60001252

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-14
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; East Dreamland; Lac Minerals (USA) Inc Environmental West Exploration
COMMODITY If not obvious	gold silver
NOTES	Drill log; geology; assay; total depth 300' handwritten notes 9p.

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
Rosebud

RD-14
East Dreamland

6000 1252 4010

60001252

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

DRILL LOG SUMMARY SHEET

PROJECT ROSEBUD

HOLE NUMBER RD-14 TOTAL DEPTH 300' LOGGED BY KLK

Date started 5-28-89

Date completed 5-29-89

Initial bearing N00E

Initial inclination -60.5°

Elevation ~~5000~~ 5460

Collar coordinates:

N 2207015

E 480247.6

Contractor: ENVIORNMENTAL WEST EXPLOR

Drill Type: Reverse Circulation

Hole Size: 5½" hammer

Drilling Conditions: GOOD

Footage: Wet / Dry

0-300' all Dry

Comments: no problems @ all

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-14 PAGE 1 OF 6

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
0-	POOR	Off white to mustard yellow fine grained to med chocolate brown sugg. tan pink hue, wh str red brown sticky clay wh qtz veins w/ assoc brown clay + goethite, prevalent limonite + wk pyr stks	CLAY	X Xv				Red brown				—		<.001		<.1				
5-	MODERATE	Off white or army epiclastic pyr hour) yellow clay w/ lat pyr. stks, weak prevalent limonite, prev in veins, tr green mineral (chl?)	CLAY	X				Lt Creamy yellow				tr diss py		.001		<.1				
10-	GOOD	Same w/ ↑ yellow clay tr white soft sticky clay w/ talkeous component tr drusy qtz stks		X Xk				"				"		.003		<.1				
15-	"	Tan fine grained silicified tuff, weak prevalent limonite ± wk pyr, more epiclastic component tr white clay tr-wk drusy qtz stks		X Xk				"				"		.002		<.1				
20-	"	Same w/ ↑ red org FeOx - prominently in veins ± goethite		X Xk				"				"		.004		<.1				
25-	"	Same - lt to medium gray w/ much white to yellow clay		X Xk				"				"		.001		<.1				
30-	"	Same as 25'-30' gray w/ strong yellow clay		X Xk				"				"		.001		<.1				
35-	"	grayish tan to off white epiclastic + fine grained pyr. silicified v. weak qtz stkwk intermittent prevalent limonite w/ tr white clay - locally limonite local qtz vns w/ FeOx assoc		X Xk				TAN				"		.001		<.1				
40-	"	Same w/ more strong yellow clay ± limon prevalent tr qtz stks		X Xk				"				"		.008		<.1				
45-	"	Gray, mod well silicified epiclastic + lith or tuff tr white, pink + yellow clay w/ mod hydthy shallow alteration tr green phases tr bright FeOx orange to goethite vns		XX Xk				"				up to 1% vnl + diss py		.008		.16				
50-																				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RD-14 PAGE 2 OF 6

