



COGEMA

Mining, Inc.

February 25, 2002

**LICENSE SUA-1341
DOCKET NO. 40-8502**

U. S. Nuclear Regulatory Commission
Mr. Mel Leach, Chief
Fuel Cycle Licensing Branch,
Mail Stop T-8A33
Two White Flint North
11545 Rockville Pike
Rockville, MD 20852-2738

RE: Submittal of the 2001 Annual Effluent and Monitoring Report

Dear Mr. Leach:

Pursuant to License Sections 12.1 And 12.6, a copy is enclosed of COGEMA Mining Inc.'s 2001 Annual Effluent and Monitoring Report. Note that the report also serves as the Semi-Annual Monitoring Report to the Wyoming Department of Environmental Quality for the second half of 2001.

Please contact me if you have any questions regarding this report.

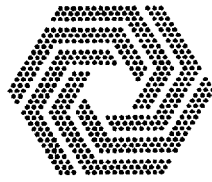
Sincerely,

John Vaselein
Radiation Safety Officer

cc: Elaine Brummett - NRC, Headquarters
Division Director - NRC, Region IV
Bob Giurgevich - WDEQ, Sheridan
Donna Wichers - COGEMA

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COGEMA

Mining, Inc.

**IRIGARAY AND CHRISTENSEN RANCH
PROJECTS**

2001 ANNUAL EFFLUENT AND MONITORING REPORT

January 1, 2001 through December 31, 2001

NRC Source Materials License SUA-1341

Docket No. 40-8502

and

SEMI-ANNUAL MONITORING REPORT

July 1, 2001 through December 31, 2001

WDEQ Permit to Mine No, 478

February 2002

Cogema Mining, Inc.
Irigaray and Christensen Ranch Projects

2001 ANNUAL EFFLUENT AND MONITORING REPORT (NRC)
and
SEMI-ANNUAL MONITORING REPORT (WDEQ)

1.0 INTRODUCTION

In accordance with Sections 12.1 and 12.6 of the NRC Source Material License No. SUA-1341, COGEMA Mining, Inc. (COGEMA) hereby submits the 2001 Annual Effluent and Monitoring Report. This document summarizes the required operational and environmental monitoring conducted at the Irigaray and Christensen Ranch Projects, along with other pertinent information. The annual report period is from January 1 through December 31, 2001.

Some of the monitoring data included in this document is also required by Section 5.10.1.1 of the 1996 License Renewal Application, in a Semi-Annual Monitoring Report to the Wyoming Department of Environmental Quality (WDEQ). The semi-annual report period is from July 1 through December 31, 2001. However, wherever monitoring data is also required by the NRC, the entire year of data is given.

2.0 OPERATIONAL SUMMARIES

With production ceased at both the Irigaray and Christensen Ranch Projects, operations consisted of groundwater restoration and related activities. During 2001, 37,990 pounds of uranium as U_3O_8 were captured from groundwater restoration operations. Note that the maximum allowed annual yellowcake production is 50,000 pounds as per Section 10.5 of the NRC license. This was increased from 30,000 pounds in October 2001. A total of 46,702 pounds of uranium were dried and shipped during 2001, with no dried product left on site at the end of 2001.

Groundwater restoration status summaries are provided below for the Irigaray and Christensen Ranch Projects. The layout for each site is shown on the General Location Maps, located in Appendix 1.

2.1 Irigaray Project

Groundwater restoration activities were concluded in November 2001, with only the groundwater stabilization monitoring to be completed during 2002. The Irigaray operational staff was reassigned to the Christensen Mine in December 2001. The Irigaray facilities were secured with door locks and locking gates at all outer perimeter access points. Security checks are conducted daily.

2.1.1 Production Units 1-5

Restoration was completed in Production Units 1 through 3 in 1993, and in Units 4 and 5 in 1999. No further actions have taken place in these wellfields. These units were mined using ammonium bicarbonate lixiviant.

2.1.2 Production Unit 6

The RO filtration/permeate injection phase was completed in October 2001 and the recirculation phase was completed in November 2001. The nine-month stabilization phase will be completed in August 2002.

2.1.3 Production Unit 7

The RO filtration/permeate injection phase was completed in July 2001 and the recirculation phase was completed in August 2001. The nine-month stabilization phase will be completed in May 2002.

2.1.4 Production Unit 8

The RO filtration/permeate injection phase was completed in June 2000, the recirculation phase was completed in August 2000, and the stabilization phase was completed in June 2001. No activity occurred in this unit after June 2001.

2.1.5 Production Unit 9

The RO filtration/permeate injection phase was completed in April 2000, the recirculation phase was completed in May 2000, and the stabilization phase was completed in January 2001. No activity occurred in this unit after January 2001.

2.2 Christensen Ranch Project

A permeate decarbonation system similar to the Irigaray system was installed at the Christensen plant. Two decarbonation columns were installed, the first in January 2001 and the second in April 2001. The process of decarbonation raises the pH of the permeate stream and allows for injection of a water with lower levels of dissolved gases and solids.

The total restoration flow capacity at Christensen was increased to 1,000 gpm in April 2001. Three new reverse osmosis (RO) units were installed. Two of the new RO's, fed at 200 gpm each, are dedicated to primary treatment of the wellfield recovery solutions. The third new RO is utilized to further concentrate (secondary treatment) the brine product from the five operating primary treatment RO's. This RO generates the final brine product for disposal along with a permeate product that is added to the wellfield injection stream.

An oxygen scavenging system was installed and started at the Christensen plant in September 2001. Sodium sulfide solution is continuously added to the restoration injection stream at a concentration of 5-10 parts per million. At this concentration, sodium sulfide increases the permeate pH about 1.5 SU's while altering the electrical potential from highly oxidizing to slightly reducing.

2.2.1 Mine Unit 2

The RO filtration/permeate injection phase began in Mine Unit 2 in October 2000. A total of 10.0 pore volumes of displacement (PVD) were completed in Mine Unit 2 at the end of 2001 where it remained in the RO filtration/permeate injection phase.

2.2.2 Mine Unit 3

The RO filtration/permeate injection phase was suspended in March 2001 as restoration efforts were shifted to Mine Unit 2. Module-4 of Mine Unit-3, an area that had not previously been treated in the RO filtration/permeate injection phase, was activated in October 2001.

A total of 12.0 pore volumes of displacement (PVD) were completed in Mine Unit 3 at the end of 2001 and Module-4 remained in the RO filtration/permeate injection phase.

2.2.3 Mine Unit 4

The RO filtration/permeate injection phase began in June 2001 in Module-3, the largest of the three modules of Mine Unit 4. The rest of the unit remained shut in pending availability of plant capacity for RO flow. A small amount of groundwater sweep was conducted for excursion control.

2.2.4 Mine Unit 5

The groundwater sweep phase began in March 2000 and was completed in June 2001. The unit was then shut in pending the initiation of the RO filtration/permeate injection phase. A small amount of groundwater sweep continued for monitor well excursion control.

2.2.5 Mine Unit 6

The groundwater sweep phase began in September 2000 and continued throughout 2001. The cumulative pore volume recovered during this phase of Mine Unit 6 was 0.5 at the end of 2001.

3.0 OPERATIONAL MONITORING

3.1 Groundwater Volumes Injected and Recovered

Groundwater restoration volumes injected and recovered from the wellfields at the Irigaray and Christensen Ranch Projects are given in Table 1. The recovery flow rates are also given in this table. The gallons were calculated by totalizing flow meters on the recovery and injection trunklines.

3.2 Injection Manifold Pressures

Injection manifold pressures are regulated to keep wellhead pressures from exceeding the limits specified in Section 11.1 of the NRC license (120 psi at the Irigaray Project and 140 psi at the Christensen Ranch Project).

Section 11.1 also requires that the injection manifold pressures be recorded daily. COGEMA used continuous chart recorders to record the injection manifold pressures on each operating wellfield module at Christensen, and each wellfield Production Unit at Irigaray. During 2001, no exceedances of the injection pressure limits were recorded at either site.

3.3 Waste Water Control

3.3.1 Evaporation Ponds

Weekly inspections were conducted on the eleven evaporation ponds at the Irigaray Project, along with the four evaporation ponds and one permeate storage pond at the Christensen Ranch Project. During 2001, no freeboard exceedances occurred and no leaks were detected. Sampling of the evaporation ponds is conducted on a quarterly basis and the sample analysis data are given in Table 2 located at the end of this test along with other referenced tables.

Partial decommissioning of four small ponds (IR-1, 2A, 2B & 3) at the Irigaray Project (517 R&D Site), was conducted in 2000. Since the water, sludge and liners have been removed from these ponds, they were only inspected to insure that the fences were maintained and posted.

Final decommissioning of these four ponds, including soil surveys and possible cleanup, is planned for 2002.

3.3.2 Disposal Wells

Two Class I injection wells are installed at the Christensen Ranch Project which are licensed by the WDEQ Permit Number UIC 00-340 for industrial wastes. During 2001, a total of 41,366,222 gallons of restoration brine water was injected into disposal well Cogema DW No.1 and 31,344,164 gallons were injected into disposal well Christensen 18-3. Quarterly reports were submitted to the WDEQ containing required water quality, water quantity and well pressure data. No limits were exceeded at either well during 2001.

3.4 Well Integrity Testing

Well integrity testing results are reported to the WDEQ by phone on a quarterly basis and in a written report semi-annually. The results for the first half of 2001 were given in the WDEQ annual report (August 2001). A list of the well integrity test results for the second half of 2001 is given in Appendix 2. A total of 397 wells were tested, all located in Mine Units 5 and 6 at the Christensen Ranch Project. Eighteen of these wells failed testing and will remain inactive until repaired or cemented for abandonment. Note that no injection occurred in Mine Units 5 and 6 during 2001.

4.0 ENVIRONMENTAL MONITORING

The environmental monitoring locations are given on the Environmental Monitoring Station Locations map located in Appendix 1. The layout of each site, including the locations of monitor/trend wells, ponds, surface discharges, and disposal wells is given in the General Location Maps, also located in Appendix 1.

4.1 Groundwater Monitoring

4.1.1 Wellfield Monitor and Trend Wells

Groundwater quality at both projects is monitored by routine sampling 327 monitor or trend wells surrounding or within the wellfields. Sampling frequency varies for these wells. Monitor wells on excursion status are sampled weekly. Monitor wells not on excursion status and the trend wells are sampled monthly until restoration is complete. These wells are then sampled quarterly during post-restoration stabilization monitoring and thereafter.

Sample analysis results along with the water level elevations for 2001 are contained in Appendix 3. Note that a monthly sample could not be collected from CR monitor well 5MW48 during January and February 2001. This was due to the low water level created by the groundwater sweep phase of restoration being conducted in the mine unit at the time. The same problem occurred with CR trend well 6TW-1 in Mine Unit 6 during June, July and August 2001, and with CR monitor well 6MW40 in Mine Unit 6 during August and September 2001. As approved by both the WDEQ and the NRC, water levels were measured on these wells and sampling was later resumed when the water levels recovered enough for a pumped sample to be obtained.

Eleven monitor wells were reported on excursion status during 2001. Since detailed excursion status reports are submitted monthly to the WDEQ and quarterly to the NRC, only a brief list of these wells is given below.

Note that only seven wells remained on excursion status at the time of this report (February 2002), all located at the Irigaray Project.

Interior Shallow Sand Monitor Well SSM3 - Irigaray Production Unit 2
Date of Initial Excursion: August 30, 1996

Interior Shallow Sand Monitor Well SSM18 - Irigaray Production Unit 8
Date of Initial Excursion: September 13, 1996

Interior Shallow Sand Monitor Well SSM40 - Irigaray Production Unit 8
Date of Initial Excursion: August 16, 1996

Interior Shallow Sand Monitor Well SSM41 - Irigaray Production Unit 4
Date of Initial Excursion: November 19, 1998

Interior Shallow Sand Monitor Well SSM42 - Irigaray Production Unit 3
Date of Initial Excursion: October 10, 1990

Interior Shallow Sand Monitor Well SSM43 - Irigaray Production Unit 1
Date of Initial Excursion: October 11, 1989

Interior Shallow Sand Monitor Well DM10 - Irigaray Production Unit 6
Date of Initial Excursion: February 2, 1994

Perimeter Ore Zone Monitor Well RS27 - Irigaray Production Unit 5
Date of Initial Excursion: June 6, 2001
Date of Excursion Termination: November 30, 2001

Perimeter Ore Zone Monitor Well M2 - Irigaray Production Unit 2
Date of Initial Excursion: Feb. 5, 2001 May 31, 2001 August 15, 2001
Date of Excursion Termination: Apr. 12, 2001 July 3, 2001 October 11, 2001

Perimeter Ore Zone Monitor Well 5MW43 - Christensen Mine Unit 5
Date of Initial Excursion: March 22, 2001
Date of Excursion Termination: April 12, 2001

Perimeter Ore Zone Monitor Well 5MW66 - Christensen Mine Unit 5
Date of Initial Excursion: August 21, 2001
Date of Excursion Termination: January 15, 2002

4.1.2 Regional Ranch Wells

Quarterly groundwater samples were collected from 6 ranch wells near the Christensen Ranch Project and semi-annual samples were collected from a ranch well near the Irigaray Project. The samples are analyzed for uranium along with Th-230, Ra-226, Pb-210 and Po-210. Sampling analysis data for 2001 are given in Table 3. All radionuclides were low in concentration or not detectable, as is normal.

4.2 Surface Water Monitoring

Willow Creek is the only source of surface water present within and adjacent to the permit boundary of both the Irigaray and Christensen Ranch Projects. Since Willow Creek is an intermittent stream it is sampled on a quarterly basis when flow is available. Three sample locations are designated at both sites; upstream, downstream and within the permit boundary. The Powder River is sampled on an annual basis downstream from the confluence with Willow Creek, which is located many miles downstream from both projects. Analysis data for both chemical parameters and radionuclides are given in Table 4. The Lead-210 concentration for CR-GS03 (at the Christensen Project) exceeded the NRC 10 CFR 20, Appendix B, effluent limit on January 29, 2001. This may be a result of upstream discharge which is discussed in the Surface Discharge section below. Note that the Lead-210 was not detectable at CR-GS03 for the other three quarters of 2001. No other limits were exceeded at any of the locations during 2001.

4.3 Surface Discharge Monitoring

A surface discharge outfall is used at each project for disposal of treated groundwater generated by restoration activities. The outfalls are licensed with the U.S. Environmental Protection Agency under National Pollutant Discharge Elimination System (NPDES) permits, issued by the WDEQ. During 2001, a total of 10,917,278 gallons of water were discharged at the Irigaray Project (Permit No. WY0028801, Discharge 001) and 42,760,311 gallons were discharged at the Christensen Ranch Project (Permit No. WY0033642, discharge 002). Note that the surface discharge at the Irigaray Project was shut down in October 2001.

Routine sampling is conducted on a weekly, monthly and quarterly basis as designated by the NPDES permits. The sample analysis data for 2001 are given in Table 5. No NPDES permit limits were exceeded at either location.

In addition, quarterly samples are also analyzed for radionuclide activity (uranium, Ra-226, Th-230, Po-210 and Pb-210) and compared to the NRC 10 CFR 20, Appendix B effluent limits. This analysis data for 2001 is also given in Table 5. In the February 2001 Semi-Annual Report, it was noted that the Lead-210 concentrations exceeded the NRC effluent limit at both discharge locations and that it was likely a result of radon decay. Further investigation and sampling has confirmed that elevated concentrations of both radon gas and Lead-210 occur in the surface discharge water at Christensen. The first two quarterly samples from Christensen also exceeded the NRC effluent limit for Lead-210, however, the concentrations were below the limit for the remainder of 2001. By letter dated July 31, 2001, COGEMA responded to the NRC's request to demonstrate if the surface discharge of restoration fluid complies with the NRC public dose limit in 10 CFR 20.1301 for all five of the radionuclides. The report stated "In summary, COGEMA contends that the restoration effluent discharged at Irigaray and Christensen will not cause an exceedance of the public dose limit in 10 CFR 20.1301, when realistic scenarios are considered".

4.4 Air Monitoring

4.4.1 Radon Gas

Radon gas is monitored continuously at six environmental air sampling locations at or near the Irigaray Project and at four locations at or near the Christensen Ranch Project. Passive outdoor radon detectors are exchanged and analyzed quarterly by Landauer, Inc., a NVLAP accredited company.

The sample analyses data are given in Table 6. No trends or abnormal results were noted and all concentrations were well below the 10 CFR Part 20, Appendix B effluent limit for radon of 1 E-8 uCi/ml.

In addition to the environmental radon monitoring, radon release estimates are calculated for both projects during production or restoration operations. These estimates are based upon the release rates given in the Calculation Of Annual Radon Emissions tables, of the 1996 License Renewal Application. Table 7.3(A)-3, Christensen Ranch, lists a restoration release rate of 258 Ci/year at a flow rate of 500 gpm (or 0.516 Ci per gpm, per year). Table 7.3(A)-7, Irigaray, lists a restoration release rate of 351 Ci/year at a flow rate of 500 gpm (or 0.702 per gpm, per year). Using these factors and the annual average recovery flows, the radon release to the environment during 2001 is estimated as follows.

Christensen Ranch Project - Restoration (882 gpm average) (0.516 factor) =	455 Curies
Irigaray Project - Restoration (249 gpm average) (0.702 factor) =	175 Curies
2001 Total =	630 Curies

4.4.2 Dryer Stack Emissions

The yellowcake dryer operated from October 23, 2001 through November 22, 2001, with a total of 46,702 pounds of uranium (as U_3O_8) dried. A stack emissions was conducted by Western Environmental, Inc. on November 2, 2001. A copy of the test report is included in Appendix 4. The total particulates were reported at 0.071 pounds per hour, which is 24% of the permit limit of 0.30. All radionuclide concentrations were within their normal historic ranges.

4.4.3 Airborne Radionuclides

During dryer operation, environmental air particulate sampling is required on a continuous basis at five of the Irigaray Project's environmental air sampling locations. Sampling was conducted from October 2, 2001 to December 3, 2001 to insure that large enough volumes were collected to meet the analysis detection limits. Air filters were changed weekly, then composited for analysis of U, Th-230, Ra-226 and Pb-210. The sample analysis data are given in Table 7. All radionuclides were < 3 % of the 10 CFR 20, Appendix B, effluent limits.

4.5 Gamma Radiation Monitoring

Gamma radiation is monitored continuously at five environmental air sampling locations surrounding the Irigaray Project and at four locations surrounding the Christensen Ranch Project. TLDs are exchanged and analyzed quarterly by Landauer, Inc., a NVLAP accredited company. The dosimeter analysis data are given in Table 8. No trends or abnormal results were noted.

5.0 OTHER INFORMATION REQUIRED BY SECTION 12.6 OF THE NRC LICENSE

5.1 ALARA Audit

An annual ALARA audit for 2001 was conducted by Enviro-Test Laboratories of Casper Wyoming. A copy of the report is given in Appendix 5. No findings of concern or recommendations were noted.

5.2 Land Use Survey

The primary use of surrounding lands at both the Irigaray and Christensen Ranch Projects continues to be rural ranching. Cattle and sheep graze these lands, but are fenced out of ponds, wellfields and restricted areas.

The secondary use of surrounding lands continues to be oil production from wells dispersed throughout the region. The closest oil well at the Christensen Ranch Project is located approximately one third of a mile west of the Christensen plant. The closest oil well at the Irigaray Project is located approximately one half mile east of the Production Unit 9 wellfield. No new oil wells have been drilled in close proximity of the projects during 2001. A new secondary use of surrounding lands has recently become established. This involves drilling wells into the underground coal seams for exploratory purposes and/or to establish claims for the methane gas. During the past two years, three such wells were drilled within a half-mile west of the Mine Unit 6 wellfield. They are all inactive at this time.

The nearest residence to the Irigaray plant is 4 miles to the north and the nearest residence to the Christensen plant is 3 miles to the southeast. Both are ranch housing with a population of 5 or less. No new residences have been added within 5 miles of either site since the regional demography was evaluated in Section 2.3.1 of the 1996 License Renewal Application.

Operation summaries of each project for 2001 have already been provided in Section 2.0 of this Annual Report.

5.3 SERP Summary

COGEMA's Safety and Environmental Review Panel (SERP) completed four safety and environmental reviews during 2001, as per License Section 9.4 (C). The purpose of the reviews was to determine if certain proposed additions and/or changes met the requirements of License Sections 9.4 (A) and (B), and could be approved. The SERPs concluded that all of the additions and/or changes reviewed do not conflict with any license section or NRC regulation, do not cause any degradation in the safety or environmental commitments in the license or reclamation plan, and are consistent with the conclusions and actions of the Environmental Assessment. Therefore, no license amendment applications were necessary as a result of the reviews.

A summary of each safety and environmental review (SER) is given below. As a result of the reviews, the following pages of the 1996 License Renewal Application have been revised and will be sent in a separate submittal: 3-37, 5-2 through 5-4, 6-8 through 6-9A.

5.3.1 SER # 2001-1

The SERP evaluated the elimination of Environmental Specialist position which was consolidated with the Radiation Safety Officer (RSO) position due to the reduction in operations. The SERP noted that the NRC license identifies technical qualifications for only the RSO (Section 9.12). The SERP also noted that the current RSO has been involved for the past 24 years with environmental monitoring programs at the Irigaray and Christensen Projects, in addition to radiation and industrial safety programs.

5.3.2 SER # 2001-2

The SERP evaluated the addition of a second gas stripping (decarbonation) column and three more reverse osmosis (RO) units, to better facilitate groundwater restoration operations at the Christensen Project. With the additional equipment, restoration flow would be increased from 600 to 1000 gpm. However, the SERP determined that there are no license limits on the restoration flow rate or for the number of RO units used for restoration purposes.

The SERP noted that the first gas stripping column was evaluated and approved by SER # 2000-7, dated December 28, 2000. In that review it explained that the RO/permeate injection phase of restoration is used for removing and lowering the groundwater TDS. However, this process does not remove CO₂ (since it is a gas) and it is injected back into the aquifer being restored. By removing CO₂ prior to injection into the aquifer, less sodium hydroxide (NaOH) is needed to raise the pH of the permeate. Therefore, by removing CO₂ and adding less NaOH, the process is much more efficient in lowering the groundwater TDS. It was determined in SER # 2000-7 that gas stripping columns were not addressed in the licensing applications, permits or the environmental assessment. However, Section 6.1.2.2 of the 1996 License Renewal Application states that one of the 3 goals of the RO/permeate injection phase is to reduce the TDS within the wellfield to baseline conditions. SER # 2000-7 agreed that this is the main purpose of the gas strip columns.

SER # 2000-7 anticipated no increase in radon exposure to employees by this system, however, routine radon daughter sampling in the work areas continued as per SOP HP-7. The SERP reviewed Attachment 7.3(A) in the 1996 License Renewal Application, which provides information used for radiological MILDOS-AREA modeling with both production and restoration combined. The table uses a maximum flow of 500 gpm for restoration at Christensen and conservatively estimates that all radon source term will be released (303 Ci/year), with 75% released at the process plant and 25% at the wellfield. In addition it was calculated that 432 Ci/year of radon would be released to the environment from production operations, for a total of 735 Ci/year. MILDOS modeling calculated a total annual effective committed dose to the nearest residence to be no more than only 0.59 mrem/year at the Christensen Project. This dose is far below the regulatory limits of 25 mrem/year and 10 mrem/year, as per 40 CFR 190 and 40 CFR 61, respectively. The SERP noted that restoration flow would increase from approximately 600 to 1000 gpm with additional equipment. However, with production ceased (3600 gpm) the overall emissions would have decreased significantly, resulting in a lower dose to the nearest residence and less impact to the environment. Therefore, the radon release from both gas stripping columns would be offset and likely be even less than determined by Table 7.3(A) in the 1996 License Renewal Application.

5.3.3 SER # 2001-3

The SERP evaluated the use of sodium sulfide as an alternate chemical reductant during groundwater restoration. Sodium sulfide was selected as the chemical reductant based on site laboratory investigations and compatibility testing (Technical Review). The SERP noted that the use of hydrogen sulfide (H₂S) for groundwater restoration is referenced in the 1996 License Renewal Application, specifically in Section 6.1.2.2 (Reverse Osmosis/Permeate Injection Phase – Metals Reduction). In this section the justification and description of a chemical reductant was specific to gaseous H₂S. The SERP noted that sodium sulfide is chemically related to H₂S but much safer to use. The SERP recommended that the language be added in the License Renewal Application to include other acceptable reductants .

Although it is less hazardous, the SERP recommended a new SOP be prepared to address the safe handling and application of sodium sulfide. This SOP was completed and reviewed with the operators during their training, prior to the use of sodium sulfide.

5.3.4 SER # 2001-4

The SERP reviewed a plan to leave the Irigaray Project routinely unmanned until decommissioning activities begin. With groundwater restoration operations completed at the Irigaray Project, COGEMA planned to transfer the employees to the Christensen Project. The SERP noted that the following additional security measures would be taken to prevent unauthorized access to the Irigaray facilities and its associated source and byproduct material.

1. Removing all drums of dried yellowcake from the site. Only non-dried source material such as yellowcake slurry will be stored at the site while it is unmanned.
2. Locking all entrances to the restricted areas. This includes the plant, wellfield building and the contaminated material storage area. In addition the entrances to the waste ponds will also be locked.
3. Installing additional fencing and locking gates along the north side of the plant, to better restrict access from the private ranch road which passes beside it.
4. Daily security checks and weekly inspections will be conducted by COGEMA personnel.

The SERP noted that the current license does not address security. The SERP also noted that Section 9.4 b, A-F (accidents and malfunctions) was not applicable since the Irigaray Project will be normally idle, which significantly reduces the chance of accidents or malfunctions of a structure, system or component and does not create any new ones.

