60001255

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-17
AUTHOR	K. Kenner; R. Grondin
DATE OF DOC(S)	1989
MULTI_DIST Y / (N?) Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud Project; Lac Minerals (USA) Inc Environmental West Exploration
COMMODITY If not obvious	gold silver
NOTES	Drill log; geology; assay; total depth 605' handwritten notes 30 p.

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

SS: DD 5/19/08
Initials Date
DB: mah
Initials Date
SCANNED:
Initials Date

Revised: 1/22/08

DRILL LOGS RL-17
Rosebud

60001255 4010

60001255

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

DRILL LOG SUMMARY SHEET

PROJECT ROSEBUD

HOLE NUMBER RL-17 TOTAL DEPTH 605' / cored to 1065' LOGGED BY KLK

Date started 6-1-89

Date completed 6-3-89

Initial bearing S~~W~~36~~W~~E

Initial inclination -61°

Elevation 5275.4

Collar coordinates:

N 2204370.

E 4818035.

Contractor: ENVIORNMENTAL WEST EXPLOR

Drill Type: Reverse Circulation

Hole Size: 5 1/2" hammer

Drilling Conditions: good

Footage: Wet / Dry 0-405 - Dry

405-410 went wet 220' 1st drop H_2O hit real H_2O @ 560'

Comments: 220' 2 drops/minute H_2O staying dry and drying out hole @ 245-250 got poor recovery, went to H_2O in 405-410

@ 605' ended hole - H_2O pressure rising

poll alteration not favorable

→ propylitic - for tertiary mineralization

DOWN HOLE SURVEY INFORMATION

FROM	TO	SURVEY POINT	INCLINATION	BEARING	X (Northing)	Y (Easting)	Z (Elevation)
0	50		-61	S36E			
50	200	100'	-62.5°	S39E			
200	450	300	-66°	S37E			
450	650	600	-70.5°	S36E			
650	800	700	-71°	S34E			
800	982.5	900	-71.5°	S30E			
982.5	1065	1065'	-71.5°	S33E			

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RL-17 PAGE 1 OF 12

Depth	RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	GRAPHIC ALT	ALTERATION ARGILLIC W M S	SILICIFICATION W M S	PROPYLLITIC W M S	COLOR FINES	MINERALIZATION LIMONITE W M S	HEMATITE W M S	JAROSITE W M S	% SULFIDES	OTHER COMMENTS	ANALYSES Au	Au V	Ag	As	Hg	Sb	Se
0-	MODERATE	Multicolored: green, golden ora, burgundy, buff fine ev tuff pervasively argillically altered intermittent zones of pervasive silicification w few clay alt lithics, wk green waxy clay, wk fine qtz stkwk, wk druzy qtz vns local Δ iation		X X K				CREAM				<1% diss + FeOx replac Py	wk goethite	.001		<.1				
5-																				
	"	same; predom lt sage green w/ str argillic alt		X X K				Lt cream green				"		<.001		.13				
10-																				
	"	same w/ mod str lt green clay		X X K				"				"		<.001		.12				
15-																				
	GOOD	same w/ slight ↑ perv. argillic alt wk calcedonic SiO_2 tr lt cherry red clay		X X K				Orange + green				"		<.001		.10				
20-																				
	"	same w/ ↑ pervasive SiO_2 + per. limonitic clay tr red orange clay brecciated micro vns poss a tuff fragmental		XX X K				"				" ?		.001		<.1				
25-																				
	"	same ↑ pervasive limonite ↑ perv. SiO_2 mod lt sage green hard waxy clay w/ goethite druzy qtz vns locally vuggy		XX X K				creamy lt gr + orange			POSS	" ?		.002		<.1				
30-																				
	"	same w/ ↑↑ pervasive argillic alt wkly mod limonitic clay		X K				"				" —		.002		<.1				
35-																				
	"	same pervasively lt sage green weak limonitic clay, tr white clay few druzy vns						MUSTARD green				—		.001		<.1				
40-																				
	"	same pervasively deeper army green forest to olive green wk pervasive SiO_2 perv argillic tr lt green clay		X				"				—		<.001		<.1				
45-																				
	"	same @ 40-45 - deep forest green		X				"				—		.001		<.1				
50-																				

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PROJECT: ROSEBUD LOGGED BY: KLK HOLE NO. RL-17 PAGE 2 OF 12

Depth	RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	GRAPHIC ALT	ALTERATION: ARGILLIC (W M S)	ALTERATION: SILICIFICATION (W M S)	ALTERATION: PROPYLLITIC (W M S)	COLOR FINES	MINERALIZATION: LIMONITE (W M S)	MINERALIZATION: HEMATITE (W M S)	MINERALIZATION: JAROSITE (W M S)	% SULFIDES	OTHER COMMENTS	ANALYSES: Au	Au V	Ag	As	Hg	Sb	Se
50-	GOOD	Deep forest green strongly lithic to finely fragmental pervasive, broadly alt'd wk pervasive silicification lithics clast, a few fine limonitic frags tr whiteclay, few grainy frags		X tr				Lt GREEN				tr diss py		.005		<.1				
55-	"	same w/ trace limonitic frags		X				"				"		.002		<.1				
60-	"	same w/ few calcedonic, lt green vns		X Xc				"				"		.001		<.1				
65-	"	same v frag clay alt'd bleached w/ deep green mottling local wk strong + limonite		X Xk				"				"		<.001		<.1				
70-	"	same w/ ↑ pervasive limonite w/ few dark gray frags-perv. silicified few limonitic tr or tuff frags wk goethite		X Xk				green into tan wk'ly limonitic				"		.001		<.1				
75-	"	same fine grained tuffy + fragmental wk v. lt green clay tr limonite wk ↑ pervasive SiO2		Xx Xk				greenish tan				" tr fresh diss py		<.001		<.1				
80-	"	same w/ ↑ perva avg alt'd seamed frags ↑ perv. silicification tuffy + fragmental, few dark gray wk calcedonic vns		X Xk Xc				"				"		.001		<.1				
85-	"	same w/ few dark gray to black gossanous goethite seams		X Xk Xc				"				"		.001		<.1				
90-	"	same w/ fragmental + lithic tuff ↑ perv SiO2		X Xk Xc				"				"		.001		.10				
95-	"	same w/ ↑ pervs argillic alt wk goethite becoming more tuffaceous becoming lighter green few sericitic w/ perv. silicificat		Xk X				"				wk limon v + pk py		<.001		<.1				
100-																				

