RCO

ANNUAL FEE and REPORT REQUEST

RECEIVED
APR 19 2012
Division of Reclamation, Mining & Safety

PERMITTEE NAME:	**Homestake Mining Company**
PERMIT NO.:	**M-1977-004**
OPERATION NAME:	**Pitch Project**
ANNIVERSARY DATE:	**April 19, 2012**
ANNUAL FEE DUE:	**$$1,150.00 (Due on or before your anniversary date)**
COUNTY:	**Saguache**

According to C.R.S. 34-32.5-116 or C.R.S. 34-32-116, each year, on the anniversary date of the permit, an operator shall submit the annual fee, a report and map showing the extent of current disturbances to affected land, reclamation accomplished to date and during the preceding year, new disturbances that are anticipated to occur during the upcoming year, reclamation that will be performed during the coming year, the dates for the beginning of active operations, and the date active operations ceased for the year, if any.

Please attach your revised written annual report and annual report map to this form. The Annual Report & Fee requirement is not met until we have received the following components: fee, report, and associated map. If no new disturbances or reclamation have occurred during the previous year and no new changes to the previous year's map are necessary, then no new map is required, provided that the Operator shall state this in the Annual Report. *Please note that an adequately labeled map that clearly delineates and includes the above elements may suffice for a written report.*

Division records indicate the following permittee contact information. Please verify and make any necessary changes:

Permittee Contact:	Alan D. Cox
Permittee Name:	Homestake Mining Company
Address:	P.O. Box 98
	Highway 605
	Grants, NM 87020
Phone Number:	(505) 287-4456
Fax Number:	(505) 287-9289

If you have additional comments and/or information that should be provided to the Division, please provide it below or attach it to this form along with your written report and map. Annual Report instructions are enclosed.

Alan D. Cox

Signature of Corporate Officer, Owner, or Designee

Date 4/17/12

Notice of Intent to Continue Mining Operations
112 Hard Rock/Metal and DMO Annual Report

Permittee Name:	Homestake Mining Company of California	
Permit No.:	M-77-004	
Operation Name:	Pitch Project	
Anniversary Date:	April 19, 2012	
Total:	$1150.00 (enclosed)	
1.	a. Permitted acreage: **CA 1200** b. County where mine is located:	Saguache
2.	Has this mine been granted TEMPORARY CESSATION STATUS?	YES (NO)
	Does this mine operate MORE or LESS than 180 days per year?	(MORE) LESS
	For 110(2) Operations: Do you extract MORE or LESS than 70,000 tons of mineral or overburden a year?	MORE (LESS)
3.	Does this mine have a phased reclamation plan?	YES (NO)
4.	Total acres affected during the report year:	0
5.	Total acres reclaimed for the report year:	0
6.	Total number of acres at topsoil replacement stage:	0
	a. Average topsoil thickness replaced:	N/A
7.	Total number of acres seeded:	0
	a. List species seeded & seeding rate for report year on back	See Report
8.	For non-phased operations provide dates extraction ceased:	N/A
	a. Dates reclamation began:	1983
9.	The type and approximate quantity of fertilizers, organic material or soils conditioners used for the report year:	See report
10.	Estimated total acres to be affected in the next report year:	None
11.	COMMENTS:	Project is currently undergoing final reclamation and closure

* Please show the location of the acreage for items 4-6 on your map**. Indicate the phases of the reclamation which have been completed, correlated with your timetable. For phased operations show dates extraction ceased and dates reclamation began.

**Note: If there have not been any changes since the last annual report and you previously submitted a map which correctly depicts the current acreage in items 2 through 6, then a new map is unnecessary. However, this must be stated above.

Please type or print current contact name, mailing address, and phone number below:

Contact Name: Alan D. Cox Phone: (505) 287-4456 x25
Fax: (505) 287-9289
Company: HOMESTAKE MINING COMPANY OF CALIFORNIA
Address: P.O. 98, Grants, New Mexico 87020

Federal Tax ID No. or Social Security No.: 94-2934609

HOMESTAKE

Pitch Reclamation Project

Alan D. Cox
Project Manager

19 April 2012

Colorado Department of Natural Resources
Division of Reclamation, Mining and Safety
1313 Sherman Street
Room 215
Denver, CO. 80203

Attn: Ms. Mary Rodriquez

Re: Pitch Mine Reclamation Project, Saguache County
Reclamation Permit #77-004HR

2011 Annual Reclamation Report

Dear Ms. Rodriquez:

Enclosed please find the 2011 annual reclamation report for the Pitch Reclamation Project pursuant to provisions of the project reclamation permit referenced above. We are enclosing via check the annual fee of $1,150.00.

Thank you for your continued cooperation and support of our reclamation and closure activities at the Pitch project. If you have any questions, please don't hesitate to contact me at (505) 287-4456 x25.

Sincerely yours,

Homestake Mining Company of California
Alan D. Cox

Cc: B. Oswald, DRMS-Durango
J. Dawson, USFS, Gunnison NF
E. Ethington, CDPHE-HMWMD

R. Chase, Barrick-SLC
D. Davis, HMC Sargents
P. DeDycker, ARCADIS, Denver

P.O. Box 98 / Highway 605, Grants, NM 87020 Tele: (505) 287-4456 FAX: (505) 287-9289

PITCH RECLAMATION PROJECT

COLORADO MINED LAND RECLAMATION BOARD

2011 ANNUAL RECLAMATION REPORT

RECLAMATION PERMIT #M77-004HR

Prepared for:

Division of Reclamation, Mining and Safety

Colorado Department of Natural Resources
1313 Sherman, Room 215
Denver, Colorado 80203

Prepared by:

Homestake Mining Company of California
P.O. Box 98
Grants, New Mexico 87020

April 19, 2012

Tables

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CD Pocket

EXECUTIVE SUMMARY

Homestake Mining Company of California (Homestake) operated the Pitch Uranium mine in Saguache County, Colorado from 1979 until 1984. The mine extracted uranium ore and trucked it to their mill in Grants, New Mexico. In 1984, operation was suspended and the mine was placed in a care and maintenance status. Incremental reclamation and revegetation of mine site disturbances were performed throughout the period of 1985 to 1993. In 1993, Homestake initiated the process of permanently closing the mine.

Since 1993, closure and reclamation activities have included pit wall grade-down and partial backfilling of the North Pit to reduce pit wall movement, the contouring and revegetation of the approximately 230 acres of disturbed area, construction of a plug in the Pinnacle Adit to reduce seepage and improve water quality, monitoring of slope stability in the North and South pits; monitoring of the phreatic surface in the Indian and Tie Camp waste rock dumps, construction of surface water controls, and the dismantling and removal of the Radium Treatment Plant (RTP) as well as associated foundation materials and soils that were placed in the Tie Camp Creek Disposal Cell.

During 2011, Homestake maintained the remaining mine facilities and fulfilled permit and license related compliance programs which included the following activities:

- Monitored water quality discharged at the point of compliance (POC), SW-33, and submitted monthly discharge monitoring reports to the Water Quality Control Division of the Colorado Department of Public Health and Environment (CDPHE) per the requirements of the Colorado Discharge Permit System (CDPS) permit #CO-0022756 renewal effective January 1, 2010;
- Continued activities under the conditions of the Radioactive Materials License (RML) issued by the Colorado Department of Health and Environment – Hazardous Materials & Waste Management Division (Permit #150-01, Amendment 14);
- Continued improvements in the drainage, stabilization, and reclamation in the constructed wetlands area (site of the former Radium Treatment Plant);
- Erosion repairs on the northwest side of the Indian Creek rock dump near the clay stockpile and low grade stockpile;
- Grading of tension cracks on the East Wall of the South Pit and in the slump area of the South Pit to eliminate pooling of water;
- Grading on the second bench of the Tie Camp Creek rock dump to reduce erosion;
- Repair work on the Tie Camp Creek Disposal Cell including grading for drainage control, harrowing, scarifying and seeding to enhance erosion control and drainage management on the top of, and around, the disposal cell;
- Geotechnical monitoring of pit wall slopes on the south and east walls of the North Pit, the east wall of the South Pit and the Indian Creek and Tie Camp Creek waste rock dumps;
- Monitoring of Tension cracks above the east wall of the North Pit;
- In August both piezometers IC10300 and IC10370 were sealed and were replaced with two new piezometers IC10300R and IC10370R at approximately the same locations.
- Monitoring of the groundwater levels in piezometers within the area of Pinnacle workings and monitoring of springs and seeps potentially influenced by the resaturation of the historical underground workings;

- Monitoring of piezometers in both the Indian Creek and Tie Camp Creek waste rock dumps;
- Weed control and removal of small pine trees that encroached on the downstream face of the sediment control embankment; and
- Monitoring of monuments and piezometers on the sediment pond embankment per the requirements of the Colorado Division of Water Resources.

This information is provided for introductory purposes; details of 2011 monitoring, closure and reclamation activities are presented in the following sections.

1. INTRODUCTION

1.1 Terms and Conditions

ARCADIS U.S., Inc. (ARCADIS) is retained by Homestake to collect the data and other information from contractors engaged at the Pitch Reclamation Project and to assemble this report of the 2011 monitoring and reclamation activities. Information used in this report was provided by: ARCADIS; Telesto Inc.; Energy Laboratories, Inc.; and the Homestake-Pitch Project field office in Sargents, Colorado.

1.2 Purpose and Scope of Work

This report was prepared to fulfill the annual reclamation reporting requirements of Homestake to the Colorado Division of Reclamation, Mining and Safety for reclamation permit number M-77-004HR. This report primarily presents reclamation and monitoring conducted during the 2011 calendar year. Documentation of reclamation conducted in previous years was presented in prior annual reports.

1.3 Project Description

The Pitch Reclamation Project is located in Township 48 North, Range 6 East, Saguache County, Colorado. The project area is situated on both fee and public land within the Gunnison National Forest. The primary drainage from the property is Indian Creek. Drainage from Tie Camp Creek joins Indian Creek upstream of the CDPS permit discharge monitoring point at the project site. Indian Creek joins Marshall Creek approximately four miles southwest of the Pitch property. A site location map is provided as **Figure 1**.

2. LAND DISTURBED IN 2011

All surface disturbance in 2011 was associated with the site improvements in the constructed wetlands area (near the former site of the Radium Treatment Plant); grading to enhance drainage and erosion control around and off the cover of the disposal cell at the toe of the Tie Camp Creek Low-Grade Ore Stockpile (Tie Camp Creek Disposal Cell); grading on the second bench of the Tie Camp Creek rock dump to reduce erosion; cleaning of sediment traps on lower Indian and Tie Camp creeks to prevent heavier sediment from entering the Sediment Pond; grading in the east wall of the North Pit to facilitate movement of water from the 10,800 level to the 10,600 level; grading in the South Pit to prevent water from ponding near the slump area; and drilling and completion of two replacement piezometers in the Indian Creek rock dump and sealing and reclamation of the old ones. These activities occurred on ground already disturbed by project related facilities.

3. RECLAMATION ACTIVITIES IN 2011

During 2011, primary reclamation activities at the Pitch site focused on additional grading and seeding of the cover on the Tie Camp Creek Disposal Cell; planting of cattails in the constructed wetlands area downstream from the North Pit embankment; and grading in both the North and South pits and on the upper benches of the Tie Camp rock dump and the west side of the Indian Creek rock dump for improved site drainage and erosion control.

Site activities also included the removal of pine seedlings on the downstream face of the sediment control embankment and continued spraying of Canadian Thistle and Scentless Chamomile using *Curtail with Surfactant*. All work was conducted in accordance with applicable conditions in the Radioactive Materials License (RML) and the Pitch Reclamation Project Procedures Manual.

3.1 Constructed Wetlands Area and Adjacent Slope

Reclamation related activities in 2011 consisted of improvements to the constructed wetlands area near the site of the former Radium Treatment Plant (RTP). The RTP was demolished, backfilled and recontoured in 2001, with grading and initial revegetation in 2002. Reclamation activities included the steep embankment behind the former RTP site, where the area was graded to reduce the slope and prevent sloughing. Reclamation in the area has consisted of recontouring to facilitate improved sedimentation control and to stabilize the slope adjacent to and down gradient from the site. Activities have included construction of small dikes in the drainage to allow the creation of small sedimentation basins, followed by the placement of timber slash in the drainage to retard flow velocity, and to trap sediment forming a wetlands type condition.

Since 2002, stabilization measures have included planting of 1,100 lodgepole pines, and 200 spruce trees on the contoured area and planting of 500 lodgepole pines and 200 Douglas fir seedlings on the slope opposite the constructed wetlands area. In 2006 and 2007, a significant number of mortalities were observed among trees planted during previous seasons on the slope opposite the constructed wetlands area. The dead trees were replaced with approximately 400 new lodgepole seedlings. The 2006 work included placement of several large rocks and rock material across the lower end of the constructed wetlands area to further enhance sediment control and prevent previously placed tree slash from washing to the trash racks during thunderstorm events. In 2007, transplanting of cattails was undertaken on an experimental basis. The heavy snowpack over the past three winters provided needed protection for the cattails and many survived through the past three years. In 2011, additional cattails were planted in the wetlands area from a source at a similar elevation. The success of the experiment will continue to be monitored and enhanced in 2012.

3.2 Tie Camp Creek Disposal Cell

In 2001 and 2002, dismantled building material from the former RTP, concrete and contaminated soils removed from the immediate drainage, were removed and placed in a Disposal Cell near the toe of Tie Camp Creek Low-Grade Stockpile. This cell was created in mid-1990 as a clay-lined repository for materials dredged from the Sediment Control Pond. The cell, as shown on **Figures 2** and **3**, was left open with sufficient capacity for the RTP demolition material. The demolition material and contaminated soil placed in the cell were crushed and compacted. In 2003, the cell was shaped and prepared for the placement of a clay cap. Placement and compaction of a clay cap was completed in 2004. A final layer of topsoil (minimum 24 inches) was added and compacted on top of the clay cap during 2005. In 2007 and 2008, finish grading was conducted on the topsoil cover to eliminate any low spots where water could pond, and to enhance drainage on and around the disposal cell. Harrowing, scarifying and reseeding of

the surface of the disposal cell area were completed in 2007, 2008, 2009 and 2010 to improve the cover stability and to minimize erosion. In 2011, the surface water drainage channel on the cell was repaired to correct erosion issues noted during an inspection by the CDPHE in August 30, 2011. All repair and reclamation work was conducted in accordance with an approved plan and conditions in the RML and the Pitch Reclamation Project Procedures Manual. A copy of the completion report dated September 19, 2011 sent to and approved by CDPHE is included in the CD at the back of this report.

3.3 Erosion Control in the North and South Pits and Waste Rock dumps

North Pit: Snowmelt, summer precipitation and springs in the east wall of the North Pit have been recurring issues since the pit was developed. This problem has been exacerbated over the past few years by heavier snow pack in the mine area. On the east wall of the North Pit, minor erosion in the form of rill development, has occurred between the 10,800 and 10,600 elevations due to snow melt runoff. This area at the crest of the east wall of the North Pit is a topographically low area that concentrates surface drainage from a relatively large area above the crest of the east wall. In 2010 the area was regraded as weather and ground conditions allowed to direct water to the "Spring Creek" channel that flows on the 10,600 bench.

Photograph 1: Straw bale flow barrier at the crest of the east wall of the North Pit looking northwest.

As shown on photographs 1 & 2, straw bales were staked in place at the area above the pit crest late in the fall of 2010, to slow surface water velocities and reduce the impact of surface erosion. In 2011, the area was re-evaluated and it was determined that a small diversion ditch should be installed in 2012.

Visual inspection of the East Wall of the North Pit in 2011 indicated that continued maintenance will be required, as expected, in the two locations where an expression of the Chester Fault system, commonly referred to as the "smile crack" crosses the 10600 bench. The displacement creates "cracks" or "steps" in the 10,600 bench that require re-grading periodically. Also, depending on the level of snow pack and summer precipitation, every few years one or two small ponds form along the 10,600 bench. During

2010, the single pond that had developed on the 10,600 bench was graded and the bench surface was filled and smoothed to re-establish drainage along the bench.

Photograph 2: East Wall of the North Pit erosion repairs.

South Pit: Observations in 2011 indicate that the slope displacement at the east wall of the South Pit is related to movement at major geologic structures, in the style of displacement that has been observed on the east wall of the North Pit. Thirteen monuments were added in 2005 to monitor the slide at the east wall of the South Pit. Eight additional survey monuments were installed on the slope by Northstar Surveying, Inc. (Northstar) in October, 2010. The monitoring point locations were selected to replace some of the monuments that had been comprised by slope displacement, and to provide a profile of the entire section of the east wall. This resulted in a net gain of two monitoring points. Some of the monuments that had been compromised were no longer located in key positions, and were abandoned without replacement. Monuments that were abandoned include; S-2, S-4, F-1, F-2, HS-2, and HS-3. Monument H-4 is located near a tension crack and may soon be compromised. As such, H-4 should be checked prior to next year's survey.

A total of 10 monuments indicated displacement greater than survey error during the 2010 – 2011 monitoring period.

The tension cracks and scarps were graded closed during October 2010. Also, the bench that transects the displacement was graded with a central crown to promote drainage in both directions of the bench. Displacement appears to have slowed. The current maximum displacement is 0.72 ft/year at monitoring point S-4, which had a displacement of 1.0 ft/year during the previous monitoring period, and nearly 2 ft in 2008. Grading may have contributed to the slower rate of displacement, but it is likely that other factors prevail. This feature will be monitored closely in 2012 and repairs will be made as necessary. Photograph 3 is a photograph of the slope displacement on the east wall of the South Pit. Linear features contrasted with the light snowfall are traces of Chester Fault structures. The slump is above the upper bench to the right side of the photograph.

The photographs presented as number 3, 4, 5 & 6 shows the tension cracks associated with the slope displacement at the East Wall of the South Pit, as they appear on the upper bench. Slope displacement results in annual vertical displacement at these tension cracks, of about 1 ft or less. The tension cracks are graded annually to close the cracks and limit infiltration of surface water. During early October, the tension cracks were graded closed and a channel cut on the up-gradient side of the bench to facilitate diversion of surface water away from the tension cracks.

The slope displacement at the East Wall of the South Pit continues to be active. The feature was initially expressed as a slump above the upper bench. Currently, evidence of slope displacement is apparent on the entire southern approximately 2/3 of the East Wall of the South Pit, as geologic structures associated with the Chester Fault system become visible in the re-graded surface.

It appears that this style of slope displacement is consistent with displacement that has been historically observed on the East Walls of the North and South Pits. Specifically, this is moment-driven displacement. Shear occurs along in-dipping, major tectonic faults associated with Laramide thrusting (the Chester Fault Zone), as the fault-bounded blocks rotate out of the slope. The small ridges that are appearing on the lower part of the East Wall of the South Pit are the surface expression of this displacement. The moment driven displacement is occurring in response to the excavation of the pit, yielding of altered rock at the toe of the slope, and the presence of the underground workings, all of which have reduced support for the in-dipping structures. The rate of slope displacement at the East Wall of the South Pit has been fairly consistent, since the feature was first noticed.

Photograph 3: Tension crack at north end of slope displacement before grading.

Photograph 4: Tension crack at south end of slope displacement before grading.

Photograph 5: Grading activities at the upper bench, looking south.

Photograph 6: Final grade and diversion ditch at upper bench, looking north.

Tie Camp Creek Rock Dump: Photographs 7-11 show erosion on the face between the first and second drainage channels and repairs that were initiated in 2011.

Photograph 7: TCC second bench showing erosion caused by the bench channel filled with sediment.

Photograph 8: TCC second bench down looking back to the North showing the drainage channel filled with sediment causing storm water and spring melt to run down the face causing erosion.

Photograph 9: TCC second bench looking south after widening and sloping back into the slope. This area was seeded, but will need to reseed again in 2012.

Photograph 10: TCC second bench after widening and sloping back in to the slope.

4. MONITORING AND ANNUAL REPORTING

4.1 Slope Movement Vector Analysis

Survey monuments have been installed at the Pitch Reclamation Project to monitor surficial slope displacement. The area east of the North Pit Lake and south of Northing 113,500 is referred to as the South Wall of the North Pit; and the area east of the pit lake and north of Northing 113,500 is referred to as the East Wall of the North Pit. These walls are identified separately for ease in discussing slope movement and do not imply the presence of a kinematic distinguishing feature at this location.

The first monitoring points were installed at the east and south walls of the North Pit in 1994. Some of the monuments have been destroyed due to re-grading, and critical ones were replaced with new monuments having different identification numbers. In 1996, six monitoring points were installed to replace points in the north pit. In 1997, 14 monitoring points were installed to monitor shallow slope movement that was observed on the south wall of the North Pit. In 1998 and 1999, five monitoring points were installed at existing locations including inclinometer collars. In 2000, 11 monitoring points were installed in the North and South pits. A monitoring point was placed at the collar of piezometer P-09 at the east wall of the South Pit in 2001. In 2005, 13 monitoring points were installed to monitoring shallow slope displacement observed on the east wall of the South Pit. On October 8, 2010, six of the monitoring points on the East Wall of the South Pit that were installed in 2005 were abandoned, because they had been compromised by slope displacement and tension crack formation. Also at that time, eight new monitoring points were installed to replace the abandoned installations and positioned to provide a profile of the slope.

