2 | 2-590 | 358950 | 894544 | 5577.8 | 862 | 10/1/1998 |
| 36 | 74 | 2 | 2-113 | 358957 | 896378 | 5484.9 | 1003 | 10/22/1985 |
| 36 | 74 | 2 | 2-117 | 358958 | 896615 | 5482.3 | 1000 | 11/17/1986 |
| 36 | 74 | 2 | 2-115 | 358958 | 896499 | 5478.6 | 1000 | 11/5/1986 |
| 36 | 74 | 2 | 2-116 | 358960 | 896200 | 5464.8 | 1000 | 11/5/1986 |
| 36 | 74 | 2 | 2-251 | 358966 | 894953 | 5552.3 | 883 | 10/31/1997 |
| 36 | 74 | 2 | 2-179 | 358966 | 896833 | 5525.1 | 860 | 9/11/1997 |
| 36 | 74 | 2 | 2-150 | 358969 | 892222 | 5627.7 | 882 | 8/14/1989 |
| 36 | 74 | 2 | 2-423 | 358989 | 896679 | 5507.1 | 786 | 8/7/1998 |
| 36 | 74 | 2 | 2-535 | 358990 | 894789 | 5563.7 | 863 | 9/11/1998 |
| 36 | 74 | 2 | 2-524 | 358995 | 894740 | 5566.5 | 862 | 9/8/1998 |
| 36 | 74 | 2 | 2-534 | 359000 | 894689 | 5571.4 | 863 | 9/11/1998 |
| 36 | 74 | 2 | 2-549 | 359002 | 894639 | 5575.5 | 843 | 9/15/1998 |
| 36 | 74 | 2 | 2-127 | 359004 | 896832 | 5518.4 | 840 | 6/6/1989 |
| 36 | 74 | 2 | 2-580 | 359006 | 894590 | 5579.8 | 863 | 9/29/1998 |
| 36 | 74 | 2 | 2-112 | 359006 | 895856 | 5509.7 | 600 | 10/27/1983 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 2 | 2-143 | 359016 | 894906 | 5558.8 | 881 | 6/13/1989 |
| 36 | 74 | 2 | 2-110 | 359017 | 894959 | 5554.1 | 601 | 10/29/1982 |
| 36 | 74 | 2 | 2-356 | 359018 | 896880 | 5528.7 | 882 | 7/22/1998 |
| 36 | 74 | 2 | 2-114 | 359019 | 895549 | 5519.3 | 601 | 10/21/1985 |
| 36 | 74 | 2 | 2-136 | 359019 | 893615 | 5614.8 | 880 | 8/10/1989 |
| 36 | 74 | 2 | 2-611 | 359020 | 894765 | 5567.1 | 611 | 6/14/2004 |
| 36 | 74 | 2 | 2-139 | 359021 | 895929 | 5503.4 | 824 | 6/7/1989 |
| 36 | 74 | 2 | 2-546 | 359026 | 894511 | 5585.4 | 862 | 9/14/1998 |
| 36 | 74 | 2 | 2-408 | 359029 | 894462 | 5586.1 | 621 | 8/13/1998 |
| 36 | 74 | 2 | 2-103 | 359031 | 895146 | 5534.5 | 604 | 6/21/1976 |
| 36 | 74 | 2 | 2-204 | 359036 | 895097 | 5539.4 | 861 | 9/25/1997 |
| 36 | 74 | 2 | 2-384 | 359038 | 896680 | 5506.8 | 762 | 7/31/1998 |
| 36 | 74 | 2 | 2-512 | 359046 | 894743 | 5570.4 | 880 | 9/1/1998 |
| 36 | 74 | 2 | 2-526 | 359052 | 894693 | 5574.3 | 861 | 9/8/1998 |
| 36 | 74 | 2 | 2-582 | 359059 | 896334 | 5481.5 | 804 | 9/28/1998 |
| 36 | 74 | 2 | 2-120 | 359060 | 896105 | 5464.2 | 1000 | 10/7/1987 |
| 36 | 74 | 2 | 2-131 | 359060 | 896204 | 5466.1 | 802 | 6/2/1989 |
| 36 | 74 | 2 | 2-142 | 359062 | 896375 | 5480.3 | 824 | 6/9/1989 |
| 36 | 74 | 2 | 2-493 | 359063 | 893717 | 5612.8 | 883 | 8/26/1998 |
| 36 | 74 | 2 | 2-220 | 359067 | 894858 | 5565 | 882 | 10/3/1997 |
| 36 | 74 | 2 | 2-481 | 359067 | 893667 | 5614 | 884 | 8/21/1998 |
| 36 | 74 | 2 | 2-268 | 359071 | 893618 | 5613.3 | 923 | 11/18/1997 |
| 36 | 74 | 2 | 2-487 | 359071 | 892228 | 5624.2 | 886 | 8/24/1998 |
| 36 | 74 | 2 | 2-158 | 359077 | 894516 | 5587.6 | 863 | 7/17/1991 |
| 36 | 74 | 2 | 2-516 | 359079 | 894618 | 5581.9 | 863 | 9/3/1998 |
| 36 | 74 | 2 | 2-378 | 359079 | 894466 | 5587.8 | 865 | 7/24/1998 |
| 36 | 74 | 2 | 2-543 | 359080 | 894386 | 5586.3 | 884 | 9/15/1998 |
| 36 | 74 | 2 | 2-554 | 359083 | 894151 | 5594.3 | 882 | 9/16/1998 |
| 36 | 74 | 2 | 2-564 | 359083 | 894151 | 5594.3 | 863 | 9/23/1998 |
| 36 | 74 | 2 | 2-198 | 359088 | 896287 | 5475.3 | 800 | 9/22/1997 |
| 36 | 74 | 2 | 2-371 | 359090 | 896638 | 5504.9 | 783 | 7/17/1998 |
| 36 | 74 | 2 | 2-505 | 359090 | 894054 | 5593.6 | 883 | 9/1/1998 |
| 36 | 74 | 2 | 2-602 | 359092 | 894004 | 5595.5 | 863 | 10/8/1998 |
| 36 | 74 | 2 | 2-155 | 359095 | 894746 | 5577.5 | 862 | 7/27/1990 |
| 36 | 74 | 2 | 2-218 | 359097 | 894699 | 5577 | 883 | 10/3/1997 |
| 36 | 74 | 2 | 2-616 | 359098 | 894928 | 5558.6 | 840 | 1/4/1999 |
| 36 | 74 | 2 | 2-128 | 359102 | 896830 | 5524.3 | 840 | 6/8/1989 |
| 36 | 74 | 2 | 2-129 | 359108 | 897043 | 5538.1 | 840 | 6/6/1989 |
| 36 | 74 | 2 | 2-610 | 359110 | 894660 | 5581.7 | 861 | 6/14/2004 |
| 36 | 74 | 2 | 2-190 | 359113 | 896220 | 5467 | 800 | 9/17/1997 |
| 36 | 74 | 2 | 2-186 | 359114 | 896380 | 5474.3 | 800 | 9/16/1997 |
| 36 | 74 | 2 | 2-504 | 359114 | 893721 | 5610.8 | 884 | 8/27/1998 |
| 36 | 74 | 2 | 2-247 | 359118 | 894799 | 5571.6 | 882 | 10/31/1997 |
| 36 | 74 | 2 | 2-507 | 359118 | 893671 | 5612 | 881 | 8/31/1998 |
| 36 | 74 | 2 | 2-147 | 359119 | 893614 | 5611.6 | 880 | 8/9/1989 |
| 36 | 74 | 2 | 2-126 | 359119 | 895926 | 5494.6 | 803 | 6/1/1989 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 2 | 2-503 | 359122 | 892233 | 5622.7 | 880 | 8/27/1998 |
| 36 | 74 | 2 | 2-266 | 359124 | 893558 | 5611.7 | 922 | 11/11/1997 |
| 36 | 74 | 2 | 2-223 | 359126 | 894515 | 5588.5 | 881 | 10/14/1997 |
| 36 | 74 | 2 | 2-239 | 359126 | 895354 | 5531.4 | 867 | 10/20/1997 |
| 36 | 74 | 2 | 2-144 | 359126 | 894256 | 5590.3 | 902 | 6/14/1989 |
| 36 | 74 | 2 | 2-241 | 359127 | 894622 | 5585.3 | 904 | 10/20/1997 |
| 36 | 74 | 2 | 2-262 | 359128 | 895304 | 5532.8 | 859 | 11/5/1997 |
| 36 | 74 | 2 | 2-439 | 359128 | 896884 | 5521.4 | 824 | 8/10/1998 |
| 36 | 74 | 2 | 2-254 | 359129 | 894340 | 5586.7 | 897 | 10/31/1997 |
| 36 | 74 | 2 | 2-228 | 359129 | 895254 | 5534.6 | 857 | 10/9/1997 |
| 36 | 74 | 2 | 2-224 | 359130 | 894389 | 5585.3 | 883 | 10/14/1997 |
| 36 | 74 | 2 | 2-500 | 359133 | 894155 | 5591.3 | 883 | 8/26/1998 |
| 36 | 74 | 2 | 2-359 | 359137 | 895716 | 5507.9 | 878 | 7/14/1998 |
| 36 | 74 | 2 | 2-517 | 359139 | 894057 | 5591.1 | 885 | 9/8/1998 |
| 36 | 74 | 2 | 2-367 | 359140 | 896289 | 5468.7 | 862 | 7/24/1998 |
| 36 | 74 | 2 | 2-443 | 359141 | 897397 | 5526.3 | 838 | 8/11/1998 |
| 36 | 74 | 2 | 2-358 | 359142 | 896634 | 5502.4 | 884 | 7/14/1998 |
| 36 | 74 | 2 | 2-539 | 359143 | 894007 | 5592.8 | 863 | 9/10/1998 |
| 36 | 74 | 2 | 2-420 | 359143 | 897347 | 5529.2 | 843 | 8/5/1998 |
| 36 | 74 | 2 | 2-456 | 359144 | 896585 | 5498.6 | 802 | 8/12/1998 |
| 36 | 74 | 2 | 2-119 | 359146 | 896503 | 5481.2 | 953 | 11/13/1983 |
| 36 | 74 | 2 | 2-451 | 359146 | 893956 | 5595.6 | 861 | 9/11/1998 |
| 36 | 74 | 2 | 2-157 | 359146 | 894694 | 5582.4 | 864 | 7/18/1991 |
| 36 | 74 | 2 | 2-260 | 359147 | 894931 | 5557.5 | 882 | 11/5/1997 |
| 36 | 74 | 2 | 2-164 | 359148 | 894754 | 5583.2 | 864 | 5/28/1992 |
| 36 | 74 | 2 | 2-121 | 359152 | 896111 | 5462.3 | 1000 | 10/7/1987 |
| 36 | 74 | 2 | 2-440 | 359155 | 897146 | 5536.1 | 842 | 8/10/1998 |
| 36 | 74 | 2 | 2-372 | 359156 | 896451 | 5477.9 | 765 | 7/16/1998 |
| 36 | 74 | 2 | 2-419 | 359159 | 897097 | 5536.6 | 840 | 8/3/1998 |
| 36 | 74 | 2 | 2-149 | 359164 | 892220 | 5623.4 | 882 | 8/10/1989 |
| 36 | 74 | 2 | 2-437 | 359164 | 892935 | 5612.2 | 900 | 8/17/1998 |
| 36 | 74 | 2 | 2-140 | 359169 | 895462 | 5526.8 | 843 | 6/8/1989 |
| 36 | 74 | 2 | 2-385 | 359171 | 895939 | 5489.7 | 861 | 7/28/1998 |
| 36 | 74 | 2 | 2-170 | 359171 | 896936 | 5524.4 | 881 | 9/8/1997 |
| 36 | 74 | 2 | 2-160 | 359173 | 893560 | 5612 | 864 | 7/16/1991 |
| 36 | 74 | 2 | 2-550 | 359176 | 894630 | 5585.8 | 864 | 9/16/1998 |
| 36 | 74 | 2 | 2-130 | 359176 | 894883 | 5562.6 | 982 | 6/2/1989 |
| 36 | 74 | 2 | 2-357 | 359176 | 896888 | 5516.7 | 859 | 7/16/1998 |
| 36 | 74 | 2 | 2-156 | 359178 | 894513 | 5589.4 | 862 | 7/26/1990 |
| 36 | 74 | 2 | 2-380 | 359179 | 896838 | 5509.1 | 801 | 7/27/1998 |
| 36 | 74 | 2 | 2-205 | 359180 | 895260 | 5536.4 | 844 | 9/26/1997 |
| 36 | 74 | 2 | 2-71 | 359183 | 894991 | 5551.6 | 603 | 1/9/1975 |
| 36 | 74 | 2 | 2-242 | 359183 | 894342 | 5584.6 | 901 | 10/21/1997 |
| 36 | 74 | 2 | 2-544 | 359184 | 894158 | 5587.8 | 885 | 9/14/1998 |
| 36 | 74 | 2 | 2-409 | 359187 | 896293 | 5462.4 | 741 | 7/29/1998 |
| 36 | 74 | 2 | 2-552 | 359187 | 894109 | 5587.6 | 864 | 9/15/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 2 | 2-193 | 359188 | 895719 | 5506.5 | 840 | 9/17/1997 |
| 36 | 74 | 2 | 2-163 | 359189 | 894394 | 5588.5 | 860 | 5/27/1992 |
| 36 | 74 | 2 | 2-533 | 359189 | 894059 | 5588.4 | 864 | 9/9/1998 |
| 36 | 74 | 2 | 2-185 | 359189 | 896638 | 5497.4 | 841 | 9/12/1997 |
| 36 | 74 | 2 | 2-555 | 359190 | 894009 | 5591 | 864 | 9/16/1998 |
| 36 | 74 | 2 | 2-478 | 359193 | 894804 | 5573.2 | 857 | 8/19/1998 |
| 36 | 74 | 2 | 2-548 | 359196 | 893959 | 5593.9 | 865 | 9/15/1998 |
| 36 | 74 | 2 | 2-469 | 359197 | 896543 | 5490.7 | 764 | 8/17/1998 |
| 36 | 74 | 2 | 2-191 | 359200 | 896163 | 5461.9 | 800 | 9/17/1997 |
| 36 | 74 | 2 | 2-542 | 359200 | 894445 | 5582.8 | 860 | 9/14/1998 |
| 36 | 74 | 2 | 2-605 | 359201 | 893909 | 5598.4 | 863 | 10/9/1998 |
| 36 | 74 | 2 | 2-261 | 359201 | 895311 | 5534.3 | 852 | 11/5/1997 |
| 36 | 74 | 2 | 2-181 | 359207 | 896454 | 5473.7 | 815 | 9/11/1997 |
| 36 | 74 | 2 | 2-165 | 359212 | 897049 | 5539.1 | 842 | 5/29/1992 |
| 36 | 74 | 2 | 2-480 | 359214 | 892937 | 5611.7 | 864 | 8/24/1998 |
| 36 | 74 | 2 | 2-494 | 359215 | 893652 | 5609.9 | 886 | 8/25/1998 |
| 36 | 74 | 2 | 2-192 | 359219 | 895465 | 5524.2 | 840 | 9/17/1997 |
| 36 | 74 | 2 | 2-486 | 359219 | 894730 | 5581.5 | 863 | 8/20/1998 |
| 36 | 74 | 2 | 2-366 | 359220 | 896336 | 5460.1 | 865 | 7/17/1998 |
| 36 | 74 | 2 | 2-145 | 359222 | 893614 | 5609.4 | 1003 | 6/14/1989 |
| 36 | 74 | 2 | 2-483 | 359222 | 894681 | 5585.6 | 864 | 8/19/1998 |
| 36 | 74 | 2 | 2-178 | 359223 | 896939 | 5519.1 | 845 | 9/11/1997 |
| 36 | 74 | 2 | 2-248 | 359225 | 894630 | 5586.5 | 903 | 10/22/1997 |
| 36 | 74 | 2 | 2-215 | 359229 | 895264 | 5537 | 841 | 10/1/1997 |
| 36 | 74 | 2 | 2-225 | 359229 | 894397 | 5580.8 | 884 | 10/11/1997 |
| 36 | 74 | 2 | 2-255 | 359230 | 894347 | 5581.7 | 900 | 10/23/1997 |
| 36 | 74 | 2 | 2-495 | 359233 | 892592 | 5598.9 | 877 | 9/8/1998 |
| 36 | 74 | 2 | 2-146 | 359236 | 894258 | 5583.9 | 880 | 6/16/1989 |
| 36 | 74 | 2 | 2-360 | 359239 | 895518 | 5519.3 | 883 | 7/17/1998 |
| 36 | 74 | 2 | 2-245 | 359242 | 894940 | 5557 | 881 | 11/3/1997 |
| 36 | 74 | 2 | 2-482 | 359246 | 896545 | 5490.4 | 803 | 8/21/1989 |
| 36 | 74 | 2 | 2-166 | 359246 | 897357 | 5536.8 | 835 | 5/29/1992 |
| 36 | 74 | 2 | 2-560 | 359251 | 893909 | 5597.9 | 865 | 9/17/1998 |
| 36 | 74 | 2 | 2-461 | 359260 | 892262 | 5618.7 | 864 | 8/18/1998 |
| 36 | 74 | 2 | 2-501 | 359264 | 892940 | 5611.7 | 885 | 8/27/1998 |
| 36 | 74 | 2 | 2-148 | 359266 | 892220 | 5615.9 | 882 | 9/7/1989 |
| 36 | 74 | 2 | 2-206 | 359267 | 895471 | 5520.4 | 845 | 9/29/1997 |
| 36 | 74 | 2 | 2-538 | 359278 | 895154 | 5549.8 | 861 | 9/10/1998 |
| 36 | 74 | 2 | 2-556 | 359280 | 894351 | 5579.2 | 862 | 9/18/1998 |
| 36 | 74 | 2 | 2-217 | 359280 | 895102 | 5550 | 886 | 10/2/1997 |
| 36 | 74 | 2 | 2-137 | 359288 | 894996 | 5553.5 | 870 | 6/12/1989 |
| 36 | 74 | 2 | 2-159 | 359289 | 894051 | 5585.7 | 838 | 7/17/1991 |
| 36 | 74 | 2 | 2-532 | 359289 | 892545 | 5600.6 | 863 | 9/14/1998 |
| 36 | 74 | 2 | 2-545 | 359292 | 894308 | 5580.3 | 643 | 9/14/1998 |
| 36 | 74 | 2 | 2-479 | 359292 | 893149 | 5612.1 | 885 | 8/24/1998 |
| 36 | 74 | 2 | 2-216 | 359292 | 894946 | 5557.4 | 884 | 10/2/1997 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 74 | 2 | 2-553 | 359296 | 894772 | 5576 | 864 | 9/17/1998 |
| 36 | 74 | 2 | 2-598 | 359296 | 893820 | 5604.2 | 684 | 10/8/1998 |
| 36 | 74 | 2 | 2-585 | 359296 | 893959 | 5592.4 | 864 | 9/30/1998 |
| 36 | 74 | 2 | 2-606 | 359299 | 893770 | 5605.9 | 860 | 10/12/1998 |
| 36 | 74 | 2 | 2-565 | 359300 | 893909 | 5597.9 | 860 | 9/24/1998 |
| 36 | 74 | 2 | 2-393 | 359307 | 893643 | 5608.8 | 841 | 7/22/1998 |
| 36 | 74 | 2 | 2-508 | 359314 | 892944 | 5611.2 | 883 | 9/2/1998 |
| 36 | 74 | 2 | 2-391 | 359317 | 893543 | 5610.6 | 848 | 7/23/1998 |
| 36 | 74 | 2 | 2-515 | 359327 | 895158 | 5549.8 | 860 | 9/3/1998 |
| 36 | 74 | 2 | 2-392 | 359335 | 893247 | 5611.8 | 905 | 7/24/1998 |
| 36 | 74 | 2 | 2-407 | 359341 | 893151 | 5611.7 | 902 | 7/28/1998 |
| 36 | 74 | 2 | 2-566 | 359341 | 892548 | 5598.6 | 861 | 9/29/1998 |
| 36 | 74 | 2 | 2-138 | 359341 | 894259 | 5577.3 | 1000 | 6/9/1989 |
| 36 | 74 | 2 | 2-377 | 359343 | 894309 | 5577.1 | 624 | 7/20/1998 |
| 36 | 74 | 2 | 2-404 | 359348 | 894206 | 5578.1 | 826 | 7/27/1998 |
| 36 | 74 | 2 | 2-541 | 359349 | 894727 | 5578.2 | 863 | 9/14/1998 |
| 36 | 74 | 2 | 2-415 | 359349 | 894157 | 5579.6 | 825 | 8/14/1998 |
| 36 | 74 | 2 | 2-579 | 359350 | 893910 | 5597.8 | 863 | 9/28/1998 |
| 36 | 74 | 2 | 2-551 | 359355 | 894508 | 5578 | 843 | 9/15/1998 |
| 36 | 74 | 2 | 2-265 | 359356 | 893645 | 5608.1 | 921 | 11/10/1997 |
| 36 | 74 | 2 | 2-267 | 359363 | 893546 | 5610 | 867 | 11/12/1997 |
| 36 | 74 | 2 | 2-460 | 359367 | 892270 | 5613.7 | 862 | 8/17/1998 |
| 36 | 74 | 2 | 2-496 | 359367 | 893499 | 5610.9 | 863 | 8/25/1998 |
| 36 | 74 | 2 | 2-167 | 359373 | 892221 | 5620.6 | 873 | 5/26/1992 |
| 36 | 74 | 2 | 2-379 | 359375 | 895207 | 5543.8 | 823 | 7/20/1998 |
| 36 | 74 | 2 | 2-108 | 359375 | 897102 | 5520.2 | 1002 | 3/16/1977 |
| 36 | 74 | 2 | 2-361 | 359376 | 895161 | 5548.2 | 863 | 7/16/1998 |
| 36 | 74 | 2 | 2-269 | 359392 | 893498 | 5610.6 | 920 | 11/17/1997 |
| 36 | 74 | 2 | 2-584 | 359450 | 893915 | 5593.6 | 865 | 9/29/1998 |
| 37 | 74 | 25 | 25-10 | 362461 | 905016 | 5451.1 | 1000 | 2/17/1972 |
| 37 | 74 | 25 | 25-100 | 358211 | 902804 | 5543.9 | 683 | 3/12/1998 |
| 37 | 74 | 25 | 25-101 | 359257 | 903230 | 5533.7 | 670 | 3/16/1998 |
| 37 | 74 | 25 | 25-102 | 359245 | 903056 | 5529.6 | 659 | 3/16/1998 |
| 37 | 74 | 25 | 25-103 | 359120 | 902839 | 5532.6 | 605 | 3/20/1998 |
| 37 | 74 | 25 | 25-104 | 358103 | 902850 | 5543.7 | 899 | 3/23/1998 |
| 37 | 74 | 25 | 25-105 | 359262 | 903179 | 5532.3 | 678 | 3/20/1998 |
| 37 | 74 | 25 | 25-106 | 359049 | 903339 | 5535.4 | 693 | 3/19/1998 |
| 37 | 74 | 25 | 25-107 | 359146 | 903048 | 5531.5 | 682 | 3/26/1998 |
| 37 | 74 | 25 | 25-108 | 358098 | 902901 | 5543.3 | 679 | 3/25/1998 |
| 37 | 74 | 25 | 25-109 | 357959 | 902867 | 5542.7 | 904 | 3/25/1998 |
| 37 | 74 | 25 | 25-11 | 363063 | 905014 | 5471.1 | 1012 | 2/16/1972 |
| 37 | 74 | 25 | 25-12 | 362446 | 903512 | 5542.7 | 600 | 2/28/1972 |
| 37 | 74 | 25 | 25-13 | 363040 | 903525 | 5510.8 | 600 | 2/28/1972 |
| 37 | 74 | 25 | 25-14 | 363156 | 903310 | 5486.5 | 602 | 6/4/1973 |
| 37 | 74 | 25 | 25-15 | 363354 | 903307 | 5478.8 | 603 | 6/5/1973 |
| 37 | 74 | 25 | 25-53 | 358010 | 903552 | 5512.8 | 620 | 2/27/1975 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 25 | 25-54 | 358308 | 903547 | 5526.6 | 643 | 2/27/1975 |
| 37 | 74 | 25 | 25-55 | 358310 | 903339 | 5538.5 | 660 | 2/27/1975 |
| 37 | 74 | 25 | 25-56 | 358613 | 903439 | 5537.6 | 663 | 2/27/1974 |
| 37 | 74 | 25 | 25-57 | 358247 | 903174 | 5540.5 | 658 | 3/4/1975 |
| 37 | 74 | 25 | 25-58 | 358927 | 903142 | 5535.9 | 658 | 3/4/1975 |
| 37 | 74 | 25 | 25-59 | 358003 | 903339 | 5528.7 | 600 | 3/7/1975 |
| 37 | 74 | 25 | 25-60 | 358305 | 902968 | 5542 | 641 | 3/6/1975 |
| 37 | 74 | 25 | 25-61 | 358927 | 903301 | 5536.5 | 643 | 3/7/1975 |
| 37 | 74 | 25 | 25-62 | 358301 | 902859 | 5543.2 | 656 | 3/10/1975 |
| 37 | 74 | 25 | 25-63 | 358006 | 903441 | 5522.4 | 600 | 3/11/1975 |
| 37 | 74 | 25 | 25-64 | 358773 | 903299 | 5538.4 | 637 | 3/11/1975 |
| 37 | 74 | 25 | 25-65 | 358301 | 902809 | 5543.7 | 660 | 3/12/1975 |
| 37 | 74 | 25 | 25-66 | 357999 | 903233 | 5533.3 | 640 | 3/13/1975 |
| 37 | 74 | 25 | 25-67 | 358850 | 903299 | 5537.6 | 638 | 3/12/1975 |
| 37 | 74 | 25 | 25-68 | 358563 | 902867 | 5541.5 | 660 | 3/13/1975 |
| 37 | 74 | 25 | 25-69 | 357997 | 903182 | 5534.7 | 642 | 3/17/1975 |
| 37 | 74 | 25 | 25-70 | 357996 | 903128 | 5537 | 640 | 3/19/1975 |
| 37 | 74 | 25 | 25-71 | 357988 | 903017 | 5540.9 | 661 | 3/21/1975 |
| 37 | 74 | 25 | 25-72 | 362640 | 903525 | 1 | 640 | 6/30/1976 |
| 37 | 74 | 25 | 25-74 | 362850 | 905020 | 1 | 1000 | 6/30/1976 |
| 37 | 74 | 25 | 25-80 | 363170 | 904830 | 1 | 1000 | 2/11/1982 |
| 37 | 74 | 25 | 25-81 | 357989 | 902768 | 5546.3 | 875 | 8/15/1989 |
| 37 | 74 | 25 | 25-82 | 358203 | 902856 | 5542.8 | 680 | 7/23/1997 |
| 37 | 74 | 25 | 25-83 | 358465 | 903148 | 5539.7 | 685 | 7/24/1997 |
| 37 | 74 | 25 | 25-84 | 358614 | 903390 | 5537.7 | 679 | 7/24/1997 |
| 37 | 74 | 25 | 25-85 | 359052 | 903289 | 5535.1 | 680 | 8/8/1997 |
| 37 | 74 | 25 | 25-86 | 359153 | 903269 | 5534.3 | 677 | 8/7/1997 |
| 37 | 74 | 25 | 25-87 | 358563 | 903387 | 5538.3 | 681 | 8/6/1997 |
| 37 | 74 | 25 | 25-88 | 358516 | 903152 | 5539.6 | 682 | 8/8/1997 |
| 37 | 74 | 25 | 25-89 | 358614 | 903290 | 5538.9 | 684 | 8/26/1997 |
| 37 | 74 | 25 | 25-9 | 361898 | 905018 | 5441.2 | 1000 | 2/17/1972 |
| 37 | 74 | 25 | 25-90 | 358390 | 902994 | 5541 | 680 | 8/26/1997 |
| 37 | 74 | 25 | 25-91 | 358386 | 903044 | 5540.9 | 682 | 3/9/1998 |
| 37 | 74 | 25 | 25-92 | 358396 | 902893 | 5542.6 | 685 | 3/10/1998 |
| 37 | 74 | 25 | 25-93 | 358846 | 903352 | 5536.6 | 680 | 3/10/1998 |
| 37 | 74 | 25 | 25-94 | 359206 | 903224 | 5533.6 | 678 | 3/10/1998 |
| 37 | 74 | 25 | 25-95 | 357936 | 903066 | 5537.8 | 902 | 3/25/1998 |
| 37 | 74 | 25 | 25-96 | 357939 | 902763 | 5543.3 | 902 | 3/12/1998 |
| 37 | 74 | 25 | 25-97 | 359167 | 902842 | 5531.4 | 683 | 3/10/1998 |
| 37 | 74 | 25 | 25-98 | 359195 | 903050 | 5530.5 | 682 | 3/10/1998 |
| 37 | 74 | 25 | 25-99 | 358438 | 903006 | 5541.5 | 679 | 3/12/1998 |
| 37 | 74 | 26 | 26-66 | 355182 | 902700 | 5578.1 | 663 | 7/3/1973 |
| 37 | 74 | 26 | 521 | 357900 | 902700 | 5543.4 | 884 | 6/20/2005 |
| 37 | 74 | 26 | 520 | 357450 | 902700 | 5535.8 | 880 | 5/2/2005 |
| 37 | 74 | 26 | 519 | 357350 | 902700 | 5535 | 879 | 4/26/2005 |
| 37 | 74 | 26 | 26-428 | 355231 | 902705 | 5574.5 | 682 | 11/26/1997 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 26 | 518 | 357950 | 902750 | 5543.7 | 883 | 6/21/2005 |
| 37 | 74 | 26 | 517 | 357300 | 902750 | 5533.1 | 880 | 5/5/2005 |
| 37 | 74 | 26 | 475 | 357842 | 902753 | 5542.5 | 880 | 6/7/1999 |
| 37 | 74 | 26 | 26-448 | 357379 | 902753 | 5533.5 | 882 | 5/24/1999 |
| 37 | 74 | 26 | 464 | 357887 | 902759 | 5543.8 | 880 | 5/27/1999 |
| 37 | 74 | 26 | 26-97 | 355372 | 902760 | 5564.7 | 677 | 6/11/1974 |
| 37 | 74 | 26 | 26-22 | 353205 | 902770 | 5466.3 | 720 | 11/28/1967 |
| 37 | 74 | 26 | 26-23 | 354001 | 902790 | 5513.9 | 690 | 11/22/1967 |
| 37 | 74 | 26 | 26-24 | 354799 | 902796 | 5584.3 | 765 | 11/22/1967 |
| 37 | 74 | 26 | 514 | 357450 | 902800 | 5530.2 | 879 | 5/6/2005 |
| 37 | 74 | 26 | 515 | 357800 | 902800 | 5538.6 | 882 | 6/22/2005 |
| 37 | 74 | 26 | 516 | 357900 | 902800 | 5542.1 | 883 | 6/20/2005 |
| 37 | 74 | 26 | 513 | 357350 | 902800 | 5530.4 | 877 | 5/5/2005 |
| 37 | 74 | 26 | 26-40 | 355179 | 902801 | 5576.4 | 657 | 3/3/1972 |
| 37 | 74 | 26 | 26-423 | 355242 | 902801 | 5573.2 | 642 | 11/21/1998 |
| 37 | 74 | 26 | 26-59 | 355080 | 902802 | 5579.8 | 664 | 6/25/1973 |
| 37 | 74 | 26 | 26-237 | 355294 | 902804 | 5570.4 | 604 | 11/5/1977 |
| 37 | 74 | 26 | 26-42 | 355376 | 902807 | 5563.9 | 770 | 3/3/1972 |
| 37 | 74 | 26 | 26-25 | 354378 | 902820 | 5545.2 | 522 | 1/29/1968 |
| 37 | 74 | 26 | 26-47 | 354261 | 902820 | 5536.9 | 675 | 3/6/1972 |
| 37 | 74 | 26 | 26-58 | 354164 | 902821 | 5523.2 | 662 | 6/25/1973 |
| 37 | 74 | 26 | 26-27 | 354377 | 902825 | 5545.2 | 584 | 6/21/1971 |
| 37 | 74 | 26 | 512 | 357950 | 902850 | 5542.7 | 882 | 6/21/2005 |
| 37 | 74 | 26 | 26-334 | 357349 | 902851 | 5528.2 | 893 | 7/10/1997 |
| 37 | 74 | 26 | 26-421 | 355287 | 902853 | 5568.7 | 683 | 11/12/1997 |
| 37 | 74 | 26 | 26-438 | 357398 | 902855 | 5527.9 | 887 | 5/1/1998 |
| 37 | 74 | 26 | 26-63 | 355376 | 902856 | 5563.5 | 664 | 7/2/1973 |
| 37 | 74 | 26 | 465 | 357792 | 902869 | 5537.6 | 878 | 5/28/1999 |
| 37 | 74 | 26 | 26-287 | 357840 | 902872 | 5544.4 | 886 | 6/14/1989 |
| 37 | 74 | 26 | 26-436 | 357890 | 902878 | 5540.1 | 908 | 4/23/1998 |
| 37 | 74 | 26 | 511 | 357450 | 902900 | 5526.6 | 878 | 5/10/2005 |
| 37 | 74 | 26 | 26-60 | 355375 | 902904 | 5562.5 | 660 | 6/25/1973 |
| 37 | 74 | 26 | 26-441 | 357919 | 902930 | 5539.7 | 900 | 4/30/1998 |
| 37 | 74 | 26 | 26-373 | 357291 | 902947 | 5527.3 | 893 | 9/3/1997 |
| 37 | 74 | 26 | 26-320 | 357342 | 902949 | 5526.7 | 903 | 6/27/1997 |
| 37 | 74 | 26 | 510 | 357850 | 902950 | 5535.9 | 883 | 6/22/2005 |
| 37 | 74 | 26 | 26-429 | 357397 | 902951 | 5526.9 | 875 | 3/29/1998 |
| 37 | 74 | 26 | 26-248 | 355431 | 902951 | 5558.7 | 660 | 5/21/1980 |
| 37 | 74 | 26 | 26-71 | 355582 | 902955 | 5550.5 | 662 | 7/5/1973 |
| 37 | 74 | 26 | 26-422 | 355374 | 902956 | 5561.6 | 683 | 11/11/1997 |
| 37 | 74 | 26 | 26-447 | 357450 | 902956 | 5526.4 | 1004 | 5/18/1998 |
| 37 | 74 | 26 | 26-143 | 357199 | 902958 | 5529.3 | 659 | 6/21/1974 |
| 37 | 74 | 26 | 26-94 | 355483 | 902959 | 5555.7 | 662 | 7/16/1973 |
| 37 | 74 | 26 | 26-218 | 356006 | 902959 | 5541.7 | 651 | 3/25/1975 |
| 37 | 74 | 26 | 26-327 | 357740 | 902997 | 5528.1 | 897 | 7/9/1997 |
| 37 | 74 | 26 | 26-161 | 356641 | 902999 | 5543.5 | 624 | 2/27/1975 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 26 | 509 | 357900 | 903000 | 5537.2 | 883 | 6/23/2005 |
| 37 | 74 | 26 | 508 | 357450 | 903000 | 5526.3 | 880 | 5/16/2005 |
| 37 | 74 | 26 | 26-210 | 356432 | 903002 | 5544 | 660 | 3/20/1975 |
| 37 | 74 | 26 | 26-321 | 357789 | 903003 | 5530.1 | 900 | 6/30/1997 |
| 37 | 74 | 26 | 26-449 | 357362 | 903003 | 5528.2 | 881 | 5/24/1999 |
| 37 | 74 | 26 | 26-257 | 355432 | 903004 | 5558.6 | 663 | 4/2/1981 |
| 37 | 74 | 26 | 26-371 | 357836 | 903006 | 5532.7 | 906 | 9/3/1997 |
| 37 | 74 | 26 | 26-98 | 355481 | 903007 | 5555.4 | 680 | 6/11/1974 |
| 37 | 74 | 26 | 505 | 357400 | 903050 | 5527.5 | 883 | 5/17/2005 |
| 37 | 74 | 26 | 507 | 357850 | 903050 | 5532.9 | 881 | 6/23/2005 |
| 37 | 74 | 26 | 504 | 357300 | 903050 | 5529 | 883 | 5/23/2005 |
| 37 | 74 | 26 | 506 | 357750 | 903050 | 5527.8 | 881 | 6/24/2005 |
| 37 | 74 | 26 | 26-76 | 355583 | 903058 | 5549.6 | 662 | 7/9/1973 |
| 37 | 74 | 26 | 26-419 | 355528 | 903058 | 5551.9 | 680 | 11/10/1998 |
| 37 | 74 | 26 | 26-96 | 355478 | 903060 | 5555.2 | 678 | 6/14/1974 |
| 37 | 74 | 26 | 26-240 | 355471 | 903100 | 5555.1 | 685 | 11/28/1977 |
| 37 | 74 | 26 | 503 | 357800 | 903100 | 5529 | 883 | 6/27/2005 |
| 37 | 74 | 26 | 502 | 357700 | 903100 | 5523.9 | 883 | 6/28/2005 |
| 37 | 74 | 26 | 450 | 357348 | 903101 | 5531.3 | 880 | 5/22/1999 |
| 37 | 74 | 26 | 26-84 | 355584 | 903107 | 5549.2 | 662 | 7/11/1973 |
| 37 | 74 | 26 | 26-244 | 355699 | 903115 | 5544.8 | 661 | 2/27/1979 |
| 37 | 74 | 26 | 26-28 | 354640 | 903122 | 5556.7 | 603 | 6/18/1971 |
| 37 | 74 | 26 | 501 | 357750 | 903150 | 5525.7 | 883 | 6/28/2005 |
| 37 | 74 | 26 | 474 | 357589 | 903181 | 5526.8 | 876 | 6/8/1999 |
| 37 | 74 | 26 | 26-289 | 357633 | 903182 | 5530.2 | 900 | 6/12/1989 |
| 37 | 74 | 26 | 26-279 | 357847 | 903184 | 5527.2 | 1060 | 11/20/1986 |
| 37 | 74 | 26 | 26-435 | 357685 | 903187 | 5522.2 | 905 | 4/29/1998 |
| 37 | 74 | 26 | 26-442 | 357736 | 903190 | 5523.4 | 904 | 5/7/1998 |
| 37 | 74 | 26 | 26-446 | 357785 | 903194 | 5525.4 | 908 | 5/19/1998 |
| 37 | 74 | 26 | 451 | 357243 | 903195 | 5535.2 | 881 | 5/22/1999 |
| 37 | 74 | 26 | 26-61 | 356169 | 903195 | 5539.5 | 665 | 6/26/1973 |
| 37 | 74 | 26 | 26-333 | 356789 | 903196 | 5535.2 | 693 | 7/8/1997 |
| 37 | 74 | 34 | 34-72 | 352375 | 901068 | 5547.1 | 663 | 7/30/1991 |
| 37 | 74 | 34 | 34-50 | 352381 | 900897 | 5574.8 | 683 | 5/1/1975 |
| 37 | 74 | 34 | 34-26 | 352388 | 900195 | 5575 | 700 | 3/14/1972 |
| 37 | 74 | 34 | 34-59 | 352394 | 900671 | 5599.3 | 719 | 3/6/1979 |
| 37 | 74 | 34 | 34-15 | 352394 | 901382 | 5505.6 | 560 | 6/25/1971 |
| 37 | 74 | 34 | 34-5 | 352395 | 901925 | 1 | 642 | 11/29/1967 |
| 37 | 74 | 34 | 34-7 | 352400 | 900393 | 5602 | 680 | 11/21/1967 |
| 37 | 74 | 34 | 34-21 | 352402 | 900585 | 5604.7 | 701 | 3/10/1972 |
| 37 | 74 | 34 | 34-9 | 352403 | 899589 | 5571.5 | 704 | 11/17/1967 |
| 37 | 74 | 34 | 34-6 | 352406 | 901195 | 5529.5 | 659 | 11/22/1967 |
| 37 | 74 | 34 | 34-11C | 352411 | 901180 | 5531.4 | 532 | 1/22/1968 |
| 37 | 74 | 34 | 34-47 | 352440 | 900197 | 5582.6 | 738 | 4/24/1975 |
| 37 | 74 | 34 | 34-36 | 352442 | 901023 | 5555 | 694 | 4/23/1975 |
| 37 | 74 | 34 | 34-4 | 352443 | 899051 | 5581 | 659 | 10/3/1967 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 34 | 34-57 | 352448 | 901284 | 5514.8 | 643 | 6/17/1976 |
| 37 | 74 | 34 | 34-61 | 352451 | 900484 | 5605.3 | 662 | 3/26/1981 |
| 37 | 74 | 34 | 34-41 | 352463 | 900772 | 5594.5 | 692 | 4/9/1975 |
| 37 | 74 | 34 | 34-40 | 352473 | 899979 | 5579.2 | 699 | 4/3/1975 |
| 37 | 74 | 34 | 34-31 | 352484 | 900197 | 5589.6 | 722 | 3/16/1972 |
| 37 | 74 | 34 | 34-24 | 352491 | 900397 | 5605.6 | 702 | 3/9/1972 |
| 37 | 74 | 34 | 34-39 | 352500 | 900583 | 5613.7 | 702 | 4/2/1975 |
| 37 | 74 | 34 | 34-49 | 352527 | 899982 | 5582 | 740 | 4/25/1975 |
| 37 | 74 | 34 | 34-58 | 352539 | 900494 | 5611.5 | 701 | 3/6/1979 |
| 37 | 74 | 34 | 34-10 | 352546 | 900576 | 5613.8 | 1200 | 3/28/1969 |
| 37 | 74 | 34 | 34-52 | 352548 | 900199 | 5595.7 | 686 | 4/30/1975 |
| 37 | 74 | 34 | 34-17 | 352574 | 901201 | 5521.8 | 702 | 3/21/1972 |
| 37 | 74 | 34 | 34-32 | 352575 | 901412 | 5511.5 | 590 | 3/31/1975 |
| 37 | 74 | 34 | 34-27 | 352581 | 899980 | 5587.2 | 700 | 3/14/1972 |
| 37 | 74 | 34 | 34-56 | 352585 | 899882 | 5584.7 | 637 | 6/17/1976 |
| 37 | 74 | 34 | 34-28 | 352587 | 899586 | 5581.3 | 701 | 3/14/1972 |
| 37 | 74 | 34 | 34-60 | 352590 | 899051 | 5596.8 | 700 | 3/6/1979 |
| 37 | 74 | 34 | 34-66 | 352592 | 899424 | 5605.8 | 682 | 2/8/1982 |
| 37 | 74 | 34 | 34-48 | 352615 | 900201 | 5601.9 | 743 | 4/25/1975 |
| 37 | 74 | 34 | 34-45 | 352645 | 899218 | 5598.8 | 718 | 4/22/1975 |
| 37 | 74 | 34 | 34-43 | 352646 | 899531 | 5593.2 | 697 | 4/18/1975 |
| 37 | 74 | 34 | 34-44 | 352649 | 899761 | 5585.6 | 677 | 4/22/1975 |
| 37 | 74 | 35 | 741 | 357840 | 897596 | 5518 | 683 | 6/25/1998 |
| 37 | 74 | 35 | 566 | 357886 | 897649 | 5514 | 904 | 8/22/1997 |
| 37 | 74 | 35 | 567 | 357864 | 897844 | 5503 | 914 | 8/22/1997 |
| 37 | 74 | 35 | 329 | 352987 | 897878 | 5618 | 720 | 5/1/1975 |
| 37 | 74 | 35 | 239 | 353210 | 897892 | 5607 | 720 | 5/8/1975 |
| 37 | 74 | 35 | 56 | 355196 | 897942 | 5569 | 722 | 2/16/1968 |
| 37 | 74 | 35 | 54 | 353583 | 897980 | 5598 | 705 | 2/21/1968 |
| 37 | 74 | 35 | 328 | 353801 | 897989 | 5586 | 720 | 5/1/1975 |
| 37 | 74 | 35 | 28 | 355596 | 897994 | 5561 | 705 | 11/15/1967 |
| 37 | 74 | 35 | 55 | 354399 | 897996 | 5573 | 970 | 2/14/1968 |
| 37 | 74 | 35 | 94 | 354186 | 898001 | 5572 | 653 | 3/20/1968 |
| 37 | 74 | 35 | 95 | 354622 | 898002 | 5568 | 661 | 3/20/1968 |
| 37 | 74 | 35 | 67 | 356202 | 899589 | 5553 | 659 | 3/5/1968 |
| 37 | 74 | 35 | 46 | 355203 | 899591 | 5552 | 705 | 2/20/1968 |
| 37 | 74 | 35 | 429 | 355339 | 899592 | 5556 | 880 | 9/7/1989 |
| 37 | 74 | 35 | 66 | 355797 | 899592 | 5556 | 660 | 3/5/1968 |
| 37 | 74 | 35 | 44 | 353604 | 899596 | 5613 | 705 | 2/20/1968 |
| 37 | 74 | 35 | 45 | 354399 | 899597 | 5572 | 705 | 2/20/1968 |
| 37 | 74 | 35 | 20 | 353188 | 899599 | 5626 | 779 | 11/17/1967 |
| 37 | 74 | 35 | 631 | 355410 | 899599 | 5553 | 901 | 2/6/1998 |
| 37 | 74 | 35 | 43 | 352800 | 899600 | 10 | 705 | 2/21/1968 |
| 37 | 74 | 35 | 184 | 355887 | 899605 | 5556 | 660 | 6/7/1973 |
| 37 | 74 | 35 | 21 | 353990 | 899606 | 5593 | 713 | 11/16/1967 |
| 37 | 74 | 35 | 22 | 354803 | 899607 | 5558 | 908 | 11/16/1967 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 35 | 768 | 357375 | 899617 | 5561 | 900 | 6/26/1998 |
| 37 | 74 | 35 | 782 | 356449 | 899630 | 5555 | 684 | 7/14/1998 |
| 37 | 74 | 35 | 708 | 356756 | 899632 | 5556 | 681 | 6/2/1998 |
| 37 | 74 | 35 | 734 | 356652 | 899638 | 5556 | 692 | 6/12/1998 |
| 37 | 74 | 35 | 629 | 355284 | 899667 | 5553 | 901 | 2/5/1998 |
| 37 | 74 | 35 | 716 | 357370 | 899668 | 5561 | 902 | 6/3/1998 |
| 37 | 74 | 35 | 651 | 355331 | 899670 | 5552 | 836 | 2/12/1998 |
| 37 | 74 | 35 | 737 | 356754 | 899682 | 5557 | 680 | 6/11/1998 |
| 37 | 74 | 35 | 749 | 356649 | 899690 | 5555 | 682 | 6/15/1998 |
| 37 | 74 | 35 | 449 | 356810 | 899708 | 5561 | 871 | 9/29/1989 |
| 37 | 74 | 35 | 424 | 356964 | 899709 | 5562 | 874 | 8/31/1989 |
| 37 | 74 | 35 | 462 | 357018 | 899711 | 5564 | 874 | 10/17/1989 |
| 37 | 74 | 35 | 418 | 357110 | 899712 | 5563 | 872 | 8/24/1989 |
| 37 | 74 | 35 | 736 | 356861 | 899713 | 5557 | 677 | 6/15/1998 |
| 37 | 74 | 35 | 413 | 357212 | 899714 | 5564 | 873 | 8/22/1989 |
| 37 | 74 | 35 | 411 | 357315 | 899715 | 5564 | 884 | 8/18/1989 |
| 37 | 74 | 35 | 693 | 357366 | 899717 | 5560 | 902 | 5/22/1998 |
| 37 | 74 | 35 | 620 | 352904 | 899721 | 5611 | 702 | 2/5/1998 |
| 37 | 74 | 35 | 742 | 357415 | 899723 | 5561 | 904 | 6/11/1998 |
| 37 | 74 | 35 | 436 | 355281 | 899740 | 5554 | 870 | 9/15/1989 |
| 37 | 74 | 35 | 476 | 355178 | 899743 | 5556 | 872 | 11/10/1989 |
| 37 | 74 | 35 | 481 | 354920 | 899751 | 5561 | 873 | 11/17/1989 |
| 37 | 74 | 35 | 628 | 355020 | 899758 | 5554 | 905 | 2/4/1998 |
| 37 | 74 | 35 | 635 | 355070 | 899765 | 5553 | 904 | 2/6/1998 |
| 37 | 74 | 35 | 318 | 352896 | 899768 | 5614 | 700 | 4/30/1975 |
| 37 | 74 | 35 | 309 | 352727 | 899769 | 5596 | 720 | 4/24/1975 |
| 37 | 74 | 35 | 330 | 352820 | 899771 | 5608 | 700 | 5/2/1975 |
| 37 | 74 | 35 | 610 | 352948 | 899777 | 5617 | 700 | 1/28/1998 |
| 37 | 74 | 35 | 62 | 356022 | 899790 | 5552 | 655 | 3/5/1968 |
| 37 | 74 | 35 | 64 | 356396 | 899791 | 5553 | 661 | 3/7/1968 |
| 37 | 74 | 35 | 63 | 356193 | 899796 | 5552 | 660 | 3/6/1968 |
| 37 | 74 | 35 | 836 | 356054 | 899796 | 5552 | 910 | 9/16/1998 |
| 37 | 74 | 35 | 849 | 355954 | 899796 | 5553 | 910 | 10/2/1998 |
| 37 | 74 | 35 | 183 | 356109 | 899797 | 5552 | 660 | 6/7/1973 |
| 37 | 74 | 35 | 61 | 355799 | 899797 | 5553 | 657 | 3/7/1968 |
| 37 | 74 | 35 | 221 | 355905 | 899800 | 5553 | 640 | 6/26/1974 |
| 37 | 74 | 35 | 65 | 356599 | 899801 | 5555 | 639 | 3/6/1968 |
| 37 | 74 | 35 | 458 | 357269 | 899814 | 5563 | 872 | 10/11/1989 |
| 37 | 74 | 35 | 735 | 357318 | 899820 | 5559 | 904 | 6/11/1998 |
| 37 | 74 | 35 | 617 | 352896 | 899822 | 5616 | 702 | 1/30/1998 |
| 37 | 74 | 35 | 463 | 356968 | 899868 | 5563 | 870 | 10/16/1989 |
| 37 | 74 | 35 | 243 | 355205 | 899874 | 5554 | 700 | 3/18/1975 |
| 37 | 74 | 35 | 648 | 355052 | 899877 | 5557 | 902 | 2/11/1998 |
| 37 | 74 | 35 | 482 | 355098 | 899879 | 5561 | 874 | 11/17/1989 |
| 37 | 74 | 35 | 633 | 355154 | 899885 | 5560 | 900 | 2/9/1998 |
| 37 | 74 | 35 | 623 | 355294 | 899898 | 5551 | 901 | 2/4/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 35 | 247 | 355366 | 899899 | 5549 | 660 | 3/20/1975 |
| 37 | 74 | 35 | 680 | 357164 | 899917 | 5559 | 900 | 5/15/1998 |
| 37 | 74 | 35 | 636 | 355097 | 899929 | 5558 | 904 | 2/9/1998 |
| 37 | 74 | 35 | 622 | 355185 | 899944 | 5555 | 900 | 2/4/1998 |
| 37 | 74 | 35 | 252 | 355647 | 899947 | 5545 | 660 | 3/21/1975 |
| 37 | 74 | 35 | 637 | 355453 | 899953 | 5547 | 702 | 2/9/1998 |
| 37 | 74 | 35 | 182 | 356109 | 899989 | 5546 | 660 | 6/7/1973 |
| 37 | 74 | 35 | 484 | 355017 | 899990 | 5566 | 873 | 11/21/1989 |
| 37 | 74 | 35 | 480 | 355179 | 899991 | 5561 | 873 | 11/16/1989 |
| 37 | 74 | 35 | 831 | 356050 | 899992 | 5546 | 907 | 9/10/1998 |
| 37 | 74 | 35 | 478 | 355288 | 899993 | 5558 | 875 | 11/14/1989 |
| 37 | 74 | 35 | 59 | 356395 | 899994 | 5551 | 660 | 3/7/1968 |
| 37 | 74 | 35 | 277 | 357067 | 899994 | 5557 | 660 | 4/10/1975 |
| 37 | 74 | 35 | 58 | 356204 | 899996 | 5546 | 660 | 3/6/1968 |
| 37 | 74 | 35 | 219 | 355902 | 899996 | 5546 | 640 | 6/27/1974 |
| 37 | 74 | 35 | 220 | 355398 | 899997 | 5550 | 640 | 6/27/1974 |
| 37 | 74 | 35 | 57 | 355999 | 899998 | 5546 | 660 | 3/7/1968 |
| 37 | 74 | 35 | 60 | 356596 | 899999 | 5554 | 660 | 3/6/1968 |
| 37 | 74 | 35 | 263 | 356908 | 900000 | 5556 | 700 | 4/1/1975 |
| 37 | 74 | 35 | 291 | 357010 | 900001 | 5556 | 680 | 4/17/1975 |
| 37 | 74 | 35 | 461 | 355526 | 900002 | 5550 | 873 | 10/13/1989 |
| 37 | 74 | 35 | 237 | 357214 | 900005 | 5557 | 680 | 4/3/1975 |
| 37 | 74 | 35 | 455 | 357154 | 900016 | 5561 | 870 | 10/5/1989 |
| 37 | 74 | 35 | 467 | 357256 | 900017 | 5560 | 870 | 10/20/1989 |
| 37 | 74 | 35 | 457 | 357364 | 900017 | 5560 | 874 | 10/10/1989 |
| 37 | 74 | 35 | 246 | 355658 | 900028 | 5543 | 700 | 3/19/1975 |
| 37 | 74 | 35 | 772 | 357259 | 900074 | 5555 | 894 | 6/25/1998 |
| 37 | 74 | 35 | 557 | 357209 | 900075 | 5555 | 906 | 8/14/1997 |
| 37 | 74 | 35 | 333 | 355995 | 900097 | 5539 | 640 | 6/16/1976 |
| 37 | 74 | 35 | 342 | 356099 | 900108 | 5539 | 640 | 8/17/1976 |
| 37 | 74 | 35 | 122 | 354797 | 900128 | 5575 | 692 | 6/24/1971 |
| 37 | 74 | 35 | 770 | 357355 | 900128 | 5552 | 907 | 6/24/1998 |
| 37 | 74 | 35 | 377 | 355192 | 900132 | 5558 | 663 | 4/1/1981 |
| 37 | 74 | 35 | 453 | 357207 | 900134 | 5558 | 872 | 10/4/1989 |
| 37 | 74 | 35 | 388 | 355725 | 900142 | 10 | 1000 | 11/2/1984 |
| 37 | 74 | 35 | 258 | 355405 | 900162 | 5553 | 700 | 3/25/1975 |
| 37 | 74 | 35 | 386 | 355503 | 900167 | 5551 | 653 | 10/28/1983 |
| 37 | 74 | 35 | 638 | 355553 | 900171 | 5549 | 726 | 2/9/1998 |
| 37 | 74 | 35 | 532 | 357298 | 900177 | 5552 | 900 | 7/23/1997 |
| 37 | 74 | 35 | 522 | 357349 | 900180 | 5552 | 896 | 7/17/1997 |
| 37 | 74 | 35 | 448 | 357399 | 900184 | 5556 | 876 | 10/3/1989 |
| 37 | 74 | 35 | 757 | 357255 | 900196 | 5551 | 911 | 6/22/1998 |
| 37 | 74 | 35 | 649 | 355497 | 900218 | 5550 | 703 | 2/12/1998 |
| 37 | 74 | 35 | 387 | 355082 | 900223 | 5563 | 650 | 10/27/1983 |
| 37 | 74 | 35 | 342A | 355190 | 900233 | 5560 | 703 | 3/2/1977 |
| 37 | 74 | 35 | 771 | 357398 | 900239 | 5550 | 901 | 6/25/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 35 | 556 | 357152 | 900241 | 5551 | 902 | 8/14/1997 |
| 37 | 74 | 35 | 539 | 357202 | 900243 | 5551 | 905 | 8/6/1997 |
| 37 | 74 | 35 | 717 | 357252 | 900245 | 5550 | 898 | 6/9/1998 |
| 37 | 74 | 35 | 748 | 357302 | 900247 | 5550 | 903 | 6/16/1998 |
| 37 | 74 | 35 | 335 | 355296 | 900252 | 5556 | 640 | 6/16/1976 |
| 37 | 74 | 35 | 146 | 355957 | 900260 | 5541 | 700 | 3/9/1972 |
| 37 | 74 | 35 | 343A | 355406 | 900262 | 5553 | 701 | 3/2/1977 |
| 37 | 74 | 35 | 218 | 356158 | 900263 | 5535 | 640 | 6/27/1974 |
| 37 | 74 | 35 | 242 | 356091 | 900273 | 5538 | 700 | 3/18/1975 |
| 37 | 74 | 35 | 435 | 355197 | 900287 | 5561 | 870 | 9/14/1989 |
| 37 | 74 | 35 | 380 | 355098 | 900288 | 5561 | 643 | 2/8/1982 |
| 37 | 74 | 35 | 425 | 354995 | 900290 | 5567 | 870 | 9/1/1989 |
| 37 | 74 | 35 | 324 | 356896 | 900291 | 5552 | 660 | 5/1/1975 |
| 37 | 74 | 35 | 445 | 357197 | 900292 | 5554 | 870 | 9/27/1989 |
| 37 | 74 | 35 | 414 | 357295 | 900293 | 5551 | 873 | 8/23/1989 |
| 37 | 74 | 35 | 410 | 357398 | 900294 | 5552 | 873 | 8/18/1989 |
| 37 | 74 | 35 | 240 | 357099 | 900295 | 5551 | 660 | 5/9/1975 |
| 37 | 74 | 35 | 408 | 357546 | 900296 | 5543 | 874 | 8/16/1989 |
| 37 | 74 | 35 | 389 | 356190 | 900327 | 5535 | 1000 | 11/5/1984 |
| 37 | 74 | 35 | 350 | 356058 | 900332 | 5543 | 700 | 3/4/1977 |
| 37 | 74 | 35 | 639 | 355244 | 900333 | 5555 | 704 | 2/10/1993 |
| 37 | 74 | 35 | 656 | 355195 | 900335 | 5556 | 898 | 3/25/1998 |
| 37 | 74 | 35 | 447 | 356988 | 900344 | 5555 | 870 | 9/27/1989 |
| 37 | 74 | 35 | 442 | 357097 | 900344 | 5554 | 870 | 9/25/1989 |
| 37 | 74 | 35 | 718 | 357037 | 900348 | 5550 | 902 | 6/9/1998 |
| 37 | 74 | 35 | 242A | 355970 | 900353 | 5547 | 640 | 2/18/1976 |
| 37 | 74 | 35 | 39 | 353604 | 900381 | 5575 | 705 | 2/21/1968 |
| 37 | 74 | 35 | 793 | 356930 | 900384 | 5548 | 904 | 7/8/1998 |
| 37 | 74 | 35 | 40 | 353998 | 900386 | 5572 | 980 | 2/15/1968 |
| 37 | 74 | 35 | 18 | 354798 | 900390 | 5562 | 630 | 11/17/1967 |
| 37 | 74 | 35 | 376 | 355097 | 900392 | 5556 | 1004 | 4/1/1981 |
| 37 | 74 | 35 | 432 | 356842 | 900392 | 5552 | 870 | 9/19/1989 |
| 37 | 74 | 35 | 498 | 355138 | 900394 | 5552 | 667 | 6/16/1992 |
| 37 | 74 | 35 | 38 | 352816 | 900395 | 5608 | 1000 | 2/16/1968 |
| 37 | 74 | 35 | 743 | 357032 | 900397 | 5547 | 906 | 6/19/1998 |
| 37 | 74 | 35 | 19 | 355595 | 900397 | 5545 | 700 | 11/16/1967 |
| 37 | 74 | 35 | 226 | 355787 | 900397 | 5550 | 640 | 6/26/1974 |
| 37 | 74 | 35 | 267 | 355290 | 900397 | 5551 | 640 | 4/1/1975 |
| 37 | 74 | 35 | 42 | 355199 | 900400 | 5554 | 695 | 2/21/1968 |
| 37 | 74 | 35 | 331 | 354595 | 900401 | 5564 | 600 | 6/16/1976 |
| 37 | 74 | 35 | 41 | 354402 | 900402 | 5568 | 700 | 2/21/1968 |
| 37 | 74 | 35 | 339 | 355903 | 900402 | 5550 | 640 | 6/17/1976 |
| 37 | 74 | 35 | 531 | 357162 | 900425 | 5545 | 892 | 7/22/1997 |
| 37 | 74 | 35 | 538 | 357112 | 900425 | 5545 | 906 | 8/5/1997 |
| 37 | 74 | 35 | 17 | 353197 | 900427 | 5586 | 699 | 11/22/1967 |
| 37 | 74 | 35 | 792 | 356878 | 900430 | 5547 | 904 | 7/8/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 35 | 790 | 356931 | 900434 | 5547 | 899 | 7/6/1998 |
| 37 | 74 | 35 | 777 | 356978 | 900439 | 5545 | 898 | 6/30/1998 |
| 37 | 74 | 35 | 763 | 357029 | 900445 | 5544 | 911 | 6/24/1998 |
| 37 | 74 | 35 | 421 | 357398 | 900445 | 5543 | 873 | 8/29/1989 |
| 37 | 74 | 35 | 446 | 357106 | 900471 | 5545 | 870 | 9/28/1989 |
| 37 | 74 | 35 | 784 | 357159 | 900473 | 5542 | 891 | 6/30/1998 |
| 37 | 74 | 35 | 796 | 357208 | 900475 | 5541 | 898 | 7/10/1998 |
| 37 | 74 | 35 | 788 | 357204 | 900524 | 5538 | 902 | 7/7/1998 |
| 37 | 74 | 35 | 719 | 357002 | 900526 | 5539 | 911 | 6/23/1998 |
| 37 | 74 | 35 | 520 | 356953 | 900527 | 5539 | 899 | 7/17/1997 |
| 37 | 74 | 35 | 791 | 357255 | 900538 | 5537 | 904 | 7/7/1998 |
| 37 | 74 | 35 | 261 | 355579 | 900557 | 5549 | 700 | 3/31/1975 |
| 37 | 74 | 35 | 798 | 357152 | 900558 | 5536 | 902 | 7/9/1998 |
| 37 | 74 | 35 | 494 | 356205 | 900561 | 5549 | 645 | 7/29/1991 |
| 37 | 74 | 35 | 145 | 355808 | 900563 | 5549 | 700 | 3/9/1972 |
| 37 | 74 | 35 | 245 | 355888 | 900565 | 5549 | 700 | 3/19/1975 |
| 37 | 74 | 35 | 136 | 355965 | 900566 | 5550 | 700 | 3/7/1972 |
| 37 | 74 | 35 | 149 | 356066 | 900566 | 5546 | 700 | 3/10/1972 |
| 37 | 74 | 35 | 4 | 356153 | 900570 | 5542 | 639 | 9/1/1967 |
| 37 | 74 | 35 | 181 | 356111 | 900571 | 5544 | 1000 | 6/11/1973 |
| 37 | 74 | 35 | 491 | 356253 | 900572 | 5534 | 640 | 8/6/1990 |
| 37 | 74 | 35 | 428 | 356692 | 900575 | 5540 | 870 | 9/6/1989 |
| 37 | 74 | 35 | 305 | 356794 | 900576 | 5537 | 640 | 4/23/1975 |
| 37 | 74 | 35 | 433 | 356949 | 900577 | 5537 | 871 | 9/14/1989 |
| 37 | 74 | 35 | 298 | 356897 | 900578 | 5535 | 640 | 4/21/1975 |
| 37 | 74 | 35 | 440 | 357002 | 900578 | 5537 | 870 | 9/22/1989 |
| 37 | 74 | 35 | 3 | 354949 | 900578 | 5552 | 600 | 9/1/1967 |
| 37 | 74 | 35 | 1 | 352556 | 900581 | 5615 | 699 | 9/1/1967 |
| 37 | 74 | 35 | 290 | 357107 | 900581 | 5534 | 660 | 4/17/1975 |
| 37 | 74 | 35 | 773 | 357202 | 900585 | 5534 | 905 | 6/24/1998 |
| 37 | 74 | 35 | 779 | 357252 | 900588 | 5534 | 902 | 6/29/1998 |
| 37 | 74 | 35 | 119 | 352753 | 900589 | 5612 | 655 | 6/23/1971 |
| 37 | 74 | 35 | 2 | 353763 | 900592 | 5566 | 664 | 9/1/1967 |
| 37 | 74 | 35 | 439 | 357398 | 900595 | 5536 | 870 | 9/18/1989 |
| 37 | 74 | 35 | 349 | 355280 | 900602 | 5552 | 701 | 3/4/1977 |
| 37 | 74 | 35 | 284 | 357198 | 900634 | 5531 | 640 | 4/14/1975 |
| 37 | 74 | 35 | 720 | 356760 | 900647 | 5531 | 911 | 6/10/1998 |
| 37 | 74 | 35 | 526 | 356689 | 900648 | 5531 | 892 | 7/21/1997 |
| 37 | 74 | 35 | 966 | 356900 | 900650 | 5528 | 884 | 8/1/2005 |
| 37 | 74 | 35 | 225 | 356108 | 900666 | 5542 | 640 | 6/27/1974 |
| 37 | 74 | 35 | 528 | 356992 | 900667 | 5525 | 849 | 7/18/1997 |
| 37 | 74 | 35 | 431 | 356841 | 900673 | 5528 | 870 | 9/8/1989 |
| 37 | 74 | 35 | 512 | 356942 | 900675 | 5525 | 885 | 7/16/1997 |
| 37 | 74 | 35 | 135 | 352755 | 900686 | 5612 | 700 | 3/2/1972 |
| 37 | 74 | 35 | 605 | 353062 | 900686 | 5602 | 701 | 1/26/1993 |
| 37 | 74 | 35 | 490 | 354293 | 900696 | 5557 | 681 | 8/6/1990 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 35 | 379 | 354509 | 900698 | 5555 | 640 | 1/29/1982 |
| 37 | 74 | 35 | 393 | 354100 | 900698 | 5560 | 650 | 11/1/1984 |
| 37 | 74 | 35 | 356 | 354191 | 900699 | 5559 | 602 | 11/29/1977 |
| 37 | 74 | 35 | 956 | 357200 | 900700 | 5525 | 883 | 8/2/2005 |
| 37 | 74 | 35 | 954 | 357300 | 900700 | 5522 | 883 | 8/1/2005 |
| 37 | 74 | 35 | 964 | 356900 | 900700 | 5520 | 881 | 8/1/2005 |
| 37 | 74 | 35 | 134 | 352525 | 900706 | 5605 | 700 | 3/13/1972 |
| 37 | 74 | 35 | 615 | 352958 | 900729 | 5604 | 704 | 2/2/1998 |
| 37 | 74 | 35 | 613 | 353008 | 900732 | 5602 | 647 | 1/28/1998 |
| 37 | 74 | 35 | 422 | 357130 | 900733 | 5513 | 876 | 8/30/1989 |
| 37 | 74 | 35 | 596 | 353108 | 900738 | 5600 | 682 | 1/19/1998 |
| 37 | 74 | 35 | 604 | 353156 | 900742 | 5600 | 704 | 1/27/1998 |
| 37 | 74 | 35 | 746 | 357054 | 900743 | 5509 | 899 | 6/26/1998 |
| 37 | 74 | 35 | 166 | 353207 | 900747 | 5599 | 700 | 3/20/1972 |
| 37 | 74 | 35 | 595 | 353257 | 900749 | 5597 | 706 | 1/15/1998 |
| 37 | 74 | 35 | 955 | 357250 | 900750 | 5517 | 881 | 7/29/2005 |
| 37 | 74 | 35 | 963 | 356950 | 900750 | 5512 | 882 | 7/28/2005 |
| 37 | 74 | 35 | 597 | 353307 | 900751 | 5595 | 701 | 1/20/1998 |
| 37 | 74 | 35 | 495 | 356426 | 900752 | 5543 | 647 | 7/30/1991 |
| 37 | 74 | 35 | 781 | 357005 | 900753 | 5511 | 906 | 7/1/1998 |
| 37 | 74 | 35 | 120 | 352526 | 900755 | 5599 | 633 | 6/25/1971 |
| 37 | 74 | 35 | 121 | 352627 | 900757 | 5602 | 625 | 6/29/1971 |
| 37 | 74 | 35 | 366 | 353361 | 900768 | 5593 | 701 | 5/19/1980 |
| 37 | 74 | 35 | 519 | 356837 | 900773 | 5517 | 904 | 7/23/1997 |
| 37 | 74 | 35 | 338 | 356029 | 900775 | 5548 | 660 | 6/16/1976 |
| 37 | 74 | 35 | 243A | 356088 | 900777 | 5546 | 640 | 2/18/1976 |
| 37 | 74 | 35 | 614 | 353253 | 900778 | 5595 | 657 | 2/2/1998 |
| 37 | 74 | 35 | 619 | 352951 | 900780 | 5600 | 700 | 2/6/1998 |
| 37 | 74 | 35 | 601 | 352738 | 900781 | 5599 | 700 | 1/23/1998 |
| 37 | 74 | 35 | 358 | 354828 | 900783 | 5553 | 603 | 11/29/1977 |
| 37 | 74 | 35 | 348A | 355242 | 900798 | 5553 | 703 | 3/4/1977 |
| 37 | 74 | 35 | 953 | 357300 | 900800 | 5506 | 861 | 7/28/2005 |
| 37 | 74 | 35 | 957 | 357200 | 900800 | 5508 | 882 | 7/29/2005 |
| 37 | 74 | 35 | 270 | 355347 | 900802 | 5554 | 680 | 4/3/1975 |
| 37 | 74 | 35 | 282 | 355448 | 900806 | 5553 | 660 | 4/14/1975 |
| 37 | 74 | 35 | 616 | 353450 | 900807 | 5587 | 702 | 2/2/1998 |
| 37 | 74 | 35 | 276 | 355551 | 900813 | 5552 | 700 | 4/10/1975 |
| 37 | 74 | 35 | 523 | 357236 | 900827 | 5510 | 903 | 7/22/1997 |
| 37 | 74 | 35 | 590 | 354249 | 900844 | 5565 | 702 | 1/14/1998 |
| 37 | 74 | 35 | 427 | 356884 | 900849 | 5536 | 868 | 9/5/1989 |
| 37 | 74 | 35 | 732 | 357047 | 900849 | 5530 | 903 | 6/10/1998 |
| 37 | 74 | 35 | 999 | 356150 | 900850 | 5547 | 658 | 7/20/2005 |
| 37 | 74 | 35 | 998 | 356050 | 900850 | 5550 | 660 | 7/21/2005 |
| 37 | 74 | 35 | 390 | 356464 | 900857 | 5539 | 1000 | 11/2/1984 |
| 37 | 74 | 35 | 443 | 357385 | 900887 | 5525 | 870 | 9/26/1989 |
| 37 | 74 | 35 | 353 | 354197 | 900889 | 5570 | 605 | 11/15/1977 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 35 | 374 | 354096 | 900889 | 5572 | 702 | 3/31/1981 |
| 37 | 74 | 35 | 312 | 356884 | 900891 | 5538 | 640 | 4/24/1975 |
| 37 | 74 | 35 | 304 | 356936 | 900893 | 5537 | 660 | 4/22/1975 |
| 37 | 74 | 35 | 322 | 356829 | 900893 | 5538 | 650 | 4/28/1975 |
| 37 | 74 | 35 | 375 | 354289 | 900895 | 5567 | 700 | 3/31/1981 |
| 37 | 74 | 35 | 303 | 356983 | 900898 | 5536 | 660 | 4/21/1975 |
| 37 | 74 | 35 | 724 | 357044 | 900898 | 5535 | 905 | 6/2/1998 |
| 37 | 74 | 35 | 997 | 356200 | 900900 | 5547 | 663 | 7/20/2005 |
| 37 | 74 | 35 | 950 | 357600 | 900900 | 5509 | 861 | 7/28/2005 |
| 37 | 74 | 35 | 986 | 356400 | 900900 | 5542 | 659 | 7/25/2005 |
| 37 | 74 | 35 | 996 | 356100 | 900900 | 5551 | 662 | 7/20/2005 |
| 37 | 74 | 35 | 344A | 355440 | 900903 | 5553 | 700 | 3/2/1977 |
| 37 | 74 | 35 | 883 | 357000 | 900920 | 5537 | 850 | 6/4/2004 |
| 37 | 74 | 35 | 384 | 356476 | 900924 | 5543 | 680 | 10/27/1983 |
| 37 | 74 | 35 | 137 | 356139 | 900926 | 5551 | 1000 | 3/6/1972 |
| 37 | 74 | 35 | 143 | 356040 | 900926 | 5554 | 700 | 3/8/1972 |
| 37 | 74 | 35 | 289 | 357338 | 900937 | 5531 | 640 | 4/18/1975 |
| 37 | 74 | 35 | 283 | 357437 | 900939 | 5526 | 640 | 4/14/1975 |
| 37 | 74 | 35 | 723 | 356940 | 900942 | 5540 | 865 | 6/3/1998 |
| 37 | 74 | 35 | 513 | 356989 | 900943 | 5539 | 900 | 7/15/1997 |
| 37 | 74 | 35 | 361 | 356680 | 900949 | 5542 | 699 | 3/5/1979 |
| 37 | 74 | 35 | 970 | 356850 | 900950 | 5542 | 883 | 7/19/2005 |
| 37 | 74 | 35 | 434 | 357086 | 900951 | 5540 | 872 | 9/13/1989 |
| 37 | 74 | 35 | 271 | 357203 | 900954 | 5534 | 660 | 4/2/1975 |
| 37 | 74 | 35 | 274 | 357614 | 900978 | 5526 | 640 | 4/9/1975 |
| 37 | 74 | 35 | 511 | 356786 | 900982 | 5542 | 904 | 7/15/1997 |
| 37 | 74 | 35 | 497 | 356465 | 900983 | 5545 | 671 | 6/3/1992 |
| 37 | 74 | 35 | 589 | 354070 | 900984 | 5580 | 701 | 1/6/1998 |
| 37 | 74 | 35 | 489 | 354120 | 900987 | 5578 | 680 | 8/6/1990 |
| 37 | 74 | 35 | 362 | 354199 | 900990 | 5577 | 701 | 3/3/1979 |
| 37 | 74 | 35 | 989 | 356300 | 901000 | 5549 | 661 | 7/19/2005 |
| 37 | 74 | 35 | 987 | 356400 | 901000 | 5548 | 661 | 7/18/2005 |
| 37 | 74 | 35 | 981 | 356600 | 901000 | 5546 | 660 | 6/30/2005 |
| 37 | 74 | 35 | 977 | 356700 | 901000 | 5544 | 656 | 6/29/2005 |
| 37 | 74 | 35 | 994 | 356200 | 901000 | 5552 | 994 | 7/19/2005 |
| 37 | 74 | 35 | 995 | 356100 | 901000 | 5555 | 661 | 7/20/2005 |
| 37 | 74 | 35 | 594 | 353548 | 901008 | 5570 | 703 | 1/16/1993 |
| 37 | 74 | 35 | 154 | 353202 | 901010 | 5550 | 700 | 3/15/1972 |
| 37 | 74 | 35 | 133 | 353598 | 901011 | 5575 | 700 | 3/1/1972 |
| 37 | 74 | 35 | 378 | 353766 | 901015 | 5591 | 639 | 2/1/1982 |
| 37 | 74 | 35 | 385 | 356338 | 901015 | 5549 | 680 | 10/27/1983 |
| 37 | 74 | 35 | 268 | 356887 | 901020 | 5544 | 680 | 4/1/1975 |
| 37 | 74 | 35 | 347 | 356480 | 901026 | 5549 | 640 | 8/17/1976 |
| 37 | 74 | 35 | 535 | 356987 | 901028 | 5544 | 903 | 7/25/1997 |
| 37 | 74 | 35 | 354 | 353366 | 901030 | 5551 | 604 | 11/30/1977 |
| 37 | 74 | 35 | 722 | 357038 | 901030 | 5544 | 905 | 6/9/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 35 | 364 | 356783 | 901032 | 5544 | 700 | 3/2/1979 |
| 37 | 74 | 35 | 593 | 354114 | 901037 | 5584 | 707 | 1/14/1998 |
| 37 | 74 | 35 | 492 | 354065 | 901042 | 5586 | 682 | 8/6/1990 |
| 37 | 74 | 35 | 591 | 353723 | 901046 | 5583 | 706 | 1/20/1998 |
| 37 | 74 | 35 | 971 | 356950 | 901050 | 5545 | 882 | 7/18/2005 |
| 37 | 74 | 35 | 988 | 356350 | 901050 | 5551 | 660 | 7/8/2005 |
| 37 | 74 | 35 | 974 | 356750 | 901050 | 5545 | 654 | 6/29/2005 |
| 37 | 74 | 35 | 991 | 356250 | 901050 | 5553 | 659 | 7/14/2005 |
| 37 | 74 | 26 | 26-296 | 357292 | 903197 | 5540.2 | 884 | 8/11/1989 |
| 37 | 74 | 26 | 26-127 | 357393 | 903199 | 5531.5 | 678 | 6/18/1974 |
| 37 | 74 | 26 | 26-332 | 357344 | 903200 | 5531.8 | 903 | 7/9/1997 |
| 37 | 74 | 26 | 26-426 | 355533 | 903202 | 5549.5 | 683 | 12/1/1997 |
| 37 | 74 | 26 | 26-418 | 355582 | 903207 | 5547.7 | 619 | 11/7/1997 |
| 37 | 74 | 26 | 26-318 | 356985 | 903239 | 5537.6 | 897 | 6/27/1997 |
| 37 | 74 | 26 | 497 | 357250 | 903250 | 5533.7 | 874 | 7/27/2005 |
| 37 | 74 | 26 | 500 | 357750 | 903250 | 5521.9 | 884 | 6/30/2005 |
| 37 | 74 | 26 | 498 | 357550 | 903250 | 5526.4 | 883 | 7/7/2005 |
| 37 | 74 | 26 | 499 | 357650 | 903250 | 5522.9 | 881 | 7/29/2005 |
| 37 | 74 | 26 | 26-425 | 355976 | 903254 | 5540.9 | 683 | 11/19/1997 |
| 37 | 74 | 26 | 26-374 | 356791 | 903269 | 5533.4 | 680 | 9/3/1997 |
| 37 | 74 | 26 | 26-326 | 356886 | 903281 | 5534.5 | 706 | 7/1/1997 |
| 37 | 74 | 26 | 493 | 357200 | 903300 | 5535 | 880 | 6/21/2005 |
| 37 | 74 | 26 | 494 | 357300 | 903300 | 5532.4 | 878 | 6/17/2005 |
| 37 | 74 | 26 | 495 | 357600 | 903300 | 5524.5 | 885 | 7/6/2005 |
| 37 | 74 | 26 | 492 | 357100 | 903300 | 5536.8 | 877 | 7/28/2005 |
| 37 | 74 | 26 | 26-70 | 356169 | 903303 | 5539.9 | 664 | 7/5/1973 |
| 37 | 74 | 26 | 26-122 | 355584 | 903310 | 5549.2 | 680 | 6/18/1974 |
| 37 | 74 | 26 | 26-134 | 355684 | 903310 | 5545.4 | 682 | 6/19/1974 |
| 37 | 74 | 26 | 26-409 | 355635 | 903311 | 5546.7 | 683 | 10/30/1997 |
| 37 | 74 | 26 | 26-319 | 357951 | 903336 | 5525.6 | 885 | 7/1/1997 |
| 37 | 74 | 26 | 26-146 | 356788 | 903340 | 5531.6 | 632 | 6/21/1974 |
| 37 | 74 | 26 | 26-136 | 356985 | 903340 | 5534.7 | 660 | 6/20/1974 |
| 37 | 74 | 26 | 26-160 | 356679 | 903340 | 5532.7 | 644 | 2/27/1975 |
| 37 | 74 | 26 | 26-126 | 357200 | 903344 | 5534.4 | 678 | 6/18/1974 |
| 37 | 74 | 26 | 26-325 | 357499 | 903346 | 5527.5 | 900 | 7/7/1997 |
| 37 | 74 | 26 | 26-118 | 357393 | 903346 | 5530.6 | 674 | 6/14/1974 |
| 37 | 74 | 26 | 452 | 357244 | 903347 | 5534.6 | 881 | 5/22/1999 |
| 37 | 74 | 26 | 490 | 357150 | 903350 | 5535.3 | 874 | 6/20/2005 |
| 37 | 74 | 26 | 491 | 357450 | 903350 | 5529.3 | 883 | 7/8/2005 |
| 37 | 74 | 26 | 26-434 | 357549 | 903353 | 5526.7 | 900 | 4/24/1998 |
| 37 | 74 | 26 | 26-77 | 356172 | 903354 | 5540.4 | 663 | 7/9/1973 |
| 37 | 74 | 26 | 26-101 | 355973 | 903354 | 5541.3 | 679 | 6/7/1974 |
| 37 | 74 | 26 | 26-445 | 357601 | 903357 | 5524.5 | 903 | 5/19/1998 |
| 37 | 74 | 26 | 26-137 | 357687 | 903389 | 5521.4 | 640 | 6/20/1974 |
| 37 | 74 | 26 | 26-278 | 357845 | 903390 | 5519.1 | 900 | 11/20/1986 |
| 37 | 74 | 26 | 26-251 | 356338 | 903390 | 5541 | 660 | 5/21/1980 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 26 | 26-433 | 357145 | 903391 | 5533.8 | 900 | 3/27/1998 |
| 37 | 74 | 26 | 26-440 | 357195 | 903392 | 5533.4 | 890 | 3/23/1998 |
| 37 | 74 | 26 | 26-372 | 357242 | 903395 | 5532.4 | 893 | 8/29/1997 |
| 37 | 74 | 26 | 489 | 357600 | 903400 | 5524.9 | 883 | 7/5/2005 |
| 37 | 74 | 26 | 488 | 357500 | 903400 | 5523.1 | 883 | 7/8/2005 |
| 37 | 74 | 26 | 26-437 | 357294 | 903401 | 5531.8 | 909 | 4/27/1998 |
| 37 | 74 | 26 | 26-228 | 355671 | 903401 | 5547.3 | 641 | 8/17/1976 |
| 37 | 74 | 26 | 26-64 | 356172 | 903403 | 5540.9 | 663 | 7/2/1973 |
| 37 | 74 | 26 | 26-249 | 355744 | 903405 | 5543.6 | 661 | 5/21/1980 |
| 37 | 74 | 26 | 26-224 | 355579 | 903406 | 5551.1 | 580 | 2/17/1976 |
| 37 | 74 | 26 | 453 | 357342 | 903406 | 5531.9 | 882 | 5/19/1999 |
| 37 | 74 | 26 | 26-416 | 356068 | 903409 | 5540.3 | 672 | 11/7/1997 |
| 37 | 74 | 26 | 472 | 357392 | 903412 | 5530.9 | 882 | 6/2/1999 |
| 37 | 74 | 26 | 26-149 | 356649 | 903430 | 5533.7 | 617 | 6/24/1974 |
| 37 | 74 | 26 | 26-439 | 357090 | 903444 | 5531 | 687 | 4/28/1998 |
| 37 | 74 | 26 | 26-111 | 357393 | 903444 | 5529.7 | 681 | 6/12/1974 |
| 37 | 74 | 26 | 26-258 | 355838 | 903445 | 5541.8 | 661 | 4/10/1981 |
| 37 | 74 | 26 | 26-317 | 357685 | 903445 | 5522.2 | 891 | 6/27/1997 |
| 37 | 74 | 26 | 26-432 | 357140 | 903446 | 5531.2 | 899 | 3/25/1998 |
| 37 | 74 | 26 | 471 | 357539 | 903449 | 5528.4 | 880 | 6/3/1999 |
| 37 | 74 | 26 | 486 | 357450 | 903450 | 5528.8 | 883 | 7/7/2005 |
| 37 | 74 | 26 | 26-340 | 356684 | 903454 | 5532.2 | 680 | 8/5/1997 |
| 37 | 74 | 26 | 26-417 | 356239 | 903464 | 5541.4 | 681 | 11/6/1997 |
| 37 | 74 | 26 | 26-431 | 357841 | 903484 | 5514.9 | 688 | 4/30/1998 |
| 37 | 74 | 26 | 26-338 | 357037 | 903487 | 5527.7 | 681 | 8/6/1997 |
| 37 | 74 | 26 | 26-336 | 356781 | 903490 | 5529.4 | 678 | 7/25/1997 |
| 37 | 74 | 26 | 455 | 357185 | 903491 | 5530.2 | 881 | 5/21/1999 |
| 37 | 74 | 26 | 26-408 | 355732 | 903491 | 5543 | 684 | 10/22/1997 |
| 37 | 74 | 26 | 26-286 | 357440 | 903493 | 5536.8 | 884 | 6/14/1989 |
| 37 | 74 | 26 | 26-350 | 355784 | 903493 | 5541.3 | 679 | 8/14/1997 |
| 37 | 74 | 26 | 26-315 | 357237 | 903493 | 5528.3 | 897 | 6/25/1997 |
| 37 | 74 | 26 | 26-291 | 357335 | 903494 | 5537.6 | 883 | 6/19/1989 |
| 37 | 74 | 26 | 26-277 | 357546 | 903494 | 5525.8 | 901 | 11/21/1986 |
| 37 | 74 | 26 | 26-132 | 357687 | 903495 | 5524 | 651 | 6/18/1974 |
| 37 | 74 | 26 | 26-295 | 357134 | 903495 | 5536.3 | 885 | 8/10/1989 |
| 37 | 74 | 26 | 454 | 357283 | 903496 | 5529.9 | 881 | 5/21/1999 |
| 37 | 74 | 26 | 26-444 | 357385 | 903497 | 5528.7 | 907 | 5/6/1998 |
| 37 | 74 | 26 | 470 | 357491 | 903497 | 5528.7 | 880 | 6/2/1999 |
| 37 | 74 | 26 | 26-312 | 356465 | 903500 | 10 | 1001 | 8/25/1993 |
| 37 | 74 | 26 | 26-102 | 356174 | 903502 | 5540 | 678 | 6/10/1974 |
| 37 | 74 | 26 | 26-311A | 356126 | 903508 | 5544.8 | 653 | 6/5/1992 |
| 37 | 74 | 26 | 26-311 | 356126 | 903508 | 5544.8 | 696 | 6/4/1992 |
| 37 | 74 | 26 | 26-57 | 353880 | 903520 | 10 | 661 | 6/26/1973 |
| 37 | 74 | 26 | 26-5 | 353770 | 903520 | 10 | 663 | 9/8/1967 |
| 37 | 74 | 26 | 26-46 | 354086 | 903525 | 5550.1 | 705 | 3/6/1972 |
| 37 | 74 | 26 | 26-26 | 354358 | 903525 | 5571.6 | 605 | 6/18/1971 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 26 | 26-241 | 356336 | 903537 | 5540.6 | 665 | 11/29/1977 |
| 37 | 74 | 26 | 26-209 | 356777 | 903538 | 5529.9 | 659 | 3/21/1975 |
| 37 | 74 | 26 | 26-335 | 356673 | 903539 | 5532.3 | 683 | 7/28/1997 |
| 37 | 74 | 26 | 26-6 | 354984 | 903539 | 5578 | 597 | 9/8/1967 |
| 37 | 74 | 26 | 26-90 | 356985 | 903540 | 5526.3 | 663 | 7/12/1973 |
| 37 | 74 | 26 | 26-217 | 356736 | 903542 | 5531.3 | 654 | 3/25/1975 |
| 37 | 74 | 26 | 26-121 | 357395 | 903543 | 5527.3 | 677 | 6/17/1974 |
| 37 | 74 | 26 | 26-316 | 357489 | 903543 | 5525.8 | 893 | 6/25/1998 |
| 37 | 74 | 26 | 26-147 | 357686 | 903545 | 5524.2 | 638 | 6/24/1974 |
| 37 | 74 | 26 | 26-250 | 355856 | 903546 | 5540.5 | 660 | 5/21/1980 |
| 37 | 74 | 26 | 484 | 357200 | 903550 | 5526 | 877 | 5/27/2005 |
| 37 | 74 | 26 | 483 | 357100 | 903550 | 5525.2 | 876 | 5/26/2005 |
| 37 | 74 | 26 | 485 | 357300 | 903550 | 5526.6 | 883 | 7/12/2005 |
| 37 | 74 | 26 | 26-20 | 353100 | 903550 | 10 | 685 | 11/28/1967 |
| 37 | 74 | 26 | 26-339 | 356890 | 903557 | 5526.7 | 682 | 8/5/1997 |
| 37 | 74 | 26 | 26-34 | 355581 | 903561 | 5547.6 | 945 | 5/5/1969 |
| 37 | 74 | 26 | 26-21 | 354807 | 903563 | 5583.2 | 765 | 11/28/1967 |
| 37 | 74 | 26 | 26-297 | 356230 | 903564 | 5537.8 | 661 | 8/2/1990 |
| 37 | 74 | 26 | 469 | 357419 | 903570 | 5527.4 | 877 | 6/2/1999 |
| 37 | 74 | 26 | 26-119 | 357688 | 903584 | 5524.3 | 677 | 6/17/1974 |
| 37 | 74 | 26 | 26-346 | 356331 | 903586 | 5538.4 | 680 | 8/12/1997 |
| 37 | 74 | 26 | 26-7 | 356159 | 903587 | 5539.1 | 656 | 9/8/1967 |
| 37 | 74 | 26 | 456 | 357148 | 903589 | 5525.1 | 881 | 5/24/1999 |
| 37 | 74 | 26 | 26-117 | 357197 | 903590 | 5524.2 | 678 | 6/17/1974 |
| 37 | 74 | 26 | 26-131 | 357394 | 903592 | 5525 | 657 | 6/19/1974 |
| 37 | 74 | 26 | 26-276 | 355420 | 903592 | 5554.1 | 653 | 10/23/1985 |
| 37 | 74 | 26 | 26-80 | 356985 | 903593 | 5525.8 | 662 | 7/10/1973 |
| 37 | 74 | 26 | 26-344 | 357246 | 903594 | 5523.9 | 899 | 8/6/1997 |
| 37 | 74 | 26 | 26-328 | 357486 | 903594 | 5524.2 | 900 | 7/7/1997 |
| 37 | 74 | 26 | 26-114 | 356071 | 903597 | 5538.6 | 681 | 6/14/1974 |
| 37 | 74 | 26 | 457 | 357294 | 903599 | 5525.8 | 881 | 5/24/1999 |
| 37 | 74 | 26 | 26-115 | 355617 | 903599 | 5545.2 | 674 | 6/14/1974 |
| 37 | 74 | 26 | 26-99 | 355670 | 903600 | 5543 | 675 | 6/10/1974 |
| 37 | 74 | 26 | 26-87 | 355974 | 903600 | 5539.6 | 662 | 7/11/1973 |
| 37 | 74 | 26 | 26-93 | 355771 | 903601 | 5540.8 | 663 | 7/16/1973 |
| 37 | 74 | 26 | 26-360 | 355721 | 903601 | 5541 | 680 | 8/20/1997 |
| 37 | 74 | 26 | 26-424 | 355812 | 903602 | 5539.8 | 623 | 11/20/1997 |
| 37 | 74 | 26 | 26-411 | 355854 | 903602 | 5539.3 | 682 | 10/22/1997 |
| 37 | 74 | 26 | 26-329 | 356886 | 903606 | 5526.6 | 700 | 7/2/1997 |
| 37 | 74 | 26 | 458 | 357366 | 903616 | 5525.5 | 879 | 5/25/1999 |
| 37 | 74 | 26 | 473 | 357411 | 903617 | 5524.8 | 882 | 6/4/1999 |
| 37 | 74 | 26 | 26-62 | 356461 | 903624 | 5536.5 | 663 | 6/26/1973 |
| 37 | 74 | 26 | 468 | 357097 | 903635 | 5524.5 | 882 | 6/3/1999 |
| 37 | 74 | 26 | 26-345 | 356156 | 903636 | 5536.9 | 681 | 8/11/1997 |
| 37 | 74 | 26 | 26-330 | 357148 | 903637 | 5522.1 | 900 | 7/8/1997 |
| 37 | 74 | 26 | 26-109 | 357393 | 903641 | 5523.2 | 674 | 6/13/1974 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 26 | 26-110 | 357686 | 903642 | 5522.1 | 680 | 6/12/1974 |
| 37 | 74 | 26 | 26-322 | 357198 | 903643 | 5522.3 | 900 | 6/30/1997 |
| 37 | 74 | 26 | 26-73 | 356984 | 903644 | 5525.3 | 662 | 7/6/1973 |
| 37 | 74 | 26 | 480 | 357050 | 903650 | 5524.1 | 879 | 5/25/2005 |
| 37 | 74 | 26 | 482 | 357450 | 903650 | 5522.3 | 883 | 7/11/2005 |
