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Mining District File Summary Sheet

DISTRICT	Rosebud
DIST_NO	4010
COUNTY If different from written on document	Pershing
TITLE If not obvious	LAC Minerals (USA), Inc., January Monthly Report, 1992, Rosebud Project
AUTHOR	Thomas B; Kuhl, T., Nelson, C; Miller, G; Beatty R; Wright J; Weicher, B; Burke C; Frank J; Kinsella, K; Ludwig C; Walde C
DATE OF DOC(S)	1992
MULTI_DIST Y / N? Additional Dist_Nos:	
QUAD_NAME	Sulphur 7½'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud Project; Dozer Hill; Lac Minerals (USA) Inc; Equinox; Valley; South area; North area; East area,
COMMODITY If not obvious	gold; silver
NOTES	Monthly property report; geology; resources; correspondence 12 p.

Keep docs at about 250 pages if no oversized maps attached (for every 1 oversized page (>11x17) with text reduce the amount of pages by ~25)

SS: DP 7/30/08
Initials Date

DB:
Initials Date

SCANNED:
Initials Date

Revised: 1/22/08

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4010
215 monthly Report.

LAC MINERALS (USA), INC.
January Monthly Report
1992
ROSEBUD PROJECT

JW
FYI

To: Bob Thomas

From: Tim Kuhl

Date: February 1, 1992

Subject: Monthly Report - January, 1992

LAC

Memorandum

ROSEBUD PROJECT, PERSHING COUNTY, NEVADA

DOZER HILL

JOINT VENTURE MEETING

A joint venture meeting was held in the Reno office on January 15, 1992. Attending were Craig Nelsen, Bob Thomas, Garry Miller, and Tim Kuhl for LAC. Ross Beatty and John Wright attended for Equinox. The proposed work plan was reviewed and accepted with incorporating both Equinox and LAC proposals. A target date of June 15 was set for the completion of a pre-feasibility study.

RESOURCE CALCULATION

A cross-sectional resource calculation was finalized in January. Cutoffs of 0.050 and 0.100 opt Au over a minimum drill length of 10 feet were used. The resource numbers are presented below.

DOZER HILL AREA RESOURCE

CUTOFF	TONS	UNCUT Au Grade	UNCUT Au OUNCES	CUT Au Grade	CUT Au OUNCES
0.05	3,123,500	0.213	664,141	0.178	554,926
0.100	1,894,100	0.312	590,823	0.254	481,609

The influence criteria was the same as those used by Nate Brewer in last years resource calculation completed in January, 1991. To determine values for cutting back high grade assays, the Dozer Hill area was subdivided into a South area, North area, and East area. High cut values for each area were determined at the 95th percentile of the cumulative frequency distribution of the assays. The high cut values for the South area (sections 00 to 1000N), North area (section 1100N to 1800N), and the East area (footwall to the South Ridge Fault section 1300SE to 2000SE) were determined to be 1.000, 0.500, and 1.200 opt Au respectively. Backup data for the resource calculation are on file in Reno, Toronto, and Kirkland Lake.

GEOLOGY

In mid December we began an extensive reappraisal of the geology of the Dozer Hill deposit and the investigation recommenced once everyone returned from the Christmas holidays. An in depth review of the geology has been completed on the standard sections (N55W section axis). This includes detailing rock type, structure, and alteration on cross-section. Relogging of chips and core is being completed where needed. To assist in correlation of cross structures other cross-section orientations are being developed. The goal of the study is to develop a set of elevation plans outlining geology and structure, mineralization, and alteration which better define the geometry of the Dozer Hill mineralization. We will complete this phase by mid-February. Cyndie Walck and Kristen Kenner are responsible for this work.

GEOTECHNICAL

We are still awaiting Kirkland Lake's evaluation and report of last years geotechnical program on the Dozer Hill core.

METALLURGY

Direct Cyanidation

We received the final report of the metallurgical work completed by McClelland Lab in Reno. George Hope is currently reviewing the data. The work consisted of 12 direct cyanidation (bottle roll) tests. Gold recoveries ranged from 79.4 to 97.3%, and averaged 92.6%, in 48 hours of leaching. The results of the testing are summarized below.

