



**COGEMA Mining, Inc.**

**IRIGARAY and CHRISTENSEN RANCH PROJECTS**

**ANNUAL REPORT**

**WDEQ Permit To Mine No. 478**

**August 19, 2007 – August 18, 2008**

**August 2008**

**ANNUAL REPORT**  
**PERMIT TO MINE NO. 478**  
**August 19, 2007 through August 18, 2008**

This document provides the information required by the Wyoming Environmental Quality Act, Wyoming Statute 35-11-411 (a). Each section is a response to a specific request listed in the Required Annual Report Information form for large mining operations, which was provided by District III, Land Quality Division, Wyoming Department of Environmental Quality (WDEQ). Additional information reported annually, as required by Permit to Mine No. 478, is provided in Response No. 9 below.

**REQUIRED ANNUAL REPORT INFORMATION**

**1. GENERAL INFORMATION:**

Name of Permittee: COGEMA Mining, Inc.  
P.O. Box 730  
Mills, Wyoming 82644

Mining Permit Number: Permit to Mine No. 478

Date of Permit Issuance: August 18, 1978  
Amendment No. 1: March 6, 1987  
Amendment No. 2: September 12, 1988

Mineral Mined: Uranium

State and Federal Mineral Lease Numbers Inside Permit Area:

COGEMA Mining Inc.'s (COGEMA) operations are primarily conducted on federal mining claims. These claims are too numerous to list here. Claim numbers for the Irigaray (IR) mine may be found in annual reports prior to the 1988-1989 reporting period, and for the Christensen Ranch (CR) mine, in Volume II, Adjudication File of the Amendment No. 2 application for CR operations. Referenced locations in the following text are shown on specified maps located in the Report Appendices.

**2. REPORTING PERIOD:**

The annual WDEQ report period for Permit No. 478 is August 19, 2007 through August 18, 2008. However, to be consistent with past annual reports and to simplify data reporting the actual period that this report covers is: July 1, 2007 through June 30, 2008.

**3. MINING:**

- a) COGEMA suspended all mining activities on June 23, 2000. Therefore, there are no newly disturbed acres or topsoil stockpiled at the IR or CR projects during the

report period.

b) Tabulated surface acreage disturbed to date is provided below:

<b>Irigaray Project:</b>	
<b>Years Affected</b>	<b>Acreage</b>
All disturbances prior to August 17, 1978	9.00 Acres
August 18, 1978 - August 18, 1979	74.56 Acres
August 19, 1979 - August 18, 1980	43.38 Acres
August 19, 1980 - August 18, 1981	4.66 Acres
August 19, 1981 - August 18, 1995	0.00 Acres
August 19, 1995 - August 18, 1996	1.50 Acres
August 19, 1996 - August 18, 2008	0.00 Acres
<b>Total</b>	<b>133.10 Acres</b>
<b>Christensen Ranch Project:</b>	
<b>Years Affected</b>	<b>Acreage</b>
August 19, 1988 - August 18, 1989	79.60 Acres <sup>1</sup>
August 19, 1989 - August 18, 1990	10.50 Acres <sup>2</sup>
August 19, 1990 - August 18, 1992	0.00 Acres
August 19, 1992 - August 18, 1993	106.87 Acres <sup>3</sup>
August 19, 1993 - August 18, 1994	5.00 Acres <sup>4</sup>
August 19, 1994 - August 18, 1995	40.72 Acres <sup>5</sup>
August 19, 1995 - August 18, 1996	66.26 Acres <sup>6</sup>
August 19, 1996 - August 18, 1997	33.70 Acres <sup>7</sup>
August 19, 1997 - August 18, 1998	12.98 Acres <sup>8</sup>
August 19, 1998 - August 18, 1999	95.70 Acres <sup>9</sup>
August 19, 1999 - August 18, 2000	2.53 Acres <sup>10</sup>
August 19, 2000 - August 18, 2008	0.00 Acres
<b>Total</b>	<b>453.90 Acres</b>
<b>GRAND TOTAL (IR &amp; CR)</b>	
	<b>587.00 Acres</b>

<sup>1</sup>Mine Unit 3 wellfield area - 45.99, ponds & plant - 13.98, topsoil - 3.71, roads - 11.03, lay-down area - 4.88;

<sup>2</sup>Unit 3 extension - 10.50; <sup>3</sup>Unit 2 wellfield, pipeline corridors & staging areas - 50.15, Unit 2 topsoil - 0.96, roads - 7.36, Unit 4 development area - 48.08, Unit 4 topsoil - 0.32; <sup>4</sup>Unit 5 lay-down area & delineation holes, - 5.00; <sup>5</sup>Unit 5 roads - 11.1, Unit 5 wellfield, pipeline corridors & staging area - 27.20, Unit 5 topsoil - 2.42; <sup>6</sup>Unit 5 wellfield & pipeline corridors - 47.8, Unit 5 roads & modules - 1.9, Unit 5 topsoil - 0.04, Unit 6 wellfield, delineation holes, & staging area - 11.1, Unit 6 topsoil - 2.52, Deep disposal well # 1 - 2.9, <sup>7</sup>Unit 6 Booster Pump Station & road - 1.8, Unit 6 wellfield, delineation holes & staging area - 29.2, Unit 6 roads & module

buildings - 2.7; <sup>8</sup>Unit 7 delineation holes - 8.28, Unit 7 lay-down & borrow area - 0.22, Unit 8 delineation holes - 4.48; <sup>9</sup>Unit 7 development area & delineation holes - 42.7, Unit 8 exploration hole sealing & delineation holes - 53.0 acres; <sup>10</sup>Deep disposal well # 18-3 location & road - 2.3 acres, wellfield electrical line replacement - 0.23.

c) Tabulated topsoil stockpile volumes and dates are provided below:

Stockpile No.	Estimated Volume (yd <sup>3</sup> )	Date Stockpiled
<b>Irigaray Project:</b>		
1	1,657.0	Nov. 1976*
2	267.0	Sep. 1978
3	9,748.0	Sep. 1978
4	120.0	Oct. 1978
5	2,248.0	Oct. 1978
6	9,463.0	Aug. 1979
7	1,553.0	Sep. 1979
8	630.0	Oct. 1979
9	3,032.0	Jul. 1980
10	3,369.0	Aug. 1980
11	1,444.0	Aug. 1980
12	8,771.0	Aug. 1980
*IR stockpile No. 1 was utilized for the restoration efforts of 517 in May 2004.		
<b>Christensen Ranch Project:</b>		
1	71,787.0	Sep. 1988
2	17,182.0	Sep. 1988
3	14,278.0	Oct. 1988
4	16,779.0	Oct. 1988
5	6,520.0	Mar. 1993
6	1,680.0	Apr. 1993
7	8,291.2	May. 1998
8	4,315.0	Jun. 1995
9	16,822.0	Jun. 1995
10	1,157.0	Apr. 1996
11	4,888.9	Jul. 1996
12	4,120.0	Jan. 1997
13	2,284.7	Feb. 1997
13*	1,230.0	May. 1998
14	2,591.3	Dec. 1999

\* Note: Stockpile No. 13 was developed in two consecutive years as construction in Mine Unit 6 continued.



- d) Due to the nature of in-situ mining, no spoil material has been produced or stockpiled.
- e) There were 0 pounds of uranium as  $U_3O_8$  captured for the report period, as groundwater restoration operations at CR have ended. Tabulated quantity of uranium historically recovered from both projects is provided below:

<b>Year</b>	<b>Lbs. <math>U_3O_8</math></b>
December, 1978 - August 18, 1979	101,581
August 19, 1979 - August 18, 1980	122,462
August 19, 1980 - August 18, 1981	58,394
August 19, 1981 - August 18, 1982	425
August 19, 1982 - August 18, 1987	0
August 19, 1987 - August 18, 1988	127,350
August 18, 1988 - July 31, 1989	245,514
November 6, 1989 - February 1, 1990	105,030
August 19, 1990 - August 18, 1991	6,224
August 19, 1991 - July 31, 1992	239,723
August 1, 1992 - June 30, 1993	168,967
July 1, 1993 - June 30, 1994	323,726
July 1, 1994 - June 30, 1995	417,237
July 1, 1995 - June 30, 1996	713,238
July 1, 1996 - June 30, 1997	650,197
July 1, 1997 - June 30, 1998	523,237
July 1, 1998 - June 30, 1999	201,010
July 1, 1999 - June 30, 2000	146,264
July 1, 2000 - June 30, 2001	32,411
July 1, 2001 - June 30, 2002	39,415
July 1, 2002 - June 30, 2003	24,712
July 1, 2003 - June 30, 2004	17,700
July 1, 2004 - June 30, 2005	14,705
July 1, 2005 - June 30, 2006	0
July 1, 2006 - June 30, 2007	0
July 1, 2007 - June 30, 2008	0
<b>Total</b>	<b>3,996,660</b>

- f) New construction at the Irigaray site during this report period consisted of the removal of sections of the cement floor in the process area and repouring with concrete. Also the filling of cracks in the floor is ongoing at the time of this report.
- g) No significant environmental problem areas were noted for the report period.

h) There were no reportable spills during this report period.

4. **SURFACE RECLAMATION AND GROUNDWATER RESTORATION:**

**Surface Reclamation:**

- a) Decommissioning of IR ponds A, C, D, E and RA (see IR Map - Appendix 4) was started in June 2003. Currently ponds A, C, D, RA and E have been completely emptied of sludge material, with liners and leak detection systems removed and disposed of at the Pathfinder - Shirley Basin disposal site.
- b) Ponds B and RB will remain in place if mining at Christensen should resume in 2009, Ponds B and RB would be used for solution evaporation from Christensen resin processing conducted at the Irigaray central plant. It is also possible that two of the other ponds, such as Ponds A, C, D or RA, would be re-lined to provide additional evaporative capacity. Therefore backfilling of the pond areas is on-hold pending a decision concerning the resumption of operations at Christensen.
- c) At the Irigaray Production Units 1 through 9 wellfields, removal of wellheads was completed in June, 2008.
- d) Vegetation cover remains good in the 517 pond and wellfield areas where the permanent seed mix was planted in May 2004. Grasses in the area grew very well this year due to the abundant rain fall during the spring.
- e) The annual noxious weed-spraying program was started in June, 2008 and is on going at the time of this report.

**Groundwater Restoration - Irigaray Project:**

Groundwater restoration at the Irigaray Project was approved by the WDEQ in November 2005. The NRC officially approved the restoration by letter dated September 20, 2006. Well plugging and abandonment of all wells was started in October 2006 and completed in June, 2008.

**Groundwater Restoration - Christensen Ranch Project:**

All groundwater restoration activities, including stabilization monitoring, ended at Christensen Ranch on May 30, 2005. The results of all wellfield restoration were compiled into a report and submitted to the WDEQ and NRC on April 8, 2008.

Groundwater Restoration Maps, showing the areas where restoration is completed, are included in Appendix 5 of this report.

**Surface Reclamation – Christensen Ranch Project:**

No surface reclamation was done at the Christensen Ranch site during the report period.

5. **MINING PLANS:**

As stated in Section 3, COGEMA suspended all mining activities on June 23, 2000. Groundwater restoration of existing wellfields at Christensen and Irigaray, and demolition of un-used facilities, has been in progress since that time.

Due to an increase in the uranium market price, mining is anticipated to resume at Christensen Ranch during year 2009.

Assuming that mining is resumed at Christensen Ranch, the first step will be continued well installation in the remainder of Mine Unit 7 (MU7). MU7 was about 50% installed when operations were shut down in year 2000. Drilling and well installation would resume, followed by the initiation of surface construction (connection of wells to module buildings, connection to existing main trunkline to the plant). If schedules are adhered to, and all necessary approvals obtained, lixiviant injection could resume in MU 7 as early as September 2009. In anticipation of the resumption of mining activities, a Wellfield Data Package for Mine Unit 7 was submitted for review June 4, 2007. COMIN responses to DEQ's comments on the data package, (November 2007), are pending.

Because of the potential for continued operations, the reclamation bond includes the installation of new wells in MU7. Restoration estimates for MU7 have not been included in this bond estimate as it is not covered by this report period; however, a new estimate will be submitted to the agencies once final approval for operations is confirmed by the COGEMA/Malapai Joint Participation, for startup of MU7.

In parallel with the development of mining activities in Mine Unit 7 it is also anticipated that some of the former active mining areas, primarily Mine Unit 5 and potentially part of Mine Unit 6 will be re-started. Both areas were prematurely halted in the mining process and contain significant remaining resources. These areas can also provide additional flow into the Christensen Satellite plant during initial phases of Mine Unit 7 placing the plant in a better position for solution management.

A summary schedule of anticipated operation is included as Figure 1.

The resumption of mining at Christensen Ranch will also involve processing of the uranium at the Irigaray central plant facility. Reclamation of the Irigaray wellfield area is near completion with all wells now plugged and abandoned. Reclamation of other Irigaray facilities not associated with uranium processing will continue.

6. **RECLAMATION & RESTORATION PLANS - NEXT REPORT PERIOD:**

**Irigaray Surface Reclamation:**

In Production Units 7 through 9 the remaining buried piping will be removed. After all work is completed in the wellfields, associated roads and surfaces will be reclaimed.

Final surface gamma surveys will be completed prior to topsoil placement and final reclamation.

**Christensen Ranch Surface Reclamation:**

No surface reclamation is planned at the Christensen site for the August 2008 through July 2009 report period, assuming that mining operations will resume. It is not anticipated that the regulatory agencies will have approved the restoration packages for the Christensen wellfields in time for any plugging and abandonment of wells.

**7. MONITORING ACTIVITIES:**

**a) Groundwater Monitoring - Wellfield Monitor Wells:**

Groundwater quality at both projects is monitored by routine sampling of 327 monitor and trend wells surrounding or within the wellfields. Sampling frequency varies for these wells. Monitor wells on excursion status are sampled weekly. These wells are then sampled quarterly during post-restoration/stabilization monitoring and thereafter.

Sample data for each monitor and trend well from July 1, 2007 through June 30, 2008 are contained in Appendix 2.

COGEMA had three monitor wells that went on excursion status during the report period: 4MW1, 2MW89, and 5MW48. 4MW1 was on excursion status twice during the report period. These wells have been terminated from excursion status. Written reports were sent to the WYDEQ and NRC concerning this matter and will not be duplicated in this report.

There is currently one well that remains on excursion status at CR during this reporting period. Perimeter ore zone monitor well 5MW66 went on excursion on July 21, 2004 when all three of its Upper Control Limits (UCL) were exceeded. Because MU5 has been restored, it was agreed with WDEQ that the well would be taken off excursion status but would continue to be monitored on a quarterly basis until final restoration approval of MU5. Monitoring of this well continues with little change in its water quality status.

**Groundwater Monitoring - Regional Ranch Wells:**

Annual samples were collected from six regional ranch wells on June 18, 2008.

One other ranch well, (Dell Gulch), that is normally sampled has a problem with an inoperable pump and, therefore, was not sampled. When and if the ranch owner repairs or replaces the pump, annual samples will again be collected from this well. Regional well samples were analyzed for uranium along with four other radionuclides in the decay chain. The resulting concentrations were primarily Non Detectable (ND), with the detected concentrations within normal historical ranges. 2008 sample data are provided in Table 1 of Appendix 1.

**Underground Injection Wells:**

Two Class I injection wells are installed at the Christensen project and are licensed by WDEQ Permit Number UIC00-340 for industrial wastes. Routine injection into the wells suspended at the end of May 2005 after the completion of aquifer restoration activities at Christensen disposal well Christensen 18-3 during the report period.

As required by UIC Permit 00-340 section I, paragraph 4, "COGEMA shall shut one of the wells covered by this permit in annually for a period of time long enough to observe a valid pressure falloff curve. Each year, a well which was not tested in the previous year shall be tested, until all wells are tested in sequence." To comply with this regulation CHRISTENSEN DW-1 was tested on September 27th, 2007 by Petrotek Engineering of Littleton, Colorado. The results indicated that CHRISTENSEN DW-1 "continues to be suitable for use as a Class I injector".

Quarterly disposal reports for both wells are submitted to the WDEQ - Water Quality Division in Cheyenne, Wyoming. No exceedances of the permit limits were recorded for flow, pressure or water quality during this annual report period.

**b) Surface Water Monitoring:**

Willow Creek is an intermittent stream present within the permit boundary of both the IR and CR projects. Three sample locations are designated at each site: upstream, downstream and within the permit boundary. Annual samples were collected on June 18, 2008 from the locations where flow was available. Two of the sites, CR GS-03, and CRGS-01 did not have flow. An annual sample of the Powder River (IR-5) was also collected near the IR site, downstream from its confluence with Willow Creek.

The samples were analyzed for both radionuclide and chemical parameters. The resulting radionuclide concentrations were mostly non-detectable, with the remaining concentrations within historical ranges. The chemical parameters were also within historical ranges. 2008 sample data are contained in Table 2 of Appendix 1.

The Federal Water Pollution Control Act and WDEQ - NPDES Program requires facilities with an approved Storm Water Discharge permit to collect water samples and report, "run-off from storm events with greater than 0.1 inches of rainfall", semi-

annually in the second, fourth and sixth year of the license period. The CR project is covered by NPDES license WYR00-0904 for the period from September 1, 2002 to August 31, 2007. Year 2007 qualifies as the sixth year of the license period. No samples were collected because personnel were not present during discharge events.

**Surface Discharge Monitoring:**

A surface discharge outfall is present at the CR project for disposal of treated groundwater generated by restoration activities. The outfall is licensed under National Pollutant Discharge Elimination System (NPDES) permit issued by the WDEQ. No water was discharged at the CR site (Permit No. WY0033642, discharge 002) during this report period, therefore no data set is included.

**Evaporation Pond Monitoring:**

Weekly inspections are conducted on all operable evaporation ponds (currently two at IR and five at CR). No leaks were detected at either site during this report period. Pond sample analytical data are contained in Table 3 of Appendix 1.

c)-g) N/A.

- h) Anticipating an eventual restart of mining, wildlife monitoring was reinitiated during 2007 and continued in 2008. COGEMA's consultant, Jones and Stokes, prepared a summary report of the 2007 wildlife monitoring which is included here as Appendix 6.
- i) Maps showing the monitored locations discussed in this section are located in Appendix 4.

**8. RECLAMATION PERFORMANCE BOND ESTIMATE:**

An updated reclamation/restoration bond estimate for August 2008 through July 2009 is provided in Appendix 3. Only minor changes have been made to the 2006 - 2007 bond estimate to account for the well plugging and abandonment reclamation work completed at the Irigaray site and an inflation adjustment.

The detailed 2008-2009 reclamation bond estimate is provided in Appendix 3. Please note that the copy of the estimate in Appendix 3 has been highlighted to show the spreadsheet cells that have been revised. A summary of the revisions made to the estimate is following.

**Worksheet 1:**

- As in previous estimates the credit issued by the WDEQ for completion of groundwater sweep at Christensen still remains, but has not been authorized by NRC; therefore, a WDEQ estimate and NRC estimate are provided.

- No costs for the groundwater restoration of new Mine Unit 7 at Christensen are provided. Lixiviant injection (subject to approval) is not scheduled in the first module of MU7 until the next reporting period (September, 2009), if all construction schedules are met. Prior to lixiviant injection, however, a new estimate will be provided to the WDEQ and NRC for their review and approval.
- Labor for groundwater restoration has been unchanged (left at 1.6 years). All restoration at both Irigaray (now approved) and Christensen has been completed, including stability monitoring. Now that Irigaray is released, the 1.6 years will only apply to Christensen Ranch until that release is attained. This is sufficient time to cover a complete repetition of the reverse osmosis phase of treatment in Christensen Mine Unit 6, which is the largest wellfield at Christensen.
- There are no changes between 2008 and 2009 for the NRC estimate of \$3,358,895 (no credit for CR groundwater sweep), and for the WDEQ estimate of \$3,124,253.

**Worksheet 2:**

- Worksheet two is for equipment removal from the various areas of the plants. During the reporting period no changes have been made to the equipment at either plant except for rebuilding and repair in preparation for operations. Accordingly, the costs for this category remain the same as in 2007.
- Transportation costs for a trip to the licensed site (Shirley Basin) have been maintained at \$1,000 per load based on actual prices charged to COGEMA by Patterson Trucking, Glenrock, Wyoming.
- Transportation costs for a trip to the local landfill (construction debris, garbage, non-contaminated items) was checked, but has been verified as the same (\$160 per load) based on actual charges from Brubaker Backhoe Service (dump truck and operator rental).
- The overall difference between the 2008 bond and the 2009 estimate is \$0.

**Worksheet 3:**

- Worksheet 3 was revised previously to include the increase in licensed site transportation rates (\$1,000 per load).
- The overall difference between the 2008 bond and the 2009 estimate is \$0.

**Worksheet 4:**

- Worksheet 4 addresses pond reclamation at both sites.
- Backfill rates of remain at \$2/Yd<sup>3</sup> consistent with the average earthmoving rate for topsoil placement at Pathfinder's Shirley Basin Mine for the 2006 tailings reclamation contract (where haul distances are much further).
- The overall difference between the 2008 bond and the 2009 estimate is \$0.

**Worksheet 5:**

- Worksheet 5 addresses well plugging and abandonment at both sites. For

- Irigaray, all wells have now been abandoned.
- The overall difference between the 2008 bond and the 2009 estimate is a net DECREASE of \$10,535.

**Worksheet 6:**

- Worksheet 6 addresses wellfield equipment removal and disposal. Section 1, Wellfield Piping: all surface piping at the Irigaray site has now been removed from the wellfields. The piping has partially been disposed of, but a majority of the pipe has been sized and stacked and is available for future use (has been surveyed and meets unrestricted use limits), or disposal. Accordingly, the piping removal costs for the Irigaray surface piping have been “removed” from the bond estimate, but the transport and disposal costs remain.
- The number of wells, and thus amount of piping remains at 602. This is because surface piping was present in Production Units 1 through 5, but buried piping still exists in Units 6 through 9. The number of wells in Production Units 1 through 5 was subtracted from the total wells to estimate the buried piping in Units 6 through 9. It will be easier to remove this piping once the wells have been plugged in these areas, so removal of the piping is pending well plugging.
- Section II, Production Well Pumps: all of the pumps and tubing have been removed from the Irigaray wells in preparation for plugging and abandonment. The pumps have either been sold to Crow Butte Resources, or disposed of (some saved for Christensen Ranch). The tubing has been coiled and is in storage for use at Christensen. The costs for pump and tubing removal for Irigaray Units 1 through 9 have been deleted from the worksheet, but the cost for transport and disposal remain for the tubing.
- Transportation costs for the licensed site remain at \$1,000 per load, consistent with actual rates.
- The overall difference between the 2008 bond and the 2009 estimate is \$0.

**Worksheet 7:**

- Worksheet 7 addresses topsoil replacement and revegetation. The rates for topsoil haulage and placement remain at \$2/Yd<sup>3</sup>, based on actual rates from PMC’s 2006 tailings reclamation contract.
- Transportation rates to the licensed site remain at \$1,000 per load in Section III Wellfields, Spill Clean-up.
- The overall difference between the 2008 bond and the 2009 estimate is \$0.

**Worksheet 8:**

- Worksheet 8 addresses miscellaneous items for reclamation.
- The overall difference between the 2008 bond and the 2009 estimate is \$0.

**Table 1, Summary:**

- Table 1 is the summary of all the worksheet changes. As noted above, changes were made to each worksheet based on either volume changes, completion of



the reclamation activity or changes in unit rates. The groundwater restoration unit rates and total costs were not changed for Christensen Ranch as the work is completed, and it is doubtful that the entire restoration program for each wellfield would be repeated if more restoration should be required by an agency. And, the timing for decommissioning of wellfields at Christensen is lower than currently estimated, based on the work in Module 63 of Mine Unit 6.

- Consistent with the revised bonding estimate the costs have been inflated from September 2006 to June 2008 values.
- No other changes were made to the Table 1 format (no changes in contingencies, or miscellaneous additions to the bond).
- The overall difference from all the changes made to Worksheets 1 through 8 amount to an overall change in the WDEQ bond amount of an INCREASE of \$138,511, and a net INCREASE of \$143,578 to the NRC amount. Both increases are primarily due to the change in the inflation adjustment.

In summary, the new Grand Total restoration and reclamation cost for WDEQ is \$9,400,175. The NRC estimate is \$9,714,299 (NRC has not allowed any credit for the completion of groundwater sweep at Christensen Ranch as WDEQ has). We respectfully request that WDEQ approve the new bond amount of \$9,400,175.

**9. ADDITIONAL INFORMATION AS REQUESTED BY THE DIVISION:**

a) COGEMA received one notice of violation during this report period. A violation notice was received by letter dated September 10, 2007 for failure to demonstration or evidence concerning compliance with the new LQD, Noncoal Rules and Regulations Chapter 11. This matter was resolved by letter dated December 10, 2007 to Mr. Glenn Mooney with Demonstration of Compliance with LQD Noncoal Rules & Regulations Chapter 11.

b) No orders occurred during this report period.

a) No permit stipulations occurred during the report period.

b) Other: The following additional information is provided to meet the reporting requirements of Section 5.10.1.1 and 5.10.1.2 of the 1996 Permit No. 478 Update Application:

1. GENERAL LOCATION MAPS

General Location Maps showing the locations of monitor wells and wellfields in conjunction with past mining activities are located in Appendix 4.

2. WATER QUALITY MONITORING DATA

Data were previously provided in Section 7. a).

3. PIEZOMETRIC MAPS

Piezometric maps of the monitored aquifers for IR and CR are included in

Appendix 5. For the CR project they include: the shallow zone, ore zone and deep zone. The maps were constructed using water level data from monitor wells and production wells where applicable. This data was collected during June 2008.

4. MECHANICAL INTEGRITY TESTING

MIT results are reported to the WDEQ on a quarterly basis. Five Hundred Forty Four (544) MITs were completed during the report period with Thirty Four (34) failing the test. Plugging and abandoning of the failed wells is ongoing at the time of this report. The data is provided as Table 4 in Appendix 1.

5. DRILL HOLES AND ABANDONED WELLS

No drill holes were completed or abandoned for exploration or mine expansion purposes. Twenty three (23) cased wells were plugged and abandoned at the Irigaray site during this report period. All recovery, injection, and monitor wells at the Irigaray site are now plugged and abandoned. The data is provided as Table 5 in Appendix 1.

## **APPENDIX 1**

### **Tables 1 through 5**

**Table 1 - Ranch Wells Regional Groundwater**

**Table 2 - Surface Water Annual Samples**

**Table 3 - Evaporation Pond Samples**

**Table 4 - Mechanical Integrity Testing Summary**

**Table 5 - Abandoned Well Summary**

Table 1

COGEMA Mining, Inc. - Irigaray and Christensen Ranch Projects  
 2008 Annual Report  
 Sample Type: Regional Groundwater (ranch wells) - Annual Samples

Sample Location: Christensen Ranch House #3	
June 18, 2008	
Radionuclide	(uCi/ml)
Uranium	9.3E-09
Thorium-230	-1.8E-10
Radium-226	4.9E-10
Lead-210	1.5E-08
Polonium-210	1.0E-10

Sample Location: Christensen Middle Artesian	
June 18, 2008	
Radionuclide	(uCi/ml)
Uranium	1.2E-09
Thorium-230	4.9E-11
Radium-226	4.0E-10
Lead-210	1.1E-08
Polonium-210	3.4E-09

Sample Location: Christensen Ellendale #4	
June 18, 2008	
Radionuclide	(uCi/ml)
Uranium	3.2E-10
Thorium-230	2.9E-11
Radium-226	-1.7E-10
Lead-210	9.2E-09
Polonium-210	9.0E-10

Sample Location: Christensen Del Gulch Lower #13 pump down	
June 18, 2008	
Radionuclide	(uCi/ml)
Uranium	
Thorium-230	
Radium-226	
Lead-210	
Polonium-210	

Sample Location: Christensen Willow Corral #32	
June 18, 2008	
Radionuclide	(uCi/ml)
Uranium	n/d
Thorium-230	1.5E-11
Radium-226	-5.0E-10
Lead-210	5.0E-09
Polonium-210	-1.0E-10

Sample Location: Christensen First Artesian Well #1	
June 18, 2008	
Radionuclide	(uCi/ml)
Uranium	2.0E-10
Thorium-230	6.4E-11
Radium-226	-8.9E-11
Lead-210	6.6E-09
Polonium-210	-1.0E-10

Sample Location: Irigaray Willow # 2	
June 18, 2008	
Radionuclide	(uCi/ml)
Uranium	n/d
Thorium-230	1.0E-11
Radium-226	-4.2E-10
Lead-210	-1.3E-09
Polonium-210	8.0E-10

LLD  
 (uCi/ml)  
 0.2 E-9 Uranium  
 0.2 E-9 Thorium-230  
 0.2 E-9 Radium-226  
 2.7 E-9 Lead-210  
 2.7 E-9 Polonium-210

n/d = Non Detectable

TABLE 2 (Page 1 of 2)

COGEMA Mining, Inc. Irigaray and Christensen Ranch Projects  
 2008 Annual Report  
 Sample Type: Surface Water, Annual Samples, June 18, 2008  
 Sample Location: Irigaray Project N/D = NON DETECTABLE

	Willow Creek IR-9 Downstream	Willow Creek IR-14 Upstream	Willow Creek IR-17 Mine Site	Powder River IR-5 Ranch Site	LLD	10 CFR 20 Appendix B Effluent Limit (uCi/ml)
Radionuclide	(uCi/ml)	(uCi/ml)	(uCi/ml)	(uCi/ml)	(uCi/ml)	
Thorium-230	0.00E+00	1.00E-10	0.00E+00	2.00E-10	0.2 E-9	1.0 E-07
Radium-226	-3.0E-10	1.80E-10	1.20E-10	-5.00E-11	0.2 E-9	6.0 E-08
Lead-210	2.0E-09	8.00E-09	4.00E-10	-3.00E-09	2.7 E-9	1.0 E-08
Polonium-210	2.5E-09	1.30E-09	-3.00E-10	-1.00E-10	2.7 E-9	4.0 E-08
<u>Chemical Parameters</u>					(mg/l)	
Total Alkalinity	632	2010	1150	151	1	N/A
Chloride	66	9	18	82	1	N/A
TDS	3290	2340	2450	722	2	N/A
Specific Conductivity	4690	3580	3790	1200	1	N/A
Sulfate	1890	80	964	338	1	N/A
pH	8.45	8.5	8.1	8.21	0.01	N/A
Arsenic	0.003	0.004	0.004	N/D	0.001	N/A
Selenium	N/D	N/D	N/D	N/D	0.001	N/A
Uranium	0.030	0.0021	0.0113	0.0051	0.0003	N/A
<u>Estimated Flow Rate:</u>	Low	Low	Low	Low		
Low = <5 cfs						
Medium = 5 - 50 cfs						
High = > 50 cfs						

TABLE 2 (Page 2 of 2)

COGEMA Mining, Inc. Irigaray and Christensen Ranch Projects

2008 Annual Report

Sample Type: Surface Water, Annual Samples, June 18, 2008

Sample Location: Christensen Ranch Project N/D = NON DETECTABLE

	Willow Creek GS-01 Downstream (uCi/ml)	Willow Creek CG-05 Upstream (uCi/ml)	Willow Creek GS-03 Mine Site (uCi/ml)	LLD (uCi/ml)	10 CFR 20 Appendix B Effluent Limit (uCi/ml)
<u>Radionuclide</u>					
Thorium-230	No Sample	1.00E-10	No Sample	0.2 E-9	1.0 E-07
Radium-226	No Flow	-3.00E-10	No Flow	0.2 E-9	6.0 E-08
Lead-210		5.00E-09		2.7 E-9	1.0 E-08
Polonium-210		6.00E-10		2.7 E-9	4.0 E-08
<u>Chemical Parameters</u>				(mg/l)	
Total Alkalinity		292		1	N/A
Chloride		11		1	N/A
TDS		2330		2	N/A
Specific Conductivity		3010		1	N/A
Sulfate		1450		1	N/A
pH		8.14		0.01	N/A
Arsenic		0.004		0.001	N/A
Selenium		N/D		0.001	N/A
Uranium		0.0214		0.0003	N/A

Estimated Flow Rate:

No Flow

Low

No Flow

Low = <5 cfs

Medium = 5 - 50 cfs

High = > 50 cfs

J:\EXCEL\A-TABLES\WATER

TABLE 3 (Page 1 of 4)

COGEMA Mining, Inc. -- Irigaray and Christensen Ranch Projects

2008 Annual Report

Sample Type: Waste Ponds (quarterly)

Sample Date: August 29, 2007

NOTE: N/D =NON DETECTABLE

Pond ID #	IR-A	IR-B	IR-C	IR-D
Sulfate (mg/l)		27,100		
Chloride (mg/l)		224,000		
NH4 as N (mg/l)		0.14		
NO3 & NO2 as N (mg/l)		3.1		
TDS (mg/l)		342,000		
Conductivity		221,000		
pH		8.2		
Zinc (mg/l)		0.21		
Uranium (mg/l)		479		
Radium 226 (pCi/l)		127+/-10		

Pond ID #	IR-E	IR-RA	IR-RB	CR-P1
Sulfate (mg/l)			15,600	POND
Chloride (mg/l)			89,300	EMPTY
NH4 as N (mg/l)			N/D	
NO3 & NO2 as N (mg/l)			0.2	
TDS (mg/l)			171,000	
Conductivity			149,000	
pH			9.3	
Zinc (mg/l)			0.03	
Uranium (mg/l)			967	
Radium 226 (pCi/l)			7.9+/-2.7	

Pond ID #	CR-1	CR-2	CR-3	CR-4
Sulfate (mg/l)	1,170	6,730	17,900	19,400
Chloride (mg/l)	463	29,800	111,000	151,000
NH4 as N (mg/l)	N/D	0.08	0.14	0.16
NO3 & NO2 as N (mg/l)	0.1	0.3	N/D	0.4
TDS (mg/l)	3,900	61,300	181,000	206,000
Conductivity	4,860	76,100	174,000	201,000
pH	10	9.2	9	8.5
Zinc (mg/l)	0.04	0.02	0.11	0.01
Uranium (mg/l)	11.4	40.7	104	209
Radium 226 (pCi/l)	45.3+/-6.2	87.5+/-9.2	64.3+/-7.6	97.0+/-9.2

EXCELA-TABLES\PONDS

TABLE 3 (Page 2 of 4)

COGEMA Mining, Inc. -- Irigaray and Christensen Ranch Projects  
 2008 Annual Report

Sample Type: Waste Ponds (quarterly)

Sample Date: November 13, 2007; NOTE: N/D = NON-DETECTABLE

Pond ID #	IR-A	IR-B	IR-C	IR-D
Sulfate (mg/l)		15,200		
Chloride (mg/l)		216,000		
NH4 as N (mg/l)		0.28		
NO3 & NO2 as N (mg/l)		4		
TDS (mg/l)		343,000		
Conductivity		96,700		
pH		8		
Zinc (mg/l)		0.13		
Uranium (mg/l)		893		
Radium 226 (pCi/l)		64.7+/-8.2		

Pond ID #	IR-E	IR-RA	IR-RB	CR-P1
Sulfate (mg/l)			13,900	POND
Chloride (mg/l)			99,200	EMPTY
NH4 as N (mg/l)			0.15	
NO3 & NO2 as N (mg/l)			0.2	
TDS (mg/l)			162,000	
Conductivity			90,900	
pH			9.2	
Zinc (mg/l)			0.16	
Uranium (mg/l)			910	
Radium 226 (pCi/l)			4.9+/-2.2	

Pond ID #	CR-1	CR-2	CR-3	CR-4
Sulfate (mg/l)	1,270	4,670	10,600	15,700
Chloride (mg/l)	511	20,800	142,000	248,000
NH4 as N (mg/l)	0.42	0.07	0.1	0.13
NO3 & NO2 as N (mg/l)	0.2	N/D	0.1	0.9
TDS (mg/l)	4,400	39,600	214,000	285,000
Conductivity	2,930	55,900	196,000	216,000
pH	9.6	9.2	8.7	8.3
Zinc (mg/l)	N/D	N/D	0.02	0.03
Uranium (mg/l)	2070	14.4	32	172
Radium 226 (pCi/l)	65.9+/-8.1	87+/-10	25.8+/-4.9	59.2+/-7.4



TABLE 3 (Page 3 of 4)

COGEMA Mining, Inc. -- Irigaray and Christensen Ranch Projects  
2008 Annual Report

Sample Type: Waste Ponds (quarterly)

Sample Date: March 11, 2008

IR Ponds A,C,D,E,& RA - empty NOTE: N/D = NON-DETECTABLE

Pond ID #	IR-A	IR-B	IR-C	IR-D
Sulfate (mg/l)		5,540		
Chloride (mg/l)		234,000		
NH4 as N (mg/l)		0.22		
NO3 & NO2 as N (mg/l)		1.3		
TDS (mg/l)		306,000		
Conductivity		235,000		
pH		8.3		
Zinc (mg/l)		2.1		
Uranium (mg/l)		360		
Radium 226 (pCi/l)		74.1+/-7.4		

Pond ID #	IR-E	IR-RA	IR-RB	CR-P1
Sulfate (mg/l)			12,200	POND
Chloride (mg/l)			83,700	EMPTY
NH4 as N (mg/l)			N/D	
NO3 & NO2 as N (mg/l)			0.1	
TDS (mg/l)			126,000	
Conductivity			140,000	
pH			9.4	
Zinc (mg/l)			2.09	
Uranium (mg/l)			894	
Radium 226 (pCi/l)			6.6+/-2.5	

Pond ID #	CR-1	CR-2	CR-3	CR-4
Sulfate (mg/l)	114	18	10,900	11,800
Chloride (mg/l)	70	77	161,000	238,000
NH4 as N (mg/l)	0.05	0.06	N/D	0.13
NO3 & NO2 as N (mg/l)	0.2	N/D	0.2	1.5
TDS (mg/l)	560	190	195,000	254,000
Conductivity	866	396	194,000	218,000
pH	9	8.1	8.9	8.3
Zinc (mg/l)	0.22	0.18	1.93	1.44
Uranium (mg/l)	1.35	0.226	146	310
Radium 226 (pCi/l)	13.7+/-3.5	5.9+/-2.5	11.5+/-3.2	83.5+/-8.3

TABLE 3 (Page 4 of 4)

COGEMA Mining, Inc. -- Irigaray and Christensen Ranch Projects  
 2008 Annual Report

Sample Type: Waste Ponds (quarterly)

Sample Date: June 4, 2008

IR Ponds A,C,D,E,& RA - empty

NOTE: N/D = NON-DETECTABLE

Pond ID #	IR-A	IR-B	IR-C	IR-D
Sulfate (mg/l)		807		
Chloride (mg/l)		361		
NH4 as N (mg/l)		N/D		
NO3 & NO2 as N (mg/l)		N/D		
TDS (mg/l)		2,650		
Conductivity		4,140		
pH		9.4		
Zinc (mg/l)		0.09		
Uranium (mg/l)		6.15		
Radium 226 (pCi/l)		68.8+/-7.2		

Pond ID #	IR-E	IR-RA	IR-RB	CR-P1
Sulfate (mg/l)			1,420	POND
Chloride (mg/l)			6,590	EMPTY
NH4 as N (mg/l)			N/D	
NO3 & NO2 as N (mg/l)			N/D	
TDS (mg/l)			15,000	
Conductivity			22,300	
pH			9	
Zinc (mg/l)			0.08	
Uranium (mg/l)			11.3	
Radium 226 (pCi/l)			44.9+/-2.6	

Pond ID #	CR-1	CR-2	CR-3	CR-4
Sulfate (mg/l)	518	712	1,450	6,200
Chloride (mg/l)	4,560	6,350	90,200	19,800
NH4 as N (mg/l)	N/D	N/D	0.27	N/D
NO3 & NO2 as N (mg/l)	N/D	N/D	0.3	N/D
TDS (mg/l)	10,000	11,800	128,000	41,000
Conductivity	15,700	19,100	155,000	52,100
pH	8.8	4.4	8.8	9.8
Zinc (mg/l)	0.08	0.1	0.4	0.13
Uranium (mg/l)	8.03	3.77	62.9	205
Radium 226 (pCi/l)	112.4+/-4.1	103.4+/-8.8	67.9+/-7.2	4.3+/-2.8

TABLE 4

WELL_ID	INTEGRITY	INT_DATE	CASING TYPE	BOTTOM CASING DEPTH	LOWER PACKER DEPTH	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	PERCENT LOSS
5BP154-1	P	7/2/2007	PVC	420	410	168	160	8	5
5BP155-1	P	7/2/2007	PVC	417	410	168	156	12	7
5BU149-1	P	7/3/2007	PVC	433	420	168	158	10	6
5BU148-1	P	7/10/2007	PVC	446	430	168	156	12	7
5BV147-1	P	7/10/2007	PVC	430	420	168	156	12	7
5BV148-1	P	7/10/2007	PVC	394	380	168	158	10	6
5BT138-1	P	7/11/2007	PVC	355	340	168	160	8	5
5BS134-1	P	7/11/2007	PVC	399	390	168	158	10	6
5BT135-1	P	7/11/2007	PVC	416	410	168	158	10	6
5BU133-1	P	7/11/2007	PVC	401	390	168	156	12	7
5BS132-1	P	7/11/2007	PVC	354	340	168	152	16	10
5BT131-1	P	7/12/2007	PVC	365	350	168	153	15	9
5BS121-1	P	7/12/2007	PVC	313	300	168	158	10	6
5BT121-2	P	7/12/2007	PVC	281	270	168	156	12	7
5BR118-2	P	7/12/2007	PVC	390	380	168	154	14	8
5BQ118-2	P	7/12/2007	PVC	394	380	168	10	8	5
5BR117-1	P	7/12/2007	PVC	385	370	168	160	8	5
5BS117-1	P	7/12/2007	PVC	380	370	168	168	8	5
5BS133-1	P	7/12/2007	PVC	381	370	168	156	12	7
5BM99-2	P	7/16/2007	PVC	378	370	168	156	12	7
5BN101-2	P	7/16/2007	PVC	377	370	168	164	4	2
5BM102-1	P	7/16/2007	PVC	379	370	168	160	8	5
5BM103-1	P	7/16/2007	PVC	377	370	168	158	10	6
5BS119-1	P	7/16/2007	PVC	287	280	168	164	4	2
5BP119-2	P	7/16/2007	PVC	405	400	168	158	10	6
5BP118-1	P	7/16/2007	PVC	406	400	168	154	14	8
5BQ117-1	P	7/16/2007	PVC	392	380	168	156	12	7
5BS120-1	P	7/16/2007	PVC	286	380	168	160	8	5
5BO103-2	P	7/17/2007	PVC	317	310	168	155	13	8
5BO102-2	P	7/17/2007	PVC	314	300	168	154	14	8
5BO101-2	P	7/17/2007	PVC	310	300	168	154	14	8
5BN100-3	P	7/17/2007	PVC	324	310	168	168	8	5
5BN97-1	P	7/17/2007	PVC	371	360	168	158	10	6
5BM96-1	P	7/17/2007	PVC	376	370	168	159	9	5
5BM98-2	P	7/17/2007	PVC	369	360	168	168	8	5