The SERP reviewed Section 5.6.1 (Irigaray Site Security) of the 1996 License Renewal Application which discusses the existing postings, fences/gates and administrative controls used to restrict unauthorized persons from access at the Irigaray Project. The SERP noted that the four additional security measures listed above, particularly fencing, gates and locks, will provide even greater access restriction from unauthorized persons.

The SERP felt that the security measures taken for stored non-dried source material were adequate to meet the requirement of 10 CFR 18.01 under reasonable circumstances. The SERP noted that if it becomes necessary in the future to store dried source material (yellowcake) at the Irigaray Project, additional precautions will be taken for security of this material. An additional SERP will be conducted at that time.

The SERP recommended that an informative letter be sent to the NRC, the WDEQ, MSHA and the State Mine Inspector, explaining COGEMA's plan to leave the Irigaray Project routinely unmanned and the additional security measures which will be taken at the site. This was done on November 30, 2001.

5.4 Daily Inspections During Dryer Operation

As required by License Section 11.5, a daily walk-through inspection of the Irigaray plant was conducted during operation of the yellowcake dryer, to determine that radiation control practices were being implemented appropriately. Daily inspections were conducted from October 29, 2001 through November 22, 2001.

On November 2, 2001 it was noted that small amounts of yellowcake needed to be washed from the drypack floor, which was done the same day. No other problems or corrective actions were noted during the inspection period.

TABLES 1 through 8

TABLE 1 (Page 1 of 2)

COGEMA Mining, Inc. Irigaray and Christensen Ranch Projects
2001 Annual Report

Irigaray Project
Groundwater Restoration Volumes (Production Units 6-8)

Month	Gallons Injected x 1,000	Gallons Recovered x 1,000	Average Recovery Flow Rate (gpm)
January	13,642	14,906	370
February	12,187	13,375	332
March	12,590	13,986	347
April	16,187	17,510	347
May	12,665	14,011	347
June	12,196	13,788	346
July	7,582	12,847	255
August	5,824	9,029	224
September	4,948	7,131	141
October	1,477	7,126	275
November	0	0	0
December	0	0	0
Year 2001	99,298 total	123,709 total	249 annual average

TABLE 1 (Page 2 of 2)

COGEMA Mining, Inc. Irigaray and Christensen Ranch Projects
2001 Annual Report

Christensen Ranch Project
Groundwater Restoration Volumes (Mine Units 2, 3, 4, 5 & 6)

Month	Gallons Injected x 1,000	Gallons Recovered x 1,000	Average Recovery Flow Rate (gpm)
January	13,923	23,237	597
February	14,045	24,282	603
March	13,579	23,431	585
April	19,940	34,753	717
May	25,200	39,379	994
June	26,393	39,768	991
July	36,499	48,356	1,007
August	32,588	41,368	1,026
September	27,341	51,539	1,022
October	21,912	40,754	1,010
November	33,125	41,152	1,021
December	40,459	50,800	1,008
Year 2001	305,004 total	458,819 total	882 annual average

TABLE 2 (page 1 of 4)

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

2001 Annual Report

Sample Type: Waste Ponds (quarterly)

Sample Date: January 30, 2001

Pond ID #	IR-A	IR-B	IR-C	IR-D
Sulfate (mg/l)	6,230	6,610	6,410	6,230
Chloride (mg/l)	108,000	95,600	117,000	104,000
NH4 as N (mg/l)	71.5	5.34	144	14.3
NO3 & NO2 as N (mg/l)	0.8	1.68	7.76	0.5
TDS (mg/l)	196,000	171,000	204,000	188,000
Conductivity	252,000	224,000	262,000	242,000
pH	8.4	8.6	8.1	8.4
Zinc (mg/l)	< 0.01	< 0.01	< 0.01	< 0.01
Uranium (mg/l)	15	151	9	11
Radium 226 (pCi/l)	39.7	38.6	70.5	21.1

Pond ID #	IR-E	IR-RA	IR-RB	CR-P1
Sulfate (mg/l)	5,790	NA	NA	3
Chloride (mg/l)	82,000	Frozen	Frozen	2
NH4 as N (mg/l)	13.5			< 0.05
NO3 & NO2 as N (mg/l)	1.06			< 0.10
TDS (mg/l)	149,000			75
Conductivity	199,000			144
pH	8.5			6.6
Zinc (mg/l)	< 0.01			< 0.01
Uranium (mg/l)	41			< 0.01
Radium 226 (pCi/l)	50.9			< 0.2

Pond ID #	CR-1	CR-2	CR-3	CR-4
Sulfate (mg/l)	NA	NA	NA	NA
Chloride (mg/l)	Frozen	Frozen	Frozen	Frozen
NH4 as N (mg/l)				
NO3 & NO2 as N (mg/l)				
TDS (mg/l)				
Conductivity				
pH				
Zinc (mg/l)				
Uranium (mg/l)				
Radium 226 (pCi/l)				

TABLE 2 (page 2 of 4)

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

2001 Annual Report

Sample Type: Waste Ponds (quarterly)

Sample Date: April 19, 2001

Pond ID #	IR-A	IR-B	IR-C	IR-D
Sulfate (mg/l)	8,950	10,600	8,970	7,830
Chloride (mg/l)	117,000	96,100	130,000	117,000
NH4 as N (mg/l)	37	1.79	138	8.96
NO3 & NO2 as N (mg/l)	0.39	0.41	9.36	0.63
TDS (mg/l)	177,000	153,000	101,000	174,000
Conductivity	266,000	229,000	282,000	254,000
pH	8.35	8.68	7.97	8.42
Zinc (mg/l)	< 0.01	< 0.01	< 0.01	< 0.01
Uranium (mg/l)	19	167	16	19
Radium 226 (pCi/l)	38.3	44.3	60.3	42.2

Pond ID #	IR-E	IR-RA	IR-RB	CR-P1
Sulfate (mg/l)	8,530	12,600	6,080	13
Chloride (mg/l)	92,700	2,870	1,480	2
NH4 as N (mg/l)	8.76	0.34	0.09	< 0.05
NO3 & NO2 as N (mg/l)	0.77	< 0.10	< 0.10	< 0.10
TDS (mg/l)	129,000	28,200	13,000	91
Conductivity	216,000	31,800	16,900	156
pH	8.44	8.03	8.28	7.18
Zinc (mg/l)	< 0.01	< 0.01	< 0.01	< 0.01
Uranium (mg/l)	47	30	14	2.4
Radium 226 (pCi/l)	33	62.3	1.1	0.4

Pond ID #	CR-1	CR-2	CR-3	CR-4
Sulfate (mg/l)	940	2,170	1,760	1,890
Chloride (mg/l)	426	227	607	227
NH4 as N (mg/l)	0.07	0.25	0.18	0.12
NO3 & NO2 as N (mg/l)	< 0.10	< 0.10	< 0.10	< 0.10
TDS (mg/l)	3,130	5,280	5,730	5,320
Conductivity	4,650	7,140	7,980	7,260
pH	8.32	8.73	8.02	8.56
Zinc (mg/l)	< 0.01	< 0.01	< 0.01	< 0.01
Uranium (mg/l)	9	1.99	3.74	3.91
Radium 226 (pCi/l)	79.3	84.8	54.2	61.1

TABLE 2 (page 3 of 4)

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

2001 Annual Report

Sample Type: Waste Ponds (quarterly)

Sample Date: July 11, 2001

Pond ID #	IR-A	IR-B	IR-C	IR-D
Sulfate (mg/l)	10,300	10,800	11,500	6,570
Chloride (mg/l)	63,500	49,300	65,000	70,600
NH4 as N (mg/l)	3.7	0.59	9.81	1.63
NO3 & NO2 as N (mg/l)	0.44	0.13	4.7	0.31
TDS (mg/l)	138,000	92,700	138,000	143,000
Conductivity	155,000	127,600	158,000	163,000
pH	8.56	8.83	8.47	8.6
Zinc (mg/l)	< 0.01	< 0.01	< 0.01	< 0.01
Uranium (mg/l)	17	94	18	21
Radium 226 (pCi/l)	21.3	30	26.1	Q

Pond ID #	IR-E	IR-RA	IR-RB	CR-P1
Sulfate (mg/l)	9,220	6,690	7,640	5
Chloride (mg/l)	44,400	3,140	1,400	8
NH4 as N (mg/l)	1.01	0.35	0.09	< 0.05
NO3 & NO2 as N (mg/l)	0.37	<0.10	<0.10	< 0.10
TDS (mg/l)	98,700	22,600	17,700	<10
Conductivity	120,000	27,000	21,900	9,690
pH	8.5	9.25	8.46	7.14
Zinc (mg/l)	< 0.01	0.01	0.01	< 0.01
Uranium (mg/l)	35	38	12	0.0079
Radium 226 (pCi/l)	22.3	2	5.1	< 0.2

Pond ID #	CR-1	CR-2	CR-3	CR-4
Sulfate (mg/l)	1,230	3,420	2,790	3,020
Chloride (mg/l)	528	298	311	292
NH4 as N (mg/l)	2.59	2.13	0.06	0.10
NO3 & NO2 as N (mg/l)	<0.10	<0.10	<0.10	<0.10
TDS (mg/l)	3,560	7,580	6,540	7,600
Conductivity	5,170	9,750	9,010	9,000
pH	8.81	8.68	8.52	8.24
Zinc (mg/l)	<0.01	<0.01	<0.01	<0.01
Uranium (mg/l)	8	2.6	4.24	5
Radium 226 (pCi/l)	79.5	145	47.9	111

TABLE 2 (page 4 of 4)

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

2001 Annual Report

Sample Type: Waste Ponds (quarterly)

Sample Date: October 8, 2001

Pond ID #	IR-A	IR-B	IR-C	IR-D
Sulfate (mg/l)	14,000	17,000	7,900	13,000
Chloride (mg/l)	43,000	34,000	68,000	55,000
NH4 as N (mg/l)	0.51	0.49	7.7	0.72
NO3 & NO2 as N (mg/l)	0.1	0.2	3.2	0.4
TDS (mg/l)	130,000	115,000	180,000	158,000
Conductivity	139,000	120,000	179,000	162,000
pH	8.7	8.8	8.5	8.7
Zinc (mg/l)	0.196	0.22	0.14	0.22
Uranium (mg/l)	62	162	58.8	64.2
Radium 226 (pCi/l)	60.2	113	66.1	272

Pond ID #	IR-E	IR-RA	IR-RB	CR-P1
Sulfate (mg/l)	12,000	7,500	8,400	< 1.0
Chloride (mg/l)	91,000	1,800	2,900	< 1.0
NH4 as N (mg/l)	1.9	0.67	0.29	< 0.05
NO3 & NO2 as N (mg/l)	0.7	< 0.10	< 0.10	< 0.10
TDS (mg/l)	237,000	19,700	27,000	< 10
Conductivity	281,000	22,300	30,500	25
pH	8.5	8.5	9.2	5.8
Zinc (mg/l)	0.16	0.13	0.12	< 0.01
Uranium (mg/l)	90.8	13400	39.3	0.0015
Radium 226 (pCi/l)	64.8	14.8	6.3	< 0.2

Pond ID #	CR-1	CR-2	CR-3	CR-4
Sulfate (mg/l)	1,380	5,400	2,900	3,700
Chloride (mg/l)	618	416	310	300
NH4 as N (mg/l)	0.19	0.36	0.08	0.61
NO3 & NO2 as N (mg/l)	< 0.10	< 0.10	< 0.10	< 0.10
TDS (mg/l)	4,950	13,700	8,260	10,200
Conductivity	7,020	16,000	10,200	12,400
pH	9.7	9.7	8.4	9
Zinc (mg/l)	0.009	0.01	0.009	0.01
Uranium (mg/l)	16.8	4.55	5.5	8.19
Radium 226 (pCi/l)	68.4	127	101	30.6

Table 3

COGEMA Mining, Inc. - Irigaray and Christensen Ranch Projects
 2001 Annual Report
 Sample Type: Regional Groundwater (ranch wells)

Sample Location: Christensen Ranch House #3				
Radionuclide	Jan 29, 2001 (uCi/ml)	Apr 25, 2001 (uCi/ml)	Jul 12, 2001 (uCi/ml)	Oct 11, 2001 (uCi/ml)
U (Total)	16.9 E-9	14.9 E-9	22.9 E-9	18.8 E-9
Th-230 (Total)	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9
Ra-226 (Total)	1.6 +/- 0.3 E-9	1.3 +/- 0.2 E-9	2.2 +/- 0.4 E-9	0.7 +/- 0.2 E-9
Pb-210 (Total)	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9
Po-210 (Total)	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9

Sample Location: Christensen Middle Artesian				
Radionuclide	Jan 29, 2001 (uCi/ml)	Apr 25, 2001 (uCi/ml)	Jul 12, 2001 (uCi/ml)	Oct 11, 2001 (uCi/ml)
U (Total)	1.4 E-9	3.3 E-9	4.2 E-9	2.9 E-9
Th-230 (Total)	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9
Ra-226 (Total)	0.6 +/- 0.4 E-9	< 0.2 E-9	< 0.2 E-9	0.6 +/- 0.2 E-9
Pb-210 (Total)	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9
Po-210 (Total)	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9

Sample Location: Christensen Ellendale #4				
Radionuclide	Jan 29, 2001 (uCi/ml)	Apr 25, 2001 (uCi/ml)	Jul 12, 2001 (uCi/ml)	Oct 11, 2001 (uCi/ml)
U (Total)	0.7 E-9	0.6 E-9	1.3 E-9	0.7 E-9
Th-230 (Total)	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9
Ra-226 (Total)	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9
Pb-210 (Total)	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9
Po-210 (Total)	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9

Sample Location: Christensen Del Gulch Lower #13				
Radionuclide	Jan 30, 2001 (uCi/ml)	Apr 25, 2001 (uCi/ml)	Jul 12, 2001 (uCi/ml)	Oct 11, 2001 (uCi/ml)
U (Total)	1.4 E-9	1.5 E-9	< 0.2 E-9	0.3 E-9
Th-230 (Total)	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9
Ra-226 (Total)	< 0.2 E-9	0.5 +/- 0.2 E-9	< 0.2 E-9	< 0.2 E-9
Pb-210 (Total)	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9
Po-210 (Total)	< 1.0 E-9	1.8 +/- 1.3 E-9	< 1.0 E-9	< 1.0 E-9

Sample Location: Christensen Willow Corral #32				
Radionuclide	Jan 29, 2001 (uCi/ml)	Apr 25, 2001 (uCi/ml)	Jul 12, 2001 (uCi/ml)	Oct 11, 2001 (uCi/ml)
U (Total)	< 0.2 E-9	< 0.2 E-9	1.5 E-9	< 0.2 E-9
Th-230 (Total)	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9
Ra-226 (Total)	0.8 +/- 0.2 E-9	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9
Pb-210 (Total)	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9
Po-210 (Total)	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9

Sample Location: Christensen First Artesian Well #1				
Radionuclide	Jan 29, 2001 (uCi/ml)	Apr 25, 2001 (uCi/ml)	Jul 12, 2001 (uCi/ml)	Oct 11, 2001 (uCi/ml)
U (Total)	0.9 E-9	< 0.2 E-9	9.5 E-9	0.3 E-9
Th-230 (Total)	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9
Ra-226 (Total)	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9
Pb-210 (Total)	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9
Po-210 (Total)	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9

Sample Location: Willow # 2 (semi-annual)		
Radionuclide	Jan 29, 2001 (uCi/ml)	Oct 11, 2001 (uCi/ml)
U (Total)	< 0.2 E-9	< 0.2 E-9
Th-230 (Total)	< 0.2 E-9	< 0.2 E-9
Ra-226 (Total)	< 0.2 E-9	< 0.2 E-9
Pb-210 (Total)	< 1.0 E-9	< 1.0 E-9
Po-210 (Total)	< 1.0 E-9	< 1.0 E-9

LLD (uCi/ml)	
2.0 E-10	U (Total)
2.0 E-10	Th-230 (Total)
2.0 E-10	Ra-226 (Total)
1.0 E-09	Pb-210 (Total)
1.0 E-09	Po-210 (Total)

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TABLE 4 (Page 1 of 7)

COGEMA Mining, Inc. Irigaray and Christensen Ranch Projects
 2001 Annual Report
 Sample Type: Surface Water, Willow Creek
 Sample Location: IR-9, downstream from the Irigaray Project

Radionuclide	Jan 29, 2001 (uCi/ml)	Apr 25, 2001 (uCi/ml)	Jul 12, 2001 (uCi/ml)	Oct 10, 2001 (uCi/ml)	LLD (uCi/ml)	Regulatory Guide 4.14 LLD (uCi/ml)	10 CFR 20 Appendix B Table 2 Limits (uCi/ml)	Effluent Limit Exceedance
U (Total)	N/A Frozen	N/A no flow	14.1 E-9	N/A no flow	2.0 E-10	2.0 E-10	3.0 E-07	No
Th-230 (Total)			< 0.2 E-9		2.0 E-10	2.0 E-10	1.0 E-07	No
Ra-226 (Total)			0.4 E-9 +/- 0.2		2.0 E-10	2.0 E-10	6.0 E-08	No
Pb-210 (Total)			< 1.0 E-9		1.0 E-09	1.0 E-09	1.0 E-08	No
Po-210 (Total)			< 1.0 E-9		1.0 E-09	1.0 E-09	4.0 E-08	No

Chemical Parameters		Detection Limit (mg/l)			
Total Alkalinity	66	1	N/A	N/A	N/A
Cl	11	1	N/A	N/A	N/A
TDS	667	2	N/A	N/A	N/A
Specific Conductivity	935	1	N/A	N/A	N/A
SO4	360	1	N/A	N/A	N/A
pH	7.7	0.01	N/A	N/A	N/A
As	< 0.001	0.001	N/A	N/A	N/A
Se	0.004	0.001	N/A	N/A	N/A

Estimated Flow Rate: Medium
 Low = <5 cfs
 Medium = 5 - 50 cfs
 High = > 50 cfs

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TABLE 4 (Page 2 of 7)

COGEMA Mining, Inc. Irigaray and Christensen Ranch Projects
 2001 Annual Report
 Sample Type: Surface Water, Willow Creek
 Sample Location: IR-14, upstream from the Irigaray Project

Radionuclide	Jan 29, 2001 (uCi/ml)	Apr 25, 2001 (uCi/ml)	Jul 12, 2001 (uCi/ml)	Oct 10, 2001 (uCi/ml)	LLD (uCi/ml)	Regulatory Guide 4.14 LLD (uCi/ml)	10 CFR 20 Appendix B Table 2 Limits (uCi/ml)	Effluent Limit Exceedance
U (Total)	N/A Frozen	N/A no flow	4.1 E-9	11.5 E-9	2.0 E-10	2.0 E-10	3.0 E-07	No
Th-230 (Total)			< 0.2 E-9	< 0.2 E-9	2.0 E-10	2.0 E-10	1.0 E-07	No
Ra-226 (Total)			0.4 E-9 +/- 0.2	< 0.2 E-9	2.0 E-10	2.0 E-10	6.0 E-08	No
Pb-210 (Total)			< 1.0 E-9	< 2.7 E-9	1.0 E-09	1.0 E-09	1.0 E-08	No
Po-210 (Total)			3.3 E-9 +/- 1.0	< 1.0 E-9	1.0 E-09	1.0 E-09	4.0 E-08	No

Chemical Parameters			Detection Limit (mg/l)					
Total Alkalinity		104	31	1	N/A	N/A	N/A	N/A
Cl		7	53	1	N/A	N/A	N/A	N/A
TDS		614	3490	2	N/A	N/A	N/A	N/A
Specific Conductivity		862	4040	1	N/A	N/A	N/A	N/A
SO4		320	1960	1	N/A	N/A	N/A	N/A
pH		7.9	9.0	0.01	N/A	N/A	N/A	N/A
As		0.002	0.002	0.001	N/A	N/A	N/A	N/A
Se		0.002	0.005	0.001	N/A	N/A	N/A	N/A

Estimated Flow Rate:
 Low = <5 cfs
 Medium = 5 - 50 cfs
 High = > 50 cfs

Medium

Low

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TABLE 4 (Page 3 of 7)

COGEMA Mining, Inc. Irigaray and Christensen Ranch Projects

2001 Annual Report

Sample Type: Surface Water, Willow Creek

Sample Location: IR-17, at the Irigaray Project

Radionuclide	Jan 29, 2001 (uCi/ml)	Apr 25, 2001 (uCi/ml)	Jul 12, 2001 (uCi/ml)	Oct 10, 2001 (uCi/ml)	LLD (uCi/ml)	Regulatory Guide 4.14 LLD (uCi/ml)	10 CFR 20 Appendix B Table 2 Limits (uCi/ml)	Effluent Limit Exceedance
U (Total)	N/A Frozen	23.7 E-9	5.42 E-9	17.6 E-9	2.0 E-10	2.0 E-10	3.0 E-07	No
Th-230 (Total)		< 0.2 E-9	< 0.2 E-9	< 0.2 E-9	2.0 E-10	2.0 E-10	1.0 E-07	No
Ra-226 (Total)		< 0.2 E-9	0.3 E-9 +/- 0.2	< 0.2 E-9	2.0 E-10	2.0 E-10	6.0 E-08	No
Pb-210 (Total)		< 1.0 E-9	< 1.0 E-9	< 2.7 E-9	1.0 E-09	1.0 E-09	1.0 E-08	No
Po-210 (Total)		< 1.0 E-9	23.8 E-9 +/- 1.9	< 1.0 E-9	1.0 E-09	1.0 E-09	4.0 E-08	No

Chemical Parameters					Detection Limit (mg/l)			
Total Alkalinity	281	98	328	1	N/A	N/A	N/A	N/A
Cl	29	13	53	1	N/A	N/A	N/A	N/A
TDS	3990	1060	4330	2	N/A	N/A	N/A	N/A
Specific Conductivity	4380	1440	4750	1	N/A	N/A	N/A	N/A
SO4	2390	653	2460	1	N/A	N/A	N/A	N/A
pH	7.8	7.9	8.1	0.01	N/A	N/A	N/A	N/A
As	0.002	0.002	< 0.001	0.001	N/A	N/A	N/A	N/A
Se	0.003	0.004	0.003	0.001	N/A	N/A	N/A	N/A

Estimated Flow Rate:

Low

Medium

Low

Low = <5 cfs

Medium = 5 - 50 cfs

High = > 50 cfs

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TABLE 4 (Page 4 of 7)

COGEMA Mining, Inc. Irigaray and Christensen Ranch Projects
 2001 Annual Report
 Sample Type: Surface Water, Willow Creek
 Sample Location: CR-GS01, downstream from the Christensen Project

Radionuclide	Jan 29, 2001 (uCi/ml)	Apr 25, 2001 (uCi/ml)	Jul 12, 2001 (uCi/ml)	Oct 10, 2001 (uCi/ml)	LLD (uCi/ml)	Regulatory Guide 4.14 LLD (uCi/ml)	10 CFR 20 Appendix B Table 2 Limits (uCi/ml)	Effluent Limit Exceedance
U (Total)	132 E-9	36.4 E-9	12.9 E-9	N/A no flow	2.0 E-10	2.0 E-10	3.0 E-07	No
Th-230 (Total)	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9		2.0 E-10	2.0 E-10	1.0 E-07	No
Ra-226 (Total)	1.4 E-9 +/- 0.3	< 0.2 E-9	0.5 +/- 0.2 E-9		2.0 E-10	2.0 E-10	6.0 E-08	No
Pb-210 (Total)	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9		1.0 E-09	1.0 E-09	1.0 E-08	No
Po-210 (Total)	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9		1.0 E-09	1.0 E-09	4.0 E-08	No

Chemical Parameters	Detection Limit (mg/l)							
Total Alkalinity	1050	293	213		1	N/A	N/A	N/A
Cl	149	38	20		1	N/A	N/A	N/A
TDS	7060	2710	1700		2	N/A	N/A	N/A
Specific Conductivity	7920	3350	2200		1	N/A	N/A	N/A
SO4	3660	1500	980		1	N/A	N/A	N/A
pH	7.8	8.1	8.0		0.01	N/A	N/A	N/A
As	0.008	< 0.001	0.001		0.001	N/A	N/A	N/A
Se	0.023	0.008	0.005		0.001	N/A	N/A	N/A

Estimated Flow Rate: Low Low Low
 Low = <5 cfs
 Medium = 5 - 50 cfs
 High = > 50 cfs
 High = > 50 cfs

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TABLE 4 (Page 5 of 7)

COGEMA Mining, Inc. Irigaray and Christensen Ranch Projects
 2001 Annual Report
 Sample Type: Surface Water, Willow Creek
 Sample Location: CR-CG05, upstream from the Christensen Project

Radionuclide	Jan 29, 2001 (uCi/ml)	Apr 25, 2001 (uCi/ml)	Jul 12, 2001 (uCi/ml)	Oct 10, 2001 (uCi/ml)	LLD (uCi/ml)	Regulatory Guide 4.14 LLD (uCi/ml)	10 CFR 20 Appendix B Table 2 Limits (uCi/ml)	Effluent Limit Exceedance
U (Total)	53.3 E-9	22.4 E-9	5.4 E-9	65.7 E-9	2.0 E-10	2.0 E-10	3.0 E-07	No
Th-230 (Total)	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9	2.0 E-10	2.0 E-10	1.0 E-07	No
Ra-226 (Total)	1.1 E-9 +/- 0.2	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9	2.0 E-10	2.0 E-10	6.0 E-08	No
Pb-210 (Total)	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9	1.0 E-09	1.0 E-09	1.0 E-08	No
Po-210 (Total)	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9	1.0 E-09	1.0 E-09	4.0 E-08	No

