60001590

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 RB-3
AUTHOR	K. Renner
DATE OF DOC(S)	1991, 1998
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 Exploration (Texas) Inc Lac Minerals (USA) Inc
COMMODITY If not obvious	gold silver
NOTES	Drill log; geology; assay; total depth 460' handwritten notes 34 p. 26

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 6/2/08
Initials Date

DB: mah
Initials Date

SCANNED: NV Blue
Initials Date

Revised: 1/22/08

RB-3

60001598 4010

60001598

LAC MINERALS EXPL. (TEXAS) INC.

DRILL LOG SUMMARY SHEET

PROJECT Rosebud

HOLE NUMBER RB-3 TOTAL DEPTH 460' LOGGED BY _____

Date started _____

Date completed _____

Initial bearing N 35 W

Initial inclination -70

Elevation 5431.0

Collar coordinates:

N 2206184.0

E 481539.9

Contractor _____

Drill Type _____

Hole Size _____

Comments _____

Data by MCH
PC Explore
6/91

DOWN HOLE SURVEY INFORMATION

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

MINERALS U.S.A. INC.

LAC PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RB-3 PAGE 1 OF 10

RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	COLOR FINES	ALTERATION: ARGILLIC W M S	ALTERATION: SILICIFICATION W M S	ALTERATION: PROPYLITIC W M S	COMMENTS	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-	FINE GRAIN'D XTAL TUFF pervasively bleached buff color w/ pervasive, intermittent limonite w/r limonite veinlets xtals clay alt'n weak green hint local massive highs white clay, trace fine qtz stringers, local wk SiO2 flush										—		.02	.023					
5-	Same ↑ clay										—		<.02	.006					
10-	Same w/ ↑ clay										—		<.02	.005					
15-	Same w/ ↑ clay										tr limon replac		<.02	.005					
20-	Same										"	wk MnO	<.02	<.005					
25-	Same ; wk calcedony veinlets										~1% limon replac	wk MnO	<.02	<.005					
30-	Same wk component of fragmental clasts						local wk argill flush ?				2% limon replac diss py	"	<.02	.005					
35-	Same mod.-wk limonitic clay tr qtz stringlets						"				1% limon replac diss py	"	<.02	<.005					
40-	Same ↑ FeOx clay						"				"	"	<.02	.005					
45-	Same										"	"	<.02	<.005					
50-																			

LAC MINERALS U.S.A. INC.

PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RB-3 PAGE 1 OF 10

Depth	RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	COLOR FINES	ALTERATION: ARGILLIC (W M S)	ALTERATION: SILICIFICATION (W M S)	ALTERATION: PROPYLLITIC (W M S)	COMMENTS	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		FINE GRAINED XTAL TUFF pervasively bleached buff color w/ pervasive intermittent limonite wk limonite veinlets xtals clay silt w/ weak green hint local massive highs white clay trace fine qtz stringers, local wk SiO2 flush										—		.02	.023					
5		same ↑ clay										—		<.02	.006					
10		same w/ ↑ clay										—		<.02	.005					
15		same w/ ↑ clay										tr limon replac		<.02	.005					
20		same										"	wk MnO	<.02	<.005					
25		same: wk calcedony veinlets										~1% limon replac	wk MnO	<.02	<.005					
30		same wk component of fragmental clasts						local wk green flush ?				2% limon replac diss py	"	<.02	.005					
35		same mod. wk limonitic clay tr qtz stringlets						"				1% limon replac diss py	"	<.02	<.005					
40		same ↑ FeOx clay						"				"	"	<.02	.005					
45		same										"	"	<.02	<.005					
50																				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RB-3 PAGE 2 OF 10