TABLE 4

WELL ID	INTEGRITY	INT DATE	CASING TYPE	BOTTOM CASING DEPTH	LOWER PACKER DEPTH	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	PERCENT LOSS
5BM100-1	P	7/17/2007	PVC	375	370	168	156	12	7
5BN91-2	P	7/18/2007	PVC	346	340	168	160	8	5
5BN92-1	P	7/18/2007	PVC	362	350	168	160	8	5
5BN93-1	P	7/18/2007	PVC	366	360	168	156	12	7
5BN94-1	P	7/18/2007	PVC	360	350	168	158	10	6
5BN95-1	P	7/18/2007	PVC	376	360	168	154	14	8
5BO104-1	P	7/18/2007	PVC	310	300	168	154	14	8
5BJ85-1	P	7/19/2007	PVC	245	240	168	160	8	5
5BK87-4	P	7/19/2007	PVC	250	240	168	162	6	4
5BM81-3	P	7/19/2007	PVC	277	270	168	164	4	2
5BK84-2	P	7/19/2007	PVC	236	220	168	158	10	6
5BL83-1	P	7/19/2007	PVC	233	220	168	158	10	6
5BK82-1	P	7/19/2007	PVC	224	210	168	158	10	6
5BK81-1	P	7/19/2007	PVC	221	210	168	168	8	5
5BK83-1	P	7/19/2007	PVC	225	220	168	158	10	6
5BM77-1	P	7/23/2007	PVC	246	230	168	164	4	2
5BM78-2	P	7/23/2007	PVC	305	290	168	160	8	5
5BL76-1	P	7/23/2007	PVC	232	220	168	156	12	7
5BL76-2	P	7/23/2007	PVC	296	290	168	160	8	5
5BK77-1	P	7/23/2007	PVC	225	220	168	154	14	8
5BK75-3	P	7/23/2007	PVC	271	260	168	156	12	7
5BL73-2	F	7/24/2007	PVC	303	290	168			
5BL74-1	P	7/24/2007	PVC	296	290	168	154	14	9
5BK74-1	P	7/24/2007	PVC	282	270	168	158	10	6
5BL74-2	P	7/24/2007	PVC	231	220	168	158	10	6
5BL72-1	P	7/24/2007	PVC	303	290	168	156	12	7
5BM71-1	P	7/25/2007	PVC	325	320	168	154	14	8
5BM72-1	P	7/25/2007	PVC	325	320	168	168	8	5
5BN71-1	P	7/25/2007	PVC	339	320	168	168	10	6
5BM70-1	P	7/25/2007	PVC	329	320	168	158	10	6
5BN67-1	P	7/25/2007	PVC	317	310	168	160	8	5
5BN69-2	P	7/25/2007	PVC	328	320	168	158	10	6
5BM69-1	P	7/25/2007	PVC	322	310	168	160	8	5
5BM68-1	P	7/25/2007	PVC	317	310	168	156	12	7
5BM73-2	P	7/30/2007	PVC	313	300	168	156	12	7

TABLE 4

WELL ID	INTEGRITY	INT DATE	CASING TYPE	BOTTOM CASING DEPTH	LOWER PACKER DEPTH	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	PERCENT LOSS
5BM75-2	P	7/30/2007	PVC	249	240	168	160	8	5
5BM75-1	P	7/30/2007	PVC	324	320	168	160	8	5
5BM76-2	P	7/30/2007	PVC	315	310	168	162	6	4
5BM79-2	P	7/30/2007	PVC	274	260	168	162	6	4
5BM80-2	P	7/30/2007	PVC	284	270	168	160	8	5
5BH66-1	P	7/31/2007	PVC	351	340	168	158	10	6
5BG67-1	P	7/31/2007	PVC	368	360	168	162	6	4
5BG65-1	P	7/31/2007	PVC	406	400	168	164	4	2
5BI65-1	P	7/31/2007	PVC	388	380	168	164	4	2
5BH65-1	P	7/31/2007	PVC	372	360	168	158	10	6
5BI66-1	P	7/31/2007	PVC	387	387	168	162	6	4
5MW60	P	8/1/2007	PVC	268	260	168	152	14	8
5MW58	P	8/1/2007	PVC	271	260	168	160	8	5
5MW56	P	8/1/2007	PVC	240	230	168	158	10	6
5MW54	P	8/1/2007	PVC	214	210	168	160	8	5
5MW52	P	8/1/2007	PVC	220	210	168	164	4	2
5MW62	P	8/1/2007	PVC	265	260	168	158	10	6
5MW64	P	8/1/2007	PVC	265	260	168	152	14	8
5MW2	P	8/1/2007	PVC	259	250	168	156	12	7
5BJ65-1	P	8/1/2007	PVC	377	377	168	154	4	2
5MW65	P	8/2/2007	PVC	255	250	168	160	8	5
5MW67	P	8/2/2007	PVC	272	260	168	162	6	4
5MW10	P	8/2/2007	PVC	286	280	168	160	8	5
5MW8	P	8/2/2007	PVC	310	300	168	156	12	7
5MW6	P	8/2/2007	PVC	282	270	168	160	8	5
5MW4	P	8/2/2007	PVC	272	260	168	160	10	6
5MW66	P	8/2/2007	PVC	265	260	168	156	12	7
5DM9T	P	8/2/2007	PVC	515	510	168	156	12	7
5MW63	P	8/6/2007	PVC	268	260	168	162	6	4
5MW69	P	8/6/2007	PVC	292	280	168	160	8	5
5MW1	P	8/6/2007	PVC	341	330	168	152	14	9
5MW3	P	8/6/2007	PVC	346	340	168	162	6	4
5MW5	P	8/6/2007	PVC	355	350	168	162	6	4
5MW20	P	8/6/2007	PVC	288	280	168	162	6	4
5MW7	P	8/6/2007	PVC	312	300	168	160	8	5

TABLE 4

WELL ID	INTEGRITY	INT DATE	CASING TYPE	BOTTOM CASING DEPTH	LOWER PACKER DEPTH	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	PERCENT LOSS
5TW-1	P	8/7/2007	PVC	494	490	168	160	8	5
5SM7	P	8/7/2007	PVC	215	210	168	158	10	6
5DM7	P	8/7/2007	PVC	635	630	168	160	8	5
5MW14	P	8/7/2007	PVC	265	260	168	164	4	2
5MW16	P	8/7/2007	PVC	292	280	168	156	12	7
5MW18	P	8/7/2007	PVC	300	290	168	156	12	7
5BQ158-1	P	8/7/2007	PVC	368	360	168	160	8	4
5SM5	P	8/8/2007	PVC	158	150	168	162	8	5
5DM8T	P	8/8/2007	PVC	492	480	168	158	10	6
5DM5	P	8/8/2007	PVC	585	570	168	152	16	10
WCOW-37D	P	8/8/2007	PVC	622	580	168	152	16	10
5SM6	P	8/8/2007	PVC	191	180	168	158	10	6
5MW12	P	8/8/2007	PVC	270	260	168	158	10	6
5BK66-1	P	8/9/2007	PVC	356	350	168	160	8	5
5BM65-1	P	8/9/2007	PVC	346	340	168	154	14	8
5BN65-1	P	8/9/2007	PVC	354	340	168	156	12	7
5BM67-1	P	8/9/2007	PVC	330	320	168	160	8	5
5BK68-1	P	8/9/2007	PVC	334	320	168	154	14	8
5BL69-1	P	8/9/2007	PVC	328	320	168	154	14	9
5MW59	P	8/9/2007	PVC	325	320	168	158	10	6
5MW61	P	8/9/2007	PVC	241	230	168	158	10	6
5BK65-2	P	8/13/2007	PVC	365	360	168	160	8	5
5BL65-1	P	8/13/2007	PVC	361	350	168	160	8	5
5BL64-1	P	8/13/2007	PVC	368	360	168	156	12	7
5BM64-1	P	8/13/2007	PVC	343	330	168	154	14	8
5BL66-1	P	8/13/2007	PVC	351	340	168	156	12	7
5BL68-1	P	8/13/2007	PVC	329	320	168	156	12	7
5BL67-1	P	8/13/2007	PVC	348	340	168	156	12	7
5BK59-1	P	8/14/2007	PVC	429	420	168	152	16	10
5BK61-1	P	8/14/2007	PVC	420	410	168	158	10	6
5BK62-1	P	8/14/2007	PVC	378	370	168	158	10	6
5BJ64-1	P	8/14/2007	PVC	390	380	168	158	10	6
5BK63-2	P	8/14/2007	PVC	366	360	168	160	8	5
5BM63-1	P	8/14/2007	PVC	385	380	168	156	12	7
5BK57-2	P	8/14/2007	PVC	433	420	168	154	14	8

TABLE 4

WELL_ID	INTEGRITY	INT_DATE	CASING TYPE	BOTTOM CASING DEPTH	LOWER PACKER DEPTH	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	PERCENT LOSS
5BK58-1	P	8/15/2007	PVC	426	420	168	158	10	6
5BK60-1	P	8/15/2007	PVC	417	410	168	160	8	5
5BJ60-1	P	8/15/2007	PVC	431	420	168	158	10	6
5BJ62-1	P	8/15/2007	PVC	418	410	168	160	8	5
5BI62-1	P	8/15/2007	PVC	433	420	168	160	8	5
5BJ63-1	F	8/16/2007	PVC	433	420				
5BJ57-2	F	8/16/2007	PVC	440	430	168			
5BI64-1	P	8/16/2007	PVC	435	430	168	154	14	8
5BJ58-1	P	8/16/2007	PVC	437	430	168	154	14	8
5BK53-1	P	8/20/2007	PVC	421	410	168	160	8	5
5BL53-1	P	8/20/2007	PVC	407	400	168	164	4	2
5BL55-1	P	8/20/2007	PVC	428	420	168	162	8	5
5BK55-1	P	8/20/2007	PVC	436	430	168	162	6	4
5BJ56-1	P	8/21/2007	PVC	445	440	168	164	4	2
5BJ59-1	P	8/21/2007	PVC	448	440	168	160	8	5
5BK56-1	P	8/21/2007	PVC	428	420	168	160	8	5
5BJ54-1	P	8/21/2007	PVC	445	440	168	156	12	7
5BK50-1	P	8/21/2007	PVC	392	380	168	160	8	5
5BK51-2	P	8/21/2007	PVC	394	390	168	158	10	6
5BK52-1	P	8/21/2007	PVC	405	400	168	160	8	5
5BJ55-1	P	8/21/2007	PVC	451	440	168	156	14	9
5BJ50-1	P	8/22/2007	PVC	424	420	168	164	4	2
5BJ46-2	P	8/22/2007	PVC	409	400	168	160	8	5
5BJ48-1	P	8/22/2007	PVC	430	420	168	160	8	5
5BK47-1	P	8/22/2007	PVC	404	400	168	158	10	6
5BK48-2	P	8/22/2007	PVC	497	480	168	164	4	2
5BK49-1	P	8/22/2007	PVC	398	390	168	158	10	6
5BJ49-1	P	8/22/2007	PVC	429	420	168	164	4	2
5BJ51-1	P	8/22/2007	PVC	424	420	168	162	6	4
5BH42-1	P	8/27/2007	PVC	415	410	168	160	8	5
5BI43-1	P	8/27/2007	PVC	409	400	168	162	6	4
5BH45-1	P	8/27/2007	PVC	421	410	168	164	4	2
5BH44-1	P	8/27/2007	PVC	418	410	168	164	4	2
5BH47-1	P	8/27/2007	PVC	419	410	168	158	10	6
5BG48-2	P	8/27/2007	PVC	425	420	168	156	12	7

TABLE 4

WELL_ID	INTEGRITY	INT_DATE	CASING TYPE	BOTTOM CASING DEPTH	LOWER PACKER DEPTH	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	PERCENT LOSS
5BF52-2	P	8/28/2007	PVC	499	490	168	162	6	4
5BG45-2	P	8/28/2007	PVC	451	440	168	158	10	6
5BG46-1	P	8/28/2007	PVC	429	420	168	160	8	5
5BF46-2	P	8/28/2007	PVC	442	430	168	158	10	6
5BF48-2	P	8/28/2007	PVC	447	440	168	158	10	6
5BF47-1	P	8/28/2007	PVC	457	450	168	154	14	8
5BF50-2	P	8/28/2007	PVC	509	500	168	156	12	7
5BE48-1	P	8/29/2007	PVC	461	450	168	162	6	4
5BE50-1	P	8/29/2007	PVC	461	450	168	164	4	2
5BG50-1	P	8/29/2007	PVC	453	440	168	154	14	8
5BH51-1	P	8/29/2007	PVC	453	440	168	156	12	7
5BH57-1	F	8/30/2007	PVC	474	460				
5BH53-1	P	8/30/2007	PVC	485	480	168	154	14	8
5BH54-1	P	8/30/2007	PVC	455	440	168	156	12	7
5BH55-2	P	8/30/2007	PVC	458	450	168	158	10	6
5BI57-2	P	9/4/2007	PVC	437	430	168	156	12	7
5BH58-2	P	9/4/2007	PVC	471	460	168	154	14	8
5BH56-1	P	9/4/2007	PVC	446	440	168	158	10	6
5BI59-1	P	9/4/2007	PVC	461	450	168	158	10	6
5BL59-1	P	9/4/2007	PVC	418	410	168	154	14	9
5BJ52-1	P	9/4/2007	PVC	450	440	168	164	4	2
5BH59-2	P	9/5/2007	PVC	475	470	168	154	14	8
5BK45-1	P	9/5/2007	PVC	435	430	168	154	14	9
5BK44-1	P	9/5/2007	PVC	425	420	168	156	12	7
5BK42-1	P	9/5/2007	PVC	399	390	168	158	10	6
5BK41-1	P	9/5/2007	PVC	379	370	168	158	10	6
5BE53-2	P	9/5/2007	PVC	453	440	168	154	14	9
5BD52-2	P	9/5/2007	PVC	448	440	168	162	6	4
5BD49-1	P	9/5/2007	PVC	501	490	410	168	8	5
5BC53-2	P	9/5/2007	PVC	488	480	168	158	10	6
5BD53-2	P	9/5/2007	PVC	449	440	168	156	12	7
5BC50-1	P	9/6/2007	PVC	493	480	168	158	10	6
5BB49-1	F	9/10/2007	PVC	473	460	168			
5BB47-2	F	9/10/2007	PVC	464	450	168			
5BA46-1	P	9/10/2007	PVC	464	450	168	154	14	8



TABLE 4

WELL_ID	INTEGRITY	INT_DATE	CASING TYPE	BOTTOM CASING DEPTH	LOWER PACKER DEPTH	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	PERCENT LOSS
5BB51-1	P	9/10/2007	PVC	463	450	168	162	6	4
5BD47-1	F	9/11/2007	PVC	458	450	168			
5BD50-1	P	9/11/2007	PVC	512	500	168	158	10	6
5BC49-1	P	9/11/2007	PVC	494	480	168	158	10	6
5BB41-1	P	9/11/2007	PVC	457	450	168	160	8	5
5BB45-2	P	9/11/2007	PVC	465	450	168	158	10	6
5BB43-1	P	9/11/2007	PVC	465	450	168	162	6	4
5BD45-3	F	9/12/2007	PVC	464	450	168			
5BD43-1	F	9/12/2007	PVC	473	460	168			
5BC44-2	P	9/12/2007	PVC	469	460	168	152	16	10
5BE47-2	F	9/13/2007	PVC	509	500				
5BC48-1	P	9/13/2007	PVC	493	480	168	160	8	5
5BC40-1	P	9/17/2007	PVC	467	460	168	158	10	6
5BC42-1	P	9/17/2007	PVC	471	460	168	158	10	6
5BD41-1	P	9/17/2007	PVC	467	450	168	154	14	9
5BD46-1	P	9/17/2007	PVC	460	450	168	156	12	7
5BC52-1	P	9/17/2007	PVC	497	490	168	154	14	8
5BD39-1	F	9/18/2007	PVC	453	440				
5BD38-1	P	9/19/2007	PVC	443	430	168	158	10	6
5BD37-1	P	9/19/2007	PVC	452	440	168	160	8	5
5BC37-2	P	9/19/2007	PVC	455	440	168	154	14	8
5BB38-1	P	9/19/2007	PVC	454	440	168	162	6	4
5BD40-2	P	9/20/2007	PVC	460	450	168	158	10	6
5BD35-2	P	9/20/2007	PVC	450	440	168	158	10	6
5BC38-1	P	9/20/2007	PVC	462	450	168	160	8	5
5BA40-1	P	9/20/2007	PVC	445	440	168	154	14	8
5BB39-1	P	9/20/2007	PVC	458	450	168	164	4	2
5BC39-1	P	9/20/2007	PVC	456	450	168	164	4	2
5BA51-2	F	9/24/2007	PVC	456	450	168			
5BE52-1	F	9/24/2007	PVC	460	450	168			
5BA48-1	P	9/24/2007	PVC	466	450	168	158	10	6
5BA50-1	P	9/24/2007	PVC	458	450	168	164	4	2
5BG52-1	P	9/25/2007	PVC	480	470	168	164	4	2
5AW47-1	P	9/25/2007	PVC	443	430	168	160	8	5
5AV46-1	P	9/25/2007	PVC	446	440	168	160	8	5

TABLE 4

WELL_ID	INTEGRITY	INT_DATE	CASING TYPE	BOTTOM CASING DEPTH	LOWER PACKER DEPTH	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	PERCENT LOSS
5AW51-1	P	9/25/2007	PVC	445	440	168	158	10	6
5AW52-1	P	9/25/2007	PVC	446	440	168	158	10	6
5AW53-1	P	9/25/2007	PVC	439	430	168	158	10	6
5AW45-1	P	9/25/2007	PVC	447	440	168	160	8	4
5AW54-2	P	9/26/2007	PVC	447	440	168	158	10	6
5AW55-1	P	9/26/2007	PVC	445	440	168	152	16	10
5AV54-1	P	9/26/2007	PVC	444	430	168	162	6	4
5AV55-1	P	9/26/2007	PVC	438	430	168	156	12	7
5AV53-1	P	9/26/2007	PVC	437	430	168	158	10	6
5AU50-1	P	9/26/2007	PVC	426	420	168	157	11	7
IW-09	P	9/26/2007	PVC	440	430	168	162	6	4
WCOW-23	P	9/26/2007	PVC	430	420	168	154	14	8
MW-06	P	9/26/2007	PVC	441	430	168	154	14	8
5AU50-1	P	9/26/2007	PVC	426	420	168	157	11	7
5AT52-1	P	9/27/2007	PVC	445	440	168	154	14	8
5AS50-1	P	9/27/2007	PVC	422	410	168	158	10	6
5AT48-1	P	9/27/2007	PVC	424	410	168	158	10	6
5AU47-2	P	9/27/2007	PVC	426	420	168	154	14	8
5AU51-1	P	9/27/2007	PVC	435	430	168	154	14	8
5AT49-1	P	9/27/2007	PVC	425	420	168	158	10	6
TW-0002	P	9/27/2007	PVC	438	430	168	160	8	5
IW-07	P	9/27/2007	PVC	444	430	168	162	6	4
5AT49-3	P	9/27/2007	PVC	425	420	168	158	10	6
5AU54-1	P	10/1/2007	PVC	432	420	168	154	14	8
5AV57-1	P	10/1/2007	PVC	393	380	168	156	12	7
5AU58-1	P	10/1/2007	PVC	389	380	168	158	10	6
5AT50-1	P	10/1/2007	PVC	440	430	168	158	10	6
5AT43-1	P	10/1/2007	PVC	473	460	168	158	10	6
5AT45-1	P	10/1/2007	PVC	448	440	168	158	10	6
5AT47-1	P	10/1/2007	PVC	443	430	168	160	8	5
5AS46-2	P	10/2/2007	PVC	448	440	168	158	10	6
5AS48-1	P	10/2/2007	PVC	456	430	168	158	10	6
5AS52-1	P	10/2/2007	PVC	444	430	168	164	4	2
TW-0001	P	10/2/2007	PVC	440	430	168	158	10	6
5AT56-1	P	10/2/2007	PVC	433	420	168	154	14	8

TABLE 4

WELL_ID	INTEGRITY	INT_DATE	CASING TYPE	BOTTOM CASING DEPTH	LOWER PACKER DEPTH	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	PERCENT LOSS
5AU57-1	P	10/2/2007	PVC	417	410	168	156	12	7
5AU55-1	P	10/2/2007	PVC	430	420	168	168	0	0
5AU53-1	P	10/2/2007	PVC	441	430	168	162	6	4
5AS57-1	F	10/24/2007	PVC	410	400	168			
5AQ58-1	P	10/24/2007	PVC	407	400	168	162	6	4
5AR59-1	P	10/24/2007	PVC	406	400	168	166	2	1
5AT44-1	P	10/24/2007	PVC	440	430	168	164	4	2
5AP55-2	P	10/29/2007	PVC	414	410	168	160	8	5
5AQ56-1	P	10/29/2007	PVC	409	390	168	158	10	6
5AP56-2	P	10/29/2007	PVC	440	430	168	160	8	5
5AQ55-1	P	10/29/2007	PVC	440	430	168	164	4	2
5AQ56-1	P	10/29/2007	PVC	404	390	168	158	10	6
5AR55-1	P	10/29/2007	PVC	407	400	168	156	12	7
5AR57-1	P	10/29/2007	PVC	401	390	168	164	4	2
5AP51-1	P	10/30/2007	PVC	425	420	168	158	10	6
5AP52-1	P	10/30/2007	PVC	411	390	168	160	8	5
5AP54-1	P	10/30/2007	PVC	446	440	168	160	8	5
5AQ53-1	P	10/30/2007	PVC	435	430	168	162	6	4
5AR51-1	F	10/31/2007	PVC	422	410	168			
5AQ54-1	P	10/31/2007	PVC	410	400	168	160	8	5
5AR53-2	P	10/31/2007	PVC	417	410	168	154	14	8
5AR54-1	P	10/31/2007	PVC	417	410	168	158	10	6
5AS55-1	P	10/31/2007	PVC	415	410	168	158	10	6
5AS53-2	P	10/31/2007	PVC	415	410	168	156	12	7
5AR58-1	P	10/31/2007	PVC	405	400	168	154	14	8
5AQ48-1	F	11/1/2007	PVC	429	420	168			
5AS51-1	P	11/1/2007	PVC	419	410	168	158	10	6
5AR49-1	P	11/1/2007	PVC	421	410	168	154	14	9
5AR47-2	P	11/1/2007	PVC	435	430	168	160	8	5
5AQ46-2	F	11/5/2007	PVC	438	420	168			
5AQ47-1	P	11/5/2007	PVC	428	420	168	162	6	4
5AS49-1	P	11/5/2007	PVC	440	430	168	158	10	6
5AQ52-1	P	11/5/2007	PVC	420	410	168	162	6	4
5AR52-1	P	11/6/2007	PVC	421	410	168	162	6	4
5AR50-1	P	11/6/2007	PVC	420	410	168	156	12	7

TABLE 4

WELL_ID	INTEGRITY	INT_DATE	CASING TYPE	BOTTOM CASING DEPTH	LOWER PACKER DEPTH	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	PERCENT LOSS
5AQ41-2	P	11/6/2007	PVC	467	460	168	156	12	7
5AR39-1	P	11/6/2007	PVC	465	460	168	162	6	4
5AR40-2	P	11/6/2007	PVC	460	450	168	162	6	4
5AS37-1	P	11/6/2007	PVC	458	450	168	160	8	5
5AS39-1	F	11/8/2007	PVC	451	440	168			
5AP49-1	P	11/8/2007	PVC	450	440	168	162	6	4
5AR41-2	P	11/8/2007	PVC	454	440	168	154	14	8
5AR37-1	P	11/8/2007	PVC	477	470	168	162	6	4
MW-08	P	11/8/2007	PVC	448	440	168	160	8	5
5AQ38-1	F	11/12/2007	PVC	476	470	168			
5AQ40-1	P	11/12/2007	PVC	471	460	168	156	12	7
5AR38-1	P	11/12/2007	PVC	455	440	168	158	10	6
5AQ36-1	F	11/13/2007	PVC	487	480				
5AO58-1	F	11/13/2007	PVC	397	390	168			
5AT46-1	P	11/13/2007	PVC	434	420	168	158	10	6
5AQ59-1	P	11/13/2007	PVC	430	420	168	158	10	6
MW-07	P	11/13/2007	PVC	430	410	168	158	10	6
5AP64-1	P	11/14/2007	PVC	435	430	168	154	14	8
5AQ61-1	P	11/14/2007	PVC	435	420	168	164	4	2
5AQ65-1	P	11/14/2007	PVC	430	420	168	162	6	4
5AO60-1	P	11/14/2007	PVC	405	400	168	154	14	8
5AO69-1	F	11/15/2007	PVC	390	380	168			
5AO67-1	F	11/15/2007	PVC	389	380	168			
5AP71-1	P	11/15/2007	PVC	387	380	168	160	8	5
5AP69-1	P	11/15/2007	PVC	387	380	168	158	10	6
5AO66-1	P	11/15/2007	PVC	391	380	168	154	14	8
5AM80-1	P	11/19/2007	PVC	399	390	168	160	8	5
5AM81-2	P	11/19/2007	PVC	392	380	168	162	6	4
5AN79-1	P	11/19/2007	PVC	399	390	168	162	6	4
5AN78-1	P	11/19/2007	PVC	397	390	168	162	6	4
5AO79-1	P	11/19/2007	PVC	397	390	168	162	6	4
5AO78-1	P	11/19/2007	PVC	386	380	168	154	14	8
5AO76-1	P	11/19/2007	PVC	391	380	168	162	6	4
5AO71-3	P	11/19/2007	PVC	387	380	168	160	8	5
5AO72-1	P	11/19/2007	PVC	384	370	168	156	12	7

TABLE 4

WELL ID	INTEGRITY	INT DATE	CASING TYPE	BOTTOM CASING DEPTH	LOWER PACKER DEPTH	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	PERCENT LOSS
5AN69-1	P	11/19/2007	PVC	393	380	168	154	14	8
5AM79-2	F	11/20/2007	PVC	398	390				
5AM71-1	P	11/20/2007	PVC	405	400	168	160	8	5
5AM72-3	P	11/20/2007	PVC	408	400	168	160	8	5
5AM75-1	P	11/20/2007	PVC	410	400	168	164	4	2
5AM76-1	P	11/20/2007	PVC	406	400	168	160	8	5
5AP62-1	P	11/21/2007	PVC	431	420	168	162	6	4
5AP60-1	P	11/21/2007	PVC	439	430	168	160	8	5
5AP59-1	P	11/21/2007	PVC	405	400	168	154	14	8
5AP58-2	P	11/21/2007	PVC	432	420	168	164	4	2
5AO74-1	P	11/26/2007	PVC	383	370	168	158	10	6
5AM67-1	P	11/26/2007	PVC	372	360	168	162	8	5
5AL68-1	P	11/26/2007	PVC	418	410	168	158	10	6
5AL69-1	F	11/27/2007	PVC	418	410	168			
5AK61-1	P	11/27/2007	PVC	438	430	168	158	10	6
5AK62-2	P	11/27/2007	PVC	435	430	168	166	2	1
5AL63-1	P	11/27/2007	PVC	431	420	168	160	8	5
5AK64-2	P	11/27/2007	PVC	432	420	168	164	4	2
5AK66-2	P	11/27/2007	PVC	425	420	168	156	12	7
5AK68-2	P	11/27/2007	PVC	422	410	168	166	2	1
5AK60-1	P	11/28/2007	PVC	433	420	168	162	6	4
5AK59-1	P	11/28/2007	PVC	439	430	168	156	12	7
5AJ60-1	P	11/28/2007	PVC	443	430	168	162	6	7
5AK58-1	P	11/28/2007	PVC	435	430	168	164	4	2
5AJ58-1	P	11/28/2007	PVC	449	440	168	160	10	8
5AJ59-1	P	11/28/2007	PVC	446	440	168	156	12	7
5AJ56-1	P	11/29/2007	PVC	449	440	168	162	6	4
5AJ57-1	P	11/29/2007	PVC	452	440	168	160	8	5
5AI58-1	P	11/29/2007	PVC	476	470	168	162	6	4
5AI59-3	P	11/29/2007	PVC	473	460	168	160	8	5
5AI60-1	P	11/29/2007	PVC	466	460	168	160	8	5
5AJ61-1	P	11/29/2007	PVC	443	430	168	162	6	4
5AI62-1	P	11/29/2007	PVC	457	450	168	162	6	4
5AH61-3	P	12/3/2007	PVC	457	450	168	164	4	2
5AH62-1	P	12/3/2007	PVC	448	440	168	158	10	6

TABLE 4

WELL_ID	INTEGRITY	INT_DATE	CASING TYPE	BOTTOM CASING DEPTH	LOWER PACKER DEPTH	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	PERCENT LOSS
5AH60-1	P	12/3/2007	PVC	459	450	168	164	4	2
5AH57-1	P	12/3/2007	PVC	467	460	168	160	8	5
5AI55-3	P	12/3/2007	PVC	470	460	168	160	8	5
5AF70-2	P	12/4/2007	PVC	455	450	168	160	8	5
5AG69-1	P	12/4/2007	PVC	459	450	168	166	2	1
5AF66-1	P	12/4/2007	PVC	462	450	168	162	6	4
5AG65-1	P	12/4/2007	PVC	461	450	168	154	14	9
5AG66-1	P	12/4/2007	PVC	452	450	168	158	10	6
5AH65-1	P	12/4/2007	PVC	451	440	168	166	2	1
5AG63-1	P	12/4/2007	PVC	454	440	168	158	10	6
5AF69-1	F	12/5/2007	PVC	462	450	168			
5AE69-1	P	12/5/2007	PVC	447	440	168	156	12	7
5AE67-1	P	12/5/2007	PVC	471	460	168	154	14	9
5AF67-1	P	12/5/2007	PVC	459	450	168	158	10	6
5AG73-1	P	12/6/2007	PVC	450	440	168	160	2	1
5AF74-1	P	12/6/2007	PVC	447	440	168	162	6	4
5AD77-1	P	12/6/2007	PVC	463	450	168	162	6	4
5AB76-1	P	12/6/2007	PVC	469	460	168	159	10	6
5AD75-1	P	12/6/2007	PVC	474	460	168	158	10	6
5AC75-1	P	12/6/2007	PVC	463	450	168	164	4	2
5AC74-1	P	12/6/2007	PVC	474	460	168	162	6	4
5AL70-1	P	12/10/2007	PVC	415	410	168	160	8	5
5AN70-1	P	12/10/2007	PVC	386	380	168	158	10	6
5AM70-1	P	12/10/2007	PVC	360	350	168	166	2	1
5AN77-1	F	12/11/2007	PVC	394	380	168			
5AN72-1	F	12/11/2007	PVC	386	370	168			
5AF72-1	P	12/12/2007	PVC	462	450	168	162	6	4
5AL66-1	P	12/12/2007	PVC	372	370	168	162	6	4
5AM78-2	P	12/12/2007	PVC	377	370	168	156	12	2
5AE81-1	P	12/13/2007	PVC	450	440	168	158	10	6
5AE83-1	P	12/13/2007	PVC	457	450	168	160	8	5
5AF81-1	P	12/13/2007	PVC	438	430	168	160	8	5
5AG75-1	P	12/13/2007	PVC	438	430	168	164	4	2
5AD81-2	P	12/13/2007	PVC	464	450	168	160	8	5
5AE80-1	F	12/17/2007	PVC	439	430				

TABLE 4

WELL_ID	INTEGRITY	INT_DATE	CASING TYPE	BOTTOM CASING DEPTH	LOWER PACKER DEPTH	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	PERCENT LOSS
5AE74-2	P	12/17/2007	PVC	443	430	168	158	10	6
5AD79-1	P	12/17/2007	PVC	468	460	168	162	6	4
5AD80-1	P	12/17/2007	PVC	466	460	168	160	8	5
5AD82-1	P	12/17/2007	PVC	464	450	168	156	12	7
5AF73-1	P	12/18/2007	PVC	455	440	168	164	4	2
5AF75-2	P	12/18/2007	PVC	448	440	168	160	8	5
5AG64-1	P	12/18/2007	PVC	449	440	168	158	10	6
5AD73-1	P	12/18/2007	PVC	479	470	168	162	6	4
5AG68-1	P	12/18/2007	PVC	451	440	168	160	8	5
5AH67-1	P	12/18/2007	PVC	450	440	168	162	6	4
5AG70-1	P	12/18/2007	PVC	446	440	168	158	10	6
5AG71-2	P	12/18/2007	PVC	443	430	168	162	6	4
5AG60-1	F	12/19/2007	PVC	460	450	168			
5AF65-1	P	12/19/2007	PVC	456	450	168	156	12	7
5AF68-1	P	12/19/2007	PVC	460	450	168	164	4	2
5AE72-2	P	12/19/2007	PVC	450	440	168	162	6	4
5AH56-2	P	12/26/2007	PVC	466	460	168	160	8	5
5AR56-1	P	12/27/2007	PVC	408	400	168	164	4	2
5DM4	P	1/2/2008	PVC	630	620	168	152	13	8
MW-11S	P	1/2/2008	PVC	290	260	168	160	8	5
WCOW-04	P	1/2/2008	PVC	240	230	168	168	0	0
MW-12D	P	1/2/2008	PVC	601	570	168	154	14	8
5SM1	P	1/2/2008	PVC	262	240	168	154	14	8
5MW36	P	1/3/2008	PVC	311	300	168	160	8	5
5MW34	P	1/3/2008	PVC	343	340	168	162	6	4
5MW32	P	1/3/2008	PVC	357	350	168	158	10	6
5MW30	P	1/3/2008	PVC	348	340	168	156	12	7
5MW31	P	1/3/2008	PVC	338	330	168	156	12	7
5DM1	P	1/3/2008	PVC	705	700	168	162	6	4
5MW39	P	1/7/2008	PVC	375	360	168	158	10	6
5MW37	P	1/7/2008	PVC	366	360	168	158	10	6
5MW35	P	1/7/2008	PVC	366	360	168	154	14	8
5MW33	P	1/7/2008	PVC	345	330	168	152	16	10
5MW43	F	1/8/2008	PVC	416	410	168			
5MW41	P	1/8/2008	PVC	388	380	168	156	12	7

TABLE 4

WELL ID	INTEGRITY	INT DATE	CASING TYPE	BOTTOM CASING DEPTH	LOWER PACKER DEPTH	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	PERCENT LOSS
5SM2	P	1/9/2008	PVC	306	300	168	166	2	1
5MW47	P	1/9/2008	PVC	415	400	168	156	12	7
5MW45	P	1/9/2008	PVC	405	400	168	158	10	6
5DM3	F	1/10/2008	PVC	548	540	168			
5DM2	P	1/10/2008	PVC	596	590	168	152	16	10
5MW48	P	1/14/2008	PVC	279	270	168	162	6	4
5SM3	P	1/14/2008	PVC	247	240	168	162	8	5
5MW53	P	1/15/2008	PVC	403	390	168	162	6	4
5MW55	P	1/15/2008	PVC	378	370	168	164	4	2
5MW40	P	1/15/2008	PVC	275	270	168	158	10	6
5MW38	P	1/15/2008	PVC	285	280	168	160	8	5
5AJ63-1	P	2/12/2008	PVC	451	420	168	156	12	7
5BJ61-1	P	2/12/2008	PVC	422	410	168	164	4	2
5MW51	P	2/12/2008	PVC	414	400	168	162	6	4
5MW49	P	2/12/2008	PVC	363	350	168	156	12	7
7SM4	P	2/13/2008	PVC	322	310	168	160	8	5
7DM1	P	2/13/2008	PVC	655	640	168	162	6	4
7DM4B	P	2/13/2008	PVC	720	710	168	158	10	6
7SM1	P	2/14/2008	PVC	339	320	168	156	12	7
7SM9	P	2/14/2008	PVC	320	310	168	160	8	5
7TW1	P	2/14/2008	PVC	359	340	168	156	12	7
7TW3	P	2/19/2008	PVC	367	360	168	160	8	5
7TW2	P	2/19/2008	PVC	357	350	168	154	14	8
7DM2	P	2/19/2008	PVC	678	670	168	154	14	8
7SM2	P	2/19/2008	PVC	201	190	168	164	4	2
7MW33	P	2/20/2008	PVC	345	340	168	156	12	7
7SM5	P	2/20/2008	PVC	235	230	168	154	14	8
7SM10	P	2/20/2008	PVC	346	340	168	160	8	5
7TW5	P	2/20/2008	PVC	389	380	168	158	10	6
7SM7	P	2/20/2008	PVC	321	310	168	158	10	6
7MW30	P	2/21/2008	PVC	540	530	168	158	10	6
7MW31	P	2/21/2008	PVC	530	520	168	154	14	8
7MW32	P	2/21/2008	PVC	545	540	168	154	14	8
7MW34	P	2/21/2008	PVC	360	350	168	158	10	6
7MW37	P	2/21/2008	PVC	375	370	168	160	8	5



TABLE 4

WELL_ID	INTEGRITY	INT_DATE	CASING TYPE	BOTTOM CASING DEPTH	LOWER PACKER DEPTH	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	PERCENT LOSS
7MW36	P	2/21/2008	PVC	350	340	168	156	12	7
7MW35	P	2/21/2008	PVC	354	340	168	160	8	5
7MW10	P	2/25/2008	PVC	456	440	168	160	8	5
7SM12	P	2/25/2008	PVC	375	360	168	160	8	5
7SM11	P	2/25/2008	PVC	215	210	168	164	4	2
7MW8	P	2/25/2008	550	490	450	168	160	8	5
7MW29	F	2/26/2008	PVC	470	460				
7MW28	P	2/26/2008	PVC	479	470	168	152	16	10
7MW14	P	2/26/2008	PVC	474	460	168	160	8	5
7MW12	P	2/26/2008	PVC	477	470	168	162	6	4
7MW23	P	2/27/2008	PVC	510	500	168	162	6	4
7MW25	P	2/27/2008	PVC	495	480	168	160	8	5
7MW26	P	2/27/2008	PVC	490	480	168	169	10	6
7MW27	P	2/27/2008	PVC	470	460	168	158	10	6
7MW24	P	2/27/2008	PVC	509	500	168	160	8	5
7MW18	P	2/28/2008	PVC	551	540	168	160	8	5
7MW20	P	2/28/2008	PVC	480	470	168	158	10	6
7SM13	P	2/28/2008	PVC	233	220	168	164	4	2
7MW21	P	3/3/2008	PVC	441	430	168	162	6	4
7MW22	P	3/3/2008	PVC	480	470	168	158	10	6
7MW3	P	3/11/2008	PVC	495	480	168	162	6	4
7MW2	P	3/11/2008	PVC	580	520	168	158	10	6
7MW13	P	3/11/2008	PVC	495	480	168	162	6	4
7MW16	P	3/11/2008	PVC	544	530	168	152	16	10
7MW6	P	3/11/2008	PVC	510	500	168	158	10	6
7MW1	P	4/15/2008	PVC	540	530	168	160	8	5
7MW7	P	4/22/2008	PVC	600	590	168	160	8	5
7MW5	P	4/22/2008	PVC	475	470	168	162	6	4
7TW6	P	4/22/2008	PVC	355	350	168	160	8	5
7SM8	P	4/22/2008	PVC	215	210	168	160	8	5
7MW4	P	4/22/2008	PVC	480	470	168	156	12	7
7DM3	F	4/23/2008	PVC	709	700	168			
7SM3	P	4/23/2008	PVC	382	370	168	158	10	6
7TW4	P	4/23/2008	PVC	470	460	168	154	12	7
7MW9	P	4/23/2008	PVC	601	590	168	154	14	8

TABLE 4

WELL_ID	INTEGRITY	INT_DATE	CASING TYPE	BOTTOM CASING DEPTH	LOWER PACKER DEPTH	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	PERCENT LOSS
7MW19	P	5/5/2008	PVC	380	370	168	162	6	4
7MW15	P	5/5/2008	PVC	540	530	168	160	8	5
7MW11	P	5/5/2008	PVC	580	570	168	160	8	5
7AS65-2	P	5/6/2008	PVC	425	410	168	160	8	5
7MW43	P	5/6/2008	PVC	575	560	168	160	8	5
7MW17	P	5/6/2008	PVC	459	450	168	152	10	6
7MW39-2	P	5/7/2008	PVC	480	470	168	154	14	8
7MW40	P	5/7/2008	PVC	515	510	168	160	8	5
7MW38	P	5/7/2008	PVC	372	360	168	164	4	2
7MW41	P	5/7/2008	PVC	550	540	168	166	4	2
7AS65-1	P	5/7/2008	PVC	430	420	168	162	6	4
5MW42	P	5/14/2008	PVC	253	240	168	164	4	2
5MW46	P	5/14/2008	PVC	289	280	168	164	4	2
5MW44	P	5/15/2008	PVC	272	260	168	164	4	2
5BK40-1	P	5/19/2008	PVC	347	340	168	154	14	8
5BK39-1	P	5/19/2008	PVC	350	340	168	154	16	10
5MW57	P	5/19/2008	PVC	340	330	168	162	6	4
5MW50	P	5/20/2008	PVC	247	230	168	154	14	9
5BK64-2	P	5/20/2008	PVC	354	340	168	158	10	6

**TABLE 5**  
**COGEMA Mining Inc. - Irigaray and Christensen Ranch Projects**  
**2008 Annual Report**  
**Abandon Well Summary**

WELL_ID	DH_TYPE	DH_STATUS	PERMIT_AREA	ABDN	ABDN_DATE
GP53	DEV	REC	IR-5	Y	12/4/2007
HI105	DEV	INJ	IR-6	Y	6/4/2008
PD1	UNK	UNK	IR	Y	6/9/2008
PS1	UNK	UNK	IR	Y	6/9/2008
PS28			IR	Y	6/9/2008
GI106	DEV	INJ	IR-4	Y	6/9/2008
RC4D	UNK	UNK	IR	Y	6/10/2008
RC35A			IR	Y	6/10/2008
RM4DA	UNK	UNK	IR	Y	6/10/2008
RM35			IR	Y	6/10/2008
RO4			IR	Y	6/10/2008
RO5	UNK	UNK	IR	Y	6/10/2008
RO6	UNK	UNK	IR	Y	6/10/2008
RP2	UNK	UNK	IR	Y	6/10/2008
RM1S	UNK	UNK	IR	Y	6/16/2008
RM2D	UNK	UNK	IR	Y	6/16/2008
RO2	UNK	UNK	IR	Y	6/16/2008
RC1SA	UNK	UNK	IR	Y	6/17/2008
RC2D	UNK	UNK	IR	Y	6/17/2008
RO1	UNK	UNK	IR	Y	6/17/2008
RP1	UNK	UNK	IR	Y	6/17/2008
RO3	UNK	UNK	IR	Y	6/18/2008
KI136B	DEV	INJ	IR-8	Y	6/23/2008