| 37 | 74 | 26 | 26-69 | 356678 | 903650 | 5531.7 | 664 | 7/5/1973 |
| 37 | 74 | 26 | 26-298 | 355851 | 903652 | 5537.8 | 661 | 8/3/1990 |
| 37 | 74 | 26 | 26-352 | 356226 | 903664 | 5536.3 | 680 | 8/15/1997 |
| 37 | 74 | 26 | 459 | 357253 | 903679 | 5523.9 | 881 | 5/25/1999 |
| 37 | 74 | 26 | 26-343 | 357305 | 903681 | 5521.8 | 901 | 8/7/1997 |
| 37 | 74 | 26 | 26-443 | 357356 | 903685 | 5521.9 | 908 | 5/5/1998 |
| 37 | 74 | 26 | 460 | 357143 | 903688 | 5522.9 | 881 | 5/25/1999 |
| 37 | 74 | 26 | 26-91 | 357394 | 903689 | 5521.4 | 663 | 7/12/1973 |
| 37 | 74 | 26 | 26-108 | 357197 | 903691 | 5521.8 | 680 | 6/12/1974 |
| 37 | 74 | 26 | 26-292 | 357091 | 903692 | 5531.4 | 882 | 6/15/1989 |
| 37 | 74 | 26 | 26-79 | 356986 | 903695 | 5524.6 | 640 | 7/9/1973 |
| 37 | 74 | 26 | 481 | 357400 | 903700 | 5521 | 883 | 7/12/2005 |
| 37 | 74 | 26 | 26-65 | 356679 | 903700 | 5530.8 | 664 | 7/2/1973 |
| 37 | 74 | 26 | 26-337 | 356727 | 903704 | 5528.5 | 684 | 8/4/1998 |
| 37 | 74 | 26 | 26-243 | 356884 | 903707 | 5526.2 | 653 | 2/27/1979 |
| 37 | 74 | 26 | 479 | 357050 | 903750 | 5522.9 | 874 | 5/24/2005 |
| 37 | 74 | 26 | 26-72 | 356680 | 903751 | 5530 | 662 | 7/5/1972 |
| 37 | 74 | 26 | 26-347 | 356334 | 903753 | 5533.2 | 679 | 8/12/1997 |
| 37 | 74 | 26 | 461 | 357244 | 903777 | 5518.7 | 868 | 5/26/1999 |
| 37 | 74 | 26 | 26-281 | 357168 | 903779 | 5519.5 | 1000 | 10/19/1987 |
| 37 | 74 | 26 | 26-323 | 357117 | 903779 | 5520.6 | 900 | 7/2/1997 |
| 37 | 74 | 26 | 26-314 | 357298 | 903780 | 5516.5 | 895 | 6/26/1997 |
| 37 | 74 | 26 | 26-280 | 357351 | 903782 | 5516.1 | 900 | 10/20/1987 |
| 37 | 74 | 26 | 26-348 | 356077 | 903793 | 5534.5 | 684 | 8/11/1997 |
| 37 | 74 | 26 | 26-89 | 356986 | 903793 | 5524 | 662 | 7/12/1973 |
| 37 | 74 | 26 | 26-88 | 356176 | 903797 | 5534.7 | 663 | 7/11/1973 |
| 37 | 74 | 26 | 26-78 | 356681 | 903801 | 5529.9 | 662 | 7/9/1973 |
| 37 | 74 | 26 | 26-129 | 356331 | 903802 | 5533.7 | 680 | 6/19/1974 |
| 37 | 74 | 26 | 26-100 | 355771 | 903803 | 5538.9 | 681 | 6/7/1974 |
| 37 | 74 | 26 | 26-141 | 356405 | 903805 | 5533.1 | 660 | 6/20/1974 |
| 37 | 74 | 26 | 26-106 | 356479 | 903806 | 5532.6 | 681 | 6/11/1974 |
| 37 | 74 | 26 | 467 | 357136 | 903828 | 5522.7 | 880 | 6/4/1999 |
| 37 | 74 | 26 | 26-133 | 355519 | 903847 | 5532.5 | 680 | 6/20/1974 |
| 37 | 74 | 26 | 26-150 | 355628 | 903848 | 5540.8 | 629 | 3/3/1975 |
| 37 | 74 | 26 | 478 | 357050 | 903850 | 5523 | 897 | 5/24/2005 |
| 37 | 74 | 26 | 26-81 | 356683 | 903851 | 5529.8 | 663 | 7/10/1973 |
| 37 | 74 | 26 | 26-331 | 357105 | 903876 | 5522.9 | 720 | 7/8/1997 |
| 37 | 74 | 26 | 26-324 | 357154 | 903881 | 5523.3 | 900 | 7/1/1997 |
| 37 | 74 | 26 | 26-341 | 357205 | 903883 | 5523.2 | 896 | 8/6/1997 |
| 37 | 74 | 26 | 26-285 | 357253 | 903884 | 5532.3 | 885 | 6/15/1989 |
| 37 | 74 | 26 | 26-342 | 357304 | 903886 | 5522.2 | 901 | 8/5/1997 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 26 | 26-107 | 356684 | 903894 | 5530.4 | 680 | 6/11/1974 |
| 37 | 74 | 26 | 26-242 | 356987 | 903899 | 5525.3 | 662 | 2/27/1979 |
| 37 | 74 | 26 | 26-369 | 356388 | 903906 | 5532.7 | 683 | 9/9/1997 |
| 37 | 74 | 26 | 462 | 357258 | 903937 | 5527.9 | 880 | 5/25/1999 |
| 37 | 74 | 26 | 26-83 | 356690 | 903940 | 5530.9 | 662 | 7/12/1973 |
| 37 | 74 | 26 | 26-362 | 356802 | 903945 | 5528.5 | 681 | 8/26/1997 |
| 37 | 74 | 26 | 26-353 | 356334 | 903952 | 5533 | 595 | 8/20/1997 |
| 37 | 74 | 26 | 26-112 | 355771 | 903953 | 5527.8 | 658 | 6/17/1974 |
| 37 | 74 | 26 | 26-144 | 355672 | 903953 | 5524.6 | 642 | 6/21/1974 |
| 37 | 74 | 26 | 26-349 | 356384 | 903955 | 5532.6 | 680 | 8/13/1997 |
| 37 | 74 | 26 | 26-288 | 357197 | 903994 | 5539.7 | 905 | 6/13/1989 |
| 37 | 74 | 26 | 26-293 | 357300 | 903995 | 5539.5 | 865 | 8/7/1989 |
| 37 | 74 | 26 | 466 | 357148 | 903995 | 5531.4 | 880 | 6/3/1999 |
| 37 | 74 | 26 | 463 | 357248 | 903996 | 5531.4 | 880 | 5/26/1999 |
| 37 | 74 | 26 | 26-283 | 356801 | 903996 | 5530.2 | 1000 | 10/21/1987 |
| 37 | 74 | 26 | 26-282 | 356988 | 903996 | 5528.6 | 900 | 10/20/1987 |
| 37 | 74 | 26 | 26-375 | 356890 | 903997 | 5529.6 | 681 | 9/2/1997 |
| 37 | 74 | 26 | 26-92 | 356177 | 904005 | 5534.8 | 663 | 7/13/1973 |
| 37 | 74 | 26 | 26-103 | 355980 | 904005 | 5536.9 | 680 | 6/11/1974 |
| 37 | 74 | 26 | 26-105 | 356380 | 904006 | 5533.6 | 680 | 6/10/1974 |
| 37 | 74 | 26 | 26-229 | 356478 | 904007 | 5533.7 | 999 | 8/18/1976 |
| 37 | 74 | 26 | 26-351 | 356029 | 904010 | 5535.1 | 676 | 8/13/1997 |
| 37 | 74 | 26 | 26-225 | 354000 | 904020 | 10 | 454 | 2/18/1976 |
| 37 | 74 | 26 | 26-130 | 356689 | 904035 | 5532.6 | 659 | 6/19/1974 |
| 37 | 74 | 26 | 26-116 | 356380 | 904055 | 5534.6 | 679 | 6/13/1974 |
| 37 | 74 | 26 | 26-113 | 355979 | 904104 | 5539.8 | 671 | 6/14/1974 |
| 37 | 74 | 26 | 26-128 | 356077 | 904106 | 5536.7 | 660 | 6/18/1974 |
| 37 | 74 | 26 | 26-124 | 356126 | 904108 | 5536.3 | 683 | 6/17/1974 |
| 37 | 74 | 26 | 26-104 | 356177 | 904110 | 5535.6 | 680 | 6/10/1974 |
| 37 | 74 | 26 | 26-142 | 356699 | 904113 | 5534.2 | 659 | 6/21/1974 |
| 37 | 74 | 26 | 26-175 | 355422 | 904122 | 5501.7 | 612 | 3/13/1975 |
| 37 | 74 | 26 | 26-223 | 355475 | 904122 | 5501.8 | 596 | 8/18/1976 |
| 37 | 74 | 26 | 26-120 | 356378 | 904155 | 5536.2 | 680 | 6/14/1974 |
| 37 | 74 | 26 | 26-363 | 356479 | 904167 | 5535.5 | 682 | 8/28/1997 |
| 37 | 74 | 26 | 26-230 | 356069 | 904174 | 5535.2 | 645 | 8/18/1976 |
| 37 | 74 | 26 | 26-410 | 356118 | 904177 | 5532.1 | 680 | 11/3/1997 |
| 37 | 74 | 26 | 26-361 | 356719 | 904182 | 5534.2 | 697 | 8/27/1997 |
| 37 | 74 | 26 | 26-284 | 356800 | 904190 | 5532.7 | 900 | 10/21/1987 |
| 37 | 74 | 26 | 26-56 | 353752 | 904196 | 5521.2 | 663 | 6/27/1973 |
| 37 | 74 | 26 | 26-294 | 356995 | 904198 | 5540.8 | 874 | 8/8/1989 |
| 37 | 74 | 26 | 26-44 | 353649 | 904199 | 5518.3 | 675 | 3/7/1972 |
| 37 | 74 | 26 | 26-290 | 357096 | 904199 | 5540.1 | 881 | 6/16/1989 |
| 37 | 74 | 26 | 26-415 | 356475 | 904219 | 5536.9 | 683 | 10/31/1997 |
| 37 | 74 | 26 | 26-167 | 356061 | 904225 | 5529.2 | 637 | 3/5/1975 |
| 37 | 74 | 26 | 26-123 | 355978 | 904239 | 5528 | 681 | 6/18/1974 |
| 37 | 74 | 26 | 26-157 | 356142 | 904244 | 5528.2 | 643 | 3/3/1975 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 26 | 26-125 | 356377 | 904257 | 5540.7 | 680 | 6/19/1974 |
| 37 | 74 | 26 | 26-355 | 356471 | 904267 | 5540.4 | 680 | 8/19/1997 |
| 37 | 74 | 26 | 26-33 | 355325 | 904276 | 5483.1 | 508 | 6/18/1971 |
| 37 | 74 | 26 | 26-151 | 355421 | 904281 | 5484.4 | 602 | 3/5/1975 |
| 37 | 74 | 26 | 26-163 | 356379 | 904357 | 5544.2 | 642 | 3/4/1975 |
| 37 | 74 | 26 | 26-404 | 355369 | 904358 | 5478.6 | 685 | 10/20/1997 |
| 37 | 74 | 26 | 26-170 | 356473 | 904358 | 5545.4 | 641 | 3/5/1975 |
| 37 | 74 | 26 | 26-159 | 356328 | 904358 | 5546 | 643 | 2/28/1975 |
| 37 | 74 | 26 | 26-179 | 355861 | 904382 | 5512.4 | 630 | 3/11/1975 |
| 37 | 74 | 26 | 26-354 | 355929 | 904384 | 5509.4 | 655 | 8/22/1997 |
| 37 | 74 | 26 | 26-18 | 354799 | 904399 | 5469.5 | 724 | 11/28/1967 |
| 37 | 74 | 26 | 26-85 | 354052 | 904401 | 5514.5 | 663 | 7/11/1973 |
| 37 | 74 | 26 | 26-19 | 355613 | 904401 | 5492.7 | 672 | 11/28/1967 |
| 37 | 74 | 26 | 26-74 | 353859 | 904402 | 5501.8 | 663 | 7/6/1973 |
| 37 | 74 | 26 | 26-67 | 353905 | 904402 | 5506.2 | 664 | 7/3/1973 |
| 37 | 74 | 26 | 26-140 | 356376 | 904406 | 5537.7 | 661 | 6/21/1974 |
| 37 | 74 | 26 | 26-17 | 353994 | 904407 | 5515 | 705 | 11/28/1967 |
| 37 | 74 | 26 | 26-303 | 355411 | 904409 | 5469.9 | 605 | 7/29/1991 |
| 37 | 74 | 26 | 26-302 | 355462 | 904411 | 5475.4 | 620 | 8/2/1990 |
| 37 | 74 | 26 | 26-29 | 354305 | 904419 | 5488.2 | 509 | 6/18/1971 |
| 37 | 74 | 26 | 26-55 | 353750 | 904422 | 5490.6 | 663 | 6/27/1973 |
| 37 | 74 | 26 | 26-135 | 355974 | 904438 | 5506.2 | 637 | 6/20/1974 |
| 37 | 74 | 26 | 26-172 | 356027 | 904443 | 5507.3 | 616 | 3/7/1975 |
| 37 | 74 | 26 | 26-25C | 353990 | 904445 | 10 | 459 | 1/29/1968 |
| 37 | 74 | 26 | 26-356 | 356327 | 904452 | 5529 | 677 | 8/21/1997 |
| 37 | 74 | 26 | 26-252 | 356415 | 904462 | 5538.7 | 661 | 5/21/1980 |
| 37 | 74 | 26 | 26-187 | 355922 | 904490 | 5501.7 | 621 | 3/13/1975 |
| 37 | 74 | 26 | 26-307 | 356228 | 904493 | 5526.3 | 644 | 7/26/1991 |
| 37 | 74 | 26 | 26-299 | 356270 | 904506 | 5520 | 660 | 8/2/1990 |
| 37 | 74 | 26 | 26-148 | 356376 | 904507 | 5532.7 | 620 | 6/24/1974 |
| 37 | 74 | 26 | 26-177 | 355613 | 904517 | 5492.7 | 595 | 3/13/1975 |
| 37 | 74 | 26 | 26-156 | 355973 | 904539 | 5498.5 | 642 | 3/3/1975 |
| 37 | 74 | 26 | 26-166 | 355863 | 904541 | 5496.4 | 599 | 3/6/1975 |
| 37 | 74 | 26 | 26-173 | 355326 | 904550 | 5474.2 | 593 | 3/7/1975 |
| 37 | 74 | 26 | 26-186 | 355405 | 904554 | 5476.4 | 574 | 3/12/1975 |
| 37 | 74 | 26 | 26-178 | 355486 | 904554 | 5480.2 | 598 | 3/11/1975 |
| 37 | 74 | 26 | 26-158 | 356375 | 904590 | 5529.8 | 623 | 2/28/1975 |
| 37 | 74 | 26 | 26-145 | 355970 | 904643 | 5481.9 | 615 | 6/24/1974 |
| 37 | 74 | 26 | 26-400 | 355273 | 904646 | 5465.4 | 672 | 10/14/1997 |
| 37 | 74 | 26 | 26-164 | 355588 | 904647 | 5478.3 | 598 | 3/6/1975 |
| 37 | 74 | 26 | 26-309 | 355375 | 904651 | 5473.8 | 605 | 6/3/1992 |
| 37 | 74 | 26 | 26-304 | 355321 | 904651 | 5467.8 | 605 | 7/26/1991 |
| 37 | 74 | 26 | 26-310 | 355379 | 904656 | 5476.4 | 676 | 6/3/1992 |
| 37 | 74 | 26 | 26-364 | 356368 | 904691 | 5521.7 | 682 | 8/28/1997 |
| 37 | 74 | 26 | 26-406 | 355296 | 904697 | 5464.5 | 681 | 10/21/1997 |
| 37 | 74 | 26 | 26-176 | 355588 | 904730 | 5471.5 | 575 | 3/10/1975 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 26 | 26-402 | 355355 | 904761 | 5461.4 | 683 | 10/15/1997 |
| 37 | 74 | 26 | 26-358 | 355956 | 904766 | 5497.9 | 678 | 8/26/1997 |
| 37 | 74 | 26 | 26-357 | 356053 | 904793 | 5501.6 | 670 | 8/26/1997 |
| 37 | 74 | 26 | 26-182 | 356200 | 904798 | 5507.7 | 636 | 3/11/1975 |
| 37 | 74 | 26 | 26-239 | 356104 | 904799 | 5504.2 | 642 | 11/28/1977 |
| 37 | 74 | 26 | 26-171 | 356255 | 904800 | 5510.4 | 600 | 3/7/1975 |
| 37 | 74 | 26 | 26-365 | 356305 | 904800 | 5509.6 | 683 | 8/29/1997 |
| 37 | 74 | 26 | 26-190 | 355314 | 904817 | 5456.6 | 579 | 3/13/1975 |
| 37 | 74 | 26 | 26-174 | 355369 | 904817 | 5458.3 | 575 | 3/7/1975 |
| 37 | 74 | 26 | 26-192 | 355342 | 904817 | 5457.3 | 577 | 3/17/1975 |
| 37 | 74 | 26 | 26-152 | 355149 | 904819 | 5450.6 | 603 | 3/5/1975 |
| 37 | 74 | 26 | 26-183 | 355257 | 904822 | 5455.5 | 579 | 3/12/1974 |
| 37 | 74 | 26 | 26-162 | 355580 | 904823 | 5464.8 | 603 | 3/3/1975 |
| 37 | 74 | 26 | 26-367 | 356250 | 904901 | 5497.4 | 680 | 9/2/1997 |
| 37 | 74 | 26 | 26-403 | 355336 | 904913 | 5451.2 | 683 | 10/16/1997 |
| 37 | 74 | 26 | 26-397 | 355865 | 904914 | 5474.1 | 560 | 10/15/1997 |
| 37 | 74 | 26 | 26-359 | 355913 | 904919 | 5476.4 | 683 | 8/27/1997 |
| 37 | 74 | 26 | 26-155 | 355963 | 904923 | 5479.5 | 603 | 3/3/1975 |
| 37 | 74 | 26 | 26-202 | 355373 | 904989 | 5447.6 | 580 | 3/19/1975 |
| 37 | 74 | 26 | 26-197 | 355286 | 904990 | 5445 | 579 | 3/17/1975 |
| 37 | 74 | 26 | 26-368 | 356116 | 904991 | 5496.2 | 684 | 9/3/1997 |
| 37 | 74 | 26 | 26-185 | 355120 | 905023 | 5432.8 | 577 | 3/14/1975 |
| 37 | 74 | 26 | 26-370 | 355890 | 905023 | 5482.9 | 681 | 9/4/1997 |
| 37 | 74 | 26 | 26-195 | 355956 | 905035 | 5489.1 | 621 | 3/17/1975 |
| 37 | 74 | 26 | 26-181 | 356065 | 905035 | 5497.4 | 622 | 3/11/1975 |
| 37 | 74 | 26 | 26-188 | 356020 | 905038 | 5494.3 | 619 | 3/13/1975 |
| 37 | 74 | 26 | 26-165 | 355990 | 905039 | 5492.7 | 621 | 3/5/1975 |
| 37 | 74 | 26 | 26-35 | 356120 | 905080 | 10 | 983 | 4/29/1969 |
| 37 | 74 | 26 | 26-313 | 356510 | 905110 | 5495 | 1001 | 8/25/1993 |
| 37 | 74 | 26 | 26-221 | 355898 | 905130 | 5477 | 599 | 3/26/1975 |
| 37 | 74 | 26 | 26-396 | 355499 | 905141 | 5463.8 | 683 | 10/6/1997 |
| 37 | 74 | 26 | 26-191 | 355896 | 905181 | 5473.3 | 595 | 3/13/1975 |
| 37 | 74 | 26 | 26-201 | 355870 | 905182 | 5470.4 | 583 | 3/18/1975 |
| 37 | 74 | 26 | 26-194 | 355837 | 905182 | 5467.4 | 592 | 3/17/1975 |
| 37 | 74 | 26 | 26-366 | 355947 | 905183 | 5477.1 | 683 | 9/8/1997 |
| 37 | 74 | 26 | 26-45 | 353590 | 905190 | 10 | 654 | 3/7/1972 |
| 37 | 74 | 26 | 26-274 | 355495 | 905192 | 5469.6 | 602 | 10/22/1985 |
| 37 | 74 | 26 | 26-54 | 353811 | 905195 | 5413.8 | 663 | 6/27/1973 |
| 37 | 74 | 26 | 26-14 | 354000 | 905195 | 5421.8 | 650 | 11/28/1967 |
| 37 | 74 | 26 | 26-395 | 355305 | 905195 | 5461.3 | 683 | 10/7/1997 |
| 37 | 74 | 26 | 26-16 | 355595 | 905196 | 5469.1 | 704 | 11/30/1967 |
| 37 | 74 | 26 | 26-236 | 354365 | 905196 | 5413.5 | 542 | 3/1/1977 |
| 37 | 74 | 26 | 26-15 | 354797 | 905199 | 5428.6 | 640 | 12/1/1967 |
| 37 | 74 | 26 | 26-215 | 355095 | 905240 | 5451.1 | 583 | 3/24/1975 |
| 37 | 74 | 26 | 26-153 | 355046 | 905240 | 5445.4 | 614 | 3/4/1975 |
| 37 | 74 | 26 | 26-31 | 355150 | 905241 | 5456 | 503 | 6/19/1971 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 26 | 26-301 | 355351 | 905247 | 5467.4 | 580 | 8/3/1990 |
| 37 | 74 | 26 | 26-272 | 355249 | 905247 | 5463.7 | 602 | 10/23/1985 |
| 37 | 74 | 26 | 26-305 | 355853 | 905281 | 5487.5 | 605 | 7/26/1991 |
| 37 | 74 | 26 | 26-275 | 355795 | 905289 | 5481.4 | 603 | 10/22/1985 |
| 37 | 74 | 26 | 26-180 | 355897 | 905291 | 5477.2 | 596 | 3/12/1974 |
| 37 | 74 | 26 | 26-394 | 355040 | 905336 | 5445.2 | 639 | 10/9/1997 |
| 37 | 74 | 26 | 26-271 | 355088 | 905340 | 5450.9 | 603 | 10/23/1985 |
| 37 | 74 | 26 | 26-383 | 355220 | 905356 | 5465.4 | 683 | 9/24/1997 |
| 37 | 74 | 26 | 26-376 | 355269 | 905360 | 5470.5 | 683 | 9/10/1997 |
| 37 | 74 | 26 | 26-399 | 355317 | 905367 | 5475.7 | 681 | 10/10/1997 |
| 37 | 74 | 26 | 26-273 | 355367 | 905371 | 5477.8 | 603 | 10/23/1985 |
| 37 | 74 | 26 | 26-206 | 355741 | 905392 | 5488.2 | 622 | 3/20/1975 |
| 37 | 74 | 26 | 26-414 | 355789 | 905396 | 5487.6 | 681 | 11/5/1997 |
| 37 | 74 | 26 | 26-306 | 355744 | 905440 | 5504.6 | 625 | 7/26/1991 |
| 37 | 74 | 26 | 26-262 | 355361 | 905465 | 5475.2 | 553 | 10/28/1982 |
| 37 | 74 | 26 | 26-231 | 355462 | 905469 | 5482.1 | 582 | 2/28/1977 |
| 37 | 74 | 26 | 26-154 | 355586 | 905494 | 5490.7 | 618 | 3/4/1975 |
| 37 | 74 | 26 | 26-169 | 355744 | 905497 | 5497.8 | 621 | 3/7/1975 |
| 37 | 74 | 26 | 26-139 | 355898 | 905512 | 5503 | 681 | 6/20/1974 |
| 37 | 74 | 26 | 26-398 | 355663 | 905560 | 5483.1 | 683 | 10/9/1997 |
| 37 | 74 | 26 | 26-211 | 354951 | 905565 | 5429.6 | 583 | 3/24/1975 |
| 37 | 74 | 26 | 26-196 | 355003 | 905565 | 5434.6 | 582 | 3/18/1975 |
| 37 | 74 | 26 | 26-168 | 355167 | 905566 | 5450.7 | 580 | 3/10/1975 |
| 37 | 74 | 26 | 26-203 | 354895 | 905567 | 5424.9 | 562 | 3/20/1975 |
| 37 | 74 | 26 | 26-389 | 355053 | 905568 | 5438.6 | 681 | 10/3/1997 |
| 37 | 74 | 26 | 26-235 | 354686 | 905574 | 5415 | 542 | 3/1/1977 |
| 37 | 74 | 26 | 26-205 | 355591 | 905609 | 5476.9 | 600 | 3/19/1975 |
| 37 | 74 | 26 | 26-214 | 355750 | 905611 | 5480.5 | 623 | 3/24/1975 |
| 37 | 74 | 26 | 26-388 | 354949 | 905620 | 5427.5 | 678 | 10/7/1997 |
| 37 | 74 | 26 | 26-207 | 355590 | 905637 | 5469.8 | 599 | 3/20/1975 |
| 37 | 74 | 26 | 26-381 | 355240 | 905654 | 5447.7 | 683 | 9/22/1997 |
| 37 | 74 | 26 | 26-377 | 355289 | 905657 | 5450.3 | 683 | 9/11/1997 |
| 37 | 74 | 26 | 26-200 | 355591 | 905663 | 5469 | 583 | 3/18/1975 |
| 37 | 74 | 26 | 26-380 | 354897 | 905685 | 5423.8 | 681 | 9/12/1997 |
| 37 | 74 | 26 | 26-254 | 354932 | 905692 | 5429.7 | 660 | 5/22/1980 |
| 37 | 74 | 26 | 26-253 | 354530 | 905698 | 5409.9 | 660 | 5/22/1980 |
| 37 | 74 | 26 | 26-193 | 355588 | 905716 | 5465.1 | 561 | 3/17/1975 |
| 37 | 74 | 26 | 26-226 | 354105 | 905723 | 5394.6 | 460 | 2/18/1976 |
| 37 | 74 | 26 | 26-387 | 355529 | 905760 | 5458.4 | 676 | 10/2/1997 |
| 37 | 74 | 26 | 26-246 | 354790 | 905780 | 10 | 664 | 3/1/1979 |
| 37 | 74 | 26 | 26-184 | 355165 | 905781 | 5438.8 | 545 | 3/12/1974 |
| 37 | 74 | 26 | 26-204 | 355481 | 905781 | 5454.8 | 581 | 3/19/1975 |
| 37 | 74 | 26 | 26-212 | 355004 | 905783 | 5433.2 | 582 | 3/24/1975 |
| 37 | 74 | 26 | 26-219 | 354892 | 905785 | 5431.1 | 574 | 4/2/1975 |
| 37 | 74 | 26 | 26-263 | 355430 | 905814 | 5450.8 | 552 | 10/28/1982 |
| 37 | 74 | 26 | 26-208 | 355477 | 905821 | 5453 | 577 | 3/20/1975 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 26 | 26-390 | 355000 | 905833 | 5437.7 | 683 | 9/26/1997 |
| 37 | 74 | 26 | 26-391 | 355050 | 905838 | 5438 | 683 | 10/2/1997 |
| 37 | 74 | 26 | 26-213 | 355481 | 905844 | 5454.1 | 581 | 3/21/1975 |
| 37 | 74 | 26 | 26-382 | 355306 | 905853 | 5448.3 | 680 | 9/18/1997 |
| 37 | 74 | 26 | 26-385 | 355401 | 905871 | 5452.8 | 683 | 9/29/1997 |
| 37 | 74 | 26 | 26-300 | 354944 | 905880 | 5439.8 | 581 | 8/3/1990 |
| 37 | 74 | 26 | 26-378 | 354896 | 905880 | 5438.9 | 633 | 9/16/1997 |
| 37 | 74 | 26 | 26-270 | 354998 | 905881 | 5443.1 | 602 | 10/23/1969 |
| 37 | 74 | 26 | 26-308 | 354845 | 905883 | 5441.9 | 602 | 6/4/1992 |
| 37 | 74 | 26 | 26-199 | 355483 | 905891 | 5457.6 | 577 | 3/18/1975 |
| 37 | 74 | 26 | 26-255 | 355132 | 905903 | 5447.5 | 662 | 5/22/1980 |
| 37 | 74 | 26 | 26-392 | 355396 | 905920 | 5457.7 | 682 | 10/3/1997 |
| 37 | 74 | 26 | 26-216 | 355480 | 905944 | 5462.7 | 598 | 3/24/1975 |
| 37 | 74 | 26 | 26-247 | 355004 | 905952 | 5449.4 | 659 | 2/28/1979 |
| 37 | 74 | 26 | 26-232 | 355299 | 905952 | 5458.4 | 561 | 2/28/1977 |
| 37 | 74 | 26 | 26-12 | 354801 | 905990 | 5443.4 | 685 | 12/4/1967 |
| 37 | 74 | 26 | 26-379 | 354848 | 905991 | 5446.6 | 680 | 9/16/1997 |
| 37 | 74 | 26 | 26-269 | 354897 | 905995 | 5449.2 | 602 | 10/23/1969 |
| 37 | 74 | 26 | 26-198 | 355485 | 905996 | 5468.9 | 598 | 3/17/1975 |
| 37 | 74 | 26 | 53 | 355894 | 905997 | 5476.4 | 661 | 6/29/1973 |
| 37 | 74 | 26 | 26-138 | 355746 | 905997 | 5471.5 | 672 | 6/21/1974 |
| 37 | 74 | 26 | 26-13 | 355600 | 905999 | 5469.4 | 682 | 11/28/1967 |
| 37 | 74 | 26 | 26-189 | 355165 | 905999 | 5458.6 | 572 | 3/14/1975 |
| 37 | 74 | 26 | 26-222 | 355297 | 906002 | 5463.6 | 537 | 3/18/1975 |
| 37 | 74 | 26 | 26-52 | 354034 | 906062 | 5400.1 | 662 | 6/28/1973 |
| 37 | 74 | 26 | 26-75 | 354084 | 906063 | 5402.7 | 662 | 7/6/1973 |
| 37 | 74 | 26 | 26-86 | 354189 | 906063 | 5408 | 662 | 7/13/1973 |
| 37 | 74 | 26 | 26-68 | 354243 | 906065 | 5411.1 | 662 | 7/3/1973 |
| 37 | 74 | 26 | 26-82 | 354132 | 906065 | 5405.2 | 662 | 7/10/1973 |
| 37 | 74 | 26 | 26-41 | 354454 | 906066 | 5419.8 | 691 | 3/8/1972 |
| 37 | 74 | 26 | 26-384 | 355209 | 906097 | 5471.7 | 680 | 9/17/1997 |
| 37 | 74 | 26 | 26-405 | 355259 | 906100 | 5472.4 | 672 | 10/17/1997 |
| 37 | 74 | 26 | 26-393 | 354957 | 906162 | 5459.5 | 682 | 10/8/1997 |
| 37 | 74 | 26 | 26-386 | 355008 | 906166 | 5464.7 | 683 | 10/1/1997 |
| 37 | 74 | 26 | 26-268 | 355057 | 906172 | 5469.1 | 602 | 10/23/1985 |
| 37 | 74 | 26 | 26-245 | 355155 | 906174 | 5476 | 658 | 2/28/1979 |
| 37 | 74 | 26 | 26-413 | 355205 | 906176 | 5476.9 | 683 | 11/4/1997 |
| 37 | 74 | 26 | 26-401 | 355006 | 906215 | 5460.7 | 611 | 10/15/1997 |
| 37 | 74 | 26 | 26-407 | 355055 | 906219 | 5465.3 | 632 | 10/21/1997 |
| 37 | 74 | 26 | 26-412 | 355104 | 906221 | 5470.3 | 683 | 11/5/1997 |
| 37 | 74 | 26 | 26-420 | 355154 | 906224 | 5474.3 | 682 | 11/17/1997 |
| 37 | 74 | 26 | 26-227 | 354142 | 906278 | 5426.7 | 417 | 2/18/1976 |
| 37 | 74 | 26 | 26-234 | 354759 | 906336 | 5452.6 | 561 | 3/1/1977 |
| 37 | 74 | 26 | 26-256 | 355189 | 906428 | 5447 | 661 | 5/22/1980 |
| 37 | 74 | 26 | 26-2 | 354989 | 906502 | 5438.6 | 599 | 9/11/1967 |
| 37 | 74 | 26 | 26-4 | 357387 | 906516 | 5442.9 | 512 | 9/8/1967 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 26 | 26-233 | 354292 | 906517 | 5451 | 602 | 3/1/1977 |
| 37 | 74 | 26 | 26-50 | 354200 | 906537 | 5441 | 705 | 6/28/1973 |
| 37 | 74 | 26 | 26-39 | 354099 | 906539 | 5438 | 696 | 3/8/1972 |
| 37 | 74 | 26 | 26-264 | 354129 | 906542 | 5437.8 | 372 | 10/28/1982 |
| 37 | 74 | 26 | 26-3 | 356290 | 906580 | 10 | 560 | 9/11/1967 |
| 37 | 74 | 26 | 26-1 | 353789 | 906581 | 5437.7 | 558 | 9/11/1967 |
| 37 | 74 | 26 | 26-38 | 353377 | 906587 | 5431.4 | 660 | 3/8/1972 |
| 37 | 74 | 26 | 26-32 | 355304 | 906590 | 5426 | 455 | 6/19/1971 |
| 37 | 74 | 26 | 51 | 355795 | 906795 | 5399.9 | 688 | 6/29/1973 |
| 37 | 74 | 26 | 26-11 | 355601 | 906799 | 5403 | 725 | 12/1/1967 |
| 37 | 74 | 26 | 26-10 | 354828 | 906812 | 5395.9 | 700 | 12/4/1967 |
| 37 | 74 | 26 | 26-261 | 354187 | 906842 | 5410.5 | 602 | 2/9/1982 |
| 37 | 74 | 26 | 26-265 | 354379 | 907001 | 5390.6 | 360 | 10/28/1982 |
| 37 | 74 | 26 | 26-259 | 354475 | 907213 | 5373.3 | 600 | 2/9/1982 |
| 37 | 74 | 26 | 26-266 | 354555 | 907433 | 5349.6 | 340 | 10/29/1982 |
| 37 | 74 | 26 | 26-37 | 354759 | 907440 | 5342 | 651 | 3/7/1972 |
| 37 | 74 | 26 | 26-30 | 355122 | 907598 | 5341 | 312 | 9/14/1970 |
| 37 | 74 | 26 | 26-9 | 355585 | 907599 | 5343.5 | 700 | 12/1/1967 |
| 37 | 74 | 26 | 26-49 | 355796 | 907599 | 5344.3 | 663 | 6/29/1973 |
| 37 | 74 | 26 | 26-8 | 354801 | 907602 | 5334.8 | 772 | 12/1/1967 |
| 37 | 74 | 26 | 26-36 | 354478 | 907681 | 5335.5 | 654 | 3/7/1972 |
| 37 | 74 | 26 | 26-48 | 354682 | 907683 | 5329.7 | 686 | 6/28/1973 |
| 37 | 74 | 26 | 26-267 | 354594 | 907684 | 5331.7 | 316 | 10/29/1982 |
| 37 | 74 | 26 | 26-260 | 354807 | 907843 | 5324.9 | 602 | 2/9/1982 |
| 37 | 73 | 30 | 30-229 | 363810 | 902730 | 5461.6 | 684 | 12/1/1997 |
| 37 | 73 | 30 | 30-244 | 363764 | 902730 | 5462 | 679 | 12/8/1997 |
| 37 | 73 | 30 | 30-359 | 365772 | 902759 | 5452.4 | 690 | 5/18/1998 |
| 37 | 73 | 30 | 30-335 | 365823 | 902762 | 5450.1 | 681 | 3/27/1998 |
| 37 | 73 | 30 | 30-334 | 365873 | 902763 | 5448.2 | 693 | 3/20/1998 |
| 37 | 73 | 30 | 30-336 | 365928 | 902766 | 5446.9 | 683 | 3/24/1998 |
| 37 | 73 | 30 | 30-114 | 363661 | 902776 | 5465.6 | 605 | 6/5/1973 |
| 37 | 73 | 30 | 30-240 | 363710 | 902777 | 5463 | 684 | 12/3/1997 |
| 37 | 73 | 30 | 30-125 | 363761 | 902779 | 5461.2 | 540 | 5/7/1974 |
| 37 | 73 | 30 | 30-103 | 363860 | 902780 | 5460.5 | 602 | 6/1/1973 |
| 37 | 73 | 30 | 30-216 | 363853 | 902828 | 5458.7 | 682 | 11/22/1997 |
| 37 | 73 | 30 | 30-224 | 363650 | 902869 | 5462.7 | 651 | 11/26/1997 |
| 37 | 73 | 30 | 30-383 | 366040 | 902872 | 5441.4 | 658 | 6/16/1998 |
| 37 | 73 | 30 | 30-215 | 363699 | 902873 | 5460.9 | 681 | 11/21/1997 |
| 37 | 73 | 30 | 30-374 | 366036 | 902922 | 5438 | 678 | 6/2/1998 |
| 37 | 73 | 30 | 30-363 | 366034 | 902972 | 5434.5 | 691 | 5/20/1998 |
| 37 | 73 | 30 | 30-400 | 364596 | 902974 | 5444.1 | 585 | 7/16/1998 |
| 37 | 73 | 30 | 30-466 | 364992 | 902975 | 5450.9 | 587 | 9/30/1998 |
| 37 | 73 | 30 | 30-410 | 364699 | 902978 | 5442.2 | 544 | 7/24/1998 |
| 37 | 73 | 30 | 30-424 | 364799 | 902981 | 5442.5 | 601 | 8/20/1998 |
| 37 | 73 | 30 | 30-388 | 365042 | 902982 | 5453.3 | 678 | 6/11/1998 |
| 37 | 73 | 30 | 30-384 | 364940 | 903018 | 5444.7 | 678 | 6/10/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 30 | 30-357 | 366030 | 903021 | 5431 | 653 | 5/14/1998 |
| 37 | 73 | 30 | 30-379 | 364990 | 903025 | 5446.5 | 678 | 6/3/1998 |
| 37 | 73 | 30 | 30-376 | 365038 | 903033 | 5447.8 | 678 | 5/29/1998 |
| 37 | 73 | 30 | 30-371 | 365088 | 903040 | 5448.7 | 678 | 5/26/1998 |
| 37 | 73 | 30 | 30-365 | 365139 | 903046 | 5451.5 | 678 | 5/20/1998 |
| 37 | 73 | 30 | 30-356 | 365190 | 903050 | 5452.6 | 678 | 5/14/1998 |
| 37 | 73 | 30 | 30-399 | 365723 | 903053 | 5436.4 | 604 | 7/13/1998 |
| 37 | 73 | 30 | 30-225 | 363570 | 903053 | 5462.8 | 684 | 11/26/1997 |
| 37 | 73 | 30 | 30-239 | 363620 | 903054 | 5460.9 | 684 | 12/2/1997 |
| 37 | 73 | 30 | 30-396 | 365770 | 903054 | 5433.7 | 684 | 7/8/1998 |
| 37 | 73 | 30 | 30-144 | 363720 | 903055 | 5458.1 | 561 | 5/12/1974 |
| 37 | 73 | 30 | 30-217 | 363670 | 903056 | 5459.1 | 686 | 11/21/1997 |
| 37 | 73 | 30 | 30-155 | 363773 | 903058 | 5456.9 | 544 | 12/6/1974 |
| 37 | 73 | 30 | 30-364 | 365819 | 903060 | 5431.6 | 689 | 5/19/1998 |
| 37 | 73 | 30 | 30-109 | 365868 | 903063 | 5429.4 | 605 | 6/4/1973 |
| 37 | 73 | 30 | 30-116 | 365918 | 903065 | 5428.1 | 600 | 5/6/1974 |
| 37 | 73 | 30 | 30-130 | 365949 | 903067 | 5427.9 | 541 | 5/9/1974 |
| 37 | 73 | 30 | 30-138 | 366026 | 903070 | 5427.2 | 539 | 5/13/1974 |
| 37 | 73 | 30 | 30-115 | 365977 | 903078 | 5427.7 | 602 | 6/5/1973 |
| 37 | 73 | 30 | 30-387 | 365187 | 903100 | 5451.7 | 674 | 6/11/1998 |
| 37 | 73 | 30 | 30-353 | 365237 | 903103 | 5452.6 | 678 | 5/8/1998 |
| 37 | 73 | 30 | 30-230 | 363715 | 903106 | 5458.7 | 684 | 11/25/1997 |
| 37 | 73 | 30 | 30-370 | 365288 | 903109 | 5449.4 | 681 | 5/22/1998 |
| 37 | 73 | 30 | 30-377 | 365336 | 903116 | 5445.6 | 678 | 5/29/1998 |
| 37 | 73 | 30 | 30-391 | 364993 | 903124 | 5436.6 | 685 | 7/12/1998 |
| 37 | 73 | 30 | 30-358 | 365775 | 903133 | 5426.1 | 682 | 5/15/1998 |
| 37 | 73 | 30 | 30-241 | 363685 | 903154 | 5460.4 | 685 | 12/2/1997 |
| 37 | 73 | 30 | 30-351 | 365292 | 903156 | 5450.8 | 679 | 5/5/1998 |
| 37 | 73 | 30 | 30-346 | 365342 | 903158 | 5446 | 678 | 4/30/1998 |
| 37 | 73 | 30 | 30-352 | 365391 | 903160 | 5441.2 | 680 | 5/12/1998 |
| 37 | 73 | 30 | 30-350 | 365438 | 903164 | 5436.9 | 678 | 5/6/1998 |
| 37 | 73 | 30 | 30-345 | 364992 | 903176 | 5433.2 | 678 | 4/29/1998 |
| 37 | 73 | 30 | 30-344 | 365090 | 903184 | 5442.1 | 677 | 4/24/1998 |
| 37 | 73 | 30 | 30-339 | 365389 | 903211 | 5443.5 | 678 | 4/22/1998 |
| 37 | 73 | 30 | 30-349 | 365017 | 903226 | 5432.1 | 678 | 5/4/1998 |
| 37 | 73 | 30 | 30-373 | 365083 | 903230 | 5438.9 | 698 | 5/27/1998 |
| 37 | 73 | 30 | 30-300 | 365768 | 903230 | 5417.4 | 684 | 1/14/1998 |
| 37 | 73 | 30 | 30-70 | 365815 | 903237 | 5415 | 598 | 5/21/1973 |
| 37 | 73 | 30 | 30-141 | 363721 | 903237 | 5463 | 540 | 5/14/1974 |
| 37 | 73 | 30 | 30-136 | 363747 | 903237 | 5462.3 | 545 | 5/13/1974 |
| 37 | 73 | 30 | 30-124 | 363801 | 903238 | 5461 | 563 | 5/8/1974 |
| 37 | 73 | 30 | 30-145 | 363671 | 903239 | 5464.7 | 542 | 12/5/1974 |
| 37 | 73 | 30 | 30-340 | 365186 | 903242 | 5446.4 | 620 | 4/21/1998 |
| 37 | 73 | 30 | 30-64 | 365865 | 903243 | 5413.6 | 602 | 5/17/1973 |
| 37 | 73 | 30 | 30-88 | 365890 | 903243 | 5413.3 | 602 | 5/30/1973 |
| 37 | 73 | 30 | 30-76 | 365917 | 903247 | 5412.9 | 600 | 5/25/1973 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 30 | 30-332 | 365386 | 903261 | 5445.6 | 681 | 2/3/1998 |
| 37 | 73 | 30 | 30-355 | 365081 | 903282 | 5435.5 | 678 | 5/13/1998 |
| 37 | 73 | 30 | 30-343 | 365180 | 903293 | 5443.2 | 618 | 4/27/1998 |
| 37 | 73 | 30 | 30-411 | 363710 | 903300 | 5466.5 | 524 | 7/27/1998 |
| 37 | 73 | 30 | 30-324 | 365384 | 903311 | 5445.1 | 680 | 1/30/1998 |
| 37 | 73 | 30 | 30-314 | 365482 | 903318 | 5433.1 | 660 | 1/28/1998 |
| 37 | 73 | 30 | 30-360 | 365077 | 903330 | 5431.8 | 678 | 5/19/1998 |
| 37 | 73 | 30 | 30-313 | 365924 | 903335 | 5406.3 | 682 | 1/23/1998 |
| 37 | 73 | 30 | 30-372 | 365173 | 903340 | 5438.4 | 678 | 5/28/1998 |
| 37 | 73 | 30 | 30-326 | 365970 | 903342 | 5403 | 680 | 1/29/1998 |
| 37 | 73 | 30 | 30-330 | 365286 | 903350 | 5444.5 | 680 | 2/2/1998 |
| 37 | 73 | 30 | 30-404 | 363706 | 903350 | 5469.8 | 585 | 7/17/1998 |
| 37 | 73 | 30 | 30-311 | 365435 | 903364 | 5435.6 | 683 | 1/27/1998 |
| 37 | 73 | 30 | 30-305 | 365482 | 903368 | 5429.9 | 680 | 1/20/1998 |
| 37 | 73 | 30 | 30-288 | 365627 | 903379 | 5416.1 | 683 | 1/8/1998 |
| 37 | 73 | 30 | 30-392 | 365116 | 903381 | 5429.7 | 680 | 7/6/1998 |
| 37 | 73 | 30 | 30-289 | 365919 | 903385 | 5401.7 | 682 | 1/7/1998 |
| 37 | 73 | 30 | 30-378 | 365166 | 903387 | 5433.1 | 678 | 6/1/1998 |
| 37 | 73 | 30 | 30-296 | 365966 | 903389 | 5400.7 | 680 | 1/13/1998 |
| 37 | 73 | 30 | 30-329 | 366016 | 903394 | 5400.2 | 683 | 2/4/1998 |
| 37 | 73 | 30 | 30-366 | 366066 | 903399 | 5400 | 682 | 5/20/1998 |
| 37 | 73 | 30 | 30-403 | 365281 | 903400 | 5436.4 | 584 | 7/15/1998 |
| 37 | 73 | 30 | 30-226 | 363700 | 903401 | 5473 | 679 | 11/26/1997 |
| 37 | 73 | 30 | 30-304 | 365432 | 903414 | 5430.3 | 681 | 1/19/1998 |
| 37 | 73 | 30 | 30-295 | 365482 | 903417 | 5426.2 | 683 | 1/13/1998 |
| 37 | 73 | 30 | 30-287 | 365532 | 903420 | 5421.2 | 684 | 1/7/1998 |
| 37 | 73 | 30 | 30-159 | 365581 | 903423 | 5417.3 | 463 | 12/9/1974 |
| 37 | 73 | 30 | 30-128 | 365628 | 903428 | 5412.8 | 540 | 5/8/1974 |
| 37 | 73 | 30 | 30-160 | 365732 | 903432 | 5407.9 | 1003 | 12/10/1974 |
| 37 | 73 | 30 | 30-380 | 365160 | 903436 | 5426.1 | 678 | 6/12/1998 |
| 37 | 73 | 30 | 30-137 | 363854 | 903439 | 5469.6 | 539 | 5/10/1974 |
| 37 | 73 | 30 | 30-123 | 363899 | 903442 | 5468.7 | 535 | 5/8/1974 |
| 37 | 73 | 30 | 30-140 | 363796 | 903444 | 5471.8 | 540 | 5/13/1974 |
| 37 | 73 | 30 | 30-146 | 363747 | 903449 | 5474.4 | 542 | 12/5/1974 |
| 37 | 73 | 30 | 30-409 | 365279 | 903449 | 5429.7 | 506 | 7/24/1998 |
| 37 | 73 | 30 | 30-44C | 365873 | 903465 | 5403.5 | 525 | 4/13/1973 |
| 37 | 73 | 30 | 30-117 | 365629 | 903479 | 5411.2 | 541 | 5/3/1974 |
| 37 | 73 | 30 | 30-13 | 365867 | 903481 | 5404.5 | 602 | 2/15/1972 |
| 37 | 73 | 30 | 30-286 | 365919 | 903485 | 402.6 | 682 | 1/7/1998 |
| 37 | 73 | 30 | 30-385 | 365160 | 903486 | 5426.1 | 679 | 6/15/1998 |
| 37 | 73 | 30 | 30-290 | 365971 | 903490 | 5399.8 | 684 | 1/8/1998 |
| 37 | 73 | 30 | 30-218 | 363899 | 903491 | 5471.3 | 679 | 11/21/1997 |
| 37 | 73 | 30 | 30-299 | 366019 | 903498 | 5399.2 | 681 | 1/14/1998 |
| 37 | 73 | 30 | 30-321 | 365323 | 903502 | 5422.4 | 684 | 1/29/1998 |
| 37 | 73 | 30 | 30-303 | 366067 | 903505 | 5398.4 | 902 | 1/16/1998 |
| 37 | 73 | 30 | 30-315 | 365372 | 903507 | 5420.8 | 684 | 1/23/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 30 | 30-312 | 366116 | 903514 | 5396.8 | 681 | 1/21/1998 |
| 37 | 73 | 30 | 30-342 | 365420 | 903515 | 5418.6 | 678 | 4/28/1998 |
| 37 | 73 | 30 | 30-320 | 366165 | 903523 | 5395.1 | 681 | 1/27/1998 |
| 37 | 73 | 30 | 30-389 | 365771 | 903525 | 5403.2 | 660 | 6/25/1998 |
| 37 | 73 | 30 | 30-382 | 365867 | 903531 | 5405.4 | 679 | 6/9/1998 |
| 37 | 73 | 30 | 30-395 | 365146 | 903534 | 5427.4 | 683 | 7/7/1998 |
| 37 | 73 | 30 | 30-367 | 365940 | 903539 | 5404.2 | 682 | 5/19/1998 |
| 37 | 73 | 30 | 30-227 | 363943 | 903546 | 5474.4 | 682 | 11/25/1997 |
| 37 | 73 | 30 | 30-309 | 366068 | 903556 | 5400.5 | 682 | 1/21/1998 |
| 37 | 73 | 30 | 30-319 | 366114 | 903566 | 5399.5 | 681 | 1/28/1998 |
| 37 | 73 | 30 | 30-242 | 363805 | 903570 | 5480.9 | 679 | 12/4/1997 |
| 37 | 73 | 30 | 30-108 | 365631 | 903575 | 5407.5 | 603 | 6/4/1973 |
| 37 | 73 | 30 | 30-390 | 365868 | 903581 | 5409.2 | 683 | 6/30/1998 |
| 37 | 73 | 30 | 30-232 | 363859 | 903587 | 5479.1 | 679 | 11/26/1997 |
| 37 | 73 | 30 | 30-386 | 365941 | 903589 | 5408 | 678 | 6/11/1998 |
| 37 | 73 | 30 | 30-118 | 365476 | 903596 | 5418.7 | 541 | 5/6/1974 |
| 37 | 73 | 30 | 30-134 | 365426 | 903597 | 5419.9 | 519 | 5/10/1974 |
| 37 | 73 | 30 | 30-127 | 365526 | 903603 | 5416.9 | 520 | 5/8/1974 |
| 37 | 73 | 30 | 30-375 | 366015 | 903610 | 5406.7 | 677 | 6/2/1998 |
| 37 | 73 | 30 | 30-369 | 366065 | 903613 | 5405.3 | 672 | 5/21/1998 |
| 37 | 73 | 30 | 30-325 | 366112 | 903616 | 5403.5 | 682 | 1/29/1998 |
| 37 | 73 | 30 | 30-328 | 366160 | 903621 | 5401.4 | 684 | 1/30/1998 |
| 37 | 73 | 30 | 30-449 | 364112 | 903638 | 5475.6 | 611 | 9/14/1998 |
| 37 | 73 | 30 | 30-394 | 365951 | 903642 | 5410.8 | 637 | 6/29/1998 |
| 37 | 73 | 30 | 30-454 | 364162 | 903643 | 5473.7 | 645 | 9/17/1998 |
| 37 | 73 | 30 | 30-393 | 366015 | 903658 | 5409.9 | 676 | 6/26/1998 |
| 37 | 73 | 30 | 30-381 | 366063 | 903663 | 5409.4 | 678 | 6/4/1998 |
| 37 | 73 | 30 | 30-397 | 366112 | 903666 | 5406.5 | 682 | 7/13/1998 |
| 37 | 73 | 30 | 30-82 | 365733 | 903668 | 5420.7 | 603 | 5/29/1973 |
| 37 | 73 | 30 | 30-465 | 364211 | 903674 | 5473.2 | 646 | 9/29/1998 |
| 37 | 73 | 30 | 30-119 | 365490 | 903679 | 5421.2 | 542 | 5/2/1974 |
| 37 | 73 | 30 | 30-453 | 364006 | 903680 | 5482.4 | 547 | 9/18/1998 |
| 37 | 73 | 30 | 30-113 | 365540 | 903680 | 1 | 605 | 6/4/1973 |
| 37 | 73 | 30 | 30-368 | 365292 | 903681 | 5427.8 | 678 | 5/21/1998 |
| 37 | 73 | 30 | 30-101 | 365433 | 903682 | 5424.9 | 603 | 6/1/1973 |
| 37 | 73 | 30 | 30-451 | 364055 | 903684 | 5481 | 646 | 9/11/1998 |
| 37 | 73 | 30 | 30-440 | 364104 | 903689 | 5479.5 | 645 | 9/8/1998 |
| 37 | 73 | 30 | 30-450 | 364154 | 903694 | 5477.1 | 647 | 9/11/1998 |
| 37 | 73 | 30 | 30-398 | 366038 | 903709 | 5413.8 | 683 | 7/9/1998 |
| 37 | 73 | 30 | 30-362 | 365236 | 903730 | 5431 | 678 | 5/19/1998 |
| 37 | 73 | 30 | 30-129 | 363945 | 903731 | 5488.9 | 553 | 5/8/1974 |
| 37 | 73 | 30 | 30-338 | 365286 | 903731 | 5431.1 | 682 | 4/6/1998 |
| 37 | 73 | 30 | 30-122 | 363995 | 903731 | 5487.8 | 562 | 5/7/1974 |
| 37 | 73 | 30 | 30-148 | 364043 | 903735 | 5489.2 | 561 | 12/6/1974 |
| 37 | 73 | 30 | 30-438 | 364095 | 903739 | 5483.4 | 644 | 8/31/1998 |
| 37 | 73 | 30 | 30-439 | 364144 | 903743 | 5481.1 | 645 | 9/8/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 30 | 30-135 | 363897 | 903744 | 5491.6 | 559 | 5/14/1974 |
| 37 | 73 | 30 | 30-455 | 364195 | 903747 | 5478.7 | 646 | 9/17/1998 |
| 37 | 73 | 30 | 30-143 | 363795 | 903748 | 5497.9 | 560 | 5/16/1974 |
| 37 | 73 | 30 | 30-147 | 363747 | 903749 | 5500.3 | 563 | 12/5/1974 |
| 37 | 73 | 30 | 30-95 | 365569 | 903749 | 5420.5 | 603 | 5/30/1973 |
| 37 | 73 | 30 | 30-432 | 363995 | 903779 | 5491.8 | 644 | 9/1/1998 |
| 37 | 73 | 30 | 30-220 | 364088 | 903790 | 5487.3 | 684 | 11/22/1997 |
| 37 | 73 | 30 | 30-429 | 364141 | 903794 | 5484.4 | 619 | 8/25/1998 |
| 37 | 73 | 30 | 30-456 | 364191 | 903800 | 5482.4 | 645 | 9/16/1998 |
| 37 | 73 | 30 | 30-284 | 365586 | 903802 | 5426.5 | 682 | 1/5/1998 |
| 37 | 73 | 30 | 30-405 | 365130 | 903814 | 5440.5 | 604 | 7/21/1998 |
| 37 | 73 | 30 | 30-401 | 365178 | 903821 | 5438.9 | 584 | 7/14/1998 |
| 37 | 73 | 30 | 30-331 | 365229 | 903824 | 5437 | 680 | 2/2/1998 |
| 37 | 73 | 30 | 30-323 | 365276 | 903830 | 5437.5 | 683 | 1/28/1998 |
| 37 | 73 | 30 | 30-94 | 365480 | 903840 | 1 | 606 | 5/31/1973 |
| 37 | 73 | 30 | 30-219 | 363838 | 903841 | 5506.1 | 678 | 11/22/1997 |
| 37 | 73 | 30 | 30-228 | 363887 | 903845 | 5503.6 | 680 | 11/25/1997 |
| 37 | 73 | 30 | 30-54 | 365789 | 903848 | 5438.8 | 605 | 4/17/1973 |
| 37 | 73 | 30 | 30-15 | 365737 | 903848 | 5439.9 | 600 | 2/21/1972 |
| 37 | 73 | 30 | 30-158 | 365439 | 903848 | 5430.3 | 500 | 12/9/1974 |
| 37 | 73 | 30 | 30-38 | 365835 | 903848 | 5437.3 | 601 | 2/25/1972 |
| 37 | 73 | 30 | 30-22 | 365692 | 903849 | 5438.1 | 602 | 2/22/1972 |
| 37 | 73 | 30 | 30-81 | 365597 | 903850 | 5430.9 | 603 | 5/29/1973 |
| 37 | 73 | 30 | 30-442 | 364010 | 903867 | 5498.4 | 645 | 9/4/1998 |
| 37 | 73 | 30 | 30-279 | 365426 | 903887 | 5433.4 | 681 | 1/6/1998 |
| 37 | 73 | 30 | 30-441 | 363885 | 903893 | 5509.2 | 638 | 9/4/1998 |
| 37 | 73 | 30 | 30-433 | 364056 | 903919 | 5500.9 | 645 | 8/27/1998 |
| 37 | 73 | 30 | 30-406 | 365122 | 903921 | 5449.5 | 605 | 7/20/1998 |
| 37 | 73 | 30 | 30-402 | 365170 | 903925 | 5446.9 | 583 | 7/15/1998 |
| 37 | 73 | 30 | 30-231 | 364153 | 903926 | 5494.8 | 679 | 12/1/1997 |
| 37 | 73 | 30 | 30-407 | 365219 | 903927 | 5444.1 | 605 | 7/22/1998 |
| 37 | 73 | 30 | 30-302 | 365270 | 903928 | 5443.1 | 686 | 2/3/1998 |
| 37 | 73 | 30 | 30-426 | 364206 | 903930 | 5491.1 | 663 | 8/25/1998 |
| 37 | 73 | 30 | 30-264 | 365375 | 903931 | 5439.7 | 681 | 12/17/1997 |
| 37 | 73 | 30 | 30-257 | 365423 | 903936 | 5435.8 | 683 | 12/12/1997 |
| 37 | 73 | 30 | 30-431 | 363938 | 903942 | 5508.8 | 643 | 8/26/1998 |
| 37 | 73 | 30 | 30-149 | 363986 | 903946 | 5508.7 | 561 | 12/5/1974 |
| 37 | 73 | 30 | 30-221 | 364104 | 903984 | 5503.3 | 679 | 11/24/1997 |
| 37 | 73 | 30 | 30-443 | 363886 | 903989 | 5515.7 | 645 | 9/9/1998 |
| 37 | 73 | 30 | 30-435 | 363935 | 903992 | 5514.2 | 644 | 9/2/1998 |
| 37 | 73 | 30 | 30-430 | 363983 | 903996 | 5514 | 645 | 8/26/1998 |
| 37 | 73 | 30 | 30-348 | 364791 | 903999 | 5462.7 | 678 | 5/1/1998 |
| 37 | 73 | 30 | 30-437 | 364035 | 903999 | 5511 | 642 | 9/2/1998 |
| 37 | 73 | 30 | 30-354 | 364842 | 904001 | 5461.9 | 678 | 5/14/1998 |
| 37 | 73 | 30 | 30-361 | 364894 | 904007 | 5461.5 | 676 | 5/18/1998 |
| 37 | 73 | 30 | 30-157 | 365312 | 904027 | 5446.4 | 1004 | 12/9/1974 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 30 | 30-131 | 365265 | 904028 | 5446.8 | 562 | 5/8/1974 |
| 37 | 73 | 30 | 30-156 | 365211 | 904028 | 5449.1 | 522 | 12/9/1974 |
| 37 | 73 | 30 | 30-434 | 364150 | 904032 | 5502.7 | 644 | 8/27/1998 |
| 37 | 73 | 30 | 30-121 | 364100 | 904033 | 5507.6 | 580 | 5/6/1974 |
| 37 | 73 | 30 | 30-112 | 364196 | 904034 | 5499.7 | 601 | 6/5/1973 |
| 37 | 73 | 30 | 30-427 | 364247 | 904035 | 5495.7 | 644 | 8/21/1998 |
| 37 | 73 | 30 | 30-102 | 364296 | 904036 | 5492.2 | 604 | 6/1/1973 |
| 37 | 73 | 30 | 30-452 | 363887 | 904040 | 5518.8 | 664 | 9/16/1998 |
| 37 | 73 | 30 | 30-444 | 363933 | 904042 | 5517.9 | 645 | 9/9/1998 |
| 37 | 73 | 30 | 30-436 | 363978 | 904043 | 5518.9 | 646 | 9/3/1998 |
| 37 | 73 | 30 | 30-446 | 364031 | 904046 | 5514.4 | 665 | 9/10/1998 |
| 37 | 73 | 30 | 30-458 | 363880 | 904086 | 5521.9 | 667 | 9/24/1998 |
| 37 | 73 | 30 | 30-447 | 363927 | 904088 | 5521.3 | 665 | 9/15/1998 |
| 37 | 73 | 30 | 30-445 | 363976 | 904091 | 5520.3 | 645 | 9/10/1998 |
| 37 | 73 | 30 | 30-107 | 365126 | 904119 | 5458.3 | 603 | 6/4/1973 |
| 37 | 73 | 30 | 30-35 | 365363 | 904120 | 5449.2 | 601 | 2/24/1972 |
| 37 | 73 | 30 | 30-53 | 365172 | 904121 | 5456.2 | 604 | 4/17/1973 |
| 37 | 73 | 30 | 30-63 | 365216 | 904122 | 5454.4 | 602 | 5/17/1973 |
| 37 | 73 | 30 | 30-60 | 365265 | 904123 | 5452.4 | 601 | 5/15/1973 |
| 37 | 73 | 30 | 30-80 | 365192 | 904124 | 5455.5 | 599 | 5/29/1973 |
| 37 | 73 | 30 | 30-25 | 365602 | 904124 | 5440.6 | 602 | 2/23/1972 |
| 37 | 73 | 30 | 30-459 | 363876 | 904137 | 5523 | 666 | 9/24/1998 |
| 37 | 73 | 30 | 30-448 | 363972 | 904139 | 5520.9 | 664 | 9/15/1998 |
| 37 | 73 | 30 | 30-457 | 363924 | 904139 | 5521.5 | 586 | 9/23/1998 |
| 37 | 73 | 30 | 30-163 | 364225 | 904176 | 5507.5 | 1000 | 2/16/1976 |
| 37 | 73 | 30 | 30-428 | 364276 | 904179 | 5503.7 | 643 | 8/24/1998 |
| 37 | 73 | 30 | 30-461 | 363872 | 904187 | 5522.5 | 666 | 9/25/1998 |
| 37 | 73 | 30 | 30-460 | 363921 | 904190 | 5521 | 660 | 9/25/1998 |
| 37 | 73 | 30 | 30-462 | 363969 | 904193 | 5520.2 | 666 | 9/26/1998 |
| 37 | 73 | 30 | 30-194 | 364166 | 904226 | 5514.9 | 554 | 7/8/1987 |
| 37 | 73 | 30 | 30-463 | 363917 | 904241 | 5520 | 666 | 9/26/1998 |
| 37 | 73 | 30 | 30-464 | 363965 | 904247 | 5519.4 | 666 | 9/30/1998 |
| 37 | 73 | 30 | 30-408 | 365131 | 904257 | 5464.2 | 603 | 7/22/1998 |
| 37 | 73 | 30 | 30-133 | 365181 | 904259 | 5459.7 | 560 | 5/9/1974 |
| 37 | 73 | 30 | 30-341 | 364847 | 904270 | 5477.2 | 670 | 4/23/1998 |
| 37 | 73 | 30 | 30-337 | 364898 | 904275 | 5475 | 669 | 4/20/1998 |
| 37 | 73 | 30 | 30-277 | 364773 | 904296 | 5485.3 | 681 | 12/30/1997 |
| 37 | 73 | 30 | 30-222 | 364206 | 904316 | 5516.1 | 677 | 11/25/1997 |
| 37 | 73 | 30 | 30-99 | 364256 | 904317 | 5515.4 | 605 | 5/31/1973 |
| 37 | 73 | 30 | 30-87 | 364304 | 904319 | 5513.8 | 602 | 5/30/1973 |
| 37 | 73 | 30 | 30-100 | 364349 | 904321 | 5513.7 | 603 | 6/1/1973 |
| 37 | 73 | 30 | 30-223 | 364400 | 904322 | 5515.3 | 680 | 11/25/1997 |
| 37 | 73 | 30 | 30-285 | 364844 | 904347 | 5482.5 | 684 | 1/7/1998 |
| 37 | 73 | 30 | 30-347 | 364794 | 904350 | 5486.6 | 679 | 5/7/1998 |
| 37 | 73 | 30 | 30-294 | 364891 | 904372 | 5480.8 | 682 | 1/9/1998 |
| 37 | 73 | 30 | 30-208 | 364840 | 904385 | 5493.2 | 607 | 7/25/1991 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 30 | 30-34 | 365313 | 904394 | 5453.3 | 600 | 2/24/1972 |
| 37 | 73 | 30 | 30-29 | 365413 | 904395 | 5451.6 | 601 | 2/23/1972 |
| 37 | 73 | 30 | 30-191 | 364941 | 904395 | 5477.5 | 603 | 10/22/1985 |
| 37 | 73 | 30 | 30-260 | 364792 | 904398 | 5491.8 | 684 | 12/17/1997 |
| 37 | 73 | 30 | 30-174 | 364307 | 904399 | 5517.6 | 600 | 2/20/1979 |
| 37 | 73 | 30 | 30-52 | 365034 | 904401 | 5469.9 | 605 | 5/14/1973 |
| 37 | 73 | 30 | 30-412 | 365083 | 904403 | 5466.5 | 644 | 7/30/1998 |
| 37 | 73 | 30 | 30-59 | 365130 | 904404 | 5464.2 | 600 | 5/15/1973 |
| 37 | 73 | 30 | 30-39 | 365223 | 904406 | 5460.2 | 602 | 2/25/1972 |
| 37 | 73 | 30 | 30-62 | 365180 | 904409 | 5461.4 | 602 | 5/17/1973 |
| 37 | 73 | 30 | 30-233 | 364245 | 904414 | 5516.8 | 687 | 12/2/1997 |
| 37 | 73 | 30 | 30-255 | 364836 | 904445 | 5491.5 | 685 | 12/11/1997 |
| 37 | 73 | 30 | 30-256 | 365080 | 904457 | 5469.4 | 685 | 12/12/1997 |
| 37 | 73 | 30 | 30-207 | 364798 | 904469 | 5494.4 | 581 | 8/1/1990 |
| 37 | 73 | 30 | 30-204 | 364901 | 904472 | 5487.3 | 603 | 6/22/1989 |
| 37 | 73 | 30 | 30-413 | 364954 | 904479 | 5478.8 | 643 | 7/29/1998 |
| 37 | 73 | 30 | 30-161 | 365202 | 904483 | 5466.1 | 972 | 2/17/1976 |
| 37 | 73 | 30 | 30-278 | 364833 | 904495 | 5495.3 | 683 | 1/5/1998 |
| 37 | 73 | 30 | 30-150 | 364249 | 904504 | 5514 | 583 | 12/6/1974 |
| 37 | 73 | 30 | 30-98 | 364302 | 904507 | 5514.6 | 600 | 5/31/1973 |
| 37 | 73 | 30 | 30-151 | 364359 | 904511 | 5514.5 | 562 | 12/6/1974 |
| 37 | 73 | 30 | 30-234 | 364287 | 904565 | 5510.1 | 680 | 12/2/1997 |
| 37 | 73 | 30 | 30-211 | 365054 | 904566 | 5484.6 | 584 | 7/25/1991 |
| 37 | 73 | 30 | 30-245 | 364336 | 904570 | 5511.3 | 680 | 12/8/1997 |
| 37 | 73 | 30 | 30-196 | 364904 | 904571 | 5492 | 555 | 10/23/1987 |
| 37 | 73 | 30 | 30-414 | 364854 | 904572 | 5497.6 | 644 | 7/28/1998 |
| 37 | 73 | 30 | 30-186 | 364998 | 904573 | 5481.2 | 550 | 10/25/1985 |
| 37 | 73 | 30 | 30-106 | 365162 | 904577 | 5472.7 | 602 | 6/1/1973 |
| 37 | 73 | 30 | 30-154 | 365107 | 904577 | 5474.4 | 542 | 12/9/1974 |
| 37 | 73 | 30 | 30-69 | 365312 | 904577 | 5464.9 | 601 | 5/18/1973 |
| 37 | 73 | 30 | 30-214 | 364956 | 904578 | 5479.3 | 603 | 6/3/1992 |
| 37 | 73 | 30 | 30-253 | 365256 | 904578 | 5470.1 | 240 | 12/11/1997 |
| 37 | 73 | 30 | 30-73 | 365205 | 904582 | 5471.9 | 1203 | 5/24/1973 |
| 37 | 73 | 30 | 30-51 | 365412 | 904583 | 5458 | 604 | 4/17/1973 |
| 37 | 73 | 30 | 30-75 | 363731 | 904594 | 5519.8 | 600 | 5/24/1973 |
| 37 | 73 | 30 | 30-181 | 364368 | 904598 | 5511.1 | 600 | 2/11/1982 |
| 37 | 73 | 30 | 30-33 | 363356 | 904603 | 5522.6 | 600 | 2/24/1972 |
| 37 | 73 | 30 | 30-177 | 364306 | 904642 | 5508.6 | 598 | 2/20/1979 |
| 37 | 73 | 30 | 30-188C | 365106 | 904683 | 5477.3 | 550 | 10/23/1984 |
| 37 | 73 | 30 | 30-185 | 365105 | 904683 | 5478 | 555 | 10/25/1985 |
| 37 | 73 | 30 | 30-93 | 364262 | 904690 | 5508 | 603 | 5/31/1973 |
| 37 | 73 | 30 | 30-86 | 364311 | 904693 | 5507.7 | 603 | 5/29/1973 |
| 37 | 73 | 30 | 30-79 | 364404 | 904695 | 5506.9 | 600 | 5/25/1973 |
| 37 | 73 | 30 | 30-152 | 364364 | 904697 | 5506.9 | 562 | 12/6/1974 |
| 37 | 73 | 30 | 30-182 | 365202 | 904705 | 5469.6 | 578 | 10/28/1982 |
| 37 | 73 | 30 | 30-254 | 365251 | 904710 | 5466.6 | 681 | 12/11/1997 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 30 | 30-258 | 364808 | 904725 | 5494.7 | 681 | 12/15/1997 |
| 37 | 73 | 30 | 30-24 | 365411 | 904725 | 5468.2 | 601 | 2/23/1972 |
| 37 | 73 | 30 | 30-206 | 364857 | 904726 | 5489.5 | 580 | 8/1/1990 |
| 37 | 73 | 30 | 30-263 | 364757 | 904727 | 5497.1 | 682 | 12/15/1997 |
| 37 | 73 | 30 | 30-259 | 364907 | 904727 | 5489.6 | 682 | 12/12/1997 |
| 37 | 73 | 30 | 30-195 | 364961 | 904729 | 5485.8 | 555 | 10/22/1987 |
| 37 | 73 | 30 | 30-209 | 364857 | 904769 | 5496.4 | 605 | 7/25/1991 |
| 37 | 73 | 30 | 30-203 | 364723 | 904775 | 5499.4 | 603 | 6/21/1989 |
| 37 | 73 | 30 | 30-180 | 365129 | 904788 | 5473.3 | 600 | 2/11/1982 |
| 37 | 73 | 30 | 30-168 | 364217 | 904810 | 5507.1 | 502 | 3/1/1977 |
| 37 | 73 | 30 | 30-172 | 364323 | 904816 | 5505.3 | 564 | 2/20/1979 |
| 37 | 73 | 30 | 30-283 | 364805 | 904824 | 5492.8 | 681 | 12/31/1997 |
| 37 | 73 | 30 | 30-162 | 364302 | 904829 | 5506.2 | 984 | 2/17/1976 |
| 37 | 73 | 30 | 30-165 | 364971 | 904832 | 5483.6 | 602 | 4/3/1974 |
| 37 | 73 | 30 | 30-166 | 365201 | 904834 | 5473.2 | 600 | 3/2/1977 |
| 37 | 73 | 30 | 30-212 | 364857 | 904836 | 5486 | 603 | 6/2/1992 |
| 37 | 73 | 30 | 30-164 | 364399 | 904844 | 5505 | 595 | 3/2/1977 |
| 37 | 73 | 30 | 30-197 | 364726 | 904880 | 5497.6 | 555 | 10/22/1987 |
| 37 | 73 | 30 | 30-246 | 364901 | 904883 | 5494.8 | 681 | 12/9/1997 |
| 37 | 73 | 30 | 30-276 | 365250 | 904886 | 5477.5 | 685 | 12/18/1997 |
| 37 | 73 | 30 | 30-235 | 364359 | 904908 | 5508.7 | 680 | 12/15/1997 |
| 37 | 73 | 30 | 30-247 | 365036 | 904916 | 5486.7 | 694 | 12/9/1997 |
| 37 | 73 | 30 | 30-179 | 365125 | 904920 | 5482.6 | 601 | 2/11/1982 |
| 37 | 73 | 30 | 30-280 | 365176 | 904924 | 5480.8 | 681 | 1/5/1998 |
| 37 | 73 | 30 | 30-183 | 364959 | 904935 | 5496 | 570 | 10/27/1982 |
| 37 | 73 | 30 | 30-17 | 365376 | 904961 | 5490.3 | 600 | 2/18/1972 |
| 37 | 73 | 30 | 30-281 | 364867 | 904965 | 5502.2 | 681 | 12/30/1997 |
| 37 | 73 | 30 | 30-270 | 365333 | 904969 | 5488.2 | 681 | 12/16/1997 |
| 37 | 73 | 30 | 30-213 | 365121 | 904974 | 5482.5 | 584 | 6/2/1992 |
| 37 | 73 | 30 | 30-74 | 364403 | 904977 | 5508.5 | 600 | 5/23/1973 |
| 37 | 73 | 30 | 30-58 | 364351 | 904981 | 5510.1 | 602 | 5/16/1973 |
| 37 | 73 | 30 | 30-171 | 364818 | 904982 | 5502.5 | 564 | 12/7/1977 |
| 37 | 73 | 30 | 30-5 | 364555 | 904983 | 5503.6 | 593 | 8/31/1967 |
| 37 | 73 | 30 | 30-68 | 364447 | 904983 | 5506.4 | 602 | 5/18/1973 |
| 37 | 73 | 30 | 30-6 | 365672 | 904985 | 5491.7 | 401 | 8/31/1967 |
| 37 | 73 | 30 | 30-11 | 365848 | 904992 | 5474.8 | 601 | 2/15/1972 |
| 37 | 73 | 30 | 30-32 | 363746 | 904993 | 5517.7 | 602 | 2/24/1972 |
| 37 | 73 | 30 | 30-37 | 363937 | 904995 | 5511.9 | 602 | 2/25/1972 |
| 37 | 73 | 30 | 30-243 | 364907 | 905008 | 5502 | 684 | 12/4/1997 |
| 37 | 73 | 30 | 30-19 | 365284 | 905009 | 5491.4 | 600 | 2/21/1972 |
| 37 | 73 | 30 | 30-178 | 364957 | 905011 | 5501.8 | 600 | 2/11/1982 |
| 37 | 73 | 30 | 30-12 | 365041 | 905013 | 5497.4 | 603 | 2/15/1972 |
| 37 | 73 | 30 | 30-252 | 365001 | 905015 | 5499.9 | 684 | 12/8/1997 |
| 37 | 73 | 30 | 30-18 | 365121 | 905016 | 5494.5 | 581 | 2/21/1972 |
| 37 | 73 | 30 | 30-14 | 365204 | 905016 | 5492 | 602 | 2/18/1972 |
| 37 | 73 | 30 | 30-268 | 365164 | 905017 | 5492.5 | 681 | 12/17/1997 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 30 | 30-269 | 365247 | 905018 | 5491.5 | 681 | 12/17/1997 |
| 37 | 73 | 30 | 30-23 | 365329 | 905018 | 5494.3 | 602 | 2/22/1972 |
| 37 | 73 | 30 | 30-45C | 365290 | 905027 | 5493.6 | 606 | 4/17/1973 |
| 37 | 73 | 30 | 30-293 | 364814 | 905033 | 5496.4 | 681 | 1/9/1998 |
| 37 | 73 | 30 | 30-251 | 365401 | 905041 | 5497.9 | 685 | 12/9/1997 |
| 37 | 73 | 30 | 30-193 | 364520 | 905051 | 5494.5 | 555 | 7/7/1987 |
| 37 | 73 | 30 | 30-173 | 364865 | 905061 | 5495.3 | 598 | 2/21/1979 |
| 37 | 73 | 30 | 30-132 | 365028 | 905063 | 5500 | 579 | 5/10/1974 |
| 37 | 73 | 30 | 30-142 | 365116 | 905064 | 5499.1 | 581 | 5/16/1974 |
| 37 | 73 | 30 | 30-425 | 364608 | 905065 | 5490.2 | 644 | 8/20/1998 |
| 37 | 73 | 30 | 30-322 | 364658 | 905070 | 5489.9 | 681 | 1/28/1998 |
| 37 | 73 | 30 | 30-416 | 364715 | 905074 | 5489.6 | 663 | 7/30/1998 |
| 37 | 73 | 30 | 30-415 | 364761 | 905076 | 5490.9 | 665 | 8/10/1998 |
| 37 | 73 | 30 | 30-273 | 364813 | 905082 | 5490.5 | 683 | 1/6/1998 |
| 37 | 73 | 30 | 30-210 | 365438 | 905087 | 5505.3 | 605 | 7/25/1991 |
| 37 | 73 | 30 | 30-236 | 364487 | 905092 | 5489.8 | 680 | 12/2/1997 |
| 37 | 73 | 30 | 30-271 | 365169 | 905093 | 5497.9 | 683 | 12/18/1997 |
| 37 | 73 | 30 | 30-262 | 365238 | 905095 | 5497 | 682 | 12/15/1997 |
| 37 | 73 | 30 | 30-153 | 364932 | 905110 | 5493.4 | 1005 | 12/11/1974 |
| 37 | 73 | 30 | 30-120 | 365072 | 905110 | 5497.7 | 582 | 5/7/1974 |
| 37 | 73 | 30 | 30-267 | 364860 | 905110 | 5488.9 | 683 | 12/16/1997 |
| 37 | 73 | 30 | 30-139 | 364977 | 905113 | 5495.2 | 583 | 5/14/1974 |
| 37 | 73 | 30 | 30-126 | 365024 | 905114 | 5496.7 | 579 | 5/8/1974 |
| 37 | 73 | 30 | 30-111 | 365121 | 905114 | 5497.9 | 604 | 6/4/1973 |
| 37 | 73 | 30 | 30-420 | 364604 | 905116 | 5482.3 | 643 | 8/11/1998 |
| 37 | 73 | 30 | 30-317 | 364656 | 905119 | 5482.1 | 683 | 1/26/1998 |
| 37 | 73 | 30 | 30-310 | 364707 | 905124 | 5482.3 | 683 | 1/21/1998 |
| 37 | 73 | 30 | 30-307 | 364757 | 905127 | 5483 | 684 | 1/19/1998 |
| 37 | 73 | 30 | 30-292 | 364809 | 905130 | 5483.8 | 681 | 1/14/1998 |
| 37 | 73 | 30 | 30-91 | 364436 | 905135 | 5486.1 | 605 | 5/31/1973 |
| 37 | 73 | 30 | 30-92 | 364532 | 905139 | 5480.9 | 604 | 5/31/1973 |
| 37 | 73 | 30 | 30-49 | 364283 | 905140 | 5491.4 | 602 | 4/18/1973 |
| 37 | 73 | 30 | 30-57 | 364483 | 905140 | 5481.5 | 603 | 5/16/1973 |
| 37 | 73 | 30 | 30-36 | 364189 | 905144 | 5484.7 | 594 | 2/25/1972 |
| 37 | 73 | 30 | 30-250 | 365235 | 905145 | 5495.8 | 679 | 12/9/1997 |
| 37 | 73 | 30 | 30-261 | 365386 | 905146 | 5495.2 | 684 | 12/13/1997 |
| 37 | 73 | 30 | 30-187 | 365336 | 905146 | 5495.2 | 553 | 10/25/1983 |
| 37 | 73 | 30 | 30-205 | 365438 | 905148 | 5491.6 | 580 | 8/1/1990 |
| 37 | 73 | 30 | 30-249 | 365486 | 905155 | 5494.9 | 684 | 12/5/1997 |
| 37 | 73 | 30 | 30-306 | 364853 | 905157 | 5481.9 | 647 | 1/19/1998 |
| 37 | 73 | 30 | 30-333 | 364651 | 905167 | 5475.6 | 682 | 2/3/1998 |
| 37 | 73 | 30 | 30-327 | 364701 | 905173 | 5475.6 | 681 | 2/2/1998 |
| 37 | 73 | 30 | 30-318 | 364753 | 905176 | 5476.5 | 682 | 1/27/1998 |
| 37 | 73 | 30 | 30-175 | 364876 | 905179 | 5480.5 | 601 | 2/23/1979 |
| 37 | 73 | 30 | 30-272 | 364938 | 905181 | 5483.1 | 681 | 12/18/1997 |
| 37 | 73 | 30 | 30-110 | 364999 | 905189 | 5485.7 | 603 | 6/5/1973 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 30 | 30-97 | 365051 | 905190 | 5488.2 | 602 | 6/1/1973 |
| 37 | 73 | 30 | 30-85 | 365095 | 905192 | 5489.8 | 603 | 5/30/1973 |
| 37 | 73 | 30 | 30-248 | 365433 | 905196 | 5493.3 | 684 | 12/8/1997 |
| 37 | 73 | 30 | 30-30 | 365187 | 905197 | 5492 | 602 | 2/24/1972 |
| 37 | 73 | 30 | 30-50 | 365232 | 905202 | 5491.6 | 602 | 4/17/1973 |
| 37 | 73 | 30 | 30-423 | 364394 | 905212 | 5480 | 665 | 8/18/1998 |
| 37 | 73 | 30 | 30-238 | 364446 | 905216 | 5473.4 | 681 | 12/5/1997 |
| 37 | 73 | 30 | 30-419 | 364494 | 905219 | 5469.7 | 643 | 8/12/1998 |
| 37 | 73 | 30 | 30-237 | 364546 | 905222 | 5468.7 | 683 | 12/4/1997 |
| 37 | 73 | 30 | 30-417 | 364720 | 905234 | 5468.2 | 646 | 8/13/1998 |
| 37 | 73 | 30 | 30-202 | 365254 | 905236 | 5491.4 | 603 | 6/22/1989 |
| 37 | 73 | 30 | 30-189 | 365329 | 905236 | 5486.4 | 601 | 10/22/1985 |
| 37 | 73 | 30 | 30-308 | 364770 | 905237 | 5469.3 | 685 | 1/20/1998 |
| 37 | 73 | 30 | 30-418 | 364820 | 905242 | 5470.2 | 643 | 8/14/1998 |
| 37 | 73 | 30 | 30-190 | 365427 | 905242 | 5486.8 | 602 | 10/22/1985 |
| 37 | 73 | 30 | 30-265 | 364918 | 905246 | 5473.4 | 678 | 12/16/1997 |
| 37 | 73 | 30 | 30-105 | 364876 | 905247 | 5472.1 | 603 | 6/4/1973 |
| 37 | 73 | 30 | 30-28 | 365188 | 905249 | 5487.8 | 601 | 2/23/1972 |
| 37 | 73 | 30 | 30-96 | 364966 | 905250 | 5476 | 606 | 5/31/1973 |
| 37 | 73 | 30 | 30-83 | 365141 | 905250 | 5485.7 | 599 | 5/25/1973 |
| 37 | 73 | 30 | 30-4 | 363602 | 905252 | 5494.4 | 380 | 8/31/1967 |
| 37 | 73 | 30 | 30-84 | 365051 | 905252 | 5480.3 | 605 | 5/30/1973 |
| 37 | 73 | 30 | 30-421 | 364418 | 905260 | 5468.7 | 644 | 8/18/1998 |
| 37 | 73 | 30 | 30-192 | 364347 | 905266 | 5478.5 | 550 | 7/8/1987 |
| 37 | 73 | 30 | 30-184 | 364467 | 905267 | 5464.9 | 554 | 10/27/1982 |
| 37 | 73 | 30 | 30-422 | 364517 | 905267 | 5462.8 | 645 | 8/17/1998 |
| 37 | 73 | 30 | 30-298 | 364597 | 905273 | 5461.7 | 682 | 1/15/1998 |
| 37 | 73 | 30 | 30-282 | 364720 | 905281 | 5462.8 | 681 | 1/6/1998 |
| 37 | 73 | 30 | 30-301 | 364767 | 905284 | 5464 | 680 | 1/16/1998 |
| 37 | 73 | 30 | 30-316 | 364817 | 905287 | 5464.8 | 683 | 1/21/1998 |
| 37 | 73 | 30 | 30-170 | 364769 | 905307 | 5461.6 | 564 | 12/7/1977 |
| 37 | 73 | 30 | 30-275 | 364985 | 905317 | 5469.9 | 673 | 12/18/1997 |
| 37 | 73 | 30 | 30-42 | 364543 | 905319 | 5456.4 | 596 | 2/28/1972 |
| 37 | 73 | 30 | 30-31 | 364192 | 905321 | 5462.6 | 602 | 2/24/1972 |
| 37 | 73 | 30 | 30-274 | 364594 | 905322 | 5456.3 | 685 | 1/8/1998 |
| 37 | 73 | 30 | 30-20 | 365231 | 905323 | 5479.2 | 602 | 2/22/1972 |
| 37 | 73 | 30 | 30-297 | 364661 | 905324 | 5457.1 | 680 | 1/14/1998 |
| 37 | 73 | 30 | 30-16 | 365035 | 905325 | 5472.3 | 602 | 2/18/1972 |
| 37 | 73 | 30 | 30-291 | 364713 | 905328 | 5457.2 | 681 | 1/8/1998 |
| 37 | 73 | 30 | 30-266 | 364872 | 905342 | 5460.9 | 677 | 12/18/1997 |
| 37 | 73 | 30 | 30-56 | 364463 | 905368 | 5451.9 | 601 | 5/16/1973 |
| 37 | 73 | 30 | 30-67 | 364795 | 905371 | 5456 | 600 | 5/18/1973 |
| 37 | 73 | 30 | 30-66 | 364654 | 905372 | 5452.2 | 602 | 5/18/1973 |
| 37 | 73 | 30 | 30-55 | 364936 | 905373 | 5461.7 | 601 | 5/16/1973 |
| 37 | 73 | 30 | 30-47 | 364381 | 905410 | 5448.6 | 601 | 4/18/1973 |
| 37 | 73 | 30 | 30-104 | 364852 | 905416 | 5454.1 | 604 | 6/4/1973 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 30 | 30-48 | 364936 | 905418 | 5458.5 | 602 | 4/18/1973 |
| 37 | 73 | 30 | 30-26 | 365032 | 905419 | 5464 | 600 | 2/23/1972 |
| 37 | 73 | 30 | 30-72 | 364656 | 905420 | 5447.4 | 600 | 5/22/1973 |
| 37 | 73 | 30 | 30-198CM | 364815 | 905459 | 5450.4 | 498 | 6/20/1988 |
| 37 | 73 | 30 | 30-61 | 364940 | 905472 | 5454.9 | 602 | 5/16/1973 |
| 37 | 73 | 30 | 30-78 | 364482 | 905502 | 5436.8 | 600 | 5/25/1973 |
| 37 | 73 | 30 | 30-41 | 364380 | 905505 | 5437.9 | 602 | 2/29/1972 |
| 37 | 73 | 30 | 30-27 | 364578 | 905507 | 5437.2 | 602 | 2/23/1972 |
| 37 | 73 | 30 | 30-46C | 364768 | 905510 | 5444.8 | 496 | 4/18/1973 |
| 37 | 73 | 30 | 30-43 | 364778 | 905517 | 5444 | 601 | 2/28/1972 |
| 37 | 73 | 30 | 30-21 | 365034 | 905517 | 5455.2 | 600 | 2/22/1972 |
| 37 | 73 | 30 | 30-200M | 364931 | 905521 | 5451.6 | 505 | 6/18/1988 |
| 37 | 73 | 30 | 30-201P | 364883 | 905533 | 5448.5 | 502 | 6/19/1988 |
| 37 | 73 | 30 | 30-90 | 364478 | 905595 | 5425.2 | 605 | 5/29/1973 |
| 37 | 73 | 30 | 30-77 | 364575 | 905595 | 5427.8 | 599 | 5/25/1973 |
| 37 | 73 | 30 | 30-71 | 364671 | 905597 | 5434.1 | 1201 | 5/23/1973 |
| 37 | 73 | 30 | 30-65 | 364767 | 905601 | 5439.9 | 602 | 5/18/1973 |
| 37 | 73 | 30 | 30-89 | 364571 | 905646 | 5422.6 | 604 | 5/29/1973 |
| 37 | 73 | 30 | 30-167 | 364657 | 905660 | 5432.3 | 600 | 3/1/1977 |
| 37 | 73 | 30 | 30-199M | 364839 | 905675 | 5439.9 | 492 | 6/18/1988 |
| 37 | 73 | 30 | 30-40 | 364376 | 905696 | 5427.4 | 600 | 2/29/1972 |
| 37 | 73 | 30 | 30-176 | 364706 | 905709 | 5434.7 | 597 | 2/21/1979 |
| 37 | 73 | 30 | 30-2 | 364593 | 906417 | 5389.8 | 602 | 9/1/1967 |
| 37 | 73 | 30 | 30-10 | 365852 | 906485 | 5385 | 1003 | 2/15/1972 |
| 37 | 73 | 30 | 30-7 | 365167 | 906498 | 5381.9 | 1000 | 4/24/1969 |
| 37 | 73 | 30 | 30-1 | 363377 | 906517 | 5415.9 | 580 | 9/7/1967 |
| 37 | 73 | 30 | 30-3 | 365685 | 906522 | 5376.7 | 597 | 9/8/1967 |
| 37 | 73 | 30 | 30-8 | 364259 | 907842 | 5425.2 | 1002 | 2/16/1972 |
| 37 | 73 | 30 | 30-9 | 365769 | 907869 | 5353.2 | 602 | 2/16/1972 |
| 37 | 73 | 31 | 31-142 | 367443 | 897463 | 5465 | 500 | 7/21/1967 |
| 37 | 73 | 31 | 31-377 | 366030 | 897470 | 1 | 500 | 7/31/1990 |
| 37 | 73 | 31 | 31-303 | 366471 | 897472 | 5510.7 | 500 | 2/9/1976 |
| 37 | 73 | 31 | 31-143 | 368234 | 897478 | 5447.9 | 302 | 7/20/1967 |
| 37 | 73 | 31 | 31-336 | 367761 | 897479 | 5452 | 515 | 12/6/1977 |
| 37 | 73 | 31 | 31-287 | 366583 | 897480 | 5508.5 | 500 | 12/13/1974 |
| 37 | 73 | 31 | 31-141 | 367033 | 897482 | 5501.2 | 497 | 7/21/1967 |
| 37 | 73 | 31 | 31-157 | 368131 | 897488 | 5448.2 | 400 | 8/25/1967 |
| 37 | 73 | 31 | 31-11 | 366632 | 897490 | 5505.8 | 503 | 6/7/1967 |
| 37 | 73 | 31 | 31-154 | 366327 | 897493 | 5501.8 | 480 | 8/29/1967 |
| 37 | 73 | 31 | 31-168 | 363833 | 897494 | 5471.9 | 958 | 2/27/1970 |
| 37 | 73 | 31 | 31-155 | 366932 | 897495 | 5503.6 | 391 | 8/28/1967 |
| 37 | 73 | 31 | 31-140 | 366241 | 897495 | 5495.9 | 418 | 7/21/1967 |
| 37 | 73 | 31 | 31-156 | 367524 | 897497 | 5457.6 | 400 | 8/25/1967 |
| 37 | 73 | 31 | 31-12 | 367850 | 897499 | 5449.6 | 502 | 6/8/1967 |