Depth	RECOVERY	LITHOLOGIC DESCRIPTION (blackmetallic – poss hemitite replaced biotite) FINE TUFF TO GATOR DIA	GRAPHIC LOG	COLOR FINES	ALTERATION: ARGILLIC (W M S)	ALTERATION: SILICIFICATION (W M S)	ALTERATION: PROPYLLITIC (W M S)	COMMENTS	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	TRANS	Fine grained xtal tuff & fragmental w/ semi rounded clasts – bleached w/ wk hemitic matrix pervasive bleaching wk clay, pervasive limonite, tr SiO_2 veinlets, tr FeOx veinlets						tr local green flush ?				>1% limon replac diss py	tr MnO	<.02	<.005					
55	ITION	same local fragmental w/ str FeOx						"				"	"	<.02	<.005					
60	GATOR DIA	Fragmental w/ subrounded clasts & hemititic matrix & minor xtal tuff mod pervasive bleaching wk clays, tr calcedony vns, tuff w/ dk metallic speckles – poss hemitite replacing biotite										1% diss limon replac py	"	<.02	.007					
65		same w/ poss wk intrusive component & mod hemititic clay, tr SiO_2 vns										"	"	<.02	<.005					
70		same wk pervasive SiO_2										"	"	<.02						
75		same w/ possible intrusive fresh biotite in tuff										"	"	<.02						
80		same tuff & fragmental wk pervasive SiO_2										"	"	<.02						
85		same " wk white clay clots										"	"	<.02						
90		same w/ tuff pervasively bleached wk micro dia veins & wk SiO_2 slkwk										"		<.02						
95		same w/ tuff – gray to buff										"		<.02						
100																				

MINERALS U.S.A. INC.

LAC PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RB-3 PAGE 3 OF 10

RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	COLOR FINES	ALTERATION: ARGILLIC W M S	ALTERATION: SILICIFICATION W M S	ALTERATION: PROPYLLITIC W M S	COMMENTS	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	GATOR AIA - Tuff w/ blk speckles (hemitite?)																		
	fragmental w/ bleached to hemititic clasts (hemitite) matrix weak pervasive clay, (weak) bleached to gray tuff component, clasts - sub rounded						WKLY calcareous				?	blk speckles hem replac biotite	<.02	<.005					
105	weak pervasive SiO2 wk pervasive clay alt																		
	tuff speckled w/ hemitite? replaced biotite																		
	same w/ predominant tuff component						"				?	"	<.02						
110	with																		
	same w/ predom tuff component						"				?	"	<.02						
115																			
	same w/ predom tuff component w/ hemitite replaced biotite speckles						"				?	"	<.02						
120																			
	same - " " " @ all above w/ only weak fragmental pervasive SiO2						"					"	<.02						
125	Fine gr tuff lt gray to buff w/ blk metallic speckles (poss hem replac py						"					"	<.02						
	pervasive hemitite weak fragmental component, weak pervasive SiO2, wk SiO2 stkwk																		
130	same blk speckled fn gr tuff to fragmental						"					"	<.02						
135																			
	same						"					"	<.02						
140																			
	same						"					"	<.02						
145																			
	same						"					"	<.02						
150																			

LAC MINERALS U.S.A. INC.

PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RB-3 PAGE 4 OF 10

RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	COLOR FINES	ALTERATION: ARGILLIC W M S	ALTERATION: SILICIFICATION W M S	ALTERATION: PROPYLLITIC W M S	COMMENTS	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
	SPECKLED TUFF																		
150	Buff to lt gray fine gr tuff, strongly speckled w/ black metallic (hemitite)? replaced biotite very weak pervasive hemitite weak pervasive SiO2						wk pervasive CaCO3 ± vns				?		<.02	.006					
155	same w/ weak hemititic clay						"				?		<.02	<.005					
160	same w/ wk hemititic clay						"				?		<.02	<.005					
165	same - locally wkly fragmental tr calcedonic SiO2	V V					"				?		<.02	<.005					
170	same w/ 60% bleached finely lithic to xtal tuff w/ assoc sulfides						" w/ tr green chl?				1-2% in bleach frag diss py		<.02	<.005					
175	FRIED zone in bleached fine gr tuff Intense sulfide zone w/ mod str goethite tr fibrous gypsum pyrite + SiO2 blebs str						tr green			P O S S	10+ % diss py	w/ local bladed Arseno-py? str goethite	.09	.082					
180	Bleached fine grained tuff weak white clay w/ intense sulfides; speckled w/ hemitite; tr green clay, tr fibrous gypsum						tr chl?				2%± vn-clustered py	"	<.02	.012					
185	same w/ trace w/ strong goethite local str crusted py						wk green				7-8% ± diss clusters vn py	"	<.02	.019					
190	same						"				5-7% clustered py +		.03	.031					
195	same w/ SiO2 + pyrite veins						"				"	local bladed sulf arseno-py?	<.02	.051					
200																			

