60001642

Mining District File Summary Sheet

DISTRICT	Rosebud
DIST_NO	4010
COUNTY If different from written on document	Pershing
TITLE If not obvious	Rosebud Drill Hole File - Hole No. RL-264C
AUTHOR	K. Kenner; T. Kuhl; V. Peterson
DATE OF DOC(S)	1992
MULTI_DIST Y / N? Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud Project; Coates Drilling; Lac Minerals (USA) Inc; East Zone; Barringer Laboratories
COMMODITY If not obvious	gold silver
NOTES	Drill log; geology; assay; total depth 1003'; handwritten notes ~~34~~ p. 36

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: DD 6/3/08
Initials Date

DB: mal
Initials Date

SCANNED: W Blue
Initials Date

Revised: 1/22/08

ROSEBUD RL-264
DRILL LOG

60001642 4010

60001642

LAC MINERALS (U.S.A.) INC.

DRILL LOG SUMMARY SHEET

PROJECT ROSEBUD

HOLE NUMBER RL-264C TOTAL DEPTH 1003 LOGGED BY KLK

Date started 4-18-92

Date completed 4-22-92

Initial bearing S41°W

Initial inclination -61°

Elevation

Collar coordinates:

N

E

Contractor: COATES

Drill Type: UDR

Hole Size: HQ

Drilling Conditions:

Footage: Wet / Dry

Comments:

DOWN HOLE SURVEY INFORMATION

FROM	TO	SURVEY POINT	INCLI-NATION	BEARING	X (Northing)	Y (Easting)	Z (Elevation)

LAC MINERALS (U.S.A.) INC.
ROSEBUD PROJECT

DRILL HOLE RL-264

Page 1 of 5

LOGGED BY KLK

FINE-GRAINED TUFF
BEDDED BUD LLT
VOLCANICLASTIC
PORPHYRITIC TUFF
FLOW BANDED TUFF

VEIN TYPES

DRUZY QUARTZ
Xc CHALCEDONIC
XK STOCKWORK
Ca CALCITE
HYDROTHERMAL BRECCIA VNS
Ba BARITE

FT.	LITHO	FRACTS FAULTS	VEIN TYPES	BLEACH W	BLEACH M	BLEACH S	CLAY W	CLAY M	CLAY S	SILIC W	SILIC M	SILIC S	COLOR	% FeOx W	% FeOx M	% FeOx S	% SULF.	COMMENTS	ROD CONN.	Ag	Au	✓
	CT	overburden																0-49S Chocolate Tuff 0-5 overburden		.02	<	<
05			Xc HHH XK										Lt army green				tr limon replac py	5-50 CT perv. oxid - ↑w/ depth, m to S ?		.01	<	
10													"					variably bleach, may be intermittently silicified		.02	.002	
15													buff + lt grn					veined w/ limonitic chalcedon local druzy qtz vns locally encapsulating py ; limonitic stkwk qtz veining		.02	.001	
20		poss											Lt army green				+ tr diss py	20-50 may reflect		.17	.007	
25		FAULT											+ golden orange					a fault zone w/ lamin. str. limonitic argillic zones w/ silic. zones		.03	.008	
30																				.04	.002	
35																				.05	.002	
40		ZONE																		.06	.007	
45																				.01	<	
50			HHH XK										gray white ; army green				±2% diss tr vn py	50-300 Variably bleached ; argillized CT !		.04	.001	
55																		50-65 w/ a trickle of oxidation. ; mbl		.04	.001	
60																				.05	.002	
65																		OX / RED		.04	.001	
70																	±3% diss tr vn py			.04	.003	
75																				.04	.004	
80			± HHH XK														1-2% diss + vn py	↓ in coarse veining poss XX		.02	<	
85																				.01	<	<
90																				.01	<	
95			Ca															has a more granular texture w/ presence of calcite veins		<	<	
100																						

NOTE SULFIDES IN COMMENTS: Py Mc Cp Pr Sb

LAC MINERALS (U.S.A.) INC.
ROSEBUD PROJECT

DRILL HOLE RL-264

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LOGGED BY KLK

FINE-GRAINED TUFF
BEDDED BUD LLT
VOLCANICLASTIC
PORPHYRITIC TUFF
FLOW BANDED TUFF

VEIN TYPES

DRUZY QUARTZ
Xc CHALCEDONIC +K = StKwk
XK STOCKWORK
Ca CALCITE
HYDROTHERMAL BRECCIA VNS
Ba BARITE

FT.	LITHO	FRACTS FAULTS	VEIN TYPES	BLEACH W	BLEACH M	BLEACH S	CLAY W	CLAY M	CLAY S	SILIC W	SILIC M	SILIC S	COLOR	% FeOx W	% FeOx M	% FeOx S	% SULF.	COMMENTS	ROD CONN.	Ag	Au	✓
	GT		Xck Ca										Lt gray Buff w/ hint green				~1% diss py	95-115 GT is granular w/ granitic texture w/ intermittent peach flesh coloration		.01	<	
105																				.01	<	
110			HHH															113-125 v. strong peru. argillic alt. - lt. gray clay		.02	<	
115		may reflect a minor f																		.04	.002	
120																				.07	.003	.003
125		A U L T	HHH + XK														1-2% diss ± VN py	125-200 GT slightly grainy, becoming more fine grained w/ depth. peru bl w/ w-m alt. predom weak qtz-py stkwk; druzy qtz veins locally encapsulating py.		.10	.005	
130																				.08	.005	
135																				.06	.002	
140																	~3% VNlt diss py	125-140 m to ms druzy qtz stkwk qtz-py vning		.03	.003	
145																	1-2% VNlt diss py			.02	<	
150																				.01		
155																				.01		
160																		m to ms ↑ peru argillic alt.		.01		
165																				.01		
170																				.01		
175																		175-185 strong into m str peru. argillic clay alt (lt grn-gry clay)		.02		<
180																				.01		
185																				.01		
190																				<		
195																				<		
200																						

NOTE SULFIDES IN COMMENTS: Py Mc Cp Pr Sb

LAC MINERALS (U.S.A.) INC.
ROSEBUD PROJECT

DRILL HOLE RL-264

Page 3 of 5

FINE-GRAINED TUFF
BEDDED BUD LLT
VOLCANICLASTIC
PORPHYRITIC TUFF
FLOW BANDED TUFF

VEIN TYPES

DRUZY QUARTZ
Xc CHALCEDONIC
XK STOCKWORK
Ca CALCITE
HYDROTHERMAL BRECCIA VNS
Ba BARITE

LOGGED BY KLK

FT.	LITHO	FRACTS FAULTS	VEIN TYPES	BLEACH W	BLEACH M	BLEACH S	CLAY W	CLAY M	CLAY S	SILIC W	SILIC M	SILIC S	COLOR	% FeOx W	% FeOx M	% FeOx S	% SULF.	COMMENTS	ROD CONN.	Ag	Au	✓
	GT.		XK										Lt grn-gray w/				1-2% diss tr N py	200-300 GT - FGT grn ± flesh, perv. bl		<	<	
205													interm flesh color					?predom m ≈ alt weakly veined w/ tr		.01		
210			±XK Xc															calcite vning intermittently weak qtz-py-stkwk		.01		
215																		weak local amber brown chalcedony vns		.01		
220																				.01		
225																		225-250 m into strong w/ depth lt gray argillic clay alt.		<		
230																				.01		<
235																				.01		
240																				.01		
245																				.05	.004	.004
250																				.04	.001	
255																	~7% diss tr N py ± cpy			.03	<	<
260																	3-4% @ above	260-270 m ↑ lt. gray argillic clay alt.		.08	.001	
265																	1-2% diss tr N py			.02	<	
270																				.01	<	
275																				.01	<	
280																		280-290 strong perv. lt. gray argillic clay alt		.01	.001	
285																				.02	<	
290																				.01	<	
295																		m-s argillic clay alt. lt gray		.01	<	
300																						

NOTE SULFIDES IN COMMENTS: Py Mc Cp Pr Sb

LAC MINERALS (U.S.A.) INC.
ROSEBUD PROJECT

DRILL HOLE RL-264

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FINE-GRAINED TUFF
BEDDED BUD LLT
VOLCANICLASTIC
PORPHYRITIC TUFF
FLOW BANDED TUFF