Chemical Parameters	Detection Limit (mg/l)							
Total Alkalinity	671	298	348	251	1	N/A	N/A	N/A
Cl	34	14	14	22	1	N/A	N/A	N/A
TDS	4960	2350	2270	2710	2	N/A	N/A	N/A
Specific Conductivity	5490	2890	2760	3070	1	N/A	N/A	N/A
SO4	2830	1350	1270	1430	1	N/A	N/A	N/A
pH	8.0	8.1	8.2	7.9	0.01	N/A	N/A	N/A
As	0.004	0.001	0.003	0.003	0.001	N/A	N/A	N/A
Se	0.007	0.002	0.001	0.002	0.001	N/A	N/A	N/A

Estimated Flow Rate: Low Low Low Low
 Low = <5 cfs
 Medium = 5 - 50 cfs
 High = > 50 cfs
 High = > 50 cfs

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TABLE 4 (Page 6 of 7)

COGEMA Mining, Inc. Irigaray and Christensen Ranch Projects
 2001 Annual Report
 Sample Type: Surface Water, Willow Creek
 Sample Location: CR-GS03, at the Christensen Project

Radionuclide	Jan 29, 2001 (uCi/ml)	Apr 25, 2001 (uCi/ml)	Jul 12, 2001 (uCi/ml)	Oct 10, 2001 (uCi/ml)	LLD (uCi/ml)	Regulatory Guide 4.14 LLD (uCi/ml)	10 CFR 20 Appendix B Table 2 Limits (uCi/ml)	Effluent Limit Exceedance
U (Total)	20.4 E-9	15.7 E-9	6.8 E-9	4.7 E-9	2.0 E-10	2.0 E-10	3.0 E-07	No
Th-230 (Total)	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9	2.0 E-10	2.0 E-10	1.0 E-07	No
Ra-226 (Total)	1.2 +/- 0.3 E-9	< 0.2 E-9	< 0.2 E-9	< 0.2 E-9	2.0 E-10	2.0 E-10	6.0 E-08	No
Pb-210 (Total)	18.9 +/- 2.3 E-9	< 1.0 E-9	< 1.0 E-9	< 1.0 E-9	1.0 E-09	1.0 E-09	1.0 E-08	Yes
Po-210 (Total)	< 1.0 E-9	< 1.0 E-9	2.7 +/- 1.0 E-9	< 1.0 E-9	1.0 E-09	1.0 E-09	4.0 E-08	No

Chemical Parameters						Detection Limit (mg/l)			
Total Alkalinity	332	180	177	110	1	N/A	N/A	N/A	N/A
Cl	14	16	5	3	1	N/A	N/A	N/A	N/A
TDS	899	1490	550	416	2	N/A	N/A	N/A	N/A
Specific Conductivity	1380	2020	843	625	1	N/A	N/A	N/A	N/A
SO4	361	770	241	164	1	N/A	N/A	N/A	N/A
pH	8.4	8.1	8.1	8.1	0.01	N/A	N/A	N/A	N/A
As	0.001	0.001	0.002	< 0.001	0.001	N/A	N/A	N/A	N/A
Se	0.011	0.010	0.006	0.005	0.001	N/A	N/A	N/A	N/A

Estimated Flow Rate: Low Low Low Low
 Low = <5 cfs
 Medium = 5 - 50 cfs
 High = > 50 cfs
 High = > 50 cfs

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TABLE 4 (Page 7 of 7)

COGEMA Mining, Inc. Irigaray and Christensen Ranch Projects
 2001 Annual Report
 Sample Type: Surface Water, Powder River (annual sample)
 Sample Location: IR-5, at the Brubaker Ranch

<u>Radionuclide</u>	<u>Apr 25, 2001 (uCi/ml)</u>	<u>LLD (uCi/ml)</u>	<u>Regulatory Guide 4.14 LLD (uCi/ml)</u>	<u>10 CFR 20 Appendix B Table 2 Limits (uCi/ml)</u>	<u>Effluent Limit Exceedance</u>
U (Total)	6.0 E-9	2.0 E-10	2.0 E-10	3.0 E-07	No
Th-230 (Total)	< 0.2 E-9	2.0 E-10	2.0 E-10	1.0 E-07	No
Ra-226 (Total)	< 0.2 E-9	2.0 E-10	2.0 E-10	6.0 E-08	No
Pb-210 (Total)	< 1.0 E-9	1.0 E-09	1.0 E-09	1.0 E-08	No
Po-210 (Total)	1.4 +/- 1.3 E-9	1.0 E-09	1.0 E-09	4.0 E-08	No

<u>Chemical Parameters</u>		<u>Detection Limit (mg/l)</u>			
Total Alkalinity	210	1	N/A	N/A	N/A
Cl	165	1	N/A	N/A	N/A
TDS	1840	2	N/A	N/A	N/A
Specific Conductivity	2510	1	N/A	N/A	N/A
SO4	855	1	N/A	N/A	N/A
pH	8.3	0.01	N/A	N/A	N/A
As	0.002	0.001	N/A	N/A	N/A
Se	0.006	0.001	N/A	N/A	N/A

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TABLE 5 (Page 1 of 2)

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

2001 Annual Report

Sample Type: Surface Discharge Water

Sample Location: Irigaray Project, Discharge # 001 (Permit # WY0028801)

	Jan 2001	Feb 2001	Mar 2001	Apr 2001	May 2001	Jun 2001	Jul 2001	Aug 2001	Sep 2001	Oct 2001	Nov 2001	Dec 2001	Discharge Limits	
													Average	Maximum
Flow (MGD) average	0.069	0.055	0.037	0.044	0.035	0.049	ND	0.073	0.048	0.028	ND	ND	0.45	NA
Total Uranium as U (mg/l) monthly sample	0.0706	0.0940	0.1120	0.0828	0.0780	0.0674	ND	0.1000	0.0598	0.0812	ND	ND	2	4
Dissolved Radium-226 (pCi/l) monthly sample	0.7	0.4	1.0	0.7	0.4	< 0.2	ND	0.8	1.3	0.6	ND	ND	3	10
Total Radium-226 (pCi/l) monthly sample	0.7	0.6	1.0	0.6	< 0.2	1.1	ND	1.0	1.0	0.5	ND	ND	10	30
Total Suspended Solids (mg/l) weekly samples maximum	< 1	< 1	1	8	< 1	1	ND	< 1	1.1	< 1	ND	ND	20	30
Total Dissolved Solids (mg/l) monthly sample	342	425	478	394	454	464	ND	672	802	1030	ND	ND	N/A	5,000
Chemical Oxygen Demand (mg/l) quarterly sample	< 1	NA	NA	< 1	NA	NA	ND	8	NA	15	ND	ND	100	200
Total Zinc (mg/l) quarterly sample	< .01	NA	NA	< .01	NA	NA	ND	< .01	NA	< .001	ND	ND	0.5	1.0
pH (units) minimum weekly samples maximum	6.4 6.7	6.3 6.6	6.2 7.4	6.1 6.8	6.1 6.4	6 6.4	ND	6.2 6.6	6.4 6.7	6.4 6.4	ND	ND	6.0 minimum	9.0
Selenium (mg/l) quarterly sample	0.003	NA	NA	0.003	NA	NA	ND	< 0.001	NA	0.007	ND	ND	0.05	0.1
Total Uranium (uCi/ml) quarterly sample	4.78 E-8	NA	NA	5.61 E-8	NA	NA	ND	6.8 E-8	NA	5.5 E-8	ND	ND	3E-07*	
Total Radium 226 (uCi/ml) quarterly sample	0.70 E-9 +/- 0.3	NA	NA	0.60 E-9 +/- 0.2	NA	NA	ND	1.0 E-9 +/- 0.2	NA	0.5 E-9 +/- 0.2	ND	ND	6E-08*	
Total Thorium-230 (uCi/ml) quarterly sample	< 0.2 E-9	NA	NA	< 0.2 E-9	NA	NA	ND	< 0.2 E-9	NA	0.5 E-9 +/- 0.1	ND	ND	1E-07*	
Total Lead-210 (uCi/ml) quarterly sample	1.02 E-8 +/- 0.24	NA	NA	< 1.0 E-9	NA	NA	ND	< 1.0 E-9	NA	4.6 E-9 +/- 5.6	ND	ND	1E-08*	
Total Polonium-210 (uCi/ml) quarterly sample	< 1.0 E-9	NA	NA	< 1.0 E-9	NA	NA	ND	1.6 E-9 +/- 1.6	NA	< 1.0 E-9	ND	ND	4E-08*	

NA - Not Applicable

ND - No Discharge

(EXEL) J:\LOTUS\A-TABLES\SUR-DIS

* 10 CFR 20, Appendix B, Table II, Column II Effluent Limitations

TABLE 5 (Page 2 of 2)

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

2001 Annual Report

Sample Type: Surface Discharge Water

Sample Location: Christensen Ranch Project, Discharge # 002 (Permit # WY0033642)

	Jan 2001	Feb 2001	Mar 2001	Apr 2001	May 2001	Jun 2001	Jul 2001	Aug 2001	Sep 2001	Oct 2001	Nov 2001	Dec 2001	Discharge Limits	
													Average	Maximum
Flow (MGD) average	0.106	0.130	0.084	0.135	0.203	0.181	0.161	0.110	0.106	0.106	0.075	0.068	0.45	NA
Total Uranium as U (mg/l) monthly sample	0.0021	0.0011	0.0012	0.0003	0.0007	0.0007	0.0009	0.0013	0.0005	0.0006	0.0008	0.0015	2	4
Dissolved Radium-226 (pCi/l) monthly sample	0.5	0.5	< 0.2	< 0.2	< 0.2	< 0.2	0.3	0.3	0.5	< 0.2	< 0.2	< 0.2	3	10
Total Radium-226 (pCi/l) monthly sample	< 0.2	1.1	0.4	0.4	< 0.2	0.4	0.3	0.3	0.7	< 0.2	< 0.2	< 0.2	10	30
Total Suspended Solids (mg/l) weekly samples maximum	< 1	3	18	8	8	9	3	3	3	2	< 1	< 1	20	30
Chemical Oxygen Demand (mg/l) quarterly sample	7	NA	NA	< 1	NA	NA	12	NA	NA	5	NA	NA	100	200
Total Zinc (mg/l) quarterly sample	< 0.01	NA	NA	< 0.01	NA	NA	< 0.01	NA	NA	0.007	NA	NA	0.5	1.0
pH (units) minimum weekly samples maximum	6.8 6.9	6.3 6.6	6.8 7.5	6.7 7.2	6.6 7.1	6.3 6.9	6.6 7.1	6.7 6.8	6.7 7.2	6.7 7.4	6.7 6.9	6.7 7.3	6.0 minimum	9.0
Selenium (mg/l) quarterly sample	0.002	NA	NA	< 0.001	NA	NA	0.002	NA	NA	0.003	NA	NA	0.05	0.1
Total Uranium (uCi/ml) quarterly sample	1.42 E-9	NA	NA	0.2 E-9	NA	NA	0.6 E-9	NA	NA	0.4 E-9	NA	NA	3E-07*	
Total Radium 226 (uCi/ml) quarterly sample	< 0.2 E-9	NA	NA	0.4 E-9 +/- 0.2	NA	NA	0.3 E-9 +/- 0.2	NA	NA	< 0.2	NA	NA	6E-08*	
Total Thorium-230 (uCi/ml) quarterly sample	< 0.2 E-9	NA	NA	< 0.2 E-9	NA	NA	< 0.2 E-9	NA	NA	0.4 E-9 +/- 0.2	NA	NA	1E-07*	
Total Lead-210 (uCi/ml) quarterly sample	1.85 E-8 +/- 0.26	NA	NA	1.20 E-8 +/- 0.25	NA	NA	6.3 E-9 +/- 1.7	NA	NA	8.9 E-9 +/- 5.7	NA	NA	1E-08*	
Total Polonium-210 (uCi/ml) quarterly sample	< 1.0 E-9	NA	NA	< 1.0 E-9	NA	NA	< 1.0 E-9	NA	NA	3.7 E-9 +/- 1.7	NA	NA	4E-08*	

NA - Not Applicable

ND - No Discharge

(EXEL) J:\LOTUSA-TABLES\SUR-DIS

* 10 CFR 20, Appendix B, Table II, Column II Effluent Limitations

TABLE 6

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

2001 Annual Report

Sample Type: Environmental Radon Gas

Location	1st Quarter 2001 uCi/ml	2nd Quarter 2001 uCi/ml	3rd Quarter 2001 uCi/ml	4th Quarter 2001 uCi/ml	Location Average 2001 uCi/ml	% of Pt. 20, App. B Effluent Conc. Limit 1 E-8 uCi/ml
IRIGARAY PROJECT						
IR-1 (Downwind of Restricted Area)	1.7 E-9 +/- 0.2	1.8 E-9 +/- 0.3	1.1 E-9 +/- 0.5	1.2 E-9 +/- 0.5	1.45 E-9	14.5 %
IR-3 (Upwind of Restricted Area)	2.0 E-9 +/- 0.2	1.4 E-9 +/- 0.3	0.9 E-9 +/- 0.5	0.9 E-9 +/- 0.5	1.30 E-9	13.0 %
IR-4 (North Road)	1.4 E-9 +/- 0.2	1.5 E-9 +/- 0.3	1.4 E-9 +/- 0.5	0.8 E-9 +/- 0.5	1.28 E-9	12.8 %
IR-5 (Irigaray Ranch - nearest resident)	1.9 E-9 +/- 0.4	1.4 E-9 +/- 0.3	1.0 E-9 +/- 1.0	0.4 E-9 +/- 0.4	1.18 E-9	11.8 %
IR-6 (Ridge Road S.E. - background)	1.6 E-9 +/- 0.2	1.5 E-9 +/- 0.3	0.6 E-9 +/- 0.5	1.5 E-9 +/- 0.5	1.30 E-9	13.0 %
IR-13 (Employee House Trailer)	1.3 E-9 +/- 0.2	1.5 E-9 +/- 0.3	1.3 E-9 +/- 0.5	0.5 E-9 +/- 0.5	1.20 E-9	12.0 %
CHRISTENSEN PROJECT						
AS-1 (Table Mountain - Background))	1.7 E-9 +/- 0.2	1.7 E-9 +/- 0.3	1.1 E-9 +/- 0.5	0.8 E-9 +/- 0.5	1.32 E-9	13.2 %
AS-5A (CR Plant Upwind S.E.)	1.8 E-9 +/- 0.2	2.7 E-9 +/- 0.2	2.1 E-9 +/- 0.5	1.9 E-9 +/- 0.4	2.12 E-9	21.2 %
AS-5B (CR Plant Downwind N.W.)	2.6 E-9 +/- 0.2	3.0 E-9 +/- 0.2	2.5 E-9 +/- 0.4	2.7 E-9 +/- 0.4	2.70 E-9	27.0 %
AS-6 (Christensen Ranch-Nearest Resident)	1.5 E-9 +/- 0.2	1.3 E-9 +/- 0.3	1.0 E-9 +/- 0.5	1.0 E-9 +/- 0.5	1.20 E-9	12.0 %

Quarterly average

1.75 E-9

1.78 E-9

1.30 E-9

1.17 E-9

LLD = 0.3 pCi/l

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TABLE 7

COGEMA Mining, Inc. Irigaray and Christensen Projects

2001 Annual Report

Sample Type: Environmental Airborne Radionuclides (weekly composite)

Sample Location: Irigaray Project

Fourth Quarter 2001 (October - December)	*Uranium uCi / ml	Th-230 uCi / ml	Ra-226 uCi / ml	Pb-210 uCi / ml
IR-1 (Downwind of Restricted Area) % of Pt. 20, App. B, Effluent Limit	1.28 E-15 < 0.1 %	< 1.00 E-16 < 0.33 %	1.83 E-16 +/- 1.57 0.02 %	1.26 E-14 +/- .15 2.1 %
IR-3 (Upwind of Restricted Area) % of Pt. 20, App. B, Effluent Limit	9.21 E-16 < 0.1 %	< 1.00 E-16 < 0.33 %	< 1.00 E-16 < 0.01 %	1.19 E-14 +/- .15 2.0 %
IR-5 (Brubaker Ranch - nearest residence) % of Pt. 20, App. B, Effluent Limit	7.92 E-16 < 0.1 %	< 1.00 E-16 < 0.33 %	< 1.00 E-16 < 0.01 %	1.32 E-14 +/- .16 2.2 %
IR-6 (Background) % of Pt. 20, App. B, Effluent Limit	2.43 E-16 < 0.1 %	< 1.00 E-16 < 0.33 %	< 1.00 E-16 < 0.01 %	1.20 E-14 +/- .15 2.0 %
IR-13 (Employee House Trailer) % of Pt. 20, App. B, Effluent Limit	4.48 E-16 < 0.1 %	< 1.00 E-16 < 0.33 %	< 1.00 E-16 < 0.01 %	1.24 E-14 +/- .15 2.1 %

Analyses performed by Energy Laboratories, Incorporated (ELI), Casper, Wyoming

* The activity for uranium is a mathematical calculation based on a chemical analysis, therefore, no precision estimate (error) is given.

Energy Lab LLD's

Uranium = 1.0 E-16

Th-230 = 1.0 E-16

Ra-226 = 1.0 E-16

Pb-210 = 2.0 E-15

Pt. 20, App.B, Effluent Limits (uCi / ml)

Uranium = 1.9 E-12 (50%D and 50% W)

Th-230 = 3.0 E-14 (Y)

Ra-226 = 9.0 E-13 (W)

Pb-210 = 6.0 E-13 (D)

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TABLE 8

COGEMA Mining, Inc. Irigaray and Christensen Projects
 2001 Annual Report
 Sample Type: Environmental Gamma Radiation

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Location	1st Quarter 2001 mrem/quarter	2nd Quarter 2001 mrem/quarter	3rd Quarter 2001 mrem/quarter	4th Quarter 2001 mrem/quarter	Location Average 2001 mrem/quarter
IRIGARAY PROJECT					
IR-1 (Downwind of Restricted Area)	38 +/- 2.7	47 +/- 2.4	39 +/- 1.4	46 +/- 1.3	42.5
IR-3 (Upwind of Restricted Area)	45 +/- 7.5	53 +/- 3.5	43 +/- 3.4	51 +/- 2.5	48.0
IR-4 (North Road)	35 +/- 2.3	38 +/- 2.0	33 +/- 0.9	41 +/- 1.9	36.8
IR-5 (Irigaray Ranch - nearest resident)	31 +/- 2.0	35 +/- 1.2	30 +/- 0.4	35 +/- 1.0	32.8
IR-6 (Ridge Road S.E. - Background)	34 +/- 4.4	38 +/- 1.9	34 +/- 1.6	39 +/- 1.0	36.2
IR-13 (Employee House Trailer)	37 +/- 1.6	40 +/- 3.8	35 +/- 0.9	40 +/- 0.5	38.0
CHRISTENSEN PROJECT					
AS-1 (Table Mountain - Background)	36 +/- 5.4	36 +/- 3.3	33 +/- 1.1	37 +/- 0.5	35.5
AS-5A (CR Plant Upwind S.E.)	36 +/- 1.4	43 +/- 1.8	36 +/- 0.9	43 +/- 1.6	39.5
AS-5B (CR Plant Downwind N.W.)	37 +/- 5.3	38 +/- 0.9	35 +/- 1.5	39 +/- 0.5	37.2
AS-6 (Christensen Ranch - nearest resid.)	32 +/- 2.1	43 +/- 0.7	37 +/- 0.4	42 +/- 2.3	38.5

Quarterly average

36.1

41.1

35.5

41.3

APPENDIX 1

General Location and Environmental Monitoring Maps

**THIS PAGE IS AN
OVERSIZED DRAWING
OR FIGURE,**

**THAT CAN BE VIEWED AT
THE RECORD TITLED:**

REV. 17-AUG-01

**CHRISTENSEN RANCH AREA
FACILITIES LOCATION MAP**

PERMIT TO MINE NO. 478

**WITHIN THIS PACKAGE...OR,
BY SEARCHING USING THE
DOCUMENT/REPORT**

REV. 17-AUG-01

NOTE: Because of this page's large file size, it may be more convenient to copy the file to a local drive and use the Imaging (Wang) viewer, which can be accessed from the Programs/Accessories menu.

D-1

**THIS PAGE IS AN
OVERSIZED DRAWING
OR FIGURE,
THAT CAN BE VIEWED AT
THE RECORD TITLED:
REV. AUG. 5, 1998
IRIGARAY PROJECT GENERAL
LOCATION MAP
MINE UNIT 1 THRU 9
PERMIT TO MINE NO. 478
WITHIN THIS PACKAGE...OR,
BY SEARCHING USING THE
DOCUMENT/REPORT
REV. AUG. 5, 1998**

NOTE: Because of this page's large file size, it may be more convenient to copy the file to a local drive and use the Imaging (Wang) viewer, which can be accessed from the Programs/Accessories menu.

D-2

**THIS PAGE IS AN
OVERSIZED DRAWING
OR FIGURE,
THAT CAN BE VIEWED AT
THE RECORD TITLED:
FIG. NO. 5.5
IRIGARAY AND CHRISTENSEN
RANCH ENVIRONMENTAL
MONITORING STATION
LOCATIONS
WITHIN THIS PACKAGE...OR,
BY SEARCHING USING THE
DOCUMENT/REPORT
Fig. No. 5.5**

NOTE: Because of this page's large file size, it may be more convenient to copy the file to a local drive and use the Imaging (Wang) viewer, which can be accessed from the Programs/Accessories menu.

APPENDIX 2

Well Integrity Testing Summary

**CHRISTENSEN UNIT 5
WELL INTEGRITY TESTING SUMMARY**

HOLE #	DATE TESTED	CASING TYPE	BOTTOM	LOWER	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE		% LOSS	PASS	FAIL
			CASING DEPTH	PACKER DEPTH			LOSS				
5AE74-2	10/30/01	PVC	443	430	168	156	12		7	X	
5AN72-1	10/30/01	PVC	386	375	168	154	14		8	X	
5AT56-1	10/31/01	PVC	433	425	168	154	14		8	X	
5AU50-1	10/31/01	PVC	426	415	168	157	11		7	X	
5AU56-1	10/31/01	PVC	418	410	168	120	48		29		X
5BA44-1	10/31/01	PVC	466	455	168	100	68		40		X
5AJ57-1	11/1/01	PVC	452	440	168	156	12		7	X	
5AR56-1	11/1/01	PVC	408	400	168	158	10		6	X	
5BH53-1	11/1/01	PVC	485	475	168	154	14		8	X	
5BA52-1	11/14/01	PVC	456	445	168	60	108		64		X
5BC46-1	11/14/01	PVC	460	450	168	154	14		8	X	
5BD52-2	11/14/01	PVC	448	440	168	152	16		10	X	
5AG70-1	11/15/01	PVC	446	435	168	160	8		5	X	
5BA46-1	11/15/01	PVC	464	455	168	153	15		9	X	
5BC40-1	11/15/01	PVC	467	455	168	160	8		5	X	
5BG52-1	11/15/01	PVC	480	470	168	152	16		10	X	
5BB38-1	12/3/01	PVC	454	445	168	153	15		9	X	
5BC42-1	12/3/01	PVC	471	460	168	154	14		8	X	
5AT44-2	12/17/01	PVC	458	440	168	156	12		7	X	
5BK40-1	12/17/01	PVC	347	330	168	158	10		6	X	

**CHRISTENSEN UNIT 6
WELL INTEGRITY TESTING SUMMARY**

HOLE #	DATE TESTED	CASING TYPE	BOTTOM	LOWER	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	% LOSS	PASS	FAIL
			CASING DEPTH	PACKER DEPTH						
6X23-1	7/2/01	PVC	495	485	168	156	12	7	X	
6X26-1	7/2/01	PVC	488	480	168	154	14	8	X	
6X28-1C	7/2/01	PVC	470	460	168	153	15	9	X	
6Y27-2	7/2/01	PVC	495	485	168	156	12	7	X	
6Y28-1	7/2/01	PVC	505	495	168	145	23	14		X
6Y29-1	7/2/01	PVC	499	490	168	155	13	8	X	
6Z27-1	7/2/01	PVC	485	475	168	153	15	9	X	
NPHW-2	7/2/01	PVC	508	500	168	152	16	10	X	
6X25-1	7/3/01	PVC	480	470	168	155	13	8	X	
6Y30-1	7/3/01	PVC	475	465	168	156	12	7	X	
6Y31-1	7/3/01	PVC	469	460	168	152	16	10	X	
6Y33-2	7/3/01	PVC	472	460	168	153	15	9	X	
6Z29-1	7/3/01	PVC	485	475	168	158	10	6	X	
6Z30-1	7/3/01	PVC	480	470	168	156	12	7	X	
6Z31-1	7/3/01	PVC	475	465	168	154	14	8	X	
6Z33-1	7/3/01	PVC	475	465	168	156	12	7	X	
6Z35-1	7/3/01	PVC	470	460	168	158	10	6	X	
6AA32-1	7/4/01	PVC	490	480	168	154	14	8	X	
6AA33-2	7/4/01	PVC	470	460	168	156	12	7	X	
6AA36-1	7/4/01	PVC	490	480	168	154	14	8	X	
6AA37-3	7/4/01	PVC	465	455	168	153	15	9	X	
6AA37-1	7/4/01	PVC	480	470	168	152	16	10	X	
6AA37-2	7/4/01	PVC	470	460	168	155	13	8	X	
6AD34-1	7/4/01	PVC	485	475	168	153	15	9	X	
6AE32-1	7/4/01	PVC	500	490	168	154	14	8	X	
6AE34-1	7/4/01	PVC	502	490	168	140	28	17		X
6AA27-3	7/10/01	PVC	497	485	168	155	13	8	X	
6AD32-1	7/10/01	PVC	490	480	168	154	14	8	X	
6AD33-1	7/10/01	PVC	479	470	168	153	15	9	X	
6AE35-1	7/10/01	PVC	495	485	168	156	12	7	X	
6AE36-1	7/10/01	PVC	485	475	168	154	14	8	X	
6AE38-1	7/10/01	PVC	480	470	168	152	16	10	X	
6AE39-1	7/10/01	PVC	478	470	168	0	168	100		X
6AB41-3	7/11/01	PVC	455	445	168	155	13	8	X	
6AC36-2	7/11/01	PVC	470	460	168	154	14	8	X	
6AC38-1	7/11/01	PVC	463	450	168	156	12	7	X	
6AC41-2	7/11/01	PVC	480	470	168	156	12	7	X	
6AC42-1	7/11/01	PVC	475	465	168	153	15	9	X	
6AD37-1	7/11/01	PVC	475	465	168	156	12	7	X	
6AD39-1	7/11/01	PVC	465	455	168	155	13	8	X	
6AD40-1	7/11/01	PVC	466	455	168	153	15	9	X	
6AD41-1	7/11/01	PVC	458	450	168	158	10	6	X	
6AA38-1	7/12/01	PVC	489	480	168	156	12	7	X	
6AA40-1	7/12/01	PVC	469	460	168	158	10	6	X	
6AA41-1	7/12/01	PVC	491	480	168	153	15	9	X	
6AA42-1	7/12/01	PVC	465	455	168	100	68	40		X
6AA43-2	7/12/01	PVC	461	450	168	156	12	7	X	
6AC43-1	7/12/01	PVC	475	465	168	153	15	9	X	
6AF41-1	7/12/01	PVC	469	460	168	154	14	8	X	