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PROJECT: ROSEBUD LOGGED BY: KLK HOLE NO. RC-7 PAGE 3 OF 12

Depth	RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	GRAPHIC ALT	ALTERATION: ARGILLIC (W M S)	ALTERATION: SILICIFICATION (W M S)	ALTERATION: PROPYLLITIC (W M S)	WHOLE FINES	MINERALIZATION: LIMONITE (W M S)	MINERALIZATION: HEMATITE (W M S)	MINERALIZATION: JAROSITE (W M S)	% SULFIDES	OTHER COMMENTS	ANALYSES: Au	Au ✓	Ag	As	Hg	Sb	Se
100-105	GOOD	medium warmy green fine grained tuffs weakly lithic pervasive argillic alt, wk to mod brown waxy hard clay, pos alt product, few fragmental seams wk intermittent limonite, wk tan clay, wk goethite + limonite veins, tr limonitic gossanous qtz vns		X v				green tan				tr relict limon replac py casts	trace barite	.002		<.1				
105-110	"	same + weakly pervasively silicified tr brownish red ore clay more olive green		X X v				"				"	"	<.001		<.1				
110-115	"	more olive green same w/ wk green SiO2 stkwk pervasive limonite, wk pervasive sil tr MnO2		X X X K X v				"				"	"	<.001		<.1				
115-120	"	same - more olive green same as 110-115' w/ perv. SiO2 wk limon + goethite ± MnO2 vns ↑ stkwk qtz		X X X c X K				"				"	"	<.001		<.1				
120-125	"	transition of same above into darker burgundy brown volcaniclastic predominant with few limonitic clasts, wk pervasive argillic alt		X X c X K				green tan into gray brown				wk fresh + wk limon replac py	—	<.001		.14				
125-130	MOD.	Dark gray brown volcaniclastic to tuffs pervasively silicified local siliceous deep brown & pale green calcedonic seams wk limonite seams v. wk argillic alt		X X X c				gray brown green				—		<.001		.76				
130-135	GOOD	Dk gray w/ deep sea green pervasive alteration mod hard fine grained tuffs wk qtz stkwk wk calcite vns few phenocrysts a dike?		X X X K ca				gray				<1% fine diss py		<.001		.13				
135-140	"	same w/ slightly more limonite v. weak argillic bleach locally		Y Y X K ca				"				<1% fine diss py		<.001		.17				
140-145	"	same w/ ↑ pervasive deep sea green w/ prominent volcaniclastic component ↓ stkwk qtz only tr		Y Y X K ca				deep green gray				"		<.001		<.1				
145-150	"	same w/ predom tuff component mod lt to med sea green waxy hard clay wk intermittent argillic alt wk calcite vns		X X X c ca				"				"		<.001		.10				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RL-17 PAGE 4 OF 12

Depth	RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	GRAPHIC ALT	ALTERATION ARGILLIC W M S	SILICIFICATION W M S	PROPYLLITIC W M S	COLOR FINES	MINERALIZATION LIMONITE W M S	HEMATITE W M S	JAROSITE W M S	% SULFIDES	OTHER COMMENTS	ANALYSES Au	Au V	Ag	As	Hg	Sb	Se
150	GOOD	Deep sea green volcaniclastic - fine bedded gray green to deep sea green pervasively silicified lt sage green waxy hard clay seams wk calcite veins clasts locally hemitic		XX ca				greenish gray				tr relict py casts		<.001		.10				
155	"	trunite hard waxy clay		X ca				"				"		.006		.21				
		same i predom deep sea green hard waxy clay (or just str arg alt)																		
160	"	same predom deep alfalfa green tuff? only ~ 20% deep gray hard frags v. strongly argillically alt		X ca				"				"		<.001		.16				
165	"	Deep alfalfa green hard waxy clay weak volcaniclastic dark gray frags wk white arg bleach well silicif. wk stkwk calcedony tr calcite vns		Wx Xcc				"				—		<.001		.27				
170	"	same w/ lt gray v. fine volcaniclastic wk med strong green calcedony stockwork & vug fill weak pervs. silicif. frk w/ FeOx frags		Xc X				"				1% very fine diss py		<.001		<.1				
175	"	wk argillic alt wk CaCO3 vns gray hemitic volcanitic (tuff?) pervs. deep green (alfalfa) weak green soft clay tr deep sea green hard waxy clay v fine flecks FeOx wk calcedonic stkwk		X Xc ca				"				"		<.001		<.1				
180	"	same - more str pervs. propyllitic green alt		X Xc ca				lt grayish green				" @ <1%		<.001		<.1				
185	"	same - pervs green wk pervs silicif wk pervs. argill alt		X Xc ca				"				" @ 1%		<.001		<.1				
190	"	same @ 185-190 w/ opaline wk ↑ pervs argillic alt vug fill		X Xc ca				"				"		<.001		<.1				
195		same @ 185-190 w/ wk ↑ argillic alt wk pyrite vns		Xc X Xc ca				"				" w/ wk py vns		<.001		<.1				
200																				

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PROJECT: ROSEBUD LOGGED BY: KLK HOLE NO. RL-17 PAGE 5 OF 12

Depth	RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	GRAPHIC ALT	ARGILLIC W M S	SILICIFICATION W M S	PROPYLLITIC W M S	COLOR FINES	LIMONITE W M S	HEMATITE W M S	JAROSITE W M S	% SULFIDES	OTHER COMMENTS	Au	Au V	Ag	As	Hg	Sb	Se
200	GOOD	mod dep olbaiba to sea green v. fine volcaniclastic weak pervasive silicification with perv. arg. bleach throughout clay w/ 1% coarse milky qtz vns fine green calcedony stwk, local py str vn v. fn gr		X Xc Xv				Lt gray to green				3% v. fine diss ± vn py	local py vns assoc w/ clays	<.001		<.1				
"		same w/ wk lt green white hard waxy clay veins & bull qtz vns		X Xo X				"				" @ 2-3%	"	.006		<.1				
"		same w/ weak opaline silica vug fill th white waxy clay & bull qtz vns ↑ v. fn gr py vns		X Xo Xc				"				" @ ~2% ↑ vn	"	<.001		<.1				
"		same w/ wk hard waxy clay vns w/ assoc. bladed sulfide!		X Xc				"				"	w/ wk bladed sulfide	.012		.15				
"		same w/ ↑ perv. silicification, tr druzy qtz vns w/ assoc white clay predom lt sage green beaker deep sea green wk fine qtz stwk, few SiO2 encap py vn		XX XX				"				" @ 2%	"	.013		<.1				
"		predom v. fine gr wk arg + silicif same predom sage green, wk druzies w/ wkly mod gray clay balls local weak blue green coloration	CLAY	X				GRAY				"	"	.003		<.1				
"		same @ 225-230 w/ mod strong lt gray clay balls + hard, lt green waxy clay (avg alt product) v. wk druzies	CLAY	X				"				" @ ≈2%	"	.005		<.1				
"		same @ 230-235 w/ wk gray clay balls predominantly lt sage green hard waxy clay	CLAY	X Xv				"				" @ 1-2%	"	<.001		.13				
"		tr tan siliceous finger frags same predom dep sea green w/ green calcedonic stwk, wk opaline SiO2 slight ↑ perv. SiO2, lt to med lt green waxy clay wk druzy qtz, tr blue green color		X Xc Xo				"				"		.001		<.1				
245	POOR	same dep sea green - hard waxy - dam brittle w/ fingers w/ wk qtz pyrite vns		Y				"				"		.002		<.1				
250																				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RL-17 PAGE 6 OF 12