VEIN TYPES

DRUZY QUARTZ
Xc CHALCEDONIC
Xk STOCKWORK
Ca CALCITE
HYDROTHERMAL BRECCIA VNS
Ba BARITE

LOGGED BY KLK

FT.	LITHO	FRACTS FAULTS	VEIN TYPES	BLEACH W	BLEACH M	BLEACH S	CLAY W	CLAY M	CLAY S	SILIC W	SILIC M	SILIC S	COLOR	% FeOx W	% FeOx M	% FeOx S	% SULF.	COMMENTS	ROD CONN.	Ag	Au	✓
	GT	FRESH	trace Ca										burg brn	w	KY		NIL to tr	300-410 Relatively fresh GT - lt gray		.01	<	
305															H		diss ± VN py	host rock w/ 3-5% plagioclase + biotite phenos		.01	<	
310															E			locally replaced w/ hemititic pervasive				
															M			hemititic fractures throughout				
315															I							
320															T							
325															I							
330															T							
335															I							
340															C							
345																						
350																						
355													lt green					354-365 weak perv. bleaching to lt green w/ hemititic fractures				
360																						
365													burg brown									
370																						
375																						
380																						
385																						
390																						
395																						
400																						

NOTE SULFIDES IN COMMENTS: Py Mc Cp Pr Sb

LAC MINERALS (U.S.A.) INC.
ROSEBUD PROJECT

DRILL HOLE RL-264

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LOGGED BY KLK

VEIN TYPES

- FINE-GRAINED TUFF
- BEDDED BUD LLT
- VOLCANICLASTIC
- PORPHYRITIC TUFF
- FLOW BANDED TUFF
- DRUZY QUARTZ
- Xc — CHALCEDONIC
- XK — STOCKWORK
- Ca — CALCITE
- HYDROTHERMAL BRECCIA VNS
- Ba — BARITE

FT.	LITHO	FRACTS FAULTS	VEIN TYPES	BLEACH W	BLEACH M	BLEACH S	CLAY W	CLAY M	CLAY S	SILIC W	SILIC M	SILIC S	COLOR	% FeOx W	% FeOx M	% FeOx S	% SULF.	COMMENTS	ROD CONN.	Ag	Au	✓
	CT	FRESH	trace Ca										burg brwn				NIL to tr py	400-410 Fresh CT descrip @ above				
405																						
410			Xc + Ca										med army green				≤1% diss py	410-425 weakly bleached CT, weak calcite veining w/ tr. chalcedony vns		<	<	
415																				.01	<	
420																				<	<	
425			XK + Ca + Xc										buff grn + flesh				±5% diss + vn py	425-495 predom 425-430 strong qtz sulfide veining.		.03	.001	
430																	3-4%	flesh + buff w/ weak grn alt. to 440. Predom		.04	.001	
435																		weak to moderate qtz-py stkwk & druzy qtz vns locally encapsulating		.02		
440													buff + flesh				2-3%	pyrite. Intermittent amber brown chalcedony		.01		
445																		veins encap. pyrite; may 445-463 increase peru. peach/flesh alt.		.01		
450																	±2%	be related to mineralizing event. weak intermittent calcite veins,		.01		
455																				.02		
460																		Few ±1% green mineral		.01		
465																		replacement.		.01		
470																				.01		
475																	2-3%			.02		
480																				.02		
485																				.02		
490																				.02		
495																						
00		TD																TD.				

NOTE SULFIDES IN COMMENTS: Py Mc Cp Pr Sb

ROSEBUD PROJECT

HOLE NO. RL 264 C LOGGED BY K.L. KENNER DATE 5/92 PAGE 1 OF 8

BOX #	DEPTH (FT)	RECOVERY	STRUCTURE: FLOW + VEIN & + BEDDING	STRUCTURE: FAULTS	% METALLICS	GRAPHIC LOG	ALTERATION	COLOR	VEIN TYPES /WIDTHS	VEINS PER FOOT	RQD
	495										
1	500	67			≤1% diss ±vn py	CT	wbl poss w~	buff w/ hemitic fracts ~ w/ hint green			30
		102	30°-50° CaCO3 ±glauc ±py vns						1-10 mm CaCO3 glauc ±py vns locally purely glauconite	2-3 / 10 ft	102
2	510	98									98
3	520	97									93
4	530	100									100
5	540	92									91
6	550	100									100
7		97									97

DESCRIPTION

0-495 R.C.

495 - 699.6 LT

495-556.5 chocolate - fine grained tuff to LLT - volc bxa w/ ~ 2-3% fine green clay altered to unaltered poss. hornblende phenos. volc bxa texture may be tectonically related as a primary feature. weak perv. bleaching and poss weak-very-argillic alteration. Fine fractures have weak hemititic stain. w/in zones of tectonic bxa - tuffaceous matrix is flushed w/ hemitite. Clasts are subrounded to angular. Very weak veining - $CaCO_3$ ± glauconite ± local pyrite. Locally can be pure glauconite. ranges: 1-10mm @ 30-50° to CA.

495.9-498 Intermittent rubble w/ clay coating

ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu

ROSEBUD PROJECT

HOLE NO. RL 264C LOGGED BY K.L. KENNER DATE 5/92 PAGE 2 OF 8

BOX #	DEPTH (FT)	RECOVERY	STRUCTURE: FLOW + VEIN & + BEDDING	STRUCTURE: FAULTS	% METALLICS	GRAPHIC LOG	ALTERATION	COLOR	VEIN TYPES /WIDTHS	VEINS PER FOOT	RQD	DESCRIPTION	ASSAYS: SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
												495-699.6 CT						
7		97	55-90° CaCO3 uns		tr diss + vn py		wbl relativ fresh	buvg bun-gray	≤1mm CaCO3 uns	±1/ft	97	556.5-565.5 Relatively fresh burgundy matrixed, gray CLASTED FG-volc bxa. phenos are hemitite or white clay alt. V. weak veining - ≤1mm CaCO3 veins						
8	560																	
		100	predom 0-20° CaCO3 uns locally 80-90°		tr diss py		wbl poss w	buff w/ hint grn w/ hemit fracts	1-10 mm CaCO3 uns & blebs	≤1/ft	92	565.5-582 weakly bleached CT - tectonically brecciated volc. bxa - a primary texture. Intermittently speckled w/ 2-3% hemitite replaced phenos of irregular shapes ≤1-2 mm Clasts range from 2-60 mm on the average. matrix is a micro bxa w/ weakly hemititic tuffaceous matrix. weak calcite ± py veins. Locally CaCO3 fills interstices of rock matrix ? is not as veins						
9	570																	
		100									98							
10	580		predom 30-60° CaCO3 uns ; locally ±75°		tr diss ±vn py		FRESH	lilac gray w/ hemit fract	2-90 mm CaCO3 uns	1-3 uns/ft		582-675.7 FRESH CT Light lilac gray predom volc bxa - primary to FGT w/ ~ 2-3% irregularly shaped hemitite alt. phenos. Clast sizes range from 1-65 mm are rounded to angular. matrix is tuffaceous and weakly hemititic. Weak hemitite fracture veining - more so w/a hemitite stain. Only true veining is calcite ranging from 2-90 mm. w/ max of 1-3 uns/ft Locally w/ a trace of pyrite or/and glauconite						
		100									100							
12	600										100							
		100																
13	610										100							
		99									100							
14	620											618.3-618.6 } massive calcite 618.8-619 } veins						

ROSEBUD PROJECT

HOLE NO. RL 264C LOGGED BY KLK DATE 5/97 PAGE 3 OF 8

BOX #	DEPTH (FT)	RECOVERY	STRUCTURE: FLOW + VEIN & + BEDDING	STRUCTURE: FAULTS	% METALLICS	GRAPHIC LOG	ALTERATION	COLOR	VEIN TYPES /WIDTHS	VEINS PER FOOT	RQD
14		99					FRESH	lilac gray w hemit fracts			99
15	630	100	predom 30-60° CaCO3 VNS locally ±75°		tr diss ± VN py				2-90 mm CaCO3 VNS	1-3 VNS/ft	100
16	640	99							1-5 mm CaCO3 VNS		100
17	650	95								≤1/ft	83
18	660	99									94
19	670	100								5-18 VNS/ft	97
20	680	81	15-85° py VNS	no real contact	4-5% diss + VN py		mbl wm w X	PINK PEACH FLESH TAN	<1-4 mm py ± SiO2 clay VNS	5-18 VNS/ft	78
21		62		XK Δ		Δ	mbl SXX		predom hydro thrm Δ VNS		90

DESCRIPTION

495 - 699.6 CT SRF: 683.5 - 699.6

FOOTWALL XK: 699.6 - 786.7

582 - 675.7 FRESH CT continued. - described @ above.