**CHRISTENSEN UNIT 6
WELL INTEGRITY TESTING SUMMARY**

HOLE #	DATE TESTED	CASING TYPE	BOTTOM CASING DEPTH	LOWER PACKER DEPTH	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	% LOSS	PASS	FAIL
6Z40-2	7/12/01	PVC	455	445	168	152	16	10	X	
6Z44-3	7/12/01	PVC	455	445	168	154	14	8	X	
6AD43-2	7/16/01	PVC	475	465	168	153	15	9	X	
6AD43-3	7/16/01	PVC	475	165	168	154	14	8	X	
6AD45-1	7/16/01	PVC	476	465	168	154	14	8	X	
6AD46-2	7/16/01	PVC	464	455	168	156	12	7	X	
6AD49-1	7/16/01	PVC	448	440	168	158	10	6	X	
6AE43-1	7/16/01	PVC	462	450	168	154	14	8	X	
6AE44-1	7/16/01	PVC	486	475	168	156	12	7	X	
6AE51-2	7/16/01	PVC	457	445	168	156	12	7	X	
6AF46-1	7/16/01	PVC	470	460	168	154	14	8	X	
NPHW-1	7/16/01	PVC	478	470	168	152	16	10	X	
6M29-1	7/17/01	PVC	570	560	168	154	14	8	X	
6M33-2	7/17/01	PVC	565	555	168	155	13	8	X	
6M34-1	7/17/01	PVC	561	550	168	152	16	10	X	
6N23-2	7/17/01	PVC	565	555	168	157	11	7	X	
6O24-1	7/17/01	PVC	550	540	168	152	16	10	X	
6O26-1	7/17/01	PVC	552	540	168	153	15	9	X	
6P28-2	7/17/01	PVC	536	525	168	156	12	7	X	
6P30-2	7/18/01	PVC	531	520	168	141	27	16		X
6Q33-1	7/18/01	PVC	525	515	168	155	13	8	X	
6R22-2	7/18/01	PVC	505	495	168	152	16	10	X	
6R22-2	7/18/01	PVC	516	505	168	154	14	8	X	
6R34-1	7/18/01	PVC	505	495	168	153	15	9	X	
6T33-1	7/18/01	PVC	500	480	168	154	14	8	X	
6W33-1	7/18/01	PVC	485	475	168	153	15	9	X	
6R19-1	7/19/01	PVC	560	550	168	140	28	17		X
6R21-1	7/19/01	PVC	530	520	168	155	13	8	X	
6S19-1	7/19/01	PVC	551	540	168	156	12	7	X	
6T16-1	7/19/01	PVC	520	510	168	153	15	9	X	
6T17-1	7/19/01	PVC	534	525	168	156	12	7	X	
6U20-2	7/19/01	PVC	519	510	168	152	16	10	X	
6V19-1	7/19/01	PVC	502	490	168	154	14	8	X	
6V22-2	7/19/01	PVC	475	465	168	158	10	6	X	
6R22-1	7/23/01	PVC	535	525	168	153	15	9	X	
6S22-1	7/23/01	PVC	527	515	168	153	15	9	X	
6S25-3	7/23/01	PVC	512	500	168	157	11	7	X	
6T23-4	7/23/01	PVC	521	510	168	152	16	10	X	
6T25-1	7/23/01	PVC	509	500	168	156	12	7	X	
6V30-3	7/23/01	PVC	505	495	168	153	15	9	X	
NPHW-5	7/23/01	PVC	514	505	168	154	14	8	X	
6U24-1	7/24/01	PVC	510	500	168	153	15	9	X	
6V24-1	7/24/01	PVC	483	470	168	153	15	9	X	
6X29-1	7/24/01	PVC	450	440	168	154	14	8	X	
6Y29-1	7/24/01	PVC	445	435	168	156	12	7	X	
6Y29-1	7/24/01	PVC	435	425	168	152	16	10	X	
6Y42-2	7/24/01	PVC	462	450	168	156	12	7	X	
6Y43-1	7/24/01	PVC	471	460	168	155	13	8	X	
6AB42-1	7/25/01	PVC	445	435	168	153	15	9	X	

**CHRISTENSEN UNIT 6
WELL INTEGRITY TESTING SUMMARY**

HOLE #	DATE TESTED	CASING TYPE	BOTTOM CASING DEPTH	LOWER PACKER DEPTH	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	% LOSS	PASS	FAIL
6AC35-1	7/25/01	PVC	470	460	168	157	11	7	X	
6AD44-1	7/25/01	PVC	455	445	168	154	14	8	X	
6AE33-1	7/25/01	PVC	500	490	168	155	13	8	X	
6AF43-2	7/25/01	PVC	460	450	168	154	14	8	X	
6W25-2	7/25/01	PVC	458	450	168	158	10	6	X	
6X27-2	7/25/01	PVC	455	445	168	152	16	10	X	
6X30-1	7/25/01	PVC	450	440	168	157	11	7	X	
6AC44-1	7/26/01	PVC	478	470	168	153	15	9	X	
6AD47-2	7/26/01	PVC	447	435	168	156	12	7	X	
6AD48-1	7/26/01	PVC	464	455	168	153	15	9	X	
6AG49-3	7/26/01	PVC	481	470	168	0	168	100		X
6AE49-2	7/30/01	PVC	460	450	168	153	15	9	X	
6AE51-3	7/30/01	PVC	465	455	168	154	14	8	X	
6AF44-1	7/30/01	PVC	485	475	168	157	11	7	X	
6AF47-2	7/30/01	PVC	500	490	168	156	12	7	X	
6AF50-1	7/30/01	PVC	475	465	168	153	15	9	X	
6AG45-1	7/30/01	PVC	490	480	168	156	12	7	X	
6AG45-2	7/30/01	PVC	495	485	168	152	16	10	X	
6AG47-1	7/30/01	PVC	490	480	168	158	10	6	X	
6AG48-1	7/30/01	PVC	485	475	168	153	15	9	X	
6AF42-1	7/31/01	PVC	495	485	168	156	12	7	X	
6AF43-1	7/31/01	PVC	495	485	168	156	12	7	X	
6AG43-3	7/31/01	PVC	505	495	168	153	15	9	X	
6AG44-1	7/31/01	PVC	506	495	168	154	14	8	X	
6AG46-1	7/31/01	PVC	500	490	168	152	16	10	X	
6AH39-1	7/31/01	PVC	484	475	168	157	11	7	X	
6AH45-2	7/31/01	PVC	480	470	168	155	13	8	X	
6AH45-3	7/31/01	PVC	490	480	168	152	16	10	X	
6AH47-1	7/31/01	PVC	490	480	168	154	14	8	X	
6AH49-2	7/31/01	PVC	480	470	168	154	14	8	X	
6AH38-1	8/1/01	PVC	475	465	168	153	15	9	X	
6AH40-2	8/1/01	PVC	472	460	168	156	12	7	X	
6AH41-2	8/1/01	PVC	470	460	168	156	12	7	X	
6AI37-1	8/1/01	PVC	475	465	168	152	16	10	X	
6AI39-1	8/1/01	PVC	478	470	168	152	16	10	X	
6AI40-1	8/1/01	PVC	475	465	168	154	14	8	X	
6AI42-1	8/1/01	PVC	450	440	168	153	15	9	X	
6AI43-1	8/1/01	PVC	455	445	168	158	10	6	X	
6AJ41-1	8/1/01	PVC	451	440	168	156	12	7	X	
6AJ43-1	8/1/01	PVC	450	440	168	157	11	7	X	
6AH42-1	8/2/01	PVC	475	465	168	152	16	10	X	
6AH44-1	8/2/01	PVC	460	450	168	153	15	9	X	
6AI38-1	8/2/01	PVC	460	450	168	0	168	100		X
6AI44-1	8/2/01	PVC	454	445	168	152	16	10	X	
6AJ42-1	8/2/01	PVC	475	465	168	153	15	9	X	
6AJ43-1	8/2/01	PVC	455	445	168	153	15	9	X	
6AJ40-2	8/2/01	PVC	440	430	168	160	8	5	X	
6AK45-2	8/2/01	PVC	355	345	168	155	13	8	X	
NPHW-15	8/2/01	PVC	353	340	168	0	168	100		X

**CHRISTENSEN UNIT 6
WELL INTEGRITY TESTING SUMMARY**

HOLE #	DATE TESTED	CASING TYPE	BOTTOM	LOWER	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	% LOSS	PASS	FAIL
			CASING DEPTH	PACKER DEPTH						
6AG42-1	8/8/01	PVC	496	485	168	152	16	10	X	
6AI46-1	8/8/01	PVC	486	475	168	153	15	9	X	
6AI48-1	8/8/01	PVC	485	475	168	153	15	9	X	
6AJ46-1	8/8/01	PVC	352	340	168	152	16	10	X	
6AK51-1	8/8/01	PVC	457	445	168	153	15	9	X	
6AL42-1	8/8/01	PVC	381	370	168	153	15	9	X	
6AL44-1	8/8/01	PVC	376	365	168	156	12	7	X	
6AM43-2	8/8/01	PVC	480	470	168	152	16	10	X	
6AL35-1	8/9/01	PVC	491	480	168	30	138	82		X
6AL40-1	8/9/01	PVC	477	465	168	154	14	8	X	
6AL41-1	8/9/01	PVC	470	460	168	154	14	8	X	
6AM36-1	8/9/01	PVC	485	475	168	156	12	7	X	
6AM37-3	8/9/01	PVC	480	470	168	153	15	9	X	
6AM41-1	8/9/01	PVC	380	370	168	155	13	8	X	
6AN33-1	8/9/01	PVC	405	395	168	153	15	9	X	
6AN35-2	8/9/01	PVC	401	390	168	157	11	7	X	
6AN36-2	8/9/01	PVC	405	395	168	154	14	8	X	
6AO33-2	8/9/01	PVC	410	400	168	152	16	10	X	
6AM34-1	8/13/01	PVC	492	480	168	155	13	8	X	
6AM40-1	8/13/01	PVC	495	485	168	154	14	8	X	
6AM42-1	8/13/01	PVC	372	360	168	156	12	7	X	
6AM43-1	8/13/01	PVC	374	365	168	154	14	8	X	
6AM44-1	8/13/01	PVC	465	455	168	156	12	7	X	
6AM44-2	8/13/01	PVC	470	460	168	154	14	8	X	
6AN41-2	8/13/01	PVC	497	485	168	153	15	9	X	
6AN43-2	8/13/01	PVC	485	475	168	153	15	9	X	
6AN43-3	8/13/01	PVC	468	460	168	153	15	9	X	
NPHW-3A	8/13/01	PVC	501	490	168	153	15	9	X	
6AN44-2	8/14/01	PVC	465	455	168	152	16	10	X	
6AN45-2	8/14/01	PVC	470	460	168	156	12	7	X	
6AN45-3	8/14/01	PVC	461	450	168	158	10	6	X	
6AN45-4	8/14/01	PVC	374	365	168	152	16	10	X	
6AO41-1	8/14/01	PVC	470	460	168	155	13	8	X	
6AO42-1	8/14/01	PVC	463	450	168	154	14	8	X	
6AP44-1	8/14/01	PVC	470	460	168	155	13	8	X	
6AP45-2	8/14/01	PVC	405	395	168	156	12	7	X	
6AO39-1	8/15/01	PVC	475	465	168	156	12	7	X	
6AO39-2	8/15/01	PVC	475	465	168	156	12	7	X	
6AP39-1	8/15/01	PVC	476	465	168	158	10	6	X	
6AP41-1	8/15/01	PVC	470	460	168	154	14	8	X	
6AP42-2	8/15/01	PVC	468	460	168	153	15	9	X	
6AP42-3	8/15/01	PVC	410	400	168	152	16	10	X	
6AP43-1	8/15/01	PVC	412	400	168	156	12	7	X	
6AQ41-1	8/15/01	PVC	415	405	168	152	16	10	X	
6AM43-3	8/15/01	PVC	421	410	168	155	13	8	X	
6AM43-4	8/15/01	PVC	470	460	168	155	13	8	X	
6AL38-2	8/16/01	PVC	478	465	168	157	11	7	X	
6AM37-2	8/16/01	PVC	473	465	168	156	12	7	X	
6AM39-1	8/16/01	PVC	476	465	168	155	13	8	X	

**CHRISTENSEN UNIT 6
WELL INTEGRITY TESTING SUMMARY**

HOLE #	DATE TESTED	CASING TYPE	BOTTOM CASING DEPTH	LOWER PACKER DEPTH	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	% LOSS	PASS	FAIL
6AM39-2	8/16/01	PVC	377	365	168	158	10	6	X	
6AN40-2	8/16/01	PVC	475	465	168	152	16	10	X	
6AO32-1	8/16/01	PVC	510	500	168	152	16	10	X	
6AO37-1	8/16/01	PVC	491	480	168	153	15	9	X	
6AP37-1	8/16/01	PVC	488	475	168	152	16	10	X	
6AP38-2	8/16/01	PVC	480	470	168	153	15	9	X	
6AO30-1	8/20/01	PVC	425	415	168	154	14	8	X	
6AO30-2	8/20/01	PVC	515	505	168	154	14	8	X	
6AO32-2	8/20/01	PVC	420	410	168	153	15	9	X	
6AP29-1	8/20/01	PVC	425	415	168	153	15	9	X	
6AP30-2	8/20/01	PVC	428	420	168	152	16	10	X	
6AP31-2	8/20/01	PVC	425	415	168	154	14	8	X	
6AP31-4	8/20/01	PVC	521	510	168	153	15	9	X	
6AP33-2	8/20/01	PVC	510	500	168	156	12	7	X	
6AQ29-3	8/20/01	PVC	430	420	168	152	16	10	X	
6AL34-1	8/21/01	PVC	480	470	168	159	9	5	X	
6AM35-2	8/21/01	PVC	481	470	168	156	12	7	X	
6AM45-1	8/21/01	PVC	465	455	168	155	13	8	X	
6AM46-2	8/21/01	PVC	465	455	168	156	12	7	X	
6AN37-1	8/21/01	PVC	400	390	168	156	12	7	X	
6AN38-2	8/21/01	PVC	483	475	168	156	12	7	X	
6AN39-2	8/21/01	PVC	495	485	168	153	15	9	X	
6AN36-4	8/21/01	PVC	485	475	168	155	13	8	X	
6AP36-1	8/21/01	PVC	495	485	168	153	15	9	X	
6AL48-1	8/22/01	PVC	460	450	168	155	13	8	X	
6AL48-2	8/22/01	PVC	473	360	168	148	20	12		X
6AM46-4	8/22/01	PVC	378	370	168	154	14	8	X	
6AM47-1	8/22/01	PVC	461	450	168	153	15	9	X	
6AM47-3	8/23/01	PVC	368	360	168	152	16	10	X	
6AM48-1	8/23/01	PVC	461	450	168	154	14	8	X	
6AN49-2	8/23/01	PVC	485	475	168	153	15	9	X	
6AK47-2	8/27/01	PVC	366	355	168	155	13	8	X	
6AK48-3	8/27/01	PVC	365	355	168	154	14	8	X	
6AM49-3	8/27/01	PVC	461	450	168	153	15	9	X	
6AN34-2	8/27/01	PVC	404	395	168	152	16	10	X	
6AN47-3	8/27/01	PVC	375	365	168	154	14	8	X	
6AN49-3	8/27/01	PVC	361	350	168	153	15	9	X	
6AP34-1	8/27/01	PVC	495	485	168	153	15	9	X	
6AP35-1	8/27/01	PVC	491	480	168	154	14	8	X	
6AK44-1	8/28/01	PVC	461	450	168	152	16	10	X	
6AK48-2	8/28/01	PVC	455	445	168	155	13	8	X	
6AL43-1	8/28/01	PVC	465	455	168	153	15	9	X	
6AL46-1	8/28/01	PVC	456	445	168	157	11	7	X	
6AL49-1	8/28/01	PVC	456	445	168	156	12	7	X	
6AL53-1	8/28/01	PVC	462	450	168	153	15	9	X	
6AL56-3	8/28/01	PVC	465	455	168	154	14	8	X	
6AN49-1	8/28/01	PVC	370	360	168	152	16	10	X	
6AJ49-2	8/29/01	PVC	465	455	168	156	12	7	X	
6AJ52-1	8/29/01	PVC	469	460	168	154	14	8	X	

**CHRISTENSEN UNIT 6
WELL INTEGRITY TESTING SUMMARY**

HOLE #	DATE TESTED	CASING TYPE	BOTTOM CASING DEPTH	LOWER PACKER DEPTH	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	% LOSS	PASS	FAIL
6AK45-1	8/29/01	PVC	455	445	168	154	14	8	X	
6AK45-3	8/29/01	PVC	355	345	168	154	14	8	X	
6AK46-1	8/29/01	PVC	352	340	168	152	16	10	X	
6AK47-1	8/29/01	PVC	441	430	168	155	13	8	X	
6AK47-3	8/29/01	PVC	437	425	168	153	15	9	X	
6AM49-1	8/29/01	PVC	364	355	168	156	12	7	X	
6AO49-2	8/29/01	PVC	375	365	168	153	15	9	X	
6AO49-3	8/29/01	PVC	450	440	168	152	16	10	X	
6AK33-1	8/30/01	PVC	481	470	168	156	12	7	X	
6AL33-1	8/30/01	PVC	493	485	168	154	14	8	X	
6AN53-1	8/30/01	PVC	368	360	168	154	14	8	X	
6AO46-3	8/30/01	PVC	453	445	168	152	16	10	X	
6AO47-3	8/30/01	PVC	445	435	168	152	16	10	X	
6AQ45-1	8/30/01	PVC	475	465	168	155	13	8	X	
6AQ46-2	8/30/01	PVC	393	385	168	158	10	6	X	
6AL52-3	9/4/01	PVC	363	350	168	152	16	10	X	
6AM52-2	9/4/01	PVC	370	360	168	153	15	9	X	
6AM59-2	9/4/01	PVC	376	365	168	152	16	10	X	
6AM60-3	9/4/01	PVC	376	365	168	154	14	8	X	
6AN50-2	9/4/01	PVC	503	495	168	154	14	8	X	
6AN57-3	9/4/01	PVC	380	370	168	153	15	9	X	
6AL51-1	9/4/01	PVC	501	490	168	152	16	10	X	
6AO54-4	9/4/01	PVC	385	375	168	156	12	7	X	
6AO59-1	9/4/01	PVC	376	365	168	152	16	10	X	
6AC66-3	9/5/01	PVC	347	335	168	154	14	8	X	
6AD63-3	9/5/01	PVC	370	360	168	153	15	9	X	
6AD64-2	9/5/01	PVC	352	340	168	152	16	10	X	
6AE62-2	9/5/01	PVC	371	360	168	158	10	6	X	
6AG61-2	9/5/01	PVC	375	365	168	153	15	9	X	
6AQ48-1	9/5/01	PVC	485	475	168	156	12	7	X	
6AQ50-1	9/5/01	PVC	481	470	168	158	10	6	X	
6AQ52-1	9/5/01	PVC	485	475	168	153	15	9	X	
6AQ53-3	9/5/01	PVC	408	400	168	154	14	8	X	
6AC62-1	9/10/01	PVC	370	360	168	153	15	9	X	
6AD61-1	9/10/01	PVC	350	340	168	158	10	6	X	
6AG63-2	9/10/01	PVC	384	375	168	154	14	8	X	
6AH61-2	9/10/01	PVC	365	355	168	156	12	7	X	
6AH63-3	9/10/01	PVC	357	345	168	155	13	8	X	
6AI61-4	9/10/01	PVC	386	375	168	160	8	5	X	
6AI65-2	9/10/01	PVC	344	335	168	153	15	9	X	
6AI66-1	9/10/01	PVC	340	330	168	153	15	9	X	
6AJ63-3	9/10/01	PVC	346	335	168	154	14	8	X	
6AJ65-4	9/10/01	PVC	344	335	168	156	12	7	X	
6AE65-2	9/11/01	PVC	335	325	168	153	15	9	X	
6AL64-4	9/11/01	PVC	349	340	168	152	16	10	X	
6AL65-3	9/11/01	PVC	325	315	168	156	12	7	X	
6AE69-2	9/11/01	PVC	298	290	168	154	14	8	X	
6AF67-5	9/11/01	PVC	324	315	168	154	14	8	X	
6AF68-3	9/11/01	PVC	345	335	168	159	9	5	X	

**CHRISTENSEN UNIT 6
WELL INTEGRITY TESTING SUMMARY**

HOLE #	DATE TESTED	CASING TYPE	BOTTOM	LOWER	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	% LOSS	PASS	FAIL
			CASING DEPTH	PACKER DEPTH						
6AG65-3	9/11/01	PVC	349	340	168	158	10	6	X	
6AH67-2	9/11/01	PVC	332	320	168	153	15	9	X	
6AH69-2	9/11/01	PVC	334	325	168	152	16	10	X	
6AD60-3	9/12/01	PVC	360	350	168	158	10	6	X	
6AE58-2	9/12/01	PVC	359	350	168	156	12	7	X	
6AS57-1	9/12/01	PVC	445	435	168	154	14	8	X	
6AS59-1	9/12/01	PVC	448	440	168	157	11	7	X	
6AT55-2	9/12/01	PVC	360	350	168	152	16	10	X	
6AU54-1	9/12/01	PVC	452	440	168	156	12	7	X	
7AR67-2	9/12/01	PVC	433	425	168	159	9	5	X	
7AS63-1	9/12/01	PVC	425	415	168	154	14	8	X	
6AI36-1	9/13/01	PVC	481	470	168	153	15	9	X	
6AK32-1	9/13/01	PVC	495	485	168	152	16	10	X	
6AL31-1	9/13/01	PVC	495	485	168	90	78	46		X
6AN51-2	9/13/01	PVC	486	475	168	155	13	8	X	
6AS43-3	9/13/01	PVC	345	335	168	153	15	9	X	
6AS47-2	9/13/01	PVC	361	350	168	154	14	8	X	
7AT62-2	9/13/01	PVC	432	420	168	0	168	100		X
6AE64-3	9/24/01	PVC	368	360	168	154	14	8	X	
6AG64-2	9/24/01	PVC	371	360	168	156	12	7	X	
6A158-2	9/24/01	PVC	337	330	168	152	16	10	X	
6A158-2	9/24/01	PVC	390	380	168	154	14	8	X	
6AM50-1	9/24/01	PVC	475	450	168	155	13	8	X	
6AM50-2	9/24/01	PVC	361	350	168	152	16	10	X	
6AM56-2	9/24/01	PVC	391	380	168	155	13	8	X	
6AQ47-1	9/24/01	PVC	472	460	168	158	10	6	X	
NPHW-7	9/24/01	PVC	361	350	168	154	14	8	X	
6AE70-3	9/25/01	PVC	294	285	168	156	12	7	X	
6AG68-1	9/25/01	PVC	336	325	168	153	15	9	X	
6AS46-2	9/25/01	PVC	348	340	168	153	15	9	X	
6AS47-1	9/25/01	PVC	350	340	168	154	14	8	X	
6AS48-3	9/25/01	PVC	344	335	168	156	12	7	X	
6AT42-1	9/25/01	PVC	384	375	168	152	16	10	X	
6AT49-2	9/25/01	PVC	355	345	168	158	10	6	X	
6AU43-4	9/25/01	PVC	392	380	168	154	14	8	X	
6AT41-2	9/26/01	PVC	377	365	168	156	12	7	X	
6AT43-2	9/26/01	PVC	379	370	168	152	16	10	X	
6AT48-4	9/26/01	PVC	377	370	168	153	15	9	X	
6AT51-1	9/26/01	PVC	348	340	168	154	14	8	X	
6AT58-1	9/26/01	PVC	460	450	168	156	12	7	X	
6AU44-1	9/26/01	PVC	382	370	168	156	12	7	X	
6AU51-2	9/26/01	PVC	404	395	168	153	15	9	X	
7AT61-1	9/26/01	PVC	441	430	168	152	16	10	X	
6AP46-2	9/27/01	PVC	471	460	168	154	14	8	X	
6A158-2	9/27/01	PVC	427	420	168	152	16	10	X	
6A158-5	9/27/01	PVC	428	420	168	156	12	7	X	
6AQ67-4	9/27/01	PVC	444	435	168	154	14	8	X	
6AT58-2	9/27/01	PVC	384	375	168	156	12	7	X	
7AS65-1	9/27/01	PVC	430	420	168	152	16	10	X	