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LAC PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RB-3 PAGE 5 OF 10

RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	COLOR FINES	ALTERATION: ARGILLIC W M S	ALTERATION: SILICIFICATION W M S	ALTERATION: PROPYLLITIC W M S	COMMENTS	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
	TUFF																		
200	Bleached fine grained lithic tuff - lithics clay alt wk SiO2 encapsulated pyrite veins, wk SiO2 tr yellow clay, tr fibrous gypsum tr SiO2 vnlets						pervasive green celad? smectite				3-5% vn; diss py ± arsenopy.		.03	.03					
205	same locally vuggy w/ SiO2 + pyrite wh pervasive SiO2 ± white clay						"				"		.05	.049					
210	same w/ weak ↑ SiO2 + py stringlets tr pink clay						"				"		.04	.057					
215	same w/ ↑ SiO2 + py veins (↑ temp SiO2) tr pink clay, fine xtals clay alt precurs bladed sulfide						"				3% vn ± diss bladed sulf		.14	.124					
220	same w/ ↑ temp xtal qtz veins ± pyrite ↑ pervasive SiO2, wk pink clay						wk intermittent green				"		.09	.098					
225	same w/ str pervasive SiO2 ↑ temp w/ pervasive bleaching wk mod fine qtz stkwork str SiO2 + bladed sulfide veins						"				5-6% vn ± diss + py bladed sulfide		.18	.142					
230	same @ above w/ strong pervasive SiO2 ~ 3 stgs SiO2 strong bladed sulfide content						"				"		.19	.206					
235	3 stg SiO2 same w/ weak hem clay (1+ pink org)						"				"		.12	.11					
240	same ~ 2-3 stg SiO2						tr chl				"		.11	.105					
245	same w/ weak fibrous gypsum ↓ SiO2						"				3-4% bladed diss + vn sulf		.05	.044					
250																			

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RB-3 PAGE 6 OF 10

Depth	RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	COLOR FINES	ALTERATION: ARGILLIC (W M S)	ALTERATION: SILICIFICATION (W M S)	ALTERATION: PROPYLLITIC (W M S)	COMMENTS	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
250		Fine grained bleached tuff white to buff, weak pervasive SiO2, wk pinna limon, wk hairline fine qtz stkwk tr fibrous gypsum wk SiO2 encapsulated sulfide veinlets, tr earthy limon						trace green				~5% VN; diss py		.02	.04					
255	OVESTO NABLE	same						"				"		.04	.057					
260		same ghost lithics silicif to clay alt						"				" @ 3%		.04	.048					
265		same w/ few golden orange fried clasts						tr green xtals				"		.04	.041					
270		same ↑ limonite sulfides mostly in veins or clusters						"				"		.09	.114					
275		same w/ ↑ xtal SiO2 + sulfide veins ↑ pervasive SiO2						"				7+% VN ± diss py	bladed sulf prom	.16	.160					
280		same						"				~3-4 %, VN; diss py		.06	.084					
285		same w/ ↓ pervasive SiO2 possible epiclastic component						"				" @ 3%		.08	.096					
290		same " "						"				~2% diss py		<.02	.049					
295		same " "						"				" @ 3%		.02	.044					
300																				

LAC MINERALS U.S.A. INC.

PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RB-3 PAGE 7 OF 10

RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	COLOR FINES	ALTERATION: ARGILLIC W M S	ALTERATION: SILICIFICATION W M S	ALTERATION: PROPYLLITIC W M S	COMMENTS	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
300	Bluff to white lithic tuff w/ possible epiclastic component wk vuggy, wk pinkish tan clay tr yellow clay, tr SiO2 stkwk, wk SiO2 + sulfide vns, tr fibrous gypsum, wk pervasive SiO2 pervasively bleached						intermittent wk green				1-2% clustered + vn py		.03	.059					
305	same w/ wk red brown calcedony vns ovg						tr green xtals				"		.04	.058					
310	same						" plus green & flush				1% clustered py		L.02	.028					
315	same						pervas intermittent green				"		L.02	.012					
320	same w/ weak red brown calcedony veins & pyrite						weak pervasive green alt				1-2% vn + diss py		L.02	L.005					
325	same mottled lt mud gray to buff wh red orange cal cedony						" very weak				"		L.02	L.005					
330	CHANGE Dark purple brown fine grained w/ 30 to 40% clasts of lt gray - pos weakly bleached fine grained, tr calcedonic SiO2						weakly calcareous				~1% diss py		L.02	L.005					
335	same w/ 10% bleached frags						"				"		L.02	L.005					
340	same w/ weak gray bleached frags						wk $CaCO_3$ vns + vug fill				"		L.02	L.005					
345	same " " "						"				"		L.02	.018					
350																			

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RB-3 PAGE 8 OF 10

Depth	RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	COLOR FINES	ALTERATION: ARGILLIC (W M S)	ALTERATION: SILICIFICATION (W M S)	ALTERATION: PROPYLLITIC (W M S)	COMMENTS	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		Medium gray to purple brown fine grained tuff moderate pervasive clay alt - soft clay - same color (a) gray, burg brown						tr green chl? alt wk $CaCO_3$ vns				tr diss py		<.02	.013					
355		same - mod str clay alt						"				"		<.02	<.005					
360		same - predom medium brown						"				"		<.02	<.005					
365		same										"		<.02						
370		same weak clay alt wk hemitite veinlets						weakly calcareous				?		<.02						
375		same	✓					"				-		<.02						
380		same w/ minor fragmental component	✓ ✓ ✓					"				-		<.02						
385		same	✓					wk $CaCO_3$ vns				-		<.02						
390		same						"				-		<.02						
395		same						"				-		<.02						
400																				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RB-3 PAGE 9 OF 10

Depth	RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	COLOR FINES	ALTERATION: ARGILLIC (W M S)	ALTERATION: SILICIFICATION (W M S)	ALTERATION: PROPYLLITIC (W M S)	COMMENTS	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		medium gray to dk burgundy buff fine grained tuff w/ minor fragmental component w/ hemititic matrix, very weak hemititic clay, speckled w/ hemitite	v v					WK $CaCO_3$ VNS tr green xtals				–		<.02	<.005					
405		same	v v v					"				–		<.02						
410		same	v v v					"				–		<.02						
415		same	v v					"				–		<.02						
420		same	v v					"				trace fresh pyrite		<.02						
425		same	v v					"				"		<.02						
430		same, pervasive lt/med gray strongly speckled w/ hemitite weak fragmental component	v v v					"				–		<.02						
435		same	v v					"				–		<.02						
440		same lt gray - speckled w/ hemitite poss replacing biotite						"				–		<.02						
445		same						"				–		<.02						
450																				

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

Depth	RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	COLOR FINES	ALTERATION: ARGILLIC (W M S)	ALTERATION: SILICIFICATION (W M S)	ALTERATION: PROPYLLITIC (W M S)	COMMENTS	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		Lt gray fine grained tuff speckled w/ black metallic - poss hemitite replaced biotite						wk $CaCO_3$ VNS tr green chl?				–		<.02	<.005					
455		same						"				–		<.02						
460														<.02						
465														<.02						
470														<.02						
475														<.02						
480														<.02						
485														<.02						
490														<.02						
495														<.02						
500																				

LAC MINERALS EXPL. (TEXAS) INC.