Depth	RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	GRAPHIC ALT	ARGILLIC W	ARGILLIC M	ARGILLIC S	SILICIFICATION W	SILICIFICATION M	SILICIFICATION S	PROPYLLITIC W	PROPYLLITIC M	PROPYLLITIC S	COLOR FINES	LIMONITE W	LIMONITE M	LIMONITE S	HEMATITE W	HEMATITE M	HEMATITE S	JAROSITE W	JAROSITE M	JAROSITE S	% SULFIDES	OTHER COMMENTS	Au	Au ✓	Ag	As	Hg	Sb	Se
250	POOR	Deep sea green - possibly lithic tuff very strong pervasive argillic alt can break frag w/ fingers wk qtz-py veins phenos v. argillic wk white + gray clay few stained perv. silicif. wk gray clay		X v X										gray green										1-2% vn + fn diss py		.002		<.1				
255	MODERATE	Same w/ wk pervasive bleaching wk opaline silica ↑ perv silicif wk green calcedonic stkwk		X v X o X c										"										" @ 4%		.001		<.1				
260	"	Same w/ mod ↑ pervasive silicification w/ few gray frags few 30% encap py vns. tr druzies fine grained py clusters, py vns, tr CaCO3 vns wk green calcedonic stkwk		X X c										"										<1% diss + vn py		.034		.19				
265	"	Same w/ few bleached frags, tr gray clay w/ wk diss py, tr CaCO3 vns wk green calc. stkwk, wk perv. silic tr druzies few bleached frags		X X c										"										"		<.001		.10				
270	"	Same predom med age green tuff green waxy argillic alt few calcedonic seams w/ perv silic wk gray clay balls		X X c										"										"		.001		<.1				
275	"	Same @ 200-275 slight ↑ gray clay weak blue green coloration		X c X										"										"	w/ bladed sulfide	.001		<.1				
280	"	Same @ 200-275 very dup sea green becoming sorted w/ a fine fragmental w/ ↑ perv silicific xtals + lithics are clay alt		X X c X k										"										"	"	.003		.10				
285	"	Very clean green fine fragmental wk calcedonic stkwk, pervasively silicified ∆ clasts are clay alt		X X c X k										"										"	"	<.001		.16				
290	"	Same w/ ↓ propyl green - lighter		X X c X k										"										"	"	<.001		.24				
295	"	Same - very deep winter green w/ tr gray clay		X X c X k										dk green										<1% @ above	"	<.001		<.1				
300																																

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RL-17 PAGE 7 OF 12

Depth	RECOVERY	LITHOLOGIC DESCRIPTION (Bud Fragmental to Volcaniclastic)	GRAPHIC LOG	GRAPHIC ALT	ALTERATION: ARGILLIC W M S	SILICIFICATION W M S	PROPYLLITIC W M S	COLOR FINES	MINERALIZATION: LIMONITE W M S	HEMATITE W M S	JAROSITE W M S	% SULFIDES	OTHER COMMENTS	ANALYSES: Au	Au V	Ag	As	Hg	Sb	Se
300	GOOD	Deep sea green fine fragmental pervasively silicified fine grained component weak pen. propylitic alt wk lt green waxy hard clay wk calcite veins, wk green calcedonic silica		X Xck Ca				deep green				~1% fine diss kal vein PY	+ fine cluster	<.001		<.1				
305	"	Same w/ wk ↑ pen. silicification predominantly fine grained		X Xck Ca				"				"		<.001		<.1				
310	"	Same @ 305-310 w/ few dark gray sulfides veins		X Xck Ca				"				"		<.001		<.1				
315	"	Same @ 305-310 w/ few dark gray frags		X Xck Ca				"				"		.001		.14				
320	"	Dark chocolate brown volcaniclast, clasts are bleached to hemitite, limon w/ fine tuffaceous interbeds weak deep green propylitic alt to ons weak pervasive silicification, few lt gray silicif frags		X				brown				—		<.001		.10				
325	"	Same Relatively unalt volcaniclastic		XX				"				—		<.001		<.1				
330	"	Same Volc-clastic wk silicif, wk propyllitic green		XX				"				—		<.001		<.1				
335	"	Same w/ seams of mod argillic alt predom tuffaceous		X				"				—		<.001		.12				
340	"	Same w/ ↑ propy alt (green) wk calcedonic green silic. seams strong tuffaceous component wk hard waxy clay alt		X Xc				"				—		<.001		<.1				
345	"	Same w/ mod str hard lt green waxy clay		X Xc				"				—		<.001		<.1				
350																				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RL-17 PAGE 8 OF 12

Depth	RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	GRAPHIC ALT	ALTERATION: ARGILLIC (W M S)	ALTERATION: SILICIFICATION (W M S)	ALTERATION: PROPYLLITIC (W M S)	COLOR FINES	MINERALIZATION: LIMONITE (W M S)	MINERALIZATION: HEMATITE (W M S)	MINERALIZATION: JAROSITE (W M S)	% SULFIDES	OTHER COMMENTS	ANALYSES: Au	Au ✓	Ag	As	Hg	Sb	Se
350	GOOD	Dark green to gray to red burn Bud volcaniclastic v. weak perv. silicification wk green hard warpy clay alt wk calcite vns		X ca				deep green gray				–		<.001		<.1				
355	"	same		X ca				"				tr diss py		<.001		<.1				
360	"	same ↓ pervasive propyllitic alt more pervasive red burn		X ca				"				"		<.001		.17				
365	"	same w/ ↓ perv. propy wk green warpy argillic clay alt		X ca				"				"		<.001		<.1				
370	"	same w/ ↓ perv. propyllitic alt ↑ perv. silicification - red burn wk green warpy clay alt		X ca				Brown				"		<.001		<.1				
375	"	same w/ intermittent argillic alt in form of bleaching local relict flow banding		XX ca				green				"		<.001		.13				
380	"	same w/ predominant hard dk green warpy clay alt, weak white to lt gray clay alt, v. few more flesh colored frags		X ca				"				"		<.001		<.1				
385	"	same w/ few fleshy frags, v. few gray hard sulfidic frags, predominantly ↓ green hard warpy clay alt wk chalky clay		XX ca				"				<1% predom in gray frags		<.001		<.1				
390	"	same, predom sage green warpy hard clay alt wk chalky clay slight ↑ sulfide verns few flesh and gray hard silicified frags		X XX ca				"				~1% predom vns w/ wk diss		<.001		<.1				
395	"	same @ 390-395 w/ wk ↑ argillic alt wk ↑ gray clay		X XX				"				"		<.001		<.1				
400																				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RL-17 PAGE 9 OF 12

