60001641

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-263C
AUTHOR	K. Kenner; C Walck; T. Kuhl; M. Hallmark
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/Major; Lac Minerals (USA) Inc; Gap Cat Barringer Laboratories Inc
COMMODITY If not obvious	gold silver
NOTES	Drill log; geology; assay; total depth 814' handwritten notes ~~29~~ p. 31

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: mch (Initials / Date)
SCANNED: NVBeue (Initials / Date)

Revised: 1/22/08

ROSEBUD
DRILL LOG RL-263

60001641 4010

6006 1641

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

DRILL LOG SUMMARY SHEET

PROJECT ROSEBUD

HOLE NUMBER RL-263C TOTAL DEPTH 814' LOGGED BY KLK

Date started 4-14-92

Date completed 4-18-92

Initial bearing N 48E

Initial inclination -80°

Elevation

Collar coordinates:

N

E

Contractor: COATES / MAJOR

Drill Type: UDR

Hole Size: HQ -> N @ 702'

Drilling Conditions:

Footage: Wet / Dry

Comments:

GAP CAT

RC to 335
core: 335-814

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 263C

Page 1 of 7

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

RL263C

VEIN TYPES

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

LOGGED BY CMW

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	RQD CONN.	Ag	Au	✓
	Qac																	Overburden				
05																		"				
	Qac																					
10													med blue-green					BUD Tbv: 10-180				
15																		med blue-green to grey-green w/ ○ ○ mag white spots				
20																		lit: Overall wk bl 15'-25' soft & clayey				
25																		25-SS Prob wk silic				
30																						
35																						
40																						
45																						
50																						
55																		Tbv				
60																		60-70 W-M silic				
65																		Tbv				
70																		70-175 Md silic, text partly distroyed				
75																		"				
80																						
85																						
90			trace grey Q+py														TR	trace grey fg Q				
95																	TR	"				
00																						

NOTE SULFIDES IN COMMENTS: Py Mc Cp Pr Sb

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

DRILL HOLE RL-263C

Page 2 of 4

RL263C

LOGGED BY CMW

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	✓
			1-2% HH Dr Q										grey-green					BUD Tbv grey-green & blue-green w/ white clasts lit.				
105			TR HH Dr Q																			
10			Trace-1% grey fg Q Dr Q															-180 cont; bennally Md silic Buo, text partly destroyed w/ minor grey Qtz locally ± py				
15			HH																			
20			HH										Blue green				TR					
25			HH																			
30			HH																			
35			HH										Grey green									
40			HH															texture mostly destroyed				
45			HH																			
150			HH										Blue green									
55			HH																			
60			HH																			
65			HH																			
70			HH																			
75			Tc										green grey					175-180 Abt grey clay Tmb? Md pink grey to grey fg rare plag phenos, fg dense, granular, prob W-M silic; trace v fg diss py minor Dr Q + py				
80			Tc-1% HH Dr Q + py																			
85													pink & green grey				TR-1%					
90																						
95																						
200																						

NOTE SULFIDES IN COMMENTS: Py Mc Cp Pr Sb

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

DRILL HOLE RL-263C

Page 3 of 4

RL 263C

LOGGED BY CMW

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	✓
			TR DrQ +Py										md grey				TR	Tmb? cont; fg md grey w ~1% tiny diss py				
205																		granular, 6cm w/m silic, trace Dr Q+Py				
10																						
15																	1%					
20			TR-1% DrQ+Py																			
25																		Minor clear DrQ, Dr Q+Py,				
30																						
35																						
40																						
45																						
250			2% DrQ +Py														2%					
55			1% "														1%					
60																						
65																						
70																						
75			1-2% DrQ																			
80			2-3% DrQ+ Py																			
85																	2%					
90																						
95																						
300																						

NOTE SULFIDES IN COMMENTS: Py Mc Cp Pr Sb

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

DRILL HOLE RL-263C

Page 4 of 4

RL263C

LOGGED BY CMW

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	✓
			f% HH Dr Q ± py										Md grey				1-2%	Tmb? Md grey to mint of green-grey fg w/ ~1% fg dss py. Granular poss wk silic ~1% DrQ, clear, Minor chips fg py + Q				
05																						
10																						
15																						
20																						
25																						
30																						
35																						
40																						
45																						
50																						
55																						
60																						
65																						
70																						
75																						
80																						
85																						
90																						
95																						
00																						

NOTE SULFIDES IN COMMENTS: Py Mc Cp Pr Sb

ROSEBUD PROJECT

HOLE NO. RL-263C LOGGED BY KLK DATE 5-7-92 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
	335										
1.	340	100	35-60° ±1mm vns		±2% diss tvn py + mc	CT	mbl w tow m	buff to gray white	±1mm qtz-py vns 35-60°	1-3/ft	100
2	350	100 / 114	20-45° tr vns						2-10 mm tr py mc vns 20-45°	<1/ft to 1/3ft	82 / 114
3	360	98	C/C 25°			25°					98
4	370	87	C2C 10-60° 1mm vns		2-3% diss tvn py + mc	C2C	wbl m wm glaucohite	gray tan ? green clasts w/in tuff matrix tan to green	±1mm qtz py vns 10-60°	2-3/ft	89
5	380	100	43° tuff clast poss. reflection of bedding						3-70 mm frothy tr qtz clay mc vns 15-50°	1-3/ft	98
6	390	90	15-50° tr vns								84
7		92					↑bl t w/ SiO2 floating w/in matrix				82

DESCRIPTION

335-360.5 CT (to C.1)

360.5-427.7 C2C

CORE BEGAN @ 335' (Tmb)

335-360.5 Chocolate FGT w/ 3-4% pyrite replaced hornblende phenos 1-2mm long <1mm wide, some have been replaced by white clay. 2 prominent vein sets - which actually may be a part of the same pulse.
1) ±1mm qtz encapsulated pyrite veins
2) 2-10 mm veins w/ druzy qtz lining w/ xtaline py replaced mc ; very weak if any Kaolin coat.