DRILL LOG SUMMARY SHEET

PROJECT Rosebud

HOLE NUMBER RB-3 TOTAL DEPTH 460' LOGGED BY _____

Date started _____

Date completed _____

Initial bearing N 35 W

Initial inclination -70

Elevation 5431.0

Collar coordinates:

N 2206184.0

E 481539.9

Contractor _____

Drill Type _____

Hole Size _____

Comments _____

Data by MCH
PC Explore
6/91

DOWN HOLE SURVEY INFORMATION

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

MINERALS U.S.A. INC.

LAC PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RB-3 PAGE 1 OF 10

RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	COLOR FINES	ALTERATION: ARGILLIC W M S	ALTERATION: SILICIFICATION W M S	ALTERATION: PROPYLITIC W M S	COMMENTS	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
	FINE GRAINED XTAL TUFF pervasively bleached but color is pervasive, intermittent limonite w/r limonite veinlets x'tals clay alt'n w/ weak green hint local massive highs white clay, trace fine qtz stringers, local w/r sulf flush										—		.02	.023					
	same ↑ clay										—		<.02	.006					
	same w/ ↑ clay										—		<.02	.005					
	same w/ ↑ clay										tr limon replac		<.02	.005					
	same										"	wk mn0	<.02	<.005					
	same; wk calcedony veinlets										~1% limon replac	wk mn0	<.02	<.005					
	same wk component of fragmental clasts						local wk green flush ?				2% limon replac diss py	"	<.02	.005					
	same mod wk limonitic clay tr qtz stringlets						"				1% limon replac diss py	"	<.02	<.005					
	same ↑ FeOx clay						"				"	"	<.02	.005					
	same										"	"	<.02	<.005					

LAC MINERALS U.S.A. INC.

PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RB-3 PAGE 1 OF 10

Depth	RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	COLOR FINES	ALTERATION: ARGILLIC (W M S)	ALTERATION: SILICIFICATION (W M S)	ALTERATION: PROPYLLITIC (W M S)	COMMENTS	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
0–5		FINE GRAINED XTAL TUFF pervasively bleached buff color w/ pervasive intermittent limonite w/k limonite veinlets xtals clay alt w/ weak green hint local massive hicks white clay trace fine qtz stringers, local wk SiO2 flush										—		.02	.023					
5–10		same ↑ clay										—		<.02	.006					
10–15		same w/ ↑ clay										—		<.02	.005					
15–20		same w/ ↑ clay										tr limon replac		<.02	.005					
20–25		same										"	wk MnO	<.02	<.005					
25–30		same: wk calcedony veinlets										~1% limon replac	wk MnO	<.02	<.005					
30–35		same wk component of fragmental clasts						local wk green flush ?				2% limon replac diss py	"	<.02	.005					
35–40		same mod wk limonitic clay tr qtz stringlets						"				1% limon replac diss py	"	<.02	<.005					
40–45		same ↑ FeOx clay						"				"	"	<.02	.005					
45–50		same										"	"	<.02	<.005					

MINERALS U.S.A. INC.

LAC PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RB-3 PAGE 2 OF 10

RECOVERY	LITHOLOGIC DESCRIPTION (blackmetallic – poss hemitite replaced biotite)	GRAPHIC LOG	COLOR FINES	ALTERATION: ARGILLIC W M S	ALTERATION: SILICIFICATION W M S	ALTERATION: PROPYLLITIC W M S	COMMENTS	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	FINE TUFF TO GATOR AIA																		
TRANS	Fine grained xtal tuff ; fragmental ; semi rounded clasts – bleached w/ wk hemitic matrix pervasive bleaching wk clay ; pervasive limonite, tr SiO_2 veinlets, tr FeOx veinlets						tr local green flush ?				7% limon veinlet class py	tr MnO	<.02	<.005					
55																			
TION	same local fragmental w/ str FeOx						"				"	"	<.02	<.005					
60																			
GATOR AIA	Fragmental w/ subrounded clasts ; hemitite matrix ; minor xtal tuff mod pervasive bleaching wk clays, tr calcedony VNS, tuff w/ dk metallic speckles – poss hemitite replacing biotite										1% diss limin veinlet py	"	<.02	.007					
65																			
	same w/ poss wk intrusive component ; mod hemitite clay, tr SiO_2 VNS										"	"	<.02	<.005					
70																			
	same wk pervasive SiO_2										"	"	<.02						
75																			
	same w/ possible intrusive fresh biotite in tuff										"	"	<.02						
80																			
	same tuff ; fragmental wk pervasive SiO_2										"	"	<.02						
85																			
	same " wk white clay clots										"	"	<.02						
90																			
	same w/ tuff pervasively bleached wk micro dia veins ; wk SiO_2 silicif										"		<.02						
95																			
	same w/ tuff - gray to buff										"		<.02						
100																			