COMPOSITE	DRILL HOLE	CALCULATED HEAD ASSAY (opt Au)	TAIL ASSAY (opt Au)	RECOVERY
1	RL168	1.166	0.081	93.1%
2	RL170	0.160	0.022	87.7%
3	RL193C	1.065	0.029	97.3%
4	RL193C	3.461	0.240	93.1%
5	RL193C	0.297	0.013	95.6%
6	RL195C	0.163	0.007	95.7%
7	RL123C	0.598	0.026	95.7%
8	RL57	1.064	0.092	91.4%
9	RL130C	0.460	0.027	94.1%
10	RL186	0.194	0.040	79.4%

11	RL198C	1.681	0.098	94.2%
12	RL201C	0.482	0.029	94.0%

In general, the Rosebud core composites are readily amenable to direct agitated cyanidation treatment at a nominal 200 mesh feed. RL186 may represent an exception. Cyanide consumption was low to moderate ranging from 0.10 to 1.04 pounds per ton of ore, averaging 0.63 pounds per ton of ore. Lime requirements were low (3.2 to 5.9 pounds per ton of ore) to maintain leaching pH of 10.0 to 10.5. Silver recovery during the testing ranged from 27.9 to 86.2% and averaged 62.8%.

CIL/Cyanidation

In addition to the above testing, CIL/Cyanidation testing was completed on composites from drill holes RL100C and RL104C. In 1990, composites from these drill holes yielded low recoveries during CIL testing, apparently the result of antimony being leached from the ore. George Hope recommended retesting these composites maintaining a lower pH (10.3 this year versus 11.0 used in 1990). A second set of tests were completed on these composites to determine the effect of pre-aeration with oxygen and PbNO3. The overall results of this testing are presented below.

CIL/CN testing

Composite	CALCULATED HEAD ASSAY (opt Au)	TAIL ASSAY (opt Au)	RECOVERY CIL/CN
RL100C	0.205	0.032	84.4%
RL104C	0.184	0.033	82.1%

CIL/CN w/ pre-aeration and PbNO3

Composite	CALCULATED HEAD ASSAY (opt Au)	TAIL ASSAY (opt Au)	RECOVERY w/PbNO3
RL100C	0.153	0.028	81.7%
RL104C	0.196	0.041	79.1%

The results were similar to those in 1990. Decreasing the pH from 11.0 to 10.3 did not decrease the amount of antimony reporting to solution in composite RL100C, but rather an increase was realized. This suggests that ore mineralogy may be different from what originally thought.

George Hope will advise us on the next metallurgical step.

PERMITTING

SURFACE

An amendment to the Plan of Operations to accommodate the 1992 surface program in the Dozer Hill and Valley areas was submitted to the BLM on January 20. The Notice of Intent for Oscar area is intact and exploration can proceed. An evaluation of the Wildrose Notice of Intent will be made in early spring. Both Oscar and Wildrose are currently low priority.

UNDERGROUND

We are still planning to submit applications to the State and BLM for the exploration decline in mid-February. Three permits will need to be submitted. A Plan of Operations, Mine Reclaimation permit and Water Discharge permit. Debbie Struhsacker will be assisting and advising for this permitting process including writing the Plan of Operations for the BLM and the Mining permit for the NDEP. Debbie will also be charged with writing the EA. I gave Debbie a tour of the Rosebud site on January 20.

On January 22, a meeting was held in Carson City with Doug Zimmerman of the Mining Regulation Branch of the NDEP. Attending for LAC were Karl Burke, Tim Kuhl, Debbie Struhsacker (consultant), and Joe Frank (Hydro-Geo). The primary purpose of the meeting was to introduce LAC Minerals and the Rosebud project to the NDEP and get input from the NDEP regarding the permitting procedure. Mr. Zimmerman reviewed several options for the water discharge permit:

1. UNDERGROUND INJECTION CONTROL PERMIT (UIC). This would allow LAC to return the water to the aquifer via injection wells. Drinking water standards apply or if baseline studies indicate existing water exceeds these standards then a nondegradation standard applies. The lead time is approximately 6 months and public review and comment are required.

2. A WATER POLLUTION CONTROL PERMIT. This permit would be required to return water to the aquifer either by infiltration basin, injection wells, or land application. This permit is also be required if discharge is to surface drainage <u>but the discharge **does not** extend beyond the project boundary</u>. Drinking water standards apply, unless baseline studies indicated existing water exceeds the drinking water standards, then a non degradation standard applies. Public review and comment are required and the permit has a 6 months lead time.

3. A NATIONAL DISCHARGE ELIMINATION SYSTEM PERMIT (NPDES). This permit would be required to discharge to a surface drainage if the discharge flows off of the project boundary. No degradation of existing streams and aquatic habitat would be allowed. As Rosebud has no flowing streams, drinking water standards would probably apply. Again a 6 month lead time is required and the process involves public review and comment. The permit has EPA oversight.

We also discussed water appropriation issues. As mine dewatering is not considered a beneficial use, the State Engineer requires that mine discharge water be returned to the aquifer from which it was withdrawn either by land application or by infiltration. Discharge to a surface drainage is less acceptable. Mr. Zimmerman suggested LAC discuss these issues with the State Engineer. A meeting will be set up in February.