(Tmb)

360.5-427.7 Chocolate C2C - heterolithic lithic lapilli tuff - clast supported. Lithics range from 2mm to 35mm on the average which are rounded to subangular. Clasts are predom a fine gr to flo banded tuff m-s argillic alt ; bl. Others are poss. pumice frags w/ s alt. Clast vary in color from buff, peach/tan, green, gray, white. Matrix is a mix of fine tuff, SiO2 ; local green clay.
Weak veining (1) ±1mm qtz py ±clay vns
(2) coarse 3-70 mm druzy qtz - locally frothy texture w/ some mixed white clay - vuggy w/ Kaolinite + mc replaced by pyrite

392.7-393.3 slight ↑ perv. argillic clay alt ; bleaching

ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
361.4-366	.004	.003	.06		
366-372	.002		.08		
372-377	.003		.06		
377-382	.003		.06		
382-387	.001		.05		
387-392	.002		.06		
392-397	.015	.014	.08		

ROSEBUD PROJECT

HOLE NO. RL-263C LOGGED BY KLK DATE 5-8-92 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
7											
8	400	92	vn ∡ diff to determine due to massive xk flooding		2-3% diss tvn pyt mc		mbl w-m ↑ w/in clasts local SiO2 flood xk	tan green buff	2-±70 mm mc ± clay vns	rid led thru out.	82
		103									92
9	410		±20° ; 50°-80° qtz py vns				wbl wm wm glaucoite		1-3 mm qtz py ± clay vns	1-3 vns/ft	
10	420	98									96
11	430	100	40°-50° bedding		±1% diss tvn mc ± py		ms bl wm x w	lt white green	10-30 mm open vuggy ↑ qtz mc vns	~2/10'	95
12	440	100	30-60° vein ∡'s								98
13	450	100					wbl w mxx	deep sea blue green	fine <1-4 mm hairline qtz py stkwk	1-5/ft ? +	100
14	460	97					ms bl w x w	med white green			97

DESCRIPTION

360.5-427.7 C_2C

427.7-618.3 Bedded Bud

395-427.7 C_2C as described above

393.3-410 Increased stockwork vuggy-frothy druzy qtz veining w/ py replaced mc xtals ; trace white kaolinite. This veining is riddled throughout - as flooding local intermittent zones of ↑ argillic alt w/in interstices of xk

410-427.7 Decrease in overall veining ; especially ~~tttt~~ vuggy mc vns. Predom ± 1mm qtz py ± clay vns

427.7-618.3 Bedded Bud @ 40° to CA

427.7-462 Bud is pervasively bleached ; weakly silicified. Predom clay matrix rich. Clasts range from 1-4mm ; are rounded to sub rounded. Bedding appears to be 40-50° to CA. Clasts are predom. bl white ; clay alt. matrix is lt. green, clay rich ; weakly silicified. weak veining throughout
① fine hairline qtz ± py xk 1-4 mm
② predom 10-30 mm druzy qtz lined vuggy w/ mc xtals - py replaced. w/ virtually no clay fill.

451-454 Increased deep sea - bluegreen glauconitic ? alt. ; m ↑ pervasive silicification.

ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
	continued				
397-402	.002		.15		
402-407	.002		.16		
407-412	.001		.10		
453-458	.001		.04		

continued on next sht

ROSEBUD PROJECT

HOLE NO. RL-263C LOGGED BY KLK DATE 5-8-92 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
15		97			±2% diss +vn mc py		ms glauconite tr bl w mxx	deep sea blue green	2-40 mm ++++ uuggy qtz mc vns 0-90°	w/ ft ; locally flood of xk	97
		93	0-90° ++++ xk								88
16	470	100									100
	480										
17		100	0-50° vns predom		2-3% @↑		ms bl w mxx	lt white green	1-20 mm ++++ mc vns	2-3/ft	100
18	490	105	30°-40° bedding; 40-50° + 0-10° ++++ mc vns		±2% @↑		ms s glauconite	deep sea blue green	2-10 mm ++++ qtz mc ± clay vns	3-5 vns/ft	98
19	500	100									95
20	510	100	40-70° ++++ mc vns		2-3% diss +vn py + mc		mbl mxx w/ of clasts; ms bl msxx	deep blue green + tr grn; lt white green	++++ qtz mc ± clay vns; 2-30 mm widths	1-2/ft	103
21	520	100									
22		100	±40° bedding				ms xx str glauconite	deep blue green			96

DESCRIPTION

427.7 - 618.3 Bedded Bud

462 - 482.8 BUD - coarser clasted of same composition, ranging up to 30mm more clasts are bl ; eaten out clay altered, ; locally lt green. matrix is perv. deep sea - blue green. Increased riddling of uuggy druzy qtz uns w/ xtalline mc + trace clay. → Appears locally as a flooding of stockwork veining w/ local secondary brecciation w/ xk SiO2 matrix w/ inter. mittent clay zones. Local open uugs to 40 mm, weak local clay fill to tr

482.8 - 488.8 Lt. white green Bud finer clasted 1-6 mm max - white clay alt lithics matrix is clay rich ; perv. silicified. weak veining: druzy qtz - uuggy to encap. py replac mc weak local clay fill or SiO2 - clay mix.

488.8 - 507.1 Very deep sea green (blue-green) Bedded Bud - matrix supported - bedding @ 30-40° to CA. Intermittently slightly wispy. Most clasts are white alt ; EATEN OUT. - 1-15mm average Veining is same @ above: ++++ qtz mc ± clay matrix is strongly glauconitic rich clayp.

507.1 - 525 Bedded Bud - clast sizes are more variable - from fine to 30 mm. Intermittenty bleached ; m - ms perv xx predom matrix supported. locally wispy. weak druzy uuggy qtz lined uns w/ mc xtal fill ± clay only locally.

ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
459-463	.005		.02		
463-468	.001		.04		
468-473	.002		.05		
473-478	.002		.06		
478-483	.003		.06		
483-488	.006		.05		
488-493	.017	.019	.10		
510-515	.012		.08		
515-520	.006		.05		
520-525	.001		.03		

ROSEBUD PROJECT

HOLE NO. RL-263C LOGGED BY KLK DATE 5-8-92 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		100	10-35° tr qtz clay mc uns		2-3% diss tun py tmc		w-m bl wm poss wx m-ms glaucomite	bl white + green lk tan	1-15 mm tr qtz w/ clay mc fill	2-3/ft	96
	530	91									74
23		100									91
	540		0-40° tr qtz mc clay uns		2-3% @		ms bl mxx w glauc; w bl m glauco w mxx; ms bl mxx	buff w/ vuggy qtz; med blue green; buff green	fine xk; tr qtz clay py mc uns	un-count able; 2-4/ft	96
24		102									
	550		20-50° tr qtz clay mc py uns		±3% diss tun mc tpy		w bl ms glauco mw	blue green w/ local veg buff flo text	2-5 mm tr qtz clay py mc uns	3-7 uns/ft	
25		96					w mbl w glauco wm				77
	560								1-3 mm chalced py uns		
26		103									100
27	570	98					wbl sglauco m		±10 mm micro uno		94
29	580	78					ms bl wm mx glauco				48
		100					m-ms bl s wm glauco				80
		107									0
29	590	108					w bl m mglauco				103

DESCRIPTION

427.7 - 618.3 Bedded Bud

526-540 Coarsely clastic volc. bxa Bedded Bud ranging up to 80 mm - clast supported locally clasts are eaten out clay alt. predom green glauconitic clayrich matrix. Increase in coarse veining w/ druzy qtz lining, clay + mc fill + py

540-547.5 Bud - matrix rich, peruasive SiO2 flooding w/ intermittent clay alt' clasts - eaten out, Local ms bleaching, flo texture or bedding 50-60° to CA. matrix is glaucon rich; locally bleached out. Prominent druzy qtz-lined vuggy veins filled w/ pyrite replaced mc + weak Kaolinite ± py veins are peru. filled; locally open to 10 mm.