Monument locations are provided on the Slope Displacement Vectors drawing presented as Appendix A. Surveys are usually conducted as close to one-year intervals as possible, allowing the magnitude of displacement to be reported as a velocity in terms of ft/year. In 2011, names of monitoring points were modified to show the year the monument was set. This change was made to differentiate when a new baseline was established for a particular monitoring point. For example, MP99-85 is monitoring point MP-85, which was established in 1999. Three monitoring points were added and P95-4 was replaced by P11-4. There are currently 74 monitoring points in the North and South pits to monitor surficial slope movement.

Monument locations are provided on the Slope Displacement Vectors drawing presented as Figure 1. Surveys are usually conducted as close to one year intervals as possible, allowing the magnitude of displacement to be reported as a velocity in terms of ft/year.

Surveys of all accessible monuments were conducted on November 15, 2011 with the previous survey performed on August 27, 2011. The surveys are actually conducted over several consecutive days with the median date used to represent the data set. Of the 74 points surveyed in 2011, 27 had annual displacement magnitudes that were greater than survey error during the 2010–2011 monitoring period, as shown on the summary table presented on Appendix A. By comparison, 31 points had annual displacement magnitudes greater than survey error for the 2009–2010 monitoring period. Points with a displacement less than the survey error are shown in grey on the map.

All monitoring points are shown on the summary table located in Appendix A and Table 1. Displacement for monitoring points where displacement was not detected, or was less than calculated survey error is indicated as “ND” or non-detectable.

The current maximum displacement at the East Wall of the North Pit is 0.35 ft/year at both MP96-66 and MP96-69. During the previous monitoring period, there was 0.21ft/yr displacement at MP96-66, and

0.20ft/yr displacement at MP96-69. The current maximum displacement at the East Wall of the South Pit is 1.84 ft/year at MP05-92, which had a displacement of 0.53 ft/year during the previous monitoring period.

During 2008, repairs were made to improve drainage at the slump above the East Wall of the South Pit. In the fall of 2010, additional survey monitoring points were added, and some were replaced because they were compromised by slope movement, resulting in a net gain of two monitoring points. Also in 2010 at the East Wall of the South Pit, the tension cracks were graded closed on the bench and on parts of the slope adjacent to the bench that were accessible to the backhoe. The bench was also crowned longitudinally across the slump to promote drainage. These maintenance measures will be continued as needed to optimize drainage from the area of slope displacement.

The slump above the bench at the East Wall of the South Pit was the first slope displacement feature noticed in this area. By the fall of 2010, it was evident that the slope displacement in this area is related to movement of structures associated with the Chester Fault system. Slope displacement currently involves the full height of the southern portion of the East Wall of the South Pit. Observation and maintenance will continue in this area.

4.2 Inclinometer Evaluation

Three inclinometers were installed in October 1998 (I98-1, I98-2, and I98-3) to monitor any subsurface movement within the south and east walls of the North Pit. The inclinometer locations are provided on the Slope Displacement Vectors drawing presented in Appendix A. Inclinometer I98-1 is located on the lowest bench on the South Wall of the North Pit; I98-2 is located on the 10,600 ft. bench of the south wall and; I98-3 is located above the crest of the East Wall and above the headscarp.

Inclinometer data are comprised of readings taken at the same 2-ft intervals, on an annual basis. A difference in the position of the casing may be indicative of slope displacement, if the magnitude indicated meets or exceeds instrument error margins. Inclinometer data collected in 1999 through 2010 from all three inclinometers is well below the survey instrument error margin of +/- 0.3 inches per 100 ft. of depth (SRK April 2011). The more recent inclinometer surveys reflect that little or no slope displacement has occurred when compared to the revised baseline inclinometer survey for the respective installations (July 2003). The new baseline reading was established after the original baseline reading data file of June 1999 was corrupted. The consequences of changing the baseline reading are minimal, because of the consistently low magnitude of slope displacement that has been observed at the site.

Noting problems that occurred in 2010, at the end of the year the inclinometer equipment was sent to the manufacturer, Slope Indicator, Inc. (SINCO) in Redmond Washington, for repair and calibration. Equipment function and calibration remained an issue during the 2011 monitoring season and resulted in collection of faulty data. However, there is no indication of slope displacement at the inclinometer locations, as evidenced by surface survey, monitoring and visual observation. The data recorder, inclinometer probe, and probe cable were sent to the equipment manufacturer in December 2011 and all equipment has been repaired and calibrated. A thorough field test of the equipment is planned for May 2012. Data will be recorded and analyzed prior to the annual monitoring event scheduled for July 2012.

Given the isolated slope displacement noted in the previous section on the northeast corner of the North Pit and the resaturation of the Pinnacle underground mine workings in the area of the south wall of the North Pit as discussed in Section 4.3, these inclinometers will continued to be monitored.

4.3 Pinnacle Mine Workings Monitoring

A concrete plug was constructed in the Pinnacle Adit in September 1995. Authorization for the placement of the Pinnacle Adit plug was requested by Homestake in April 1995, through Technical Revision #4 (TR4) – Pinnacle Adit Closure, Pitch Project, Technical Revision for Permit #77-4HR (Golder Associates, Inc.). Conditional approval of the Technical Revision request was granted by the Colorado Division of Minerals and Geology, in a letter dated May 26, 1995.

The intention of the plug was to partially seal the Pinnacle Adit and allow the area around the historical underground workings to resaturate. The resaturation of the workings was expected to re-establish a geochemically reducing environment and lower the solubility of uranium and radium within the underground workings of the Pinnacle Mine. The Division's approval of TR-4 required Homestake to monitor the effects of resaturation in the Pinnacle workings for five years or until hydrologic conditions stabilized. Components in the Monitoring Plan outlined in TR4 (Section 4.0), included continuation of discharge water quality monitoring at the POC (SW-33), monitoring of groundwater resaturation levels, annual spring and seep surveys in areas down-gradient from Pinnacle workings, and monitoring for changes in water quality that could be attributable to resaturation. The stated purpose of the monitoring program is to verify the intended effectiveness of the adit plug. Homestake has continued to monitor the following facets of resaturation through 2011:

- Survey of springs and seeps;
- Groundwater levels in piezometers installed in the area of the Pinnacle workings;
- Water quality and flow from the Pinnacle Adit at sampling point PP-01; and
- Monitor discharges from the property at the CDPS permit POC SW-33.

As in 2011, monitoring the resaturation of the South Wall of the North Pit will continue in 2012.

4.3.1 Spring and Seep Monitoring

Spring and seep surveys were conducted to monitor changes in shallow groundwater conditions due to construction of the Pinnacle Adit plug. These surveys have been conducted annually since July 1995 and were repeated in 2011. In general, flow from some springs and seeps increased for a brief period after the adit plug installation and have declined to a steady state since the spring of 1997. Small variances noted since 1997, are believed to be attributable to a variety of conditions including precipitation, depth of snow pack, timing of snowmelt, and the potential for infiltration with respect to frozen ground. All "active" spring and seep locations are shown in Figure 3. Springs and seeps currently designated as "inactive" (no flow or seepage observed over the past five years) are not shown, but can be found on maps issued with past reports. A new spring (IC-12) was found and monitored in 2008. Its flow rate was consistent with the other springs. Table 2 shows spring and seep data, including flow measurements, from 1995 to the present. Spring IC-4 has experienced an increased flow over the past couple of years due to higher snow packs at the site since 2005. The flow in IC-4 and all springs decrease rapidly during the early summer months to a point where there is little to no flow in the fall. We will continue to monitoring the springs and seeps in 2012.

4.3.2 Groundwater Levels

Seven piezometers were installed in the area of the Pinnacle Mine to monitor the piezometric surface within the workings area behind the adit plug. The piezometers are identified as P4 through P10. Piezometer P7 was installed as a replacement for P6, which was lost during plug grouting/construction.

The locations of these piezometers are provided in Figure 3. All six piezometers fluctuate seasonally with the highest levels in late May or early June sympathetic with snowmelt. A hydrograph of the piezometer water levels is provided as Figure 4. Piezometers located within the Pinnacle workings include P-4 and P-5. P-9 is located downgradient of the Pinnacle workings and also monitors water levels within the workings. Piezometers located upgradient of the Pinnacle workings (and Pinnacle Adit plug) include P-7, P-8, and P-10; these piezometers are not within the workings.

Piezometers that monitor water levels in the underground mine workings (P-4, P-5, and P-9) behave very similar since 1997. Spring and summertime water levels may vary from year to year due to the magnitude and timing of snowmelt and heavy summer precipitation event; however, water levels during low-flow conditions since 1997 (i.e., over-the-winter) have consistently been between 10,391 to 10,397 ft-amsl. Water levels during low-flow conditions should be considered when assessing trends and indicate that there is no increasing trend for the Pinnacle workings. Based on the available data since 1997, the water level in the workings has essentially reached steady state.

Piezometer P-7 is designed to monitor bedrock water levels upgradient of in the Pinnacle Adit plug. As shown on Figure 4, the water levels in P-7 are approximately 10 to 15 feet below the level in the Pinnacle workings and follow the same seasonal water level patterns as the piezometers that are within the workings, suggesting that P-7 is somewhat hydraulically connected to with the workings. The slightly lower water level is due to the complex geology and hydrogeology at the Pitch site. Groundwater is compartmentalized, as documented in early hydrogeology reports by Dr. David Snow (Leeds, Hill, and Jewett, Inc. 1979), which is a result of cross cutting faults and the underground workings add another level of compartmentalization. Review of the water levels in P-7 reveals that the low-flow levels have been relatively consistent since 2001, varying over a very small range from 10,381 to 10,383 feet. Therefore, we believe that the water level in P-7 is not increasing and has reached steady state similar to the water level within the Pinnacle workings.

Piezometer P-8 lies just to the north of the Pinnacle workings and was constructed to monitor bedrock water levels upgradient of the Pinnacle Adit plug, and is closest piezometer to the Chester Fault Zone. P-8 was converted to a dual-purpose inclinometer in 1999 by installing inclinometer casing inside the piezometer casing. P-8 has consistently displayed the lowest water level in the mine vicinity although it has increased approximately 15 feet since 1997, or 1.3 feet per year on average. P-8 is located where the workings once day-lighted in the South Wall of the North Pit. Springs occur in this area (CFS and CFS-2) and perhaps the water is slowly filling the secondary porosity in the bedrock resulting in increased water levels in the piezometer. The fractured nature of the rock within the fault zone may also enhance infiltration of water from the springs. Therefore, water in the Pinnacle workings does not appear to be the cause of the slightly increasing water level in P-8. Additionally, precipitation does not appear to be responsible for the increasing water levels because the water level trend has been linear over a 14-year period and one would expect a noticeable change in the rate of increase corresponding to wet or dry years.

Flow from the Chester Fault Zone into the North Pit Lake is measured at CFS and CFS-2, which are springs located on the south wall of the pit (Figure 1). The flow from CFS has been measured since fall 1999 and has ranged from 0.5 to 7.2 gpm. The flow from CFS-2 has been measured since fall 2002 and has a similar range from 0.4 to 4.4 gpm. Review of the flow measurements reveals that there is no apparent increase in the flow rate from these springs into the North Pit Lake.

4.3.3 Pinnacle Adit Flow

The flow rate from the Pinnacle Adit at PP-01 has been monitored since November 1993. The flow from the adit remains in a seasonal pattern of high flows during the short period of spring melt in late May or

early June and stable flows of less than 10 gallons per minute (gpm) throughout the year. The measured peak flow for the 2011 season was 28.5 gpm on June 15, 2011. This was consistent with the peak discharge in 2009 of 29.2 gpm and 22.6 gpm in 2010 and consistent with higher snow packs at the site since 2005. A hydrograph of the Pinnacle Adit flow at PP-01 is provided as Figure 5. The spike in flows observed at PP-01 each spring are likely a result of snowmelt and runoff from surrounding sources originating between the Pinnacle plug and the PP-01 monitoring point. Once the snowmelt period is over, the flow rate at PP-01 decreases and stabilizes at normal levels.

4.3.4 Radium and Uranium Concentrations at PP-01

Dissolved radium 226 and total uranium have been monitored at PP-01 since March 1994. After construction of the Pinnacle Adit plug in September 1995, both the dissolved radium 226 and total uranium concentrations have stabilized at reduced concentrations. A graph of the radium and uranium concentrations at PP-01 is provided as Figure 6. During 2011, total uranium and dissolved radium 226 levels remained at the reduced concentrations observed over the preceding fifteen -year period.

4.4 Sediment Control Embankment

The safety and efficiency of the sediment embankment is monitored with a network of surface and subsurface systems. There are five permanent survey monuments where any physical movement of the embankment can be measured and nine piezometers have been installed to monitor the phreatic surface within the embankment. Five of the piezometers were installed during the initial construction in 1980, and four of the piezometers were completed in the core of the embankment in 2001. The 2011 monument survey was performed on September 24 and results indicate the amount of vertical movement is minimal and within the range of survey instrument error. No significant vertical displacement has occurred since the initial settlement following construction.

In 2011, the highest water level in the pond of 9890.0 amsl occurred on June1 and dropped back down to the 9884.0 elevation by June 27 and remained at the level through the rest of the year. As a result, the water levels in the piezometers showed little response to water stored in the impoundment in 2011.

In 2011, the water level in Piezometer P1 in the upstream face of the embankment rose by 12.90 feet compared with 15.45 feet in 2009 when the pond level reached 9891.0 amsl. In response to the higher water levels in the pond since 2005, the maximum water level in Piezometer P3 increased from 9863.56 to 9866.02ft. amsl, representing a rise of 2.46 feet. The water level in P3 increased by 3.61 feet in mid June and dropped back to the normal ranged by the end of summer. In contrast, from 2004 through 2010, the maximum water level in Piezometer P4 decreased from 9831.1 to 9829.3 ft. amsl, a drop of 1.8 feet. In 2011, the water level in P4 increased by 1.52 feet.

Because P4 is in close proximity to the seepage area noted in 2000, it is monitored closely. Over the previous five years it was observed that the water level in P4 was not falling back as rapidly as the other piezometers. It was noted that when the probe was pulled out of the P4 and P5 they were covered with silt. The silt build up didn't allow the pipes to drain sufficiently to show the phreatic surface in the embankment. In an attempt to remedy the problem, in July 2009 both piezometers P4 and P5 were flushed with high-pressure water in an attempt to minimize the silt and other debris that had built up in the standpipes. The high pressure flushing resulted in the water levels in both piezometers falling back to normal levels within a few days in 2009, with the average water level in P4 dropping by more than 3 feet. Piezometer P5 also fell back rapidly after being flushed. In 2010, the maximum water elevation in P5 was 2.46 feet, below the maximum elevation of 6.7 feet in 2009. The 2011 maximum water levels in the embankment piezometers P6, P8 and P9 also decreased from levels over the past four years. Only P6

showed an increase over the maximum water levels in 2009 and 2008 and similar to 2007. This may also due to silt built in the standpipe and will be monitored closely in 2012.

Based upon the 2011 monitoring data and embankment inspections, it appears that the cutoff trench and clay blanket reconstruction performed in 2001 have addressed the previous localized perched zone and related seepage through the embankment core, thus, allowing the embankment to function as designed.

A Sediment Embankment Report is submitted annually to the Colorado Division of Water Resources (CDWR) providing the results of the embankment-monitoring program. The 2011 report is provided in electronic Adobe Acrobat© Portable Document Format on the CD attached to this report.

4.5 Waste Rock Dumps

The waste rock dumps were inspected monthly in 2011, except when winter conditions prohibited access, in accordance with the recommended monitoring program. The historical water levels in the piezometers show little fluctuations during the winter months. The visual inspections conducted in 2011 indicate stable conditions for the Indian Creek and Tie Camp waste rock dumps.

In the past, water levels in several of the piezometers have had seasonal fluctuations and generally fall back within an acceptable range by mid-summer. Following the dry conditions of 2001 through 2003, the seasonal variations have increased in recent years as heavier snow packs have occurred. The increases in the maximum water levels are related to the spring snow melt and the saturated zones within the dump remain thin. We will continue to evaluate the cause and possible effects of the seasonal spikes in the water levels in some piezometers, and observe surface features of the dumps. However, there continues to be no indication of instability in either of the waste rock dumps.

Once again in 2011, a few of the piezometers became plugged with silt and required flushing with high pressure water to get the probe down to the water. Each piezometer behaves differently and their flushing requires experience to be successful. The water levels in the rock dump piezometers in 2011 continued to show normal seasonal fluctuations when the silt was not an issue. Prior to October 2001, data was not obtained from Piezometer IC10600 due to the presence of a gravel obstruction that blocked the passage of the piezometer. Additionally, in 2007, the local elk herd destroyed the stand-pipe casing in Piezometer IC 10370 and consequently caused the upper part of the borehole soil to collapse into the piezometer casing. This resulted in approximately six feet of rock debris being introduced into the bottom of the piezometer, rendering it non-functional until the fall of 2009 when the obstruction was cleared from the bottom of the casing by high pressure flushing. This allowed us to remedy that problem and to begin using the Piezometer IC10370 as part of the monitoring system. Piezometer IC10300 was also flushed in 2009 & 2010 to remove the silt in the casing. In late 2011 it was decided that piezometers IC10300 and IC10370 would be replaced in 2011 to allow more accurate measurement of the phreatic surface in this portion of the Indian Creek rock dump.

In August 2011, both piezometers IC10300 and IC10370 were sealed and were replaced with two new piezometers at approximately the same locations as shown on Figure 3. The replacement piezometer IC10300R is located approximately 30 feet to the west of the former location of IC10300. Piezometer IC10370R is located approximately 67 feet to the west of the former location of IC10370.

Piezometers IC-10300R and IC-10370R were designed in accordance with Colorado Office of the State Engineer Rules for water well construction rule 14 “Minimum Construction Standards for Monitoring and Observation Wells/Holes and Test Holes”. The existing piezometers IC-10300 and IC10370 were abandoned in accordance with Colorado Office of the State Engineer Rules for water well construction

rule 16 “Standards for Plugging and Sealing Wells and Boreholes”. Piezometer construction details are is presented on the table below.

New Piezometer Construction Details

Piezometer Location	Material	Diameter (ID-Inches)	Depth (ft BGS)	Screen Length (ft)	Screen Interval (ft BGS)	Static Water 09/16/2011 (ft bgs)
IC-10300R	Sch. 80 PVC	5	208.95	20	188 - 208	188.12
IC-10370R	Sch. 80 PVC	5	207.87	10	197 - 207	197.83

Notes:

m = meters ID-Inches = Interior Diameter in inches ft BGS = Feet Below Ground Surface ft = feet

The new piezometers consist of a 5-inch interior diameter (id) schedule 80 Polyvinyl Chloride (PVC) riser and screen and completed with an 8 inch interior diameter steel stick up and well cover with a 3 ft. by 3 ft. concrete well apron secures the stick-up pipe. Water level measurements were first taken from the new piezometers on September 9, 2011. More detailed discussions and figures are presented in the 2011 Annual Geotechnical Report filed with the Division in December 2011 and in the Piezometer Replacement Field Report filed with the Division in October 2011.

4.6 Water Quality Monitoring

As outlined in TR4, Homestake has monitored water quality since 1994 to verify the intended effectiveness of installation of the Pinnacle Adit plug. Water quality monitoring was conducted in 2011 including sampling points located at the North Pit Lake discharge (Sample Point NPL), the Tie Camp Creek drainage (Sample Points TCCDRN and TCC), the site discharge POC (Sample Point SW-33), as well as spring and seep surveys performed in the spring and fall. Monthly discharge-monitoring reports (DMRs), pursuant to Colorado Discharge Permit System (CDPS) number CO-0022756, were submitted to the Colorado Department of Public Health and Environment (CDPHE) for 2011. Monitoring for the CDPS was conducted at the designated POC SW-33, shown on Figure 3. Analytical tests conducted for the DMRs at SW-33 as required by the CDPS include: flow; dissolved radium 226; total radium 226/228; total uranium; pH; total suspended solids (TSS); total dissolved solids; oil and grease (visual only); potentially dissolved zinc; and whole effluent toxicity (WET). During 2011, all analytical results were below the CDPS permit’s 30-day average or daily maximum limitations and WET testing results were within permit limits. The 2011 DMRs are on file with the CDPHE-Water Quality Control Division. Water quality monitoring will continue in 2012

4.7 Radioactive Materials License

The RTP building, foundation and sediments excavated from the upper portion of Indian Creek below the old RTP area were placed in the Tie Camp Disposal Cell in 2001. Final grading and revegetation of the RTP area was started in 2002 and completed in 2003. With the removal of the RTP, the radioactive source material and any treatment capacity have been removed. Small concentrations of the Radium 226 isotope remain in the sediment deposited upstream of the sediment control embankment. The Radioactive Materials License (RML) for the Pitch Reclamation Project was renewed in April 2008. License renewal #14 allows Homestake to manage the Tie Camp Low-Grade Stockpile and the sediment upstream of the sediment control embankment within the guidelines of the license. A copy of the 2011 Annual RML letter report is provided in electronic Adobe Acrobat© Portable Document Format on the CD attached to this report.

5. INSPECTIONS

A compliance inspection was conducted by Edgar Ethington of the CDPHE on August 30, 2011 under the terms of RML license No. 150-01. A notice of violation was issued for the lack of available administrative and operation procedures related to radiological health and safety and for the lack of available instructions and precautions to keep exposures ALARA. An item of concern was addressed for erosion on the south flank of the Tie Camp Disposal cell.