**APPENDIX 2**

**Monitor & Trend Well Sampling Data**

**MONITOR WELLS**  
**PERIMETER ORE ZONE**

<b>Well I.D.</b>	<b>Location</b>	<b>Page #</b>	<b>Well I.D.</b>	<b>Location</b>	<b>Page #</b>
MW17-2	Mine Unit 3	1	MW102	Mine Unit 2	48
MW18	Mine Unit 3	2	MW103	Mine Unit 2	49
MW19	Mine Unit 3	3	MW104	Mine Unit 2	50
MW20	Mine Unit 3	4	MW105	Mine Unit 2	51
MW23	Mine Unit 3	5	MW106	Mine Unit 2	52
MW24	Mine Unit 3	6	MW107	Mine Unit 2	53
MW25	Mine Unit 3	7	MW108	Mine Unit 2	54
MW26	Mine Unit 3	8	MW109	Mine Unit 2	55
MW27	Mine Unit 3	9	MW110	Mine Unit 2	56
MW28	Mine Unit 3	10	MW111	Mine Unit 2	57
MW29	Mine Unit 3	11	MW114	Mine Unit 3	58
MW30	Mine Unit 3	12	MW115	Mine Unit 3	59
MW31	Mine Unit 3	13	MW116	Mine Unit 3	60
MW32	Mine Unit 3	14	4MW-1	Mine Unit 4	61
MW35	Mine Unit 3	15	4MW-2	Mine Unit 4	62
MW36	Mine Unit 3	16	4MW-3	Mine Unit 4	63
MW37	Mine Unit 3	17	4MW-4	Mine Unit 4	64
MW38	Mine Unit 3	18	4MW-5	Mine Unit 4	65
MW39	Mine Unit 3	19	4MW-6	Mine Unit 4	66
MW40	Mine Unit 3	20	4MW-7	Mine Unit 4	67
MW41	Mine Unit 3	21	4MW-8	Mine Unit 4	68
MW42	Mine Unit 3	22	4MW-9	Mine Unit 4	69
MW43	Mine Unit 3	23	4MW-10	Mine Unit 4	70
MW44	Mine Unit 3	24	4MW-11	Mine Unit 4	71
MW45	Mine Unit 3	25	4MW-12	Mine Unit 4	72
MW62	Mine Unit 3	26	4MW-13	Mine Unit 4	73
MW63	Mine Unit 3	27	4MW-14	Mine Unit 4	74
MW64	Mine Unit 3	28	4MW-15	Mine Unit 4	75
MW73	Mine Unit 2	29	4MW-16	Mine Unit 4	76
MW74	Mine Unit 2	30	4MW-17	Mine Unit 4	77
MW75	Mine Unit 2	31	4MW-18	Mine Unit 4	78
MW76	Mine Unit 2	32	4MW-19	Mine Unit 4	79
MW77	Mine Unit 2	33	4MW-20	Mine Unit 4	80
MW78	Mine Unit 2	34	4MW-21	Mine Unit 4	81
MW79	Mine Unit 2	35	4MW-22	Mine Unit 4	82
MW80	Mine Unit 2	36	4MW-23	Mine Unit 4	83
MW81	Mine Unit 2	37	4MW-24	Mine Unit 4	84
MW82	Mine Unit 2	38	4MW-25	Mine Unit 4	85
MW83	Mine Unit 2	39	5MW1	Mine Unit 5	86
MW84	Mine Unit 2	40	5MW2	Mine Unit 5	87
MW85	Mine Unit 2	41	5MW3	Mine Unit 5	88
MW86	Mine Unit 2	42	5MW4	Mine Unit 5	89
MW87	Mine Unit 2	43	5MW5	Mine Unit 5	90
MW88	Mine Unit 2	44	5MW6	Mine Unit 5	91
MW89	Mine Unit 2	45	5MW7	Mine Unit 5	92
MW90	Mine Unit 2	46	5MW8	Mine Unit 5	93
MW101	Mine Unit 2	47	5MW10	Mine Unit 5	94

**MONITOR WELLS**  
**PERIMETER ORE ZONE**

<b>Well I.D.</b>	<b>Location</b>	<b>Page #</b>	<b>Well I.D.</b>	<b>Location</b>	<b>Page #</b>
5MW12	Mine Unit 5	95	5MW64	Mine Unit 5	134
5MW14	Mine Unit 5	96	5MW65	Mine Unit 5	135
5MW16	Mine Unit 5	97	5MW66	Mine Unit 5	136
5MW18	Mine Unit 5	98	5MW67	Mine Unit 5	137
5MW20	Mine Unit 5	99	5MW69	Mine Unit 5	138
5MW30A	Mine Unit 5	100	6MW17-2	Mine Unit 6	139
5MW31	Mine Unit 5	101	6MW19	Mine Unit 6	140
5MW32A	Mine Unit 5	102	6MW21	Mine Unit 6	141
5MW33	Mine Unit 5	103	6MW23	Mine Unit 6	142
5MW34	Mine Unit 5	104	6MW25	Mine Unit 6	143
5MW35A	Mine Unit 5	105	6MW27	Mine Unit 6	144
5MW36	Mine Unit 5	106	6MW29	Mine Unit 6	145
5MW37	Mine Unit 5	107	6MW31	Mine Unit 6	146
5MW38	Mine Unit 5	108	6MW33	Mine Unit 6	147
5MW39A	Mine Unit 5	109	6MW34	Mine Unit 6	148
5MW40	Mine Unit 5	110	6MW35	Mine Unit 6	149
5MW41A	Mine Unit 5	111	6MW36	Mine Unit 6	150
5MW42	Mine Unit 5	112	6MW37	Mine Unit 6	151
5MW43	Mine Unit 5	113	6MW38	Mine Unit 6	152
5MW44	Mine Unit 5	114	6MW39	Mine Unit 6	153
5MW45	Mine Unit 5	115	6MW40	Mine Unit 6	154
5MW46	Mine Unit 5	116	6MW41	Mine Unit 6	155
5MW47B	Mine Unit 5	117	6MW42	Mine Unit 6	156
5MW48	Mine Unit 5	118	6MW43	Mine Unit 6	157
5MW49	Mine Unit 5	119	6MW44	Mine Unit 6	158
5MW50	Mine Unit 5	120	6MW45	Mine Unit 6	159
5MW51	Mine Unit 5	121	6MW46	Mine Unit 6	160
5MW52	Mine Unit 5	122	6MW47	Mine Unit 6	161
5MW53	Mine Unit 5	123	6MW48-3	Mine Unit 6	162
5MW54	Mine Unit 5	124	6MW49	Mine Unit 6	163
5MW55	Mine Unit 5	125	6MW50	Mine Unit 6	164
5MW56	Mine Unit 5	126	6MW51	Mine Unit 6	165
5MW57	Mine Unit 5	127	6MW52	Mine Unit 6	166
5MW58	Mine Unit 5	128	6MW53	Mine Unit 6	167
5MW59	Mine Unit 5	129	6MW54	Mine Unit 6	168
5MW60	Mine Unit 5	130			
5MW61	Mine Unit 5	131			
5MW62	Mine Unit 5	132			
5MW63	Mine Unit 5	133			

**MONITOR AND TREND WELL INDEX****CHRISTENSEN RANCH PROJECT****INTERIOR SHALLOW SAND**  
**MONITOR WELLS**

<b>Well I.D.</b>	<b>Location</b>	<b>Page #</b>	<b>Well I.D.</b>	<b>Location</b>	<b>Page #</b>
MW-11S	Mine Unit 5	169	4SRM-07	Mine Unit 4	191
MW46S	Mine Unit 3	170	5SM1	Mine Unit 5	192
MW48S	Mine Unit 3	171	5SM2	Mine Unit 5	193
MW50S	Mine Unit 3	172	5SM3	Mine Unit 5	194
MW52S	Mine Unit 3	173	5SM5	Mine Unit 5	195
MW54S	Mine Unit 3	174	5SM6	Mine Unit 5	196
MW56S	Mine Unit 3	175	5SM7	Mine Unit 5	197
MW58S	Mine Unit 3	176	WCOW-04	Mine Unit 5	198
MW66S-2	Mine Unit 3	177	6SM1	Mine Unit 6	199
MW68S	Mine Unit 2	178	6SM2	Mine Unit 6	200
MW70S	Mine Unit 2	179	6SM3	Mine Unit 6	201
MW72S	Mine Unit 2	180	6SM4	Mine Unit 6	202
MW92S	Mine Unit 2	181	6SM5	Mine Unit 6	203
MW94S	Mine Unit 2	182	6SM6	Mine Unit 6	204
MW96S	Mine Unit 2	183	6SM7	Mine Unit 6	205
MW98S	Mine Unit 2	184	6SM8	Mine Unit 6	206
MW100S	Mine Unit 2	185	6SM9	Mine Unit 6	207
MW112S	Mine Unit 2	186	6SM10	Mine Unit 6	208
MW117S	Mine Unit 2	187	6SM11	Mine Unit 6	209
4SM-1	Mine Unit 4	188	6SM12	Mine Unit 6	210
4SM-4	Mine Unit 4	189	6SM13	Mine Unit 6	211
4SM-8	Mine Unit 4	190	6SM14	Mine Unit 6	212

**MONITOR AND TREND WELL INDEX****CHRISTENSEN RANCH PROJECT****INTERIOR DEEP SAND**  
**MONITOR WELLS**

<b>Well I.D.</b>	<b>Location</b>	<b>Page #</b>	<b>Well I.D.</b>	<b>Location</b>	<b>Page #</b>
MW-12D	Mine Unit 5	213	5DM1A	Mine Unit 5	235
MW45D	Mine Unit 3	214	5DM2	Mine Unit 5	236
MW47D	Mine Unit 3	215	5DM3	Mine Unit 5	237
MW49D	Mine Unit 3	216	5DM4	Mine Unit 5	238
MW51D	Mine Unit 3	217	5DM5	Mine Unit 5	239
MW53D	Mine Unit 3	218	5DM7	Mine Unit 5	240
MW55D	Mine Unit 3	219	WCOW-37D	Mine Unit 5	241
MW57D	Mine Unit 3	220	6DM1	Mine Unit 6	242
MW65D	Mine Unit 3	221	6DM2	Mine Unit 6	243
MW67D	Mine Unit 2	222	6DM3-2	Mine Unit 6	244
MW69D	Mine Unit 2	223	6DM4-2	Mine Unit 6	245
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MW91D	Mine Unit 2	225	6DM6	Mine Unit 6	247
MW93D	Mine Unit 2	226	6DM7	Mine Unit 6	248
MW95D	Mine Unit 2	227	6DM8	Mine Unit 6	249
MW97D	Mine Unit 2	228	6DM9	Mine Unit 6	250
MW99D	Mine Unit 2	229	6DM10	Mine Unit 6	251
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**INTERIOR DEEP SAND**  
**TREND WELLS**

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**CHRISTENSEN PROJECT**

**Perimeter Ore Zone Monitor Wells**

Mine Unit 3  
Well I.D. MW17-2

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.1	662	94.4	8.7	4570.7
09 OCT 2007	8.6	665	91.5	8.7	4570.7
07 JAN 2008	8.5	667	93.8	8.7	4573.3
09 APR 2008	9.0	661	92.8	8.8	4572.9

\* Values Exceed Upper Control Limit

MW17-2

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW18

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	$\mu$ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
30 JUL 2007	9.7	670	97.9	8.5	4569.1
16 OCT 2007	9.3	662	92.0	8.5	4569.1
07 JAN 2008	8.8	670	94.8	8.7	4571.6
07 APR 2008	9.0	672	94.3	8.6	4571.4

\* Values Exceed Upper Control Limit

MW18

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW19

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.6	669	103.7	8.4	4567.9
10 OCT 2007	8.9	670	92.3	8.1	4567.9
07 JAN 2008	9.3	679	103.8	8.3	4570.1
07 APR 2008	9.5	683	102.0	8.5	4570.3

\* Values Exceed Upper Control Limit

MW19

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW20

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.8	661	99.4	8.4	4566.8
16 OCT 2007	9.0	667	93.8	8.4	4566.8
07 JAN 2008	9.4	671	98.6	8.4	4569.4
07 APR 2008	9.2	672	97.5	8.5	4569.2

\* Values Exceed Upper Control Limit

MW20

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW23

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.9	667	93.1	8.6	4560.9
16 OCT 2007	9.5	656	88.5	8.6	4560.9
07 JAN 2008	8.9	659	91.6	8.6	4563.5
07 APR 2008	9.3	661	89.9	8.7	4563.8

\* Values Exceed Upper Control Limit

MW23

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW24

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
30 JUL 2007	10.3	664	95.9	8.5	4560.7
16 OCT 2007	9.5	660	89.7	8.5	4560.7
07 JAN 2008	9.0	663	92.9	8.5	4563.3
07 APR 2008	9.7	664	92.4	8.7	4563.4

\* Values Exceed Upper Control Limit

MW24

Negative U308 Grades Indicate Less Than Detection Limit.



Mine Unit 3  
Well I.D. MW25

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
30 JUL 2007	9.7	662	98.6	8.4	4562.2
16 OCT 2007	8.9	662	90.2	8.4	4562.2
07 JAN 2008	8.9	663	94.0	8.4	4564.3
07 APR 2008	9.3	663	92.9	8.6	4564.6

\* Values Exceed Upper Control Limit

MW25

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW26

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
30 JUL 2007	9.6	662	95.5	8.4	4563.6
17 OCT 2007	9.3	663	89.6	8.3	4563.6
07 JAN 2008	9.3	662	93.6	8.5	4565.6
07 APR 2008	9.2	661	90.1	8.6	4565.8

\* Values Exceed Upper Control Limit

MW26

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW27

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	$\mu$ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
30 JUL 2007	12.6	672	102.7	8.4	4558.1
16 OCT 2007	11.2	672	96.9	8.4	4558.1
07 JAN 2008	10.3	670	97.4	8.4	4558.3
07 APR 2008	10.4	673	95.8	8.6	4557.7

\* Values Exceed Upper Control Limit

MW27

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW28

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	10.7	733	103.8	8.4	4571.4
16 OCT 2007	10.1	717	95.0	8.4	4571.4
07 JAN 2008	9.6	720	98.8	8.4	4573.8
07 APR 2008	10.0	718	97.1	8.5	4573.0

\* Values Exceed Upper Control Limit

MW28

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW29

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.5	679	94.3	8.5	4574.3
16 OCT 2007	9.6	663	94.4	8.4	4574.3
08 JAN 2008	9.1	666	96.4	8.4	4574.6
08 APR 2008	9.0	661	90.0	8.3	4575.7

\* Values Exceed Upper Control Limit

MW29

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW30

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.6	680	104.7	8.5	4569.2
16 OCT 2007	9.0	671	97.7	8.5	4563.2
08 JAN 2008	8.8	672	100.8	8.4	4568.7
08 APR 2008	8.9	671	93.6	8.0	4565.8

\* Values Exceed Upper Control Limit

MW30

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW31

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.5	678	103.7	8.5	4571.2
16 OCT 2007	9.2	673	97.8	8.5	4571.2
08 JAN 2008	8.8	672	101.9	8.4	4575.0
08 APR 2008	9.0	672	94.6	8.4	4571.8

\* Values Exceed Upper Control Limit

MW31

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW32

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.2	675	105.6	8.5	4580.4
23 OCT 2007	9.1	674	97.1	8.3	4580.4
08 JAN 2008	8.7	672	106.9	8.4	4583.5
08 APR 2008	8.8	672	95.4	8.1	4582.2

\* Values Exceed Upper Control Limit

MW32

Negative U3O8 Grades Indicate Less Than Detection Limit.



Mine Unit 3  
Well I.D. MW35

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	13.4	733	137.3 *	8.4	4575.3
09 OCT 2007	14.1 *	744	133.6 *	8.3	4575.1
10 OCT 2007	13.2	732	129.7	8.2	4575.4
10 OCT 2007	13.0	731	128.7	8.2	4575.2
08 JAN 2008	9.5	680	112.4	8.2	4578.8
08 APR 2008	13.3	725	123.0	8.1	4577.2

\* Values Exceed Upper Control Limit

MW35

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW36

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.2	672	103.6	8.4	4580.2
17 OCT 2007	8.8	671	96.4	8.3	4580.2
08 JAN 2008	9.0	675	99.2	8.4	4580.0
09 APR 2008	8.8	671	98.3	8.5	4582.1

\* Values Exceed Upper Control Limit

MW36

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW37

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.8	674	103.1	8.5	4573.1
09 OCT 2007	9.7	672	97.6	8.4	4573.1
08 JAN 2008	8.8	683	99.4	8.3	4576.2
09 APR 2008	9.2	672	98.3	8.5	4575.2

\* Values Exceed Upper Control Limit

MW37

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW38

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.7	668	104.9	8.6	4572.2
09 OCT 2007	9.2	666	96.9	8.5	4572.2
08 JAN 2008	8.9	673	100.4	8.4	4575.2
08 APR 2008	9.2	667	94.2	8.3	4574.2

\* Values Exceed Upper Control Limit

MW38

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW39

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	10.7	667	112.5	8.6	4572.7
09 OCT 2007	10.4	665	98.8	8.5	4572.7
08 JAN 2008	9.5	670	98.7	8.3	4575.7
09 APR 2008	9.6	669	95.6	8.6	4574.5

\* Values Exceed Upper Control Limit

MW39

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW40

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.5	684	102.2	8.5	4571.2
10 OCT 2007	9.2	671	98.6	8.4	4573.9
08 JAN 2008	8.8	669	98.7	8.4	4576.7
08 APR 2008	8.8	670	92.1	8.1	4575.4

\* Values Exceed Upper Control Limit

MW40

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW41

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
30 JUL 2007	9.5	677	105.5	8.4	4578.2
23 OCT 2007	8.9	675	100.6	8.3	4578.9
08 JAN 2008	8.7	676	104.2	8.4	4585.8
08 APR 2008	8.7	676	99.4	8.2	4584.3

\* Values Exceed Upper Control Limit

MW41

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW42

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.4	666	103.4	8.5	4584.5
15 OCT 2007	9.2	672	91.8	8.2	4584.5
08 JAN 2008	8.7	667	99.4	8.5	4587.7
08 APR 2008	8.9	667	93.9	8.2	4585.4

\* Values Exceed Upper Control Limit

MW42

Negative U308 Grades Indicate Less Than Detection Limit.



Mine Unit 3  
Well I.D. MW43

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.4	665	105.3	8.4	4586.2
15 OCT 2007	8.9	667	90.7	8.2	4586.2
08 JAN 2008	8.5	668	99.4	8.2	4589.6
08 APR 2008	8.7	665	93.6	8.1	4586.0

\* Values Exceed Upper Control Limit

MW43

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW44

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.4	668	99.9	8.4	4572.9
15 OCT 2007	9.3	668	86.7	8.6	4572.9
08 JAN 2008	9.1	665	87.2	8.5	4571.6
08 APR 2008	8.9	667	90.8	7.9	4573.6

\* Values Exceed Upper Control Limit

MW44

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW45

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.2	670	96.8	8.5	4575.1
09 OCT 2007	9.1	669	95.2	8.4	4575.1
08 JAN 2008	8.8	672	99.4	8.3	4578.5
08 APR 2008	9.3	670	92.4	8.1	4576.6

\* Values Exceed Upper Control Limit

MW45

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW62

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	8.9	667	94.1	8.8	4579.9
15 OCT 2007	8.9	663	80.9	8.7	4579.9
08 JAN 2008	8.7	665	91.2	8.7	4580.2
09 APR 2008	8.6	664	92.1	8.7	4583.7

\* Values Exceed Upper Control Limit

MW62

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW63

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.0	668	98.1	8.7	4582.9
15 OCT 2007	9.2	666	88.0	8.5	4582.9
09 JAN 2008	8.3	665	92.7	8.7	4586.1
08 APR 2008	8.6	670	96.7	8.6	4586.4

\* Values Exceed Upper Control Limit

MW63

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW64

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.1	677	106.0	8.3	4586.4
15 OCT 2007	8.8	676	94.4	8.0	4586.4
08 JAN 2008	8.9	675	99.2	8.1	4587.2
08 APR 2008	8.8	680	103.8	8.2	4587.2

\* Values Exceed Upper Control Limit

MW64

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW73

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.6	823	121.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
19 SEP 2007	9.0	663	96.0	8.6	4577.8
05 DEC 2007	8.6	670	95.2	8.8	4578.5
10 MAR 2008	9.1	668	98.4	8.9	4577.0
10 JUN 2008	9.6	665	100.0	9.0	4575.2

\* Values Exceed Upper Control Limit

MW73

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW74

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.6	823	121.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	8.9	670	95.5	8.6	4577.9
05 DEC 2007	8.5	671	96.4	8.8	4578.7
10 MAR 2008	9.2	672	93.9	8.6	4580.1
10 JUN 2008	9.4	662	98.6	8.7	4575.0

\* Values Exceed Upper Control Limit

MW74

Negative U3O8 Grades Indicate Less Than Detection Limit.



Mine Unit 2  
Well I.D. MW75

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.6	823	121.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	9.1	677	96.3	8.3	4576.4
05 DEC 2007	8.3	678	95.2	8.6	4577.4
10 MAR 2008	9.0	677	92.4	8.3	4578.8
10 JUN 2008	9.1	674	99.0	8.7	4573.8

\* Values Exceed Upper Control Limit

MW75

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW76

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.6	823	121.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	8.1	724	94.7	8.4	4576.8
05 DEC 2007	7.5	725	92.1	8.5	4578.1
10 MAR 2008	8.4	724	89.6	8.2	4579.5
10 JUN 2008	8.1	726	94.6	8.6	4575.7

\* Values Exceed Upper Control Limit

MW76

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW77

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.6	823	121.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	7.9	740	91.8	8.2	4575.9
05 DEC 2007	7.5	743	91.8	8.3	4577.3
10 MAR 2008	7.9	740	88.1	8.2	4578.5
10 JUN 2008	8.0	739	96.4	8.4	4575.5

\* Values Exceed Upper Control Limit

MW77

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW78

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.6	823	121.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	8.5	705	93.2	8.2	4571.1
05 DEC 2007	8.5	708	93.0	8.5	4572.6
10 MAR 2008	8.7	706	89.7	8.1	4573.7
10 JUN 2008	8.8	707	95.0	8.6	4571.4

\* Values Exceed Upper Control Limit

MW78

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW79

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.6	823	121.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	8.1	718	94.6	8.3	4568.6
05 DEC 2007	7.7	720	92.8	8.4	4569.9
10 MAR 2008	8.2	721	88.3	8.1	4570.9
10 JUN 2008	8.4	719	94.3	8.5	4569.1

\* Values Exceed Upper Control Limit

MW79

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW80

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.6	823	121.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	8.8	681	94.8	8.3	4565.0
11 DEC 2007	8.8	683	88.9	7.9	4566.5
10 MAR 2008	9.1	683	89.6	8.0	4567.5
10 JUN 2008	9.1	682	97.3	8.6	4566.0

\* Values Exceed Upper Control Limit

MW80

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW81

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.6	823	121.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	8.9	672	93.9	8.3	4563.7
11 DEC 2007	9.0	674	89.6	8.3	4565.1
10 MAR 2008	9.2	675	89.7	8.3	4566.1
10 JUN 2008	9.2	674	94.0	8.5	4565.1

\* Values Exceed Upper Control Limit

MW81

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW82

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.6	823	121.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
19 SEP 2007	9.4	657	91.6	8.4	4556.9
05 DEC 2007	8.9	658	90.3	8.5	4556.9
03 MAR 2008	9.6	659	88.7	8.2	4559.1
10 JUN 2008	9.6	658	93.0	8.6	4558.3

\* Values Exceed Upper Control Limit

MW82

Negative U308 Grades Indicate Less Than Detection Limit.



Mine Unit 2  
Well I.D. MW83

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.6	823	121.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
19 SEP 2007	9.2	663	92.7	8.3	4558.1
05 DEC 2007	8.8	665	91.4	8.5	4558.5
03 MAR 2008	9.3	663	88.6	8.2	4560.4
10 JUN 2008	9.6	664	96.0	8.6	4559.5

\* Values Exceed Upper Control Limit

MW83

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW84

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.6	823	121.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
19 SEP 2007	9.5	679	100.7	8.3	4558.5
05 DEC 2007	9.1	678	99.8	8.5	4557.9
03 MAR 2008	9.8	680	98.5	8.2	4560.5
10 JUN 2008	10.3	677	104.2	8.6	4559.5

\* Values Exceed Upper Control Limit

MW84

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW85

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.6	823	121.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
19 SEP 2007	9.5	662	94.0	8.3	4558.4
05 DEC 2007	8.7	662	90.9	8.5	4557.8
03 MAR 2008	9.5	661	87.8	8.2	4560.4
10 JUN 2008	9.4	660	94.0	8.6	4559.6

\* Values Exceed Upper Control Limit

MW85

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW86

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.6	823	121.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
19 SEP 2007	9.5	665	95.9	8.2	4552.2
11 DEC 2007	9.4	664	89.8	8.0	4550.3
10 MAR 2008	9.5	666	88.6	8.0	4554.1
10 JUN 2008	9.7	664	91.4	8.4	4552.0

\* Values Exceed Upper Control Limit

MW86

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW87

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.6	823	121.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	9.5	674	95.7	8.3	4550.8
11 DEC 2007	9.4	666	91.3	8.4	4553.5
10 MAR 2008	9.4	665	89.3	8.3	4554.5
10 JUN 2008	9.7	666	96.1	8.5	4551.6

\* Values Exceed Upper Control Limit

MW87

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW88

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.6	823	121.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	9.3	666	96.0	8.0	4566.8
11 DEC 2007	9.2	664	90.2	8.0	4566.1
10 MAR 2008	9.3	667	91.0	7.9	4568.7
10 JUN 2008	9.3	664	96.2	8.5	4565.4

\* Values Exceed Upper Control Limit

MW88

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW89

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.6	823	121.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	12.7	753	133.7	*	8.0
11 DEC 2007	13.3	761	131.3	*	7.9
10 MAR 2008	14.3	* 768	132.0	*	7.9
11 MAR 2008	13.8	* 762	138.0	*	8.2
20 MAR 2008	14.4	* 763	130.6	*	8.0
27 MAR 2008	14.6	* 767	125.9	*	7.7
03 APR 2008	13.2	762	139.0	*	8.2
10 APR 2008	13.7	* 780	136.0	*	8.1
17 APR 2008	14.2	* 758	132.0	*	7.6
23 APR 2008	13.9	* 765	124.0	*	8.0
01 MAY 2008	14.2	* 755	133.0	*	8.1
08 MAY 2008	14.2	* 750	143.0	*	8.4
15 MAY 2008	14.7	* 755	153.2	*	8.4
29 MAY 2008	13.6	751	144.0	*	8.1
04 JUN 2008	13.4	754	138.0	*	8.1
10 JUN 2008	13.4	747	140.0	*	8.5

\* Values Exceed Upper Control Limit

Negative U308 Grades Indicate Less Than Detection Limit.

MW89

Mine Unit 2  
Well I.D. MW90

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.6	823	121.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	8.6	679	92.2	8.1	4561.5
12 DEC 2007	8.8	673	88.9	8.2	4561.8
10 MAR 2008	9.0	683	89.0	8.2	4563.0
10 JUN 2008	9.3	680	96.0	8.4	4563.2

\* Values Exceed Upper Control Limit

MW90

Negative U308 Grades Indicate Less Than Detection Limit.



Mine Unit 2  
Well I.D. MW101

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.6	778	124.6			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	9.3	667	92.8	8.3	4557.8
11 DEC 2007	9.1	670	88.6	8.2	4559.4
10 MAR 2008	9.3	668	87.2	8.3	4561.3
10 JUN 2008	9.3	665	96.0	8.4	4560.7

\* Values Exceed Upper Control Limit

MW101

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW102

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.6	778	124.6			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	9.1	674	91.8	8.3	4554.5
11 DEC 2007	9.1	673	86.4	8.0	4555.5
11 MAR 2008	9.0	680	90.6	8.3	4557.4
10 JUN 2008	8.8	673	96.8	8.6	4557.4

\* Values Exceed Upper Control Limit

MW102

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW103

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.6	778	124.6			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
19 SEP 2007	9.1	663	91.2	8.5	4553.9
11 DEC 2007	9.2	666	85.6	8.4	4555.5
11 MAR 2008	8.9	666	88.1	8.4	4557.2
10 JUN 2008	9.2	665	94.4	8.5	4557.4

\* Values Exceed Upper Control Limit

MW103

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW104

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.6	778	124.6			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
19 SEP 2007	8.3	696	92.3	8.5	4550.8
11 DEC 2007	8.6	699	86.4	8.5	4551.8
11 MAR 2008	8.8	699	91.6	8.6	4553.2
10 JUN 2008	8.5	698	97.2	8.7	4553.4

\* Values Exceed Upper Control Limit

MW104

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW105

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.6	778	124.6			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
19 SEP 2007	8.9	682	93.4	8.3	4548.7
12 DEC 2007	9.0	684	89.0	8.3	4548.2
03 MAR 2008	9.0	684	89.0	8.4	4550.8
10 JUN 2008	9.1	681	95.0	8.6	4551.0

\* Values Exceed Upper Control Limit

MW105

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW106

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.6	778	124.6			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
19 SEP 2007	9.0	672	93.0	8.2	4546.5
12 DEC 2007	9.1	672	87.7	8.0	4547.4
03 MAR 2008	9.2	674	87.7	8.0	4549.2
10 JUN 2008	9.0	672	93.4	8.6	4549.8

\* Values Exceed Upper Control Limit

MW106

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW107

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.6	778	124.6			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
19 SEP 2007	9.3	663	91.5	8.2	4548.3
12 DEC 2007	9.2	661	86.2	8.2	4549.1
03 MAR 2008	9.4	665	88.0	8.3	4551.1
10 JUN 2008	9.2	666	96.2	8.4	4551.2

\* Values Exceed Upper Control Limit

MW107

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW108

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.6	778	124.6			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
19 SEP 2007	10.0	680	102.5	8.2	4548.5
05 DEC 2007	9.6	680	100.5	8.5	4549.8
03 MAR 2008	9.9	680	99.7	8.1	4550.6
10 JUN 2008	9.8	682	108.4	8.6	4550.7

\* Values Exceed Upper Control Limit

MW108

Negative U3O8 Grades Indicate Less Than Detection Limit.



Mine Unit 2  
Well I.D. MW109

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.6	778	124.6			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
19 SEP 2007	9.5	707	86.7	8.2	4548.8
05 DEC 2007	9.3	710	85.6	8.4	4548.8
03 MAR 2008	9.8	703	82.4	8.2	4551.0
10 JUN 2008	9.7	696	91.0	8.4	4550.8

\* Values Exceed Upper Control Limit

MW109

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW110

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.6	778	124.6			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
19 SEP 2007	9.5	660	94.0	8.1	4551.0
05 DEC 2007	9.0	665	91.0	8.5	4550.9
03 MAR 2008	9.4	663	88.6	8.1	4553.2
10 JUN 2008	9.3	661	94.2	8.7	4553.0

\* Values Exceed Upper Control Limit

MW110

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW111

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.6	778	124.6			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
19 SEP 2007	9.7	658	92.8	8.3	4552.9
05 DEC 2007	9.3	656	89.3	8.5	4553.0
03 MAR 2008	9.7	656	86.2	8.1	4555.4
10 JUN 2008	9.4	653	92.0	8.6	4554.8

\* Values Exceed Upper Control Limit

MW111

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW114

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	10.4	675	98.4	8.5	4564.7
16 OCT 2007	9.8	669	93.0	8.5	4564.7
07 JAN 2008	9.6	669	96.6	8.6	4567.4
07 APR 2008	9.4	673	93.2	8.6	4567.5

\* Values Exceed Upper Control Limit

MW114

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW115

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.1	677	100.7	8.4	4562.1
16 OCT 2007	9.0	671	96.1	8.4	4562.1
07 JAN 2008	8.9	672	100.7	8.6	4564.8
07 APR 2008	9.0	674	98.2	8.6	4565.0

\* Values Exceed Upper Control Limit

MW115

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW116

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.2	675	99.1	8.6	4561.4
16 OCT 2007	9.0	668	94.5	8.6	4561.4
07 JAN 2008	8.8	670	98.0	8.7	4564.0
07 APR 2008	8.9	670	94.8	8.7	4564.3

\* Values Exceed Upper Control Limit

MW116

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4MW-1

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
04 SEP 2007	42.6 *	875 *	130.3 *	8.1	4586.2
05 SEP 2007	40.7 *	850 *	126.9 *	8.1	4586.2
13 SEP 2007	24.9 *	755	107.7	8.1	4582.4
20 SEP 2007	18.3 *	711	98.6	8.1	4573.5
27 SEP 2007	16.1 *	695	96.5	8.4	4572.0
04 DEC 2007	15.2 *	708	102.9	8.6	4586.2
10 MAR 2008	28.9 *	797	117.0 *	8.2	4588.8
11 MAR 2008	28.5 *	788	117.6 *	8.3	4588.8
20 MAR 2008	16.1 *	707	96.3	8.1	4579.1
27 MAR 2008	13.6 *	681	90.1	7.9	4579.1
03 APR 2008	13.8 *	680	66.5	8.2	4574.8
10 APR 2008	13.2 *	683	92.1	8.3	4574.8
03 JUN 2008	13.9 *	679	101.0	8.0	4588.2

\* Values Exceed Upper Control Limit

4MW-1

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4MW-2

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
05 SEP 2007	8.8	668	97.7	8.3	4589.7
04 DEC 2007	8.7	668	99.5	8.5	4590.0
10 MAR 2008	8.6	668	95.7	8.4	4592.3
03 JUN 2008	9.4	663	103.0	8.4	4592.2

\* Values Exceed Upper Control Limit

4MW-2

Negative U308 Grades Indicate Less Than Detection Limit.



Mine Unit 4  
Well I.D. 4MW-3

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
04 SEP 2007	10.3	673	92.0	8.6	4585.7
04 DEC 2007	12.6 *	676	92.3	8.7	4586.2
10 MAR 2008	12.2 *	675	91.2	8.6	4588.6
03 JUN 2008	9.7	681	99.2	8.6	4588.2

\* Values Exceed Upper Control Limit

4MW-3

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4MW-4

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
05 SEP 2007	8.6	674	101.9	8.2	4592.4
04 DEC 2007	8.4	675	102.2	8.5	4593.0
10 MAR 2008	8.4	675	99.0	8.3	4595.0
03 JUN 2008	9.6	671	106.0	7.8	4595.2

\* Values Exceed Upper Control Limit

4MW-4

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4MW-5

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
04 SEP 2007	9.0	674	95.9	8.4	4587.2
04 DEC 2007	8.5	671	95.9	8.6	4587.9
10 MAR 2008	9.0	671	94.9	8.4	4590.1
03 JUN 2008	10.2	669	101.4	8.1	4589.8

\* Values Exceed Upper Control Limit

4MW-5

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4MW-6

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
05 SEP 2007	8.7	672	99.7	8.4	4595.3
04 DEC 2007	8.3	672	101.1	8.6	4596.3
10 MAR 2008	8.3	673	97.2	8.5	4598.1
03 JUN 2008	9.1	669	103.0	8.1	4597.9

\* Values Exceed Upper Control Limit

4MW-6

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4MW-7

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
04 SEP 2007	8.8	662	89.9	8.7	4588.9
04 DEC 2007	8.1	662	90.6	8.8	4589.9
10 MAR 2008	8.7	662	90.3	8.7	4591.9
03 JUN 2008	9.8	663	98.3	8.3	4591.6

\* Values Exceed Upper Control Limit

4MW-7

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4MW-8

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
05 SEP 2007	8.6	679	101.1	8.3		4594.5
04 DEC 2007	8.1	677	101.8	8.6		4595.6
10 MAR 2008	8.5	677	99.5	8.4		4597.3
03 JUN 2008	9.4	676	107.0	8.0		4597.5

\* Values Exceed Upper Control Limit

4MW-8

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D.: 4MW-9

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
04 SEP 2007	8.5	668	95.3	8.3	4589.7
04 DEC 2007	8.1	671	95.8	8.5	4590.7
'10 MAR 2008	8.2	670	93.8	8.4	4592.4
09 JUN 2008	9.1	658	91.6	8.3	4592.6

\* Values Exceed Upper Control Limit

4MW-9

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4MW-10

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
05 SEP 2007	8.8	670	97.2	8.4	4595.3
04 DEC 2007	8.5	673	98.3	8.5	4595.3
10 MAR 2008	8.8	673	97.0	8.4	4598.1
03 JUN 2008	9.4	671	99.6	8.0	4598.2

\* Values Exceed Upper Control Limit

4MW-10

Negative U3O8 Grades Indicate Less Than Detection Limit.



Mine Unit 4  
Well I.D. 4MW-11

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
04 SEP 2007	8.9	664	92.0	8.5	4591.1
04 DEC 2007	8.5	666	93.4	8.6	4592.4
10 MAR 2008	9.0	667	91.4	8.4	4593.9
09 JUN 2008	9.5	665	87.4	8.4	4594.2

\* Values Exceed Upper Control Limit

4MW-11

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4MW-12

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
05 SEP 2007	9.1	667	98.9	8.6	4597.2
04 DEC 2007	8.5	676	97.6	8.8	4598.7
10 MAR 2008	8.8	674	95.6	8.6	4600.1
03 JUN 2008	9.6	674	100.0	8.3	4600.1

\* Values Exceed Upper Control Limit

4MW-12

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4MW-13

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
04 SEP 2007	9.0	671	95.0	8.4	4591.8
04 DEC 2007	8.5	670	94.3	8.6	4593.0
10 MAR 2008	9.0	669	93.5	8.4	4594.2
03 JUN 2008	10.2	665	102.0	8.0	4595.1

\* Values Exceed Upper Control Limit

4MW-13

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4MW-14

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
05 SEP 2007	8.8	673	101.5	8.3	4598.6
04 DEC 2007	8.9	674	101.3	8.5	4600.2
10 MAR 2008	8.4	672	98.8	8.4	4601.7
03 JUN 2008	9.4	671	107.0	8.0	4601.6

\* Values Exceed Upper Control Limit

4MW-14

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4MW-15

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
04 SEP 2007	9.1	679	99.3	8.4	4592.6
04 DEC 2007	8.5	682	100.7	8.5	4594.0
10 MAR 2008	9.0	681	100.0	8.4	4595.5
03 JUN 2008	10.2	681	103.0	8.2	4595.8

\* Values Exceed Upper Control Limit

4MW-15

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4MW-16

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
05 SEP 2007	8.1	667	100.3	8.3	4599.9
04 DEC 2007	7.5	670	101.1	8.5	4601.5
10 MAR 2008	7.9	668	98.9	8.3	4603.0
03 JUN 2008	8.1	666	104.2	8.0	4602.9

\* Values Exceed Upper Control Limit

4MW-16

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4MW-17

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
04 SEP 2007	8.8	674	96.6	8.5	4594.5
04 DEC 2007	8.4	673	96.6	8.7	4596.2
10 MAR 2008	8.8	671	95.6	8.4	4597.7
03 JUN 2008	9.0	670	101.0	8.0	4597.7

\* Values Exceed Upper Control Limit

4MW-17

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4MW-18

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
05 SEP 2007	8.9	677	101.3	8.3	4599.5
04 DEC 2007	8.5	679	99.8	8.6	4601.3
11 MAR 2008	9.0	680	99.2	8.4	4602.7
03 JUN 2008	9.1	678	105.0	8.3	4602.7

\* Values Exceed Upper Control Limit

4MW-18

Negative U308 Grades Indicate Less Than Detection Limit.



Mine Unit 4  
Well I.D. 4MW-19

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
05 SEP 2007	8.8	671	96.2	8.3	4594.4
04 DEC 2007	8.7	669	97.5	8.6	4596.1
11 MAR 2008	8.7	673	98.2	8.3	4597.6
03 JUN 2008	9.3	670	99.2	8.4	4597.6

\* Values Exceed Upper Control Limit

4MW-19

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4MW-20

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
05 SEP 2007	8.5	674	102.9	8.3	4598.6
04 DEC 2007	8.1	676	103.3	8.4	4603.4
11 MAR 2008	8.6	679	101.0	8.3	4604.6
03 JUN 2008	9.1	677	111.0	8.4	4604.8

\* Values Exceed Upper Control Limit

4MW-20

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4MW-21

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
05 SEP 2007	8.9	668	95.6	8.2	4594.9
04 DEC 2007	8.8	668	96.9	8.3	4596.7
11 MAR 2008	8.9	669	94.9	8.3	4598.0
03 JUN 2008	9.5	667	99.4	8.3	4598.1

\* Values Exceed Upper Control Limit

4MW-21

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4MW-22

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
05 SEP 2007	8.3	676	100.2	8.2	4601.1
04 DEC 2007	8.2	676	100.0	8.6	4602.7
11 MAR 2008	8.5	682	97.5	8.3	4604.1
03 JUN 2008	8.7	676	104.2	8.1	4604.3

\* Values Exceed Upper Control Limit

4MW-22

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4MW-23

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
05 SEP 2007	9.1	675	102.3	8.2	4596.4
04 DEC 2007	8.6	674	98.7	8.5	4598.5
11 MAR 2008	8.7	676	96.6	8.3	4599.8
03 JUN 2008	9.1	674	102.0	8.0	4599.7

\* Values Exceed Upper Control Limit

4MW-23

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4MW-24

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
13 SEP 2007	8.7	679	96.2	8.4	4599.9
04 DEC 2007	8.2	672	96.7	8.5	4601.7
11 MAR 2008	8.5	674	94.5	8.4	4603.1
03 JUN 2008	9.1	671	100.4	8.4	4603.3

\* Values Exceed Upper Control Limit

4MW-24

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4MW-25

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	11.1	825	116.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
05 SEP 2007	8.7	676	99.1	8.3	4598.1
04 DEC 2007	8.5	680	99.0	8.5	4600.1
11 MAR 2008	8.6	680	96.5	8.3	4601.3
03 JUN 2008	9.0	678	99.5	8.4	4601.5

\* Values Exceed Upper Control Limit

4MW-25

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW1

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
09 JUL 2007	8.4	760	106.7	8.2	4630.5
29 OCT 2007	7.7	767	98.5	8.1	4633.4
28 JAN 2008	7.9	762	93.4	7.6	4635.2
02 APR 2008	8.4	759	93.3	7.7	4637.4

\* Values Exceed Upper Control Limit

5MW1

Negative U308 Grades Indicate Less Than Detection Limit.