547.5-598 Bedded Bud - predom matrix - green glauconite supported; intermittent local clast supported clast are lt green to white clay altered; range from 1-20 mm on the average. Bedding averages 50-60° to CA. Intermittent SiO2 flooding. 3 predominant phases of veining: 1) 2-5 mm druzy qtz lined, locally vuggy uns w/ white Kaolinite + mc ± py fill 2) 1-3 mm opaque chalcedony - white to blue w/ local stringers of pyrite 3) very few ± 10 mm micro breccia veins w/ fine blebs of pyrite

572.5-574 ↑ silica flooding

576.5-583.5 increase peru. argillic alt. w/ local rubble

584.5-585 lt gray clay gouge this is @ the beginning of a run - ? fall out

ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
525-530	.002		.08		
530-534	.001		.10		
534-539	.003	.003	.09		
539-544	.011		.09		
544-549	.003		.06		
549-553	.003		.06		
553-556	.002		.03		
556-556.7	.005		.10		
556.7-561	.002		.05		
561-566	.002		.06		
566-571	.002	.002	.04		
571-576	.003		.07		
576-583	.002		.05		
583-588	.002		.06		

ROSEBUD PROJECT

HOLE NO. RL-263C LOGGED BY KLK DATE 5-92 PAGE 5 OF 8

BOX #	DEPTH (FT)	RECOVERY	STRUCTURE: FLOW + VEIN & + BEDDING	STRUCTURE: FAULTS	% METALLICS	GRAPHIC LOG	ALTERATION	COLOR	VEIN TYPES /WIDTHS	VEINS PER FOOT	RQD
29		106	20-50° fine qtz mc vns		±3% diss tun mct py		wbl m~ m glauc	blue gun tbuff	describ @ above	5-7 vns/ft	92
30		97	30-40° fine py vns		±3% @ above		ms bl ms wm glauconite	Lt sage grn	1-4mm qtz-py ±clay vns	3-6 vns/ft	97
	600	33									93
31		91	net work of (Δ) Xk				ms bl w~ ms XX wm glauc				91
	610	75		15° / 85°		15°					75
32											85
	620		40-60° qtz clay py vns		3-4% @ above	LBT	mbl wm glauc wm	mottled green blue gray buff	2-10 mm mixed SiO2 clay py vns	~10/ft fine Xk >50	
33		102	0-40° fine py qtz clay vns		±2% @		wm X		<1-2 mm SiO2 py vns	1-3 vns/ft	102
	630										
34		84	0-90° various Xk		3-4% mc+ py + dk gray sulf.		bl X		5-40 mm Xc+ micro Δ +sulf clay vns	5-8 vns/ft	84
35	640										
36		94	70-80° flo vs. bedding 10-90° Xk w/ micro Δ		~3% @ above		v.w bl ms glauc green w~ mXX	mod deep blue green	5-45 mm micro Δ Xk w/ py+SiO2 + clay + glauc.	5-25 vns/ft	71
	650										
37		102									102

DESCRIPTION

427.7 - 618.3 Bedded Bud

618.3 - 728.2 LBT

598-618.3 matrix supported Bedded Bud - lt green glauconite rich. Clasts are lt green to white to gray-tan ranging from 2-25 mm. Locally w/ spy @ ±60° (bedding?) 2 predom vein sets 1) 1-4 mm qtz encap. py vns ± clay 2) vein breccia - well silicified, SiO2 cemented. locally vuggy

602.4-604 intermittent clay gouge, clay cemented rubble

607-618.3 Silica flooded w/ a network of SiO2 intermittent stockwork vein brecciation - well silicified, does contain jurrassic frag. Intermittent eaten out, clay alt clasts.

dk grn chl frags poss. clay

w/ Jurrasic frag

618.3 - 728.2 LBT

618.3-643 mottled green & gray-buff LBT intermittently vesicular w/ lt ± med green chalcedonic ± clay fill ~3 stages of veining 1) Kaolinite + py ± SiO2 <1-2mm 2) druzy qtz encap. mc + py ± clay locally vuggy 2-6mm 3) 5-40mm chalc., local micro Δ Xk w/ white to lt green clasts, w/ local dark gray sulfide + mc ± py & local clay mix to Kaolinite fill, locally vuggy

643-663 Pseudo flo banded LBT - fine grained peru. blue-green w/ flo fract vns @ 70°-80° to CA w/ py ± SiO2 ± glauco ± clay lining ≤1mm, weak-m peru. silicification. Prominent veining consists of massive stockwork SiO2 veins locally w/ vuggy druzy qtz, matrix is intermittently a micro Δ w/ ±5mm laths of py, locally vugs are filled w/ white clay ± local glauconite & local chalcedony

ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
588-593	.002		.06		
593-598	.003		.05		
598-602	.003		.04		
602-605	.002		.04		
605-610	.001		.03		
610-615	.001	.001	.03		
615-618.3	.001		.03		
618.3-623	.003		.05		
623-628	.003		.05		
628-633	.004		.06		
633-638	.003		.09		
638-643	.003		.10		
643-648	.002		.08		
648-653	.003	.004	.09		

ROSEBUD PROJECT

HOLE NO. RL-263C 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
37	660	102	70-80° to vs bed; 10-90° XK		~3-4% @ above	LBT	v. wbl mglauc w mXX	med blue green	same @ above	same @	102
38	670	93	0-90° XK	30°	4-5% diss tvn mc tpy		w-mbl wX blue-grn; ms bl w glauc SXXX; sbl local X	peach grn; peach green	pure hydrotherm Δ w local 1-3mm SiO2 + py ± clay over print XK	pure Δ vn	43
39	680	96	83°	40			ms bl tr glauc SXXX; sbl; mbl mXX	peach pink tr local grn			67
40	690	107	50-80° pseudo flo vns fracts	70°	≤3% diss tvn py + mc		ms bl w w X to wmXX	lt-med peach w lt green fract selvages	±1mm flo fracts py glauc ±SiO2 clay ⊥ to vns	8-15 vns ft	58
41		103	30-50° vns ⊥ to flo						<1-4 mm glauc py clay SiO2 vns	1-3 ft	103
42	700	87	±20° XK SiO2 py clay glauc vns						3-7mm chalced SiO2 + py + clay vns	≤1 ft	72
		83	60-80° XK & clay SiO2 py	SRF							67
43	710	100	0-90° XΔ		±3% diss py ± mc		mbl SXXX	peach clasts white to lt sage grn matrix	All Δ vn		75
44	720	97	20° Δ vn						few ±20° qtz clay py vns	≤1 ft	77
		103									94

DESCRIPTION

SRF: 706-730.6

618.3-728.2 LBT

661-663 intermittently brecciated w peach matrix-tuffaceous ; green glauconitic clasts ; local perv. flooding mod stockwork of clay + py ; XK of blue-gray translucent chalced.