Depth	RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	GRAPHIC ALT	ALTERATION: ARGILLIC (W M S)	ALTERATION: SILICIFICATION (W M S)	ALTERATION: PROPYLLITIC (W M S)	COLOR FINES	MINERALIZATION: LIMONITE (W M S)	MINERALIZATION: HEMATITE (W M S)	MINERALIZATION: JAROSITE (W M S)	% SULFIDES	OTHER COMMENTS	ANALYSES: Au	Au ✓	Ag	As	Hg	Sb	Se
400	GOOD	Deep sea to yellow green to gray volcaniclastic (prim. dive. ab. alt.) alt by weak to mod gray clay, wk drusy qtz sulfide veins, wk chalcedonic stkwk, wk opaline qtz, mod green hard waxy clay alt, wk local perv SiO2	CLAY	X Xo Xck				green gray				~4% fine diss + SiO2 sulf vns	w/ wk bladed sulfide	.003		<.1				
405	"	Same w/ ↓ gray clay ↓ drusy qtz sulfide vns, wk pervasive SiO2		X Xck Xk				gray				" @ ~2%	"	<.001		.10				
410	"	Same w/ ↓ gray clay ↓ drusy + stkwk qtz vns, weakly perv. silicified		X Xck				"				"		<.001		<.1				
415	"	Same predominantly deep sea green propylitic alt, wk calcite vns, wk pervasive silicification, ↓ intense waxy clay alt, ↓ drusy + stkwk qtz vns		X Xck Ca				green				" @ ~1%		<.001		<.1				
420	"	Same - predominantly deep sea green propylitic alt, wk calcite vns, ↑ perv SiO2, ↓ waxy clay, ↓ drusy + stkwk qtz, wk opaline qtz		X Xo Xck Ca				"				"		<.001		<.1				
425	"	Same @ 420-425		X Xo Xck Ca				"				"		<.001		.15				
430	"	Same @ 420-425 w/ v. wk bleach		X Xck Ca				"				"		<.001		<.1				
435	"	Same @ 420-425 w/ wk pervasive bleach w/ ~2% finely cubic py cluster SiO2 veins w/ assoc propyllitic green alt		Xck X Ca				green to gray to green				~2% vn + wk diss py		.001		<.1				
440	"	Same @ 420-425 w/ wk perv. bleach w/ wkly mod drusy qtz sulfide veins tr calcite w/ py veins, wk blue green coloration		Xck X Ca				"				" or more		.002		<.1				
445	"	Same @ 420-425 only trace drusies becoming weakly unaltered gray brown color		X Xck Ca				"				"		<.001		<.1				
450																				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RL-17 PAGE 10 OF 12

Depth	RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	GRAPHIC ALT	ALTERATION: ARGILLIC (W M S)	ALTERATION: SILICIFICATION (W M S)	ALTERATION: PROPYLLITIC (W M S)	COLOR FINES	MINERALIZATION: LIMONITE (W M S)	MINERALIZATION: HEMATITE (W M S)	MINERALIZATION: JAROSITE (W M S)	% SULFIDES	OTHER COMMENTS	ANALYSES: Au	Au V	Ag	As	Hg	Sb	Se
450	GOOD	Dk sea green Bud Volcaniclastic very weak propylitic argillic alt, weak pervasive silicification, wk deep sea green to blue green alt, stockwork, wk opaline SiO2 veinlets, wk calcite vns, ↓ weak druzy qtz vns		X XCK Xo CA				GREEN				~1.5% fine diss + wk vn clusters PY		<.001		<.1				
455	"	same w/ ↓ druzy qtz vns		X XCK Xo CA				"				" @ 1%		<.001		<.1				
460	"	same w/ ↓ druzy qtz + stkwk qtz vns ↓ overall SiO2 veinwork, + white clay		X XCK Xo CA				"				<1% fine diss PY		<.001		<.1				
465	"	same w/ ↓ druzy qtz + stkwk qtz vns		X XCK Xo CA				"				"		<.001		<.1				
470	"	same w/ ↓↓ druzy + stkwk qtz vns		X XCK CA				"				"		<.001		<.1				
475	"	same Ø druzy + stkwk qtz		X XCK CA				"				"		<.001		<.1				
480	"	same " " "		X XCK CA				"				"		<.001		<.1				
485	"	same " " "		X XCK CA				"				"		<.001		<.1				
490	"	same " " "		X XCK CA				"				~1% fine diss PY		<.001		<.1				
495	"	same " " "		X XCK CA				"				"		<.001		<.1				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RL-17 PAGE 11 OF 12

Depth	RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	GRAPHIC ALT	ALTERATION: ARGILLIC (W M S)	ALTERATION: SILICIFICATION (W M S)	ALTERATION: PROPYLLITIC (W M S)	COLOR FINES	MINERALIZATION: LIMONITE (W M S)	MINERALIZATION: HEMATITE (W M S)	MINERALIZATION: JAROSITE (W M S)	% SULFIDES	OTHER COMMENTS	ANALYSES: Au	Au V	Ag	As	Hg	Sb	Se
500	GOOD	Deep sea green Rud volcaniclastic pervasive argillic alt weak pervasive SiO2 weak green calcedonic stockwork, wk calcite veining		~ X Xck Ca				GREEN				≤1% fine diss fine clusted UN py	CLUSTER	<.001		<.1				
505	"	same w/ tr white hard wavy clay		~ X Xck Ca				"				" @ 1-2% clusted	predom VNS	.001		<.1				
510	"	same w/ tr opaline silica tr white clay & tr py few SiO2 encap sulfide VNS		~ X Xck Ca tr				"				" @ 2-3% mpy		.013		.18				
515	"	same w/ weak intermittent tan coloration wk druzy qtz stwk → weakly limonitic		~ X Xk Xck Ca tr				"				" @ ~2%	w/ wk marcasite xtals	.002		.16				
520	"	same w/ weak limonite wk druzy qtz stwk locally encapsulating sulfide VNS & green calcedonic stwk		~ X Xk tr Xck Ca				"				"	"	.002		.12				
525	"	same - predominantly fine gr. tuffaceous ↑ pervasive silicification ↓ argillic alt thus deepen sea green to hard white clay tr limonite weak fine qtz stwk local deep green		~ XX Xk Ca				"				" @ ~1.5%		.001		<.1				
530	"	same v. weakly locally limonitic tr stwk druzy qtz, wk ↑ pervasive SiO2		~ X Xck Kk Ca				"				" @ 1-2%		.046		.24				
535	"	Very dark gray brown hard siliceous fine grained tuffaceous sill/dike weak hematitic veinlets, wk chl xtals tr CaCO3 VNS v. wk propy green alt		XX Ca				Brown				tr diss py		.001		<.1				
540	"	same @ 525-530 w/ wk white semi hard clay v. wk local argillic alt / deep sea green to brown v. wk stwk locally green		~ XX Xck Ca				GREEN				"		<.001		<.1				
545	"	same (alt 500-505 w/ weak limonite wk intermitent bleaching v. wk druzy VNS		~ X Xck tr Ca				"				~2% fine diss fine clusted py VNS	CLUSTER	<.001		<.1				
550																				

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION
						CORING BEGAN @ 605'
610	92		45/ Frac VN	±2% diss + buck shot + VN py		605-615 medium to pale green fine grained tuffs w/ intermittent weak pyroclastic weak tan coloration very weakly fractured w/ $CaCO_3$ + pyrite + local white clay alt
620	100	60/ Fo	65/ Shot py VN	±3% buck shot + VN + diss py		615-656 mixed tan and green fine grained tuffs locally brecciated w/ less local pyroclastic mod to strongly fractured w/ pyrite + kaolinite + lr green chlorite ± sericite + local $CaCO_3$ ± local drusy qtz w/ patchy disem. pyrite local grainy texture
630	90		py VN / 60			
640	100		45 py VN	±2% diss + VN + buck shot py		624.1 - 628.7 fault zone - w/ local clay gouge w/ intermittent broken rubble
650	100		40 py VN			636 - 639 minor fault - fresh broken rubble weak local clay gouge, pervasive medium bright green and bleached white fine grained tuffs
660	100		10 py VN / 90		gouge	644' - 2' lr green clay gouge seam
670	33		30/ Fo	3% diss + VN py		643 - 654 variably silicified
			55/ VN	±2% diss + VN py		652 - 653.2 hydrothermal breccia variably silicified w/ white clay alt & bleached clasts vuggy drusy qtz + pyrite rich frags in SiO_2 rich matrix
			50/ py VNS			656 - 671 mixed tan & green fine grained to gran wacke and banded tuffs weakly intermittently speckled due to preferential clay alt of feldspars weak fine pyrite veining
			35/ Fo			
			60 py VN			
		30-40° Fo	10 py VN			