Mine Unit 5  
Well I.D. 5MW2

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	$\mu$ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
09 JUL 2007	10.4	913	100.9	8.1	4625.8
29 OCT 2007	9.8	908	95.5	8.1	4628.4
14 JAN 2008	10.0	908	99.5	8.2	4630.0
02 APR 2008	10.8	898	95.7	8.1	4632.4

\* Values Exceed Upper Control Limit

5MW2

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW3

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
09 JUL 2007	7.9	768	101.6	8.1	4630.5
29 OCT 2007	7.3	768	94.1	8.0	4633.0
28 JAN 2008	7.2	770	88.6	7.5	4635.0
02 APR 2008	8.1	770	93.8	7.5	4637.2

\* Values Exceed Upper Control Limit

5MW3

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW4

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
09 JUL 2007	9.8	943	117.4	8.1	4627.9
29 OCT 2007	8.8	977	107.7	8.1	4630.6
14 JAN 2008	8.7	946	112.6	8.1	4632.1
02 APR 2008	8.7	962	109.4	8.0	4634.5

\* Values Exceed Upper Control Limit

5MW4

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW5

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
09 JUL 2007	7.0	885	95.5	8.1	4629.1
29 OCT 2007	6.5	884	89.9	8.1	4631.2
28 JAN 2008	6.6	876	85.9	7.5	4633.4
02 APR 2008	7.1	886	85.6	7.6	4635.4

\* Values Exceed Upper Control Limit

5MW5

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW6

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
09 JUL 2007	9.1	959	115.5	8.1	4628.1
29 OCT 2007	8.4	918	106.0	8.1	4630.9
14 JAN 2008	8.5	885	109.2	8.2	4632.5
02 APR 2008	8.4	900	105.3	8.1	4634.6

\* Values Exceed Upper Control Limit

5MW6

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW7

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
09 JUL 2007	7.0	873	100.5	8.2	4627.0
29 OCT 2007	6.7	875	92.2	8.1	4630.0
14 JAN 2008	6.3	871	93.4	8.2	4631.6
02 APR 2008	6.8	875	90.8	8.1	4633.8

\* Values Exceed Upper Control Limit

5MW7

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW8

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	23	1423	122.5			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
09 JUL 2007	19.2	1238	192.2 *	7.9	4627.9
29 OCT 2007	19.5	1238	180.7 *	7.7	4630.5
14 JAN 2008	11.7	1214	165.4 *	7.8	4632.0
02 APR 2008	15.4	1254	166.8 *	7.7	4634.2

\* Values Exceed Upper Control Limit

5MW8

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW10

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
09 JUL 2007	10.5	791	128.0	8.1	4628.1
29 OCT 2007	12.2	845	151.2 *	8.0	4630.9
14 JAN 2008	9.6	787	126.7	8.2	4632.6
02 APR 2008	12.7	867	153.7 *	8.0	4634.8

\* Values Exceed Upper Control Limit

5MW10

Negative U3O8 Grades Indicate Less Than Detection Limit.



Mine Unit 5  
Well I.D. 5MW12

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.8	1725	145.4			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
09 JUL 2007	8.1	879	125.2	8.0	4623.4
29 OCT 2007	8.0	885	116.5	7.9	4626.4
14 JAN 2008	7.9	883	119.9	8.0	4627.9
02 APR 2008	8.4	882	117.2	7.8	4630.1

\* Values Exceed Upper Control Limit

5MW12

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW14

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
09 JUL 2007	8.4	692	109.3	8.3	4623.6
29 OCT 2007	8.1	691	104.5	8.3	4625.8
14 JAN 2008	8.0	691	108.1	8.3	4627.6
02 APR 2008	8.4	691	104.6	8.1	4629.8

\* Values Exceed Upper Control Limit

5MW14

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW16

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
09 JUL 2007	8.0	753	106.8	8.2	4623.5
29 OCT 2007	7.6	760	99.0	8.2	4626.1
14 JAN 2008	7.4	762	103.1	8.3	4627.8
02 APR 2008	7.7	760	99.8	8.1	4630.0

\* Values Exceed Upper Control Limit

5MW16

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW18

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
09 JUL 2007	7.0	860	98.7	8.1	4621.3
29 OCT 2007	6.8	855	93.3	8.1	4623.9
28 JAN 2008	7.0	860	89.1	7.8	4625.7
02 APR 2008	7.7	857	89.5	7.8	4627.8

\* Values Exceed Upper Control Limit

5MW18

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW20

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
09 JUL 2007	6.9	887	96.7	8.2	4624.8
29 OCT 2007	6.5	877	90.0	8.2	4627.2
14 JAN 2008	6.5	882	94.4	8.2	4629.2
02 APR 2008	7.1	882	91.1	8.0	4631.0

\* Values Exceed Upper Control Limit

5MW20

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW30A

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	8.0	673	107.3	8.5	4615.4
29 OCT 2007	7.4	670	103.3	8.4	4618.0
30 JAN 2008	9.5	720	129.2	7.5	4620.2
14 APR 2008	10.6	678	125.0	7.7	4622.1

\* Values Exceed Upper Control Limit

5MW30A

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW31

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	8.1	671	106.9	8.4	4615.2
29 OCT 2007	7.9	669	105.9	8.3	4617.8
30 JAN 2008	8.4	716	111.4	8.2	4620.1
01 APR 2008	9.9	672	119.9	8.3	4622.0

\* Values Exceed Upper Control Limit

5MW31

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW32A

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	8.7	672	104.3	8.3	4615.3
23 OCT 2007	7.9	675	105.8	8.3	4617.9
30 JAN 2008	9.4	706	122.2	7.5	4620.5
14 APR 2008	10.1	673	112.0	7.7	4622.1

\* Values Exceed Upper Control Limit

5MW32A

Negative U3O8 Grades Indicate Less Than Detection Limit.



Mine Unit 5  
Well I.D. 5MW33

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	8.3	670	105.0	8.4	4615.7
29 OCT 2007	7.8	670	101.1	8.3	4618.3
30 JAN 2008	9.0	711	121.4	7.6	4620.5
14 APR 2008	11.2	675	117.0	8.0	4622.3

\* Values Exceed Upper Control Limit

5MW33

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW34

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	8.7	674	106.5	8.3	4616.3
23 OCT 2007	7.7	676	104.6	8.2	4618.9
28 JAN 2008	8.1	710	117.1	7.5	4621.5
14 APR 2008	9.7	681	115.0	7.9	4623.3

\* Values Exceed Upper Control Limit

5MW34

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW35A

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	8.4	670	107.2	8.5	4617.0
29 OCT 2007	7.8	673	104.0	8.4	4619.7
30 JAN 2008	8.1	677	103.1	7.9	4621.8
14 APR 2008	10.0	674	110.0	8.1	4623.6

\* Values Exceed Upper Control Limit

5MW35A

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW36

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	8.9	677	109.3	8.3	4617.3
23 OCT 2007	8.3	679	106.8	8.3	4620.1
28 JAN 2008	7.9	692	107.1	7.7	4621.9
02 APR 2008	9.4	685	113.0	7.8	4624.1

\* Values Exceed Upper Control Limit

5MW36

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW37

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	7.9	660	108.0	8.5	4618.1
29 OCT 2007	7.9	668	104.3	8.3	4620.9
30 JAN 2008	8.1	674	109.2	8.2	4622.9
14 APR 2008	9.7	669	111.0	8.1	4624.7

\* Values Exceed Upper Control Limit

5MW37

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW38

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	8.8	694	116.9	8.2	4618.2
23 OCT 2007	7.9	699	118.1	8.1	4621.0
28 JAN 2008	7.9	706	115.9	7.7	4623.0
02 APR 2008	9.5	700	122.8	7.8	4625.4

\* Values Exceed Upper Control Limit

5MW38

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW39A

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
09 JUL 2007	8.2	683	112.3	8.3	4620.4
29 OCT 2007	7.8	683	105.9	8.2	4623.0
30 JAN 2008	7.9	704	114.6	7.6	4625.0
02 APR 2008	9.3	688	114.6	7.5	4626.9

\* Values Exceed Upper Control Limit

5MW39A

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW40

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	8.0	675	109.6	8.3	4619.1
23 OCT 2007	7.9	677	106.9	8.3	4621.9
28 JAN 2008	8.2	689	111.7	7.9	4623.8
02 APR 2008	9.8	702	124.5	7.9	4625.9

\* Values Exceed Upper Control Limit

5MW40

Negative U3O8 Grades Indicate Less Than Detection Limit.



Mine Unit 5  
Well I.D. 5MW41A

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	7.9	668	108.5	8.3	4621.3
29 OCT 2007	7.8	670	102.6	8.2	4624.1
28 JAN 2008	8.2	683	108.3	7.7	4626.1
02 APR 2008	9.5	672	105.4	7.7	4628.4

\* Values Exceed Upper Control Limit

5MW41A

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW42

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	8.9	677	107.7	8.3	4620.6
23 OCT 2007	7.9	679	107.1	8.2	4623.4
28 JAN 2008	7.9	680	104.7	7.4	4625.2
02 APR 2008	8.6	678	106.6	7.8	4627.6

\* Values Exceed Upper Control Limit

5MW42

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW43

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	7.9	677	111.6	8.4	4623.0
29 OCT 2007	7.6	676	105.7	8.3	4625.8
28 JAN 2008	8.0	711	123.0	7.8	4627.9
02 APR 2008	9.0	715	132.2	7.7	4630.1

\* Values Exceed Upper Control Limit

5MW43

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW44

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	8.5	677	106.6	8.3	4621.1
23 OCT 2007	8.1	678	108.0	8.3	4624.0
28 JAN 2008	7.9	678	103.2	7.6	4625.7
01 APR 2008	8.2	678	105.3	7.7	4628.2

\* Values Exceed Upper Control Limit

5MW44

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW45

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	8.0	677	116.7	8.3	4624.8
29 OCT 2007	7.3	679	109.3	8.2	4627.6
28 JAN 2008	7.9	716	126.8	7.4	4629.5
14 APR 2008	8.4	681	116.0	8.1	4631.4

\* Values Exceed Upper Control Limit

5MW45

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW46

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	8.7	679	109.8	8.3	4622.6
29 OCT 2007	7.6	681	110.7	8.4	4625.4
14 JAN 2008	7.5	680	111.7	8.2	4627.1
01 APR 2008	7.9	684	111.8	8.0	4629.7

\* Values Exceed Upper Control Limit

5MW46

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW47B

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	7.8	683	113.3	8.3	4627.7
29 OCT 2007	7.4	682	108.9	8.1	4630.5
28 JAN 2008	7.5	684	109.0	7.5	4632.4
01 APR 2008	9.3	686	112.8	7.4	4634.7

\* Values Exceed Upper Control Limit

5MW47B

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW48

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
02 JUL 2007	20.7	707	153.9 *	8.1		4623.3
29 OCT 2007	21.8	780	140.8 *	8.2		4626.0
30 JAN 2008	21.8	790	149.2 *	8.2		4627.3
14 APR 2008	23.7 *	795	145.0 *	8.1		4630.1
15 APR 2008	24.3 *	790	138.0 *	8.1		4630.1
23 APR 2008	27.3 *	781	175.0 *	8.0		4630.1
01 MAY 2008	21.7	719	161.0 *	8.0		4630.1
08 MAY 2008	22.4	709	179.0 *	7.9		4622.1
15 MAY 2008	18.9	681	183.8 *	8.1		4614.7

\* Values Exceed Upper Control Limit

5MW48

Negative U3O8 Grades Indicate Less Than Detection Limit.



Mine Unit 5  
Well I.D. 5MW49

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	7.0	680	118.4	8.3	4628.4
29 OCT 2007	7.4	682	108.5	8.2	4631.2
28 JAN 2008	7.6	684	107.0	7.9	4632.9
01 APR 2008	9.3	685	111.0	8.0	4635.2

\* Values Exceed Upper Control Limit

5MW49

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW50

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
03 JUL 2007	8.4	675	115.6	8.4	4621.6
29 OCT 2007	8.0	681	112.1	8.3	4624.3
28 JAN 2008	8.4	679	106.8	7.9	4625.9
02 APR 2008	8.7	684	106.5	7.7	4628.9

\* Values Exceed Upper Control Limit

5MW50

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW51

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	8.0	685	117.2	8.2	4630.2
29 OCT 2007	7.4	686	110.2	8.2	4633.0
28 JAN 2008	7.1	686	106.3	7.8	4634.6
14 APR 2008	8.8	691	121.0	7.8	4637.0

\* Values Exceed Upper Control Limit

5MW51

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW52

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
03 JUL 2007	8.4	697	125.2	8.4	4623.2
29 OCT 2007	8.5	693	115.0	8.3	4626.2
14 JAN 2008	8.3	696	116.7	8.2	4628.6
01 APR 2008	9.5	560	103.2	8.2	4630.2

\* Values Exceed Upper Control Limit

5MW52

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW53

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	8.0	691	118.7	8.3	4630.4
29 OCT 2007	7.4	686	111.7	8.2	4633.3
30 JAN 2008	9.9	699	125.6	8.1	4635.0
14 APR 2008	8.9	702	136.0 *	8.0	4637.2

\* Values Exceed Upper Control Limit

5MW53

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW54

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
03 JUL 2007	11.7	730	150.2 *	8.2	4624.0
29 OCT 2007	12.2	760	145.1 *	8.1	4626.9
14 JAN 2008	11.8	766	147.3 *	8.0	4629.2
02 APR 2008	11.6	750	138.4 *	8.0	4630.9

\* Values Exceed Upper Control Limit

5MW54

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW55

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	8.5	687	116.3	8.2	4629.2
29 OCT 2007	7.9	688	111.9	8.2	4632.3
28 JAN 2008	8.2	702	114.6	7.7	4633.8
14 APR 2008	8.6	695	131.0	8.2	4636.1

\* Values Exceed Upper Control Limit

5MW55

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW56

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
03 JUL 2007	9.2	701	115.3	8.0	4624.7
29 OCT 2007	9.0	698	117.5	8.2	4627.1
14 JAN 2008	8.6	698	116.8	8.2	4628.4
02 APR 2008	11.7	751	132.5	8.1	4631.3

\* Values Exceed Upper Control Limit

5MW56

Negative U3O8 Grades Indicate Less Than Detection Limit.



Mine Unit 5  
Well I.D. 5MW57

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	8.2	692	115.6	8.2	4628.9
29 OCT 2007	8.0	690	112.6	8.2	4632.0
28 JAN 2008	8.1	694	106.9	7.8	4633.3
02 APR 2008	8.7	691	110.7	7.6	4636.1

\* Values Exceed Upper Control Limit

5MW57

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW58

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
03 JUL 2007	9.7	696	116.6	8.4	4624.8
29 OCT 2007	9.2	697	110.8	8.2	4627.5
14 JAN 2008	7.9	697	114.7	8.3	4629.0
02 APR 2008	10.0	697	109.9	8.1	4631.7

\* Values Exceed Upper Control Limit

5MW58

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW59

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	8.2	689	117.9	8.3	4626.9
29 OCT 2007	8.0	690	112.3	8.3	4630.0
28 JAN 2008	8.0	689	106.6	7.9	4631.1
02 APR 2008	9.0	689	108.8	7.7	4633.9

\* Values Exceed Upper Control Limit

5MW59

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW60

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	23.7	779	191.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
03 JUL 2007	10.7	975 *	185.1	8.1	4624.6
29 OCT 2007	11.1	969 *	172.8	7.9	4627.3
14 JAN 2008	10.9	970 *	181.3	8.0	4628.9
02 APR 2008	12.0	965 *	180.4	7.6	4631.4

\* Values Exceed Upper Control Limit

5MW60

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW61

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	8.2	694	116.6	8.2	4629.3
29 OCT 2007	7.9	689	110.7	8.1	4631.9
28 JAN 2008	8.0	690	106.3	7.6	4633.2
02 APR 2008	9.5	690	114.9	7.6	4636.1

\* Values Exceed Upper Control Limit

5MW61

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW62

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
03 JUL 2007	9.9	760	128.9	8.2	4624.3
29 OCT 2007	9.6	758	125.5	8.1	4627.3
14 JAN 2008	9.3	768	126.2	8.2	4628.8
02 APR 2008	9.1	763	130.2	7.7	4631.3

\* Values Exceed Upper Control Limit

5MW62

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW63

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
03 JUL 2007	8.2	684	109.9	8.3	4628.8
29 OCT 2007	8.0	689	109.5	8.2	4631.8
28 JAN 2008	8.2	686	106.4	7.8	4633.0
02 APR 2008	8.4	686	110.7	7.9	4635.7

\* Values Exceed Upper Control Limit

5MW63

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. . 5MW64

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
03 JUL 2007	8.2	745	110.7	8.3	4625.4
29 OCT 2007	8.1	752	109.0	8.2	4628.1
14 JAN 2008	7.9	745	113.5	8.2	4629.7
02 APR 2008	7.9	745	111.1	8.0	4632.3

\* Values Exceed Upper Control Limit

5MW64

Negative U308 Grades Indicate Less Than Detection Limit.



Mine Unit 5  
Well I.D. 5MW65

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	24.9	734	128.1			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
03 JUL 2007	9.5	697	116.0	8.2	4629.4
29 OCT 2007	8.8	700	108.7	8.0	4632.4
28 JAN 2008	9.1	701	104.9	7.8	4633.3
02 APR 2008	10.4	700	108.7	7.8	4636.5

\* Values Exceed Upper Control Limit

5MW65

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW66

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
03 JUL 2007	34.6 *	1410 *	332.0 *	7.4	4626.5
29 OCT 2007	39.0 *	1463 *	378.0 *	7.5	4629.3
14 JAN 2008	37.6 *	1510 *	384.0 *	7.6	4630.7
02 APR 2008	40.0 *	1473 *	347.6 *	7.4	4633.2

\* Values Exceed Upper Control Limit

5MW66

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW67

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
09 JUL 2007	7.0	835	98.8	8.2	4630.4
29 OCT 2007	6.7	844	90.1	7.8	4633.4
28 JAN 2008	6.9	843	86.9	7.6	4634.8
02 APR 2008	8.4	843	91.7	7.4	4637.4

\* Values Exceed Upper Control Limit

5MW67

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5MW69

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
03 JUL 2007	7.5	844	95.2	8.1	4630.4
29 OCT 2007	7.1	823	92.5	8.2	4633.2
28 JAN 2008	7.2	840	88.4	7.9	4635.0
02 APR 2008	8.7	826	93.3	8.0	4637.4

\* Values Exceed Upper Control Limit

5MW69

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW17-2

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	5.6	1309	76.1	7.6	4583.2
12 NOV 2007	5.2	1309	69.9	7.6	4585.4
05 FEB 2008	4.9	1314	64.7	7.5	4589.2
21 MAY 2008	5.6	1298	72.7	7.9	4589.2

\* Values Exceed Upper Control Limit

6MW17-2

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW19

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	5.3	1308	76.4	8.1	4629.7
12 NOV 2007	5.0	1314	66.4	8.0	4626.6
05 FEB 2008	4.9	1314	67.9	7.7	4634.1
21 MAY 2008	5.7	1311	75.2	8.1	4635.1

\* Values Exceed Upper Control Limit

6MW19

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW21

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	5.6	1177	81.6	7.7	4627.9
12 NOV 2007	5.6	1179	77.3	7.6	4625.7
05 FEB 2008	5.5	1177	72.0	7.5	4632.4
21 MAY 2008	5.7	1171	79.1	7.9	4633.2

\* Values Exceed Upper Control Limit

6MW21

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW23

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	5.3	1250	74.7	7.9	4625.5
12 NOV 2007	5.1	1254	65.7	7.7	4623.2
05 FEB 2008	5.0	1257	67.1	7.5	4629.9
02 JUN 2008	6.6	1255	70.4	7.8	4629.9

\* Values Exceed Upper Control Limit

6MW23

Negative U3O8 Grades Indicate Less Than Detection Limit.



Mine Unit 6  
Well I.D. 6MW25

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
14 AUG 2007	4.7	1256	69.6	7.9	4623.5
12 NOV 2007	5.2	1254	66.5	7.7	4621.1
11 FEB 2008	4.9	1256	67.8	7.5	4622.4
21 MAY 2008	5.7	1253	73.4	7.9	4625.4

\* Values Exceed Upper Control Limit

6MW25

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW27

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
14 AUG 2007	6.3	1248	94.8	7.8	4622.6
12 NOV 2007	6.4	1244	89.7	7.7	4620.4
11 FEB 2008	6.5	1248	89.7	7.5	4622.4
21 MAY 2008	7.3	1246	99.1 *	7.9	4655.2

\* Values Exceed Upper Control Limit

6MW27

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW29

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	5.9	1282	80.0	8.2	4621.0
06 NOV 2007	6.6	1287	78.2	8.3	4618.5
11 FEB 2008	6.5	1292	80.0	8.1	4620.4
21 MAY 2008	6.5	1290	83.2	8.1	4625.1

\* Values Exceed Upper Control Limit

6MW29

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW31

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	14.4	1460	140.6 *	7.7	4621.3
12 NOV 2007	14.6	1465	135.2 *	7.5	4619.0
11 FEB 2008	13.8	1463	129.8 *	7.4	4621.0

\* Values Exceed Upper Control Limit

6MW31

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW33

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	5.1	1280	73.1	7.8	4617.4
06 NOV 2007	5.2	1280	68.7	7.8	4615.4
11 FEB 2008	4.8	1277	68.8	7.4	4618.5
21 MAY 2008	5.1	1280	72.4	7.6	4621.9

\* Values Exceed Upper Control Limit

6MW33

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW34

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	4.7	1341	71.1	7.5	4630.7
12 NOV 2007	4.9	1347	63.1	7.3	4628.6
05 FEB 2008	4.8	1345	64.5	7.4	4635.2
21 MAY 2008	5.6	1318	74.3	7.6	4636.0

\* Values Exceed Upper Control Limit

6MW34

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW35

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	5.0	1287	78.1	7.5	4615.7
06 NOV 2007	5.0	1281	68.1	7.3	4613.5
11 FEB 2008	4.8	1279	69.0	7.4	4615.5
21 MAY 2008	5.1	1282	72.2	7.5	4632.8

\* Values Exceed Upper Control Limit

6MW35

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW36

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	6.0	1206	77.6	7.6	4629.7
12 NOV 2007	5.7	1214	73.6	7.4	4627.7
05 FEB 2008	5.6	1212	67.0	7.4	4634.0
21 MAY 2008	6.7	1180	79.7	7.6	4635.2

\* Values Exceed Upper Control Limit

6MW36

Negative U308 Grades Indicate Less Than Detection Limit.



Mine Unit 6  
Well I.D. 6MW37

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	5.7	1279	78.6	7.6	4613.6
06 NOV 2007	5.0	1274	68.0	7.4	4611.5
19 FEB 2008	5.0	1266	68.1	7.4	4613.8
21 MAY 2008	5.2	1270	75.2	7.5	4618.4

\* Values Exceed Upper Control Limit

6MW37

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW38

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	4.7	1335	74.6	7.6	4628.2
12 NOV 2007	4.9	1339	65.5	7.4	4627.4
05 FEB 2008	4.7	1339	65.5	7.4	4632.8
21 MAY 2008	5.6	1336	76.2	7.6	4633.5

\* Values Exceed Upper Control Limit

6MW38

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW39

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	5.6	1273	70.7	8.1	4607.1
06 NOV 2007	5.1	1255	63.1	7.8	4608.1
11 FEB 2008	4.8	1255	63.1	8.1	4611.1
20 MAY 2008	5.4	1256	70.0	8.2	4613.1

\* Values Exceed Upper Control Limit

6MW39

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW40

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	4.9	1346	71.4	7.7	4625.6
12 NOV 2007	4.9	1350	62.3	7.8	4623.6
05 FEB 2008	4.7	1350	63.1	7.7	4630.2
21 MAY 2008	5.2	1347	69.1	8.1	4631.0

\* Values Exceed Upper Control Limit

6MW40

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW41

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	5.7	1125	134.8 *	8.0	4608.8
06 NOV 2007	5.6	1110	128.5 *	7.9	4606.9
11 FEB 2008	5.8	1102	134.2 *	8.1	4609.2
20 MAY 2008	6.1	1094	139.6 *	8.2	4611.2

\* Values Exceed Upper Control Limit

6MW41

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW42

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	5.7	1336	70.5	7.3	4624.3
12 NOV 2007	4.9	1340	62.0	7.5	4622.3
05 FEB 2008	4.8	1340	64.1	7.4	4629.0
21 MAY 2008	5.2	1345	66.4	7.5	4629.0

\* Values Exceed Upper Control Limit

6MW42

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW43

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	8.4	1347	106.3 *	7.9	4607.8
06 NOV 2007	8.5	1347	100.3 *	7.9	4605.9
11 FEB 2008	8.8	1359	102.4 *	8.0	4607.9
20 MAY 2008	9.7	1369	112.4 *	8.1	4610.4

\* Values Exceed Upper Control Limit

6MW43

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW44

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	5.3	1351	82.5	7.9	4622.9
12 NOV 2007	5.6	1353	77.0	7.6	4622.8
11 FEB 2008	5.7	1356	81.3	7.4	4627.6
21 MAY 2008	5.7	1360	85.1	7.5	4629.0

\* Values Exceed Upper Control Limit

6MW44

Negative U3O8 Grades Indicate Less Than Detection Limit.



Mine Unit 6  
Well I.D. 6MW45

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	6.2	1280	83.6	7.6	4605.3
06 NOV 2007	6.0	1222	88.7	7.6	4604.1
11 FEB 2008	5.8	1220	87.8	7.4	4607.2
21 MAY 2008	6.1	1222	93.2	7.5	4610.5

\* Values Exceed Upper Control Limit

6MW45

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW46

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20.6	2427	89.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	7.8	1450	132.6 *	7.8	4620.9
12 NOV 2007	8.0	1432	124.1 *	7.6	4618.9
11 FEB 2008	8.0	1430	129.2 *	7.5	4620.9
21 MAY 2008	7.9	1435	133.2 *	7.6	4626.9

\* Values Exceed Upper Control Limit

6MW46

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW47

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	5.6	1284	84.1	7.8	4606.6
05 NOV 2007	5.6	1279	77.6	7.7	4604.9
11 FEB 2008	5.9	1280	82.1	8.1	4605.9
21 MAY 2008	6.0	1261	84.1	8.3	4607.9

\* Values Exceed Upper Control Limit

6MW47

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW48-3

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	5.3	1348	69.8	7.7	4622.0
12 NOV 2007	5.5	1344	64.0	7.5	4623.1
11 FEB 2008	5.1	1354	63.6	7.7	4618.9
21 MAY 2008	5.4	1355	68.6	7.7	4628.1

\* Values Exceed Upper Control Limit

6MW48-3

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW49

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	5.2	1288	81.2	7.6	4607.6
06 NOV 2007	5.6	1282	74.6	7.5	4605.6
11 FEB 2008	5.7	1280	71.6	7.7	4607.6
20 MAY 2008	5.8	1141	78.0	7.9	4609.6

\* Values Exceed Upper Control Limit

6MW49

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW50

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	5.3	1333	72.8	7.6	4618.8
06 NOV 2007	4.9	1334	65.5	7.6	4616.8
11 FEB 2008	4.9	1340	66.5	7.4	4618.8
21 MAY 2008	5.2	1345	71.2	7.5	4625.2

\* Values Exceed Upper Control Limit

6MW50

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW51

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	5.5	1275	75.5	7.7	4607.2
06 NOV 2007	5.6	1274	68.2	7.6	4605.2
11 FEB 2008	5.1	1272	70.5	7.4	4607.2
21 MAY 2008	5.4	1275	74.3	7.5	4613.4

\* Values Exceed Upper Control Limit

6MW51

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW52

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	5.6	1267	72.7	7.7	4613.4
06 NOV 2007	5.8	1262	66.1	7.5	4611.6
11 FEB 2008	5.5	1264	66.8	7.5	4616.4
20 MAY 2008	5.7	1263	74.4	8.2	4619.9

\* Values Exceed Upper Control Limit

6MW52

Negative U308 Grades Indicate Less Than Detection Limit.



Mine Unit 6  
Well I.D. 6MW53

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	6.1	1211	73.4	8.5	4605.6
06 NOV 2007	6.0	1211	65.5	8.1	4603.5
11 FEB 2008	6.3	1214	66.5	8.0	4606.5
20 MAY 2008	6.2	1211	75.4	8.5	4609.1

\* Values Exceed Upper Control Limit

6MW53

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6MW54

CHRISTENSEN RANCH  
PERIMETER ORE ZONE MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	5.4	1278	75.9	7.8	4611.5
06 NOV 2007	5.6	1281	65.3	7.7	4609.6
11 FEB 2008	5.0	1288	64.9	7.8	4607.6
20 MAY 2008	5.7	1284	68.8	8.1	4609.2

\* Values Exceed Upper Control Limit

6MW54

Negative U308 Grades Indicate Less Than Detection Limit.

**CHRISTENSEN PROJECT**  
**Interior Shallow Sand Monitor Wells**

Mine Unit 5  
Well I.D. MW-11S

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.1	2922	316.6			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	6.8	1285	93.0	7.9	4648.2
23 OCT 2007	6.1	1300	94.1	8.0	4648.7
30 JAN 2008	6.9	1287	100.6	7.6	4649.5
01 APR 2008	7.9	1284	100.1	7.6	4649.7

\* Values Exceed Upper Control Limit

MW-11S

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW46S

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.5	1087	184.4			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.7	1181 *	149.9	8.0	4554.3
10 OCT 2007	8.8	1177 *	138.3	7.8	4554.3
08 JAN 2008	8.8	1183 *	141.6	7.9	4554.3
08 APR 2008	9.1	1183 *	137.0	7.7	4554.9

\* Values Exceed Upper Control Limit

MW46S

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW48S

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.2	1775	268.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.0	1812 *	124.0	7.8	4556.0
10 OCT 2007	9.1	1802 *	125.7	7.6	4556.0
08 JAN 2008	8.7	1821 *	127.3	7.7	4555.6
08 APR 2008	9.2	1812 *	125.0	7.5	4556.5

\* Values Exceed Upper Control Limit

MW48S

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW50S

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.2	1775	268.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	8.6	1253	147.2	7.9	4558.7
10 OCT 2007	8.5	1285	150.1	7.7	4558.7
08 JAN 2008	8.9	1287	162.2	8.1	4560.1
09 APR 2008	9.0	1285	192.0	8.2	4559.2

\* Values Exceed Upper Control Limit

MW50S

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW52S

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.2	1775	268.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	7.6	1379	113.8	8.0	4550.8
10 OCT 2007	7.2	1411	101.7	7.8	4550.8
07 JAN 2008	6.9	1414	104.0	8.0	4549.2
07 APR 2008	7.0	1412	103.0	8.2	4551.5

\* Values Exceed Upper Control Limit

MW52S

Negative U308 Grades Indicate Less Than Detection Limit.



Mine Unit 3  
Well I.D. MW54S

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.2	1775	268.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
30 JUL 2007	8.1	1499	123.9	7.8	4561.8
10 OCT 2007	6.8	1497	116.3	7.8	4561.8
08 JAN 2008	7.1	1499	117.4	8.0	4562.0
09 APR 2008	7.4	1505	119.0	8.0	4562.4

\* Values Exceed Upper Control Limit

MW54S

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW56S

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.5	1087	184.4			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
30 JUL 2007	8.3	785	168.5	8.0		4561.1
23 OCT 2007	7.7	852	179.2	7.9		4561.1
08 JAN 2008	6.3	811	183.9	7.8		4561.4
08 APR 2008	10.4	753	195.5 *	7.8		4561.7

\* Values Exceed Upper Control Limit

MW56S

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW58S

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.5	1087	184.4			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	7.0	954	122.4	8.6	4568.6
23 OCT 2007	6.7	960	118.2	8.4	4568.6
08 JAN 2008	6.5	945	118.2	8.4	4569.2
08 APR 2008	6.8	950	122.2	8.4	4569.4

\* Values Exceed Upper Control Limit

MW58S

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW66S-2

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.2	1775	268.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	7.2	1378	119.7	7.8	4574.3
23 OCT 2007	6.7	1473	115.1	8.0	4574.3
08 JAN 2008	7.1	1460	119.5	7.9	4576.3
08 APR 2008	7.1	1470	121.2	8.1	4576.6

\* Values Exceed Upper Control Limit

MW66S-2

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW68S

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	23.5	3560	304			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	14.1	2433	211.4	7.0	4572.7
05 DEC 2007	13.6	2451	200.6	7.4	4572.8
11 MAR 2008	17.7	2565	284.0	7.2	4575.6
09 JUN 2008	15.5	2482	245.6	7.3	4572.6

\* Values Exceed Upper Control Limit

MW68S

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW70S

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	63.4	21365	5861.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	10.4	1819	40.6	7.5	4562.1
05 DEC 2007	10.2	1831	49.6	7.6	4562.3
11 MAR 2008	10.5	1889	33.5	7.5	4562.3
09 JUN 2008	10.7	1786	40.7	7.3	4562.9

\* Values Exceed Upper Control Limit

MW70S

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW72S

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	63.4	21365	5861.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	11.6	2205	158.9	7.5	4568.1
05 DEC 2007	10.9	2210	150.3	7.8	4568.3
11 MAR 2008	11.5	2214	158.0	7.8	4568.3
09 JUN 2008	12.7	2201	180.9	7.7	4568.7

\* Values Exceed Upper Control Limit

MW72S

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW92S

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	23.5	3560	304			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	11.1	2392	139.0	7.3	4571.0
05 DEC 2007	10.4	2399	133.9	7.5	4571.1
11 MAR 2008	11.0	2408	138.0	7.5	4570.7
09 JUN 2008	12.0	2326	140.0	7.3	4570.5

\* Values Exceed Upper Control Limit

MW92S

Negative U308 Grades Indicate Less Than Detection Limit.



Mine Unit 2  
Well I.D. MW94S

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	23.5	3560	304			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
17 SEP 2007	13.4	2636	184.9	6.9	4563.6
05 DEC 2007	12.9	2642	175.3	7.4	4563.5
11 MAR 2008	13.4	2637	183.0	7.4	4563.3
09 JUN 2008	14.2	2637	190.0	7.2	4563.2

\* Values Exceed Upper Control Limit

MW94S

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW96S

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	23.5	3560	304			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
17 SEP 2007	11.2	2708	229.3	7.1		4566.6
05 DEC 2007	10.8	2712	217.0	7.3		4566.6
03 MAR 2008	10.9	2709	211.7	7.1		4564.4
09 JUN 2008	10.8	2560	219.7	7.4		4566.1

\* Values Exceed Upper Control Limit

MW96S

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW98S

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	63.4	21365	5861.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
17 SEP 2007	12.3	2641	166.9	7.0	4558.0
05 DEC 2007	11.9	2641	163.0	7.5	4558.0
03 MAR 2008	12.5	2634	160.6	7.2	4558.4
09 JUN 2008	12.8	2636	169.4	7.4	4557.8

\* Values Exceed Upper Control Limit

MW98S

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW100S

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	23.5	3560	304			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
17 SEP 2007	12.0	2589	157.5	7.6	4555.9
11 DEC 2007	12.2	2596	156.0	7.6	4555.9
03 MAR 2008	12.2	2593	151.6	7.1	4555.7
09 JUN 2008	12.8	2594	169.2	7.4	4555.1

\* Values Exceed Upper Control Limit

MW100S

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW112S

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	63.4	21365	5861.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
19 SEP 2007	10.0	2203	252.4	11.2	4552.6
05 DEC 2007	10.5	2355	241.1	11.4	4553.7
03 MAR 2008	11.8	2156	254.3	11.1	4554.6
10 JUN 2008	12.6	1998	229.0	11.3	4553.7

\* Values Exceed Upper Control Limit

MW112S

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW117S

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.6	768	144.5			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
17 SEP 2007	7.2	740	128.2	7.9	4537.4
05 DEC 2007	6.9	736	128.5	8.3	4538.2
03 MAR 2008	7.3	736	128.2	7.9	4538.4
10 JUN 2008	7.4	735	133.0	8.5	4538.4

\* Values Exceed Upper Control Limit

MW117S

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4SM-1

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	8.8	1570	142.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
05 SEP 2007	6.5	1186	102.8	7.9	4611.6
04 DEC 2007	6.4	1170	120.3	8.7	4612.2
11 MAR 2008	6.6	1156	103.0	8.0	4612.2
02 JUN 2008	6.7	1149	116.0	8.2	4612.3

\* Values Exceed Upper Control Limit

4SM-1

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4SM-4

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	8.8	1570	142.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
04 SEP 2007	7.9	1063	117.1	7.0	4598.5
04 DEC 2007	7.4	1078	122.7	7.8	4598.9
11 MAR 2008	6.2	1087	109.0	7.7	4599.1
03 JUN 2008	6.4	1041	110.0	7.7	4599.5

\* Values Exceed Upper Control Limit

4SM-4

Negative U3O8 Grades Indicate Less Than Detection Limit.



Mine Unit 4  
Well I.D. 4SM-8

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	8.8	1570	142.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
04 SEP 2007	6.1	844	114.5	7.8	4594.7
04 DEC 2007	6.5	845	131.2	8.7	4595.1
11 MAR 2008	6.2	863	117.0	7.8	4595.1
02 JUN 2008	6.0	822	122.0	7.9	4595.3

\* Values Exceed Upper Control Limit

4SM-8

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4SRM-07

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	19.4	1175	447.1			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
04 SEP 2007	8.5	511	249.2	7.9	4598.5
04 DEC 2007	9.1	515	261.8	8.7	4581.1
11 MAR 2008	8.7	513	250.0	8.0	4581.1
03 JUN 2008	9.0	511	264.4	7.9	4581.0

\* Values Exceed Upper Control Limit

4SRM-07

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5SM1

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.1	2922	316.6			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	19.8	1205	170.1	7.3	4631.2
23 OCT 2007	23.0 *	1208	168.6	7.3	4631.2
28 JAN 2008	18.4	1210	165.4	7.3	4632.1
14 APR 2008	17.8	1192	127.0	7.4	4632.5

\* Values Exceed Upper Control Limit

5SM1

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5SM2

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.1	2922	316.6			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	7.1	1199	114.5	7.0	4678.8
23 OCT 2007	6.5	1195	109.2	7.6	4678.2
30 JAN 2008	11.8	1284	270.8	7.8	4679.2
14 APR 2008	24.6 *	1166	262.0	7.9	4679.3

\* Values Exceed Upper Control Limit

5SM2

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5SM3

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.1	2922	316.6			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
03 JUL 2007	6.7	1475	77.7	8.2	4677.9
23 OCT 2007	6.1	1497	77.9	8.4	4677.4
30 JAN 2008	6.9	1481	81.7	8.0	4678.1
14 APR 2008	7.0	1467	83.0	7.9	4678.1

\* Values Exceed Upper Control Limit

5SM3

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5SM5

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.1	2922	316.6			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
03 JUL 2007	6.0	1323	107.5	7.7	4683.8
29 OCT 2007	5.6	1328	101.6	7.7	4682.3
14 JAN 2008	5.6	1319	104.7	7.5	4682.7
01 APR 2008	5.7	1331	107.6	7.1	4683.3

\* Values Exceed Upper Control Limit

5SM5

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5SM6

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.1	2922	316.6			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
03 JUL 2007	9.9	589	169.3	8.4	4673.8
29 OCT 2007	9.0	612	188.9	8.3	4672.9
28 JAN 2008	9.1	604	172.9	8.1	4673.4
01 APR 2008	8.7	597	159.4	7.9	4674.2

\* Values Exceed Upper Control Limit

5SM6

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5SM7

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.1	2922	316.6			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
03 JUL 2007	8.2	1190	169.5	7.6	4667.8
29 OCT 2007	15.8	973	193.7	7.6	4667.4
28 JAN 2008	9.6	1237	163.4	7.4	4668.0
01 APR 2008	9.4	1775	169.3	7.2	4668.8

\* Values Exceed Upper Control Limit

5SM7

Negative U308 Grades Indicate Less Than Detection Limit.



Mine Unit 5  
Well I.D. WCOW-04

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.1	2922	316.6			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	7.5	1122	127.6	7.8	4649.2
23 OCT 2007	6.4	1151	125.7	8.1	4649.8
28 JAN 2008	7.5	1151	139.3	7.8	4650.6
01 APR 2008	7.6	1088	145.0	7.7	4651.0

\* Values Exceed Upper Control Limit

WCOW-04

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6SM1

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22	1966	289.1			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	6.3	927	114.3	8.2	4703.3
06 NOV 2007	6.0	900	102.5	8.1	4703.7
05 FEB 2008	6.2	913	106.5	8.2	4704.3
20 MAY 2008	6.4	895	115.9	8.3	4704.7

\* Values Exceed Upper Control Limit

6SM1

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6SM2

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	24.2	3574	238.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	7.6	1950	86.4	7.5	4707.6
06 NOV 2007	7.8	1960	77.8	7.5	4707.9
05 FEB 2008	7.5	1958	78.5	7.4	4708.6
20 MAY 2008	8.2	1963	77.2	7.7	4708.8

\* Values Exceed Upper Control Limit

6SM2

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6SM3

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	24.2	3574	238.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	9.6	2101	88.3	8.0	4716.8
06 NOV 2007	14.9	2107	105.9	8.0	4717.0
05 FEB 2008	11.1	2095	105.7	8.3	4716.5
20 MAY 2008	12.9	2078	107.0	8.6	4717.2

\* Values Exceed Upper Control Limit

6SM3

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6SM4

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	24.2	3574	238.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	6.7	1015	26.4	9.0	4717.4
06 NOV 2007	7.6	1658	16.7	8.9	4717.6
05 FEB 2008	7.0	1583	24.1	9.4	4717.6
21 MAY 2008	7.2	1599	26.2	9.2	4717.6

\* Values Exceed Upper Control Limit

6SM4

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6SM5

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22	1966	289.1			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
14 AUG 2007	7.1	1461	89.6	7.1	4708.4
12 NOV 2007	7.3	1441	90.8	7.6	4710.4
05 FEB 2008	7.4	1534	88.8	7.1	4709.0
21 MAY 2008	7.3	1525	92.4	7.3	4709.0

\* Values Exceed Upper Control Limit

6SM5

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6SM6

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22	1966	289.1			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
14 AUG 2007	10.8	502	251.9	8.0	4696.2
12 NOV 2007	10.8	508	259.1	8.1	4697.5
05 FEB 2008	11.5	522	244.0	8.2	4696.9
21 MAY 2008	11.4	504	263.0	8.3	4697.6

\* Values Exceed Upper Control Limit

6SM6

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6SM7

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	25.6	889	330			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	11.5	480	247.9	8.3	4696.0
12 NOV 2007	10.5	485	247.8	8.3	4698.0
05 FEB 2008	11.1	485	229.8	7.8	4697.0
21 MAY 2008	10.9	490	234.8	8.1	4696.7

\* Values Exceed Upper Control Limit

6SM7

Negative U308 Grades Indicate Less Than Detection Limit.