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

RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	COLOR FINES	ALTERATION: ARGILLIC W M S	ALTERATION: SILICIFICATION W M S	ALTERATION: PROPYLITIC W M S	COMMENTS	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	GATOR AIA - Tuff w/ blk speckles (hemitite?)																		
	fragmental w/ bleached to hemitite clasts (hemitite) matrix weak pervasive clay, weak bleached to gray tuffs component clasts - sub rounded						wkly calcareous				?	blk speckles hem replac biotite	<.02	<.005					
105	weak pervasive SiO2 wk pervasive clay alt																		
	tuff speckled w/ hemitite? replaced biotite																		
	same w/ predominant tuffs component with						"				?	"	<.02						
110																			
	same w/ predom tuffs component						"				?	"	<.02						
115																			
	same w/ predom tuffs component w/ hemitite replaced biotite speckles						"				?	"	<.02						
120																			
	same - " " " @ all above w/ only weak fragmental pervasive SiO2						"					"	<.02						
125																			
	FINE gr tuffs dk gray to buff w/ blk metallic speckles (poss hem replac py pervasive hemitite weak fragmental component, weak pervasive SiO2, wk SiO2 stkwk						"					"	<.02						
130																			
	same blk speckled fn gr tuff to fragmental						"					"	<.02						
135																			
	same						"					"	<.02						
140																			
	same						"					"	<.02						
145																			
	same						"					"	<.02						
150																			

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LAC PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RB-3 PAGE 4 OF 10

RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	COLOR FINES	ALTERATION: ARGILLIC W M S	ALTERATION: SILICIFICATION W M S	ALTERATION: PROPYLLITIC W M S	COMMENTS	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
150	SPECKLED TUFF																		
	Buff to lt gray fine gr tuff, strongly speckled w/ black metallic (hemitite)? replaced biotite very weak pervasive hemitite weak pervasive SiO_2						wk pervasive $CaCO_3$ ± vns				?		<.02	.006					
155	same w/ weak hemitite clay						"				?		<.02	<.005					
160	same w/ wk hemitite clay						"				?		<.02	<.005					
165	same - locally wkly fragmental tr calcedonic SiO_2						"				?		<.02	<.005					
170	same w/ 60% bleached finely lithic to xtal tuff w/ ADDOC sulfides						" w/ tr green chl?				1-2% in bleach frac'd diss py		<.02	<.005					
175	FRIED zone in bleached fine gr tuff Intense sulfide zone w/ mod str goethite tr fibrous gypsum pyrite + SiO_2 blebs str						tr green			POSS	10+ % diss py	w/ local bladed Arsenopy? str goethite	.09	.082					
180	Bleached fine grained tuff weak white clay w/ intense sulfides; speckled w/ hemitite; tr green clay, tr fibrous gypsum						tr chl?				2%± vn-clustered py	"	<.02	.012					
185	same w/ frags w/ strong goethite local str crustiform						wk green				7-8% ± diss clustee ! vn py	"	<.02	.019					
190	same						"				5-7% clustee py +		.03	.031					
195	same w/ SiO_2 + pyrite veins						"				"	local bladed sulf arsenopy?	<.02	.051					
200																			