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
605-612				.001	-.1
612-619				.002	-.1
619-624				.002	.17
624-629				.007	.18
629-634				.001	-.1
634-639				.001	-.1
639-644				.022	-.1
644-649.5				.026	-.1
649.5-654				.011	.31
654-660				.004	.25
660-666				.002	-.1
666-672				.005	-.1

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION	Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
	110	33/flo	85 py VN	±3% diss +VN py *		671-683 Spotted vesicular tuff w/ interbedded fine grained tuff mottled green and tan pervasively strongly fractured w/ pyrite local sericite; drusy qtz ± local* rodocrosite	672-677				.003	-.1
							677-680				.003	-.1
680	100	45/flo	50 / 75 py VNS / 38 45 py VNS			683-722.5 Predominantly tan (peach) and green alt which grades out w/ depth fine grained tuff w/ local foliation varying from 40°-60° to core axis, weak to moderate fracture veining throughout w/ pyrite sericite nontronite local drusy qtz and weakly riddled w/ buckshot pyrite ± rough hbr	680-685				.003	.17
							685-690				.002	-.1
690	70	20/flo	70 VN				690-695				.001	-.1
							695-700				.004	-.1
700	95	45/flo	55/fract			Faults: 693-694.8, 710-710.8, 718-720 } w/ mod clay gouge to pur. clay alt ± local sericite ± fine pyrite, local nontronite	700-705				.001	-.1
			40 py VN		gouge		705-710				.002	-.1
710			25 fract 5°			715-717 Broken rubble	710-717				.001	-.1
720	105	60/flo	60 60 py VNS				717-722.5				.001	-.1
		45/flo	30 spot VNS	2-3% finely diss py	4' tricone	722.5-733 Mottled medium gray and tan dense fine grained tuff, strongly pervasively silicified	722.5-726				.016	-.1
730	100	30/flo	10/spot VN	±3% diss black shot +VN py		733-748 Fine grained tuff weakly to mod bleached w/ weak green alt w/ mod strong concentrations along veins mod pervasive veining w/ pyrite, nontronite ± kaolinite	730-735				.005	-.1
740			py VN 50 / 65				735-740				.002	-.1

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
	100		SiO2+ py vns 15/55	2-3% diss +VN py		740 - 748 fine grained tuff continued @ above	740-745				.022	.21
750	98		60/VN 60/VN 65/VNS/35	±4% diss +VN +buck shot py	60/45	* 748 - 765 fine grained tuff, intermittently brecciated pervasive peach coloration w/ tuffy bleached and lt green color clasts ↑ perv. alteration moderate silica flooding intermittent hydrothermal brecciation w/ SiO2 rich matrix w/ fine disseminated sulfides w/ local sulfide rich clasts, mod to local mod strong fracturing w/ drusy qtz + pyrite ± local clay + lt green duch bleb sericite on soft wavy clay	745-750				.021	.12
							750-755				.054	.1
760	100	55/20/VN	25/SHEAR	±3% diss +VN +buck shot py			755-760.5				.025	.1
							760.5-765				.026	.1
						752-760 more or less pervasive fracturing and hydrothermal brecciation	765-770.5				.073	.23
770	95		50/35				770.5-775				.018	.22
						765-795 fine grained tuff pervasively tan w/ weakly green rimmed fracture veins filled w/ pyrite, nontronite, local clay, mod strong fracturing throughout 785.7 - 795 ↑ bleaching ↓ tan coloration	775-780				.117	.23
780	100		70	11 @ 4%	70		780-785.7				.099	.28
						780 - 785.7 fine grained tuff as above w/ strong intermittent vuggy brecciated faulted zone - pos. hydrothermal - w/ druzy vuggy qtz + white sericite + lt green duch bleb sericite on wavy clay - SiO2 rich matrix supported breccia	785.7-790				.054	.23
790	100		10/80/py vns	±3% diss +VN +buck shot py			790-795				.022	.21
			45/py vns/80	±2% diss +VN py			795-800				.007	.19
800	100		VNS 70 py			795 - 838.5 mixed fragmental + fine grained tuff w/ decreased perv. alteration and ↓ perv. veining, increased perv. green coloration	800-805				.004	.1
810	100						805-810				.003	.19

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION
820	100		PY VN 75/30	±2% diss +VN PY		810 - 838.5 mixed fragmental and tuff predom green ± tan, continued @ above w/ ↓ veining ; ↓ perv. alteration
830	100		75/5 PY VNS			
840	100		50 20 PY VNS			838.5 - 863.5 fine grained tuff predom green alt. w/ ↓ tan alt. weakly pervasively altered ↓ veining - w/ drusy qtz + pyrite + local $CaCO_3$ ± local nontronite (?) ± local clay alt
			20 $CaCO_3$ + PY VN			850 - 851 weakly brecciated
850	100		5° PY VN			
860	100		PY VN 5° 30 PY VN			863.5 - 942 Pervasive granular tuff ± local fine grained tuff - predom tan (peach) coloration, weak local green alt w/ in breccia matrix and fracture veins, increased veining and intermittent hydrothermal brecciation w/ fill: SiO_2, locally drusy, pale green waxy kaolinite clay, pyrite, local white sericite, local nontronite + local marcasite
				2-3% diss +VN PY		
870	100		PY VNS 60 5°		50°	
880	100		10 PS VN 50			867.5 - 869.5 broken rubble poss fault zone

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
810-815				.005	-.1
815-818				.003	-.1
818-823				.003	-.1
823-828				.005	-.1
828-833				-.001	-.1
833-838.5				.047	.17
838.5-843.5				.003	-.1
843.5-848.5				.007	-.1
848.5-853.5				.006	-.1
853.5-858				.003	-.1
858-863.5				.003	.21
863.5-868				.002	.25
868-873				.003	-.1
873-878				.005	.24

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION	Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
			30	2-3% diss + VN py ± local marcasite		880-942 Tam FGT + Granular tuff (continued) (fn speckled)	878-883				.001	-.1
						866-882 weak pervasive post drilling oxidation of kaolinite? clay alteration concentrated locally w/in veins and pervasively disseminated	883-888				.006	.14
890	100	50 py VN	60 VN				888-893				.004	.14
						882-883 moderate silicified hydrothermal breccia	893-898.5				.002	-.1
900	100		VN 15			893-903 pervasively brecciated variably silicified w/ rich local silica flooding matrix supported w/ SiO_2 + local lt green waxy kaolinite + fine diss pyrite ± local sericite w/ local vuggy drusy qtz sulfide vns	898.5-902				-.001	-.1
	100		py VN 30 48				902-907				.003	.12
910	95		70		70	910-915 pervasively silicified intermittent hydrothermal brecciation w/ silica flooding + oxidized clay (post drilling) local drusy-vuggy quartz sulfide veins + possible realgar	907-912				.006	.19
			70 fract VN				912-917				-.001	-.1
920	100		30 55 py VN				917-922				.002	-.1
			45 VN				922-927				.004	-.1
930	100		15 VN 15			-930' w/ silicified breccia seam	927-932				.002	-.1
			65 VNS 25				932-937				-.001	-.1
940							937-942				.001	-.1
	100			1-2% diss + VN py		942-952 fault zone - light green pyroclastic strongly pervasively clay altered fault gouge	942-947				-.001	-.1
950							947-952				.004	.17