**CHRISTENSEN UNIT 6
WELL INTEGRITY TESTING SUMMARY**

HOLE #	DATE TESTED	CASING TYPE	BOTTOM CASING DEPTH	LOWER PACKER DEPTH	INITIAL PRESSURE	FINAL PRESSURE	PRESSURE LOSS	% LOSS	PASS	FAIL
7AT64-2	9/27/01	PVC	437	425	168	153	15	9	X	
6AP51-2	10/2/01	PVC	473	465	168	153	15	9	X	
6AP51-3	10/2/01	PVC	397	385	168	153	15	9	X	
6AP58-3	10/2/01	PVC	394	385	168	153	15	9	X	
6AP59-2	10/2/01	PVC	478	470	168	154	14	8	X	
6AQ46-1	10/2/01	PVC	468	460	168	154	14	8	X	
6AQ49-2	10/2/01	PVC	473	465	168	160	8	5	X	
6AQ54-1	10/2/01	PVC	490	480	168	154	14	8	X	
6AQ56-1	10/2/01	PVC	505	495	168	152	16	10	X	
6AO54-1	10/3/01	PVC	386	375	168	156	12	7	X	
6AO56-4	10/3/01	PVC	396	385	168	154	14	8	X	
6AR42-1	10/3/01	PVC	350	340	168	159	9	5	X	
6AR45-2	10/3/01	PVC	390	380	168	153	15	9	X	
6AR46-1	10/3/01	PVC	382	370	168	156	12	7	X	
6AT56-3	10/3/01	PVC	454	445	168	155	13	8	X	
6AH70-5	10/4/01	PVC	313	300	168	156	12	7	X	
6AJ67-2	10/4/01	PVC	324	315	168	155	13	8	X	
6AJ69-2	10/4/01	PVC	316	310	168	160	8	5	X	
6AH71-4	10/8/01	PVC	314	305	168	157	11	7	X	
6AI69-3	10/8/01	PVC	319	310	168	156	12	7	X	
6AI73-4	10/8/01	PVC	314	305	168	154	14	8	X	
6AI75-1	10/8/01	PVC	485	475	168	154	14	8	X	
7AC55-2	10/8/01	PVC	425	415	168	156	12	7	X	
6AB39-1	10/9/01	PVC	465	435	168	156	12	7	X	
6AI63-3	10/9/01	PVC	355	345	168	154	14	8	X	
6V23-1	10/9/01	PVC	493	485	168	153	15	9	X	
6Z28-1	10/9/01	PVC	490	480	168	150	18	11		X
6AD42-1	10/10/01	PVC	463	450	168	156	12	7	X	
6AE45-1	10/10/01	PVC	468	460	168	156	12	7	X	
6AF39-1	10/10/01	PVC	490	480	168	158	10	6	X	
6AI41-2	10/10/01	PVC	473	460	168	154	14	8	X	
6S23-2	10/10/01	PVC	526	515	168	150	18	11		X
6AA31-2	10/30/01	PVC	485	460	168	153	15	9	X	
6AF69-1	10/31/01	PVC	465	450	168	152	16	10	X	

APPENDIX 3

Monitor and Trend Well Sampling Data

Monitor and Trend Well Index

Irigaray Project

Monitor Wells

Perimeter Ore Zone					
Well No.	Location	Page No.	Well No.	Location	Page No.
M2	Mine Unit 2	1	M27	Mine Unit 7	12
M4	Mine Unit 2	2	M28	Mine Unit 8	13
M7	Mine Unit 1	3	M29	Mine Unit 8	14
M10	Mine Unit 4	4	M30	Mine Unit 9	15
M17	Mine Unit 1	5	M31	Mine Unit 9	16
M18	Mine Unit 1	6	M32	Mine Unit 9	17
M19	Mine Unit 3	7	M33	Mine Unit 9	18
M23	Mine Unit 5	8	T31	Mine Unit 1	19
M24	Mine Unit 6	9	RS27	Mine Unit 5	20
M25	Mine Unit 6	10	16-151	Mine Unit 9	21
M26	Mine Unit 7	11			
Shallow Sand					
SSM2	Mine Unit 1	22	SSM19	Mine Unit 8	33
SSM3	Mine Unit 2	23	SSM34	Mine Unit 9	34
SSM4	Mine Unit 2	24	SSM35	Mine Unit 9	35
SSM5	Mine Unit 3	25	SSM36	Mine Unit 9	36
SSM6	Mine Unit 4	26	SSM37	Mine Unit 7	37
SSM7	Mine Unit 5	27	SSM38	Mine Unit 7	38
SSM8	Mine Unit 5	28	SSM39	Mine Unit 7	39
SSM9	Mine Unit 6	29	SSM40	Mine Unit 8	40
SSM10	Mine Unit 6	30	SSM41	Mine Unit 4	41
SSM11	Mine Unit 6	31	SSM42	Mine Unit 3	42
SSM18	Mine Unit 8	32	SSM43	Mine Unit 1	43
Deep Sand					
DM1	Mine Unit 1	44	DM14	Mine Unit 8	53
DM2	Mine Unit 1	45	DM15	Mine Unit 9	54
DM3	Mine Unit 2	46	DM16	Mine Unit 9	55
DM4	Mine Unit 4	47	DM17	Mine Unit 5	56
DM5	Mine Unit 2	48	DM18	Mine Unit 4	57
DM9	Mine Unit 5	49	DM19	Mine Unit 3	58
DM10	Mine Unit 6	50	DM20	Mine Unit 3	59
DM11	Mine Unit 7	51	DM21	Mine Unit 7	60
DM13	Mine Unit 8	52	DM22	Mine Unit 6	61

Monitor and Trend Well Index

Christensen Ranch Project

Monitor Wells

Perimeter Ore Zone					
Well No.	Location	Page No.	Well No.	Location	Page No.
MW17-2	Mine Unit 3	62	MW87	Mine Unit 2	104
MW18	Mine Unit 3	63	MW88	Mine Unit 2	105
MW19	Mine Unit 3	64	MW89	Mine Unit 2	106
MW20	Mine Unit 3	65	MW90	Mine Unit 2	107
MW23	Mine Unit 3	66	MW101	Mine Unit 2	108
MW24	Mine Unit 3	67	MW102	Mine Unit 2	109
MW25	Mine Unit 3	68	MW103	Mine Unit 2	110
MW26	Mine Unit 3	69	MW104	Mine Unit 2	111
MW27	Mine Unit 3	70	MW105	Mine Unit 2	112
MW28	Mine Unit 3	71	MW106	Mine Unit 2	113
MW29	Mine Unit 3	72	MW107	Mine Unit 2	114
MW30	Mine Unit 3	73	MW108	Mine Unit 2	115
MW31	Mine Unit 3	74	MW109	Mine Unit 2	116
MW32	Mine Unit 3	75	MW110	Mine Unit 2	117
MW35	Mine Unit 3	76	MW111	Mine Unit 2	118
MW36	Mine Unit 3	77	MW114	Mine Unit 3	119
MW37	Mine Unit 3	78	MW115	Mine Unit 3	120
MW38	Mine Unit 3	79	MW116	Mine Unit 3	121
MW39	Mine Unit 3	80	4MW-1	Mine Unit 4	122
MW40	Mine Unit 3	81	4MW-2	Mine Unit 4	123
MW41	Mine Unit 3	82	4MW-3	Mine Unit 4	124
MW42	Mine Unit 3	83	4MW-4	Mine Unit 4	125
MW43	Mine Unit 3	84	4MW-5	Mine Unit 4	126
MW44	Mine Unit 3	85	4MW-6	Mine Unit 4	127
MW45	Mine Unit 3	86	4MW-7	Mine Unit 4	128
MW62	Mine Unit 3	87	4MW-8	Mine Unit 4	129
MW63	Mine Unit 3	88	4MW-9	Mine Unit 4	130
MW64	Mine Unit 3	89	4MW-10	Mine Unit 4	131
MW73	Mine Unit 2	90	4MW-11	Mine Unit 4	132
MW74	Mine Unit 2	91	4MW-12	Mine Unit 4	133
MW75	Mine Unit 2	92	4MW-13	Mine Unit 4	134
MW76	Mine Unit 2	93	4MW-14	Mine Unit 4	135
MW77	Mine Unit 2	94	4MW-15	Mine Unit 4	136
MW78	Mine Unit 2	95	4MW-16	Mine Unit 4	137
MW79	Mine Unit 2	96	4MW-17	Mine Unit 4	138
MW80	Mine Unit 2	97	4MW-18	Mine Unit 4	139
MW81	Mine Unit 2	98	4MW-19	Mine Unit 4	140
MW82	Mine Unit 2	99	4MW-20	Mine Unit 4	141
MW83	Mine Unit 2	100	4MW-21	Mine Unit 4	142
MW84	Mine Unit 2	101	4MW-22	Mine Unit 4	143
MW85	Mine Unit 2	102	4MW-23	Mine Unit 4	144
MW86	Mine Unit 2	103	4MW-24	Mine Unit 4	145

Monitor and Trend Well Index

Christensen Ranch Project

Monitor Wells

Perimeter Ore Zone (cont.)					
Well No.	Location	Page No.	Well No.	Location	Page No.
4MW-25	Mine Unit 4	146	5MW57	Mine Unit 5	188
5MW1	Mine Unit 5	147	5MW58	Mine Unit 5	189
5MW2	Mine Unit 5	148	5MW59	Mine Unit 5	190
5MW3	Mine Unit 5	149	5MW60	Mine Unit 5	191
5MW4	Mine Unit 5	150	5MW61	Mine Unit 5	192
5MW5	Mine Unit 5	151	5MW62	Mine Unit 5	193
5MW6	Mine Unit 5	152	5MW63	Mine Unit 5	194
5MW7	Mine Unit 5	153	5MW64	Mine Unit 5	195
5MW8	Mine Unit 5	154	5MW65	Mine Unit 5	196
5MW10	Mine Unit 5	155	5MW66	Mine Unit 5	197
5MW12	Mine Unit 5	156	5MW67	Mine Unit 5	198
5MW14	Mine Unit 5	157	5MW69	Mine Unit 5	199
5MW16	Mine Unit 5	158	6MW17-2	Mine Unit 6	200
5MW18	Mine Unit 5	159	6MW19	Mine Unit 6	201
5MW20	Mine Unit 5	160	6MW21	Mine Unit 6	202
5MW30A	Mine Unit 5	161	6MW23	Mine Unit 6	203
5MW31	Mine Unit 5	162	6MW25	Mine Unit 6	204
5MW32A	Mine Unit 5	163	6MW27	Mine Unit 6	205
5MW33	Mine Unit 5	164	6MW29	Mine Unit 6	206
5MW34	Mine Unit 5	165	6MW31	Mine Unit 6	207
5MW35A	Mine Unit 5	166	6MW33	Mine Unit 6	208
5MW36	Mine Unit 5	167	6MW34	Mine Unit 6	209
5MW37	Mine Unit 5	168	6MW35	Mine Unit 6	210
5MW38	Mine Unit 5	169	6MW36	Mine Unit 6	211
5MW39A	Mine Unit 5	170	6MW37	Mine Unit 6	212
5MW40	Mine Unit 5	171	6MW38	Mine Unit 6	213
5MW41A	Mine Unit 5	172	6MW39	Mine Unit 6	214
5MW42	Mine Unit 5	173	6MW40	Mine Unit 6	215
5MW43	Mine Unit 5	174	6MW41	Mine Unit 6	216
5MW44	Mine Unit 5	175	6MW42	Mine Unit 6	217
5MW45	Mine Unit 5	176	6MW43	Mine Unit 6	218
5MW46	Mine Unit 5	177	6MW44	Mine Unit 6	219
5MW47B	Mine Unit 5	178	6MW45	Mine Unit 6	220
5MW48	Mine Unit 5	179	6MW46	Mine Unit 6	221
5MW49	Mine Unit 5	180	6MW47	Mine Unit 6	222
5MW50	Mine Unit 5	181	6MW48-3	Mine Unit 6	223
5MW51	Mine Unit 5	182	6MW49	Mine Unit 6	224
5MW52	Mine Unit 5	183	6MW50	Mine Unit 6	225
5MW53	Mine Unit 5	184	6MW51	Mine Unit 6	226
5MW54	Mine Unit 5	185	6MW52	Mine Unit 6	227
5MW55	Mine Unit 5	186	6MW53	Mine Unit 6	228
5MW56	Mine Unit 5	187	6MW54	Mine Unit 6	229

Monitor and Trend Well Index

Christensen Ranch Project

Monitor Wells

Shallow Sand					
Well No.	Location	Page No.	Well No.	Location	Page No.
MW-11S	Mine Unit 5	230	4SRM-07	Mine Unit 4	252
MW46S	Mine Unit 3	231	5SM1	Mine Unit 5	253
MW48S	Mine Unit 3	232	5SM2	Mine Unit 5	254
MW50S	Mine Unit 3	233	5SM3	Mine Unit 5	255
MW52S	Mine Unit 3	234	5SW5	Mine Unit 5	256
MW54S	Mine Unit 3	235	5SW6	Mine Unit 5	257
MW56S	Mine Unit 3	236	5SM7	Mine Unit 5	258
MW58S	Mine Unit 3	237	WCOW-04	Mine Unit 5	259
MW66S-2	Mine Unit 3	238	6SM1	Mine Unit 6	260
MW68S	Mine Unit 2	239	6SM2	Mine Unit 6	261
MW70S	Mine Unit 2	240	6SM3	Mine Unit 6	262
MW72S	Mine Unit 2	241	6SM4	Mine Unit 6	263
MW92S	Mine Unit 2	242	6SM5	Mine Unit 6	264
MW94S	Mine Unit 2	243	6SM6	Mine Unit 6	265
MW96S	Mine Unit 2	244	6SM7	Mine Unit 6	266
MW98S	Mine Unit 2	245	6SM8	Mine Unit 6	267
MW100S	Mine Unit 2	246	6SM9	Mine Unit 6	268
MW112S	Mine Unit 2	247	6SM10	Mine Unit 6	269
MW117S	Mine Unit 2	248	6SM11	Mine Unit 6	270
4SM-1	Mine Unit 4	249	6SM12	Mine Unit 6	271
4SM-4	Mine Unit 4	250	6SM13	Mine Unit 6	272
4SM-8	Mine Unit 4	251	6SM14	Mine Unit 6	273

Monitor and Trend Well Index

Christensen Ranch Project

Monitor Wells

Deep Sand

Well No.	Location	Page No.	Well No.	Location	Page No.
MW-12D	Mine Unit 5	274	5DM1A	Mine Unit 4	296
MW45D	Mine Unit 3	275	5DM2	Mine Unit 5	297
MW47D	Mine Unit 3	276	5DM3	Mine Unit 5	298
MW49D	Mine Unit 3	277	5DM4	Mine Unit 5	299
MW51D	Mine Unit 3	278	5DM5	Mine Unit 5	300
MW53D	Mine Unit 3	279	5DM7	Mine Unit 5	301
MW55D	Mine Unit 3	280	WCOW-37D	Mine Unit 5	302
MW57D	Mine Unit 3	281	6DM1	Mine Unit 5	303
MW65D	Mine Unit 3	282	6DM2	Mine Unit 6	304
MW67D	Mine Unit 2	283	6DM3-2	Mine Unit 6	305
MW69D	Mine Unit 2	284	6DM4-2	Mine Unit 6	306
MW71D	Mine Unit 2	285	6DM5	Mine Unit 6	307
MW91D	Mine Unit 2	286	6DM6	Mine Unit 6	308
MW93D	Mine Unit 2	287	6DM7	Mine Unit 6	309
MW95D	Mine Unit 2	288	6DM8	Mine Unit 6	310
MW97D	Mine Unit 2	289	6DM9	Mine Unit 6	311
MW99D	Mine Unit 2	290	6DM10	Mine Unit 6	312
MW113D	Mine Unit 2	291	6DM11	Mine Unit 6	313
4DM-1	Mine Unit 2	292	6DM12	Mine Unit 6	314
4DM-4	Mine Unit 4	293	6DM13	Mine Unit 6	315
4DM-8	Mine Unit 4	294	6DM14	Mine Unit 6	316
4DRM-07	Mine Unit 4	295			

Trend Wells

Perimeter Ore Zone

Well No.	Location	Page No.	Well No.	Location	Page No.
MW78T	Mine Unit2	317	6TW2	Mine Unit 6	321
MW87T	Mine Unit2	318	6TW3	Mine Unit 6	322
5TW-1	Mine Unit 5	319	6TW4	Mine Unit 6	323
6TW-1	Mine Unit 6	320	6TW5	Mine Unit 6	324

Deep Sand

5DM8T	Mine Unit 5	325	6DT1	Mine Unit 6	327
5DM9T	Mine Unit 5	326			

IRIGARAY PROJECT
Perimeter Ore Zone Monitor Wells

COGEMA Mining Inc.

IRIGARAY RANCH

PERIMETER ORE ZONE MONITOR WELL

Mine Unit 2

Well I.D. M2

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	18	685	131.1			

Date

05 FEB 2001	19.5	*	806	*	95.3	8.4	4251.7
06 FEB 2001	20.5	*	799	*	97.3	8.6	4257.8
12 FEB 2001	19.7	*	807	*	94.9	8.5	4263.3
20 FEB 2001	20.2	*	818	*	95.4	8.5	4264.3
26 FEB 2001	20.0	*	804	*	92.3	8.5	4264.0
05 MAR 2001	19.2	*	808	*	96.8	8.4	4253.7
12 MAR 2001	19.1	*	800	*	93.6	8.6	4260.7
19 MAR 2001	18.1	*	793	*	91.1	8.6	4252.2
26 MAR 2001	16.5		784	*	90.2	8.4	4251.4
03 APR 2001	16.0		796	*	88.6	8.8	4255.6
10 APR 2001	16.3		770	*	90.6	8.6	4251.9
29 MAY 2001	18.5	*	822	*	95.9	8.5	4269.7
30 MAY 2001	18.6	*	857	*	94.8	8.6	4269.7
05 JUN 2001	20.1	*	836	*	97.9	8.7	4270.2
11 JUN 2001	17.0		805	*	95.6	8.6	4258.2
19 JUN 2001	16.2		802	*	90.9	8.6	4255.5
25 JUN 2001	15.0		795	*	91.4	8.5	4253.9
03 JUL 2001	15.1		798	*	92.3	8.5	4251.0
14 AUG 2001	20.1	*	812	*	98.3	8.6	4261.0
15 AUG 2001	20.2	*	810	*	98.0	8.5	4261.0
20 AUG 2001	20.7	*	828	*	97.7	8.5	4261.1
27 AUG 2001	20.1	*	820	*	97.8	8.5	4249.6
04 SEP 2001	20.4	*	805	*	102.1	8.6	4253.5
10 SEP 2001	18.8	*	799	*	97.7	8.7	4245.9
17 SEP 2001	18.0		793	*	95.4	8.6	4247.1
24 SEP 2001	16.8		790	*	92.4	8.5	4247.4
01 OCT 2001	16.6		801	*	94.7	8.6	4247.2
07 OCT 2001	16.0		735	*	90.7	8.5	4252.3
13 NOV 2001	16.0		793	*	90.2	8.6	4270.6

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

M2

COGEMA Mining Inc.**IRIGARAY RANCH****PERIMETER ORE ZONE MONITOR WELL****2001**

Mine Unit 2

Well I.D. M4

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	18.1	671	100.4			

Date

20 FEB 2001	10.5	1089	*	83.4	8.4	4268.5
29 MAY 2001	10.5	1094	*	87.0	8.4	4275.1
15 AUG 2001	10.8	1115	*	86.9	8.4	4264.1
14 NOV 2001	10.5	1055	*	84.4	8.4	4281.4

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

M4

COGEMA Mining Inc.**IRIGARAY RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 1

2001

W-11.D. M7

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	17.5	679	109.8			

Date

20 FEB 2001	11.9	1980	*	107.8	7.9	4276.8
29 MAY 2001	11.2	2002	*	104.6	8.0	4276.8
15 AUG 2001	12.0	1995	*	107.3	8.0	4273.8
14 NOV 2001	11.7	1912	*	102.7	8.0	4283.2

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

M7

COGEMA Mining Inc.**IRIGARAY RANCH****PERIMETER ORE ZONE MONITOR WELL**

2001

Mine Unit 4
Well I.D. M10

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	17.5	701	132.3			

Date

13 FEB 2001	15.3	637	115.1	8.6		4258.6
31 MAY 2001	15.3	646	119.7	8.6		4266.3
21 AUG 2001	17.3	649	119.7	8.7		4252.6
14 NOV 2001	15.2	649	113.1	8.6		4274.3

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

M10

COGEMA Mining Inc.**IRIGARAY RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 1

I.D. M17

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	17.1	724	112.9			

Date

20 FEB 2001	9.9	650	91.1	8.5		4271.6
29 MAY 2001	9.5	654	90.7	8.5		4276.3
15 AUG 2001	10.2	646	93.7	8.6		4268.4
14 NOV 2001	10.0	647	89.9	8.6		4277.4

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

M17

COGEMA Mining Inc.**IRIGARAY RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 1
Well I.D. M18

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	17	719	111.7			

Date						
20 FEB 2001	10.9	1537	*	91.7	8.1	4273.5
29 MAY 2001	10.7	1491	*	93.0	8.1	4278.5
15 AUG 2001	11.1	1483	*	93.0	8.1	4270.0
14 NOV 2001	10.8	1510	*	91.9	8.2	4282.5

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

M18

COGEMA Mining Inc.**IRIGARAY RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 3

W-11.D. M19

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	17	651	116.7			

Date

13 FEB 2001	10.8	600	97.0	8.6		4266.1
29 MAY 2001	10.3	607	98.3	8.6		4271.1
14 AUG 2001	10.6	598	101.0	8.6		4257.3
14 NOV 2001	10.7	625	92.5	8.6		4280.0

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

M19

COGEMA Mining Inc.**IRIGARAY RANCH****PERIMETER ORE ZONE MONITOR WELL****2001**

Mine Unit 5
Well I.D. M23

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	17	614	106.6			

Date						
13 FEB 2001	10.7	604		92.2	8.7	4264.3
31 MAY 2001	10.8	617	*	93.9	8.8	4269.2
08 AUG 2001	11.2	621	*	94.4	8.7	4252.5
14 NOV 2001	11.2	619	*	94.1	8.6	4281.6

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

M23

COGEMA Mining Inc.**IRIGARAY RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 6

W.U.D. M24

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	14.5	632	119.4			

Date					
02 JAN 2001	8.8	501	116.0	8.8	4260.3
05 FEB 2001	8.8	500	114.0	8.7	4261.0
05 MAR 2001	9.1	502	115.0	8.7	4259.8
10 APR 2001	9.1	511	112.8	8.7	4266.1
16 MAY 2001	8.9	506	114.3	8.7	4268.8
03 JUL 2001	8.6	511	114.4	8.8	4253.9
30 JUL 2001	9.0	509	115.0	8.8	4247.5
21 AUG 2001	9.5	516	115.6	8.8	4254.9
12 SEP 2001	9.3	515	114.1	8.8	4250.8
17 OCT 2001	9.5	521	112.0	8.8	4262.8
06 NOV 2001	10.0	546	106.3	8.8	4279.6

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

M24

COGEMA Mining Inc.**IRIGARAY RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 6
Well I.D. M25

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	15.5	692	111.9			

Date					
08 JAN 2001	10.5	604	94.4	8.6	4249.0
05 FEB 2001	10.5	600	95.5	8.6	4246.2
05 MAR 2001	10.9	604	95.6	8.5	4245.0
10 APR 2001	10.9	591	94.6	8.6	4256.5
16 MAY 2001	10.5	593	98.4	8.5	4262.4
03 JUL 2001	10.6	600	98.3	8.6	4245.3
30 JUL 2001	11.2	608	97.6	8.6	4239.7
21 AUG 2001	11.3	606	98.0	8.6	4245.7
12 SEP 2001	11.2	606	96.6	8.7	4241.5
17 OCT 2001	11.3	600	97.9	8.7	4258.8
06 NOV 2001	11.0	598	98.3	8.6	4281.2

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

M25

COGEMA Mining Inc.**IRIGARAY RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 7

Well I.D. M26

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	14.6	596	113.9			

Date

02 JAN 2001	9.0	540	101.7	8.7		4252.1
05 FEB 2001	9.2	540	102.6	8.7		4251.4
05 MAR 2001	9.5	543	103.4	8.6		4252.3
10 APR 2001	9.9	534	103.1	8.7		4259.5
16 MAY 2001	10.1	547	103.9	8.8		4260.7
03 JUL 2001	9.5	562	103.6	8.7		4236.7
30 JUL 2001	9.6	549	105.1	8.7		4245.3
21 AUG 2001	10.1	548	106.1	8.8		4253.2
06 NOV 2001	10.0	545	105.5	8.8		4277.0

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

M26

COGEMA Mining Inc.**IRIGARAY RANCH****PERIMETER ORE ZONE MONITOR WELL****2001**Mine Unit 7
Well I.D. M27

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	15.2	625	105.8			

Date						
02 JAN 2001	10.5	606	98.7	8.6		4232.3
05 FEB 2001	10.8	602	100.4	8.4		4228.0
05 MAR 2001	10.7	604	99.7	8.3		4237.1
10 APR 2001	10.9	594	98.8	8.6		4244.7
16 MAY 2001	10.7	598	100.4	8.5		4247.8
03 JUL 2001	10.9	633 *	103.9	8.6		4234.6
30 JUL 2001	11.4	610	104.3	8.6		4231.2
21 AUG 2001	11.3	609	101.7	8.7		4245.4
06 NOV 2001	10.9	601	103.5	8.7		4278.5

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

M27

COGEMA Mining Inc.**IRIGARAY RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 8

V-1 I.D. M28

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	15.5	715	110.9			

Date

05 FEB 2001	10.7	621	94.3	8.6		4259.3
30 MAY 2001	10.7	625	97.1	8.6		4267.0
31 JUL 2001	11.2	632	95.0	8.6		4258.2
13 NOV 2001	11.0	622	95.9	8.7		4286.0

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

M28

COGEMA Mining Inc.**IRIGARAY RANCH****PERIMETER ORE ZONE MONITOR WELL****2001**

Mine Unit 8

Well I.D. M29

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	16.1	702	109.8			

Date

05 FEB 2001	10.7	610	97.4	8.7		4240.1
30 MAY 2001	10.6	609	98.5	8.6		4251.3
31 JUL 2001	11.2	616	98.0	8.6		4245.2
13 NOV 2001	11.2	606	99.7	8.7		4283.9

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

M29

COGEMA Mining Inc.**IRIGARAY RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 9

V.I.D. M30

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	15.2	704	105.5			

Date

05 FEB 2001	10.7	624	95.5	8.6		4271.7
30 MAY 2001	10.5	624	96.2	8.5		4277.6
31 JUL 2001	11.0	631	99.9	8.6		4271.9
13 NOV 2001	11.0	621	97.0	8.7		4290.4

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

M30

COGEMA Mining Inc.**IRIGARAY RANCH****PERIMETER ORE ZONE MONITOR WELL****2001****Mine Unit 9****Well I.D. M31**

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	15.6	690	107.2			

Date

05 FEB 2001	12.1	630	106.1	8.6		4251.4
30 MAY 2001	11.9	629	107.2	8.5		4261.5
31 JUL 2001	12.4	635	106.7	8.6		4255.0
13 NOV 2001	12.5	625	107.4	8.6		4285.8

*** Values Exceed Upper Control Limit**

Negative U3O8 Grades Indicate Less Than Detection Limit.

