60001256

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 RD-18
AUTHOR	K. Kenner; B. Bennett; G. Fechko; R. Grondin
DATE OF DOC(S)	1989 - 1997
MULTI_DIST Y / (N?) Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud Project; White Alps; Lac Minerals (USA) Inc Environmental West Exploration
COMMODITY If not obvious	gold silver
NOTES	Drill log; geology; assay; total depth 465' handwritten notes 19p.

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: mch
Initials Date
SCANNED:
Initials Date

Revised: 1/22/08

DRILL LOGS RD-18
Rosebud White Alps

60001256 4010

60001256

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

DRILL LOG SUMMARY SHEET

PROJECT ROSEBUD

HOLE NUMBER RD-18 TOTAL DEPTH 465' LOGGED BY KLK

Date started 6-4-89

Date completed 6-6-89

Initial bearing N 49 W

Initial inclination -61°

Elevation 6192.2

Collar coordinates:

N 2209229

E 477215.6

Contractor: ENVIRONMENTAL WEST EXPLOR

Drill Type: Reverse Circulation

Hole Size: Hammer 5 1/2"

Drilling Conditions: cave in - in a fault zones

Footage: Wet / Dry hit little moisture @ ~265'

drilled continually dry

Comments: 6-4-AM drillers stuck the rig, pipe truck; 4 wheel drive in mud, all we unstuckted; got onto pad; drilled 185', fault zone betw/ 280-295' & 305' upper fault zone caving in - had to blow out the hole

day 15

6-5 had to pull rods twice because of cave in - also lost circulation

above 6-6 AM cave in worse - had to pull out again. TD'd hole torque too bad, if were to reenter would have to pull 350' to clean out - then no gaurantee on footage in event of further cave in.

DOWN HOLE SURVEY INFORMATION

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

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PROJECT: ROSEBUD LOGGED BY: KLK HOLE NO. RD-18 PAGE 1 OF 10

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
0	POOR	Fine to granular weakly lithic tuff, periodically argillic w/ -brecciated, weak clay lithics and clay alt, pervasive weak FeOx limonite, very weakly silicified, few green chl. xtals, wk calcedony veins, tr Hbrng grains		X Xc P				Creamy orange				<1% FeOx replac PY		<.001		<.1				
5	"	Same w/ wh. red orange clay tr translucent qtz xtals		X Xc P				Lt creamy orange				"		<.001		<.1				
10	MODERATE	Same w/ weak red orange clay slightly ↑ perv. FeOx, v. wk stk wk qtz		X Xc PXk				Creamy orange				"		<.001		<.1				
15	"	Same w/ creamy component, tr red Org clay wk stk wk qtz wh. white hard waxy clay or alunite?)		X Xc Xk P				"				"		<.001		<.1				
20	"	Same w/ ↑ pervasive SiO2 ↓ perv lim w/ creamy (epidote) component wk hard white clay (pholvite?) wk stk wk qtz		XX Xc Xk P				"				<1% FeOx replac PY		<.001		<.1				
25	GOOD	Same w/ ↑ perv. SiO2 wk ↓ perv. FeOx trace lt creamy green clay tr few ch green grays		XX Xc Xk P				"				"	plus goethite in relict PY casts	<.001		<.1				
30	"	Same w/ ↑ perv. SiO2 + ↑ perv. FeOx strong granular component tr. hard white clay		XX Xc Xk P				"				"		<.001		<.1				
35	"	Same w/ ↑ perv. SiO2 ↑ perv. FeOx mod org to red org clay ~3% hard tr gr buff gray predom calcedonic qtz vns		XX Xc XK P				Red				"		<.001		<.1				
40	"	Same w/ ↑ perv. SiO2 ↑ calcedonic stwk wk drusy FeOx qtz vns wk limonitic clay predom lemon mustard wk red org clay		XX X cr +++				creamy yellow				"		<.001		<.1				
45	"	Same @ 40-45		XX Xcr +++				"				"	local goethite in relict PY casts	<.001		.56				
50																				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RD-18 PAGE 2 OF 16

