Hole Abandonment 1998

60008642

The Rosebud Mining Company, LLC
Hecla Mining Company, Operator

MEMORANDUM

TO: Mark Barnett

FROM: Kurt D. Allen

DATE: May 12, 1998

SUBJECT: Rosebud Project Drill Hole Abandonment Procedures Past and Present.

Attached is the Rosebud Mining Co. LLC drill hole abandonment list. This list is in part an estimate based on the best information available of drill hole abandonment practices on the project prior to Hecla's involvement beginning in 1994. Following 1994, drill hole abandonment practices are well known.

If you need any further information, please let me know.

ROSEBUD MINING CO. LLC
DRILL HOLE ABANDONMENT

Following is a drill hole series' listing of all drill holes associated with the Rosebud deposit to date. These holes have been drilled by various companies, some with unknown hole abandonment procedures. The known or best estimate of the drill hole abandonment procedure for each set of drill hole series is given in bold.

KM series	Freeport rotary holes (early 1980's). **Unknown abandonment procedures.**
RB series	Early LAC reverse-circulation holes (late 1980's to early 1990's). **Unknown abandonment procedures.**
RB-95-xx series	Hecla 1995 condemnation RVC drill holes. **The hole is filled with abantonite to within 10 feet of the surface followed by a 10-foot cement cap.**
RBW series	Hecla 1996 water well exploration holes (RVC). **If a water well was not developed, the drill hole was filled to within 10 feet of the collar with abantonite, followed by a 10 foot cement cap.**
RL-xxx series	LAC reverse-circulation holes (late 1980's to early 1990's). **Hole filled with bentonite slurry from TD to within 50 feet of the surface. A plastic perma plug was set at 50 feet in each hole and some holes (not all ?) were capped with 50 feet of cement.**
RL-xxxC series	LAC core holes drilled in the early 1980's to late 1990's (majority are HQ). **Hole filled with bentonite slurry from TD to within 50 feet of the surface. A plastic perma plug was set at 50 feet in each hole and some holes (not all ?) were capped with 50 feet of cement.**
RE-xxx series	LAC/Equinox reverse-circulation holes (late 1980's to early 1990's). **Hole filled with bentonite slurry from TD to within 50 feet of the surface. A plastic perma plug was set at 50 feet in each hole and some holes (not all ?) were capped with 50 feet of cement.**
RE-xxxC series	LAC/Equinox core holes drilled in the late 1980's to early 1990's(majority are HQ). **Hole filled with bentonite slurry from TD to within 50 feet of the surface. A plastic perma plug was set at 50 feet in each hole and some holes (not all?) were capped with 50 feet of cement.**

RS-xxx series	The Rosebud Mining Company, LLC 1997and 1998 surface exploration and development RVC pre-collar and core hole (HQ) tail. **Core hole tail filled with abantonite or cement, followed with the filling of the RVC pre-collar to within 10 feet of the surface with either bentonite chips or uncontaminated cuttings and/or soil (when water table not intersected). A cement cap is put in each hole from 10 below the surface to the surface.**
TH-94-xx series	Hecla 1994 condemnation core holes. **The hole is filled with abantonite to within 10 feet of the surface followed by a 10-foot cement cap.**
WW-xx series	Hecla 1994 water wells. **If a water well was not developed, the drill hole was filled to within 10 feet of the collar with abantonite, followed by a 10 foot cement cap.**
94-xxxC series	Hecla 1994 surface core holes (HQ). **The hole is filled with abantonite to within 10 feet of the surface followed by a 10-foot cement cap.**
95-xxxC series	Hecla 1995 surface core holes (HQ). **The hole is filled with abantonite to within 10 feet of the surface followed by a 10-foot cement cap.**
96-xxx series	Hecla/Santa Fe 1996 surface RVC holes. **The hole is filled with abantonite to within 10 feet of the surface followed by a 10-foot cement cap.**
D-xx-94 series	Hecla 1994 underground core holes (NBDGM or NQ). **Not abandoned (some contain packers).**
D-xxx-95 series	Hecla 1995 underground core holes (NBDGM or NQ). **Not abandoned.**
D-xxx-97 series	The Rosebud Mining Company, LLC 1997 underground core holes (NBDGM). **Not abandoned.**
D-xxx-98 series	The Rosebud Mining Company, LLC 1998 underground core holes (NBDGM). **Not abandoned.**
MW-series	Hecla 1994 hydrology monitoring wells (reverse-circulation). **Not abandoned.**

GEOTEMPS INC®

WEEKLY TIMECARD

EMPLOYEE Luis F Figueroa

POSITION Laborer

CLIENT Rosebud mining - Hecla

WEEK ENDING (MMDDYY) 5-9-98

	REG HRS	OT HRS	PROJECT/ LOCATION	ACCTG CODE
SN				
M				
T	10			
W	10			
TH	10			
F	10			
ST				
	40		TOTAL HRS.	