M31

COGEMA Mining Inc.

IRIGARAY RANCH

PERIMETER ORE ZONE MONITOR WELL

Mine Unit 9

I.D. M32

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	16.1	707	107.4			

Date

05 FEB 2001	10.9	624	97.1	8.5		4278.5
30 MAY 2001	10.8	624	97.6	8.5		4283.7
31 JUL 2001	11.5	630	99.3	8.6		4279.6
13 NOV 2001	11.1	620	97.7	8.7		4293.6

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

M32

COGEMA Mining Inc.**IRIGARAY RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 9
Well I.D. M33

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	15.9	686	112			

Date						
05 FEB 2001	10.5	612	96.1	8.5		4259.1
30 MAY 2001	10.8	612	98.9	8.5		4267.0
31 JUL 2001	11.2	617	98.3	8.6		4261.8
13 NOV 2001	10.9	608	98.5	8.7		4285.8

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

M33

COGEMA Mining Inc.**IRIGARAY RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 1

I.D. T31

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	21.8	779	106.1			

Date

20 FEB 2001	14.2	702	89.8	8.5		4263.8
29 MAY 2001	13.3	696	91.8	8.5		4268.5
15 AUG 2001	13.8	688	92.1	8.4		4260.6
14 NOV 2001	14.4	701	91.4	8.5		4269.2

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

T31

COGEMA Mining Inc.**IRIGARAY RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 5
Well I.D. RS27

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	16.9	646	101.2			

Date						
13 FEB 2001	12.0	714	*	98.3	8.4	4256.3
06 JUN 2001	13.5	724	*	102.5	8.5	4266.0
07 JUN 2001	12.1	714	*	101.9	8.6	4266.0
11 JUN 2001	12.2	725	*	96.3	8.7	4262.8
19 JUN 2001	11.7	736	*	98.7	8.6	4259.5
25 JUN 2001	12.1	727	*	101.5	8.5	4258.1
03 JUL 2001	11.8	729	*	98.6	8.5	4256.0
09 JUL 2001	11.5	729	*	100.5	8.6	4246.3
16 JUL 2001	11.5	717	*	99.7	8.6	4248.3
23 JUL 2001	11.5	723	*	102.1	8.7	4250.3
30 JUL 2001	11.8	722	*	99.8	8.7	4249.2
06 AUG 2001	11.6	717	*	98.9	8.5	4251.0
14 AUG 2001	12.3	711	*	102.8	8.5	4251.4
20 AUG 2001	12.2	710	*	102.2	8.5	4252.7
27 AUG 2001	12.2	722	*	99.9	8.5	4248.8
04 SEP 2001	12.3	718	*	101.2	8.6	4248.2
10 SEP 2001	12.3	718	*	101.8	8.6	4246.5
17 SEP 2001	12.6	717	*	104.8	8.5	4248.6
24 SEP 2001	12.4	716	*	100.8	8.5	4256
01 OCT 2001	11.6	729	*	96.7	8.6	4250.3
07 OCT 2001	12.5	715	*	101.7	8.5	4256.4
15 OCT 2001	12.0	713	*	100.1	8.6	4261.7
22 OCT 2001	12.2	724	*	103.5	8.6	4269.7
29 OCT 2001	12.0	716	*	100.2	8.6	4275.0
05 NOV 2001	12.0	724	*	100.8	8.7	4279.7
12 NOV 2001	11.9	710	*	101.1	8.5	4280.8
19 NOV 2001	12.0	696	*	101.0	8.6	4280.2
26 NOV 2001	12.0	687	*	95.7	8.6	4282.0

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

RS27

COGEMA Mining Inc.**IRIGARAY RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 9

I.D. 16-151

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	16	702	110.2			

Date

05 FEB 2001	10.9	598	95.4	8.6		4268.5
30 MAY 2001	10.7	598	95.3	8.6		4275.4
31 JUL 2001	11.2	606	96.1	8.6		4270.8
13 NOV 2001	10.9	598	95.6	8.7		4290.8

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

16-151

IRIGARAY PROJECT

Interior Shallow Sand Monitor Wells

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR SHALLOW SAND MONITOR WELL**

Mine Unit 1
 V.I.D. SSM2

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	20.3	2075	128.4			

Date

20 FEB 2001	22.7	*	2008	108.8	7.9	4301.9
29 MAY 2001	22.5	*	2022	110.2	8.0	4302.6
15 AUG 2001	23.5	*	2006	111.8	8.1	4301.8
14 NOV 2001	23.8	*	1997	111.2	8.0	4301.0

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

SSM2

COGEMA Mining Inc.

IRIGARAY RANCH

INTERIOR SHALLOW SAND MONITOR WELL

2001

Mine Unit 2
Well I.D. SSM3

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	38.5	1451	219.1			

Date

02 JAN 2001	55.8	*	1806	*	150.1	7.7	4304.2
08 JAN 2001	56.1	*	1805	*	152.9	7.8	4304.3
15 JAN 2001	56.0	*	1804	*	153.3	7.7	4304.4
22 JAN 2001	56.1	*	1800	*	151.0	7.7	4304.4
30 JAN 2001	55.6	*	1785	*	148.0	7.7	4304.6
05 FEB 2001	56.5	*	1807	*	151.3	7.8	4304.5
12 FEB 2001	58.0	*	1796	*	150.5	7.8	4304.5
20 FEB 2001	58.0	*	1812	*	151.0	7.7	4304.6
26 FEB 2001	57.8	*	1779	*	148.9	7.9	4304.6
05 MAR 2001	59.0	*	1821	*	158.0	7.8	4304.5
12 MAR 2001	57.9	*	1799	*	152.7	7.8	4304.5
19 MAR 2001	58.4	*	1799	*	150.7	7.8	4304.5
26 MAR 2001	58.5	*	1794	*	151.2	7.7	4304.5
03 APR 2001	59.1	*	1822	*	151.4	7.8	4304.5
10 APR 2001	59.2	*	1797	*	150.5	7.8	4304.7
16 APR 2001	58.8	*	1790	*	152.1	7.8	4304.6
23 APR 2001	58.0	*	1818	*	155.2	7.8	4304.8
30 APR 2001	57.6	*	1828	*	155.3	7.8	4304.9
08 MAY 2001	57.7	*	1835	*	157.6	7.7	4304
14 MAY 2001	57.2	*	1830	*	160.5	7.8	4305
23 MAY 2001	56.5	*	1838	*	152.3	7.9	4305.3
29 MAY 2001	58.0	*	1839	*	153.0	7.8	4305.0
05 JUN 2001	57.7	*	1837	*	152.5	7.7	4305.2
11 JUN 2001	56.0	*	1833	*	151.2	7.8	4305.0
19 JUN 2001	56.9	*	1844	*	155.9	7.9	4304.6
25 JUN 2001	56.9	*	1836	*	152.3	7.8	4305.0
03 JUL 2001	57.2	*	1845	*	154.5	7.8	4306.2
09 JUL 2001	56.7	*	1847	*	155.4	7.8	4305.0
16 JUL 2001	57.5	*	1813	*	159.9	7.8	4305.0
23 JUL 2001	57.3	*	1832	*	158.5	7.9	4304.7
30 JUL 2001	59.3	*	1837	*	151.9	7.7	4304.6
06 AUG 2001	58.8	*	1830	*	152.0	7.7	4304.4
14 AUG 2001	60.8	*	1829	*	157.1	7.8	4304.3
20 AUG 2001	61.0	*	1815	*	162.9	7.8	4304.2
27 AUG 2001	59.3	*	1840	*	153.2	7.8	4303.9
04 SEP 2001	60.8	*	1828	*	160.4	7.9	4304.0
10 SEP 2001	60.9	*	1839	*	161.2	7.9	4303.8
17 SEP 2001	60.3	*	1838	*	162.3	7.9	4303.8
24 SEP 2001	61.6	*	1841	*	162.6	7.8	4303.6
01 OCT 2001	59.1	*	1854	*	150.5	7.9	4303.5
07 OCT 2001	59.6	*	1824	*	154.2	7.8	4302.3
15 OCT 2001	60.0	*	1828	*	151.0	8.0	4303.6
22 OCT 2001	60.2	*	1847	*	154.3	7.9	4304.0
29 OCT 2001	61.5	*	1861	*	160.2	7.9	4304.2
05 NOV 2001	59.3	*	1873	*	152.0	7.9	4304.5
12 NOV 2001	60.9	*	1868	*	154.0	7.8	4304.8
19 NOV 2001	61.8	*	1853	*	154.3	7.8	4305.2
26 NOV 2001	62.4	*	1828	*	150.6	7.8	4305.7
03 DEC 2001	62.7	*	1859	*	152.0	7.8	4305
10 DEC 2001	65.0	*	1863	*	157.1	7.9	4306.0
17 DEC 2001	63.3	*	1873	*	150.6	7.8	4306.3
26 DEC 2001	62.9	*	1855	*	150.7	7.8	4306.5

* Values Exceed Upper Control Limit

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR SHALLOW SAND MONITOR WELL**

Mine Unit 2

W.U.I.D. SSM4

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	23.5	883	275.5			

Date						
26 FEB 2001	18.9	681	288.9	*	8.4	4297.5
29 MAY 2001	18.7	695	280.1	*	8.4	4298.2
15 AUG 2001	15.4	717	221.4		8.3	4297.3
14 NOV 2001	17.0	718	249.1		8.3	4295.8

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

SSM4

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR SHALLOW SAND MONITOR WELL**

Mine Unit 3
Well I.D. SSM5

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	21.5	825	254.9			

Date					
20 FEB 2001	15.4	754	221.4	8.0	4300.7
29 MAY 2001	14.6	748	224.7	8.1	4301.7
09 AUG 2001	15.3	735	220.5	8.2	4300.3
14 NOV 2001	15.1	737	224.5	7.9	4299.7

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

SSM5

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR SHALLOW SAND MONITOR WELL**

Mine Unit 4

W-11.D. SSM6

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	16.3	2445	122.2			

Date

13 FEB 2001	11.2	2054	99.8	7.9		4304.1
30 MAY 2001	11.3	2055	102.1	7.9		4304.0
09 AUG 2001	11.5	2050	101.6	7.9		4304.0
14 NOV 2001	11.8	2040	101.7	7.8		4303.2

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

SSM6

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR SHALLOW SAND MONITOR WELL**

Mine Unit 5
Well I.D. SSM7

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	17.1	2604	119.4			

Date					
13 FEB 2001	12.9	2291	104.8	7.8	4304.8
30 MAY 2001	12.9	2307	102.2	7.9	4305.0
08 AUG 2001	12.7	2318	103.4	7.8	4304.7
14 NOV 2001	13.3	2308	106.6	7.8	4303.7

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

SSM7

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR SHALLOW SAND MONITOR WELL**

Mine Unit 5

U.D. SSM8

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	16.6	2389	112.2			

Date

13 FEB 2001	17.6	*	2121	100.9	7.9	4304.4
30 MAY 2001	18.9	*	2195	110.0	7.9	4304.7
08 AUG 2001	20.2	*	2242	107.4	7.9	4304.4
14 NOV 2001	21.4	*	2274	109.0	7.9	4303.4

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

SSM8

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR SHALLOW SAND MONITOR WELL**

Mine Unit 6
Well I.D. SSM9

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	15	2008	117.8			

Date					
08 JAN 2001	8.9	1527	95.4	7.9	4307.0
13 FEB 2001	9.3	1515	96.2	7.8	4307.3
05 MAR 2001	9.2	1520	95.8	7.8	4307.4
10 APR 2001	9.2	1506	97.1	7.9	4307.5
16 MAY 2001	8.8	1492	100.8	7.9	4308.0
03 JUL 2001	9.1	1512	101.6	8.1	4307.9
30 JUL 2001	9.4	1529	97.5	8.0	4307.4
21 AUG 2001	9.6	1521	99.2	8.0	4307.0
12 SEP 2001	9.6	1529	98.3	8.1	4303.7
17 OCT 2001	9.5	1513	99.2	8.0	4305.2
06 NOV 2001	9.7	1497	102.2	8.0	4305.9

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

SSM9

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR SHALLOW SAND MONITOR WELL**

Mine Unit 6

V.I.D. SSM10

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	15.5	1955	177.4			

Date

02 JAN 2001	10.7	1589	109.8	7.9		4306.7
12 FEB 2001	11.1	1573	111.4	7.9		4307.2
05 MAR 2001	11.1	1593	111.3	7.8		4307.1
10 APR 2001	11.6	1593	112.5	8.1		4307.3
16 MAY 2001	11.2	1592	115.5	8.0		4307.8
03 JUL 2001	11.4	1620	116.6	8.3		4307.7
30 JUL 2001	11.6	1626	112.4	8.3		4307.1
21 AUG 2001	12.1	1614	117.0	8.2		4306.7
12 SEP 2001	11.6	1619	113.1	8.2		4306.5
17 OCT 2001	11.4	1589	112.2	8.0		4305.0
06 NOV 2001	11.3	1569	113.1	8.0		4305.7

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

SSM10

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR SHALLOW SAND MONITOR WELL**

Mine Unit 6
Well I.D. SSM11

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	16.2	2784	122.9			

Date					
08 JAN 2001	12.3	2409	93.8	7.8	4308.4
13 FEB 2001	11.9	2380	90.8	7.8	4308.7
05 MAR 2001	12.7	2419	95.6	7.8	4308.7
10 APR 2001	12.3	2366	91.6	7.8	4308.9
16 MAY 2001	11.7	2345	95.9	7.9	4309.4
03 JUL 2001	12.0	2376	96.3	8.1	4309.3
30 JUL 2001	12.3	2402	93.8	8.0	4308.7
21 AUG 2001	13.4	2428	96.7	7.9	4308.4
12 SEP 2001	13.2	2448	96.4	8.0	4308.3
17 OCT 2001	13.2	2386	98.2	8.0	4306.7
06 NOV 2001	12.4	2372	94.4	8.0	4307.5

* Values Exceed Upper Control Limit

Negative U308 Grades Indicate Less Than Detection Limit.

SSM11

COGEMA Mining Inc.

IRIGARAY RANCH

INTERIOR SHALLOW SAND MONITOR WELL

Mine Unit 8

W-11 I.D. SSM18

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	14.7	1849	119.4			

Date

02 JAN 2001	18.3	*	1766	156.2	*	7.7	4308.4
08 JAN 2001	18.0	*	1751	154.5	*	7.8	4308.5
15 JAN 2001	18.5	*	1771	158.5	*	7.6	4308.5
22 JAN 2001	18.6	*	1779	157.8	*	7.7	4308.6
30 JAN 2001	18.3	*	1753	157.5	*	7.6	4308.8
05 FEB 2001	17.9	*	1755	152.9	*	7.7	4308.7
12 FEB 2001	18.2	*	1741	153.1	*	7.7	4308.7
20 FEB 2001	18.2	*	1754	153.5	*	7.7	4308.7
26 FEB 2001	17.9	*	1724	149.3	*	7.8	4308.7
05 MAR 2001	18.6	*	1780	164.1	*	7.8	4308.7
12 MAR 2001	18.4	*	1745	154.5	*	7.8	4308.7
19 MAR 2001	19.4	*	1763	160.0	*	7.8	4308.7
26 MAR 2001	18.6	*	1754	154.9	*	7.7	4308.7
03 APR 2001	18.2	*	1776	151.6	*	7.8	4308.7
10 APR 2001	18.5	*	1761	153.7	*	7.8	4308.8
16 APR 2001	18.7	*	1754	158.5	*	7.8	4308.7
23 APR 2001	19.0	*	1812	162.7	*	7.7	4308.9
30 APR 2001	18.5	*	1807	160.8	*	7.7	4308.4
08 MAY 2001	17.9	*	1802	155.8	*	7.7	4309.0
14 MAY 2001	18.3	*	1822	159.6	*	7.8	4309.0
23 MAY 2001	18.1	*	1803	159.4	*	7.8	4309.0
30 MAY 2001	18.2	*	1804	160.3	*	7.8	4309.1
05 JUN 2001	18.5	*	1803	160.6	*	7.7	4309.1
11 JUN 2001	18.5	*	1814	162.7	*	7.8	4309.1
19 JUN 2001	17.9	*	1831	157.7	*	7.9	4309.0
25 JUN 2001	18.1	*	1808	157.2	*	7.8	4309.0
03 JUL 2001	18.1	*	1821	157.8	*	7.8	4309.0
09 JUL 2001	18.4	*	1842	162.0	*	7.9	4308.6
16 JUL 2001	18.2	*	1794	159.5	*	7.8	4308.6
23 JUL 2001	18.2	*	1814	160.7	*	7.9	4308.8
30 JUL 2001	18.5	*	1811	154.7	*	8.0	4308.8
06 AUG 2001	18.8	*	1813	159.1	*	7.7	4308.4
14 AUG 2001	19.4	*	1807	162.1	*	7.8	4308.0
20 AUG 2001	20.1	*	1811	167.4	*	7.8	4308.6
27 AUG 2001	18.8	*	1821	157.2	*	7.8	4308.2
04 SEP 2001	18.9	*	1822	165.1	*	7.9	4308.3
10 SEP 2001	18.9	*	1823	158.4	*	7.8	4308.0
17 SEP 2001	20.0	*	1834	166.4	*	7.8	4308.1
24 SEP 2001	20.5	*	1842	168.9	*	7.7	4307.8
01 OCT 2001	19.8	*	1863	163.8	*	7.8	4308.0
07 OCT 2001	20.4	*	1845	168.9	*	7.7	4306.5
15 OCT 2001	19.4	*	1821	159.1	*	8.0	4307.8
22 OCT 2001	19.5	*	1843	161.8	*	7.9	4308.2
29 OCT 2001	19.5	*	1840	162.8	*	7.8	4308.2
05 NOV 2001	19.7	*	1877	165.9	*	7.8	4308.8
12 NOV 2001	19.2	*	1859	162.1	*	7.7	4309.0
19 NOV 2001	19.1	*	1839	158.4	*	7.8	4309.2
26 NOV 2001	20.5	*	1835	164.4	*	7.8	4309.1
03 DEC 2001	18.9	*	1826	152.0	*	7.8	4309.7
10 DEC 2001	19.1	*	1842	151.2	*	7.9	4309.8
17 DEC 2001	20.0	*	1834	160.0	*	7.7	4310.0
26 DEC 2001	18.8	*	1818	159.4	*	7.6	4310.3

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR SHALLOW SAND MONITOR WELL**

2001

Mine Unit 8
Well I.D. SSM19

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.7	1636	114.1			

Date						
12 FEB 2001	8.8	1482	88.4	8.1		4308.9
30 MAY 2001	8.6	1493	88.5	8.3		4310.1
31 JUL 2001	8.9	1504	86.9	8.2		4309.7
07 NOV 2001	8.9	1473	87.3	8.3		4308.1

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

SSM19

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR SHALLOW SAND MONITOR WELL**

Mine Unit 9

I.D. SSM34

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.2	1698	110.4			

Date

12 FEB 2001	8.9	1213	92.6	8.0		4308.4
30 MAY 2001	8.7	1229	94.3	8.1		4308.6
31 JUL 2001	9.2	1233	98.8	8.1		4308.2
13 NOV 2001	9.4	1210	96.2	8.3		4300.0

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

SSM34

COGEMA Mining Inc.

IRIGARAY RANCH

INTERIOR SHALLOW SAND MONITOR WELL

Mine Unit 9
Well I.D. SSM35

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	14.4	1688	132.7			

Date					
05 FEB 2001	9.0	1295	107.8	8.2	4308.7
30 MAY 2001	9.6	1319	108.9	8.3	4309.2
31 JUL 2001	9.6	1306	105.9	8.2	4309.0
13 NOV 2001	9.6	1290	107.7	8.3	4307.7

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

SSM35

COGEMA Mining Inc.**IRIGARAY RANCH**

Mine Unit 9

INTERIOR SHALLOW SAND MONITOR WELL

W-11 I.D. SSM36

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.7	1565	119.6			

Date

05 FEB 2001	8.4	1275	102.0	8.1		4310.5
30 MAY 2001	8.4	1281	105.5	8.2		4310.8
31 JUL 2001	8.9	1308	106.9	8.3		4310.7
07 NOV 2001	9.3	1261	110.1	8.2		4309.0

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

SSM36

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR SHALLOW SAND MONITOR WELL**

2001

Mine Unit 7
Well I.D. SSM37

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	14.3	1813	120			

Date						
08 JAN 2001	10.9	1652	116.8	7.9		4304.2
12 FEB 2001	11.1	1650	116.1	7.9		4304.6
05 MAR 2001	11.2	1655	117.0	7.9		4304.5
16 APR 2001	11.6	1659	119.4	7.9		4304.6
16 MAY 2001	11.2	1662	124.1 *	8.0		4305.1
03 JUL 2001	10.9	1698	120.4 *	8.2		4305.0
30 JUL 2001	11.6	1699	120.0	8.0		4304.4
21 AUG 2001	12.1	1695	125.5 *	7.9		4304.0
06 NOV 2001	11.4	1657	118.9	8.1		4302.9

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

SSM37

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR SHALLOW SAND MONITOR WELL**

Mine Unit 7

W.D. SSM38

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	16.2	2800	118.8			

Date

08 JAN 2001	10.7	2204	101.0	7.9		4306.4
13 FEB 2001	10.9	2171	99.5	7.9		4306.8
05 MAR 2001	10.7	2212	98.6	7.9		4306.6
16 APR 2001	10.9	2161	100.3	7.9		4306.7
16 MAY 2001	10.2	2071	95.6	8.0		4307.3
03 JUL 2001	10.8	2270	104.3	8.1		4307.3
30 JUL 2001	11.1	2208	101.1	7.9		4306.8
21 AUG 2001	11.5	2216	104.2	7.9		4306.4
06 NOV 2001	10.9	2042	95.1	8.1		4300.3

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

SSM38

COGEMA Mining Inc.

IRIGARAY RANCH

INTERIOR SHALLOW SAND MONITOR WELL

Mine Unit 7
Well I.D. SSM39

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	14.5	2071	104.4			

Date						
08 JAN 2001	11.9	1817	106.7	*	7.9	4304.9
12 FEB 2001	12.3	1800	108.1	*	7.8	4305.2
05 MAR 2001	12.1	1810	107.1	*	7.8	4305.2
16 APR 2001	12.4	1798	108.8	*	7.9	4305.2
16 MAY 2001	11.9	1793	111.4	*	8.0	4305.8
03 JUL 2001	11.8	1805	109.4	*	8.3	4305.7
30 JUL 2001	12.2	1835	107.3	*	8.0	4305.2
21 AUG 2001	12.8	1822	111.6	*	7.9	4305.0

* Values Exceed Upper Control Limit

Negative U308 Grades Indicate Less Than Detection Limit.

SSM39

COGEMA Mining Inc.