FAULT: 663-681.5 Hydrothermal Δ w local zones of argillized rubble. Peach Δ w rounded to sub angular clasts ranging from <1-30mm ; peach colored, locally w/ 3 stg Δ. ; short thru w SiO2 XK Clasts are a FGT to flo banded tuff. matrix is a SiO2 flooded micro Δ.- locally w green (lt.) chalcedonic expression. Few clasts are glauconitic. Locally over printed w drozy qtz vns locally vuggy w/ mc ; local tr. clay fill.

665.5-669 strongly argillic rubble w strong white clay, few XΔ intervals

676-676.7 same @ 665.5-669

677.3-679 " " " "

679-681.5 ↓ perv. Δ, becomes more XKΔ vns

681.5-706 Peach-Tan Pseudo flo banded fine grained LBT - flo ~ 50-80° to CA w fract vns along foliation w py-glaucon ± SiO2 ± clay fill. There are veins of similar compo which are perpendicular to flo fract veins. There are also veins ±20° of similar composition. 4 vein set is 3-7 mm chalcedony veins w local clay mix ; locally is a micro Δ ; local pods of soft white clay ; contains intermittent diss py-mc

@ 702' reduced to N core

SRF: 706-730.6

706-720 Hydrothermal Breccia Vein clast are peach FG to flo banded tuff w white selvages ± 1/8" along flo fracts. matrix is opaque white SiO2 to lt sage green-duck butter colored chalcedony. clasts are angular to rounded ranging from <1-50mm up to 4-5 stages of Δ locally @ 718.5 etc. Few cross cutting vuggy clay seams @ ±20° to CA Predom. matrix supported.

☆ poss. w/ few JR clasts

ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
653-658	.004		.09		
658-663	.06		.09		
663-666	.002		.05		
666-669	.002		.02		
669-674	.002		.04		
677-677.3	.002		.04		
677.3-679	.002		.04		
679-684	.002		.04		
684-689	.019	.019	.09		
689-694	.016		.12		
694-699	.003		.08		
699-702	.002		.08		
702-706	.007		.10		
706-711	.002		.03		
711-716	.002		.04		
716-721	.003		.06		

ROSEBUD PROJECT

HOLE NO. RL-263C 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
45		103	5-30° cross cutting vns	LBT 50°	±2% diss tvn py-mc		an glauco w bl ms XXX	green mtrx clasts peach tan white green black	1-4 mm SiO2 py-mc clay	2-4/ft	94
	730		0-15° vns	DT 50°	2-3% @↑		m bl s	Lt sage grn	1-3mm w/ py ± SiO2	±2/ft	
46		98		END OF SRF	2-3% diss tvn py w/ poss chalcopyrite		wm bl w poss w x	Lt sage grn	fine hair-line qtz py CaCO3 XK	>50/ft	73
47	740	97	0-90° fine CaCO3 XK						lt avg fract vns	±2/ft	95
48	750	99		30° w/ 60° slicks py CaCO3 + orange mineral					±1-2 mm CaCO3 py calcpy vns locally w/ dk gray sulfide poss v. fn py	≤1/ft	98
49	760	101					w bl w		≤1mm CaCO3 + py vns	5-20/ft or more	100
50	770	99	10-75° CaCO3 py vns								91
51	780	90	0-20° CaCO3 clay py vns						2-3 mm CaCO3 clay py vns	±1/ft	40
52		93									56

LBT: 618.3 - 728.2
SRF: 706 - 730.6
DT: 728.2 - 814

DESCRIPTION

720 - 728.2 Hydrothermal Δ w/ finer clasts ranging from <1-13mm; predom ≤1-5mm of FGT flobd tuff JR basement frags ie. more heterolithic than above XΔ. matrix is lt to medium green micro breccia. Probable H-5 stge Δ. Clasts are rounded to subrounded. Prob. verging on being more clast supported. clast colors: white, green, peach or black. Weak cross cutting vein set: 1-4mm - framed in lt green chalcedony w/ weak local clay fill + local xtaline mc-py.

728.2 - 814 DOZER Tuff contact @ 50° to CA

728.2 - 730.6 Dozer Tuff frags ranging <1-30 mm w/in lit sage green clay gouge. Locally w/ dark gray sulfide rich clay seams ~1-5mm Footwall gouge zone. Local micro Δ veins w/ intermittent SiO2 flooding - clasts are <1-3 mm rounded to subrounded At the contact there is a 10 mm black sulfide rich matrix Δ hosted in SiO2 w/ <1-4 mm DT subrounded clasts.

END OF SRF DESCRIP.

730.6 - 761 DT - pervasively tectonically brecciated w/ angular to subrounded clasts, w/in tuffaceous matrix which has ↑ argillic alt. (clay) locally w/in interstices of tectonic Δxa is CaCO3. Pervasively riddled w/ v. fine hairline stockwork of lt green (sage) clay + py ± CaCO3 ± SiO2 w/ local chalcopy. >50/ft. Later stage vein sets of 1) lt orange mineral assoc. w/ CaCO3 2) ±1mm CaCO3 ± qtz + py ± SiO2 + chalcopy.

ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
721-724	.003	.003	.05		
724-728.2	.005		.04		
728.2-730.6	.001		.06		
730.6-736	.001		.02		
736-743	.001		.02		
743-748	.001		.01		
748-753	.001		.02		
753-758	.001		.01		
758-763	.001		.01		
763-768	<		.01		
768-773	<		.01		
773-778	.001		.01		
778-783	.001		.01		

ROSEBUD PROJECT

HOLE NO. RL-263C 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
52	790	93	0-75° CaCO3 py uns		2-3% diss tvn py + chalc py ± mc	DT	w bl w ~	Lt sage grn	≤1mm CaCO3 py uns	5-10 / ft or more	56
53	800	99	0-20° CaCO3 clay py uns						2-3 mm CaCO3 py uns + clay	±1 / ft	57
54	810	86									42
55	814 TD.										