Mine Unit 6  
Well I.D. 6SM8

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	24.2	3574	238.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	9.7	2177	56.9	7.3	4730.6
06 NOV 2007	9.6	2167	51.8	7.3	4730.7
05 FEB 2008	9.6	2173	51.8	7.0	4730.7
21 MAY 2008	9.8	2175	59.4	7.2	4731.1

\* Values Exceed Upper Control Limit

6SM8

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6SM9

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	$\mu$ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	24.2	3574	238.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	8.8	1845	20.0	8.9	4731.2
06 NOV 2007	8.3	1788	21.0	8.5	4731.4
05 FEB 2008	8.6	1848	18.7	8.3	4731.5
21 MAY 2008	8.5	1835	23.7	8.4	4731.8

\* Values Exceed Upper Control Limit

6SM9

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6SM10

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	25.6	889	330			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
14 AUG 2007	10.5	655	250.7	8.0	4684.4
06 NOV 2007	11.1	673	244.1	8.1	4684.1
11 FEB 2008	10.9	657	244.5	7.7	4685.5
21 MAY 2008	11.2	650	257.0	8.4	4685.7

\* Values Exceed Upper Control Limit

6SM10

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6SM11

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	24.2	3574	238.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	13.9	2603	76.6	7.8	4730.4
12 NOV 2007	11.9	2594	66.7	7.9	4732.4
05 FEB 2008	12.7	2617	72.7	8.0	4730.2
21 MAY 2008	13.3	2598	74.7	8.1	4730.4

\* Values Exceed Upper Control Limit

6SM11

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6SM12

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	24.2	3574	238.2	8.5		

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	13.3	2729	110.7	7.6	4725.6
12 NOV 2007	13.4	2733	109.8	7.8	4728.9
05 FEB 2008	14.2	2745	96.8	7.2	4730.8
21 MAY 2008	13.9	2435	99.8	7.3	4731.2

\* Values Exceed Upper Control Limit

6SM12

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6SM13

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	24.2	3574	238.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	12.0	2334	78.9	7.2	4730.4
06 NOV 2007	12.6	2338	73.2	7.4	4730.5
11 FEB 2008	11.8	2341	71.0	7.3	4730.4
20 MAY 2008	12.9	2343	82.2	7.8	4730.8

\* Values Exceed Upper Control Limit

6SM13

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6SM14

CHRISTENSEN RANCH  
INTERIOR SHALLOW SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22	1966	289.1			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
14 AUG 2007	6.8	1059	119.3	8.1	4708.0
12 NOV 2007	6.8	1140	130.2	8.2	4710.0
11 FEB 2008	6.9	1150	130.2	8.2	4708.7
20 MAY 2008	7.3	1145	140.0	8.3	4709.4

\* Values Exceed Upper Control Limit

6SM14

Negative U308 Grades Indicate Less Than Detection Limit.

**CHRISTENSEN PROJECT**

**Interior Deep Sand Monitor Wells**



Mine Unit 5  
Well I.D. MW-12D

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.8	1017	420.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
02 JUL 2007	9.1	517	205.5	8.2		4602.7
23 OCT 2007	7.7	520	206.2	8.3		4603.6
31 JAN 2008	10.5	510	208.6	7.8		4605.6
01 APR 2008	9.9	512	202.8	7.7		4605.8

\* Values Exceed Upper Control Limit

MW-12D

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW45D

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.7	753	153.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	10.1	639	117.1	8.5	4539.3
10 OCT 2007	9.6	644	110.5	8.3	4539.3
08 JAN 2008	9.1	650	114.1	8.4	4541.4
08 APR 2008	9.4	648	105.0	8.1	4541.8

\* Values Exceed Upper Control Limit

MW45D

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW47D

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.7	753	153.5			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	9.5	639	120.1	8.6	4542.5
10 OCT 2007	9.2	638	113.4	8.5	4542.5
08 JAN 2008	9.1	642	117.5	8.5	4544.0
07 APR 2008	9.5	645	114.0	8.7	4544.7

\* Values Exceed Upper Control Limit

MW47D

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW49D

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.7	753	153.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	10.2	649	124.2	8.6	4545.3
10 OCT 2007	8.9	641	116.2	8.4	4545.3
08 JAN 2008	9.1	640	117.0	8.5	4546.3
09 APR 2008	9.2	642	117.0	8.6	4548.0

\* Values Exceed Upper Control Limit

MW49D

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW51D

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.7	753	153.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	10.5	639	119.5	8.5	4537.6
10 OCT 2007	10.4	637	111.7	8.4	4537.6
07 JAN 2008	9.4	640	116.6	8.4	4539.8
07 APR 2008	10.2	639	113.0	8.6	4540.2

\* Values Exceed Upper Control Limit

MW51D

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW53D

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.7	753	153.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
30 JUL 2007	10.7	650	112.4	8.5	4548.5
10 OCT 2007	9.6	645	106.0	8.4	4548.5
08 JAN 2008	9.8	650	107.0	8.5	4550.2
09 APR 2008	9.7	647	106.0	8.6	4551.2

\* Values Exceed Upper Control Limit

MW53D

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW55D

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.7	753	153.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	10.5	594	111.1	8.5	4547.6
23 OCT 2007	10.5	593	116.7	8.6	4547.6
08 JAN 2008	10.8	599	118.2	8.6	4548.2
08 APR 2008	10.4	600	120.2	8.5	4548.4

\* Values Exceed Upper Control Limit

MW55D

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 3  
Well I.D. MW57D

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.7	753	153.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	12.1	636	117.8	8.5	4553.6
23 OCT 2007	11.3	637	106.1	8.3	4553.6
08 JAN 2008	11.8	640	112.2	8.4	4554.2
08 APR 2008	12.1	645	118.9	8.4	4555.6

\* Values Exceed Upper Control Limit

MW57D

Negative U3O8 Grades Indicate Less Than Detection Limit.



Mine Unit 3  
Well I.D. MW65D

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.7	753	153.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
11 JUL 2007	8.7	556	153.5 *	9.2	4559.5
23 OCT 2007	8.8	602	121.7	9.1	4559.5
08 JAN 2008	8.9	605	133.8	9.1	4560.2
08 APR 2008	8.8	608	139.8	9.0	4561.2

\* Values Exceed Upper Control Limit

MW65D

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW67D

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	12.9	789	134			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	8.7	592	144.6 *	8.6	4537.2
05 DEC 2007	8.3	598	136.9 *	8.9	4538.2
11 MAR 2008	8.9	606	136.0 *	8.8	4539.0
09 JUN 2008	9.6	605	146.9 *	8.9	4540.1

\* Values Exceed Upper Control Limit

MW67D

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW69D

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	12.9	789	134			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	9.3	631	118.9	8.6	4538.7
05 DEC 2007	8.6	636	116.1	8.8	4539.7
11 MAR 2008	9.3	643	116.0	8.7	4540.7
09 JUN 2008	9.8	646	129.8	8.8	4541.7

\* Values Exceed Upper Control Limit

MW69D

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW71D

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	12.9	789	134			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	9.6	652	112.4	8.4	4541.6
05 DEC 2007	8.9	645	109.5	8.9	4542.5
11 MAR 2008	9.0	651	108.0	8.8	4543.7
09 JUN 2008	9.5	648	120.7	8.9	4544.8

\* Values Exceed Upper Control Limit

MW71D

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW91D

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	12.9	789	134			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	8.8	572	156.6 *	8.2	4536.7
05 DEC 2007	8.3	580	147.5 *	8.5	4537.6
11 MAR 2008	8.9	599	143.0 *	8.4	4538.4
09 JUN 2008	9.5	597	152.5 *	8.4	4539.6

\* Values Exceed Upper Control Limit

MW91D

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW93D

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	12.9	789	134			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
17 SEP 2007	9.8	651	106.2	8.3	4534.5
05 DEC 2007	9.0	655	100.6	8.5	4535.5
11 MAR 2008	9.5	662	102.0	8.4	4536.5
09 JUN 2008	9.8	663	106.0	8.3	4537.6

\* Values Exceed Upper Control Limit

MW93D

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW95D

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	12.9	789	134			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
17 SEP 2007	9.5	654	109.0	8.4	4535.7
05 DEC 2007	8.8	650	104.8	8.5	4536.6
03 MAR 2008	9.6	653	105.4	8.3	4537.4
09 JUN 2008	10.2	652	110.4	8.3	4538.4

\* Values Exceed Upper Control Limit

MW95D

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW97D

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.8	723	143.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
17 SEP 2007	10.3	633	110.6	8.4	4533.6
05 DEC 2007	9.3	627	101.3	8.5	4534.4
03 MAR 2008	9.9	631	102.7	8.3	4536.1
09 JUN 2008	10.8	626	109.7	8.3	4537.2

\* Values Exceed Upper Control Limit

MW97D

Negative U308 Grades Indicate Less Than Detection Limit.



Mine Unit 2  
Well I.D. MW99D

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.8	723	143.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
17 SEP 2007	10.2	607	115.5	8.4	4530.0
11 DEC 2007	10.1	601	111.0	8.2	4530.7
03 MAR 2008	10.2	616	106.7	8.3	4530.7
09 JUN 2008	10.5	619	110.5	8.3	4532.1

\* Values Exceed Upper Control Limit

MW99D

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW113D

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	13.8	723	143.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
17 SEP 2007	10.0	564	156.7 *	8.6	4530.9
05 DEC 2007	9.5	567	146.3 *	8.9	4531.7
03 MAR 2008	10.3	584	135.3	8.6	4532.5
09 JUN 2008	11.1	597	136.0	8.8	4533.1

\* Values Exceed Upper Control Limit

MW113D

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4DM-1

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	14.1	712	189.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
05 SEP 2007	8.0	563	120.6	8.4	4572.1
04 DEC 2007	8.0	565	117.6	8.4	4571.4
11 MAR 2008	8.2	564	120.0	8.5	4573.7
03 JUN 2008	8.7	562	123.0	8.2	4574.1

\* Values Exceed Upper Control Limit

4DM-1

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4DM-4

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	14.1	712	189.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
04 SEP 2007	7.5	516	137.7	8.6	4567.0
04 DEC 2007	7.5	520	135.8	8.5	4567.2
11 MAR 2008	7.5	513	136.0	8.6	4568.8
03 JUN 2008	8.4	513	146.0	8.2	4569.6

\* Values Exceed Upper Control Limit

4DM-4

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4DM-8

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	14.1	712	189.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
04 SEP 2007	7.9	520	146.9	8.5	4563.3
04 DEC 2007	8.2	518	142.9	8.4	4563.0
11 MAR 2008	8.1	516	146.0	8.6	4565.3
02 JUN 2008	8.3	516	160.0	8.7	4566.2

\* Values Exceed Upper Control Limit

4DM-8

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 4  
Well I.D. 4DRM-07

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	14.1	712	189.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
04 SEP 2007	7.7	531	132.5	8.5	4569.3
04 DEC 2007	7.8	535	129.5	8.4	4568.2
11 MAR 2008	7.6	530	130.0	8.5	4570.9
03 JUN 2008	8.2	527	138.2	8.2	4571.5

\* Values Exceed Upper Control Limit

4DRM-07

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5DM1A

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.8	1017	420.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	5.9	406	199.4	8.7	4605.4
23 OCT 2007	5.0	404	194.7	8.7	4606.0
28 JAN 2008	6.5	482	207.3	8.6	4606.6
01 APR 2008	7.1	484	200.8	8.5	4606.8

\* Values Exceed Upper Control Limit

5DM1A

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5DM2

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.8	1017	420.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
03 JUL 2007	11.2	627	122.6	8.9		4608.0
23 OCT 2007	9.9	622	117.1	8.9		4618.2
28 JAN 2008	10.5	631	112.0	8.7		4612.1
01 APR 2008	11.3	623	108.4	8.5		4612.3

\* Values Exceed Upper Control Limit

5DM2

Negative U308 Grades Indicate Less Than Detection Limit.



Mine Unit 5  
Well I.D. 5DM3

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.8	1017	420.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
03 JUL 2007	8.8	532	158.6	8.7	4605.1
23 OCT 2007	8.2	535	145.4	8.7	4605.6
28 JAN 2008	8.2	539	154.3	8.1	4607.3
02 APR 2008	8.7	546	152.0	8.2	4607.5

\* Values Exceed Upper Control Limit

5DM3

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5DM4

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.8	1017	420.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	5.8	422	202.9	8.6	4604.8
23 OCT 2007	4.9	425	210.9	8.7	4605.4
28 JAN 2008	6.5	458	211.4	8.5	4606.2
01 APR 2008	6.3	538	253.8	8.5	4606.2

\* Values Exceed Upper Control Limit

5DM4

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5DM5

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.8	1017	420.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
03 JUL 2007	5.4	446	240.4	8.6	4603.6
29 OCT 2007	6.0	468	229.8	8.5	4604.0
15 JAN 2008	5.6	454	237.3	8.5	4605.6
01 APR 2008	5.8	450	238.2	8.1	4605.8

\* Values Exceed Upper Control Limit

5DM5

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5DM7

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.8	1017	420.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
02 JUL 2007	7.5	525	242.4	8.5	4602.8
29 OCT 2007	7.3	546	237.1	8.6	4604.1
28 JAN 2008	6.6	530	233.4	8.6	4605.7
01 APR 2008	7.4	518	233.0	8.4	4606.1

\* Values Exceed Upper Control Limit

5DM7

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. WCOW-37D

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.8	1017	420.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
03 JUL 2007	9.1	456	223.8	8.4	4602.8
29 OCT 2007	8.4	462	228.8	8.4	4602.8
28 JAN 2008	8.4	460	220.5	8.3	4604.2
01 APR 2008	8.4	457	218.0	8.1	4604.7

\* Values Exceed Upper Control Limit

WCOW-37D

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6DM1

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	21.9	1682	129.4			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
14 AUG 2007	7.5	796	91.1	7.7	4604.5
06 NOV 2007	7.8	800	86.7	7.7	4602.6
05 FEB 2008	7.6	797	85.2	7.5	4608.4
20 MAY 2008	8.5	798	96.1	8.2	4611.0

\* Values Exceed Upper Control Limit

6DM1

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6DM2

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	21.9	1682	129.4			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
08 AUG 2007	6.2	1139	72.7	8.9		4605.9
06 NOV 2007	6.3	1127	62.6	8.8		4603.9
05 FEB 2008	6.5	1127	62.8	8.4		4606.5
20 MAY 2008	7.0	1120	78.6	9.0		4609.4

\* Values Exceed Upper Control Limit

6DM2

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6DM3-2

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	21.9	1682	129.4			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	6.2	1132	79.5	7.5	4607.0
06 NOV 2007	6.1	1133	70.9	7.3	4604.9
05 FEB 2008	6.1	1133	70.6	7.4	4606.4
20 MAY 2008	6.4	1136	77.2	7.9	4609.0

\* Values Exceed Upper Control Limit

6DM3-2

Negative U308 Grades Indicate Less Than Detection Limit.



Mine Unit 6  
Well I.D. 6DM4-2

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	21.9	1682	129.4			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	6.6	1165	81.1	8.1	4607.9
06 NOV 2007	6.0	1159	71.7	7.8	4605.7
05 FEB 2008	5.9	1157	70.8	7.5	4609.5
21 MAY 2008	6.6	1158	81.1	8.3	4612.9

\* Values Exceed Upper Control Limit

6DM4-2

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6DM5

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	21.9	1682	129.4			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
14 AUG 2007	6.0	1136	77.3	7.4	4609.9
12 NOV 2007	6.2	1139	72.6	7.0	4607.6
05 FEB 2008	6.2	1142	74.3	7.4	4611.6
21 MAY 2008	6.3	1145	78.6	7.3	4614.4

\* Values Exceed Upper Control Limit

6DM5

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6DM6

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	21.9	1682	129.4			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
14 AUG 2007	7.0	833	90.3	8.0	4617.9
06 NOV 2007	7.4	837	85.3	8.2	4615.7
05 FEB 2008	7.2	835	84.6	7.8	4618.5
21 MAY 2008	7.3	840	89.3	8.0	4622.5

\* Values Exceed Upper Control Limit

6DM6

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6DM7

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	21.9	1682	129.4			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	7.7	863	96.2	7.8	4627.5
12 NOV 2007	7.1	868	80.9	7.6	4625.2
05 FEB 2008	7.0	871	81.9	7.6	4627.7
21 MAY 2008	7.6	865	81.7	7.6	4632.8

\* Values Exceed Upper Control Limit

6DM7

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6DM8

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	21.9	1682	129.4			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
14 AUG 2007	6.7	854	88.9	8.1	4622.1
12 NOV 2007	7.3	854	82.9	7.8	4619.7
05 FEB 2008	6.9	852	83.4	7.8	4626.5
20 MAY 2008	7.1	856	92.4	8.1	4627.9

\* Values Exceed Upper Control Limit

6DM8

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6DM9

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	21.9	1682	129.4			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	8.2	831	93.5	7.6	4618.6
12 NOV 2007	7.1	830	81.8	7.2	4616.2
11 FEB 2008	7.2	830	83.5	7.4	4616.8
21 MAY 2008	7.3	831	94.2	8.0	4618.4

\* Values Exceed Upper Control Limit

6DM9

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6DM10

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	21.9	1682	129.4			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
14 AUG 2007	6.7	847	87.9	8.0	4618.8
06 NOV 2007	7.3	847	84.7	8.2	4616.4
11 FEB 2008	7.0	847	84.1	7.8	4616.0
21 MAY 2008	7.6	845	97.1	8.2	4619.2

\* Values Exceed Upper Control Limit

6DM10

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6DM11

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.9	1101	385.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	9.1	600	163.6	8.5	4624.3
12 NOV 2007	8.6	603	144.7	8.2	4621.9
05 FEB 2008	8.5	604	148.6	8.2	4628.9
21 MAY 2008	8.7	602	159.7	8.7	4630.2

\* Values Exceed Upper Control Limit

6DM11

Negative U308 Grades Indicate Less Than Detection Limit.



Mine Unit 6  
Well I.D. 6DM12

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.9	1101	385.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	7.8	542	126.9	8.6	4625.2
12 NOV 2007	7.4	537	112.2	8.4	4622.9
05 FEB 2008	7.5	535	114.7	8.4	4630.2
20 MAY 2008	7.7	537	129.7	8.5	4632.0

\* Values Exceed Upper Control Limit

6DM12

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6DM13

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	22.9	1101	385.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	7.5	635	184.0	8.3	4622.3
06 NOV 2007	7.4	639	183.6	8.1	4619.9
11 FEB 2008	7.4	639	182.5	8.2	4619.0
20 MAY 2008	7.6	636	199.4	8.4	4621.4

\* Values Exceed Upper Control Limit

6DM13

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6DM14

CHRISTENSEN RANCH  
INTERIOR DEEP SAND MONITOR WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Upper Control Limit	21.9	1682	129.4			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
14 AUG 2007	6.8	828	88.5	7.9	4614.3
12 NOV 2007	6.9	830	92.0	8.2	4613.3
05 FEB 2008	7.2	829	84.7	8.1	4618.9
20 MAY 2008	7.5	833	97.5	8.2	4620.3

\* Values Exceed Upper Control Limit

6DM14

Negative U308 Grades Indicate Less Than Detection Limit.

**CHRISTENSEN PROJECT**

**Perimeter Ore Zone Trend Wells**

Mine Unit 2  
Well I.D. MW78T

CHRISTENSEN RANCH  
PERIMETER ORE ZONE TREND WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Action Level	13.6	823	121.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	8.9	676	95.0	8.1	4569.3
05 DEC 2007	8.4	680	92.5	8.5	4570.4
10 MAR 2008	8.9	683	88.9	8.1	4571.4
10 JUN 2008	9.7	664	99.2	8.6	4569.3

\* Values Exceed Action Level

MW78T

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 2  
Well I.D. MW87T

CHRISTENSEN RANCH  
PERIMETER ORE ZONE TREND WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Action Level	13.6	823	121.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
18 SEP 2007	9.6	664	95.4	7.9	4553.2
11 DEC 2007	9.4	665	91.2	8.0	4555.2
10 MAR 2008	9.4	666	89.9	8.0	4558.6
10 JUN 2008	9.7	664	99.0	8.5	4557.8

\* Values Exceed Action Level

MW87T

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5TW-1

CHRISTENSEN RANCH  
PERIMETER ORE ZONE TREND WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Action Level	22.7	1004	134.3			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
03 JUL 2007	8.6	720	102.2	8.3	4625.3
29 OCT 2007	8.0	727	103.0	8.2	4628.9
28 JAN 2008	7.9	725	99.6	8.2	4630.5
01 APR 2008	8.5	719	95.8	8.3	4632.8

\* Values Exceed Action Level

5TW-1

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6TW1

CHRISTENSEN RANCH  
PERIMETER ORE ZONE TREND WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Action Level	20	1576	95.2			

Date	Chloride		Specific Conductance	Total Alkalinity	pH	Piezometric Elevation	
08 AUG 2007	20.6	*	1515	540.4	*	7.3	4622.9
07 NOV 2007	20.4	*	1495	499.4	*	7.4	4624.8
11 FEB 2008	21.2	*	1547	468.4	*	7.2	4627.1
21 MAY 2008	22.1	*	1539	480.2	*	7.2	4628.9

\* Values Exceed Action Level

6TW1

Negative U3O8 Grades Indicate Less Than Detection Limit.



Mine Unit 6  
Well I.D. 6TW2

CHRISTENSEN RANCH  
PERIMETER ORE ZONE TREND WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Action Level	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	31.2 *	1649 *	207.6 *	7.3	4622.8
12 NOV 2007	32.6 *	1668 *	177.5 *	7.5	4620.6
11 FEB 2008	31.9 *	1653 *	171.6 *	7.2	4620.6
20 MAY 2008	37.0 *	1654 *	226.0 *	7.6	4622.6

\* Values Exceed Action Level

6TW2

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6TW3

CHRISTENSEN RANCH  
PERIMETER ORE ZONE TREND WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Action Level	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
14 AUG 2007	4.8	1283	72.1	7.2	4624.6
06 NOV 2007	5.4	1287	68.6	7.3	4622.4
11 FEB 2008	4.9	1285	67.6	7.2	4620.1
21 MAY 2008	5.8	1285	77.1	7.4	4622.1

\* Values Exceed Action Level

6TW3

Negative U308 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6TW4

CHRISTENSEN RANCH  
PERIMETER ORE ZONE TREND WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Action Level	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	51.0 *	2327 *	400.2 *	7.1	4622.5
13 NOV 2007	52.1 *	2331 *	400.6 *	7.3	4619.5
11 FEB 2008	44.4 *	2367 *	349.6 *	7.3	4622.5
20 MAY 2008	45.8 *	2225 *	434.0 *	7.4	4628.4

\* Values Exceed Action Level

6TW4

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6TW5

CHRISTENSEN RANCH  
PERIMETER ORE ZONE TREND WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Action Level	20	1576	95.2			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	37.8 *	2447 *	554.0 *	7.3	4621.7
07 DEC 2007	37.6 *	2435 *	535.2 *	7.4	4622.5
11 FEB 2008	42.8 *	2506 *	507.2 *	7.1	4626.5
21 MAY 2008	39.6 *	2500 *	525.2 *	7.2	4627.5

\* Values Exceed Action Level

6TW5

Negative U3O8 Grades Indicate Less Than Detection Limit.

**CHRISTENSEN PROJECT**

**Interior Deep Sand Trend Wells**

Mine Unit 5  
Well I.D. 5DM8T

CHRISTENSEN RANCH  
INTERIOR DEEP SAND TREND WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Action Level	22.8	1017	420.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
09 JUL 2007	8.4	572	134.4	8.3	4618.9
29 OCT 2007	8.3	597	129.5	8.4	4620.2
15 JAN 2008	7.8	595	136.0	8.3	4623.9
01 APR 2008	8.3	590	137.9	8.2	4625.9

\* Values Exceed Action Level

5DM8T

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 5  
Well I.D. 5DM9T

CHRISTENSEN RANCH  
INTERIOR DEEP SAND TREND WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Action Level	22.8	1017	420.9			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
03 JUL 2007	10.7	499	114.4	8.6	4621.5
29 OCT 2007	9.8	509	110.3	8.5	4623.3
28 JAN 2008	10.3	509	107.1	8.1	4626.4
01 APR 2008	9.9	508	103.2	7.6	4628.3

\* Values Exceed Action Level

5DM9T

Negative U3O8 Grades Indicate Less Than Detection Limit.

Mine Unit 6  
Well I.D. 6DT1

CHRISTENSEN RANCH  
INTERIOR DEEP SAND TREND WELL

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO <sub>3</sub>		mg/l	msl
Action Level	21.3	1802	121.7			

Date	Chloride	Specific Conductance	Total Alkalinity	pH	Piezometric Elevation
08 AUG 2007	7.8	830	95.2	8.1	4610.7
06 NOV 2007	7.6	821	86.5	7.9	4608.5
11 FEB 2008	7.3	821	88.9	7.5	4609.2
21 MAY 2008	7.5	825	94.2	7.6	4615.1

\* Values Exceed Action Level

6DT1

Negative U308 Grades Indicate Less Than Detection Limit.



**APPENDIX 3**

**Reclamation/Restoration Bond Estimate 2008-2009**

COGEMA Mining, Inc.  
SUMMARY OF RECLAMATION/RESTORATION BOND ESTIMATE, August 2008 - July 2009  
WDEQ PERMIT NO. 478/USNRC LICENSE SUA-1341

TABLE 1

	WDEQ Estimate	NRC Estimate		
<b>I GROUNDWATER RESTORATION - Worksheet 1:</b>	<b>\$3,124,253</b>	<b>\$3,358,895</b>		
<b>II DECOMMISSIONING AND SURFACE RECLAMATION:</b>				
A. Process Plant(s) Equipment Removal and Disposal Worksheet 2	\$184,990	\$184,990		
B. Plant Building(s) Demolition and Disposal Worksheet 3	\$750,473	\$750,473		
C. Process Pond Sludge and Liner Handling Worksheet 4	\$696,640	\$696,640		
D. Well Abandonment Worksheet 5	\$568,244	\$568,244		
E. Wellfield Equipment Removal and Disposal Worksheet 6	\$842,007	\$842,007		
F. Topsoil Replacement and Revegetation Worksheet 7	\$942,469	\$942,469		
G. Miscellaneous Reclamation Activities Worksheet 8	\$116,118	\$116,118		
Sub Total - Decommissioning and Surface Reclamation	<b>\$4,100,941</b>	<b>\$4,100,941</b>		
<b>TOTAL RESTORATION AND RECLAMATION</b>	<b>\$7,225,195</b>	<b>\$7,459,836</b>		
Adjustment for Inflation = 7.8% (Sep. 2006 CPI All Urban Consumers, 202.9, to June 2008, 218.8)	\$566,727	\$585,132		
<b>SUBTOTAL</b>	<b>\$7,791,922</b>	<b>\$8,044,968</b>		
Miscellaneous Costs Associated with Third Party Contractors				
	WDEQ	NRC		
Project Design	0.5%	0%		
Contractor Profit & Mobilization	8%	3%		
Pre-construction Investigation	1%			
Project Management	3%	2%		
On-site monitoring	0.5%			
Site Security & Liability Assurance	1%	0.0%		
Longterm Administration	2%			
Subtotal miscellaneous additions to bond	16.0%	5.0%	\$1,246,708	\$402,248.42
<b>SUBTOTAL</b>			<b>\$9,038,629</b>	<b>\$8,447,217</b>
Contingency	WDEQ 4%	NRC 15%	\$361,545	\$1,267,083
<b>GRAND TOTAL RESTORATION AND RECLAMATION</b>			<b>\$9,400,175</b>	<b>\$9,714,299</b>

COGEMA Mining, Inc.  
2008 Restoration and Reclamation Costs  
Wyoming Operations  
WORKSHEET 1

GROUNDWATER RESTORATION

	Irigaray Mine Unit(s) #1 Thru #5	Irigaray Mine Unit(s) #6 Thru #9	Christensen Mine Unit #2	Christensen Mine Unit #3	Christensen Mine Unit #4	Christensen Mine Unit #5	Christensen Mine Unit #6	Christensen Mine Unit #7	Christensen Mine Unit #8
<b>Technical Assumptions:</b>									
Wellfield Area (Ft²)	522720	784080	890000	798944	510088	1210968	2021243	1332936	1600000
Wellfield Area (Acres)	12.00	18.00	20.43	18.34	11.71	27.80	46.40	30.6	36.7
Affected Ore Zone Area (Ft²)	522720	784080	890000	798944	550193	1346004	2058344		
Avg Completed Thickness (Ft)	15.0	18.0	11.0	10.0	12.7	19.9	21.8		
<b>Affected Volume:</b>									
Factor For Vertical Flare	20%	20%	20%	20%	20%	20%	20%		
Factor For Horizontal Flare	20%	20%	20%	20%	20%	20%	20%		
Total Volume (Ft³)	11290752	20323353.6	14097600	11504793.6	10061929.6	38593685.7	64615534.85		
Porosity	26.0%	26.0%	26.0%	26.0%	26.0%	26.0%	26.0%		
Gallons Per Cubic Foot	7.48	7.48	7.48	7.48	7.48	7.48	7.48		
Gallons Per Pore Volume	21958254.49	39524858.1	27417012.5	22374522.6	19568440.7	75057000	125664292.2		
<b>Number of Wells in Unit(s)</b>									
Production Wells	150	274	153	185	105	217	202	155	
Injection Wells	310	330	173	277	128	277	244	170	
Monitor Wells	150	165	50	46	44	70	65	66	
Baseline Water Quality wells (prod or inj)	19	27	24	19	15	25	47		
Average Well Spacing (Ft)	35	35	85	70	85	85	100	100	
Average Well Depth (Ft)	250	250	345	300	430	450	520	550	

I. GROUNDWATER SWEEP

<b>A. PLANT &amp; OFFICE</b>									
<b>Operating Assumptions:</b>									
Flowrate (gpm)			200	200	200	200	200		
PV's Required			1	1	1	1	1		
Total Gallons For Treatment			27417012.5	22374522.6	19568440.7	75057000	125664292.2		
Total KGals for Treatment			27417	22375	19568	75057	125664		
<b>Cost Assumptions:</b>									
<b>Power</b>									
Avg Connected Hp			40.00	40.00	40.00	40.00	40.00		
Kwh's/Hp			0.83	0.83	0.83	0.83	0.83		
\$/Kwh			\$0.0365	\$0.0365	\$0.0365	\$0.0365	\$0.0365		
Gallons Per Minute			200	200	200	200	100		
Gallons Per Hour			12000	12000	12000	12000	6000		
Cost Per Hour			1.21	1.21	1.21	1.21	1.21		
Cost Per Gallon			0.00010	0.00010	0.00010	0.00010	0.00020		
Cost Per KGal (\$)			\$0.101	\$0.101	\$0.101	\$0.101	\$0.202		
<b>Chemicals</b>									
Antiscalent (\$/KGals)			\$0.0947	\$0.0947	\$0.0947	\$0.0947	\$0.0947		
Elution (\$/KGals)			\$0.099	\$0.099	\$0.099	\$0.099	\$0.099		
Repair & Maintenance (\$/KGals)			\$0.0379	\$0.0379	\$0.0379	\$0.0379	\$0.0379		
Analysis (\$/KGals)			\$0.131	\$0.127	\$0.115	\$0.050	\$0.056		
Total Cost Per KGal			\$0.464	\$0.460	\$0.448	\$0.383	\$0.490		
Total Treatment Cost			\$12,718	\$10,291	\$8,758	\$28,713	\$61,534		
<b>Utilities</b>									
Power (\$/Month)			\$65	\$65	\$65	\$65	\$65		
Telephone (\$/Month)			\$500	\$500	\$500	\$500	\$500		
<b>Time For Treatment</b>									
Minutes For Treatment			137085	111873	97842	375285	628321		
Hours For Treatment			2285	1865	1631	6255	10472		
Days For Treatment			95	78	68	261	436		
Average Days Per Month			30.4	30.4	30.4	30.4	30.4		
Months For Treatment			3.1	2.6	2.2	8.6	14.3		
Utilities Cost (\$)			\$1,768	\$1,443	\$1,262	\$4,841	\$8,105		
<b>TOTAL PLANT &amp; OFFICE COST</b>	\$0	\$0	\$14,487	\$11,734	\$10,020	\$33,554	\$69,639	\$0	\$0

I. GROUNDWATER SWEEP (Continued)

<b>B. WELLFIELD</b>									
<b>Cost Assumptions:</b>									
<b>Power</b>									
Avg Flow/Pump (gpm)			20	20	20	20	20		
Avg Hp/Pump			3.00	3.00	3.00	3.00	3.00		
Avg # of Pumps Required			10.0	10.0	10.0	10.0	10.0		
Avg Connected Hp			25	25	25	25	25		
Kwh's/Hp			0.830	0.830	0.830	0.830	0.830		
\$/Kwh			\$0.0365	\$0.0365	\$0.0365	\$0.0365	\$0.0365		

COGEMA Mining, Inc.  
 2008 Restoration and Reclamation Costs  
 Wyoming Operations  
 WORKSHEET 1

GROUNDWATER RESTORATION	Irigaray	Irigaray	Christensen	Christensen	Christensen	Christensen	Christensen	Christensen	Christensen
	Mine Unit(s) #1 Thru #5	Mine Unit(s) #6 Thru #9	Mine Unit #2	Mine Unit #3	Mine Unit #4	Mine Unit #5	Mine Unit #6	Mine Unit #7	Mine Unit #8
Gallons Per Minute			200	200	200	200	200		
Gallons Per Hour			12000	12000	12000	12000	12000		
Cost Per Hour (\$)			\$0.76	\$0.76	\$0.76	\$0.76	\$0.76		
Cost Per Gallon (\$)			\$0.0001	\$0.0001	\$0.0001	\$0.0001	\$0.0001		
Cost Per KGal (\$)			0.063	0.063	0.063	0.063	0.063		
Repair & Maintenance (\$/KGals)			\$0.289	\$0.289	\$0.289	\$0.289	\$0.289		
Total Cost Per KGal			\$0.353	\$0.353	\$0.353	\$0.353	\$0.353		
TOTAL WELLFIELD COST	\$0	\$0	\$9,665	\$7,887	\$6,898	\$26,459	\$44,298	\$0	\$0
TOTAL GROUND WATER SWEEP COST	\$0	\$0	\$24,152	\$19,622	\$16,918	\$60,012	\$113,937	\$0	\$0

II REVERSE OSMOSIS									
A. PLANT & OFFICE									
Operating Assumptions:									
Flowrate (gpm)			500	500	500	500	500		
PV's Required			5.0	5.0	5.0	5.0	5.0		
Total Gallons For Treatment			137085062	111872613	97842203.3	375285000	628321460.9		
Total KGals for Treatment			137085	111873	97842	375285	628321		
Feed to RO (gpm)			500	500	500	500	500		
Permeate Flow (gpm)			375	375	375	375	375		
Brine Flow (gpm)			125	125	125	125	125		
Average RO Recovery			75.0%	75.0%	75.0%	75.0%	75.0%		
Cost Assumptions:									
Power									
Avg Connected Hp			560.00	560.00	560.00	560.00	560.00		
Kwh's/Hp			0.830	0.830	0.830	0.830	0.830		
\$/Kwh			\$0.0365	\$0.0365	\$0.0365	\$0.0365	\$0.0365		
Gallons Per Minute			500	500	500	500	500		
Gallons Per Hour			30000	30000	30000	30000	30000		
Cost Per Hour (\$)			\$16.97	\$16.97	\$16.97	\$16.97	\$16.97		
Cost Per Gallon (\$)			\$0.00057	\$0.00057	\$0.00057	\$0.00057	\$0.00057		
Cost Per KGal (\$)			\$0.566	\$0.566	\$0.566	\$0.566	\$0.566		
Chemicals									
Caustic Soda (\$/KGals)			\$0.018	\$0.018	\$0.018	\$0.018	\$0.018		
Antiscalent (\$/KGals)			\$0.0947	\$0.0947	\$0.0947	\$0.0947	\$0.0947		
Elution (\$/KGals)			\$0.099	\$0.099	\$0.099	\$0.099	\$0.099		
Repair & Maintenance (\$/KGals)			\$0.038	\$0.038	\$0.038	\$0.038	\$0.038		
Sampling & Analysis (\$/KGals)			\$0.090	\$0.122	\$0.092	\$0.039	\$0.032		
Total Cost Per KGal (\$)			\$0.905	\$0.937	\$0.907	\$0.854	\$0.847		
Total Pumping Cost (\$)	\$0	\$0	\$124,089	\$104,788	\$88,752	\$320,397	\$531,949		
Utilities									
Power (\$/Month)			\$65	\$65	\$65	\$65	\$65		
Propane (\$/Month)			\$500	\$500	\$500	\$500	\$500		
Time For Treatment									
Minutes For Treatment			274170	223745	195684	750570	1256643		
Hours For Treatment			4570	3729	3261	12510	20944		
Days For Treatment			190	155	136	521	873		
Average Days Per Month			30.4	30.4	30.4	30.4	30.4		
Months For Treatment			6.3	5.1	4.5	17.1	28.7		
Utilities Cost (\$)	\$0	\$0	\$3,560	\$2,882	\$2,543	\$9,662	\$16,216		
TOTAL PLANT & OFFICE COST	\$0	\$0	\$127,648	\$107,670	\$91,294	\$330,059	\$548,165	\$0	\$0

II REVERSE OSMOSIS (Continued)									
B. WELLFIELD									
Cost Assumptions:									
Power									
Avg Flow/Pump (gpm)			20.00	20.00	20.00	20.00	20.00		
Avg Hp/Pump			3.00	3.00	3.00	3.00	3.00		
Avg # of Pumps Required			25.0	25.0	25.0	25.0	25.0		
Avg Connected Hp			75.0	75.0	75.0	75.0	75.0		
Kwh's/Hp			0.830	0.830	0.830	0.830	0.830		
\$/Kwh			\$0.0365	\$0.0365	\$0.0365	\$0.0365	\$0.0365		
Gallons Per Minute			500	500	500	500	500		
Gallons Per Hour			30000	30000	30000	30000	30000		
Cost Per Hour (\$)			\$2.27	\$2.27	\$2.27	\$2.27	\$2.27		
Cost Per Gallon (\$)			\$0.0001	\$0.0001	\$0.0001	\$0.0001	\$0.0001		
Cost Per KGal (\$)			\$0.076	\$0.076	\$0.076	\$0.076	\$0.076		
Repair & Maintenance (\$/KGals)			\$0.289	\$0.289	\$0.289	\$0.289	\$0.289		

COGEMA Mining, Inc.  
2008 Restoration and Reclamation Costs  
Wyoming Operations  
WORKSHEET 1

GROUNDWATER RESTORATION	Irigaray	Irigaray	Christensen	Christensen	Christensen	Christensen	Christensen	Christensen	Christensen
	Mine Unit(s) #1 Thru #5	Mine Unit(s) #6 Thru #9	Mine Unit #2	Mine Unit #3	Mine Unit #4	Mine Unit #5	Mine Unit #6	Mine Unit #7	Mine Unit #8
Total Cost Per KGal			\$0.365	\$0.365	\$0.365	\$0.365	\$0.365	\$0.365	\$0.365
<b>TOTAL WELLFIELD COST</b>	\$0	\$0	\$50,000	\$40,804	\$35,687	\$136,881	\$229,172	\$0	\$0
Add for 1 PV of Hydrogen Sulfide gas reductant \$0.863 per Kgal			\$23,661	\$19,309	\$16,888	\$64,774	\$108,448		
<b>TOTAL REVERSE OSMOSIS COST</b>	\$0	\$0	\$201,309	\$167,783	\$143,869	\$531,714	\$885,785	\$0	\$0

III WASTE DISPOSAL WELL									
Operating Assumptions:									
Annual Evaporation Capacity (Gals)			1,917,612	1,917,612	1,917,612	1,917,612	1,917,612		
Avg. Monthly Evap. Capacity (Gals)			159,801	159,801	159,801	159,801	159,801		
Total Disposal Requirement									
RO Brine Total Gallons			34,271,266	27,968,153	24,460,551	93,821,250	157,080,365		
RO Brine Total KGallons			34,271	27,968	24,461	93,821	157,080		
Brine Concentration Factor			60%	60%	60%	60%	60%		
Total Concentrated Brine (Gals)			20,562,759	16,780,892	14,676,330	56,292,750	94,248,219		
Months of RO Operation			6.3	5.1	4.5	17.1	28.7		
Average Monthly Reqmt (Gallons)			3,263,930	3,290,371	3,261,407	3,291,974	3,283,910		
Monthly Balance for DDW (Gals)			3,104,129	3,130,570	3,101,806	3,132,173	3,124,109		
Total WDW Disposal (Gallons)			19,556,013	15,965,907	13,957,226	53,560,153	89,661,930		
Total WDW Disposal (KGals)			19,556	15,966	13,957	53,560	89,662		
Cost Assumptions:									
Power									
Avg Connected Hp			100.00	100.00	100.00	100.00	100.00		
WDW Avg Connected Hp			180.00	180.00	180.00	180.00	180.00		
Kwh's/Hp			0.830	0.830	0.830	0.830	0.830		
\$/Kwh			\$0.0365	\$0.0365	\$0.0365	\$0.0365	\$0.0365		
Gallons Per Minute			150	150	150	150	150		
Gallons Per Hour			9000	9000	9000	9000	9000		
Cost Per Hour (\$)			\$8.48	\$8.48	\$8.48	\$8.48	\$8.48		
Cost Per Gallon (\$)			\$0.0009	\$0.0009	\$0.0009	\$0.0009	\$0.0009		
Cost Per KGal (\$)			\$0.943	\$0.943	\$0.943	\$0.943	\$0.943		
Chemicals (\$/Kgals)									
RO Antiscalent (\$/Kgals)			\$0.190	\$0.190	\$0.190	\$0.190	\$0.190		
WDW Antiscalent (\$/Kgals)			\$0.237	\$0.237	\$0.237	\$0.237	\$0.237		
Sulfuric Acid (\$/Kgals)			\$0.534	\$0.534	\$0.534	\$0.534	\$0.534		
Corrosion Inhibitor			\$0.000	\$0.000	\$0.000	\$0.000	\$0.000		
Algacide			\$0.111	\$0.111	\$0.111	\$0.111	\$0.111		
Repair & Maint (\$/Kgals)			\$0.077	\$0.077	\$0.077	\$0.077	\$0.077		
Total Cost Per KGal			\$2.092	\$2.092	\$2.092	\$2.092	\$2.092		
<b>TOTAL WASTE DISPOSAL WELL COST</b>			\$40,902	\$33,393	\$29,192	\$112,022	\$187,529	\$0	\$0