SUPERVISOR Kurt D. Allen 5/8/98
PLEASE PRINT DATE

SUPERVISOR Kurt D. Allen
SIGNATURE DATE

EMPLOYEE Luis F Figueroa 5-8-98
SIGNATURE DATE

COMMENTS

INDICATE PAID VACATION, HOLIDAY, SICK HOURS

CLIENT

C.B. BROWN CO., INC. - BROWN'S TRUE VALUE HARDWARE

221 S. BRIDGE STREET
WINNEMUCCA, NV 89445

PHONE: (702) 623-2541

RENTAL SHOP NOW OPEN!!!!
PLEASE CHECK OUT ALL THE TOP QUALITY RENTAL
RATED EQUIPMENT AVAILABLE

HECLA MINING COMPANY,OPERATOR
ROSEBUD MINING CO.,LCC-(H
VIC CHRISTENSON
WINNEMUCCA, NV. 89446-
(702) 623-6912

CUST #: 860036

INV #:050204-0015
DATE: 02 MAY 1998 TIME: 11:40 AM
CLERK: MRA

QUANTITY	UM	ITEM		DESCRIPTION	PRICE / PER	EXTENSION
				REG PRICE		
1.00		L0099		WHEEL BARROW	$55.89 /EA	$55.89
1.00		256186	N	LHSP Scoop Shovel	$19.99 $16.99 /EA	$16.99
2.00		347463	N	LHRP Shovel	$19.99 $16.99 /EA	$33.98

Auth. Signature: K ALLEN/R CLAYTON

X Kurt S. Allen

RECEIVED BY

Subtotal	$106.86
Tax Amount	6.95
Total Amount	$113.81

NAC 534.042 "Bentonite grout" defined. (NRS 534.020, 534.110) "Bentonite grout" means a product that is specifically designed to seal and plug wells and boreholes and:

1. Consists of not more than 87.9 percent water and not less than 12.1 percent bentonite by weight of water;

2. Has the ability to gel;

3. Does not separate into water and solid materials after it gels;

4. Has hydraulic conductivity or permeability values of 10^{-7} centimeters per second or less; and

5. Has a fluid weight of not less than 9 pounds per gallon.

(Added to NAC by St. Engineer, eff. 12-30-97)

NAC 534.043 "Blast hole" defined. (NRS 534.020, 534.110) "Blast hole" means a borehole that is drilled and, as soon as practicable, is loaded with explosives for mining purposes.

(Added to NAC by St. Engineer, eff. 12-30-97)

NAC 534.045 "Board" defined. "Board" means the statewide well drillers' advisory board.

(Added to NAC by St. Engineer, eff. 1-9-90)

NAC 534.047 "Borehole" defined. (NRS 534.020, 534.110) "Borehole" means a penetration in the ground that is deeper than the longest dimension of its opening at the surface and is made to obtain geologic, hydrologic, geophysical or geotechnical information, to obtain information relating to engineering or for any other purpose other than for use as a well.

(Added to NAC by St. Engineer, eff. 12-30-97)

NAC 534.048 "Bridge" defined. (NRS 534.020, 534.110) "Bridge" means an obstruction in the well bore or annular space of a borehole or well caused when the walls of the well bore collapse or when materials are jammed or wedged into the well bore or annular space.

(Added to NAC by St. Engineer, eff. 12-30-97)

NAC 534.050 "Casing" defined. "Casing" means the conduit required to prevent waste and contamination of the ground water and to hold the formation open during the construction or use of the well.

[St. Engineer, Drilling Wells Reg. § 1.04, eff. 5-19-81]—(NAC A 1-9-90)

NAC 534.060 "Cement grout" defined. "Cement grout" means a mixture of portland cement, sand and water which contains at least seven bags of cement per cubic yard and not more than 7 gallons of clean water for each bag of cement (1 cubic foot or 94 pounds).