DESCRIPTION

728.2-814 DT

761-814 DT - weakly bleached FGT densely welded very fine grained. Shot through w/ fine hairline stockwork <1mm w/ CaCO3 + py ; questionable SiO2. @ 773' start to pick up vein set sub ll to CA 0-20° w/ 2-3 mm CaCO3 + py + clay ; poss. w/ mc.

This is typical Dozer.

@ 758' find ± 1mm pyrite replaced poss hornblende phenos. -

808-814 lots of brittle rubble due to mislatch. ; redrilling.

mislatch rubble

ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
783-788	.001		.01		
788-793	.001		.01		
793-798	.001		.01		
798-803	.001		.01		
803-808	.001	<	.02		
808-814	.001		.01		

GEOTECHNICAL LOG

PAGE A OF B

PROJECT: ROSEBUD LOCATION: GAP CAT LOGGED BY: KLK

HOLE NO.: RL-263C DIP: CORE SIZE: HQ DATE: 5-8-92

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
335	343	8'	8'	8'	3	100	100	.38	30-40°	planar rough 1-4mm locally open w/ druzy qtz lining
343	348	5'	5'	4.1'	0	100	82	0		343 - 343.9 clay gouge v. dense w/ .2' seam w/ sandy component
348	351.5	3.5'	4'	4'	0	114	114	0		
351.5	362	10.5'	10.3	10.3'	1	98	98	.09	70°	planar rough vuggy 2-4mm w/ druzy qtz lining
362	372	10'	8.9'	8.9'	0	89	89	0		361' C1C / C2C contact not significant in alt
372	382	10'	10'	9.8'	3	100	98	.40	45°	Rough - irregular w/ druzy qtz lining - vuggy
					1				20°	qtz healed - wk local clay fill
382	392.5	10.5'	9.4'	8.8'		90	84	.11		391.9 - 392.5 ↑ argillic alt - spun off - not a geotech weakness
					1				60°	rough - irregular vuggy druzy qtz lining
392.5	403	10.5	9.8'	8.6'		93	82	.20		@ 394-394.1 clay seam
					1				10°	rough irregular druzy qtz lined - open to outer part of core
					1				40°	" " " " " " " " "
										@ 401' ↑ ~ alt broke off no ↑ readable mechanical?
										401.6-402 rubble & clay frags
403	413	10'	10.3	9.2'	1	103	92	.09	30°	planar rough tight, weak clay coat
										403 - 405.3 3 breaks @ ~ 90° along druzy
										vuggy qtz uns rough irregular breaks most
										probably due to mechanical - handling
413	423	10'	9.9'	9.6'	1	99	96	.10	30°	planar rough tight weak clay coat
423	433	10'	9.9'	9.5'		99	95	.61		427.7' C1 / Bud contact @ 40° to CA
										The Bud from 427.7 - 495 is bleached & m
										silicified - competent
					1				40°	planar rough 2-3mm druzy qtz lined
					1				25°	planar " tr clay coating - tight
		w/in Bud →			4				40°	planar semi smooth tr clay no diff in alt from host
433	443	10'	10'	9.8'	1	100	98	.60	25°	curved rough tight weak clay coat
					4				70-80°	irregular w/ druzy qtz lining locally vuggy / vein
										is open to 22mm
443	453	10'	10'	10'	1	100	100	.10	30°	same @ irregular above but break prob due to mechan handling
453	463	10'	9.7'	9.7'	2	97	97	.31	40°	irregular druzy qtz lined vuggy & open spaced 2-11 mm
					1				25°	wavy smooth tight, tr clay coat

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: GAP CAT LOGGED BY: KLK

HOLE NO.: RL-263C DIP: CORE SIZE: HQ DATE: 5-8-92

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
463	471	8'	7.4'	7.0'	1	93	88	.54	40°	wavy smooth tight weak clay coat
					3				50-60°	planar rough 1-3mm weak clay coat relativ. tight
										470.6-471 ↑ argillic alt broke in 2 places
										prob. due to handling however is a zone of weakness
471	479.5	8.5'	8.5'	8.5'	2	100	100	.47	60°	rough planar tight 1-3mm druzy qtz lining
					1				15°	planar semi smooth tight tr clay coat
					1				70	planar rough tight druzy qtz lining
479.5	489.5	10'	10'	10'	2	100	100	.30	50°	planar roughtight " " "
					1				30°	planar very rough tight 1-4mm druzy qtz lined &
										filled w/ clay
489.5	500	10.5'	10.3'	10.3'	1	98	98	.19	20	planar rough - tight unaltered or filled
					1				80°	planar rough tight lined w/ druzy qtz + mc
500	510	10'	10'	9.5	1	100	95	.30	20°	phanar roughtight unaltered
					1				30°	planar to irregular 0-4mm w/ druzy qtz lining
										495-507 The Bud is more clay matrix
										rich - breaks are mechanical for most part
										very irregular & due to clay rich matrix
										502.3 - 502.8 clay rubble - not any more
										altered than the host.
					1				15-20°	planar rough open spaced w/ druzy qtz lining
510	518	8'	8.2'	8.2'	2	103	103	.37	25-30°	planar, very rough open spaced to exterior of
					1				50°	core to 30 mm, lined w/ druzy qtz + mc Xtals
518	528	10'	10'	9.6'	2	100	96	.50	35-40°	irregular vuggy to 25mm, lined w/ druzy qtz + Xtal mc
					1				45°	planar rough unalt - along bedding planar break
					1				20°	planar rough lined w/ druzy qtz followed by 4' rubble
					1				35°	planar semi rough tight lined w/ white clay & competent angular