IV STABILIZATION MONITORING									
Operating Assumptions:									
Time of Stabilization (mos)			9	9	9	9	9		
Frequency of Analysis (mos)			3	3	3	3	3		
Total Sets of Analysis			3	3	3	3	3		
Cost Assumptions:									
Generator Rental per sample set			\$280	\$280	\$280	\$280	\$280		
Analytical costs per set			\$3,600	\$2,850	\$2,250	\$3,750	\$7,050		
Total Sampling & Analysis Cost (\$)			\$11,640	\$9,390	\$7,590	\$12,090	\$21,990		
Utilities (Power + Telephone per month)			\$565	\$565	\$565	\$565	\$565		
Total Utilities Cost (\$)			\$5,085	\$5,085	\$5,085	\$5,085	\$5,085		
<b>TOTAL STABILIZATION COST</b>	\$0	\$0	\$16,725	\$14,475	\$12,675	\$17,175	\$27,075	\$0	\$0

V LABOR (Irigaray and Christensen Combined)			
Cost Assumptions	Cost/Hour	Hours/Year	Cost
Crew:			
1 Supervisor	\$25.00	2080	\$52,000
4 Operators	\$20.00	2080	\$166,400
2 Maintenance	\$20.00	2080	\$83,200
2 Vehicles	\$12.00	2080	\$49,920
Cost per Year			\$351,520
Time Required - Years		1.6	
<b>TOTAL RESTORATION LABOR COST</b>	\$562,432		

COGEMA Mining, Inc.  
 2008 Restoration and Reclamation Costs  
 Wyoming Operations  
 WORKSHEET 1

GROUNDWATER RESTORATION

Irigaray Mine Unit(s) #1 Thru #5	Irigaray Mine Unit(s) #6 Thru #9	Christensen Mine Unit #2	Christensen Mine Unit #3	Christensen Mine Unit #4	Christensen Mine Unit #5	Christensen Mine Unit #6	Christensen Mine Unit #7	Christensen Mine Unit #8
Irigaray Mine Unit(s) #1 Thru #9	Christensen Mine Unit #2 Thru #4	Total Christensen & Irigaray						

VI RESTORATION CAPITAL REQUIREMENTS	
I Deep Disposal Well(s) - new	\$0
II Plug and Abandon CR DW-1	\$73,950
III Plug and Abandon CR 18-3	\$66,250
IV 500 GPM Reverse Osmosis Unit	\$0
<b>Total</b>	<b>\$0 \$140,200</b>

	Irigaray Mine Unit(s) #1 Thru #5	Irigaray Mine Unit(s) #6 Thru #9	Christensen Mine Unit #2	Christensen Mine Unit #3	Christensen Mine Unit #4	Christensen Mine Unit #5	Christensen Mine Unit #6	Christensen Mine Unit #7	Christensen Mine Unit #8	TOTAL
<b>SUMMARY:</b>										
I GROUNDWATER SWEEP	\$0	\$0	\$24,152	\$19,622	\$16,918	\$60,012	\$113,937	\$0		
II REVERSE OSMOSIS	\$0	\$0	\$201,309	\$167,783	\$143,869	\$531,714	\$885,785	\$0		
III WASTE DISPOSAL WELL	\$0	\$0	\$40,902	\$33,393	\$29,192	\$112,022	\$187,529	\$0		
IV STABILIZATION	\$0	\$0	\$16,725	\$14,475	\$12,675	\$17,175	\$27,075	\$0		
SUB TOTAL	\$0	\$0	\$283,088	\$235,273	\$202,654	\$720,923	\$1,214,327	\$0		\$2,656,263
V LABOR										\$562,432
VI CAPITAL										\$140,200
<b>TOTAL GROUNDWATER RESTORATION COST</b>										<b>\$3,358,895</b>
Credit for Completion of Groundwater Sweep (WDEQ)			\$24,152	\$19,622	\$16,918	\$60,012	\$113,937	\$0		\$234,642
Credit for Completion of Reverse Osmosis (WDEQ)										\$0
Credit Completion of Stabilization Monitoring (WDEQ)										\$0
Credit Subtotal			\$24,152	\$19,622	\$16,918	\$60,012	\$113,937	\$0	\$0	\$234,642
<b>GRAND TOTAL WDEQ</b>	\$0	\$0	\$258,936	\$215,651	\$185,735	\$660,910	\$1,100,389	\$0	\$0	<b>\$3,124,253</b>
<b>GRAND TOTAL NRC (no cred</b>	\$0	\$0	\$283,088	\$235,273	\$202,654	\$720,923	\$1,214,327	\$0	\$0	<b>\$3,358,895</b>

COGEMA Mining, Inc.  
2008 Restoration and Reclamation Costs  
Wyoming Operations  
WORKSHEET 2

PLANT EQUIPMENT REMOVAL AND DISPOSAL	Irigaray						Christensen					
	Maint Area & Laboratory	Main Process Building	Expansion Building	Resin + Sand Filter Media	Dry Pack Area	Restoration Building	Sub Total	Satellite Plant	Resin + Sand Filter Media	Restoration Extension	Wellfield Modules	Sub Total
Volume (Yds <sup>3</sup> )	40	0	180	110	40	0		91	197	42	55	
Quantity Per Truck Load (Yds <sup>3</sup> )	20	20	20	20	20	20		20	20	20	20	
Number of Truck Loads	2.0	0.0	9.0	5.5	2.0	0.0		4.55	9.9	2.1	2.8	
<b>I Decontamination Cost</b>												
Decontamination Cost (\$/Load)	\$435	\$435	\$435	\$435	\$435	\$435		\$435	\$435	\$435	\$435	
Percent Requiring Decontamination	20.0%	100.0%	100.0%	0.0%	100.0%	100.0%		100.0%	0.0%	100.0%	100.0%	
Total Cost	\$174	\$0	\$3,915	\$0	\$870	\$0	\$4,959	\$1,979	\$0	\$914	\$1,196	\$4,089
<b>II Dismantle and Loading Cost</b>												
Cost Per Truck Load (\$)	\$650	\$650	\$650	\$650	\$650	\$650		\$650	\$650	\$650	\$650	
Total Cost	\$1,300	\$0	\$5,850	\$3,575	\$1,300	\$0	\$12,025	\$2,958	\$6,403	\$1,365	\$1,788	\$12,513
<b>III Oversize Charges</b>												
Percent Requiring Permits	40.0%	40.0%	40.0%	0.0%	60.0%	40.0%		40.0%	0.0%	40.0%	0.0%	
Cost Per Truck Load (\$)	\$326	\$326	\$326	\$326	\$326	\$326		\$326	\$326	\$326	\$326	
Total Cost	\$261	\$0	\$1,174	\$0	\$391	\$0	\$1,826	\$593	\$0	\$274	\$0	\$867
<b>IV Transportation &amp; Disposal</b>												
<b>A. Landfill</b>												
Percent To Be Shipped	80.0%	80.0%	80.0%	0.0%	50.0%	80.0%		80.0%	0.0%	80.0%	80.0%	
Transportation Cost Per Truck Load	\$160	\$160	\$160	\$160	\$160	\$160		\$160	\$160	\$160	\$160	
Transportation Cost	\$256	\$0	\$1,152	\$0	\$160	\$0		\$582	\$0	\$269	\$352	
Disposal Fee Per Cubic Yard	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00		\$12.00	\$12.00	\$12.00	\$12.00	
Disposal Cost (\$)	\$384	\$0	\$1,728	\$0	\$240	\$0		\$874	\$0	\$403	\$528	
Total Cost	\$640	\$0	\$2,880	\$0	\$400	\$0		\$1,456	\$0	\$672	\$880	
<b>B. Licensed Site</b>												
Percent To Be Shipped	20.0%	20.0%	20.0%	100.0%	50.0%	20.0%		20.0%	100.0%	20.0%	20.0%	
Transportation Cost Per Truck Load	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000		\$1,000	\$1,000	\$1,000	\$1,000	
Transportation Cost	\$400	\$0	\$1,800	\$5,500	\$1,000	\$0		\$910	\$9,850	\$420	\$550	
Disposal Cost Per Cubic Foot (\$)	\$11.00	\$11.00	\$11.00	\$11.00	\$11.00	\$11.00		\$11.00	\$11.00	\$11.00	\$11.00	
Quantity Per Truck Load (Yds <sup>3</sup> )	20.0	20.0	20.0	20.0	20.0	20.0		20.0	20.0	20.0	20.0	
Quantity Per Truck Load (Ft <sup>3</sup> )	540	540	540	540	540	540		540	540	540	540	
Disposal Cost	\$2,376	\$0	\$10,692	\$32,670	\$5,940	\$0		\$5,405	\$58,509	\$2,495	\$3,267	
Total Cost Licensed Site	\$2,776	\$0	\$12,492	\$38,170	\$6,940	\$0		\$6,315	\$68,359	\$2,915	\$3,817	
Total Cost Transportation & Disposal	\$3,416	\$0	\$15,372	\$38,170	\$7,340	\$0	\$64,298	\$7,771	\$68,359	\$3,587	\$4,697	\$84,414
<b>TOTAL COST</b>	\$5,151	\$0	\$26,311	\$41,745	\$9,901	\$0	\$83,108	\$13,301	\$74,762	\$6,139	\$7,681	\$101,883
<b>TOTAL COST - IRIGARAY AND CHRISTENSEN</b>												\$184,990

Maint Area & Laboratory	Warehouse & Offices	Irigaray				Sub Total	Christensen						Warehouse	Sub Total
		Main Process Building	Expansion Building	Dry Pack Area	Restoration Building		Satellite Plant	Wellfield Modules	Booster Pump Bldgs.	Restoration Extension	Office Building			

**BUILDING DEMOLITION AND DISPOSAL**

Structural Character	1 Story	1 Story	1 Story	1 Story	3 Story	1 Story	Sub Total	2 Story	1 Story	1 Story	2 Story	1 Story	1 Story	Sub Total	
	Steel Frame	Steel Frame	Steel Frame	Steel Frame	Steel/Masonry	Steel Frame		Steel Frame	Pre Fab (22)	Pre Fab (4)	Steel Frame	Pre-Fab	Steel Frame		
Demolition Volume (Ft³)	179400	108720	430400	386400	126000	69640		192000	95040	46720	72000	64800	11000		
Cost of Demolition Per Ft³	\$0.1650	\$0.1650	\$0.1650	\$0.1650	\$0.1650	\$0.1650		\$0.1650	\$0.1650	\$0.1650	\$0.1650	\$0.1650	\$0.1650		
Demolition Cost (\$)	\$29,601	\$17,939	\$71,016	\$63,756	\$20,790	\$11,491	\$214,592	\$31,680	\$15,682	\$7,709	\$11,880	\$10,692	\$1,815	\$79,457	
Factor For Gutting	15.0%	10.0%	30.0%	10.0%	20.0%	10.0%		20.0%	0.0%	0.0%	20.0%	10.0%	10.0%		
Cost For Gutting (\$)	\$4,440	\$1,794	\$21,305	\$6,376	\$4,158	\$1,149	\$39,221	\$6,336	\$0	\$0	\$2,376	\$1,069	\$182	\$9,963	
Weight (pounds)	158761	96212	380885	341947	111504	61628		169912	66660	28032	63717	38802	9735		
Weight per Truckload	40000	40000	40000	40000	40000	40000		40000	40000	40000	40000	40000	40000		
Number of Truckloads	4.0	2.4	9.5	8.5	2.8	1.5		4.2	1.7	0.7	1.6	1.0	0.2		
Transportation Cost per Truckload	\$160	\$160	\$160	\$160	\$160	\$160		\$160	\$160	\$160	\$160	\$160	\$160		
Transportation Cost (\$)	\$635	\$385	\$1,524	\$1,368	\$446	\$247	\$4,604	\$680	\$267	\$112	\$255	\$155	\$39	\$1,507	
Disposal Cost per Truckload (25 CY)	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00		\$300.00	\$300.00	\$300.00	\$300.00	\$300.00	\$300.00		
Disposal Cost (\$)	\$1,191	\$722	\$2,857	\$2,565	\$836	\$462	\$8,632	\$1,274	\$500	\$210	\$478	\$291	\$73	\$2,826	
<b>TOTAL COST</b>	<b>\$35,867</b>	<b>\$20,839</b>	<b>\$96,701</b>	<b>\$74,064</b>	<b>\$26,230</b>	<b>\$13,348</b>	<b>\$267,050</b>	<b>\$39,970</b>	<b>\$16,448</b>	<b>\$8,031</b>	<b>\$14,989</b>	<b>\$12,207</b>	<b>\$2,108</b>	<b>\$93,754</b>	
<b>TOTAL COST IRIGARAY AND CHRISTENSEN</b>															<b>\$360,804</b>

**CONCRETE DECONTAMINATION, DEMOLITION & DISPOSAL**

Area (Ft²)	8020	7100	17600	18400	5600	3600		9600	0	1440	3600	0	1000		
Average Thickness (Ft)	0.5	0.5	0.5	0.5	1	0.5		0.5	0.0	0.5	0.5	0.0	0.5		
Volume (Ft³)	4010	3550	8800	9200	5600	1800		4800	0	720	1800	0	500		
Percent Requiring Decontamination	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%		100.0%	0.0%	100.0%	100.0%	0.0%	0.0%		
Percent Decontaminated	0.0%	0.0%	75.0%	75.0%	40.0%	75.0%		75.0%	0.0%	100.0%	100.0%	0.0%	0.0%		
Decontamination (\$/Ft²)	\$0.134	\$0.134	\$0.134	\$0.134	\$0.134	\$0.134		\$0.134	\$0.134	\$0.134	\$0.134	\$0.134	\$0.134		
Decontamination Cost	\$0	\$0	\$1,769	\$1,849	\$300	\$362	\$4,280	\$965	\$0	\$193	\$482	\$0	\$0	\$1,640	
Demolition (\$/Ft²)	\$3.05	\$3.05	\$3.05	\$3.05	\$3.05	\$3.05		\$3.05	\$3.05	\$3.05	\$3.05	\$3.05	\$3.05		
Demolition Cost	\$24,461	\$21,655	\$53,680	\$56,120	\$17,080	\$10,980	\$183,976	\$29,280	\$0	\$4,392	\$10,980	\$0	\$3,050	\$47,702	
Transportation & Disposal															
A. Onsite Disposal															
Percent to be Disposed Onsite	100%	100%	90%	90%	40%	90%		90%	0%	100%	100%	0%	100%		
Transportation Cost	\$0	\$0	\$0	\$0	\$0	\$0		\$0	\$0	\$0	\$0	\$0	\$0		
Disposal Cost per Cubic Foot	\$0.230	\$0.230	\$0.230	\$0.230	\$0.230	\$0.230		\$0.230	\$0.230	\$0.230	\$0.230	\$0.230	\$0.230		
Disposal Cost (\$)	\$922	\$817	\$1,822	\$1,904	\$515	\$373	\$6,353	\$994	\$0	\$166	\$414	\$0	\$115	\$1,688	
B. Licensed Site															
Percent to be Shipped	0%	0%	10%	10%	60%	10%		10%	100%	0%	0%	100%	0%		
Transportation Cost per Truckload	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000		\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000		
Transportation Cost (\$)	\$0	\$0	\$1,630	\$1,704	\$6,222	\$333	\$9,889	\$889	\$0	\$0	\$0	\$0	\$0	\$889	
Disposal Cost per Cubic Foot	\$3.70	\$3.70	\$3.70	\$3.70	\$3.70	\$3.70		\$3.70	\$3.70	\$3.70	\$3.70	\$3.70	\$3.70		
Quantity Per Truck Load (Yds³)	20	20	20	20	20	20		20	20	20	20	20	20		
Quantity Per Truck Load (Ft³)	540	540	540	540	540	540		540	540	540	540	540	540		
Disposal Cost (\$)	\$0	\$0	\$3,256	\$3,404	\$12,432	\$666	\$19,758	\$1,776	\$0	\$0	\$0	\$0	\$0	\$1,776	
<b>TOTAL COST</b>	<b>\$25,383</b>	<b>\$22,472</b>	<b>\$62,156</b>	<b>\$64,981</b>	<b>\$36,550</b>	<b>\$12,714</b>	<b>\$224,255</b>	<b>\$33,903</b>	<b>\$0</b>	<b>\$4,751</b>	<b>\$11,876</b>	<b>\$0</b>	<b>\$3,165</b>	<b>\$53,695</b>	
<b>TOTAL COST IRIGARAY AND CHRISTENSEN</b>															<b>\$277,951</b>

**SOIL REMOVAL & DISPOSAL**

Assume removal of 3" of Contaminated Soil under Primary Areas, Disposal at a Licensed facility.

Removal with Loader (\$75/hr)	\$75	\$0	\$0	\$1,222	\$1,278	\$389	\$250	\$3,139	\$667	\$0	\$0	\$0	\$0	\$0	\$867
Quantity to be Shipped (Ft³)	0	0	4400	4600	1400	900		2400	0	0	0	0	0	0	
Transportation Cost per Truckload	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000		\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000		
Transportation Cost (\$)	\$0	\$0	\$8,148	\$8,519	\$2,593	\$1,667	\$20,926	\$4,444	\$0	\$0	\$0	\$0	\$0	\$4,444	
Disposal fee Per Cubic Foot(\$)	\$3.70	\$3.70	\$3.70	\$3.70	\$3.70	\$3.70		\$3.70	\$3.70	\$3.70	\$3.70	\$3.70	\$3.70		
Quantity per Truckload (Ft³)	540	540	540	540	540	540		540	540	540	540	540	540		
Disposal Cost (\$)	\$0	\$0	\$16,280	\$17,020	\$5,180	\$3,330	\$41,810	\$8,880	\$0	\$0	\$0	\$0	\$0	\$8,880	
Removal, NPDES Pts.															
Quantity to be Shipped (Ft³)			559					5,030							
Transportation Cost per Truckload	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000		\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000		



COGENA Mining, Inc.  
 2008 Restoration and Reclamation Costs  
 Wyoming Operations  
 WORKSHEET 3

	Irigaray							Christensen							Sub Total
	Maint Area & Laboratory	Warehouse & Offices	Main Process Building	Expansion Building	Dry Pack Area	Restoration Building		Satellite Plant	Wellfield Modules	Booster Pump Bldgs.	Restoration Extension	Office Building	Warehouse		
Transportation Cost (\$)	\$0	\$0	\$1,035	\$0	\$0	\$0	\$1,035	\$9,315	\$0	\$0	\$0	\$0	\$0	\$0	\$9,315
Disposal fee Per Cubic Foot(\$)	\$3.70	\$3.70	\$3.70	\$3.70	\$3.70	\$3.70		\$3.70	\$3.70	\$3.70	\$3.70	\$3.70	\$3.70	\$3.70	
Quantity per Truckload (Ft³)	540	540	540	540	540	540		540	540	540	540	540	540	540	
Disposal Cost (\$)	\$0	\$0	\$2,068	\$0	\$0	\$0	\$2,068	\$18,611	\$0	\$0	\$0	\$0	\$0	\$0	\$18,611
Total Cost	\$0	\$0	\$28,753	\$26,816	\$8,161	\$5,247	\$68,978	\$41,917	\$0	\$0	\$0	\$0	\$0	\$0	\$41,917
TOTAL COST	\$0	\$0	\$28,753	\$26,816	\$8,161	\$5,247	\$68,978	\$41,917	\$0	\$0	\$0	\$0	\$0	\$0	\$41,917
TOTAL COST IRIGARAY AND CHRISTENSEN															\$110,895

RADIATION SURVEY														
	0.18	0.16	0.40	0.42	0.13	0.08		0.22	0.00	0.03	0.08	0.00	0.02	
Area required (acres)														
Survey Cost (\$/acre)	\$520.00	\$520.00	\$520.00	\$520.00	\$520.00	\$520.00		\$520.00	\$520.00	\$520.00	\$520.00	\$520.00	\$520.00	\$520.00
TOTAL SURVEY COST (\$)	\$96		\$210	\$220	\$67	\$43	\$636	\$115	\$0	\$17	\$43	\$0	\$12	\$187

TOTAL COST	\$61,346	\$43,311	\$187,820	\$166,082	\$71,008	\$31,352	\$560,919	\$115,906	\$16,448	\$12,799	\$26,908	\$12,207	\$5,285	\$189,554
TOTAL COST IRIGARAY AND CHRISTENSEN														\$750,473

COGEMA Mining, Inc.  
2008 Restoration and Reclamation Costs  
Wyoming Operations  
WORKSHEET 4

POND RECLAMATION COST	Irigaray						Christensen						
	Pond A	Pond B	Pond C	Pond D	Pond E	Pond RA	Pond RB	Brine Pond 1	Brine Pond 2	Brine Pond 3	Brine Pond 4	Permeate Pond	
<b>POND SLUDGE:</b>													
Average Sludge Depth (Ft)		0.156					0.156	0.166	0.222	0.143	0.068	0.000	
Average Area of Sludge (Ft²)		50,604					50,604	20,909	20,909	20,909	20,909	-	
Volume of Sludge (Ft³)		7,907					7,907	3,466	4,651	2,983	1,414	-	
Volume of Sludge (Yds³)		293					293	128	172	110	52	0	
Volume of Sludge Per Truck Load (Yds³)		20.0					20.0	20.0	20.0	20.0	20.0	20.0	
# of Truck Loads of Sludge		14.7					14.7	6.4	8.6	5.5	2.6	0.0	
Sludge Handling Cost Per Load (\$)		\$240.00					\$240.00	\$240.00	\$240.00	\$240.00	\$240.00	\$240.00	
Total Sludge Handling Cost (\$)	\$0	\$3,528	\$0	\$0	\$0	\$0	\$3,528	\$1,536	\$2,064	\$1,320	\$624	\$0	
<b>Transportation &amp; Disposal</b>													
Percent To Be Shipped to Licensed Site		100.0%					100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
Transportation Cost per Truckload		\$1,000					\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	
Transportation Cost (\$)		\$14,700					\$14,700	\$6,400	\$8,600	\$5,500	\$2,600	\$0	
Disposal Cost Per Cubic Foot (\$)		\$11.00					\$11.00	\$11.00	\$11.00	\$11.00	\$11.00	\$11.00	
Quantity Per Truck Load (Yds³)		20.0					20.0	20.0	20.0	20.0	20.0	20.0	
Quantity Per Truck Load (Ft³)		540					540	540	540	540	540	540	
Disposal Cost (\$)		\$87,318					\$87,318	\$38,016	\$51,084	\$32,670	\$15,444	\$0	
Total Transportation & Disposal (\$)	\$0	\$102,018	\$0	\$0	\$0	\$0	\$102,018	\$44,416	\$59,684	\$38,170	\$18,044	\$0	
<b>TOTAL SLUDGE COST (\$)</b>	<b>\$0</b>	<b>\$105,546</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$105,546</b>	<b>\$45,952</b>	<b>\$61,748</b>	<b>\$39,490</b>	<b>\$18,668</b>	<b>\$0</b>	<b>\$376,950</b>
<b>POND LINER:</b>													
Total Pond Area (Acres)		1.72					2.17	1.10	1.10	1.10	1.10	0.00	
Total Pond Area (Ft²)		74923.2					94525.2	47916	47916	47916	47916	0	
Factor For Sloping Sides		20.0%					20.0%	20.0%	20.0%	20.0%	20.0%	0.0%	
Total Liner Area (Ft²)		89908					113430	57499	57499	57499	57499	0	
Liner Thickness (Millimeters)		30					30	30	30	30	30	0	
Liner Thickness (Inches)		0.1181					0.1181	0.1181	0.1181	0.1181	0.1181	0	
Liner Thickness (Ft)		0.0098					0.0098	0.0098	0.0098	0.0098	0.0098	0	
"Swell" Factor		25.0%					25.0%	25.0%	25.0%	25.0%	25.0%	0.0%	
Liner Volume (Ft³)		1101					1390	704	704	704	704	0	
Truck Loads of Liner		2.0					2.6	1.3	1.3	1.3	1.3	0.0	
<b>Liner Handling Cost (\$)</b>													
Labor Crew Cost per Hour (\$)		\$90					\$90	\$90	\$90	\$90	\$90	\$0	
Hours per Load		2.0					2.0	2.0	2.0	2.0	2.0	0.0	
Liner Handling Cost Per Load (\$)		\$180.00					\$180.00	\$180.00	\$180.00	\$180.00	\$180.00	\$0.00	
Total Liner Handling Cost (\$)	\$0	\$360	\$0	\$0	\$0	\$0	\$468	\$234	\$234	\$234	\$234	\$0	
<b>Transportation &amp; Disposal</b>													
Percent To Be Shipped to Licensed Site		100.0%					100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
Transportation Cost per Truckload		\$1,000					\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	
Transportation Cost (\$)		\$2,000					\$2,600	\$1,300	\$1,300	\$1,300	\$1,300	\$0	
Disposal Cost Per Cubic Foot (\$)		\$11.00					\$11.00	\$11.00	\$11.00	\$11.00	\$11.00	\$11.00	
Quantity Per Truck Load (Ft³)		540					540	540	540	540	540	540	
Disposal Cost (\$)		\$11,880					\$15,444	\$7,722	\$7,722	\$7,722	\$7,722	\$0	
Total Transportation & Disposal (\$)	\$0	\$13,880	\$0	\$0	\$0	\$0	\$18,044	\$9,022	\$9,022	\$9,022	\$9,022	\$0	
<b>TOTAL LINER COST (\$)</b>	<b>\$0</b>	<b>\$14,240</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$18,512</b>	<b>\$9,256</b>	<b>\$9,256</b>	<b>\$9,256</b>	<b>\$9,256</b>	<b>\$0</b>	<b>\$69,776</b>
<b>POND BACKFILL:</b>													
Backfill required (Yds³)	8740	8580	8740	8580	2517	14617	16319	9048	9048	9048	9048	18070	
Backfill Cost (\$/Yd³)	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	
<b>TOTAL BACKFILL COST (\$)</b>	<b>\$17,480</b>	<b>\$17,160</b>	<b>\$17,480</b>	<b>\$17,160</b>	<b>\$5,034</b>	<b>\$29,234</b>	<b>\$32,638</b>	<b>\$18,096</b>	<b>\$18,096</b>	<b>\$18,096</b>	<b>\$18,096</b>	<b>\$36,140</b>	<b>\$244,710</b>
<b>RADIATION SURVEY</b>													
Areal required (acres)		1.72		1.72			2.17	1.10	1.10	1.10	1.10	0	
Survey Cost (\$/acre)	\$520.00	\$520.00	\$520.00	\$520.00	\$520.00	\$520.00	\$520.00	\$520.00	\$520.00	\$520.00	\$520.00	\$520.00	
<b>TOTAL SURVEY COST (\$)</b>	<b>\$0</b>	<b>\$894</b>	<b>\$0</b>	<b>\$894</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,128</b>	<b>\$572</b>	<b>\$572</b>	<b>\$572</b>	<b>\$572</b>	<b>\$0</b>	<b>\$5,204</b>
<b>LEAK DETECTION SYSTEM REMOVAL</b>													
Volume of Gravel and Piping (Ft³) (Assume 3")													
Quantity per Truckload (Ft³)													
Quantity to be Shipped to Licensed Site (Loads)													
Transportation Cost per Truckload													
Transportation Cost (\$)													
Handling Cost per load													
Disposal Fee per Cubic Foot (\$)													
Disposal Cost (\$)													

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POND RECLAMATION COST	Irigaray							Christensen					
	Pond A	Pond B	Pond C	Pond D	Pond E	Pond RA	Pond RB	Brine Pond 1	Brine Pond 2	Brine Pond 3	Brine Pond 4	Permeate Pond	
TOTAL LEAK DETECTION SYSTEM REMOVAL	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTAL POND RECLAMATION COST</b>	<b>\$17,480</b>	<b>\$137,840</b>	<b>\$17,480</b>	<b>\$18,054</b>	<b>\$5,034</b>	<b>\$29,234</b>	<b>\$157,824</b>	<b>\$73,876</b>	<b>\$89,672</b>	<b>\$67,414</b>	<b>\$46,592</b>	<b>\$36,140</b>	<b>\$696,640</b>

SUMMARY - IRIGARAY:

TOTAL SLUDGE COST (\$)	\$211,092
TOTAL LINER COST (\$)	\$32,752
TOTAL BACKFILL COST (\$)	\$136,186
TOTAL RADIATION SURVEY COST (\$)	\$2,916
LEAK DETECTION SYSTEM REMOVAL	\$0
<b>TOTAL POND RECLAMATION COST</b>	<b>\$382,946</b>

SUMMARY - CHRISTENSEN:

TOTAL SLUDGE COST (\$)	\$165,858
TOTAL LINER COST (\$)	\$37,024
TOTAL BACKFILL COST (\$)	\$108,524
TOTAL RADIATION SURVEY COST (\$)	\$2,288
LEAK DETECTION SYSTEM REMOVAL	\$0
<b>TOTAL POND RECLAMATION COST</b>	<b>\$313,694</b>
<b>TOTAL PROJECT COST - CR and IR (\$)</b>	<b>\$696,640</b>

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	Irigaray				Christensen			
	Mine Units #1 Thru #9	517 USMT Test Sites	Monitor/ Trend	Sub Total	Mine Units #2 Thru #7	Monitor/ Trend	Misc. Regional	Sub Total
<b>WELL PLUGGING AND ABANDONMENT</b>								
Number of Wells	0	11	0	11	2379	327	137	2843
Average Depth	250	250	250		450	450	410	
Average Diameter	4.5	4.5	4.5		4.5	4.5	4.5	
<b>Materials</b>								
Bentonite Chips Required (Ft <sup>3</sup> /Well)	11.4	11.4	11.4		11.4	11.4	11.4	
Bags of Chips Required/Well	15.0	15.0	15.0		16.0	16.0	15.0	
Cost Per Bag (\$)	\$4.50	\$4.50	\$4.50		\$4.50	\$4.50	\$4.50	
Cost/Well Bentonite Chips (\$)	\$67.50	\$67.50	\$67.50		\$72.00	\$72.00	\$67.50	
Gravel Fill Required (Ft <sup>3</sup> /Well)	15.7	15.7	15.7		33.6	33.6	33.6	
Gravel Fill Required (Yd <sup>3</sup> /Well)	0.58	0.58	0.58		1.24	1.24	1.24	
Cost of Gravel/Yd <sup>3</sup> (\$)	\$20.00	\$20.00	\$20.00		\$20.00	\$20.00	\$20.00	
Cost/Well Gravel Fill (\$)	\$11.63	\$11.63	\$11.63		\$24.89	\$24.89	\$24.89	
Cement Cone/Markers Req'd/Well	1.0	1.0	1.0		1.0	1.0	1.0	
Cost of Cement Cones/Markers (\$)	\$4.00	\$4.00	\$4.00		\$4.00	\$4.00	\$4.00	
Total Materials Cost per Well	\$83.13	\$83.13	\$83.13		\$100.89	\$100.89	\$96.39	
<b>Labor</b>								
Hours Required per Well	1.0	1.0	1.0		1.0	1.0	1.0	
Labor Cost per Hour	\$60.00	\$60.00	\$60.00		\$60.00	\$60.00	\$60.00	
Total Labor Cost per Well (\$)	\$60.00	\$60.00	\$60.00		\$60.00	\$60.00	\$60.00	
<b>Equipment Rental</b>								
Hours Required per Well	1.0	1.0	1.0		1.0	1.0	1.0	
Backhoe w/Operator Cost/Hr (\$)	\$38.50	\$38.50	\$38.50		\$38.50	\$38.50	\$38.50	
Total Equipment Cost per Well (\$)	\$38.50	\$38.50	\$38.50		\$38.50	\$38.50	\$38.50	
Total Cost per Well (\$)	\$181.63	\$181.63	\$181.63		\$199.39	\$199.39	\$194.89	
<b>TOTAL WELL ABANDONMENT COST (\$)</b>		\$1,998	\$0	\$1,998	\$474,346	\$65,200	\$26,700	\$566,246
<b>GRAND TOTAL IRIGARAY AND CHRISTENSEN</b>								\$568,246

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WELLFIELD EQUIPMENT REMOVAL & DISPOSAL

	Irigaray Mine Unit(s) #1 Thru #9	Christensen Mine Units #2 Thru #4	Christensen Mine Unit #5	Christensen Mine Unit #6	Christensen Mine Unit #7	Christensen Mine Unit #8	Total Christensen & Irigaray
<b>I Wellfield Piping</b>							
<b>A. Removal</b>							
Length/Well (Ft)	100	300	300	300			
Total Number of Wells	602	1021	494	446			
Total Quantity (Ft)	60200	306300	148200	133800			
Cost of Removal (\$/Ft)	\$0.202	\$0.202	\$0.202	\$0.202			
Cost of Removal (\$)	\$12,160	\$61,873	\$29,936	\$27,028			\$130,997
Average OD (Inches)	3.0	3.0	3.0	3.0			
Chipped Volume Reduction (Ft <sup>3</sup> /Ft)	0.016	0.016	0.016	0.016			
Chipped Volume (Ft <sup>3</sup> )	963	4,901	2,371	2,141			
Quantity Per Truck Load (Ft <sup>3</sup> )	540	540	540	540			
Total Number of Truck Loads	1.8	9.1	4.4	4.0			
<b>B. Survey &amp; Decontamination</b>							
Percent Requiring Decontamination	0%	0%	0%	0%			
Loads for Decontamination	0.0	0.0	0.0	0.0			
Cost for Decontamination (\$/Load)	\$435.00	\$435.00	\$435.00	\$435.00			
Cost for Decontamination (\$)	\$0	\$0	\$0	\$0			\$0
<b>C. Transport &amp; Disposal</b>							
<b>1.) Landfill</b>							
<b>a. Transportation</b>							
Percent To Be Shipped	0.0%	0.0%	0.0%	0.0%			
Loads To Be Shipped	0.0	0.0	0.0	0.0			
Transportation Cost per Load	\$160	\$160	\$160	\$160			
Transportation Cost (\$)	\$0	\$0	\$0	\$0			\$0
<b>b. Disposal</b>							
Disposal Fee Per Yd <sup>3</sup>	\$12.00	\$12.00	\$12.00	\$12.00			
Yds <sup>3</sup> Per Load	20	20	20	20			
Disposal Cost (\$)	\$0	\$0	\$0	\$0			
Total Cost - Landfill	\$0	\$0	\$0	\$0			\$0
<b>2.) Licensed Site</b>							
<b>a. Transportation</b>							
Percent To Be Shipped	100.0%	100.0%	100.0%	100.0%			
Loads To Be Shipped	1.8	9.1	4.4	4.0			
Transportation Cost per Load	\$1,000	\$1,000	\$1,000	\$1,000			
Transportation Cost (\$)	\$1,800	\$9,100	\$4,400	\$4,000			\$19,300
<b>b. Disposal</b>							
Disposal Cost Per Ft <sup>3</sup>	\$11.00	\$11.00	\$11.00	\$11.00			
Disposal Fee Per Yd <sup>3</sup>	\$297.00	\$297.00	\$297.00	\$297.00			
Quantity Per Truck Load (Yds <sup>3</sup> )	20	20	20	20			
Disposal Cost (\$)	\$10,692	\$54,054	\$26,136	\$23,760			\$114,642
Total Cost - Licensed Site	\$12,492	\$63,154	\$30,536	\$27,760			\$133,942
Total Cost - Transport & Disposal	\$12,492	\$63,154	\$30,536	\$27,760			\$133,942
<b>Total Cost - WF Piping Removal &amp; Disposal</b>	<b>\$24,652</b>	<b>\$125,027</b>	<b>\$60,472</b>	<b>\$54,788</b>	<b>\$0</b>	<b>\$0</b>	<b>\$264,939</b>
<b>II Production Well Pumps</b>							
<b>A. Pump and Tubing Removal</b>							
Number of Production Wells	424	443	217	202			
Cost of Removal (\$/well)	\$22.50	\$22.50	\$22.50	\$22.50			
Cost of Removal (\$)	\$0	\$9,968	\$4,883	\$4,545			\$19,395
Number of Pumps Per Truck Load	180	180	180	180			
Number of Truck Loads (Pumps)	0.0	2.5	1.2	1.1			
<b>B. Survey &amp; Decontamination (Pumps)</b>							
Percent Requiring Decontamination	50.0%	50.0%	50.0%	50.0%			
Loads for Decontamination	0.0	1.3	0.6	0.6			
Cost for Decontamination (\$/Load)	\$435.00	\$435.00	\$435.00	\$435.00			
Cost for Decontamination (\$)	\$0	\$566	\$261	\$261			\$1,088
<b>C. Tubing Volume Reduction &amp; Loading</b>							
Length per Well (Ft)	100	300	300	450			
Total Quantity (Ft)	42,400	132,900	65,100	90,900			
Cost of Removal (\$/Ft)	\$0.025	\$0.025	\$0.025	\$0.025			
Cost of Removal (\$)	\$0	\$3,323	\$1,628	\$2,273			\$7,223
Average OD (Inches)	3.0	3.0	3.0	3.0			
Chipped Volume Reduction (Ft <sup>3</sup> /Ft)	0.016	0.016	0.016	0.016			
Chipped Volume (Ft <sup>3</sup> )	678	2,126	1,042	1,454			

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WELLFIELD EQUIPMENT REMOVAL & DISPOSAL	Irigaray Mine Unit(s) #1 Thru #9	Christensen Mine Units #2 Thru #4	Christensen Mine Unit #5	Christensen Mine Unit #6	Christensen Mine Unit #7	Christensen Mine Unit #8	Total Christensen & Irigaray
Quantity per Truckload (Ft³)	540	540	540	540			
Number of Truck Loads	1.3	3.9	1.9	2.7			
<b>D. Transport &amp; Disposal</b>							
1.) Landfill							
a. Transportation							
Percent To Be Shipped (Pumps)	50.0%	50.0%	50.0%	50.0%			
Loads To Be Shipped	0.0	1.3	0.6	0.6			
Transportation Cost per Load	\$160	\$160	\$160	\$160			
Transportation Cost (\$)	\$0	\$208	\$96	\$96			\$400
b. Disposal							
Disposal Fee Per Yd³	\$12.00	\$12.00	\$12.00	\$12.00			
Yds³ Per Load	20	20	20	20			
Disposal Cost (\$)	\$0	\$312	\$144	\$144			\$600
Total Cost - Landfill	\$0	\$520	\$240	\$240			\$1,000
2.) Licensed Site							
a. Transportation							
Percent To Be Shipped (Pumps)	50.0%	50.0%	50.0%	50.0%			
Percent To Be Shipped (Tubing)	100.0%	100.0%	100.0%	100.0%			
Loads To Be Shipped	1.3	5.2	2.5	3.2			
Transportation Cost per Load	\$1,000	\$1,000	\$1,000	\$1,000			
Transportation Cost (\$)	\$1,256	\$5,188	\$2,529	\$3,243			\$12,216
b. Disposal							
Disposal Cost Per Ft³	\$11.00	\$11.00	\$11.00	\$11.00			
Disposal Fee Per Yd³	\$297.00	\$297.00	\$297.00	\$297.00			
Quantity Per Truck Load (Yds³)	20	20	20	20			
Disposal Cost (\$)	\$7,462	\$30,815	\$15,022	\$19,265			\$72,565
Total Cost - Licensed Site	\$8,719	\$36,003	\$17,550	\$22,509			\$84,781
Total Cost - Transport & Disposal	\$8,719	\$36,523	\$17,790	\$22,749			\$85,781
Total Cost - Pump Removal & Disposal	\$8,719	\$50,379	\$24,561	\$29,827	\$0	\$0	\$113,486
<b>III Surface Trunkline Piping</b>							
A. Removal							
Total Quantity (Ft)	44700	0	0	0	0	0	
Cost of Removal (\$/Ft)	\$0.146	\$0.146	\$0.146	\$0.146	\$0.146	\$0.146	
Cost of Removal (\$)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Average OD (Inches)	8.750	8.750	0.000	0.000	0.000	0.000	
Chipped Volume Reduction (Ft³/Ft)	0.088	0.088	0.088	0.088	0.088	0.088	
Chipped Volume (Ft³)	3934	0	0	0	0	0	
Quantity Per Truck Load (Ft³)	540	540	540	540	0	0	
Total Number of Truck Loads	7.3	0.0	0.0	0.0	0.0	0.0	
B. Survey & Decontamination							
Percent Requiring Decontamination	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Loads for Decontamination	0.0	0.0	0.0	0.0	0.0	0.0	
Cost for Decontamination (\$/Load)	\$435.00	\$435.00	\$435.00	\$435.00	\$0.00	\$0.00	
Cost for Decontamination (\$)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C. Transport & Disposal							
1.) Landfill							
a. Transportation							
Percent To Be Shipped	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Loads To Be Shipped	0.0	0.0	0.0	0.0	0.0	0.0	
Transportation Cost per Load	\$160	\$160	\$160	\$160	\$0	\$0	
Transportation Cost (\$)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
b. Disposal							
Disposal Fee Per Yd³	\$12.00	\$12.00	\$12.00	\$12.00	\$0.00	\$0.00	
Yds³ Per Load	20	20	20	20	0	0	
Disposal Cost (\$)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Cost - Landfill	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.) Licensed Site							
a. Transportation							
Percent To Be Shipped	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
Loads To Be Shipped	7.3	0.0	0.0	0.0	0.0	0.0	
Transportation Cost per Load	\$1,000	\$1,000	\$1,000	\$1,000	\$0	\$0	
Transportation Cost (\$)	\$7,284	\$0	\$0	\$0	\$0	\$0	\$7,284
b. Disposal							
Disposal Cost Per Ft³	\$11.00	\$11.00	\$11.00	\$11.00	\$0.00	\$0.00	
Disposal Fee Per Yd³	\$297.00	\$297.00	\$297.00	\$297.00	\$0.00	\$0.00	