624.7 - 624.85 calcite vein

635.5 - 664 Decrease in overall calcite veining. Becomes more clast supported - fresh CT

664 - 675.7 Increase in calcite veining ± 1-2 mm & filling interstices of rock fabric

675.7 - 683.5 Fine grained CT tuff pervasive peach alt weak argillic & weak-m perv. silicif. moderate pyrite ± weak clay ± tr SiO2 veining. Locally w/ buckshot py selvages up to 5-20 mm. Stringers of peach-orange oxidation along tight fractures

683.5 - 685.6 same @ above however w/ mod. strong hydrothermal Δ veining w/ SiO2 matrix rich & ↑ perv silicif. w/ ~ 3 stgo Δ clasts are rounded to subangular

ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
675.7 - 680	.002	.003	.03		
680 - 683.5	.005		.07		
683.5 - 686.7	.003		.08		

ROSEBUD PROJECT

HOLE NO. RL 264C LOGGED BY KLK DATE 5/92 PAGE 4 OF 8

BOX #	DEPTH (FT)	RECOVERY	STRUCTURE: FLOW + VEIN & + BEDDING	STRUCTURE: FAULTS	% METALLICS	GRAPHIC LOG	ALTERATION	COLOR	VEIN TYPES /WIDTHS	VEINS PER FOOT	RQD
22	690	62	semi massive sulfide	70° 90 ug 60° 40	20-30% 3-4%		mbl sxx s	gray flesh green	pure Δ vn clay 90	ug	90
		37	semi mass. sulf. w/ slicks	60 50°	5-7% 2-30% 5-7% diss py + chalc		msbl sxxx sbl sxxx	gray white	pure hydro Δ vn 15-25°	1-2 mm 1/ft	93
23	700	95			2-3% diss py		sxs sbl sxxx	flesh + buff gray			88
24	710	101	hairline coarse xk 0-90°		±4% diss tvn py mc stibn ? cpy		wm bl mxx tr	lt sage grn	hairline fine xk qtz healed ? ≤1mm	30-50/ft	101
25	720	100							0-40 mm coarse xk qtz clay py sto mc barite	3-17/ft	100
26	730	82									103
27	740	103			5-7% diss mostly veined mc py stibnite ? cpy				fine xk	30-50/ft	103
28		23							coarse xk	5/ft to massive xk	90
29	750	94						lt sage grn lt org frags			89

CT 495 - 699.6
DT 699.6 - 1003 = LBT ?

DESCRIPTION

SRF: 683.5 - 699.6

FOOTWALL XK : 699.6 - 786.7

685.6 - 686.7 hydrothermal Δ - strongly SiO_2 cemented w/ 685.8 - 686.3 as a semi massive sulfide - w/ SiO_2 matrix well silicified, clasts are predom rounded to subangular, ~3-4 stgs. of Δ clasts: dk tan - flesh to green to gray sulfide rich

686.7 - 687.9 lt. green gray clay cemented argillic Δ rubble. Component clasts present are silicified tan, green or gray. Clasts are predominantly rounded. Clay matrix is fairly soft

687.9 - 689.7 orangish brown hydrotherm Δ well silicified w/ intermittent duck butter green clay seams up to 5 to 40 to 60 mm wide, weak sub ll to CA open vuggy druzy qtz uns w/ tr clay fill + py.

689.7 - 690 DK gray semi massive sulfide seams w/in fine SiO_2 matrix @ ~60° to CA

690 - 696.2 hydrothermal Δ - predom opaque milky gray white w/ 4-5 stages of Δ clasts range from 1-20 mm, are predom rounded to subrounded to, locally subangular. Appears heterolithic.

690 - 692 matrix is milky white to green w/ some green clasts

692 - 696.2 matrix is predom milky gray white

694 - 695.1 matrix is SiO_2 however Δ clasts are bleached white & strongly clay altered & predom eaten out by clay

@ 696.2 54° to CA even later stage Δ vn imprint over massive hydrothm Δ vn.

696.2 - 699.6 hydrothermal Δ clasts are 2-30mm rounded to subrounded predom. / locally sub ∠. ~3-4 stages of Δ clasts are buff to peach tan. matrix support which is a micro Δ. Locally Δ clasts are riddled w/ fine ≤1mm qtz stockwork. Few blebs of py throughout.

699.6 - 1003 DOZER TUFF

Chalcopyrite 70°

ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
683.5-686.7	(Continued)				
686.7-687.9	.002		.13		
687.9-689.7	.002		.10		
689.7-694	.0307		.14		
694-696.2	.086	.082	.42		
696.2-699.6	.008		.02		
699.6-703	.099	.091	.20		
703-708	.077		.12		
708-713	.048		.07		
713-718	.064		.13		
718-723	.013		.04		
723-728	.007		.04		
728-733	.023		.04		
733-738	.015		.06		
738-743	.021		.08		
743-747	.011	.011	.08		
747-750	.027		.08		

ROSEBUD PROJECT

HOLE NO. RL 264C LOGGED BY KLK DATE 5/92 PAGE 5 OF 8

BOX #	DEPTH (FT)	RECOVERY	STRUCTURE: FLOW + VEIN ∡ + BEDDING	STRUCTURE: FAULTS	% METALLICS	ALT GRAPHIC LOG	GRAPHIC ALTERATION	COLOR	VEIN TYPES /WIDTHS	VEINS PER FOOT	RQD
29		94	0-90° coarse XK	(∡ Δ)	5-7% diss mostly vein py mc stbnt ± cpy	wm bl m XX tr ~	(∡ Δ)	lt sage grn	hairline XK ≤1mm	30-50/ft	89
		28		(∡ Δ)							110
		31		(∡ Δ)					2-40 mm XK qtz clay mc py stb + barite	5/ft to massive XK	89
30	760	36		(∡ Δ)			(∡ Δ)				90
				(∡ Δ)							
		102		(∡ Δ)			(∡ Δ)				102
31	770		fine XK 0-90°	tecton (∡ Δ)	±3% diss + vn py + py replac mc + local barite	wm bl w ~ w X		lt sage grn	hairline XK ≤1mm qtz ± py ± clay	±40/50 ft	
32	780	102	tectonic Δ all orienti	tecton (∡ Δ)					tectonic Δ XK 2-12 mm to massive all tuffaceous	un-count-able	102
33	790	95	2-15 mm veins 10-75° to CA	tecton (∡ Δ)					2-15 mm XK w/ qtz py mc ± clay local barite	2-8/ft	95
34	800	101		tecton (∡ Δ)							101
35	810	100			5-6% @ above						80
36	815	97									97

DESCRIPTION

699.6 - 1003 DT = LBT?

699.6 - 768.7 FOOTWALL ALTERED DT w/ pervasive stockwork veining and hydrothermal breccia. veins, Fine hairline XK w/ qtz ± py ± green celad? alt. - locally w/ fine micro breccia. Overprinted w/ coarse XK 2-40mm ranging in all orientations w/ qtz to qtz-clay fill w/ py, mc, barite, stibnite & poss tr cpy fill. Locally vuggy w/ druzy qtz lining & prominent xtalline barite ± stibnite w/ depth becomes more of a hydrothm Δ XK w/ 2-15 mm sub & DT clasts & hosted w/in micro breccia w/ qtz SiO2 matrix. Metallics present mostly w/in veins & intermittently disseminated w/in wall rock. Very few clay filled vugs - rock is very compentent - SiO2 matrix veins ↑ strength.

768.7 - 849 Fine grained DT ± 1% w/ fine spray 1-2mm py replaced? mafic laths. Intermittently milled texture w/ ghosts of subrounded to rounded clasts mixed w/ a more secondary microtectonic fine brecciation. Locally milled clasts have orange selvages (weak) to a weak orange leisgang banding texture specific to sub to rounded clasts. There appears to be ~ 3 stages (+?) of veining: 1) fine qtz ± lt sage green clay ± py hairline stockwk w/ all orientations & # 2) tectonic micro Δ veining w/ tuffaceous matrix well healed & not related to mineralization 3) very weak % of veins similar to above w/ 2-15mm qtz mc py barite stb. weak clay %.

ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
750-753	.028		.24		
753-756	.016		.10		
756-759	.008		.05		
759-764	.051		.11		
764-768.7	.019		.09		
768.7-773	.002		.05		
773-778	.004	.005	.05		
778-783	.006		.06		
783-788	.003		.05		
788-793	.020	.020	.07		
793-798	.003		.04		
798-803	.006		.05		
803-808	.004		.05		
808-813	.007		.06		
813-818	.008		.07		

ROSEBUD PROJECT

HOLE NO. RL 264 C LOGGED BY KLK DATE 5/92 PAGE 6 OF 8

BOX #	DEPTH (FT)	RECOVERY	STRUCTURE: FLOW + VEIN ∢ + BEDDING	STRUCTURE: FAULTS	% METALLICS	GRAPHIC LOG	ALTERATION	COLOR	VEIN TYPES /WIDTHS	VEINS PER FOOT	RQD
36	820	97	fine XK 0-90°		5-6% fine diss tvn py + tr mc ¦local barite		wmbl w~ wX	Lt sage grn	fine XK <1mm qtz py ± clay	±30 50 ft	97
37	830	99	micro tectonic bxa all orientations		±7-8 % @ above				micro tecton Δ	perv	99
38	840	97	2-15 mm XK 10-75° to CA	50° (Δ) VN	3-4% @ above		mbl mto ms local X wmbl w~ wX		2-15 mm qtz ±clay mc py barite vns coarse XK 2-4 mm	2-15 ft	49
39	850	99		Δ Δ VN 55°		gouge	mbl mXX ? tr ~				90
40	860	99	fine XK 0-90°	gray py 1% Δ 50 Δ Δ gouge green	±3 or 4% diss +VN py tr mc + poss cpy			Lt sage grn + mottled orange	predom 1-3 mm qtz clay py mc vns tr local barite	2-7 vns ft	99
41	870	100	1-3mm qtz mc py clay vns 0-50°						Riddled w/ fine hairline qtz py ± clay	>50 ft	100
42	880	97							1-10 mm dull qtz clay py	<1 to 20 ft	97
43											

Dt may be LBT

DESCRIPTION

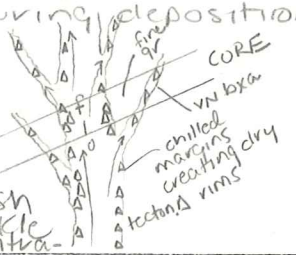
813-831 Increased milled texture w/ micro tectonic intermittent micro Δ interstitial fill w/in tuffaceous matrix + poss. wk SiO2 ¦ local dissem. py in matrix ¦ locally concentrated w/in clasts. ↑ in dissem vs. vein metallics splashed through tect. bxa matrix ¦ localized w/in clasts. Also dissem. concentrations @ selvages along veins weak local prob. post drilling oxidation selvages along veins.

831-840 Rubble zone w/in host same @ above w/ ↑ argillic alt, clasts are competent - predom w/ intermittent stockwork qtz py mc barite veins. increased dissem. fine py ± mc fracture rubble surfaces are mod clay altered. Could be fault or hangingwall to fault related.

840-849 decrease in overall veining ¦ metallic content. Similar to above the rubble zone. Coarse veins. Intermittent mustard stain ¦ weak orange coloration within micro bxa tuffaceous matrix

841-841.2 } hydrothermal SiO2 healed
842.4-842.6 } breccia VN. w/ micro Δ matrix in SiO2 cement. clasts subrounded to angular 2-30 mm

849-943.2 Fine grained tuff - pervasively tectonically brecciated (ie. dry w/ tuffaceous matrix) to local crackle brecciated - may all have happened during deposition - is competent rock. Through zone of various textures across arm of flo. Clasts predom bleached w/ orangish matrix. Local crackle fracturing w/ concentration of orange along fracture seams. cont. →



ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
813-818	(continued)				
818-823	.007		.06		
823-828	.007		.06		
828-833	.009		.07		
833-838	.006		.08		
838-843	.018		.07		
843-848	.028	.029	.08		
848-853	.019	.021	.16		
853-858	.05		.05		
858-863	.013		.08		
863-868	.004		.06		
868-873	.003		.05		
873-878	.001		.04		
878-883	.001		.04		

ROSEBUD PROJECT

HOLE NO. RL 264 C LOGGED BY KLK DATE 5/92 PAGE 7 OF 8

BOX #	DEPTH (FT)	RECOVERY	STRUCTURE: FLOW + VEIN & + BEDDING	STRUCTURE: FAULTS	% METALLICS	GRAPHIC LOG	ALTERATION	COLOR	VEIN TYPES /WIDTHS	VEINS PER FOOT	RQD
43		97	fine XK 0-90°		3-4% @ above		mbl mXX ? tr ~	lt sage grn ; mottled orange			97
44	890	97	1-4 mm 0-45°		±5% @ above				1-4 mm qtz clay sulf fine XK	10-14/ft 20-40/ft	89
45	900	99	fine XK 0-90°		2-3% diss tvn py ±mc				fine orange fract to qtz rich hairline stkwk <1mm	30->50/ft	99
46	910	100	0-40° <1-2 mm sulf qtz vns								100
47	920	99							<1 to 2mm fine qtz sulf veins w/↑ clay @ depth	1-13/ft	99
48	930	98		30°/Δ vn Δ vn/30°							98
49	940	100									100
50		91	30° VN Δ	30°/Δ ∠ Δ	3-5%		ms bl sx mv		All Δ hy dvb		88

DESCRIPTION

DT = LBT ?

3 predom stages of veining: 1) 1st fine hairline qtz stkwk ± py ± clay 2) 1-3 mm qtz ± clay ± py ± mc ± cpy veins, 3) drusy qtz vugs qtz clay fill from 849-858 w/ few green duck butter clay veins up to 2-3 mm @ 858; 55° to CA is a 19 mm dk gray to black sulfide rich + SiO2 Δ seam followed by 2 1/2" seam of green clay gouge - questionable duck butter.

893-943.2 significant drop in veining - dry tectonic bxa is still prominent but becoming more of a vein bxa - ; fine grain texture becoming more prominent @ 909' crackle fracturing throughout w/ orange selvages. Fine <1-13 mm sulfide/qtz veins locally appear @ dentritic stringers w/ orange selvages.

Secondary Hydrothermal XK Vein Δ.

943.2-947 FAULT: upper contact @ 30° to CA, lower contact @ 30° to CA

943.2-944.5 all broken rubble - subrounded well silicified clasts appears to have been ridalled w/ qtz stockwork - vugs which busted apart; ends in ~ 2" white clay cemented rubble

944.5-947 Intense stockwork vein Δ - hydrothermal subrounded to angular clasts sealed w/in SiO2. Matrix is a micro Δ; Interstitially open spaced lined w/ qtz; locally filled w/ white clay; locally clay has spider web of SiO2 thru it. Matrix predom hosts the metallics ~ 3 stages of Δ.

ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
878-883	(Continued)				
883-888	.004		.07		
888-893	.004		.05		
893-898	.001		.02		
898-903	<		.01		
903-908	.002		.01		
908-913	.001		<		
913-918	.002		.01		
918-923	.001		.04		
923-928	.002		.04		
928-933	.007		.06		
933-938	.002	.002	.05		
938-943	.004		.06		
943-947	.005		.08		

ROSEBUD PROJECT

HOLE NO. RL 264C LOGGED BY KLK DATE 5/92 PAGE 8 OF 8

BOX #	DEPTH (FT)	RECOVERY	STRUCTURE: FLOW + VEIN ∡ + BEDDING	STRUCTURE: FAULTS	% METALLICS	GRAPHIC LOG	ALTERATION	COLOR	VEIN TYPES /WIDTHS	VEINS PER FOOT	RQD
50			30° Δ un	x Δ 30°	3-5%	x Δ x Δ/30°	ms bl sx m	gray green	All hyd vn	vo Δ	
		91			3-4% diss tvn py + cpy + ± mc		m bl v. w poss m xx	± gray green buff locally fract selvages w/ orange	fine hairline qtz ± py xk	>50/ft	88
51	950		fine hairline 0-90°								
		99									99
52	960		CaCO3 clay sulf 30-80° uns						1-5 mm CaCO3, clay, ± qtz mc, py vns ± cpy	<1 to 3/ft	
		100									100
53	970										
54	980	97	qtz py clay sulf uns 5-80°	5-10° Δ					1-8 mm qtz-py cpy ± clay vns + local orange mineral	1-9/ft	97
55	990	96									96
56	1000	103									103
57	1003										

DESCRIPTION

DT = LBT?

