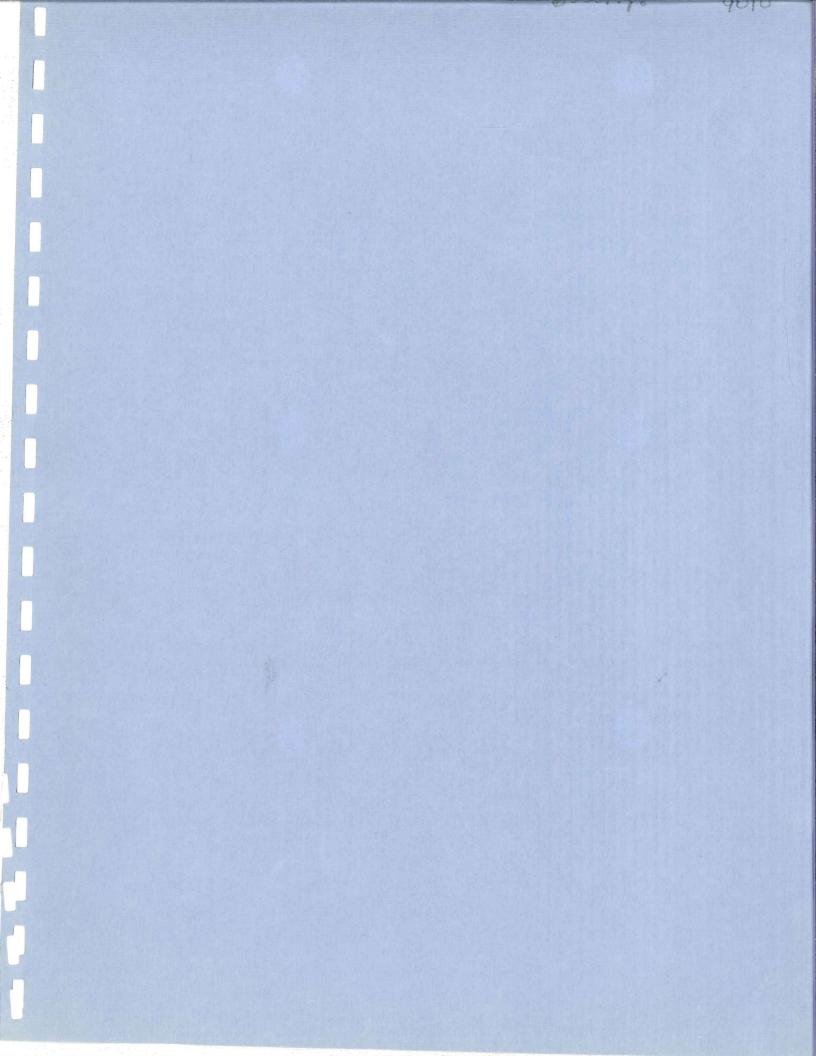
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AUTHOR		Miller G. B.	,
	Struhsacher, D. W.	alck, C; Ke	enner, K
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# LAC MINERALS (USA) INC.

**ROSEBUD PROJECT** 

March Monthly Reports 1992



Bob Thomas

From:

Tim Kuhl

Date:

March 29, 1992

Subject:

Monthly Report - March, 1992



Memorandur

#### ROSEBUD PROJECT, PERSHING COUNTY, NEVADA

#### DOZER HILL

#### GEOLOGY

Geologic interpretations on elevation plans has been completed. Northwesterly striking structures appear significant to mineralization. Five target areas in Dozer Hill have been identified which could significantly increase the resource tonnage. Refer to Jon Carlson's report for a detailed summary of these targets.

#### DRILLING

#### Reverse Circulation

Reverse circulation drill continued at Rosebud this month. Five drill holes were completed in the Dozer Hill area during March for a total of 3,106 drilled. Year to date RC footage totals 5,815 feet.