| 37 | 73 | 31 | 31-10 | 365440 | 897510 | 1 | 438 | 6/8/1967 |
| 37 | 73 | 31 | 31-345 | 367945 | 897511 | 5447.6 | 300 | 4/29/1981 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 31 | 31-9 | 364253 | 897523 | 5478.9 | 498 | 6/7/1967 |
| 37 | 73 | 31 | 31-288 | 366654 | 897656 | 5509.9 | 500 | 12/19/1974 |
| 37 | 73 | 31 | 31-286 | 366705 | 897657 | 5509.2 | 500 | 12/13/1974 |
| 37 | 73 | 31 | 31-318 | 366754 | 897658 | 5508.7 | 540 | 6/25/1976 |
| 37 | 73 | 31 | 31-357 | 366135 | 897686 | 5485.8 | 500 | 10/20/1983 |
| 37 | 73 | 31 | 31-169 | 367854 | 897729 | 5442.5 | 965 | 2/27/1970 |
| 37 | 73 | 31 | 31-346 | 367948 | 897794 | 5439.6 | 300 | 4/29/1981 |
| 37 | 73 | 31 | 31-301 | 365965 | 897813 | 5476.1 | 500 | 2/11/1976 |
| 37 | 73 | 31 | 31-302 | 366310 | 897911 | 5494.7 | 500 | 2/9/1976 |
| 37 | 73 | 31 | 31-131 | 366780 | 897960 | 1 | 521 | 7/25/1967 |
| 37 | 73 | 31 | 31-130 | 366430 | 897965 | 1 | 450 | 7/25/1967 |
| 37 | 73 | 31 | 31-247 | 366738 | 897972 | 5505.8 | 520 | 5/9/1974 |
| 37 | 73 | 31 | 31-315 | 366359 | 897974 | 5494.9 | 540 | 6/25/1976 |
| 37 | 73 | 31 | 31-197 | 366703 | 897974 | 5507.1 | 500 | 2/11/1972 |
| 37 | 73 | 31 | 31-132 | 367445 | 897976 | 5491.7 | 548 | 7/25/1967 |
| 37 | 73 | 31 | 31-188 | 366620 | 897977 | 5508.7 | 550 | 2/10/1972 |
| 37 | 73 | 31 | 31-125 | 364634 | 897979 | 5409.3 | 460 | 7/28/1967 |
| 37 | 73 | 31 | 31-179 | 366554 | 897980 | 5508.1 | 500 | 2/7/1972 |
| 37 | 73 | 31 | 31-129 | 366250 | 897985 | 1 | 497 | 7/24/1967 |
| 37 | 73 | 31 | 31-128 | 365839 | 897985 | 5453.8 | 498 | 7/24/1967 |
| 37 | 73 | 31 | 31-134 | 368240 | 898000 | 1 | 460 | 7/24/1967 |
| 37 | 73 | 31 | 31-133 | 367840 | 898000 | 1 | 498 | 7/24/1967 |
| 37 | 73 | 31 | 31-126 | 365044 | 898001 | 5384.4 | 504 | 7/28/1967 |
| 37 | 73 | 31 | 31-127 | 365391 | 898065 | 5394.1 | 500 | 7/25/1967 |
| 37 | 73 | 31 | 31-358 | 366453 | 898117 | 5491.1 | 500 | 10/20/1983 |
| 37 | 73 | 31 | 31-359 | 366558 | 898120 | 5493.1 | 500 | 10/21/1983 |
| 37 | 73 | 31 | 31-376 | 366360 | 898125 | 1 | 502 | 7/31/1990 |
| 37 | 73 | 31 | 31-347 | 367750 | 898228 | 5479 | 340 | 4/29/1981 |
| 37 | 73 | 31 | 31-354 | 366448 | 898272 | 5482.5 | 497 | 10/27/1982 |
| 37 | 73 | 31 | 31-320 | 366542 | 898279 | 5482.2 | 500 | 6/28/1976 |
| 37 | 73 | 31 | 31-363 | 367475 | 898372 | 5498.1 | 500 | 10/20/1983 |
| 37 | 73 | 31 | 31-362 | 367126 | 898471 | 5503.5 | 500 | 10/21/1983 |
| 37 | 73 | 31 | 31-120 | 367860 | 898473 | 5486.9 | 525 | 7/25/1967 |
| 37 | 73 | 31 | 31-121 | 368254 | 898474 | 5438.5 | 498 | 7/25/1967 |
| 37 | 73 | 31 | 31-177 | 366446 | 898478 | 5472.9 | 500 | 2/7/1972 |
| 37 | 73 | 31 | 31-314 | 366540 | 898478 | 5480.2 | 500 | 6/24/1976 |
| 37 | 73 | 31 | 31-117 | 366624 | 898478 | 5486.9 | 540 | 7/25/1967 |
| 37 | 73 | 31 | 31-115 | 365832 | 898480 | 5436.4 | 502 | 7/27/1967 |
| 37 | 73 | 31 | 31-246 | 366803 | 898480 | 5499.7 | 540 | 5/9/1974 |
| 37 | 73 | 31 | 31-187 | 366853 | 898480 | 5503.3 | 550 | 2/10/1972 |
| 37 | 73 | 31 | 31-114 | 365422 | 898480 | 5386.9 | 504 | 7/27/1967 |
| 37 | 73 | 31 | 31-285 | 366748 | 898481 | 5495.6 | 1000 | 12/12/1974 |
| 37 | 73 | 31 | 31-178 | 366717 | 898482 | 5493.6 | 755 | 2/7/1972 |
| 37 | 73 | 31 | 31-118 | 367027 | 898482 | 5506.6 | 499 | 7/25/1967 |
| 37 | 73 | 31 | 31-116 | 366235 | 898486 | 5459.1 | 501 | 7/26/1967 |
| 37 | 73 | 31 | 31-119 | 367453 | 898487 | 5500.5 | 505 | 7/26/1967 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 31 | 31-325 | 365576 | 898488 | 5409.6 | 600 | 3/14/1977 |
| 37 | 73 | 31 | 31-300 | 366333 | 898489 | 5463.3 | 500 | 2/11/1976 |
| 37 | 73 | 31 | 31-334 | 367556 | 898490 | 5499.6 | 519 | 12/5/1977 |
| 37 | 73 | 31 | 31-361 | 366933 | 898493 | 5507.4 | 500 | 10/21/1983 |
| 37 | 73 | 31 | 31-333 | 367275 | 898500 | 5502.9 | 504 | 12/6/1977 |
| 37 | 73 | 31 | 31-466 | 366745 | 898532 | 5495.9 | 587 | 9/15/1998 |
| 37 | 73 | 31 | 31-370 | 366570 | 898657 | 5475.9 | 500 | 10/25/1983 |
| 37 | 73 | 31 | 31-475 | 366632 | 898661 | 5480.7 | 569 | 9/1/1998 |
| 37 | 73 | 31 | 31-368 | 367466 | 898666 | 5501.9 | 500 | 10/26/1983 |
| 37 | 73 | 31 | 31-456 | 366683 | 898666 | 5484.6 | 548 | 9/9/1998 |
| 37 | 73 | 31 | 31-457 | 366388 | 898669 | 5456.1 | 546 | 9/8/1998 |
| 37 | 73 | 31 | 31-360 | 366732 | 898675 | 5487.8 | 500 | 10/21/1983 |
| 37 | 73 | 31 | 31-353 | 366440 | 898675 | 5462.6 | 500 | 10/27/1982 |
| 37 | 73 | 31 | 31-356 | 365299 | 898676 | 5372.5 | 480 | 10/25/1983 |
| 37 | 73 | 31 | 31-375 | 366832 | 898681 | 5493.1 | 500 | 10/12/1984 |
| 37 | 73 | 31 | 31-459 | 366286 | 898746 | 5442.1 | 548 | 9/11/1998 |
| 37 | 73 | 31 | 31-490 | 366623 | 898756 | 5473.1 | 519 | 10/23/1998 |
| 37 | 73 | 31 | 31-364 | 367464 | 898762 | 5498.4 | 500 | 10/21/1983 |
| 37 | 73 | 31 | 31-486 | 366672 | 898763 | 5474.9 | 550 | 10/13/1998 |
| 37 | 73 | 31 | 31-458 | 366279 | 898798 | 5440.9 | 545 | 9/8/1998 |
| 37 | 73 | 31 | 31-452 | 366329 | 898803 | 5447.5 | 547 | 9/2/1998 |
| 37 | 73 | 31 | 31-473 | 366225 | 898828 | 5435 | 546 | 9/16/1998 |
| 37 | 73 | 31 | 31-355 | 366271 | 898847 | 5440.6 | 500 | 10/27/1982 |
| 37 | 73 | 31 | 31-319 | 366324 | 898851 | 5439.6 | 500 | 6/28/1976 |
| 37 | 73 | 31 | 31-469 | 366376 | 898855 | 5451.3 | 549 | 9/23/1998 |
| 37 | 73 | 31 | 31-462 | 366174 | 898873 | 5428.9 | 549 | 9/11/1998 |
| 37 | 73 | 31 | 31-468 | 366224 | 898877 | 5434.5 | 548 | 9/18/1998 |
| 37 | 73 | 31 | 31-474 | 366606 | 898897 | 5459.7 | 549 | 9/25/1998 |
| 37 | 73 | 31 | 31-450 | 366321 | 898901 | 5446.9 | 547 | 9/1/1998 |
| 37 | 73 | 31 | 31-467 | 366420 | 898911 | 5454.2 | 548 | 9/16/1998 |
| 37 | 73 | 31 | 31-464 | 366119 | 898918 | 5426.3 | 548 | 9/16/1998 |
| 37 | 73 | 31 | 31-344 | 366171 | 898923 | 5429.7 | 601 | 3/24/1980 |
| 37 | 73 | 31 | 31-455 | 366505 | 898948 | 5452.8 | 548 | 9/9/1998 |
| 37 | 73 | 31 | 31-451 | 366655 | 898949 | 5455.2 | 548 | 9/3/1998 |
| 37 | 73 | 31 | 31-470 | 366296 | 898954 | 5443 | 549 | 9/17/1998 |
| 37 | 73 | 31 | 31-335 | 366741 | 898955 | 5453.9 | 523 | 12/6/1977 |
| 37 | 73 | 31 | 31-484 | 366449 | 898955 | 5452 | 544 | 10/12/1998 |
| 37 | 73 | 31 | 31-328 | 364720 | 898957 | 5392 | 600 | 3/11/1977 |
| 37 | 73 | 31 | 31-472 | 366396 | 898961 | 5452.8 | 547 | 9/26/1998 |
| 37 | 73 | 31 | 31-104 | 365852 | 898972 | 5421.4 | 500 | 7/26/1967 |
| 37 | 73 | 31 | 31-150 | 365144 | 898981 | 5365.1 | 460 | 8/31/1967 |
| 37 | 73 | 31 | 31-372 | 364940 | 898990 | 1 | 450 | 10/23/1984 |
| 37 | 73 | 31 | 31-465 | 366453 | 898993 | 5450.8 | 549 | 9/14/1998 |
| 37 | 73 | 31 | 31-8 | 367838 | 898994 | 5458.5 | 479 | 6/5/1967 |
| 37 | 73 | 31 | 31-327 | 364029 | 898996 | 5391.3 | 1000 | 3/9/1977 |
| 37 | 73 | 31 | 31-449 | 366505 | 898997 | 5449.1 | 548 | 9/2/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 31 | 31-7 | 366655 | 898997 | 5450.2 | 500 | 6/5/1967 |
| 37 | 73 | 31 | 31-106 | 367033 | 899000 | 5452.1 | 499 | 7/26/1967 |
| 37 | 73 | 31 | 31-151 | 365741 | 899005 | 5425.9 | 460 | 8/31/1967 |
| 37 | 73 | 31 | 31-330 | 363558 | 899009 | 5366.6 | 1001 | 3/16/1977 |
| 37 | 73 | 31 | 31-478 | 366083 | 899014 | 5419.4 | 548 | 9/29/1998 |
| 37 | 73 | 31 | 31-153 | 366957 | 899015 | 5447.6 | 457 | 8/31/1967 |
| 37 | 73 | 31 | 31-298 | 366133 | 899020 | 5420 | 480 | 12/11/1976 |
| 37 | 73 | 31 | 31-105 | 366226 | 899029 | 5425.5 | 498 | 7/26/1967 |
| 37 | 73 | 31 | 31-193 | 366274 | 899032 | 5428.9 | 450 | 2/11/1972 |
| 37 | 73 | 31 | 31-366 | 367256 | 899041 | 5467.9 | 500 | 10/21/1983 |
| 37 | 73 | 31 | 31-152 | 366325 | 899041 | 5431.4 | 480 | 8/31/1967 |
| 37 | 73 | 31 | 31-191 | 366543 | 899047 | 5446.1 | 450 | 2/11/1972 |
| 37 | 73 | 31 | 31-245 | 366502 | 899047 | 5448 | 480 | 5/9/1974 |
| 37 | 73 | 31 | 31-186 | 366462 | 899048 | 5450.3 | 450 | 2/9/1972 |
| 37 | 73 | 31 | 31-6 | 365454 | 899049 | 5403.2 | 498 | 6/5/1967 |
| 37 | 73 | 31 | 31-149 | 364470 | 899050 | 1 | 460 | 8/31/1967 |
| 37 | 73 | 31 | 31-365 | 367448 | 899054 | 5474.4 | 506 | 10/21/1983 |
| 37 | 73 | 31 | 31-5 | 364272 | 899054 | 5403.3 | 460 | 6/6/1967 |
| 37 | 73 | 31 | 31-367 | 367653 | 899055 | 5463.7 | 500 | 10/25/1983 |
| 37 | 73 | 31 | 31-176 | 366058 | 899055 | 5415.3 | 450 | 2/4/1972 |
| 37 | 73 | 31 | 31-480 | 366002 | 899056 | 5411.9 | 549 | 10/7/1998 |
| 37 | 73 | 31 | 31-488 | 366368 | 899074 | 5435.7 | 549 | 10/22/1998 |
| 37 | 73 | 31 | 31-471 | 366217 | 899078 | 5425.5 | 548 | 9/17/1998 |
| 37 | 73 | 31 | 31-477 | 366267 | 899081 | 5426.3 | 364 | 10/2/1998 |
| 37 | 73 | 31 | 31-483 | 366503 | 899098 | 5445.7 | 547 | 10/12/1998 |
| 37 | 73 | 31 | 31-343 | 366174 | 899101 | 5421.5 | 598 | 3/24/1980 |
| 37 | 73 | 31 | 31-479 | 366314 | 899109 | 5433.1 | 549 | 10/8/1998 |
| 37 | 73 | 31 | 31-489 | 366072 | 899119 | 5411.5 | 551 | 10/16/1998 |
| 37 | 73 | 31 | 31-482 | 366362 | 899124 | 5433.8 | 549 | 10/9/1998 |
| 37 | 73 | 31 | 31-487 | 366409 | 899137 | 5433.6 | 546 | 10/14/1998 |
| 37 | 73 | 31 | 31-485 | 366460 | 899227 | 5417.7 | 550 | 10/15/1998 |
| 37 | 73 | 31 | 31-369 | 367440 | 899246 | 5466.2 | 480 | 10/26/1983 |
| 37 | 73 | 31 | 31-481 | 366407 | 899273 | 5405.6 | 546 | 10/8/1998 |
| 37 | 73 | 31 | 31-310 | 366134 | 899295 | 5395.2 | 460 | 6/25/1976 |
| 37 | 73 | 31 | 31-476 | 366357 | 899295 | 5403.9 | 549 | 10/2/1998 |
| 37 | 73 | 31 | 31-214 | 366046 | 899297 | 5392.5 | 420 | 5/15/1973 |
| 37 | 73 | 31 | 31-166 | 365877 | 899298 | 5385.9 | 959 | 2/25/1970 |
| 37 | 73 | 31 | 31-229 | 366002 | 899303 | 5390.2 | 400 | 5/25/1973 |
| 37 | 73 | 31 | 31-244 | 365951 | 899306 | 5387.4 | 400 | 5/8/1974 |
| 37 | 73 | 31 | 31-454 | 366206 | 899309 | 5397.6 | 549 | 9/4/1998 |
| 37 | 73 | 31 | 31-460 | 366257 | 899311 | 5399.7 | 549 | 9/10/1998 |
| 37 | 73 | 31 | 31-463 | 366306 | 899314 | 5401.6 | 549 | 9/23/1998 |
| 37 | 73 | 31 | 31-461 | 366251 | 899409 | 5416.9 | 548 | 9/10/1998 |
| 37 | 73 | 31 | 31-299 | 364885 | 899424 | 5362.9 | 500 | 2/16/1976 |
| 37 | 73 | 31 | 31-90 | 364685 | 899435 | 1 | 459 | 7/28/1967 |
| 37 | 73 | 31 | 31-447 | 365996 | 899450 | 5400.1 | 588 | 9/1/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 31 | 31-91 | 365026 | 899460 | 5358.6 | 437 | 7/27/1967 |
| 37 | 73 | 31 | 31-373 | 365558 | 899476 | 5374.9 | 500 | 10/22/1984 |
| 37 | 73 | 31 | 31-167 | 367458 | 899483 | 5454.1 | 964 | 2/26/1970 |
| 37 | 73 | 31 | 31-92 | 365448 | 899490 | 5380.8 | 480 | 7/27/1967 |
| 37 | 73 | 31 | 31-95 | 366625 | 899495 | 1 | 499 | 7/27/1967 |
| 37 | 73 | 31 | 31-93 | 365856 | 899496 | 5389.4 | 447 | 7/27/1967 |
| 37 | 73 | 31 | 31-175 | 366043 | 899503 | 5408.6 | 460 | 2/4/1972 |
| 37 | 73 | 31 | 31-94 | 366244 | 899507 | 5420.2 | 479 | 7/31/1967 |
| 37 | 73 | 31 | 31-374 | 366146 | 899509 | 5418.3 | 450 | 10/12/1984 |
| 37 | 73 | 31 | 31-305 | 363544 | 899548 | 5399.1 | 1007 | 6/22/1976 |
| 37 | 73 | 31 | 31-448 | 366280 | 899556 | 5424.7 | 588 | 8/31/1998 |
| 37 | 73 | 31 | 31-453 | 366078 | 899630 | 5413.8 | 547 | 9/4/1998 |
| 37 | 73 | 31 | 31-445 | 366112 | 899661 | 5412.8 | 588 | 8/31/1998 |
| 37 | 73 | 31 | 31-434 | 366107 | 899716 | 5412.2 | 690 | 6/24/1998 |
| 37 | 73 | 31 | 31-165 | 363539 | 899744 | 5408.3 | 960 | 3/2/1970 |
| 37 | 73 | 31 | 31-446 | 366289 | 899753 | 5425.2 | 590 | 8/26/1998 |
| 37 | 73 | 31 | 31-243 | 366103 | 899764 | 5406.4 | 420 | 5/9/1974 |
| 37 | 73 | 31 | 31-228 | 366154 | 899787 | 5408.6 | 400 | 5/25/1973 |
| 37 | 73 | 31 | 31-226 | 366193 | 899798 | 5410.9 | 581 | 5/22/1973 |
| 37 | 73 | 31 | 31-213 | 366235 | 899802 | 5416.4 | 400 | 5/15/1973 |
| 37 | 73 | 31 | 31-433 | 366286 | 899806 | 5424.4 | 688 | 6/25/1998 |
| 37 | 73 | 31 | 31-326 | 365991 | 899836 | 5385.4 | 600 | 3/14/1977 |
| 37 | 73 | 31 | 31-431 | 366041 | 899840 | 5387.3 | 528 | 8/28/1998 |
| 37 | 73 | 31 | 31-329 | 363556 | 899890 | 5392.6 | 1002 | 3/16/1977 |
| 37 | 73 | 31 | 31-430 | 366303 | 899907 | 5411.7 | 684 | 6/23/1998 |
| 37 | 73 | 31 | 31-297 | 365818 | 899964 | 5356.8 | 400 | 2/12/1976 |
| 37 | 73 | 31 | 31-194 | 366325 | 899969 | 5403.2 | 450 | 2/11/1972 |
| 37 | 73 | 31 | 31-230 | 366273 | 899970 | 5402.1 | 400 | 5/29/1973 |
| 37 | 73 | 31 | 31-225 | 366514 | 899977 | 5408.7 | 400 | 5/22/1973 |
| 37 | 73 | 31 | 31-227 | 366376 | 899978 | 5403 | 395 | 5/24/1973 |
| 37 | 73 | 31 | 31-85 | 367857 | 899980 | 5398.9 | 492 | 7/31/1967 |
| 37 | 73 | 31 | 31-84 | 367450 | 899980 | 1 | 480 | 7/31/1967 |
| 37 | 73 | 31 | 31-313 | 365922 | 899987 | 5362.7 | 420 | 6/24/1976 |
| 37 | 73 | 31 | 31-86 | 368249 | 899987 | 5389 | 501 | 8/1/1967 |
| 37 | 73 | 31 | 31-80 | 365830 | 899988 | 5356.3 | 462 | 7/31/1967 |
| 37 | 73 | 31 | 31-174 | 366011 | 899988 | 5368.7 | 460 | 2/4/1972 |
| 37 | 73 | 31 | 31-81 | 366232 | 899988 | 5400.9 | 501 | 7/31/1967 |
| 37 | 73 | 31 | 31-371 | 364555 | 899989 | 5395.9 | 500 | 10/22/1984 |
| 37 | 73 | 31 | 31-185 | 366420 | 899989 | 5403.3 | 450 | 2/9/1972 |
| 37 | 73 | 31 | 31-82 | 366646 | 899991 | 5421 | 515 | 8/3/1967 |
| 37 | 73 | 31 | 31-77 | 364644 | 899992 | 5400.8 | 499 | 8/1/1967 |
| 37 | 73 | 31 | 31-428 | 365960 | 899993 | 5364.2 | 679 | 6/19/1998 |
| 37 | 73 | 31 | 31-83 | 367055 | 899993 | 5461.3 | 506 | 8/31/1967 |
| 37 | 73 | 31 | 31-324 | 364733 | 899995 | 5401 | 580 | 3/14/1977 |
| 37 | 73 | 31 | 31-78 | 365051 | 900003 | 5381 | 468 | 7/28/1967 |
| 37 | 73 | 31 | 31-316 | 366095 | 900036 | 5367.6 | 442 | 6/24/1976 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 31 | 31-296 | 365535 | 900041 | 5354.7 | 440 | 2/17/1976 |
| 37 | 73 | 31 | 31-443 | 366051 | 900047 | 5361.1 | 508 | 8/24/1998 |
| 37 | 73 | 31 | 31-342 | 365386 | 900050 | 5369 | 498 | 2/20/1979 |
| 37 | 73 | 31 | 31-337 | 365494 | 900050 | 5356.7 | 496 | 2/20/1979 |
| 37 | 73 | 31 | 31-79 | 365436 | 900051 | 5366.2 | 447 | 7/27/1968 |
| 37 | 73 | 31 | 31-308 | 365335 | 900053 | 5370.9 | 460 | 6/24/1976 |
| 37 | 73 | 31 | 31-444 | 366143 | 900102 | 5361 | 508 | 8/25/1998 |
| 37 | 73 | 31 | 31-292 | 363565 | 900117 | 5403.1 | 500 | 2/12/1976 |
| 37 | 73 | 31 | 31-429 | 365660 | 900122 | 5349.3 | 657 | 6/17/1998 |
| 37 | 73 | 31 | 31-425 | 365514 | 900139 | 5361.5 | 313 | 6/15/1998 |
| 37 | 73 | 31 | 31-295 | 365719 | 900167 | 5349 | 450 | 12/17/1976 |
| 37 | 73 | 31 | 31-426 | 365761 | 900174 | 5347.4 | 671 | 8/13/1998 |
| 37 | 73 | 31 | 31-282 | 363353 | 900176 | 5415.2 | 480 | 12/12/1974 |
| 37 | 73 | 31 | 31-422 | 365511 | 900191 | 5365.1 | 689 | 6/12/1998 |
| 37 | 73 | 31 | 31-164 | 365432 | 900192 | 5368.9 | 967 | 2/24/1970 |
| 37 | 73 | 31 | 31-418 | 365561 | 900194 | 5360 | 602 | 5/28/1998 |
| 37 | 73 | 31 | 31-212 | 366022 | 900199 | 5357.8 | 400 | 5/15/1973 |
| 37 | 73 | 31 | 31-224 | 366076 | 900204 | 5355.2 | 400 | 5/22/1973 |
| 37 | 73 | 31 | 31-219 | 365978 | 900221 | 5347.8 | 400 | 5/17/1973 |
| 37 | 73 | 31 | 31-421 | 365556 | 900241 | 5363.8 | 690 | 6/11/1998 |
| 37 | 73 | 31 | 31-493 | 363248 | 900266 | 5424.2 | 551 | 10/27/1998 |
| 37 | 73 | 31 | 31-438 | 365859 | 900280 | 5353.1 | 692 | 8/20/1998 |
| 37 | 73 | 31 | 31-439 | 365512 | 900288 | 5368.2 | 600 | 8/14/1998 |
| 37 | 73 | 31 | 31-437 | 365555 | 900293 | 5364.4 | 678 | 6/23/1998 |
| 37 | 73 | 31 | 31-420 | 365609 | 900300 | 5362.4 | 693 | 6/10/1998 |
| 37 | 73 | 31 | 31-415 | 365658 | 900308 | 5357 | 691 | 5/29/1998 |
| 37 | 73 | 31 | 31-412 | 365708 | 900316 | 5352.8 | 686 | 5/22/1998 |
| 37 | 73 | 31 | 31-211 | 365759 | 900323 | 5347.6 | 400 | 5/15/1973 |
| 37 | 73 | 31 | 31-435 | 366002 | 900374 | 5345.3 | 681 | 6/26/1998 |
| 37 | 73 | 31 | 31-413 | 365420 | 900395 | 5379.8 | 692 | 6/2/1998 |
| 37 | 73 | 31 | 31-442 | 365470 | 900398 | 5376.9 | 507 | 8/21/1998 |
| 37 | 73 | 31 | 31-436 | 365665 | 900401 | 5358.7 | 679 | 6/22/1998 |
| 37 | 73 | 31 | 31-424 | 365615 | 900407 | 5363.3 | 692 | 6/9/1998 |
| 37 | 73 | 31 | 31-427 | 365951 | 900421 | 5345.3 | 604 | 6/22/1998 |
| 37 | 73 | 31 | 31-441 | 365414 | 900445 | 5382.1 | 224 | 8/20/1998 |
| 37 | 73 | 31 | 31-70 | 366341 | 900447 | 5380.7 | 501 | 8/1/1967 |
| 37 | 73 | 31 | 31-440 | 365463 | 900447 | 5378.1 | 689 | 8/19/1998 |
| 37 | 73 | 31 | 31-423 | 365559 | 900449 | 5371.1 | 692 | 6/5/1998 |
| 37 | 73 | 31 | 31-414 | 365608 | 900454 | 5366.9 | 687 | 5/27/1998 |
| 37 | 73 | 31 | 31-411 | 365657 | 900459 | 5361.1 | 688 | 5/21/1998 |
| 37 | 73 | 31 | 31-339 | 364684 | 900465 | 5438.5 | 514 | 2/20/1979 |
| 37 | 73 | 31 | 31-416 | 365897 | 900469 | 5345.1 | 67 | 6/3/1998 |
| 37 | 73 | 31 | 31-269 | 363210 | 900489 | 5446.1 | 500 | 5/23/1974 |
| 37 | 73 | 31 | 31-275 | 363159 | 900490 | 5448.9 | 500 | 5/29/1974 |
| 37 | 73 | 31 | 31-265 | 363358 | 900490 | 5443.1 | 560 | 5/22/1974 |
| 37 | 73 | 31 | 31-273 | 363061 | 900491 | 5450 | 520 | 5/28/1974 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 31 | 31-71 | 367044 | 900491 | 5432.8 | 499 | 7/31/1967 |
| 37 | 73 | 31 | 31-407 | 365413 | 900493 | 5383.7 | 682 | 5/21/1998 |
| 37 | 73 | 31 | 31-69 | 365857 | 900494 | 5347.1 | 463 | 8/1/1967 |
| 37 | 73 | 31 | 31-323 | 364775 | 900495 | 5440.5 | 600 | 3/14/1977 |
| 37 | 73 | 31 | 31-2 | 365464 | 900496 | 5380.6 | 495 | 6/6/1967 |
| 37 | 73 | 31 | 31-492 | 363259 | 900498 | 5445.8 | 551 | 10/27/1998 |
| 37 | 73 | 31 | 31-291 | 363713 | 900499 | 5438.2 | 500 | 2/11/1976 |
| 37 | 73 | 31 | 31-1 | 364269 | 900502 | 5435.8 | 500 | 6/7/1967 |
| 37 | 73 | 31 | 31-306 | 364868 | 900502 | 5424.9 | 520 | 6/24/1976 |
| 37 | 73 | 31 | 31-321 | 364960 | 900502 | 5413.1 | 520 | 6/28/1976 |
| 37 | 73 | 31 | 31-3 | 366668 | 900502 | 5400.1 | 505 | 6/7/1967 |
| 37 | 73 | 31 | 31-408 | 365508 | 900503 | 5376.1 | 682 | 5/21/1998 |
| 37 | 73 | 31 | 31-68 | 365053 | 900504 | 5404.6 | 504 | 8/2/1967 |
| 37 | 73 | 31 | 31-284 | 365674 | 900505 | 5363.4 | 400 | 12/12/1974 |
| 37 | 73 | 31 | 31-184 | 365553 | 900507 | 5374.6 | 450 | 2/9/1972 |
| 37 | 73 | 31 | 31-147 | 365758 | 900507 | 5354.4 | 480 | 9/6/1967 |
| 37 | 73 | 31 | 31-173 | 365651 | 900508 | 5365.2 | 460 | 2/4/1972 |
| 37 | 73 | 31 | 31-410 | 365601 | 900508 | 5369.9 | 651 | 5/20/1998 |
| 37 | 73 | 31 | 31-242 | 365699 | 900509 | 5360.9 | 400 | 5/7/1974 |
| 37 | 73 | 31 | 31-146 | 365154 | 900511 | 5396.2 | 476 | 9/1/1967 |
| 37 | 73 | 31 | 31-67 | 364639 | 900515 | 5444.4 | 518 | 8/1/1967 |
| 37 | 73 | 31 | 31-495 | 363306 | 900515 | 5446 | 346 | 11/21/1993 |
| 37 | 73 | 31 | 31-145 | 364559 | 900521 | 5444.8 | 497 | 9/1/1967 |
| 37 | 73 | 31 | 31-144 | 363963 | 900524 | 5436.7 | 460 | 8/31/1967 |
| 37 | 73 | 31 | 31-290 | 363397 | 900539 | 5444 | 580 | 2/11/1976 |
| 37 | 73 | 31 | 31-162 | 363450 | 900540 | 1 | 962 | 3/2/1970 |
| 37 | 73 | 31 | 31-419 | 365390 | 900609 | 5378.2 | 692 | 6/1/1998 |
| 37 | 73 | 31 | 31-311 | 365679 | 900613 | 5360.5 | 460 | 6/24/1976 |
| 37 | 73 | 31 | 31-409 | 365441 | 900615 | 5375.1 | 82 | 5/20/1998 |
| 37 | 73 | 31 | 31-241 | 365492 | 900619 | 5373 | 410 | 5/7/1974 |
| 37 | 73 | 31 | 31-250 | 365566 | 900620 | 5368.4 | 420 | 5/10/1974 |
| 37 | 73 | 31 | 31-223 | 365590 | 900620 | 5366.7 | 730 | 5/22/1973 |
| 37 | 73 | 31 | 31-210 | 365544 | 900621 | 5369.5 | 400 | 5/15/1973 |
| 37 | 73 | 31 | 31-491 | 363365 | 900654 | 5456.4 | 547 | 10/26/1993 |
| 37 | 73 | 31 | 31-494 | 363414 | 900659 | 5455.6 | 560 | 11/20/1993 |
| 37 | 73 | 31 | 31-348 | 363241 | 900715 | 5470.5 | 500 | 5/1/1981 |
| 37 | 73 | 31 | 31-280 | 363340 | 900751 | 5474.1 | 540 | 12/11/1974 |
| 37 | 73 | 31 | 31-281 | 363447 | 900755 | 5467.3 | 1000 | 12/11/1974 |
| 37 | 73 | 31 | 31-270 | 363403 | 900755 | 5469.5 | 540 | 5/24/1974 |
| 37 | 73 | 31 | 31-201 | 365160 | 900780 | 1 | 1040 | 4/21/1969 |
| 37 | 73 | 31 | 31-198 | 365542 | 900813 | 5373.8 | 450 | 2/14/1972 |
| 37 | 73 | 31 | 31-183 | 365604 | 900814 | 5374.1 | 450 | 2/9/1972 |
| 37 | 73 | 31 | 31-195 | 365582 | 900814 | 5374.1 | 452 | 2/14/1972 |
| 37 | 73 | 31 | 31-417 | 366200 | 900830 | 5342.2 | 689 | 6/19/1998 |
| 37 | 73 | 31 | 31-148 | 366302 | 900872 | 5339.7 | 440 | 9/1/1967 |
| 37 | 73 | 31 | 31-222 | 365558 | 900898 | 5380.4 | 450 | 5/21/1973 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 31 | 31-240 | 365505 | 900898 | 5380.3 | 410 | 5/7/1974 |
| 37 | 73 | 31 | 31-304 | 363350 | 900900 | 1 | 1002 | 6/22/1976 |
| 37 | 73 | 31 | 31-249 | 365530 | 900900 | 5380.3 | 420 | 5/9/1974 |
| 37 | 73 | 31 | 31-349 | 363436 | 900907 | 5466.2 | 540 | 4/30/1981 |
| 37 | 73 | 31 | 31-59 | 366260 | 900950 | 1 | 468 | 8/1/1967 |
| 37 | 73 | 31 | 31-58 | 365855 | 900965 | 5370.6 | 459 | 7/28/1967 |
| 37 | 73 | 31 | 31-307 | 364858 | 900978 | 5402.8 | 460 | 6/24/1976 |
| 37 | 73 | 31 | 31-55 | 364664 | 900980 | 5409.8 | 499 | 8/2/1967 |
| 37 | 73 | 31 | 31-331 | 364462 | 900985 | 5421.3 | 582 | 3/14/1977 |
| 37 | 73 | 31 | 31-54 | 364273 | 900986 | 5432.6 | 505 | 8/2/1967 |
| 37 | 73 | 31 | 31-317 | 364954 | 900987 | 5402.7 | 440 | 6/24/1976 |
| 37 | 73 | 31 | 31-192 | 365562 | 900989 | 5385.1 | 450 | 2/14/1972 |
| 37 | 73 | 31 | 31-338 | 363451 | 900990 | 5462 | 530 | 2/19/1979 |
| 37 | 73 | 31 | 31-57 | 365453 | 900990 | 5386 | 450 | 7/28/1967 |
| 37 | 73 | 31 | 31-272 | 363508 | 900991 | 5457.8 | 540 | 5/24/1974 |
| 37 | 73 | 31 | 31-341 | 363614 | 900993 | 5451.5 | 536 | 2/19/1979 |
| 37 | 73 | 31 | 31-56 | 365057 | 900993 | 5399.2 | 505 | 8/2/1967 |
| 37 | 73 | 31 | 31-268 | 363557 | 900994 | 5454.5 | 520 | 5/23/1974 |
| 37 | 73 | 31 | 31-172 | 365652 | 900995 | 5386 | 460 | 2/4/1972 |
| 37 | 73 | 31 | 31-264 | 363660 | 901001 | 5448.3 | 540 | 5/22/1974 |
| 37 | 73 | 31 | 31-404 | 365483 | 901087 | 5390.4 | 678 | 5/15/1998 |
| 37 | 73 | 31 | 31-350 | 363614 | 901090 | 5452.6 | 540 | 5/1/1981 |
| 37 | 73 | 31 | 31-312 | 365599 | 901130 | 5390.1 | 520 | 6/24/1976 |
| 37 | 73 | 31 | 31-294 | 365451 | 901133 | 5393.2 | 450 | 2/12/1976 |
| 37 | 73 | 31 | 31-401 | 365551 | 901135 | 5391.8 | 692 | 5/15/1998 |
| 37 | 73 | 31 | 31-283 | 365392 | 901135 | 5394.1 | 1000 | 12/12/1974 |
| 37 | 73 | 31 | 31-402 | 365645 | 901136 | 5389.5 | 680 | 5/15/1998 |
| 37 | 73 | 31 | 31-248 | 365503 | 901137 | 5392.3 | 440 | 5/10/1974 |
| 37 | 73 | 31 | 31-403 | 365474 | 901187 | 5395.3 | 693 | 5/14/1998 |
| 37 | 73 | 31 | 31-351 | 363435 | 901232 | 5464.3 | 540 | 4/30/1981 |
| 37 | 73 | 31 | 31-159 | 364542 | 901235 | 5444.6 | 1280 | 3/21/1968 |
| 37 | 73 | 31 | 31-161 | 366470 | 901240 | 1 | 763 | 2/26/1970 |
| 37 | 73 | 31 | 31-263 | 363622 | 901249 | 5466.7 | 540 | 5/23/1974 |
| 37 | 73 | 31 | 31-274 | 363575 | 901250 | 5468 | 540 | 5/28/1974 |
| 37 | 73 | 31 | 31-271 | 363526 | 901250 | 5467.3 | 540 | 5/24/1974 |
| 37 | 73 | 31 | 31-322 | 364967 | 901266 | 5431.2 | 500 | 6/28/1976 |
| 37 | 73 | 31 | 31-309 | 365063 | 901269 | 5427.1 | 500 | 6/25/1976 |
| 37 | 73 | 31 | 31-160 | 364661 | 901273 | 5441.9 | 963 | 2/24/1970 |
| 37 | 73 | 31 | 31-405 | 365502 | 901336 | 5394.8 | 662 | 5/18/1998 |
| 37 | 73 | 31 | 31-399 | 365550 | 901339 | 5393.8 | 692 | 5/13/1998 |
| 37 | 73 | 31 | 31-218 | 365644 | 901342 | 5392.2 | 455 | 5/17/1973 |
| 37 | 73 | 31 | 31-239 | 365670 | 901343 | 5391.9 | 420 | 5/7/1974 |
| 37 | 73 | 31 | 31-182 | 365742 | 901343 | 5390 | 450 | 2/9/1972 |
| 37 | 73 | 31 | 31-209 | 365602 | 901344 | 5392.5 | 450 | 5/14/1973 |
| 37 | 73 | 31 | 31-352 | 363565 | 901351 | 5474.8 | 540 | 4/30/1981 |
| 37 | 73 | 31 | 31-396 | 365597 | 901392 | 5389.3 | 693 | 5/7/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 31 | 31-43 | 365065 | 901439 | 5411.2 | 480 | 7/28/1967 |
| 37 | 73 | 31 | 31-47 | 366655 | 901466 | 5340.3 | 527 | 7/31/1967 |
| 37 | 73 | 31 | 31-48 | 367077 | 901466 | 5360.3 | 450 | 7/31/1967 |
| 37 | 73 | 31 | 31-46 | 366256 | 901467 | 5339 | 500 | 7/28/1967 |
| 37 | 73 | 31 | 31-261 | 363770 | 901480 | 1 | 560 | 5/21/1974 |
| 37 | 73 | 31 | 31-44 | 365466 | 901486 | 5391.3 | 527 | 7/28/1967 |
| 37 | 73 | 31 | 31-41 | 364256 | 901492 | 5446.1 | 497 | 7/28/1967 |
| 37 | 73 | 31 | 31-45 | 365859 | 901494 | 5376.5 | 503 | 7/28/1967 |
| 37 | 73 | 31 | 31-279 | 363574 | 901496 | 5485.5 | 560 | 12/10/1974 |
| 37 | 73 | 31 | 31-40 | 363875 | 901498 | 5472.9 | 528 | 7/27/1967 |
| 37 | 73 | 31 | 31-267 | 363622 | 901499 | 5484.9 | 560 | 5/22/1974 |
| 37 | 73 | 31 | 31-266 | 363675 | 901499 | 5483.8 | 560 | 5/21/1974 |
| 37 | 73 | 31 | 31-400 | 365593 | 901501 | 5386 | 693 | 5/14/1993 |
| 37 | 73 | 31 | 31-217 | 365826 | 901502 | 5377.4 | 459 | 5/17/1973 |
| 37 | 73 | 31 | 31-39 | 363459 | 901503 | 5484.7 | 460 | 7/27/1967 |
| 37 | 73 | 31 | 31-42 | 364625 | 901505 | 5431.8 | 528 | 7/28/1967 |
| 37 | 73 | 31 | 31-238 | 365806 | 901507 | 5377.5 | 420 | 5/7/1974 |
| 37 | 73 | 31 | 31-208 | 365734 | 901510 | 5376.6 | 450 | 5/15/1973 |
| 37 | 73 | 31 | 31-171 | 365692 | 901512 | 5379.1 | 460 | 2/4/1972 |
| 37 | 73 | 31 | 31-180 | 365786 | 901518 | 5375.9 | 460 | 2/4/1972 |
| 37 | 73 | 31 | 31-406 | 365638 | 901559 | 5379.5 | 676 | 5/19/1993 |
| 37 | 73 | 31 | 31-398 | 365688 | 901563 | 5376.6 | 501 | 5/12/1993 |
| 37 | 73 | 31 | 31-256 | 363572 | 901773 | 5486.4 | 560 | 5/15/1974 |
| 37 | 73 | 31 | 31-260 | 363670 | 901774 | 5485.4 | 560 | 5/16/1974 |
| 37 | 73 | 31 | 31-278 | 363717 | 901775 | 5484.7 | 1000 | 12/10/1974 |
| 37 | 73 | 31 | 31-388 | 365657 | 901806 | 5380.9 | 693 | 4/24/1993 |
| 37 | 73 | 31 | 31-389 | 365713 | 901810 | 5380.2 | 690 | 4/27/1993 |
| 37 | 73 | 31 | 31-237 | 365598 | 901847 | 5387.3 | 450 | 5/7/1974 |
| 37 | 73 | 31 | 31-190 | 365646 | 901850 | 5386 | 450 | 2/14/1972 |
| 37 | 73 | 31 | 31-207 | 365733 | 901853 | 5385.5 | 452 | 5/14/1973 |
| 37 | 73 | 31 | 31-206 | 365548 | 901853 | 5391 | 450 | 5/17/1973 |
| 37 | 73 | 31 | 31-221 | 365687 | 901857 | 5385.8 | 450 | 5/21/1973 |
| 37 | 73 | 31 | 31-393 | 365616 | 901899 | 5392.1 | 693 | 5/5/1998 |
| 37 | 73 | 31 | 31-392 | 365414 | 901940 | 5411.4 | 688 | 4/30/1993 |
| 37 | 73 | 31 | 31-394 | 365464 | 901941 | 5406.8 | 692 | 5/6/1998 |
| 37 | 73 | 31 | 31-395 | 365638 | 901950 | 5396.3 | 693 | 5/7/1998 |
| 37 | 73 | 31 | 31-385 | 365572 | 901951 | 5398.7 | 58 | 5/13/1993 |
| 37 | 73 | 31 | 31-34 | 366654 | 901973 | 5362.5 | 431 | 7/26/1967 |
| 37 | 73 | 31 | 31-32 | 365855 | 901984 | 5393.8 | 518 | 7/31/1967 |
| 37 | 73 | 31 | 31-33 | 366239 | 901985 | 5385 | 440 | 8/3/1967 |
| 37 | 73 | 31 | 31-391 | 365411 | 901988 | 5417.2 | 691 | 4/30/1993 |
| 37 | 73 | 31 | 31-28 | 364261 | 901990 | 5473.3 | 443 | 7/27/1967 |
| 37 | 73 | 31 | 31-29 | 364655 | 901990 | 5460.7 | 539 | 8/2/1967 |
| 37 | 73 | 31 | 31-30 | 365070 | 901996 | 5447.3 | 498 | 8/3/1967 |
| 37 | 73 | 31 | 31-27 | 363859 | 901998 | 5493.4 | 602 | 8/2/1967 |
| 37 | 73 | 31 | 31-31 | 365476 | 902002 | 5412.6 | 469 | 7/26/1967 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 31 | 31-181 | 365712 | 902005 | 5401.5 | 450 | 2/9/1972 |
| 37 | 73 | 31 | 31-170 | 365568 | 902006 | 5404.8 | 460 | 2/4/1972 |
| 37 | 73 | 31 | 31-26 | 363466 | 902007 | 5506.5 | 549 | 7/27/1967 |
| 37 | 73 | 31 | 31-277 | 363722 | 902014 | 5498.1 | 540 | 12/4/1974 |
| 37 | 73 | 31 | 31-255 | 363568 | 902014 | 553.3 | 580 | 5/15/1974 |
| 37 | 73 | 31 | 31-252 | 363670 | 902015 | 5499.8 | 550 | 5/13/1974 |
| 37 | 73 | 31 | 31-259 | 363615 | 902015 | 5502 | 580 | 5/20/1974 |
| 37 | 73 | 31 | 204-C | 365712 | 902022 | 5402.7 | 460 | 4/14/1973 |
| 37 | 73 | 31 | 31-382 | 365817 | 902030 | 5399.7 | 692 | 4/21/199 |
| 37 | 73 | 31 | 31-387 | 365514 | 902043 | 5413.6 | 692 | 4/23/199 |
| 37 | 73 | 31 | 31-384 | 365614 | 902053 | 5407.6 | 688 | 4/22/199 |
| 37 | 73 | 31 | 31-381 | 365718 | 902081 | 5408.2 | 682 | 3/26/199 |
| 37 | 73 | 31 | 31-293 | 365758 | 902126 | 5410.5 | 500 | 2/12/197 |
| 37 | 73 | 31 | 31-189 | 365810 | 902130 | 5409.5 | 462 | 2/14/197 |
| 37 | 73 | 31 | 31-390 | 365622 | 902131 | 5415.6 | 692 | 4/28/199 |
| 37 | 73 | 31 | 31-205 | 365715 | 902133 | 5412.9 | 450 | 5/14/1973 |
| 37 | 73 | 31 | 31-232 | 365672 | 902134 | 5414.4 | 450 | 5/30/1973 |
| 37 | 73 | 31 | 31-236 | 365691 | 902135 | 5412.7 | 460 | 5/6/1974 |
| 37 | 73 | 31 | 31-380 | 365779 | 902176 | 5413.3 | 82 | 3/25/199 |
| 37 | 73 | 31 | 31-262 | 363575 | 902252 | 5491.2 | 560 | 5/21/197 |
| 37 | 73 | 31 | 31-258 | 363524 | 902253 | 5491.5 | 560 | 5/20/197 |
| 37 | 73 | 31 | 31-215 | 365900 | 902285 | 5415.5 | 450 | 4/16/1973 |
| 37 | 73 | 31 | 31-233 | 365849 | 902285 | 5419.9 | 450 | 5/30/1973 |
| 37 | 73 | 31 | 31-289 | 363634 | 902354 | 5481.9 | 500 | 2/11/1976 |
| 37 | 73 | 31 | 31-386 | 365745 | 902401 | 5431.5 | 691 | 4/22/1998 |
| 37 | 73 | 31 | 31-19 | 365854 | 902469 | 5430.8 | 499 | 8/3/1967 |
| 37 | 73 | 31 | 31-379 | 365811 | 902475 | 5435.4 | 84 | 3/25/1998 |
| 37 | 73 | 31 | 203-C | 365861 | 902480 | 5431.5 | 480 | 4/18/1973 |
| 37 | 73 | 31 | 31-383 | 365909 | 902482 | 5426.3 | 692 | 4/28/1998 |
| 37 | 73 | 31 | 31-17 | 365055 | 902485 | 5476 | 440 | 8/2/1967 |
| 37 | 73 | 31 | 31-16 | 364663 | 902489 | 5475.4 | 534 | 8/2/1967 |
| 37 | 73 | 31 | 31-20 | 366265 | 902490 | 5434.6 | 499 | 8/3/1967 |
| 37 | 73 | 31 | 31-14 | 363863 | 902497 | 5474.1 | 565 | 8/2/1967 |
| 37 | 73 | 31 | 31-15 | 364257 | 902497 | 5478.4 | 547 | 8/2/1967 |
| 37 | 73 | 31 | 31-276 | 363776 | 902499 | 5472.1 | 540 | 12/5/1974 |
| 37 | 73 | 31 | 31-257 | 363722 | 902500 | 5471.6 | 560 | 5/15/1974 |
| 37 | 73 | 31 | 31-18 | 365462 | 902502 | 5468.5 | 462 | 8/3/1967 |
| 37 | 73 | 31 | 31-253 | 363622 | 902502 | 5471.3 | 560 | 5/14/1974 |
| 37 | 73 | 31 | 31-13 | 363460 | 902503 | 5472.3 | 565 | 8/3/1967 |
| 37 | 73 | 31 | 31-251 | 363672 | 902504 | 5471.3 | 560 | 5/13/1974 |
| 37 | 73 | 31 | 31-378 | 365738 | 902600 | 5453.1 | 631 | 3/24/1998 |
| 37 | 73 | 31 | 31-235 | 365710 | 902647 | 5453.3 | 560 | 5/6/1974 |
| 37 | 73 | 31 | 31-234 | 365761 | 902650 | 5453.4 | 606 | 6/4/1973 |
| 37 | 73 | 31 | 31-231 | 365808 | 902655 | 5449.4 | 500 | 5/30/1973 |
| 37 | 73 | 31 | 31-216 | 365859 | 902660 | 5446.2 | 600 | 5/17/1973 |
| 37 | 73 | 31 | 31-220 | 365905 | 902664 | 5442.4 | 600 | 5/21/1973 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 32 | 32-162 | 371032 | 897464 | 5506.1 | 382 | 8/23/1967 |
| 37 | 73 | 32 | 32-135 | 368628 | 897466 | 5444.5 | 340 | 7/20/1967 |
| 37 | 73 | 32 | 32-137 | 369831 | 897468 | 5464 | 339 | 7/20/1967 |
| 37 | 73 | 32 | 32-136 | 369432 | 897469 | 5446 | 298 | 7/20/1967 |
| 37 | 73 | 32 | 32-161 | 370516 | 897476 | 5517 | 380 | 8/23/1967 |
| 37 | 73 | 32 | 32-160 | 369931 | 897476 | 5469.8 | 380 | 8/23/1967 |
| 37 | 73 | 32 | 32-138 | 370640 | 897477 | 5514.1 | 360 | 7/20/1967 |
| 37 | 73 | 32 | 32-139 | 371114 | 897481 | 5505.5 | 310 | 7/19/1967 |
| 37 | 73 | 32 | 32-11 | 369041 | 897482 | 5436 | 504 | 6/8/1967 |
| 37 | 73 | 32 | 32-158 | 368733 | 897485 | 5442.8 | 362 | 8/23/1967 |
| 37 | 73 | 32 | 32-159 | 369329 | 897485 | 5443.7 | 402 | 8/23/1967 |
| 37 | 73 | 32 | 32-702 | 369194 | 897486 | 5439.1 | 401 | 3/13/1980 |
| 37 | 73 | 32 | 32-719 | 368911 | 897487 | 5441.4 | 400 | 3/9/1981 |
| 37 | 73 | 32 | 32-855 | 370201 | 897509 | 5498.2 | 462 | 7/27/1990 |
| 37 | 73 | 32 | 32-701 | 370249 | 897512 | 5499.1 | 449 | 2/16/1979 |
| 37 | 73 | 32 | 32-12 | 370296 | 897513 | 5502.8 | 502 | 6/8/1967 |
| 37 | 73 | 32 | 32-692 | 370343 | 897516 | 5505.5 | 481 | 2/15/1979 |
| 37 | 73 | 32 | 32-691 | 369288 | 897578 | 5437.6 | 400 | 2/9/1979 |
| 37 | 73 | 32 | 32-700 | 369188 | 897581 | 5434 | 417 | 2/16/1979 |
| 37 | 73 | 32 | 32-857 | 369387 | 897588 | 5440.9 | 405 | 7/23/1991 |
| 37 | 73 | 32 | 32-865 | 369834 | 897623 | 5459.7 | 424 | 6/1/1992 |
| 37 | 73 | 32 | 32-864 | 370186 | 897665 | 5489.6 | 476 | 6/1/1992 |
| 37 | 73 | 32 | 32-852 | 370235 | 897665 | 5488.6 | 504 | 6/26/1989 |
| 37 | 73 | 32 | 32-861 | 370291 | 897668 | 5500.1 | 485 | 7/24/1991 |
| 37 | 73 | 32 | 32-338 | 370035 | 897719 | 5467.9 | 340 | 10/2/1967 |
| 37 | 73 | 32 | 32-336 | 369634 | 897722 | 5444.5 | 320 | 10/3/1967 |
| 37 | 73 | 32 | 32-334 | 369235 | 897722 | 5427.5 | 340 | 10/3/1967 |
| 37 | 73 | 32 | 32-333 | 369020 | 897723 | 5425.6 | 280 | 10/3/1967 |
| 37 | 73 | 32 | 32-335 | 369438 | 897724 | 5434.9 | 300 | 10/3/1967 |
| 37 | 73 | 32 | 32-689 | 369284 | 897727 | 5429.4 | 437 | 2/9/1979 |
| 37 | 73 | 32 | 32-859 | 369736 | 897728 | 5449.9 | 444 | 7/24/1991 |
| 37 | 73 | 32 | 32-337 | 369836 | 897732 | 5452.7 | 300 | 10/3/1967 |
| 37 | 73 | 32 | 32-696 | 369935 | 897736 | 5459.4 | 440 | 2/15/1979 |
| 37 | 73 | 32 | 32-703 | 369164 | 897760 | 5421.2 | 401 | 3/12/1980 |
| 37 | 73 | 32 | 32-771 | 370130 | 897807 | 5478.5 | 450 | 10/10/1984 |
| 37 | 73 | 32 | 32-728 | 370233 | 897807 | 5479.1 | 505 | 1/18/1982 |
| 37 | 73 | 32 | 32-729 | 370562 | 897817 | 5502.6 | 480 | 1/18/1982 |
| 37 | 73 | 32 | 32-862 | 370459 | 897820 | 5506.2 | 484 | 6/1/1992 |
| 37 | 73 | 32 | 32-730 | 370820 | 897823 | 5503.9 | 506 | 1/18/1982 |
| 37 | 73 | 32 | 32-856 | 369829 | 897837 | 5435.2 | 420 | 8/1/1990 |
| 37 | 73 | 32 | 32-853 | 369622 | 897867 | 5421.1 | 402 | 7/30/1990 |
| 37 | 73 | 32 | 32-690 | 369283 | 897877 | 5423.6 | 398 | 2/12/1979 |
| 37 | 73 | 32 | 32-858 | 369517 | 897892 | 5421.3 | 386 | 7/24/1991 |
| 37 | 73 | 32 | 32-704 | 369522 | 897947 | 5426.7 | 402 | 3/12/1980 |
| 37 | 73 | 32 | 32-124 | 369430 | 897959 | 5425 | 459 | 7/21/1967 |
| 37 | 73 | 32 | 32-325 | 369629 | 897968 | 5432 | 300 | 10/2/1967 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 32 | 32-125 | 369834 | 897968 | 5444.4 | 482 | 7/21/1967 |
| 37 | 73 | 32 | 32-128 | 371035 | 897970 | 5504.1 | 344 | 7/19/1967 |
| 37 | 73 | 32 | 32-126 | 370231 | 897971 | 5472.8 | 316 | 7/21/1967 |
| 37 | 73 | 32 | 32-326 | 370038 | 897971 | 5457.2 | 300 | 10/2/1967 |
| 37 | 73 | 32 | 32-127 | 370622 | 897972 | 5493.4 | 357 | 7/20/1967 |
| 37 | 73 | 32 | 32-324 | 369238 | 897972 | 5416.5 | 380 | 10/2/1967 |
| 37 | 73 | 32 | 32-123 | 369028 | 897984 | 5418.8 | 445 | 7/21/1967 |
| 37 | 73 | 32 | 32-122 | 368643 | 897984 | 5412 | 445 | 7/24/1967 |
| 37 | 73 | 32 | 32-770 | 370128 | 898005 | 5463.9 | 450 | 10/10/1984 |
| 37 | 73 | 32 | 32-860 | 370180 | 898005 | 5467.9 | 440 | 7/24/1991 |
| 37 | 73 | 32 | 32-863 | 370224 | 898006 | 5470.8 | 474 | 6/2/1992 |
| 37 | 73 | 32 | 32-769 | 369166 | 898022 | 5398.9 | 450 | 10/10/1984 |
| 37 | 73 | 32 | 32-720 | 369418 | 898056 | 5416.5 | 400 | 3/9/1981 |
| 37 | 73 | 32 | 32-739 | 370033 | 898065 | 5456.1 | 300 | 10/25/1982 |
| 37 | 73 | 32 | 32-854 | 370290 | 898069 | 5487.1 | 403 | 7/31/1990 |
| 37 | 73 | 32 | 32-851 | 370044 | 898165 | 5485.8 | 504 | 6/26/1989 |
| 37 | 73 | 32 | 32-707 | 370148 | 898187 | 5456.8 | 400 | 3/14/1980 |
| 37 | 73 | 32 | 32-705 | 369936 | 898193 | 5447.2 | 400 | 3/12/1980 |
| 37 | 73 | 32 | 32-305 | 369441 | 898204 | 5423.1 | 300 | 10/2/1967 |
| 37 | 73 | 32 | 32-695 | 369303 | 898206 | 5412.5 | 457 | 2/16/1979 |
| 37 | 73 | 32 | 32-304 | 369252 | 898206 | 5408.5 | 300 | 10/2/1967 |
| 37 | 73 | 32 | 32-311 | 370630 | 898210 | 5489.6 | 340 | 9/29/1967 |
| 37 | 73 | 32 | 32-308 | 370038 | 898213 | 5451.6 | 300 | 9/29/1967 |
| 37 | 73 | 32 | 32-313 | 371034 | 898215 | 5500.1 | 330 | 9/29/1967 |
| 37 | 73 | 32 | 32-307 | 369836 | 898217 | 5441.6 | 299 | 9/29/1967 |
| 37 | 73 | 32 | 32-309 | 370241 | 898220 | 5456.5 | 322 | 9/29/1967 |
| 37 | 73 | 32 | 32-698 | 370291 | 898221 | 5460.8 | 461 | 2/15/1979 |
| 37 | 73 | 32 | 32-312 | 370825 | 898221 | 5499.1 | 351 | 9/29/1967 |
| 37 | 73 | 32 | 32-310 | 370440 | 898225 | 5473.9 | 360 | 9/29/1967 |
| 37 | 73 | 32 | 32-306 | 369645 | 898230 | 5435 | 300 | 10/2/1967 |
| 37 | 73 | 32 | 32-611 | 369365 | 898320 | 1 | 959 | 3/3/1970 |
| 37 | 73 | 32 | 32-738 | 370356 | 898343 | 5460.3 | 300 | 10/25/1982 |
| 37 | 73 | 32 | 32-737 | 370145 | 898344 | 5446.9 | 299 | 10/25/1982 |
| 37 | 73 | 32 | 32-706 | 369749 | 898372 | 5435.7 | 397 | 3/13/1980 |
| 37 | 73 | 32 | 32-721 | 369528 | 898420 | 5431 | 400 | 3/10/1981 |
| 37 | 73 | 32 | 32-115 | 371036 | 898458 | 5498.2 | 340 | 7/18/1967 |
| 37 | 73 | 32 | 32-297 | 370840 | 898463 | 5496.5 | 320 | 9/28/1967 |
| 37 | 73 | 32 | 32-296 | 370443 | 898465 | 5463.8 | 300 | 9/28/1967 |
| 37 | 73 | 32 | 32-113 | 370231 | 898465 | 5447.6 | 301 | 7/20/1967 |
| 37 | 73 | 32 | 32-294 | 369633 | 898467 | 5430.5 | 320 | 9/29/1967 |
| 37 | 73 | 32 | 32-697 | 370737 | 898469 | 5488.4 | 460 | 2/15/1979 |
| 37 | 73 | 32 | 32-768 | 369304 | 898469 | 5417.9 | 450 | 10/11/1984 |
| 37 | 73 | 32 | 32-699 | 369396 | 898471 | 5421.9 | 458 | 2/16/1979 |
| 37 | 73 | 32 | 32-114 | 370634 | 898472 | 5479.3 | 320 | 7/19/1967 |
| 37 | 73 | 32 | 32-111 | 369444 | 898475 | 5424.3 | 301 | 7/20/1967 |
| 37 | 73 | 32 | 32-112 | 369836 | 898475 | 5425.5 | 320 | 7/20/1967 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 32 | 32-295 | 370041 | 898478 | 5433.9 | 320 | 9/29/1967 |
| 37 | 73 | 32 | 32-110 | 369045 | 898482 | 5396 | 433 | 7/25/1967 |
| 37 | 73 | 32 | 32-109 | 368651 | 898484 | 5423.2 | 475 | 7/25/1967 |
| 37 | 73 | 32 | 32-708 | 370355 | 898580 | 5459 | 398 | 3/14/1980 |
| 37 | 73 | 32 | 32-736 | 370566 | 898584 | 5476.7 | 300 | 10/25/1982 |
| 37 | 73 | 32 | 32-735 | 370458 | 898585 | 5468 | 300 | 10/25/1982 |
| 37 | 73 | 32 | 32-711 | 369867 | 898596 | 5429.2 | 400 | 3/14/1980 |
| 37 | 73 | 32 | 32-280 | 370447 | 898701 | 5470.9 | 320 | 9/28/1967 |
| 37 | 73 | 32 | 32-734 | 369937 | 898704 | 5433 | 300 | 10/25/1982 |
| 37 | 73 | 32 | 32-723 | 370544 | 898711 | 5480.8 | 320 | 3/9/1981 |
| 37 | 73 | 32 | 32-618 | 370745 | 898714 | 5495.3 | 340 | 2/2/1976 |
| 37 | 73 | 32 | 32-283 | 371038 | 898715 | 5499.8 | 360 | 9/28/1967 |
| 37 | 73 | 32 | 32-277 | 369833 | 898716 | 5423.8 | 280 | 9/27/1967 |
| 37 | 73 | 32 | 32-281 | 370638 | 898717 | 5489.4 | 340 | 9/28/1967 |
| 37 | 73 | 32 | 32-279 | 370229 | 898717 | 5451.5 | 300 | 9/28/1967 |
| 37 | 73 | 32 | 32-282 | 370852 | 898718 | 5498.8 | 340 | 9/28/1967 |
| 37 | 73 | 32 | 32-278 | 370039 | 898722 | 5436.4 | 280 | 9/28/1967 |
| 37 | 73 | 32 | 32-722 | 369939 | 898820 | 5433 | 300 | 3/9/1981 |
| 37 | 73 | 32 | 32-767 | 369843 | 898829 | 5404.2 | 450 | 10/11/1984 |
| 37 | 73 | 32 | 32-806 | 369638 | 898883 | 5425.9 | 302 | 10/17/1985 |
| 37 | 73 | 32 | 32-805 | 369735 | 898885 | 5433.1 | 302 | 10/17/1985 |
| 37 | 73 | 32 | 32-274 | 370841 | 898944 | 5494 | 320 | 9/27/1967 |
| 37 | 73 | 32 | 32-104 | 371044 | 898959 | 5500.9 | 342 | 7/19/1967 |
| 37 | 73 | 32 | 32-103 | 370632 | 898969 | 5483.9 | 320 | 7/20/1967 |
| 37 | 73 | 32 | 32-101 | 369446 | 898972 | 5418.8 | 302 | 7/21/1967 |
| 37 | 73 | 32 | 32-102 | 369824 | 898978 | 5449.7 | 300 | 7/20/1967 |
| 37 | 73 | 32 | 32-152 | 370532 | 898980 | 5477.2 | 320 | 8/23/1967 |
| 37 | 73 | 32 | 32-766 | 369636 | 898985 | 5436.8 | 450 | 10/11/1984 |
| 37 | 73 | 32 | 32-764 | 370141 | 898985 | 5465.3 | 350 | 10/11/1984 |
| 37 | 73 | 32 | 32-103C | 370685 | 898985 | 1 | 309 | 9/21/1967 |
| 37 | 73 | 32 | 32-765 | 369741 | 898986 | 5447.2 | 450 | 10/11/1984 |
| 37 | 73 | 32 | 32-763 | 370048 | 898988 | 5462.2 | 350 | 10/11/1984 |
| 37 | 73 | 32 | 32-7 | 369069 | 898989 | 5385.2 | 504 | 6/2/1967 |
| 37 | 73 | 32 | 32-151 | 369951 | 898993 | 5456.2 | 362 | 8/23/1967 |
| 37 | 73 | 32 | 32-8 | 370261 | 899009 | 5466.3 | 343 | 5/31/1967 |
| 37 | 73 | 32 | 32-731 | 370336 | 899084 | 5475.3 | 320 | 10/25/1982 |
| 37 | 73 | 32 | 32-732 | 370652 | 899089 | 5483.2 | 320 | 10/22/1982 |
| 37 | 73 | 32 | 32-733 | 370864 | 899095 | 5493.4 | 320 | 10/22/1982 |
| 37 | 73 | 32 | 32-262 | 370638 | 899191 | 5486.9 | 340 | 9/27/1967 |
| 37 | 73 | 32 | 32-261 | 370441 | 899191 | 5479 | 330 | 9/27/1967 |
| 37 | 73 | 32 | 32-263 | 370839 | 899206 | 5484.5 | 320 | 9/27/1967 |
| 37 | 73 | 32 | 32-260 | 370242 | 899209 | 5462.8 | 320 | 9/26/1967 |
| 37 | 73 | 32 | 32-617 | 370946 | 899213 | 5483.8 | 318 | 2/2/1976 |
| 37 | 73 | 32 | 32-264 | 371041 | 899215 | 5486 | 320 | 9/27/1967 |
| 37 | 73 | 32 | 32-608 | 369819 | 899272 | 5454.2 | 965 | 3/3/1970 |
| 37 | 73 | 32 | 32-762 | 369719 | 899278 | 5450.2 | 350 | 10/11/1984 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 73 | 32 | 32-804 | 369938 | 899451 | 5439.8 | 302 | 10/17/1985 |
| 37 | 73 | 32 | 32-761 | 370050 | 899458 | 5444.6 | 350 | 10/11/1984 |
| 37 | 73 | 32 | 32-760 | 370147 | 899461 | 5444.2 | 350 | 10/11/1984 |
| 37 | 73 | 32 | 32-91 | 370239 | 899464 | 5447.1 | 320 | 7/20/1967 |
| 37 | 73 | 32 | 32-254 | 370838 | 899469 | 5450.2 | 320 | 9/26/1967 |
| 37 | 73 | 32 | 32-253 | 370439 | 899470 | 5446.4 | 320 | 9/26/1967 |
| 37 | 73 | 32 | 32-92 | 370636 | 899470 | 5448.6 | 320 | 7/20/1967 |
| 37 | 73 | 32 | 32-93 | 371051 | 899472 | 5455.7 | 338 | 7/20/1967 |
| 37 | 73 | 32 | 32-90 | 369848 | 899475 | 5437.4 | 399 | 7/25/1967 |
| 37 | 73 | 32 | 32-241 | 370642 | 899721 | 5425.4 | 300 | 9/25/1967 |
| 37 | 73 | 32 | 32-242 | 370843 | 899723 | 5433.1 | 300 | 9/26/1967 |
| 37 | 73 | 32 | 32-243 | 371041 | 899728 | 5439.8 | 300 | 9/26/1967 |
| 37 | 73 | 32 | 32-77 | 369851 | 899962 | 5409.8 | 455 | 8/2/1967 |
| 37 | 73 | 32 | 32-78 | 370241 | 899963 | 5418.5 | 425 | 7/25/1967 |
| 37 | 73 | 32 | 32-74 | 368672 | 899964 | 5360.2 | 420 | 8/1/1967 |
| 37 | 73 | 32 | 32-79 | 370654 | 899968 | 5417.9 | 298 | 7/20/1967 |
| 37 | 73 | 32 | 32-234 | 370847 | 899970 | 5422.1 | 320 | 9/25/1967 |
| 37 | 73 | 32 | 32-80 | 371050 | 899971 | 5430.3 | 317 | 7/20/1967 |
| 37 | 73 | 32 | 32-76 | 369448 | 899982 | 5414 | 430 | 8/1/1967 |
| 37 | 73 | 32 | 32-75 | 369053 | 899982 | 5385 | 431 | 8/1/1967 |
| 37 | 74 | 34 | 34-3 | 351344 | 899044 | 5537.9 | 643 | 10/3/1967 |
| 37 | 74 | 34 | 34-2 | 351348 | 900591 | 5533.7 | 589 | 9/7/1967 |
| 37 | 74 | 34 | 34-75 | 351587 | 902105 | 5464.2 | 603 | 6/5/1992 |
| 37 | 74 | 34 | 34-78 | 351590 | 901890 | 1 | 1000 | 8/30/1993 |
| 37 | 74 | 34 | 34-8 | 351594 | 899589 | 5536.6 | 805 | 11/22/1967 |
| 37 | 74 | 34 | 34-74 | 351688 | 901895 | 5478.9 | 624 | 7/30/1991 |
| 37 | 74 | 34 | 34-73 | 351746 | 901689 | 5488.3 | 627 | 7/30/1991 |
| 37 | 74 | 34 | 34-77 | 351755 | 898977 | 1 | 1100 | 8/27/1993 |
| 37 | 74 | 34 | 34-71 | 351799 | 901692 | 5494.3 | 600 | 10/31/1983 |
| 37 | 74 | 34 | 34-37 | 351809 | 900540 | 5552 | 695 | 3/26/1975 |
| 37 | 74 | 34 | 34-34 | 351811 | 900974 | 5550.4 | 698 | 3/21/1975 |
| 37 | 74 | 34 | 34-35 | 351811 | 900766 | 5545.3 | 698 | 3/24/1975 |
| 37 | 74 | 34 | 34-29 | 351819 | 901187 | 5533.3 | 701 | 3/13/1972 |
| 37 | 74 | 34 | 34-76 | 351856 | 901489 | 5510.8 | 662 | 6/4/1992 |
| 37 | 74 | 34 | 34-54 | 351896 | 901696 | 5502.3 | 663 | 5/8/1975 |
| 37 | 74 | 34 | 34-68 | 351900 | 901590 | 5508.8 | 600 | 10/28/1983 |
| 37 | 74 | 34 | 34-69 | 351904 | 901482 | 5515.3 | 600 | 10/28/1983 |
| 37 | 74 | 34 | 34-13 | 352003 | 900432 | 5569.2 | 775 | 2/22/1968 |
| 37 | 74 | 34 | 34-12 | 352005 | 901192 | 5543.3 | 705 | 2/22/1968 |
| 37 | 74 | 34 | 34-64 | 352089 | 900667 | 5568.6 | 699 | 2/9/1982 |
| 37 | 74 | 34 | 34-38 | 352105 | 901019 | 5557.1 | 678 | 4/2/1975 |
| 37 | 74 | 34 | 34-53 | 352113 | 901697 | 5492.2 | 610 | 5/2/1975 |
| 37 | 74 | 34 | 34-70 | 352123 | 901533 | 5503.6 | 600 | 10/28/1983 |
| 37 | 74 | 34 | 34-20 | 352156 | 901021 | 5557.4 | 700 | 3/16/1972 |
| 37 | 74 | 34 | 34-63 | 352184 | 900928 | 5563.6 | 601 | 3/30/1981 |
| 37 | 74 | 34 | 34-25 | 352198 | 900188 | 5574.6 | 702 | 3/14/1972 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 34 | 34-14 | 352204 | 901194 | 5536.3 | 584 | 6/23/1971 |
| 37 | 74 | 34 | 34-62 | 352212 | 901020 | 5557.7 | 601 | 3/30/1981 |
| 37 | 74 | 34 | 34-23 | 352214 | 900389 | 5587.9 | 701 | 3/13/1972 |
| 37 | 74 | 34 | 34-19 | 352241 | 900770 | 5591.6 | 690 | 3/10/1972 |
| 37 | 74 | 34 | 34-33 | 352254 | 900917 | 5567.4 | 684 | 3/20/1975 |
| 37 | 74 | 34 | 34-18 | 352258 | 901023 | 5557.2 | 700 | 3/13/1972 |
| 37 | 74 | 34 | 34-51 | 352284 | 901665 | 1 | 634 | 4/30/1975 |
| 37 | 74 | 34 | 34-46 | 352285 | 901484 | 5497.6 | 657 | 4/25/1975 |
| 37 | 74 | 34 | 34-16 | 352289 | 901194 | 5535.4 | 700 | 3/14/1972 |
| 37 | 74 | 34 | 34-30 | 352300 | 900769 | 5580.9 | 700 | 3/13/1972 |
| 37 | 74 | 34 | 34-65 | 352327 | 900998 | 5559.7 | 679 | 2/8/1982 |
| 37 | 74 | 34 | 34-67 | 352339 | 901282 | 5521.8 | 550 | 10/29/1982 |
| 37 | 74 | 34 | 34-42 | 352343 | 900393 | 5597.9 | 695 | 4/4/1975 |
| 37 | 74 | 34 | 34-22 | 352357 | 900769 | 5586.6 | 700 | 3/16/1972 |
| 37 | 74 | 35 | 26 | 354007 | 898002 | 5574 | 704 | 11/16/1967 |
| 37 | 74 | 35 | 27 | 354809 | 898009 | 5568 | 705 | 11/15/1967 |
| 37 | 74 | 35 | 96 | 355003 | 898011 | 5564 | 655 | 3/20/1968 |
| 37 | 74 | 35 | 684 | 357798 | 898063 | 5510 | 697 | 5/20/1998 |
| 37 | 74 | 35 | 712 | 355799 | 898089 | 5547 | 892 | 6/2/1998 |
| 37 | 74 | 35 | 752 | 355848 | 898092 | 5544 | 905 | 6/24/1998 |
| 37 | 74 | 35 | 733 | 355899 | 898093 | 5541 | 904 | 6/15/1998 |
| 37 | 74 | 35 | 486 | 356267 | 898094 | 5546 | 870 | 11/27/1989 |
| 37 | 74 | 35 | 776 | 355950 | 898096 | 5540 | 903 | 7/1/1998 |
| 37 | 74 | 35 | 572 | 357841 | 898139 | 5513 | 680 | 8/26/1997 |
| 37 | 74 | 35 | 559 | 357890 | 898143 | 5512 | 679 | 8/21/1997 |
| 37 | 74 | 35 | 93 | 354998 | 898193 | 5551 | 658 | 3/19/1968 |
| 37 | 74 | 35 | 90 | 354399 | 898196 | 5562 | 655 | 3/19/1968 |
| 37 | 74 | 35 | 479 | 355119 | 898196 | 5553 | 870 | 11/15/1989 |
| 37 | 74 | 35 | 477 | 354896 | 898196 | 5556 | 873 | 11/14/1989 |
| 37 | 74 | 35 | 92 | 354798 | 898199 | 5554 | 661 | 3/18/1968 |
| 37 | 74 | 35 | 91 | 354607 | 898204 | 5558 | 661 | 3/19/1968 |
| 37 | 74 | 35 | 233 | 354500 | 898210 | 5560 | 1000 | 6/29/1974 |
| 37 | 74 | 35 | 576 | 357793 | 898237 | 5525 | 680 | 12/15/1997 |
| 37 | 74 | 35 | 878 | 357844 | 898239 | 5523 | 841 | 6/19/1999 |
| 37 | 74 | 35 | 558 | 357891 | 898243 | 5521 | 681 | 8/20/1997 |
| 37 | 74 | 35 | 307 | 356525 | 898249 | 5552 | 660 | 4/22/1975 |
| 37 | 74 | 35 | 232 | 354353 | 898254 | 5564 | 640 | 6/28/1974 |
| 37 | 74 | 35 | 475 | 356192 | 898302 | 5555 | 873 | 11/9/1989 |
| 37 | 74 | 35 | 295 | 356244 | 898303 | 5552 | 660 | 4/18/1975 |
| 37 | 74 | 35 | 795 | 355938 | 898311 | 5541 | 904 | 7/10/1998 |
| 37 | 74 | 35 | 473 | 355566 | 898339 | 5551 | 870 | 10/31/1989 |
| 37 | 74 | 35 | 456 | 355462 | 898340 | 5550 | 877 | 10/6/1989 |
| 37 | 74 | 35 | 543 | 357890 | 898342 | 5531 | 903 | 8/13/1997 |
| 37 | 74 | 35 | 459 | 355358 | 898342 | 5550 | 872 | 10/11/1989 |
| 37 | 74 | 35 | 802 | 356630 | 898345 | 5555 | 665 | 7/14/1998 |
| 37 | 74 | 35 | 799 | 355836 | 898355 | 5546 | 905 | 7/9/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 35 | 711 | 355888 | 898358 | 5545 | 897 | 6/2/1998 |
| 37 | 74 | 35 | 786 | 355938 | 898362 | 5544 | 904 | 7/6/1998 |
| 37 | 74 | 35 | 89 | 355261 | 898391 | 5550 | 660 | 3/8/1968 |
| 37 | 74 | 35 | 758 | 356112 | 898392 | 5548 | 906 | 6/23/1998 |
| 37 | 74 | 35 | 86 | 354599 | 898393 | 5568 | 675 | 3/4/1968 |
| 37 | 74 | 35 | 231 | 354299 | 898393 | 5579 | 900 | 6/29/1974 |
| 37 | 74 | 35 | 800 | 356627 | 898396 | 5553 | 684 | 7/9/1998 |
| 37 | 74 | 35 | 189 | 354897 | 898397 | 5562 | 600 | 6/8/1973 |
| 37 | 74 | 35 | 87 | 354799 | 898397 | 5565 | 661 | 3/4/1968 |
| 37 | 74 | 35 | 230 | 354745 | 898399 | 5566 | 1000 | 6/28/1974 |
| 37 | 74 | 35 | 88 | 354988 | 898401 | 5559 | 661 | 3/18/1968 |
| 37 | 74 | 35 | 859 | 355962 | 898421 | 5548 | 904 | 10/22/1998 |
| 37 | 74 | 35 | 683 | 357743 | 898434 | 5542 | 678 | 5/5/1998 |
| 37 | 74 | 35 | 560 | 357793 | 898435 | 5540 | 890 | 8/19/1997 |
| 37 | 74 | 35 | 714 | 356522 | 898441 | 5552 | 684 | 6/15/1998 |
| 37 | 74 | 35 | 544 | 357892 | 898442 | 5539 | 903 | 8/12/1997 |
| 37 | 74 | 35 | 754 | 356573 | 898445 | 5552 | 904 | 6/22/1998 |
| 37 | 74 | 35 | 764 | 356623 | 898446 | 5552 | 684 | 6/23/1998 |
| 37 | 74 | 35 | 323 | 355927 | 898450 | 5550 | 640 | 4/28/1975 |
| 37 | 74 | 35 | 314 | 356246 | 898453 | 5550 | 660 | 4/23/1975 |
| 37 | 74 | 35 | 794 | 356004 | 898465 | 5548 | 680 | 7/8/1998 |
| 37 | 74 | 35 | 785 | 356055 | 898466 | 5549 | 904 | 7/7/1998 |
| 37 | 74 | 35 | 715 | 356155 | 898471 | 5550 | 683 | 6/16/1998 |
| 37 | 74 | 35 | 787 | 356669 | 898497 | 5551 | 691 | 7/2/1998 |
| 37 | 74 | 35 | 471 | 355461 | 898497 | 5560 | 870 | 10/24/1989 |
| 37 | 74 | 35 | 311 | 352846 | 898507 | 5613 | 720 | 4/24/1975 |
| 37 | 74 | 35 | 326 | 352950 | 898512 | 5611 | 700 | 5/1/1975 |
| 37 | 74 | 35 | 801 | 355950 | 898517 | 5554 | 863 | 7/13/1998 |
| 37 | 74 | 35 | 321 | 353022 | 898519 | 5608 | 680 | 4/28/1975 |
| 37 | 74 | 35 | 299 | 356515 | 898542 | 5550 | 660 | 4/21/1975 |
| 37 | 74 | 35 | 545 | 357892 | 898543 | 5538 | 900 | 8/12/1997 |
| 37 | 74 | 35 | 460 | 355462 | 898551 | 5565 | 872 | 10/12/1989 |
| 37 | 74 | 35 | 618 | 352999 | 898554 | 5610 | 701 | 2/2/1998 |
| 37 | 74 | 35 | 316 | 356247 | 898555 | 5550 | 640 | 4/25/1975 |
| 37 | 74 | 35 | 612 | 352943 | 898557 | 5612 | 702 | 1/28/1998 |
| 37 | 74 | 35 | 85 | 355392 | 898575 | 10 | 660 | 3/8/1968 |
| 37 | 74 | 35 | 803 | 356437 | 898580 | 5548 | 644 | 7/14/1998 |
| 37 | 74 | 35 | 740 | 357741 | 898584 | 5539 | 670 | 6/11/1998 |
| 37 | 74 | 35 | 691 | 357790 | 898586 | 5539 | 678 | 5/20/1998 |
| 37 | 74 | 35 | 84 | 355181 | 898589 | 5569 | 661 | 3/21/1968 |
| 37 | 74 | 35 | 83 | 355001 | 898589 | 5571 | 661 | 3/8/1968 |
| 37 | 74 | 35 | 464 | 355088 | 898591 | 5574 | 874 | 10/19/1989 |
| 37 | 74 | 35 | 82 | 354799 | 898594 | 5576 | 635 | 3/18/1968 |
| 37 | 74 | 35 | 188 | 355608 | 898595 | 5562 | 660 | 6/8/1973 |
| 37 | 74 | 35 | 286 | 356246 | 898609 | 5552 | 640 | 4/15/1975 |
| 37 | 74 | 35 | 296 | 356300 | 898609 | 5551 | 660 | 4/17/1975 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 35 | 280 | 355931 | 898610 | 5555 | 680 | 4/11/1975 |
| 37 | 74 | 35 | 301 | 356191 | 898610 | 5552 | 660 | 4/21/1975 |
| 37 | 74 | 35 | 857 | 355945 | 898616 | 5556 | 910 | 10/15/1998 |
| 37 | 74 | 35 | 765 | 356669 | 898624 | 5551 | 682 | 6/30/1998 |
| 37 | 74 | 35 | 797 | 356433 | 898628 | 5550 | 684 | 7/9/1998 |
| 37 | 74 | 35 | 753 | 356718 | 898628 | 5551 | 684 | 6/22/1998 |
| 37 | 74 | 35 | 858 | 355760 | 898637 | 5557 | 902 | 10/16/1998 |
| 37 | 74 | 35 | 546 | 357894 | 898643 | 5537 | 901 | 8/11/1997 |
| 37 | 74 | 35 | 325 | 356603 | 898675 | 5551 | 640 | 5/1/1975 |
| 37 | 74 | 35 | 317 | 356662 | 898677 | 5552 | 640 | 4/28/1975 |
| 37 | 74 | 35 | 713 | 356713 | 898678 | 5552 | 684 | 6/16/1998 |
| 37 | 74 | 35 | 789 | 356428 | 898678 | 5552 | 691 | 7/6/1998 |
| 37 | 74 | 35 | 644 | 352806 | 898695 | 5613 | 702 | 2/10/1998 |
| 37 | 74 | 35 | 444 | 356063 | 898703 | 5560 | 870 | 9/26/1989 |
| 37 | 74 | 35 | 625 | 352904 | 898704 | 5617 | 702 | 2/5/1998 |
| 37 | 74 | 35 | 840 | 355862 | 898704 | 5554 | 908 | 9/23/1998 |
| 37 | 74 | 35 | 468 | 355910 | 898707 | 5559 | 870 | 10/23/1989 |
| 37 | 74 | 35 | 855 | 355962 | 898710 | 5556 | 910 | 10/14/1998 |
| 37 | 74 | 35 | 710 | 356270 | 898717 | 5556 | 679 | 6/1/1998 |
| 37 | 74 | 35 | 729 | 356320 | 898720 | 5555 | 691 | 6/11/1998 |
| 37 | 74 | 35 | 415 | 356210 | 898720 | 10 | 884 | 8/22/1989 |
| 37 | 74 | 35 | 747 | 356369 | 898723 | 5554 | 683 | 6/12/1998 |
| 37 | 74 | 35 | 766 | 356422 | 898727 | 5553 | 678 | 6/30/1998 |
| 37 | 74 | 35 | 707 | 356658 | 898727 | 5552 | 679 | 4/28/1998 |
| 37 | 74 | 35 | 692 | 357747 | 898731 | 5542 | 1001 | 5/19/1998 |
| 37 | 74 | 35 | 703 | 357697 | 898731 | 5542 | 678 | 5/28/1998 |
| 37 | 74 | 35 | 561 | 357797 | 898734 | 5541 | 891 | 8/18/1997 |
| 37 | 74 | 35 | 452 | 355753 | 898735 | 5557 | 873 | 10/3/1989 |
| 37 | 74 | 35 | 547 | 357896 | 898743 | 5541 | 900 | 8/8/1997 |
| 37 | 74 | 35 | 626 | 353156 | 898753 | 5612 | 701 | 2/5/1998 |
| 37 | 74 | 35 | 841 | 355909 | 898756 | 5556 | 908 | 9/24/1998 |
| 37 | 74 | 35 | 279 | 355346 | 898769 | 5564 | 660 | 4/11/1975 |
| 37 | 74 | 35 | 313 | 356654 | 898771 | 5548 | 660 | 4/23/1975 |
| 37 | 74 | 35 | 709 | 356448 | 898784 | 5553 | 679 | 5/29/1998 |
| 37 | 74 | 35 | 224 | 355700 | 898785 | 5553 | 640 | 6/26/1974 |
| 37 | 74 | 35 | 187 | 355804 | 898786 | 5553 | 660 | 6/6/1973 |
| 37 | 74 | 35 | 80 | 355018 | 898792 | 5575 | 661 | 3/8/1968 |
| 37 | 74 | 35 | 50 | 354400 | 898793 | 5592 | 700 | 2/19/1968 |
| 37 | 74 | 35 | 228 | 355150 | 898794 | 5571 | 1000 | 6/28/1974 |
| 37 | 74 | 35 | 51 | 354799 | 898794 | 5580 | 743 | 2/16/1968 |
| 37 | 74 | 35 | 81 | 355393 | 898795 | 5561 | 649 | 3/7/1968 |
| 37 | 74 | 35 | 53 | 355601 | 898795 | 5555 | 705 | 2/23/1968 |
| 37 | 74 | 35 | 48 | 353605 | 898795 | 5607 | 1005 | 2/15/1968 |
| 37 | 74 | 35 | 49 | 354002 | 898796 | 5596 | 705 | 2/19/1968 |
| 37 | 74 | 35 | 52 | 355200 | 898797 | 5570 | 1000 | 2/15/1968 |
| 37 | 74 | 35 | 25 | 353206 | 898797 | 5612 | 787 | 11/17/1967 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 35 | 229 | 355249 | 898797 | 5568 | 640 | 7/2/1974 |
| 37 | 74 | 35 | 300 | 352793 | 898799 | 5621 | 720 | 4/21/1975 |
| 37 | 74 | 35 | 266 | 352997 | 898800 | 5621 | 700 | 4/14/1975 |
| 37 | 74 | 35 | 308 | 352848 | 898803 | 5624 | 720 | 4/23/1975 |
| 37 | 74 | 35 | 472 | 355520 | 898809 | 5561 | 870 | 10/26/1989 |
| 37 | 74 | 35 | 293 | 353106 | 898814 | 5615 | 720 | 4/18/1975 |
| 37 | 74 | 35 | 881 | 357703 | 898822 | 5546 | 660 | 6/22/1999 |
| 37 | 74 | 35 | 879 | 357754 | 898825 | 5546 | 657 | 6/17/1999 |
| 37 | 74 | 35 | 876 | 357800 | 898830 | 5546 | 659 | 6/16/1999 |
| 37 | 74 | 35 | 856 | 355871 | 898833 | 5553 | 910 | 10/13/1998 |
| 37 | 74 | 35 | 417 | 356443 | 898833 | 5555 | 885 | 8/25/1989 |
| 37 | 74 | 35 | 306 | 356497 | 898833 | 5550 | 660 | 4/22/1975 |
| 37 | 74 | 35 | 553 | 357848 | 898836 | 5546 | 684 | 8/13/1997 |
| 37 | 74 | 35 | 854 | 355920 | 898839 | 5554 | 911 | 10/12/1998 |
| 37 | 74 | 35 | 548 | 357898 | 898841 | 5547 | 904 | 8/11/1997 |
| 37 | 74 | 35 | 696 | 356764 | 898842 | 5548 | 900 | 5/26/1998 |
| 37 | 74 | 35 | 828 | 355970 | 898844 | 5555 | 908 | 8/3/1998 |
| 37 | 74 | 35 | 450 | 355755 | 898883 | 5556 | 870 | 10/2/1989 |
| 37 | 74 | 35 | 474 | 356976 | 898884 | 5555 | 870 | 11/7/1989 |
| 37 | 74 | 35 | 470 | 357186 | 898886 | 5554 | 870 | 10/25/1989 |
| 37 | 74 | 35 | 697 | 357139 | 898886 | 5551 | 900 | 5/21/1998 |
| 37 | 74 | 35 | 839 | 355807 | 898890 | 5551 | 907 | 9/18/1998 |
| 37 | 74 | 35 | 875 | 357703 | 898925 | 5552 | 661 | 6/16/1999 |
| 37 | 74 | 35 | 880 | 357752 | 898928 | 5552 | 659 | 6/17/1999 |
| 37 | 74 | 35 | 834 | 355756 | 898933 | 5551 | 910 | 9/14/1998 |
| 37 | 74 | 35 | 551 | 357800 | 898933 | 5553 | 901 | 8/13/1997 |
| 37 | 74 | 35 | 823 | 355238 | 898938 | 5566 | 907 | 8/31/1998 |
| 37 | 74 | 35 | 549 | 357899 | 898941 | 5554 | 904 | 8/8/1997 |
| 37 | 74 | 35 | 423 | 355906 | 898941 | 5552 | 873 | 8/31/1989 |
| 37 | 74 | 35 | 485 | 356007 | 898945 | 5554 | 872 | 11/22/1989 |
| 37 | 74 | 35 | 172C | 355417 | 898953 | 5560 | 660 | 5/19/1973 |
| 37 | 74 | 35 | 819 | 355234 | 898988 | 5566 | 908 | 8/25/1998 |
| 37 | 74 | 35 | 79 | 355818 | 898989 | 5549 | 654 | 3/7/1968 |
| 37 | 74 | 35 | 77 | 355403 | 898989 | 5561 | 655 | 3/4/1968 |
| 37 | 74 | 35 | 441 | 356376 | 898990 | 5558 | 870 | 9/28/1989 |
| 37 | 74 | 35 | 227 | 355754 | 898991 | 5551 | 1000 | 6/27/1974 |
| 37 | 74 | 35 | 419 | 355906 | 898992 | 5551 | 884 | 8/28/1989 |
| 37 | 74 | 35 | 186 | 355705 | 898992 | 5551 | 660 | 6/6/1973 |
| 37 | 74 | 35 | 78 | 355603 | 898995 | 5547 | 661 | 3/4/1968 |
| 37 | 74 | 35 | 320 | 352741 | 899005 | 5621 | 700 | 4/30/1975 |
| 37 | 74 | 35 | 76 | 355193 | 899006 | 5567 | 655 | 3/8/1968 |
| 37 | 74 | 35 | 702 | 357605 | 899026 | 5555 | 679 | 5/27/1998 |
| 37 | 74 | 35 | 682 | 357654 | 899026 | 5555 | 679 | 5/4/1998 |
| 37 | 74 | 35 | 562 | 357704 | 899029 | 5556 | 905 | 8/18/1997 |
| 37 | 74 | 35 | 853 | 355696 | 899030 | 5552 | 910 | 10/14/1998 |
| 37 | 74 | 35 | 552 | 357803 | 899034 | 5557 | 900 | 8/13/1997 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 35 | 850 | 355746 | 899035 | 5551 | 903 | 10/8/1998 |
| 37 | 74 | 35 | 550 | 357903 | 899039 | 5558 | 904 | 8/7/1997 |