The violations and item of concern were satisfactorily addressed before the end of 2011.

A compliance inspection under the terms of CDPS permit no.CO-0022756 was conducted by Joseph C. Talbott, Jr of the CDPHE on August 9, 2011. The inspection. Noted two violations. The first for the time limitations for field sampling of pH at outfall SW33; and the second for having annual inspection performed by a individual with a current Class “D” certification.

Both violations were satisfactorily addressed before the end of 2011.

6. SURETY

Homestake maintains a reclamation surety performance bond for the Pitch Reclamation project in the form of a financial guarantee bond with Safeco Insurance Company of America in the amount of $2,263,000. A copy of the notification and surety form to the Division is provided as Appendix B.

7. MONITORING & RECLAMATION ACTIVITIES PLANNED FOR 2012

In addition to the continued monitoring of pit slope stability and water quality, Homestake continues to move forward with final closure and reclamation of the Pitch property. During 2012, the following activities are planned:

- Continue to monitor the Tie Camp Creek Disposal Cell for depressions where water could pond, and manage the drainage off and around the cell;
- Planting of tree seedlings in selected areas of the rock dumps and pits slopes;
- Continue to monitor the reclamation work on the constructed wetlands located in the drainage area in the vicinity of the former RTP including placement of additional organic material (e.g. peat), transplanting cattails from similar elevations; and other enhancement activities to further promote sediment control;
- Monitor the drainage channels on the east and south walls of the North Pit and the east wall of the South Pit and in other areas throughout the property and make improvements as necessary;
- Clean out sediment traps in Indian and Tie Camp creeks;
- Inspect and replace, if necessary, the pump in piezometer P-4 and install new level Troll 500, In-Situ level transducer in P-7;
- Assess the area where the straw bales were placed in the North Pit in 2010 and install a small diversion ditch as necessary and remove straw bales and clean up area;
- Continue to inspect and remove tree seedlings on the downstream face of the Sediment Embankment;
- Continued noxious weed control management using Curtail with Surfactant;
- Conduct monthly and quarterly monitoring and reporting pursuant to the CDPS permit at the POC SW-33 for water releases;
- Conduct annual surveys of the slope monitoring monuments and inclinometers;
- Inspect and monitor waste rock dumps and sediment control embankment; and
- Continue to evaluate and remedy where possible any blockage in the older piezometers in the Indian Creek waste rock dump.
- Continue to remedy erosion between the first and second drainage benches on the Tie Camp Waste Rock Dump; consider installing waddles to prevent erosion
- Grade all roads for safe travel ways into and around mine site; and
- Set up test for slope movement equipment May/June to determine its functionality and verify proper repair and calibration completed in December 2011 prior to retrieving inclinometer readings for the 2012 field season.

8. REFERENCES

Telesto Solutions, Inc. Draft – Inclinometer Data Analysis – Pitch Reclamation Project. April, 2012.

Telesto Solutions, Inc. Draft – Evaluation of Surface Slope Displacement during the 2010-2011 Monitoring Period at the Pitch Reclamation Project. February 27, 2012.

TABLES

Table 1 Summary of Annual Slope Displacement for 2009-2010

Monitoring Point I.D.	Location	Year Installed	Total Annual Displacement (ft)	Dip Direction (deg)	Dip (deg)
MP-08	N Pit, E Wall	1994	ND	ND	ND
MP-09	N Pit, E Wall	1994	ND	ND	ND
MP-12	N Pit, E Wall	1994	ND	ND	ND
MP-16	N Pit, E Wall	1994	ND	ND	ND
MP-18	N Pit, E Wall	1994	0.21	242	3
MP-23	N Pit, E Wall	1994	0.24	235	0
MP-24	N Pit, E Wall	1994	ND	ND	ND
MP-25	N Pit, E Wall	1994	0.96	248	74
MP-26	N Pit, E Wall	1994	ND	ND	ND
MP-27	N Pit, E Wall	1994	ND	ND	ND
MP-28	N Pit, E Wall	1994	ND	ND	ND
MP-29	N Pit, E Wall	1994	0.23	239	2
MP-34	N Pit, E Wall	1994	ND	ND	ND
MP-35	N Pit, E Wall	1994	ND	ND	ND
MP-36	N Pit, E Wall	1994	ND	ND	ND
MP-37	N Pit, E Wall	1994	0.24	234	10
MP-38	N Pit, E Wall	1994	0.25	227	-11
MP-39	N Pit, E Wall	1994	ND	ND	ND
MP-40	N Pit, E Wall	1994	0.16	210	4
MP-41	N Pit, E Wall	1994	ND	ND	ND
MP-42	N Pit, E Wall	1994	ND	ND	ND
MP-43	N Pit, E Wall	1994	ND	ND	ND
MP-44	N Pit, E Wall	1994	ND	ND	ND
MP-52	N Pit, E Wall	1994	ND	ND	ND
MP-65	N Pit, E Wall	1996	0.18	227	13
MP-66	N Pit, E Wall	1996	0.20	254	27
MP-67	N Pit, E Wall	1996	ND	ND	ND
MP-70	N Pit, E Wall	1996	ND	ND	ND
MP-69	N Pit, E Wall	1997	0.21	240	20
I94-2	N Pit, E Wall	1998	ND	ND	ND
C94-1	N Pit, E Wall	1998	ND	ND	ND
I98-3	N Pit, E Wall	1999	ND	ND	ND
MP-81	N Pit, E Wall	2000	ND	ND	ND
MP-82	N Pit, E Wall	2000	ND	ND	ND
MP-83	N Pit, E Wall	2000	0.41	247	-42
MP-84	N Pit, E Wall	2000	ND	ND	ND
MP-85	N Pit, E Wall	2000	0.15	254	8
MP-86	N Pit, E Wall	2000	0.09	264	6
MP-87	N Pit, E Wall	2000	0.15	245	12
MP-88	N Pit, E Wall	2000	ND	ND	ND
MP-89	N Pit, E Wall	2000	ND	ND	ND
MP-47	N Pit, S Wall	1994	ND	ND	ND
MP-48	N Pit, S Wall	1994	ND	ND	ND
MP-50	N Pit, S Wall	1994	ND	ND	ND
MP-59	N Pit, S Wall	1995	0.15	290	0
MP-68	N Pit, S Wall	1996	0.12	297	-15
P-08	N Pit, S Wall	1996	0.10	302	12
MP-72	N Pit, S Wall	1997	ND	ND	ND

Table 1 Summary of Annual Slope Displacement for 2009-2010

Monitoring Point I.D.	Location	Year Installed	Total Annual Displacement (ft)	Dip Direction (deg)	Dip (deg)
MP-73	N Pit, S Wall	1997	ND	ND	ND
MP-74	N Pit, S Wall	1997	ND	ND	ND
MP-75	N Pit, S Wall	1997	ND	ND	ND
MP-76	N Pit, S Wall	1997	0.14	266	8
MP-77	N Pit, S Wall	1997	ND	ND	ND
MP-78	N Pit, S Wall	1997	ND	ND	ND
MP-79	N Pit, S Wall	1997	0.13	261	4
MP-80	N Pit, S Wall	1997	0.11	265	5
P-04	N Pit, S Wall	1997	ND	ND	ND
P-07	N Pit, S Wall	1997	ND	ND	ND
P-10	N Pit, S Wall	1997	ND	ND	ND
I98-1	N Pit, S Wall	1999	0.09	291	19
I98-2	N Pit, S Wall	1999	ND	ND	ND
MP-06	S Pit, E Wall	1994	ND	ND	ND
MP-07	S Pit, E Wall	1994	ND	ND	ND
MP-45	S Pit, E Wall	1994	ND	ND	ND
MP-63	S Pit, E Wall	1995	0.35	254	0
MP-64	S Pit, E Wall	1995	ND	ND	ND
MP-71	S Pit, E Wall	1997	ND	ND	ND
MP-90	S Pit, E Wall	2000	0.05	153	34
MP-91	S Pit, E Wall	2000	ND	ND	ND
P-09	S Pit, E Wall	2001	ND	ND	ND
MP-92	S Pit, E Wall	2005	0.53	229	-12
H-1	S Pit, E Wall	2005	ND	ND	ND
HS-2	S Pit, E Wall	2005	ND	ND	ND
HS-3	S Pit, E Wall	2005	0.64	242	-21
HS-4	S Pit, E Wall	2005	0.46	229	-22
H-5	S Pit, E Wall	2005	0.56	236	-18
HS-6	S Pit, E Wall	2005	ND	ND	ND
HS-7	S Pit, E Wall	2005	ND	ND	ND
S-1	S Pit, E Wall	2005	0.27	253	-2
S-2	S Pit, E Wall	2005	0.41	255	1
S-4	S Pit, E Wall	2005	0.72	236	-2
F-1	S Pit, E Wall	2005	0.07	262	16
F-2	S Pit, E Wall	2005	ND	ND	ND

Table 2 Spring and Seep Summary of Activity (1995-2009)

Station	Current Designation	Flow Rate Data* (gallons per minute – gpm)																						
		Spring 1995	Spring 1996	Spring 1997	Spring 1998	Fall 1998	Spring 1999	Fall 1999	Spring 2000	Fall 2000	Spring 2001	Fall 2001	Spring 2002	Fall 2002	Spring 2003	Fall 2003	Spring 2004	Fall 2004	Spring 2005	Fall 2005	Spring 2006	Fall 2006	Spring 2007	Fall 2007
TC-1	Inactive	*<1	no flow	*<1	no flow or dry	*<1	no flow or dry	no survey	*<1	*<1	no flow or dry	no flow or dry	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
TC-2	Spring	*5	*5	*5	*5	*5	*1	no survey	0.6	*<1	0.8	0.3	no flow	0.2	1.5	0.3	0.6	no flow	some flow (no meas.)	no flow	some flow (no meas.)	no flow	some flow (no meas.)	no flow
TC-3	Spring	*5	*5	*5	*5	*5	*1	no survey	0.5	*<1	0.8	0.5	no flow	0.4	3.8	0.4	0.9	no flow	some flow (no meas.)	no flow	some flow (no meas.)	no flow	some flow (no meas.)	no flow
TC-4	Seep	*<1	no flow	*5	no flow	*5	no flow	no survey	1.2	no flow or dry	0.4	no flow or dry	no flow or dry	no flow or dry	4.3	no flow or dry	0.4	no flow or dry	some flow (no meas.)	no flow	some flow (no meas.)	no flow	some flow (no meas.)	no flow
TC-5	Seep	*<1	no flow	*5	no flow	*5	no flow	no survey	0.5	no flow or dry	0.4	no flow or dry	no flow or dry	no flow or dry	1.7	no flow or dry	no flow or dry	no flow or dry	some flow (no meas.)	no flow	some flow (no meas.)	no flow	some flow (no meas.)	no flow
TC-6	Inactive	*5	no flow	no flow	N-O	N-O	N-O	no survey	not observable	no flow or dry	no flow or dry	no flow or dry	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
TC-7	Inactive	no flow	*20	no flow	no flow	no flow	no flow	no survey	no flow	no flow or dry	no flow or dry	no flow or dry	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
TC-8	Inactive	no flow	no flow	*<1	*<1	*<1	*<1	no survey	*<1	no flow or dry	no flow or dry	no flow or dry	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
TC-9	Seep	no flow	no flow	no flow	*<1	*<1	0.1	no survey	0.2	no flow or dry	0.1	no flow or dry	no flow or dry	no flow or dry	no flow or dry	no flow or dry	no flow or dry	no flow or dry	no flow or dry	no flow or dry	no flow or dry	no flow or dry	no flow or dry	no flow or dry
TC-10	Spring	First monitored in spring 1999					*1	no survey	1.5	0.9	0.5	0.5	0.4	0.6	1.2	0.6	1.7	0.6	0.9	0.5	0.7	0.5	0.9	0.5
TC-11	Inactive	First monitored in spring 2000							*<1	no flow	no flow or dry	no flow or dry	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
TC-12	Inactive	First monitored in spring 2000							no flow	no flow	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
IC-1	Inactive	*2	no flow	no flow	*<1	no flow	N-O	N-O	N-O	N-O	no flow or dry	no flow or dry	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
IC-2	Spring/Seep	*<1	*<1	*<1	*<1	*<1	0.7	no survey	1.2	no flow	0.5	no flow or dry	no flow or dry	no flow or dry	2.1	0.3	0.9	no flow or dry	some flow (no meas.)	no flow or dry	some flow (no meas.)	no flow or dry	some flow (no meas.)	no flow or dry
IC-3	Seep	*2	*2	*2-5	*<1	*<1	no flow	no survey	no flow	no flow	no flow or dry	no flow or dry	no flow or dry	no flow or dry	no flow or dry	no flow or dry	no flow or dry	no flow or dry	some flow (no meas.)	no flow or dry	some flow (no meas.)	no flow or dry	some flow (no meas.)	no flow or dry
IC-4	Spring/Seep	*10	*5	*20	*15	*1	*2.5	no survey	8.6	no flow	3.8	no flow or dry	no flow or dry	no flow or dry	28.4	no flow or dry	1.9	no flow or dry	20.9	no flow or dry	15.4	no flow or dry	37.2	0.4
IC-5	Inactive	no flow	no flow	no flow	*<1	no flow	no flow	no survey	*<1	*<1	no flow or dry	no flow or dry	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
IC-6	Seep	*5	no flow	no flow	*2	*<1	no flow	no survey	1.3	no flow	0.5	no flow	0.5	no flow or dry	0.7	no flow or dry	no flow or dry	no flow or dry	no flow or dry	no flow or dry	no flow or dry	no flow or dry	no flow or dry	no flow or dry
IC-7	Inactive	no flow	no flow	no flow	no flow	no flow	no flow	no survey	*<1	<1	no flow or dry	no flow or dry	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
IC-8	Inactive	3	no flow	no flow	*<1	no flow	no flow	no survey	*<1	no flow	no flow or dry	no flow or dry	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
IC-9	Inactive	no flow	*<1	*<1	*<1	no flow	no flow	no survey	*<1	no flow	no flow or dry	no flow or dry	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
IC-10	Spring	First monitored in spring 2003													16.8	4.2	13.4	4.9	14.5	4.1	11.9	5.6	15.3	5.7
IC-11	Inactive	First monitored in spring 2003													5.2	no flow or dry	no flow or dry	no flow or dry	N-O	N-O	N-O	N-O	N-O	N-O
CF-1	Re-named as CFS & CFS-2	not present	variable	variable	no flow	*<1	Re-named as CFS, CFS-2 (CFS-2 added Fall 2002)																	
CF-2		not present	variable	variable	no flow	*<1																		
NP-1	Inactive	First surveyed in fall 1998				*<1	no flow	no survey	no flow	no flow	no flow or dry	no flow or dry	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
CFS	Spring	Not designated until fall 1999						1.8	2.6	no survey	2.3	no survey	0.6	0.5	no survey	1.5	3.1	1.7	4.6	1.6	3.4	1.8	2.8	2.5
CFS-2	Spring	Not designated until Fall 2002												0.4	no survey	0.7	1.1	0.6	2.1	0.6	1.2	0.9	0.4	0.7

Notes:

1 *flows visually estimated.

2 “TC” indicates feature located in Tie Camp Creek drainage.

3 “IC” indicates feature located in Indian Creek drainage.

4 “CF” or “CFS” indicates feature located at south wall of North Pit Lake within the Chester Fault Zone.

5 “NP” indicates feature located at South Wall of North Pit Lake.

6 N-O = Not Observed for 1-year or more.

For locations of springs and seeps currently designated as “Inactive”, refer to maps contained in past reports.

Table 2 *(cont)* Spring and Seep Summary of Activity (1995-2009)

Station	Current Designation	Flow Rate Data* (gallons per minute – gpm)							
		Spring 2008	**Fall 2008**	**Spring 2009**	**Fall 2009**	**Spring 2010**	**Fall 2010**	**Spring 2011**	**Fall 2011**
TC-1	Inactive	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
TC-2	Spring	some flow (no meas.)	no flow	some flow (no meas.)	no flow	some flow (no meas.)	no flow	some flow (no meas.)	no flow
TC-3	Spring	some flow (no meas.)	no flow	some flow (no meas.)	no flow	some flow (no meas.)	no flow	some flow (no meas.)	no flow
TC-4	Seep	some flow (no meas.)	no flow	some flow (no meas.)	no flow	some flow (no meas.)	no flow	some flow (no meas.)	no flow
TC-5	Seep	some flow (no meas.)	no flow	some flow (no meas.)	no flow	some flow (no meas.)	no flow	some flow (no meas.)	no flow
TC-6	Inactive	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
TC-7	Inactive	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
TC-8	Inactive	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
TC-9	Seep	some flow (no meas.)	no flow or dry	some flow (no meas.)	no flow or dry	some flow (no meas.)	no flow or dry	some flow (no meas.)	no flow or dry
TC-10	Spring	1.0	0.5	0.9	0.4	0.8	0.5	0.9	0.4
TC-11	Inactive	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
TC-12	Inactive	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
IC-1	Inactive	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
IC-2	Spring/Seep	some flow (no meas.)	no flow or dry	some flow (no meas.)	no flow or dry	some flow (no meas.)	no flow or dry	some flow (no meas.)	no flow or dry
IC-3	Seep	some flow (no meas.)	no flow or dry	some flow (no meas.)	no flow or dry	some flow (no meas.)	no flow or dry	some flow (no meas.)	no flow or dry
IC-4	Spring/Seep	44.8	0.6	25.0	0.2	20.3	no flow or dry	40.0	no flow or dry
IC-5	Inactive	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
IC-6	Seep	no flow or dry	no flow or dry	no flow or dry	no flow or dry	no flow or dry	no flow or dry	no flow or dry	no flow or dry
IC-7	Inactive	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
IC-8	Inactive	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
IC-9	Inactive	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
IC-10	Spring	18.2	4.4	13.6	5.1	13.2	4.6	17.4	5.5
IC-11	Inactive	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
IC-12	Spring	33.3	0.4	14.3	0.3	6.4	no flow or dry	17.6	0.4
NP-1	Inactive	N-O	N-O	N-O	N-O	N-O	N-O	N-O	N-O
CFS	Spring	7.2	3.1	5.7	1.9	5.4	2.0	5.7	0.1
CFS-2	Spring	4.4	1.6	2.8	1.3	1.6	0.7	2.7	0.8

Notes:

1 *flows visually estimated.

2 “TC” indicates feature located in Tie Camp Creek drainage.

3 “IC” indicates feature located in Indian Creek drainage.

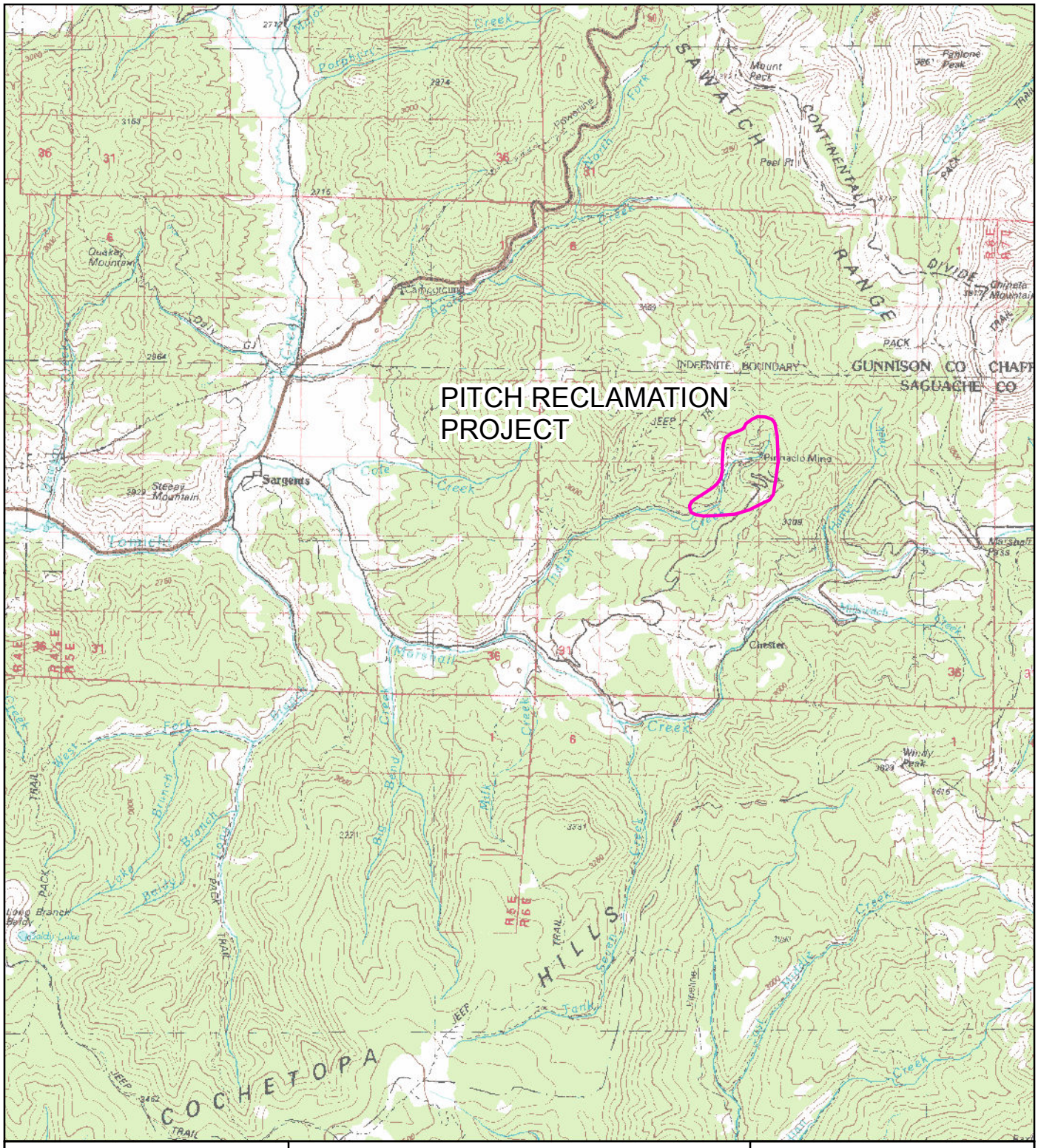
4 “CF” or “CFS” indicates feature located at south wall of North Pit Lake within the Chester Fault Zone.