947 – 1003 Fine Grained tuff – pervasively bleached w/ prob/poss perv. silicification. Very intermittently crackle brecciated – fractured w/ orange to amber brown mineral – to selvage stain, may have some chalcedonic composition. 3 predom. stages of veining: 1) fine hairline qtz ± py stockwork 2) 1-5 mm $CaCO_3$, clay ± cpy ± SiO_2 ± mc, py veins 3) 1-8 mm qtz-py cpy, ± clay uns w/ local orange selvages ; poss. local amber brown chalcedony.

978.7 to ~983. Intermittent massive micro vein brecciation w/ SiO_2 matrix becoming black & sulfide rich w/ depth. clasts are subangular to subrounded w/ predom. 10-20° to CA expression. fine calcite veins appear to cross cut the Δ.

995-1003 Increase in crackle brecciation w/ green celadonite alt, weak local red brwn poss. chalcedony alt slight ↑ $CaCO_3$-clay-py-cpy veins. Lays on the higher end of the vein count. ; locally up to 20-25 for 1-8 mm qtz-py-cpy ± clay uns.

ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
943-947	(continued)				
947-953	.008		.06		
953-958	.012		.08		
958-963	.002		.05		
963-968	.003		.03		
968-973	.003		.04		
973-978	.005		.04		
978-983	.003		.04		
983-988	.002		.04		
988-993	.003		.04		
993-998	.003		.06		
998-1003	.004		.07		

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: Feed Cat - East Zone LOGGED BY: KLK

HOLE NO.: RL-264C DIP: -60° ? CORE SIZE: HQ DATE: 5-14-92

1	2	3	4	5	6	7	8	9	10	11
FROM	TO	CORE RUN	RECOVERED CORE	TOTAL LENGTH OF CORE>4"	NO. OF FRACTURES	CORE RECOVERY (%) (4/3 X 100)	R.Q.D. (%) (5/3 X 100)	FRACTURES PER FT. (6/4)	RANGE OR AVERAGE ANGLE OF FRACTURE W.R.T. CORE AXIS	REMARKS
495	498	3'	2'	.9'	2	67	30	1.0	30°	planar rough tight weak clay lining
										495.9-498 broken rubble - competent w/
										clay coating thruout
498	503	5'	5.1'	5.1'	1	102	102	.20	35°	planar rough tight weak hemititic stain
503	513	10'	9.8'	9.8'	3	98	98	.31	55-60°	" " " " stain & green brittle clay
513	523	10'	9.7'	9.3'	2	97	93	.21	40-50°	" " " " " " " "
										514-514.4 weakly rubbly w/ local clay healed
523	533	10'	10'	10'	1	100	100	.20	60°	planar rough tight unalt to tr clay coat
					1				40°	" " " weak $CaCO_3$ fill 2-5mm
533	543	10'	9.2	9.1	3	92	91	.33	50°	" " " unalt to tr clay coat
543	553	10'	10'	10'	1	100	100	.10	20°	" " " w/ slicks on weak clay coat
553	563	10'	9.7'	9.7	0	97	97	0		
563	573	10'	10'	9.2'	1	100	92	.10	40°	planar rough irregular unalt to weak clay coat
										566.3 - 568.2 few broken rubble zones - competent
										rock zones ~.2-.4' thickness
573	583	10'	10'	9.8'	1	100	98	.50	25°	planar rough tight unalt
					4				55-60°	" " " weak clay coating
583	593	10'	10'	10'	2	100	100	.40	40-50°	" " " weak hemititic stain
					2				30°	" " " " " " tr wk clay coat
593	603	10'	10'	10'	0	100	100	0		
603	613	10'	10'	10'	2	100	100	.20	50°	curved smooth tight weak hemit stain tr clay coat
613	623	10'	10'	10'	4	100	100	.40	40-50°	planar rough tight weak hemt stain; tr $CaCO_3$ ± clay coat
623	633	10'	9.9'	9.9'	1	99	99	.10	50°	planar " " weak " "
633	643	10'	9.9	9.9'	1	99	99	.20	60°	" smooth " " " "
					1				70°	" " " " " "
643	653	10'	9.6	9.3'	2	96	93	.52	planar 45-50°	all are curved to planar, tight w/
					1				10° curved	brittle hemititic clay coating
					2				60-65° planar	
653	663	10'	10'	9.8'	2	100	98	.60	50° curved planar	curved, tight rough weak hemititic stain
					2				60-65°	planar, rough " " " "
					2				40-45°	" " " " " "
663	673	10'	10'	10'	1	100	100	.20	25°	smooth planar tight weak hemititic clay coat
					1				35° planar rough unalt to tr clay	663.2-663.3 hemititic clay gouge - contact 70-90° rough

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: FEED CAT LOGGED BY: KLK

HOLE NO.: RL-264C DIP: CORE SIZE: HQ DATE: 4-21-92

1	2	3	4	5	6	7	8	9	10	11
FROM	TO	CORE RUN	RECOVERED CORE	TOTAL LENGTH OF CORE>4"	NO. OF FRACTURES	CORE RECOVERY (%) (4/3 X 100)	R.Q.D. (%) (5/3 X 100)	FRACTURES PER FT. (6/4)	RANGE OR AVERAGE ANGLE OF FRACTURE W.R.T. CORE AXIS	REMARKS
										683.5-739 perv m-s bl, weak argillic alt intermittent s perv silic. stockwk veining; hydrothm Δ veining
613	623	10	9.9	9.9	2	99	99	.20	50-55°	1 smooth planar, 1 rough planar } tight <1mm w/ tr clay ± tr $CaCO_3$ coating
623	633	10'	10.0	10.0	0	100	100	0	—	—
633	643	10'	9.9	10	1	99	100	.10	55°	smooth planar tight w/ weak hemititic stain - no alt
643	653	10'	9.5'	8.3	2	95	83	.42	60°	smooth planar " " " " w/ tr. clay
					2				10° + 30°	undulating-rough weak hemititic stain tight <2mm
653	663	10'	9.9	9.4		99	94	.51		w/ weak argillic hemititic clay alt assoc w/ ↑ fracs
					5				40-50°	3 smooth planar, 1 curved, 1 planar rough } tight <1mm w/ weak hemititic stain; tr hemititic clay
663	673	10'	10.0	9.7	1	100	97	.20	25°	smooth planar tight w/ tr hemititic clay
					1				35°	curved, rough weak/tr hemit. clay coat open to 3-4mm no fill
										603.2-603.3 hemititic clay gouge @ 80-90° to CA along rough undulat surface
673	683	10'	8.1	7.8	4	81	78	.62	50-60°	planar rough tight <1mm tr clay coat ± $CaCO_3$
					1				20°	" " " " " " "
683	689	6'	6.2	5.4		103	90	.81		683.5-686.8 SiO_2 cement hydrothm Δ vn
										686.8-688.0 clay cemented rubble - clasts silicified
										↳ 70° to CA
										683.5-684.2 open spaced vuggy dcuzy qtz opening up to 95mm along axis w/ few marcasite crystals / rough planar fracture surface @ ±30° to CA
					1				65°	smooth planar tight unaltered
										687.5-687.7 broken rubble w/ weak clay fill - silic frags
					1				37°	planar, rough tight - unaltered, poss
					1				20°	weak local clay coat
					1				30°	
					1				40°	
										688.0-689 predom m to s perv. silic. w/ <2mm local clay seam
689	693	4'	3.7	3.7	3	.93	93	.81	60-70°	smooth planar tight weak clay coating <1mm
										1 w/ slicks; unalt @ 60°
									689-694.15	Entire interval is a strongly SiO_2
										cemented hydrothm Δ vn