All drill holes were completed on Equinox JV ground. Four drill holes were completed in the east zone as offsets of drill holes RL220 and RL217. Two were completed in RL8 area (south central Dozer Hill; section 800N) to test mineralization encountered in RL8 and RL37. RL257 encountered 10' of 0.25 opt gold at the South Ridge Fault.

#### Core

Coates drilling was awarded the core drilling contract for 1992. Drilling will begin April 1.

#### Drill Results

DRILL	HOLE	Depth/Angle	LENGTH/GRADE/TOP	OF	INTERCEPT

Dozer	Hill/Shart Fault area	
RL250	545'/Vert	240-245'/ 5'/0.011
	,	300-305'/ 5'/0.011
		375-385'/10'/0.011
RL251	400'/Vert	290-295'/ 5'/0.013

TO: Bob Thomas FR: Tim Kuhl

Monthly Report - March, 1992

RL252	500'/Vert	75- 80'/ 5'/0.026 95-100'/ 5'/0.012 295-300'/ 5'/0.015
Dozer RL253	Hill / Far East Zone (RL220 565'/-60 S55E	offsets) 205-210'/ 5'/0.031
RL254	380'/-60 S55E	275-280'/ 5'/0.020 285-290'/ 5'/0.021 305-310'/ 5'/0.031 325-330'/ 5'/0.011
RL255	500'/Vert	20- 25'/ 5'/0.013 50- 55'/ 5'/0.043 115-120'/ 5'/0.012 150-160'/10'/0.026
Dozer RL256	Hill/South Zone (RL8 offset 600'/Vert	s) 275-280'/ 5'/0.011 400-410'/10'/0.016
RL257	800'/Vert Includes	25- 35'/10'/0.011 120-125'/ 5'/0.019 430-490'/60'/0.072 440-450'/10'/0.255
		505-515'/10'/0.013 555-610'/55'/0.025 700-705'/ 5'/0.012 745-755'/10'/0.030
Dozer RL258 RL259	Hill/Far East Zone (RL217 o 900'/Vert Vert	ffsets) PENDING In Progress

Barringer Laboratories has been maintaining a 4 to 6 day turn around time on samples to date.