[St. Engineer, Drilling Wells Reg. § 1.14, eff. 5-19-81]—(NAC A 1-9-90)

NAC 534.070 "Concrete grout" defined. "Concrete grout" means a mixture of portland cement, sand, 1/4-inch minus aggregate and water which contains at least five bags of cement per cubic yard of concrete and not more than 7 gallons of clean water per bag of cement (1 cubic foot or 94 pounds).

[St. Engineer, Drilling Wells Reg. § 1.13, eff. 5-19-81]—(NAC A 1-9-90)

NAC 534.080 "Conductor casing" defined. (NRS 534.020, 534.110) "Conductor casing" means the

(b) If the highest saturated stratum is not more than 60 feet above the bottom of the borehole, by placing concrete grout, cement grout, neat cement or bentonite grout by tremie pipe in an upward direction from the bottom of the borehole to the surface or by placing sodium bentonite chips or pellets specifically designed to be used to plug boreholes from the bottom of the borehole to the surface; or

(c) If the highest saturated stratum encountered in the borehole is more than 60 feet above the bottom of the borehole, by:

(1) Plugging the portion of the borehole from the bottom to 50 feet above the highest saturated stratum encountered in the borehole in the manner described in paragraph (a);

(2) Backfilling the portion of the borehole that extends from the materials placed in the borehole pursuant to subparagraph (1) to 10 feet from the surface with compacted soil which is uncontaminated; and

(3) Placing any of the materials described in paragraph (a) from 10 feet below the surface to the surface.

3. If a contaminant or contaminated water is encountered in a borehole, the strata that contain the contaminant or contaminated water must be sealed in the manner prescribed in subsection 2 to prevent the contaminant or contaminated water from commingling with other strata or the water contained in other strata. The vertical movement of contaminants in the well bore must be prevented.

4. If the elevation of the bottom of the borehole is more than 50 feet above the preexisting natural elevation of any saturated ground water stratum, the borehole must be plugged by:

(a) Backfilling the borehole from the bottom to 10 feet from the surface with compacted soil which is uncontaminated; and

(b) Placing any of the materials described in paragraph (b) of subsection 2 from 10 feet below the surface to the surface.

5. If bentonite grout is used to plug a borehole, it must be mixed pursuant to the specifications recommended by the manufacturer.

6. If sodium bentonite chips or pellets or uncontaminated soil are placed in the borehole, they must be placed in such a manner that a bridge does not occur. Sodium bentonite chips or pellets may not be placed in more than 100 feet of standing liquid unless the chips or pellets have been coated by the manufacturer to delay hydration.

7. If casing is set in a borehole, the borehole must be completed as a well pursuant to the provisions of this chapter. The borehole must be plugged pursuant to NAC 534.420, or the casing must be removed from the borehole when it is plugged. The upper portion of the borehole may be permanently cased if the annular space between the casing and the walls of the borehole is completely sealed from the bottom of the casing to the surface pursuant to NAC 534.380.

(Added to NAC by St. Engineer, eff. 12-30-97)

NAC 534.4373 Boreholes: Responsibility for plugging. (NRS 534.020, 534.110) The owner and lessor of the land on which a borehole is located, the operator of the exploration project and the plugging contractor for the project are jointly and severally responsible for plugging the borehole pursuant to this chapter.

(Added to NAC by St. Engineer, eff. 12-30-97)

NAC 534.4375 Boreholes, blast holes and seismic shot holes: Artesian conditions. (NRS 534.020, 534.110) If an artesian condition is encountered in any borehole, blast hole or seismic shot hole, the artesian water strata must be contained pursuant to NRS 534.060 and NAC 534.378, and the borehole, blast hole or seismic shot hole must be sealed by the method described in subsection 2 of NAC 534.4371. The owner and lessor of the land on which a borehole is located, the operator of the exploration project and the drilling contractor for the project shall take the necessary steps to prevent the loss of water above or below the surface and to prevent the vertical movement of water in the well bore.

(Added to NAC by St. Engineer, eff. 12-30-97)

NAC 534.4377 Treatment of certain holes as boreholes. (NRS 534.020, 534.110)

1. For the purposes of this chapter, blast holes are not boreholes.

2. If the construction of a shot hole or a hole used for the installation of electrical conductors as part of a system to prevent corrosion or provide electrical grounding may cause waste or contamination of the ground water, the hole shall be deemed a borehole for the purposes of NAC 534.4369 and 534.4371.