5 “NP” indicates feature located at South Wall of North Pit Lake.

6 N-O = Not Observed for 1-year or more.

For locations of springs and seeps currently designated as “Inactive”, refer to maps contained in past reports.

FIGURES



COLORADO

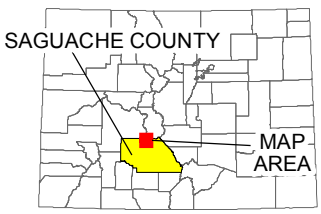


FIGURE 1

PITCH RECLAMATION PROJECT

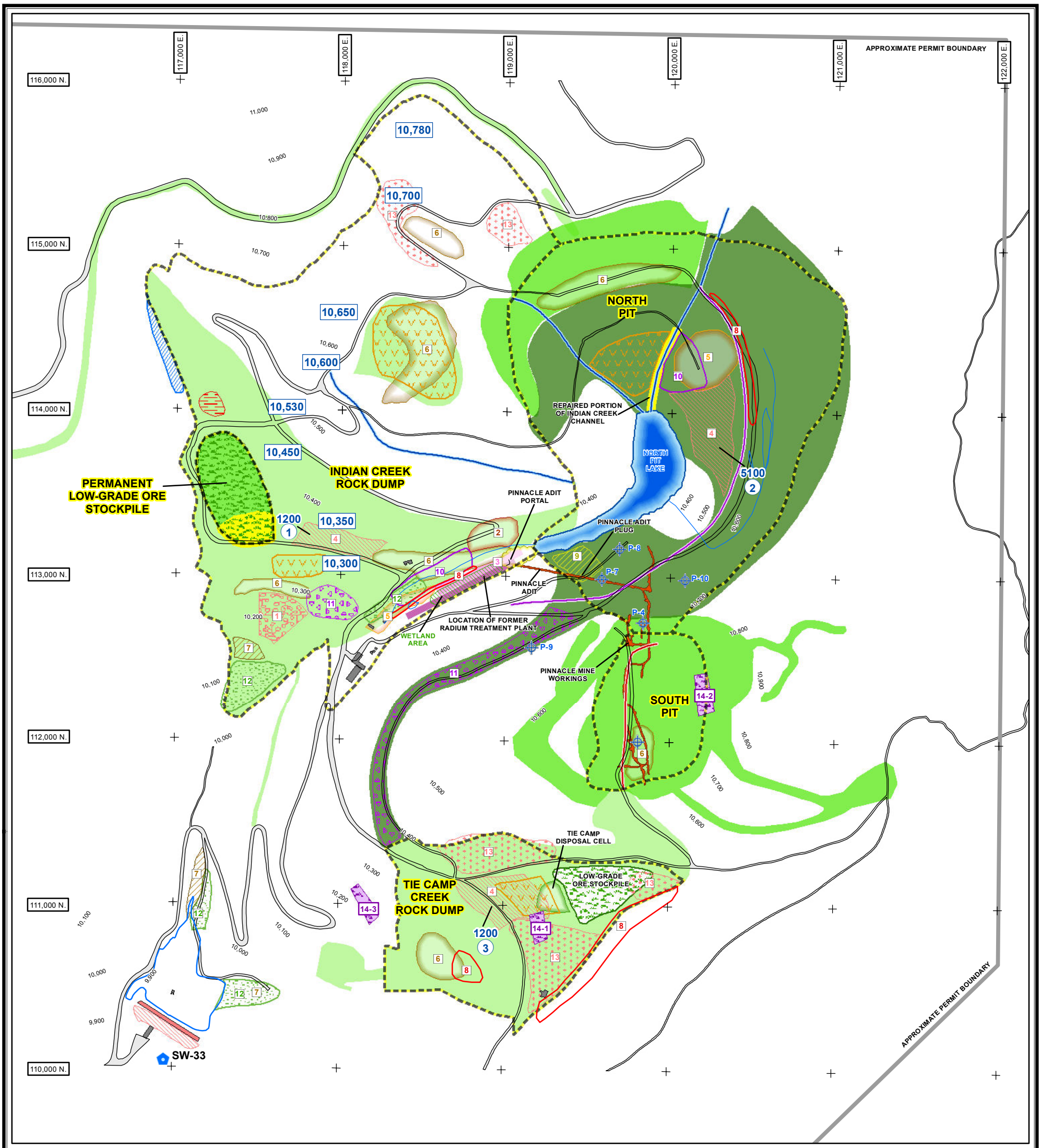
SAGUACHE COUNTY, COLORADO

0 1 2 3

MILES

DATE: 04/02/2012	*PROJECT NUMBER:* AO000102.0004
CARTOGRAPHER: JG-JC	
CHECKED BY: PHIL DeDYCKER	
PROJECT MANAGER: PHIL DeDYCKER	

ARCADIS
630 Plaza Drive, Suite 200
Highlands Ranch, Colorado
80129 • Tel: 720-344-3500
www.arcadis-us.com



Legend

- Areas Repaired in 2011
- 14-1 Disposal Cell Drainage Repair
- 14-2 East Wall Tension Crack Repair
- 14-3 Erosion Control on Second Bench
- Area Repaired in 2010
- Wetland Area 2007, 2009, and 2010
- Area Revegetated in 2004
- 1 Lodgepole Pine Tree Seedling Planted Areas 2003, 2004, 2006, 2007
- Area Revegetated in 2003
- 2 Lodgepole Pine Tree and Douglas Fir Planted Areas 2003
- Drainage Improvement in 2003
- Area Repaired in 2002 and 2003
- Area Revegetated in 2002 and 2003
- 3 Lodgepole Pine Tree and Blue Spruce Planted Areas 2002
- Area Revegetated in 1999
- 4 Lodgepole Pine Trees Planted in 1999
- 1,200 (1) Number of Lodgepole Pine Trees Planted in 1999 with Identifier
- Area Revegetated in 1998
- 5 Aspen, Willow, Cottonwood, and Shrub Planted Areas 1998 and 2007
- Area Revegetated in 1998
- 6 Lodgepole Pine Tree Planted Areas 1998
- Area Repaired in 1997
- Area Revegetated in 1997
- Area Revegetated in 1997
- 7 Willow Tree Planted Areas 1997
- Area Revegetated in 1997
- 8 Willow and Aspen Planted Areas 1997
- Area Revegetated in 1997
- 9 Spruce Tree Planted Areas 1997
- Area Revegetated in 1997
- 10 Pine Tree Planted Areas 1997
- Area Revegetated in 1996
- Area Revegetated in 1996
- 11 Spruce and Pine Tree Transplanted Areas 1996
- Clay-Fabric-Rock Lined Channel 1996
- Rip-Rap Lined Channel 1996
- Area Revegetated in 1995
- Area Revegetated in 1995
- 12 Quaking Aspen Tree Planted Areas 1995
- Area Revegetated in 1995
- 13 Spruce and Pine Tree Transplanted Areas 1995
- Rip-Rap Lined Channel 1995
- Area Revegetated in 1994
- Area Revegetated in 1993
- Facility Areas
- Pinnacle Adit
- Retaining Wall
- Clay Stockpile
- Tie Camp Disposal Cell
- Buildings
- Road
- 10,600 Revegetation Area Identification
- Drainage
- P-4 Piezometer
- SW-33 CDPS Compliance Point

N W E S

0 200 400 800 1,200 Feet

Notes:

1. Base topography provided by Homestake Mining Company established in 1994.
2. Revegetated areas prior to 1998 provided by Golder Associates.

HOMESTAKE MINING COMPANY OF CALIFORNIA

PITCH RECLAMATION PROJECT
SARGENTS, COLORADO

FIGURE 2: RECLAMATION AREAS PITCH RECLAMATION PROJECT

ARCADIS
630 Plaza Drive, Suite 200
Highlands Ranch, Colorado
80129 - Tel: 720-344-3500
www.arcadis-us.com

DESIGN:
DRAWN: MSH
FILE: Reclamation Areas.mxd
Project No.: AO000102.0006
SCALE: AS SHOWN
DATE: 04/02/2012
FIGURE: 2

I:\AO000102_Pitch\ACAD\siteplan 4-4-12.dwg

INDIAN CREEK ROCK DUMP

TIE CAMP ROCK DUMP

IC 10630
IC 10600
IC 10525
IC 10370
NEW IC 10360R
OLD IC 10360
NEW IC 10300R
OLD IC 10300
IC 10375

ICANPL
North Pit Lake
NP-1
UEWSPR
NP-2
NP-3
NPL
CFS-2
CFS
IP-8
NP-1
I-1
I-2
I-3
P-7
IP-10
PPO1
PPO2
PINNACLE ADIT
PINNACLE ADIT PLUG
LOCATION OF FORMER RADIUM TREATMENT PLANT
P-4
P-9
P-5
IC-11
IC-6
IC-7
ICDRN
OFFICES/SHOP
W-3
IC-4
IC
IC-10
IC-3
IC-2
IC-1
IC-8
IC-9
TCC
W-2
TCDRN
W-1
WATER TREATMENT PLANT
SW-33
TC-8
TC-9
TIE CAMP DISPOSAL CELL
TC-7
TC-4
TC-2
TC-5
TC-10
TC-1
TC-3
APPROXIMATE EAST PERMIT BOUNDARY

Legend

W-1	Monitoring Well
I-3	Inclinometer
P-9	Piezometer
SW-33	Site Compliance Point
PPO1	Surface Water Sampling Point
PPO2	Inactive Surface Water Sampling Point
IC-5	Seep
IC-6	Spring
IC-7	Inactive / Not Observed
	Road

NOTES:

1) BASE TOPOGRAPHY MAP SUPPLIED BY NIELSONS, INC. aai94asbilt972FORESTMAP.dwg
2) SITE LOCATIONS PROVIDED BY SRK, INC.

N NORTH

0 250 500 750
Scale (ft)

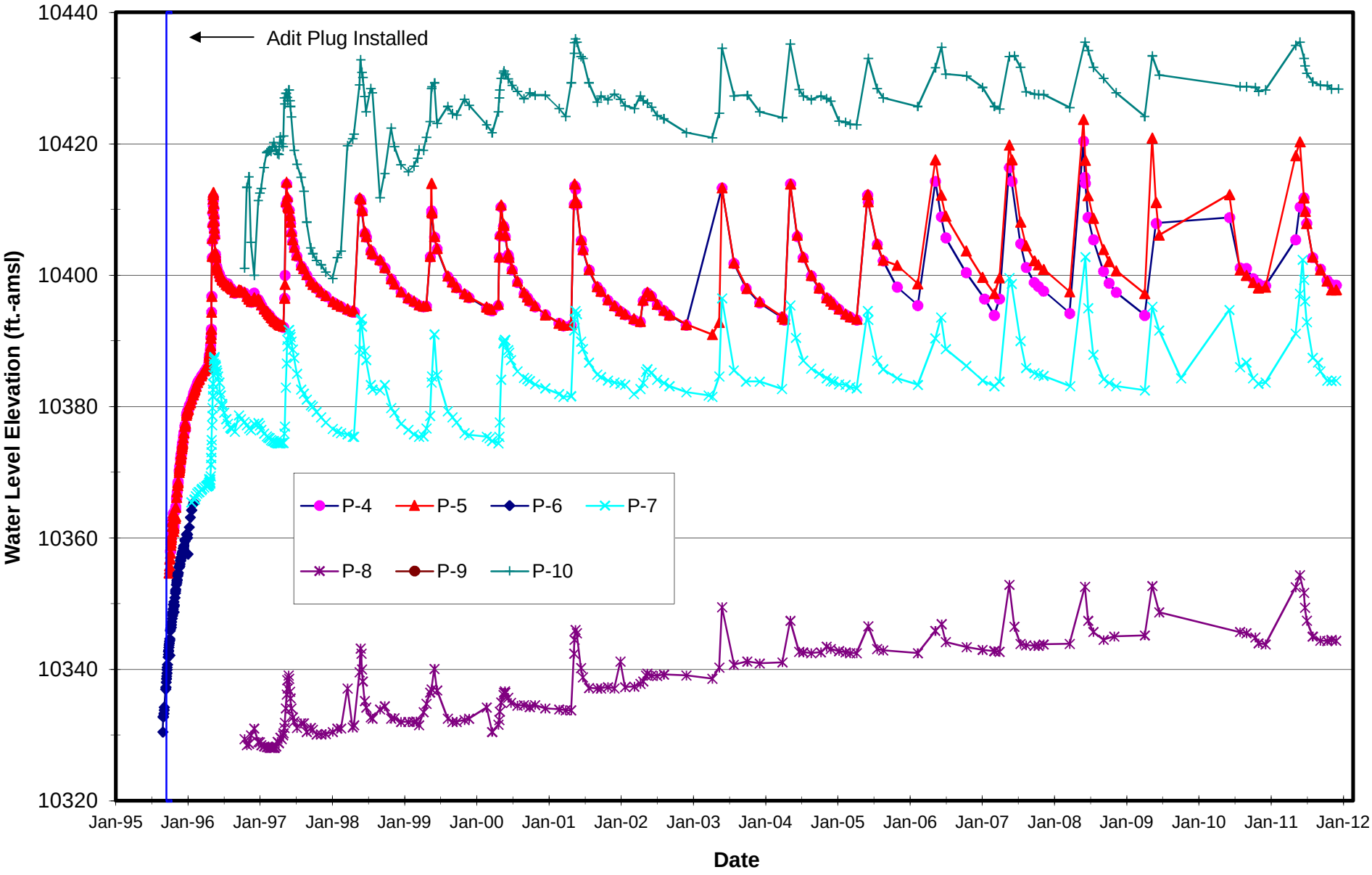
HOMESTAKE MINING COMPANY OF CALIFORNIA

PITCH RECLAMATION PROJECT
SARGENTS, COLORADO

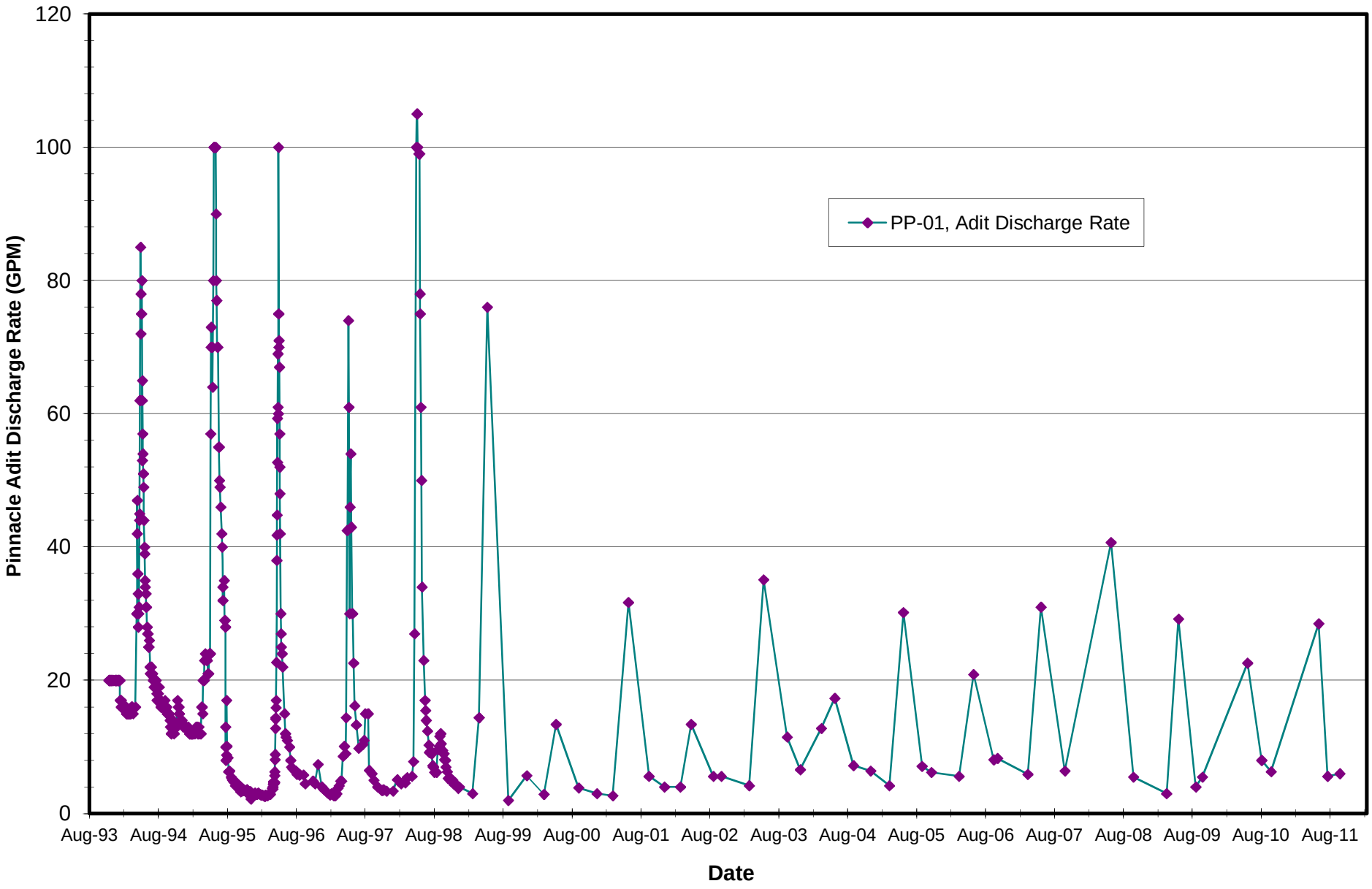
FIGURE 3: SITE PLAN
PITCH RECLAMATION PROJECT

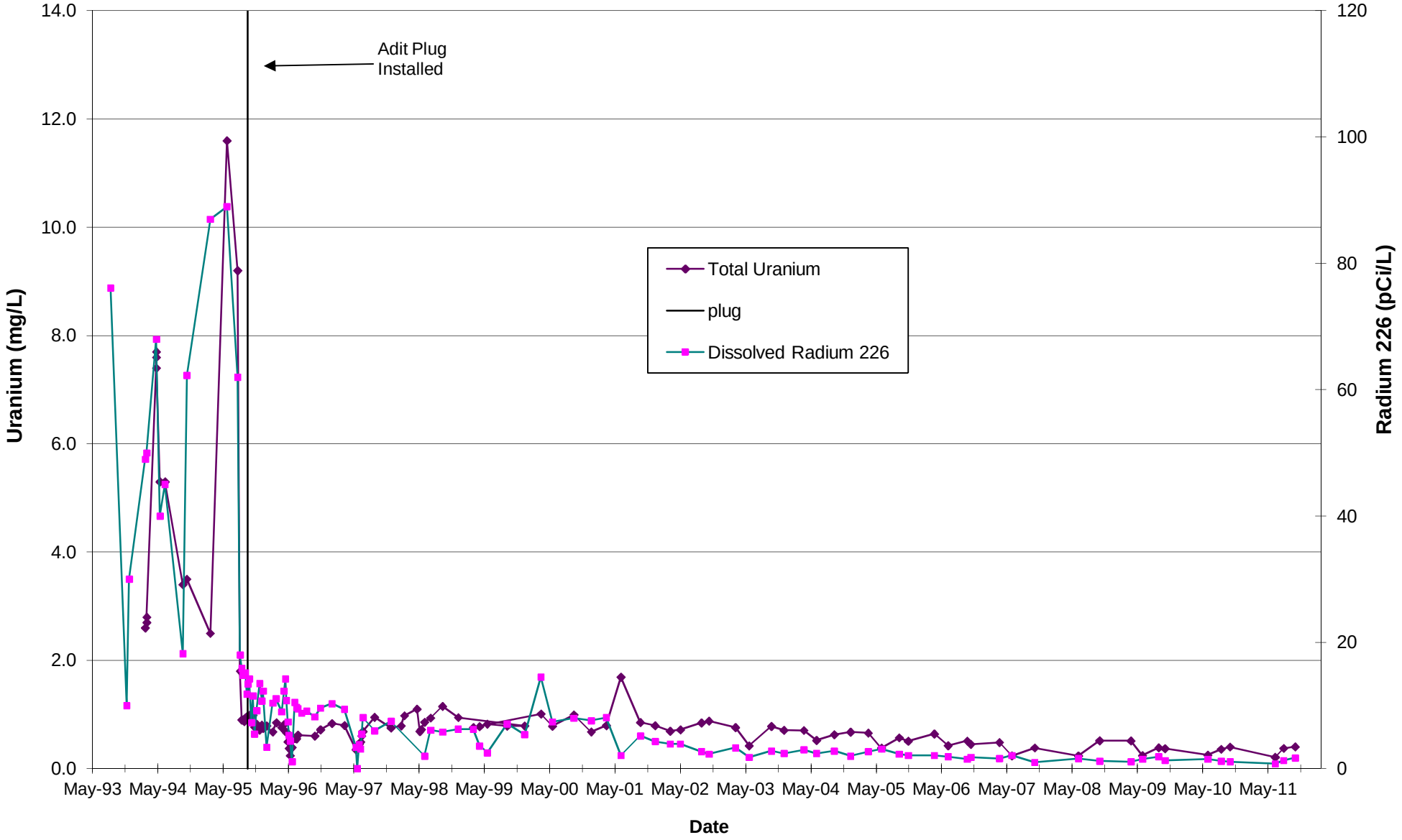
ARCADIS
630 Plaza Drive, Suite 200
Highlands Ranch, Colorado
80129 • Tel: 720-344-3500
www.arcadis-us.com