#### ENGINEERING

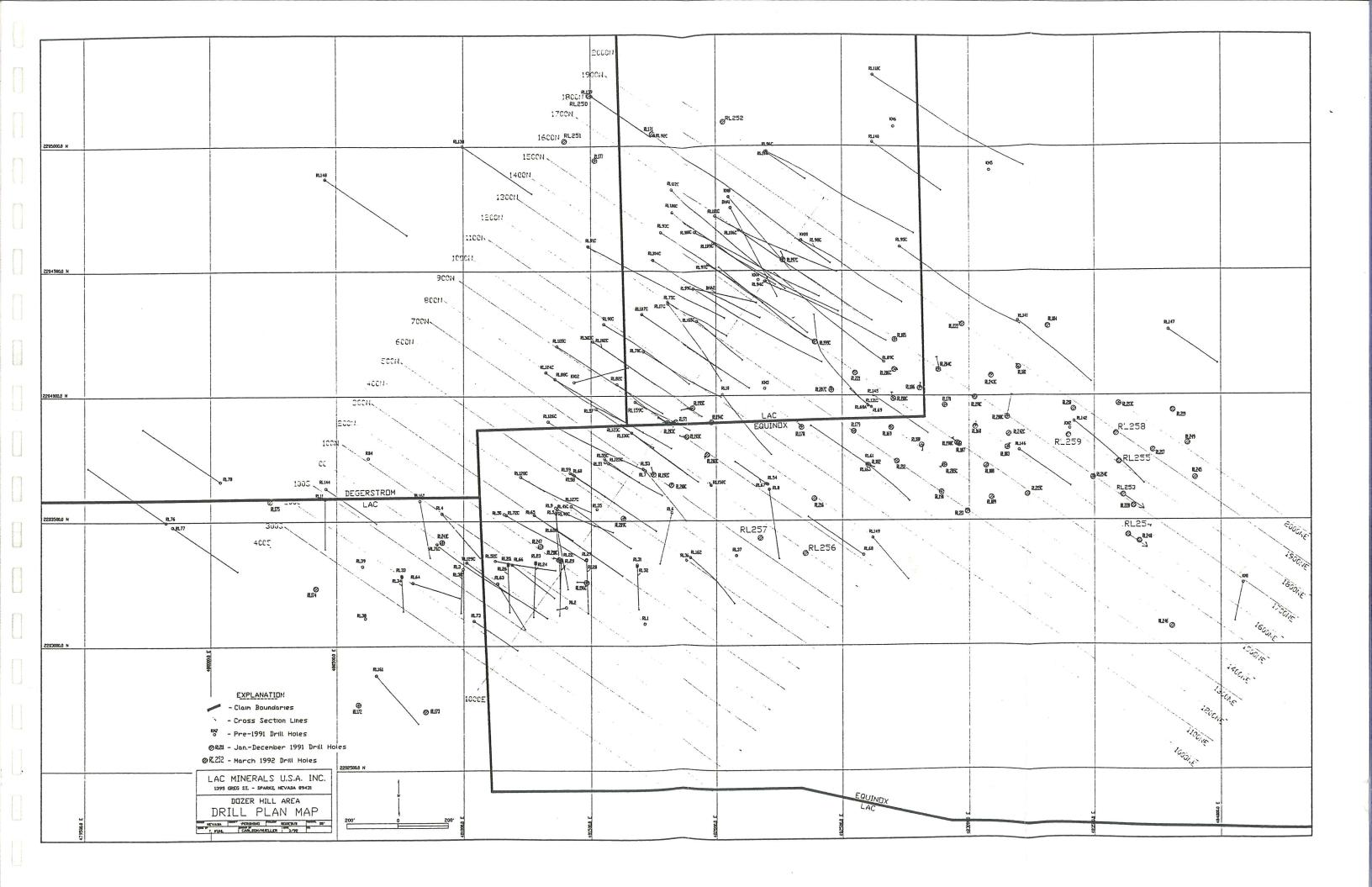
A proposal was received from SRK to review mining and operating cost estimates for the Dozer Hill underground program.

#### PERMITTING

#### UNDERGROUND

#### Plan of Operations

A Plan of Operations for the underground exploration program was submitted to the BLM March 16, 1992.





Garry L. Miller

From:

Karl Burke

Date:

April 1, 1992

Subject:

Monthly Report - March 1992

Memorandum

#### Rosebud

- 1. The decline permitting effort is on schedule with the timetable presented with the February 1992 report. A copy is attached.
- 2. The decline Plan of Operation and Reclamation Plan was submitted to the BLM and Nevada Division of Environmental Protection on March 16, 1992.
- 3. A meeting was held with the Air Quality Bureau of the NDEP to determine permitting requirements. The decline will require a surface disturbance permit and a permit for emissions from the diesel generators.
- 4. Meetings were held with the consultants responsible for baseline data collection and impact analysis for the Environmental Assessment. Data and schedule requirements were established.
- 5. The amended surface exploration plan was submitted to the Nevada Department of Environmental Protection.
- 6. The 1992 NDEP Mine Reclamation Program statuary and regulatory fees were submitted.

#### 1992 ROSEBUD UNDERGROUND EXPLORATION PROJECT FERMITTING SCHEDULE

	JAN	FEB	MAR	APR	MAY	JUN .	JUL	AUG	SEP	OUT	NOV	DEC
Baseline Studies Hydrology Infiltration Area Design Socioeconomics	, reserve	MARKE MARKE KAKKE	12.								20	
Mine Plan	RXXXXX	XXX III										
Permit Applications Plan of Operation NDEP Reclamation NDEP Water Discharge NDWR Water Appropriation NDWR Dam Safety NDOW Artificial Ponds NDEP Air Quality		ANEXE	RRX © OO RRX © OO RRXXXXX RXXXX RXXX RXXX RXX	000000 000000 000000 000000 00000 000000	000000 000000 000000 000000 000000	000000 000000 000000 000000 000000	000000 000000 000000 000000 000000	000000 000000 000000 000000 000000	000000 000000 000000 000000 000000 00000	00000@ 00000@ 00000@ 00000@ 00000@ 00000@		٠
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Construction								<u> </u>			KIKKKIK	XXXXXXX