(Added to NAC by St. Engineer, eff. 12-30-97)

WAIVERS

NAC 534.440 Waiver to drill exploratory well to determine quality or quantity of water in designated basin. (NRS 534.020, 534.110)

1. The request for a waiver to drill an exploratory well to determine the quality or quantity of water pursuant to NRS 534.050 in a designated basin must be submitted in writing and contain the following information:

(a) The location by public survey, county assessor's parcel number and plat map of the exploratory well anticipated to be drilled;

(b) The name, address and telephone number of the person who:

(1) Is collecting data from the exploratory well; and

(2) Will be available to answer questions concerning the well;

(c) The reason for requesting a waiver;

(d) The proposed diameter and depth of the exploratory well;

(e) The estimated starting and completion dates of the exploratory well, not to exceed 90 days after authority is given to drill;

(f) The name, address and telephone number of the person who will be responsible for plugging the well, and the name, address and telephone number of the owner of the land where the well will be located if he is not the person responsible for plugging the well; and

(g) A notarized affidavit signed by the person responsible for plugging the well which states that he will be responsible for plugging the well if it is abandoned.

2. Each waiver for an exploratory well will bear a unique number preceded by the letter "W." The notice of intent to drill submitted to the division pursuant to NAC 534.320 and the record of

1. A well driller may construct a drive point well without placing in the annular space of the well the gravel pack and seals required pursuant to NAC 534.4357.

2. The diameter of the casing used in a drive point well which is not constructed pursuant to the provisions of NAC 534.4357 must not be larger than 2 inches in nominal size.

3. A drive point well which is not constructed pursuant to the provisions of NAC 534.4357 must be abandoned within 60 days after the well is constructed. Upon abandonment, the casing must be removed from the well bore and the well bore must be plugged in the manner provided in NAC 534.4371.

(Added to NAC by St. Engineer, eff. 12-30-97)

NAC 534.4369 Boreholes: Generally. (NRS 534.020, 534.110)

1. A borehole may be drilled or plugged by a person who is not a licensed well driller.

2. A person who constructs a borehole is not required to file with the division a notice of intent to drill or plug the borehole.

3. A borehole may be drilled without obtaining from the division a permit to appropriate water or a waiver of the requirement to obtain such a permit.

4. A person who drills or plugs a borehole, the operator of the exploration project or the owner of the land where the borehole is located must maintain a record of the drilling operation which includes:

(a) The dates on which the borehole is constructed and plugged;

(b) The location of the borehole as shown by public survey;

(c) The depth and diameter of the borehole;

(d) The depth at which ground water is encountered in the borehole; and

(e) The methods and materials used to plug the borehole.

5. The state engineer may, at any time, require the person drilling or plugging the borehole, the operator of the exploration project or the owner of the land on which the borehole is located to submit to the state engineer a copy of the record required pursuant to subsection 4 and any other information relating to the construction, operation or plugging of the borehole that the state engineer determines is necessary.

6. The owner and the lessor of the land on which a borehole is located, the operator of the exploration project and the drilling or plugging contractor for the project shall ensure that the ground water is uncontaminated during the drilling, operation or plugging of the borehole.

(Added to NAC by St. Engineer, eff. 12-30-97)

NAC 534.4371 Boreholes: Plugging requirements; measures required if contaminant or contaminated water is encountered. (NRS 534.020, 534.110)

1. A borehole must be plugged within 60 days after it is drilled.

2. Except as otherwise provided in subsections 3 and 4, a borehole must be plugged:

(a) In the manner prescribed in NAC 534.420;

NAC 534.420 Plugging of well: General requirements. (NRS 534.020, 534.110)

1. Except as otherwise provided in NAC 534.422, wells must be plugged in the manner prescribed in this section by a driller licensed by the state engineer.

2. A driller shall:

(a) Ensure that a notice of his intent to plug a water well is received by the division not less than 3 working days before the drill rig is moved to the location where the well will be plugged; and

(b) Notify the division not less than 24 hours before he begins to plug the well.

3. Before the driller begins to plug the well, he shall, if possible, obtain the log and record of work for that well from the division or the owner of the well.