| 37 | 74 | 35 | 846 | 355798 | 899040 | 5549 | 904 | 9/30/1998 |
| 37 | 74 | 35 | 829 | 356009 | 899045 | 5548 | 903 | 9/4/1998 |
| 37 | 74 | 35 | 8 | 357490 | 899060 | 10 | 658 | 10/2/1967 |
| 37 | 74 | 35 | 7 | 356290 | 899060 | 10 | 664 | 9/29/1967 |
| 37 | 74 | 35 | 6 | 355090 | 899060 | 10 | 704 | 9/29/1967 |
| 37 | 74 | 35 | 5 | 353739 | 899068 | 5606 | 721 | 9/29/1967 |
| 37 | 74 | 35 | 804 | 355293 | 899077 | 5562 | 908 | 8/11/1998 |
| 37 | 74 | 35 | 483 | 355343 | 899081 | 5564 | 873 | 11/12/1989 |
| 37 | 74 | 35 | 824 | 355165 | 899082 | 5566 | 903 | 9/1/1998 |
| 37 | 74 | 35 | 842 | 355745 | 899085 | 5551 | 909 | 9/26/1998 |
| 37 | 74 | 35 | 808 | 355215 | 899085 | 5564 | 908 | 8/13/1998 |
| 37 | 74 | 35 | 725 | 357025 | 899089 | 5553 | 902 | 6/9/1998 |
| 37 | 74 | 35 | 838 | 355846 | 899093 | 5548 | 909 | 9/17/1998 |
| 37 | 74 | 35 | 843 | 355896 | 899097 | 5547 | 910 | 9/25/1998 |
| 37 | 74 | 35 | 235 | 355796 | 899098 | 5549 | 1000 | 6/29/1974 |
| 37 | 74 | 35 | 852 | 355945 | 899099 | 5547 | 907 | 10/9/1998 |
| 37 | 74 | 35 | 845 | 355995 | 899103 | 5546 | 908 | 9/26/1998 |
| 37 | 74 | 35 | 827 | 355603 | 899104 | 5555 | 909 | 9/8/1998 |
| 37 | 74 | 35 | 815 | 355241 | 899118 | 5562 | 907 | 8/20/1998 |
| 37 | 74 | 35 | 874 | 357601 | 899120 | 5557 | 662 | 6/17/1999 |
| 37 | 74 | 35 | 811 | 355366 | 899133 | 5559 | 905 | 8/19/1998 |
| 37 | 74 | 35 | 851 | 355794 | 899138 | 5550 | 910 | 10/7/1998 |
| 37 | 74 | 35 | 704 | 357284 | 899138 | 5557 | 900 | 5/29/1998 |
| 37 | 74 | 35 | 756 | 357123 | 899141 | 5554 | 902 | 6/23/1998 |
| 37 | 74 | 35 | 430 | 356401 | 899150 | 5558 | 880 | 9/12/1989 |
| 37 | 74 | 35 | 744 | 357395 | 899160 | 5559 | 903 | 6/15/1998 |
| 37 | 74 | 35 | 739 | 357445 | 899162 | 5560 | 692 | 6/10/1998 |
| 37 | 74 | 35 | 690 | 357495 | 899164 | 5560 | 1000 | 5/18/1998 |
| 37 | 74 | 35 | 569 | 357546 | 899168 | 5559 | 685 | 8/25/1997 |
| 37 | 74 | 35 | 643 | 352879 | 899170 | 5621 | 702 | 2/11/1998 |
| 37 | 74 | 35 | 826 | 355115 | 899174 | 5566 | 907 | 9/2/1998 |
| 37 | 74 | 35 | 426 | 356107 | 899177 | 5549 | 870 | 9/6/1989 |
| 37 | 74 | 35 | 469 | 357331 | 899185 | 5563 | 870 | 10/24/1989 |
| 37 | 74 | 35 | 73 | 355602 | 899186 | 5555 | 650 | 3/5/1968 |
| 37 | 74 | 35 | 806 | 355214 | 899187 | 5562 | 904 | 8/11/1998 |
| 37 | 74 | 35 | 185 | 355896 | 899187 | 5548 | 660 | 6/6/1973 |
| 37 | 74 | 35 | 466 | 357278 | 899188 | 5562 | 870 | 10/19/1989 |
| 37 | 74 | 35 | 437 | 356246 | 899188 | 5556 | 870 | 9/15/1989 |
| 37 | 74 | 35 | 830 | 355944 | 899191 | 5547 | 909 | 9/8/1998 |
| 37 | 74 | 35 | 412 | 357171 | 899191 | 5560 | 884 | 8/21/1989 |
| 37 | 74 | 35 | 75 | 355989 | 899192 | 5546 | 654 | 3/6/1968 |
| 37 | 74 | 35 | 416 | 357067 | 899192 | 5557 | 884 | 8/23/1989 |
| 37 | 74 | 35 | 74 | 355798 | 899193 | 5551 | 661 | 3/5/1968 |
| 37 | 74 | 35 | 223 | 355697 | 899194 | 5553 | 640 | 6/26/1974 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 35 | 72 | 355462 | 899206 | 5558 | 661 | 3/7/1968 |
| 37 | 74 | 35 | 751 | 357393 | 899212 | 5560 | 905 | 6/16/1998 |
| 37 | 74 | 35 | 568 | 357542 | 899218 | 5560 | 897 | 8/22/1997 |
| 37 | 74 | 35 | 315 | 352693 | 899220 | 5603 | 740 | 4/24/1975 |
| 37 | 74 | 35 | 563 | 357591 | 899221 | 5560 | 904 | 8/19/1997 |
| 37 | 74 | 35 | 327 | 352843 | 899223 | 5619 | 700 | 4/30/1975 |
| 37 | 74 | 35 | 319 | 352901 | 899223 | 5625 | 720 | 4/28/1975 |
| 37 | 74 | 35 | 820 | 355115 | 899223 | 5564 | 909 | 8/26/1998 |
| 37 | 74 | 35 | 611 | 352793 | 899223 | 5614 | 701 | 1/29/1998 |
| 37 | 74 | 35 | 814 | 355164 | 899236 | 5562 | 906 | 8/20/1998 |
| 37 | 74 | 35 | 816 | 355262 | 899237 | 5560 | 902 | 8/21/1998 |
| 37 | 74 | 35 | 847 | 355889 | 899237 | 5549 | 909 | 10/1/1998 |
| 37 | 74 | 35 | 821 | 355309 | 899239 | 5559 | 908 | 9/1/1998 |
| 37 | 74 | 35 | 833 | 355938 | 899241 | 5548 | 904 | 9/11/1998 |
| 37 | 74 | 35 | 818 | 355357 | 899243 | 5559 | 910 | 8/25/1998 |
| 37 | 74 | 35 | 769 | 357392 | 899261 | 5560 | 870 | 6/29/1998 |
| 37 | 74 | 35 | 783 | 357493 | 899268 | 5561 | 685 | 7/1/1998 |
| 37 | 74 | 35 | 624 | 352882 | 899271 | 5626 | 703 | 2/6/1998 |
| 37 | 74 | 35 | 810 | 355114 | 899282 | 5562 | 904 | 8/14/1998 |
| 37 | 74 | 35 | 805 | 355162 | 899284 | 5562 | 908 | 8/12/1998 |
| 37 | 74 | 35 | 640 | 355211 | 899286 | 5560 | 902 | 2/10/1998 |
| 37 | 74 | 35 | 630 | 355261 | 899288 | 5560 | 905 | 2/6/1998 |
| 37 | 74 | 35 | 454 | 355892 | 899293 | 5555 | 870 | 10/5/1989 |
| 37 | 74 | 35 | 262 | 355699 | 899298 | 5556 | 700 | 3/31/1975 |
| 37 | 74 | 35 | 844 | 355943 | 899298 | 5550 | 909 | 9/29/1998 |
| 37 | 74 | 35 | 645 | 352644 | 899318 | 5603 | 702 | 2/11/1998 |
| 37 | 74 | 35 | 627 | 352644 | 899318 | 5602 | 703 | 2/6/1998 |
| 37 | 74 | 35 | 706 | 356777 | 899332 | 5555 | 901 | 6/1/1998 |
| 37 | 74 | 35 | 822 | 355333 | 899341 | 5560 | 910 | 8/27/1998 |
| 37 | 74 | 35 | 755 | 357178 | 899342 | 5557 | 904 | 6/19/1998 |
| 37 | 74 | 35 | 848 | 355975 | 899344 | 5550 | 910 | 10/1/1998 |
| 37 | 74 | 35 | 809 | 355382 | 899344 | 5561 | 907 | 8/19/1998 |
| 37 | 74 | 35 | 877 | 357433 | 899359 | 5561 | 840 | 6/16/1999 |
| 37 | 74 | 35 | 642 | 352873 | 899369 | 5627 | 704 | 2/12/1998 |
| 37 | 74 | 35 | 778 | 356878 | 899388 | 5556 | 682 | 6/26/1998 |
| 37 | 74 | 35 | 222 | 355455 | 899390 | 10 | 1000 | 6/27/1974 |
| 37 | 74 | 35 | 835 | 355947 | 899391 | 5553 | 908 | 9/15/1998 |
| 37 | 74 | 35 | 70 | 355999 | 899392 | 5551 | 660 | 3/5/1968 |
| 37 | 74 | 35 | 71 | 356200 | 899392 | 5549 | 660 | 3/5/1968 |
| 37 | 74 | 35 | 420 | 355349 | 899393 | 5564 | 884 | 8/29/1989 |
| 37 | 74 | 35 | 68 | 355604 | 899393 | 5560 | 655 | 3/7/1968 |
| 37 | 74 | 35 | 817 | 355304 | 899393 | 5562 | 908 | 8/24/1998 |
| 37 | 74 | 35 | 465 | 355192 | 899394 | 5564 | 870 | 11/8/1989 |
| 37 | 74 | 35 | 745 | 357226 | 899395 | 5559 | 899 | 6/15/1998 |
| 37 | 74 | 35 | 807 | 355144 | 899395 | 5561 | 907 | 8/13/1998 |
| 37 | 74 | 35 | 812 | 355243 | 899396 | 5561 | 908 | 8/18/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 35 | 69 | 355801 | 899397 | 5556 | 660 | 3/5/1968 |
| 37 | 74 | 35 | 832 | 356045 | 899397 | 5551 | 909 | 9/9/1998 |
| 37 | 74 | 35 | 738 | 357325 | 899401 | 5560 | 903 | 6/10/1998 |
| 37 | 74 | 35 | 701 | 357375 | 899405 | 5561 | 901 | 5/28/1998 |
| 37 | 74 | 35 | 487 | 354992 | 899406 | 5566 | 870 | 11/28/1989 |
| 37 | 74 | 35 | 574 | 357428 | 899410 | 5562 | 904 | 9/4/1997 |
| 37 | 74 | 35 | 609 | 352642 | 899428 | 5607 | 705 | 1/29/1998 |
| 37 | 74 | 35 | 731 | 356771 | 899432 | 5556 | 681 | 6/9/1998 |
| 37 | 74 | 35 | 621 | 352692 | 899432 | 5610 | 666 | 2/4/1998 |
| 37 | 74 | 35 | 760 | 356821 | 899435 | 5556 | 905 | 6/24/1998 |
| 37 | 74 | 35 | 234 | 355517 | 899438 | 5558 | 1000 | 7/1/1974 |
| 37 | 74 | 35 | 451 | 357160 | 899439 | 5561 | 870 | 10/18/1989 |
| 37 | 74 | 35 | 780 | 356920 | 899441 | 5556 | 903 | 7/2/1998 |
| 37 | 74 | 35 | 825 | 355347 | 899442 | 5559 | 907 | 9/2/1998 |
| 37 | 74 | 35 | 652 | 355395 | 899445 | 5559 | 908 | 2/12/1998 |
| 37 | 74 | 35 | 813 | 355189 | 899447 | 5559 | 909 | 8/17/1998 |
| 37 | 74 | 35 | 632 | 355140 | 899495 | 5557 | 904 | 2/5/1998 |
| 37 | 74 | 35 | 641 | 355191 | 899501 | 5556 | 904 | 2/10/1998 |
| 37 | 74 | 35 | 681 | 357320 | 899506 | 5560 | 679 | 5/21/1998 |
| 37 | 74 | 35 | 730 | 357371 | 899510 | 5561 | 664 | 6/12/1998 |
| 37 | 74 | 35 | 705 | 357419 | 899511 | 5562 | 683 | 6/1/1998 |
| 37 | 74 | 35 | 310 | 352732 | 899524 | 5602 | 700 | 4/24/1975 |
| 37 | 74 | 35 | 265 | 352690 | 899529 | 5597 | 700 | 4/15/1975 |
| 37 | 74 | 35 | 359 | 354480 | 899530 | 10 | 311 | 5/30/1978 |
| 37 | 74 | 35 | 695 | 356764 | 899535 | 5556 | 899 | 5/22/1998 |
| 37 | 74 | 35 | 47 | 356010 | 899574 | 5554 | 705 | 2/20/1968 |
| 37 | 74 | 35 | 837 | 355954 | 899577 | 5555 | 909 | 9/16/1998 |
| 37 | 74 | 35 | 761 | 356451 | 899580 | 5555 | 892 | 6/25/1998 |
| 37 | 74 | 35 | 650 | 355291 | 899582 | 5553 | 901 | 2/11/1998 |
| 37 | 74 | 35 | 23 | 355607 | 899584 | 5553 | 798 | 11/16/1967 |
| 37 | 74 | 35 | 302 | 356734 | 899586 | 5556 | 660 | 4/22/1975 |
| 37 | 74 | 35 | 24 | 356396 | 899587 | 5555 | 725 | 11/16/1967 |
| 37 | 74 | 35 | 297 | 356655 | 899588 | 5556 | 660 | 4/18/1975 |
| 37 | 74 | 35 | 292 | 356553 | 899588 | 5556 | 700 | 4/15/1975 |
| 37 | 74 | 35 | 285 | 356811 | 899589 | 5557 | 660 | 4/14/1975 |
| 37 | 74 | 35 | 993 | 356150 | 901050 | 5556 | 658 | 7/14/2005 |
| 37 | 74 | 35 | 985 | 356450 | 901050 | 5550 | 659 | 7/7/2005 |
| 37 | 74 | 35 | 982 | 356550 | 901050 | 5549 | 662 | 7/6/2005 |
| 37 | 74 | 35 | 980 | 356650 | 901050 | 5547 | 661 | 7/5/2005 |
| 37 | 74 | 35 | 972 | 356850 | 901050 | 5544 | 883 | 7/19/2005 |
| 37 | 74 | 35 | 278 | 357204 | 901062 | 5543 | 660 | 4/10/1975 |
| 37 | 74 | 35 | 407 | 357559 | 901082 | 5540 | 860 | 8/16/1989 |
| 37 | 74 | 35 | 409 | 357456 | 901086 | 5543 | 874 | 8/17/1989 |
| 37 | 74 | 35 | 721 | 357507 | 901089 | 5539 | 877 | 6/3/1998 |
| 37 | 74 | 35 | 372 | 354039 | 901097 | 5591 | 700 | 5/19/1980 |
| 37 | 74 | 35 | 978 | 356700 | 901100 | 5546 | 660 | 7/1/2005 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 35 | 973 | 356800 | 901100 | 5545 | 660 | 6/28/2005 |
| 37 | 74 | 35 | 932 | 357300 | 901100 | 5543 | 884 | 7/15/2005 |
| 37 | 74 | 35 | 931 | 357200 | 901100 | 5545 | 881 | 7/18/2005 |
| 37 | 74 | 35 | 176 | 353607 | 901101 | 5566 | 660 | 6/12/1973 |
| 37 | 74 | 35 | 592 | 354093 | 901105 | 5589 | 697 | 1/21/1998 |
| 37 | 74 | 35 | 603 | 354140 | 901107 | 5588 | 702 | 1/27/1998 |
| 37 | 74 | 35 | 602 | 354187 | 901109 | 5588 | 701 | 1/21/1998 |
| 37 | 74 | 35 | 257 | 356594 | 901113 | 5549 | 680 | 3/25/1975 |
| 37 | 74 | 35 | 217 | 356183 | 901114 | 5558 | 640 | 6/26/1974 |
| 37 | 74 | 35 | 147 | 356282 | 901114 | 5554 | 700 | 3/10/1972 |
| 37 | 74 | 35 | 371 | 353899 | 901114 | 5591 | 700 | 5/20/1980 |
| 37 | 74 | 35 | 138 | 356332 | 901116 | 5553 | 700 | 3/6/1972 |
| 37 | 74 | 35 | 142 | 356379 | 901117 | 5553 | 700 | 3/8/1972 |
| 37 | 74 | 35 | 346 | 356478 | 901118 | 5551 | 640 | 8/17/1976 |
| 37 | 74 | 35 | 534 | 356880 | 901119 | 5544 | 903 | 7/24/1997 |
| 37 | 74 | 35 | 499 | 353761 | 901124 | 5576 | 662 | 6/17/1992 |
| 37 | 74 | 35 | 192 | 353610 | 901147 | 5564 | 660 | 6/20/1973 |
| 37 | 74 | 35 | 370 | 353692 | 901149 | 5570 | 700 | 5/20/1980 |
| 37 | 74 | 35 | 882 | 351090 | 901150 | 5586 | 640 | 6/2/2004 |
| 37 | 74 | 35 | 990 | 356250 | 901150 | 5556 | 661 | 7/15/2005 |
| 37 | 74 | 35 | 941 | 357550 | 901150 | 5537 | 865 | 7/18/2005 |
| 37 | 74 | 35 | 940 | 357450 | 901150 | 5540 | 861 | 7/14/2005 |
| 37 | 74 | 35 | 992 | 356150 | 901150 | 5559 | 661 | 7/18/2005 |
| 37 | 74 | 35 | 979 | 356650 | 901150 | 5547 | 660 | 7/6/2005 |
| 37 | 74 | 35 | 367 | 353294 | 901153 | 5534 | 700 | 5/20/1980 |
| 37 | 74 | 35 | 525 | 357898 | 901155 | 5504 | 898 | 7/23/1997 |
| 37 | 74 | 35 | 178 | 353999 | 901162 | 5582 | 660 | 6/13/1973 |
| 37 | 74 | 35 | 438 | 357251 | 901163 | 5548 | 870 | 9/18/1989 |
| 37 | 74 | 35 | 336 | 356331 | 901164 | 5554 | 640 | 6/17/1976 |
| 37 | 74 | 35 | 207 | 353773 | 901177 | 5571 | 640 | 6/25/1974 |
| 37 | 74 | 35 | 170C | 354099 | 901183 | 5582 | 650 | 5/18/1973 |
| 37 | 74 | 35 | 15 | 354801 | 901183 | 5571 | 695 | 11/21/1967 |
| 37 | 74 | 35 | 509 | 357502 | 901183 | 5536 | 899 | 7/14/1997 |
| 37 | 74 | 35 | 264 | 356890 | 901186 | 5544 | 680 | 3/31/1975 |
| 37 | 74 | 35 | 13 | 353212 | 901187 | 5526 | 705 | 11/29/1967 |
| 37 | 74 | 35 | 175 | 353400 | 901195 | 5535 | 660 | 6/12/1973 |
| 37 | 74 | 35 | 36 | 354407 | 901196 | 5591 | 745 | 2/20/1968 |
| 37 | 74 | 35 | 35 | 353611 | 901196 | 5560 | 700 | 2/21/1968 |
| 37 | 74 | 35 | 37 | 355198 | 901197 | 5564 | 700 | 2/20/1968 |
| 37 | 74 | 35 | 930 | 357300 | 901200 | 5541 | 883 | 7/14/2005 |
| 37 | 74 | 35 | 929 | 357200 | 901200 | 5543 | 884 | 7/13/2005 |
| 37 | 74 | 35 | 332 | 354605 | 901203 | 5580 | 600 | 6/14/1976 |
| 37 | 74 | 35 | 288 | 355465 | 901208 | 5562 | 700 | 4/15/1975 |
| 37 | 74 | 35 | 139 | 354184 | 901209 | 5587 | 700 | 3/9/1972 |
| 37 | 74 | 35 | 16 | 355574 | 901210 | 5561 | 700 | 11/17/1967 |
| 37 | 74 | 35 | 260 | 355355 | 901210 | 5563 | 700 | 4/1/1975 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 35 | 348 | 356477 | 901211 | 5550 | 640 | 8/17/1976 |
| 37 | 74 | 35 | 132 | 354095 | 901211 | 5579 | 700 | 3/1/1972 |
| 37 | 74 | 35 | 14 | 354000 | 901211 | 5573 | 700 | 11/30/1967 |
| 37 | 74 | 35 | 355 | 356176 | 901216 | 5559 | 604 | 11/15/1977 |
| 37 | 74 | 35 | 152 | 353676 | 901222 | 5560 | 700 | 3/15/1972 |
| 37 | 74 | 35 | 273 | 357207 | 901225 | 5541 | 660 | 4/4/1975 |
| 37 | 74 | 35 | 600 | 353839 | 901225 | 5567 | 702 | 1/23/1998 |
| 37 | 74 | 35 | 131 | 353774 | 901227 | 5563 | 701 | 3/1/1972 |
| 37 | 74 | 35 | 171C | 353674 | 901233 | 5559 | 660 | 5/22/1973 |
| 37 | 74 | 35 | 208 | 353998 | 901238 | 5570 | 640 | 6/28/1974 |
| 37 | 74 | 35 | 206 | 353562 | 901241 | 5554 | 640 | 6/26/1974 |
| 37 | 74 | 35 | 383 | 356053 | 901244 | 5563 | 650 | 10/28/1982 |
| 37 | 74 | 35 | 573 | 357145 | 901258 | 5542 | 900 | 8/28/1997 |
| 37 | 74 | 35 | 536 | 357244 | 901263 | 5539 | 893 | 7/25/1997 |
| 37 | 74 | 35 | 177 | 353788 | 901273 | 5557 | 660 | 6/12/1973 |
| 37 | 74 | 35 | 585 | 353837 | 901275 | 5559 | 701 | 12/18/1997 |
| 37 | 74 | 35 | 657 | 357495 | 901280 | 5533 | 898 | 5/27/1998 |
| 37 | 74 | 35 | 750 | 357545 | 901282 | 5532 | 905 | 6/17/1998 |
| 37 | 74 | 35 | 598 | 353380 | 901282 | 5531 | 705 | 1/23/1998 |
| 37 | 74 | 35 | 599 | 353477 | 901288 | 5542 | 704 | 1/21/1998 |
| 37 | 74 | 35 | 352 | 355139 | 901290 | 5572 | 599 | 11/14/1977 |
| 37 | 74 | 35 | 345A | 355285 | 901293 | 5570 | 700 | 3/3/1977 |
| 37 | 74 | 35 | 363 | 355185 | 901294 | 5572 | 701 | 3/5/1979 |
| 37 | 74 | 35 | 216 | 356670 | 901295 | 5546 | 640 | 6/26/1974 |
| 37 | 74 | 35 | 294 | 355241 | 901296 | 5571 | 700 | 4/18/1975 |
| 37 | 74 | 35 | 180 | 356569 | 901297 | 5547 | 660 | 6/11/1973 |
| 37 | 74 | 35 | 937 | 357600 | 901300 | 5534 | 861 | 7/14/2005 |
| 37 | 74 | 35 | 927 | 357200 | 901300 | 5541 | 883 | 7/13/2005 |
| 37 | 74 | 35 | 928 | 357300 | 901300 | 5539 | 882 | 7/14/2005 |
| 37 | 74 | 35 | 144 | 356420 | 901302 | 5550 | 700 | 3/8/1972 |
| 37 | 74 | 35 | 148 | 356476 | 901302 | 5548 | 700 | 3/10/1972 |
| 37 | 74 | 35 | 248 | 356315 | 901303 | 5553 | 700 | 3/19/1975 |
| 37 | 74 | 35 | 118 | 353262 | 901304 | 5520 | 583 | 6/24/197 |
| 37 | 74 | 35 | 165 | 353378 | 901330 | 5528 | 700 | 3/20/1972 |
| 37 | 74 | 35 | 130 | 353265 | 901331 | 5518 | 1000 | 3/3/1972 |
| 37 | 74 | 35 | 153 | 353163 | 901332 | 5513 | 700 | 3/15/1972 |
| 37 | 74 | 35 | 167 | 353811 | 901341 | 5549 | 700 | 3/20/1972 |
| 37 | 74 | 35 | 381 | 355075 | 901347 | 5579 | 650 | 10/28/1982 |
| 37 | 74 | 35 | 373 | 354224 | 901348 | 5594 | 702 | 5/20/1980 |
| 37 | 74 | 35 | 658 | 357191 | 901354 | 5542 | 899 | 3/13/1998 |
| 37 | 74 | 35 | 369 | 353293 | 901364 | 5518 | 710 | 5/20/1980 |
| 37 | 74 | 35 | 542 | 357239 | 901364 | 5541 | 902 | 8/4/1997 |
| 37 | 74 | 35 | 606 | 353380 | 901380 | 5525 | 701 | 1/23/1998 |
| 37 | 74 | 35 | 521 | 357439 | 901383 | 5541 | 905 | 7/16/1997 |
| 37 | 74 | 35 | 368 | 353345 | 901389 | 5521 | 702 | 5/21/1980 |
| 37 | 74 | 35 | 168 | 353163 | 901396 | 5509 | 660 | 6/13/1973 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 35 | 238 | 354169 | 901398 | 5584 | 660 | 3/17/1975 |
| 37 | 74 | 35 | 936 | 357600 | 901400 | 5543 | 860 | 7/13/2005 |
| 37 | 74 | 35 | 287 | 355242 | 901407 | 5581 | 700 | 4/15/1975 |
| 37 | 74 | 35 | 527 | 357488 | 901409 | 5543 | 904 | 7/18/1997 |
| 37 | 74 | 35 | 160 | 353377 | 901427 | 5525 | 700 | 3/17/1972 |
| 37 | 74 | 35 | 251 | 356032 | 901430 | 5563 | 680 | 3/21/1975 |
| 37 | 74 | 35 | 554 | 357150 | 901430 | 5543 | 900 | 8/15/1997 |
| 37 | 74 | 35 | 241 | 356190 | 901431 | 5559 | 700 | 3/18/1975 |
| 37 | 74 | 35 | 571 | 357201 | 901436 | 5543 | 896 | 8/25/1997 |
| 37 | 74 | 35 | 209 | 354110 | 901440 | 5572 | 640 | 6/25/1974 |
| 37 | 74 | 35 | 200 | 354218 | 901441 | 5582 | 660 | 6/21/1973 |
| 37 | 74 | 35 | 179 | 354271 | 901442 | 5586 | 660 | 6/14/1973 |
| 37 | 74 | 35 | 163 | 354060 | 901446 | 5564 | 700 | 3/20/1972 |
| 37 | 74 | 35 | 115 | 353968 | 901446 | 5554 | 624 | 6/24/1971 |
| 37 | 74 | 35 | 129 | 354168 | 901448 | 5576 | 700 | 3/2/1972 |
| 37 | 74 | 35 | 926 | 357250 | 901450 | 5543 | 889 | 7/20/2005 |
| 37 | 74 | 35 | 935 | 357550 | 901450 | 5545 | 881 | 7/13/2005 |
| 37 | 74 | 35 | 517 | 357483 | 901462 | 5544 | 901 | 7/14/1997 |
| 37 | 74 | 35 | 925 | 357150 | 901475 | 5545 | 883 | 7/21/2005 |
| 37 | 74 | 35 | 205 | 353167 | 901526 | 5515 | 640 | 6/26/1973 |
| 37 | 74 | 35 | 564 | 357189 | 901530 | 5546 | 903 | 8/20/1997 |
| 37 | 74 | 35 | 541 | 357240 | 901535 | 5545 | 902 | 8/1/1997 |
| 37 | 74 | 35 | 158 | 353777 | 901535 | 5536 | 700 | 3/17/1972 |
| 37 | 74 | 35 | 934 | 357550 | 901550 | 5547 | 881 | 7/12/2005 |
| 37 | 74 | 35 | 281 | 355239 | 901558 | 5588 | 700 | 4/14/1975 |
| 37 | 74 | 35 | 275 | 355396 | 901560 | 5552 | 660 | 4/10/1975 |
| 37 | 74 | 35 | 334 | 355315 | 901560 | 5586 | 680 | 6/14/1976 |
| 37 | 74 | 35 | 269 | 355601 | 901563 | 5579 | 680 | 4/3/1975 |
| 37 | 74 | 35 | 924 | 357150 | 901575 | 5547 | 883 | 7/21/2005 |
| 37 | 74 | 35 | 159 | 353371 | 901575 | 5512 | 700 | 3/17/1972 |
| 37 | 74 | 35 | 117 | 353202 | 901584 | 5508 | 561 | 6/23/1971 |
| 37 | 74 | 35 | 128 | 354383 | 901597 | 5598 | 700 | 3/1/1972 |
| 37 | 74 | 35 | 933 | 357500 | 901600 | 5546 | 882 | 7/11/2005 |
| 37 | 74 | 35 | 210 | 354151 | 901607 | 5577 | 640 | 6/25/1974 |
| 37 | 74 | 35 | 341 | 354573 | 901610 | 5611 | 640 | 6/18/1976 |
| 37 | 74 | 35 | 607 | 353056 | 901621 | 5505 | 726 | 2/4/1998 |
| 37 | 74 | 35 | 555 | 357180 | 901631 | 5545 | 905 | 8/15/1997 |
| 37 | 74 | 35 | 582 | 354978 | 901632 | 5592 | 701 | 12/12/1997 |
| 37 | 74 | 35 | 347A | 355029 | 901636 | 5590 | 701 | 3/3/1977 |
| 37 | 74 | 35 | 533 | 357229 | 901639 | 5544 | 898 | 7/24/1997 |
| 37 | 74 | 35 | 530 | 357331 | 901644 | 5544 | 903 | 7/21/1997 |
| 37 | 74 | 35 | 151 | 354111 | 901645 | 5573 | 700 | 3/15/1972 |
| 37 | 74 | 35 | 141 | 354208 | 901645 | 5586 | 700 | 3/9/1972 |
| 37 | 74 | 35 | 201 | 354160 | 901646 | 5579 | 660 | 6/21/1973 |
| 37 | 74 | 35 | 524 | 357430 | 901653 | 5544 | 904 | 7/17/1997 |
| 37 | 74 | 35 | 867 | 357479 | 901658 | 5544 | 881 | 4/20/1999 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 35 | 508 | 357529 | 901663 | 5544 | 1000 | 7/11/1997 |
| 37 | 74 | 35 | 608 | 352954 | 901664 | 5496 | 700 | 1/30/1998 |
| 37 | 74 | 35 | 496 | 353050 | 901668 | 5494 | 623 | 7/29/1991 |
| 37 | 74 | 35 | 501 | 353006 | 901679 | 5494 | 627 | 6/16/1992 |
| 37 | 74 | 35 | 919 | 357200 | 901700 | 5544 | 885 | 7/25/2005 |
| 37 | 74 | 35 | 922 | 357600 | 901700 | 5544 | 881 | 7/7/2005 |
| 37 | 74 | 35 | 920 | 357300 | 901700 | 5543 | 881 | 7/21/2005 |
| 37 | 74 | 35 | 921 | 357500 | 901700 | 5544 | 881 | 7/6/2005 |
| 37 | 74 | 35 | 346A | 356117 | 901712 | 5560 | 701 | 3/2/1977 |
| 37 | 74 | 35 | 584 | 354100 | 901732 | 5569 | 702 | 12/17/1997 |
| 37 | 74 | 35 | 581 | 354151 | 901735 | 5575 | 704 | 12/11/1997 |
| 37 | 74 | 35 | 659 | 357892 | 901742 | 5540 | 913 | 3/13/1998 |
| 37 | 74 | 35 | 864 | 357214 | 901744 | 5544 | 879 | 5/27/1999 |
| 37 | 74 | 35 | 917 | 357150 | 901750 | 5543 | 883 | 7/22/2005 |
| 37 | 74 | 35 | 918 | 357250 | 901750 | 5542 | 885 | 7/25/2005 |
| 37 | 74 | 35 | 244 | 356304 | 901753 | 5557 | 700 | 3/19/1975 |
| 37 | 74 | 35 | 583 | 354727 | 901753 | 5594 | 700 | 12/17/1997 |
| 37 | 74 | 35 | 249 | 356516 | 901757 | 5555 | 700 | 3/19/1975 |
| 37 | 74 | 35 | 505 | 357428 | 901761 | 5542 | 903 | 6/26/1997 |
| 37 | 74 | 35 | 255 | 356945 | 901761 | 5545 | 700 | 3/25/1975 |
| 37 | 74 | 35 | 256 | 357270 | 901762 | 5542 | 700 | 3/25/1975 |
| 37 | 74 | 35 | 678 | 357480 | 901763 | 5543 | 898 | 4/30/1998 |
| 37 | 74 | 35 | 406 | 357526 | 901767 | 5545 | 874 | 8/15/1989 |
| 37 | 74 | 35 | 156 | 354049 | 901782 | 5564 | 700 | 3/16/1972 |
| 37 | 74 | 35 | 211 | 354146 | 901784 | 5576 | 640 | 6/25/1974 |
| 37 | 74 | 35 | 150 | 354096 | 901784 | 5570 | 700 | 3/15/1972 |
| 37 | 74 | 35 | 140 | 354195 | 901784 | 5581 | 700 | 3/9/1972 |
| 37 | 74 | 35 | 126 | 354381 | 901786 | 5601 | 700 | 3/1/1972 |
| 37 | 74 | 35 | 340 | 354737 | 901789 | 5591 | 640 | 6/18/1976 |
| 37 | 74 | 35 | 174 | 354685 | 901789 | 5593 | 660 | 6/13/1973 |
| 37 | 74 | 35 | 104 | 354807 | 901793 | 5589 | 696 | 8/25/1970 |
| 37 | 74 | 35 | 127 | 354583 | 901794 | 5598 | 690 | 2/29/1972 |
| 37 | 74 | 35 | 916 | 357600 | 901800 | 5543 | 881 | 7/8/2005 |
| 37 | 74 | 35 | 915 | 357300 | 901800 | 5542 | 881 | 7/22/2005 |
| 37 | 74 | 35 | 914 | 357200 | 901800 | 5542 | 882 | 7/25/2005 |
| 37 | 74 | 35 | 113 | 354014 | 901803 | 5561 | 625 | 6/22/1971 |
| 37 | 74 | 35 | 588 | 354657 | 901837 | 5591 | 701 | 12/18/1997 |
| 37 | 74 | 35 | 689 | 357160 | 901839 | 5541 | 982 | 5/15/1998 |
| 37 | 74 | 35 | 565 | 357210 | 901840 | 5541 | 904 | 8/21/1997 |
| 37 | 74 | 35 | 157 | 353790 | 901840 | 10 | 700 | 3/16/1972 |
| 37 | 74 | 35 | 912 | 357250 | 901850 | 5541 | 880 | 7/27/2005 |
| 37 | 74 | 35 | 913 | 357450 | 901850 | 5542 | 881 | 7/6/2005 |
| 37 | 74 | 35 | 236 | 354085 | 901871 | 5571 | 680 | 3/14/1975 |
| 37 | 74 | 35 | 587 | 355191 | 901881 | 5573 | 639 | 2/3/1998 |
| 37 | 74 | 35 | 343 | 354819 | 901887 | 5584 | 640 | 8/16/1976 |
| 37 | 74 | 35 | 868 | 357435 | 901889 | 5543 | 882 | 5/26/1999 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 35 | 514 | 357486 | 901890 | 5541 | 904 | 7/10/1997 |
| 37 | 74 | 35 | 29 | 353204 | 901899 | 5507 | 702 | 11/22/1967 |
| 37 | 74 | 35 | 351 | 354685 | 901899 | 5588 | 604 | 11/15/1977 |
| 37 | 74 | 35 | 910 | 357150 | 901900 | 5541 | 883 | 7/27/2005 |
| 37 | 74 | 35 | 911 | 357400 | 901900 | 5541 | 878 | 7/5/2005 |
| 37 | 74 | 35 | 865 | 357205 | 901931 | 5541 | 890 | 4/20/1999 |
| 37 | 74 | 35 | 869 | 357253 | 901934 | 5542 | 879 | 5/28/1999 |
| 37 | 74 | 35 | 670 | 357447 | 901942 | 5542 | 898 | 4/24/1998 |
| 37 | 74 | 35 | 391 | 356945 | 901942 | 10 | 1000 | 11/6/1984 |
| 37 | 74 | 35 | 518 | 357496 | 901942 | 5541 | 905 | 7/16/1997 |
| 37 | 74 | 35 | 909 | 357150 | 901950 | 5541 | 883 | 7/27/2005 |
| 37 | 74 | 35 | 394 | 353900 | 901970 | 10 | 650 | 11/1/1984 |
| 37 | 74 | 35 | 212 | 354088 | 901980 | 5558 | 640 | 6/25/1974 |
| 37 | 74 | 35 | 337 | 354042 | 901980 | 5553 | 600 | 6/16/1976 |
| 37 | 74 | 35 | 10 | 353997 | 901983 | 5550 | 699 | 11/22/1967 |
| 37 | 74 | 35 | 111 | 354493 | 901985 | 5590 | 623 | 6/22/1971 |
| 37 | 74 | 35 | 32 | 354383 | 901986 | 5585 | 1005 | 2/16/1968 |
| 37 | 74 | 35 | 31 | 353602 | 901987 | 5541 | 705 | 2/19/1968 |
| 37 | 74 | 35 | 33 | 355195 | 901989 | 5567 | 700 | 2/19/1968 |
| 37 | 74 | 35 | 866 | 357444 | 901990 | 5543 | 882 | 5/25/1999 |
| 37 | 74 | 35 | 11 | 354800 | 901990 | 5581 | 701 | 11/20/1967 |
| 37 | 74 | 35 | 103 | 354998 | 901992 | 5574 | 700 | 8/25/1970 |
| 37 | 74 | 35 | 507 | 357503 | 901993 | 5542 | 903 | 6/25/1997 |
| 37 | 74 | 35 | 259 | 355820 | 901994 | 5554 | 700 | 4/1/1975 |
| 37 | 74 | 35 | 12 | 355599 | 901995 | 5557 | 625 | 11/17/1967 |
| 37 | 74 | 35 | 102 | 354597 | 901997 | 5590 | 700 | 8/26/1970 |
| 37 | 74 | 35 | 30C | 353810 | 902000 | 5581 | 605 | 1/26/1968 |
| 37 | 74 | 35 | 908 | 357400 | 902000 | 5541 | 881 | 6/30/2005 |
| 37 | 74 | 35 | 907 | 357200 | 902000 | 5540 | 881 | 8/3/2005 |
| 37 | 74 | 35 | 906 | 357100 | 902000 | 5540 | 880 | 7/27/2005 |
| 37 | 74 | 35 | 3679 | 357316 | 902028 | 5540 | 895 | 4/30/1998 |
| 37 | 74 | 35 | 488 | 354594 | 902049 | 5585 | 701 | 8/3/1990 |
| 37 | 74 | 35 | 905 | 357450 | 902050 | 5542 | 880 | 6/30/2005 |
| 37 | 74 | 35 | 677 | 357117 | 902067 | 5540 | 900 | 4/29/1998 |
| 37 | 74 | 35 | 675 | 357166 | 902069 | 5540 | 900 | 4/23/1998 |
| 37 | 74 | 35 | 667 | 357216 | 902072 | 5540 | 905 | 3/25/1998 |
| 37 | 74 | 35 | 570 | 357264 | 902073 | 5540 | 904 | 8/27/1997 |
| 37 | 74 | 35 | 493 | 354491 | 902075 | 5576 | 707 | 7/29/1991 |
| 37 | 74 | 35 | 202 | 353995 | 902077 | 5541 | 660 | 6/21/1973 |
| 37 | 74 | 35 | 365 | 354698 | 902079 | 5582 | 699 | 3/5/1979 |
| 37 | 74 | 35 | 540 | 357365 | 902082 | 5540 | 904 | 8/1/1997 |
| 37 | 74 | 35 | 155 | 354796 | 902087 | 5578 | 700 | 3/16/1972 |
| 37 | 74 | 35 | 515 | 357468 | 902092 | 5542 | 900 | 7/10/1997 |
| 37 | 74 | 35 | 213 | 354102 | 902096 | 5546 | 640 | 6/27/1974 |
| 37 | 74 | 35 | 169C | 354792 | 902101 | 5577 | 650 | 5/16/1973 |
| 37 | 74 | 35 | 214 | 354236 | 902101 | 5555 | 600 | 7/2/1974 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 35 | 688 | 357064 | 902114 | 5540 | 1009 | 5/14/1998 |
| 37 | 74 | 35 | 903 | 357300 | 902125 | 5540 | 881 | 6/24/2005 |
| 37 | 74 | 35 | 500 | 354392 | 902133 | 5568 | 701 | 6/16/1992 |
| 37 | 74 | 35 | 502 | 352895 | 902135 | 10 | 960 | 8/31/1993 |
| 37 | 74 | 35 | 578 | 354609 | 902138 | 5579 | 684 | 12/8/1997 |
| 37 | 74 | 35 | 863 | 357115 | 902142 | 5540 | 879 | 3/31/1999 |
| 37 | 74 | 35 | 870 | 357162 | 902147 | 5541 | 874 | 6/1/1999 |
| 37 | 74 | 35 | 904 | 357500 | 902150 | 5542 | 878 | 6/28/2005 |
| 37 | 74 | 35 | 198 | 354102 | 902159 | 5544 | 660 | 6/22/1973 |
| 37 | 74 | 35 | 902 | 357050 | 902170 | 5540 | 881 | 8/4/2005 |
| 37 | 74 | 35 | 655 | 357249 | 902174 | 5541 | 903 | 3/13/1998 |
| 37 | 74 | 35 | 660 | 357358 | 902182 | 5540 | 927 | 3/12/1998 |
| 37 | 74 | 35 | 101 | 354803 | 902185 | 5571 | 700 | 8/24/1970 |
| 37 | 74 | 35 | 105 | 354609 | 902187 | 5579 | 701 | 8/31/1970 |
| 37 | 74 | 35 | 114 | 355001 | 902187 | 5566 | 622 | 6/9/1971 |
| 37 | 74 | 35 | 125 | 355212 | 902189 | 5559 | 700 | 2/29/1972 |
| 37 | 74 | 35 | 728 | 357444 | 902191 | 5540 | 883 | 6/11/1998 |
| 37 | 74 | 35 | 405 | 357491 | 902192 | 5543 | 885 | 8/14/1989 |
| 37 | 74 | 35 | 195 | 354103 | 902192 | 5547 | 660 | 6/19/1973 |
| 37 | 74 | 35 | 360 | 354896 | 902200 | 5568 | 686 | 3/2/1979 |
| 37 | 74 | 35 | 403 | 357893 | 902206 | 5548 | 884 | 8/9/1989 |
| 37 | 74 | 35 | 197 | 354802 | 902208 | 5571 | 660 | 6/20/1973 |
| 37 | 74 | 35 | 106 | 354413 | 902212 | 5579 | 700 | 9/15/1970 |
| 37 | 74 | 35 | 700 | 357051 | 902216 | 5540 | 902 | 6/1/1998 |
| 37 | 74 | 35 | 687 | 357100 | 902217 | 5540 | 893 | 5/13/1998 |
| 37 | 74 | 35 | 579 | 354466 | 902218 | 5582 | 681 | 12/9/1997 |
| 37 | 74 | 35 | 901 | 357300 | 902225 | 5540 | 881 | 6/23/2005 |
| 37 | 74 | 35 | 900 | 357200 | 902225 | 5539 | 880 | 8/2/2005 |
| 37 | 74 | 35 | 191 | 354803 | 902230 | 5570 | 1000 | 6/18/1973 |
| 37 | 74 | 35 | 173 | 354105 | 902231 | 5548 | 660 | 6/15/1973 |
| 37 | 74 | 35 | 162 | 354206 | 902232 | 5559 | 700 | 3/20/1972 |
| 37 | 74 | 35 | 586 | 354280 | 902238 | 5564 | 702 | 12/16/1997 |
| 37 | 74 | 35 | 862 | 357469 | 902241 | 5540 | 881 | 4/20/1999 |
| 37 | 74 | 35 | 196 | 354608 | 902241 | 5580 | 660 | 6/20/1973 |
| 37 | 74 | 35 | 672 | 357520 | 902245 | 5541 | 899 | 4/6/1998 |
| 37 | 74 | 35 | 203 | 354414 | 902263 | 5582 | 650 | 6/22/1973 |
| 37 | 74 | 35 | 345 | 354469 | 902266 | 5555 | 640 | 8/16/1976 |
| 37 | 74 | 35 | 665 | 357243 | 902269 | 5540 | 900 | 3/21/1998 |
| 37 | 74 | 35 | 899 | 357050 | 902270 | 5540 | 881 | 6/27/2005 |
| 37 | 74 | 35 | 674 | 357147 | 902270 | 5540 | 898 | 4/22/1998 |
| 37 | 74 | 35 | 666 | 357195 | 902271 | 5540 | 882 | 3/25/1998 |
| 37 | 74 | 35 | 172 | 354800 | 902282 | 5571 | 660 | 6/14/1973 |
| 37 | 74 | 35 | 190 | 354608 | 902282 | 5583 | 700 | 6/18/1973 |
| 37 | 74 | 35 | 580 | 354207 | 902283 | 5558 | 703 | 12/8/1997 |
| 37 | 74 | 35 | 357 | 354904 | 902284 | 5567 | 602 | 11/29/1977 |
| 37 | 74 | 35 | 871 | 357342 | 902285 | 5541 | 878 | 5/27/1999 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 35 | 577 | 354992 | 902287 | 5564 | 683 | 12/2/1997 |
| 37 | 74 | 35 | 664 | 357392 | 902288 | 5540 | 902 | 3/23/1998 |
| 37 | 74 | 35 | 506 | 357442 | 902292 | 5540 | 904 | 6/24/1997 |
| 37 | 74 | 35 | 654 | 357491 | 902295 | 5540 | 915 | 3/12/1998 |
| 37 | 74 | 35 | 663 | 357846 | 902297 | 5545 | 899 | 3/24/1998 |
| 37 | 74 | 35 | 661 | 357540 | 902300 | 5541 | 887 | 3/24/1998 |
| 37 | 74 | 35 | 402 | 357895 | 902306 | 5549 | 884 | 6/21/1989 |
| 37 | 74 | 35 | 686 | 357051 | 902313 | 5540 | 901 | 5/4/1998 |
| 37 | 74 | 35 | 161 | 354511 | 902313 | 5589 | 700 | 3/20/1972 |
| 37 | 74 | 35 | 199 | 354413 | 902314 | 5581 | 660 | 6/21/1973 |
| 37 | 74 | 35 | 676 | 357099 | 902316 | 5540 | 900 | 4/28/1998 |
| 37 | 74 | 35 | 669 | 357241 | 902320 | 5539 | 902 | 3/26/1998 |
| 37 | 74 | 35 | 898 | 357000 | 902325 | 5540 | 878 | 6/24/2005 |
| 37 | 74 | 35 | 245A | 354312 | 902326 | 5567 | 600 | 2/18/1976 |
| 37 | 74 | 35 | 726 | 357390 | 902338 | 5539 | 906 | 6/19/1998 |
| 37 | 74 | 35 | 171 | 354211 | 902339 | 5557 | 660 | 6/15/1973 |
| 37 | 74 | 35 | 861 | 357436 | 902341 | 5540 | 881 | 3/31/1999 |
| 37 | 74 | 35 | 671 | 357795 | 902344 | 5545 | 854 | 3/27/1998 |
| 37 | 74 | 35 | 193 | 354516 | 902349 | 5588 | 660 | 6/19/1973 |
| 37 | 74 | 35 | 896 | 357200 | 902350 | 5539 | 879 | 8/1/2005 |
| 37 | 74 | 35 | 897 | 357300 | 902350 | 5540 | 881 | 6/23/2005 |
| 37 | 74 | 35 | 215 | 354414 | 902360 | 5579 | 640 | 6/24/1974 |
| 37 | 74 | 35 | 774 | 357050 | 902362 | 5540 | 901 | 6/25/1998 |
| 37 | 74 | 35 | 685 | 357100 | 902365 | 5539 | 976 | 5/8/1998 |
| 37 | 74 | 35 | 110 | 355009 | 902374 | 5569 | 700 | 9/15/1970 |
| 37 | 74 | 35 | 194 | 354212 | 902376 | 5555 | 664 | 6/19/1973 |
| 37 | 74 | 35 | 168C | 355001 | 902379 | 5570 | 650 | 5/16/1973 |
| 37 | 74 | 35 | 109 | 354801 | 902382 | 5577 | 700 | 9/16/1970 |
| 37 | 74 | 35 | 344 | 354897 | 902384 | 5573 | 640 | 8/16/1976 |
| 37 | 74 | 35 | 762 | 357385 | 902387 | 5539 | 903 | 6/23/1998 |
| 37 | 74 | 35 | 170 | 354514 | 902389 | 5587 | 660 | 6/15/1973 |
| 37 | 74 | 35 | 107 | 354391 | 902390 | 5574 | 701 | 9/14/1970 |
| 37 | 74 | 35 | 108 | 354611 | 902394 | 5588 | 699 | 9/11/1970 |
| 37 | 74 | 35 | 254 | 357137 | 902396 | 5539 | 700 | 3/25/1975 |
| 37 | 74 | 35 | 250 | 356299 | 902398 | 5544 | 680 | 3/21/1975 |
| 37 | 74 | 35 | 253 | 356721 | 902398 | 5544 | 700 | 3/25/1975 |
| 37 | 74 | 35 | 895 | 357500 | 902400 | 5540 | 881 | 6/17/2005 |
| 37 | 74 | 35 | 124 | 355203 | 902411 | 5566 | 1000 | 3/2/1972 |
| 37 | 74 | 35 | 698 | 357049 | 902412 | 5540 | 906 | 5/29/1998 |
| 37 | 74 | 35 | 694 | 357097 | 902413 | 5539 | 906 | 5/18/1998 |
| 37 | 74 | 35 | 727 | 357147 | 902415 | 5539 | 906 | 6/16/1998 |
| 37 | 74 | 35 | 759 | 357196 | 902417 | 5539 | 899 | 6/22/1998 |
| 37 | 74 | 35 | 872 | 357288 | 902424 | 5541 | 881 | 5/27/1999 |
| 37 | 74 | 35 | 894 | 357450 | 902450 | 5540 | 862 | 6/8/2005 |
| 37 | 74 | 35 | 699 | 357092 | 902463 | 5539 | 904 | 5/28/1998 |
| 37 | 74 | 35 | 775 | 357142 | 902464 | 5539 | 904 | 6/24/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 35 | 382 | 355041 | 902466 | 5570 | 625 | 10/28/1982 |
| 37 | 74 | 35 | 516 | 357409 | 902490 | 5539 | 900 | 7/11/1997 |
| 37 | 74 | 35 | 653 | 357359 | 902492 | 5540 | 907 | 3/10/1998 |
| 37 | 74 | 35 | 510 | 357637 | 902496 | 5543 | 900 | 7/10/1997 |
| 37 | 74 | 35 | 9 | 357510 | 902500 | 10 | 643 | 9/28/1967 |
| 37 | 74 | 35 | 891 | 357200 | 902500 | 5539 | 880 | 6/22/2005 |
| 37 | 74 | 35 | 892 | 357300 | 902500 | 5539 | 842 | 6/22/2005 |
| 37 | 74 | 35 | 662 | 357558 | 902513 | 5542 | 882 | 3/24/1998 |
| 37 | 74 | 35 | 112 | 354613 | 902519 | 5592 | 624 | 6/22/1971 |
| 37 | 74 | 35 | 116 | 355149 | 902529 | 5578 | 643 | 6/10/1971 |
| 37 | 74 | 35 | 890 | 357450 | 902550 | 5540 | 882 | 6/21/2005 |
| 37 | 74 | 35 | 889 | 357350 | 902550 | 5539 | 880 | 6/20/2005 |
| 37 | 74 | 35 | 537 | 357892 | 902552 | 5546 | 905 | 7/28/1997 |
| 37 | 74 | 35 | 393A | 357541 | 902580 | 5540 | 1050 | 11/1/1986 |
| 37 | 74 | 35 | 169 | 355046 | 902583 | 5583 | 660 | 6/14/1973 |
| 37 | 74 | 35 | 123 | 354998 | 902583 | 5584 | 624 | 6/10/1971 |
| 37 | 74 | 35 | 164 | 355103 | 902584 | 5581 | 700 | 3/17/1972 |
| 37 | 74 | 35 | 404 | 357326 | 902589 | 5541 | 884 | 8/11/1989 |
| 37 | 74 | 35 | 503 | 357379 | 902590 | 5539 | 896 | 6/24/1997 |
| 37 | 74 | 35 | 392 | 357132 | 902591 | 5537 | 1000 | 11/5/1984 |
| 37 | 74 | 35 | 673 | 357479 | 902592 | 5539 | 904 | 3/26/1998 |
| 37 | 74 | 35 | 401 | 357428 | 902592 | 5541 | 883 | 6/20/1989 |
| 37 | 74 | 35 | 400 | 357634 | 902597 | 5544 | 880 | 6/20/1989 |
| 37 | 74 | 35 | 888 | 357200 | 902600 | 5538 | 882 | 6/21/2005 |
| 37 | 74 | 35 | 394A | 357888 | 902601 | 5544 | 980 | 11/19/1986 |
| 37 | 74 | 35 | 668 | 357585 | 902618 | 5540 | 899 | 3/26/1998 |
| 37 | 74 | 35 | 575 | 355146 | 902637 | 5578 | 682 | 12/4/1997 |
| 37 | 74 | 35 | 860 | 357399 | 902642 | 5539 | 880 | 5/26/1999 |
| 37 | 74 | 35 | 504 | 357474 | 902644 | 5538 | 903 | 6/23/1997 |
| 37 | 74 | 35 | 887 | 357300 | 902650 | 5538 | 881 | 6/20/2005 |
| 37 | 74 | 35 | 873 | 357916 | 902664 | 5545 | 880 | 6/1/1999 |
| 37 | 74 | 36 | 36-200 | 358963 | 897455 | 5516 | 800 | 7/2/1975 |
| 37 | 74 | 36 | 36-61 | 359433 | 897455 | 5539 | 880 | 1/28/1975 |
| 37 | 74 | 36 | 36-245 | 361433 | 897455 | 5473 | 600 | 7/10/1975 |
| 37 | 74 | 36 | 36-79 | 359233 | 897455 | 5531 | 840 | 1/31/1975 |
| 37 | 74 | 36 | 36-356 | 358833 | 897455 | 5511 | 800 | 8/19/1975 |
| 37 | 74 | 36 | 36-204 | 359963 | 897455 | 5504 | 596 | 7/8/1975 |
| 37 | 74 | 36 | 36-248 | 360333 | 897455 | 5479 | 840 | 7/11/1975 |
| 37 | 74 | 36 | 36-187 | 358333 | 897455 | 5518 | 617 | 7/1/1975 |
| 37 | 74 | 36 | 36-50 | 358233 | 897455 | 5532 | 617 | 1/17/1975 |
| 37 | 74 | 36 | 36-84 | 359133 | 897455 | 5524 | 818 | 2/5/1975 |
| 37 | 74 | 36 | 36-240 | 360233 | 897455 | 5486 | 598 | 7/10/1975 |
| 37 | 74 | 36 | 36-83 | 359333 | 897455 | 5536 | 816 | 2/4/1975 |
| 37 | 74 | 36 | 36-836 | 358746 | 897467 | 5509 | 816 | 4/28/1977 |
| 37 | 74 | 36 | 36-947 | 358583 | 897480 | 5487 | 875 | 5/26/1977 |
| 37 | 74 | 36 | 36-6h | 357970 | 897481 | 5539 | 893 | 1/11/1968 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-835 | 359028 | 897492 | 5518 | 815 | 3/2/1977 |
| 37 | 74 | 36 | 36-5h | 359537 | 897513 | 5540 | 899 | 1/15/1968 |
| 37 | 74 | 36 | 36-1086 | 361503 | 897524 | 5466.5 | 621 | 8/20/1998 |
| 37 | 74 | 36 | 36-902 | 358086 | 897552 | 5534 | 598 | 3/17/1977 |
| 37 | 74 | 36 | 36-813 | 358228 | 897553 | 5530 | 435 | 3/15/1977 |
| 37 | 74 | 36 | 36-684 | 360233 | 897555 | 5497 | 564 | 1/21/1977 |
| 37 | 74 | 36 | 36-265 | 362933 | 897555 | 5447 | 838 | 7/16/1975 |
| 37 | 74 | 36 | 36-968 | 358533 | 897555 | 5486 | 597 | 5/26/1977 |
| 37 | 74 | 36 | 36-697 | 361633 | 897555 | 5483 | 559 | 1/27/1977 |
| 37 | 74 | 36 | 36-685 | 360333 | 897555 | 5492 | 559 | 1/21/1977 |
| 37 | 74 | 36 | 36-357 | 359233 | 897555 | 5530 | 817 | 8/19/1975 |
| 37 | 74 | 36 | 36-849 | 359031 | 898652 | 5510 | 599 | 3/22/1977 |
| 37 | 74 | 36 | 36-422 | 358183 | 898655 | 5537 | 614 | 9/5/1975 |
| 37 | 74 | 36 | 36-674 | 360533 | 898655 | 5483 | 562 | 1/19/1977 |
| 37 | 74 | 36 | 36-540 | 361033 | 898655 | 5474 | 575 | 12/8/1976 |
| 37 | 74 | 36 | 36-338 | 358333 | 898655 | 5528 | 854 | 8/14/1975 |
| 37 | 74 | 36 | 36-398 | 358083 | 898655 | 5538 | 637 | 9/3/1975 |
| 37 | 74 | 36 | 36-396 | 358633 | 898655 | 5531 | 618 | 9/2/1975 |
| 37 | 74 | 36 | 36-547 | 361233 | 898655 | 5459 | 557 | 12/9/1976 |
| 37 | 74 | 36 | 36-305 | 359283 | 898655 | 5490 | 858 | 8/6/1975 |
| 37 | 74 | 36 | 36-675 | 360633 | 898655 | 5488 | 562 | 1/19/1977 |
| 37 | 74 | 36 | 36-539 | 360933 | 898655 | 5489 | 577 | 12/9/1976 |
| 37 | 74 | 36 | 36-538 | 360833 | 898655 | 5499 | 593 | 12/9/1976 |
| 37 | 74 | 36 | 36-559 | 360733 | 898655 | 5498 | 578 | 12/10/1976 |
| 37 | 74 | 36 | 36-263 | 361933 | 898655 | 5420 | 500 | 7/14/1975 |
| 37 | 74 | 36 | 36-546 | 361133 | 898655 | 5465 | 557 | 12/9/1976 |
| 37 | 74 | 36 | 36-322 | 358533 | 898655 | 5528 | 852 | 8/9/1975 |
| 37 | 74 | 36 | 36-541 | 361333 | 898655 | 5447 | 540 | 12/9/1976 |
| 37 | 74 | 36 | 36-543 | 361533 | 898655 | 5429 | 540 | 12/10/1976 |
| 37 | 74 | 36 | 36-787 | 362203 | 898655 | 5434 | 475 | 2/14/1977 |
| 37 | 74 | 36 | 36-677 | 361733 | 898655 | 5423 | 536 | 1/20/1977 |
| 37 | 74 | 36 | 36-542 | 361433 | 898655 | 5437 | 540 | 12/9/1976 |
| 37 | 74 | 36 | 36-789 | 362077 | 898657 | 5427 | 420 | 2/14/1977 |
| 37 | 74 | 36 | 36-1309 | 359330 | 898660 | 5483.8 | 880 | 6/8/1999 |
| 37 | 74 | 36 | 36-847 | 359385 | 898662 | 5486 | 795 | 5/4/1977 |
| 37 | 74 | 36 | 36-848 | 359116 | 898667 | 5509 | 796 | 5/7/1977 |
| 37 | 74 | 36 | 36-1374 | 359229 | 898702 | 5497.6 | 799 | 7/8/1999 |
| 37 | 74 | 36 | 36-1355 | 359276 | 898705 | 5493.7 | 842 | 7/6/1999 |
| 37 | 74 | 36 | 36-797 | 360838 | 898739 | 5494 | 561 | 3/4/1977 |
| 37 | 74 | 36 | 36-932 | 359031 | 898746 | 5502 | 420 | 3/24/1977 |
| 37 | 74 | 36 | 36-930 | 358835 | 898748 | 5508 | 581 | 3/23/1977 |
| 37 | 74 | 36 | 36-931 | 358938 | 898750 | 5506 | 580 | 3/23/1977 |
| 37 | 74 | 36 | 36-410 | 358033 | 898755 | 5543 | 617 | 9/3/1975 |
| 37 | 74 | 36 | 36-421 | 358133 | 898755 | 5542 | 614 | 9/5/1975 |
| 37 | 74 | 36 | 36-499 | 359283 | 898755 | 5496 | 782 | 5/10/1976 |
| 37 | 74 | 36 | 36-610 | 361133 | 898755 | 5477 | 576 | 1/10/1977 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-247 | 361933 | 898755 | 5434 | 440 | 7/14/1975 |
| 37 | 74 | 36 | 36-609 | 361233 | 898755 | 5472 | 582 | 1/6/1977 |
| 37 | 74 | 36 | 36-439 | 360933 | 898755 | 5491 | 617 | 9/11/1975 |
| 37 | 74 | 36 | 36-136 | 358633 | 898755 | 5514 | 817 | 6/25/1975 |
| 37 | 74 | 36 | 36-135 | 359333 | 898755 | 5493 | 796 | 6/26/1975 |
| 37 | 74 | 36 | 36-151 | 358733 | 898755 | 5511 | 820 | 6/27/1975 |
| 37 | 74 | 36 | 36-650 | 361033 | 898755 | 5486 | 580 | 1/13/1977 |
| 37 | 74 | 36 | 36-154 | 359233 | 898755 | 5497 | 802 | 6/27/1975 |
| 37 | 74 | 36 | 36-155 | 358233 | 898755 | 5540 | 840 | 6/28/1975 |
| 37 | 74 | 36 | 36-686 | 361333 | 898755 | 5457 | 239 | 1/21/1977 |
| 37 | 74 | 36 | 36-170 | 357943 | 898755 | 5544 | 640 | 6/30/1975 |
| 37 | 74 | 36 | 36-171 | 358433 | 898755 | 5533 | 836 | 6/30/1975 |
| 37 | 74 | 36 | 36-178 | 358333 | 898755 | 5538 | 84 | 7/2/1975 |
| 37 | 74 | 36 | 36-928 | 359433 | 898759 | 5484 | 796 | 5/4/1977 |
| 37 | 74 | 36 | 36-924 | 358545 | 898765 | 5525 | 839 | 4/28/1977 |
| 37 | 74 | 36 | 36-1383 | 359145 | 898805 | 5489.1 | 801 | 7/13/1999 |
| 37 | 74 | 36 | 36-1359 | 359196 | 898806 | 5489.4 | 862 | 7/6/1999 |
| 37 | 74 | 36 | 36-798 | 360870 | 898822 | 5477 | 557 | 3/4/1977 |
| 37 | 74 | 36 | 36-927 | 358934 | 898851 | 5499 | 598 | 3/23/1977 |
| 37 | 74 | 36 | 36-937 | 359383 | 898852 | 5484 | 796 | 5/5/1977 |
| 37 | 74 | 36 | 36-933 | 359185 | 898853 | 5491 | 795 | 5/5/1977 |
| 37 | 74 | 36 | 36-1307 | 359336 | 898853 | 5479.9 | 880 | 6/8/1999 |
| 37 | 74 | 36 | 36-916 | 358179 | 898854 | 5553 | 643 | 4/11/1977 |
| 37 | 74 | 36 | 36-537 | 362033 | 898855 | 5455 | 536 | 12/8/1976 |
| 37 | 74 | 36 | 36-296 | 358333 | 898855 | 5544 | 855 | 7/28/1975 |
| 37 | 74 | 36 | 36-776 | 360733 | 898855 | 5473 | 581 | 2/10/1977 |
| 37 | 74 | 36 | 36-302 | 358433 | 898855 | 5541 | 859 | 7/29/1975 |
| 37 | 74 | 36 | 36-411 | 357983 | 898855 | 5550 | 637 | 9/4/1975 |
| 37 | 74 | 36 | 36-667 | 362133 | 898855 | 5456 | 469 | 1/19/1977 |
| 37 | 74 | 36 | 36-298 | 359283 | 898855 | 5482 | 838 | 8/5/1975 |
| 37 | 74 | 36 | 36-666 | 362233 | 898855 | 5461 | 542 | 1/18/1977 |
| 37 | 74 | 36 | 36-259 | 362433 | 898855 | 5446 | 438 | 7/14/1975 |
| 37 | 74 | 36 | 36-665 | 362333 | 898855 | 5464 | 542 | 1/18/1977 |
| 37 | 74 | 36 | 36-536 | 361933 | 898855 | 5450 | 540 | 12/8/1976 |
| 37 | 74 | 36 | 36-799 | 360986 | 898855 | 5479 | 560 | 3/2/1977 |
| 37 | 74 | 36 | 36-773 | 361283 | 898855 | 5473 | 580 | 2/9/1977 |
| 37 | 74 | 36 | 36-774 | 361183 | 898855 | 5476 | 580 | 2/9/1977 |
| 37 | 74 | 36 | 36-775 | 361083 | 898855 | 5480 | 579 | 2/8/1977 |
| 37 | 74 | 36 | 36-498 | 359233 | 898855 | 5490 | 760 | 5/10/1976 |
| 37 | 74 | 36 | 36-929 | 359033 | 898856 | 5494 | 417 | 3/23/1977 |
| 37 | 74 | 36 | 36-915 | 358087 | 898857 | 5555 | 640 | 4/11/1977 |
| 37 | 74 | 36 | 36-926 | 358832 | 898858 | 5512 | 596 | 3/23/1977 |
| 37 | 74 | 36 | 36-923 | 358737 | 898861 | 5523 | 596 | 3/24/1977 |
| 37 | 74 | 36 | 36-1354 | 359142 | 898903 | 5486.1 | 843 | 7/6/1999 |
| 37 | 74 | 36 | 36-801 | 360876 | 898920 | 5463 | 560 | 3/4/1977 |
| 37 | 74 | 36 | 36-1331 | 359088 | 898945 | 5490.9 | 800 | 6/18/1999 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-828 | 362332 | 898946 | 5461 | 475 | 3/7/1977 |
| 37 | 74 | 36 | 36-1306 | 359292 | 898949 | 5479.3 | 881 | 6/8/1999 |
| 37 | 74 | 36 | 36-1305 | 359187 | 898951 | 5485.3 | 881 | 6/8/1999 |
| 37 | 74 | 36 | 36-603 | 361233 | 898955 | 5464 | 580 | 1/10/1977 |
| 37 | 74 | 36 | 36-601 | 361433 | 898955 | 5472 | 602 | 1/6/1977 |
| 37 | 74 | 36 | 36-40 | 359133 | 898955 | 5491 | 798 | 1/3/1975 |
| 37 | 74 | 36 | 36-606 | 360833 | 898955 | 5464 | 580 | 1/11/1977 |
| 37 | 74 | 36 | 36-607 | 360733 | 898955 | 5465 | 602 | 1/20/1977 |
| 37 | 74 | 36 | 36-130 | 358233 | 898955 | 5553 | 840 | 6/17/1975 |
| 37 | 74 | 36 | 36-22 | 359033 | 898955 | 5498 | 800 | 12/11/1974 |
| 37 | 74 | 36 | 36-56 | 358133 | 898955 | 5556 | 897 | 1/20/1975 |
| 37 | 74 | 36 | 36-602 | 361333 | 898955 | 5466 | 580 | 1/10/1977 |
| 37 | 74 | 36 | 36-137 | 358033 | 898955 | 5558 | 640 | 6/26/1975 |
| 37 | 74 | 36 | 36-604 | 361133 | 898955 | 5469 | 600 | 1/19/1977 |
| 37 | 74 | 36 | 36-23 | 358633 | 898955 | 5538 | 900 | 12/12/1974 |
| 37 | 74 | 36 | 36-920 | 358433 | 898955 | 5552 | 841 | 4/26/1977 |
| 37 | 74 | 36 | 36-36 | 358333 | 898955 | 5521 | 900 | 12/31/1974 |
| 37 | 74 | 36 | 36-19 | 358833 | 898955 | 5517 | 920 | 12/9/1974 |
| 37 | 74 | 36 | 36-88 | 359233 | 898955 | 5484 | 792 | 6/26/1975 |
| 37 | 74 | 36 | 36-131 | 359333 | 898955 | 5479 | 780 | 6/17/1975 |
| 37 | 74 | 36 | 36-419 | 357958 | 898955 | 5557 | 637 | 9/4/1975 |
| 37 | 74 | 36 | 36-605 | 360933 | 898955 | 5472 | 582 | 1/11/1977 |
| 37 | 74 | 36 | 36-925 | 358936 | 898959 | 5506 | 416 | 3/24/1977 |
| 37 | 74 | 36 | 36-1015 | 358532 | 898960 | 5548 | 840 | 4/28/1977 |
| 37 | 74 | 36 | 36-1016 | 359535 | 898962 | 5476 | 595 | 5/11/1977 |
| 37 | 74 | 36 | 36-922 | 358732 | 898963 | 5534 | 838 | 4/27/1977 |
| 37 | 74 | 36 | 36-996 | 359424 | 898974 | 5479 | 596 | 5/4/1977 |
| 37 | 74 | 36 | 36-1373 | 359086 | 898998 | 5495 | 800 | 7/8/1999 |
| 37 | 74 | 36 | 36-26h | 361760 | 899000 | 5457 | 602 | 4/23/1969 |
| 37 | 74 | 36 | 36-1353 | 359135 | 899001 | 5492.1 | 843 | 7/6/1999 |
| 37 | 74 | 36 | 36-800 | 360823 | 899018 | 5441 | 560 | 3/7/1977 |
| 37 | 74 | 36 | 36-761 | 361433 | 899030 | 5461 | 560 | 2/9/1977 |
| 37 | 74 | 36 | 36-762 | 361333 | 899030 | 5453 | 561 | 2/10/1977 |
| 37 | 74 | 36 | 36-763 | 361233 | 899030 | 5454 | 560 | 2/9/1977 |
| 37 | 74 | 36 | 36-765 | 360889 | 899030 | 5453 | 560 | 2/14/1977 |
| 37 | 74 | 36 | 36-825 | 362433 | 899050 | 5435 | 435 | 3/7/1977 |
| 37 | 74 | 36 | 36-826 | 362334 | 899052 | 5441 | 436 | 3/7/1977 |
| 37 | 74 | 36 | 36-832 | 362237 | 899054 | 5450 | 455 | 3/8/1977 |
| 37 | 74 | 36 | 36-335 | 358933 | 899055 | 5518 | 875 | 8/11/1975 |
| 37 | 74 | 36 | 36-392 | 358833 | 899055 | 5531 | 840 | 8/27/1975 |
| 37 | 74 | 36 | 36-420 | 357983 | 899055 | 5560 | 657 | 9/14/1975 |
| 37 | 74 | 36 | 36-320 | 358733 | 899055 | 5542 | 834 | 8/9/1975 |
| 37 | 74 | 36 | 36-300 | 359133 | 899055 | 5499 | 838 | 7/29/1975 |
| 37 | 74 | 36 | 36-303 | 359233 | 899055 | 5491 | 837 | 7/30/1975 |
| 37 | 74 | 36 | 36-306 | 358633 | 899055 | 5546 | 837 | 8/6/1975 |
| 37 | 74 | 36 | 36-297 | 358533 | 899055 | 5548 | 860 | 7/28/1975 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-299 | 358333 | 899055 | 5553 | 838 | 7/29/1975 |
| 37 | 74 | 36 | 36-497 | 359183 | 899055 | 5513 | 818 | 5/6/1976 |
| 37 | 74 | 36 | 36-919 | 358434 | 899056 | 5555 | 841 | 4/26/1977 |
| 37 | 74 | 36 | 36-918 | 358192 | 899057 | 5557 | 636 | 3/24/1977 |
| 37 | 74 | 36 | 36-917 | 358089 | 899059 | 5565 | 638 | 4/11/1977 |
| 37 | 74 | 36 | 36-1017 | 359519 | 899059 | 5484 | 597 | 5/11/1977 |
| 37 | 74 | 36 | 36-936 | 359336 | 899060 | 5486 | 420 | 3/24/1977 |
| 37 | 74 | 36 | 36-995 | 359434 | 899075 | 5489 | 601 | 4/23/1977 |
| 37 | 74 | 36 | 36-1372 | 359092 | 899105 | 5503.3 | 730 | 7/8/1999 |
| 37 | 74 | 36 | 36-1382 | 359045 | 899106 | 5508 | 819 | 7/13/1999 |
| 37 | 74 | 36 | 36-1352 | 359139 | 899107 | 5499.2 | 862 | 7/2/1999 |
| 37 | 74 | 36 | 36-20h | 359033 | 899135 | 5520 | 800 | 4/19/1969 |
| 37 | 74 | 36 | 36-827 | 362346 | 899144 | 5426 | 440 | 3/8/1977 |
| 37 | 74 | 36 | 36-152 | 359133 | 899155 | 5507 | 840 | 6/27/1975 |
| 37 | 74 | 36 | 36-614 | 361633 | 899155 | 5438 | 540 | 1/10/1977 |
| 37 | 74 | 36 | 36-132 | 358333 | 899155 | 5552 | 840 | 6/17/1975 |
| 37 | 74 | 36 | 36-556 | 361033 | 899155 | 5428 | 500 | 12/13/1976 |
| 37 | 74 | 36 | 36-557 | 360933 | 899155 | 5431 | 540 | 12/13/1976 |
| 37 | 74 | 36 | 36-678 | 361533 | 899155 | 5422 | 540 | 1/28/1977 |
| 37 | 74 | 36 | 36-139 | 358033 | 899155 | 5557 | 639 | 6/25/1975 |
| 37 | 74 | 36 | 36-138 | 358633 | 899155 | 5546 | 840 | 6/24/1975 |
| 37 | 74 | 36 | 36-133 | 358833 | 899155 | 5543 | 835 | 6/24/1975 |
| 37 | 74 | 36 | 36-554 | 361133 | 899155 | 5427 | 538 | 12/13/1976 |
| 37 | 74 | 36 | 36-558 | 360833 | 899155 | 5432 | 538 | 12/14/1976 |
| 37 | 74 | 36 | 36-555 | 361233 | 899155 | 5427 | 505 | 12/13/1976 |
| 37 | 74 | 36 | 36-553 | 361333 | 899155 | 5425 | 540 | 12/10/1976 |
| 37 | 74 | 36 | 36-552 | 361433 | 899155 | 5421 | 540 | 12/10/1976 |
| 37 | 74 | 36 | 36-134 | 359233 | 899155 | 5498 | 862 | 6/25/1975 |
| 37 | 74 | 36 | 36-993 | 359383 | 899155 | 5491 | 601 | 4/23/1977 |
| 37 | 74 | 36 | 36-437 | 360743 | 899155 | 5431 | 592 | 9/10/1975 |
| 37 | 74 | 36 | 36-264 | 362433 | 899155 | 5419 | 540 | 7/14/1975 |
| 37 | 74 | 36 | 36-192 | 358933 | 899155 | 5547 | 838 | 7/8/1975 |
| 37 | 74 | 36 | 36-938 | 358130 | 899156 | 5560 | 642 | 4/11/1977 |
| 37 | 74 | 36 | 36-921 | 358733 | 899156 | 5550 | 638 | 3/24/1977 |
| 37 | 74 | 36 | 36-964 | 358233 | 899156 | 5558 | 500 | 4/15/1977 |
| 37 | 74 | 36 | 36-838 | 357966 | 899157 | 5564 | 658 | 4/11/1977 |
| 37 | 74 | 36 | 36-953 | 358437 | 899157 | 5555 | 841 | 4/25/1977 |
| 37 | 74 | 36 | 36-994 | 359478 | 899158 | 5491 | 599 | 4/23/1977 |
| 37 | 74 | 36 | 36-954 | 358534 | 899158 | 5553 | 841 | 4/25/1977 |
| 37 | 74 | 36 | 36-934 | 359343 | 899159 | 5493 | 461 | 3/24/1977 |
| 37 | 74 | 36 | 36-859 | 360984 | 899159 | 5428 | 502 | 3/7/1977 |
| 37 | 74 | 36 | 36-1018 | 359533 | 899160 | 5488 | 597 | 5/10/1977 |
| 37 | 74 | 36 | 36-935 | 359432 | 899160 | 5489 | 503 | 3/24/1977 |
| 37 | 74 | 36 | 36-1350 | 358997 | 899166 | 5520 | 860 | 6/30/1999 |
| 37 | 74 | 36 | 36-1351 | 359097 | 899169 | 5508.6 | 862 | 7/2/1999 |
| 37 | 74 | 36 | 36-496 | 359083 | 899205 | 5528 | 818 | 5/6/1976 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-1273 | 359133 | 899206 | 5508.8 | 849 | 5/7/1999 |
| 37 | 74 | 36 | 36-1349 | 358941 | 899211 | 5536.1 | 860 | 7/7/1999 |
| 37 | 74 | 36 | 36-1327 | 358993 | 899212 | 5526.9 | 840 | 6/18/1999 |
| 37 | 74 | 36 | 36-958 | 358830 | 899248 | 5544 | 835 | 4/30/1977 |
| 37 | 74 | 36 | 36-961 | 359428 | 899251 | 5497 | 621 | 4/22/1977 |
| 37 | 74 | 36 | 36-41 | 358733 | 899255 | 5540 | 860 | 1/3/1974 |
| 37 | 74 | 36 | 36-672 | 362433 | 899255 | 5453 | 418 | 1/20/1977 |
| 37 | 74 | 36 | 36-673 | 362333 | 899255 | 5450 | 415 | 1/20/1977 |
| 37 | 74 | 36 | 36-963 | 359328 | 899255 | 5505 | 596 | 4/23/1977 |
| 37 | 74 | 36 | 36-583 | 362233 | 899255 | 5416 | 416 | 12/16/1976 |
| 37 | 74 | 36 | 36-582 | 362133 | 899255 | 5428 | 417 | 12/16/1976 |
| 37 | 74 | 36 | 36-581 | 362033 | 899255 | 5439 | 410 | 12/15/1976 |
| 37 | 74 | 36 | 36-416 | 358933 | 899255 | 5539 | 835 | 9/8/1975 |
| 37 | 74 | 36 | 36-295 | 359133 | 899255 | 5515 | 838 | 7/31/1975 |
| 37 | 74 | 36 | 36-304 | 359033 | 899255 | 5530 | 834 | 8/6/1975 |
| 37 | 74 | 36 | 36-42 | 358633 | 899255 | 5542 | 616 | 1/10/1975 |
| 37 | 74 | 36 | 36-951 | 358433 | 899255 | 5552 | 501 | 4/15/1977 |
| 37 | 74 | 36 | 36-495 | 359208 | 899255 | 5513 | 821 | 5/5/1976 |
| 37 | 74 | 36 | 36-446 | 358033 | 899255 | 5553 | 637 | 9/9/1975 |
| 37 | 74 | 36 | 36-939 | 358137 | 899256 | 5556 | 643 | 4/15/1977 |
| 37 | 74 | 36 | 36-952 | 358531 | 899256 | 5550 | 501 | 4/17/1977 |
| 37 | 74 | 36 | 36-965 | 358231 | 899256 | 5555 | 500 | 4/15/1977 |
| 37 | 74 | 36 | 36-959 | 359236 | 899257 | 5510 | 817 | 5/11/1977 |
| 37 | 74 | 36 | 36-940 | 357969 | 899258 | 5560 | 657 | 4/11/1977 |
| 37 | 74 | 36 | 36-1271 | 359166 | 899258 | 5508.8 | 859 | 4/20/1999 |
| 37 | 74 | 36 | 36-1019 | 359534 | 899261 | 5492 | 575 | 5/6/1977 |
| 37 | 74 | 36 | 36-1272 | 358989 | 899262 | 5534.5 | 861 | 5/7/1999 |
| 37 | 74 | 36 | 36-1371 | 359098 | 899264 | 5518.4 | 822 | 7/7/1999 |
| 37 | 74 | 36 | 36-1219 | 362391 | 899274 | 5394.5 | 540 | 12/1/1998 |
| 37 | 74 | 36 | 36-1332 | 358829 | 899296 | 5529.4 | 839 | 6/21/1999 |
| 37 | 74 | 36 | 36-1370 | 359045 | 899310 | 5528.3 | 840 | 7/8/1999 |
| 37 | 74 | 36 | 36-1348 | 359094 | 899313 | 5521.8 | 862 | 7/6/1999 |
| 37 | 74 | 36 | 36-1381 | 359145 | 899317 | 5516.7 | 820 | 7/13/1999 |
| 37 | 74 | 36 | 36-957 | 358844 | 899337 | 5528 | 839 | 4/30/1977 |
| 37 | 74 | 36 | 36-851 | 361494 | 899342 | 5424 | 538 | 3/8/1977 |
| 37 | 74 | 36 | 36-852 | 361086 | 899344 | 5435 | 517 | 3/7/1977 |
| 37 | 74 | 36 | 36-853 | 360986 | 899344 | 5434 | 540 | 3/7/1977 |
| 37 | 74 | 36 | 36-1020 | 359519 | 899347 | 5498 | 595 | 5/6/1977 |
| 37 | 74 | 36 | 36-791 | 361435 | 899347 | 5424 | 500 | 2/15/1977 |
| 37 | 74 | 36 | 36-950 | 358440 | 899350 | 5547 | 461 | 4/17/1977 |
| 37 | 74 | 36 | 36-955 | 358624 | 899351 | 5541 | 620 | 4/17/1977 |
| 37 | 74 | 36 | 36-174 | 357953 | 899355 | 5554 | 639 | 7/1/1975 |
| 37 | 74 | 36 | 36-758 | 361033 | 899355 | 5434 | 540 | 2/11/1977 |
| 37 | 74 | 36 | 36-757 | 361333 | 899355 | 5430 | 541 | 2/11/1977 |
| 37 | 74 | 36 | 36-756 | 361533 | 899355 | 5426 | 541 | 2/10/1977 |
| 37 | 74 | 36 | 36-494 | 359208 | 899355 | 5520 | 818 | 5/5/1976 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-24 | 358933 | 899355 | 5520 | 900 | 12/10/1974 |
| 37 | 74 | 36 | 36-27 | 359033 | 899355 | 5521 | 820 | 12/20/1974 |
| 37 | 74 | 36 | 36-29 | 358533 | 899355 | 5541 | 620 | 12/18/1974 |
| 37 | 74 | 36 | 36-956 | 358733 | 899355 | 5536 | 616 | 4/23/1977 |
| 37 | 74 | 36 | 36-153 | 359133 | 899355 | 5519 | 839 | 6/28/1975 |
| 37 | 74 | 36 | 36-942 | 358136 | 899356 | 5556 | 639 | 4/15/1977 |
| 37 | 74 | 36 | 36-941 | 358032 | 899357 | 5558 | 637 | 4/11/1977 |
| 37 | 74 | 36 | 36-1328 | 358984 | 899359 | 5517.3 | 840 | 6/18/1999 |
| 37 | 74 | 36 | 36-960 | 359333 | 899360 | 5510 | 635 | 5/3/1977 |
| 37 | 74 | 36 | 36-1288 | 359091 | 899360 | 5517.3 | 859 | 5/21/1999 |
| 37 | 74 | 36 | 36-962 | 359441 | 899362 | 5503 | 617 | 5/3/1977 |
| 37 | 74 | 36 | 36-1286 | 359061 | 899407 | 5510.8 | 859 | 5/21/1999 |
| 37 | 74 | 36 | 36-1385 | 359110 | 899409 | 5510.4 | 820 | 7/12/1999 |
| 37 | 74 | 36 | 36-1005 | 358727 | 899410 | 5535 | 617 | 5/10/1977 |
| 37 | 74 | 36 | 36-1008 | 358417 | 899443 | 5547 | 618 | 5/10/1977 |
| 37 | 74 | 36 | 36-1021 | 359535 | 899448 | 5503 | 596 | 5/6/1977 |
| 37 | 74 | 36 | 36-1380 | 358982 | 899451 | 5508.3 | 821 | 7/9/1999 |
| 37 | 74 | 36 | 36-622 | 361733 | 899455 | 5423 | 535 | 1/11/1977 |
| 37 | 74 | 36 | 36-260 | 362433 | 899455 | 5409 | 537 | 7/15/1975 |
| 37 | 74 | 36 | 36-569 | 361233 | 899455 | 5451 | 540 | 12/14/1976 |
| 37 | 74 | 36 | 36-414 | 359133 | 899455 | 5507 | 818 | 9/8/1975 |
| 37 | 74 | 36 | 36-570 | 360963 | 899455 | 5433 | 540 | 12/14/1976 |
| 37 | 74 | 36 | 36-301 | 359033 | 899455 | 5508 | 836 | 8/5/1975 |
| 37 | 74 | 36 | 36-580 | 361633 | 899455 | 5432 | 540 | 12/15/1976 |
| 37 | 74 | 36 | 36-568 | 361433 | 899455 | 5443 | 540 | 12/15/1976 |
| 37 | 74 | 36 | 36-591 | 361533 | 899455 | 5432 | 540 | 12/17/1976 |
| 37 | 74 | 36 | 36-597 | 360833 | 899455 | 5460 | 537 | 1/3/1977 |
| 37 | 74 | 36 | 36-448 | 361958 | 899455 | 5413 | 560 | 9/10/1975 |
| 37 | 74 | 36 | 36-412 | 358833 | 899455 | 5532 | 837 | 9/9/1975 |
| 37 | 74 | 36 | 36-429 | 358033 | 899455 | 5553 | 636 | 9/9/1975 |
| 37 | 74 | 36 | 36-596 | 361033 | 899455 | 5457 | 541 | 1/3/1977 |
| 37 | 74 | 36 | 36-592 | 361333 | 899455 | 5452 | 539 | 12/17/1976 |
| 37 | 74 | 36 | 36-623 | 361833 | 899455 | 5412 | 490 | 1/11/1977 |
| 37 | 74 | 36 | 36-68 | 360333 | 899455 | 5473 | 620 | 2/10/1975 |
| 37 | 74 | 36 | 36-1287 | 359082 | 899457 | 5504.7 | 837 | 5/22/1999 |
| 37 | 74 | 36 | 36-943 | 357963 | 899457 | 5559 | 642 | 4/29/1977 |
| 37 | 74 | 36 | 36-1007 | 358527 | 899458 | 5542 | 617 | 5/9/1977 |
| 37 | 74 | 36 | 36-1006 | 358631 | 899461 | 5540 | 617 | 5/9/1977 |
| 37 | 74 | 36 | 36-854 | 361088 | 899466 | 5448 | 540 | 3/8/1977 |
| 37 | 74 | 36 | 36-438 | 361124 | 899468 | 5458 | 593 | 9/11/1975 |
| 37 | 74 | 36 | 36-829 | 362334 | 899469 | 5413 | 435 | 3/8/1977 |
| 37 | 74 | 36 | 36-1022 | 359443 | 899471 | 5507 | 597 | 5/6/1977 |
| 37 | 74 | 36 | 36-1218 | 362383 | 899473 | 5410.5 | 540 | 11/30/1993 |
| 37 | 74 | 36 | 36-493 | 358963 | 899485 | 5522 | 827 | 5/7/1976 |
| 37 | 74 | 36 | 36-830 | 362505 | 899487 | 5412 | 436 | 3/7/1977 |
| 37 | 74 | 36 | 36-492 | 359083 | 899505 | 5506 | 800 | 5/6/1976 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drillec |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-1270 | 359012 | 899507 | 5510.6 | 860 | 5/19/1999 |
| 37 | 74 | 36 | 36-790 | 361581 | 899535 | 5440 | 560 | 2/15/1977 |
| 37 | 74 | 36 | 36-755 | 361446 | 899541 | 5443 | 560 | 2/15/1977 |
| 37 | 74 | 36 | 36-856 | 361331 | 899553 | 5463 | 535 | 3/9/1977 |
| 37 | 74 | 36 | 36-655 | 362933 | 899555 | 5421 | 462 | 1/17/1977 |
| 37 | 74 | 36 | 36-180 | 358933 | 899555 | 5533 | 838 | 6/29/1975 |
| 37 | 74 | 36 | 36-164 | 357943 | 899555 | 5556 | 636 | 6/28/1975 |
| 37 | 74 | 36 | 36-181 | 358133 | 899555 | 5551 | 660 | 6/30/1975 |
| 37 | 74 | 36 | 36-160 | 358033 | 899555 | 5554 | 654 | 6/25/1975 |
| 37 | 74 | 36 | 36-415 | 359133 | 899555 | 5499 | 820 | 9/7/1975 |
| 37 | 74 | 36 | 36-147A | 358733 | 899555 | 5541 | 845 | 6/25/1975 |
| 37 | 74 | 36 | 36-753 | 361533 | 899555 | 5441 | 560 | 2/10/1977 |
| 37 | 74 | 36 | 36-949 | 358633 | 899555 | 5547 | 641 | 4/17/1977 |
| 37 | 74 | 36 | 36-127 | 358833 | 899555 | 5539 | 838 | 6/17/1975 |
| 37 | 74 | 36 | 36-754 | 361633 | 899555 | 5435 | 558 | 2/10/1977 |
| 37 | 74 | 36 | 36-201 | 359033 | 899555 | 5514 | 837 | 7/2/1975 |
| 37 | 74 | 36 | 36-294 | 358533 | 899555 | 5544 | 633 | 8/20/1975 |
| 37 | 74 | 36 | 36-751 | 361233 | 899555 | 5462 | 561 | 2/10/1977 |
| 37 | 74 | 36 | 36-1009 | 358436 | 899557 | 5550 | 621 | 4/30/1977 |
| 37 | 74 | 36 | 36-1289 | 358963 | 899562 | 5528.1 | 860 | 5/28/1999 |
| 37 | 74 | 36 | 36-1269 | 359085 | 899567 | 5504.2 | 860 | 5/15/1999 |
| 37 | 74 | 36 | 36-1337 | 358907 | 899606 | 5533 | 839 | 6/22/1999 |
| 37 | 74 | 36 | 36-1258 | 358957 | 899609 | 5530.2 | 860 | 5/22/1999 |
| 37 | 74 | 36 | 36-855 | 361272 | 899641 | 5473 | 540 | 3/8/1977 |
| 37 | 74 | 36 | 36-944 | 357967 | 899653 | 5564 | 641 | 4/29/1977 |
| 37 | 74 | 36 | 36-857 | 361692 | 899654 | 5441 | 521 | 3/8/1977 |
| 37 | 74 | 36 | 36-2c | 358983 | 899655 | 5530 | 810 | 6/5/1976 |
| 37 | 74 | 36 | 36-292 | 358733 | 899655 | 5540 | 636 | 8/5/1975 |
| 37 | 74 | 36 | 36-286 | 358633 | 899655 | 5543 | 639 | 7/24/1975 |
| 37 | 74 | 36 | 36-285 | 358833 | 899655 | 5536 | 839 | 7/2/1975 |
| 37 | 74 | 36 | 36-658 | 362633 | 899655 | 5423 | 462 | 1/18/1977 |
| 37 | 74 | 36 | 36-447 | 358133 | 899655 | 5553 | 637 | 9/10/1975 |