IRIGARAY RANCH

INTERIOR SHALLOW SAND MONITOR WELL

Mine Unit 8

I.D. SSM40

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.6	1672	109.2			

Date

02 JAN 2001	13.9	*	1568	113.0	*	8.0	4310.0
08 JAN 2001	13.8	*	1550	112.9	*	8.0	4310.2
15 JAN 2001	13.8	*	1561	114.3	*	7.9	4310.2
22 JAN 2001	14.2	*	1582	115.4	*	7.9	4310.2
30 JAN 2001	14.0	*	1560	115.4	*	7.9	4310.4
05 FEB 2001	14.0	*	1566	114.0	*	8.0	4310.4
12 FEB 2001	14.4	*	1592	114.4	*	8.0	4310.4
20 FEB 2001	14.1	*	1549	113.7	*	8.0	4310.4
26 FEB 2001	14.0	*	1534	111.1	*	8.1	4310.4
05 MAR 2001	14.8	*	1608	117.6	*	8.0	4310.4
12 MAR 2001	14.2	*	1543	114.9	*	8.0	4310.4
19 MAR 2001	14.1	*	1549	112.6	*	8.0	4310.4
26 MAR 2001	13.9	*	1531	111.1	*	7.9	4310.4
03 APR 2001	13.6	*	1555	109.9	*	8.0	4310.4
10 APR 2001	14.6	*	1575	114.6	*	8.0	4310.5
16 APR 2001	14.5	*	1572	115.8	*	8.1	4310.4
23 APR 2001	14.0	*	1569	116.6	*	8.0	4310.0
30 APR 2001	14.4	*	1631	117.8	*	8.0	4310.6
08 MAY 2001	13.1	*	1542	111.7	*	7.9	4310.7
14 MAY 2001	14.8	*	1622	117.5	*	7.9	4311.5
23 MAY 2001	13.7	*	1459	105.9	*	8.1	4310.7
30 MAY 2001	13.6	*	1592	116.4	*	8.1	4310.8
05 JUN 2001	13.7	*	1575	115.7	*	7.9	4310.6
11 JUN 2001	13.6	*	1587	116.3	*	8.0	4310.8
19 JUN 2001	12.8	*	1547	112.3	*	8.2	4310.8
25 JUN 2001	14.3	*	1633	117.7	*	8.0	4310.8
03 JUL 2001	12.9	*	1531	111.7	*	8.0	4310.3
09 JUL 2001	13.8	*	1631	116.4	*	8.2	4310.4
16 JUL 2001	14.2	*	1608	116.9	*	8.1	4310.4
23 JUL 2001	13.4	*	1465	107.8	*	8.3	4310.4
30 JUL 2001	13.8	*	1581	113.2	*	8.2	4310.4
06 AUG 2001	14.2	*	1598	114.5	*	8.0	4310.1
14 AUG 2001	13.0	*	1434	110.5	*	8.1	4310.1
20 AUG 2001	15.1	*	1612	120.3	*	8.0	4310.1
27 AUG 2001	12.9	*	1503	108.3	*	8.1	4309.7
04 SEP 2001	14.0	*	1538	115.1	*	8.1	4310.0
10 SEP 2001	14.3	*	1589	115.0	*	8.1	4309.7
17 SEP 2001	14.1	*	1591	112.8	*	8.1	4309.5
24 SEP 2001	13.6	*	1599	107.3	*	7.9	4309.5
01 OCT 2001	13.1	*	1509	108.0	*	8.1	4309.5
07 OCT 2001	12.3	*	1440	104.1	*	7.9	4310.0
15 OCT 2001	14.1	*	1553	112.3	*	8.3	4309.8
22 OCT 2001	13.6	*	1532	111.6	*	8.2	4309.8
29 OCT 2001	13.9	*	1554	112.1	*	8.1	4310.1
05 NOV 2001	14.6	*	1660	116.2	*	8.2	4310.4
12 NOV 2001	12.9	*	1518	108.8	*	8.2	4310.6
19 NOV 2001	14.2	*	1581	113.3	*	8.3	4310.6
26 NOV 2001	14.5	*	1566	111.8	*	8.2	4311.0
03 DEC 2001	14.7	*	1601	112.4	*	8.4	4311.4
10 DEC 2001	14.5	*	1598	108.0	*	8.3	4311.5
17 DEC 2001	14.4	*	1593	111.9	*	8.0	4311.7
27 DEC 2001	15.3	*	1634	116.6	*	8.0	4311.9

* Values Exceed Upper Control Limit

40

Negative U3O8 Grades Indicate Less Than Detection Limit.

SSM40

COGEMA Mining Inc.

IRIGARAY RANCH

INTERIOR SHALLOW SAND MONITOR WELL

Mine Unit 4
Well I.D. SSM41

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	24.9	2566	126.8			

Date						
02 JAN 2001	33.0	*	2435	134.1	*	7.7
08 JAN 2001	33.5	*	2448	135.0	*	7.7
15 JAN 2001	33.0	*	2428	134.6	*	7.7
22 JAN 2001			2425			
30 JAN 2001	33.3	*	2408	133.9	*	7.6
05 FEB 2001	33.1	*	2435	132.7	*	7.7
12 FEB 2001	34.3	*	2411	133.8	*	7.7
20 FEB 2001	33.3	*	2430	130.4	*	7.6
26 FEB 2001	33.4	*	2392	130.3	*	7.8
05 MAR 2001	33.5	*	2444	139.0	*	7.7
12 MAR 2001	34.1	*	2427	135.9	*	7.7
19 MAR 2001	33.7	*	2417	131.2	*	7.7
26 MAR 2001	33.9	*	2401	132.2	*	7.6
03 APR 2001	34.7	*	2451	134.6	*	7.7
10 APR 2001	34.7	*	2409	133.8	*	7.7
16 APR 2001	34.1	*	2394	136.6	*	7.8
23 APR 2001	34.8	*	2457	142.4	*	7.8
30 APR 2001	34.0	*	2462	136.9	*	7.7
08 MAY 2001	33.9	*	2471	138.1	*	7.7
14 MAY 2001	34.3	*	2457	142.4	*	7.7
23 MAY 2001	34.0	*	2469	141.3	*	7.9
30 MAY 2001	33.8	*	2467	141.9	*	7.9
05 JUN 2001	34.4	*	2459	143.3	*	7.7
11 JUN 2001	33.8	*	2422	140.8	*	7.8
19 JUN 2001	33.7	*	2487	141.1	*	8.0
25 JUN 2001	34.0	*	2475	139.6	*	7.8
03 JUL 2001	33.5	*	2481	138.2	*	7.8
09 JUL 2001	33.8	*	2482	139.8	*	8.0
16 JUL 2001	34.1	*	2446	139.4	*	7.8
23 JUL 2001	34.2	*	2463	143.1	*	7.9
30 JUL 2001	35.2	*	2456	136.6	*	8.0
06 AUG 2001	35.5	*	2464	138.6	*	7.7
14 AUG 2001	36.2	*	2435	134.5	*	8.0
20 AUG 2001	38.8	*	2472	147.9	*	7.8
27 AUG 2001	37.6	*	2474	146.1	*	7.9
04 SEP 2001	37.9	*	2487	146.2	*	8.0
10 SEP 2001	36.3	*	2467	140.7	*	8.0
17 SEP 2001	36.7	*	2470	143.2	*	7.9
24 SEP 2001	36.9	*	2475	140.2	*	7.7
01 OCT 2001	36.3	*	2485	139.9	*	7.9
07 OCT 2001	39.4	*	2511	138.9	*	8.0
15 OCT 2001	36.6	*	2447	121.1	*	8.1
22 OCT 2001	37.2	*	2456	144.7	*	7.9
29 OCT 2001	36.2	*	2486	136.4	*	8.1
05 NOV 2001	35.5	*	2497	137.4	*	8.0
12 NOV 2001	36.6	*	2492	142.4	*	7.9
19 NOV 2001	36.9	*	2464	141.0	*	8.1
26 NOV 2001	36.6	*	2410	135.7	*	8.0
03 DEC 2001	36.4	*	2458	134.3	*	8.1
10 DEC 2001	36.9	*	2464	134.1	*	7.9
17 DEC 2001	36.9	*	2485	136.6	*	7.8
26 DEC 2001	36.3	*	2446	140.9	*	7.6

* Values Exceed Upper Control Limit

Negative U308 Grades Indicate Less Than Detection Limit.

COGEMA Mining Inc.

IRIGARAY RANCH

INTERIOR SHALLOW SAND MONITOR WELL

Mine Unit 3

WELL I.D. SSM42

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	23.3	1571	213.2			

Date

02 JAN 2001	53.3	*	2311	*	130.4	7.8	4300.0
08 JAN 2001	55.1	*	2316	*	129.4	7.8	4300.1
15 JAN 2001	55.7	*	2321	*	130.4	7.7	4300.2
22 JAN 2001	55.6	*	2323	*	128.7	7.7	4300.2
30 JAN 2001	55.5	*	2266	*	133.7	7.7	4300.3
05 FEB 2001	55.1	*	2311	*	128.2	7.7	4300.3
12 FEB 2001	56.1	*	2293	*	128.6	7.7	4300.2
20 FEB 2001	56.6	*	2316	*	128.5	7.7	4300.3
26 FEB 2001	56.7	*	2288	*	125.6	7.8	4300.2
05 MAR 2001	57.9	*	2331	*	131.0	7.7	4300.3
12 MAR 2001	58.4	*	2321	*	132.7	7.8	4300.3
19 MAR 2001	59.3	*	2309	*	133.2	7.8	4300.3
26 MAR 2001	58.7	*	2302	*	131.3	7.7	4300.3
03 APR 2001	56.9	*	2327	*	129.0	7.7	4300.2
10 APR 2001	57.0	*	2274	*	130.1	7.7	4300.4
16 APR 2001	56.8	*	2287	*	133.4	7.8	4300.2
23 APR 2001	56.3	*	2317	*	132.5	7.8	4300.1
30 APR 2001	56.3	*	2340	*	134.4	7.7	4300.4
08 MAY 2001	57.0	*	2341	*	135.9	7.7	4300.6
14 MAY 2001	57.3	*	2351	*	135.4	7.8	4300.5
23 MAY 2001	56.0	*	2330	*	133.6	7.8	4300.8
29 MAY 2001	59.9	*	2367	*	135.1	7.7	4300.9
05 JUN 2001	57.8	*	2332	*	137.3	7.7	4300.7
11 JUN 2001	58.7	*	2356	*	142.0	7.8	4300.9
19 JUN 2001	57.1	*	2363	*	136.6	7.8	4300.6
25 JUN 2001	59.0	*	2368	*	138.8	7.7	4300.8
03 JUL 2001	59.9	*	2376	*	145.4	7.8	4300.0
09 JUL 2001	58.7	*	2360	*	137.7	7.8	4300.6
16 JUL 2001	56.6	*	2300	*	135.3	7.8	4300.6
23 JUL 2001	57.2	*	2333	*	141.1	7.9	4300.2
30 JUL 2001	59.4	*	2344	*	135.1	7.7	4300.4
06 AUG 2001	59.4	*	2343	*	135.4	7.6	4300.2
14 AUG 2001	59.9	*	2311	*	142.1	7.6	4300.3
20 AUG 2001	61.6	*	2324	*	143.5	7.6	4300.1
27 AUG 2001	58.4	*	2353	*	132.9	7.7	4300.0
04 SEP 2001	59.3	*	2337	*	139.3	7.9	4300.0
10 SEP 2001	61.6	*	2345	*	145.1	7.8	4298.0
17 SEP 2001	59.0	*	2342	*	135.4	7.8	4299.8
24 SEP 2001	61.8	*	2345	*	143.0	7.8	4299.7
01 OCT 2001	58.6	*	2366	*	132.3	7.9	4299.7
07 OCT 2001	59.4	*	2330	*	133.0	7.7	4300.0
15 OCT 2001	57.8	*	2311	*	130.2	8.0	4299.6
22 OCT 2001	59.2	*	2341	*	138.0	7.8	4299.7
29 OCT 2001	58.2	*	2369	*	135.0	7.9	4299.9
05 NOV 2001	61.3	*	2377	*	141.2	7.9	4300.0
12 NOV 2001	61.3	*	2390	*	138.3	7.7	4300.1
19 NOV 2001	62.6	*	2367	*	138.8	7.8	4300.1
26 NOV 2001	63.6	*	2333	*	136.2	7.8	4300.5
03 DEC 2001	64.3	*	2312	*	137.7	7.9	4300.7
10 DEC 2001	67.0	*	2402	*	141.4	7.9	4300.9
17 DEC 2001	68.2	*	2413	*	141.3	7.9	4301.1
26 DEC 2001	67.8	*	2363	*	146.2	7.7	4301.2

* Values Exceed Upper Control Limit

Negative U308 Grades Indicate Less Than Detection Limit.

COGEMA Mining Inc.

IRIGARAY RANCH

INTERIOR SHALLOW SAND MONITOR WELL

2001

Mine Unit 1
Well I.D. SSM43

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	25.6	1456	170.4			

Date							
02 JAN 2001	34.2	*	1704	*	140.5	7.9	4303.1
08 JAN 2001	34.8	*	1715	*	142.0	7.9	4303.2
15 JAN 2001	34.4	*	1709	*	141.3	7.9	4303.2
22 JAN 2001	33.5	*	1708	*	135.0	7.7	4303.3
30 JAN 2001	34.7	*	1686	*	141.9	7.8	4303.4
05 FEB 2001	35.0	*	1708	*	142.8	7.9	4303.4
12 FEB 2001	35.3	*	1701	*	140.3	7.9	4303.4
20 FEB 2001	35.3	*	1716	*	140.0	7.8	4303.4
26 FEB 2001	35.0	*	1687	*	137.9	8.0	4303.4
05 MAR 2001	35.6	*	1718	*	142.0	7.9	4303.4
12 MAR 2001	35.5	*	1710	*	137.4	8.0	4303.4
19 MAR 2001	34.9	*	1698	*	138.1	8.0	4303.4
26 MAR 2001	35.7	*	1688	*	144.5	7.9	4303.4
03 APR 2001	36.3	*	1716	*	143.4	8.0	4303.3
10 APR 2001	35.3	*	1687	*	138.9	8.0	4303.5
16 APR 2001	34.9	*	1684	*	144.8	8.0	4303.5
23 APR 2001	35.2	*	1703	*	145.2	7.9	4303.6
30 APR 2001	34.4	*	1724	*	142.4	7.9	4303.7
08 MAY 2001	34.1	*	1718	*	141.4	8.0	4303.7
14 MAY 2001	34.0	*	1719	*	147.9	8.0	4304.0
23 MAY 2001	34.8	*	1711	*	150.7	8.1	4304.0
29 MAY 2001	35.5	*	1726	*	140.2	8.0	4304.0
05 JUN 2001	34.1	*	1712	*	140.7	7.9	4303.8
11 JUN 2001	34.5	*	1729	*	143.4	8.0	4303.9
19 JUN 2001	33.8	*	1730	*	141.2	8.1	4303.9
25 JUN 2001	34.5	*	1728	*	141.4	7.9	4303.8
03 JUL 2001	34.4	*	1738	*	141.1	8.0	4303.8
09 JUL 2001	34.0	*	1719	*	141.8	8.1	4303.6
16 JUL 2001	34.8	*	1684	*	144.9	8.0	4303.5
23 JUL 2001	33.7	*	1715	*	141.0	8.1	4303.1
30 JUL 2001	35.9	*	1721	*	142.6	8.2	4303.1
06 AUG 2001	36.0	*	1721	*	142.2	7.8	4303.3
14 AUG 2001	36.3	*	1707	*	139.2	8.0	4303.0
20 AUG 2001	36.6	*	1714	*	142.8	7.9	4303.0
27 AUG 2001	37.3	*	1741	*	146.3	7.9	4303.0
04 SEP 2001	37.0	*	1728	*	145.3	8.1	4302.8
10 SEP 2001	36.2	*	1724	*	141.1	8.1	4302.7
17 SEP 2001	36.7	*	1734	*	144.0	8.1	4302.7
24 SEP 2001	36.9	*	1740	*	142.2	8.0	4302.7
01 OCT 2001	37.3	*	1750	*	145.0	8.0	4302.5
07 OCT 2001	37.9	*	1724	*	148.6	7.9	4302.0
15 OCT 2001	37.3	*	1705	*	141.8	8.2	4302.6
22 OCT 2001	36.9	*	1740	*	142.7	8.2	4302.9
29 OCT 2001	36.2	*	1748	*	140.3	8.2	4303.2
05 NOV 2001	36.4	*	1764	*	141.1	8.2	4303.4
12 NOV 2001	36.8	*	1750	*	143.8	7.9	4303.8
19 NOV 2001	37.3	*	1726	*	142.7	8.2	4303.8
26 NOV 2001	37.4	*	1709	*	139.2	8.0	4304.3
03 DEC 2001	38.9	*	1727	*	147.1	8.2	4304.0
10 DEC 2001	37.4	*	1731	*	136.3	8.0	4304.9
17 DEC 2001	37.9	*	1737	*	140.8	8.0	4305.1
26 DEC 2001	36.0	*	1702	*	141.2	7.7	4305.1

* Values Exceed Upper Control Limit

Negative U308 Grades Indicate Less Than Detection Limit.

IRIGARAY PROJECT
Interior Deep Sand Monitor Wells

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR DEEP SAND MONITOR WELL**

Mine Unit 1

V I.D. DM1

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	16.2	609	207.4			

Date

20 FEB 2001	9.5	482	121.9	8.3		4295.3
29 MAY 2001	9.7	487	119.6	8.5		4295.5
15 AUG 2001	9.9	486	112.7	8.6		4294.8
14 NOV 2001	9.3	486	118.9	8.6		4292.7

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

DM1

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR DEEP SAND MONITOR WELL**

Mine Unit 1
Well I.D. DM2

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	15.1	757	187.1			

Date						
20 FEB 2001	8.6	605	187.4	*	8.1	4277.7
29 MAY 2001	8.9	609	189.3	*	8.3	4279.5
15 AUG 2001	8.8	603	187.7	*	8.5	4276.5
14 NOV 2001	8.9	604	198.8	*	8.4	4276.3

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

DM2

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR DEEP SAND MONITOR WELL**

Mine Unit 2

2001

V I.D. DM3

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	15.8	677	240.9			

Date

26 FEB 2001	13.7	575	184.3	8.3		4276.7
29 MAY 2001	14.6	607	211.5	8.3		4278.8
15 AUG 2001	14.9	596	205.2	8.5		4273.3
14 NOV 2001	15.2	592	206.5	8.4		4277.9

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

DM3

COGEMA Mining Inc.

IRIGARAY RANCH

INTERIOR DEEP SAND MONITOR WELL

2001

Mine Unit 4
Well I.D. DM4

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	14.4	603	117.6			

Date

13 FEB 2001	9.3	518	99.5	8.9		4263.4
30 MAY 2001	9.3	519	102.4	8.9		4269.0
09 AUG 2001	10.2	523	102.6	9.0		4256.3
14 NOV 2001	10.1	521	107.8	8.9		4278.4

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

DM4

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR DEEP SAND MONITOR WELL**

Mine Unit 2

I.D. DM5

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	15.7	675	206			

Date

20 FEB 2001	8.4	617	203.1		8.1	4267.6
29 MAY 2001	8.3	625	209.4	*	8.2	4259.1
15 AUG 2001	8.8	619	209.4	*	8.3	4266.4
14 NOV 2001	8.9	614	212.3	*	8.2	4264.2

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

DM5

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR DEEP SAND MONITOR WELL**

Mine Unit 5
Well I.D. DM9

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	16.3	647	132.7			

Date					
13 FEB 2001	9.6	524	100.4	8.8	4262.6
30 MAY 2001	9.6	527	103.2	8.6	4264.7
09 AUG 2001	9.9	533	101.5	8.8	4251.2
14 NOV 2001	9.8	524	102.2	8.8	4280.1

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

DM9

COGEMA Mining Inc.

IRIGARAY RANCH

INTERIOR DEEP SAND MONITOR WELL

Mine Unit 6

I.D. DM10

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	16.4	606	107.5			

Date						
02 JAN 2001	30.1	*	944	*	254.7	8.2
08 JAN 2001	29.6	*	946	*	254.5	8.3
15 JAN 2001	29.7	*	939	*	252.8	8.2
22 JAN 2001	30.6	*	945	*	267.2	8.2
30 JAN 2001	29.6	*	926	*	251.3	8.2
05 FEB 2001	28.8	*	918	*	242.9	8.1
12 FEB 2001	30.5	*	938	*	249.5	8.3
20 FEB 2001	29.9	*	888	*	234.4	8.2
26 FEB 2001	29.4	*	872	*	233.9	8.3
05 MAR 2001	30.9	*	916	*	252.6	8.2
12 MAR 2001	31.8	*	901	*	251.9	8.3
19 MAR 2001	32.7	*	931	*	252.6	8.3
26 MAR 2001	34.6	*	935	*	272.9	8.2
03 APR 2001	34.2	*	954	*	264.5	8.3
10 APR 2001	35.7	*	944	*	270.1	8.2
16 APR 2001	34.9	*	947	*	273.0	8.2
23 APR 2001	36.2	*	976	*	281.8	8.2
30 APR 2001	35.8	*	978	*	280.6	8.2
08 MAY 2001	35.0	*	980	*	279.8	8.2
14 MAY 2001	35.0	*	982	*	281.9	8.2
23 MAY 2001	35.6	*	970	*	284.9	8.3
30 MAY 2001	35.0	*	971	*	293.9	8.2
05 JUN 2001	34.6	*	963	*	268.6	8.2
11 JUN 2001	35.0	*	951	*	265.3	8.2
19 JUN 2001	35.4	*	960	*	264.2	8.3
25 JUN 2001	36.7	*	943	*	261.4	8.2
03 JUL 2001	35.8	*	941	*	257.5	8.2
09 JUL 2001	33.2	*	889	*	248.9	8.3
16 JUL 2001	29.3	*	841	*	224.5	8.2
23 JUL 2001	29.9	*	851	*	229.3	8.3
30 JUL 2001	32.6	*	876	*	229.0	8.3
06 AUG 2001	26.5	*	787	*	198.8	8.2
14 AUG 2001	26.4	*	772	*	196.5	8.3
20 AUG 2001	32.3	*	826	*	228.8	8.2
27 AUG 2001	33.1	*	846	*	231.2	8.2
04 SEP 2001	28.2	*	793	*	201.5	8.3
10 SEP 2001	29.6	*	806	*	208.7	8.3
17 SEP 2001	34.4	*	872	*	231.5	8.3
24 SEP 2001	37.5	*	919	*	245.3	8.2
01 OCT 2001	37.0	*	914	*	248.9	8.2
07 OCT 2001	36.3	*	866	*	235.5	8.1
15 OCT 2001	37.0	*	889	*	242.9	8.4
22 OCT 2001	37.3	*	904	*	248.1	8.2
29 OCT 2001	38.2	*	926	*	257.4	8.3
05 NOV 2001	36.5	*	935	*	252.1	8.3
12 NOV 2001	35.6	*	942	*	260.5	8.1
19 NOV 2001	36.7	*	943	*	264.3	8.4
26 NOV 2001	37.2	*	923	*	229.4	8.2
03 DEC 2001	36.6	*	922	*	242.2	8.4
10 DEC 2001	36.2	*	904	*	239.4	8.0
17 DEC 2001	35.3	*	888	*	241.4	8.1
26 DEC 2001	34.5	*	863	*	231.5	8.2

* Values Exceed Upper Control Limit

50

Negative U3O8 Grades Indicate Less Than Detection Limit.

DM10

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR DEEP SAND MONITOR WELL**

Mine Unit 7

Well I.D. DM11

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	15	607	104.7			

Date

08 JAN 2001	10.1	556	97.2	8.6		4256.9
13 FEB 2001	10.2	549	95.9	8.5		4263.2
05 MAR 2001	10.2	558	95.9	8.5		4259.3
16 APR 2001	10.6	537	96.3	8.6		4260.7
16 MAY 2001	10.3	545	101.4	8.7		4267.8
03 JUL 2001	10.1	586	98.9	8.8		4261.3
30 JUL 2001	10.8	558	99.3	8.7		4253.0
21 AUG 2001	11.0	559	102.3	8.6		4256.4
06 NOV 2001	10.5	553	97.9	8.7		4271.9

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

DM11

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR DEEP SAND MONITOR WELL**

Mine Unit 8

I.D. DM13

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	15.1	624	113.5			

Date

12 FEB 2001	9.9	545	102.4	8.5		4280.5
30 MAY 2001	9.8	550	102.4	8.7		4281.8
31 JUL 2001	10.4	551	101.9	8.6		4276.8
07 NOV 2001	10.3	548	102.3	8.6		4281.3

*** Values Exceed Upper Control Limit**

Negative U3O8 Grades Indicate Less Than Detection Limit.

DM13

COGEMA Mining Inc.

IRIGARAY RANCH

INTERIOR DEEP SAND MONITOR WELL

Mine Unit 8
Well I.D. DM14

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	15.5	619	109.5			

Date					
12 FEB 2001	10.3	560	98.2	8.7	4279.6
30 MAY 2001	10.4	566	99.4	8.8	4280.8
31 JUL 2001	10.7	567	100.0	8.8	4277.0
07 NOV 2001	10.6	558	101.2	8.8	4279.9

* Values Exceed Upper Control Limit

Negative U308 Grades Indicate Less Than Detection Limit.