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
50	GOOD	Golden peachy tinge on lithic tuff ± epiclastic mod pert. silicification pers argillic alt pert limonite, wh red orange clay wth hard white alunite ? (or clay ?) & calcedony stockwk tr fine hairline stwk		XX Xck Xk										creamy orange										WK FeOx replac PY casts		.002		<.1				
55	"	same w/ wk pers hematite also ↑ overall FeOx tr chl		XX Xck Xk										"										"		<.001		<.1				
60	"	same w/ ↑ overall FeOx + hematite tr chl		XX Xck Xk										Red orange										"		<.001		<.1				
65	"	same w/ ↓ overall FeOx only hint of hematite		XX Xck Xk										CREAM yellow org										"		<.001		<.1				
70	"	Interbedded clastic w/ fine gr well silicif tuff pers argillic alt ≤ butterscotch colored lithics + clastics - clay alt wh pers limon tr limon clay tr drusy qtz vns (may well be a volcaniclastic ?)		XX Xc HH										CREAM										tr FeOx replac PY		<.001		<.1				
75	"	Brown lithic tuff - lithics clay alt pervasively soft argillic alt, wh pers brown clay, tr local calcedony vug fill v. wh pers. sdr tr green phenos		Xc X										Brown										—		<.001		<.1				
80	"	same		Xc X										"										—		<.001		<.1				
85	"	same		Xc X										"										—		<.001		<.1				
90	"	same		Xc X										"										—		<.001		<.1				
95	"	same		Xc X										"										—		<.001		<.1				
100																																

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RO-18 PAGE 3 OF 10

Depth	RECOVERY	LITHOLOGIC DESCRIPTION (lithic tuff or volcaniclastic?)	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
100	GOOD	same @ 75-80 w/ v. strong clay alt	CLAY	Xc				Brown				–		<.001		<.1				
105	"	same @ 75-80 – ¾ predom all brown soft clay + wk white clay	CLAY					"				–		<.001		<.1				
110	"	same @ 75-80 w/ intense clay alt all brown w/ tr white tr grass green colored phnos	CLAY					"				–		<.001		<.1				
115	"	same @ 110-115	CLAY					"				–		<.001		<.1				
120	"	same @ 110-115 w/ mod soft white clay w/ wk perv. silicif. + tr grn locally	CLAY					"				–		<.001		<.1				
125	"	(same) Rusty brown tn gr tuff, pervasively silicified perv. argillic alt wk white clay veins + wk-tr yellow orange clay		X				"				–		<.001		<.1				
130	"	same @ 125-130 ; very weak moving into gray frags w/ tr calcite veins		X Ca				"				–		<.001		<.1				
135	"	volcaniclastic w/ tr brownish gray pervasive clay alt v. wkly silicif. tr calcite veins		X Ca				GRAY				–		<.001		<.1				
140	"	same		X Ca				"				–		<.001		<.1				
145	"	same tr white clay tr lt brn clay		X Ca				"				–		<.001		<.1				
150																				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RD-18 PAGE 4 OF 10

Depth	RECOVERY	LITHOLOGIC DESCRIPTION Bud Volcaniclastic ± fn fragmental	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
150	GOOD	mottled salt & pepper gray brn & white fine gr Volcaniclastic well hard blue green clay v. weakly silicified perv argillic w/ calcite veins		X Ca				Gray Brn				—		<.001		<.1				
155	"	same w/ slight ↑ perv silicif locally intermittent green propylic alt		X P Ca				Gray Brn into Green				<1% PY VNS		<.001		<.1				
160	"	same pervasively green w/ mod strong lt gray clay		X P Ca				Green				"		<.001		<.1				
165	"	same pervasively dark gray green mod calcite veins.		X P Ca				"				18+ diss PY		<.001		<.1				
170	"	same pervasively dep sea green argillic to dk brn silicif tuff ↑ perv SiO2 w/k-mod white clay		X P Ca				"				1-2% vn+ diss PY		<.001		<.1				
175	"	same pervasively med army green ↑ perv. clay alt - green based waxy w/k opal SiO2		X P Ca				"				"		<.001		<.1				
180	"	same perv. med army green w/k calcite vns, flecked w/ dk gray brn silicif frag lt gray tfrag w/k opaline SiO2		X P Ca				"				"		<.001		<.1				
185	"	same w/ perv prop argill alt lowly strong pink brn clayey w/ lt gray silicified frag w/ disp sulfides subhydrothermal fragmental		X P Ca				"				2-3% diss & vn clustered PY		<.001		<.1				
190	"	same @ 185-190 w/ slight ↑ propylitic alt becoming more finely fragmental		X P Ca				"				" @ ~3%		<.001		<.1				
195	"	same @ 185-19 w/ ↑ perv silicification w/ SiO2 rich gray tuff w/ mod diss sulf-PY more fragmental in nature w/k gr structure		X P Ca				"				" @ ~4-5%		<.001		<.1				
200																				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RD-18 PAGE 5 OF 10

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
200	GOOD	[illegible]		X H P				GREEN				2-4% fine diss + vn cluster py		<.001		<.1				
205	"	[illegible]		X H P				"				"		<.001		<.1				
210	"	[illegible]		X H P				"				"	w/ strong veining	<.001		<.1				
215	"	[illegible]		X H P				"				" 2-3%		<.001		<.1				
220	"	[illegible]		X H P				"				" ~2%		<.001		<.1				
225	"	[illegible]		X H P				"				" ~3%		<.001		<.1				
230	"	[illegible]		X H P				"				" 2-3%		<.001		<.1				
235	"	[illegible]		X H P				"				" ~2%		<.001		<.1				
240	"	[illegible]		X H P				"				"		<.001		<.1				
245	"	[illegible]		X H P				"				"		.14						
250																				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RD-18 PAGE 6 OF 10