#### Manued Schedule;

CARA = work on going = report completion = permit submittal = neon = agency and/or public permit review = permit issued

#### Actual Schedules

\*\*\*\* = shown only if actual schedule deviates from planned schedule

Schedule Update: As of 3/31/92, project permitting efforts meet the schedule shown above. The Plan of Operations and the NDEP reclamation permit application were submitted on achedule on 3/16/92

DWS 2/25/92, Updated by DWS 3/31/92

# Debra W. Struhsacker

# Environmental Permitting and Regulatory Compliance Consultant

3610 Big Bend Lane Reno, Nevada 89509 Telephone: 702/826-3800 Facsimile: 702/826-2648

#### MEMORANDUM

TO:

Tim Kuhl

Karl Burke

FROM:

Debbie Struhsacker DWS

DATE:

March 31, 1992

SUBJECT:

MARCH 1992 ENVIRONMENTAL PERMITTING ACTIVITIES FOR THE

ROSEBUD UNDERGROUND EXPLORATION PROJECT

#### **EXECUTIVE SUMMARY**

During March, environmental permitting activities for the proposed underground exploration project at Rosebud focused on finalizing the Plan of Operations and the State of Nevada reclamation permit application. These documents were submitted to the BLM and the Nevada Division of Environmental Protection (NDEP) in mid-March. To date, we have no feedback from either agency regarding the submittals.

Meetings were held with the consultants retained to perform the baseline studies and the impact analyses for the Environmental Assessment (EA). Data and schedule requirements for preparing the EA were established at these meetings. A draft Table of Contents for the EA was submitted to the BLM for review.

A meeting was held with the Air Quality Bureau of the NDEP to discuss project air quality permitting requirements.

#### 1.0 SUMMARY OF KEY ACTIVITIES PERFORMED

# 1.1 Plan of Operations/NDEP Reclamation Permit Application

The Plan of Operations and the NDEP Reclamation Permit Application for the Rosebud Underground Exploration Project were finalized and submitted to the BLM and NDEP on schedule on March 16th. The BLM has set April 17th as a target date for providing LAC with comments on the Plan. We will try to schedule a meeting with the NDEP in early April to receive their comments.

Tim Kuhl Karl Burke March 31, 1992 Page 2

# 1.2 EA Preparation

Work on the EA commenced immediately following submittal of the Plan of Operations and the reclamation permit application. Meetings were held with the consultants responsible for preparing the soils, vegetation, wildlife, hydrology, socioeconomics, transportation, land use, and recreation baseline studies and the impact analyses for the EA. Data requirements for the EA, the EA format, and schedule requirements were discussed at the meetings. A similar meeting with the archaeologist is scheduled for early April. A draft Table of Contents for the EA was submitted to the BLM for review and comment.

As shown on the attached project permitting schedule chart, the target date for submitting a working draft of the EA to the BLM is May 29, 1992. A detailed discussion of project deliverables and deliverable schedules for the EA was described in a memorandum dated March 29th and circulated to all of the consultants working on the project. As described in this memorandum, finalizing the project description and performing the impact analysis will need to wait until the BLM's comments on the Plan of Operations have been received.

A meeting was held with the Air Quality Bureau of the NDEP to verify the air quality permitting requirements for the project. The proposed project will require a surface disturbance permit dealing with fugitive dust and a permit for emissions from diesel generators.