DM14

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR DEEP SAND MONITOR WELL**

Mine Unit 9

V.I.D. DM15

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	15.1	618	110.6			

Date

12 FEB 2001	10.3	559	94.4	8.7		4285.0
30 MAY 2001	10.1	568	96.9	8.7		4286.0
31 JUL 2001	10.5	569	98.5	8.7		4282.4
07 NOV 2001	10.6	555	95.7	8.8		4285.0

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

DM15

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR DEEP SAND MONITOR WELL**

Mine Unit 9
Well I.D. DM16

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	15.7	646	111			

Date					
05 FEB 2001	10.6	565	94.8	8.8	4287.0
30 MAY 2001	11.0	565	100.0	8.7	4297.0
31 JUL 2001	10.9	571	97.6	8.8	4284.2
07 NOV 2001	11.3	559	98.3	8.7	4287.0

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

DM16

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR DEEP SAND MONITOR WELL**

Mine Unit 5

V I.D. DM17

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	15	618	108.2			

Date

13 FEB 2001	9.3	533	117.4	*	8.5	4258.6
30 MAY 2001	9.4	536	120.2	*	8.6	4258.2
09 AUG 2001	9.5	536	117.9	*	8.6	4241.8
14 NOV 2001	9.4	534	116.9	*	8.8	4277.5

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

DM17

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR DEEP SAND MONITOR WELL**

Mine Unit 4
Well I.D. DM18

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	14.5	598	105.6			

Date					
13 FEB 2001	9.6	525	96.1	8.7	4264.3
30 MAY 2001	9.7	530	103.8	8.6	4267.3
09 AUG 2001	10.1	532	104.9	8.6	4244.6
14 NOV 2001	9.7	520	99.1	8.6	4277.3

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

DM18

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR DEEP SAND MONITOR WELL**

Mine Unit 3

V I.D. DM19

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	31.7	1207	245.3			

Date						
26 FEB 2001	10.0	510	122.5	8.4		4239.9
29 MAY 2001	9.9	519	127.5	8.3		4242.0
09 AUG 2001	10.1	515	124.9	8.6		4226.0
14 NOV 2001	10.0	512	125.8	8.7		4196.0

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

DM19

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR DEEP SAND MONITOR WELL****2001**

Mine Unit 3

Well I.D. DM20

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	17.5	609	135.6			

Date

20 FEB 2001	9.3	515	101.8	8.5		4266.2
29 MAY 2001	9.4	520	104.6	8.6		4270.0
09 AUG 2001	9.6	519	109.9	7.8		4255.0
14 NOV 2001	9.9	512	106.7	8.7		4280.4

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

DM20

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR DEEP SAND MONITOR WELL**

Mine Unit 7

I.D. DM21

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	15.6	628	126.7			

Date

08 JAN 2001	10.5	558	99.3	8.6		4271.2
12 FEB 2001	10.2	554	95.8	8.6		4273.1
05 MAR 2001	10.3	560	96.4	8.6		4271.2
16 APR 2001	10.8	548	96.8	8.7		4271.7
16 MAY 2001	11.0	551	100.1	8.7		4271.3
03 JUL 2001	10.1	590	97.4	8.8		4272.0
30 JUL 2001	10.4	563	99.5	8.7		4262.2
21 AUG 2001	10.7	561	99.2	8.6		4266.3
06 NOV 2001	10.5	554	102.0	8.8		4276.7

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

DM21

COGEMA Mining Inc.**IRIGARAY RANCH****INTERIOR DEEP SAND MONITOR WELL**

2001

Mine Unit 6
Well I.D. DM22

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO ₃		mg/l	msl
Upper Control Limit	15.1	654	117			

Date					
08 JAN 2001	9.7	548	94.7	8.7	4245.4
13 FEB 2001	10.6	542	92.9	8.7	4249.0
05 MAR 2001	10.3	550	96.9	8.6	4245.9
10 APR 2001	10.9	540	93.2	8.7	4245.6
16 MAY 2001	11.0	543	97.3	8.7	4254.5
03 JUL 2001	16.8 *	614	94.3	8.7	4241.3
30 JUL 2001	15.0	577	95.8	8.7	4233.2
21 AUG 2001	17.9 *	597	98.5	8.7	4240.3
12 SEP 2001	14.2	572	100.0	8.8	4237.4
17 OCT 2001	11.9	554	101.6	8.5	4247.2
06 NOV 2001	18.9 *	582	96.9	8.7	4267.7

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

DM22

CHRISTENSEN RANCH PROJECT

Perimeter Ore Zone Monitor Wells

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 3

2001

I.D. MW17-2

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date					
09 JAN 2001	9.8	668	94.2	8.7	4509.7
13 FEB 2001	9.4	670	92.8	8.8	4513.1
13 MAR 2001	9.4	673	96.9	8.8	4520.5
10 APR 2001	9.1	675	94.5	8.8	4514.9
08 MAY 2001	9.5	677	96.0	8.9	4509.1
12 JUN 2001	9.5	675	95.0	8.9	4506.0
11 JUL 2001	9.6	690	95.5	8.9	4500.5
13 AUG 2001	9.6	675	95.6	8.9	4498.8
10 SEP 2001	9.8	678	97.3	8.9	4500.8
16 OCT 2001	9.6	674	96.2	9.0	4498.3
13 NOV 2001	9.6	675	96.7	8.9	4497.6
11 DEC 2001	9.6	670	95.6	8.8	4502.3

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

MW17-2

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL**

2001

Mine Unit 3

Well I.D. MW18

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date					
09 JAN 2001	9.9	667	95.6	8.6	4508.2
13 FEB 2001	9.5	669	91.5	8.6	4510.1
13 MAR 2001	9.6	672	97.0	8.6	4512.3
10 APR 2001	9.9	675	99.8	8.6	4514.1
08 MAY 2001	9.5	682	95.6	8.6	4509.7
11 JUN 2001	10.0	677	99.6	8.7	4506.0
09 JUL 2001	9.6	683	96.6	8.7	4500.4
13 AUG 2001	9.8	673	97.4	8.7	4498.6
10 SEP 2001	10.1	678	98.8	8.7	4498.8
15 OCT 2001	10.0	670	96.5	8.7	4497.8
12 NOV 2001	9.7	682	97.4	8.6	4497.1
11 DEC 2001	9.7	673	96.0	8.5	4501.7

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

MW18

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 3

2001

I.D. MW19

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date					
09 JAN 2001	9.3	668	91.8	8.5	4492.1
13 FEB 2001	9.3	664	92.0	8.5	4493.9
13 MAR 2001	9.6	674	97.7	8.4	4511.5
10 APR 2001	9.6	674	100.2	8.4	4512.5
08 MAY 2001	9.5	682	96.7	8.4	4508.2
11 JUN 2001	9.5	676	97.0	8.5	4504.1
09 JUL 2001	9.6	680	97.6	8.5	4498.1
14 AUG 2001	9.7	670	96.4	8.4	4496.6
10 SEP 2001	9.8	677	97.5	8.5	4496.9
15 OCT 2001	10.2	671	102.0	8.4	4496.6
12 NOV 2001	9.7	680	99.5	8.4	4496.0
11 DEC 2001	9.7	675	99.1	8.3	4500.4

* Values Exceed Upper Control Limit

MW19

Negative U3O8 Grades Indicate Less Than Detection Limit.

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 3
Well I.D. MW20

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date					
09 JAN 2001	9.4	671	98.9	8.5	4508.8
13 FEB 2001	9.3	670	95.3	8.6	4504.9
13 MAR 2001	9.6	676	103.8	8.6	4509.5
10 APR 2001	9.7	679	106.3	8.5	4512.0
08 MAY 2001	9.4	686	101.1	8.6	4508.1
12 JUN 2001	9.4	685	100.5	8.7	4503.0
09 JUL 2001	9.3	683	99.4	8.6	4497.4
13 AUG 2001	9.5	676	100.1	8.6	4496.0
10 SEP 2001	9.5	682	99.9	8.6	4496.3
15 OCT 2001	9.6	670	100.3	8.6	4495.7
12 NOV 2001	9.7	682	103.1	8.5	4495.3
11 DEC 2001	9.4	678	100.1	8.4	4499.6

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

MW20

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 3

I.D. MW23

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date						
08 JAN 2001	9.2	674	92.1	8.5		4507.0
13 FEB 2001	9.6	667	94.9	8.6		4501.1
13 MAR 2001	9.7	675	99.5	8.5		4506.7
10 APR 2001	10.0	676	102.4	8.5		4508.6
07 MAY 2001	9.8	674	98.2	8.5		4506.5
11 JUN 2001	9.9	677	99.7	8.6		4499.0
09 JUL 2001	10.0	681	99.4	8.6		4493.1
13 AUG 2001	10.1	674	99.5	8.6		4491.3
10 SEP 2001	10.2	678	99.0	8.6		4491.8
15 OCT 2001	10.4	668	98.6	8.6		4490.6
12 NOV 2001	10.1	677	98.0	8.5		4490.1
10 DEC 2001	10.0	663	97.4	8.7		4493.8

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

MW23

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 3
Well I.D. MW24

2001

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

Date					
08 JAN 2001	9.9	670	94.0	8.6	4505.7
12 FEB 2001	9.6	660	91.5	8.7	4504.7
13 MAR 2001	10.0	671	97.1	8.6	4504.7
10 APR 2001	9.7	665	93.2	8.6	4507.0
07 MAY 2001	9.7	661	91.0	8.7	4505.1
11 JUN 2001	9.7	663	90.5	8.8	4513.5
09 JUL 2001	9.7	668	91.4	8.8	4508.7
13 AUG 2001	9.6	662	90.7	8.8	4506.0
10 SEP 2001	10.1	671	91.8	8.8	4509.5
15 OCT 2001	10.1	661	93.6	8.8	4500.8
12 NOV 2001	9.8	671	93.5	8.6	4500.3
10 DEC 2001	9.9	662	93.7	8.8	4509.4

* Values Exceed Upper Control Limit

Negative U308 Grades Indicate Less Than Detection Limit.

MW24

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 3

I.D. MW25

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date					
08 JAN 2001	9.5	666	89.9	8.5	4503.5
12 FEB 2001	9.7	660	90.3	8.6	4500.2
12 MAR 2001	9.6	667	93.3	8.6	4499.6
10 APR 2001	9.7	667	95.7	8.5	4505.5
07 MAY 2001	9.7	665	94.2	8.6	4503.8
11 JUN 2001	9.9	669	94.6	8.6	4494.8
09 JUL 2001	9.8	673	95.2	8.6	4489.0
13 AUG 2001	10.0	666	96.2	8.6	4506.0
10 SEP 2001	10.1	677	96.4	8.7	4488.7
15 OCT 2001	9.8	665	95.5	8.6	4488.1
12 NOV 2001	10.0	673	96.4	8.5	4487.6
10 DEC 2001	10.1	664	97.6	8.6	4491.3

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

MW25

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 3
Well I.D. MW26

2001

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

Date					
08 JAN 2001	9.7	667	90.3	8.5	4502.4
12 FEB 2001	9.9	661	90.5	8.6	4500.0
12 MAR 2001	9.7	667	93.7	8.6	4500.5
10 APR 2001	10.0	667	94.9	8.5	4503.6
07 MAY 2001	10.0	667	94.5	8.6	4502.1
11 JUN 2001	10.0	668	93.6	8.6	4492.7
09 JUL 2001	10.0	672	94.3	8.6	4487.0
13 AUG 2001	10.0	666	94.2	8.6	4486.0
10 SEP 2001	10.4	672	94.0	8.6	4487.7
15 OCT 2001	10.1	662	93.6	8.6	4488.0
12 NOV 2001	10.1	673	94.7	8.5	4487.2
10 DEC 2001	10.0	666	94.8	8.6	4490.9

* Values Exceed Upper Control Limit

Negative U308 Grades Indicate Less Than Detection Limit.

MW26

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 3

I.D. MW27

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date					
08 JAN 2001	11.2	666	91.3	8.5	4502.8
12 FEB 2001	11.4	662	91.3	8.6	4503.2
12 MAR 2001	11.3	670	96.1	8.5	4502.8
10 APR 2001	11.0	668	94.6	8.5	4502.5
07 MAY 2001	10.9	665	94.8	8.5	4498.7
11 JUN 2001	11.0	668	94.8	8.5	4490.6
09 JUL 2001	10.7	672	94.1	8.6	4484.7
13 AUG 2001	10.9	666	94.6	8.6	4485.0
10 SEP 2001	10.8	673	94.4	8.6	4487.7
15 OCT 2001	10.8	661	95.4	8.6	4489.0
12 NOV 2001	10.4	671	93.9	8.5	4488.3
10 DEC 2001	10.9	668	95.1	8.6	4493.5

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

MW27

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 3
Well I.D. MW28

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date					
08 JAN 2001	9.8	670	92.7	8.4	4508.7
12 FEB 2001	10.0	664	92.1	8.6	4507.8
12 MAR 2001	10.2	674	98.8	8.5	4506.6
09 APR 2001	10.1	672	95.9	8.5	4504.0
07 MAY 2001	10.0	667	97.5	8.6	4496.8
11 JUN 2001	10.3	669	98.6	8.5	4489.6
09 JUL 2001	10.0	672	97.4	8.6	4483.3
13 AUG 2001	10.6	666	101.1	8.6	4485.0
10 SEP 2001	10.3	676	97.6	8.7	4488.9
15 OCT 2001	10.7	661	100.6	8.6	4491.6
12 NOV 2001	10.1	680	98.0	8.5	4492.4
10 DEC 2001	10.4	683	101.7	8.6	4498.0

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

MW28

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 3

I.D. MW29

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date					
08 JAN 2001	9.5	668	96.0	8.5	4513.4
12 FEB 2001	9.6	665	95.0	8.6	4511.4
12 MAR 2001	9.6	671	98.6	8.5	4508.7
09 APR 2001	9.8	672	102.0	8.5	4507.7
07 MAY 2001	9.7	670	100.6	8.5	4498.3
11 JUN 2001	10.1	673	102.1	8.6	4492.8
09 JUL 2001	9.9	677	100.6	8.6	4486.2
13 AUG 2001	9.6	671	99.4	8.6	4488.0
10 SEP 2001	9.8	674	98.5	8.6	4491.6
15 OCT 2001	9.8	665	98.1	8.6	4494.8
12 NOV 2001	9.8	676	100.3	8.5	4493.7
10 DEC 2001	9.7	672	99.7	8.5	4501.9

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

MW29

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 3
Well I.D. MW30

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date					
08 JAN 2001	9.4	675	98.3	8.4	4519.4
12 FEB 2001	9.5	672	97.3	8.5	4514.8
12 MAR 2001	9.5	677	101.6	8.5	4511.6
09 APR 2001	9.5	678	101.4	8.5	4511.5
07 MAY 2001	9.5	676	101.2	8.5	4501.6
11 JUN 2001	9.6	678	101.7	8.6	4497.0
09 JUL 2001	9.5	682	99.9	8.6	4499.8
13 AUG 2001	9.9	676	102.2	8.6	4491.8
10 SEP 2001	10.3	674	105.9	8.6	4495.0
15 OCT 2001	9.8	670	100.8	8.5	4497.6
12 NOV 2001	9.7	680	101.3	8.4	4496.5
10 DEC 2001	9.6	682	101.4	8.5	4504.5

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

MW30

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 3

V.I.D. MW31

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date

08 JAN 2001	9.2	680	102.2	8.6		4524.2
12 FEB 2001	9.5	675	98.2	8.6		4523.7
12 MAR 2001	9.2	683	99.6	8.6		4515.7
09 APR 2001	9.5	685	104.3	8.6		4517.9
07 MAY 2001	9.7	683	104.5	8.7		4509.8
11 JUN 2001	9.6	681	102.2	8.6		4517.8
09 JUL 2001	9.5	685	99.7	8.6		4501.1
13 AUG 2001	9.7	678	102.0	8.8		4500.3
10 SEP 2001	9.7	678	99.9	8.6		4501.5
15 OCT 2001	10.1	676	102.6	8.5		4502.7
12 NOV 2001	9.6	679	99.6	8.5		4500.6
10 DEC 2001	10.0	685	108.0	8.5		4499.3

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

MW31

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL**

2001

Mine Unit 3
Well I.D. MW32

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date					
08 JAN 2001	9.2	676	98.4	8.5	4524.8
12 FEB 2001	9.3	671	98.4	8.5	4522.6
12 MAR 2001	9.3	678	102.2	8.5	4517.7
09 APR 2001	9.2	681	102.4	8.5	4519.6
07 MAY 2001	9.6	680	103.5	8.6	4511.1
11 JUN 2001	9.4	680	102.6	8.6	4509.4
09 JUL 2001	9.4	683	101.6	8.6	4503.7
13 AUG 2001	9.6	676	104.7	8.6	4527.6
10 SEP 2001	9.6	682	103.7	8.6	4503.2
15 OCT 2001	9.4	674	102.4	8.6	4503.6
12 NOV 2001	9.6	681	103.6	8.5	4502.2
11 DEC 2001	9.1	678	101.1	8.4	4505.0

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

MW32

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 3

I.D. MW35

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date					
08 JAN 2001	9.2	677	97.3	8.4	4519.8
12 FEB 2001	9.2	671	97.4	8.5	4517.8
12 MAR 2001	9.2	679	100.0	8.5	4510.8
10 APR 2001	9.3	680	103.1	8.5	4513.3
08 MAY 2001	9.2	690	101.8	8.6	4512.1
12 JUN 2001	9.4	679	103.9	8.6	4511.8
11 JUL 2001	9.2	691	100.9	8.6	4506.4
13 AUG 2001	9.5	679	102.4	8.6	4504.3
10 SEP 2001	10.0	681	107.4	8.6	4504.3
16 OCT 2001	9.8	676	106.4	8.6	4502.2
13 NOV 2001	9.6	683	102.8	8.4	4502.8
11 DEC 2001	9.3	676	100.9	8.4	4502.8

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

MW35

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 3
Well I.D. MW36

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date					
09 JAN 2001	9.3	671	99.1	8.4	4525.5
13 FEB 2001	9.3	666	96.9	8.5	4525.0
13 MAR 2001	9.6	670	103.0	8.5	4518.8
10 APR 2001	9.3	678	102.6	8.5	4523.7
08 MAY 2001	9.2	682	101.0	8.5	4517.3
12 JUN 2001	9.1	677	100.9	8.6	4515.2
11 JUL 2001	9.4	688	102.1	8.6	4510.0
13 AUG 2001	9.5	678	102.2	8.5	4508.2
10 SEP 2001	9.5	681	102.6	8.5	4508.2
16 OCT 2001	9.6	676	105.1	8.6	4507.2
13 NOV 2001	9.6	675	102.8	8.4	4506.7
11 DEC 2001	9.6	664	105.5	8.0	4511.6

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

MW36

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 3

I.D. MW37

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date

09 JAN 2001	9.3	671	97.2	8.5		4519.3
13 FEB 2001	9.5	667	98.0	8.5		4516.8
13 MAR 2001	9.6	670	101.6	8.5		4512.6
10 APR 2001	9.3	678	102.4	8.5		4516.1
08 MAY 2001	9.5	673	101.5	8.5		4509.5
12 JUN 2001	9.5	676	104.0	8.6		4507.0
11 JUL 2001	9.5	687	101.2	8.6		4501.7
13 AUG 2001	9.6	678	102.8	8.6		4500.4
10 SEP 2001	9.7	681	102.8	8.6		4500.4
16 OCT 2001	9.5	674	101.7	8.6		4501.1
13 NOV 2001	9.7	677	103.2	8.4		4500.6
11 DEC 2001	9.4	676	102.1	8.4		4506.1

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

MW37

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 3

Well I.D. MW38

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date					
09 JAN 2001	9.5	672	95.2	8.6	4517.6
13 FEB 2001	9.9	666	99.6	8.7	4514.1
13 MAR 2001	9.8	669	98.8	8.7	4511.8
11 APR 2001	9.7	668	102.0	8.7	4513.7
08 MAY 2001	10.1	673	105.3	8.6	4507.8
12 JUN 2001	10.3	674	103.1	8.8	4503.6
11 JUL 2001	9.9	669	100.1	8.7	4497.9
14 AUG 2001	10.3	670	105.1	8.7	4497.1
11 SEP 2001	10.3	683	103.3	8.8	4497.7
15 OCT 2001	10.1	666	100.5	8.6	4498.1
12 NOV 2001	10.0	682	103.7	8.5	4497.5
11 DEC 2001	9.5	672	102.3	8.5	4497.5

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

MW38

COGEMA Mining Inc.
CHRISTENSEN RANCH
PERIMETER ORE ZONE MONITOR WELL

Mine Unit 3
 I.D. MW39

2001

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

Date					
09 JAN 2001	9.7	675	94.2	8.6	4517.9
13 FEB 2001	9.6	672	94.8	8.7	4517.9
13 MAR 2001	9.6	672	98.0	8.8	4511.3
11 APR 2001	9.5	669	100.0	8.8	4512.6
08 MAY 2001	9.6	676	100.5	8.6	4507.2
12 JUN 2001	9.5	678	100.5	8.7	4501.2
11 JUL 2001	9.5	679	99.7	8.6	4495.7
14 AUG 2001	10.0	674	103.1	8.6	4495.3
11 SEP 2001	9.6	685	101.4	8.7	4496.5
15 OCT 2001	9.6	669	99.0	8.7	4497.5
12 NOV 2001	9.9	682	102.6	8.5	4496.3
11 DEC 2001	9.7	671	102.3	8.5	4496.3

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

MW39

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 3
Well I.D. MW40

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date					
08 JAN 2001	9.4	675	95.8	8.5	4518.4
12 FEB 2001	9.5	672	95.3	8.6	4513.1
12 MAR 2001	9.5	677	101.9	8.6	4511.4
09 APR 2001	9.4	680	100.9	8.6	4511.8
07 MAY 2001	9.7	678	100.3	8.6	4503.3
11 JUN 2001	10.0	675	104.0	8.6	4511.8
09 JUL 2001	9.5	684	101.8	8.6	4493.4
13 AUG 2001	9.6	679	102.0	8.6	4493.7
10 SEP 2001	10.0	686	103.5	8.6	4495.6
15 OCT 2001	9.6	671	100.4	8.6	4497.4
12 NOV 2001	9.6	673	94.7	8.6	4497.9
10 DEC 2001	9.4	672	96.0	8.6	4504.0

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

MW40

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 3

I.D. MW41

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date

08 JAN 2001	9.0	681	100.0	8.4		4527.3
12 FEB 2001	9.0	677	98.5	8.6		4524.2
12 MAR 2001	9.5	682	109.6	8.5		4521.2
09 APR 2001	9.4	684	102.4	8.5		4521.9
07 MAY 2001	9.4	682	105.7	8.5		4513.2
11 JUN 2001	9.2	684	103.4	8.6		4512.5
09 JUL 2001	9.1	688	104.1	8.6		4507.0
13 AUG 2001	9.3	685	105.8	8.6		4505.2
10 SEP 2001	9.7	687	109.7	8.6		4505.2
15 OCT 2001	9.4	678	104.7	8.6		4505.6
12 NOV 2001	9.4	687	105.8	8.6		4506.2
11 DEC 2001	9.1	681	104.0	8.5		4505.2

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

MW41

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 3
Well I.D. MW42

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date					
08 JAN 2001	9.2	669	95.8	8.7	4529.3
12 FEB 2001	9.5	664	96.5	8.7	4526.7
12 MAR 2001	9.2	671	98.3	8.7	4523.5
09 APR 2001	9.5	674	102.2	8.7	4524.0
07 MAY 2001	9.4	673	100.8	8.9	4515.1
11 JUN 2001	9.7	673	103.3	8.5	4516.5
09 JUL 2001	9.4	677	101.3	8.6	4511.6
13 AUG 2001	9.5	678	103.5	8.7	4509.2
10 SEP 2001	9.6	680	103.8	8.7	4508.7
15 OCT 2001	9.5	669	101.0	8.7	4507.2
12 NOV 2001	9.3	678	100.1	8.6	4507.8
11 DEC 2001	9.6	673	103.7	8.5	4506.1

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

MW42

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL**

Mine Unit 3

I.D. MW43

2001

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date					
08 JAN 2001	9.1	670	96.8	8.5	4530.9
12 FEB 2001	9.4	666	96.7	8.5	4528.3
12 MAR 2001	9.2	670	100.5	8.5	4525.2
09 APR 2001	9.2	674	101.7	8.5	4525.6
07 MAY 2001	9.3	672	100.7	8.6	4516.4
11 JUN 2001	9.4	674	101.6	8.5	4525.6
09 JUL 2001	9.4	677	101.9	8.6	4514.8
13 AUG 2001	9.5	672	102.1	8.6	4512.4
10 SEP 2001	9.6	674	101.9	8.6	4510.9
16 OCT 2001	9.3	669	101.4	8.6	4508.6
12 NOV 2001	9.1	677	100.5	8.5	4507.9
11 DEC 2001	9.1	671	100.0	8.4	4508.2

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

MW43

COGEMA Mining Inc.**CHRISTENSEN RANCH****PERIMETER ORE ZONE MONITOR WELL****2001**

Mine Unit 3
Well I.D. MW44

Water Quality Parameters	Chloride	Specific Conductance	Total Alkalinity	pH	Uranium	Piezometric Elevation
Units	mg/l	μ mho/cm	mg/l as CaCO_3		mg/l	msl
Upper Control Limit	13.4	777	129.7			

Date					
08 JAN 2001	9.2	676	95.0	8.4	4519.2
12 FEB 2001	9.5	670	96.7	8.5	4518.3
12 MAR 2001	9.5	677	100.9	8.4	4514.1
10 APR 2001	9.6	678	103.1	8.4	4516.8
07 MAY 2001	9.6	677	100.9	8.4	4509.9
12 JUN 2001	9.6	682	103.5	8.6	4516.8
11 JUL 2001	9.6	689	100.5	8.5	4506.0
13 AUG 2001	9.7	676	101.4	8.5	4503.0
13 SEP 2001	10.9	669	103.5	8.5	4503.0
16 OCT 2001	9.6	676	101.5	8.4	4497.9
13 NOV 2001	9.8	676	100.6	8.3	4496.7
11 DEC 2001	9.4	673	97.9	8.3	4499.1

* Values Exceed Upper Control Limit

Negative U3O8 Grades Indicate Less Than Detection Limit.

MW44