| 37 | 74 | 36 | 36-663 | 361133 | 899655 | 5531 | 536 | 1/19/1977 |
| 37 | 74 | 36 | 36-662 | 361333 | 899655 | 5501 | 532 | 1/18/1977 |
| 37 | 74 | 36 | 36-661 | 361633 | 899655 | 5481 | 537 | 1/18/1977 |
| 37 | 74 | 36 | 36-659 | 362733 | 899655 | 5414 | 462 | 1/17/1977 |
| 37 | 74 | 36 | 36-413 | 358933 | 899655 | 5536 | 836 | 9/7/1975 |
| 37 | 74 | 36 | 36-656 | 362933 | 899655 | 5430 | 462 | 1/17/1977 |
| 37 | 74 | 36 | 36-624 | 361933 | 899655 | 5418 | 496 | 1/12/1977 |
| 37 | 74 | 36 | 36-621 | 361733 | 899655 | 5423 | 556 | 1/11/1977 |
| 37 | 74 | 36 | 36-620 | 361833 | 899655 | 5432 | 557 | 1/11/1977 |
| 37 | 74 | 36 | 36-619 | 361233 | 899655 | 5477 | 559 | 1/10/1977 |
| 37 | 74 | 36 | 36-587 | 362333 | 899655 | 5432 | 436 | 12/17/1976 |
| 37 | 74 | 36 | 36-393 | 359033 | 899655 | 5523 | 820 | 9/2/1975 |
| 37 | 74 | 36 | 36-586 | 362433 | 899655 | 5431 | 437 | 12/16/1976 |
| 37 | 74 | 36 | 36-585 | 362533 | 899655 | 5426 | 457 | 12/16/1976 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-945 | 358032 | 899656 | 5561 | 638 | 4/15/1977 |
| 37 | 74 | 36 | 36-1010 | 358534 | 899656 | 5549 | 637 | 5/3/1977 |
| 37 | 74 | 36 | 36-1011 | 358438 | 899657 | 5551 | 619 | 5/3/1977 |
| 37 | 74 | 36 | 36-1346 | 358881 | 899661 | 5528.9 | 864 | 7/2/1999 |
| 37 | 74 | 36 | 36-1336 | 358882 | 899661 | 5529.1 | 861 | 6/21/1999 |
| 37 | 74 | 36 | 36-1338 | 358880 | 899711 | 5522 | 838 | 6/30/1999 |
| 37 | 74 | 36 | 36-1211 | 363020 | 899734 | 5431.8 | 580 | 11/22/1998 |
| 37 | 74 | 36 | 36-970 | 358833 | 899745 | 5531 | 836 | 4/30/1977 |
| 37 | 74 | 36 | 36-966 | 357964 | 899754 | 5565 | 659 | 4/22/1977 |
| 37 | 74 | 36 | 36-162 | 358333 | 899755 | 5549 | 633 | 6/27/1975 |
| 37 | 74 | 36 | 36-724 | 361533 | 899755 | 5461 | 551 | 2/1/1977 |
| 37 | 74 | 36 | 36-545 | 362933 | 899755 | 5430 | 440 | 12/9/1976 |
| 37 | 74 | 36 | 36-48 | 359133 | 899755 | 5517 | 893 | 1/22/1975 |
| 37 | 74 | 36 | 36-166 | 358433 | 899755 | 5547 | 639 | 6/28/1975 |
| 37 | 74 | 36 | 36-169 | 358733 | 899755 | 5532 | 836 | 6/29/1975 |
| 37 | 74 | 36 | 36-723 | 361633 | 899755 | 5455 | 562 | 2/1/1977 |
| 37 | 74 | 36 | 36-26 | 358933 | 899755 | 5523 | 910 | 12/13/1974 |
| 37 | 74 | 36 | 36-64 | 359033 | 899755 | 5520 | 858 | 2/5/1975 |
| 37 | 74 | 36 | 36-725 | 361333 | 899755 | 5463 | 562 | 2/3/1977 |
| 37 | 74 | 36 | 36-726 | 361233 | 899755 | 5474 | 560 | 2/3/1979 |
| 37 | 74 | 36 | 36-80 | 358533 | 899755 | 5544 | 615 | 2/6/1975 |
| 37 | 74 | 36 | 36-1268 | 358987 | 899756 | 5518.7 | 861 | 5/21/1999 |
| 37 | 74 | 36 | 36-967 | 358034 | 899757 | 5564 | 639 | 4/15/1977 |
| 37 | 74 | 36 | 36-969 | 358130 | 899759 | 5561 | 639 | 4/15/1977 |
| 37 | 74 | 36 | 36-987 | 358638 | 899760 | 5545 | 641 | 4/21/1977 |
| 37 | 74 | 36 | 36-858 | 361740 | 899771 | 5448 | 540 | 3/9/1977 |
| 37 | 74 | 36 | 36-1257 | 358961 | 899803 | 5530.4 | 861 | 5/19/1999 |
| 37 | 74 | 36 | 36-1267 | 359007 | 899806 | 5528.1 | 857 | 5/19/1999 |
| 37 | 74 | 36 | 36-1220 | 362963 | 899829 | 5422.6 | 560 | 12/1/1998 |
| 37 | 74 | 36 | 36-1213 | 363014 | 899833 | 5423.1 | 560 | 11/30/1998 |
| 37 | 74 | 36 | 36-1210 | 363064 | 899837 | 5423 | 560 | 11/22/1998 |
| 37 | 74 | 36 | 36-732 | 361483 | 899855 | 5470 | 562 | 2/2/1977 |
| 37 | 74 | 36 | 36-664 | 360833 | 899855 | 5491 | 579 | 1/19/1977 |
| 37 | 74 | 36 | 36-730 | 361683 | 899855 | 5459 | 563 | 2/2/1977 |
| 37 | 74 | 36 | 36-729 | 361583 | 899855 | 5464 | 554 | 2/3/1977 |
| 37 | 74 | 36 | 36-728 | 361333 | 899855 | 5479 | 548 | 2/1/1977 |
| 37 | 74 | 36 | 36-727 | 361233 | 899855 | 5474 | 561 | 2/2/1977 |
| 37 | 74 | 36 | 36-491 | 358983 | 899855 | 5535 | 847 | 4/22/1976 |
| 37 | 74 | 36 | 36-731 | 361783 | 899855 | 5452 | 550 | 2/7/1977 |
| 37 | 74 | 36 | 36-975 | 358033 | 899855 | 5565 | 658 | 4/22/1977 |
| 37 | 74 | 36 | 36-283 | 358733 | 899855 | 5541 | 837 | 7/24/1975 |
| 37 | 74 | 36 | 36-490 | 358883 | 899855 | 5537 | 850 | 4/22/1976 |
| 37 | 74 | 36 | 36-544 | 362933 | 899855 | 5424 | 440 | 12/9/1976 |
| 37 | 74 | 36 | 36-284 | 358833 | 899855 | 5537 | 838 | 7/25/1975 |
| 37 | 74 | 36 | 36-417 | 359033 | 899855 | 5531 | 837 | 9/6/1975 |
| 37 | 74 | 36 | 36-291 | 358933 | 899855 | 5538 | 838 | 7/27/1975 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-978 | 358332 | 899855 | 5557 | 637 | 4/17/1977 |
| 37 | 74 | 36 | 36-979 | 358437 | 899856 | 5554 | 637 | 4/22/1977 |
| 37 | 74 | 36 | 36-976 | 358138 | 899856 | 5563 | 638 | 4/17/1977 |
| 37 | 74 | 36 | 36-974 | 357959 | 899857 | 5562 | 641 | 4/29/1977 |
| 37 | 74 | 36 | 36-980 | 358537 | 899857 | 5551 | 640 | 4/21/1977 |
| 37 | 74 | 36 | 36-1003 | 358096 | 899857 | 5564 | 658 | 4/23/1977 |
| 37 | 74 | 36 | 36-977 | 358232 | 899857 | 5561 | 638 | 4/17/1977 |
| 37 | 74 | 36 | 36-986 | 358636 | 899859 | 5536 | 640 | 4/21/1977 |
| 37 | 74 | 36 | 36-990 | 359109 | 899869 | 5535 | 834 | 4/26/1977 |
| 37 | 74 | 36 | 36-449 | 362399 | 899871 | 5461 | 600 | 9/11/1975 |
| 37 | 74 | 36 | 36-1240 | 359733 | 899890 | 5516.3 | 645 | 12/10/1998 |
| 37 | 74 | 36 | 36-489 | 358933 | 899905 | 5538 | 838 | 4/22/1976 |
| 37 | 74 | 36 | 36-1266 | 358980 | 899911 | 5534.9 | 860 | 4/20/1999 |
| 37 | 74 | 36 | 36-1304 | 358438 | 899912 | 5549.4 | 860 | 6/15/1999 |
| 37 | 74 | 36 | 36-1324 | 358488 | 899916 | 5548.2 | 863 | 6/18/1999 |
| 37 | 74 | 36 | 36-1265 | 359029 | 899918 | 5531.8 | 861 | 5/19/1999 |
| 37 | 74 | 36 | 36-1340 | 358539 | 899919 | 5546.6 | 861 | 7/2/1999 |
| 37 | 74 | 36 | 36-1333 | 358748 | 899922 | 5539.7 | 861 | 6/23/1999 |
| 37 | 74 | 36 | 36-989 | 359133 | 899954 | 5541 | 836 | 4/25/1977 |
| 37 | 74 | 36 | 36-122 | 358833 | 899955 | 5541 | 857 | 6/15/1975 |
| 37 | 74 | 36 | 36-434 | 362133 | 899955 | 5443 | 595 | 9/7/1975 |
| 37 | 74 | 36 | 36-533 | 361633 | 899955 | 5467 | 550 | 12/8/1976 |
| 37 | 74 | 36 | 36-983 | 358236 | 899955 | 5564 | 660 | 4/21/1977 |
| 37 | 74 | 36 | 36-534 | 361733 | 899955 | 5462 | 557 | 12/7/1976 |
| 37 | 74 | 36 | 36-124 | 358633 | 899955 | 5547 | 617 | 6/16/1975 |
| 37 | 74 | 36 | 36-432 | 361433 | 899955 | 5478 | 597 | 9/7/1975 |
| 37 | 74 | 36 | 36-146 | 358733 | 899955 | 5543 | 858 | 6/26/1975 |
| 37 | 74 | 36 | 36-535 | 361833 | 899955 | 5454 | 560 | 12/16/1976 |
| 37 | 74 | 36 | 36-433 | 361333 | 899955 | 5485 | 596 | 9/6/1975 |
| 37 | 74 | 36 | 36-590 | 361933 | 899955 | 5447 | 560 | 12/16/1976 |
| 37 | 74 | 36 | 36-488 | 358983 | 899955 | 5537 | 837 | 4/22/1976 |
| 37 | 74 | 36 | 36-981 | 358036 | 899955 | 5567 | 659 | 4/22/1977 |
| 37 | 74 | 36 | 36-982 | 358133 | 899955 | 5567 | 656 | 4/17/1977 |
| 37 | 74 | 36 | 36-123 | 359033 | 899955 | 5536 | 860 | 6/15/1975 |
| 37 | 74 | 36 | 36-530 | 360833 | 899955 | 5498 | 580 | 12/8/1976 |
| 37 | 74 | 36 | 36-261 | 362933 | 899955 | 5517 | 538 | 7/15/1975 |
| 37 | 74 | 36 | 36-140 | 358533 | 899955 | 5550 | 617 | 6/17/1975 |
| 37 | 74 | 36 | 36-528 | 361033 | 899955 | 5484 | 580 | 12/8/1976 |
| 37 | 74 | 36 | 36-532 | 361533 | 899955 | 5474 | 560 | 12/15/1976 |
| 37 | 74 | 36 | 36-529 | 360933 | 899955 | 5491 | 580 | 12/8/1976 |
| 37 | 74 | 36 | 36-531 | 360733 | 899955 | 5507 | 596 | 12/8/1976 |
| 37 | 74 | 36 | 36-141 | 358933 | 899955 | 5539 | 860 | 6/16/1975 |
| 37 | 74 | 36 | 36-984 | 358337 | 899957 | 5561 | 659 | 4/21/1977 |
| 37 | 74 | 36 | 36-992 | 359534 | 899957 | 5537 | 537 | 4/22/1977 |
| 37 | 74 | 36 | 36-436 | 361202 | 899966 | 5485 | 595 | 9/10/1975 |
| 37 | 74 | 36 | 36-879 | 359728 | 899992 | 5529 | 597 | 3/14/1977 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-487 | 358983 | 900005 | 5538 | 831 | 4/21/1976 |
| 37 | 74 | 36 | 36-486 | 358783 | 900005 | 5543 | 837 | 5/4/1976 |
| 37 | 74 | 36 | 36-485 | 358683 | 900005 | 5545 | 839 | 5/3/1976 |
| 37 | 74 | 36 | 36-831 | 362636 | 900015 | 5441 | 475 | 3/8/1977 |
| 37 | 74 | 36 | 36-1369 | 359023 | 900017 | 5536.5 | 836 | 7/7/1999 |
| 37 | 74 | 36 | 36-24h | 362407 | 900021 | 5471 | 602 | 4/22/1969 |
| 37 | 74 | 36 | 36-9 | 362012 | 900040 | 5450 | 585 | 5/6/1974 |
| 37 | 74 | 36 | 36-1000 | 358438 | 900048 | 5562 | 660 | 4/21/1977 |
| 37 | 74 | 36 | 36-1004 | 358385 | 900050 | 5564 | 657 | 4/23/1977 |
| 37 | 74 | 36 | 36-991 | 359533 | 900053 | 5538 | 562 | 4/21/1977 |
| 37 | 74 | 36 | 36-865 | 361684 | 900053 | 5472 | 560 | 3/9/1977 |
| 37 | 74 | 36 | 36-988 | 359135 | 900054 | 5542 | 837 | 4/25/1977 |
| 37 | 74 | 36 | 36-1012 | 359433 | 900055 | 5540 | 559 | 5/11/1977 |
| 37 | 74 | 36 | 36-267 | 358933 | 900055 | 5541 | 858 | 7/17/1975 |
| 37 | 74 | 36 | 36-266 | 358833 | 900055 | 5542 | 857 | 7/22/1975 |
| 37 | 74 | 36 | 36-653 | 360833 | 900055 | 5511 | 600 | 1/14/1977 |
| 37 | 74 | 36 | 36-668 | 362933 | 900055 | 5406 | 422 | 1/18/1977 |
| 37 | 74 | 36 | 36-282 | 358733 | 900055 | 5546 | 857 | 7/24/1975 |
| 37 | 74 | 36 | 36-430 | 361033 | 900055 | 5499 | 596 | 9/6/1975 |
| 37 | 74 | 36 | 36-418 | 359033 | 900055 | 5538 | 855 | 9/6/1975 |
| 37 | 74 | 36 | 36-18h | 360948 | 900055 | 5502 | 900 | 3/7/1968 |
| 37 | 74 | 36 | 36-290 | 358633 | 900055 | 5550 | 860 | 7/26/1975 |
| 37 | 74 | 36 | 36-744 | 359733 | 900055 | 5527 | 523 | 2/4/1977 |
| 37 | 74 | 36 | 36-287 | 358533 | 900055 | 5553 | 652 | 8/19/1975 |
| 37 | 74 | 36 | 36-863 | 361483 | 900056 | 5488 | 558 | 3/9/1977 |
| 37 | 74 | 36 | 36-1001 | 358347 | 900056 | 5565 | 658 | 4/21/1977 |
| 37 | 74 | 36 | 36-862 | 361384 | 900057 | 5494 | 556 | 3/9/1977 |
| 37 | 74 | 36 | 36-864 | 361582 | 900058 | 5476 | 559 | 3/9/1977 |
| 37 | 74 | 36 | 36-1212 | 363115 | 900060 | 5397.7 | 539 | 11/23/1998 |
| 37 | 74 | 36 | 36-1344 | 358899 | 900060 | 5539.1 | 861 | 6/29/1999 |
| 37 | 74 | 36 | 36-1241 | 359770 | 900061 | 5523.6 | 625 | 12/9/1998 |
| 37 | 74 | 36 | 36-1002 | 358259 | 900063 | 5567 | 658 | 4/23/1977 |
| 37 | 74 | 36 | 36-1209 | 363165 | 900064 | 5394.3 | 539 | 11/21/1998 |
| 37 | 74 | 36 | 36-23h | 361412 | 900066 | 5494 | 598 | 4/23/1969 |
| 37 | 74 | 36 | 36-1160 | 363212 | 900067 | 5394.8 | 549 | 11/2/1998 |
| 37 | 74 | 36 | 36-1345 | 358989 | 900067 | 5537.2 | 860 | 6/29/1999 |
| 37 | 74 | 36 | 36-2h | 360994 | 900091 | 5501 | 423 | 10/9/1966 |
| 37 | 74 | 36 | 36-833 | 362626 | 900104 | 5438 | 396 | 3/14/1977 |
| 37 | 74 | 36 | 36-459 | 358983 | 900105 | 5539 | 835 | 4/21/1976 |
| 37 | 74 | 36 | 36-1323 | 358690 | 900113 | 5548.1 | 859 | 6/17/1999 |
| 37 | 74 | 36 | 36-1378 | 359018 | 900116 | 5536.3 | 840 | 7/9/1999 |
| 37 | 74 | 36 | 36-1339 | 358739 | 900117 | 5546 | 861 | 6/22/1999 |
| 37 | 74 | 36 | 36-1065 | 361552 | 900129 | 5479 | 514 | 12/16/1988 |
| 37 | 74 | 36 | 36-22h | 359367 | 900140 | 5534 | 797 | 4/22/1969 |
| 37 | 74 | 36 | 36-5 | 359253 | 900140 | 5533 | 820 | 4/30/1974 |
| 37 | 74 | 36 | 36-6c | 361383 | 900151 | 5486 | 537 | 9/6/1977 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-1347 | 359085 | 900152 | 5535.2 | 857 | 6/30/1999 |
| 37 | 74 | 36 | 36-1062 | 361409 | 900153 | 5485 | 488 | 12/16/1988 |
| 37 | 74 | 36 | 36-1303 | 358587 | 900154 | 5553.9 | 862 | 6/15/1999 |
| 37 | 74 | 36 | 36-43 | 358833 | 900155 | 5543 | 858 | 1/8/1975 |
| 37 | 74 | 36 | 36-108 | 358733 | 900155 | 5549 | 860 | 6/15/1975 |
| 37 | 74 | 36 | 36-671 | 360733 | 900155 | 5502 | 578 | 1/20/1977 |
| 37 | 74 | 36 | 36-182 | 359433 | 900155 | 5533 | 595 | 6/30/1975 |
| 37 | 74 | 36 | 36-107 | 358233 | 900155 | 5561 | 639 | 6/14/1975 |
| 37 | 74 | 36 | 36-39 | 358533 | 900155 | 5557 | 900 | 1/2/1975 |
| 37 | 74 | 36 | 36-57 | 358433 | 900155 | 5559 | 618 | 1/18/1975 |
| 37 | 74 | 36 | 36-126 | 358033 | 900155 | 5560 | 642 | 6/16/1975 |
| 37 | 74 | 36 | 36-129 | 358133 | 900155 | 5561 | 639 | 6/24/1975 |
| 37 | 74 | 36 | 36-35 | 358333 | 900155 | 5560 | 896 | 12/31/1974 |
| 37 | 74 | 36 | 36-645 | 361733 | 900155 | 5475 | 582 | 1/13/1977 |
| 37 | 74 | 36 | 36-163 | 359533 | 900155 | 5531 | 597 | 6/27/1975 |
| 37 | 74 | 36 | 36-66 | 359133 | 900155 | 5536 | 842 | 1/27/1975 |
| 37 | 74 | 36 | 36-46 | 359033 | 900155 | 5537 | 859 | 1/17/1975 |
| 37 | 74 | 36 | 36-654 | 361633 | 900155 | 5471 | 582 | 1/17/1977 |
| 37 | 74 | 36 | 36-65 | 358933 | 900155 | 5546 | 856 | 2/4/1975 |
| 37 | 74 | 36 | 36-651 | 362933 | 900155 | 5411 | 362 | 1/13/1977 |
| 37 | 74 | 36 | 36-669 | 360933 | 900155 | 5503 | 578 | 1/19/1977 |
| 37 | 74 | 36 | 36-647 | 361333 | 900155 | 5488 | 582 | 1/14/1977 |
| 37 | 74 | 36 | 36-670 | 360833 | 900155 | 5500 | 578 | 1/19/1977 |
| 37 | 74 | 36 | 36-646 | 361433 | 900155 | 5485 | 580 | 1/14/1977 |
| 37 | 74 | 36 | 36-512 | 359733 | 900155 | 5524 | 515 | 12/6/1976 |
| 37 | 74 | 36 | 36-1335 | 358788 | 900168 | 5544.5 | 858 | 6/21/1999 |
| 37 | 74 | 36 | 36-1343 | 358888 | 900176 | 5539.7 | 861 | 6/29/1999 |
| 37 | 74 | 36 | 36-8h | 358391 | 900208 | 5559 | 889 | 1/24/1968 |
| 37 | 74 | 36 | 36-1379 | 359038 | 900209 | 5534.6 | 837 | 7/12/1999 |
| 37 | 74 | 36 | 36-1064 | 361361 | 900216 | 5480 | 519 | 12/16/1988 |
| 37 | 74 | 36 | 36-1056C | 361430 | 900219 | 5476 | 512 | 10/17/1988 |
| 37 | 74 | 36 | 36-860 | 361439 | 900244 | 5475 | 555 | 3/9/1977 |
| 37 | 74 | 36 | 36-1342 | 358986 | 900251 | 5535.1 | 860 | 6/30/1999 |
| 37 | 74 | 36 | 36-1013 | 359136 | 900251 | 5539 | 837 | 4/26/1977 |
| 37 | 74 | 36 | 36-1329 | 359086 | 900253 | 5532.8 | 859 | 6/18/1999 |
| 37 | 74 | 36 | 36-1334 | 358581 | 900255 | 5554.4 | 862 | 6/22/1999 |
| 37 | 74 | 36 | 36-735 | 361783 | 900255 | 5463 | 563 | 2/4/1977 |
| 37 | 74 | 36 | 36-734 | 361683 | 900255 | 5463 | 560 | 2/4/1977 |
| 37 | 74 | 36 | 36-733 | 361483 | 900255 | 5468 | 562 | 2/4/1977 |
| 37 | 74 | 36 | 36-280 | 358833 | 900255 | 5543 | 854 | 7/23/1975 |
| 37 | 74 | 36 | 36-1014 | 359231 | 900255 | 5536 | 848 | 5/10/1977 |
| 37 | 74 | 36 | 36-750 | 361383 | 900255 | 5476 | 562 | 2/3/1977 |
| 37 | 74 | 36 | 36-483 | 358683 | 900255 | 5552 | 854 | 4/21/1976 |
| 37 | 74 | 36 | 36-293 | 358633 | 900255 | 5554 | 858 | 7/27/1975 |
| 37 | 74 | 36 | 36-652 | 362933 | 900255 | 5422 | 362 | 1/13/1977 |
| 37 | 74 | 36 | 36-289 | 358733 | 900255 | 5548 | 860 | 7/25/1975 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-408 | 358533 | 900255 | 5558 | 856 | 9/5/1975 |
| 37 | 74 | 36 | 36-511 | 359333 | 900255 | 5531 | 600 | 12/6/1976 |
| 37 | 74 | 36 | 36-513 | 359733 | 900255 | 5517 | 555 | 12/7/1976 |
| 37 | 74 | 36 | 36-405 | 358433 | 900255 | 5557 | 856 | 8/27/1975 |
| 37 | 74 | 36 | 36-268 | 358933 | 900255 | 5538 | 858 | 7/16/1975 |
| 37 | 74 | 36 | 36-745 | 360033 | 900255 | 5509 | 516 | 2/7/1977 |
| 37 | 74 | 36 | 36-1237 | 359381 | 900255 | 5527.6 | 625 | 12/9/1998 |
| 37 | 74 | 36 | 36-388 | 359033 | 900255 | 5535 | 852 | 8/26/1975 |
| 37 | 74 | 36 | 36-861 | 361633 | 900259 | 5464 | 560 | 3/11/1977 |
| 37 | 74 | 36 | 36-1238 | 359783 | 900259 | 5511.8 | 625 | 12/10/1998 |
| 37 | 74 | 36 | 36-997 | 358041 | 900262 | 5557 | 657 | 4/29/1977 |
| 37 | 74 | 36 | 36-1341 | 358782 | 900270 | 5543.9 | 862 | 6/29/1999 |
| 37 | 74 | 36 | 36-1208 | 363204 | 900284 | 5424.7 | 539 | 11/23/1998 |
| 37 | 74 | 36 | 36-1063 | 361420 | 900287 | 5467 | 523 | 12/16/1988 |
| 37 | 74 | 36 | 36-1221 | 359430 | 900305 | 5522.9 | 861 | 12/2/1998 |
| 37 | 74 | 36 | 36-14 | 358391 | 900310 | 5556 | 880 | 5/24/1974 |
| 37 | 74 | 36 | 36-1230 | 361627 | 900353 | 5447.1 | 580 | 12/3/1998 |
| 37 | 74 | 36 | 36-998 | 358037 | 900353 | 5552 | 637 | 4/29/1977 |
| 37 | 74 | 36 | 36-484 | 358983 | 900355 | 5533 | 816 | 4/13/1976 |
| 37 | 74 | 36 | 36-404 | 358533 | 900355 | 5556 | 847 | 9/3/1975 |
| 37 | 74 | 36 | 36-514 | 359733 | 900355 | 5509 | 557 | 12/6/1976 |
| 37 | 74 | 36 | 36-584 | 361433 | 900355 | 5460 | 560 | 12/15/1976 |
| 37 | 74 | 36 | 36-524 | 361033 | 900355 | 5484 | 580 | 12/7/1976 |
| 37 | 74 | 36 | 36-482 | 358683 | 900355 | 5549 | 863 | 4/21/1976 |
| 37 | 74 | 36 | 36-525 | 361133 | 900355 | 5476 | 580 | 12/7/1976 |
| 37 | 74 | 36 | 36-510 | 359333 | 900355 | 5525 | 540 | 12/6/1976 |
| 37 | 74 | 36 | 36-168 | 359933 | 900355 | 5501 | 600 | 6/28/1975 |
| 37 | 74 | 36 | 36-167 | 358233 | 900355 | 5553 | 855 | 6/29/1975 |
| 37 | 74 | 36 | 36-526 | 361233 | 900355 | 5473 | 554 | 12/7/1976 |
| 37 | 74 | 36 | 36-262 | 362933 | 900355 | 5534 | 537 | 7/15/1975 |
| 37 | 74 | 36 | 36-149 | 358833 | 900355 | 5540 | 820 | 6/26/1975 |
| 37 | 74 | 36 | 36-509 | 361833 | 900355 | 5456 | 572 | 12/7/1976 |
| 37 | 74 | 36 | 36-736 | 361683 | 900355 | 5454 | 561 | 2/7/1977 |
| 37 | 74 | 36 | 36-144 | 359133 | 900355 | 5529 | 620 | 6/25/1975 |
| 37 | 74 | 36 | 36-145 | 358933 | 900355 | 5535 | 876 | 6/24/1975 |
| 37 | 74 | 36 | 36-527 | 361333 | 900355 | 5470 | 559 | 12/7/1976 |
| 37 | 74 | 36 | 36-148 | 359033 | 900355 | 5532 | 853 | 6/25/1975 |
| 37 | 74 | 36 | 36-109 | 358333 | 900355 | 5553 | 861 | 6/15/1975 |
| 37 | 74 | 36 | 36-397 | 358733 | 900355 | 5546 | 880 | 9/5/1975 |
| 37 | 74 | 36 | 36-227 | 358633 | 900355 | 5552 | 837 | 7/22/1975 |
| 37 | 74 | 36 | 36-746 | 360033 | 900355 | 5499 | 521 | 2/8/1977 |
| 37 | 74 | 36 | 36-101 | 358433 | 900355 | 5553 | 860 | 6/12/1975 |
| 37 | 74 | 36 | 36-128 | 359233 | 900355 | 5526 | 600 | 6/17/1975 |
| 37 | 74 | 36 | 36-866 | 361576 | 900357 | 5452 | 556 | 3/11/1977 |
| 37 | 74 | 36 | 36-1244 | 359879 | 900358 | 5500 | 621 | 12/9/1998 |
| 37 | 74 | 36 | 36-13 | 358388 | 900405 | 5550 | 880 | 5/23/1974 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-1239 | 359129 | 900407 | 5524.2 | 866 | 12/8/1998 |
| 37 | 74 | 36 | 36-878 | 360033 | 900411 | 5496 | 501 | 4/22/1977 |
| 37 | 74 | 36 | 36-481 | 358903 | 900425 | 5533 | 838 | 4/14/1976 |
| 37 | 74 | 36 | 36-1023 | 358838 | 900444 | 5535 | 857 | 5/10/1977 |
| 37 | 74 | 36 | 36-1243 | 359986 | 900446 | 5489.3 | 620 | 12/10/1998 |
| 37 | 74 | 36 | 36-1024 | 358731 | 900449 | 5539 | 856 | 5/11/1977 |
| 37 | 74 | 36 | 36-868 | 361234 | 900451 | 5463 | 555 | 3/14/1977 |
| 37 | 74 | 36 | 36-867 | 361430 | 900451 | 5456 | 556 | 3/11/1977 |
| 37 | 74 | 36 | 36-999 | 358034 | 900451 | 5545 | 637 | 4/29/1977 |
| 37 | 74 | 36 | 36-873 | 361691 | 900452 | 5450 | 560 | 3/14/1977 |
| 37 | 74 | 36 | 36-871 | 361633 | 900454 | 5444 | 562 | 3/9/1977 |
| 37 | 74 | 36 | 36-1184 | 358932 | 900454 | 5528 | 861 | 11/18/1998 |
| 37 | 74 | 36 | 36-281 | 358883 | 900455 | 5532 | 854 | 7/23/1975 |
| 37 | 74 | 36 | 36-1025 | 358509 | 900455 | 5547 | 636 | 5/13/1977 |
| 37 | 74 | 36 | 36-383 | 358233 | 900455 | 5556 | 850 | 8/24/1975 |
| 37 | 74 | 36 | 36-1186 | 359083 | 900455 | 5523.3 | 856 | 11/19/1998 |
| 37 | 74 | 36 | 36-1185 | 359032 | 900455 | 5524.6 | 860 | 11/18/1998 |
| 37 | 74 | 36 | 36-382 | 358633 | 900455 | 5543 | 849 | 8/25/1975 |
| 37 | 74 | 36 | 36-454 | 361333 | 900455 | 5461 | 597 | 9/11/1975 |
| 37 | 74 | 36 | 36-288 | 358983 | 900455 | 5528 | 860 | 7/26/1975 |
| 37 | 74 | 36 | 36-85 | 360333 | 900455 | 5483 | 601 | 2/10/1975 |
| 37 | 74 | 36 | 36-317 | 358333 | 900455 | 5548 | 870 | 8/16/1975 |
| 37 | 74 | 36 | 36-435 | 361133 | 900455 | 5472 | 597 | 9/7/1975 |
| 37 | 74 | 36 | 36-515 | 360033 | 900455 | 5492 | 479 | 12/6/1976 |
| 37 | 74 | 36 | 36-1181 | 358881 | 900505 | 5526.7 | 859 | 11/18/1998 |
| 37 | 74 | 36 | 36-1183 | 358983 | 900505 | 5523.2 | 860 | 11/17/1998 |
| 37 | 74 | 36 | 36-1180 | 358831 | 900506 | 5528.9 | 858 | 11/17/1998 |
| 37 | 74 | 36 | 36-1182 | 358933 | 900506 | 5524.5 | 862 | 11/18/1998 |
| 37 | 74 | 36 | 36-21H | 358409 | 900530 | 5500 | 800 | 4/22/1969 |
| 37 | 74 | 36 | 36-869 | 361322 | 900533 | 5456 | 540 | 3/11/1977 |
| 37 | 74 | 36 | 36-1222 | 361469 | 900537 | 5439.4 | 579 | 12/2/1998 |
| 37 | 74 | 36 | 36-1227 | 361666 | 900541 | 5429.8 | 580 | 12/3/1998 |
| 37 | 74 | 36 | 36-1079 | 358277 | 900545 | 5539.4 | 906 | 8/4/1997 |
| 37 | 74 | 36 | 36-1249 | 360092 | 900546 | 5479.5 | 620 | 12/10/1998 |
| 37 | 74 | 36 | 36-1026 | 358640 | 900548 | 5533 | 837 | 5/11/1977 |
| 37 | 74 | 36 | 36-1179 | 358883 | 900554 | 5522.8 | 858 | 11/16/1998 |
| 37 | 74 | 36 | 36-1178 | 358783 | 900554 | 5526.7 | 862 | 11/16/1998 |
| 37 | 74 | 36 | 36-143 | 358733 | 900555 | 5530 | 838 | 6/27/1975 |
| 37 | 74 | 36 | 36-97 | 358333 | 900555 | 5540 | 860 | 6/12/1975 |
| 37 | 74 | 36 | 36-121 | 357933 | 900555 | 5535 | 638 | 6/14/1975 |
| 37 | 74 | 36 | 36-94 | 358233 | 900555 | 5541 | 860 | 6/11/1975 |
| 37 | 74 | 36 | 36-593 | 361633 | 900555 | 5435 | 576 | 12/17/1976 |
| 37 | 74 | 36 | 36-125 | 358833 | 900555 | 5527 | 859 | 6/16/1975 |
| 37 | 74 | 36 | 36-594 | 361533 | 900555 | 5439 | 577 | 1/3/1977 |
| 37 | 74 | 36 | 36-595 | 361433 | 900555 | 5448 | 577 | 1/3/1977 |
| 37 | 74 | 36 | 36-74 | 358133 | 900555 | 5540 | 640 | 2/7/1975 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-165 | 359033 | 900555 | 5520 | 800 | 6/28/1975 |
| 37 | 74 | 36 | 36-516 | 360033 | 900555 | 5486 | 482 | 1/3/1977 |
| 37 | 74 | 36 | 36-508 | 361733 | 900555 | 5430 | 582 | 12/16/1976 |
| 37 | 74 | 36 | 36-480 | 358983 | 900555 | 5521 | 836 | 4/20/1976 |
| 37 | 74 | 36 | 36-877 | 360277 | 900555 | 5474 | 522 | 4/22/1977 |
| 37 | 74 | 36 | 36-142 | 358933 | 900555 | 5522 | 838 | 6/24/1975 |
| 37 | 74 | 36 | 36-161 | 359133 | 900555 | 5512 | 820 | 6/26/1975 |
| 37 | 74 | 36 | 36-105 | 358533 | 900555 | 5536 | 860 | 6/13/1975 |
| 37 | 74 | 36 | 36-91 | 358033 | 900555 | 5541.4 | 640 | 6/10/1975 |
| 37 | 74 | 36 | 36-876 | 360394 | 900561 | 5469 | 542 | 4/22/1977 |
| 37 | 74 | 36 | 36-1175 | 358882 | 900602 | 5518.3 | 862 | 11/17/1998 |
| 37 | 74 | 36 | 36-1176 | 358933 | 900604 | 5515.9 | 862 | 11/17/1998 |
| 37 | 74 | 36 | 36-1177 | 358984 | 900604 | 5512.4 | 861 | 11/18/1998 |
| 37 | 74 | 36 | 36-476 | 358783 | 900605 | 5525 | 815 | 4/20/1976 |
| 37 | 74 | 36 | 36-1174 | 358833 | 900605 | 5520.4 | 862 | 11/16/1998 |
| 37 | 74 | 36 | 36-1028 | 358633 | 900645 | 5524 | 838 | 5/12/1977 |
| 37 | 74 | 36 | 36-1228 | 361708 | 900647 | 5430.9 | 578 | 12/4/1998 |
| 37 | 74 | 36 | 36-1027 | 358531 | 900648 | 5526 | 837 | 5/12/1977 |
| 37 | 74 | 36 | 36-870 | 361325 | 900650 | 5436 | 541 | 3/14/1977 |
| 37 | 74 | 36 | 36-1029 | 358728 | 900651 | 5520 | 854 | 5/12/1977 |
| 37 | 74 | 36 | 36-1223 | 361458 | 900652 | 5430.8 | 580 | 12/2/1998 |
| 37 | 74 | 36 | 36-479 | 358983 | 900655 | 5508 | 797 | 4/23/1976 |
| 37 | 74 | 36 | 36-345 | 359033 | 900655 | 5505 | 838 | 8/19/1975 |
| 37 | 74 | 36 | 36-737 | 361683 | 900655 | 5433 | 541 | 2/8/1977 |
| 37 | 74 | 36 | 36-738 | 361533 | 900655 | 5433 | 538 | 2/7/1977 |
| 37 | 74 | 36 | 36-310 | 358083 | 900655 | 5533 | 860 | 7/30/1975 |
| 37 | 74 | 36 | 36-380 | 358283 | 900655 | 5533 | 854 | 8/24/1975 |
| 37 | 74 | 36 | 36-478 | 358883 | 900655 | 5515 | 792 | 4/20/1976 |
| 37 | 74 | 36 | 36-315 | 358833 | 900655 | 5517 | 836 | 8/6/1975 |
| 37 | 74 | 36 | 36-279 | 358933 | 900655 | 5511 | 840 | 7/29/1975 |
| 37 | 74 | 36 | 36-739 | 361433 | 900655 | 5433 | 540 | 2/7/1977 |
| 37 | 74 | 36 | 36-475 | 358783 | 900655 | 5519 | 817 | 4/23/1976 |
| 37 | 74 | 36 | 36-613 | 360433 | 900655 | 5448 | 520 | 1/10/1977 |
| 37 | 74 | 36 | 36-872 | 361794 | 900655 | 5429 | 558 | 3/14/1977 |
| 37 | 74 | 36 | 36-275 | 358183 | 900655 | 5533 | 857 | 7/27/1975 |
| 37 | 74 | 36 | 36-1171 | 358832 | 900704 | 5508.3 | 861 | 11/16/1998 |
| 37 | 74 | 36 | 36-1172 | 358883 | 900705 | 5504.6 | 860 | 11/16/1998 |
| 37 | 74 | 36 | 36-474 | 358683 | 900705 | 5518 | 811 | 4/23/1976 |
| 37 | 74 | 36 | 36-1170 | 358782 | 900705 | 5510.6 | 860 | 11/13/1998 |
| 37 | 74 | 36 | 36-1031 | 358323 | 900731 | 5526 | 838 | 5/13/1977 |
| 37 | 74 | 36 | 36-231 | 358833 | 900755 | 5501 | 820 | 7/15/1975 |
| 37 | 74 | 36 | 36-344 | 358933 | 900755 | 5493 | 814 | 8/14/1975 |
| 37 | 74 | 36 | 36-34 | 358233 | 900755 | 5524 | 898 | 1/6/1975 |
| 37 | 74 | 36 | 36-273 | 358133 | 900755 | 5524 | 840 | 7/26/1975 |
| 37 | 74 | 36 | 36-743 | 361733 | 900755 | 5445 | 536 | 2/8/1977 |
| 37 | 74 | 36 | 36-742 | 361633 | 900755 | 5448 | 541 | 2/8/1977 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-741 | 361533 | 900755 | 5444 | 541 | 2/8/1977 |
| 37 | 74 | 36 | 36-740 | 361433 | 900755 | 5444 | 541 | 2/8/1977 |
| 37 | 74 | 36 | 36-749 | 360833 | 900755 | 5451 | 561 | 2/8/1977 |
| 37 | 74 | 36 | 36-1168 | 358763 | 900755 | 5500.4 | 859 | 11/17/1998 |
| 37 | 74 | 36 | 36-47 | 358633 | 900755 | 5512 | 859 | 1/16/1975 |
| 37 | 74 | 36 | 36-314 | 358533 | 900755 | 5518 | 840 | 7/31/1975 |
| 37 | 74 | 36 | 36-598 | 361133 | 900755 | 5443 | 558 | 1/3/1977 |
| 37 | 74 | 36 | 36-599 | 361033 | 900755 | 5458 | 556 | 1/6/1977 |
| 37 | 74 | 36 | 36-381 | 358033 | 900755 | 5525 | 854 | 8/23/1975 |
| 37 | 74 | 36 | 36-213 | 358733 | 900755 | 5506 | 820 | 7/12/1975 |
| 37 | 74 | 36 | 36-477 | 358883 | 900755 | 5498 | 798 | 5/6/1976 |
| 37 | 74 | 36 | 36-660 | 361333 | 900755 | 5450 | 539 | 1/17/1977 |
| 37 | 74 | 36 | 36-216 | 358433 | 900755 | 5513 | 856 | 7/26/1975 |
| 37 | 74 | 36 | 36-644 | 361233 | 900755 | 5450 | 536 | 1/18/1977 |
| 37 | 74 | 36 | 36-612 | 360433 | 900755 | 5458 | 537 | 1/10/1977 |
| 37 | 74 | 36 | 36-1229 | 361743 | 900774 | 5440.7 | 600 | 12/9/1998 |
| 37 | 74 | 36 | 36-1036 | 359042 | 900777 | 5473 | 857 | 5/2/1977 |
| 37 | 74 | 36 | 36-1224 | 361542 | 900795 | 5444.4 | 614 | 12/4/1998 |
| 37 | 74 | 36 | 36-1034 | 357999 | 900843 | 5514 | 837 | 5/13/1977 |
| 37 | 74 | 36 | 36-1032 | 358395 | 900847 | 5508 | 833 | 5/13/1977 |
| 37 | 74 | 36 | 36-5c | 361637 | 900852 | 5462 | 540 | 9/1/1977 |
| 37 | 74 | 36 | 36-608 | 360833 | 900855 | 5460 | 517 | 1/6/1977 |
| 37 | 74 | 36 | 36-384 | 358883 | 900855 | 5476 | 794 | 8/25/1975 |
| 37 | 74 | 36 | 36-637 | 361733 | 900855 | 5447 | 540 | 1/13/1977 |
| 37 | 74 | 36 | 36-636 | 361533 | 900855 | 5454 | 540 | 1/12/1977 |
| 37 | 74 | 36 | 36-431 | 358583 | 900855 | 5500 | 815 | 9/5/1975 |
| 37 | 74 | 36 | 36-635 | 361633 | 900855 | 5463 | 540 | 1/12/1977 |
| 37 | 74 | 36 | 36-611 | 360433 | 900855 | 5472 | 526 | 1/10/1977 |
| 37 | 74 | 36 | 36-385 | 358283 | 900855 | 5509 | 840 | 8/26/1975 |
| 37 | 74 | 36 | 36-394 | 360133 | 900855 | 5487 | 597 | 9/11/1975 |
| 37 | 74 | 36 | 36-361 | 358083 | 900855 | 5510 | 816 | 8/20/1975 |
| 37 | 74 | 36 | 36-389 | 358683 | 900855 | 5478 | 798 | 9/3/1975 |
| 37 | 74 | 36 | 36-347 | 358183 | 900855 | 5507 | 836 | 8/19/1975 |
| 37 | 74 | 36 | 36-409 | 358483 | 900855 | 5491 | 798 | 9/5/1975 |
| 37 | 74 | 36 | 36-343 | 358783 | 900855 | 5475 | 800 | 8/13/1975 |
| 37 | 74 | 36 | 36-402 | 358983 | 900855 | 5481 | 792 | 9/2/1975 |
| 37 | 74 | 36 | 36-1060 | 358744 | 900859 | 5477 | 772 | 12/16/1988 |
| 37 | 74 | 36 | 36-1058 | 359803 | 900882 | 5487 | 796 | 12/6/1988 |
| 37 | 74 | 36 | 36-1253 | 361733 | 900897 | 5448.4 | 579 | 12/14/1998 |
| 37 | 74 | 36 | 36-1232 | 361583 | 900905 | 5461 | 619 | 12/7/1998 |
| 37 | 74 | 36 | 36-473 | 358133 | 900905 | 5501 | 801 | 4/23/1976 |
| 37 | 74 | 36 | 36-4 | 360818 | 900925 | 5475 | 518 | 4/29/1974 |
| 37 | 74 | 36 | 36-1061 | 358431 | 900934 | 5476 | 771 | 12/16/1988 |
| 37 | 74 | 36 | 36-237 | 358770 | 900938 | 5493 | 821 | 7/17/1975 |
| 37 | 74 | 36 | 36-1231 | 361680 | 900944 | 5459.7 | 599 | 12/7/1998 |
| 37 | 74 | 36 | 36-747 | 360445 | 900946 | 5488 | 538 | 3/14/1977 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-1055C | 358642 | 900949 | 5482 | 780 | 10/25/1988 |
| 37 | 74 | 36 | 36-407 | 358233 | 900955 | 5490 | 797 | 9/4/1975 |
| 37 | 74 | 36 | 36-348 | 358133 | 900955 | 5491 | 820 | 8/11/1975 |
| 37 | 74 | 36 | 36-311 | 358833 | 900955 | 5487 | 839 | 7/30/1975 |
| 37 | 74 | 36 | 36-365 | 358963 | 900955 | 5506 | 838 | 8/23/1975 |
| 37 | 74 | 36 | 36-368 | 358033 | 900955 | 5494 | 851 | 8/23/1975 |
| 37 | 74 | 36 | 36-406 | 358333 | 900955 | 5488 | 795 | 9/3/1975 |
| 37 | 74 | 36 | 36-218 | 358533 | 900955 | 5492 | 832 | 7/22/1975 |
| 37 | 74 | 36 | 36-210 | 358633 | 900955 | 5489 | 857 | 7/12/1975 |
| 37 | 74 | 36 | 36-472 | 358708 | 900955 | 5490 | 841 | 5/3/1976 |
| 37 | 74 | 36 | 36-1035 | 357962 | 900956 | 5498 | 830 | 5/17/1977 |
| 37 | 74 | 36 | 36-1033 | 358433 | 900956 | 5487 | 860 | 5/27/1977 |
| 37 | 74 | 36 | 36-1242 | 361632 | 900957 | 5468.4 | 618 | 12/8/1998 |
| 37 | 74 | 36 | 36-1301 | 358100 | 900967 | 5492.1 | 860 | 6/7/1999 |
| 37 | 74 | 36 | 36-1256 | 361780 | 900975 | 5447.9 | 580 | 12/15/199 |
| 37 | 74 | 36 | 36-1247 | 361726 | 900993 | 1 | 600 | 12/11/199 |
| 37 | 74 | 36 | 36-1248 | 361676 | 900993 | 5459.6 | 619 | 12/9/1998 |
| 37 | 74 | 36 | 36-1190 | 358934 | 901004 | 5510.9 | 858 | 11/13/199 |
| 37 | 74 | 36 | 36-1254 | 361633 | 901009 | 5467.2 | 616 | 12/16/199 |
| 37 | 74 | 36 | 36-471A | 358437 | 901017 | 5490 | 800 | 5/7/1976 |
| 37 | 74 | 36 | 36-1302 | 358098 | 901018 | 5495.7 | 880 | 6/14/1999 |
| 37 | 74 | 36 | 36-1255 | 361773 | 901027 | 5453.6 | 599 | 12/16/199 |
| 37 | 74 | 36 | 36-19h | 360808 | 901040 | 5479 | 600 | 4/22/1969 |
| 37 | 74 | 36 | 36-1252 | 361683 | 901047 | 5452.6 | 620 | 12/14/199 |
| 37 | 74 | 36 | 36-748 | 361083 | 901055 | 5463 | 560 | 2/9/1977 |
| 37 | 74 | 36 | 36-346 | 358333 | 901055 | 5500 | 816 | 8/21/1975 |
| 37 | 74 | 36 | 36-600 | 361033 | 901055 | 5439 | 557 | 1/3/1977 |
| 37 | 74 | 36 | 36-342 | 358833 | 901055 | 5514 | 834 | 8/13/1975 |
| 37 | 74 | 36 | 36-470 | 358633 | 901055 | 5511 | 841 | 4/20/1976 |
| 37 | 74 | 36 | 36-642 | 361133 | 901055 | 5480 | 538 | 1/14/1977 |
| 37 | 74 | 36 | 36-364 | 358928 | 901055 | 5513 | 836 | 8/23/1975 |
| 37 | 74 | 36 | 36-319 | 358133 | 901055 | 5511 | 833 | 8/6/1975 |
| 37 | 74 | 36 | 36-360 | 358033 | 901055 | 5504 | 814 | 8/20/1975 |
| 37 | 74 | 36 | 36-640 | 361833 | 901055 | 5472 | 540 | 1/14/1977 |
| 37 | 74 | 36 | 36-657 | 360933 | 901055 | 5477 | 517 | 1/17/1977 |
| 37 | 74 | 36 | 36-469 | 358983 | 901055 | 5504 | 839 | 4/19/1976 |
| 37 | 74 | 36 | 36-313 | 358233 | 901055 | 5507 | 835 | 8/5/1975 |
| 37 | 74 | 36 | 36-1144 | 358584 | 901055 | 5511.4 | 854 | 10/15/1998 |
| 37 | 74 | 36 | 36-277 | 358738 | 901055 | 5513 | 859 | 7/28/1975 |
| 37 | 74 | 36 | 36-1145 | 358686 | 901055 | 5510.2 | 849 | 10/15/1998 |
| 37 | 74 | 36 | 36-403 | 358533 | 901055 | 5511 | 816 | 9/4/1975 |
| 37 | 74 | 36 | 36-638 | 361633 | 901055 | 5469 | 540 | 1/12/1977 |
| 37 | 74 | 36 | 36-1146 | 358785 | 901055 | 5513.7 | 860 | 10/15/1998 |
| 37 | 74 | 36 | 36-1147 | 358881 | 901056 | 5512.7 | 861 | 10/15/1998 |
| 37 | 74 | 36 | 36-1140 | 358833 | 901104 | 5517 | 862 | 10/14/1998 |
| 37 | 74 | 36 | 36-1137 | 358684 | 901104 | 5516.6 | 863 | 10/29/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-1142 | 358932 | 901105 | 5513.7 | 865 | 10/14/1998 |
| 37 | 74 | 36 | 36-1136 | 358634 | 901105 | 5516.9 | 863 | 11/2/1998 |
| 37 | 74 | 36 | 36-1139 | 358784 | 901105 | 5517.3 | 863 | 10/27/1998 |
| 37 | 74 | 36 | 36-1138 | 358735 | 901105 | 5515.8 | 863 | 11/11/1998 |
| 37 | 74 | 36 | 36-1141 | 358882 | 901106 | 5516.2 | 1005 | 11/12/1998 |
| 37 | 74 | 36 | 36-1135 | 358584 | 901106 | 5517.5 | 1003 | 11/12/1998 |
| 37 | 74 | 36 | 36-1131 | 358583 | 901154 | 5521.3 | 862 | 10/26/1998 |
| 37 | 74 | 36 | 36-387 | 358033 | 901155 | 5519 | 838 | 8/26/1975 |
| 37 | 74 | 36 | 36-272 | 358633 | 901155 | 5523 | 859 | 7/26/1975 |
| 37 | 74 | 36 | 36-276 | 358733 | 901155 | 5523 | 859 | 7/28/1975 |
| 37 | 74 | 36 | 36-236 | 358533 | 901155 | 5524 | 857 | 7/15/1975 |
| 37 | 74 | 36 | 36-363 | 358933 | 901155 | 5516 | 841 | 8/22/1975 |
| 37 | 74 | 36 | 36-312 | 358133 | 901155 | 5518 | 838 | 8/15/1975 |
| 37 | 74 | 36 | 36-235 | 358333 | 901155 | 5512 | 836 | 7/16/1975 |
| 37 | 74 | 36 | 36-1132 | 358682 | 901155 | 5520.9 | 863 | 11/11/1998 |
| 37 | 74 | 36 | 36-1133 | 358783 | 901155 | 5520.4 | 861 | 11/11/1998 |
| 37 | 74 | 36 | 36-199 | 358433 | 901155 | 5517 | 860 | 7/13/1975 |
| 37 | 74 | 36 | 36-219 | 358233 | 901155 | 5515 | 840 | 7/14/1975 |
| 37 | 74 | 36 | 36-341 | 358833 | 901155 | 5521 | 860 | 8/12/1975 |
| 37 | 74 | 36 | 36-468 | 358983 | 901155 | 5515 | 835 | 4/15/1976 |
| 37 | 74 | 36 | 36-1134 | 358884 | 901156 | 5518.8 | 863 | 10/26/1998 |
| 37 | 74 | 36 | 36-1037 | 357952 | 901162 | 5510 | 835 | 5/17/1977 |
| 37 | 74 | 36 | 36-1054 | 358716 | 901165 | 5522 | 924 | 5/14/1982 |
| 37 | 74 | 36 | 36-1125 | 358683 | 901204 | 5524.4 | 865 | 11/10/1998 |
| 37 | 74 | 36 | 36-1129 | 358935 | 901204 | 5518 | 861 | 10/26/1998 |
| 37 | 74 | 36 | 36-1128 | 358833 | 901205 | 5523.4 | 863 | 10/15/1998 |
| 37 | 74 | 36 | 36-1127 | 358784 | 901205 | 5524 | 861 | 10/22/1998 |
| 37 | 74 | 36 | 36-3c | 358883 | 901205 | 5523 | 837 | 5/30/1976 |
| 37 | 74 | 36 | 36-1122 | 358533 | 901206 | 5525.5 | 865 | 11/2/1998 |
| 37 | 74 | 36 | 36-1126 | 358733 | 901206 | 5524.3 | 862 | 10/23/1998 |
| 37 | 74 | 36 | 36-1124 | 358633 | 901206 | 5524.9 | 863 | 10/23/1998 |
| 37 | 74 | 36 | 36-1123 | 358583 | 901207 | 5524.4 | 865 | 10/26/1998 |
| 37 | 74 | 36 | 36-1118 | 358684 | 901254 | 5528.4 | 860 | 10/22/1998 |
| 37 | 74 | 36 | 36-369 | 358733 | 901255 | 5529 | 835 | 8/24/1975 |
| 37 | 74 | 36 | 36-362 | 358633 | 901255 | 5530 | 857 | 8/21/1975 |
| 37 | 74 | 36 | 36-274 | 358433 | 901255 | 5530 | 860 | 7/27/1975 |
| 37 | 74 | 36 | 36-639 | 361733 | 901255 | 5478 | 560 | 1/13/1977 |
| 37 | 74 | 36 | 36-400 | 358833 | 901255 | 5528 | 837 | 8/27/1975 |
| 37 | 74 | 36 | 36-340 | 358533 | 901255 | 5530 | 860 | 8/12/1975 |
| 37 | 74 | 36 | 36-278 | 358183 | 901255 | 5527 | 860 | 7/29/1975 |
| 37 | 74 | 36 | 36-1119 | 358784 | 901255 | 5527.6 | 863 | 10/15/1998 |
| 37 | 74 | 36 | 36-648 | 361033 | 901255 | 5474 | 536 | 1/17/1977 |
| 37 | 74 | 36 | 36-316 | 358283 | 901255 | 5516 | 835 | 8/6/1975 |
| 37 | 74 | 36 | 36-318 | 358083 | 901255 | 5529 | 838 | 8/6/1975 |
| 37 | 74 | 36 | 36-641 | 361533 | 901255 | 5480 | 560 | 1/14/1977 |
| 37 | 74 | 36 | 36-643 | 361133 | 901255 | 5487 | 538 | 1/14/1977 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-840 | 357963 | 901255 | 5529 | 896 | 5/24/1977 |
| 37 | 74 | 36 | 36-1117 | 358583 | 901255 | 5529.3 | 863 | 10/23/1998 |
| 37 | 74 | 36 | 36-1116 | 358483 | 901255 | 5527.9 | 863 | 10/23/1998 |
| 37 | 74 | 36 | 36-649 | 360933 | 901255 | 5478 | 534 | 1/17/1977 |
| 37 | 74 | 36 | 36-386 | 358933 | 901255 | 5523 | 840 | 8/24/1975 |
| 37 | 74 | 36 | 36-1120 | 358884 | 901255 | 5525.5 | 864 | 10/14/1998 |
| 37 | 74 | 36 | 36-1108 | 358482 | 901304 | 5532 | 865 | 10/27/1998 |
| 37 | 74 | 36 | 36-1112 | 358733 | 901304 | 5532.2 | 865 | 10/23/1998 |
| 37 | 74 | 36 | 36-1111 | 358682 | 901305 | 5532.5 | 865 | 10/23/1998 |
| 37 | 74 | 36 | 36-466 | 358633 | 901305 | 5534 | 835 | 4/14/1976 |
| 37 | 74 | 36 | 36-1114 | 358833 | 901305 | 5530.8 | 860 | 11/13/1998 |
| 37 | 74 | 36 | 36-1109 | 358533 | 901305 | 5532.7 | 865 | 10/26/1998 |
| 37 | 74 | 36 | 36-1115 | 358883 | 901305 | 5528.7 | 865 | 10/22/1998 |
| 37 | 74 | 36 | 36-465 | 358433 | 901305 | 5532 | 842 | 4/15/1976 |
| 37 | 74 | 36 | 36-1113 | 358783 | 901306 | 5531.9 | 865 | 10/22/1998 |
| 37 | 74 | 36 | 36-1202 | 358934 | 901308 | 5525.1 | 861 | 11/20/1998 |
| 37 | 74 | 36 | 36-1110 | 358581 | 901308 | 5533.6 | 866 | 10/26/1998 |
| 37 | 74 | 36 | 36-1216 | 358984 | 901309 | 5525 | 863 | 12/1/1998 |
| 37 | 74 | 36 | 36-1059 | 362238 | 901332 | 5487 | 819 | 12/12/1988 |
| 37 | 74 | 36 | 36-1103 | 358483 | 901354 | 5536.1 | 865 | 10/27/1998 |
| 37 | 74 | 36 | 36-1107 | 358884 | 901354 | 5532.4 | 860 | 11/12/1998 |
| 37 | 74 | 36 | 36-1106 | 358778 | 901354 | 5536 | 862 | 10/23/1998 |
| 37 | 74 | 36 | 36-837 | 357963 | 901355 | 5538 | 857 | 5/24/1977 |
| 37 | 74 | 36 | 36-467 | 358833 | 901355 | 5537 | 839 | 4/14/1976 |
| 37 | 74 | 36 | 36-33 | 358133 | 901355 | 5535 | 900 | 12/19/1974 |
| 37 | 74 | 36 | 36-1039 | 358733 | 901355 | 5539 | 856 | 5/21/1977 |
| 37 | 74 | 36 | 36-705 | 359233 | 901355 | 5538 | 559 | 1/27/1977 |
| 37 | 74 | 36 | 36-704 | 359133 | 901355 | 5542 | 560 | 1/27/1977 |
| 37 | 74 | 36 | 36-703 | 359033 | 901355 | 5538 | 550 | 1/27/1977 |
| 37 | 74 | 36 | 36-25 | 358233 | 901355 | 5533 | 880 | 12/11/1974 |
| 37 | 74 | 36 | 36-215 | 358333 | 901355 | 5521 | 839 | 7/14/1975 |
| 37 | 74 | 36 | 36-18 | 358433 | 901355 | 5536 | 475 | 12/9/1974 |
| 37 | 74 | 36 | 36-401 | 358533 | 901355 | 5538 | 857 | 9/2/1975 |
| 37 | 74 | 36 | 36-1105 | 358678 | 901356 | 5537 | 860 | 10/26/1998 |
| 37 | 74 | 36 | 36-839 | 358032 | 901356 | 5537 | 858 | 5/17/1977 |
| 37 | 74 | 36 | 36-1076 | 358080 | 901359 | 5533.8 | 901 | 7/28/1997 |
| 37 | 74 | 36 | 36-1207 | 358984 | 901359 | 5529.4 | 861 | 11/30/1998 |
| 37 | 74 | 36 | 36-1104 | 358580 | 901359 | 5537.7 | 862 | 10/26/1998 |
| 37 | 74 | 36 | 36-1077 | 358180 | 901359 | 5532.4 | 898 | 7/29/1997 |
| 37 | 74 | 36 | 36-1038 | 358624 | 901359 | 5538 | 855 | 5/22/1977 |
| 37 | 74 | 36 | 36-1200 | 358934 | 901360 | 5527.7 | 862 | 11/19/1998 |
| 37 | 74 | 36 | 36-1203 | 358436 | 901399 | 5536.2 | 861 | 11/19/1998 |
| 37 | 74 | 36 | 36-1098 | 358534 | 901403 | 5540.1 | 862 | 11/11/1998 |
| 37 | 74 | 36 | 36-1097 | 358483 | 901403 | 5538.9 | 865 | 11/11/1998 |
| 37 | 74 | 36 | 36-1206 | 358832 | 901405 | 5538.5 | 862 | 11/23/1998 |
| 37 | 74 | 36 | 36-1102 | 358731 | 901406 | 5540.4 | 863 | 10/14/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-1101 | 358679 | 901406 | 5541.1 | 863 | 10/27/1998 |
| 37 | 74 | 36 | 36-1100 | 358628 | 901406 | 5541.2 | 862 | 11/2/1998 |
| 37 | 74 | 36 | 36-1099 | 358581 | 901406 | 5541.2 | 862 | 11/10/1998 |
| 37 | 74 | 36 | 36-1199 | 358882 | 901407 | 5535.8 | 860 | 11/19/1998 |
| 37 | 74 | 36 | 36-1201 | 358934 | 901408 | 5530.7 | 860 | 11/19/1998 |
| 37 | 74 | 36 | 36-1225 | 358984 | 901411 | 5532.1 | 861 | 11/30/1998 |
| 37 | 74 | 36 | 36-1215 | 358982 | 901450 | 5534.6 | 863 | 12/1/1998 |
| 37 | 74 | 36 | 36-946 | 358432 | 901452 | 5556 | 860 | 5/24/1977 |
| 37 | 74 | 36 | 36-1094 | 358482 | 901453 | 5540.9 | 1002 | 10/26/1998 |
| 37 | 74 | 36 | 36-1052 | 358533 | 901454 | 5544 | 858 | 5/22/1977 |
| 37 | 74 | 36 | 36-1204 | 358934 | 901454 | 5536.6 | 861 | 11/22/1998 |
| 37 | 74 | 36 | 36-119 | 359233 | 901455 | 5540 | 560 | 6/24/1975 |
| 37 | 74 | 36 | 36-1236 | 358831 | 901455 | 5542.6 | 860 | 12/7/1998 |
| 37 | 74 | 36 | 36-32 | 358333 | 901455 | 5537 | 883 | 12/20/1974 |
| 37 | 74 | 36 | 36-349 | 358133 | 901455 | 5541 | 856 | 8/11/1975 |
| 37 | 74 | 36 | 36-217 | 358233 | 901455 | 5539 | 860 | 7/13/1975 |
| 37 | 74 | 36 | 36-985 | 358832 | 901455 | 5544 | 859 | 5/20/1977 |
| 37 | 74 | 36 | 36-81 | 362933 | 901455 | 5479 | 598 | 2/3/1975 |
| 37 | 74 | 36 | 36-117 | 359133 | 901455 | 5542 | 557 | 6/16/1975 |
| 37 | 74 | 36 | 36-841 | 358633 | 901455 | 5547 | 856 | 5/21/1977 |
| 37 | 74 | 36 | 36-1095 | 358583 | 901455 | 5543.8 | 865 | 10/26/1998 |
| 37 | 74 | 36 | 36-1096 | 358681 | 901458 | 5544.8 | 870 | 10/23/1998 |
| 37 | 74 | 36 | 36-1205 | 358880 | 901458 | 5538.8 | 861 | 11/23/1998 |
| 37 | 74 | 36 | 36-842 | 358729 | 901458 | 5546 | 854 | 5/20/1977 |
| 37 | 74 | 36 | 36-1149 | 358230 | 901499 | 5540.1 | 863 | 10/23/1998 |
| 37 | 74 | 36 | 36-1148 | 358433 | 901501 | 5541 | 863 | 10/13/1998 |
| 37 | 74 | 36 | 36-1089 | 358484 | 901504 | 5542.8 | 863 | 10/13/1998 |
| 37 | 74 | 36 | 36-1214 | 358932 | 901504 | 5542.6 | 861 | 12/25/1998 |
| 37 | 74 | 36 | 36-1090 | 358534 | 901504 | 5544.4 | 864 | 10/13/1998 |
| 37 | 74 | 36 | 36-464 | 358283 | 901505 | 5542 | 861 | 4/13/1976 |
| 37 | 74 | 36 | 36-1092 | 358635 | 901506 | 5546.7 | 861 | 10/14/1998 |
| 37 | 74 | 36 | 36-1091 | 358585 | 901506 | 5545.6 | 862 | 10/14/1998 |
| 37 | 74 | 36 | 36-1093 | 358684 | 901507 | 5547.4 | 861 | 10/13/1998 |
| 37 | 74 | 36 | 36-1217 | 358879 | 901507 | 5543.8 | 861 | 12/1/1998 |
| 37 | 74 | 36 | 36-1235 | 358980 | 901509 | 5542.2 | 867 | 12/7/1998 |
| 37 | 74 | 36 | 36-1246 | 359032 | 901510 | 5544.5 | 860 | 12/10/1998 |
| 37 | 74 | 36 | 36-1057 | 360349 | 901538 | 5535 | 817 | 10/17/1988 |
| 37 | 74 | 36 | 36-1053 | 358633 | 901555 | 5551 | 859 | 5/23/1977 |
| 37 | 74 | 36 | 36-118 | 358133 | 901555 | 5545 | 860 | 6/16/1975 |
| 37 | 74 | 36 | 36-116 | 358033 | 901555 | 5544 | 860 | 6/15/1975 |
| 37 | 74 | 36 | 36-104 | 358233 | 901555 | 5544 | 858 | 6/14/1975 |
| 37 | 74 | 36 | 36-712 | 359133 | 901555 | 5557 | 562 | 2/1/1977 |
| 37 | 74 | 36 | 36-713 | 359233 | 901555 | 5558 | 559 | 1/31/1977 |
| 37 | 74 | 36 | 36-1233 | 358928 | 901555 | 5548.4 | 866 | 12/9/1998 |
| 37 | 74 | 36 | 36-120 | 358333 | 901555 | 5544 | 859 | 6/15/1975 |
| 37 | 74 | 36 | 36-711 | 359033 | 901555 | 5555 | 551 | 2/1/1977 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-1226 | 358878 | 901557 | 5549 | 863 | 12/2/1998 |
| 37 | 74 | 36 | 36-1234 | 358977 | 901558 | 5548.1 | 865 | 12/8/1998 |
| 37 | 74 | 36 | 36-1245 | 359028 | 901560 | 5548.7 | 866 | 12/10/1998 |
| 37 | 74 | 36 | 36-29h | 359407 | 901577 | 5568 | 796 | 4/21/1969 |
| 37 | 74 | 36 | 36-1150 | 358089 | 901602 | 5543.2 | 861 | 10/22/1998 |
| 37 | 74 | 36 | 36-1250 | 358974 | 901606 | 5551.4 | 861 | 12/11/1998 |
| 37 | 74 | 36 | 36-1251 | 359025 | 901609 | 5551.8 | 866 | 12/11/1998 |
| 37 | 74 | 36 | 36-1151 | 357933 | 901650 | 5540.9 | 860 | 10/15/1998 |
| 37 | 74 | 36 | 36-258 | 358083 | 901655 | 5544 | 856 | 7/15/1975 |
| 37 | 74 | 36 | 36-350 | 358283 | 901655 | 5547 | 850 | 8/21/1975 |
| 37 | 74 | 36 | 36-257 | 358183 | 901655 | 5546 | 856 | 7/16/1975 |
| 37 | 74 | 36 | 36-1041 | 357988 | 901658 | 5543 | 855 | 5/17/1977 |
| 37 | 74 | 36 | 36-1152 | 358324 | 901708 | 5546.9 | 862 | 10/13/1998 |
| 37 | 74 | 36 | 36-17 | 358233 | 901755 | 5547 | 897 | 12/6/1974 |
| 37 | 74 | 36 | 36-700 | 359133 | 901755 | 5555 | 561 | 1/26/1977 |
| 37 | 74 | 36 | 36-21 | 358033 | 901755 | 5541 | 919 | 12/13/1974 |
| 37 | 74 | 36 | 36-702 | 358933 | 901755 | 5555 | 554 | 1/26/1977 |
| 37 | 74 | 36 | 36-31 | 358133 | 901755 | 5543 | 885 | 12/17/1974 |
| 37 | 74 | 36 | 36-701 | 359033 | 901755 | 5555 | 557 | 1/27/1977 |
| 37 | 74 | 36 | 36-699 | 359233 | 901755 | 5556 | 560 | 1/26/1977 |
| 37 | 74 | 36 | 36-1040 | 358333 | 901755 | 5550 | 854 | 5/20/1977 |
| 37 | 74 | 36 | 36-103 | 357933 | 901755 | 5541 | 437 | 6/12/1975 |
| 37 | 74 | 36 | 36-463 | 358233 | 901805 | 5547 | 848 | 4/12/1976 |
| 37 | 74 | 36 | 36-1042 | 357963 | 901855 | 5541 | 856 | 5/21/1977 |
| 37 | 74 | 36 | 36-366 | 358033 | 901855 | 5540 | 854 | 8/21/1975 |
| 37 | 74 | 36 | 36-255 | 358233 | 901855 | 5545 | 856 | 7/15/1975 |
| 37 | 74 | 36 | 36-256 | 358133 | 901855 | 5544 | 858 | 7/17/1975 |
| 37 | 74 | 36 | 36-462 | 358283 | 901855 | 5546 | 847 | 4/9/1976 |
| 37 | 74 | 36 | 36-269 | 358333 | 901855 | 5547 | 860 | 7/23/1975 |
| 37 | 74 | 36 | 36-461 | 358183 | 901855 | 5544 | 852 | 4/12/1976 |
| 37 | 74 | 36 | 36-1 | 359882 | 901887 | 5553 | 1922 | 7/28/1973 |
| 37 | 74 | 36 | 36-1043 | 357964 | 901953 | 5542 | 855 | 5/21/1977 |
| 37 | 74 | 36 | 36-90 | 358133 | 901955 | 5542 | 857 | 6/10/1975 |
| 37 | 74 | 36 | 36-102 | 359133 | 901955 | 5542 | 557 | 6/13/1975 |
| 37 | 74 | 36 | 36-460 | 358283 | 901955 | 5544 | 874 | 4/13/1976 |
| 37 | 74 | 36 | 36-212 | 358333 | 901955 | 5543 | 861 | 7/11/1975 |
| 37 | 74 | 36 | 36-100 | 358233 | 901955 | 5543 | 860 | 6/12/1975 |
| 37 | 74 | 36 | 36-112 | 358033 | 901955 | 5543 | 880 | 6/16/1975 |
| 37 | 74 | 36 | 36-113 | 358933 | 901955 | 5543 | 640 | 6/14/1975 |
| 37 | 74 | 36 | 36-115 | 359033 | 901955 | 5535 | 538 | 6/16/1975 |
| 37 | 74 | 36 | 36-28h | 360394 | 901988 | 5568 | 600 | 4/21/1969 |
| 37 | 74 | 36 | 36-1h | 359442 | 902010 | 5542 | 406 | 10/7/1966 |
| 37 | 74 | 36 | 36-367 | 358133 | 902055 | 5545 | 848 | 8/22/1975 |
| 37 | 74 | 36 | 36-238 | 358233 | 902055 | 5543 | 862 | 7/16/1975 |
| 37 | 74 | 36 | 36-1044 | 357965 | 902055 | 5546 | 858 | 5/22/1977 |
| 37 | 74 | 36 | 36-457 | 358183 | 902055 | 5545 | 852 | 4/6/1976 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-458 | 358283 | 902055 | 5544 | 846 | 4/5/1976 |
| 37 | 74 | 36 | 36-271 | 358333 | 902055 | 5543 | 860 | 7/22/1975 |
| 37 | 74 | 36 | 36-1045 | 358035 | 902058 | 5546 | 857 | 5/20/1977 |
| 37 | 74 | 36 | 36-1081 | 358094 | 902092 | 5544.2 | 893 | 4/28/1998 |
| 37 | 74 | 36 | 36-1078 | 358141 | 902099 | 5543.4 | 882 | 7/29/1997 |
| 37 | 74 | 36 | 36-1082 | 359091 | 902099 | 5537.8 | 680 | 5/1/1998 |
| 37 | 74 | 36 | 36-1300 | 358261 | 902102 | 5543.9 | 880 | 6/4/1999 |
| 37 | 74 | 36 | 36-1299 | 358087 | 902148 | 5546.5 | 881 | 6/3/1999 |
| 37 | 74 | 36 | 36-16 | 358133 | 902155 | 5546 | 897 | 12/6/1974 |
| 37 | 74 | 36 | 36-93 | 358233 | 902155 | 5544 | 859 | 6/11/1975 |
| 37 | 74 | 36 | 36-455 | 358183 | 902155 | 5546 | 850 | 4/6/1976 |
| 37 | 74 | 36 | 36-720 | 359233 | 902155 | 5544 | 544 | 1/31/1977 |
| 37 | 74 | 36 | 36-708 | 358933 | 902155 | 5545 | 551 | 1/28/1977 |
| 37 | 74 | 36 | 36-707 | 359133 | 902155 | 5545 | 556 | 1/28/1977 |
| 37 | 74 | 36 | 36-706 | 359033 | 902155 | 5544 | 561 | 1/28/1977 |
| 37 | 74 | 36 | 36-456 | 358283 | 902155 | 5545 | 855 | 4/5/1976 |
| 37 | 74 | 36 | 36-106 | 358333 | 902155 | 5543 | 860 | 6/13/1975 |
| 37 | 74 | 36 | 36-1046 | 357965 | 902160 | 5547 | 857 | 5/22/1977 |
| 37 | 74 | 36 | 36-20 | 358027 | 902168 | 5545 | 900 | 12/16/1974 |
| 37 | 74 | 36 | 36-4c | 358233 | 902205 | 5546 | 842 | 5/22/1976 |
| 37 | 74 | 36 | 36-234 | 358183 | 902255 | 5546 | 862 | 7/15/1975 |
| 37 | 74 | 36 | 36-239 | 358083 | 902255 | 5547 | 857 | 7/23/1975 |
| 37 | 74 | 36 | 36-1047 | 357984 | 902256 | 5548 | 850 | 5/23/1977 |
| 37 | 74 | 36 | 36-1298 | 358228 | 902256 | 5546.2 | 881 | 6/3/1999 |
| 37 | 74 | 36 | 36-1297 | 358127 | 902259 | 5547.4 | 881 | 6/2/1999 |
| 37 | 74 | 36 | 36-270 | 358293 | 902265 | 1 | 862 | 7/17/1975 |
| 37 | 74 | 36 | 36-7h | 361718 | 902337 | 5520 | 900 | 1/18/1968 |
| 37 | 74 | 36 | 36-99 | 358033 | 902355 | 5549 | 880 | 6/13/1975 |
| 37 | 74 | 36 | 36-214 | 357933 | 902355 | 5549 | 859 | 7/11/1975 |
| 37 | 74 | 36 | 36-98 | 358233 | 902355 | 5547 | 861 | 6/13/1975 |
| 37 | 74 | 36 | 36-692 | 358933 | 902355 | 5537 | 557 | 1/26/1977 |
| 37 | 74 | 36 | 36-693 | 359033 | 902355 | 5536 | 555 | 1/25/1977 |
| 37 | 74 | 36 | 36-694 | 359133 | 902355 | 5535 | 560 | 1/26/1977 |
| 37 | 74 | 36 | 36-695 | 359233 | 902355 | 5534 | 556 | 1/26/1977 |
| 37 | 74 | 36 | 36-696 | 359083 | 902355 | 5536 | 548 | 1/28/1977 |
| 37 | 74 | 36 | 36-111 | 358333 | 902355 | 5545 | 860 | 6/14/1975 |
| 37 | 74 | 36 | 36-709 | 358433 | 902355 | 5544 | 550 | 1/28/1977 |
| 37 | 74 | 36 | 36-710 | 358533 | 902355 | 5543 | 561 | 1/31/1977 |
| 37 | 74 | 36 | 36-92 | 358133 | 902355 | 5548 | 860 | 6/11/1975 |
| 37 | 74 | 36 | 36-1292 | 358079 | 902362 | 5549.6 | 880 | 6/2/1999 |
| 37 | 74 | 36 | 36-1293 | 358178 | 902369 | 5548.7 | 882 | 6/1/1999 |
| 37 | 74 | 36 | 36-1153 | 357998 | 902382 | 5549 | 857 | 10/14/1993 |
| 37 | 74 | 36 | 36-233 | 358183 | 902455 | 5549 | 861 | 7/15/1975 |
| 37 | 74 | 36 | 36-232 | 357983 | 902455 | 5550 | 860 | 7/14/1975 |
| 37 | 74 | 36 | 36-230 | 358083 | 902455 | 5550 | 861 | 7/13/1975 |
| 37 | 74 | 36 | 36-82 | 362933 | 902455 | 5487 | 550 | 2/3/1975 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-1290 | 358032 | 902459 | 5550.8 | 882 | 6/1/1999 |
| 37 | 74 | 36 | 36-1291 | 358132 | 902464 | 5550.2 | 882 | 5/28/1999 |
| 37 | 74 | 36 | 36-12 | 358066 | 902523 | 5550 | 920 | 5/22/1974 |
| 37 | 74 | 36 | 36-1080 | 359094 | 902535 | 5533.2 | 682 | 3/13/1998 |
| 37 | 74 | 36 | 36-689 | 358433 | 902555 | 5547 | 550 | 1/24/1977 |
| 37 | 74 | 36 | 36-691 | 358633 | 902555 | 5544 | 557 | 1/25/1977 |
| 37 | 74 | 36 | 36-196 | 357933 | 902555 | 5548 | 881 | 7/10/1975 |
| 37 | 74 | 36 | 36-110 | 359133 | 902555 | 5533 | 544 | 6/14/1975 |
| 37 | 74 | 36 | 36-150 | 358933 | 902555 | 5537 | 560 | 6/24/1975 |
| 37 | 74 | 36 | 36-690 | 358533 | 902555 | 5546 | 549 | 1/25/1977 |
| 37 | 74 | 36 | 36-89 | 358133 | 902555 | 5549 | 880 | 6/10/1975 |
| 37 | 74 | 36 | 36-95 | 358033 | 902555 | 5549 | 880 | 6/12/1975 |
| 37 | 74 | 36 | 36-114 | 359033 | 902555 | 5535 | 540 | 6/15/1975 |
| 37 | 74 | 36 | 36-96 | 358733 | 902555 | 5541 | 557 | 6/11/1975 |
| 37 | 74 | 36 | 36-1048 | 358233 | 902557 | 5549 | 857 | 5/24/1977 |
| 37 | 74 | 36 | 36-1296 | 358074 | 902561 | 5549.5 | 881 | 6/7/1999 |
| 37 | 74 | 36 | 36-1295 | 357978 | 902563 | 5548.3 | 881 | 6/7/1999 |
| 37 | 74 | 36 | 36-1049 | 358135 | 902625 | 5548 | 857 | 5/25/1977 |
| 37 | 74 | 36 | 36-1051 | 358033 | 902649 | 5547 | 858 | 5/25/1977 |
| 37 | 74 | 36 | 36-1050 | 357963 | 902653 | 5546 | 876 | 5/24/1977 |
| 37 | 74 | 36 | 36-1294 | 358017 | 902668 | 5546.8 | 880 | 5/28/1999 |
| 36 | 73 | 5 | 5-153 | 370188 | 892971 | 5539.4 | 523 | 12/5/1977 |
| 36 | 73 | 5 | 5-11 | 370271 | 893046 | 5534.6 | 510 | 6/26/1967 |
| 36 | 73 | 5 | 5-217 | 370506 | 893510 | 5485.3 | 420 | 10/25/1984 |
| 36 | 73 | 5 | 5-223 | 370708 | 893517 | 5485.7 | 455 | 10/29/1986 |
| 36 | 73 | 5 | 5-122 | 370100 | 893604 | 5481.3 | 402 | 2/18/1975 |
| 36 | 73 | 5 | 5-99 | 370505 | 893608 | 5481.7 | 964 | 2/5/1970 |
| 36 | 73 | 5 | 5-116 | 370302 | 893608 | 5480 | 402 | 2/14/1975 |
| 36 | 73 | 5 | 5-117 | 370817 | 893612 | 5485.5 | 402 | 2/14/1975 |
| 36 | 73 | 5 | 5-185 | 370095 | 893760 | 5470.2 | 420 | 3/6/1981 |
| 36 | 73 | 5 | 5-224 | 370622 | 893953 | 1 | 455 | 10/29/1986 |
| 36 | 73 | 5 | 5-146 | 370268 | 894033 | 5458.2 | 420 | 11/11/1977 |
| 36 | 73 | 5 | 5-115 | 370759 | 894146 | 1 | 402 | 2/14/1975 |
| 36 | 73 | 5 | 5-216 | 370616 | 894154 | 5444.9 | 400 | 10/24/1984 |
| 36 | 73 | 5 | 5-184 | 370504 | 894155 | 5452.6 | 402 | 3/6/1981 |
| 36 | 73 | 5 | 5-121 | 370265 | 894226 | 5465 | 401 | 2/18/1975 |
| 36 | 73 | 5 | 5-103 | 370158 | 894226 | 5467.5 | 363 | 2/24/1975 |
| 36 | 73 | 5 | 5-134 | 370314 | 894228 | 5465.2 | 401 | 11/11/1977 |
| 36 | 73 | 5 | 5-147 | 370462 | 894228 | 5462.8 | 420 | 11/11/1977 |
| 36 | 73 | 5 | 5-196 | 370378 | 894307 | 5468.2 | 440 | 1/20/1982 |
| 36 | 73 | 5 | 5-152 | 370590 | 894316 | 5465.1 | 443 | 12/2/1977 |
| 36 | 73 | 5 | 5-183 | 370697 | 894320 | 5463 | 400 | 3/6/1981 |
| 36 | 73 | 5 | 5-197 | 370805 | 894321 | 5462.1 | 401 | 1/20/1982 |
| 36 | 73 | 5 | 5-151 | 370147 | 894398 | 5477.6 | 443 | 12/2/1977 |
| 36 | 73 | 5 | 5-114 | 370827 | 894461 | 5470.3 | 401 | 2/13/1975 |
| 36 | 73 | 5 | 5-91 | 370774 | 894464 | 5470.5 | 1003 | 6/4/1969 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drillec |
|---|---|---|---|---|---|---|---|---|
| 36 | 73 | 5 | 5-125 | 370356 | 894466 | 5477.9 | 341 | 2/20/1975 |
| 36 | 73 | 5 | 5-113 | 370508 | 894466 | 5475.7 | 401 | 2/11/1975 |
| 36 | 73 | 5 | 5-76 | 370607 | 894468 | 5473.8 | 340 | 8/9/1967 |
| 36 | 73 | 5 | 5-77 | 371021 | 894468 | 5469 | 320 | 8/9/1967 |
| 36 | 73 | 5 | 5-6 | 370233 | 894488 | 5481.8 | 497 | 6/26/1967 |
| 36 | 73 | 5 | 5-199 | 370735 | 894578 | 5479.8 | 402 | 1/20/1982 |
| 36 | 73 | 5 | 5-198 | 370885 | 894586 | 5476.8 | 402 | 1/20/1982 |
| 36 | 73 | 5 | 5-225 | 370986 | 894586 | 5471.2 | 456 | 10/29/1986 |
| 36 | 73 | 6 | 6-404 | 364644 | 892494 | 5550.2 | 581 | 3/30/1999 |
| 36 | 73 | 6 | 6-102 | 366640 | 892497 | 5542.4 | 958 | 2/17/1970 |
| 36 | 73 | 6 | 6-202 | 364690 | 892497 | 5549.5 | 562 | 3/21/1977 |
| 36 | 73 | 6 | 6-235 | 364738 | 892498 | 5549.1 | 560 | 11/8/1977 |
| 36 | 73 | 6 | 6-385 | 364824 | 892631 | 5541.8 | 581 | 3/17/1999 |
| 36 | 73 | 6 | 6-206 | 367180 | 892662 | 5536.2 | 582 | 3/22/1977 |
| 36 | 73 | 6 | 6-414 | 364620 | 892666 | 5543.8 | 581 | 3/29/1999 |
| 36 | 73 | 6 | 6-205 | 367083 | 892668 | 5535.2 | 581 | 3/21/1977 |
| 36 | 73 | 6 | 6-403 | 364670 | 892669 | 5542.1 | 582 | 3/25/1999 |
| 36 | 73 | 6 | 6-154 | 364932 | 892671 | 5540.6 | 1007 | 12/28/1974 |
| 36 | 73 | 6 | 6-161 | 364823 | 892678 | 5540 | 491 | 1/15/1975 |
| 36 | 73 | 6 | 6-204 | 364875 | 892678 | 5539.7 | 542 | 3/21/1977 |
| 36 | 73 | 6 | 6-163 | 364772 | 892679 | 5540.4 | 502 | 1/17/1975 |
| 36 | 73 | 6 | 6-278 | 364721 | 892680 | 5540.5 | 600 | 3/5/1980 |
| 36 | 73 | 6 | 6-386 | 364818 | 892728 | 5537.8 | 603 | 3/17/1999 |
| 36 | 73 | 6 | 6-387 | 364613 | 892791 | 5540.4 | 581 | 3/16/1999 |
| 36 | 73 | 6 | 6-233 | 364671 | 892793 | 5538.5 | 500 | 11/8/1977 |
| 36 | 73 | 6 | 6-234 | 364767 | 892795 | 5536.9 | 500 | 11/9/1977 |
| 36 | 73 | 6 | 6-232 | 364715 | 892795 | 5537.5 | 500 | 11/7/1977 |
| 36 | 73 | 6 | 6-261 | 364817 | 892799 | 5535.8 | 560 | 2/8/1979 |
| 36 | 73 | 6 | 6-259 | 364715 | 892888 | 5535.5 | 559 | 2/7/1979 |
| 36 | 73 | 6 | 6-279 | 364771 | 892888 | 5535.1 | 600 | 3/6/1980 |
| 36 | 73 | 6 | 6-388 | 364718 | 892928 | 5535.1 | 581 | 3/19/1999 |
| 36 | 73 | 6 | 6-110 | 366839 | 892974 | 5526.2 | 552 | 2/8/1972 |
| 36 | 73 | 6 | 6-207 | 367210 | 892977 | 5525.2 | 561 | 3/22/1977 |
| 36 | 73 | 6 | 6-10 | 366615 | 892987 | 5529 | 510 | 6/26/1967 |
| 36 | 73 | 6 | 6-91 | 368449 | 892988 | 1 | 942 | 6/10/1969 |
| 36 | 73 | 6 | 6-12 | 369024 | 892991 | 5528.4 | 340 | 6/28/1967 |
| 36 | 73 | 6 | 6-153 | 365120 | 892996 | 5533.6 | 504 | 12/27/1974 |
| 36 | 73 | 6 | 6-208 | 365521 | 893001 | 5532.4 | 546 | 3/23/1977 |
| 36 | 73 | 6 | 6-11 | 367813 | 893001 | 5524.1 | 402 | 6/26/1967 |
| 36 | 73 | 6 | 6-160 | 364915 | 893001 | 5532.1 | 503 | 1/15/1975 |
| 36 | 73 | 6 | 6-405 | 364704 | 893001 | 5534.4 | 581 | 3/25/1999 |
| 36 | 73 | 6 | 6-162 | 364858 | 893002 | 5532 | 502 | 1/20/1975 |
| 36 | 73 | 6 | 6-87 | 365015 | 893002 | 1 | 1123 | 3/28/1968 |
| 36 | 73 | 6 | 6-211 | 364809 | 893005 | 5532.7 | 561 | 3/23/1977 |
| 36 | 73 | 6 | 6-280 | 364755 | 893006 | 5533.5 | 600 | 3/6/1980 |
| 36 | 73 | 6 | 6-9 | 365417 | 893006 | 5533.4 | 577 | 6/27/1967 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 73 | 6 | 6-239 | 369216 | 893009 | 5519.5 | 483 | 12/2/1977 |
| 36 | 73 | 6 | 6-331 | 365260 | 893011 | 5533.6 | 500 | 10/17/1983 |
| 36 | 73 | 6 | 6-411 | 365306 | 893061 | 5532.9 | 581 | 3/29/1999 |
| 36 | 73 | 6 | 6-407 | 365461 | 893165 | 5528.9 | 78 | 3/29/1999 |
| 36 | 73 | 6 | 6-390 | 365509 | 893169 | 5528.3 | 601 | 3/22/1999 |
| 36 | 73 | 6 | 6-409 | 365050 | 893200 | 5529 | 581 | 3/26/1999 |
| 36 | 73 | 6 | 6-391 | 365099 | 893202 | 5528.7 | 600 | 3/19/1999 |
| 36 | 73 | 6 | 6-329 | 365147 | 893204 | 5528.5 | 500 | 10/17/1983 |
| 36 | 73 | 6 | 6-410 | 365301 | 893207 | 5527.9 | 581 | 3/26/1999 |
| 36 | 73 | 6 | 6-231 | 365250 | 893209 | 5528.1 | 500 | 11/8/1977 |
| 36 | 73 | 6 | 6-330 | 365555 | 893221 | 5526.7 | 500 | 10/17/1983 |
| 36 | 73 | 6 | 6-281 | 364811 | 893224 | 5530.7 | 591 | 3/6/1980 |
| 36 | 73 | 6 | 6-282 | 364914 | 893228 | 5530 | 600 | 3/6/1980 |
| 36 | 73 | 6 | 6-197 | 365300 | 893306 | 5527.6 | 558 | 3/18/1977 |
| 36 | 73 | 6 | 6-229 | 365246 | 893311 | 5528.7 | 542 | 11/7/1977 |
| 36 | 73 | 6 | 6-230 | 365347 | 893312 | 5527.4 | 499 | 11/7/1977 |
| 36 | 73 | 6 | 6-159 | 365399 | 893316 | 5527 | 503 | 1/5/1975 |
| 36 | 73 | 6 | 6-212 | 365502 | 893321 | 5525.8 | 561 | 3/23/1977 |
| 36 | 73 | 6 | 6-408 | 365114 | 893361 | 5533.7 | 581 | 3/26/1999 |
| 36 | 73 | 6 | 6-392 | 365163 | 893364 | 5533.3 | 581 | 3/22/1999 |
| 36 | 73 | 6 | 6-338 | 369207 | 893368 | 5504.2 | 450 | 10/25/1985 |
| 36 | 73 | 6 | 6-258 | 365210 | 893369 | 5532.5 | 557 | 2/6/1979 |
| 36 | 73 | 6 | 6-357 | 368995 | 893370 | 5503.9 | 402 | 10/30/1986 |
| 36 | 73 | 6 | 6-346 | 369100 | 893371 | 5497.9 | 403 | 10/17/1985 |
| 36 | 73 | 6 | 6-337 | 369318 | 893375 | 5492.9 | 450 | 10/25/1984 |
| 36 | 73 | 6 | 6-336 | 369431 | 893376 | 5491.8 | 450 | 10/25/1984 |
| 36 | 73 | 6 | 6-309 | 369542 | 893379 | 5492.3 | 503 | 1/21/1982 |
| 36 | 73 | 6 | 6-335 | 369658 | 893380 | 5496.9 | 450 | 10/25/1984 |
| 36 | 73 | 6 | 6-393 | 365497 | 893385 | 5528.1 | 581 | 3/22/1999 |
| 36 | 73 | 6 | 6-241 | 369780 | 893395 | 5495.6 | 483 | 12/2/1977 |
| 36 | 73 | 6 | 6-99 | 369010 | 893483 | 1 | 963 | 2/16/1970 |
| 36 | 73 | 6 | 6-97 | 365419 | 893491 | 5534.3 | 966 | 2/11/1970 |
| 36 | 73 | 6 | 6-152 | 365469 | 893514 | 5534.4 | 1004 | 12/20/1974 |
| 36 | 73 | 6 | 6-109 | 365785 | 893515 | 5528.3 | 560 | 2/8/1972 |