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 V	Ag	As	Hg	Sb	Se
50-	GOOD	hydrotherm abrupt epiclastic pervasive argillic alt w/ white clay veins, pos. w/ tuffaceous component weak limon ± hemitite veins pervasive silicified, tr orpiment, tr iron sulfates & clay, tr drusy qtz ± FeOx vns		X										TAN										tr diss Py pass more		.001		.12				
55-	"	same w/ ↑ tuffaceous component		X										"										≥ 1% fine diss + vn py		<.001		<.1				
60-	*	v = ? Δ same w/ fine fragmental - brecciated component w/ orange matrix mod strong white clay, some drusy qtz pyrite veins		X										GRAY										1-2% vn + diss py		<.001		<.1				
65-	*	same - predominantly an orange matrix silic breccia on the fragmental + rounded clasts w/ ↑ pervasive clay alt		X										"										" @ ~2%		<.001		<.1				
70-	*	same w/ ↑ qtz sulfide py veins		X										"										" plus ↑		.002		<.1				
75-	*	same w/ pervasive intermittent lt green coloration of waxy clay, soft clay white clay still present ↑ pervasive silic		X										"										" @ 1-2%		.003		<.1				
80-	*	same - very well silicified & pervasive argillic alt w/ tuffaceous component hydrothermally brecciated, w/ white soft clay		X										GRAY INTO TAN										" @ veins py + marcasite	prev. marcasite present	.004		<.1				
85-	"	same fine fragmental + tuff v. wk silicic alt mod pervasive argillic alt w/ ↑ argillic alt		X										TAN										≥ 1% diss py ± marc ± VNS		.002		<.1				
90-	"	same @ 85-90 w/ ↑ limonite ± hemit tooth veinlets tr soft white clay ↑ fine silicic alt fine frag + tuff, tr clayey alt		X										"										≥ 1% fine diss + vn py ± marcasite		.003		<.1				
95-	*	hydrothermal breccia? same - strongly pervasively silicified mod strong earthy limonite vein ± hemit locally big qtz w/ white waxy clay		X										orange										"		.003		<.1				
100-																																	

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RD-14 PAGE 3 OF 6

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 ✓	Ag	As	Hg	Sb	Se
100	G 0 0 0 0 clay	110415 - unalt choc. Fine fragmental gray to off white mod pervasively silicified & pervasively argillized dk. pervasive red golden orange limonite clay, light mod SiO2 + sulfide veins		XX Xv Xk				orange into gray				2-3% diss + vn py + bladed sulfide		.004		<.1				
105	"	same relatively unoxidized tr perv. SiO2 ↑ perv argillic alt wk perv green (remerality) + SiO2 vns. wk white soft clay red org matrix w/ clay alt (white) clasts		X Xk				GRAY				" @ 3-4% diss w/ str diss py clusters		.001		<.1				
110	"	→ weakly perv. calcareous unaltered dark burg brown lithic tuff weak pervasively silicified tr white clay perv. hematite veinl, wk green I SiO2 vns		X Xkc				GRAY INTO BROWN				tr diss py		.004		<.1				
115	"	same - no argillic alt		X				Burg Brown				–		.004		<.1				
120	"	same no argillic alt tr yellow clay		X				"				–		<.001		<.1				
125	"	same		X				"				–								
130	"	same		X				"				–								
135	"	same tr calcite vns		X ca				"				–								
140	"	same tr calcite vns tr bright red clay		X ca				"				–		<.001		<.1				
145	"	same w/ wk bright red clay wk green calcedony vug filling vns! ↑ wk calcite vns		X Xcv ca				"				–								
150																				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RD-14 PAGE 4 OF 6

	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
150	50%	dark gray lime dacitic tuff - welded + devitrified silicified wk envirold green calcite lite, weak calcite veining, weak bright red clay veins		X Ca Xck				GRAY				–								
155	"	same		X Ca Xck				"				–								
160	"	same only to bright red clay vn		X Ca Xck				"				–		<.001		<.1				
165	"	same w only trace (bn red) hematitic clay ↓ overall limit. ↓ Xck		X Ca Xc				"				–								
170	"	same only to bright red clay ↓ Xck ↓ overall limit. wk green nonassoc. w calcite		X Xc Ca				"				–								
175	"	same no red clay ↓ overall hematite		X Ca Xc				"				–								
180	"	same no bright red clay ↓ overall hematite		X Ca Xc				"				–		<.001		<.1				
185	"	same " " "		X Ca Xc				"				–								
190	"	same " " "		X Ca Xc				"				–								
195	"	same " " "		X Xc Ca				"				–								
200																				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RD-14 PAGE 5 OF 6