DESIGN:
DRAWN: ETC
FILE: siteplan 4-4-12.dwg
PROJECT NO.: AO000102.0006
SCALE: AS SHOWN
DATE: 04/04/2012
FIGURE: 3



HOMESTAKE	HOMESTAKE MINING COMPANY PITCH RECLAMATION PROJECT 2011 Annual Reclamation Report	**Figure 4: Water Level Elevation Data in P - Wells**
		Date: April, 2012 **Page 11**


120
100
80
60
40
20
0
Pinnacle Adit Discharge Rate (GPM)
PP-01, Adit Discharge Rate
Aug-93
Aug-94
Aug-95
Aug-96
Aug-97
Aug-98
Aug-99
Aug-00
Aug-01
Aug-02
Aug-03
Aug-04
Aug-05
Aug-06
Aug-07
Aug-08
Aug-09
Aug-10
Aug-11
Date



HOMESTAKE

HOMESTAKE MINING COMPANY
PITCH RECLAMATION PROJECT
2011 Annual Reclamation Report

Figure 6: Pinnacle Adit Discharge, Uranium And Radium Concentrations

APPENDIX A

SLOPE DISPLACEMENT VECTORS

I:\AO000102_Pitch\ACAD\vectormap 2011 survey for large plots.dwg

Summary of Annual Slope Displacement				
Monitoring Point I.D.	Location	Total Annual Displacement (ft)	Dip Direction (deg)	Dip (deg)
MP94-08	N Pit, E Wall	ND	ND	ND
MP94-09	N Pit, E Wall	ND	ND	ND
MP94-12	N Pit, E Wall	ND	ND	ND
MP94-18	N Pit, E Wall	0.32	257	-32
MP94-23	N Pit, E Wall	0.24	262	-27
MP94-24	N Pit, E Wall	0.23	277	-47
MP94-25	N Pit, E Wall	ND	ND	ND
MP94-26	N Pit, E Wall	ND	ND	ND
MP94-27	N Pit, E Wall	ND	ND	ND
MP94-28	N Pit, E Wall	0.23	234	-54
MP94-29	N Pit, E Wall	0.25	257	-24
MP94-34	N Pit, E Wall	ND	ND	ND
MP94-35	N Pit, E Wall	ND	ND	ND
MP94-36	N Pit, E Wall	0.24	267	-45
MP94-37	N Pit, E Wall	0.26	247	-16
MP94-38	N Pit, E Wall	0.32	243	9
MP94-39	N Pit, E Wall	0.20	346	-78
MP94-40	N Pit, E Wall	0.20	41	-6
MP94-41	N Pit, E Wall	ND	ND	ND
MP94-42	N Pit, E Wall	ND	ND	ND
MP94-43	N Pit, E Wall	ND	ND	ND
MP94-44	N Pit, E Wall	ND	ND	ND
MP94-52	N Pit, E Wall	ND	ND	ND
MP96-65	N Pit, E Wall	0.34	225	0
MP96-66	N Pit, E Wall	0.35	246	3
MP96-67	N Pit, E Wall	0.22	252	-27
MP96-69	N Pit, E Wall	0.35	248	-2
MP96-70	N Pit, E Wall	0.21	256	0
MP99-81	N Pit, E Wall	ND	ND	ND
MP99-82	N Pit, E Wall	ND	ND	ND
MP99-83	N Pit, E Wall	ND	ND	ND
MP99-84	N Pit, E Wall	ND	ND	ND
MP99-85	N Pit, E Wall	0.10	264	-29
MP99-86	N Pit, E Wall	0.08	220	-21
MP99-87	N Pit, E Wall	0.19	254	-19
MP99-88	N Pit, E Wall	ND	ND	ND
MP99-89	N Pit, E Wall	ND	ND	ND
C94-1	N Pit, E Wall	ND	ND	ND
I94-02	N Pit, E Wall	ND	ND	ND
I98-03	N Pit, E Wall	ND	ND	ND
MP94-47	N Pit, S Wall	ND	ND	ND
MP94-48	N Pit, S Wall	ND	ND	ND
MP94-50	N Pit, S Wall	ND	ND	ND
MP95-59	N Pit, S Wall	0.11	280	-10
MP96-68	N Pit, S Wall	ND	ND	ND
MP97-72	N Pit, S Wall	ND	ND	ND
MP97-73	N Pit, S Wall	ND	ND	ND
MP97-74	N Pit, S Wall	ND	ND	ND
MP97-75	N Pit, S Wall	ND	ND	ND
MP97-76	N Pit, S Wall	ND	ND	ND
MP97-77	N Pit, S Wall	ND	ND	ND
MP97-78	N Pit, S Wall	ND	ND	ND
MP97-79	N Pit, S Wall	0.11	270	-56
MP97-80	N Pit, S Wall	ND	ND	ND
I98-01	N Pit, S Wall	ND	ND	ND
I98-02	N Pit, S Wall	ND	ND	ND
P95-08	N Pit, S Wall	0.13	265	-29
P95-10	N Pit, S Wall	ND	ND	ND
MP94-10	N Pit, W Wall	ND	ND	ND
MP94-16	N Pit, W Wall	ND	ND	ND
MP94-06	S Pit, E Wall	ND	ND	ND
MP94-07	S Pit, E Wall	ND	ND	ND
MP94-45	S Pit, E Wall	ND	ND	ND
MP95-63	S Pit, E Wall	1.07	259	-4
MP95-64	S Pit, E Wall	ND	ND	ND
MP97-71	S Pit, E Wall	ND	ND	ND
MP99-90	S Pit, E Wall	ND	ND	ND
MP99-91	S Pit, E Wall	ND	ND	ND
MP05-92	S Pit, E Wall	1.84	232	-14
MP05-HS4	S Pit, E Wall	1.44	225	-21
MP05-H5	S Pit, E Wall	1.77	233	-15
MP05-S1	S Pit, E Wall	0.86	259	-3
MP05-F2	S Pit, E Wall	0.07	261	-33
P95-09	S Pit, E Wall	ND	ND	ND

NOTE: ND = NOT DETECTED – LESS THAN SURVEY ERROR

0 200 400 800
Scale (ft)

LEGEND

Surface Contours 10' Interval

Surface Contours 20' Interval

Surface Contours 25' Interval

MP-86 -8° — Total Displacement (ft) (Length shown has been multiplied by 300 for display purposes); Monitoring Station ID; Surface Monitoring Station; Time Interval Aug. 2010 to Nov. 2011; Angle from Horiz. (deg.)

Monitoring Point— Displacement Less Than Survey Error

I98-1 — Inclinometer/Monitoring Station

NOTES:

1. BASE TOPOGRAPHY FROM HOMESTAKE MINING COMPANY 1994 BASE MAP AND NIELSON'S, INC. 1996 BASE MAP.
2. VECTORS SHOW TOTAL DISPLACEMENT FOR TIME PERIOD INDICATED IN LEGEND.
3. ONLY MONITORING POINTS SURVEYED AT DATES INDICATED ARE SHOWN.
4. SURVEY ERROR IS 0.1 ft/1000 ft.
5. GREEN VECTORS SHOWN FOR MONITORING POINTS WITH DISPLACEMENTS HIGHER THAN CALCULATED ERROR.
6. GRAY VECTORS SHOWN FOR MONITORING POINTS WITH DISPLACEMENTS LESS THAN CALCULATED ERROR.

PREPARED FOR: HOMESTAKE

PREPARED BY: TELESTO SOLUTIONS INCORPORATED

ENGINEER

REVISIONS No.	DESCRIPTION	BY	DATE

TITLE:

PITCH RECLAMATION PROJECT

SLOPE DISPLACEMENT VECTORS

SCALE: AS SHOWN

DRAWING No.: Figure 1

PROJECT No.: 210200

A REVISION

REFERENCE			
DESIGNED	JRB	12/06	
DRAWN	KR	02/12	
CHECKED	JBV	02/12	
APPROVED			
APPROVED			

APPENDIX B

LETTER OF SURETY

STATE OF COLORADO

DIVISION OF MINERALS AND GEOLOGY
Department of Natural Resources

1313 Sherman St., Room 215
Denver, Colorado 80203
Phone: (303) 866-3567
FAX: (303) 832-8106

FINANCIAL WARRANTY
CORPORATE SURETY

Operator: Homestake Mining Company

Operation: Pitch Mine

Permit No.: M77-004 Bond No.: 6068126

Warrantor: Safeco Insurance Company of America

Street: 400 Taylor Blvd.

City: Pleasant Hill

State: California Zip Code: 94523

Area Code: 925 Telephone: 969-2000

KNOW ALL MEN BY THESE PRESENTS, THAT:

WHEREAS, the Colorado Mined Land Reclamation Act, C.R.S. 1973, 34-32-101 et seq. (the "Act"), as amended, provides that no permit may be issued under the Act until the Mined Land Reclamation Board (the "Board") receives a Financial Warranty (or Warranties) as described in the Act.

WHEREAS, Homestake Mining Company (the "Operator"), a California corporation, has applied for a permit to conduct a mining operation known as Pitch Mine (the "Operation"), on certain lands in Saguache County, Colorado. These lands are described in the permit application, as amended and supplemented, and are referred to herein as the "Affected Lands".

WHEREAS, in the application for the permit, the Operator has agreed to be bound by all requirements of the Act and all applicable rules and regulations of the Board, as amended from time to time.

WHEREAS, in the application for the permit, the Operator has agreed with the Board to provide for reclamation of the Affected Lands that are now, or may become, subject to the permit, as required by law.

WHEREAS, the Operator and Safeco Insurance Company of America (the "Warrantor"), a corporation organized and existing under the laws of the State of Washington and duly authorized to transact a bonding and surety business in the State of Colorado are hereby and firmly bound unto the State in the sum of Two Million Two Hundred Sixty Three Thousand and no/100ths---------- Dollars ($2,263,000.00) for the life of mine or until such time as replacement is received, for the payment of which sum, well and truly made, we hereby bind ourselves and our personal representatives, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Board has determined, in accordance with the Act, that the estimated costs of reclamation of the Affected Lands are those amounts for the stated periods of time as set forth herein. Said amount may be amended from time to time to reflect revised estimates of said costs of reclamation.

WHEREAS, the Operator and the Warrantor, in accordance with the Act, has promised and hereby promises the Board that it will be responsible for all the estimated costs of reclamation with regard to the Affected Lands.

WHEREAS, the Board has determined that this Financial Warranty by the Warrantor equals the estimated costs of reclamation, as approved by the Board, with regard to the Affected Lands.

NOW, THEREFORE, the Operator and the Warrantor are held hereby firmly unto the State of Colorado in the amount of those sums for those periods of time as set forth herein, until this Financial Warranty is amended or released in accordance with applicable law.

The Board may, for good cause shown, increase or decrease the amount and duration of this Financial Warranty. The Operator shall have sixty (60) days after the date of notice of any such adjustment to increase the surety amount, but no such increase shall bind the Warrantor unless and until it shall have consented thereto in writing by the issuance of an additional Financial Warranty or by an endorsement to this Financial Warranty.

The Operator and the Warrantor shall notify the Board immediately of any event which may impair this Financial Warranty. If the Board receives such notice, or otherwise has reason to believe that this Financial Warranty has been materially impaired, it may convene a hearing in accordance with the Act for the purpose of determining whether impairment has occurred.

The obligation of the Operator and the Warrantor shall continue until the Board has released this Financial Warranty or has ordered it forfeited in accordance with applicable provisions of the Act. It is understood that periods of years may necessarily be required before determination can be made that reclamation of the Affected Lands has been satisfactorily completed. It is also recognized that, as reclamation is accomplished, the amount of this Financial Warranty may be reduced with the approval of the Board so that it reflects the then current estimated cost of the remaining reclamation of the Affected Lands. No revision, extension, or renewal of the permit, or of the time allowed to complete reclamation, shall diminish the Operator's or Warrantor's obligation under this Financial Warranty. No misrepresentation by the Operator which may have induced the Warrantor to execute this Financial Warranty shall be any defense to demand by the State under this agreement.

In any single year during the life of the permit, the amount of the Financial Warranty shall not exceed the estimated cost of fully reclaiming all lands to be affected in said year, plus all lands affected in previous permit years and not yet fully reclaimed. Reclamation costs shall be computed with reference to current reclamation costs.

The amount of this Financial Warranty is based upon estimates as to the cost of reclamation, and does not operate to liquidate, limit, enlarge or restrict the Operator's obligations to complete reclamation and to comply in all respects with the permit and with applicable laws and regulations governing reclamation, even though the actual cost thereof may substantially exceed the amount of this Financial Warranty.

The Warrantor shall not be liable under this Financial Warranty for an amount greater than the sum designated herein, unless increased by a later amendment to this Financial Warranty. This Financial Warranty shall be reviewed by the Board from time to time, and the Board may require an increase in the principal sum of this Financial Warranty (and a corresponding increase in the surety amount) to cover increases in the estimated costs of reclamation, but no such increase shall bind the Warrantor unless and until it shall have consented thereto in writing by the issuance of an additional Financial Warranty or by an endorsement to this Financial Warranty.

The Warrantor reserves the right to cancel this Financial Warranty, effective only upon an anniversary date, and only by giving written notice to that effect, mailed by Certified Mail, at least ninety (90) days prior to such anniversary date, addressed to both the Operator at its address herein stated, and to the Board at the address herein stated. In the event of such cancellation, this Financial Warranty shall nevertheless remain in full force and effect as respects the reclamation of all areas disturbed prior to the effective date of such cancellation, unless and until the Operator shall file a substitute Financial Warranty which: (1) assumes liability for all reclamation obligations which shall have arisen at any time while this Financial Warranty is in force; and (2) is accepted in writing by the Board.

In the event of such cancellation, if the Financial Warranty is not fully released, the amount of the continuing Financial Warranty available for the reclamation of areas disturbed and unreclaimed at the date of cancellation shall be fixed by the Board at the amount it determines necessary to complete such reclamation (which amount may not exceed the sum designated herein) and the Board shall concurrently identify such areas in writing, and notify the Warrantor and the Operator thereof. Thereafter, the obligation of the Warrantor shall be limited to reclamation of the areas so identified.

The consideration for the Warrantor's execution of this agreement is the promise of the Operator to pay the premiums, but failure by the Operator to pay such premiums shall not invalidate or diminish the Warrantor's obligation hereunder.

The Board may make demand upon the Warrantor for payment hereunder if the Board determines that reclamation which ought to have been performed by the Operator, or its successors or assigns, remains unperformed, and if Financial Warranty forfeiture procedures required by law have been initiated. No other condition precedent need be fulfilled to entitle the State to receive the amount so demanded. However, if, upon completion of reclamation by the State, the amounts expended for reclamation shall be less than the amount received from the Warrantor, the excess shall be promptly refunded to the Warrantor.

If demand is made upon the Warrantor for payment of an amount due to the Board hereunder, and if the Warrantor fails to make payment of such amount within ninety (90) days after the date of receipt of such demand, or if it should thereafter be determined, by agreement of the Warrantor or by final judgment of court, that the amount demanded was properly payable, the Warrantor agrees to pay to the Board, in addition to the amount demanded, interest at the prime rate in effect from time to time at The United Bank of Denver for the period commencing at the end of such ninety-day period and ending on the date of actual payment.

If the Board shall notify the Warrantor that the Operator is in default, and if the Board shall initiate any Financial Warranty forfeiture procedures required by law or regulation, the Warrantor may, in lieu of making payment to the Board of the amount due hereunder, cause the reclamation to be timely performed in accordance with all requirements of the Act and all applicable rules and regulations. In such event, when and if the reclamation has been timely performed to the satisfaction of the Board or Division, this Financial Warranty shall be released. If the reclamation shall not be so performed to the satisfaction of the Board or Division, this Financial Warranty shall remain in full force and effect.

This Financial Warranty shall be subject to forfeiture whenever the Board determines that any one or more of the following circumstances exist:

1. A Cease and Desist Order entered pursuant to Section 34-32-124 of the Act has been violated, and the corrective action proposed in such Order has not been completed, although ample time to have done so has elapsed; or

2. The Operator is in default under its Performance Warranty, and such default has not been cured, although written notice and ample time to cure such default has been given; or

3. The Operator and/or the Warrantor has failed to maintain its Financial Warranty in good standing as required by the Act; or

4. The Warrantor no longer has the financial ability to carry out its obligations in accordance with the Act.

The description of lands herein is for convenience of reference only, and no error in such description, nor any revision of the permitted mining area, nor the disturbance by the Operator of lands outside of the permitted mining area shall alter or diminish the obligations of the Operator and/or Warrantor hereunder, which shall extend to the reclamation of all such lands disturbed.

If this Financial Warranty applies to National Forest System lands, and if this Financial Warranty is accepted by the United States Forest Service ("U.S.F.S.") as the bond required under 36 C.F.R. 252.13, then the Operator, having requested that the Board and the U.S.F.S. accept this single Financial Warranty in lieu of the separate bonds which would otherwise be required by applicable law, hereby agrees that, notwithstanding any other provision hereof, or of law, this Financial Warranty shall remain in full force and effect until U.S.F.S. has advised the Board by written notice that the Operator's obligations to U.S.F.S., for which this Warranty is executed, have been satisfied, and until the financial warranty has been released by the Board.

If this Financial Warranty applies to lands under the jurisdiction of the State Board of Land Commissioners ("Land Board"), and if this Financial Warranty, in whole or in part, is accepted by the Land Board as the bond required under its applicable law and procedures, then the Operator, having requested that the State accept this Financial Warranty in lieu of the separate bonds which would otherwise be required by the Colorado Mined Land Reclamation Board or Division of Minerals and Geology and by the Land Board, hereby agrees that, notwithstanding any other provision hereof, or of law, this Financial Warranty shall remain in full force and effect until the Board is notified in writing by the Land Board that the Operator's obligations to the Land Board, for which this Warranty is executed, have been satisfied, and until the financial warranty has been released by the Board.

If all or any part of the Affected Lands are under the jurisdiction of the Bureau of Land Management, United States Department of the Interior (the "BLM"), and if, at the request of the Operator on this Financial Warranty, the BLM has, pursuant to 43 C.F.R. 3809.1-9, accepted this Financial Warranty in lieu of requiring a separate reclamation bond payable to the United States, then, notwithstanding any other provision of this Financial Warranty, or of law, the Operator and Warrantor hereby agree that this Financial Warranty shall not be released until the Board is advised in writing by the BLM that the Operator's obligations to the BLM, for which this Warranty is executed, have been satisfied, and until the financial warranty has been released by the Board.

This Financial Warranty may be executed in multiple copies, each of which shall be treated as an original, but together they constitute only one agreement, the validity and interpretation of which shall be governed by the laws of the State of Colorado.

The provisions hereof shall bind and inure to the benefit of the parties hereto and their successors and assigns.
The Effective Date of this bond is 30th day of June, 2000.

SIGNED, SEALED AND DATED this 16th day of June, 2000.

Safeco Insurance Company of America (SEAL)
Warrantor

By: _____
Katsuko Takata, Attorney-in-Fact

Homestake Mining Company (SEAL)
Operator

By: T. H. Wong

NOTARIZATION OF WARRANTOR'S ACKNOWLEDGEMENT

STATE OF California)
) ss.
COUNTY OF San Francisco)

The foregoing instrument was acknowledged before me this 16th day of June, 2000,
by Katsuko Takata as Attorney-in-Fact of Safeco Insurance Company of America

DORIS B. DIAZ
COMM. # 1181809
NOTARY PUBLIC - CALIFORNIA
SAN FRANCISCO COUNTY
My Comm. Expires May 22, 2002

CRS 2 CRS 2

_____
NOTARY PUBLIC

My Commission expires: May 22, 2002

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California
County of CONTRA COSTA } ss.