| 36 | 73 | 6 | 6-130 | 365572 | 893516 | 5532.8 | 601 | 7/25/1973 |
| 36 | 73 | 6 | 6-260 | 365523 | 893518 | 1 | 557 | 2/8/1979 |
| 36 | 73 | 6 | 6-262 | 365615 | 893518 | 5531.6 | 560 | 2/8/1979 |
| 36 | 73 | 6 | 6-356 | 369323 | 893561 | 5487.3 | 402 | 10/30/1985 |
| 36 | 73 | 6 | 6-347 | 369422 | 893568 | 5481.6 | 400 | 10/17/1985 |
| 36 | 73 | 6 | 6-355 | 369526 | 893573 | 5484.2 | 402 | 10/30/1985 |
| 36 | 73 | 6 | 6-228 | 365671 | 893661 | 5533.8 | 500 | 11/7/1977 |
| 36 | 73 | 6 | 6-101 | 367876 | 893740 | 5543.5 | 959 | 2/16/1970 |
| 36 | 73 | 6 | 6-341 | 369558 | 893744 | 5471.8 | 420 | 10/25/1984 |
| 36 | 73 | 6 | 6-340 | 369672 | 893749 | 5471.4 | 420 | 10/25/1984 |
| 36 | 73 | 6 | 6-308 | 369783 | 893751 | 5470.8 | 500 | 1/21/1982 |
| 36 | 73 | 6 | 6-339 | 369891 | 893753 | 5471.4 | 420 | 10/24/1984 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 73 | 6 | 6-399 | 365645 | 893821 | 5531.1 | 580 | 3/22/1999 |
| 36 | 73 | 6 | 6-192 | 365685 | 893823 | 5531.8 | 563 | 3/18/1977 |
| 36 | 73 | 6 | 6-151 | 365781 | 893825 | 5532.1 | 501 | 12/20/1974 |
| 36 | 73 | 6 | 6-213 | 365878 | 893829 | 5531 | 562 | 3/23/1977 |
| 36 | 73 | 6 | 6-395 | 365906 | 893994 | 5531 | 581 | 3/22/1999 |
| 36 | 73 | 6 | 6-406 | 365864 | 894041 | 5530.5 | 581 | 3/25/1999 |
| 36 | 73 | 6 | 6-142 | 365955 | 894048 | 5531.7 | 542 | 12/18/1974 |
| 36 | 73 | 6 | 6-108 | 365914 | 894049 | 5531.3 | 552 | 2/8/1972 |
| 36 | 73 | 6 | 6-116 | 366079 | 894049 | 5531.7 | 557 | 2/11/1972 |
| 36 | 73 | 6 | 6-129 | 365996 | 894050 | 5531.9 | 601 | 7/24/1973 |
| 36 | 73 | 5 | 5-222 | 371090 | 894599 | 5470.2 | 354 | 10/17/1985 |
| 36 | 73 | 5 | 5-154 | 370502 | 894682 | 5494.6 | 423 | 12/3/1977 |
| 36 | 73 | 5 | 5-221 | 371122 | 894693 | 5473.9 | 356 | 10/17/1985 |
| 36 | 73 | 5 | 5-128 | 370719 | 894693 | 5492.5 | 400 | 11/8/1977 |
| 36 | 73 | 5 | 5-112 | 370961 | 894697 | 5483.3 | 402 | 2/10/1975 |
| 36 | 73 | 5 | 5-133 | 371012 | 894698 | 5481.2 | 320 | 11/11/1977 |
| 36 | 73 | 5 | 5-120 | 370906 | 894698 | 5485.6 | 403 | 2/17/1975 |
| 36 | 73 | 5 | 5-220 | 370811 | 894823 | 5495.9 | 351 | 10/17/1985 |
| 36 | 73 | 5 | 5-214 | 370918 | 894829 | 5493.5 | 320 | 10/24/1984 |
| 36 | 73 | 5 | 5-215 | 371124 | 894835 | 5484.5 | 320 | 10/24/1984 |
| 36 | 73 | 5 | 5-175 | 371019 | 894838 | 5494.3 | 384 | 3/12/1980 |
| 36 | 73 | 5 | 5-219 | 370831 | 894958 | 5499.7 | 360 | 10/17/1985 |
| 36 | 73 | 5 | 5-64 | 370617 | 894960 | 5508 | 400 | 8/8/1967 |
| 36 | 73 | 5 | 5-213 | 370912 | 894961 | 5499.2 | 420 | 10/24/1984 |
| 36 | 73 | 5 | 5-68 | 372228 | 894964 | 5439.9 | 337 | 8/9/1967 |
| 36 | 73 | 5 | 5-67 | 371821 | 894966 | 5459.4 | 358 | 8/9/1967 |
| 36 | 73 | 5 | 5-65 | 371008 | 894967 | 5502.4 | 340 | 8/8/1967 |
| 36 | 73 | 5 | 5-66 | 371424 | 894968 | 5480.5 | 355 | 8/9/1967 |
| 36 | 73 | 5 | 5-63 | 370223 | 894971 | 5512 | 400 | 8/8/1967 |
| 36 | 73 | 5 | 5-150 | 370732 | 894971 | 5506.7 | 361 | 12/1/1977 |
| 36 | 73 | 5 | 5-111 | 371124 | 894974 | 5498 | 402 | 2/7/1975 |
| 36 | 73 | 5 | 5-96 | 371215 | 894974 | 5496.1 | 959 | 2/4/1970 |
| 36 | 73 | 5 | 5-173 | 370996 | 895099 | 5504.3 | 401 | 3/11/1980 |
| 36 | 73 | 5 | 5-212 | 371210 | 895103 | 5488.3 | 320 | 10/24/1984 |
| 36 | 73 | 5 | 5-200 | 371115 | 895103 | 5500.6 | 400 | 1/20/1982 |
| 36 | 73 | 5 | 5-174 | 370897 | 895105 | 5505 | 520 | 3/11/1980 |
| 36 | 73 | 5 | 5-201 | 371317 | 895110 | 5488.1 | 420 | 1/20/1982 |
| 36 | 73 | 5 | 5-226 | 370795 | 895123 | 5499.3 | 455 | 10/29/1986 |
| 36 | 73 | 5 | 5-135 | 370961 | 895222 | 5500.6 | 378 | 11/11/1977 |
| 36 | 73 | 5 | 5-110 | 371069 | 895228 | 5495.1 | 403 | 2/11/1975 |
| 36 | 73 | 5 | 5-136 | 371142 | 895384 | 5477.6 | 420 | 11/11/1977 |
| 36 | 73 | 5 | 5-129 | 371095 | 895386 | 5479.1 | 400 | 11/8/1977 |
| 36 | 73 | 5 | 5-52 | 371075 | 895427 | 5476.8 | 339 | 8/8/1967 |
| 36 | 73 | 5 | 5-54 | 371819 | 895462 | 5462.3 | 340 | 8/8/1967 |
| 36 | 73 | 5 | 5-55 | 372219 | 895463 | 5459.6 | 355 | 8/8/1967 |
| 36 | 73 | 5 | 5-53 | 371426 | 895466 | 5464 | 340 | 8/8/1967 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 73 | 5 | 5-51 | 370619 | 895469 | 5473.2 | 355 | 8/8/1967 |
| 36 | 73 | 5 | 5-50 | 370211 | 895472 | 5480.6 | 337 | 8/8/1967 |
| 36 | 73 | 5 | 5-109 | 371120 | 895472 | 5473.5 | 402 | 2/11/1975 |
| 36 | 73 | 5 | 5-211 | 371302 | 895482 | 5457.5 | 300 | 10/24/1984 |
| 36 | 73 | 5 | 5-186 | 371590 | 895483 | 5457.6 | 402 | 3/6/1981 |
| 36 | 73 | 5 | 5-95 | 371240 | 895484 | 5467 | 960 | 2/9/1970 |
| 36 | 73 | 5 | 5-172 | 371099 | 895544 | 5469.8 | 593 | 3/7/1980 |
| 36 | 73 | 5 | 5-227 | 371004 | 895546 | 5460.7 | 462 | 10/29/1986 |
| 36 | 73 | 5 | 5-171 | 371097 | 895636 | 5467.3 | 600 | 3/10/1980 |
| 36 | 73 | 5 | 5-108 | 371095 | 895716 | 5468.8 | 402 | 2/11/1975 |
| 36 | 73 | 5 | 5-82 | 371195 | 895720 | 5471.7 | 1496 | 10/28/1968 |
| 36 | 73 | 5 | 5-176 | 371286 | 895750 | 5473.6 | 600 | 3/10/1980 |
| 36 | 73 | 5 | 5-131 | 371391 | 895776 | 5470.8 | 321 | 11/8/1977 |
| 36 | 73 | 5 | 5-137 | 371244 | 895811 | 5470.1 | 300 | 11/14/1977 |
| 36 | 73 | 5 | 5-130 | 371195 | 895815 | 5468.7 | 300 | 11/8/1977 |
| 36 | 73 | 5 | 5-177 | 371466 | 895819 | 5464.3 | 501 | 3/11/1980 |
| 36 | 73 | 5 | 5-187 | 371729 | 895935 | 5459.4 | 382 | 3/5/1981 |
| 36 | 73 | 5 | 5-42 | 370619 | 895960 | 5479.2 | 355 | 8/7/1967 |
| 36 | 73 | 5 | 5-45 | 372221 | 895962 | 5466.1 | 340 | 8/7/1967 |
| 36 | 73 | 5 | 5-44 | 371828 | 895965 | 5462 | 356 | 8/7/1967 |
| 36 | 73 | 5 | 5-43 | 371028 | 895968 | 5464 | 355 | 8/7/1967 |
| 36 | 73 | 5 | 5-158 | 372256 | 895972 | 5464.4 | 316 | 1/24/1979 |
| 36 | 73 | 5 | 5-94 | 371182 | 895996 | 5462.6 | 958 | 2/4/1970 |
| 36 | 73 | 5 | 5-1 | 370244 | 896004 | 5490.8 | 366 | 6/13/1966 |
| 36 | 73 | 5 | 5-235 | 371738 | 896028 | 5456.5 | 1005 | 6/29/1989 |
| 36 | 73 | 5 | 5-188 | 371831 | 896036 | 5464.7 | 382 | 3/5/1981 |
| 36 | 73 | 5 | 5-139 | 371590 | 896041 | 5466.5 | 320 | 11/10/1977 |
| 36 | 73 | 5 | 5-2 | 371494 | 896042 | 5468.7 | 358 | 6/13/1967 |
| 36 | 73 | 5 | 5-107 | 371401 | 896048 | 5465.2 | 402 | 2/13/1975 |
| 36 | 73 | 5 | 5-233 | 370962 | 896063 | 5463.4 | 500 | 9/30/1987 |
| 36 | 73 | 5 | 5-163 | 371546 | 896064 | 5469 | 320 | 1/24/1979 |
| 36 | 73 | 5 | 5-162 | 371396 | 896147 | 5466.9 | 320 | 1/24/1979 |
| 36 | 73 | 5 | 5-218 | 370515 | 896148 | 5491.1 | 454 | 10/17/1985 |
| 36 | 73 | 5 | 5-132 | 371493 | 896150 | 5467.7 | 300 | 11/8/1977 |
| 36 | 73 | 5 | 5-210 | 370615 | 896151 | 5485.2 | 450 | 10/23/1984 |
| 36 | 73 | 5 | 5-138 | 371543 | 896153 | 5467.9 | 302 | 11/10/1977 |
| 36 | 73 | 5 | 5-228 | 370816 | 896160 | 5476.1 | 458 | 10/28/1986 |
| 36 | 73 | 5 | 5-160 | 371874 | 896202 | 5469.7 | 320 | 1/23/1979 |
| 36 | 73 | 5 | 5-157 | 372124 | 896203 | 5468.3 | 320 | 1/23/1979 |
| 36 | 73 | 5 | 5-140 | 371660 | 896205 | 5469.5 | 320 | 11/10/1977 |
| 36 | 73 | 5 | 5-127 | 371984 | 896206 | 5469.4 | 341 | 2/24/1975 |
| 36 | 73 | 5 | 5-142 | 371928 | 896207 | 5469.5 | 322 | 11/10/1977 |
| 36 | 73 | 5 | 5-123 | 371607 | 896208 | 5468.9 | 402 | 2/19/1975 |
| 36 | 73 | 5 | 5-143 | 372027 | 896208 | 5469.4 | 320 | 10/11/1977 |
| 36 | 73 | 5 | 5-118 | 371715 | 896209 | 5470.2 | 402 | 2/17/1975 |
| 36 | 73 | 5 | 5-106 | 371826 | 896210 | 5470.1 | 1006 | 2/12/1975 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 73 | 5 | 5-141 | 371766 | 896210 | 5470.5 | 321 | 11/10/1977 |
| 36 | 73 | 5 | 5-155 | 371539 | 896251 | 5467.5 | 320 | 1/23/1979 |
| 36 | 73 | 5 | 5-232 | 370812 | 896262 | 5482 | 500 | 10/1/1987 |
| 36 | 73 | 5 | 5-208 | 372128 | 896292 | 5466.9 | 420 | 10/24/1984 |
| 36 | 73 | 5 | 5-167 | 371654 | 896342 | 5468.8 | 600 | 3/7/1980 |
| 36 | 73 | 5 | 5-229 | 370512 | 896346 | 5503.3 | 435 | 10/28/1986 |
| 36 | 73 | 5 | 5-234 | 370605 | 896349 | 5502.1 | 1004 | 6/29/1989 |
| 36 | 73 | 5 | 5-159 | 372213 | 896361 | 5468.8 | 316 | 1/23/1979 |
| 36 | 73 | 5 | 5-231 | 370506 | 896436 | 5505.5 | 500 | 10/1/1987 |
| 36 | 73 | 5 | 5-105 | 371266 | 896453 | 5477.7 | 402 | 2/19/1975 |
| 36 | 73 | 5 | 5-164 | 372322 | 896455 | 5466.2 | 320 | 1/23/1979 |
| 36 | 73 | 5 | 5-195 | 372082 | 896456 | 5467.4 | 400 | 1/19/1982 |
| 36 | 73 | 5 | 5-32 | 371426 | 896458 | 5470.2 | 378 | 8/4/1967 |
| 36 | 73 | 5 | 5-161 | 372183 | 896459 | 5466 | 320 | 1/23/1979 |
| 36 | 73 | 5 | 5-166 | 371789 | 896461 | 5467.2 | 320 | 1/24/1979 |
| 36 | 73 | 5 | 5-34 | 372229 | 896462 | 5465.7 | 355 | 8/4/1967 |
| 36 | 73 | 5 | 5-93 | 371633 | 896465 | 5466.6 | 957 | 2/3/1970 |
| 36 | 73 | 5 | 5-31 | 371029 | 896469 | 5492.5 | 380 | 8/7/1967 |
| 36 | 73 | 5 | 5-29 | 370230 | 896471 | 1 | 399 | 8/4/1967 |
| 36 | 73 | 5 | 5-33 | 371828 | 896471 | 5467 | 339 | 8/4/1967 |
| 36 | 73 | 5 | 5-145 | 371934 | 896471 | 5467.3 | 320 | 11/11/1977 |
| 36 | 73 | 5 | 5-30 | 370629 | 896474 | 5510 | 397 | 8/4/1967 |
| 36 | 73 | 5 | 5-165 | 372237 | 896511 | 5463.7 | 320 | 1/23/1979 |
| 36 | 73 | 5 | 5-230 | 370111 | 896565 | 5514.2 | 500 | 10/1/1987 |
| 36 | 73 | 5 | 5-205 | 372148 | 896572 | 5460.6 | 300 | 10/26/1982 |
| 36 | 73 | 5 | 5-204 | 372348 | 896579 | 5459.3 | 300 | 10/26/1982 |
| 36 | 73 | 5 | 5-194 | 372450 | 896581 | 5457 | 400 | 1/19/1982 |
| 36 | 73 | 5 | 5-170 | 372039 | 896609 | 5457.4 | 600 | 3/10/1980 |
| 36 | 73 | 5 | 5-124 | 372284 | 896690 | 1 | 302 | 2/24/1975 |
| 36 | 73 | 5 | 5-180 | 372444 | 896691 | 5446.2 | 380 | 2/6/1981 |
| 36 | 73 | 5 | 5-119 | 372337 | 896695 | 1 | 402 | 2/18/1975 |
| 36 | 73 | 5 | 5-104 | 372237 | 896695 | 1 | 402 | 2/13/1975 |
| 36 | 73 | 5 | 5-144 | 372128 | 896695 | 1 | 320 | 11/11/1977 |
| 36 | 73 | 5 | 5-126 | 371182 | 896775 | 5511.7 | 402 | 2/26/1975 |
| 36 | 73 | 5 | 5-209 | 371392 | 896776 | 5479.6 | 450 | 10/24/1984 |
| 36 | 73 | 5 | 5-168 | 372145 | 896820 | 5450.7 | 599 | 3/11/1980 |
| 36 | 73 | 5 | 5-169 | 372130 | 896879 | 5447.3 | 600 | 3/10/1980 |
| 36 | 73 | 5 | 5-17 | 370630 | 896961 | 5524.6 | 399 | 8/3/1967 |
| 36 | 73 | 5 | 5-20 | 371832 | 896965 | 5461 | 385 | 8/3/1967 |
| 36 | 73 | 5 | 5-21 | 372231 | 896965 | 5448.3 | 320 | 8/3/1967 |
| 36 | 73 | 5 | 5-19 | 371432 | 896966 | 5488 | 360 | 8/3/1967 |
| 36 | 73 | 5 | 5-16 | 370232 | 896971 | 5517 | 350 | 8/3/1967 |
| 36 | 73 | 5 | 5-18 | 371032 | 896972 | 5517.2 | 390 | 8/3/1967 |
| 36 | 73 | 5 | 5-90 | 372027 | 897056 | 5457.1 | 1020 | 4/17/1969 |
| 36 | 73 | 5 | 5-178 | 372335 | 897182 | 5462.5 | 360 | 3/6/1981 |
| 36 | 73 | 5 | 5-189 | 370257 | 897370 | 1 | 482 | 1/18/1982 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 73 | 5 | 5-179 | 372389 | 897387 | 5480.6 | 361 | 2/6/1981 |
| 36 | 73 | 6 | 6-415 | 365082 | 892023 | 5563.8 | 581 | 3/30/1999 |
| 36 | 73 | 6 | 6-384 | 364830 | 892147 | 5556.5 | 801 | 3/16/1999 |
| 36 | 73 | 6 | 6-383 | 364777 | 892194 | 5558.2 | 764 | 3/9/1999 |
| 36 | 73 | 6 | 6-14 | 369535 | 892218 | 1 | 419 | 6/26/1967 |
| 36 | 73 | 6 | 6-98 | 367734 | 892226 | 5513.5 | 958 | 2/13/1970 |
| 36 | 73 | 6 | 6-13 | 368359 | 892228 | 1 | 394 | 6/28/1967 |
| 36 | 73 | 6 | 6-394 | 364727 | 892238 | 5556.9 | 581 | 3/19/1999 |
| 36 | 73 | 6 | 6-389 | 364651 | 892258 | 5557.6 | 801 | 3/16/1999 |
| 36 | 73 | 6 | 6-277 | 364649 | 892302 | 5555.8 | 600 | 3/5/1980 |
| 36 | 73 | 6 | 6-290 | 364747 | 892306 | 5555.3 | 600 | 3/5/1980 |
| 36 | 73 | 6 | 6-240 | 366961 | 892386 | 5551.2 | 563 | 12/1/1977 |
| 36 | 73 | 6 | 6-203 | 367057 | 892390 | 5551.4 | 582 | 3/22/1977 |
| 36 | 73 | 6 | 6-227 | 365985 | 894158 | 5530.5 | 485 | 11/7/1977 |
| 36 | 73 | 6 | 6-327 | 366087 | 894159 | 5531 | 500 | 10/18/1983 |
| 36 | 73 | 6 | 6-328 | 366389 | 894162 | 5529.4 | 500 | 10/17/1983 |
| 36 | 73 | 6 | 6-243 | 368847 | 894187 | 5510.8 | 482 | 12/3/1977 |
| 36 | 73 | 6 | 6-396 | 366084 | 894207 | 5531 | 581 | 3/22/1999 |
| 36 | 73 | 6 | 6-397 | 366387 | 894211 | 5530.4 | 581 | 3/23/1999 |
| 36 | 73 | 6 | 6-238 | 369818 | 894225 | 5471.5 | 483 | 12/2/1977 |
| 36 | 73 | 6 | 6-342 | 369923 | 894228 | 5471.2 | 420 | 10/24/1984 |
| 36 | 73 | 6 | 6-400 | 366029 | 894444 | 5531.9 | 581 | 3/24/1999 |
| 36 | 73 | 6 | 6-398 | 366590 | 894448 | 5532.2 | 581 | 3/23/1999 |
| 36 | 73 | 6 | 6-81 | 368218 | 894477 | 5517 | 340 | 8/9/1967 |
| 36 | 73 | 6 | 6-214 | 366119 | 894478 | 5533.3 | 562 | 3/24/1977 |
| 36 | 73 | 6 | 6-84 | 369826 | 894479 | 5489.4 | 359 | 8/9/1967 |
| 36 | 73 | 6 | 6-83 | 369415 | 894482 | 5508 | 360 | 8/9/1967 |
| 36 | 73 | 6 | 6-80 | 367421 | 894483 | 5527 | 312 | 8/9/1967 |
| 36 | 73 | 6 | 6-326 | 366221 | 894483 | 5532.2 | 500 | 10/18/1983 |
| 36 | 73 | 6 | 6-343 | 369213 | 894484 | 1 | 460 | 10/25/1984 |
| 36 | 73 | 6 | 6-88 | 366319 | 894484 | 5532.8 | 1000 | 4/11/1969 |
| 36 | 73 | 6 | 6-8 | 369033 | 894485 | 5513.3 | 401 | 6/22/1967 |
| 36 | 73 | 6 | 6-191 | 366025 | 894485 | 5532.8 | 521 | 3/17/1977 |
| 36 | 73 | 6 | 6-225 | 366271 | 894488 | 5533.2 | 450 | 11/7/1977 |
| 36 | 73 | 6 | 6-107 | 365934 | 894489 | 5531.2 | 550 | 2/8/1972 |
| 36 | 73 | 6 | 6-141 | 365872 | 894490 | 5529.8 | 543 | 12/17/1974 |
| 36 | 73 | 6 | 6-226 | 365973 | 894490 | 5532.2 | 541 | 11/7/1977 |
| 36 | 73 | 6 | 6-127 | 365829 | 894492 | 5528.7 | 603 | 7/25/1973 |
| 36 | 73 | 6 | 6-82 | 368608 | 894493 | 5514 | 340 | 8/9/1967 |
| 36 | 73 | 6 | 6-96 | 365623 | 894493 | 5523.9 | 960 | 2/13/1970 |
| 36 | 73 | 6 | 6-6 | 366637 | 894500 | 5531.2 | 518 | 6/22/1967 |
| 36 | 73 | 6 | 6-7 | 367849 | 894502 | 5520.3 | 401 | 6/22/1967 |
| 36 | 73 | 6 | 6-5 | 365441 | 894514 | 5527.9 | 379 | 6/14/1967 |
| 36 | 73 | 6 | 6-242 | 369898 | 894571 | 5494.8 | 477 | 12/2/1977 |
| 36 | 73 | 6 | 6-150 | 366217 | 894690 | 5532.4 | 503 | 12/27/1974 |
| 36 | 73 | 6 | 6-324 | 366115 | 894691 | 5533.3 | 500 | 10/18/1983 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 73 | 6 | 6-140 | 366319 | 894694 | 5531.5 | 1003 | 12/17/1974 |
| 36 | 73 | 6 | 6-325 | 366423 | 894695 | 5530.1 | 500 | 10/18/1983 |
| 36 | 73 | 6 | 6-412 | 366470 | 894699 | 5530.5 | 581 | 3/24/1999 |
| 36 | 73 | 6 | 6-95 | 367623 | 894715 | 1 | 960 | 2/10/1970 |
| 36 | 73 | 6 | 6-128 | 367514 | 894726 | 1 | 602 | 7/24/1973 |
| 36 | 73 | 6 | 6-401 | 366418 | 894742 | 5530.5 | 581 | 3/23/1999 |
| 36 | 73 | 6 | 6-139 | 366400 | 894932 | 5530.5 | 541 | 12/18/1974 |
| 36 | 73 | 6 | 6-125 | 366451 | 894957 | 5529.7 | 601 | 7/24/1973 |
| 36 | 73 | 6 | 6-223 | 366502 | 894957 | 5528.7 | 500 | 11/7/1977 |
| 36 | 73 | 6 | 6-111 | 366369 | 894957 | 5530.4 | 550 | 2/8/1972 |
| 36 | 73 | 6 | 6-115 | 366556 | 894961 | 1 | 557 | 2/10/1972 |
| 36 | 73 | 6 | 6-190 | 366268 | 894962 | 5534 | 602 | 3/17/1977 |
| 36 | 73 | 6 | 6-126 | 367633 | 894962 | 5524.7 | 603 | 7/24/1973 |
| 36 | 73 | 6 | 6-94 | 369220 | 894968 | 5520.7 | 963 | 2/10/1970 |
| 36 | 73 | 6 | 6-344 | 369325 | 894969 | 1 | 480 | 10/23/1984 |
| 36 | 73 | 6 | 6-75 | 369821 | 894972 | 5513.7 | 396 | 8/10/1967 |
| 36 | 73 | 6 | 6-73 | 369020 | 894975 | 5520.7 | 401 | 8/10/1967 |
| 36 | 73 | 6 | 6-74 | 369424 | 894975 | 5518.8 | 362 | 8/9/1967 |
| 36 | 73 | 6 | 6-71 | 368224 | 894980 | 5529 | 503 | 8/10/1967 |
| 36 | 73 | 6 | 6-70 | 367827 | 894987 | 5526.3 | 400 | 8/10/1967 |
| 36 | 73 | 6 | 6-72 | 368630 | 894987 | 5524.5 | 382 | 8/10/1967 |
| 36 | 73 | 6 | 6-69 | 367426 | 894988 | 5520.5 | 400 | 8/10/1967 |
| 36 | 73 | 6 | 6-68 | 367020 | 894989 | 5521.9 | 400 | 8/10/1967 |
| 36 | 73 | 6 | 6-221 | 366410 | 895046 | 5532.5 | 500 | 6/13/1977 |
| 36 | 73 | 6 | 6-149 | 366322 | 895204 | 5533.5 | 523 | 12/27/1974 |
| 36 | 73 | 6 | 6-147 | 366375 | 895209 | 5533.5 | 522 | 12/18/1974 |
| 36 | 73 | 6 | 6-138 | 366403 | 895211 | 5533 | 542 | 12/16/1974 |
| 36 | 73 | 6 | 6-402 | 366456 | 895221 | 5532.9 | 581 | 3/24/1999 |
| 36 | 73 | 6 | 6-413 | 366503 | 895225 | 5532.6 | 581 | 3/30/1999 |
| 36 | 73 | 6 | 6-90 | 365977 | 895239 | 5535.2 | 1039 | 6/4/1969 |
| 36 | 73 | 6 | 6-333 | 365581 | 895280 | 5536.8 | 500 | 10/26/1983 |
| 36 | 73 | 6 | 6-334 | 365790 | 895281 | 5536.1 | 500 | 10/26/1983 |
| 36 | 73 | 6 | 6-332 | 365377 | 895281 | 5537.5 | 500 | 10/26/1983 |
| 36 | 73 | 6 | 6-201 | 366301 | 895380 | 5536 | 542 | 3/18/1977 |
| 36 | 73 | 6 | 6-157 | 366380 | 895381 | 5534.6 | 503 | 12/30/1974 |
| 36 | 73 | 6 | 6-106 | 366350 | 895382 | 5535.1 | 560 | 2/8/1972 |
| 36 | 73 | 6 | 6-137 | 366429 | 895384 | 5533.1 | 1000 | 12/17/1974 |
| 36 | 73 | 6 | 6-114 | 366514 | 895387 | 5532.4 | 551 | 2/10/1972 |
| 36 | 73 | 6 | 6-123 | 366564 | 895387 | 5531.5 | 604 | 7/23/1973 |
| 36 | 73 | 6 | 6-345 | 369912 | 895469 | 5493.2 | 500 | 10/23/1984 |
| 36 | 73 | 6 | 6-62 | 369822 | 895472 | 5496.7 | 491 | 8/10/1967 |
| 36 | 73 | 6 | 6-61 | 369421 | 895474 | 5504 | 400 | 8/11/1967 |
| 36 | 73 | 6 | 6-59 | 368626 | 895478 | 5513 | 400 | 8/11/1967 |
| 36 | 73 | 6 | 6-54 | 366629 | 895480 | 5533.3 | 400 | 8/11/1967 |
| 36 | 73 | 6 | 6-297 | 367330 | 895482 | 5524.1 | 480 | 2/5/1981 |
| 36 | 73 | 6 | 6-55 | 367029 | 895483 | 5535.2 | 400 | 8/11/1967 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 73 | 6 | 6-56 | 367422 | 895483 | 5527.5 | 400 | 8/11/1967 |
| 36 | 73 | 6 | 6-173 | 367627 | 895485 | 5521.6 | 603 | 2/26/1975 |
| 36 | 73 | 6 | 6-200 | 366715 | 895487 | 5534.9 | 542 | 3/18/1977 |
| 36 | 73 | 6 | 6-53 | 366225 | 895488 | 5533.3 | 400 | 8/11/1967 |
| 36 | 73 | 6 | 6-124 | 367226 | 895488 | 5533.4 | 600 | 7/23/1973 |
| 36 | 73 | 6 | 6-323 | 365380 | 895488 | 5532.9 | 500 | 10/18/1983 |
| 36 | 73 | 6 | 6-172 | 366827 | 895488 | 5536.7 | 603 | 2/26/1975 |
| 36 | 73 | 6 | 6-60 | 369023 | 895491 | 5507.4 | 402 | 8/11/1967 |
| 36 | 73 | 6 | 6-58 | 368230 | 895493 | 5516.6 | 400 | 8/11/1967 |
| 36 | 73 | 6 | 6-57 | 367841 | 895494 | 5520.5 | 434 | 8/11/1967 |
| 36 | 73 | 6 | 6-300 | 367945 | 895539 | 5520.2 | 340 | 3/10/1981 |
| 36 | 73 | 6 | 6-136 | 366488 | 895562 | 5530.3 | 540 | 12/16/1974 |
| 36 | 73 | 6 | 6-146 | 366594 | 895565 | 5533.8 | 522 | 12/18/1974 |
| 36 | 73 | 6 | 6-148 | 366536 | 895581 | 5531.1 | 503 | 12/27/1974 |
| 36 | 73 | 6 | 6-189 | 366443 | 895603 | 5527.4 | 603 | 3/17/1977 |
| 36 | 73 | 6 | 6-320 | 365976 | 895612 | 5534.4 | 500 | 10/18/1983 |
| 36 | 73 | 6 | 6-220 | 366461 | 895671 | 5524.6 | 500 | 6/16/1977 |
| 36 | 73 | 6 | 6-199 | 366539 | 895694 | 5526.8 | 542 | 3/17/1977 |
| 36 | 73 | 6 | 6-188 | 367493 | 895707 | 5520.1 | 563 | 3/16/1977 |
| 36 | 73 | 6 | 6-171 | 367591 | 895723 | 5517.7 | 1000 | 2/25/1975 |
| 36 | 73 | 6 | 6-198 | 367691 | 895740 | 5517.3 | 529 | 3/22/1977 |
| 36 | 73 | 6 | 6-170 | 367228 | 895743 | 5524.4 | 624 | 2/26/1975 |
| 36 | 73 | 6 | 6-187 | 367795 | 895752 | 5519.9 | 562 | 3/17/1977 |
| 36 | 73 | 6 | 6-307 | 369292 | 895776 | 5505.2 | 500 | 1/19/1982 |
| 36 | 73 | 6 | 6-293 | 367500 | 895811 | 5517.6 | 340 | 2/5/1981 |
| 36 | 73 | 6 | 6-306 | 369804 | 895811 | 5498.8 | 500 | 1/19/1982 |
| 36 | 73 | 6 | 6-105 | 366326 | 895812 | 5514.1 | 550 | 2/7/1972 |
| 36 | 73 | 6 | 6-180 | 366401 | 895818 | 5514.3 | 502 | 2/16/1976 |
| 36 | 73 | 6 | 6-113 | 366486 | 895825 | 5515 | 562 | 2/10/1972 |
| 36 | 73 | 6 | 6-121 | 366538 | 895829 | 5515.8 | 602 | 7/16/1973 |
| 36 | 73 | 6 | 6-145 | 366632 | 895833 | 5517.1 | 500 | 12/19/1974 |
| 36 | 73 | 6 | 6-135 | 366674 | 895834 | 5517.3 | 522 | 12/16/1974 |
| 36 | 73 | 6 | 6-322 | 365362 | 895867 | 5528.7 | 500 | 10/20/1983 |
| 36 | 73 | 6 | 6-321 | 365764 | 895887 | 5515.3 | 500 | 10/18/1983 |
| 36 | 73 | 6 | 6-319 | 365967 | 895897 | 5513.8 | 500 | 10/18/1983 |
| 36 | 73 | 6 | 6-46 | 368224 | 895972 | 5516.5 | 400 | 8/11/1967 |
| 36 | 73 | 6 | 6-47 | 368626 | 895972 | 5513 | 400 | 8/11/1967 |
| 36 | 73 | 6 | 6-49 | 369828 | 895973 | 5499 | 493 | 8/11/1967 |
| 36 | 73 | 6 | 6-48 | 369428 | 895975 | 5508 | 400 | 8/11/1967 |
| 36 | 73 | 6 | 6-4 | 369028 | 895976 | 5514 | 402 | 6/13/1967 |
| 36 | 73 | 6 | 6-193 | 366935 | 895977 | 5510.6 | 542 | 3/17/1977 |
| 36 | 73 | 6 | 6-44 | 367027 | 895980 | 5512 | 400 | 8/14/1967 |
| 36 | 73 | 6 | 6-45 | 367426 | 895982 | 5518.2 | 400 | 8/11/1967 |
| 36 | 73 | 6 | 6-3 | 367828 | 895982 | 5517 | 357 | 6/13/1967 |
| 36 | 73 | 6 | 6-382 | 367114 | 895983 | 5516.9 | 363 | 6/1/1992 |
| 36 | 73 | 6 | 6-169 | 367315 | 895984 | 5518.2 | 604 | 2/25/1975 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 73 | 6 | 6-2 | 366628 | 895987 | 5507 | 395 | 6/14/1967 |
| 36 | 73 | 6 | 6-43 | 366228 | 895988 | 5507 | 500 | 8/14/1967 |
| 36 | 73 | 6 | 6-93 | 367624 | 895990 | 5512.8 | 961 | 2/11/1970 |
| 36 | 73 | 6 | 6-274 | 367990 | 895991 | 5517.6 | 361 | 2/15/1979 |
| 36 | 73 | 6 | 6-1 | 365428 | 895992 | 5527 | 400 | 6/14/1967 |
| 36 | 73 | 6 | 6-182 | 367539 | 895997 | 5515 | 420 | 2/13/1976 |
| 36 | 73 | 6 | 6-89 | 368115 | 896010 | 1 | 934 | 4/18/1969 |
| 36 | 73 | 6 | 6-381 | 367357 | 896086 | 5518.9 | 344 | 6/1/1992 |
| 36 | 73 | 6 | 6-315 | 367457 | 896087 | 5515.7 | 320 | 10/26/1982 |
| 36 | 73 | 6 | 6-272 | 367993 | 896092 | 5514.2 | 343 | 2/14/1979 |
| 36 | 73 | 6 | 6-352 | 367639 | 896092 | 5510.4 | 322 | 10/28/1986 |
| 36 | 73 | 6 | 6-313 | 367741 | 896096 | 5509.9 | 320 | 10/25/1982 |
| 36 | 73 | 6 | 6-299 | 367846 | 896097 | 5513.3 | 340 | 2/5/1980 |
| 36 | 73 | 6 | 6-369 | 369701 | 896101 | 5507.2 | 502 | 7/27/1990 |
| 36 | 73 | 6 | 6-349 | 369850 | 896101 | 5501.5 | 502 | 10/18/1985 |
| 36 | 73 | 6 | 6-348 | 369752 | 896102 | 5504.1 | 503 | 10/18/1985 |
| 36 | 73 | 6 | 6-354 | 369951 | 896104 | 5502.1 | 504 | 10/28/1986 |
| 36 | 73 | 6 | 6-370 | 369799 | 896149 | 5502 | 460 | 8/1/1990 |
| 36 | 73 | 6 | 6-318 | 365776 | 896171 | 5526.9 | 500 | 10/20/1983 |
| 36 | 73 | 6 | 6-351 | 367552 | 896186 | 5493.9 | 302 | 10/28/1986 |
| 36 | 73 | 6 | 6-276 | 367999 | 896188 | 5509.6 | 359 | 2/14/1979 |
| 36 | 73 | 6 | 6-314 | 367456 | 896192 | 5510.2 | 320 | 10/25/1982 |
| 36 | 73 | 6 | 6-373 | 369901 | 896206 | 5503.4 | 465 | 7/22/1991 |
| 36 | 73 | 6 | 6-368 | 367848 | 896206 | 5513.5 | 322 | 7/31/1990 |
| 36 | 73 | 6 | 6-304 | 369438 | 896242 | 5509.8 | 501 | 1/19/1982 |
| 36 | 73 | 6 | 6-265 | 367858 | 896281 | 5503.4 | 359 | 2/9/1979 |
| 36 | 73 | 6 | 6-267 | 367955 | 896285 | 5505.4 | 360 | 2/12/1979 |
| 36 | 73 | 6 | 6-271 | 368001 | 896285 | 5506.2 | 361 | 2/15/1979 |
| 36 | 73 | 6 | 6-264 | 368056 | 896287 | 5507.3 | 360 | 2/9/1979 |
| 36 | 73 | 6 | 6-269 | 368107 | 896287 | 5508.6 | 358 | 2/15/1979 |
| 36 | 73 | 6 | 6-296 | 369748 | 896292 | 5505.2 | 501 | 2/5/1981 |
| 36 | 73 | 6 | 6-219 | 367455 | 896293 | 5504.5 | 500 | 6/14/1977 |
| 36 | 73 | 6 | 6-183 | 367403 | 896295 | 5504.9 | 420 | 2/13/1976 |
| 36 | 73 | 6 | 6-216 | 367357 | 896296 | 5504.9 | 542 | 3/24/1977 |
| 36 | 73 | 6 | 6-195 | 367499 | 896297 | 5503.6 | 601 | 3/17/1977 |
| 36 | 73 | 6 | 6-215 | 367632 | 896298 | 1 | 542 | 3/24/1977 |
| 36 | 73 | 6 | 6-168 | 367584 | 896301 | 5503 | 603 | 2/25/1975 |
| 36 | 73 | 6 | 6-380 | 368069 | 896374 | 5513.1 | 354 | 6/1/1992 |
| 36 | 73 | 6 | 6-270 | 368111 | 896383 | 5512.2 | 333 | 2/14/1979 |
| 36 | 73 | 6 | 6-218 | 367630 | 896402 | 5502.7 | 500 | 6/14/1977 |
| 36 | 73 | 6 | 6-209 | 369200 | 896445 | 5516.7 | 542 | 3/21/1977 |
| 36 | 73 | 6 | 6-185 | 369248 | 896449 | 5518.7 | 503 | 2/16/1976 |
| 36 | 73 | 6 | 6-210 | 369296 | 896453 | 5515.4 | 542 | 3/21/1977 |
| 36 | 73 | 6 | 6-39 | 369430 | 896470 | 5514.5 | 520 | 8/14/1967 |
| 36 | 73 | 6 | 6-40 | 369830 | 896473 | 5511 | 500 | 8/14/1967 |
| 36 | 73 | 6 | 6-35 | 367833 | 896476 | 5501 | 500 | 8/14/1967 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 73 | 6 | 6-120 | 369535 | 896476 | 5514.7 | 602 | 7/16/1973 |
| 36 | 73 | 6 | 6-37 | 368628 | 896476 | 5517.2 | 498 | 8/14/1967 |
| 36 | 73 | 6 | 6-253 | 368087 | 896476 | 5509.9 | 356 | 2/6/1979 |
| 36 | 73 | 6 | 6-38 | 369033 | 896477 | 5520.9 | 502 | 8/14/1967 |
| 36 | 73 | 6 | 6-34 | 367431 | 896478 | 5505.7 | 500 | 8/14/1967 |
| 36 | 73 | 6 | 6-316 | 366153 | 896479 | 5512.8 | 500 | 10/20/1983 |
| 36 | 73 | 6 | 6-33 | 367025 | 896479 | 5501.5 | 502 | 8/14/1967 |
| 36 | 73 | 6 | 6-119 | 368041 | 896479 | 5508.8 | 600 | 7/23/1973 |
| 36 | 73 | 6 | 6-256 | 367901 | 896480 | 5503.6 | 360 | 2/6/1979 |
| 36 | 73 | 6 | 6-317 | 366051 | 896481 | 5510.3 | 500 | 10/20/1983 |
| 36 | 73 | 6 | 6-283 | 368153 | 896481 | 5511.4 | 440 | 3/14/1980 |
| 36 | 73 | 6 | 6-196 | 367948 | 896482 | 5505.6 | 602 | 3/17/1977 |
| 36 | 73 | 6 | 6-250 | 367997 | 896483 | 5506.7 | 360 | 2/6/1979 |
| 36 | 73 | 6 | 6-194 | 367130 | 896483 | 5503 | 562 | 3/21/1977 |
| 36 | 73 | 6 | 6-31 | 366232 | 896484 | 5510.4 | 500 | 8/14/1967 |
| 36 | 73 | 6 | 6-32 | 366633 | 896485 | 5501.2 | 489 | 8/14/1967 |
| 36 | 73 | 6 | 6-36 | 368253 | 896487 | 5513.7 | 516 | 8/14/1967 |
| 36 | 73 | 6 | 6-118 | 366364 | 896488 | 5498.5 | 600 | 7/23/1973 |
| 36 | 73 | 6 | 6-217 | 367177 | 896489 | 5504 | 542 | 3/24/1977 |
| 36 | 73 | 6 | 6-104 | 366465 | 896490 | 5497.2 | 560 | 2/7/1972 |
| 36 | 73 | 6 | 6-134 | 366572 | 896491 | 5498 | 1005 | 12/14/1974 |
| 36 | 73 | 6 | 6-158 | 366522 | 896491 | 5497 | 504 | 12/28/1974 |
| 36 | 73 | 6 | 6-184 | 367645 | 896497 | 5503.1 | 422 | 2/13/1976 |
| 36 | 73 | 6 | 6-244 | 368936 | 896500 | 5523.1 | 560 | 1/24/1979 |
| 36 | 73 | 6 | 6-181 | 366786 | 896501 | 5500.9 | 503 | 2/13/1976 |
| 36 | 73 | 6 | 6-305 | 369716 | 896559 | 5517 | 500 | 1/19/1982 |
| 36 | 73 | 6 | 6-350 | 369812 | 896565 | 5518.6 | 502 | 10/18/1985 |
| 36 | 73 | 6 | 6-312 | 368005 | 896571 | 5503.2 | 320 | 10/25/1982 |
| 36 | 73 | 6 | 6-353 | 369894 | 896573 | 5516.6 | 503 | 10/27/1986 |
| 36 | 73 | 6 | 6-284 | 368179 | 896575 | 5508.6 | 398 | 3/13/1980 |
| 36 | 73 | 6 | 6-360 | 370002 | 896577 | 5518.3 | 500 | 10/1/1987 |
| 36 | 73 | 6 | 6-275 | 368143 | 896586 | 1 | 361 | 2/15/1979 |
| 36 | 73 | 6 | 6-222 | 367942 | 896699 | 5502 | 500 | 11/7/1977 |
| 36 | 73 | 6 | 6-379 | 368065 | 896701 | 5507.3 | 335 | 6/1/1992 |
| 36 | 73 | 6 | 6-311 | 368008 | 896719 | 5505 | 320 | 10/25/1982 |
| 36 | 73 | 6 | 6-273 | 368293 | 896730 | 5510.1 | 305 | 2/14/1979 |
| 36 | 73 | 6 | 6-245 | 368340 | 896734 | 5511.7 | 560 | 1/24/1979 |
| 36 | 73 | 6 | 6-167 | 368242 | 896736 | 5510.4 | 604 | 2/19/1975 |
| 36 | 73 | 6 | 6-251 | 368192 | 896736 | 5508.9 | 358 | 2/2/1979 |
| 36 | 73 | 6 | 6-246 | 368144 | 896737 | 5507.7 | 557 | 1/25/1979 |
| 36 | 73 | 6 | 6-166 | 367828 | 896747 | 5497.9 | 953 | 2/20/1975 |
| 36 | 73 | 6 | 6-358 | 369884 | 896750 | 5528.9 | 500 | 10/2/1987 |
| 36 | 73 | 6 | 6-359 | 369837 | 896752 | 5529.8 | 500 | 10/2/1987 |
| 36 | 73 | 6 | 6-302 | 369937 | 896753 | 5527.5 | 502 | 1/18/1982 |
| 36 | 73 | 6 | 6-156 | 366359 | 896753 | 5516.5 | 502 | 12/28/1974 |
| 36 | 73 | 6 | 6-294 | 369708 | 896757 | 5523.9 | 481 | 2/5/1981 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 73 | 6 | 6-144 | 366468 | 896758 | 5517.6 | 502 | 12/19/1974 |
| 36 | 73 | 6 | 6-303 | 369508 | 896759 | 5514.7 | 500 | 1/18/1982 |
| 36 | 73 | 6 | 6-133 | 366570 | 896762 | 5510.1 | 501 | 12/16/1974 |
| 36 | 73 | 6 | 6-377 | 368343 | 896837 | 5506.4 | 345 | 7/24/1991 |
| 36 | 73 | 6 | 6-310 | 368557 | 896839 | 5505.3 | 302 | 10/25/1982 |
| 36 | 73 | 6 | 6-285 | 368447 | 896840 | 5504.9 | 441 | 3/13/1980 |
| 36 | 73 | 6 | 6-372 | 369892 | 896848 | 5528.7 | 505 | 7/23/1991 |
| 36 | 73 | 6 | 6-361 | 369836 | 896852 | 5526.7 | 600 | 10/2/1987 |
| 36 | 73 | 6 | 6-363 | 369575 | 896962 | 5493.5 | 1004 | 6/27/1989 |
| 36 | 73 | 6 | 6-266 | 369777 | 896971 | 5510.8 | 500 | 2/9/1979 |
| 36 | 73 | 6 | 6-27 | 369825 | 896972 | 5515.4 | 485 | 8/15/1967 |
| 36 | 73 | 6 | 6-268 | 369869 | 896973 | 5519.5 | 520 | 2/8/1979 |
| 36 | 73 | 6 | 6-26 | 369432 | 896975 | 5486 | 500 | 8/15/1967 |
| 36 | 73 | 6 | 6-25 | 369032 | 896976 | 5475 | 495 | 8/15/1967 |
| 36 | 73 | 6 | 6-186 | 369332 | 896977 | 5483.1 | 501 | 2/16/1976 |
| 36 | 73 | 6 | 6-117 | 369229 | 896977 | 5479.8 | 604 | 7/16/1973 |
| 36 | 73 | 6 | 6-252 | 368487 | 896978 | 5487.6 | 360 | 2/7/1979 |
| 36 | 73 | 6 | 6-174 | 368345 | 896980 | 5490.1 | 623 | 2/25/1975 |
| 37 | 74 | 36 | 36-683 | 360133 | 897555 | 5504 | 556 | 1/25/1977 |
| 37 | 74 | 36 | 36-428 | 357983 | 897555 | 5534 | 597 | 9/7/1975 |
| 37 | 74 | 36 | 36-351 | 359433 | 897555 | 5537 | 832 | 8/11/1975 |
| 37 | 74 | 36 | 36-573 | 361283 | 897555 | 5462 | 559 | 12/17/1976 |
| 37 | 74 | 36 | 36-588 | 361733 | 897555 | 5489 | 554 | 12/16/1976 |
| 37 | 74 | 36 | 36-948 | 358633 | 897555 | 5507 | 596 | 5/26/1977 |
| 37 | 74 | 36 | 36-589 | 361833 | 897555 | 5493 | 558 | 12/16/1976 |
| 37 | 74 | 36 | 36-326 | 359333 | 897555 | 5535 | 834 | 8/10/1975 |
| 37 | 74 | 36 | 36-330 | 358933 | 897555 | 5511 | 799 | 8/11/1975 |
| 37 | 74 | 36 | 36-354 | 358833 | 897555 | 5500 | 799 | 8/13/1975 |
| 37 | 74 | 36 | 36-377 | 359133 | 897555 | 5523 | 820 | 8/25/1975 |
| 37 | 74 | 36 | 36-565 | 360833 | 897555 | 5441 | 531 | 12/14/1976 |
| 37 | 74 | 36 | 36-564 | 360733 | 897555 | 5455 | 518 | 12/13/1976 |
| 37 | 74 | 36 | 36-563 | 360633 | 897555 | 5468 | 552 | 12/13/1976 |
| 37 | 74 | 36 | 36-551 | 359933 | 897555 | 5518 | 558 | 12/14/1976 |
| 37 | 74 | 36 | 36-566 | 360933 | 897555 | 5424 | 540 | 1/27/1977 |
| 37 | 74 | 36 | 36-561 | 360433 | 897555 | 5483 | 537 | 12/13/1976 |
| 37 | 74 | 36 | 36-567 | 361033 | 897555 | 5427 | 539 | 1/14/1977 |
| 37 | 74 | 36 | 36-571 | 360033 | 897555 | 5507 | 557 | 12/14/1976 |
| 37 | 74 | 36 | 36-572 | 361383 | 897555 | 5476 | 557 | 12/16/1976 |
| 37 | 74 | 36 | 36-378 | 359033 | 897555 | 5516 | 820 | 8/25/1975 |
| 37 | 74 | 36 | 36-550 | 359833 | 897555 | 5527 | 575 | 12/14/1976 |
| 37 | 74 | 36 | 36-562 | 360533 | 897555 | 5475 | 533 | 12/13/1976 |
| 37 | 74 | 36 | 36-812 | 358425 | 897556 | 5510 | 417 | 3/17/1977 |
| 37 | 74 | 36 | 36-899 | 358742 | 897556 | 5504 | 819 | 4/28/1977 |
| 37 | 74 | 36 | 36-814 | 358341 | 897557 | 5519 | 415 | 3/17/1977 |
| 37 | 74 | 36 | 36-1319 | 359180 | 897561 | 5524.5 | 841 | 6/14/1999 |
| 37 | 74 | 36 | 36-1083 | 360941 | 897569 | 5418.4 | 521 | 8/12/1998 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drillec |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-1088 | 361500 | 897577 | 5465.7 | 562 | 9/1/1998 |
| 37 | 74 | 36 | 36-1084 | 361038 | 897589 | 5417 | 520 | 8/18/1998 |
| 37 | 74 | 36 | 36-1087 | 361087 | 897591 | 5416.3 | 522 | 8/27/1998 |
| 37 | 74 | 36 | 36-874 | 358331 | 897599 | 5520 | 600 | 5/25/1977 |
| 37 | 74 | 36 | 36-1030 | 358043 | 897601 | 5531 | 600 | 5/26/1977 |
| 37 | 74 | 36 | 36-875 | 358238 | 897604 | 5525 | 599 | 5/26/1977 |
| 37 | 74 | 36 | 36-10h | 358461 | 897605 | 5510 | 900 | 2/2/1968 |
| 37 | 74 | 36 | 36-507 | 359333 | 897605 | 5547 | 832 | 5/12/1976 |
| 37 | 74 | 36 | 36-1384 | 359290 | 897606 | 5529.6 | 821 | 7/12/1999 |
| 37 | 74 | 36 | 36-973 | 358137 | 897608 | 5528 | 599 | 5/26/1977 |
| 37 | 74 | 36 | 36-781 | 361293 | 897648 | 5437 | 560 | 2/15/1977 |
| 37 | 74 | 36 | 36-1318 | 359190 | 897649 | 5522.2 | 841 | 6/14/1999 |
| 37 | 74 | 36 | 36-898 | 358437 | 897650 | 5509 | 417 | 3/17/1977 |
| 37 | 74 | 36 | 36-805 | 361481 | 897650 | 5464 | 550 | 3/2/1977 |
| 37 | 74 | 36 | 36-901 | 358132 | 897653 | 5525 | 595 | 3/17/1977 |
| 37 | 74 | 36 | 36-823 | 362136 | 897654 | 5483 | 380 | 3/4/1977 |
| 37 | 74 | 36 | 36-897 | 358532 | 897654 | 5498 | 419 | 3/21/1977 |
| 37 | 74 | 36 | 36-633 | 362233 | 897655 | 5474 | 377 | 1/13/1977 |
| 37 | 74 | 36 | 36-372 | 359533 | 897655 | 5530 | 840 | 8/21/1975 |
| 37 | 74 | 36 | 36-2 | 358058 | 897655 | 5527 | 930 | 4/30/1974 |
| 37 | 74 | 36 | 36-632 | 362033 | 897655 | 5480 | 359 | 1/14/1977 |
| 37 | 74 | 36 | 36-519 | 361183 | 897655 | 5530 | 515 | 3/4/1977 |
| 37 | 74 | 36 | 36-634 | 362433 | 897655 | 5475 | 640 | 1/13/1977 |
| 37 | 74 | 36 | 36-379 | 358733 | 897655 | 5487 | 797 | 8/26/1975 |
| 37 | 74 | 36 | 36-780 | 361383 | 897655 | 5455 | 560 | 2/14/1977 |
| 37 | 74 | 36 | 36-206 | 358833 | 897655 | 5496 | 798 | 7/9/1975 |
| 37 | 74 | 36 | 36-329 | 358933 | 897655 | 5507 | 791 | 8/9/1975 |
| 37 | 74 | 36 | 36-205 | 359433 | 897655 | 5528 | 818 | 7/9/1975 |
| 37 | 74 | 36 | 36-189 | 359333 | 897655 | 5529 | 797 | 7/2/1975 |
| 37 | 74 | 36 | 36-186 | 358333 | 897655 | 5517 | 597 | 7/1/1975 |
| 37 | 74 | 36 | 36-184 | 359233 | 897655 | 5525 | 799 | 6/30/1975 |
| 37 | 74 | 36 | 36-1377 | 359286 | 897656 | 5527 | 820 | 7/9/1999 |
| 37 | 74 | 36 | 36-900 | 358235 | 897657 | 5522 | 599 | 3/17/1977 |
| 37 | 74 | 36 | 36-764 | 360335 | 897659 | 5494 | 556 | 3/1/1977 |
| 37 | 74 | 36 | 36-795 | 360885 | 897659 | 5445 | 540 | 2/28/1977 |
| 37 | 74 | 36 | 36-896 | 358641 | 897660 | 5473 | 418 | 3/21/1977 |
| 37 | 74 | 36 | 36-802 | 360982 | 897666 | 5437 | 536 | 3/1/1977 |
| 37 | 74 | 36 | 36-803 | 361072 | 897670 | 5428 | 540 | 3/1/1977 |
| 37 | 74 | 36 | 36-770 | 360422 | 897672 | 5484 | 560 | 3/1/1977 |
| 37 | 74 | 36 | 36-971 | 358533 | 897705 | 5497 | 595 | 5/25/1977 |
| 37 | 74 | 36 | 36-972 | 358436 | 897706 | 5507 | 600 | 5/25/1977 |
| 37 | 74 | 36 | 36-1376 | 359246 | 897707 | 5518.2 | 821 | 7/9/1999 |
| 37 | 74 | 36 | 36-27h | 360593 | 897750 | 5479 | 598 | 4/23/1969 |
| 37 | 74 | 36 | 36-1316 | 359186 | 897751 | 5512.1 | 861 | 6/9/1999 |
| 37 | 74 | 36 | 36-618 | 360333 | 897755 | 5493 | 557 | 1/11/1977 |
| 37 | 74 | 36 | 36-53 | 359633 | 897755 | 5520 | 800 | 1/21/1975 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-73 | 361533 | 897755 | 5458 | 910 | 2/3/1975 |
| 37 | 74 | 36 | 36-390 | 358733 | 897755 | 5470 | 775 | 8/25/1975 |
| 37 | 74 | 36 | 36-786 | 360433 | 897755 | 5489 | 560 | 2/10/1977 |
| 37 | 74 | 36 | 36-252 | 361433 | 897755 | 5448 | 540 | 7/13/1975 |
| 37 | 74 | 36 | 36-427 | 357983 | 897755 | 5515 | 597 | 9/7/1975 |
| 37 | 74 | 36 | 36-615 | 360033 | 897755 | 5508 | 566 | 1/12/1977 |
| 37 | 74 | 36 | 36-223 | 361333 | 897755 | 5439 | 536 | 7/11/1975 |
| 37 | 74 | 36 | 36-698 | 361033 | 897755 | 5436 | 557 | 1/26/1977 |
| 37 | 74 | 36 | 36-788 | 360533 | 897755 | 5478 | 561 | 2/11/1977 |
| 37 | 74 | 36 | 36-376 | 359533 | 897755 | 5519 | 820 | 8/24/1975 |
| 37 | 74 | 36 | 36-444 | 358083 | 897755 | 5518 | 597 | 9/10/1975 |
| 37 | 74 | 36 | 36-226 | 360733 | 897755 | 5461 | 533 | 7/9/1975 |
| 37 | 74 | 36 | 36-375 | 359333 | 897755 | 5501 | 799 | 8/23/1975 |
| 37 | 74 | 36 | 36-70 | 360933 | 897755 | 5448 | 898 | 1/30/1975 |
| 37 | 74 | 36 | 36-370 | 359433 | 897755 | 5517 | 820 | 8/22/1975 |
| 37 | 74 | 36 | 36-225 | 361133 | 897755 | 5419 | 540 | 7/12/1975 |
| 37 | 74 | 36 | 36-811 | 358185 | 897755 | 5517 | 600 | 3/16/1977 |
| 37 | 74 | 36 | 36-337 | 359133 | 897755 | 5511 | 792 | 8/11/1975 |
| 37 | 74 | 36 | 36-76 | 358633 | 897755 | 5487 | 795 | 1/31/1975 |
| 37 | 74 | 36 | 36-325 | 359233 | 897755 | 5514 | 800 | 8/9/1975 |
| 37 | 74 | 36 | 36-244 | 360833 | 897755 | 5454 | 534 | 7/12/1975 |
| 37 | 74 | 36 | 36-617 | 360233 | 897755 | 5498 | 558 | 1/11/1977 |
| 37 | 74 | 36 | 36-616 | 360133 | 897755 | 5501 | 553 | 1/12/1977 |
| 37 | 74 | 36 | 36-359 | 358933 | 897755 | 5500 | 794 | 8/20/1975 |
| 37 | 74 | 36 | 36-891 | 359033 | 897756 | 5510 | 599 | 3/22/1977 |
| 37 | 74 | 36 | 36-810 | 358284 | 897756 | 5515 | 595 | 3/16/1977 |
| 37 | 74 | 36 | 36-808 | 358534 | 897757 | 5498 | 416 | 3/15/1977 |
| 37 | 74 | 36 | 36-809 | 358437 | 897758 | 5506 | 414 | 3/15/1977 |
| 37 | 74 | 36 | 36-1317 | 359293 | 897759 | 5514 | 862 | 6/9/1999 |
| 37 | 74 | 36 | 36-759 | 360632 | 897804 | 5469 | 558 | 2/28/1977 |
| 37 | 74 | 36 | 36-1067C | 359241 | 897814 | 5510 | 762 | 11/9/1988 |
| 37 | 74 | 36 | 36-9h | 358139 | 897819 | 5513 | 898 | 1/26/1968 |
| 37 | 74 | 36 | 36-523 | 361275 | 897848 | 5417 | 500 | 2/15/1977 |
| 37 | 74 | 36 | 36-1322 | 357978 | 897850 | 5505.1 | 843 | 6/16/1999 |
| 37 | 74 | 36 | 36-904 | 358238 | 897850 | 5510 | 595 | 3/18/1977 |
| 37 | 74 | 36 | 36-520 | 360535 | 897852 | 5479 | 560 | 2/14/1977 |
| 37 | 74 | 36 | 36-752 | 361185 | 897853 | 5429 | 540 | 3/2/1977 |
| 37 | 74 | 36 | 36-903 | 358335 | 897853 | 5511 | 598 | 3/16/1977 |
| 37 | 74 | 36 | 36-717 | 360987 | 897853 | 5445 | 515 | 3/1/1977 |
| 37 | 74 | 36 | 36-895 | 358636 | 897853 | 5490 | 418 | 3/21/1977 |
| 37 | 74 | 36 | 36-1315 | 359276 | 897854 | 5505.3 | 880 | 6/14/1999 |
| 37 | 74 | 36 | 36-518 | 360883 | 897854 | 5453 | 517 | 2/28/1977 |
| 37 | 74 | 36 | 36-202 | 359933 | 897855 | 5509 | 587 | 7/8/1975 |
| 37 | 74 | 36 | 36-78 | 359333 | 897855 | 5507 | 819 | 2/3/1975 |
| 37 | 74 | 36 | 36-188 | 359133 | 897855 | 5507 | 800 | 7/1/1975 |
| 37 | 74 | 36 | 36-183 | 359233 | 897855 | 5506 | 800 | 6/30/1975 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-549 | 360133 | 897855 | 5499 | 574 | 12/10/1976 |
| 37 | 74 | 36 | 36-371 | 359533 | 897855 | 5510 | 815 | 8/21/1975 |
| 37 | 74 | 36 | 36-62 | 359433 | 897855 | 5508 | 813 | 1/28/1975 |
| 37 | 74 | 36 | 36-241 | 360033 | 897855 | 5504 | 558 | 7/10/1975 |
| 37 | 74 | 36 | 36-548 | 360433 | 897855 | 5482 | 556 | 12/10/1976 |
| 37 | 74 | 36 | 36-323 | 358783 | 897855 | 5466 | 776 | 8/8/1975 |
| 37 | 74 | 36 | 36-339 | 358908 | 897855 | 5498 | 777 | 8/12/1975 |
| 37 | 74 | 36 | 36-443 | 358133 | 897855 | 5510 | 597 | 9/8/1975 |
| 37 | 74 | 36 | 36-45 | 359633 | 897855 | 5509 | 896 | 1/10/1975 |
| 37 | 74 | 36 | 36-506 | 359183 | 897855 | 5507 | 800 | 5/11/1976 |
| 37 | 74 | 36 | 36-426 | 358033 | 897855 | 5509 | 618 | 9/6/1975 |
| 37 | 74 | 36 | 36-804 | 361069 | 897857 | 5438 | 558 | 3/1/1977 |
| 37 | 74 | 36 | 36-890 | 359038 | 897857 | 5507 | 596 | 3/22/1977 |
| 37 | 74 | 36 | 36-894 | 358537 | 897860 | 5504 | 415 | 3/15/1977 |
| 37 | 74 | 36 | 36-892 | 358723 | 897863 | 5476 | 459 | 3/21/1977 |
| 37 | 74 | 36 | 36-796 | 360623 | 897863 | 5468 | 537 | 3/1/1977 |
| 37 | 74 | 36 | 36-8c | 358049 | 897895 | 5503 | 560 | 9/7/1977 |
| 37 | 74 | 36 | 36-834 | 359658 | 897911 | 5502 | 798 | 3/23/1977 |
| 37 | 74 | 36 | 36-815 | 358340 | 897945 | 5500 | 597 | 3/21/1977 |
| 37 | 74 | 36 | 36-893 | 358629 | 897952 | 5494 | 796 | 4/27/1977 |
| 37 | 74 | 36 | 36-373 | 359622 | 897955 | 5496 | 800 | 8/22/1975 |
| 37 | 74 | 36 | 36-374 | 359533 | 897955 | 5517 | 789 | 8/23/1975 |
| 37 | 74 | 36 | 36-1066C | 360759 | 897955 | 5458 | 433 | 11/4/1988 |
| 37 | 74 | 36 | 36-560 | 360333 | 897955 | 5484 | 544 | 12/10/1976 |
| 37 | 74 | 36 | 36-254 | 360633 | 897955 | 5466 | 540 | 7/13/1975 |
| 37 | 74 | 36 | 36-243 | 360833 | 897955 | 5453 | 535 | 7/10/1975 |
| 37 | 74 | 36 | 36-242 | 361033 | 897955 | 5444 | 528 | 7/10/1975 |
| 37 | 74 | 36 | 36-324 | 359333 | 897955 | 5499 | 798 | 8/8/1975 |
| 37 | 74 | 36 | 36-222 | 360933 | 897955 | 5448 | 540 | 7/8/1975 |
| 37 | 74 | 36 | 36-221 | 361133 | 897955 | 5441 | 538 | 7/9/1975 |
| 37 | 74 | 36 | 36-71 | 358233 | 897955 | 5498 | 620 | 1/30/1975 |
| 37 | 74 | 36 | 36-336 | 359133 | 897955 | 5500 | 777 | 8/12/1975 |
| 37 | 74 | 36 | 36-353 | 358733 | 897955 | 5481 | 895 | 8/14/1975 |
| 37 | 74 | 36 | 36-782 | 361433 | 897955 | 5427 | 560 | 2/14/1977 |
| 37 | 74 | 36 | 36-44 | 358033 | 897955 | 5488 | 616 | 1/6/1975 |
| 37 | 74 | 36 | 36-224 | 361333 | 897955 | 5413 | 540 | 7/12/1975 |
| 37 | 74 | 36 | 36-687 | 360433 | 897955 | 5479 | 542 | 1/21/1977 |
| 37 | 74 | 36 | 36-246 | 361233 | 897955 | 5429 | 540 | 7/12/1975 |
| 37 | 74 | 36 | 36-576 | 361833 | 897955 | 5467 | 597 | 12/15/1976 |
| 37 | 74 | 36 | 36-249 | 360733 | 897955 | 5460 | 535 | 7/11/1975 |
| 37 | 74 | 36 | 36-333 | 359233 | 897955 | 5498 | 793 | 8/10/1975 |
| 37 | 74 | 36 | 36-505 | 359283 | 897955 | 5499 | 795 | 5/11/1976 |
| 37 | 74 | 36 | 36-504 | 359183 | 897955 | 5499 | 796 | 5/12/1976 |
| 37 | 74 | 36 | 36-688 | 360533 | 897955 | 5473 | 559 | 1/26/1977 |
| 37 | 74 | 36 | 36-334 | 358833 | 897955 | 5464 | 780 | 8/9/1975 |
| 37 | 74 | 36 | 36-574 | 361633 | 897955 | 5450 | 602 | 12/15/1976 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-575 | 361733 | 897955 | 5459 | 599 | 12/14/1976 |
| 37 | 74 | 36 | 36-355 | 358933 | 897955 | 5498 | 578 | 8/13/1975 |
| 37 | 74 | 36 | 36-49 | 358133 | 897955 | 5498 | 599 | 1/16/1975 |
| 37 | 74 | 36 | 36-7 | 360823 | 898035 | 5457 | 560 | 5/4/1974 |
| 37 | 74 | 36 | 36-792 | 361379 | 898045 | 5412 | 496 | 2/15/1977 |
| 37 | 74 | 36 | 36-522 | 361131 | 898048 | 5437 | 573 | 2/15/1977 |
| 37 | 74 | 36 | 36-889 | 358793 | 898048 | 5471 | 798 | 4/27/1977 |
| 37 | 74 | 36 | 36-1321 | 357989 | 898051 | 5481.8 | 840 | 6/16/1999 |
| 37 | 74 | 36 | 36-1314 | 359195 | 898052 | 5487.5 | 839 | 6/9/1999 |
| 37 | 74 | 36 | 36-907 | 358432 | 898052 | 5476 | 561 | 3/16/1977 |
| 37 | 74 | 36 | 36-778 | 360637 | 898052 | 5475 | 556 | 2/28/1977 |
| 37 | 74 | 36 | 36-886 | 358934 | 898052 | 5463 | 540 | 3/17/1977 |
| 37 | 74 | 36 | 36-905 | 358224 | 898052 | 5480 | 560 | 3/16/1977 |
| 37 | 74 | 36 | 36-794 | 361178 | 898052 | 5436 | 497 | 3/1/1977 |
| 37 | 74 | 36 | 36-888 | 359157 | 898054 | 5492 | 595 | 3/22/1977 |
| 37 | 74 | 36 | 36-425 | 358033 | 898055 | 5482 | 597 | 9/6/1975 |
| 37 | 74 | 36 | 36-521 | 360933 | 898055 | 5448 | 580 | 2/15/1977 |
| 37 | 74 | 36 | 36-453 | 360733 | 898055 | 5468 | 538 | 9/10/1975 |
| 37 | 74 | 36 | 36-358 | 358683 | 898055 | 5468 | 775 | 8/20/1975 |
| 37 | 74 | 36 | 36-442 | 358133 | 898055 | 5478 | 594 | 9/8/1975 |
| 37 | 74 | 36 | 36-629 | 362233 | 898055 | 5434 | 360 | 1/12/1977 |
| 37 | 74 | 36 | 36-327 | 359233 | 898055 | 5487 | 799 | 8/9/1975 |
| 37 | 74 | 36 | 36-395 | 358583 | 898055 | 5481 | 800 | 8/27/1975 |
| 37 | 74 | 36 | 36-631 | 362433 | 898055 | 5435 | 360 | 1/12/1977 |
| 37 | 74 | 36 | 36-906 | 358335 | 898055 | 5476 | 560 | 3/16/1977 |
| 37 | 74 | 36 | 36-75 | 361233 | 898055 | 5432 | 579 | 2/3/1975 |
| 37 | 74 | 36 | 36-309 | 359333 | 898055 | 5488 | 798 | 8/8/1975 |
| 37 | 74 | 36 | 36-682 | 360033 | 898055 | 5503 | 560 | 1/31/1977 |
| 37 | 74 | 36 | 36-887 | 359034 | 898055 | 5467 | 541 | 3/17/1977 |
| 37 | 74 | 36 | 36-630 | 362033 | 898055 | 5451 | 360 | 1/13/1977 |
| 37 | 74 | 36 | 36-824 | 362138 | 898061 | 5441 | 634 | 3/4/1977 |
| 37 | 74 | 36 | 36-1c | 359263 | 898105 | 5494 | 758 | 5/19/1976 |
| 37 | 74 | 36 | 36-1313 | 359186 | 898145 | 5471.6 | 880 | 6/16/1999 |
| 37 | 74 | 36 | 36-10 | 360787 | 898151 | 5471 | 540 | 5/5/1974 |
| 37 | 74 | 36 | 36-910 | 358537 | 898154 | 5472 | 556 | 3/17/1977 |
| 37 | 74 | 36 | 36-77 | 359333 | 898155 | 5482 | 800 | 2/7/1975 |
| 37 | 74 | 36 | 36-908 | 358226 | 898155 | 5486 | 560 | 3/17/1977 |
| 37 | 74 | 36 | 36-38 | 360133 | 898155 | 5503 | 890 | 1/20/1975 |
| 37 | 74 | 36 | 36-203 | 360033 | 898155 | 5503 | 555 | 7/8/1975 |
| 37 | 74 | 36 | 36-63 | 359433 | 898155 | 5488 | 817 | 1/26/1975 |
| 37 | 74 | 36 | 36-197 | 359133 | 898155 | 5462 | 602 | 7/8/1975 |
| 37 | 74 | 36 | 36-195 | 358833 | 898155 | 5479 | 780 | 7/8/1975 |
| 37 | 74 | 36 | 36-194 | 358633 | 898155 | 5473 | 766 | 7/9/1975 |
| 37 | 74 | 36 | 36-207 | 360333 | 898155 | 5494 | 556 | 7/9/1975 |
| 37 | 74 | 36 | 36-176 | 358033 | 898155 | 5507 | 614 | 7/1/1975 |
| 37 | 74 | 36 | 36-175 | 358733 | 898155 | 5484 | 840 | 7/1/1975 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-209 | 360933 | 898155 | 5452 | 536 | 7/10/1975 |
| 37 | 74 | 36 | 36-220 | 361133 | 898155 | 5438 | 536 | 7/11/1975 |
| 37 | 74 | 36 | 36-52 | 361933 | 898155 | 5435 | 920 | 1/22/1975 |
| 37 | 74 | 36 | 36-722 | 358933 | 898155 | 5477 | 601 | 2/1/1977 |
| 37 | 74 | 36 | 36-7c | 360982 | 898155 | 5448 | 500 | 9/9/1977 |
| 37 | 74 | 36 | 36-250 | 361033 | 898155 | 5445 | 536 | 7/12/1975 |
| 37 | 74 | 36 | 36-30 | 359233 | 898155 | 5473 | 952 | 12/31/1974 |
| 37 | 74 | 36 | 36-251 | 361233 | 898155 | 5430 | 538 | 7/13/1975 |
| 37 | 74 | 36 | 36-253 | 360833 | 898155 | 5464 | 540 | 7/13/1975 |
| 37 | 74 | 36 | 36-503 | 359283 | 898155 | 5476 | 760 | 5/12/1976 |
| 37 | 74 | 36 | 36-681 | 360633 | 898155 | 5484 | 562 | 1/21/1977 |
| 37 | 74 | 36 | 36-885 | 359026 | 898156 | 5462 | 538 | 3/18/1977 |
| 37 | 74 | 36 | 36-909 | 358430 | 898156 | 5478 | 560 | 3/16/1977 |
| 37 | 74 | 36 | 36-777 | 360536 | 898157 | 5489 | 561 | 2/28/1977 |
| 37 | 74 | 36 | 36-817 | 358340 | 898171 | 5496 | 560 | 3/15/1977 |
| 37 | 74 | 36 | 36-11h | 358105 | 898173 | 5501 | 823 | 2/7/1968 |
| 37 | 74 | 36 | 36-1375 | 359232 | 898203 | 5461.8 | 780 | 7/9/1999 |
| 37 | 74 | 36 | 36-1281 | 358697 | 898206 | 5491.7 | 859 | 5/18/1999 |
| 37 | 74 | 36 | 36-14h | 360212 | 898210 | 5501 | 897 | 2/20/1968 |
| 37 | 74 | 36 | 36-12h | 358814 | 898237 | 5494 | 901 | 2/10/1968 |
| 37 | 74 | 36 | 36-6 | 360403 | 898243 | 5480 | 559 | 5/4/1974 |
| 37 | 74 | 36 | 36-807 | 361334 | 898250 | 5408 | 514 | 3/4/1977 |
| 37 | 74 | 36 | 36-1320 | 357983 | 898251 | 5518.6 | 841 | 6/15/1999 |
| 37 | 74 | 36 | 36-882 | 359100 | 898252 | 5461 | 778 | 5/9/1977 |
| 37 | 74 | 36 | 36-1312 | 359183 | 898252 | 5455.5 | 837 | 6/15/1999 |
| 37 | 74 | 36 | 36-1264 | 358368 | 898254 | 5504 | 858 | 5/8/1999 |
| 37 | 74 | 36 | 36-883 | 359019 | 898254 | 5466 | 791 | 5/9/1977 |
| 37 | 74 | 36 | 36-517 | 361140 | 898254 | 5439 | 520 | 2/15/1977 |
| 37 | 74 | 36 | 36-69 | 360133 | 898255 | 5500 | 600 | 1/26/1975 |
| 37 | 74 | 36 | 36-58 | 360933 | 898255 | 5479 | 559 | 1/23/1975 |
| 37 | 74 | 36 | 36-308 | 359333 | 898255 | 5461 | 756 | 8/7/1975 |
| 37 | 74 | 36 | 36-321 | 358633 | 898255 | 5507 | 835 | 8/8/1975 |
| 37 | 74 | 36 | 36-680 | 360533 | 898255 | 5483 | 560 | 1/21/1977 |
| 37 | 74 | 36 | 36-679 | 360633 | 898255 | 5476 | 560 | 1/20/1977 |
| 37 | 74 | 36 | 36-1280 | 358696 | 898255 | 5498.3 | 859 | 5/18/1999 |
| 37 | 74 | 36 | 36-331 | 358533 | 898255 | 5507 | 813 | 8/9/1975 |
| 37 | 74 | 36 | 36-441 | 358133 | 898255 | 5524 | 617 | 9/8/1975 |
| 37 | 74 | 36 | 36-451 | 360733 | 898255 | 5468 | 539 | 9/10/1975 |
| 37 | 74 | 36 | 36-87 | 361233 | 898255 | 5431 | 598 | 2/6/1975 |
| 37 | 74 | 36 | 36-779 | 361033 | 898255 | 5450 | 600 | 2/14/1977 |
| 37 | 74 | 36 | 36-452 | 360833 | 898255 | 5461 | 540 | 9/10/1975 |
| 37 | 74 | 36 | 36-424 | 358033 | 898255 | 5519 | 615 | 9/8/1975 |
| 37 | 74 | 36 | 36-328 | 359233 | 898255 | 5454 | 757 | 8/9/1975 |
| 37 | 74 | 36 | 36-502 | 359283 | 898255 | 5460 | 755 | 5/11/1976 |
| 37 | 74 | 36 | 36-819 | 358418 | 898256 | 5401 | 600 | 3/15/1977 |
| 37 | 74 | 36 | 36-818 | 358322 | 898260 | 5509 | 620 | 3/15/1977 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-884 | 358928 | 898261 | 5487 | 599 | 3/21/1977 |
| 37 | 74 | 36 | 36-822 | 358731 | 898264 | 5498 | 815 | 3/15/1977 |
| 37 | 74 | 36 | 36-816 | 358228 | 898265 | 5513 | 599 | 3/15/1977 |
| 37 | 74 | 36 | 36-13h | 359435 | 898268 | 5460 | 900 | 2/16/1968 |
| 37 | 74 | 36 | 36-1277 | 358435 | 898293 | 5503.3 | 832 | 5/18/1999 |
| 37 | 74 | 36 | 36-1263 | 358688 | 898305 | 5502.4 | 861 | 5/27/1999 |
| 37 | 74 | 36 | 36-1285 | 358289 | 898307 | 5512.7 | 861 | 5/18/1999 |
| 37 | 74 | 36 | 36-1279 | 358744 | 898309 | 5500.8 | 861 | 5/17/1999 |
| 37 | 74 | 36 | 36-1276 | 358530 | 898311 | 5506.6 | 861 | 5/17/1999 |
| 37 | 74 | 36 | 36-15h | 361111 | 898339 | 5447 | 900 | 2/23/1968 |
| 37 | 74 | 36 | 36-8 | 361276 | 898341 | 5430 | 562 | 5/5/1974 |
| 37 | 74 | 36 | 36-15 | 359018 | 898350 | 5503 | 841 | 5/28/1974 |
| 37 | 74 | 36 | 36-1278 | 358377 | 898351 | 5513.7 | 862 | 5/8/1999 |
| 37 | 74 | 36 | 36-579 | 361433 | 898355 | 5409 | 356 | 12/15/1976 |
| 37 | 74 | 36 | 36-172 | 358133 | 898355 | 5526 | 620 | 6/30/1975 |
| 37 | 74 | 36 | 36-501 | 359283 | 898355 | 5464 | 755 | 5/10/1976 |
| 37 | 74 | 36 | 36-714 | 358933 | 898355 | 5495 | 617 | 2/2/1977 |
| 37 | 74 | 36 | 36-577 | 361633 | 898355 | 5423 | 538 | 12/15/1976 |
| 37 | 74 | 36 | 36-158 | 358733 | 898355 | 5506 | 820 | 6/29/1975 |
| 37 | 74 | 36 | 36-715 | 358233 | 898355 | 5522 | 618 | 2/2/1977 |
| 37 | 74 | 36 | 36-208 | 360833 | 898355 | 5470 | 558 | 7/11/1975 |
| 37 | 74 | 36 | 36-578 | 361533 | 898355 | 5407 | 538 | 12/15/1976 |
| 37 | 74 | 36 | 36-173 | 358633 | 898355 | 5510 | 820 | 6/30/1975 |
| 37 | 74 | 36 | 36-177 | 358833 | 898355 | 5501 | 619 | 7/2/1975 |
| 37 | 74 | 36 | 36-179 | 358333 | 898355 | 5518 | 621 | 7/2/1975 |
| 37 | 74 | 36 | 36-190 | 358533 | 898355 | 5513 | 816 | 7/8/1975 |
| 37 | 74 | 36 | 36-191 | 357953 | 898355 | 5534 | 619 | 7/2/1975 |
| 37 | 74 | 36 | 36-450 | 360633 | 898355 | 5479 | 540 | 9/9/1975 |
| 37 | 74 | 36 | 36-193 | 359333 | 898355 | 5457 | 862 | 7/9/1975 |
| 37 | 74 | 36 | 36-198 | 359133 | 898355 | 5478 | 759 | 7/12/1975 |
| 37 | 74 | 36 | 36-423 | 358033 | 898355 | 5529 | 618 | 9/5/1975 |
| 37 | 74 | 36 | 36-211 | 359233 | 898355 | 5471 | 761 | 7/13/1975 |
| 37 | 74 | 36 | 36-229 | 361233 | 898355 | 5436 | 535 | 7/13/1975 |
| 37 | 74 | 36 | 36-228 | 361033 | 898355 | 5457 | 540 | 7/11/1975 |
| 37 | 74 | 36 | 36-51 | 360933 | 898355 | 5489 | 557 | 1/20/1975 |
| 37 | 74 | 36 | 36-721 | 358433 | 898355 | 5515 | 600 | 1/31/1977 |
| 37 | 74 | 36 | 36-1274 | 358476 | 898356 | 5511.6 | 860 | 5/8/1999 |
| 37 | 74 | 36 | 36-3 | 360758 | 898360 | 5471 | 959 | 5/1/1974 |
| 37 | 74 | 36 | 36-1275 | 358576 | 898365 | 5510 | 862 | 5/7/1999 |
| 37 | 74 | 36 | 36-3h | 362434 | 898367 | 5394 | 406 | 10/10/1965 |
| 37 | 74 | 36 | 36-16h | 362001 | 898384 | 5408 | 901 | 2/27/1968 |
| 37 | 74 | 36 | 36-4h | 363058 | 898386 | 5410 | 805 | 1/18/1968 |
| 37 | 74 | 36 | 36-1284 | 358232 | 898401 | 5525.2 | 861 | 5/18/1999 |
| 37 | 74 | 36 | 36-17h | 362573 | 898403 | 5391 | 898 | 3/5/1968 |
| 37 | 74 | 36 | 36-1326 | 358738 | 898409 | 5508.1 | 840 | 6/17/1999 |
| 37 | 74 | 36 | 36-1261 | 358330 | 898410 | 5521.7 | 864 | 5/7/1999 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-1358 | 359377 | 898424 | 5453.9 | 840 | 7/8/1999 |
| 37 | 74 | 36 | 36-806 | 361836 | 898439 | 5415 | 496 | 3/2/1977 |
| 37 | 74 | 36 | 36-1311 | 359226 | 898453 | 5480.1 | 840 | 6/14/1999 |
| 37 | 74 | 36 | 36-783 | 361131 | 898454 | 5454 | 540 | 2/28/1977 |
| 37 | 74 | 36 | 36-784 | 361239 | 898454 | 5440 | 535 | 2/28/1977 |
| 37 | 74 | 36 | 36-718 | 358833 | 898455 | 5509 | 621 | 2/3/1977 |
| 37 | 74 | 36 | 36-676 | 360633 | 898455 | 5491 | 562 | 1/20/1977 |
| 37 | 74 | 36 | 36-766 | 360933 | 898455 | 5478 | 555 | 2/10/1977 |
| 37 | 74 | 36 | 36-332 | 358533 | 898455 | 5521 | 812 | 8/10/1975 |
| 37 | 74 | 36 | 36-719 | 358908 | 898455 | 5509 | 606 | 2/4/1977 |
| 37 | 74 | 36 | 36-625 | 360733 | 898455 | 5484 | 603 | 1/11/1977 |
| 37 | 74 | 36 | 36-626 | 362333 | 898455 | 5408 | 522 | 1/12/1977 |
| 37 | 74 | 36 | 36-307 | 359283 | 898455 | 5483 | 778 | 8/7/1975 |
| 37 | 74 | 36 | 36-627 | 362233 | 898455 | 5411 | 522 | 1/12/1977 |
| 37 | 74 | 36 | 36-500 | 359363 | 898455 | 5468 | 759 | 5/10/1976 |
| 37 | 74 | 36 | 36-628 | 362133 | 898455 | 5380 | 520 | 1/12/1977 |
| 37 | 74 | 36 | 36-445 | 357948 | 898455 | 5540 | 618 | 9/10/1975 |
| 37 | 74 | 36 | 36-391 | 358633 | 898455 | 5518 | 820 | 8/26/1975 |
| 37 | 74 | 36 | 36-1283 | 358277 | 898455 | 5529.6 | 860 | 5/17/1999 |
| 37 | 74 | 36 | 36-767 | 360833 | 898455 | 5480 | 558 | 2/9/1977 |
| 37 | 74 | 36 | 36-440 | 358033 | 898455 | 5537 | 634 | 9/9/1975 |
| 37 | 74 | 36 | 36-352A | 358428 | 898455 | 5525 | 853 | 8/13/1975 |
| 37 | 74 | 36 | 36-716 | 358133 | 898455 | 5526 | 622 | 2/3/1977 |
| 37 | 74 | 36 | 36-881 | 359138 | 898457 | 5486 | 580 | 3/21/1977 |
| 37 | 74 | 36 | 36-1282 | 358376 | 898463 | 5525.9 | 859 | 5/17/1999 |
| 37 | 74 | 36 | 36-820 | 358226 | 898463 | 5533 | 620 | 3/14/1977 |
| 37 | 74 | 36 | 36-821 | 358325 | 898464 | 5530 | 620 | 3/14/1977 |
| 37 | 74 | 36 | 36-1330 | 358570 | 898464 | 5519.4 | 840 | 6/22/1999 |
| 37 | 74 | 36 | 36-880 | 359028 | 898469 | 5506 | 580 | 3/21/1977 |
| 37 | 74 | 36 | 36-1357 | 359309 | 898509 | 5487.7 | 843 | 7/7/1999 |
| 37 | 74 | 36 | 36-25h | 360582 | 898526 | 5497 | 600 | 4/23/1969 |
| 37 | 74 | 36 | 36-1310 | 359286 | 898554 | 5487.6 | 839 | 6/9/1999 |
| 37 | 74 | 36 | 36-793 | 361036 | 898554 | 5470 | 555 | 3/2/1977 |
| 37 | 74 | 36 | 36-769 | 360833 | 898555 | 5493 | 560 | 2/14/1977 |
| 37 | 74 | 36 | 36-60 | 358333 | 898555 | 5534 | 620 | 1/24/1975 |
| 37 | 74 | 36 | 36-1325 | 358678 | 898555 | 5526.8 | 840 | 6/17/1999 |
| 37 | 74 | 36 | 36-37 | 359233 | 898555 | 5493 | 809 | 1/3/1975 |
| 37 | 74 | 36 | 36-399 | 358133 | 898555 | 5535 | 618 | 9/3/1975 |
| 37 | 74 | 36 | 36-54 | 358433 | 898555 | 5535 | 860 | 1/21/1975 |
| 37 | 74 | 36 | 36-760 | 360633 | 898555 | 5498 | 550 | 2/10/1977 |
| 37 | 74 | 36 | 36-772 | 361233 | 898555 | 5447 | 556 | 2/11/1977 |
| 37 | 74 | 36 | 36-768 | 360733 | 898555 | 5497 | 544 | 2/9/1977 |
| 37 | 74 | 36 | 36-59 | 360933 | 898555 | 5481 | 755 | 1/23/1975 |
| 37 | 74 | 36 | 36-157 | 358033 | 898555 | 5537 | 620 | 6/28/1975 |
| 37 | 74 | 36 | 36-159 | 357943 | 898555 | 5539 | 618 | 6/29/1975 |
| 37 | 74 | 36 | 36-72 | 359333 | 898555 | 5485 | 797 | 2/4/1975 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 37 | 74 | 36 | 36-846 | 359132 | 898555 | 5502 | 581 | 3/23/1977 |
| 37 | 74 | 36 | 36-86 | 358533 | 898555 | 5533 | 795 | 2/5/1975 |
| 37 | 74 | 36 | 36-28 | 359033 | 898555 | 5511 | 820 | 12/17/1974 |
| 37 | 74 | 36 | 36-771 | 361133 | 898555 | 5459 | 556 | 2/10/1977 |
| 37 | 74 | 36 | 36-156 | 358633 | 898555 | 5530 | 820 | 6/29/1975 |
| 37 | 74 | 36 | 36-67 | 358733 | 898555 | 5524 | 859 | 1/23/1975 |
| 37 | 74 | 36 | 36-55 | 359433 | 898555 | 5474 | 800 | 1/24/1975 |
| 37 | 74 | 36 | 36-845 | 358933 | 898557 | 5515 | 599 | 3/21/1977 |
| 37 | 74 | 36 | 36-843 | 358238 | 898558 | 5533 | 601 | 3/24/1977 |
| 37 | 74 | 36 | 36-785 | 361175 | 898558 | 5452 | 540 | 3/2/1977 |
| 37 | 74 | 36 | 36-844 | 358836 | 898565 | 5518 | 600 | 3/23/1977 |
| 37 | 74 | 36 | 36-1356 | 359284 | 898610 | 5485.2 | 836 | 7/7/1999 |
| 37 | 74 | 36 | 36-914 | 357969 | 898645 | 5544 | 621 | 4/11/1977 |
| 37 | 74 | 36 | 36-850 | 358935 | 898649 | 5515 | 599 | 3/22/1977 |
| 37 | 74 | 36 | 36-912 | 358729 | 898649 | 5528 | 601 | 3/22/1977 |
| 37 | 74 | 36 | 36-911 | 358832 | 898650 | 5519 | 601 | 3/22/1977 |
| 37 | 74 | 36 | 36-913 | 358435 | 898651 | 5529 | 837 | 4/27/1977 |
| 37 | 74 | 36 | 36-1308 | 359230 | 898652 | 5492.4 | 841 | 6/9/1999 |
| 36 | 73 | 6 | 6-23 | 368234 | 896981 | 5493.1 | 503 | 8/15/1967 |
| 36 | 73 | 6 | 6-362 | 368833 | 896983 | 5481.9 | 1004 | 6/28/1989 |
| 36 | 73 | 6 | 6-24 | 368630 | 896983 | 5488.9 | 500 | 8/15/1967 |
| 36 | 73 | 6 | 6-289 | 368730 | 896983 | 5487.9 | 400 | 3/13/1980 |
| 36 | 73 | 6 | 6-21 | 367432 | 896983 | 5481 | 504 | 8/15/1967 |
| 36 | 73 | 6 | 6-255 | 368679 | 896983 | 5488.7 | 359 | 2/7/1979 |
| 36 | 73 | 6 | 6-92 | 368446 | 896985 | 5487.2 | 964 | 2/12/1970 |
| 36 | 73 | 6 | 6-22 | 367833 | 896986 | 5500.6 | 500 | 8/15/1967 |
| 36 | 73 | 6 | 6-247 | 368538 | 896991 | 5486.5 | 560 | 1/25/1979 |
| 36 | 73 | 6 | 6-20 | 367024 | 896992 | 5491.8 | 498 | 8/14/1967 |
| 36 | 73 | 6 | 6-19 | 366630 | 896993 | 5505.6 | 498 | 8/14/1967 |
| 36 | 73 | 6 | 6-18 | 366228 | 896996 | 5511.6 | 502 | 8/15/1967 |
| 36 | 73 | 6 | 6-103 | 366317 | 897001 | 5512.3 | 550 | 2/7/1972 |
| 36 | 73 | 6 | 6-132 | 366583 | 897002 | 5508.3 | 500 | 12/14/1974 |
| 36 | 73 | 6 | 6-112 | 366480 | 897004 | 5518.2 | 553 | 2/10/1972 |
| 36 | 73 | 6 | 6-298 | 367611 | 897083 | 5484.3 | 320 | 2/6/1981 |
| 36 | 73 | 6 | 6-375 | 368841 | 897127 | 5465.3 | 305 | 7/23/1991 |
| 36 | 73 | 6 | 6-366 | 368472 | 897127 | 5471.3 | 323 | 7/31/1990 |
| 36 | 73 | 6 | 6-367 | 368738 | 897130 | 5471.9 | 322 | 7/31/1990 |
| 36 | 73 | 6 | 6-291 | 368599 | 897143 | 5470.9 | 320 | 2/5/1981 |
| 36 | 73 | 6 | 6-295 | 369862 | 897196 | 5487.1 | 480 | 2/4/1981 |
| 36 | 73 | 6 | 6-257 | 368801 | 897257 | 5458.3 | 317 | 2/7/1979 |
| 36 | 73 | 6 | 6-254 | 368871 | 897261 | 5453.5 | 420 | 2/19/1979 |
| 36 | 73 | 6 | 6-286 | 368983 | 897274 | 5447.2 | 400 | 3/13/1980 |
| 36 | 73 | 6 | 6-248 | 368720 | 897280 | 5458.1 | 560 | 1/25/1979 |
| 36 | 73 | 6 | 6-263 | 368674 | 897284 | 5458 | 359 | 2/8/1979 |
| 36 | 73 | 6 | 6-165 | 368626 | 897286 | 5458.1 | 1006 | 2/20/1975 |
| 36 | 73 | 6 | 6-164 | 368235 | 897290 | 5462.4 | 403 | 2/25/1975 |