	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
200	G	Fine grtuff w/ incipient chlorite + calcedony wk pervasive silicification wk calcite vns relatively unaltered tr-wk hematite veins		X Xc Ca				GRAY				—		<.001		<.1				
205	"	Same		X Xc Ca				"				—								
210	"	Same		X Xc Ca				"				—								
215	"	Same w/ ↑ hematite vns		X Xc Ca				"				—								
220	"	Same w/ ↑ hematite vns		X Xc Ca				"				—		<.001		<.1				
225	"	Same w/ ↑ hematite vns		X Xc Ca				"				—								
230	"	Same w/ ↑ hematite vns		X Xc Ca				"				—								
235	"	Same w/ ↑ hematite vns wk tan clay halos tr white clay		X Xc Ca				"				—								
240	"	Same " (no tan clay halos)		X Xc Ca				"				—		<.001		<.1				
245	"	Same w/ ↑ hematite veins		X Xc Ca				"				—								
250																				

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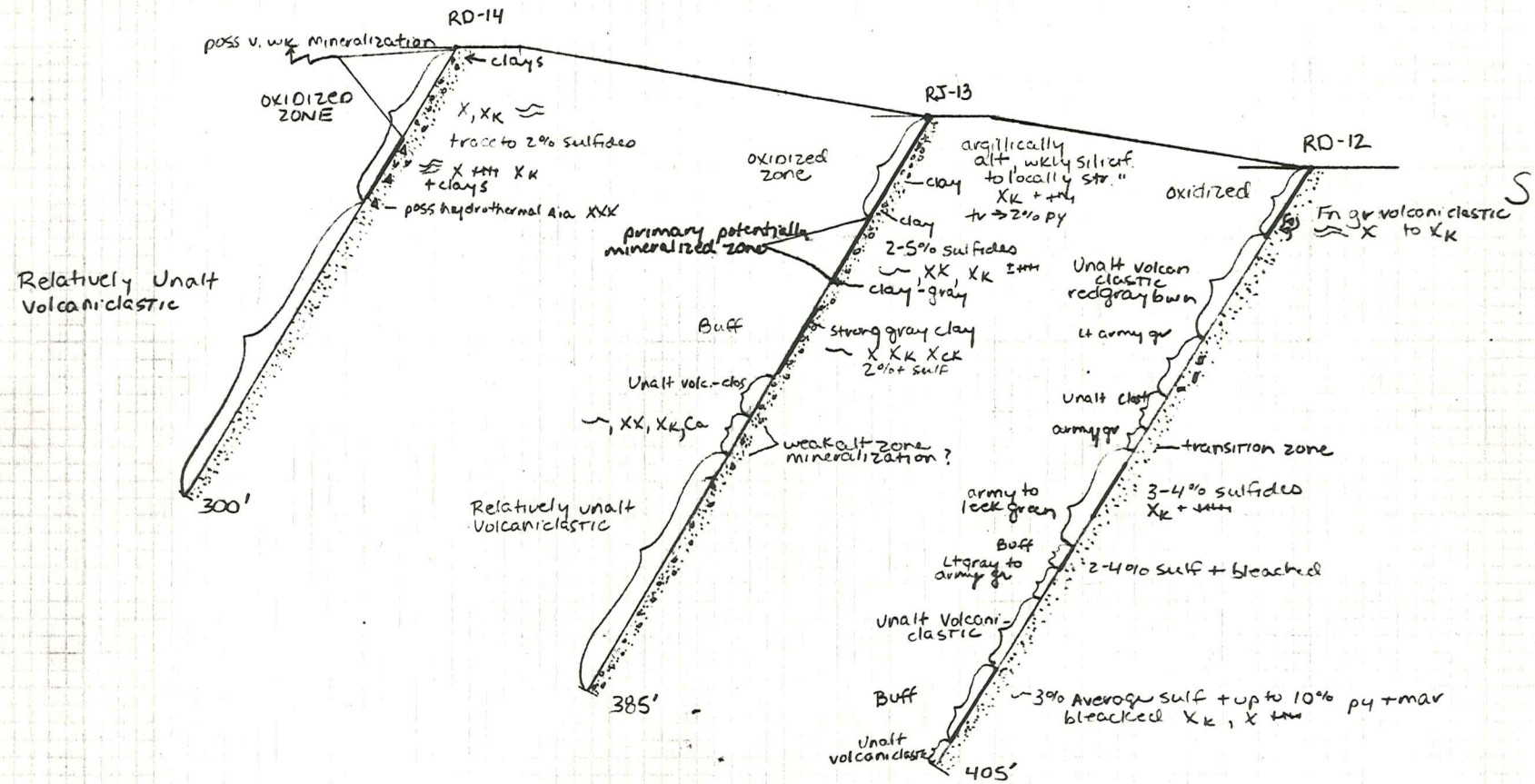
PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RD-14 PAGE 6 OF 6