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
250	GOOD	By 2 fine horizontal pervasively silicified mottled tr [illegible] grain trap bleached to clay alt w/ ↑silic + grain matrix w/some calcareous siliceous + v. fine pyrite perv. limonite + veins w/hairline stwk + tr white clay		XX Xc P				ORANGE				~2% fine diss + v. fine SiO2 ~1 vn		<.001		<.1				
255	"	Same – NOT oxidized pervasively bleached wk lt green ~5% dark brown burn siliceous sulfide rich seams wk white clay		XX Xc P				WHITE Green				"		<.001		<.1				
260	"	Same @ 250-255 → oxidized w/ lt gray tan volcaniclastic? frag w/v fine diss py v. wk fine stwk qtz		X Xk P				ORANGE				~2-3% v fine diss py		<.001		<.1				
265	"	Intense clay alt v fine fragmental, lt green strong white to lt gray clay w/ weak disp limonite, weak stwk SiO2 + fine sulfides		X Xv P				LT green				1-2% fine diss ± vn py		<.001		<.1				
270	"	Same @ 265-270 w/ wk opal silical vug fill (translucent lt blue) tan/gray burn wk perv silic frag		X P				"				2-3% fine diss + vn py		<.001		<.1				
275	"	wk stwk qtz Texture unidentifiable, interbedded white to gray siliceous sulfidic frag argillic frag w/ strongly limonitic frag tr deepazure blue mineral wk lt gray to limonitic clay		XX P Xk				ORANGE + gray				5% diss + vn py	plus bbeded sulfide	.031		3.25				
280	"	Well silicified gray fragmental w/ white clay sulfide in beds w/ weak local blue mineral calcitation weak stwk qtz weak drusy qtz hairline		XX Xk P				GRAY ↑				" 5-6%	"	.211		.49				
285	"	Dark brownish gray strongly pervasively silicified w/ fine perv sulfide - fractured - Fault zone w/ wk gray clay to lt blue white calcedony veins poss altered frag w/ white tr gypsum, wk stwk		XX Xc Xk P				" FAULT				up to 5% v fine diss + vn py	"	.005		.11				
290	"	Same w/ mod hard white clay		XX Xc Xk P				Lt gray white				"		.009		.17				
295	"	Mottled dk brown to whitish tan strong pervasive silicification w/ weak perv bleaching, preliminary clay beds exact texture unidentifiable wk stwk hairline qtz wk pervasive chl green seams		XX Xk P				Tan gray Burn ↓				@ 4-5% vn + fine diss		.002		.15				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RD-18 PAGE 7 OF 10

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
300	GOOD	Gray brown fine fragmental + fine grained tuffs well perv. silicified, fine argillic alt, alt frags (bleach ± clay) v. weak hairline stwk qtz. v. weak chl stamp to hem + clay alt fine tale		XXX Xc Xk P				Brownish gray				4-5% v fn diss + vn py	wk bladed sulfide	.004		<.1				
305	"	same w/ wk gray clay, locally hydrothermally brecciated, wk to argillic bleached frags		XXX Xc Xk P				"				"	"	.007		<.1				
310	"	same - pervasively gray to lt bleached coloration ↑ perv. argillic bleach ± clay alt (wk) wk gray clay very fine grained possible tuffaceous tuff? locally fragmental to flatted ↓ perv. alt SiO2		XX Xk P Xc				GRAY				" @ 3-4%	"	<.001		<.1				
315	"	same gray to gray brown ↑ pervasive argillic bleach fine fragmental w/ tuff comp tuffs is silicified wk ↑ propy grn somewhat brecciated		XX Xc Xk P				GRAY Brown				"		<.001		<.1				
320	"	same w/ ↓ perv. silicif. ↑ perv argillic alt ↑ propy green wk white clay mottled lt green gray, gray brown to weakly FeOx blush		Xc Xc Xk P				"				" @ ~3%		<.001		<.1				
325	"	Tan to blush color fragmental wk perv arg bleach wk hard white clay ? alunite? w/ tuffaceous component to brown red clay assoc w/ qtz wk perv. lim + v stwk		Xx Xc P				Tan				2-3% v fine diss + vn py		.001		<.1				
330	"	Interbedded well silicified gray to gray brown fine grained tuffs to finely white to lt green argillic bleach + clay alt frags - most finely fragmental lithics clay to FeOx alt trace fine stwk		XX Xc Xk P				gray				" @ ~3% to 4%		<.001		<.1				
335	"	same @ 330-335 w/ ↑ dark gray brown siliceous frags		XX Xc P				"				"		<.001		<.1				
340	"	same @ 330-335 ↑ green propy arg frags		XX Xk P				"				" @ ~3%		<.001		<.1				
345	"	same @ 330-335 ↑ perv. argillic + propy alt overall perv. silicified		XXX Xk P				"				" @ 3-4%	wk bladed sulf	.002 ~~.001~~		<.1				
350																				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RD-18 PAGE 8 OF 10