# 1.3 Permitting Schedule

The planned project permitting schedule is shown on the attached scheduling chart. To date, the permitting efforts are on schedule, and the first target milestone to submit the Plan of Operations and the reclamation permit application by mid-March was achieved. Meeting the scheduling objectives shown in the scheduling chart will require timely submittals of deliverables from the environmental baseline consultants, receipt of the BLM's and the NDEP's comments on the Plan of Operations and the reclamation permit application by mid-April, and immediate involvement of a Nevada-registered Professional Engineer to help prepare the NDEP Water Pollution Control Permit for the mine water disposal and surface water control systems.

### 2.0 WORK PLANNED FOR NEXT MONTH

Work in April will focus on preparing the EA. Internal drafts of each chapter will be submitted to LAC for review. Chapters 1, 2, 3, and 4, should be completed in draft form during April.

Work on the other permit applications required for the project, (e.g., the NDEP reclamation, water pollution control, and air quality permits; and the artificial pond permit from the Nevada Department of Wildlife) will continue in April.

#### 1992 ROSEBUD UNDERGROUND EXPLORATION PROJECT PERMITTING SCHEDULE

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OUT	NOV	DEC
Baseline Studies Hydrology Infiltration Area Design Socioeconomics	KXXXXX .	MARKE MARKE KARKE	IX M					Ü			ı	
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#### Marmed Schedule:

CXXX = work on going = report completion = permit submittal = 0000 = agency and/or public permit review = permit issued

#### Actual Schedules

\*\*\*\* = shown only if actual achedule deviates from planned schedule

Schedule Update: As of 3/31/92, project permitting efforts meet the schedule shown above. The Plan of Operations and the NDEP reclamation permit application were submitted on schedule on 3/16/92

DWS 2/25/92, Updated by DWS 3/31/92



Tim Kuhl

From:

Cyndie Walck

Date:

March 30, 1992

Subject:

Monthly Report



Memorandum

Level sections for the Dozer Hill area were finally completed in early March. Connecting offsets of the South Ridge Fault with similar motion offsets of stratigraphy, and using drill-hole alteration and structural zones as a guide, several NW structures became apparent. These structures probably reflect a deeper regional structural fabric, and may be important in the localization of mineralization.

A crude structural contour map of the South Ridge Fault was also constructed. In the southwest part of the orebody, the dip of the SRF was fairly steep at the surface (60°-70°), and the dip flattens to the north, to 50°, 40°, and finally about 30°. In the East zone, and continuing under the northeast part of the main trend, the dip is generally much flatter, ranging from 15° to 25°. This may insinuate some sort of flexure of the SRF, the hinge line of which would trend NW or WNW, toward the 900 zone.

A few days were spent finishing up the detailed surface mapping in the Dozer Hill area, including mapping DHA2, an adit on Dozer Hill. Two NNE structures were encountered in this adit, the second one probably corresponding to the 10ppm crack. A geologic map was constructed, using both the surface mapping data and drill collar information.

Mapping of the Valley Target is currently underway.



10:

TIMOTHY O. KUHL

From:

KRISTEN L. KENNER

Date:

March 27, 1992

Subject:

MONTHLY REPORT - MARCH 1992



Memorandum

ROSEBUD PROJECT - PERSHING COUNTY, NEVADA:

1) Cyndie Walck, Tim Kuhl, Jon Carlson, Alice Mueller and I completed the final version of the level plans. I am making a final list of the lithologies for the poxplor database. This is based upon the cross sections with some editing from actual reviews of holes. I am also mapping out the characteristics of the South Ridge fault. It appears that there are at least 4 distinct

expressions that may denote different faults.

The South Ore block is characterized by a green clay gouge cemented calcite fault. As you move east into the zone of 800N - 900N you begin to pick up a light translucent green massive chalcedonic fault which extends into the North Ore zone. There is another fault that contains basement clasts on the far SW end and is picked up again as you approach the 900N zone. This fault is similar to the black matrix breccia seen in the South Ridge adit #1 and the eastern most shark fin of the South Ridge fault. This fault may be indicative of the Rosebud shear zone influence. The East Ore zone is composed of a silica cemented hydrothermal breccia, more characteristic of a feeder zone. I am presently finishing the mapping of these faults and plotting them onto level plans to trace out strikes and offsets.