Depth	RECOVERY	LITHOLOGIC DESCRIPTION Choco Tuff	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
250	GOOD	Fine grained tuff w/ calcedonic vein fill locally green chlorite pervasive silicification w/ calcite veining relatively unaltered more hematite staining tuff is med to dark gray		X Xc Ca				Burg Gray				–								
255	"	same hard		X Xc Ca				"				–								
260	✓ "	same hard		X Xc Ca				"				–		<.001		<.1				
265	"	same		X Xc Ca				"				–								
270	"	same		X Xc Ca				"				–								
275	"	same hard		X Xc Ca				"				–								
280	✓ "	same hard		X Xc Ca				"				–		<.001		<.1				
285	"	same		X Xc Ca				"				–								
290	"	same		X Xc Ca				"				–								
295	✓ "	same		X Xc Ca				"				–								
300		T.D.																		

E

Gray to Red Brown Volcaniclastic -
fine gr tuff w/ sandy inner beds ~ 6" wide

——— delineates potential Au zones



Sample I.D.				Au o/t	Ag o/t
220	RJ-13	245	250	<.001	<.10
221	RJ-13	265	270	<.001	<.10
222	RJ-13	285	290	<.001	<.10
223	RJ-13	305	310	<.001	<.10
224	RJ-13	325	330	<.001	<.10
225	RJ-13	345	350	<.001	<.10
226	RJ-13	360	365	<.001	<.10
227	RJ-13	380	385	0.004	<.10
228	RD-14	0	5	<.001	<.10
229	RD-14	5	10	0.001	<.10
230	RD-14	10	15	0.003	<.10
231	RD-14	15	20	0.002	<.10
232	RD-14	20	25	0.004	<.10
233	RD-14	25	30	0.001	<.10
234	RD-14	30	35	0.001	<.10
235	RD-14	35	40	0.001	<.10
236	RD-14	40	45	0.008	<.10
237	RD-14	45	50	0.008	0.16
238	RD-14	50	55	0.001	0.12
239	RD-14	55	60	<.001	<.10
240	RD-14	60	65	<.001	<.10
241	RD-14	65	70	<.001	<.10
242	RD-14	70	75	0.002	<.10
243	RD-14	75	80	0.003	<.10
244	RD-14	80	85	0.004	<.10
245	RD-14	85	90	0.002	<.10
246	RD-14	90	95	0.003	<.10
247	RD-14	95	100	0.003	<.10
248	RD-14	100	105	0.004	<.10
249	RD-14	105	110	0.001	<.10
250	RD-14	110	115	0.004	<.10
251	RD-14	115	120	0.004	<.10
252	RD-14	120	125	<.001	<.10
253	RD-14	140	145	<.001	<.10
254	RD-14	160	165	<.001	<.10
255	RD-14	180	185	<.001	<.10
256	RD-14	200	205	<.001	<.10
257	RD-14	220	225	<.001	<.10
258	RD-14	240	245	<.001	<.10
259	RD-14	260	265	<.001	<.10
260	RD-14	280	285	<.001	<.10

This report reviewed and approved by:

Richard Grondin

Richard Grondin, Operations Manager