	RECOVERY	LITHOLOGIC DESCRIPTION Bud-fm fragmental	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 ✓	Ag	As	Hg	Sb	Se
350	GOOD	mottled med to brown and green tuffaceous fine fragmental & ignimbrite more well stratified silicified weak perv arg bleach tr sakuk qtz, dark frags - calcedonic		XXX Xc P				GRAY				~3% v fr tdiss + vn py	wk bladed sulf	.001		<.1				
355	"	same w/ tr tan clay, fragmental tuff more prominent		XXX Xc P				"				"	"	.003		<.1				
360	"	same grey tr sakuk, ar		XX Xc P				"				"	"	.004		<.1				
365	"	same - argillically alt frags w/ ↑clay alt interbedded w/ hard fm & frags w/ white clay hard silicified fm & frags may be kaolinite		XX Xc P				"				" @ 2-3%	"	.004		<.1				
370	"	same predom fragmental - strongly perv. silicified few tan frags tr tan clay		XXX Xc P				"				" @ 3%	w/ bladed sulf	.007		<.1				
375	"	same w/ perv. strong silicification bottom of interval - Fractured		XXX Xc P				"				" @ 3%	"	.008		<.1				
380	"	same str perv SiO2 v few opaque white semi soft arg alt frags w/ white translucent qtz vns tr white clay		XXX Xv Xc P				" FAULT				"	"	.006		<.1				
385	"	same - perv. well silicified w/ ~1' fracture zone, few soft lt white green clay alt frags tr limon clay		XXX Xc P				"				" @ 3-4%	"	.004		.17				
390	"	same w/ wk ↑ perv argillic alt		XXX Xc P				"				" @ ~3%	"	.003		<.1				
395	"	same w/ wk ↑ intermittent arg alt predom well silicified		XXX Xc P				"				"	"	.004		<.1				
400																				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RD-18 PAGE 9 OF 10

Depth	RECOVERY	LITHOLOGIC DESCRIPTION: Bud v into 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
400	GOOD	mottled green brown gray & orange white fine fragmental pervasively silicified w/ intermittent clayalt + propy green softer frags, wk v fine hairline stwk wk calcedonic + sulfide vns		XXX Xk Xc p				GRAY				~3% very finely diss + vn py	poss wkly bladed sulf	<.001		<.1				
405	"	same wk fine sulf encapsulated veins w/ lt green hard waxy clay ↑ pen. argillic alt		XXX Xk Xc p				"				"	"	<.001		<.1				
410	"	same pervasively gray + green green is preferen hard waxy clay alt wk lt gray clay		XX Xc Xk p				"				"	"	<.001		.43				
415	"	Off white to flesh colored volcaniclastic granular pervasively silicified, weak pen breccia w/ wk stwk qtz, wk Δ'ation wk intermittent propyllitic alt, weak FeOx calcedony veins, calcitic veining		XX Xk Xc p				"				"	w/ short bladed sulfides " poss w/ Ag sulfide	.001		.13				
420	"	same w/ fine fragmental component w/ poss brecciation & argillic alt		XX Xk Xc p				"				" 2-3%	"	<.001		.11				
425	"	Fine fragmental bleached to locally clay alt frags w/ red brown siliceous matrix pervasively silicified wk FeOx ± SiO2 stwk tr drusy qtz silica veins wk calcedonic vns weakly green propyllitic tr SiO2 encapsulf vns		XX Xk Xc p				Brown				"	"	.002		.14				
430	"	same @ 425-430 w/ intermittent ↑ argillic alt		XX Xk Xc p				"				"	"	.004		<.1				
435	"	same @ 425-430 w/ ↑ pen. argillic alt mottled burnt green		XX Xc Xk p				"				"	"	.001		<.1				
440	"	same w/ local brecciation		XX Xk Xc p				"				"	"	.004		<.1				
445	"	same w/ ↑ fine hairline qtz stwk		XX Xk Xc p				"				"	"	.002		<.1				
450																				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RD-18 PAGE 10 OF 10