LAND APPLICATION

It became evident in the meeting the preferred strategy for discharging water from the decline would be through a land application system. This would keep the permitting responsibility within the mining regulatory group. Ponding in the land application area would be acceptable as long as the ponded water was not detrimental to wildlife. We will complete an infiltration test study in the proposed land application area in February (weather permitting).

WATER RIGHTS AND WATER APPROPRIATIONS

Garry Miller has been asked to look into the water rights issue at Rosebud.

SURFACE HYDROLOGY

Hydro-Geo has completed the ground water characterization study. The Rosebud area has an estimated annual precipitation of 9.3 inches with an annual pan evaporation of 38.9 inches. The 24 hour storms events with a recurrence interval of 10,25,50, and 100 years were estimated to be 1.5, 1.8, 2.0, and 2.4 inches respectively. The Dozer Hill basin was subdivided into three drainage basins and peak flow calculations for a 100 year/24 hour storm were estimated for each basin. The peak flows were calculated to be 388 cfs, 422, and 695 cfs.

GROUNDWATER INFLOW - DECLINE

Using the conceptual exploration decline outlined by Beacon Hill in their March, 1991 pre-feasibility study, Hydro-Geo has estimated a sustained inflow into the decline of 200 to 300 gpm. This sustained flow assumes a grouting program. Peak flows may exceed 500 gpm on a temporary basis. This is considered a conservative estimate and the maximum amount of water that will

need to be discharged should be less.

Water treatment for organics, nitrates, arsenic, and sediment of the decline discharge will have to be addressed once the site plan and water balance are complete.

Presently it would appear we will have to discharge water during the exploration phase of the decline. If a production decision was made and a mill was constructed, the underground workings may not supply adequate water resources.

SITE PLAN AND WATER BALANCE

On January 28, I attended a meeting at Dynatec's Denver office. Attending were Vladimir Straskraba and Joe Frank of Hydro-Geo, Ernie Kettner of Dynatec, and Karl Burke and Tim Kuhl. A preliminary site plan of the exploration decline was reviewed. Dynatec is nearing completion of the site plan. The total disturbance of the decline site is approximately 7 acres. The sizing of the containment pond, providing for a 24 hour retention time to handle the discharge from the decline, is currently being finalized. Dynatec will also complete a water balance for the exploration phase. This work will be complete the first week of February.

HUMAN RESOURCES

A meeting with Planning Information Corporation (PIC) was held in Denver January 28. Attending were George Blankenship (PIC), Lloyd Levy (PIC), Karl Burke, and Tim Kuhl. PIC will evaluate socioeconomic, land use, transportation, recreation, and mitigation concerns of the decline project. This evaluation will be a requirement for the EA.

RECLAMATION PLAN

Once the site plan is finalized, a reclamation plan can be developed. We hope to get input from Pat Downey regarding this. The plan will need to be signed off by a Professional Engineer, registered in Nevada.

MONITORING AND SPILL PLANS

These will be developed once the site plan is complete.

MONITORING WELLS

The second round of sampling of ground water monitoring well at Dozer Hill was completed on January 21. Joe Frank of Hydro-Geo, Karl Burke, Kristen Kenner, and Kevin Kinsella completed the sampling. Future sampling will be completed in house presumably by either Kevin or Kristen.

The first round of water quality samples had a relatively high total dissolved solids (TDS), ranging from 594 to 1,428 mg/l. The samples had a pH of 7.3 to 8.5. Sulfate concentrations were high ranging from 270 to 776 mg/l. This exceeds the Federal and Nevada state drinking water maximum contaminant level (MCL) of 250 mg/l. Manganese content was also high, ranging from 0.31 to 1.61 mg/l, and exceed Nevada and Federal MCI of 0.10 mg/l. Iron levels exceeded the Nevada and Federal MCI (0.6 mg/l) in MW-1 (0.9 mg/l) and RB-4 (4.2 mg/l). Arsenic exceeded MCI levels (0.05 mg/l) in MW-2 (0.053 mg/l) and MW-3 (0.053 mg/l).

ROCK CHARACTERIZATION

Meteoric water mobility tests were completed on 8 samples representing the stratigraphic suite which will be encountered in the decline and also mineralization from both the east and south resource areas. The results indicate that the mine rock has little potential for release of cation, anion or trace element contaminants due to contact with meteoric waters. The indicate there is a moderate acid generating potential in the Rosebud rock types. George Hope is reveiwing the data.

Leachate solutions were slightly basic (pH 7.9 to 8.4). Selenium concentration from 6 samples (Bud, East zone, Dozer tuff, LBT, Main Zone) exceeded State and Federal drinking water standards. Manganese exceeded State and Federal drinking water standards on 2 samples (Dozer Tuff and LBT). Chrome exceed State and Federal drinking water standards in one sample (Dozer Tuff).