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	Irigaray Mine Unit(s) #1 Thru #9	Christensen Mine Units #2 Thru #4	Christensen Mine Unit #5	Christensen Mine Unit #6	Christensen Mine Unit #7	Christensen Mine Unit #8	Total Christensen & Irigaray
<b>WELLFIELD EQUIPMENT REMOVAL &amp; DISPOSAL</b>							
Quantity Per Truck Load (Yds <sup>3</sup> )	20	20	20	20	0	0	
Disposal Cost (\$)	\$43,270	\$0	\$0	\$0	\$0	\$0	\$43,270
Total Cost - Licensed Site	\$50,554	\$0	\$0	\$0	\$0	\$0	\$50,554
Total Cost - Transport & Disposal	\$50,554	\$0	\$0	\$0	\$0	\$0	\$50,554
Total Cost - Surface Trunkline Removal & Disposal	\$50,554	\$0	\$0	\$0	\$0	\$0	\$50,554
<b>IV Buried Trunkline</b>							
<b>A. Removal</b>							
Total Quantity (Ft)	7300	11565	24500	47000	0	0	
Cost of Removal (\$/Ft)	\$3.12	\$3.12	\$3.12	\$3.12	\$3.12	\$3.12	
Cost of Removal (\$)	\$22,776	\$36,083	\$76,440	\$146,640	\$0	\$0	\$281,939
Average OD (Inches)	8.750	8.750	8.750	12.000	12.000	12.000	
Chipped Volume Reduction (Ft <sup>3</sup> /Ft)	0.088	0.088	0.088	0.130	0.130	0.130	
Chipped Volume (Ft <sup>3</sup> )	642	1018	2156	6110	0	0	
Quantity Per Truck Load (Ft <sup>3</sup> )	540	540	540	540	0	0	
Number of Truck Loads	1.2	1.9	4.0	11.3	0.0	0.0	
<b>B. Survey &amp; Decontamination</b>							
Percent Requiring Decontamination	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Loads for Decontamination	0.0	0.0	0.0	0.0	0.0	0.0	
Cost for Decontamination, (\$/Load)	\$435.00	\$435.00	\$435.00	\$435.00	\$0.00	\$0.00	
Cost for Decontamination, (\$)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>C. Transport &amp; Disposal</b>							
<b>1.) Landfill</b>							
<b>a. Transportation</b>							
Percent To Be Shipped	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Loads To Be Shipped	0.0	0.0	0.0	0.0	0.0	0.0	
Transportation Cost per Load	\$160	\$160	\$160	\$160	\$0	\$0	
Transportation Cost (\$)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>b. Disposal</b>							
Disposal Fee Per Yd <sup>3</sup>	\$12.00	\$12.00	\$12.00	\$12.00	\$0.00	\$0.00	
Yds <sup>3</sup> Per Load	20	20	20	20	0	0	
Disposal Cost (\$)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Cost - Landfill	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>2.) Licensed Site</b>							
<b>a. Transportation</b>							
Percent To Be Shipped	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
Loads To Be Shipped	1.2	1.9	4.0	11.3	0.0	0.0	
Transportation Cost per Load	\$1,000	\$1,000	\$1,000	\$1,000	\$0	\$0	
Transportation Cost (\$)	\$1,200	\$1,900	\$4,000	\$11,300	\$0	\$0	\$18,400
<b>b. Disposal</b>							
Disposal Cost Per Ft <sup>3</sup>	\$11.00	\$11.00	\$11.00	\$11.00	\$0.00	\$0.00	
Disposal Fee Per Yd <sup>3</sup>	\$297.00	\$297.00	\$297.00	\$297.00	\$0.00	\$0.00	
Quantity Per Truck Load (Yds <sup>3</sup> )	20	20	20	20	0	0	
Disposal Cost (\$)	\$7,128	\$11,286	\$23,760	\$67,122	\$0	\$0	\$109,296
Total Cost - Licensed Site	\$8,328	\$13,186	\$27,760	\$78,422	\$0	\$0	\$127,696
Total Cost - Transport & Disposal	\$8,328	\$13,186	\$27,760	\$78,422	\$0	\$0	\$127,696
Total Cost - Buried Trunkline Removal & Disposal	\$31,104	\$49,269	\$104,200	\$225,062	\$0	\$0	\$409,635
<b>V Manholes</b>							
<b>A. Removal</b>							
Total Quantity	5	8	5	11	0	0	
Cost of Removal (\$ Each)	\$117.00	\$117.00	\$117.00	\$117.00	\$117.00	\$117.00	
Cost of Removal (\$)	\$585	\$936	\$585	\$1,287	\$0	\$0	\$3,393
Quantity Per Truck Load	10	10	10	10	10	10	
Number of Truck Loads	0.5	0.8	0.5	1.1	0.0	0.0	
<b>B. Survey &amp; Decontamination</b>							
Percent Requiring Decontamination	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Loads for Decontamination	0.0	0.0	0.0	0.0	0.0	0.0	
Cost for Decontamination, (\$/Load)	\$435.00	\$435.00	\$435.00	\$435.00	\$0.00	\$0.00	
Cost for Decontamination, (\$)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>C. Transport &amp; Disposal</b>							
<b>1.) Landfill</b>							
<b>a. Transportation</b>							
Percent To Be Shipped	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Loads To Be Shipped	0.0	0.0	0.0	0.0	0.0	0.0	
Transportation Cost per Load	\$160	\$160	\$160	\$160	\$0	\$0	

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WELLFIELD EQUIPMENT REMOVAL & DISPOSAL

	Irigaray - Mine Unit(s) #1 Thru #9	Christensen Mine Units #2 Thru #4	Christensen Mine Unit #5	Christensen Mine Unit #6	Christensen Mine Unit #7	Christensen Mine Unit #8	Total Christensen & Irigaray
Transportation Cost (\$)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
b. Disposal							
Disposal Fee Per Yd <sup>3</sup> (\$)	\$12.00	\$12.00	\$12.00	\$12.00	\$0.00	\$0.00	
Yds <sup>3</sup> Per Load	20	20	20	20	0	0	
Disposal Cost (\$)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Cost - Landfill	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2.) Licensed Site							
a. Transportation							
Percent To Be Shipped	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Loads To Be Shipped	0.0	0.0	0.0	0.0	0.0	0.0	
Transportation Cost per Load	\$1,000	\$1,000	\$1,000	\$1,000	\$0	\$0	
Transportation Cost (\$)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
b. Disposal							
Disposal Cost Per Ft <sup>3</sup>	\$11.00	\$11.00	\$11.00	\$11.00	\$0.00	\$0.00	
Disposal Fee Per Yd <sup>3</sup>	\$297.00	\$297.00	\$297.00	\$297.00	\$0.00	\$0.00	
Quantity Per Truck Load (Yds <sup>3</sup> )	20	20	20	20	0	0	
Disposal Cost (\$)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Cost - Licensed Site	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Cost - Transport & Disposal	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Cost Manhole Removal & Disposal	\$585	\$936	\$585	\$1,287	\$0	\$0	\$3,393
<b>TOTAL COST - WELLFIELD EQUIP REMOVAL &amp; DISP</b>	<b>\$115,614</b>	<b>\$225,610</b>	<b>\$189,819</b>	<b>\$310,964</b>	<b>\$0</b>	<b>\$0</b>	<b>\$842,007</b>



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	Irigaray Mine Unit(s) #1 Thru #9	Christensen Mine Units #2 Thru #4	Christensen Mine Unit #5	Christensen Mine Unit #6	Christensen Mine Unit #7	Christensen Mine Unit #8	Total Christensen & Irigaray
<b>TOPSOIL REPLACEMENT &amp; REVEGETATION</b>							
<b>I Process Plant and Office Building</b>							
<b>A. Topsoil Handling &amp; Grading</b>							
Affected Area (Acres)	5.0	2.5	0.0	0.0	0.0	0.0	
Average Affected Thickness (Ins)	12.0	12.0	0.0	0.0	0.0	0.0	
Topsoil Volume (Yds <sup>3</sup> )	8067	4033	0	0	0	0	
Unit Cost - Haul/Place (\$/Yd <sup>3</sup> )	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	
Topsoil Handling Cost (\$)	\$16,133	\$8,067	\$0	\$0	\$0	\$0	
Unit Cost - Grading (\$/Ac)	\$38.45	\$38.45	\$38.45	\$38.45	\$38.45	\$38.45	
Grading Cost (\$)	\$192	\$96	\$0	\$0	\$0	\$0	
Sub Total - Topsoil	\$16,326	\$8,163	\$0	\$0	\$0	\$0	\$24,488
<b>B. Radiation Survey &amp; Soil Analysis</b>							
Unit Cost (\$/Ac)	\$520.00	\$520.00	\$520.00	\$520.00	\$520.00	\$520.00	
Sub Total - Survey & Analysis	\$2,600	\$1,300	\$0	\$0	\$0	\$0	\$3,900
<b>C. Revegetation</b>							
Fertilizer (\$/Ac)	\$46.49	\$46.49	\$46.49	\$46.49	\$46.49	\$46.49	
Seeding Prep & Seeding (\$/Ac)	\$168.68	\$168.68	\$168.68	\$168.68	\$168.68	\$168.68	
Mulching & Crimping (\$/Ac)	\$276.54	\$276.54	\$276.54	\$276.54	\$276.54	\$276.54	
Sub Total Cost/Acre	\$491.71	\$491.71	\$491.71	\$491.71	\$491.71	\$491.71	
Sub Total - Revegetation	\$2,459	\$1,229	\$0	\$0	\$0	\$0	\$3,688
Sub Total - Process Plant and Office Bldg.	\$21,384	\$10,692	\$0	\$0	\$0	\$0	\$32,076
<b>II Ponds</b>							
<b>A. Topsoil Handling &amp; Grading</b>							
Affected Area (Acres)	20.0	12.0	0.0	0.0	0.0	0.0	
Average Affected Thickness (Ins)	12	12	0	0	0	0	
Topsoil Volume (Yds <sup>3</sup> )	32267	19360	0	0	0	0	
Unit Cost - Haul/Place (\$/Yd <sup>3</sup> )	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	
Topsoil Handling Cost (\$)	\$64,533	\$38,720	\$0	\$0	\$0	\$0	
Unit Cost - Grading (\$/Ac)	\$38.45	\$38.45	\$38.45	\$38.45	\$38.45	\$38.45	
Grading Cost (\$)	\$769	\$461	\$0	\$0	\$0	\$0	
Sub Total - Topsoil	\$65,302	\$39,181	\$0	\$0	\$0	\$0	\$104,484
<b>B. Radiation Survey &amp; Soil Analysis</b>							
Unit Cost (\$/Ac)	\$520.00	\$520.00	\$520.00	\$520.00	\$520.00	\$520.00	
Sub Total - Survey & Analysis	\$10,400	\$6,240	\$0	\$0	\$0	\$0	\$16,640
<b>C. Revegetation</b>							
Fertilizer (\$/Ac)	\$46.49	\$46.49	\$46.49	\$46.49	\$46.49	\$46.49	
Seeding Prep & Seeding (\$/Ac)	\$168.68	\$168.68	\$168.68	\$168.68	\$168.68	\$168.68	
Mulching & Crimping (\$/Ac)	\$276.54	\$276.54	\$276.54	\$276.54	\$276.54	\$276.54	
Sub Total Cost/Acre	\$491.71	\$491.71	\$491.71	\$491.71	\$491.71	\$491.71	
Sub Total - Revegetation	\$9,834	\$5,901	\$0	\$0	\$0	\$0	\$15,735
Sub Total - Ponds	\$85,537	\$51,322	\$0	\$0	\$0	\$0	\$136,858
<b>III Wellfields</b>							
<b>A. Topsoil Handling &amp; Grading</b>							
Affected Area (Acres)	40.0	55.0	30.0	50.0	35.0	40.0	
Average Affected Thickness (Ins)	3.5	0.0	0.0	0.0	0.0	0.0	
Topsoil Volume (Yds <sup>3</sup> )	18822	0	0	0	0	0	
Unit Cost - Haul/Place (\$/Yd <sup>3</sup> )	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	
Topsoil Handling Cost (\$)	\$37,644	\$0	\$0	\$0	\$0	\$0	
Unit Cost - Grading (\$/Ac)	\$38.45	\$38.45	\$38.45	\$38.45	\$38.45	\$0.00	
Grading Cost (\$)	\$1,538	\$2,115	\$1,154	\$1,923	\$1,346	\$0	
Sub Total - Topsoil	\$39,182	\$2,115	\$1,154	\$1,923	\$1,346	\$0	\$45,719
<b>B. Radiation Survey &amp; Soil Analysis</b>							
Unit Cost (\$/Ac)	\$520.00	\$520.00	\$520.00	\$520.00	\$0.00	\$0.00	
Sub Total - Survey & Analysis	\$20,800	\$28,600	\$15,600	\$26,000	\$0	\$0	\$91,000
<b>C. Spill Cleanup</b>							
Affected Area (Acres)		0.036	0	0	0	0	
Affected Area (ft <sup>2</sup> )		1,568	0	0	0	0	
Average Affected Thickness (ft)		0.25	0	0	0	0	
Affected Volume (ft <sup>3</sup> )		392	0	0	0	0	
Quantity per Truckload (ft <sup>3</sup> )		540	540	540	540	540	
Quantity to be Shipped (Loads)		0.7	0.0	0.0	0.0	0.0	
Transportation Cost per Load		\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	
Transportation Cost (\$)		\$726	\$0	\$0	\$0	\$0	
Handling Cost (\$240/load)		\$174	\$0	\$0	\$0	\$0	
Disposal Fee per Cubic Foot (\$)		\$3.70	\$3.70	\$3.70	\$3.70	\$3.70	
Disposal Cost (\$)		\$1,450	\$0	\$0	\$0	\$0	

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	Irigaray Mine Unit(s) #1 Thru #9	Christensen Mine Units #2 Thru #4	Christensen Mine Unit #5	Christensen Mine Unit #6	Christensen Mine Unit #7	Christensen Mine Unit #8	Total Christensen & Irigaray
<b>TOPSOIL REPLACEMENT &amp; REVEGETATION</b>							
Sub Total - Spill Cleanup	\$0	\$2,351	\$0	\$0	\$0	\$0	\$2,351
D. Revegation							
Fertilizer (\$/Ac)	\$46.49	\$46.49	\$46.49	\$46.49	\$46.49	\$46.49	
Seeding Prep & Seeding (\$/Ac)	\$168.68	\$168.68	\$168.68	\$168.68	\$168.68	\$168.68	
Mulching & Crimping (\$/Ac)	\$276.54	\$276.54	\$276.54	\$276.54	\$276.54	\$276.54	
Sub Total Cost/Acre	\$491.71	\$491.71	\$491.71	\$491.71	\$491.71	\$491.71	
Sub Total - Revegation	\$19,668	\$27,044	\$14,751	\$24,586	\$17,210	\$19,668	\$122,928
Sub Total - Wellfields (\$)	\$79,651	\$60,109	\$31,505	\$52,508	\$18,556	\$19,668	\$261,997
<b>IV Roads</b>							
A. Topsoil Handling & Grading							
Affected Area (Acres)	25.0	20.0	15.0	21.0	0.0	0.0	
Average Affected Thickness (Ins)	12	12	12	12	12	12	
Topsoil Volume (Yds <sup>3</sup> )	40333	32267	24200	33880	0	0	
Unit Cost - Haul/Place (\$/Yd <sup>3</sup> )	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	
Topsoil Handling Cost (\$)	\$80,667	\$64,533	\$48,400	\$67,760	\$0	\$0	
Unit Cost - Grading (\$/Ac)	\$38.45	\$38.45	\$38.45	\$38.45	\$38.45	\$38.45	
Grading Cost (\$)	\$961	\$769	\$577	\$807	\$0	\$0	
Sub Total - Topsoil	\$81,628	\$65,302	\$48,977	\$68,567	\$0	\$0	\$264,474
B. Radiation Survey & Soil Analysis							
Unit Cost (\$/Ac)	\$520.00	\$520.00	\$520.00	\$520.00	\$0.00	\$0.00	
Sub Total - Survey & Analysis	\$13,000	\$10,400	\$7,800	\$10,920	\$0	\$0	\$42,120
C. Revegation							
Fertilizer (\$/Ac)	\$46.49	\$46.49	\$46.49	\$46.49			
Seeding Prep & Seeding (\$/Ac)	\$168.68	\$168.68	\$168.68	\$168.68			
Mulching & Crimping (\$/Ac)	\$276.54	\$276.54	\$276.54	\$276.54			
Sub Total Cost/Acre	\$491.71	\$491.71	\$491.71	\$491.71			
Sub Total - Revegation	\$12,293	\$9,834	\$7,376	\$10,326	\$0	\$0	\$39,829
Sub Total - Roads (\$)	\$106,921	\$85,537	\$64,152	\$89,813	\$0	\$0	\$346,423
<b>V Other</b>							
A. Topsoil Handling & Grading							
Affected Area (Acres)	41.0	19.0	5.0	5.0	0.0	0.0	
Average Affected Thickness (Ins)	0.0	0.0	0	0	0	0	
Topsoil Volume (Yds <sup>3</sup> )	0	0	0	0	0	0	
Unit Cost - Haul/Place (\$/Yd <sup>3</sup> )	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	
Topsoil Handling Cost (\$)	\$0	\$0	\$0	\$0	\$0	\$0	
Unit Cost - Grading (\$/Ac)	\$38.45	\$38.45	\$38.45	\$38.45	\$38.45	\$0.00	
Grading Cost (\$)	\$1,576	\$731	\$192	\$192	\$0	\$0	
Sub Total - Topsoil	\$1,576	\$731	\$192	\$192	\$0	\$0	\$2,692
B. Radiation Survey & Soil Analysis							
Unit Cost (\$/Ac)	\$520.00	\$520.00	\$520.00	\$520.00	\$0.00	\$0.00	
Sub Total - Survey & Analysis	\$21,320	\$9,880	\$2,600	\$2,600	\$0	\$0	\$36,400
C. Revegation							
Fertilizer (\$/Ac)	\$46.49	\$46.49	\$46.49	\$46.49	\$0.00	\$0.00	
Seeding Prep & Seeding (\$/Ac)	\$168.68	\$168.68	\$168.68	\$168.68	\$0.00	\$0.00	
Mulching & Crimping (\$/Ac)	\$276.54	\$276.54	\$276.54	\$276.54	\$0.00	\$0.00	
Sub Total Cost/Acre	\$491.71	\$491.71	\$491.71	\$491.71	\$0.00	\$0.00	
Sub Total - Revegation	\$20,160	\$9,342	\$2,459	\$2,459	\$0	\$0	\$34,420
Sub Total - Other	\$43,057	\$19,953	\$5,251	\$5,251	\$0	\$0	\$73,511
<b>VI Remedial Action</b>							
A. Topsoil Handling & Grading							
Affected Area (Acres)	65.5	54.3	25.0	38.0	17.5	20.0	
Average Affected Thickness (Ins)	0.0	0.0	0.0	0.0	0.0	0.0	
Topsoil Volume (Yds <sup>3</sup> )	0	0	0	0	0	0	
Unit Cost - Haul/Place (\$/Yd <sup>3</sup> )	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Topsoil Handling Cost (\$)	\$0	\$0	\$0	\$0	\$0	\$0	
Unit Cost - Grading (\$/Ac)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Grading Cost (\$)	\$0	\$0	\$0	\$0	\$0	\$0	
Sub Total - Topsoil	\$0	\$0	\$0	\$0	\$0	\$0	\$0
B. Radiation Survey & Soil Analysis							
Unit Cost (\$/Ac)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Sub Total - Survey & Analysis	\$0	\$0	\$0	\$0	\$0	\$0	\$0
C. Revegation							
Fertilizer (\$/Ac)	\$46.49	\$46.49	\$46.49	\$46.49	\$46.49	\$46.49	
Seeding Prep & Seeding (\$/Ac)	\$168.68	\$168.68	\$168.68	\$168.68	\$0.00	\$0.00	
Mulching & Crimping (\$/Ac)	\$276.54	\$276.54	\$276.54	\$276.54	\$0.00	\$0.00	
Sub Total Cost/Acre	\$491.71	\$491.71	\$491.71	\$491.71	\$46.49	\$46.49	

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TOPSOIL REPLACEMENT & REVEGETATION	Irigaray Mine Unit(s) #1 Thru #9	Christensen Mine Units #2 Thru #4	Christensen Mine Unit #5	Christensen Mine Unit #6	Christensen Mine Unit #7	Christensen Mine Unit #8	Total Christensen & Irigaray
Sub Total - Revegation	\$32,207	\$26,675	\$12,293	\$18,685	\$814	\$930	\$91,603
Sub Total - Remedial Action	\$32,207	\$26,675	\$12,293	\$18,685	\$814	\$930	\$91,603
<b>TOTAL COST - TOPSOIL &amp; REVEGETATION</b>	<b>\$368,756</b>	<b>\$254,288</b>	<b>\$113,201</b>	<b>\$166,257</b>	<b>\$19,369</b>	<b>\$20,598</b>	<b>\$942,469</b>

COGEMA Mining, Inc.  
 2008 Restoration and Reclamation Costs  
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MISCELLANEOUS RECLAMATION		Irigaray Mine Unit(s) #1 Thru #9	Christensen Mine Units #2 Thru #4	Christensen Mine Unit #5	Christensen Mine Unit #6	Christensen Mine Unit #7	Christensen Mine Unit #8	Total Christensen & Irigaray
<b>I Fence Removal &amp; Disposal</b>								
Quantity (Feet)		15240	35260	20000	9000	0	0	
Cost of Removal/Disposal (\$/Ft)		\$0.68	\$0.68	\$0.68	\$0.68	\$0.68	\$0.68	
Cost of Removal/Disposal (\$)		\$10,363	\$23,977	\$13,600	\$6,120	\$0	\$0	\$54,060
<b>II Powerline Removal &amp; Disposal</b>								
Quantity (Feet)		9450	10565	18000	18000	0	0	
Cost of Removal/Disposal (\$/Ft)		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Cost of Removal/Disposal (\$)		\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>III Powerpole Removal &amp; Disposal</b>								
Quantity		25	30	60	60	0	0	
Cost of Removal/Disposal (\$/Each)		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Cost of Removal/Disposal (\$)		\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>IV Transformer Removal &amp; Disposal</b>								
Quantity		0	1	0	18	3	0	
Cost of Removal/Disposal (\$/Each)		\$2,525	\$2,525	\$2,525	\$619	\$619	\$619	
Cost of Removal/Disposal (\$)		\$0	\$2,525	\$0	\$11,142	\$1,857	\$0	\$15,524
<b>V Booster Pump Assembly Removal &amp; Disposal</b>								
Quantity		0	6	5	5	0	0	
Cost of Removal/Disposal (\$/Each)		\$248	\$248	\$248	\$248	\$248	\$248	
Cost of Removal/Disposal (\$)		\$0	\$1,488	\$1,240	\$1,240	\$0	\$0	\$3,968
<b>VI Culvert Removal &amp; Disposal</b>								
Quantity (Feet)		150	1200	1000	1000	0	0	
Cost of Removal/Disposal (\$/Ft)		\$3.48	\$3.48	\$3.48	\$3.48	\$3.48	\$3.48	
Cost of Removal/Disposal (\$)		\$522	\$4,176	\$3,480	\$3,480	\$0	\$0	\$11,658
<b>VII Guardrail Removal</b>								
Quantity (Feet)		200	3000	0	0	0	0	
Cost of Removal/Disposal (\$/Ft)		\$6.44	\$6.44	\$6.44	\$6.44	\$6.44	\$6.44	
Cost of Removal/Disposal (\$)		\$1,288	\$19,320	\$0	\$0	\$0	\$0	\$20,608
<b>VIII Low Water Stream Crossing</b>								
Quantity		0	1	1	0	0	0	
Cost of Removal/Disposal (\$/Each)		\$4,500	\$4,500	\$4,500	\$4,500	\$4,500	\$4,500	
Cost of Removal/Disposal (\$)		\$0	\$4,500	\$4,500	\$0	\$0	\$0	\$9,000
<b>IX Utilities Cost</b>								
Quantity (Mos)		0	8	4	4	4	0	
Cost Per Month (\$/Month)		\$65	\$65	\$65	\$65	\$65	\$65	
Total Cost (\$)		\$0	\$520	\$260	\$260	\$260	\$0	\$1,300
<b>TOTAL MISCELLANEOUS COST</b>		<b>\$12,173</b>	<b>\$56,506</b>	<b>\$23,080</b>	<b>\$22,242</b>	<b>\$2,117</b>	<b>\$0</b>	<b>\$116,118</b>

**APPENDIX 4**

**General Location & Environmental Monitoring  
Location Map**

**THIS PAGE IS AN  
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**“Area Facilities Location Map,  
Permit to Mine # 478.”**

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**D-01**

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**“General Location Map,  
Production Units 1 through 9,  
Permit to Mine # 478.”**

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**“Irigaray & Christensen Ranch  
Environmental Monitoring  
Station Locations.”**

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**APPENDIX 5**

**Piezometric Contour Maps**

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**“Shallow Zone Piezometric Map  
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Perit to Mine No. 478.  
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**APPENDIX 6**

**Summary Wildlife Monitoring Report**

**IRIGARAY AND CHRISTENSEN RANCH**

**2007 WILDLIFE MONITORING**



Prepared for:

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## INTRODUCTION

Cogema Mining, Inc. (Cogema) historically operated two in situ uranium recovery operations near the boundary of Johnson and Campbell Counties: Irigaray and Christensen Ranch. Operations at both sites were suspended in 2000 due to reduced market forces. In preparation for renewed operations, Cogema commissioned Jones & Stokes (formerly Thunderbird Wildlife Consulting and Powder River Eagle Studies) to renew wildlife monitoring efforts at both properties in 2007, with full reinstatement of the annual monitoring program by 2008.

Jones & Stokes conducted annual wildlife monitoring surveys at Irigaray and Christensen Ranch from 1995 through 1999, with renewed survey efforts in most of the area in 2007. In keeping with Cogema's Permit to Mine (No. 478-A2), the survey tasks completed in each of those years included:

- an aerial survey for wintering big game;
- monitoring and searching for greater sage-grouse (*Centrocercus urophasianus*) leks; and
- surveys for nesting raptors.

Due to the overlap between the survey area for Cogema and other unrelated energy projects, surveys for mountain plovers (*Charadrius montanus*) were also conducted in portions of the mine's wildlife monitoring area during 2007.

The wildlife study area, survey methods, and results from 2007 and previous years are described below. Survey results are summarized by animal group.

## STUDY AREA

### IRIGARAY

The Irigaray permit area is limited to approximately one square mile that spans Sections 5, 8, 9, and 16, Township (T) 45 North (N), Range (R) 77 West (W). The wildlife survey area for Irigaray has always included the permit area and a surrounding perimeter. That area has ranged from 10.6 to 14 square miles over the years. In 2007, the monitoring area consisted of the Irigaray permit area and its one-mile perimeter; approximately 10.6 square miles (Map 1).

The terrain in the survey area is rugged and heavily dissected by numerous steep drainages. Willow Creek bisects the area from southeast to northwest, flowing into the Powder River just west of the one-mile perimeter. Cottonwood (*Populus* spp.) trees occur along Willow Creek, but few trees are found elsewhere on the property.



## CHRISTENSEN RANCH

The Christensen Ranch Amendment Area includes approximately 22.5 square miles (Map 1). Although the Amendment Area is quite large, activities associated with uranium recovery have been limited to scattered, narrow bands totaling less than 3.0 square miles. The wildlife survey area has varied over time, ranging from 53 to 64 square miles. In 2007, the Christensen Ranch monitoring area included the Amendment Area and a 1.0-1.5-mile perimeter; approximately 53 square miles. Much of this survey area is also broken by numerous drainage systems. The North Butte plateau rises up in the extreme east-central part of the survey perimeter. With few exceptions, trees are limited to the corridor along Willow Creek, which flows northwest through the center of the permit area. The southeastern quarter of the monitoring area consists of somewhat gentler terrain, with fewer deep drainages and more rolling hills.

## METHODS

### BIG GAME

One winter aerial survey for pronghorn (*Antilocapra americana*) and mule deer (*Odocoileus hemionus*) was conducted in the Irigaray and Christensen Ranch study areas on February 23, 2007. The Christensen Ranch survey area was flown first, and the Irigaray area was flown immediately afterward.

A high-wing, light plane (Cessna 182) was used for the survey. The two areas were covered by flying north-south transects spaced at one-half-mile intervals. Flights over both areas began with the eastern-most transects and progressed west. Flight speed and altitude were approximately 80-85 miles per hour (mph), and 300-350 feet above ground level, respectively.

Two biologists counted big game within a one-half-mile wide strip on either side of the flight path; sightings of other wildlife were also noted. A navigator and recorder plotted all sightings on 1:24000 topographic maps. Data recorded included the number and species of animals seen, location to quarter section, habitat type, and activity.

### GREATER SAGE-GROUSE

Eight greater sage-grouse leks were located during previous monitoring. Three leks (Christensen Ranch [CR] 1, CR 3, and CR 7, Map 1) were in the Christensen Ranch Amendment Area, and five leks (CR 2, CR 4, CR 5, Irigaray, and Irigaray II, Map 1) were in its perimeter. One potential lek site (Map 1) was tentatively identified in the southwestern corner of the Irigaray survey perimeter in previous years.

Sage-grouse leks were checked three times in spring 2007: April 9, 18, and 25 (CR leks), and April 6, 15, and 25 (Irigaray leks). All leks were monitored via aerial surveys conducted

between one-half-hour before and one-half-hour after sunrise. Aerial surveys were conducted by two Jones & Stokes biologists and a pilot in a fixed-wing Cessna 172XP, 182, or 205 at a speed and altitude of 80-115 mph and 100-300 feet above ground level, respectively. All known leks were checked for activity during each survey. The aerial surveys were flown using north-south transects that covered both permit areas and their surrounding perimeters. Transects were spaced at 0.62-mile (1 kilometer [km]) intervals during the first two flights, and 1.24-mile (2 km) intervals during the third flight. Biologists also watched for and recorded grouse or their sign (droppings, fecal deposits, or feathers) during all ground surveys for other wildlife species.

## RAPTORS

Raptor nest monitoring and searches were conducted from late March through early July 2007. Guidelines recommended by Grier and Fyfe (1987) were followed to prevent nest abandonment and injury to eggs or young. All nests previously located within the two survey areas were checked at least once during the breeding season. Early in the breeding season, known nests were monitored from a distance with the aid of binoculars and a spotting scope. Nests were not approached on foot until after May.

New nests were located by slowly driving throughout the study areas, and frequently stopping to examine typical nesting habitat. Rough breaks and tree groves were searched on foot. Personnel also continually watched for adult raptors and noted behavior that may indicate a nearby nest. Areas where individuals or pairs were repeatedly seen were thoroughly searched for nests.

All nests found were plotted on 1:24,000 topographic maps. The status (active, inactive, alternate, etc.) of nests, number of young hatched, and number of young successfully raised to fledgling were recorded.

## MOUNTAIN PLOVERS

Although surveys for mountain plovers are not required for the Cogema properties, they are required for neighboring coal bed natural gas (CBNG) developments. Due to the overlap among project locations for the two industries, approximately one-half of the Irigaray study area and three-quarters of the Christensen Ranch study area were surveyed for mountain plovers. Surveys were completed between May 1 and June 15, 2007, in accordance with the current (March 2002) U.S. Fish and Wildlife Service's (USFWS) Mountain Plover Survey Guidelines. Biologists searched for mountain plovers by slowly driving on established roads and two-tracks through suitable habitat, and stopping regularly to scan for birds using binoculars and spotting scopes. All mountain plover sightings were recorded, including notes on location, number of

individuals, habitat, and activity. Specific locations of birds and nests were recorded using Universal Transverse Mercator (UTM) coordinates taken with the aid of handheld Global Positioning System (GPS) receivers.

## RESULTS

### BIG GAME

Weather conditions during the aerial survey were rated as fair to good. The sky was partly cloudy (40-50% cloud cover) and the wind was relatively light (5-15 mph), but gusty. The ground had less than 5% snow cover. Visibility during the survey was variable but rated as good, overall.

#### Irigaray

The only big game sighting in the entire Irigaray survey area consisted of one herd of mule deer (six animals) in the northern half of the perimeter. The deer were seen in sagebrush-grassland habitat northwest of the permit area.

Results from aerial big game surveys completed from 1995 through 1999, and in 2007, indicated that the Irigaray area is not heavily used by wintering big game. Those results, however, should be viewed with caution. The survey area covered no more than 14 square miles during that period, and animals could easily have moved in and out of the area in a short period of time.

Mule deer counts were relatively low during all six survey years, peaking at 32 (2.3 animals/square mile) in 1998. The distribution of deer was similar over time, with the majority of animals observed in the southern half of the study area in most years. Mule deer may be attracted to that portion of the area due to the protective cover of rough terrain. Results from those surveys did not reveal any consistent patterns of habitat use by wintering mule deer.

The greatest number of pronghorn observed during aerial surveys conducted since 1995 was 23 (1.6 animals/square mile) in 1996. No pronghorn were observed within the survey area in 2007. Due to the small counts recorded over the years, no consistent patterns of pronghorn distribution or habitat use have been identified in the Irigaray area.

### Christensen Ranch

Twenty-six big game herds were recorded in the Christensen Ranch wildlife survey area in 2007: 14 mule deer herds (118 animals) and 12 pronghorn herds (192 animals). Three bald eagles (*Haliaeetus leucocephalus*) were also observed in the southeastern portion of the study area during the big game flight.

Mule deer occurred as lone individuals and in herds of up to 18 animals. Average herd size was nine animals, with a density of 1.8 deer/square mile. Herds were widely distributed over the entire survey area. All but one of the mule deer observed were in sagebrush-grassland habitat (Table 1).

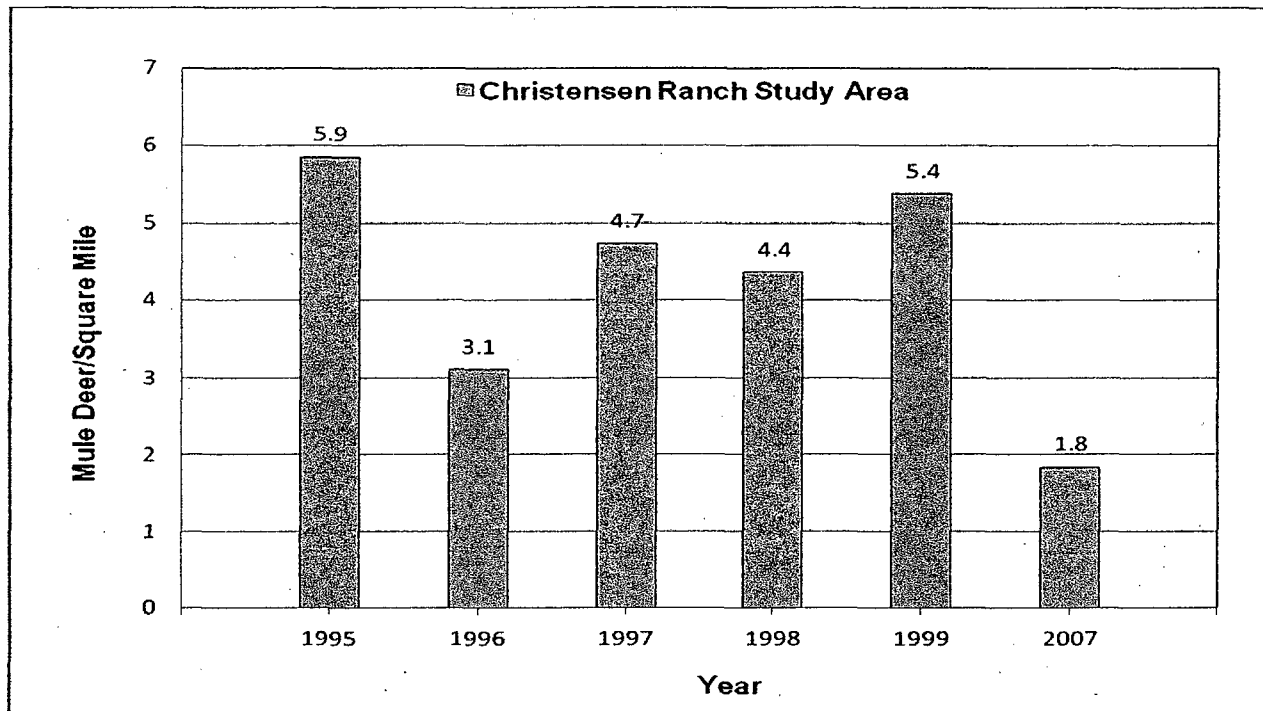
Table 1. Big game habitat associations recorded at Christensen Ranch during the February 23, 2007 aerial survey.

MULE DEER		
HABITAT	No.	%
Sagebrush	117	99
Bottomland	1	1
TOTAL	118	100

The entire Christensen Ranch Amendment Area and various perimeters were surveyed annually from 1995 through 1999, and again in 2007. Mule deer density within the survey area was highest in 1995 (Figure 1), but was considerably reduced by the following year. It is believed that much of that decline was due to a disease outbreak in fall 1995 that affected big game populations throughout the Powder River Basin. Mule deer density gradually increased after 1996, and had reached its second highest level by 1999. During the 2007 survey, mule deer density was the lowest ever recorded, with only 1.8 deer/square mile. Observations may have been low that year due to relatively mild winter conditions that allowed deer to remain dispersed throughout the area rather than concentrated in larger foraging areas. Smaller herds are more difficult to observe from the air, particularly in rugged terrain.

Mule deer have been recorded in all parts of the Christensen Ranch area during aerial surveys. However, deer were typically most abundant in the southeastern quarter of the area. That region includes more water, grazing pastures, and hiding cover (trees) than the rest of the

Figure 1. Mule deer densities recorded in the Christensen Ranch area during winter aerial surveys from 1995 through 1999, and in 2007.

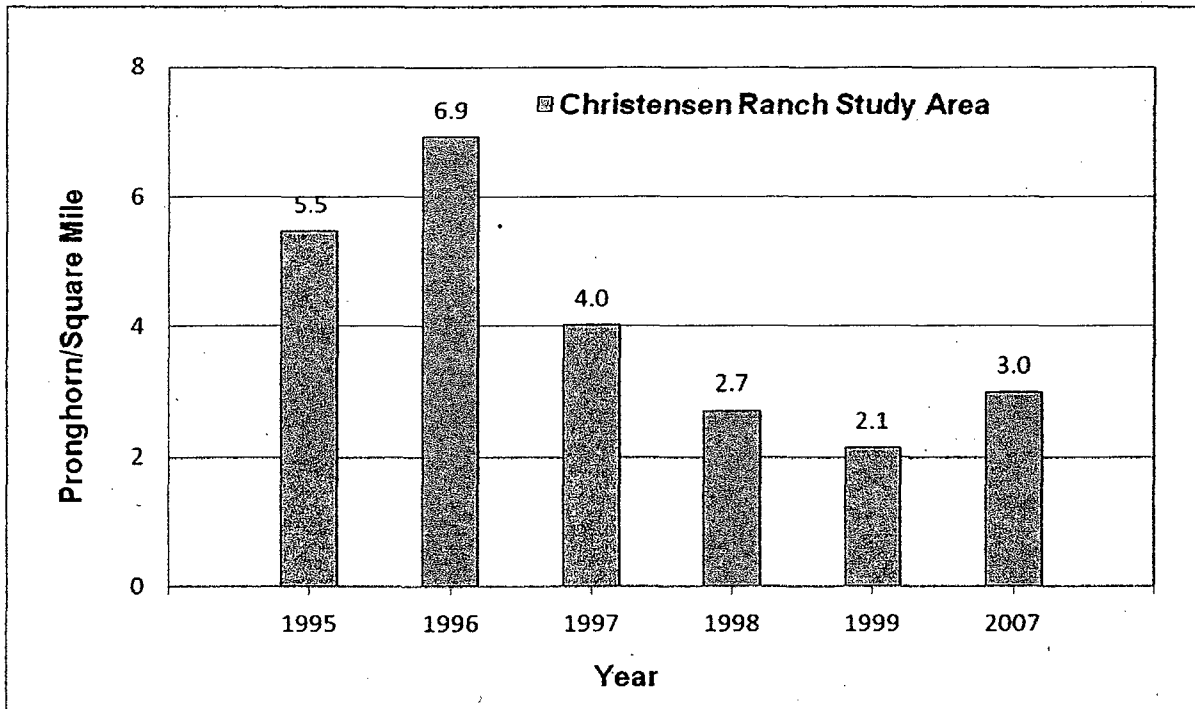


survey area. Each year since 1995, most of the mule deer observed were in sagebrush-grassland habitat, the predominant habitat in the area. Three other habitats that have typically held mule deer during big game aerial surveys include grassland, bottomland, and rough breaks.

In 2007, pronghorn in the Christensen Ranch study area occurred as lone individuals and in herds of up to 50 animals. Average herd size was 16 animals, with a mean density of 3.0 pronghorn/square mile. All pronghorn observations were recorded in sagebrush-grassland habitat.

Pronghorn density in the Christensen Ranch study area decreased from a high of 6.9 animals/square mile in 1996 to a low of 2.1 animals/square mile in 1999 (Figure 2), with slightly higher counts in 2007. Some of the decline recorded during the latter half of the 1990s was likely attributable to relatively harsh winter weather conditions in late 1996 and early 1997. The continued low pronghorn density after 1997 was probably an artifact of the expansion of the monitoring area after that year. Much of the 40 square miles added to the survey area during that period included deeply dissected terrain that is generally not considered to be attractive to wintering pronghorn. As with mule deer, pronghorn have consistently been most common in the

Figure 2. Pronghorn densities recorded in the Christensen Ranch area during winter aerial surveys from 1995 through 1999, and in 2007.



southeastern quarter of the survey area. At least 51% of the pronghorn observed were in that area during each survey year. The terrain in the southeastern corner of the survey area is relatively flat in comparison to the rest of the area. Conversely, the east-central and western parts of the survey area are dominated by steep breaks associated with North Butte and Table Mountain, respectively. As indicated above, rough breaks habitat is not attractive to wintering pronghorn, and few animals have been recorded in those portions of the study area during winter surveys.

The majority of pronghorn observed each year since 1995 were in sagebrush-grassland habitat, ranging from at least 67% to a high of 100% in 2007. Grassland usually held most of the remaining animals each year, and was the only other habitat where pronghorn were recorded on a consistent basis.

#### GREATER SAGE-GROUSE

Eight greater sage-grouse leks have been documented in the Irigaray and Christensen Ranch survey areas over the years. Four of those leks were discovered in 1989: Irigaray, CR 1, CR 2, and CR 3. The CR 4 and CR 5 leks were discovered in 1998 and 1999, respectively, and the Irigaray II and CR 7 leks were discovered in 2005.

Four sage-grouse leks were active in 2007: Irigaray II, CR 1, CR 4, and CR 7 (Table 2). Three of those four leks have remained consistently active since they were first documented. The CR 7 lek was active in two of the three years since it was found, but few birds have ever been recorded there. Peak male counts at individual leks in 2007 ranged from 1 to 28 birds, with the highest count occurring at CR 1 (Table 2). In addition to birds observed at leks, individual females were encountered on a few occasions in spring 2007. On June 14, one hen and several young flushed from the roadside in sagebrush-grassland in SE $\frac{1}{4}$  NW $\frac{1}{4}$  Section 3, T44N, R77W, in the western portion of the Christensen Ranch Amendment Area.