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: GAP CAT LOGGED BY: KLK

HOLE NO.: RL-263C DIP: CORE SIZE: HQ DATE: 4-17-92

1	2	3	4	5	6	7	8	9	10	11
FROM (previous: 6.6')	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
528	535	7'	6.4'	5.2		91.4	74	0		528 - 618.3 Classic bedded Bud -
										characteristically matrix rich with soft
										gouge like green clay - can poke a pencil
										into, clasts are bleached tan to white clay
										altered to green w/ mod clay alteration, can be broken by hand
										Note: there are local zones with pervasive
										silicification intermittently; noted as follows
528	535	7'	6.4'	5.2	1	91.4	74	.31	60°	fracture/ 2-20mm open vuggy w/ marca, kaolin fill / Rough
					1				~5°	fract/ open ±10mm w/ white clay fill / rough
										533.2 - 535 broken rubble w/ m to S clay alt
535	540.5	5.5'	5.5'	5.0	3	100	91	.55	20-30°	Fract/ 10 to 20 mm open w/ clay fill / rough
										there are 2 other veins w/ same orientation; fill
540.5	550.5	10.0'	10.15'	9.55		101.5	96	.79		540.5 - 547.5 strong into mod str. perv. silicif. ; ms to
										m bleaching
					6				40-50°	fracts/ open s; up to 20mm w/ tint lining; w-m clay fill / rough
					2				5-20°	2 other veins exist w/ similar charact; fill
550.5	561	10.5'	10.1	8.1		96	77	.19		interval is weakly bleached; silicified
					2				30-35°	fract/ open max 5mm w/ druzy qtz lining; wk clay fill / rough
										1 other unbroken vein has similar character
										556 - 556.7 pure clay gouge
561	564	3'	3.1'	3'	4	103	100	1.29	±40°	fract/ tight weak druzy qtz lining; clay coating planar to
										547.5 - 578 Bud is w/m bleach; w-m silicified curved, rough
564	573	9'	8.8'	8.5'	5	98	94	.57	30-45°	fract. / tight w/ white clay coating druzy qtz lining planar smoothly undulat
573	583	10'	7.8'	4.8'		78	48	.51		574.1 - 574.3 broken rubble
					2				30-50°	fract / tight, clay coating / planar smooth
										578.4 - 583.1 s. clay cemented rubble; gouge
					2				15-20°	tight unaltered no coating undulating planar smooth
583	584.5	1.5	1.5	1.2		100	80	.67		str. clay alt - pervasively breaks along bedding
					1				25°	fract tight / clay coating / planar rough
584.5	586	1.5	1.6	0		106.7	0	0		585.4 - 585.6 } gray clay gouge
										584.5 - 585 }
586	590	4	4.3	4.1	1	107.5	103	.23	50°	fract / druzy qtz lining / planar rough

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: Gap Cat LOGGED BY: KLK

HOLE NO.: RL-263C DIP: CORE SIZE: HQ DATE: 4-17-92

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
590	595	5'	5.3	4.6'	2	106	92	.57	50° & 70°	tight fract / druzy qtz lining + clay / planar rough
					1				25°	" same @ ↑
595	601	6'	5.8'	5.8	0	97	97	0		
601	604	3'	3.4	2.8	0	33	93	0		602.4 - 603.7 pure dense clay gouge
604	611	7'	6.4'	6.4'		91	91			604 - 607.2 v. str. clay alt - poke pencil into
					1				45°	tight undulating w/ druzy qtz lining wk clay coat, rough
611	613	2'	1.5	1.5	0	75	75	.16		618.3 Bud / LBT contact
613	623	10'	10.0	8.5		100	85	.10		618.3 - 619.2 broken rubble poss mechan. derived
										619.8 - 620.1 clay + rubble
					1				90°	max ~ 20mm open fract, druzy qtz lined tr clay rough
623	633	10'	10.2'	10.2	3	102	102	.39	20-40°	tight, wk druzy qtz lining tr. clay coat planar rough
					1				55°	same @ above
633	643	10'	8.4	8.4	1	84	84	.24	50°	tight wk stain no fill / planar smooth
					1				80°	open fract up to 20-30 mm fract / open w-m clay partial fill, rough
643	653	10'	9.4	7.1		94	71	.21		643 - 644.2 Interm. broken rubble could be a mislatch
										646.- 648.2 ms argillically alt rubble
					1				50°	smooth planar unaltered joint us fract
					1				80-90°	fract 5-10 mm open weak-m clay coat to fill / rough
653	663	10'	10.2	10.2	2	102	102	.29	30° + 50°	fract tight wk clay coat open < 2mm / curved rough
					1				0-10°	fract open > 5mm w/ druzy qtz lining wk clay coat + mc / rough
										~ 4 veins - unfractured ; similar to above
663	670	7'	6.5'	3.0'		93	43	.77		663 - 665.5 strongly silica cemented Δ w/ few clay uno
					5				15-25°	fract undulating w/ rough surf ; w-m clay fill
										665.5 - 669 mixed XΔ rubble + clay cemented rubble
									60° - gouge	plus pure white clay gouge @ 669' @ 60° to ch / lower contact
670	680.5	10.5'	10.1	7'		96	67	.59		669 - 675.9 strongly SiO2 cemented Δ Intermittently
										w/ ms perv. silicif. inbetween
										675.9 - 676.3 str. clay alt rubble
										677 - 678.2 clay cemented rubble
					4				30-50°	fract / tight w-m clay lining + druzy qtz lining rough + planar + smooth + planar
					2				15-25°	fract un 2-4 mm open w/ white clay fill, planar rough to smooth

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: Gap Cat LOGGED BY: KLK

HOLE NO.: RL-263C DIP: CORE SIZE: HQ DATE: 4-17-92

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
680.5	685	4.5	4.8'	2.6	5	107	58	1.04	40-60°	appears to be along pseudo flo banded uns w/ clay fill
										tight ~<1-2 mm w/ clay lining
										681 - 681.4 broken rubble of ≤ silic. Δ w/ open spaced
										vuggy veins
685	693	8'	8.2'	8.2'	5	103	103	.73	20-60°	tight fract <2mm w/ wk clay lining + planar smooth planar rough
					1				± 80°	rough open wk clay fill fract
693	702	9'	7.8	6.5	9	87	72	1.28	50°	tight planar smooth wk clay film
					1				50°	planar rough w/ tight lining w/ wk clay coat
☆ Note @	702	reduced	from	HQ	to N	core				getting into wk altered Δ w/ X vein matrix
										these breaks correlate w/ clay film vein set
702	705	3	2.5	2'	1	83	67	1.2	≥5°	planar rough w/ wk clay ± qtz film <5mm
					2				30°	planar smooth wk clay film
705	707	2	2.	1.5		100	75	1.5		705 - 705.3 rubble w/ clay fract surfaces
					3				50-65°	planar, smooth <2mm tight weak clay coat
										706 - 728.1 SiO2 cemented hydrothermal
										Δ zone - compentent w/ few fracture zones
707	717.5	10.5	10.2	8.1	4	97	77	49	10°	tight planar rough <3mm w/ clay lining-coating
					1				≥5°	" " " " " "
717.5	727.5	10'	10.3	9.4	2	103	94	.19	30-35°	undulating - rough tight <5mm w/ clay coating
										720.2 - 720.6 rubble w/ X frags; clay coating
										poss. partially mechanically derived
727.5	738	10.5	10.3	7.7		98	73	.78		728.2 contact w/ dozer @ 48° to CA
										728.2 - 730.6 m to ms argillized to local clay
										cemented rubble @ 730.6 is 40° to CA
										overall breaks easily w/ hands
										731.2 - 731.25 gouge seam - broken
										732 - 732.5 broken rubble competent frags w/
										weak clay coat along fract surfaces
					2				20-30°	tight, planar, rough unaltered w/ local CaCO3 on
					6				50-65°	tight planar smooth weak clay coating - unalt.
738	748.5	10.5	10.2	10.0	4	97	95	.39	50-55°	tight <1-2 mm planar rough; / planar smooth w/
										weak clay coating