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION
	100		80 wk sfract	1-2% diss + VN py local bladed sulfide		952-972 interlithic green breccia weakly pervasively bleached and weakly silicified, weak local ↑ bleaching, mod to mod strong pervasive clay alt
960	100		58 VN			962 - green pyroclastic changes into pink breccia
			5-7° sfract			
970	100		15° sfract	11 @ ±2%		10-15-90 Silicified breccia zone - poss silicif & lithic lapilli tuff or pure brecciated tuff silicif. FAULT RELATED
980	95		15° sfract 80 VN	±2% diss + VN py		972-977 light pink fine grained tuff - local brecciated increased pervasive bleaching possible fault zone, matrix rich where brecciated w/ lt green wavy clay fill + $CaCO_3$ + finely bladed sulfides, locally matrix w/ fine breccia, local clay gouge (weak)
			$CaCO_3$ VN	2-3% diss + VN py		977-1065 Pale green moderately to locally strongly bleached fine grained welded tuff - DOZER? local vuggy veins to moderate pervasive fine stockwork calcite; local pyrite
990	105		65 ΔVN	±2% diss + VN py		
1000	100		5-10° sfract VN			987.8-991 Intermittent silicified breccia zones matrix w/ mod strong SiO_2 + micro breccia fill and strong dark gray sulfides disem throughout w/ local concentrations in veins; as buckshot pyrite clasts are bleached fine grained dozer; intermittent moderate $CaCO_3$ veining; fill
1010	100		15° 15° py 60 VNS	2-3% diss + VN py		
1020			50 50 VN	±2% diss + VN py		1005-1012 strongly fractured and intermittently brecciated and variably silicified pyrite mineralized veins and subparallel to core axis mod strong $CaCO_3$ VNS 1010-1012 strongly broken

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
952-957				<	<
957-962				.004	<
962-967				<	<
967-972				<	<
972-977				.001	<
977-982				.003	<
982-987				.001	<
987-992				.001	<
992-997				.001	<
997-1002				.001	<
1002-1007				.002	<
1007-1012				.002	<
1012-1017				.001	<
1017-1022				.002	<

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERAL-IZATION	GRAPHIC LOG	DESCRIPTION
	100		py vns 62/65	±2% diss +vn py		1020-1065 Bleached Dacite Tuff (continued) weak to moderate fine stockwork $CaCO_3$ and pyrite throughout
1030	100		60/35 py vns			1033-1038.5 moderate increased fracturing resulting in broken rubble zone w/ local concentrations of kaolinite ± pyrite ± local $CaCO_3$
1040	95		32/15 fine vnlets			1040-1065 becoming finer grained less alteration, weak decrease in bleaching weak increase in grain size, weak increase pervasive fine $CaCO_3$ ± local pyrite vns
1050	100		52/ py vnlets 60			1048-1049.5 broken rubble w/ local clay gouge
1060	90		60/ py vn 42/ 65 py vn			
1065			$CaCO_3$ vn			T.D 1065'

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
1022-1027				.001	<
1027-1032				.002	<
1032-1037				.003	<
1037-1042				.002	<
1042-1047				.001	<
1047-1052				.002	<
1052-1057				<	<
1057-1065				<	<

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	Sample I.D.			Au o/t	Ag o/t
79	RD-16	20	25	<.001	<.10
80	RD-16	25	30	<.001	<.10
81	RD-16	30	35	<.001	<.10
82	RD-16	35	40	0.001	<.10
83	RD-16	40	45	0.001	<.10
84	RD-16	45	50	0.002	<.10
85	RD-16	50	55	0.001	<.10
86	RD-16	55	60	<.001	<.10
87	RD-16	60	65	0.001	<.10
88	RD-16	65	70	0.001	0.60
89	RD-16	70	75	<.001	<.10
90	RD-16	75	80	0.002	<.10
91	RD-16	80	85	<.001	<.10
92	RD-16	85	90	0.002	<.10
93	RD-16	90	95	0.002	<.10
94	RD-16	95	100	0.002	<.10
95	RD-16	100	105	<.001	<.10
96	RD-16	105	110	0.001	<.10
97	RD-16	110	115	0.001	<.10
98	RD-16	115	120	<.001	<.10
99	RD-16	120	125	0.001	<.10
100	RD-16	125	130	0.005	<.10
101	RD-16	130	135	0.001	<.10
102	RD-16	135	140	0.002	<.10
103	RD-16	140	145	0.002	<.10
104	RD-16	145	150	0.003	<.10
105	RD-16	150	155	<.001	<.10
106	RD-16	155	160	0.001	<.10
107	RD-16	160	165	<.001	<.10
108	RD-16	165	170	<.001	<.10
109	RD-16	170	175	<.001	<.10
110	RD-16	175	180	<.001	<.10
111	RD-16	180	185	<.001	<.10
112	RD-16	185	190	<.001	<.10
113	RD-16	190	195	<.001	<.10
114	RD-16	195	200	<.001	<.10
115	RD-16	210	215	<.001	<.10
116	RD-16	215	220	<.001	<.10
117	RD-16	235	240	<.001	<.10
118	RD-16	255	260	<.001	<.10
119	RD-16	275	280	<.001	<.10
120	RD-16	295	300	<.001	0.10
121	RL-17	0	5	0.001	<.10
122	RL-17	5	10	<.001	0.13
123	RL-17	10	15	<.001	0.12
124	RL-17	15	20	<.001	0.10