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: feed cat LOGGED BY: KLK

HOLE NO.: RL-264C DIP: -60° CORE SIZE: HQ DATE: 4-21-92

1	2	3	4	5	6	7	8	9	10	11
FROM	TO	CORE RUN	RECOVERED CORE	TOTAL LENGTH OF CORE>4"	NO. OF FRACTURES	CORE RECOVERY (%) (4/3 X 100)	R.Q.D. (%) (5/3 X 100)	FRACTURES PER FT. (6/4)	RANGE OR AVERAGE ANGLE OF FRACTURE W.R.T. CORE AXIS	REMARKS
693	703	10'	9.5	8.8	2	95	88	.53	50°-60°	undulating rough wk clay coating, brittle crumbly
										wk ↑ argillic alt
					1				60°	smooth planar SiO_2 coating 2mm opening w/
										xtaline barite growths
					2				55°	rough planar tight. ±1mm clay coat
703	713	10'	10.1'	10.1'	1	101	101	.10	±80°	undulating smooth w/ tr clay coating, tight
713	723	10'	10.0	10.0'	3	100	100	.50	40°	} planar rough tight, unaltered to weak clay coating
					1				60°	
					1				±80°	undulating, rough, open spaced vuggy w/ druzy
										qtz lining w/ weak barite clay mc filling
723	731	8'	8.2'	8.2'	1	103	103	.12	70°	planar rough prob. more mechanically
										derived, locally vuggy to 30 mm, open spaced
										w/ weak clay fill
731	741	10'	10.3	10.3	1	103	103	.39	90°	planar rough, unalt. w/ local open druzy qtz lined
										vug, w/ xtal barite intergrowths
					1				10°	planar rough open spaced along axis @ 60 mm
										diameter @ 20°mm druzy qtz lined weak
										clay + barite fill
					2				±50°	planar rough open spaced vuggy 25-50mm lined w/
										druzy qtz & w/ xtaline barite fill, weak white clay fill
741	743	2'	2.25	1.8'	1	113	90	.44	10-20°	planar rough, open spaced ~2-5mm lined w/
										druzy qtz w/ barite xtal intergrowth; weak clay
743	753	10'	9.4	8.9	2	94	89	.21	20°	same @ ↑ above
753	755.5	2.5'	2.75'	2.75	~~0~~	110	110	0		
755.5	759	3.5'	3.1	3.1	~~0~~	89	89	0		
759	763	4'	3.6	3.6	~~0~~	90	90	0		well cemented (SiO_2) hard hydrothm Δ
763	773	10'	10.2	10.2	1	102	102	.10	35°	may be mechanically derived - planar rough
										open spaced no filling ~20 mm, vuggy, open
										pure SiO_2 trace clay
773	783	10'	10.2'	10.2	1	102	102	.29	20°	probable mechanical breaks planar rough wk clay coat tight
					2				60°	planar rough SiO_2 mc coating tight <1mm tr clay

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: feed CAT 55° LOGGED BY: KLK

HOLE NO.: RL-264C DIP: -60° 30' .8 CORE SIZE: HQ DATE: 4-21-92

1	2	3	4	5	6	7	8	9	10	11
FROM	TO	CORE RUN	RECOVERED CORE	TOTAL LENGTH OF CORE>4"	NO. OF FRACTURES	CORE RECOVERY (%) (4/3 X 100)	R.Q.D. (%) (5/3 X 100)	FRACTURES PER FT. (6/4)	RANGE OR AVERAGE ANGLE OF FRACTURE W.R.T. CORE AXIS	REMARKS
783	793	10'	9.5	9.5	~~0~~	95	95	0		
793	803	10'	10.1	10.1	2	101	101	.30	50°	tight planar rough druzy tr. clay qtz lining, ± mc/py <1mm
					1				10°	tight planar rough to smooth unaltered <1mm
803	813	10'	10.0'	8'	2	100	80	.30	20	open 1/2 core non existant planar rough total surface
										coated w/ xtaline barite up to 16 mm wide / open vug
					1				35°	1-2 mm open spaced planar rough w/ druzy qtz lining
813	823	10'	9.7	9.7	3	97	97	.31	10-25°	planar rough open spaced up to 47 mm or more
										lined w/ druzy qtz w/ massive xtaline barite;
										marcasite xtal growth
823	833	10'	9.9	9.9	2	99	99	.10	5-20°	same discrip @ above w/ sun opening only to ~10mm
										828 – 829.3 competent broken rubble along sub //
										to axis open spaced vein – @ above, prob due to mechanical break
833	843	10'	9.7	4.9		4.9	49	.62		834 – 839 Intermittent broken rubble – all frag
										fairly competent, weak clay fill wk ↑ argillic perv. alt
					4				20-25°	Same description @ 813-823 w/ variable
										open vuggyness ; same xtal barite fill
					2				40°	planar rough tight dry-unalt no alt. filling
843	853	10'	9.9'	9.0'	2	90	90	.30	25°	planar rough tight unalt – no coating
					1				15°	planar rough tight wk green duck butter coating – clay
853	863	10'	9.9	9.9	1	99	99	.10	15°	planar rough tight wk duck butter clay coating
863	873	10'	10.0	10.0	~~0~~	100	100	0		
873	883	10'	9.7	9.7	~~0~~	97	97	0		
883	893	10'	9.7	8.9	1	89	89	.72	20°	planar smooth weak duck butter clay coat
					4				20°	planar rough – unalt no fill tight
					2				50-60°	planar rough – fairly unalt, tight weak clay coat
893	903	10'	9.9'	9.9'	2	99	99	.30	25-30°	planar smooth, tight, weak clay coat
					1				55°	planar rough weak SiO_2 ± clay coat
903	913	10'	10'	10.0'	4	100	100	.40		planar wavy rough, tight unalt, weak tr clay coat

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: feed cat LOGGED BY: KLK

HOLE NO.: RL-264C DIP: -60° CORE SIZE: HQ DATE: 4-21-92

1	2	3	4	5	6	7	8	9	10	11
FROM	TO	CORE RUN	RECOVERED CORE	TOTAL LENGTH OF CORE>4"	NO. OF FRACTURES	CORE RECOVERY (%) (4/3 X 100)	R.Q.D. (%) (5/3 X 100)	FRACTURES PER FT. (6/4)	RANGE OR AVERAGE ANGLE OF FRACTURE W.R.T. CORE AXIS	REMARKS
913	923	10'	9.9'	9.9'	1	99	99	.10	50°	planar smooth weak py lining, tight, unalt
923	933	10'	9.8	9.8	0	98	98	0		
933	943	10'	10.0'	10'	0	100	100	0		
943	953	9.1	9.1	8.0'		100	88	.11		943.5-946.6 FAULT mixed vuggy silicified
										-25° to CA L 30° to CA rubble w/ pods of white
										clay elsewhere Δ vuggy w/ SiO_2 matrix
										lattice holding (Δx Δ X vuggy) together
										vugs filled w/ white clay pods
					1				25°	fault surface planar rough w/ open spaces
										w/ xtaline barite ± clay
953	963	10'	9.9	9.9	1	99	99	.10	60°	tight planar rough weak clay+py coating
963	973	10'	10.0	10.0	2	100	100	.20	35-40°	planar rough tight weak clay coat to unalt
973	983	10'	9.7	9.7	~~0~~	97	97	0		
983	993	10'	9.6'	9.6'	~~0~~	96	96	0		
993	1003	10'	10.3	10.3	2	103	10.3	.29	35-40°	planar rough tight unalt to weak clay coat
	TD				1				65°	" " " " " " " " +mc

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5301 LONGLEY LANE
BUILDING E, SUITE 178
RENO, NEVADA 89511
PHONE: (702) 828-1158

13-May-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Page: 3
Copy: 1 of 3
Set : 2

Attn: Tim Kuhl
Project:

Received: 8-May-92 19:53

PO #:

Job: 92757R

Status: Final

Abbreviations:

Parameters:

Au	: Gold
Ag	: Silver

Methods:

FA	: Fire Assay
AA	: Atomic Absorption

Units:

oz/ton	: ounces per ton

Quality codes:

NA	: Not Analyzed

Job approved by:

Signed: .....

Vernon K. Peterson
Laboratory Manager

cc: KRISTEN KENNER, LAC MINERALS

BARRINGER LABORATORIES INC.

15000 W. 6TH AVE., SUITE 300
GOLDEN, COLORADO 80401
PHONE: (303) 277-1687

5301 LONGLEY LANE
BUILDING E. SUITE 178
RENO, NEVADA 89511
PHONE: (702) 828-1158

18-May-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Page: 4
Copy: 1 of 3
Set : 2

Received: 13-May-92 21:39

Attn: Tim Kuhl
Project:

PO #:

Job: 92786R

Status: Final

Abbreviations:

Parameters:

Au	: Gold
Ag	: Silver

Methods:

FA/AA/AAS	: Fire Assay/AA Finish
FA/AA	: Fire Assay with AA finish
AA	: Atomic Absorption

Units:

oz/ton	: ounces per ton

Quality codes:

<	: less than
NA	: Not Analyzed

Job approved by:

Signed:

.....
Vernon K. Peterson
Laboratory Manager

cc: KRISTEN KENNER, LAC MINERALS

File

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BARRINGER LABORATORIES INC.