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: GAP CAT LOGGED BY: KLK

HOLE NO.: RL-263C DIP: CORE SIZE: N DATE: 4-18-92

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
748.5	758.5	10'	9.9	9.8	3	99	98	.40	±40°	planar smooth ≤1mm wk clay ± $CaCO_3$ coating
										753.4 - 753.9 ms-s lt green clay alt zone
									50°	↳ @ 50° to CA contact can break w/ hands
					1				50°	748.7 break @ ~50° 10-15 mm clay seam
										along a planar rough surface
758.5	768.5	10'	10.1	10.0	2	101	100	.30	60°	planar, smooth tight <1mm w/ weak
					1				30°	clay coating ± $CaCO_3$
										758.5 - 759 ↑ prev. argillic clay alt to moderate
768.5	779	10.5	10.4	9.6	7	99	91	.67	40-55°	planar smooth predom unaltered surfaces
										; locally weak clay coat - tight unopened fracts
										778 - 778.4 competent unalt. rubble w/ 1 gray
										clay seam ~10 mm wide
779	780	1'	0.9'	0.4'	2	90	40	4.4	40°	planar smooth tight unopen fract
					1				60°	unalt to weak local clay coating
					1				20°	planar rough unaltered tight fract
780	791	11'	10.2	6.2'		93	56	1.08		780 - 780.6 broken rubble w/ unalt fract surf + frags
					8				30-45°	planar smooth, tight unopen w/ weak clay coat to
					3				5-20°	planar rough tight unalt w/ local " " " unalt.
										785.5 - 791 Intermittent broken - coarse
										rubble relatively unaltered
791	801.5	10.5	10.4	6.0.	4	99	57	1.15	±5°	planar rough tight unopen, unalt to weak clay coat ≤1mm
					8				25-40°	planar smooth unopen - tight unalt tr clay
										801 - 801.5 coarse - rubble unalt brittle frags
801.5	814	12.5	10.7	5.2		86	42	1.03		801.5 - 814 Intermittent zones of .2 - .5 rubble
										of unalt. angular frags.
					6				± 30°	all predom planar rough, unaltered tight
					5				± 10°-20°	w/ wk local coating of clay ± $CaCO_3$
										The above interval - core run is
										busted up quite a bit - they had a
										mistatch ; had difficulty retrieving
										the core barrel - had to pull rods to
										get it.

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-Jun-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Page: 3
Copy: 1 of 2
Set : 2

Attn: Tim Kuhl
Project:

Received: 9-Jun-92 09:32

PO #:

Job: 921080R

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:

NA	: Not Analyzed

Job approved by:

Signed: Marie Hallmark
Marie Hallmark
Assistant Laboratory Manager

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

28-Apr-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Received: 23-Apr-92 16:44

Attn: Tim Kuhl
Project:

PO #:

Job: 92601R

Status: Final

Drill Core

Sample Id	Au FA/AA/AAS oz/ton	Au FA/AA oz/ton	Ag AA oz/ton
RL-263C 663 666	0.0024	NA	0.047
RL-263C 666 669	0.0018	NA	0.023
RL-263C 669 674	0.0024	NA	0.041
RL-263C 674 677.3	0.0019	NA	0.044
RL-263C 677.3 679	0.0019	NA	0.035
RL-263C 679 684	0.0016	NA	0.035
RL-263C 684 689	0.0187	0.0190	0.085
BL-067	0.0147	NA	NA
RL-263C 689 694	0.0159	NA	0.117
RL-263C ~~697~~ 699 694?	0.0030	NA	0.076
RL-263C 699 702	0.0034	NA	0.082
RL-263C 702 706	0.0073	NA	0.102
RL-263C 706 711	0.0019	NA	0.029
RL-263C 711 716	0.0020	NA	0.038
RL-263C 716 721	0.0033	NA	0.064
RL-263C 721 724	0.0032	0.0034	0.053
RL-263C 724 728.2	0.0049	NA	0.041
RL-263C 728.2 730.6	0.0010	NA	0.055
RL-263C 730.6 736	0.0011	NA	0.018
RL-263C 736 743	0.0008	NA	0.020
RL-263C 743 748	0.0007	NA	0.012
RL-263C 748 753	0.0012	NA	0.023
RL-263C 753 758	0.0007	NA	0.012
RL-263C 758 763	0.0006	NA	0.009
RL-263C 763 768	0.0001	0.0002	0.009
BL-068	0.0517	NA	NA
RL-263C 768 773	0.0002	NA	0.012
RL-263C 773 778	0.0010	NA	0.012
RL-263C 778 783	0.0009	NA	0.012
RL-263C 783 788	0.0006	NA	0.012

File

JUN 23 1992

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-Jun-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Page: 1
Copy: 1 of 2
Set : 1

Attn: Tim Kuhl
Project:

Received: 9-Jun-92 09:32

PO #:

Job: 921080R

Status: Final

Sample Type: Rock Chip

Sample Id	Au FA/AA/AAS oz/ton	Au FA/AA oz/ton	Ag AA oz/ton
RL-263C 110 115	0.0019	0.0020	0.041
BL-076	0.0466	NA	NA
RL-263C 115 120	0.0026	NA	0.047
RL-263C 120 125	0.0011	NA	0.041
RL-263C 125 130	0.0016	NA	0.076
RL-263C 130 135	0.0023	NA	0.088
RL-263C 135 140	0.0016	NA	0.050
RL-263C 140 145	0.0015	NA	0.058
RL-263C 145 150	0.0022	NA	0.055
RL-263C 150 155	0.0016	NA	0.041
RL-263C 155 160	0.0022	NA	0.038
RL-263C 160 165	0.0094	0.0117	0.038
RL-263C 165 170	0.0004	NA	0.012
RL-263C 170 175	0.0075	0.0091	0.029
RL-263C 175 180	0.0023	NA	0.058
RL-263C 180 185	0.0015	NA	0.041
RL-263C 185 190	0.0013	NA	0.032
RL-263C 190 195	0.0011	NA	0.029
RL-263C 195 200	0.0019	0.0019	0.029
BL-077	0.0505	NA	NA
RL-263C 200 205	0.0020	NA	0.038
RL-263C 205 210	0.0013	NA	0.035
RL-263C 210 215	0.0010	NA	0.029
RL-263C 215 220	0.0013	NA	0.029
RL-263C 220 225	0.0015	NA	0.041
RL-263C 225 230	0.0016	NA	0.047
RL-263C 230 235	0.0025	NA	0.050
RL-263C 235 240	0.0013	NA	0.026
RL-263C 240 245	0.0015	NA	0.035
RL-263C 245 250	0.0019	NA	0.047