Sample I.D.				Au o/t	Ag o/t
125	RL-17	20	25	0.001	<.10
126	RL-17	25	30	0.002	<.10
127	RL-17	30	35	0.002	<.10
128	RL-17	35	40	0.001	<.10
129	RL-17	40	45	<.001	<.10
130	RL-17	45	50	0.001	<.10
131	RL-17	50	55	0.005	<.10
132	RL-17	55	60	0.002	<.10
133	RL-17	60	65	0.001	<.10
134	RL-17	65	70	<.001	<.10
135	RL-17	70	75	0.001	<.10
136	RL-17	75	80	<.001	<.10
137	RL-17	80	85	0.001	<.10
138	RL-17	85	90	0.001	<.10
139	RL-17	90	95	0.001	0.10
140	RL-17	95	100	<.001	<.10
141	RL-17	100	105	0.002	<.10
142	RL-17	105	110	<.001	<.10
143	RL-17	110	115	<.001	<.10
144	RL-17	115	120	<.001	<.10
145	RL-17	120	125	<.001	0.14
146	RL-17	125	130	<.001	0.76
147	RL-17	130	135	<.001	0.13
148	RL-17	135	140	<.001	0.19
149	RL-17	140	145	<.001	<.10
150	RL-17	145	150	<.001	0.10
151	RL-17	150	155	<.001	0.10
152	RL-17	155	160	0.006	0.21
153	RL-17	160	165	<.001	0.16
154	RL-17	165	170	<.001	0.27
155	RL-17	170	175	<.001	<.10
156	RL-17	175	180	<.001	<.10
157	RL-17	180	185	<.001	<.10
158	RL-17	185	190	<.001	<.10
159	RL-17	190	195	<.001	<.10
160	RL-17	195	200	<.001	<.10
161	RL-17	200	205	~~<.001~~	~~<.10~~
162	RL-17	205	210	0.006	<.10
163	RL-17	210	215	<.001	<.10
164	RL-17	215	220	0.012 } 10'c .013	0.15
165	RL-17	220	225	0.013 }	<.10
166	RL-17	225	230	~~0.003~~	~~<.10~~
167	RL-17	230	235	0.005	<.10
168	RL-17	235	240	<.001	0.13
169	RL-17	240	245	0.001	<.10
170	RL-17	245	250	0.002	<.10

Sample I.D.			Au o/t	Ag o/t
171	RL-17	250 255	0.002	<.10
172	RL-17	255 260	0.001	<.10
173	RL-17	260 265	0.034	0.19
174	RL-17	265 270	<.001	0.10
175	RL-17	270 275	0.001	<.10
176	RL-17	275 280	0.001	<.10
177	RL-17	280 285	0.003	0.10
178	RL-17	285 290	<.001	0.16
179	RL-17	290 295	<.001	0.24
180	RL-17	295 300	<.001	<.10
181	RL-17	300 305	<.001	<.10
182	RL-17	305 310	<.001	<.10
183	RL-17	310 315	<.001	<.10
184	RL-17	315 320	0.001	0.14
185	RL-17	320 325	<.001	0.10
186	RL-17	325 330	<.001	<.10
187	RL-17	330 335	<.001	<.10
188	RL-17	335 340	<.001	0.12
189	RL-17	340 345	<.001	<.10
190	RL-17	345 350	<.001	<.10
191	RL-17	350 355	<.001	<.10
192	RL-17	355 360	<.001	<.10
193	RL-17	360 365	<.001	0.17
194	RL-17	365 370	<.001	<.10
195	RL-17	370 375	<.001	<.10
196	RL-17	375 380	<.001	0.13
197	RL-17	380 385	<.001	<.10
198	RL-17	385 390	<.001	<.10
199	RL-17	390 395	<.001	<.10
200	RL-17	395 400	0.001	<.10
201	RL-17	400 405	0.003	<.10
202	RL-17	405 410	<.001	0.10
203	RL-17	410 415	<.001	<.10
204	RL-17	415 420	<.001	<.10
205	RL-17	420 425	<.001	<.10
206	RL-17	425 430	<.001	0.15
207	RL-17	430 435	<.001	<.10
208	RL-17	435 440	0.001	<.10
209	RL-17	440 445	0.002	<.10
210	RL-17	445 450	<.001	<.10
211	RL-17	450 455	<.001	<.10
212	RL-17	455 460	<.001	<.10
213	RL-17	460 465	<.001	<.10

This report reviewed and approved by:

Richard A. Grondin

Richard Grondin, Operations Manager

NEVADA GSI GEOCHEMICAL SERVICES, INC.

JUN 28 1989

GEOCHEMICAL ANALYSIS REPORT

June 23, 1989

Ms. Kristen Kenner
LAC Minerals, USA
1475 Greg St.
Sparks, Nv. 89431

Number of Samples: 114
Project: 615411
GSI Number: 4465
Analysis: Fire Assay for Gold, and Silver, with an A.A. finish.

	Sample I.D.			Au o/t	Ag o/t
1	RL-17	465	470	<.001	<.10
2	RL-17	470	475	<.001	<.10
3	RL-17	475	480	<.001	<.10
4	RL-17	480	485	<.001	<.10
5	RL-17	485	490	<.001	<.10
6	RL-17	490	495	<.001	<.10
7	RL-17	495	500	<.001	<.10
8	RL-17	500	505	<.001	<.10
9	RL-17	505	510	0.001	<.10
10	RL-17	510	515	0.013	0.18
11	RL-17	515	520	0.002	0.16
12	RL-17	520	525	0.002	0.12
13	RL-17	525	530	0.001	<.10
14	RL-17	530	535	0.046	0.24
15	RL-17	535	540	0.001	<.10
16	RL-17	540	545	<.001	<.10
17	RL-17	545	550	<.001	<.10
18	RL-17	550	555	<.001	<.10
19	RL-17	555	560	0.001	<.10
20	RL-17	560	565	0.007	0.21
21	RL-17	565	570	0.003	<.10
22	RL-17	570	575	0.005	<.10
23	RL-17	575	580	<.001	<.10
24	RL-17	580	585	<.001	<.10
25	RL-17	585	590	<.001	<.10
26	RL-17	590	595	<.001	0.13
27	RL-17	595	600	<.001	<.10
28	RL-17	600	605	0.003	<.10
29	RD-18	0	5	<.001	<.10

1498 Kleppe Lane • Sparks, Nevada 89431 • FAX: 702/359-6605 • 702/359-6600

NEVADA GSI

MAY 15 1990

GEOCHEMICAL ANALYSIS REPORT

May 10, 1990

Mr. Nate Brewer
Lac Minerals
1395 Greg Street #107
Sparks, NV 89431

Number of Samples: 68
Project #: URBD
GSI #: 7156
Analysis: Fire Assay for Gold and Silver, with an A.A. finish.

	Sample I.D.			Au o/t	Ag o/t
1	RL-17C	605	612	-0.001	-0.10
2	RL-17C	612	619	0.002	-0.10
3	RL-17C	619	624	0.002	0.17
4	RL-17C	624	629	0.007	0.18
5	RL-17C	629	634	0.001	-0.10
6	RL-17C	634	639	0.001	-0.10
7	RL-17C	639	644	0.022	-0.10
8	RL-17C	644	649.5	0.026	-0.10
9	RL-17C	649.5	654	0.011	0.31
10	RL-17C	654	660	0.004	0.25
11	RL-17C	660	666	0.002	-0.10
12	RL-17C	666	672	0.005	-0.10
13	RL-17C	672	677	0.003	-0.10
14	RL-17C	677	680	0.003	-0.10
15	RL-17C	680	685	0.003	0.17
16	RL-17C	685	690	0.002	-0.10
17	RL-17C	690	695	-0.001	-0.10
18	RL-17C	695	700	0.004	-0.10
19	RL-17C	700	705	0.001	-0.10
20	RL-17C	705	710	0.002	-0.10
21	RL-17C	710	717	0.001	-0.10
22	RL-17C	717	722	-0.001	-0.10
23	RL-17C	722.5	726	0.016	-0.10
24	RL-17C	730	735	0.005	-0.10
25	RL-17C	735	740	0.002	-0.10
26	RL-17C	740	745	0.022	0.21
27	RL-17C	745	750	0.021	0.12
28	RL-17C	750	755	0.054	-0.10
29	RL-17C	755	760	0.025	-0.10
30	RL-17C	760.5	765	0.026	-0.10