18-May-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Page: 1
Copy: 1 of 3
Set : 1

Attn: Tim Kuhl
Project:

PO #:

Received: 13-May-92 21:39

Job: 92786R

Status: Final

Cutting

Sample Id	Au FA/AA/AAS oz/ton	Au FA/AA oz/ton	Ag AA oz/ton
RL-264C 0 5	0.0001	0.0001	0.015
BL-038	~~0.0158~~	NA	NA
RL-264C 5 10	<0.0001	NA	0.009
RL-264C 10 15	0.0023	NA	0.018
RL-264C 15 20	0.0006	NA	0.020
RL-264C 20 25	0.0068	NA	0.166
RL-264C 25 30	0.0075	0.0072	0.079
RL-264C 30 35	0.0023	NA	0.035
RL-264C 35 40	0.0019	NA	0.053
RL-264C 40 45	0.0072	NA	0.055
RL-264C 45 50	0.0001	NA	0.009
RL-264C 50 55	0.0011	NA	0.038
RL-264C 55 60	0.0009	NA	0.041
RL-264C 60 65	0.0023	NA	0.047
RL-264C 65 70	0.0005	NA	0.035
RL-264C 70 75	0.0025	NA	0.044
RL-264C 75 80	0.0041	NA	0.038
RL-264C 80 85	<0.0001	NA	0.015
RL-264C 85 90	<0.0001	<0.0001	0.009
BL-039	~~0.0333~~	NA	NA
RL-264C 90 95	<0.0001	NA	0.009
RL-264C 95 100	<0.0001	NA	0.003
RL-264C 100 105	<0.0001	NA	0.006
RL-264C 105 110	<0.0001	NA	0.006
RL-264C 110 115	0.0001	NA	0.018
RL-264C 115 120	0.0015	NA	0.038
RL-264C 120 125	0.0032	0.0029	0.067
RL-264C 125 130	0.0047	NA	0.096
RL-264C 130 135	0.0051	NA	0.082
RL-264C 135 140	0.0016	NA	0.055

18. 92 04:48 PM *Barringer Labs, Inc. P03

BARRINGER LABORATORIES INC.

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5301 LONGLEY LANE
BUILDING F, SUITE 178
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PHONE: (702) 828-1158

18-May-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Attn: Tim Kuhl
Project:

PO #:

Received: 13-May-92 21:39

Job: 92786R

Status: Final

Cutting

Sample Id	Au FA/AA/AAS oz/ton	Au FA/AA oz/ton	Ag AA oz/ton
RL-264C 140 145	0.0027	NA	0.026
RL-264C 145 150	0.0002	NA	0.018
RL-264C 150 155	<0.0001	NA	0.012
RL-264C 155 160	<0.0001	NA	0.006
RL-264C 160 165	0.0001	NA	0.012
RL-264C 165 170	<0.0001	NA	0.009
RL-264C 170 175	<0.0001	<0.0001	0.006
BL-040	0.0460	NA	NA
RL-264C 175 180	0.0002	NA	0.015
RL-264C 180 185	0.0001	NA	0.012
RL-264C 185 190	0.0004	NA	0.006
RL-264C 190 195	<0.0001	NA	0.003
RL-264C 195 200	0.0002	NA	0.003
RL-264C 200 205	<0.0001	NA	0.003
RL-264C 205 210	<0.0001	NA	0.006
RL-264C 210 215	0.0002	NA	0.006
RL-264C 215 220	<0.0001	NA	0.006
RL-264C 220 225	<0.0001	NA	0.006
RL-264C 225 230	0.0001	NA	0.003
RL-264C 230 235	<0.0001	<0.0001	0.006
RL-264C 235 240	0.0001	NA	0.006
RL-264C 240 245	0.0002	NA	0.006
RL-264C 245 250	0.0035	0.0039	0.050
RL-264C 250 255	0.0008	NA	0.041
RL-264C 255 260	0.0003	0.0003	0.029
BL-041	0.0507	NA	NA
RL-264C 260 265	0.0006	NA	0.076
RL-264C 265 270	0.0002	NA	0.020
RL-264C 270 275	0.0003	NA	0.009
RL-264C 275 280	0.0002	NA	0.006

5. 18. 92 04:48 PM *Barringer Labs, Inc. P04

BARRINGER LABORATORIES INC.

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BUILDING E, SUITE 178
RENO, NEVADA 89511
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18-May-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Attn: Tim Kuhl
Project:

PO #:

Received: 13-May-92 21:39

Job: 92786R

Status: Final

Cutting

Sample Id	Au FA/AA/AAS oz/ton	Au FA/AA oz/ton	Ag AA oz/ton
RL-264C 280 285	0.0005	NA	0.009
RL-264C 285 290	0.0003	NA	0.023
RL-264C 290 295	0.0002	NA	0.009
RL-264C 295 300	<0.0001	NA	0.009
RL-264C 300 305	<0.0001	NA	0.009
RL-264C 305 310	<0.0001	NA	0.006
RL-264C 410 415	<0.0001	NA	0.003
RL-264C 415 420	<0.0001	NA	0.006
RL-264C 420 425	<0.0001	NA	0.003
RL-264C 425 430	0.0005	NA	0.029
RL-264C 430 435	0.0008	0.0008	0.041
RL-264C 435 440	<0.0001	NA	0.020
RL-264C 440 445	<0.0001	0.0001	0.012
BL-042	0.0303	NA	NA
RL-264C 445 450	0.0001	NA	0.009
RL-264C 450 455	0.0001	NA	0.009
RL-264C 455 460	0.0002	NA	0.015
RL-264C 460 465	<0.0001	NA	0.009
RL-264C 465 470	<0.0001	NA	0.012
RL-264C 470 475	<0.0001	NA	0.012
RL-264C 475 480	<0.0001	NA	0.015
RL-264C 480 485	0.0002	NA	0.015
RL-264C 485 490	0.0001	NA	0.018
RL-264C 490 495	0.0002	NA	0.015

File

BARRINGER LABORATORIES INC.

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5301 LONGLEY LANE
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RENO, NEVADA 89511
PHONE: (702) 828-1158

28-Apr-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Page: 1
Copy: 1 of 3
Set : 1

Received: 23-Apr-92 14:13

Attn: Tim Kuhl
Project:

PO #:

Status: Final

Job: 92598R

Drill Core

Sample Id	Au FA/AA/AAS oz/ton	Au FA/AA oz/ton	Ag AA oz/ton
RL-264C 675.7 680	0.0017	0.0025	0.026
~~BL-059~~	~~<0.0001~~	~~NA~~	~~NA~~
RL-264C 680 683.5	0.0050	NA	0.070
RL-264C 683.5 686.7	0.0033	NA	0.082
RL-264C 686.7 687.9	0.0017	NA	0.131
RL-264C 687.9 689.7	0.0023	NA	0.096
RL-264C 689.7 694	0.0307	NA	0.137
RL-264C 694 696.2	0.0859	0.0820	0.420
RL-264C 696.2 699.6	0.0077	NA	0.020
RL-264C 699.6 703	0.0990	0.0908	0.204
RL-264C 703 708	0.0767	NA	0.117
RL-264C 708 713	0.0483	NA	0.073
RL-264C 713 718	0.0640	NA	0.131
RL-264C 718 723	0.0126	NA	0.041
RL-264C 723 728	0.0073	NA	0.035
RL-264C 728 733	0.0231	NA	0.041
RL-264C 733 738	0.0147	NA	0.061
RL-264C 738 743	0.0212	NA	0.076
RL-264C 743 747	0.0109	0.0108	0.047
BL-060	0.0447	NA	NA
RL-264C 747 750	0.0274	NA	0.082
RL-264C 750 753	0.0280	NA	0.242
RL-264C 753 756	0.0156	NA	0.096
RL-264C 756 759	0.0083	NA	0.050
RL-264C 759 764	0.0510	NA	0.108
RL-264C 764 768.7	0.0187	NA	0.088
RL-264C 768.7 773	0.0024	NA	0.053
RL-264C 773 778	0.0042	0.0049	0.050
RL-264C 778 783	0.0061	NA	0.055
RL-264C 783 788	0.0029	NA	0.053

04.28.92 01:48 PM *Barringer Labs, Inc. P09

BARRINGER LABORATORIES INC.