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	Tuff fragmental locally brecciated pervasively silicified w/ softer argillic alt & white/green intervals w/ stockwork qtz wk calcitic + py frags. w/ volc-clastic component						Grey Brown				2-3% very fn diss + vn py	+ short bleeds + mass ppt'd sulfides	.007		<.1				
455	"	same						"				"	"	.006		<.1				
460	"	same w/ wk argillic alt						"				"	"	<.001		<.1				
465		TD.																		
470																				
475																				
480																				
485																				
490																				
495																				
500																				

PROJECT: ROSEBUD	STATE: Nevada	NORTHING:	TOTAL 465' Page 1/2
LOGD BY: HSM 02/25/97	COUNTY: Pershing	EASTING:	BEARING:
UTM#: NK 11-10-06	SEC. T. N., R.	ELEVATION:	ANGLE:

HOLE#: DRB RD18

DRILLING NOTES		COLOR (WET)	STRATIGRAPHY/LITHOLOGY																	STRCT		GRAPHIC	ALTERATION & MINERALIZATION														GRAPHIC	COMMENTS	SAMPLE No.
TIME	Dates, H2O, Casing, Bits, Hole C		ALUVM 1	BADGER 2	CHOCOLT 3	UBUD 4	BRADY 5	MKR PORR 6	LBUD 7	DOZER 8	WILDROS 9	SURGTUF 10	ASH FLO 11	LAVA 12	AUTOBXA 13	INTRUSV 14	BASALT 12	ANDESIT 13	RHYOLIT 14	BROKEN 15	GOUGE 16		OXD'T'N MANGAN 17	HEMAT 18	LIMON 19	PYRITE 20		UNALTRD 21	PROPYLT 22	ARG 22	RPL SIL 23	STKWKS 24	VEINS 25	CALCITE 26	27		Sample Recovery Composite Geochem Intervals Verified white Alps area.	
DEPTH in FEET																																								5
10																																						RD18001:		10
20																																						10-15': PALE RUDDY TAN RELICT GLOMERO-		15
																																						PORPHYRITIC PLAG PHENOCRYSTS. BLEACHED		20
30																																						MODERATELY TO STRONGLY. STRONG		25
																																						KAOLINITE SIGNAL. THIS RK/ALTERATION		30
40																																						TYPE EXTENDS TO 75'.		35
																																								40
50																																								45
																																								50
60																																								55
																																								60
70																																								65
																																								70
80																																								75
																																								80
90																																								85
																																								90
100																																								95
																																								100
110																																								105
																																								110
120																																						RD18002:		115
																																						115-120': DUSKY PURPLE MODLY FRIABLE		120
130																																						CHOCOLATE ~~W/~~ MODERATE RELICT PLAG.		125
																																						NOTHING ABOVE BACKGROUND.		130
140																																								135
																																								140
150																																								145
																																								150
160																																								155
																																								160
170																																								165
																																								170
180																																								175
																																								180
190																																								185
																																								190
200																																								195
																																								200
210																																								205
																																								210
220																																								215
																																								220
230																																								225
																																								230
240																																						RD18003:		235
																																						240-245': PALE GRN MOTTLED BUD SURGE-TYPE		240
250																																						MATERIAL. FRIABLE. WK MONTMORILLONITE		245
																																						SIGNAL.		250

PROJECT: ROSEBUD	STATE: Nevada	NORTHING:	TOTAL 465' Page 2/2
LOGD BY: HSM 02/25/97	COUNTY: Pershing	EASTING:	BEARING:
UTM#: NK 11-10-06	SEC. T. N., R.	ELEVATION:	ANGLE:

HOLE#: DRB RD-18

DRILLING NOTES		COLOR (WET)	STRATIGRAPHY/LITHOLOGY																			STRCT	GRAPHIC	ALTERATION & MINERALIZATION														GRAPHIC	COMMENTS	SAMPLE No
TIME	Dates, H2O, Casing, Bits, Hole C		ALUVM	BADGER	CHOCOLT	BUD	BRADY	MKRPOR	BUD	DOZER	WILDROS	SURGTUF	ASHOFLO	LAVA0	AUTOBXA	INTRUSV	BASALT	ANDESIT	RHYOLIT	BROKEN	GOUGE			OXD'T'N MANGAN	HEMAT	LIMON	PYRITE		UNALTRD	PROPYLT	ARG	RPLSIL	STKWKS	VEINS	CALCITE				Sample Recovery	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27									Composite Geochem Intervals	
DEPTH in FEET																																									
260																																									255 260
270																																									265 270 275
280																																									280
290																																									285 290 295
300																																									300
310																																									305 310 315
320																																									320
330																																									325 330
340																																									335 340
350																																									345 350 355
360																																									360
370																																									365 370 375
380																																									380
390																																									385 390 395
400																																									400
410																																									405 410 415
420																																									420
430																																									425 430 435
440																																									440
450																																									445 450 455
460																																									460
470																																									465 470 475
480																																									480
490																																									485 490 495
500																																									500

RD-18004:
330-335': FG ANDESITE VARIEGATED CRM PALE GRN AND PURPLE. MODERATE TO WK SIGNAL OF AN UNKNOWN CLAY TYPE OR A MIXTURE. LOOKS MOST LIKE MONTMORILLONITE.
THIS MAY BE CHOCOLATE LITHIC TUFF/BXA. THE CHIPS ARE HIGHLY VARIABLE & TUFF BRECCIA IS PRESENT DOWNHOLE WITH NO LITHOLOGY "BREAKS APPARENT.