4. On abandonment or order of the state engineer, a water well must be plugged by:

(a) Removing the pump or debris from the well bore with appropriate equipment; and

(b) If an annular cement seal was not installed, breaking the casing free with appropriate equipment so that the casing may be pulled from the well.

5. If the casing in the well:

(a) Breaks free, the driller shall plug the borehole in the manner prescribed in NAC 534.4371 as the casing is pulled from the well or after the casing is removed from the well if the borehole remains intact. The well must be plugged from the total depth of the well to the surface of the well, in stages if necessary, to displace in an upward direction any fluid or debris in the well.

(b) Does not break free, the driller shall perforate that portion of the casing which extends from the bottom of the well to not less than 50 feet above the top of the uppermost saturated ground water stratum. That portion of the casing must be perforated not less than four times per linear foot to allow the plugging fluid to penetrate the annular space and the geologic formation. The perforations made in each linear foot of the casing must be made along a horizontal plane of the well bore. The angle between any two consecutive perforations made on a horizontal plane must not exceed 90 degrees, as measured from the center of the well bore. A well with a diameter of more than 8 inches in nominal size must be perforated a sufficient number of additional times per linear foot to ensure that the plugging fluid penetrates into the annular space and formation. The well driller shall then plug the well from the total depth of the well to 50 feet above the uppermost saturated ground water stratum or to within 20 feet of the surface of the well, whichever is less, with neat cement or bentonite grout specifically designed to plug abandoned wells.

6. The well driller shall place a surface plug in the well consisting of neat cement, cement grout or concrete grout, from a depth of at least 20 feet to the surface.

7. If the well casing does not break free and there is no evidence of a sanitary seal around the well casing, the driller shall, in addition to the requirements of subsection 5, perforate the upper 50 feet of casing before setting the surface plug. The casing must have at least four perforations per linear foot of casing and the surface plug must consist of neat cement.

8. A well driller shall submit a written report to the division within 30 days after a water well has been plugged. The report must contain the location of the well by public survey and county assessor's parcel number, the name of the owner of the well, the condition of the well, the static water level before plugging and a detailed description of the method of plugging, including, but not limited to:

(a) The depth of the well;

(b) The depth to which the materials used to plug the well were placed;

(c) The type, size and location of the perforations which were made in the casing;

(d) The debris encountered in, milled out of or retrieved from the well; and

(e) The materials used to plug the well.

9. If there is any standing liquid in the interval of the well bore that is being plugged, all grout materials used pursuant to this section must be placed by tremie pipe in an upward direction.

[St. Engineer, Drilling Wells Reg. Part 14, eff. 5-19-81]—(NAC A 1-9-90; 12-30-97)

NAC 534.422 Plugging of well: Use of exceptional method. (NRS 534.020, 534.110)

1. A well driller who wishes to plug a well in a manner that does not comply with the provisions set forth in NAC 534.420 must request approval from the division.

2. If the division authorizes the well driller to plug the well in a manner other than the manner set forth in NAC 534.420, the well driller shall comply with the instructions he receives from the division, if any, relating to the manner in which the well must be plugged.

(Added to NAC by St. Engineer, eff. 12-30-97)

NAC 534.424 Plugging of well: Responsibility for cost. (NRS 534.020, 534.110)

1. If a well is located on private land, the owner of the land at the time the well is plugged is responsible for the cost of plugging the well.

2. If a well is located on public land, the person who last drilled or used the well is responsible for the cost of plugging the well. If the person who last drilled or used the well does not plug the well within 1 year after receiving notice from the division by certified mail, return receipt requested, that the well must be plugged, the person who owns the land on which the well is located must plug the well.

(Added to NAC by St. Engineer, eff. 12-30-97)

NAC 534.427 Mandatory plugging of certain wells. (NRS 534.020, 534.110)

1. If any type of permit, waiver or application to appropriate water from a water well is canceled, abrogated, forfeited, withdrawn or denied, the well must be plugged in the manner prescribed in NAC 534.420.

2. A well, other than a water well drilled for a domestic purpose, for which a permit or waiver has not been issued must also be plugged in the manner prescribed in NAC 534.420.

(Added to NAC by St. Engineer, eff. 1-9-90; A 12-30-97)

NAC 534.430 Access port or removable well cap required. (NRS 534.020, 534.110)

1. Except as otherwise provided in subsection 3, each well that is drilled, deepened or reconditioned must have:

(a) An access port near the top of the casing that is not less than 1 inch in diameter; or

(b) A commercially manufactured sanitary well cap that may be easily removed to determine the level of water in the well.