15000 W 6TH AVE., SUITE 300
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5301 LONGLEY LANE
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RENO, NEVADA 89511
PHONE: (702) 828-1158

28-Apr-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Page: 2
Copy: 1 of 3
Set : 1

Received: 23-Apr-92 14:13

Attn: Tim Kuhl
Project:

PO #:

Status: Final

Job: 92598R

Drill Core

Sample Id	Au FA/AA/AAS oz/ton	Au FA/AA oz/ton	Ag AA oz/ton
RL-264C 788 793	0.0201	0.0204	0.070
RL-264C 793 798	0.0028	NA	0.041
RL-264C 798 803	0.0058	NA	0.050
RL-264C 803 808	0.0039	NA	0.053
RL-264C 808 813	0.0071	NA	0.064
RL-264C 813 818	0.0084	NA	0.073

BARRINGER LABORATORIES INC.

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28-Apr-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Page: 3
Copy: 1 of 3
Set : 1

Received: 23-Apr-92 16:44

Attn: Tim Kuhl
Project:

PO #:

Job: 92601R

Status: Final

Drill Core

THIS IS

Sample Id	Au FA/AA/AAS oz/ton	Au FA/AA oz/ton	Ag AA oz/ton
RL-263C 788 793	0.0006	NA	0.009
RL-263C 793 798	0.0006	NA	0.009
RL-263C 798 803	0.0014	NA	0.009
RL-263C 803 808	0.0013	0.0002	0.015
RL-263C 808 814	0.0007	NA	0.012
RL-263C 818 823	0.0069	NA	0.055
RL-263C 823 828	0.0069	NA	0.058
RL-263C 828 833	0.0085	NA	0.067
RL-263C 833 838	0.0060	NA	0.079
RL-263C 838 843	0.0184	NA	0.070
RL-263C 843 848	0.0276	0.0290	0.079

264

NOT 263

BARRINGER LABORATORIES INC.

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5301 LONGLEY LANE
BUILDING E, SUITE 178
RENO, NEVADA 89511
PHONE: (702) 828-1158

13-May-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Attn: Tim Kuhl
Project:

Received: 8-May-92 19:53

PO #:

Job: 92757R

Status: Final

Drill Core

Sample Id	Au FA oz/ton	Au FA oz/ton	Ag AA oz/ton
RL-264C 848 853	0.0186	0.0206	0.158
BL-022	0.0154	NA	NA
RL-264C 853 858	0.0047	NA	0.047
RL-264C 858 863	0.0127	NA	0.079
RL-264C 863 868	0.0043	NA	0.055
RL-264C 868 873	0.0030	NA	0.053
RL-264C 873 878	0.0008	NA	0.035
RL-264C 878 883	0.0013	NA	0.035
RL-264C 883 888	0.0035	NA	0.067
RL-264C 888 893	0.0038	NA	0.047
RL-264C 893 898	0.0008	NA	0.020
RL-264C 898 903	0.0004	NA	0.012
RL-264C 903 908	0.0020	NA	0.006
RL-264C 908 913	0.0010	NA	0.003
RL-264C 913 918	0.0015	NA	0.009
RL-264C 918 923	0.0006	NA	0.035
RL-264C 923 928	0.0018	NA	0.035
RL-264C 928 933	0.0071	NA	0.064
RL-264C 933 938	0.0019	0.0022	0.047
BL-023	0.0223	NA	NA
RL-264C 938 943.2	0.0036	NA	0.058
RL-264C 943.2 947	0.0051	NA	0.076
RL-264C 947 953	0.0030	NA	0.064
RL-264C 953 958	0.0122	NA	0.076
RL-264C 958 963	0.0022	NA	0.050
RL-264C 963 968	0.0026	NA	0.026
RL-264C 968 973	0.0029	NA	0.035
RL-264C 973 978	0.0046	NA	0.041
RL-264C 978 983	0.0028	NA	0.038
RL-264C 983 988	0.0020	NA	0.044

BARRINGER LABORATORIES INC.

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13-May-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Attn: Tim Kuhl
Project:

Received: 8-May-92 19:53

PO #:

Job: 92757R

Status: Final

Drill Core

Sample Id	Au FA oz/ton	Au FA oz/ton	Ag AA oz/ton
RL-264C 988 993	0.0029	NA	0.044
RL-264C 993 998	0.0029	NA	0.055
RL-264C 998 1003	0.0044	NA	0.070

LAC MINERALS — REJECTS TO KEEP

DATE Recieved	work order #	REJECTS TO KEEP
4-23-92	92601	RL-264
	this is written up @ RL-263 but it is RL-264	818-823 → 843-848
		686.7-687.9 → 868-873
		on a diff. job. # 92598
	from 92601	RL-263
		534-539 → 544-549
		679-684 → 702-706
	this is actually RL-264 was written up wrong	818-823 → 843-848
4-23-92	92598	RL-264
		686.7-687.9 → 813-818
4-23-92	92602	RL-272
		80-85 → 95-100
		140-145 → 155-160
		185-190 → 200-205
		280-285 → 475-480
		510-515 → 520-525
4-23-92	92600	RL-259
		550-555 → 640-645
4-17-92	92564	3 Rock chip samples TOSS
4-17-92	92563	RL-262
		1023-1027 → 1134-1139

LAC minerals — REJECTS TO KEEP

work order #	Rejects to Keep
92809	RL-269
	25-30 → 45-50
	200-205 → 545-550
92788	RL-265
	40-45
	→ 125-130
92787	RL-261
	125-130 → 155-160
	455-460 → 465-470
92786	RL-264
	20-25 → 40-45
92785	RL-266
	those to Keep are on page 1 : 540-545 → 610-615
	660-665 → 680-685
92784	RL-268
	60-65 → 75-80
	225-230 → 305-310
92783	RL-267
	25-30 → 45-50
	185-190 → 235-240

LAC minerals

WORK ORDER #	REJECTS TO KEEP
92782	RL-263
	377-382 → 515-520
92757	RL-264
	818-823 → 868-873
	943.2-947 → 963-968
92756	RL-265
	130-133.6 → 196.5-199
	223-228
	373-378 → 387.5-393
	653-654.5 → 669-674
	723.5-725.1 → 725.1-730
	830-832 → 852.5-857.1

BARRINGER LABORATORIES INC.

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1455 DEMING WAY, #15
SPARKS, NEVADA 89431
PHONE: (702) 358-1158
FAX: (702) 356-9189

3382 HWY 12 EAST
HELENA, MONTANA 59601
PHONE: (406) 442-6383
FAX: (406) 442-9757

5451 GLACIER HWY.
JUNEAU, ALASKA 99801

File

SHIPPING NO. 12292

WORK ORDER NO. 92598
DATE RECEIVED 4-23-92
PURCHASE ORDER NO.
PROJECT NO.
DATE SHIPPED
SHIPPED VIA. HAND DEL.
NO. OF CARTONS
NO. OF SAMPLES 34

GEOCHEMICAL LABORATORY INSTRUCTION SHEET

COPY OF RESULTS TO	RESULTS AND INVOICE TO
	Tim O Kuhl
LAC minerals	LAC minerals
P.O. Box 12	1395 Greg St., Suite 107
LOVELOCK, NV 89419	SPARKS NV 89431
	AUTHORITY:

NO. OF SAMPLES	SAMPLE TYPE	LIST OF SAMPLE NUMBERS	ELEMENTS REQUESTED	METHOD
34	core	RL-264C 675.7-680	Au, Ag	
		thru 813-818	@ per	
		(813-818)	contract	
		Rush		

SAMPLE DISPOSITION	PULPS	REJECTS	WATERS
STORE 60 DAYS AND RETURN			
STORE 60 DAYS AND DISCARD			
RETURN AFTER ANALYSIS (Avg. 30 days)	X	X	
DISCARD AFTER ANALYSIS (Avg. 30 days)			
HOLD FOR PICKUP WITHIN 30 DAYS			

ADDITIONAL INSTRUCTIONS:

CE REJECTS WILL BE DISCARDED UNLESS OTHERWISE REQUESTED