On JUNE 19 2000 (Date), before me, MATTHEW TAYLOR, NOTARY PUBLIC (Name and Title of Officer (e.g., "Jane Doe, Notary Public")),

personally appeared T. H. WONG (Name(s) of Signer(s)),

☒ personally known to me
☐ proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(~~ies~~), and that by his/~~her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature of Notary Public

MATTHEW TAYLOR
Commission # 1232591
Notary Public - California
San Francisco County
My Comm. Expires Aug 20, 2003

Place Notary Seal Above

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document
Title or Type of Document: FINANCIAL WARRANTY CORPORATE SURETY

Document Date: _____ Number of Pages: 7

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer
Signer's Name: _____
☐ Individual
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☑ Attorney in Fact
☐ Trustee
☐ Guardian or Conservator
☐ Other: _____

Signer Is Representing: _____

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

NOTARIZATION OF OPERATOR'S ACKNOWLEDGEMENT

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, _____,
by _____ as _____ of _____.

_____
NOTARY PUBLIC

My Commission expires: _____

APPROVED:

State of Colorado
Mined Land Reclamation Board
Division of Minerals and Geology

By: _____ Date: _____
Division Director

SAFECO

POWER OF ATTORNEY

SAFECO INSURANCE COMPANY OF AMERICA
GENERAL INSURANCE COMPANY OF AMERICA
HOME OFFICE: SAFECO PLAZA
SEATTLE, WASHINGTON 98185

No. 8857

KNOW ALL BY THESE PRESENTS:

That SAFECO INSURANCE COMPANY OF AMERICA and GENERAL INSURANCE COMPANY OF AMERICA, each a Washington corporation, does each hereby appoint

**********KATSUKO TAKATA; San Francisco, California**********

its true and lawful attorney(s)-in-fact, with full authority to execute on its behalf fidelity and surety bonds or undertakings and other documents of a similar character issued in the course of its business, and to bind the respective company thereby.

IN WITNESS WHEREOF, SAFECO INSURANCE COMPANY OF AMERICA and GENERAL INSURANCE COMPANY OF AMERICA have each executed and attested these presents

this 4th day of January, 1993.

R A Pierson
R.A. PIERSON, SECRETARY

W. Randall Stoddard
W. RANDALL STODDARD, PRESIDENT

CERTIFICATE

Extract from the By-Laws of SAFECO INSURANCE COMPANY OF AMERICA
and of GENERAL INSURANCE COMPANY OF AMERICA:

"Article V, Section 13. - FIDELITY AND SURETY BONDS ... the President, any Vice President, the Secretary, and any Assistant Vice President appointed for that purpose by the officer in charge of surety operations, shall each have authority to appoint individuals as attorneys-in-fact or under other appropriate titles with authority to execute on behalf of the company fidelity and surety bonds and other documents of similar character issued by the company in the course of its business... On any instrument making or evidencing such appointment, the signatures may be affixed by facsimile. On any instrument conferring such authority or on any bond or undertaking of the company, the seal, or a facsimile thereof, may be impressed or affixed or in any other manner reproduced; provided, however, that the seal shall not be necessary to the validity of any such instrument or undertaking."

Extract from a Resolution of the Board of Directors of SAFECO INSURANCE COMPANY OF AMERICA
and of GENERAL INSURANCE COMPANY OF AMERICA adopted July 28, 1970.

"On any certificate executed by the Secretary or an assistant secretary of the Company setting out,

(i) The provisions of Article V, Section 13 of the By-Laws, and
(ii) A copy of the power-of-attorney appointment, executed pursuant thereto, and
(iii) Certifying that said power-of-attorney appointment is in full force and effect,

the signature of the certifying officer may be by facsimile, and the seal of the Company may be a facsimile thereof."

I, R.A. Pierson, Secretary of SAFECO INSURANCE COMPANY OF AMERICA and of GENERAL INSURANCE COMPANY OF AMERICA, do hereby certify that the foregoing extracts of the By-Laws and of a Resolution of the Board of Directors of these corporations, and of a Power of Attorney issued pursuant thereto, are true and correct, and that both the By-Laws, the Resolution and the Power of Attorney are still in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the facsimile seal of said corporation

this 16th day of June, 2000.

SAFECO INSURANCE COMPANY OF AMERICA CORPORATE SEAL 1953 STATE OF WASHINGTON

GENERAL INSURANCE COMPANY OF AMERICA CORPORATE SEAL 1923 State of Washington

R A Pierson
R.A. PIERSON, SECRETARY

HOMESTAKE
Grants NM Office

Alan D. Cox
Project Manager - Pitch

December 19, 2011

Mr. Jason Ward, P.E.
Colorado Division of Water Resources
1313 Sherman Street
Denver, CO 80203

RE: ***Pitch Reclamation Project- 2011 Annual Report***
Sediment Control Embankment - Permit ID 280110

Dear Mr. Ward:

The following Annual Report is provided pursuant to the above referenced facility:

Project Description

Homestake Mining Company (Homestake) is the operator of the Pitch Reclamation Project near Sargents, Colorado. The site was operated by Homestake as an open pit mine for the extraction of uranium ore from 1979 to 1984. Since 1984, the project has been in a care and maintenance mode as it has progressed into the final stages of closure and reclamation. In 1980, an approximately 80-foot high earthen embankment was constructed below the confluence of Indian Creek and Tie Camp Creek to allow settlement of suspended solids from surface water prior to its release to Indian Creek.

Upon completion of the embankment, five piezometers and five permanent survey monuments were installed to monitor the phreatic surface within the embankment and to measure any physical movement of the embankment. Four additional boreholes were advanced and completed as piezometers along the crest of the embankment in 2000. Monitoring of the monuments and piezometers allows for an examination of the safety and efficiency of the embankment.

Seepage that was observed on the downstream face of the embankment in June 2000, and discussed in the 2000 and 2001 annual reports, has not reappeared following the repair work conducted in 2001. The following sections provide a summary of the monitoring conducted during 2011 and discusses the monument and piezometer data.

Embankment Displacement Monuments

The annual survey of the five vertical displacement monuments located on the crest of the embankment was conducted on September 24, 2011. The permanent monuments (M1 - M5) are located near the upstream side of the embankment crest level, as shown on Figure 1. These monuments have been surveyed annually since 1981.

The results of monitoring since the installation of the monuments are shown on Table 1. A graph illustrating the vertical displacement since construction of the embankment is provided as Figure 2. As shown on Figure 2, no significant vertical displacement has occurred since the initial settlement and the readings continue to be within the limits of survey error.

TABLE 1: MONUMENT SURVEY RESULTS SINCE INSTALLATION

Date	Monument 1	Monument 2	Monument 3	Monument 4	Monument 5
Sep-1981	9905.94	9905.26	9904.85	9906.06	9905.15
Sep-1981	9905.93	9905.27	9904.85	9906.05	9905.17
Oct-1981	9905.92	9905.24	9904.83	9906.02	9905.14
Oct-1981	9905.92	9905.26	9904.85	9906.04	9905.18
Nov-1981	9905.92	9905.25	9904.84	9906.06	9905.19
Dec-1981	9905.91	9905.24	9904.83	9906.07	9905.10
Dec-1981	9905.94	9905.27	9904.85	9906.05	9905.22
Jan-1982	9905.90	9905.23	9904.82	9906.06	9905.16
Feb-1982	9905.93	9905.25	9904.85	9906.09	9905.23
May-1982	9905.87	9905.13	9904.66	9905.97	9905.21
Jun-1982	9905.85	9905.09	9904.59	9905.94	9905.19
Jul-1982	9905.83	9905.05	9904.55	9905.90	9905.16
Aug-1982	9905.83	9905.05	9904.55	9905.71	9905.19
Nov-1982	9905.78	9905.01	9904.53	9905.87	9905.20
Jun-1983	9905.66	9904.87	9904.43	9905.82	9905.19
Sep-1983	9905.43	9904.70	9904.31	9905.68	9905.17
Aug-1984	9905.48	9904.71	9904.27	9905.64	9905.08
Jun-1985	9905.48	9904.72	9904.34	9905.77	9905.23
Jul-1986	9905.63	9904.90	9904.47	9905.79	9905.12
Sep-1987	9905.67	9904.86	9904.46	9905.82	9905.03
Sep-1988	9905.51	9904.72	9904.36	9905.75	9905.34

TABLE 1: MONUMENT SURVEY RESULTS SINCE INSTALLATION

Date	Monument 1	Monument 2	Monument 3	Monument 4	Monument 5
Sep-1989	9905.51	9904.73	9904.34	9905.68	9905.20
Sep-1990	9905.45	9904.65	9904.25	9905.63	9905.15
Sep-1991	9905.49	9904.70	9904.31	9905.66	9905.26
Sep-1992	9905.47	9904.67	9904.29	9905.64	9905.23
Sep-1993	9905.46	9904.67	9904.29	9905.62	9905.24
Jul-1994	9905.47	9904.67	9904.27	9905.62	9905.24
Sep-1995	9905.46	9904.66	9904.27	9905.62	9905.25
Sep-1996	9905.46	9904.65	9904.26	9905.60	9905.26
Oct-1997	9905.46	9904.67	9904.29	9905.63	9905.27
Sep-1998	9905.45	9904.64	9904.26	9905.61	9905.27
Nov-1999	9905.44	9904.64	9904.25	9905.60	9905.26
Oct-2000	9905.45	9904.64	9904.26	9905.62	9905.29
Oct-2001	[illegible]	9904.64	9904.26	9905.59	9905.24
Sep-2002	9905.46	9904.65	9904.26	9905.62	9905.27
Sep-2003	9905.43	9904.62	9904.23	9905.58	9905.24
Sep-2004	9905.44	9904.64	9904.27	9905.61	9905.27
Oct-2005	9905.43	9904.63	9904.25	9905.58	9905.26
Oct-2006	9905.44	9904.63	9904.25	9905.59	9905.27
Oct-2007	9905.44	9904.62	9904.24	9905.59	9905.25
Oct-2008	9905.44	9904.63	9904.24	9905.60	9905.27
Oct-2009	9905.43	9904.61	9904.24	9905.57	9905.24
Sept- 2010	9905.44	9904.62	9904.24	9905.58	9905.24
Sept-2011	9905.44	9904.62	9904.24	9905.59	9905.27
Differential 2010-11	0.00	0.00	0.00	+0.01	+0.03
Maximum Differential	-0.51	-0.66	[illegible]	-0.52	+0.31

Maximum Elevation
Minimum Elevation

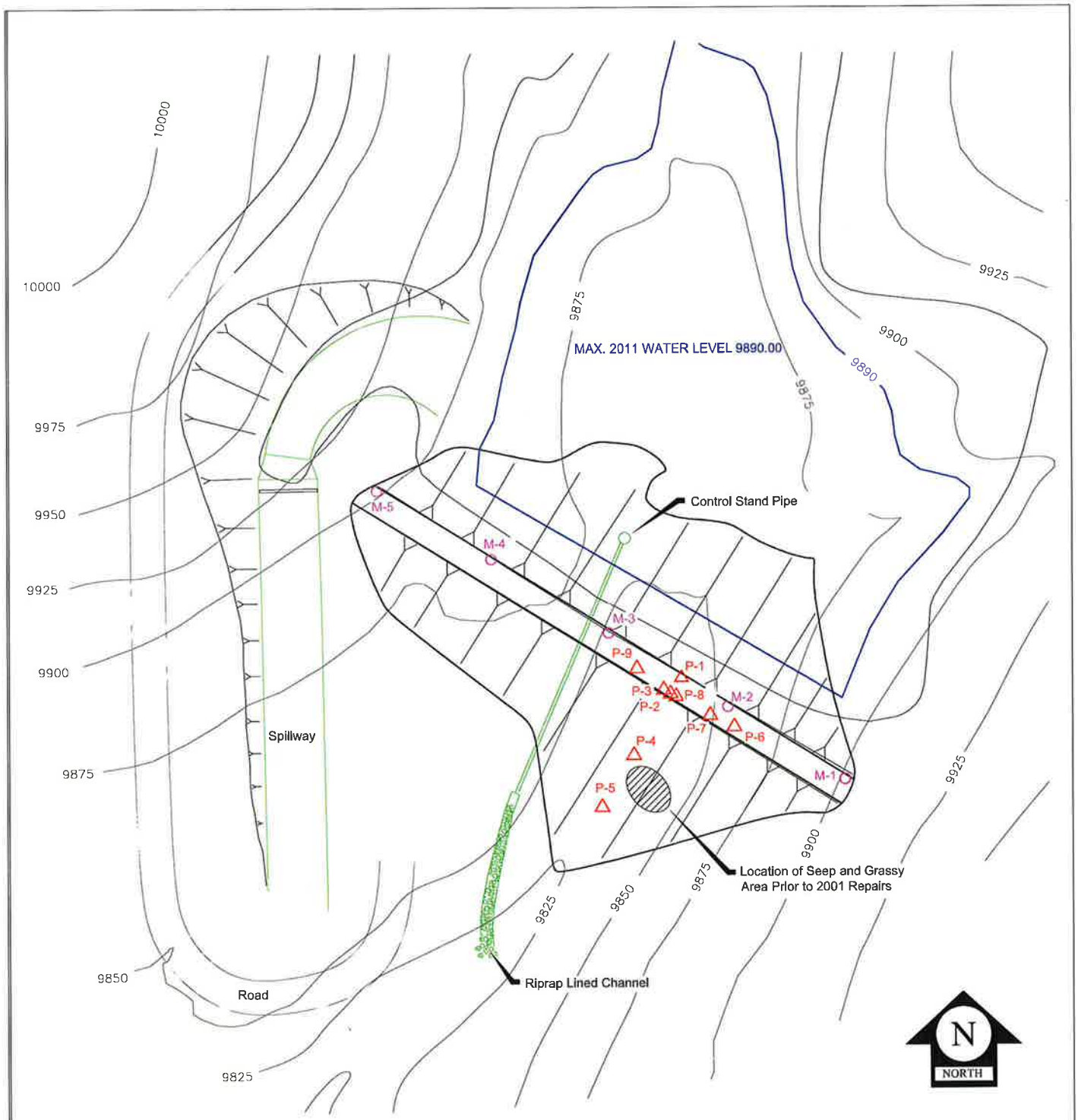


FIGURE 1:
SEDIMENT EMBANKMENT 2011 ANNUAL REPORT
MONITORING STATION LOCATIONS

LEGEND

- SURVEY MONUMENT
- PIEZOMETER

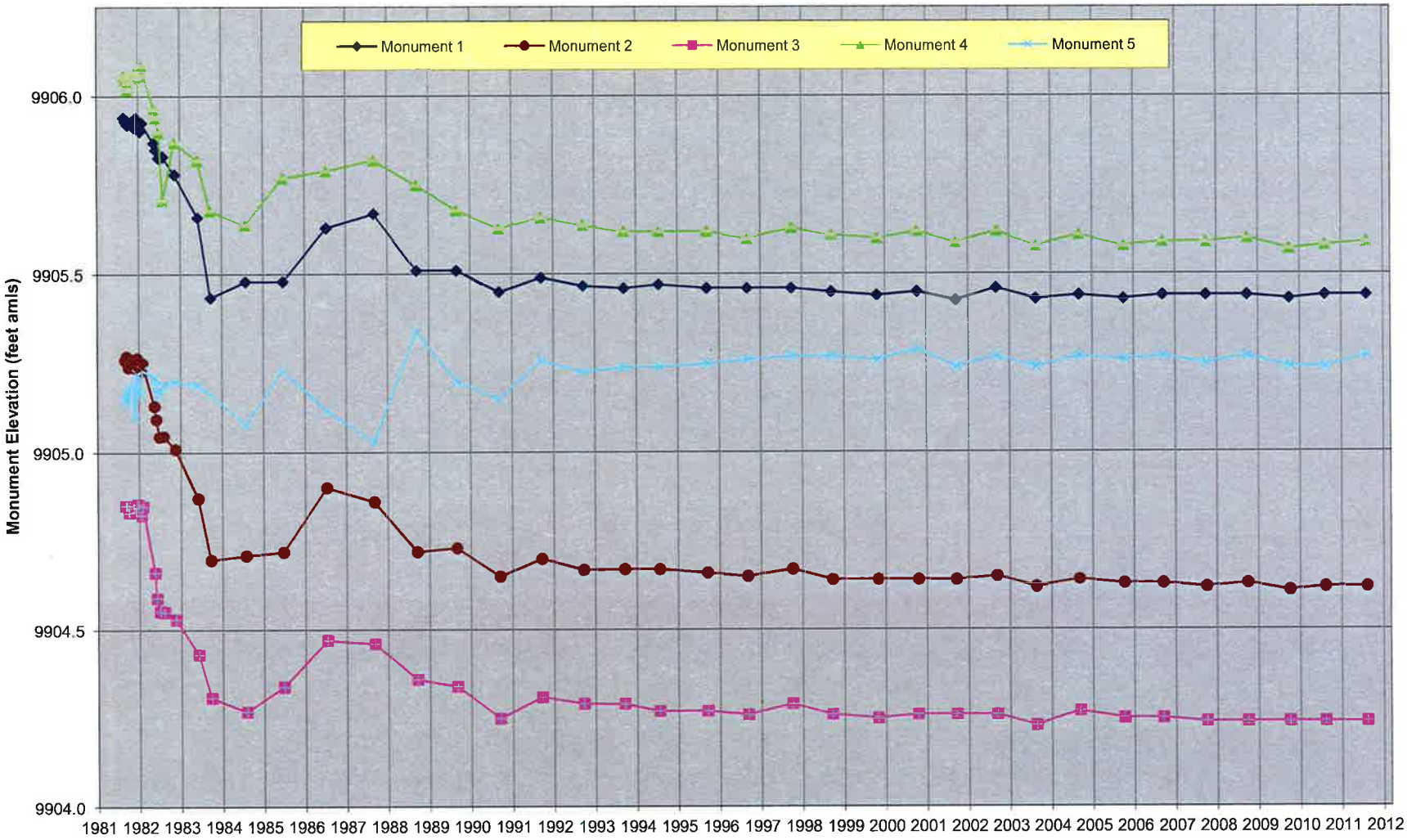
0 50 100 150

HOMESTAKE

HOMESTAKE MINING COMPANY OF CALIFORNIA

PITCH RECLAMATION PROJECT
SARGENTS, COLORADO

CREATED BY:	ARCADIS
DRAWN:	ETC
FILE:	Figure_1.DWG
PROJECT:	2011 Sed Dam Annual Report
SCALE:	AS SHOWN
DATE:	12/19/11
FIGURE:	1



HOMESTAKE MINING COMPANY OF CALIFORNIA	**HOMESTAKE MINING COMPANY** **PITCH RECLAMATION PROJECT** **2011 Annual Report** **Sediment Control Embankment** **I.D. 280110**	**Figure 2: Vertical Displacement Monument Survey**		
		DATE	November 21, 2011	FILENAME Figures 2011.xls

2011 PIEZOMETER EVALUATION

In June 2000, seepage was observed on the downstream face of the embankment. Subsequent evaluations during 2000 determined there was a localized rise in the phreatic surface within the embankment and the downstream shell. Remediation work was conducted in 2001 to identify the cause of this rise and repair the embankment. The repair consisted of installing a cutoff trench and clay blanket on the upstream face. The top of the clay blanket is at elevation 9885.5 amsl. A final engineering report detailing the repairs and performance was provided to the Division on January 7, 2003. In May 2004, the pond level was raised by roughly 10 ft to an elevation of 9888.5 amsl. In May 2005, the water level in the pond reached a maximum elevation of 9893.5 amsl. That represents the highest water level in the pond since the repair work was completed in 2001 and the water level remained 7 feet below the spillway crest elevation of 9900 ft. amsl. In all cases the water levels in some of the piezometers responded to the water being temporarily being stored above the repair area. But the water levels in the piezometers dropped back quickly as the water being stored in the pond dropped below the 9885.5 elevation.

In 2011, the highest water level in the pond of 9890.0 amsl occurred in mid-June and was maintained at or near the 9884.0 elevation for most of the year. This was below the clay blanket top elevation of 9885.5 amsl. As shown in Table 2, water levels in the piezometers show a quick response to water in the impoundment. In 2011, the water level in Piezometer P1 in the upstream face of the embankment rose by 12.90 feet compared with 15.45 feet in 2009 when the pond level reached 9891.0 amsl. In response to the higher water levels in the pond since 2005, the maximum water level in Piezometer P3 increased from 9863.56 to 9866.02ft. amsl, representing a rise of 2.46 feet. In 2011, the water level in P3 increased by 3.61 feet in mid June and dropped back to the normal ranged by the end of summer. In contrast, from 2004 through 2010, the maximum water level in Piezometer P4 decreased from 9831.1 to 9829.3 ft. amsl, a drop of 1.8 feet. In 2011, the water level in P4 increased by 1.52 feet.

Because piezometer P4 is in close proximity to the seepage area noted on the downstream face of the embankment in 2000, it has been monitored closely. From 2005 to 2009 it was observed that the water level in P4 was not falling back as rapidly as the other piezometers. It was noted that when the probe was pulled out of peizometers P4 and P5 they were covered with silt. The silt build up didn't allow the pipes to drain sufficiently to show the phreatic surface in the embankment. To remedy the problem, in July 2009, both piezometers P4 and P5 were flushed with high pressure water in an attempt to minimize the silt and other debris that had built up in the standpipes. The high pressure flushing resulted in the water levels in both piezometers falling back to normal levels within a few days over the past two years, with the average water level in P4 dropping by more than 4 feet. Piezometer P5 also fell back rapidly after being flushed. In 2011, the maximum water elevation in P5 was 2.8 feet and 2.5 feet in 2010, and both reading below the maximum elevation of 6.7 feet in 2009. The 2011 maximum water levels in the embankment piezometers P6 and P9 also decreased from levels over the past four years. Only P6 & P8 showed an increase over the maximum water levels in 2009 and similar to 2007. This may also due to silt built in the standpipe and will be monitored closely in

2012.