We are planning to submit an additional 6 to 10 samples to further define the rock chemistry. More sophisticated testing techniques may be in order. We are consulting George Hope regarding this matter.

UPCOMING

A meeting with the BLM will be scheduled for mid-February once we have a draft of the Plan of Operations for the decline, site plan, and final hydrology reports.

GEOSTATISTICS

Pat Downey reviewed the drill data in Reno on January 23 and 24. Once the reevaluation of the geology is complete, he will be able to give us assistance regarding geostatistical parameters.

DRILLING

Bid requests for reverse circulation drilling were sent to Gustin Drilling Corporation, Eklund Drilling, Stevens Drilling, Lang Drilling, Hackworth Drilling, Humboldt Drilling. At this writing we are still waiting on replies from Hackworth. I plan

to select a RC contractor the first week of February. We are currently scheduled to begin the RC program on February 18.

Bid requests for core drilling will be sent out in early February. A partial bid list includes SDS drilling, Coates Drilling, AMS drilling, and Tonto Drilling. We will need to begin the core program by mid-March.

Is any other drillers?

ANALYTICAL

Bid requests for analytical work were sent to Bondar-Clegg, Barringer and Chemex. We are awaiting replies.

We are also evaluating Casmyn U.S.A. Casmyn essentially uses a batch mill technique using 5 pound (75 assay ton) samples. Given the variability and potential coarse gold content of the Dozer Hill area, this may give us more reliable results. We are submitting approximately 140 samples from different grade ranges to evaluate the technique. My present concern is the reliability of the technique and, as the technique is new, how well it would be received by third party technical review. Dependant upon our current evaluation, we will consider using Casmyn on selected intervals as checks.

GEOPHYSICS

Cris Ludwig was in Reno January 14 to review all geophysical work completed to date on the Dozer Hill area. Emphasis was on reviewing the existing ground mag, VLF and IP data from Dozer Hill and comparing similar anomalies along the Rosebud shear. The most pronounced comparison comes from the IP anomaly over Dozer Hill and a similar anomaly in the Valley target. As this area has little exposure, it was recommended we put additional detailed ground mag and VLF into the Valley area to assist in refining geologic interpretation. We will begin this work in February.

EXPLORATION

With the emphasis for completing an inhouse pre-feasibility study on the Dozer Hill area by June 15, the satellite targets will take a low priority until late spring - early summer. The exception to this will be the Valley target because of its proximity to any future mine related facilities. Exploration activity on the Oscar and Wildrose targets can be suspended until late spring or early summer.

OTHER

Kristen Kenner is gave a poster session at the Core Shack in Vancouver, B.C. on January 31.

Bob Weicker, Chief Geologist for Equinox, will be in Reno the first week of February.

To: Timothy O. Kuhl

From: Kristen L. Kenner

Date: February 3, 1992

Subject: **MONTHLY REPORT - JANUARY 1991**

LAC

Memorandum

ROSEBUD PROJECT - PERSHING COUNTY, NEVADA:

1) I compiled geologic and structural information onto E-W sections with the trace of the proposed decline for Hydro-Geo Consultants.

2) Carl Burke, Joe Frank, Kevin Kinsella, and myself went to Rosebud for monitor well testing. A temporary, portable well head was put together for use through the first year of testing until a final decision on the decline is made. Kevin and I will do the remaining quarterly tests on the wells. The water samples were sent to ACZ Lab in Fort Collins,CO.

3) I am in the process of compiling alteration data from all Rosebud holes. We are seeing if there is a correlation between alteration and mineralizing structural expressions. If so then possibly alteration halos may give us a guide to target areas. Final conclusions would be premature at this time.

4) I put together an abstract to be displayed at the Cordillerian Roundup in Vancouver, BC. I will also be showing various cross sections, drill plans, geologic maps and core from Rosebud on January 31.

To: Tim Kuhl

From: Cyndie Walck

Date: January 29, 1992

Subject: January 1992 Monthly Report

LAC

Memorandum

Most of January was spent on a Dozer Hill compilation. Cross-sections 300N through 1700N have been revised, including adjustment of contacts and plotting of structural zones. In many cases the data was collected from the actual drill chips, instead of from the logs or old sections. This allowed for more accurate interpretations of contacts, and thus better recognition of dicontinuities. The data will next be transferred to a set of north-south sections, and finally to level plans. It is hoped that this exercise, in conjunction with my recent geologic mapping and interpretation of geophysical data will yield further insight to ore controls and future targets.

One day was spent reviewing geophysical data with Chris Ludwig. The VLF data for the Dozer Hill area was quite interesting. Several of the structures I had mapped at the surface showed up on the VLF: often the trace was displaced slightly down-dip on the VLF. Other structures/features on the VLF could be unrecognized structures in covered areas. This technique may be valuable in the Valley target area if the cover is not too deep.