- 2) I plotted up elevations of the Mesozoic contact with the Tertiary volcanics to determine a fault relationship with mineralization in the North Ore zone. There is a possibility of feeder structures in the basement which mineralize the hangingwall of the South Ridge fault. Locally the basement is in the footwall of the South Ridge fault and contains sporadic ore grade gold values. There were 25 drill holes which pierced the basement and all of these contacts are faulted. At present it does not appear that there is enough data to make an absolute call on this relationship.
- 3) Jon Carlson and I extended the RL-5 geophysics grid out into the southwest valley area. Loyal Olsen has completed the survey. Kevin Kinsella and Marsha Walker will begin the VLF and MAG surveys the first week in April.
- 4) Jon Carlson and I proposed a number of drill holes for the 1992 drill season based on the final version of the level plans. Jon is generating different orientations of cross sections, we will be reviewing these to determine optimal locations for these holes. Please refer to Jon Carlson's monthly report for details on these proposed drill holes.



Robert Thomas

From:

Jon Carlson

Date:

March 31, 1992

Subject:

MONTHLY REPORT - MARCH 1992



Memorandum

#### ROSEBUD PROJECT, PERSHING COUNTY, NEVADA

A set of level plans was constructed on 100 foot spacing from 5100 feet to 4300 feet elevations. Contacts were interpolated from the digitized cross sections in Geomodel. Drill hole pierce points were merged on to the elevation plans from Pcxplor. Mineralized block contacts from the resource evaluation were also merged on to the level plans.

Geological interpretations were drawn on to the level plans by Kristin Kenner and Cyndie Walck. The new geological model integrates sectional interpretation, surface mapping and geophysics. The structural setting is interpreted to be much more complex than the previously digitized model. A series of northwest trending structures may control mineralization within the East Zone and north Dozer Hill.

The final set of level plans were plotted and copies were sent to Lac's Toronto office and Equinox's Vancouver office. Cross justification of level plans and cross sections is in progress.

The objective of the next phase of drilling at Dozer Hill is to markedly extend the known geologic resource. Comparison of the new geological model to mineralization has indicated significant potential in five areas. Drill hole recommendations are summarized on the attached map and in the tables below:

HOLE #	OBJECTIVES						
PDH-1 to 3	Test for feeders to East Zone						
PDH-4	Test for downdip mineralization to 900N block						
PDH-5	Offset mineralization of PDH-4						
PDH-6	Find mineralization below RL11 w/in structures						
PDH-7	Offset mineralization of PDH-6						
PDH-8,9	Find 900N type block						
PDH-10 to 15	Locate mineralization south of East Zone						

HOLE #	TYPE	EASTING	NORTHING	AZIMUTH	DIP	LENGTH
PDH-1	CORE	483350	2204210	S45W	-60	1200′
PDH-2	CORE	483140	2204285	S45W	-60	1200′
PDH-3	CORE	482420	2203605	N45E	-60	1200′
PDH-4	CORE	481295	2204245	VERT	-90	1200′
PDH-5	CORE	481040	2203910	N55E	<del>-</del> 75	1200′
PDH-6	CORE	480830	2203590	S65W	-60	1000′
PDH-7	CORE	480830	2203590	W	<del>-</del> 75	1000′
PDH-8	CORE	482195	2209028	E	-84	1000′
PDH-9	CORE	481965	2203760	N48E	-80	1000′
PDH-10	RVC	482420	2203240	S40W	-70	800′
PDH-11	RVC	482650	2203410	S40W	-70	800′
PDH-12	RVC	482630	2203110	S40W	-70	800′
PDH-13	RVC	482975	2203510	S40W	-70	800′
PDH-14	RVC	483145	2203265	S55W	-70	800′
PDH-15	RVC	483430	2203340	S60W	-70	800′

The top priority is to test for steeply dipping feeders to East Zone mineralization. Possible pathways for mineralizing fluids for the East Zone include the South Ridge Fault, northwest trending structural zones underlying north Dozer Hill, and steeply dipping structures bordering the East Zone. Five cross sections were constructed through the East Zone facing N45W to evaluate the possible sources. Continuity of the ore blocks through the sections and the spatial relationship of the mineralization between two northwest trending (N45W to N55W) structures are evident.