The historical piezometer and pond water elevation data are shown on Figure 3. Figure 4 and Table 2 depicts the detailed data for 2011 and Figures 5 and 6 are cross-sections through the embankment showing the location of the nine piezometers and their associated range in water levels.

During 2011, the piezometers in the embankment continued to demonstrate that even with a rise in water levels above the 2001 repair area , there was a rapid attenuation of water levels on the downstream side of the embankment core, which assures that the phreatic surface does not create stress conditions.

However, flushing P-4 and P-5, along with clearing of the clogged drain line in 2009 have continued to keep water levels low in the downstream and toe section of the embankment. No seepage was noted on the downstream dam face in 2011, despite the higher pond water levels. This is similar to the conditions in 2009 when the pond level reached 9891 amsl. This information, along with the near foundation water levels observed in P-4 and P-5 indicate that there is a relatively sharp downward hydraulic gradient on the downstream side of the dam that is effectively limiting excess hydraulic head in the toe of the dam.

In response to a heavier snow pack in 2011, the pond level was allowed to increase to higher than normal levels. The elevated pond surface resulted in a rise in piezometer levels. The pattern of increased water levels observed in the piezometers is indicative of a higher flow height through the embankment, rather than an upward hydraulic gradient from under-flow Comparison of the change in water levels between 2010 and 2011 in all of the piezometers located on the crest of the dam indicate that the rise in water levels was concentrated in the vicinity of P-1 and P-8, The greatest changes in water levels occurred in this area, and water levels in piezometers distal from P-1 and P-8 (P-2 through P-7) were observed to undergo about one-half of the degree of change that was observed in P-1 and P-8. Piezometers P-4 and P-5 are located more or less along the centerline of the dam, in the toe area of the section. Water levels in these piezometers are also indicative of a downward gradient in the downstream part of the embankment.

Facility Maintenance

In 2011, the following items noted in the Engineer's Inspection Report, dated November 17, 2008 were addressed. All piezometer stand-pipe caps were inspected; pine seedlings that had encroached onto the embankment and spillway were removed (see before and after photos on the next page); and the toe drain that had been submerged in the downstream channel due to beaver activities was cleared in 2009 and the pipe flushed of built up silt. The outlet pipe was inspected in 2011 and continues to flow freely.

Conclusion

The 2011 survey results continue to indicate that the amount of total vertical movement in the embankment is minimal, within historic levels, and lies within the range of survey error. There was no significant vertical displacement in any of the monuments located on

the crest of the embankment in 2011. Following the 2001 embankment remediation work, water levels recorded in the piezometers indicate that the cutoff trench and placement of the bentonite seal on the upstream surface had been successful in reducing seepage

Pine trees growing on Pitch Sediment Embankment Spillway (Summer 2011)

Pine trees and root balls removed. (Fall 2011)

through the core of the embankment when water stored in the impoundment is maintained below the repair area elevation of 9885.5 amsl.

Homestake will continue to monitor the outlet pipe to assure it is flowing freely and monitor monuments and piezometers on a monthly basis or more often when the water level in the pond reaches the 9885 ft. amsl. We will continue to inspect the downstream face of the embankment for potential seepage, remove any pine seedlings and repair rill erosion as need in a timely manner.

If you have any questions, or require further information, please contact me in the Grants office at (505) 287-4456 x17 or via cell phone at (505) 400-2794.

Sincerely,

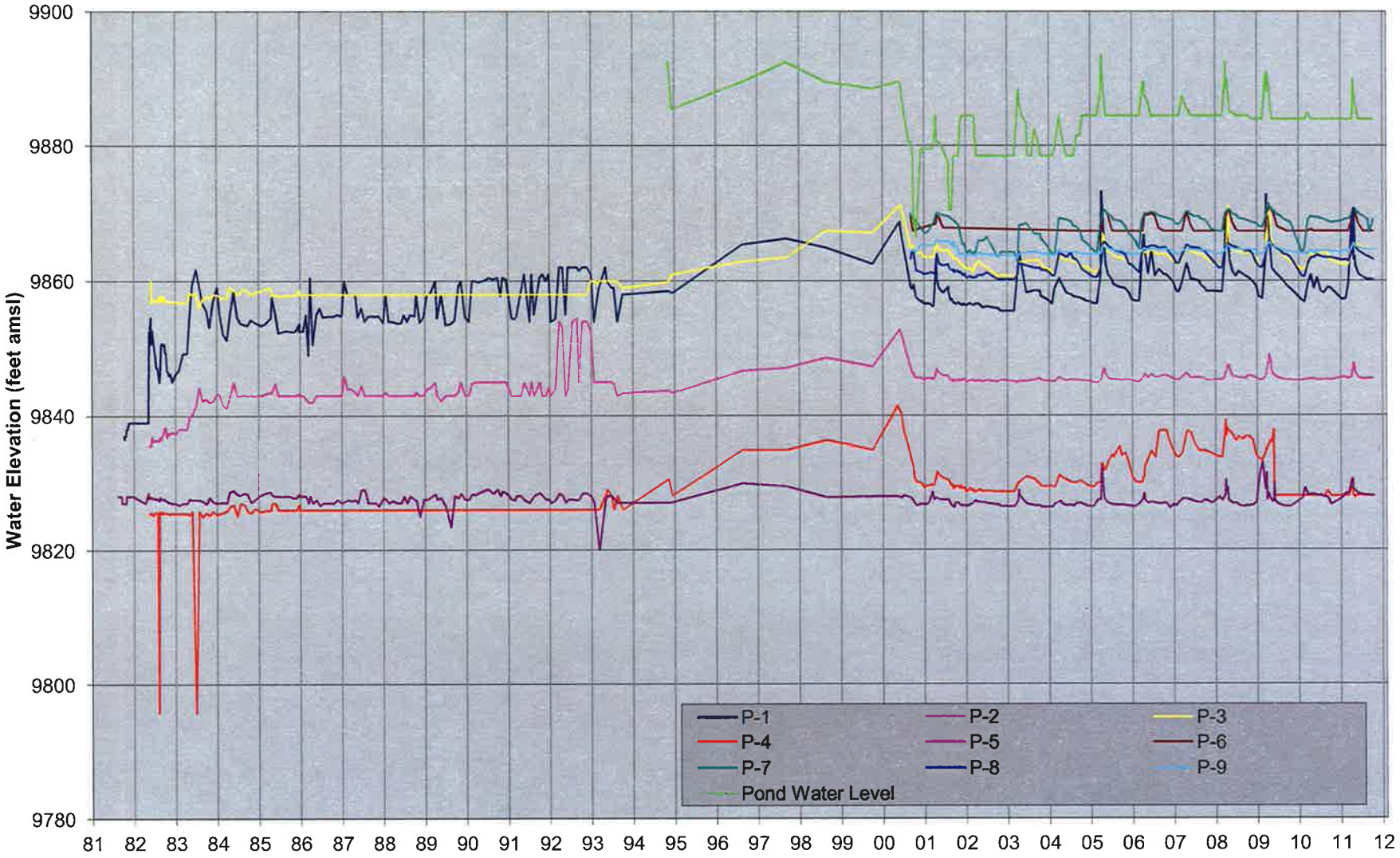
Homestake Mining Company of California
Alan D. Cox
Project Manager, Pitch Reclamation Project

cc: Rocky Chase - SLC office
Dale Davis - Sargents office
Phillip De Dycker - ARCADIS-US, Inc.

TABLE 2: PIEZOMETER WATER ELEVATION DATA

Piezometer No.	P-1	P-2	P-3	P-4	P-5	P-6	P-7	P-8	P-9	Pond Water Level
Surface Elevation (ft. amsl)	**9905.68**	**9905.51**	**9906.60**	**9875.45**	**9847.79**	**9906.07**	**9906.00**	**9906.00**	**9906.29**	**NA**
Stand Pipe (ft.)	2.13	1.96	2.02	2.04	1.81	1.92	1.85	0.2	0.75	NA
collar elevation (ft. amsl)	9907.81	9908.47	9908.62	9877.49	9849.60	9907.99	9907.85	9908.20	9907.04	NA
Total Depth (ft.)	**70.00**	**70.00**	**47.00**	**49.00**	**24.00**	**39.23**	**44.16**	**47.00**	**44.17**	**NA**
Not Collected in January										
Not Collected in February										
3/02/2011	9857.21	9845.67	9862.52	9827.99	9827.70	9867.39	9868.96	9863.06	9864.34	9884
4/11/2011	9857.31	9845.67	9862.52	9827.99	9828.39	9867.39	9869.25	9863.16	9864.54	9884
5/05/2011	9859.61	9845.50	9862.41	9828.01	9828.35	9867.39	9869.23	9862.91	9864.32	9884
6/01/2011	9869.13	9845.73	9864.89	9829.19	9830.40	9868.87	9869.85	9864.06	9864.74	9884
6/06/2011	9870.11	9846.45	9865.32	9829.29	9830.50	9870.37	9870.23	9865.06	9865.04	9885
6/13/2011	9867.86	9847.11	9865.74	9827.99	9829.05	9870.39	9870.60	9869.81	9865.39	9890
6/20/2011	9863.09	9847.79	9866.02	9828.01	9828.90	9870.57	9870.80	9870.66	9865.62	9888
6/27/2011	9863.65	9847.11	9865.69	9827.77	9828.76	9870.36	9870.67	9865.50	9865.21	9887
7/05/2011	9862.25	9846.41	9865.63	9828.01	9828.59	9870.18	9870.54	9865.04	9865.12	9886
8/01/2011	9860.99	9845.64	9865.32	9828.00	9828.29	9868.47	9870.03	9864.43	9864.93	9884
9/12/2011	9860.51	9845.42	9864.92	9828.00	9828.13	9867.39	9869.58	9863.97	9864.77	9884
10/18/2011	9860.19	9845.49	9864.69	9827.99	9828.07	9867.39	9869.21	9863.60	9864.66	9884
11/02/2011	9860.21	9845.53	9864.73	9827.99	9828.05	9867.39	9869.17	9863.54	9864.64	9884
12/01/2011	9860.16	9845.51	9864.72	9827.97	9827.96	9867.39	9869.17	9863.16	9864.62	9884
2011 Average Water Level	**9862.31**	**9846.07**	**9864.65**	**9828.16**	**9828.65**	**9868.64**	**9869.81**	**9864.85**	**9864.85**	**9885**
2011 Max	**9870.11**	**9847.79**	**9866.02**	**9829.29**	**9830.50**	**9870.57**	**9870.80**	**9870.66**	**9865.62**	**9890**
2011 Min	**9857.21**	**9845.42**	**9862.41**	**9827.77**	**9827.70**	**9867.39**	**9868.96**	**9862.91**	**9864.32**	**9885**
2011 Max/Min Differential	**12.90**	**2.37**	**3.61**	**1.52**	**2.80**	**3.28**	**1.84**	**7.75**	**1.30**	**6.00**

amsl –above mean sea level **N/A Not Applicable**

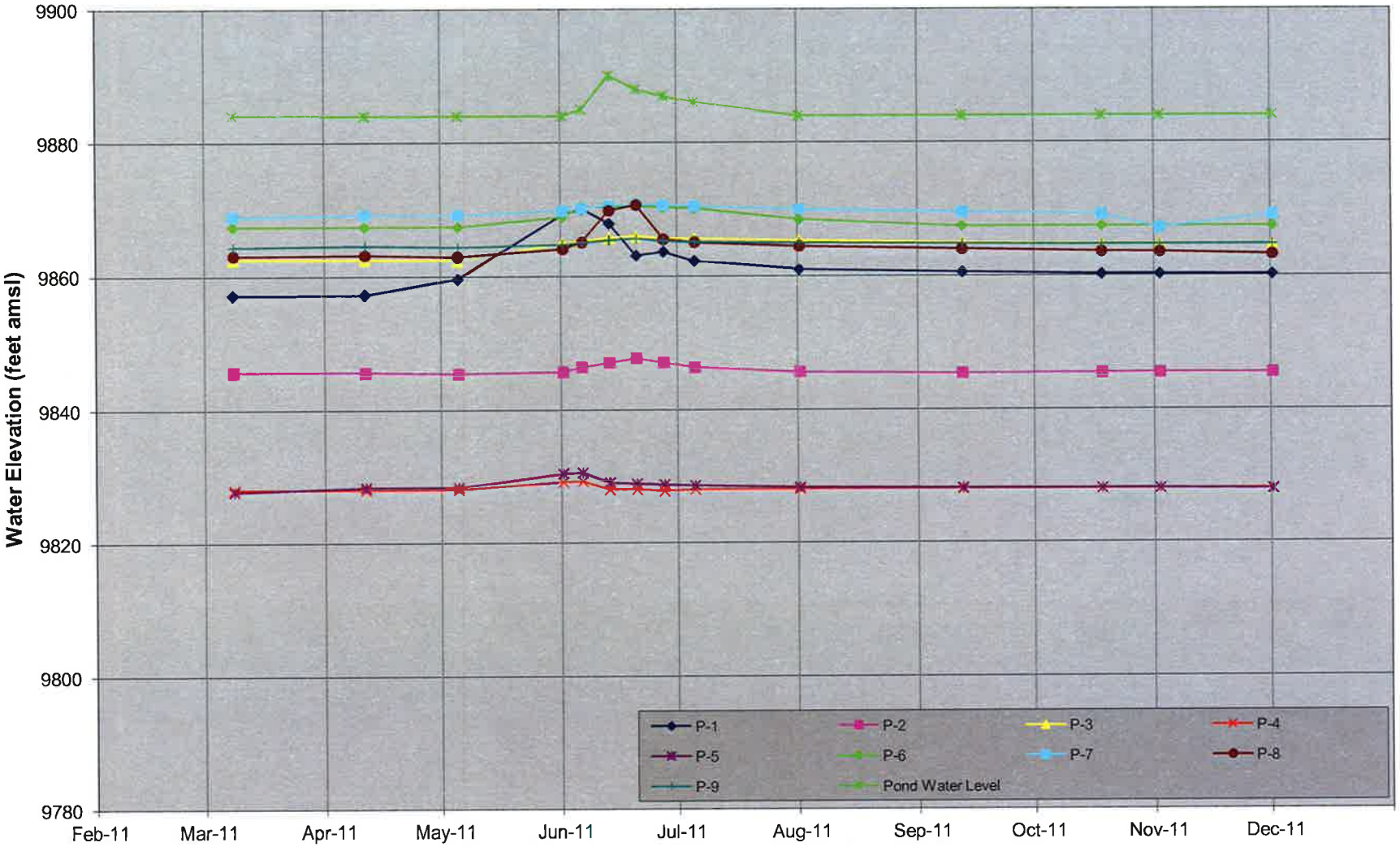


HOMESTAKE MINING COMPANY OF CALIFORNIA

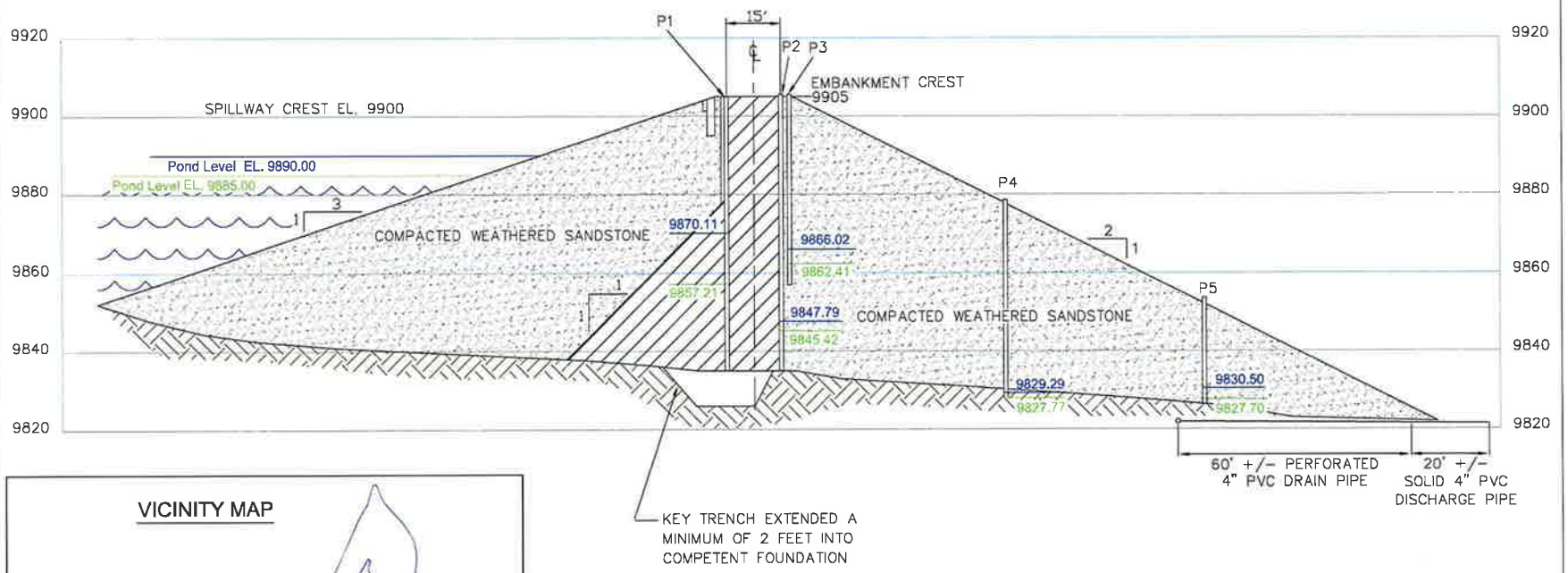
HOMESTAKE MINING COMPANY
PITCH RECLAMATION PROJECT
2011 Annual Report
Sediment Control Impoundment I.D.
280110

Figure 3: Impoundment Piezometer History

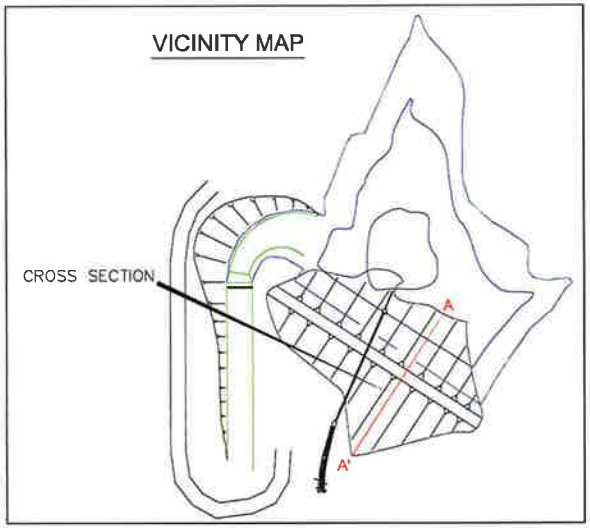
DATE	December 12, 2011	FILENAME	Figures 2011.xls



HOMESTAKE MINING COMPANY OF CALIFORNIA	**HOMESTAKE MINING COMPANY** **PITCH RECLAMATION PROJECT** **2011 Annual Report** **Sediment Control Embankment I.D. 280110**	**Figure 4: Detailed Year 2011** **Sediment Embankment Piezometer Water Elevations**		
		DATE	December 12, 2011	FILENAME	Figures 2011.xls



VICINITY MAP



LEGEND

2011 MAXIMUM POND & PIEZOMETER WATER ELEVATION

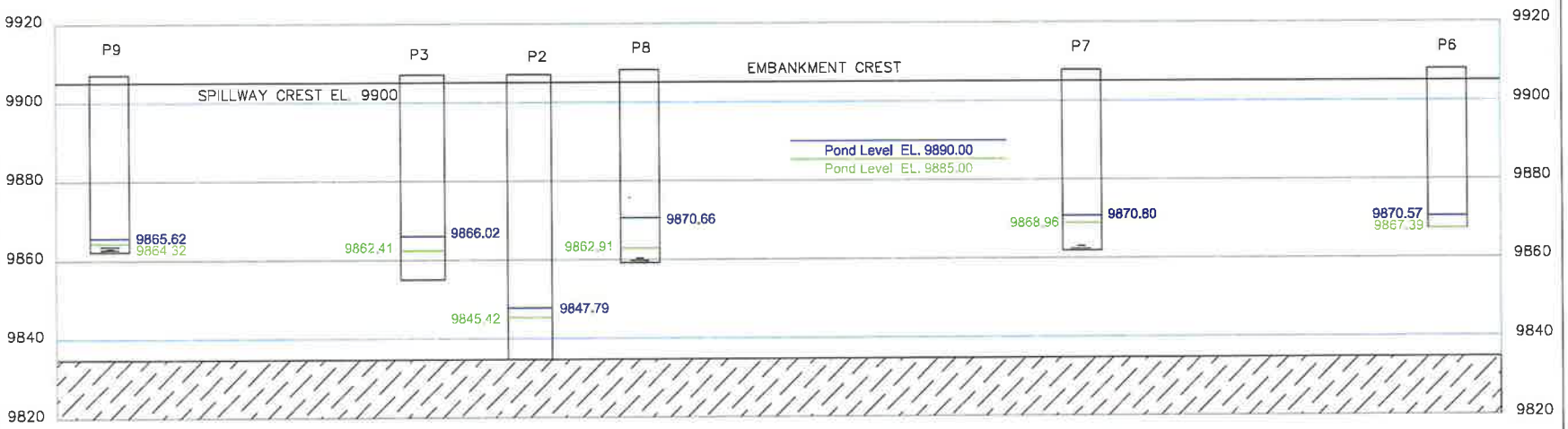
2011 MINIMUM POND & PIEZOMETER WATER ELEVATION