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	Sample I.D.			Au o/t	Ag o/t
31	RL-17C	765	770.5	0.073	0.23
32	RL-17C	770.5	775	0.018	0.22
33	RL-17C	775	780	0.117	0.23
34	RL-17C	780	785.7	0.099	0.28
35	RL-17C	785.7	790	0.054	0.23
36	RL-17C	790	795	0.022	0.21
37	RL-17C	795	800	0.007	0.19
38	RL-17C	800	805	0.004	-0.10
39	RL-17C	805	810	0.003	0.19
40	RL-17C	810	815	0.005	-0.10
41	RL-17C	815	818	0.003	-0.10
42	RL-17C	818	823	0.003	-0.10
43	RL-17C	823	828	0.005	-0.10
44	RL-17C	828	833	-0.001	-0.10
45	RL-17C	833	838.5	0.047	0.17
46	RL-17C	838.5	843.5	0.003	-0.10
47	RL-17C	843.5	848.5	0.007	-0.10
48	RL-17C	848.5	853.5	0.006	-0.10
49	RL-17C	853.5	858	0.003	-0.10
50	RL-17C	858.5	863.5	0.003	0.21
51	RL-17C	863.5	868	0.002	0.25
52	RL-17C	868	873	0.003	-0.10
53	RL-17C	873	878	0.005	0.24
54	RL-17C	878	883	0.001	-0.10
55	RL-17C	883	888	0.006	0.14
56	RL-17C	888	893	0.004	0.14
57	RL-17C	893	898.5	0.002	-0.10
58	RL-17C	898.5	902	-0.001	-0.10
59	RL-17C	902	907	0.003	0.12
60	RL-17C	907	912	0.006	0.19
61	RL-17C	912	917	-0.001	-0.10
62	RL-17C	917	922	0.002	-0.10
63	RL-17C	922	927	0.004	-0.10
64	RL-17C	927	932	0.002	-0.10
65	RL-17C	932	937	-0.001	-0.10
66	RL-17C	937	942	0.001	-0.10
67	RL-17C	942	947	-0.001	-0.10
68	RL-17C	947	952	0.004	0.17

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This report reviewed and approved by:

Richard A. Grondin

Richard Grondin, Operations Manager

NEVADA GSI

GEOCHEMICAL ANALYSIS REPORT

June 6, 1990

CUST. CODE: LOA
PROJECT: URBD
P.O. #: XXXX
LOT ID: 7294

GEOLOGIST: NATE BREWER
COPIES TO: SAME
COMPANY: LAC MINERALS
ANALYSIS: FIRE ASSAY FOR GOLD AND SILVER, WITH AN A.A. FINISH.

	SAMPLE I.D.			Au o/t	Ag o/t
1.	RL-17C	952	957	-0.001	-0.10
2.	RL-17C	957	962	0.004	-0.10
3.	RL-17C	962	967	-0.001	-0.10
4.	RL-17C	967	972	-0.001	-0.10
5.	RL-17C	972	977	0.001	-0.10
6.	RL-17C	977	982	0.003	-0.10
7.	RL-17C	982	987	0.001	-0.10
8.	RL-17C	987	992	0.001	-0.10
9.	RL-17C	992	997	0.001	-0.10
10.	RL-17C	997	1002	0.001	-0.10
11.	RL-17C	1002	1007	0.002	-0.10
12.	RL-17C	1007	1012	0.002	-0.10
13.	RL-17C	1012	1017	0.001	-0.10
14.	RL-17C	1017	1022	0.002	-0.10
15.	RL-17C	1022	1027	0.001	-0.10
16.	RL-17C	1027	1032	0.002	-0.10
17.	RL-17C	1032	1037	0.003	-0.10
18.	RL-17C	1037	1042	0.002	-0.10
19.	RL-17C	1042	1047	0.001	-0.10
20.	RL-17C	1047	1052	0.002	-0.10
21.	RL-17C	1052	1057	-0.001	-0.10
22.	RL-17C	1057	1065	-0.001	-0.10

THIS REPORT REVIEWED AND APPROVED BY:

Richard A. Grondin

RICHARD GRONDIN, LABORATORY MANAGER

1498 Kleppe Lane • Sparks, Nevada 89431 • FAX: 702/359-6605 • 702/359-6600

RL-17 Rotary

0-35 oxidized Bedded Bud
35-120 green bedded lithic lapilli tuff
120-130 burn gray green lithic lapilli
(looks similar to Cyndi's intrusive holes
130-170 green bedded bud
170-220 green mottled FGT
220-280 FGT w/ poss lithics local chicken pox
280-320 green bedded bud
320-375 burg brown; mixed green
bedded bud ± tuff beds
375-400 lr sage green bedded bud
400-535 mottled EGT
525-535 more blue green
poss ↑ SiO_2
535-545 gray intrusive
OR S
545-605 mottled lr green to flesh
FGT
545-565 mod str druzy qtz
sulfide veins
560-565 intense druzy
qtz pyrite replaced
marcasite xtals

10-15-90

RL-17C LOG SUMMARY

605 - 656 Volc bxa w FGT beds

624.1 - 628.7
636 - 639
644 - gouge
652 - 653.2

fault zone - broken rubble + clay gouge locally variably silicified

hydrothermal breccia

656 - 942 FGT

671 - 683 speckled

683 - 722.5 pseudo flow banding

693 - 694.8
710 - 710.8
718 - 720

minor faults

715 - 717 broken rubble

722.5 - 733 mottled

733 - 748 pervasive fracturing

748 - 765 intermittent brecciation

752 - 760 hydrothermal Δ

780 - 785.7 poss hydro Δ fault zone

* → 795 - 838.5 FGT + wk VOLC. bxa

863.5 - 942 granular + FGT intermittent hydroth Δ

866 - 882 oxidized (golden) clay

882 - 883 silicif hydro Δ

893 - 903 perv. brecciated + variably δ2

910 - 915 " " "

930' silic Δ seam

FAULT

942 - 952 Fault Rubble + clay gouge

952 - 972 hetrolithic - silicified fault poss. lithic lappilli tuff (bed bed?)

972 - 977 peach-flesh FGT w variable speckled preferential clay alt

977 - 1065 Darker FGT - upper portion - bleached fractured w/ ↓ w/ depth

RL-17 ROTARY - LOG SUMMARY

0-50 FINE GRAINED TUFF - WKLY LITHIC
(POSS. CHOCOLATE)

50-~100' Green Lithic Lapilli Tuff - bedded Bud
100-125 FGT grn + tan
125-225 Volcaniclastic - green + gray
225-240 Clay gouge - gray into sage green
240-285 FGT wkly lithic (vs. volc. bxa)
285-305 green lithic lapilli (bedded bud
305-605 Volcaniclastic - dk choco. brn.
poss. lithic lapilli vs. volc. bxa
305-375 brown fines
375-400 green
400-450 green to gray
450-TD green
535-545 dark gray brn hard

prev. drp sea green

* Bedded Bud vs. potential Intrusive breccia