2. An access port must have a watertight, screw-type cap seal to prevent contamination and must be kept closed.

3. On wells that are 8 inches in diameter or smaller, the access may be a 1/2-inch hole at the top of the casing or in the casing cover with a removable plug or bolt.

4. As used in this section, "access port" means an opening in the top of a well casing in the form of a tapped hole and plug or a capped pipe welded on the casing to permit entry of a device to measure the water level of the well.

[St. Engineer, Drilling Wells Reg. Part 6, eff. 5-19-81]—(NAC A 1-9-90; 12-30-97)

No Water present 116 holes

BLM → Cuttings or bentonite to 3'

below ground level

- Non-metallic plug w/ approved company identification
- Compacted fill or cement plug to surface.

NAC - plugged w/in 60 days after it was drilled

- ~~concrete, gro~~
- if H_2O is greater than 50 ft. below bottom of hole - can be plugged w/ uncontaminated compacted soil.
- if H_2O is not more than 100 ft above the bottom of the borehole, by placing cement grout, concrete ... etc...

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
WINNEMUCCA DISTRICT OFFICE
705 EAST 4TH STREET
WINNEMUCCA, NEVADA 89445

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

3809
N26-89-008P
(NV-026.5)

JUL 2 0 1990

BLM Case File Number
N26-89-008P

Project
Rosebud Project

Operator
LAC Minerals (USA), Inc.
P.O. Box 21390
Reno, NV 89515

Location
T. 34 N., R. 30 E., Sec. 18, 19
T. 34 N., R. 29 E., Sec. 13, 24

FIELD COMPLIANCE INSPECTION REPORT

Dear Mr. Brewer:

At your request a field inspection was performed by Rebecca Lange of my staff on June 5, 1990 to review reclamation concurrent with your ongoing exploration operations.

Thank you for taking time to show Rebecca around your operations. Thank you also for the map of the reclaimed areas which we received on June 11, 1990. The map you sent shows eight (8) reclaimed drill pads, three (3) additional reclaimed drill holes, and approximately 11,450 feet of reclaimed access roads.

During her inspection, Rebecca visited the reclaimed South Ridge Area access road, the reclaimed connecting route at the 1750' elevation contour on Rosebud Peak, and had an overview of the reclaimed road in the Degerstrom Area. The reshaping/recontouring work was excellent. We understand the work was accomplished with a track-type excavator. The disturbed areas were returned to original contour and raked with the excavator bucket teeth to provide depressions along the slope contour. We feel the reclaimed areas may settle some, but find the recontouring work very acceptable.

Rebecca noted that drill holes are being plugged upon abandonment and that all current plugging is being performed to the new State regulation standard. Although she did not visit each of the reclaimed drill holes shown as plugged on the map we received June 11, 1990, she believes this work has been satisfactorily performed.

Rebecca also noted that LAC has been working with the Nevada Dept. of Minerals under the State hazardous conditions abatement program. Open shafts on the Rosebud property have been fenced and warning signs posted. Old structures and adits were also posted with warning signs. We encourage you to continue to take whatever measures necessary to maintain site safety.

In response to your question about a recommended seed mixture for application to reclaimed areas at the Rosebud Project site, we have put together the following suggested seed mix.

Suggested Bulk Rate	Seed Type
5 lbs/ac	Indian Rice Grass (Nespar)
4 lbs/ac	Sandberg bluegrass (Poa seconda)
5 lbs/ac	Crested wheatgrass (Siberian)
1 lb/ac	Shadscale (Atriplex Confertifolia)
5 lbs/ac	Ladak alfalfa

If you have any difficulty obtaining any of the native seed, please contact us. We would appreciate your comments and input.

As soon as seeding is performed this fall, we will deduct 4.1 acres from the total disturbance calculation for this case file.

Please contact Rebecca Lange, Geologist, at (702)623-1500 at this office if you have any questions or if you wish to modify your Plan of Operations.

Sincerely yours,

Bud C. Cribley
Area Manager
Sonoma-Gerlach Resource Area

NEWMONT EXPLORATION LIMITED
DRILL HOLE ABANDONMENT AND SURFACE SEAL

LABOR CONTRACTOR

Project: Hecla / Newmont Hole #: RB-438

Drilled By Boart Longyear Date Completed: 4-17-98

Hole Dept 800 Hole Size: 3.895 - HQ

Wet Hole: 100% Circ Dry Hole: ~

SURFACE SEAL

Cement Weight: _____ lbs./gal.