RD-18005:
415-420': GRY HARD COMPARATIVELY UNALTERED CHIP FROM A VARIEGATED ZONE IN TUFF BRECCIA OR SURGE. TRACE MONTMORILLONITE, NEARLY LOST IN THE NOISE.

NEVADA GSI
GEOCHEMICAL SERVICES, INC.

JUN 28 1989

GEOCHEMICAL ANALYSIS REPORT

June 23, 1989

Mr. Bob Bennett
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

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	Sample I.D.			Au o/t	Ag o/t
30	RD-18	5	10	<.001	<.10
31	RD-18	10	15	<.001	<.10
32	RD-18	15	20	<.001	<.10
33	RD-18	20	25	<.001	<.10
34	RD-18	25	30	<.001	<.10
35	RD-18	30	35	<.001	<.10
36	RD-18	35	40	<.001	<.10
37	RD-18	40	45	<.001	<.10
38	RD-18	45	50	0.001	0.56
39	RD-18	50	55	0.002	<.10
40	RD-18	55	60	<.001	<.10
41	RD-18	60	65	<.001	<.10
42	RD-18	65	70	<.001	<.10
43	RD-18	70	75	<.001	<.10
44	RD-18	75	80	<.001	<.10
45	RD-18	80	85	<.001	<.10
46	RD-18	85	90	<.001	<.10
47	RD-18	90	95	<.001	<.10
48	RD-18	95	100	<.001	<.10
49	RD-18	100	105	<.001	<.10
50	RD-18	105	110	<.001	<.10
51	RD-18	110	115	<.001	<.10
52	RD-18	115	120	<.001	<.10
53	RD-18	120	125	<.001	<.10
54	RD-18	125	130	<.001	<.10
55	RD-18	130	135	<.001	<.10
56	RD-18	135	140	<.001	<.10
57	RD-18	140	145	<.001	<.10
58	RD-18	145	150	<.001	<.10
59	RD-18	150	155	<.001	<.10
60	RD-18	155	160	<.001	<.10
61	RD-18	160	165	<.001	<.10
62	RD-18	165	170	<.001	<.10
63	RD-18	170	175	<.001	<.10
64	RD-18	175	180	<.001	<.10
65	RD-18	180	185	<.001	<.10
66	RD-18	185	190	<.001	<.10
67	RD-18	190	195	<.001	<.10
68	RD-18	195	200	<.001	<.10
69	RD-18	200	205	<.001	<.10
70	RD-18	205	210	<.001	<.10
71	RD-18	210	215	<.001	<.10
72	RD-18	215	220	<.001	<.10
73	RD-18	220	225	<.001	<.10
74	RD-18	225	230	<.001	<.10
75	RD-18	230	235	<.001	<.10

	Sample I.D.		Au o/t	Ag o/t
76	RD-18	235 240	<.001	<.10
77	RD-18	240 245	<.001	<.10
78	RD-18	245 250	<.001	0.14
79	RD-18	250 255	<.001	<.10
80	RD-18	255 260	<.001	<.10
81	RD-18	260 265	<.001	<.10
82	RD-18	265 270	<.001	<.10
83	RD-18	270 275	<.001	<.10
84	RD-18	275 280	0.031	3.25
85	RD-18	280 285	0.011	0.49
86	RD-18	285 290	0.005	0.11
87	RD-18	290 295	0.009	0.17
88	RD-18	295 300	0.002	0.15
89	RD-18	300 305	0.004	<.10
90	RD-18	305 310	0.007	<.10
91	RD-18	310 315	<.001	<.10
92	RD-18	315 320	<.001	<.10
93	RD-18	320 325	<.001	<.10
94	RD-18	325 330	0.001	<.10
95	RD-18	330 335	<.001	<.10
96	RD-18	335 340	<.001	<.10
97	RD-18	340 345	<.001	<.10
98	RD-18	345 350	0.002	<.10
99	RD-18	350 355	0.001	<.10
100	RD-18	355 360	0.003	<.10
101	RD-18	360 365	0.004	<.10
102	RD-18	365 370	0.004	<.10
103	RD-18	370 375	0.007	<.10
104	RD-18	375 380	0.008	<.10
105	RD-18	380 385	0.006	<.10
106	RD-18	385 390	0.004	0.17
107	RD-18	390 395	0.003	<.10
108	RD-18	395 400	0.004	<.10
109	RD-18	400 405	<.001	<.10
110	RD-18	405 410	<.001	<.10
111	RD-18	410 415	<.001	0.43
112	RD-18	415 420	0.001	0.13
113	RD-18	420 425	<.001	0.11
114	RD-18	425 430	0.002	0.14