| Township | Range | Section | Hole | Easting | Northing | Elevation | Total Depth | Date Drilled |
|---|---|---|---|---|---|---|---|---|
| 36 | 73 | 6 | 6-249 | 368536 | 897294 | 5456.5 | 560 | 1/25/1979 |
| 36 | 73 | 6 | 6-155 | 366673 | 897310 | 5507.7 | 504 | 12/28/1974 |
| 36 | 73 | 6 | 6-131 | 366625 | 897312 | 5511.2 | 1004 | 12/13/1974 |
| 36 | 73 | 6 | 6-143 | 366575 | 897315 | 5515.3 | 503 | 12/19/1974 |
| 36 | 73 | 6 | 6-365 | 368905 | 897349 | 5447.3 | 323 | 7/31/1990 |
| 36 | 73 | 6 | 6-288 | 369010 | 897351 | 5443 | 400 | 3/13/1980 |
| 36 | 73 | 6 | 6-292 | 369119 | 897356 | 5445.7 | 400 | 2/4/1981 |
| 36 | 73 | 6 | 6-374 | 369174 | 897358 | 5446.7 | 405 | 7/23/1991 |
| 36 | 73 | 6 | 6-371 | 369760 | 897378 | 5463.4 | 942 | 7/23/1991 |
| 36 | 73 | 6 | 6-378 | 369815 | 897379 | 5467.3 | 425 | 7/24/1991 |
| 36 | 73 | 6 | 6-301 | 369866 | 897381 | 5470 | 481 | 1/18/1982 |
| 36 | 73 | 6 | 6-364 | 369972 | 897383 | 5475.9 | 463 | 7/30/1990 |
| 36 | 73 | 6 | 6-376 | 368668 | 897385 | 5449.1 | 305 | 7/24/1991 |
| 36 | 73 | 6 | 6-287 | 368800 | 897400 | 5448.7 | 400 | 3/13/1980 |
| 36 | 73 | 7 | 7-18 | 365400 | 887400 | 5482.6 | 1109 | 10/22/1968 |
| 36 | 73 | 7 | 7-20 | 367000 | 887400 | 5493.1 | 1100 | 10/18/1968 |
| 36 | 73 | 7 | 7-14 | 367000 | 889000 | 5433.5 | 1108 | 10/17/1968 |
| 36 | 73 | 7 | 7-12 | 365400 | 889000 | 5455.8 | 1127 | 10/21/1968 |
| 36 | 73 | 7 | 7-6 | 365400 | 890600 | 5497.8 | 1107 | 10/15/1968 |
| 36 | 73 | 7 | 7-8 | 367000 | 890600 | 5481.7 | 1107 | 10/15/1968 |
| 36 | 73 | 7 | 7-22 | 365078 | 890603 | 1 | 805 | 1/29/1975 |
| 36 | 73 | 7 | 7-26 | 364617 | 890733 | 5547.2 | 801 | 3/18/1999 |
| 36 | 73 | 7 | 7-29 | 364640 | 890781 | 5548.4 | 800 | 3/24/1999 |
| 36 | 73 | 7 | 7-41 | 364686 | 890784 | 5548.6 | 801 | 3/30/1999 |
| 36 | 73 | 7 | 7-35 | 364660 | 890830 | 5550 | 800 | 3/29/1999 |
| 36 | 73 | 7 | 7-25 | 364638 | 890978 | 5556 | 841 | 3/18/1999 |
| 36 | 73 | 7 | 7-21 | 365007 | 891001 | 1 | 805 | 1/30/1975 |
| 36 | 73 | 7 | 7-27 | 364675 | 891179 | 5569.4 | 820 | 3/19/1999 |
| 36 | 73 | 7 | 7-30 | 364671 | 891228 | 5570.9 | 839 | 3/24/1999 |
| 36 | 73 | 7 | 7-38 | 364712 | 891368 | 5563.3 | 821 | 3/30/1999 |
| 36 | 73 | 7 | 7-31 | 364709 | 891419 | 5566 | 850 | 3/26/1999 |
| 36 | 73 | 7 | 7-39 | 364793 | 891508 | 5565.6 | 821 | 3/30/1999 |
| 36 | 73 | 7 | 7-42 | 364645 | 891654 | 5594.4 | 579 | 3/30/1999 |
| 36 | 73 | 7 | 7-40 | 364683 | 891706 | 5590.6 | 578 | 3/30/1999 |
| 36 | 73 | 7 | 7-36 | 364721 | 891758 | 5586.7 | 580 | 3/26/1999 |
| 36 | 73 | 7 | 7-32 | 364759 | 891809 | 5581.5 | 820 | 3/25/1999 |
| 36 | 73 | 7 | 7-28 | 364801 | 891866 | 5573.6 | 600 | 3/19/1999 |
| 36 | 73 | 7 | 7-23 | 364850 | 891868 | 5572.8 | 801 | 3/15/1999 |
| 36 | 73 | 7 | 7-24 | 364848 | 891918 | 5569 | 601 | 3/16/1999 |
| 36 | 73 | 7 | 7-33 | 364946 | 891923 | 5569 | 820 | 3/23/1999 |
| 36 | 73 | 7 | 7-34 | 364995 | 891925 | 5568.7 | 601 | 3/25/1999 |
| 36 | 73 | 7 | 7-37 | 365087 | 891974 | 5566 | 579 | 3/29/1999 |