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-Jun-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Attn: Tim Kuhl
Project:

PO #:

Received: 9-Jun-92 09:32

Job: 921080R

Status: Final

Sample Type: Rock Chip

Sample Id	Au FA/AA/AAS oz/ton	Au FA/AA oz/ton	Ag AA oz/ton
RL-263C 250 255	0.0029	NA	0.035
RL-263C 255 260	0.0017	NA	0.032
RL-263C 260 265	0.0015	NA	0.035
RL-263C 265 270	0.0015	NA	0.041
RL-263C 270 275	0.0034	NA	0.038
RL-263C 275 280	0.0018	NA	0.038
RL-263C 280 285	0.0016	0.0015	0.035
BL-078	0.0467	NA	NA
RL-263C 285 290	0.0095	0.0078	0.047
RL-263C 290 295	0.0022	NA	0.035
RL-263C 295 300	0.0012	NA	0.044
RL-263C 300 305	0.0037	NA	0.047
RL-263C 305 310	0.0026	NA	0.076
RL-263C 310 315	0.0028	NA	0.082
RL-263C 315 320	0.0107	0.0122	0.067
RL-263C 320 325	0.0047	NA	0.053
RL-263C 325 330	0.0021	NA	0.058
RL-263C 330 335	0.0015	NA	0.023

File

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

28-Apr-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Page: 1
Copy: 1 of 3
Set : 1

Received: 23-Apr-92 16:44

Attn: Tim Kuhl
Project:

PO #:

Job: 92601R

Status: Final

Drill Core

Sample Id	Au FA/AA/AAS oz/ton	Au FA/AA oz/ton	Ag AA oz/ton
RL-263C 534 539	0.0025	0.0028	0.088
Bl-065	0.0500	NA	NA
RL-263C 539 544	0.0105	NA	0.093
RL-263C 544 549	0.0031	NA	0.055
RL-263C 549 553	0.0034	NA	0.061
RL-263C 553 556	0.0021	NA	0.029
RL-263C 556 556.7	0.0048	NA	0.102
RL-263C 556.7 561	0.0019	NA	0.050
RL-263C 561 566	0.0018	NA	0.055
RL-263C 566 571	0.0017	0.0020	0.044
RL-263C 571 576	0.0030	NA	0.067
RL-263C 576 583	0.0024	NA	0.053
RL-263C 583 588	0.0021	NA	0.061
RL-263C 588 593	0.0022	NA	0.055
RL-263C 593 598	0.0028	NA	0.047
RL-263C 598 602	0.0029	NA	0.044
RL-263C 602 605	0.0018	NA	0.035
RL-263C 605 610	0.0012	NA	0.026
RL-263C 610 615	0.0009	0.0010	0.026
BL-066	0.0480	NA	NA
RL-263C 615 618.3	0.0011	NA	0.032
RL-263C 618.3 623	0.0034	NA	0.047
RL-263C 623 628	0.0025	NA	0.047
RL-263C 628 633	0.0036	NA	0.064
RL-263C 633 638	0.0028	NA	0.088
RL-263C 638 643	0.0032	NA	0.096
RL-263C 643 648	0.0022	NA	0.076
RL-263C 648 653	0.0032	0.0036	0.091
RL-263C 653 658	0.0044	NA	0.093
RL-263C 658 663	0.0064	NA	0.093

04. 28. 92 01:48 PM *Barringer Labs, Inc. P01

BARRINGER LABORATORIES INC.

15000 W. 6TH AVE., SUITE 300
GOLDEN, COLORADO 80401
PHONE: (303) 277-1697

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

28-Apr-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Received: 23-Apr-92 16:44

Attn: Tim Kuhl
Project:

PO #:

Job: 92601R

Status: Final

Drill Core

Sample Id	Au FA/AA/AAS oz/ton	Au FA/AA oz/ton	Ag AA oz/ton
RL-263C 663 666	0.0024	NA	0.047
RL-263C 666 669	0.0018	NA	0.023
RL-263C 669 674	0.0024	NA	0.041
RL-263C 674 677.3	0.0019	NA	0.044
RL-263C 677.3 679	0.0019	NA	0.035
RL-263C 679 684	0.0016	NA	0.035
RL-263C 684 689	0.0187	0.0190	0.085
BL-067	0.0147	NA	NA
RL-263C 689 694	0.0159	NA	0.117
RL-263C ~~697~~ 694? 699	0.0030	NA	0.076
RL-263C 699 702	0.0034	NA	0.082
RL-263C 702 706	0.0073	NA	0.102
RL-263C 706 711	0.0019	NA	0.029
RL-263C 711 716	0.0020	NA	0.038
RL-263C 716 721	0.0033	NA	0.064
RL-263C 721 724	0.0032	0.0034	0.053
RL-263C 724 728.2	0.0049	NA	0.041
RL-263C 728.2 730.6	0.0010	NA	0.055
RL-263C 730.6 736	0.0011	NA	0.018
RL-263C 736 743	0.0008	NA	0.020
RL-263C 743 748	0.0007	NA	0.012
RL-263C 748 753	0.0012	NA	0.023
RL-263C 753 758	0.0007	NA	0.012
RL-263C 758 763	0.0006	NA	0.009
RL-263C 763 768	0.0001	0.0002	0.009
BL-068	0.0517	NA	NA
RL-263C 768 773	0.0002	NA	0.012
RL-263C 773 778	0.0010	NA	0.012
RL-263C 778 783	0.0009	NA	0.012
RL-263C 783 788	0.0006	NA	0.012

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

28-Apr-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Received: 23-Apr-92 16:44

Attn: Tim Kuhl
Project:

PO #:

Status: Final

Job: 92601R

Drill Core

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

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 → 868-87[illegible]
		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
921081	RL-267 200-205 → 220-225
921080	RL-263 285-290 → 330-335
921079	RL-262 105-110 → 120-125
921078	RL-270C 40-45 → 50-55
92990	RL-270C 167-171 → 442-446
92914	RL-270C TOSS
92913	RL-270C 823-828 → 853-858
92810	RL-275 75-80 → 125-130 175-180 → 230-235 325-330 → 395-400

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