Placed in Hole: From _____ft. to _____ ft.

MATERIALS MIXED

Qty.	Size	Product	Brand Name
	50 lbs.	Environplug Coarse	Wyo-Ben
15	94 lbs.	Cement	Nevada Cement
30	47#	Absantonite	

REMARKS

100% Circ

NEWMONT EXPLORTATION LIMITED _____

By: _____ By: M C. Schmidt

Title: _____ Title: Driller

NEWMONT EXPLORATION LIMITED
DRILL HOLE ABANDONMENT AND SURFACE SEAL

LABOR CONTRACTOR

Project: Heela / Newmont Hole #: RS-439

Drilled By Boart Longyear Date Completed: 4-15-98

Hole Dept 800 Hole Size: 3.895 / HQ

Wet Hole: _____ Dry Hole: 0% Circ

SURFACE SEAL

Cement Weight: _____ lbs./gal.

Placed in Hole: From _____ ft. to _____ ft.

MATERIALS MIXED

Qty.	Size	Product	Brand Name
_____	50 lbs.	Environplug Coarse	Wyo-Ben
11 ~~bbl~~	94 lbs.	Cement	Nevada Cement
30	47#	Abantonite	

REMARKS

no Circ

NEWMONT EXPLORTATION LIMITED

By: _____ By: Rob Schmidt

Title: _____ Title: Driller

NEWMONT EXPLORATION LIMITED
DRILL HOLE ABANDONMENT AND SURFACE SEAL

LABOR CONTRACTOR

Project: Heela / Vermont Hole #: RS-4410

Drilled By Boart Longyear Date Completed: 4-18-98

Hole Dept 850 Hole Size: 3,895 / HQ

Wet Hole: _____ Dry Hole: 0% Circ

SURFACE SEAL

Cement Weight: _____ lbs./gal.

Placed in Hole: From _____ft. to _____ ft.

MATERIALS MIXED

Qty.	Size	Product	Brand Name
_____	50 lbs.	Environplug Coarse	Wyo-Ben
13	94 lbs.	Cement	Nevada Cement
32	417#	Abantonite	_____

REMARKS

_____

_____

_____

NEWMONT EXPLORTATION LIMITED _____

By: _____ By: R.C. Schmidt

Title: _____ Title: Driller

NEWMONT EXPLORATION LIMITED
DRILL HOLE ABANDONMENT AND SURFACE SEAL

LABOR CONTRACTOR

Project: Heela (Rosebud) Hole #: RS-4141

Drilled By Boart Longyear Date Completed: 4-23-98

Hole Dept 850' Hole Size: 3.895 - HQWL

Wet Hole: X Dry Hole: _____

SURFACE SEAL

Cement Weight: _____ lbs./gal.

Placed in Hole: From _____ft. to _____ ft.

MATERIALS MIXED

Qty.	Size	Product	Brand Name
_____	50 lbs.	Environplug Coarse	Wyo-Ben
12	94 lbs.	Cement	Nevada Cement
32	47#	Abantante	_____

REMARKS

_____

_____

_____

NEWMONT EXPLORTATION LIMITED _____

By: _____ By: Richard E Schmidt

Title: _____ Title: Driller

NEWMONT EXPLORATION LIMITED
DRILL HOLE ABANDONMENT AND SURFACE SEAL

LABOR CONTRACTOR

Project: Heela / Newmont Hole #: RS-4142

Drilled By Boart Longyear Date Completed: 4-24-98

Hole Dept 900 Hole Size: 3.895 - HQ WL

Wet Hole: ✓ Dry Hole: _____

SURFACE SEAL

Cement Weight: _____ lbs./gal.

Placed in Hole: From _____ft. to _____ ft.

MATERIALS MIXED

Qty.	Size	Product	Brand Name
_____	50 lbs.	Environplug Coarse	Wyo-Ben
13	94 lbs.	Cement	Nevada Cement
31	47#	Abantonite	_____

REMARKS

_____

_____

_____

NEWMONT EXPLORTATION LIMITED _____

By: _____ By: Richard Schmidt

Title: _____ Title: Driller