**TOTAL FOOTAGE DRILLED 4325390**

**TOTAL NUMBER OF DRILL HOLES 6295**

# THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

## THAT CAN BE VIEWED AT THE RECORD TITLED:

## PLATE D5-2

## "REYNOLDS RANCH URANIUM PROJECT DRILL HOLE MAP"

## WITHIN THIS PACKAGE

**D-04**

# THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

## THAT CAN BE VIEWED AT THE RECORD TITLED: FIGURE A-2 "REYNOLDS RANCH URANIUM PROJECT MINERAL OWNERSHIP MAP"

## WITHIN THIS PACKAGE

**D-05**

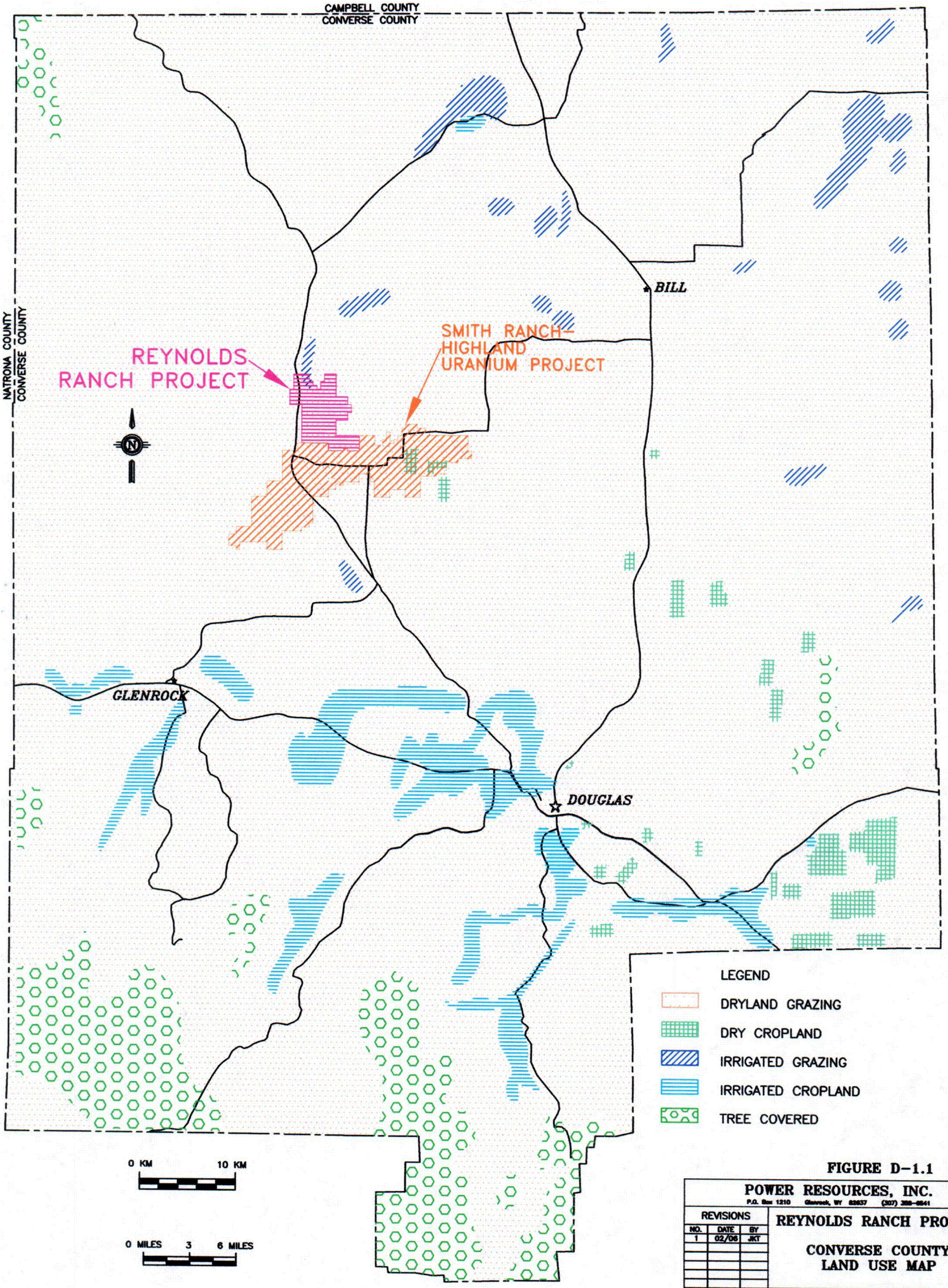



FIGURE D-1.1

| POWER RESOURCES, INC. | | | |
|---|---|---|---|
| REVISIONS | | | REYNOLDS RANCH PROJECT<br>CONVERSE COUNTY<br>LAND USE MAP |
| NO. | DATE | BY | |
| 1 | 02/06 | JKT | |

Land Use Data provided by Converse County.

C16

**APPENDIX D-6**

HYDROLOGY

REYNOLDS RANCH AMENDMENT AREA
CONVERSE COUNTY, WYOMING

## 1 GROUNDWATER

Descriptions of the geologic formations of the Powder River Basin and their hydrologic properties have been discussed in numerous publications (Hodson et al., 1973; Hodson, 1971, Whitcomb et al., 1958; Huntoon, 1976; Davis, 1976) and were summarized in Appendix D-5 (Geology). The hydrologic units beneath the permit area and the general vicinity include the following: Holocence-age alluvial deposits, the Eocene-age Wasatch Formation, the Paleocene-age Fort Union Formation, and the Cretaceous-age Lance and Fox Hills Formations (Table D-6.1). Individual sandstones within these units may be classified as aquifers depending on their hydrologic characteristics and potential yield to wells and/or springs.

### *1.1 GROUNDWATER RIGHTS*

Listings of all known water wells and springs in the permit area or within three miles of the permit boundary are provided on Table D-6.2. The general locations of stock wells and springs within the nearest ¼ ¼ Section are indicated on Figure D-6.1. The well listing is by the Wyoming permit number and well name as listed in the Wyoming State Engineers Office (WSEO) Water Rights Database. Table D-6.2 reflects listings in the WSEO Water Rights Database as of August 2004. Monitor wells associated with in situ mining or development are not included in Table D-6.2.

### *1.2 GROUNDWATER QUALITY*

Extensive groundwater quality data was previously collected by Solution Mining Corporation from the planned Production Zones and also other zones that are representative of potential potable or existing stock water sources (not planned mining zones). Baseline water quality data for the Production Zones and potable/stock water sources are summarized in Attachment D6-2. See Figure D6-1 for the locations of these wells.

Baseline data will be extensively developed for the designated wells in each mining unit prior to start-up to determine baseline conditions, Upper Control Limits, and Restoration Target Values. This data will be submitted to WDEQ-WQD prior to placing a mining unit into production.

### *1.3 HYDROGEOLOGIC UNITS*

Alluvium. The alluvium in the permit area consists of thin, unconsolidated, poorly stratified clays, silts, sands, and gravels. The total thickness of these deposits is estimated to range from less than 1 foot to 30 feet. Small amounts of precipitation infiltrate the alluvium during part of the year and intermittent flows across the alluvium may provide some recharge. The water table however is typically more than 100 feet below the land surface throughout most of the permit area.

The potential for future development of alluvial groundwater supplies in the permit area is considered very poor.

Wasatch Formation. The Wasatch Formation typically is lenticular fine- to coarse-grained sandstones with interbedded claystones and siltstones. The Wasatch Formation contains some of the more important shallow aquifers in the Powder River Basin.

Properly constructed wells penetrating the Wasatch aquifer in the vicinity of the proposed project site generally yield from 5 to 15 gallons per minute (gpm).

For the most part, groundwater in the Wasatch aquifer occurs under water table (unconfined) conditions and its primary use in the permit area is low-yielding wells used for watering livestock. Artesian (confined) zones near the base of the formation are separated from near-surface deposits and from each other by impermeable shale layers.

Fort Union Formation. The Fort Union Formation underlies the Wasatch Formation in the permit area. Typically, the Fort Union is comprised of lenticular fine- to coarse-grained sandstones with interbedded claystones, siltstones, and coal. The formation is as much as 3000 feet thick beneath the permit area.

The Fort Union Formation contains important aquifers in the Powder River Basin, and contains the principle production zones for the Reynolds Ranch Project. While most of the solution mining wells are designated for limited yields (5 to 30 gpm of water), wells completed in the Fort Union formation can produce substantial volumes of groundwater over extended periods as demonstrated by the various past mining operations in the Southern Powder River Basin.

Lance and Fox Hills Formations. The Lance and Fox Hills Formations underlie the Fort Union Formation at depths of approximately 3500 feet and 5500 feet, respectively beneath the proposed permit area. The formations are comprised of fine to medium grained sandstones, interbedded sandy shales and claystones. Well yields from these formations are not expected to exceed 100 gpm, and the groundwater reserves may be limited. Little is known of the hydrologic characteristics of the Lance and Fox Hills Formations as no water wells tap these aquifers in the vicinity of the permit area. Because of the depths of these formation and the availability of water from other shallow aquifers, it appears unlikely that these formations will be tapped for water supplies in the future in the permit area.

## *1.4 LOCAL HYDROGEOLOGIC SETTING*

The hydrostratigraphic units of primary concern in analyzing the possible impacts of uranium in-situ mining operations in the O-sand and U/S-Sand aquifers of the Fort Union Formation are:

- Wasatch Formation sandstones (overlying aquifers G and E-Sands)
- W-sand aquifer (upper production zone- undeveloped)
- Fort Union Formation V Shale (upper confining stratum)
- U/S-sand aquifer (middle production zone)
- Intermediate P Shale (U/S-sand lower confining stratum and O-sand upper confining stratum)
- O-sand aquifer (lower production zone)
- Basal Shale (lower confining stratum)

Detailed descriptions of each of these stratigraphic units is presented in Appendix D-5.

## *1.5 AQUIFER PUMP TESTS AND ANALYSIS*

Pump tests have been conducted in the permit area to evaluate the hydrologic characteristics of the mineralized zones. The pump tests were performed by In-Situ, Inc. for Solution Mining Company and are presented in Attachment D6-1. The In-Situ Inc. pump tests were performed in January 1989 in areas of each production zone where future production is likely to occur. The pump tests conducted demonstrated that the mineralized formations have acceptable permeability and transmissivity characteristics for solution mining and all confining shale members tested have proven to be effective aquitards for controlling the vertical movement of leach solutions.

It is important to note that terminology for the stratigraphic formations described in the pump test and analysis by In-Situ Inc. and Solution Mining Company (SMC) is different than the terminology used by Power Resources, Inc for the same formations. The list below provides a cross-reference for the different terminologies used.

- The SMC E-sand is equivalent to the PRI O-sand.
- The SMC H-sand is equivalent to the PRI U/S-sand.
- The SMC I-shale is equivalent to the PRI V-shale.

### 1.5.1 U/S Sand Pump Test Results

The U/S-sand production zone aquifer is separated into upper (U) and lower (S) zones by a discontinuous shale horizon. Transmissivities of the U/S-sand were found to range from 490-570 gpd/ft during the pumping phase and up to 820 gpd/ft during the recovery phase of the pump test. The mean transmissivity was 540 gpd/ft with a slight anisotropy in the transmissivity of 1.6:1 to 1.2:1 noted. When the U/S-sand aquifer was stressed during the pumping phase both the upper and lower zones responded as a single hydraulic unit. The storage coefficient lies in a small range of 1.5E-5 to 1.7E-5.

As noted on page D6-A1-11, the H-sand consists of an upper and lower zone separated by a discontinuous shale layer. These two zones of the H-sand are referred to as the U and S-sand respectively under current PRI terminology (U is the upper zone and S is the lower zone). Monitor well 1062 is completed in the U-sand, which is overlying the S-sand. As noted, the aquitard separating these sands (T-shale) is in fact discontinuous in areas shown Figures D5-1 and D5-2 leading to communication between these zones. This explains the slight drawdown in well 1062 from pumping well 1054. The pumping well (1054) is located in the S-sand. Figures D5-1 and D5-2 were revised to show the referenced pump locations.

### 1.5.2 O-Sand Pump Test Results

Transmissities of the O-sand were found to range from 422 – 767 gpd/ft during the pumping phase and from 507-652 gpd/ft in the recovery phase of the test. The mean transmissivity is 640 gpd/ft. A pronounced anisotropy in the transmissvity is apparent (3.3:1) with the major axis of transmissivity oriented on a bearing of 57 degrees. Extreme anisotropy was detected in the data from one of the observation wells suggesting the existence of appreciable heterogeneity in the hydrologic properties of the O-sand aquifer. When the O-sand aquifer was stressed during the pump test it responded as a single hydraulic unit. The storage coefficient lies in the range 6.3E-5 to 7.8E-5.

### *1.6 AQUIFER POTENTIOMETRIC SURFACES*

Potentiometric surface contours have been constructed for the O-sand and U/S-sand production zones. Figures D-6-2 and D6-3 presents the potentiometric surfaces for the U/S-sand and O-sand, respectively, and were produced from water levels taken on November 6, 2004. Production sand water levels were measured at six existing wells installed by Solution mining Company (three wells in the O-sand and three wells in the U/S-sand) and at an additional five wells installed by Power Resources, Inc. Well locations were chosen in order to provide adequate coverage for each production zone in northern half of the permit area where mining is initially planned. Table D6-4 lists these wells and associated water level monitoring results from July through November 2004.

Water levels from wells UM-200, 26-476 (PRI), 35-882 (PRI), SMC-1062, SMC-1066, 2-611 (PRI) were used to develop the potentiometric surface contours for the U/S-sand aquifer. These contours show the direction of groundwater flow in a northeast direction. The average groundwater velocity is estimated to be 8 ft/yr based on a hydraulic conductivity of 22 gpd/ft$^2$ (2.89 ft/day), a matrix porosity of 0.27, and average gradient of 0.002 ft/ft. These estimates also correlate closely with estimates determined by the previous hydrologic testing from Solution Mining Company.

Water levels from wells SMC-1055, SMC-1058, SMC-1067, 26-477 (PRI), and 35-883 (PRI) were used to develop the potentiometric surface contours for the O-sand aquifer. These contours show the direction of groundwater flow in a northwesterly direction. The average velocity is estimated to be 1.9 ft/year based on a hydraulic conductivity of 21 gal/day/ft$^2$ (2.81 ft/day), a matrix porosity of 0.27, and an average gradient of 0.0005 ft/ft. These estimates show that the O-sand potentiometric surface is extremely flat, which correlates with the findings from Solution Mining Company hydrologic tests conducted previously.

## 2 SURFACE WATER

Surface flow in the permit area is intermittent, the result of both the relatively low average annual precipitation in the region and the fact that most stream channels in the area are underlain by quaternary deposits of high transmissivity.

Most of the high flow rates in the streams of the permit area result from high-intensity convective storms that enter the region from the east (Lowers, 1960). These storms are most likely to occur during May and June.

The permit area is located in the Duck Creek, Willow Creek, and Brown Springs Creek drainages all attendant to the Dry Fork drainage of Little Cheyenne River. The Little Cheyenne River is part of the Cheyenne River drainage system in the southern part of the Powder River Basin. The only natural surface water in the permit area is ephemeral runoff in response to intermittent precipitation and seepage into small basins at low points in the Duck Creek, Willow Creek, and Brown Springs Creek drainages. Surface runoff is very limited, surrounding stock ponds collect some runoff for livestock and wildlife consumption, but are dry most of the year. Some stock ponds on the permit area are fed by a pumped well and will contain water for longer durations.

The average annual runoff from this part of Wyoming is approximately 0.3 to 0.5 inches, or between approximately 0.022 and 0.037 cubic feet per second per square mile (U.S. Soil Conservation Service, 1975; Hodson et al., 1973).

## *2.1 SURFACE WATER QUALITY*

Surface water inside the Permit Area is limited to snow melt and rain runoff. Surface water is present for only short periods of time. A working stock pond, which is supplied primarily by a shallow well, is located within the Permit Area. Solution Mining Company conducted surface water analysis of the stock pond and other surface water sites including the Silver Spoon Reservoir and Brown Springs Creek for radiological constituents. The results of these analyses are presented in Attachment D6-2.

## *2.2 SURFACE WATER RIGHTS*

A listing of all the adjudicated and non-adjudicated surface water rights is provided in Table D-6-3. Only two surface water rights (the Silver Spoon Reservoir) exist in the Permit Area or with one-half mile of the Permit Area as determined from the WSEO Water Rights Database in August of 2004. The general location of these surface water rights are indicated on Figure D-6.1.

# TABLE D6-2
## EXISTING STOCK AND DOMESTIC WELLS
## REYNOLDS RANCH PERMIT AMENDMENT AREA + 3 MILES

| Permit # | Status | Township | Tns Suffix | Range | Rng Suffix | Section | Qtrqtr | Applicant | Facility Name | Uses | Yld Act | Well Depth | Static Depth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P14374P | GST | 36 | N | 73 | W | 23 | SWNE | RUTH WHITING | NUMRICH #6 | STO | 5 | 170 | |
| P14375P | GST | 36 | N | 73 | W | 23 | SENW | RUTH WHITING | NUMRICH #7 | STO | 5 | 180 | |
| P14376P | GST | 36 | N | 73 | W | 23 | NWNW | RUTH WHITING | NUMRICH #8 | STO | 5 | 180 | |
| P14377P | GST | 36 | N | 73 | W | 22 | NWNE | RUTH WHITING | NUMRICH #9 | STO | 5 | 180 | |
| P144333W | GST | 36 | N | 73 | W | 15 | SWSW | NUMRICH RANCH | TERRELL NO. 1 | STO | 7 | 146 | 85 |
| P153488W | GSI | 36 | N | 73 | W | 17 | SWNW | DUCK CREEK RANCHES INC. | DUCK CREEK #17-2 | STO | | | |
| P160753W | GSI | 36 | N | 73 | W | 21 | NENW | DUCK CREEK RANCHES INC. | REYNOLDS #21-3 | STO | | | |
| P163615W | GSI | 36 | N | 73 | W | 17 | SWNW | DUCK CREEK RANCHES INC. | DUCK CREEK S17-1 | STO | | | |
| P163616W | GSI | 36 | N | 73 | W | 5 | SESW | DUCK CREEK RANCHES INC. | MANGY COYOTE S5-1 | STO | | | |
| P27911W | GST | 36 | N | 73 | W | 19 | NWNE | WILLIAM R. & ALICE L. VOLLMAN | ADAMS #1 | STO | 25 | 300 | 100 |
| P6983P | GST | 36 | N | 73 | W | 27 | SWSE | VOLLMAN RANCHES | VOLLMAN #1 | STO | 5 | 180 | 142.3 |
| P6984P | GST | 36 | N | 73 | W | 30 | SENE | WILLIAM R. VOLLMAN | VOLLMAN #2 | STO | 5 | 100 | 85 |
| P6985P | GST | 36 | N | 73 | W | 35 | NESE | WILLIAM R. VOLLMAN | VOLLMAN #3 | STO | 5 | 20 | 15 |
| P6986P | GST | 36 | N | 73 | W | 21 | SWSE | VOLLMAN WILLIAM R. | VOLLMAN #4 | STO | 4 | 200 | 127 |
| P6987P | GST | 36 | N | 73 | W | 26 | SWNE | WILLIAM R. VOLLMAN | VOLLMAN #5 | STO | 5 | 198 | 94 |
| P6989P | GST | 36 | N | 73 | W | 30 | NENE | WILLIAM R. VOLLMAN | VOLLMAN #7 | STO | 5 | 32 | -1 |
| P75937W | GST | 36 | N | 73 | W | 27 | NWSE | W. R. "BILL" VOLLMAN | STOCK WATER OVERFILING SWEPI #1 WATER | STO | 25 | 710 | 450 |
| P77858W | GST | 36 | N | 73 | W | 17 | SWNE | DUCK CREEK RANCHES INC. | DUCK CREEK #17 | STO | 2 | 255 | 102 |
| P9155P | GST | 36 | N | 73 | W | 3 | NWSW | DUCK CREEK RANCHES INC. | REYNOLDS #3 | STO | 10 | 180 | 42 |
| P9161P | GST | 36 | N | 73 | W | 20 | NWNW | DUCK CREEK RANCHES INC. | REYNOLDS #20 | STO | 4 | 47 | 26 |

# TABLE D6-2
## EXISTING STOCK AND DOMESTIC WELLS
## REYNOLDS RANCH PERMIT AMENDMENT AREA + 3 MILES

| Permit # | Status | Township | Tns Suffix | Range | Rng Suffix | Section | Qtrqtr | Applicant | Facility Name | Uses | Yld Act | Well Depth | Static Depth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P99386W | GST | 36 | N | 73 | W | 11 | SESE | BONER BROS. PARTNERSHIP | WILLOW CREEK #1 | STO | 8 | 695 | 348 |
| P6988P | GST | 36 | N | 73 | W | 27 | NWNE | WILLIAM R. VOLLMAN | VOLLMAN #6 | DOM | 5 | 180 | 165 |
| P111655W | GST | 36 | N | 74 | W | 26 | NWNE | SMITH SHEEP CO. | WW109 A | STO | 4 | 200 | 90 |
| P126089W | GST | 36 | N | 74 | W | 9 | NWSW | HORNBUCKLE RANCH, INC. | UPPER BROWN SPRING #1 | STO | 10 | 160 | 29 |
| P139440W | GST | 36 | N | 74 | W | 6 | SENW | HORNBUCKLE RANCH INC. | JUDSON SPRING | STO | 12 | 10 | 1 |
| P163613W | GSI | 36 | N | 74 | W | 12 | NWNW | DUCK CREEK RANCHES INC. | SILVER SPOON SPRING S12-1 | STO | | | |
| P30728W | | 36 | N | 74 | W | 8 | SWSW | HORNBUCKLE RANCH | HORNBUCKLE #17 | STO | 8 | 92 | 54 |
| P30999W | GST | 36 | N | 74 | W | 17 | NENE | SMITH SHEEP CO. | SMITH #51 | STO | 5 | 100 | 78 |
| P33796W | GST | 36 | N | 74 | W | 4 | NESW | HORNBUCKLE RANCH | HORNBUCKLE #20 | DOM,STO | 15 | 120 | 13 |
| P47627W | GST | 36 | N | 74 | W | 3 | NWNE | OGALALLA LAND LTD | GRANPA #1 | STO | | | |
| P5005P | GST | 36 | N | 74 | W | 27 | NESW | SMITH SHEEP CO. | SMITH #32 | STO | 8 | 287 | 115 |
| P5006P | GST | 36 | N | 74 | W | 23 | SESW | SMITH SHEEP CO. | SMITH #33 | STO | 8 | 175 | 60 |
| P5007P | GST | 36 | N | 74 | W | 24 | NESW | SMITH SHEEP CO. | SMITH #34 | STO | 8 | 145 | 110 |
| P8625W | GST | 36 | N | 74 | W | 20 | NESE | SMITH SHEEP CO. | SMITH #41 | STO | 7 | 85 | 60 |
| P88428W | ABA | 36 | N | 74 | W | 15 | NESE | SMITH SHEEP CO. | EAST NORTH PASTURE #63 | STO | Unknown | 500 | -7 |
| P9154P | GST | 36 | N | 74 | W | 1 | SWNE | DUCK CREEK RANCHES INC. | REYNOLDS #1 | STO | 3 | 11 | 4 |
| P9158P | GST | 36 | N | 74 | W | 13 | NWNW | DUCK CREEK RANCHES INC. | REYNOLDS #13 | STO | 3 | 195 | 150 |
| P114459W | GST | 37 | N | 73 | W | 22 | SENE | DUCK CREEK RANCHES, INC. | DUCK CREEK #22-1 | STO | 20 | 77 | 15 |
| P163614W | GSI | 37 | N | 73 | W | 31 | NESW | DUCK CREEK RANCHES INC. | BARRACKS SPRING S31-1 | STO | | | |
| P19964P | GST | 37 | N | 73 | W | 8 | SWNE | HORNBUCKLE RANCH | HORNBUCKLE WELL #3 | STO | 8 | 530 | -1 |
| P19965P | GST | 37 | N | 73 | W | 19 | SWSE | HORNBUCKLE RANCH | HORNBUCKLE WELL #4 | STO | 8 | 130 | 90 |
| P19968P | GST | 37 | N | 73 | W | 17 | SESW | HORNBUCKLE RANCH | HORNBUCKLE WELL #7 | STO | 8 | 210 | 100 |

# TABLE D6-2
## EXISTING STOCK AND DOMESTIC WELLS
## REYNOLDS RANCH PERMIT AMENDMENT AREA + 3 MILES

| Permit # | Status | Township | Tns Suffix | Range | Rng Suffix | Section | Qtrqtr | Applicant | Facility Name | Uses | Yld Act | Well Depth | Static Depth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P19969P | GST | 37 | N | 73 | W | 5 | NWNW | HORNBUCKLE RANCH | HORNBUCKLE WELL #8 | STO | 10 | 200 | -4 |
| P28416W | GST | 37 | N | 73 | W | 31 | SWSW | DUCK CREEK RANCHES INC. | DUCK CREEK #1 | STO | 17 | 440 | 40 |
| P69509W | GST | 37 | N | 73 | W | 27 | NWNE | DUCK CREEK RANCHES INC. | DCR #1 | STO | 25 | 1000 | 140 |
| P75999W | GST | 37 | N | 73 | W | 28 | SWSW | DUCK CREEK RANCHES | DUCK CREEK #28 | STO | 3 | 240 | 110 |
| P9167P | GST | 37 | N | 73 | W | 32 | SWSW | DUCK CREEK RANCHES INC. | REYNOLDS #32 | STO | 3 | 175 | 130 |
| P94860W | GST | 37 | N | 73 | W | 32 | NESW | DUCK CREEK RANCHES INC. | DUCK CREEK #32 | STO | 5 | 320 | 240 |
| P96420W | GST | 37 | N | 73 | W | 31 | NWNW | DUCK CREEK RANCHES INC. | DUCK CREEK #31 | STO | 2 | 170 | 125 |
| P23698W | GST | 37 | N | 73 | W | 10 | NENW | ROY C. BAKER**FEROL BAKER | BAKER #1 | DOM | 6 | 300 | 20 |
| P35031W | GST | 37 | N | 73 | W | 22 | SENE | DUCK CREEK RANCHES INC. | DUCK CREEK #2 | DOM | 1 | 400 | 0 |
| P68591W | GST | 37 | N | 73 | W | 10 | SENW | ROY C. & FEROL BAKER | BAKER 10 A | DOM | 13 | 300 | 50 |
| P9162P | GST | 37 | N | 73 | W | 22 | SENE | DUCK CREEK RANCHES INC. | REYNOLDS #22 | DOM | 3 | 375 | -6 |
| P113277W | GSI | 37 | N | 74 | W | 21 | NENW | WILLIAM M HENRY III | HOOPER HOUSE SPRING | STO | 0 | 0 | 0 |
| P126088W | GST | 37 | N | 74 | W | 32 | SENW | HORNBUCKLE RANCH, INC. | LOWER BROWN SPRINGS #1 | STO | 10 | 200 | 86 |
| P129266W | GST | 37 | N | 74 | W | 8 | SENW | WILLIAM M HENRY III | WES DIPPING VAT | STO | | 115 | 36 |
| P140786W | GST | 37 | N | 74 | W | 20 | SWSW | WILLIAM M HENRY III | SHEARING PENS # 2 | STO | 6 | 118 | 1 |
| P158732W | GSI | 37 | N | 74 | W | 21 | NWNE | WILLIAM M. HENRY III | WATERS FEE 31-21 | STO | | | |
| P158735W | GST | 37 | N | 74 | W | 21 | NWSW | WILLIAM M. HENRY III | HOOPER HOUSE WELL | STO | 5 | 245 | 54 |
| P158736W | GST | 37 | N | 74 | W | 10 | NESW | WILLIAM M. HENRY III | SOUTH PAST. SOLAR | STO | 2 | 150 | 39 |

# TABLE D6-2

## EXISTING STOCK AND DOMESTIC WELLS
## REYNOLDS RANCH PERMIT AMENDMENT AREA + 3 MILES

| Permit # | Status | Township | Tns Suffix | Range | Rng Suffix | Section | Qtrqtr | Applicant | Facility Name | Uses | Yld Act | Well Depth | Static Depth |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P158737W | GSI | 37 | N | 74 | W | 9 | SWSW | WILLIAM M. HENRY III | PHILLIPS CREEK WINDMILL | STO | | | |
| P17314P | GST | 37 | N | 74 | W | 34 | SWSE | WILLIAM H. MASON | MASON #2 | STO | 4 | 255 | 120 |
| P19962P | GST | 37 | N | 74 | W | 12 | NWNW | HORNBUCKLE RANCH | HORNBUCKLE WELL #1 | STO | 25 | -1 | -1 |
| P19967P | GST | 37 | N | 74 | W | 12 | SESW | HORNBUCKLE RANCH | HORNBUCKLE WELL #6 | STO | 10 | 510 | 25 |
| P19971P | GST | 37 | N | 74 | W | 24 | NWNW | HORNBUCKLE RANCH | HORNBUCKLE WELL #10 | STO | 8 | 140 | 90 |
| P24118P | GST | 37 | N | 74 | W | 8 | NESE | 55 RANCH - WERNER, INC | ART #55 1 | STO | 3 | 200 | -1 |
| P3319W | GST | 37 | N | 74 | W | 8 | NWSE | WERNER INC. | SECTION 8 37 74 WELL #1 | STO | 2 | 215 | -4 |
| P36169P | GST | 37 | N | 74 | W | 8 | SESW | WILLIAM M. HENRY**WYO BOARD OF LAND COMMISSIONERS | HENRY #5 | STO | 25 | 300 | -6 |
| P38165W | GST | 37 | N | 74 | W | 35 | NESW | WILLIAM H. MASON | MASON #3 | DOM,STO | 5 | 310 | 180 |
| P7719P | GST | 37 | N | 74 | W | 23 | NWNE | WILLIAM M. HENRY | HENRY #3 | STO | 5 | 235 | 23 |
| P7720P | GST | 37 | N | 74 | W | 14 | NENE | WILLIAM M. HENRY | HENRY #4 | STO | 4 | 255 | -6 |
| P9169P | GST | 37 | N | 74 | W | 36 | SENE | GAME & FISH COMM., STATE OF WYOMING** DUCK CREEK RANCHES INC. | REYNOLDS #36 (DEEPENED) | STO | 3 | 180 | 58 |

# TABLE D6-3
## SURFACE WATER RIGHTS
## REYNOLDS RANCH PERMIT AMENDMENT AREA + 3 MILES

| Appropriation | Township | Tns suffix | Range | Rng suffix | Section | Quarter | Qtrqtr | Status | Supply type | SW Permit Uses | SW Permit Facility name | SW Permit Applicant | SW Permit Priority | SW Permit Amount | SW Permit Unit | SW Permit Source |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P10045R | 36 | N | 73 | W | 11 | 16 | SESE | UNA | ORI | IND,FLO,TEM | Satellite No. 2 Purge Storage | POWER RESOURCES INC. | 7/20/1994 | 472.36 | ACFT | Bob Draw |
| P10045R | 36 | N | 73 | W | 12 | 11 | SWSW | UNA | ORI | IND,FLO,TEM | Satellite No. 2 Purge Storage | POWER RESOURCES INC. | 7/20/1994 | 472.36 | ACFT | Bob Draw |
| P1615S | 36 | N | 73 | W | 14 | 7 | SWNW | PU | ORI | STO | Whipple #1 Stock Reservoir | HYLAND SHEEP CO | 10/22/1956 | 3.22 | ACFT | Whipple Draw |
| P1615S | 36 | N | 73 | W | 14 | 7 | SWNW | PUO | ORI | STO | Whipple #1 Stock Reservoir | HYLAND SHEEP CO | 10/22/1956 | 3.22 | ACFT | Whipple Draw |
| P7725S | 36 | N | 73 | W | 11 | 16 | SESE | PU | ORI | STO | MX-1 Stock Reservoir | R. L. BONER | 6/19/1974 | 0.71 | ACFT | MX - 1 Draw |
| P7725S | 36 | N | 73 | W | 11 | 16 | SESE | PUO | ORI | STO | MX-1 Stock Reservoir | R. L. BONER | 6/19/1974 | 0.71 | ACFT | MX - 1 Draw |
| P28780D | 37 | N | 73 | W | 23 | 5 | NENW | PUD | ORI | OIL,TEM,IND,DRI | Ukele State 42-15 | DIAMOND SHAMROCK EXPLORATION COMPANY**WYO BOARD OF LAND COMMISSIONERS | 12/12/1984 | 0.47 | CFS | Hold-up Hollow Draw |
| P28958D | 37 | N | 73 | W | 23 | 5 | NENW | PUD | ORI | OIL,TEM,IND,DRI | Suicide Hill State 21-51 | DIAMOND SHAMROCK EXPLORATION COMPANY**WYO BOARD OF LAND COMMISSIONERS | 4/22/1985 | 0.47 | CFS | Hold-up Hollow Draw |
| P7806R | 37 | N | 73 | W | 28 | 11 | SWSW | PUO | ORI | MIS | Settling Ponds, Sections 28-33 Reservoir | SEQUOYAH FUELS CORPORATION**WYO BOARD OF LAND COMMISSIONERS | 7/8/1977 | 5.21 | ACFT | Dry Wash |
| P4541S | 37 | N | 73 | W | 16 | 2 | NWNE | PUO | ORI | STO | Jeff #1 Stock Reservoir | WALTER J. REYNOLDS | 4/25/1962 | 19.06 | ACFT | Creek |
| P16808D | 37 | N | 74 | W | 11 | 3 | SWNE | ADJ | ORI | IRR | Harland Ditch | JOHN C. HARLAND | 4/28/1924 | 0.69 | CFS | Brown Spings Creek |
| P17313P | 37 | N | 74 | W | 35 | 15 | SWSE | PUW | ORI | | | | | | | |
| P17314P | 37 | N | 74 | W | 34 | 15 | SWSE | PUW | ORI | | | | | | | |
| P17330D | 37 | N | 74 | W | 33 | 16 | SESE | UNA | ORI | IRR | Judson No. 2 Ditch | CARL J. JUDSON | 1/28/1928 | 0.41 | CFS | BROWN SPRING CREEK |
| P25097D | 37 | N | 74 | W | 30 | 16 | SESE | PUD | ORI | OIL,TEM,IND,DRI | Chaparral Resources, Inc. Oil Well Water Supply Pipeline | CHAPARRAL RESOURCES INC. | 6/16/1976 | 0.36 | CFS | Phillips Creek |
| P27247D | 37 | N | 74 | W | 8 | 16 | SESE | PUD | ORI | OIL,TEM,IND,DRI | Ford Federal 23-4 Water Use | DIAMOND SHAMROCK CORPORATION | 7/29/1981 | 0.47 | CFS | Dry Fork |
| P27303D | 37 | N | 74 | W | 8 | 16 | SESE | PUD | ORI | OIL,TEM,IND,DRI | Federal 744 #1-8 Water Haul | INTERNORTH INC.** ALLEMAND WATER SERVICE | 9/11/1981 | 0.56 | CFS | Dry Fork |
| P8097S | 37 | N | 74 | W | 33 | 13 | NESE | ADJ | ORI | STO | Brown Springs No. 1 Stock Reservoir | HORNBUCKLE RANCH**WYO BOARD OF LAND COMMISSIONERS | 2/2/1976 | 0.7 | ACFT | Brown Spings Creek |
| P8098S | 37 | N | 74 | W | 33 | 4 | SENE | ADJ | ORI | STO | Brown Springs No. 2 Stock Reservoir | HORNBUCKLE RANCH**WYO BOARD OF LAND COMMISSIONERS | 2/2/1976 | 1.49 | ACFT | Brown Spings Creek |
| P25312D | 36 | N | 74 | W | 4 | 15 | SWSE | PUD | ORI | STO | Brown Springs Pipeline No. 1 | HORNBUCKLE RANCH | 2/2/1976 | 0.044 | CFS | Hornbuckle Draw |
| P25313D | 36 | N | 74 | W | 4 | 14 | NWSE | ADJ | ORI | STO | Brown Springs Pipeline No. 2 | HORNBUCKLE RANCH | 9/9/1976 | 0.044 | CFS | Brown Spings Creek |
| P5393R | 36 | N | 74 | W | 12 | 5 | NENW | PUO | ORI | STO | Silver Spoon Reservoir | JOE REYNOLDS | 1/24/1941 | 17.25 | ACFT | Hold-up Hollow Draw |
| P10398S | 37 | N | 73 | W | 16 | 3 | SWNE | PUO | ORI | STO | AML 15-II Site 30 Stock Reservoir | WYO BOARD OF LAND COMMISSIONERS**DUCK CREEK RANCHES INC. | 6/13/1988 | 2.05 | ACFT | Solar Draw |
| P10434S | 37 | N | 73 | W | 9 | 16 | SESE | UNA | ORI | STO | Betty Lou Stock Reservoir | ROY C. & FEROL BAKER | 8/1/1988 | 1.84 | ACFT | Betty Lou Draw |

# TABLE D6-3
## SURFACE WATER RIGHTS
## REYNOLDS RANCH PERMIT AMENDMENT AREA + 3 MILES

| Appropriation | Township | Tns suffix | Range | Rng suffix | Section | Quarter | Qtrqtr | Status | Supply type | SW Permit Uses | SW Permit Facility name | SW Permit Applicant | SW Permit Priority | SW Permit Amount | SW Permit Unit | SW Permit Source |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Appropriation | Township | Tns suffix | Range | Rng suffix | Section | Quarter | Qtrqtr | Status | Supply type | Adj Uses | Adj Facility Name | Adj Appropriation | Adj Priority | Adj Amount | Adj Unit | Adj Source |
| C74/031A | 36 | N | 74 | W | 4 | 15 | SWSE | PUD | ORI | STO | Brown Springs Pipeline No. 1 | Hornbuckle Ranch- Dick J. Hornbuckle | 2/2/1976 | | | Hornbuckle Draw |
| C74/032A | 36 | N | 74 | W | 4 | 14 | NWSE | PUD | ORI | STO | Brown Springs Pipeline No. 2 | Hornbuckle Ranch- Dick J. Hornbuckle | 9/9/1976 | | | Brown Spings Creek |
| CR1/269A | 36 | N | 74 | W | 12 | 5 | NENW | PUO | ORI | STO | Silver Spoon Reservoir | Joseph W. Reynolds | 1/24/1941 | | | Hold-up Hollow Draw |
| CR8/763A | 37 | N | 74 | W | 33 | 13 | NESE | PUO | ORI | STO | Brown Springs No. 1 Stock Reservoir | State Board of Land Commissioners and Hornbuckle Ranch | 2/2/1976 | | | Brown Spings Creek |
| CR8/764A | 37 | N | 74 | W | 33 | 4 | SENE | PUO | ORI | STO | Brown Springs No. 2 Stock Reservoir | State Board of Land Commissioners and Hornbuckle Ranch | 2/2/1976 | | | Brown Spings Creek |
| P10398S | 37 | N | 73 | W | 16 | 3 | SWNE | PUO | ORI | STO | AML 15-II Site 30 Stock Reservoir | Wyoming State Board of Land Commissioners | 6/13/1988 | | | Solar Draw |
| P10434S | 37 | N | 73 | W | 9 | 16 | SESE | UNA | ORI | STO | Betty Lou Stock Reservoir | Roy C. Baker and Ferol Baker | 8/1/1988 | | | Betty Lou Draw |

**Water rights described in this database represent what is of record in our office as entered on the computer (many of the computer entries have not been proofed for accuracy and may not reflect the entire record about a water right or its current status). The office records may or may not reflect the actual situation on the ground. Failure to exercise a water right, for 5 years, when water is available, may constitute grounds for forfeiture.**

**ABBREVIATIONS FOR STATUS:**
A&C=ABANDONED AND CANCELLED
ABA=ABANDONED
ADJ=ADJUDICATED
AME=AMENDED (LANDS MOVED TO NEW LOCATION NO LONGER UNDER THIS PERMIT)
CAN=CANCELLED
DSC=DESCRIPTION
E&C=ELIMINATED AND CANCELLED
ELI=ELIMINATED
EXP=EXPIRED
GSE=GOOD STANDING PERMITTED TIME LIMITS HAVE BEEN EXTENDED
GST=GOOD STANDING
GSM=GOOD STANDING BUT MAP IS STILL REQUIRED
GSI=GOOD STANDING INCOMPLETE-REQUIRED NOTICES NOT RECEIVED-NOT YET EXPIRED
OTH=OTHER
PU=POINT OF USE NON IRRIGATION (NOT ACTUAL STATUS)
PUD=POINT OF DIVERSION (NOT ACTUAL STATUS)
PUE=POINT OF EXTENSION (NOT ACTUAL STATUS)
PUH=POINT OF DIVERSION (NOT ACTUAL STATUS)
PUO=POINT OF RESERVOIR OUTLET (NOT ACTUAL STATUS)
PUW=LOCATION OF WELL (NOT ACTUAL STATUS)
REJ=REJECTED BY THE STATE ENGINEER
REC=LANDS RECEIVED FROM ANOTHER PERMIT
REM=REMAINING
TEM=TEMPORARY
TRA=TRANSFERRED TO ANOTHER FACILITY
UNA=UNADJUDICATED
?=NO ENTRY IN THE DATABASE FOR THIS APPROPRIATION

**ABBREVIATIONS FOR USES:**
AQU=AQUACULTURE
BAT=BATHING
CBM-COAL BED METHANE
CHE=CHEMICAL
CIF=CONSUMPTIVE INSTREAM FLOW
COM=COMMERCIAL
CNG=COAL BED NATURAL GAS
CUL=CULINARY
DEW=DEWATERING
DOM=DOMESTIC
DRI=DRILLING
DSP=DOMESTIC SUPPLY
ENV=ENVIRONMENTAL
ERO=EROSION CONTROL
FIR=FIRE PROTECTION
FIS=FISH PROPAGATION

FLO=FLOOD CONTROL
FTH=FLOW THROUGH NON-CONSUMPTIVE
GWR=GROUND WATER RECHARGE
HEX=HEAT EXTRACTION
ICE=ICE CUTTING
IND=INDUSTRIAL
IRR=IRRIGATION
ISF=INSTREAM FLOW
MAI=MAINTENANCE
MAN=MANUFACTURING
MEC=MECHANICAL
MED=MEDICINAL
MIL=MILLING
MIN=MINING
MIS=MISCELLANEOUS
MON=MONITORING
MUN=MUNICIPAL
OIL=OIL REFINING/PRODUCTION
POW=POWER DEVELOPMENT
RAI=RAILROAD
REC=RECREATION
REF=REFINING
RES=RESERVOIR SUPPLY
SED=SEDIMENTATION
STE=STEAM ENGINE
STO=STOCK
TEM=TEMPORARY USE
TST=TEST WELL
UTI=PUBLIC UTILITY
W&S=WILD & SCENIC
WET=WETLANDS
WIL=WILDLIFE

**ABBREVIATIONS FOR SUPPLY TYPES (SupTy):**
ADD=ADDITIONAL SUPPLY FROM A WELL
ORI=ORIGINAL SUPPLY
STR=STORAGE SUPPLY (FOR RESERVOIR AND STOCK RESERVOIR PERMITS-MAY NOT APPEAR ON OLDER PERMITS)
SEC=SUPPLY FROM A RESERVOIR
SUP=SUPPLEMENTAL SUPPLY FROM ANOTHER SURFACE WATER SOURCE
SWS=SURFACE WATER SUPPLY (USED FOR FIRST SURFACE WATER SUPPLY FOR EXISTING GROUNDWATER SUPPLY)

**RECORD SUFFIXES ARE DENOTED AS FOLLOWS:**
"A"=ADJUDICATED (FINALIZED) RIGHTS; UNLESS THE RIGHT IS A TERRITORIAL APPROPRIATION, THERE WILL BE A MATCH IN THE AppNm COLUMN FROM ONE OF THE FOLLOWING PERMIT TYPES FOR THE UNADJUDICATED PORTION
"C"=WELL STATEMENTS OF CLAIM, FILED FROM 1947 TO 1957 FOR WELLS COMPLETED PRIOR TO APRIL 1, 1947
"D"=DITCH OR PIPELINE PERMIT
"G"= WELL REGISTRATIONS, FILED FOR WELLS COMPLETED AFTER APRIL 1, 1947
"E"=ENLARGEMENT OF A DITCH OR PIPELINE PERMIT
"P"=STOCK AND DOMESTIC USE WELLS COMPLETED PRIOR TO MAY 24, 1969 AND REGISTERED WITH THE STATE ENGINEER'S OFFICE PRIOR TO DECEMBER 31, 1972

"R"=RESERVOIR PERMIT
"S"=STOCK RESERVOIR PERMIT
U=UTAH PERMIT RECORDED IN UTAH; LANDS IN WYOMING
"W" PERMITS ARE FOR WELLS WITH A PRIORITY DATE FOR THE DATE OF FILING WITH THE STATE ENGINEER

**RECORD PREFIXES ARE DENOTED AS FOLLOWS:**
"B"= BEAR CREEK COURT DECREE
"D"= BALDWIN CREEK COURT DECREE
"E"= CLEAR CREEK COURT DECREE
"H"= HORSE CREEK COURT DECREE
"K"= CROW CREEK COURT DECREE
"L"= LARAMIE RIVER COURT DECREE
"M"= CRAZY WOMAN CREEK COURT DECREE
"R"= ROCK CREEK COURT DECREE
"S"= SWEETWATER CREEK COURT DECREE
"T"-TERRITORIAL APPROPRIATION

AN "X" IN THE LOC (LOCATION) FIELD INDICATES THE LOCATION OF A HEADGATE FOR A DITCH OR PIPELINE, AN OUTLET FOR A RESERVOIR OR STOCK RESERVOIR OR THE LOCATION OF WELL

**THE FOLLOWING QUARTER-QUARTERS ARE DESIGNATED BY THE "Qtr" FIELD:**
1=NE¼NE¼
2=NW¼NE¼
3=SW¼NE¼
4=SE¼NE¼
5=NE¼NW¼
6=NW¼NW¼
7=SW¼NW¼
8=SE¼NW¼
9=NE¼SW¼
10=NW¼SW¼
11=SW¼SW¼
12=SE¼SW¼
13=NE¼SE¼
14=NW¼SE¼
15=SW¼SE¼
16=SE¼SE¼

# THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

## THAT CAN BE VIEWED AT THE RECORD TITLED:
## FIGURE D6-1,
## "REYNOLDS RANCH URANIUM PROJECT EXISTING STOCK & DOMESTIC WELLS EXISTING SURFACE WATER RIGHTS"

## WITHIN THIS PACKAGE

**D-06**