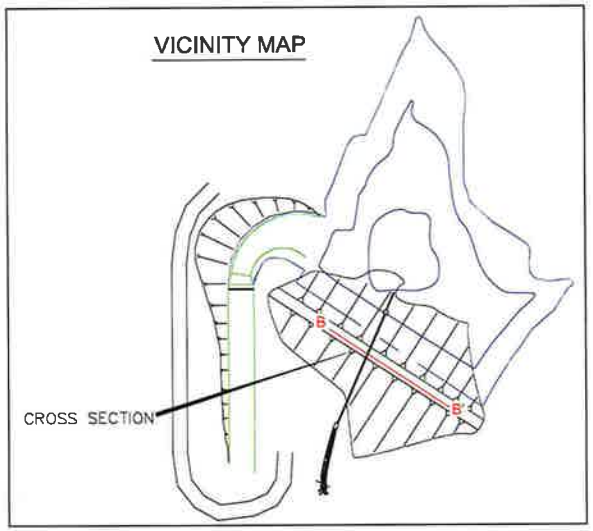
HOMESTAKE MINING COMPANY OF CALIFORNIA

PITCH RECLAMATION PROJECT
SARGENTS, COLORADO

FIGURE 5:
2011 ANNUAL REPORT
A–A' EMBANKMENT
CROSS SECTION

CREATED BY:	ARCADIS
DRAWN:	ETC
FILE:	Figure_5.DWG
PROJECT NO.:	2011 ANNUAL REPORT
SCALE:	AS SHOWN
DATE:	12/9/11
FIGURE:	5





LEGEND

2011 MAXIMUM POND & PIEZOMETER WATER ELEVATION

2011 MINIMUM POND & PIEZOMETER WATER ELEVATION

HOMESTAKE MINING COMPANY OF CALIFORNIA

PITCH RECLAMATION PROJECT
SARGENTS, COLORADO

FIGURE 6:
2011 ANNUAL REPORT
B–B' EMBANKMENT
CROSS SECTION

CREATED BY :	ARCADIS
DRAWN:	ETC
FILE:	Figure_6.DWG
PROJECT NO.:	2011 ANNUAL REPORT
SCALE:	AS SHOWN
DATE:	12/9/11
FIGURE:	6

STATE OF COLORADO

Compliance Inspection Report

Radiation Management Program

Colorado Department of Public Health and Environment

Licensee: Homestake Mining	License No. 150-01
Address: P.O. Box 98, Grants, NM 87020	Amendment: 14
Location Inspected: Pitch Mine, Sargents, CO	

This inspection was an examination of the activities conducted under your license as they relate to radiation safety and to compliance with the State of Colorado Rules and Regulations Pertaining to Radiation Control (the Regulations) (6CCR 1007-1), and the conditions of your license. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector(s). This form may be subject to posting requirements in accordance with Part 10.2. The inspection findings are as follows:

☐ 1. NO VIOLATIONS were identified within the scope of this inspection. ☐ 2. Previous violation(s) are considered closed.

☒ 3. NOTICE OF VIOLATION. During this inspection, certain of your activities, as described below and/or attached, were in violation of Department requirements and are being cited in accordance with Colorado Revised Statute 25-11-107. Within 30 days you are required to submit a letter to the Colorado Department of Public Health and Environment containing data, views, and arguments concerning the violations noted below. The letter will identify corrective steps already taken and the results achieved, corrective steps which will be taken, and the date when full compliance will be achieved. You must also respond to any written recommendations and/or items of concern made by the inspector(s). **You may request an informal conference to discuss this notice of violation. Such a request must be made within 15 days of receipt of this notice.**

1). Did not have available administrative and operating procedures relating to radiological health and safety as per LC 14.B(1).

2) Did not have available instructions and precautions to keep exposures ALARA as per LC 14.B(2)

Items of concern.

1) erosional gully on south flank of Tie Camp disposal cell

Inspector's Name:	Inspector's Signature:	Date:
Edgar Ethington	E Ethington	8/30/11

Licensee's Agent Signature	Printed Name	Title	Date
Alan D. Cox	ALAN D. COX	RSO	8/30/11

Address Correspondence to: Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division, Radiation Management Program – B2, 4300 Cherry Creek Drive South, Denver, CO 80246-1530

White RCD 59-1. Licensee

Yellow RCD 59-2. Records File Copy Section 5

STATE OF COLORADO

John W. Hickenlooper, Governor
Christopher E. Urbina, MD, MPH
Executive Director and Chief Medical Officer

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S.
Denver, Colorado 80246-1530
Phone (303) 692-2000
Located in Glendale, Colorado

Laboratory Services Division
8100 Lowry Blvd.
Denver, Colorado 80230-6928
(303) 692-3090

http://www.cdphe.state.co.us

Colorado Department
of Public Health
and Environment

SOUTHERN REGION OFFICE
4718 North Elizabeth Street, Suite B
Pueblo, Colorado 81008-2054
Phone (719) 545-4650 FAX (719) 543-8441

Certified Mail #7007 1490 0000 5427 8378
Return Receipt Requested

August 9, 2011

Allan D. Cox, Project Manager
Homestake Mining Company, Pitch Reclamation Project
P.O. Box 98
Grants, NM 81248

Subject: Compliance Inspection of Industrial Wastewater Treatment Facility (CDPS No CO-0022756); Homestake Mining Company, Pitch Reclamation Project; Saguache County

Dear Mr. Cox:

This letter serves to report the results of the compliance inspection conducted by the Engineering Section of the Water Quality Control Division ("the Division") on the above-referenced facility on June 28, 2011. Dale Davis, Gary Halbersleben, Allan Cox, and Joseph Talbott, Jr. were present during the site visit. I have enclosed a copy of the inspection report for your records.

Violations

The following alleged violations of your CDPS permit, Colorado State Statute, and/or the associated control regulations were identified during the inspection and must be addressed:

1. **Sampling Procedure 40 C.F.R. Part 136.**

   The Analytical and Sampling Methods for Monitoring section, Part I, D.3 of the discharge permit requires that all sampling shall be performed according to the methods specified in 40 C.F.R. Part 136. It was noted in the records that the pH results collected from the discharge point were analyzed by the laboratory and not on-site. As specified by 40 C.F.R. Part 136.3 the holding time for pH samples must not exceed 15 minutes. For reporting proposes the pH sampling procedure should be analyzed, and amended as necessary, to ensure that pH is analyzed within the 15 minute holding time.

2. **Operator in Responsible Charge Regulation 100 Part 6**

   Per article 100.6 of Regulation 100, the Homestake Mining Company Pitch Reclamation Project is a minor industrial facility and it does need to have a certified plant operator. The fact sheet lists Mr. Robert Olson as the certified operator for the facility. As it is the Division's

understanding that Mr. Olson is no longer the certified operator, this requirement is not being met. Given that the only treatment present at the facility is sedimentation, a class "D" industrial certification is required. The facility may opt to apply for Class 2 exemption. For more information on operator certification requirements, please contact Lori Moore with the Facility Operators Program at 303-692-3510.

Please provide a written response addressing the issues listed above by September 9, 2011. Your response must outline the course of action that will be taken and the date by which you propose to bring your facility into compliance. Failure to respond within the required time frame may result in formal enforcement action.

Permit Information

During the inspection, the following issues(s) was/were identified and discussed:

1. It was noted during that Mr. Vern Kelso, Site Representative for the facility had recently passed away. Dale Davis is now the current Site Representative for the facility. A new Change of Contact Form must be completed and submitted to the Division. The form may be found at the following link: http://www.cdphe.state.co.us/wq/PermitsUnit/FORMSandApplications/FORMS/CONTACTCHANGEFORM.pdf

For questions regarding your current permit or other permit-related issues, please contact the permit writer indicated on your permit, the public assistance contact line for the Permits Section at 303- 692-3517 or refer to the Permits Section web page at http://www.cdphe.state.co.us/wq/PermitsUnit/index.html .

Self-Reported Data (Discharge Monitoring Report, DMR) Review

During the inspection DMRs and the associated laboratory records for the period from January 1, 2009 to June 1, 2011were reviewed and discussed and no issues were identified.

Other Observations/Comments/Recommendations

The following are observations, comments, and/or recommendations that will enable your system to better conform to applicable design criteria or other industry standards:

1. The Stormwater Management Plan requirements embedded within the CDPS Fact Sheet for Colorado Discharge Permit System (CDPS No. CO-0022756) were evaluated and no issues were identified.

Reminders

- Sanitary sewer overflows (SSO) and any other spills that may impact state waters are required by law to be reported to the Department in accordance with the Division's *Guidance for Reporting Spills under the Colorado Water Quality Control Act and Colorado Discharge Permits*, which is available on the Division's web page at http://www.cdphe.state.co.us/wq/WhatsNew/SpillGuidanceDocument.pdf . The Department's 24-hour toll-free number for environmental release and incident reporting is 877-518-5608.

- Construction of interceptor sewers, lift stations, and treatment plants, including modification/expansion of existing facilities, requires site location and design approval prior to commencement of construction. Please refer to the Engineering Section's web page at http://www.cdphe.state.co.us/wq/engineering/techhom.html for information regarding these requirements.
- Most regulations, guidance documents, and forms are available via Internet on the Department's website. Please link to http://www.cdphe.state.co.us/wq/index.html for further information. You can link directly to the Engineering Section's webpage at www.cdphe.state.co.us/wq/engineering/techhom.html

If you have any questions, please contact me at 719-545-4650 x101 or at joseph.talbott@state.co.us. Thank you for your time and cooperation.

Sincerely,

Joseph C. Talbott, Jr., P.E., CWP
Engineering Section
Water Quality Control Division
Colorado Department of Public Health and Environment

Encl.
Inspection Report

cc: EPA Region VIII, NPDES Unit, Water Technical Enforcement Program
Permit File No. CO-0022756
Saguache County Health Department

ec: Andrew Rice, District Engineer, WQCD Engineering Section
Kathleen Rosow, WQCD Permits Section-Stormwater
Lori Moore, Facility Operator Program, WQCD-Denver

CDPS Facility Inspection Report

CDPS Permit Number: CO0022756 **Effective Date:** 1/1/2010 **Expiration Date:** 12/31/2014

Inspection Type: CEI **Inspection Date:** Tuesday, June 28, 2011 **Entry Time:** 10:18 AM

Rating: Satisfactory program

Primary Inspector: Talbott, Joe, PE, District Engineer **Phone:**

Other Inspector(s):

Name	Title	Phone
Gary Halbersleben	Sampler	303-692-3561

Onsite Rep Names: Dale Davis **Phone:**

Facility Name : Pitch Reclamation Project **Facility Type:** Industrial Facility

Facility Address: Aprpox 6 mi E of Sargent, Sargent, CO 81248 **County:** Saguache

Latitude (Dec. Deg.): 38.400278000 **Longitude (Dec. Deg.):** -106.411111000

Operator in Responsible Charge **Total No. of Operators:**

Type	Facility Level	ORC Name	ORC Cert Level	Phone	Email Address
Treatment	D-I	Dale Davis	Not Certified		

Determinations

Permit:	Satisfactory	**Flow Measuring:**	Satisfactory	**Pretreatment:**	Not Applicable
Record:	Satisfactory	**Laboratory:**	Satisfactory	**Compliance Schedule:**	Not Applicable
Site Review:	Satisfactory	**Effluent:**	Satisfactory	**Self Monitoring:**	Marginal
Stormwater:	Satisfactory	**Biosolids Disposal:**	Not Applicable	**Operations/Maintenance:**	Satisfactory
SSO/CMOM:	Not Applicable				

I/I Problem? ☐ **Sample Per Permit?** ☑ **Does Permit Match Facility?** ☑

Onsite Analysis: pH, O&G **Contract Lab:** Energy Labs

Total Taps: 1 **Industrial Taps:** 1 **Number Of Lift Stations:**

Treatment Processes Used

Process Type	Design Capacity	Present Loading	Capacity Used
Hydraulic (MGD)	2.6	0.47	18.08%

Treatment Units

Barscreen:		**Mechanical Bar Screen:**		**SBR:**	
Trickling Filter:		**Secondary Clarifier:**		**Primary Clarifier:**	
Activated Sludge:		**RBC:**		**Centrifuge:**	
Drying Bed:		**CL 2:**		**Anaerobic Digester:**	
Aerobic Digester:		**Filter Press:**		**Lagoon:**	
Aerated Lagoon:		**De CL 2:**		**UV:**	
Coagulation:		**Polishing Pond:**		**Communicator:**	
Grit Removal:		**Land Treatment Reuse:**		**Filter:**	
Wetland:					

Other Treatment: Sedimentation

Treatment Comments:

Comments

ID	Name	Latitude	Longitude	Flow Device	Date Calibrated	Accurate?
001A	V-Notch Weir	38.399	106.308	90 deg v-notch weir		☐

HOMESTAKE
PITCH PROJECT

Alan D. Cox
Project Manager – Pitch

21 March 2012

Colo. Dept. of Public Health & Environment
Hazardous Materials & Waste Management Division
Radiation Management Program
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

Attn: Mr. Edgar Ethington – Environmental Protection Specialist

RE: ***Pitch Reclamation Project***
Radioactive Materials License No. 150-01
2011 - Annual Letter Report

Dear Mr. Ethington:

Radioactive Materials License Number 150-0l, Amendment No. 14 condition 15.C requires Homestake Mining Company of California (HMC) to submit a letter report each year describing any activities that took place in the previous year, or no activities, as appropriate. License Condition 15.C also states that a copy of the Annual Reclamation Report to the Division of Reclamation, Mining and Safety (DRMS) within the Colorado Department of Natural Resources is to be provided to the Hazardous Materials & Waste Management Division, and License Condition 15.D (errata) provides that adequate surety be maintained.

HMC hereby submits this letter that documents license related activities performed during 2011 as well as summarizing activities planned for 2012. During 2011, HMC conducted several on-the-ground activities at the Pitch site, in addition to license/permit related regulatory maintenance activities. Activities related to the RML included the following:

- Monitoring of water levels in piezometers within and adjacent to the Pinnacle Mine workings;
- Geotechnical monitoring of surface monuments in the east and south walls of the North Pit;
- Monitoring of the piezometers in the Indian Creek and Tie Camp Creek waste rock dumps;
- Abandonment of piezometers IC10300 and IC10370 and replacement with new piezometers IC10300R and IC10370R within the Indian Creek waste rock dump;
- Monitoring of the Sediment Control Embankment;
- Monitoring of discharges at compliance point SW-33 in accordance with the Colorado Discharge Permit System (CDPS) permit # CO0022756.
- Repair of the surface water drainage channel on the Tie Camp Creek Low Grade Ore Stockpile/Disposal Cell. This work was completed per the approved plan on August 30, 2012 and a completion report submitted to the Hazardous Materials and Waste Management Division of the CDPHE on September 19, 2011.
- An update to the ALARA Policy and Radiation Safety Operating Procedures (SOP) manual was completed and filed with the Division in October 2011; a copy of the document is maintained and kept on file at the Pitch Site Sargents office.

During 2011, water quality monitoring results for discharges from the Pitch Reclamation Project, as required under CDPS Permit No. 000022756, demonstrated that the discharges were within acceptable permit limits as established by the WQCD – Colorado Department of Public Health and Environment.

All monitoring data, site inspection records, employee training records, as well as all RML related activities, reviews, investigations, and corrective actions (if any) are documented, stored, and maintained by HMC and are available for review upon request.

Expected RML related activities in 2012 at the Pitch site include the following:

- Monitoring of the repair work completed in 2011 on the Tie Camp Low Grade Ore Stockpile/Disposal cell;
- Continued monitoring of surface drainage and repair, as needed within project area;
- Monitor of water levels in piezometers in the Pinnacle mine workings and North Pit;
- Monitor phreatic surface water levels in the Indian Creek and Tie Camp Creek waste rock dumps;
- Monitor phreatic surface water levels and crest monuments of the Sediment Control Embankment;
- Collect water samples at the surface water discharge point of compliance (SW-33) and report results as required by the CDPS permit;
- Monitor the surface monuments in the North Pit; and
- Continue site and facilities maintenance and weed control as required.

Specific reclamation activities in 2011 will be documented in the 2011 Annual Reclamation Report due to the DRMS in mid-April 2012. Upon completion, a copy of the 2011 Annual Reclamation Report will be submitted to the Hazardous Materials and Waste Management Division. Finally, a surety bond of $2,263,000.00 is maintained for the Pitch Reclamation Project with Safeco Insurance Company of America.

If you have any questions or require further information, please contact the undersigned at (505) 287-4456 ext. 25

Sincerely yours,

HOMESTAKE MINING COMPANY OF CALIFORNIA

Alan D. Cox
Project Manager – Pitch/
Radiation Safety Officer

CC: R. Chase – Barrick-SLC
D. Davis – Sargents Office
P. DeDycker - ARCADIS

HOMESTAKE

PITCH PROJECT

Alan D. Cox
Project Manager – Pitch

19 September 2011

Colo. Dept. of Public Health & Environment
Hazardous Materials & Waste Management Division
Radiation Management Program
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

Attn: Mr. Edgar Ethington – Environmental Protection Specialist

RE: ***Pitch Reclamation Project***
Radioactive Materials License No. 150-01

Completion Report
on
Cover Repair Work for Tie Camp Creek Low Grade Ore Stockpile / Disposal Cell

Dear Mr. Ethington:

This letter is in follow up to the Pitch Reclamation Project work plan that was submitted to your office and subsequently approved as related to field activities necessary to address an observed erosion gully along the south margin of the of the low grade ore stockpile / disposal site cell situated on the Tie Camp waste rock disposal area.

Attached please find a copy of the Completion Report summarizing the repair work that was accomplished under the approved Work Plan.

Thank you for your time and attention on this matter. If you have any questions or require further information, please contact me at the Grants office at (505) 287-4456 ext. 25, or on my cell phone at 505-400-2794.

Sincerely yours,

HOMESTAKE MINING COMPANY OF CALIFORNIA

Alan D. Cox
Project Manager /
Radiation Safety Officer

CC: D. Davis – Sargents Office
R. Chase – Barrick-SLC
P. DeDycker – ARCADIS

Completion Report
For
Erosion Cut Repair on Tie Camp Creek Disposal Cell (TCCDC)

Background

A precipitation runoff-induced erosion cut was observed in the field on August 30, 2011 during an inspection of the Tie Camp Creek Disposal Cell (TCCDC). During the inspection it was verified (via mrem field instrument scanning of the erosion area) that the erosion cut involved only displacement and removal of clean soil cover along the south margin of the cell where surface precipitation flows are directed from the top of the cell. The observed erosion area involved a cut approximately 5 feet in width at the widest point, 1-3 feet deep, and 25 feet long along the southern flank of the disposal cell. Field observation indicated that the original conveyance channel was not rip-rapped to the extent necessary to prevent erosion.

Completed Repair Work

A 4WD wheel backhoe was utilized to conduct the channel repair work. The excised erosion area was graded and shaped with use of clean soil cover material. This channel bedding was mechanically wheel compacted to construct a base for the channel. Locally available rip-rap rock was segregated and collected from other portions of the Tie Camp waste rock disposal top for use in lining the channel. The rip-rap rock was placed and bedded on the surface of the channel profile, with the outlet of the channel at the bottom of the cell. The exit portion of the repaired channel is on relatively level ground that has been compacted and contains rock material for preventing erosion at the toe portion of the TCCDC.

Attached to this completion report are several photos documenting 1) the existing condition of the erosion cut, 2) in-progress repair work performed, and 3) the completed channel repair configuration.

The channel repair site area will be seeded this Fall prior to onset of winter weather with a seed mix utilized at the Pitch Reclamation Project.

Repair Work Site Monitoring

For the next 1-2 Spring meltoff/runoff seasons, the channel repair area will be inspected to assure that the channel is stable and performing as intended. In addition, revegetation / reseeding success will be evaluated to determine if additional seeding is required to assure adequate soil stability and vegetative ground cover. Future repair work, if necessary, will be completed as soon as practicable to address any identified issues. As needed, reseeding of the area will be completed after any repair work.

1. Existing erosion cut in channel. Looking N from toe of TCCDC up to crest of the drainage channel. Prior to initiation of channel repair work. Note dimension markers – erosion area is approximately 5 ft wide in some locations by 1-3 ft in depth.

2. Existing erosion cut in channel. Opposite view from Photo 1. looking S from crest of the drainage channel to the toe of TCCDC. Prior to initiation of channel repair work.

3. Initiation of wheel roll compacting of channel after excavation, and placement and shaping of clean soil cover material for the bedding portion of the channel.

4. Initiation of rip-rap material placement over wheel compacted clean soil cover base material in the channel.

5. In-progress photo showing placement of rip-rap material.

6. Rip-rap channel repair area; nearing completion of work. Area will be seeded and monitored in the short term following significant storm events and/or Spring meltoff to assure that the channel "beds" and is stable to prevent future erosion.