This report reviewed and approved by:

Gary M. Fechko, General Manager

NEVADA GSI GEOCHEMICAL SERVICES, INC.

JUN 26 1989

GEOCHEMICAL ANALYSIS REPORT

June 12, 1989

Mr. Bob Bennett
Lac Minerals
1475 Greg St.
Sparks, Nv. 89431

Number of Samples: 7
GSI Number: 4451
Analysis: Fire Assay for Gold and Silver, with an A.A. finish.

	Sample I.D.	Au o/t	Ag o/t
1	RD-18 430 435	0.004	<.10
2	RD-18 435 440	0.001	<.10
3	RD-18 440 445	0.004	<.10
4	RD-18 445 450	0.002	<.10
5	RD-18 450 455	0.007	<.10
6	RD-18 455 460	0.006	<.10
7	RD-18 460 465	<.001	<.10

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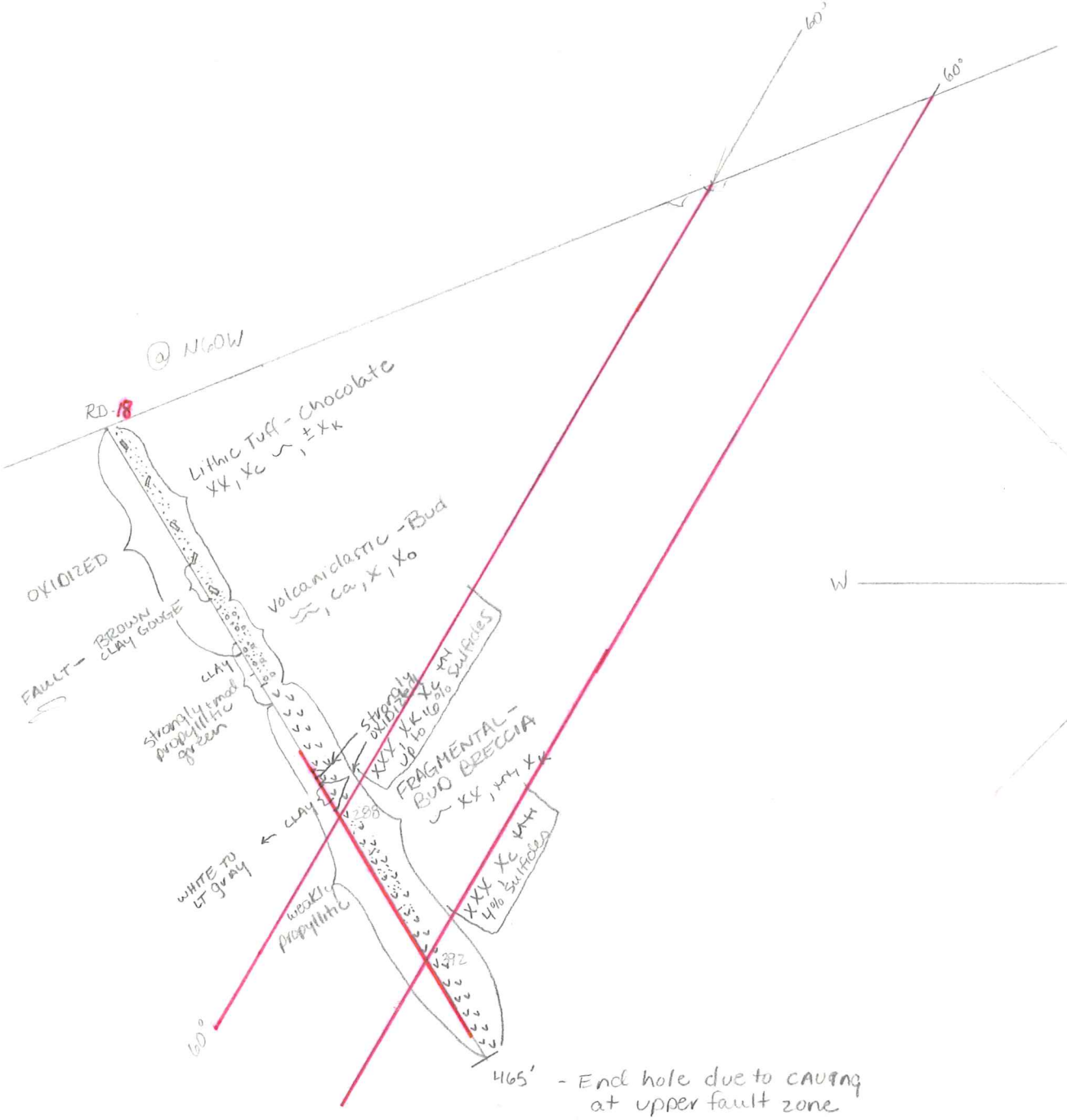
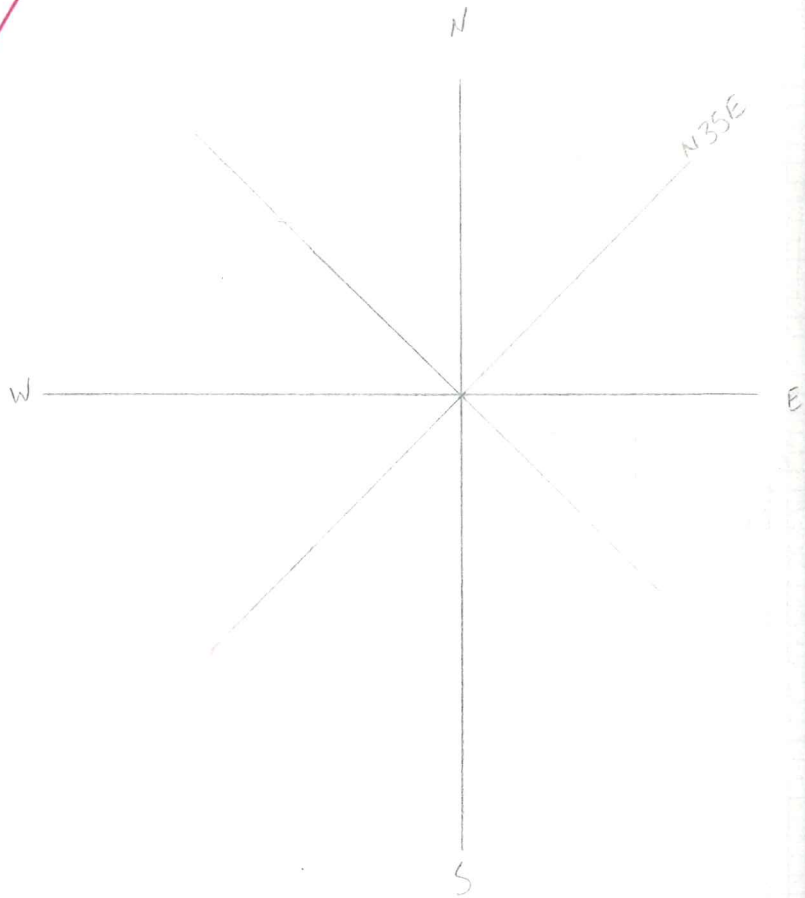
This report reviewed and approved by:

Richard A. Grondin

Richard Grondin, Operations Manager

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


60°
60°
@ N60W
RD-18
Lithic Tuff - chocolate
XX, Xc ~, ± Xk
OXIDIZED
Volcaniclastic - Bud
~, ca, X, Xo
FAULT - BROWN CLAY GOUGE
CLAY
strongly mod propylitic green
Strongly oxidized
XXY, XK up to 40% sulfides
FRAGMENTAL - BUD BRECCIA
~ XX, ++, Xk
CLAY
WHITE TO LT gray
weak propylitic
XXY, Xc
4% sulfides
60°
465' - End hole due to caving at upper fault zone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RD-18

0-75' bl. tan, buff fgt ⇒ Tct
75-160 red brn/maroon fragmental - clay rich & matrix supported ⇒ intrusive bx ??
160-275 typical green Bud pc ⇒ Tcb
250-265' mod bl. & sil'd/+ ox'd.
275-425 : mod sil'd & bl. grey, white, tan ± pale grn. f.g.t. or bx ??
wkly pyritic

425-465 T.D.: reddish brn matrix bx w/ frags of bl. fg.t. as above ??
⇒ intrusive ?? or poss. basal bud bx ??

RBP-19

0-30 f.g.t. ⇒ reddish-tan Tct ??
30-55 grayish clay-rich bud ??
55-360 brick red/purple matrix fragmental
90-120 Xm-s in f.g. grey frags
130-170 Xm-s " " " "
170-185 bl. ~w-m; Xw
185-215 variably lim/hem vuggy gossan esp. 205-215:
215-240 bleached as from 170-185

345-360 becomes purple "