All sage-grouse leks were monitored nearly every year since their respective discoveries, whether by agency (Wyoming Game and Fish Department [WGFD]) or consulting biologists. As a result, long-term data are available for several of those sites. The grouse population in the Irigaray and Christensen Ranch area, as measured by male attendance at the monitored leks, declined from 1989 through 1995 (Figure 3). Cumulative peak attendance dropped from 42 to 7 males during that period. Male grouse counts remained quite low through 1997, with several leks abandoned by the late 1990s (Table 2). Populations began to increase in 1998, rising to a cumulative high of 69 in 2006. In 2007, the overall peak male count was lower than 2006, but still greater than in most previous years. It should be noted that leks were only monitored sporadically from 2000 to 2002; WGFD database records indicate that only the Irigaray lek was monitored in 2002. Despite the wide variations in peak counts over the years, the sage-grouse population in the Irigaray and Christensen Ranch area has shown a slight increasing trend (Figure 3).

#### OTHER UPLAND GAME BIRDS

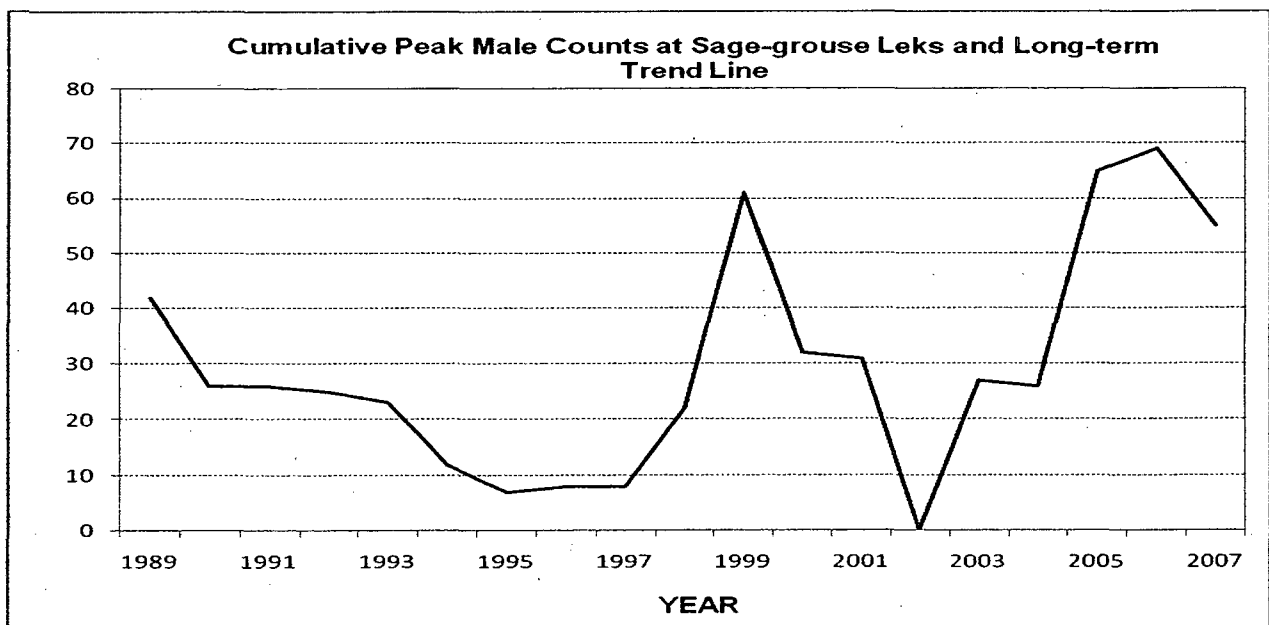
No other upland game bird species were recorded during wildlife surveys in 2007. Wild turkeys (*Meleagris gallopavo*) were seen on several occasions in spring and summer 1999. All observations were made within a one-mile stretch of Willow Creek from southern Section 16 to southern Section 21, T44N, R76W. That riparian corridor is near the Christensen Ranch; Mr. J. Christensen (personal communication) regularly feeds the birds. Flocks ranged in size from 9 to 27. A few females were observed in spring 1999, and Mr. Christensen reported seeing some

Table 2. Peak male counts at greater sage-grouse leks in the Irigaray and Christensen Ranch study areas from 1989 through 2007.

Year	CR 1	CR 2	CR 3	CR 4	CR 5	CR 7	Irigaray	Irigaray II
1989	23	--	9	--	--	--	10	--
1990	16	--	4	--	--	--	6	--
1991	21	3	0	--	--	--	2	--
1992	13	6	0	--	--	--	6	--
1993	8	10	0	--	--	--	5	--
1994	4	3	0	--	--	--	5	--
1995	3	1	1	--	--	--	2	--
1996	7	0	0	--	--	--	1	--
1997	7	0	0	--	--	--	1	--
1998	10	0	0	7	--	--	5	--
1999	7	0	0	43	11	--	0	--
2000 <sup>1</sup>	--	--	--	22	10	--	--	--
2001 <sup>1</sup>	16	--	--	11	4	--	--	--
2002 <sup>1</sup>	--	--	--	--	--	--	0	--
2003 <sup>1</sup>	12	0	0	15	0	--	0	--
2004 <sup>1</sup>	12	0	0	14	0	--	0	--
2005 <sup>1</sup>	25	0	0	24	0	2	0	14
2006 <sup>1</sup>	28	2	0	23	5	0	1	10
2007	28	0	0	19	0	1	0	7

<sup>1</sup> Peak male counts from the Wyoming Game and Fish Department database; leks were not monitored in all years.  
 CR = Christensen Ranch  
 -- = Lek not discovered or not monitored.

Figure 3. Cumulative peak male sage-grouse attendance at leks in the Irigaray and Christensen Ranch areas during spring surveys from 1989 through 2007<sup>1</sup>.



<sup>1</sup>The Irigaray lek was the only site observed in 2002.



turkey broods that summer. He also observed gray partridge (*Perdix perdix*) in the area during winter 1998-1999.

## RAPTORS

As noted previously, wildlife surveys were not required or conducted in the Irigaray and Christensen Ranch areas from 2000 to 2006, with partial coverage in 2007. However, biologists continued to monitor nesting raptors in portions of the survey area overlapped by CBNG development during that period. Table 3 presents a compilation of information obtained specifically from the Irigaray and Christensen Ranch areas from 1995 through 1999, and in 2007; from surveys conducted by Jones & Stokes in overlapping areas of CBNG development from 2003 through 2007; and from Bureau of Land Management (BLM) data related to CBNG development in the general project area from 2003 through 2007.

Compilation of those datasets yielded 125 known nest sites within the Irigaray and Christensen Ranch survey areas. Over time, some of those nests were destroyed by natural causes. Consequently, of those 125 nest sites, 61 were confirmed to be intact during 2007, 57 were reported as unknown condition, and 7 were confirmed as destroyed by natural causes. Many of the unknown nest conditions were gleaned from the BLM database. Information for those nests may have been limited due to time lags between the compilation and distribution of BLM data, and limited access to nest sites due to landowner restrictions. Confirmed intact nests in 2007 included:

- 11 ferruginous hawk (*Buteo regalis*) nests,
- 10 red-tailed hawk (*Buteo jamaicensis*) nests,
- 9 great-horned owl (*Bubo virginianus*) nests,
- 7 golden eagle (*Aquila chrysaetos*) nests,
- 2 prairie falcon (*Falco mexicanus*) nest sites,
- 14 sites where the nesting species was not known, and
- 8 red-tailed hawk/great horned owl nests.

Twenty-eight raptor nests within the Irigaray and Christensen Ranch survey area showed some level of activity in 2007. Raptors that successfully nested within the study area that year included six pairs of great horned owls, four pairs of red-tailed hawks, one pair of ferruginous hawks, and one pair of prairie falcons (Table 3). Two additional pairs of red-tailed hawks, and one pair each of ferruginous hawks and golden eagles actively nested (i.e., laid and incubated eggs), but did not fledge young. Five other nests were known to be active, either by direct

Table 3. Raptor nest locations, status, and productivity<sup>1</sup> in the Irigaray and Christensen Ranch survey area from 2003 through 2007.

<u>Nest No.</u>	<u>Code</u>	<u>¼ ¼</u>	<u>Sec</u>	<u>T-R</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>
FH1a	CB	NW SW	34	45-77	--	--	--	A,2+,2	A,0,0
FH1b	CB	SE SW	34	45-77	--	--	--	--	I
FH2a	EP	NE NE	28	45-77	U	U	U	U	U
FH2b	ROC	SW SE	21	45-77	--	U	U	I	I
FH2c	SS	SE SE	21	45-77	U	U	U	U	U
FH2d	CB	NW SE	28	45-77	--	--	--	I	I
FH3a	G	SE SW	19	45-76	U	U	U	U	U
FH3b	CB	NE SW	19	45-76	U	U	U	U	U
FH4	ROC	SW SE	11	44-77	--	--	--	--	I
FH5	G	SW NE	14	44-77	--	--	--	--	A,1+,1
FH6	Windmill	NE NE	30	44-76	--	--	--	--	A-T
FH7A	ROC	SE NE	20	45-76	--	--	--	--	I
FH7b	ROC	SE NE	20	45-76	--	--	--	--	I
FH7c	ROC	NW SE	21	45-76	--	--	--	--	I
FH7d	CB	SE SE	20	45-76	--	--	--	--	I
Ferruginous Hawk Subtotals					0,0,0	0,0,0	0,0,0	1,2+,2	3,1+,1
GE1a	CB	NW SW	8	44-76	U	U	U	U	U
GE1b	CLF	NW SW	8	44-76	--	--	--	I	A-T
GE1c	CLF	SW SW	8	44-76	--	--	--	A,2+,2	ALT
GE2 <sup>2</sup>	CW	SE NW	6	45-77	U	U	U	U	U
GE3 <sup>2</sup>	CW	SW NW	14	45-77	U	U	U	U	U
GE4a	CW	NE SW	27	44-76	U	U	U	U	U
GE4b	CW	NE SW	27	44-76	U	U	U	U	U
GE4c	CW	NW SE	27	44-76	--	--	--	A,1+,1	D-M
GE4d	CW	SW SE	27	44-76	--	U	A,?,?	U	U
GE5	CLF	NE SE	36	45-77	--	--	--	I	U
GE6a	CW	NE NE	23	45-77	--	--	--	A,2+,2	U
GE6b	CW	SW SW	24	45-77	--	U	D-N	--	--
GE7	CW	SE NE	26	45-77	--	--	--	I	U
GE8	POL	NW SW	10	44-76	--	--	--	A,1+,1	A-T
GE9	CW	NE NE	29	44-76	--	--	--	--	I

Table 3, continued.

<u>Nest No.</u>	<u>Code</u>	<u>¼ ¼</u>	<u>Sec</u>	<u>T-R</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>
GE10a	CW	NW SW	27	45-76	--	--	--	--	I
GE10b	CW	NW SW	27	45-76	--	--	--	--	I
GE11	CW	NENW	20	45-76	--	--	--	--	A,1+,0
Golden Eagle Subtotals					0,0,0	0,0,0	1,?,?	4,6+,6	3,1+,0
GHO4b	ROC	SE NE	32	45-76	--	--	--	--	I
GHO6a	JU	SW SE	34	46-77	--	--	U	U	U
GHO6b	CW	SW SE	34	46-77	--	--	--	A,?,?	U
GHO7a	CW	SE NE	9	45-77	--	--	--	A,?,?	U
GHO8	CW	NW SE	22	45-77	--	--	--	A,1+,1	U
GHO9b	CW	NW NW	27	45-77	--	--	--	--	A-T
GHO9c	CW	NW NW	27	45-77	--	--	--	--	I
GHO10a	BOX	NE NE	32	45-76	--	--	--	--	I
GHO11	CW	SW NE	36	45-77	--	--	I	U	U
GHO12a	CW	SE SE	8	44-76	--	--	--	A, 1+,1	I
GHO13	CW	NW NW	19	44-76	--	--	--	--	A,1+,1
GHO14b	CW	SE SW	13	44-77	--	--	--	--	A,1+,1
GHO15b	CW	SE SE	25	44-77	--	--	--	A,2+,2	I
GHO16	CW	SW NE	30	44-76	--	--	--	A,3+,3	A,2+,2
Great Horned Owl Subtotals					0,0,0	0,0,0	0,0,0	6,7+,7	4,4+,4
RTH1a	CW	SE SE	5	45-77	U	U	U	ALT	U
RTH1c	CW	NW NW	9	45-77	U	U	U	ALT	U
RTH1d	CW	SW SW	4	45-77	--	--	--	A,?,?	U
RTH2b	CW	SE SE	21	44-76	U	U	U	U	U
RTH2c	CW	SE SE	21	44-76	--	--	--	A,2+,2	A,1+,1
RTH3a	CW	SW NW	33	45-76	--	--	--	A,?,?	U
RTH3b	CW	SW NW	33	45-76	--	--	--	I	U
RTH4a	CW	SE SW	1	44-77	D-N in 1995	--	--	--	--
RTH4b	ROC	SW NW	1	44-77	--	--	--	A,1+,1	U
RTH4c	CW	SW SW	2	44-77	--	--	--	A,2+,2	U
RTH5a	CW	NE NE	32	45-77	U	U	A,?,?	I	D-N
RTH5b	CW	NW SE	33	45-77	D-N in 1997	--	--	--	--

Table 3, continued.

<u>Nest No.</u>	<u>Code</u>	<u>¼ ¼</u>	<u>Sec</u>	<u>T-R</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>
RTH6a <sup>2</sup>	CW	SE NE	36	45-78	U	U	U	U	U
RTH6b <sup>2</sup>	CW	SE NE	36	45-78	U	U	U	U	U
RTH7b	CW	SW NE	32	45-77	U	U	U	U	U
RTH7c	CW	SW NE	32	45-77	—	—	I	A <sup>BBMA</sup>	I
RTH8a	CW	NE SE	21	45-77	D-N in 1995	—	—	—	—
RTH8b	CW	SW SE	21	45-77	D-N in 1995	—	—	—	—
RTH8d	CW	SW NW	21	45-77	—	U	U	A,?,?	A,?,?
RTH8e	CW	SE NW	20	45-77	—	U	U	A,?,?	A,0,0
RTH8f	CW	SW NE	29	45-77	—	—	—	A,?,?	I
RTH9	CW	SW SE	34	46-77	U	U	U	U	U
RTH11	CW	NW NW	13	44-77	U	U	U	U	U
RTH12	CW	NW NW	35	45-76	U	U	U	U	U
RTH13b	CW	NW SE	25	44-77	—	—	—	—	A,2+2
RTH13c	CW	NW SE	25	44-77	—	—	—	—	A,?,?
RTH14a	CW	SE NE	9	45-77	—	—	—	A,?,?	U
RTH18	CW	SW SW	18	44-76	—	—	—	—	A,3+3
RTH20	CW	SW NE	30	44-76	—	—	—	I	A,2+2
RTH21a	CW	NW SE	27	44-76	—	—	—	I	A,0,0
RTH21b	CW	NW SE	27	44-76	—	U	I	U	U
Red-tailed Hawk Subtotals					0,0,0	0,0,0	1,?,?	9,5+5	8,8+8
H1	G	NE NE	18	44-76	U	U	U	U	U
Northern Harrier Subtotals					0,0,0	0,0,0	0,0,0	0,0,0	0,0,0
LEO1	CW	SE NW	19	45-76	—	—	—	A,?,?	U
Long-eared Owl Subtotals					0,0,0	0,0,0	0,0,0	1,?,?	0,0,0
PF1a	ROC	SE SW	11	44-76	—	—	—	A,?,?	ALT
PF1b	ROC	NW NW	14	44-76	—	—	—	ALT	A,2+2
Prairie Falcon Subtotals					0,0,0	0,0,0	0,0,0	1,?,?	1,2+2
UNK1	CW	NE SW	16	45-77	U	U	U	U	U
UNK2	CW	NW SE	9	45-77	—	—	—	—	I

Table 3, continued.

<u>Nest No.</u>	<u>Code</u>	<u>¼ ¼</u>	<u>Sec</u>	<u>T-R</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>
UNK3	CW	NE NE	15	45-77	--	--	--	I	U
UNK4	CW	NW SW	14	45-77	--	--	--	I	U
UNK5	CW	NW SE	22	45-77	--	--	--	--	I
UNK6	CW	NE NE	23	45-77	--	--	--	I	U
UNK7	CW	NW NE	23	45-77	--	--	--	I	U
UNK8	CW	SE SE	24	45-77	--	--	--	I	U
UNK9	CW	NE SW	26	45-77	--	U	I	U	U
UNK10	CW	SE SW	25	45-77	--	U	I	U	U
UNK11	CW	SW SW	36	45-77	--	--	--	I	U
UNK12	PP	NE NE	2	44-76	--	U	I	U	U
UNK13	POL	NE NE	2	44-76	--	U	I	U	U
UNK14	CW	NE NE	1	44-77	--	--	--	--	I
UNK15	CW	SE SE	35	45-76	--	--	--	I	U
UNK16	CW	SW NW	8	44-77	--	--	--	--	I
UNK17	WIL	NW NE	16	44-76	--	--	--	--	I
UNK18	POL	SE NW	10	44-76	--	--	--	I	I
UNK19	CLF	NW NE	15	44-76	--	--	--	--	I
UNK20	POL	NE NW	15	44-76	--	--	--	--	I
UNK21	CW	SW SW	33	46-77	--	--	--	--	I
UNK22	CW	NE SW	26	44-76	--	--	--	I	U
UNK23	CW	NE NE	20	45-76	--	--	--	--	I
UNK24	CW	SW SE	20	45-76	--	--	--	--	A-T
UNK25	CW	SW SE	32	45-76	--	--	--	--	A-T
UNK26	JU	SE SW	32	45-76	--	--	--	--	U
UNK27	JU	SE SW	32	45-76	--	--	--	--	A-T
UNK28	JU	SE SW	32	45-76	--	--	--	--	U
UNK29	CW	SE SE	17	45-76	--	--	U	U	U
UNK30	CW	NE SW	26	44-76	--	--	I	A,?,?	U
UNK31	CW	SE SW	33	46-77	--	--	--	--	I
UNK32	CW	NE SE	27	44-76	--	--	--	I	U
Unknown Species Subtotals					0,0,0	0,0,0	0,0,0	1,?,?	3,0,0

Table 3, continued.

<u>Nest No.</u>	<u>Code</u>	<u>¼ ¼</u>	<u>Sec</u>	<u>T-R</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>
RTH1b/GHO2	CW	NW NW	9	45-77	U	U	U	ALT	U
RTH2a/GHO3	CW	SW SE	21	44-76	U	U	U	U	U
RTH7a/GHO1	CW	SW NE	32	45-77	—	—	I	I	A,2+,2 <sup>GHO</sup>
RTH8c/GHO5	CW	SE NE	21	45-77	—	U	U	A,2+,2 <sup>GHO</sup>	ALT
RTH10a/GHO4a	CW	SE SW	16	44-76	—	—	—	A,3+,3	A,?,?
RTH10b/GHO4b	CW	NW NE	21	44-76	—	—	—	A,?,?	A,?,?
RTH13a/GHO15a	CW	NW SE	25	44-77	—	—	—	A,2+,2	A,2+,2 <sup>GHO</sup>
RTH16a/GHO9a	CW	SW NW	27	45-77	—	—	—	A,3+,3	A,?,?
RTH17a/GHO12b	CW	SW NW	9	44-76	—	—	—	A,2+,2	A,2+,2 <sup>GHO</sup>
RTH19/GHO14a	CW	SE SW	13	44-77	—	—	—	A,2+,2	I
Multiple Species Subtotals					0,0,0	0,0,0	0,0,0	7,14+,14	6,6+,6
Grand Totals					0,0,0	0,0,0	2,?,?	30,34+,34	28,22+,21

<sup>1</sup> Data for 2003-2007 derived largely from BLM datasets, which do not always include status and productivity. Specific surveys were not conducted for the Irigaray and Christensen Ranch properties in most years during that period.

<sup>2</sup> Denotes nests beyond the wildlife survey areas monitored in some years.

X,#,# = Status, number of young hatched, number of young fledged.

? = Unknown number of young hatched or fledged.

#+ = Minimum estimate of number of young fledged.

Species Codes  
 BBMA = Black-billed magpie  
 FH = Ferruginous hawk  
 GE = Golden eagle  
 GHO = Great horned owl  
 H = Northern harrier  
 LEO = Long-eared owl  
 PF = Prairie falcon  
 RTH = Red-tailed hawk  
 UNK = Unknown species

Nest Substrate Codes  
 BOX = Nest box  
 CB = Creek bank  
 CLF = Cliff  
 CW = Cottonwood  
 EP = Earth pillar  
 G = Ground  
 JU = Juniper  
 POL = Power pole  
 PP = Ponderosa pine  
 ROC = Rock  
 SS = Sandstone pillar  
 WIL = Willow

Nest Status Codes  
 A = Active  
 ALT = Alternate nest  
 A-T = Active-tended/no eggs laid  
 D-N = Destroyed, natural causes  
 I = Inactive  
 — = Undiscovered  
 U = Unknown

observation or physical evidence (e.g., fresh droppings, prey remains, etc.) at the site, but the final outcome of the nest was unknown. Those five sites included two red-tailed hawk nests, and three nests where the active species was not known. The remaining seven nests were tended (i.e., new material added), but no eggs were laid: three unknown species, two golden eagles, one ferruginous hawk, and one great horned owl.

Table 4 presents raptor production in the Irigaray and Christensen Ranch areas during surveys conducted specifically for those properties. Productivity was relatively low from 1991 through 1996, but increased in subsequent survey years (Table 4). Raptor production was the greatest in 1998, with relatively high counts in the following two survey years (1999 and 2007), as well. The increase in 1998 was attributable primarily to the enlargement of the survey area that year, though improved prey populations throughout the region in recent years likely also contributed to greater raptor production since then. Another factor that may have influenced raptor production results in 2007 was the time lag between the submittal of information collected from areas overlapping the Irigaray and Christensen Ranch survey perimeter to the BLM and the distribution of that database to interested parties. All known nest sites will be included in the renewed annual monitoring efforts for the uranium projects, which should provide more detailed information for nesting raptors in that survey area in future years.

Table 4. Annual productivity for nesting raptors in the Irigaray and Christensen Ranch survey areas during surveys conducted for those properties from 1991 through 1999, and in 2007.

Year	Number of young fledged/species					Total
	RTH	GE	GHO	FH	PF	
1991	--	1+	?	--	---	1+
1992	2+	3+	0	--	---	5+
1993	1+	0	0	--	---	1+
1994	3+	1+	?	--	---	4+
1995	1	1	0	--	---	2
1996	4	4	0	0	---	8
1997	7+	3	2+	0	---	12
1998 <sup>1</sup>	17+	4	4	3+	---	28+
1999	11	6	2	2	---	21
2007	8+	0	10+	1	2	21
Annual Means <sup>2</sup>	6.0	2.3	2.3	1.2	2.0	10.3

+ Indicates minimum estimate.

? Indicates nesting status unknown.

<sup>1</sup> Study area was increased by 40 mi<sup>2</sup> in 1998.

<sup>2</sup> Means calculated within species by dividing total fledged by the number of years species is known to have nested within survey area.

-- Indicates species not known to nest in area.

Species Codes

FH = Ferruginous hawk

GHO = Great horned owl

PF = Prairie Falcon

GE = Golden eagle

RTH = Red-tailed hawk

Fluctuations in raptor nesting attempts and success rates are often linked to variations in prey availability. Large raptor species such as golden eagles, ferruginous hawks, red-tailed hawks, and great horned owls prey predominantly on lagomorphs (hares and rabbits). Lagomorph surveys are not required for in situ uranium operations in Wyoming. However, surveys for lagomorphs in other parts of the Powder River Basin indicate that populations were severely reduced from 1993 through 1996, but increased dramatically since then (Jones & Stokes, unpublished data). That increase in lagomorph populations undoubtedly contributed to the higher raptor production rates recorded in the overall survey area after 1997.

Red-tailed hawks are common nesters in the survey area, and were more abundant than other raptor species in most survey years. At least one pair successfully nested every year since 1992 (Table 4). The number of nesting pairs of red-tailed hawks within the overall survey area has fluctuated in recent years. Three to five pairs of red-tailed hawks nested each year through 1997. Nine pairs nested in the area in each of the following two years, including two pairs that were added as a result of the survey area expansion in 1998. In 2007, 21 territories were recorded within the study area, with at least 6 confirmed as active. It is possible that other nests not encompassed by survey efforts were also active in 2007.

Golden eagles have also regularly nested in the Irigaray and Christensen Ranch survey area. From 1991 through 1997, four known territories were present in or immediately adjacent to the Irigaray and Christensen Ranch study areas. A fifth territory (GE5, Map 1) was identified when the study area was expanded in 1998. By 2007, 11 golden eagle territories had been recorded within the overall survey area. At least one pair of golden eagles fledged young during 8 of the last 10 survey years (1991-1999, and 2007) (Table 4). The annual number of successful pairs has increased in recent years, likely in response to improved lagomorph populations during that same period. Only one pair of golden eagles fledged young in any given year from 1991 through 1995. At least two pairs fledged young each year from 1996 through 1999, with five successful pairs in the latter year. Three territories were confirmed as active in 2007, but none fledged young. As noted above, it is possible that other golden eagle nests not included in all surveys were also active and/or successful in 2007.

One golden eagle pair (GE1, Map 1) nests near the Christensen Ranch facilities and has been monitored with some regularity since 1987. Over the years, the pair has had a history of failed nesting attempts due to their repeated use of a friable cliff bank along Willow Creek as a nest site. From 1987 through 1995, three separate nesting attempts were unsuccessful due to structural failures in the cliff wall either above or below the nest. Chicks perished during two of the incidents, and eggs were destroyed during the third. In 1996, the pair again built a nest on the cliff bank; the nest remained intact and one eaglet fledged. Young also fledged from that



nest in two of the subsequent three years. The cliff nest site was tended (new material added) in 2007, but no evidence of active nesting (incubation, brood-rearing) was documented that year.

Although multiple ferruginous hawk nests had been identified in the survey area in previous years, no activity was recorded at any of those sites until 1996. A single adult ferruginous hawk was observed bringing sticks to the FH1a nest (Map 1) in both 1996 and 1997, but no eggs or young were seen in either year. Ferruginous hawks actively nested at that location in both 1998 and 1999, with young fledging in both years. Seven ferruginous hawk territories had been defined in the survey area by 2007, though the status of several nests in those territories was not known in many years. Three territories were active in 2007, but only one fledged young (Table 3). As indicated above, annual monitoring was not conducted specifically for the Irigaray and Christensen Ranch projects from 2000-2006, with partial monitoring conducted in 2007.

Great horned owls were found nesting in the area in 1991 and 1994, but their productivity during those years was not determined. No active nests were located in 1995 or 1996, although adult owls were observed roosting during each of those years. In contrast, great horned owl nests were confirmed each year from 1997 through 1999 and again in 2007, when surveys resumed in much of the area. Two to three pairs of owls successfully nested each year from 1997 through 1999. In 2007, 7 of the 16 great horned owl territories documented in the survey area were active, with at least 6 territories producing young (Table 3). The secretive nature of great horned owls, which often nest in hidden sites such as cavities within cliff faces or large trees, can result in additional nesting efforts going undetected in some years.

#### MOUNTAIN PLOVERS

No mountain plovers were observed in the Irigaray and Christensen Ranch monitoring area during surveys of suitable habitat conducted from early May through mid-June 2007. Additionally, no mountain plovers were observed incidental to any other wildlife surveys completed that year.

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**IRIGARAY AND CHRISTENSEN RANCH**  
**Threatened & Endangered Species Report**



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## INTRODUCTION

Cogema Mining, Inc. (Cogema) historically operated two in situ uranium recovery operations near the boundary of Johnson and Campbell Counties in northeast Wyoming: Irigaray and Christensen Ranch. Operations at both sites were suspended in 2000 due to reduced market forces. In preparation for renewed operations, Cogema must submit a report that addresses federally listed Threatened and Endangered (T&E) species to the Nuclear Regulatory Commission (NRC) as part of that agency's Environmental Analysis for this project; Wyoming does not maintain a statewide list of T&E species. Cogema commissioned Jones & Stokes (formerly Thunderbird Wildlife Consulting and Powder River Eagle Studies) to prepare this document to address that T&E reporting requirement.

Specific surveys for T&E species were historically not part of the annual monitoring requirements for the Cogema operations. However, due to the overlap between the Cogema survey area and adjacent coal bed natural gas (CBNG) developments, nearly all of the Irigaray and Christensen Ranch permit areas and their respective one-mile perimeters were included in some level of T&E monitoring during one or more of the last four years (2004-2008). Those surveys consisted primarily of aerial searches for bald eagle (*Haliaeetus leucocephalus*) winter roost sites (Map 1). Other recent surveys conducted adjacent to the Christensen Ranch permit area included habitat assessments for the threatened Ute ladies'-tresses orchid (*Spiranthes diluvialis*). In addition to these recent efforts, historic surveys for T&E were also conducted within the Cogema permit areas. At least one survey each was conducted for orchids and the endangered black-footed ferret (*Mustela nigripes*) during the 1980s as part of the original permitting process. Along with these targeted efforts, Jones & Stokes biologists recorded all T&E species observed incidental to other wildlife surveys during each monitoring year. Notes on each sighting included the date, species, number of individuals, location, habitat, and activity.

This report addresses three federally listed species that could occur in Campbell and/or Johnson County (U.S. Fish and Wildlife Service [USFWS] 2008): the black-footed ferret, Ute ladies'-tresses orchid, and the threatened Canada lynx (*Lynx canadensis*). The USFWS removed the bald eagle from protection under the Endangered Species Act (ESA) in July 2007 (Federal Register 2007). Due to the recent timing of that delisting action, and their continuing federal protection, bald eagles are also included in this report.

## STUDY AREAS

### IRIGARAY

The Irigaray permit area is limited to approximately one square mile that spans Sections 5, 8, 9, and 16, Township (T) 45 North (N), Range (R) 77 West (W). The wildlife survey area for Irigaray has always included the permit area and a surrounding perimeter. That area has ranged from 10.6 to 14.0 square miles over the years. In 2007, the monitoring area consisted of the Irigaray permit area and its one-mile perimeter; approximately 10.6 square miles (Map 1).

The terrain in the survey area is rugged and heavily dissected by numerous steep drainages. Willow Creek bisects the area from southeast to northwest, flowing into the Powder River just west of the one-mile perimeter. Cottonwood (*Populus* spp.) trees occur along Willow Creek, but few trees are found elsewhere on the property.

### CHRISTENSEN RANCH

The Christensen Ranch Amendment Area (hereafter, permit area) includes approximately 22.5 square miles (Map 1). Although the area is quite large, activities associated with uranium recovery have been limited to scattered, narrow bands totaling less than 3.0 square miles. The wildlife survey area has varied over time, ranging from 53 to 64 square miles. In 2007, the Christensen Ranch monitoring area included the permit area and a 1.0-1.5-mile perimeter; approximately 53 square miles. Much of this survey area is also broken by numerous drainage systems. The North Butte plateau rises up in the extreme east-central part of the survey perimeter. With few exceptions, trees are limited to the corridor along Willow Creek, which flows northwest through the center of the permit area. The southeastern quarter of the monitoring area consists of somewhat gentler terrain, with fewer deep drainages and more rolling hills.

## METHODS

### BLACK-FOOTED FERRET

As indicated in the *Introduction* section, one survey for black-footed ferrets was conducted for the Cogema properties in 1986. No other surveys targeting this species have been conducted at Cogema since then. However, several surveys have been conducted elsewhere in the Powder River Basin over the last 20 years by a variety of certified state, federal, and private biologists. The USFWS issued a block clearance from conducting surveys for black-footed ferrets in black-tailed prairie dog (*Cynomys ludovicianus*) colonies throughout Wyoming in 2004 (USFWS 2004).

### UTE LADIES'-TRESSES ORCHIDS

Surveys for Ute ladies'-tresses orchids were conducted in appropriate habitats within the

Cogema permit boundaries during the original baseline studies in the 1980s. A trained Jones & Stokes biologist conducted a habitat assessment for these orchids in May and June 2006 in two portions of the Cogema perimeter immediately adjacent to the Christensen Ranch permit boundary; those surveys were conducted for overlapping CBNG projects. The two surveyed areas encompassed all or portions of Sections 14 and 23-26, T44N, R77W, and Sections 20-22 and 27-29, T45N, R77W.

Surveys for Ute ladies'-tresses habitat were based on criteria defined by the Bureau of Land Management (BLM) Buffalo Field Office orchid habitat tree (March 2004) and suggested USFWS protocols (*1995 Ute Ladies'-Tresses Recommendations and Guidelines*). Prior to the surveys, topographic and soils data (Natural Resources Conservation Service) maps were consulted to assess current and historical hydrological features in the area and to reference soil types for determination of potential habitat. Upland areas lacking a water source were omitted from further study. All major drainages and pertinent habitats were targeted for close scrutiny during pedestrian surveys. Photographs of representative habitat types were taken, predominant vegetative species were recorded, current and past (i.e., water marks, soil moisture, evidence of erosion) water availability was assessed, and soil types (i.e., textures) were evaluated. Other considerations used to evaluate potential Ute ladies'-tresses habitat included slope, plant competition, and alkalinity/salinity conditions.

#### CANADA LYNX

Canada lynx prefer subalpine/coniferous forests at high elevations and cold, snowy winters that provide a snowshoe hare (*Lepus americanus*) prey base (Jones et al. 1983; Clark and Stromberg 1987, Ruediger et al. 2000, Cerovski et al. 2004). No such conditions or prey species exist within the Irigaray and Christensen Ranch survey areas. The only coniferous species in the project area are the Rocky Mountain juniper (*Juniperus scopulorum*) and ponderosa pine (*Pinus ponderosa*), which are only sparsely present in some draws and on ridgelines in the more rugged portions of the permit areas and the Christensen Ranch perimeter, respectively. Similarly, deep crusted snow cover is not persistent within the project area. Consequently, no surveys for Canada lynx have ever been required or conducted for the Cogema properties.

## BALD EAGLE (RECENTLY DELISTED)

As described in the *Introduction* section, most of the Cogema monitoring area (both permit areas and their respective one-mile perimeters) was included in one or more bald eagle winter roost surveys from 2004 through early 2008 (Map 1). Those surveys were conducted for adjacent CBNG projects that coincidentally overlapped the Cogema project area. Three aerial surveys were conducted during each of those four winters to search for bald eagle roosts throughout the limited woodland habitats in the Cogema permit areas and their surrounding one-mile perimeters. All surveys were completed between one-half-hour before and one hour after sunrise, or between one hour before and one-half-hour after sunset. Surveys were conducted by two Jones & Stokes biologists and a pilot using a fixed-wing Cessna 182. Flight speed and altitude were typically 80-100 mph and 100-300 feet above ground level, respectively. Surveys were only conducted under favorable viewing conditions (i.e., relatively clear, calm skies).

## RESULTS

### BLACK FOOTED FERRET

No black-footed ferrets have been documented within the Cogema project area or elsewhere in the Powder River Basin despite numerous surveys in that region over more than two decades. No potential habitat (i.e., prairie dog colonies) for black-footed ferrets exists within either of the two Cogema permit boundaries or their respective one-half-mile perimeters. Only three small (5.4 to 10.2 acres) black-tailed prairie dog colonies were known to be present in the general vicinity in 2007. Those colonies were approximately 0.8 to 1.4 miles from the nearest permit boundary. None of the three colonies are considered large enough (at least 120 acres) to provide potential habitat to sustain breeding black-footed ferrets (Forrest et al. 1985). As described in the *Methods* section, above, the USFWS no longer requires surveys for black-footed ferrets in black-tailed prairie dog colonies throughout Wyoming. Furthermore, the Cogema area is not within a portion of the state considered by any state or federal agency as a potential ferret reintroduction site (USFS 2002, Grenier 2003, B. Oakleaf, WGFD, personal communication to G. McKee, Jones & Stokes, 2004).

### UTE LADIES'-TRESSES ORCHID

No Ute ladies'-tresses orchids were found during site-specific surveys conducted at Cogema in the 1980s. Results from more recent surveys in similar habitats immediately adjacent to, and near, the permit areas indicate that the physical characteristics in the general project area have limited potential to support this plant. Additionally, no known orchid seed source exists within that vicinity. Although several drainages course through the Cogema permit areas, most

are intermittent or ephemeral, and run only during limited periods or immediately following substantial rainfall, respectively. Sandy and loamy soils were present along most drainages and ridgelines in recently surveyed sites beyond the two permit areas. However, those drainages were also comprised primarily of dense upland vegetation such as cheatgrass (*Bromus tectorum*), native wheat grasses (*Elymus* spp.), bluegrass (*Poa* spp.), Indian ricegrass (*Oryzopsis asperifolia*), Japanese brome (*Bromus japonicus*), and big sagebrush (*Artemisia tridentata*). Furthermore, the topography in the general vicinity is generally rugged, with abrupt transitions between draws and upland habitats. While future operations would potentially cross some of these draws, much of the anticipated disturbance would occur in upland habitats.

#### CANADA LYNX

No Canada lynx have ever been documented in Campbell or Johnson County (Clark and Stromberg 1987, Cerovski et al. 2004), and no suitable habitat for this species is present in the Cogema project area.

#### BALD EAGLE (RECENTLY DELISTED)

Although it is no longer considered to be a listed species under the ESA, the bald eagle remains under the purview of the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act, both of which are administered and enforced by the USFWS. Consequently, they remain a species of concern in Wyoming. Bald eagles are common winter residents in portions of northeast Wyoming, and sightings at Cogema have occurred with some regularity over the years. Roosting habitat is limited primarily to the cottonwood corridor along Willow Creek as it courses through the Irigaray and Christensen Ranch permit areas, and the larger pine trees along North Butte at the eastern edge of the combined survey area.

The BLM has identified four bald eagle roost sites within the project area, as well as several other observation points (Map 1). Those records span more than 20 years, and all but two of the roost and observation locations were located along Willow Creek or one of its primary tributaries. One roost site appears to have been located at the head of a tributary draw flowing southwest into Little Willow Creek, and another roost site was in the pine trees at the base of the western slope of North Butte. Two of the four BLM winter roost sites are within the Christensen Ranch permit area; none are in the Irigaray permit area. However, the locations within the Christensen Ranch area are immediately adjacent to existing processing facilities or are in an area not currently scheduled for uranium development.



Despite these historic observations, few bald eagle sightings have been recorded during targeted roost surveys conducted in the Cogema area over the last four years. All of the bald eagles seen during surveys conducted annually since 2004 were restricted to the southeastern corner of the Christensen Ranch permit area and its one-mile perimeter (Map 1). The BLM roost site previously identified within the permit area is located along Willow Creek, beside an access road to an existing well field and an occupied ranch house, and within 1,500 feet of the well field. The observations in the one-mile perimeter have occurred at, or near, the BLM roost site located in the pine trees at the base of North Butte. Those sightings were concentrated in the trees located 0.25 to 0.50 mile east of the Christensen Ranch permit area, and approximately 0.8 to 1.3 miles east of the nearest proposed or existing well field, respectively. The rugged location of the pine tree roost site provides a visual buffer from human disturbance at the proposed well field, with a partial sight-line to the existing well field.

#### DETERMINATIONS OF EFFECTS ON T&E SPECIES AND RATIONALE

##### BLACK FOOTED FERRET

The black-footed ferret relies exclusively on prairie dogs for food and shelter (Clark and Stromberg 1987). As no ferret populations are known to be present in northeast Wyoming, and no prairie dog colonies are located in or within one-half-mile of either the Irigaray or Christensen Ranch permit area, Cogema's in situ operations will have no effect on black-footed ferrets.

##### UTE LADIES'-TRESSES ORCHID

Due to the lack of evidence that suitable habitat for the Ute ladies'-tresses orchid is present in the general area, the absence of a documented seed source in the vicinity of the project area, the lack of historic observations during surveys conducted within the permit areas, and the location of a large percentage of future disturbance in upland habitats, renewed operations at the Irigaray and Christensen Ranch facilities would likely have no effect on Ute ladies'-tresses orchids.

##### CANADA LYNX

As no potential habitat for Canada lynx is present in or near the project area, the Irigaray and Christensen Ranch operations will have no effect on this species.

#### CONCLUSIONS

No species currently included on the federal list of Threatened and Endangered Species have ever been documented at Cogema's Irigaray and Christensen Ranch properties in northeast Wyoming. Potential habitat for those species is either extremely limited or non-

existent. The bald eagle was recently removed from listing under the ESA, but remains a species of interest and concern for various federal agencies. Bald eagles have been documented in both permit areas and their corresponding one-mile perimeters. However, results from repeated, targeted surveys for bald eagle roosts conducted in the survey area during each of the last four winters have documented regular use of only two sites. One of those is along an existing, active road within 1,500 feet of an existing, but currently dormant, in situ well field. The other site is a minimum of 0.8 mile from, and beyond view of, the nearest proposed future disturbance. Consequently, renewed operations of in situ recovery at the Cogema properties is not likely to negatively impact any current, or recently removed, federally listed species.

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Mr. Tom Hardgrove  
Areva Resources Inc.

April 25, 2008

RE: NRC inquiry – T&E Report for Irigaray and Christensen Ranch

Dear Tom,

Per your forward of Mr. Ron Linton's (NRC) email inquiry from April 23, 2008 regarding the potential for the endangered blowout penstemon (*Penstemon haydenii*) to occur in the Irigaray/Christensen Ranch project area, I offer the following information. This assessment has been reviewed by both Ms. Jan McKee (no relation) and Ms. Patricia Deibert of the U.S. Fish and Wildlife Service's (USFWS's) Ecological Services Office (ESO) in Cheyenne, Wyoming, and has been determined to be accurate for the project area.

Please feel free to have Mr. Linton contact me with any further questions or concerns, or to contact me yourself, and I will be happy to provide additional assistance.

Regards,



Gwyn McKee  
Technical Director/Senior Wildlife Biologist  
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The blowout penstemon is a member of the snapdragon family. The USFWS listed the plant as endangered in 1987. This species is restricted to shifting, sparsely vegetated sand dunes. The micro habitat within dune complexes consists of conical or irregularly-shaped craters scooped out of sand dunes and dune complexes by the swirling action of prevailing westerly winds. This plant is a primary invader that does not persist when a blowout becomes completely vegetated (Pool 1914).

Blowout penstemon is typically associated with the Nebraska sandhills. It was first discovered in Wyoming in 1996 in the sand dune country south of the Ferris Mountains in Carbon County, and was confirmed as present there in 1999. Currently, the Wyoming population is confined to an area of approximately 20 acres on BLM land in northern Carbon County. According to Ms. Jan McKee, of the USFWS ESO in Cheyenne, the lack of sand dunes and dune complexes in the Cogema project area precludes the presence of this endangered plant in that area (J. McKee, personal communication to G. McKee, Jones & Stokes, April 24, 2008).

Sources:

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2007 Wildlife Monitoring  
Raptor Nests and Sage-Grouse Leks”**

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