Drill holes RL95C, RL141, RL181, RL184 and RL222 intersect the South Ridge Fault 200 feet to 400 feet downdip of East Zone mineralization. Intervals of these holes within the fault zone are consistently barren (<0.002 opt Au). Deep mineralization at north Dozer Hill (700 - 800 feet) is lower grade than that of the East Zone. There appears to be a spatial relationship between mineralization at north Dozer Hill and the East Zone, however it seems unlikely that mineralizing fluids moved from northwest to southeast along the corridor between the northwest trending structures. The remaining possibility is the occurrence of feeder zones below the northwest trending East Zone. Evidence supporting this contention includes:

- 1. Mineralization in the East Zone extends well below the South Ridge Fault into the footwall including the Jurassic-Triassic basement.
- Mineralization is mostly confined to a 200 to 300 foot wide zone in between two steeply dipping faults.
- 3. It is the only possibility that has not yet been tested by drilling.

Three drill holes are proposed initially to test for high grade feeder zones. PDH1 will penetrate about 650 feet of Chocolate tuff, cross the South Ridge Fault between 650 to 700 feet and test the footwall below high grade intercepts of RL168 and RL198C. PDH2 will offset PDH1 by 200 feet to the northwest and will also be drilled at S45W. It will test the footwall along the southwest margin of the projected East Zone. The third drill hole (PDH3) will be drilled N45E and will test for feeder zones along the northeastern edge of the East Zone.

Two drill holes are proposed to test for the possibility of ore grade mineralization down dip of the 900 North block. Drilling to date has not considered the possibility of gold mineralization at deeper levels along the South Ridge Fault. The major target is the intersection of northwest trending structural zones with the South Ridge Fault downdip of the 900 North block. PDH4 is a vertical hole designed to test for mineralization 600 feet downdip of the known ore zone. A wedge of epiclastic Bud which may be dragged along the South Ridge Fault was intersected by drill holes on the northwestern edge of the 900 North block. The drill target is below the epiclastic unit in the hanging wall of the South Ridge Fault. PDH5 will be drilled as an offset to PC4 assuming intersection of a mineralized block.

Two drill holes are planned to find mineralization below a low grade intercept at the bottom of RL11. RL11 intersected pervasively silicified and argillized tuffs in the vicinity of the Rosebud shear zone. Stockwork veining was noted in the interval from 350 feet to 480 feet. The South Ridge Fault likely was not penetrated by RL11. There is potential for higher grade mineralization within altered LBT beneath RL11 and RL144. The first hole (PDH6) will be collared on the RL160 pad and drilled S65W at -60 degrees. PDH7 will be drilled as an offset to PDH6 assuming that significant mineralization is found.

The fourth area is a gap in drilling between the East Zone and the 900 North block. A structural zone in between two northwest trending faults at the intersection of the South Ridge Fault is present near the RL10. Two structures in an untested corridor between the East Zone and the 900 North block will be evaluated by drill hole PDH8 and PDH9.

The fifth area is the region north of the exposed east-west trending South Ridge Fault and south of the East Zone. A series of northwest trending structures have been postulated on the level plans and are evident on the VLF maps. This area will be tested by six reverse circulation drill holes oriented southwest. Two holes will be drilled in the first pass to better plan the remaining drill holes.

A vertical drill hole in the Valley target will be drilled shortly. Additional drill holes have been tentatively planned based on IP, magnetic and previous drilling.