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RB-3 PAGE 5 OF 10

RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	COLOR FINES	ALTERATION: ARGILLIC W M S	ALTERATION: SILICIFICATION W M S	ALTERATION: PROPYLLITIC W M S	COMMENTS	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	TUFF Bleached fine grained lithic tuff - lithics clay altd wk SiO2 encapsulated pyrite veins wk SiO2 tr yellow clay, tr fibrous gypsum tr SiO2 vnlets						pervasive green celadonite smectite				3-5% vn; diss py ± arsenopy.		.03	.03					
205	same locally vuggy w/ SiO2 + pyrite wh pervasive SiO2 ± white clay						"				"		.05	.048					
210	same w/ weak ↑ SiO2 + py stringlets tr pink clay						"				"		.04	.057					
215	same w/ ↑ SiO2 + py veins (↑ temp SiO2) tr pink clay fine xtals clay alt pricom bladed sulfide						"				3% vn ± diss bladed sulf		.14	.124					
220	same w/ ↑ temp xtal qtz veins ± pyrite ↑ pervasive SiO2, wk pink clay						wk intermittent green				"		.09	.098					
225	same w/ str pervasive SiO2 ↑ temp w/ pervasive bleaching wk mod fine qtz stkwork str SiO2 + bladed sulfide veins						"				5-6% vn ± diss + py bladed sulfide		.18	.142					
230	same @ above w/ strong pervasive SiO2 w 3 stgs SiO2 strong bladed sulfide content						"				"		.19	.206					
235	3 stg SiO2 same w/ weak hem clay (lt pink org)						"				"		.12	.11					
240	same w 2-3 stg SiO2						tr chl				"		.11	.105					
245	same w/ weak fibrous gypsum ↓ SiO2						"				3-4% bladed diss py vn sulf		.05	.044					
250																			

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RB-3 PAGE 6 OF 10

Depth	RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	COLOR FINES	ALTERATION: ARGILLIC (W M S)	ALTERATION: SILICIFICATION (W M S)	ALTERATION: PROPYLLITIC (W M S)	COMMENTS	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
250		Fine grained bleached tuff white to buff weak pervasive SiO_2, wk pinna limon, wk hairline fine qtz stkwk tr fibrous gypsum wk SiO_2 encapsulated sulfide veinlets, tr earthy limon						trace green				~5% VN; diss py		.02	.04					
255	OVERSTO NABLE	same						"				"		.04	.057					
260		same ghost lithics silicif to clay alt						"				" @ 3%		.04	.048					
265		same w/ few golden orange fried clasts						tr green xtals				"		.04	.041					
270		same ↑ limonite sulfides mostly in veins or clusters						"				"		.09	.114					
275		same w/ ↑ xtal SiO_2 + sulfide veins ↑ pervasive SiO_2						"				7+% VN ± diss py	bladed sulf. prom	.16	.160					
280		same						"				~3-4% VN; diss py		.06	.084					
285		same w/ ↓ pervasive SiO_2 possible epiclastic component						"				" @ 3%		.08	.096					
290		same " "						"				~2% diss py		<.02	.049					
295		same " "						"				" @ 3%		.02	.044					
300																				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RB-3 PAGE 7 OF 10

RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	COLOR FINES	ALTERATION: ARGILLIC W M S	ALTERATION: SILICIFICATION W M S	ALTERATION: PROPYLITIC W M S	COMMENTS	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
300	Bluff to white lithic tuff w/ possible epiclastic component wk vuggy, wk pinkish tan clay tr yellow clay, tr SiO2 stkwk wk SiO2 + sulfide vns, tr fibrous gypsum, wk pervasive SiO2 pervasively bleached						intermittent wk green				1-2% clusters + vn py		.03	.059					
305	same w/ wk melburn calcedony vns ovg						tr green xtals				"		.04	.058					
310	same						" plus green flush				1% clusters py		<.02	.028					
315	same						pervas intermittent green				"		<.02	.012					
320	same w/ weak red brown calcedony veins + pyrite						weak pervas green alt				1-2% vn + diss py		<.02	<.005					
325	same mottled lt mud gray to buff with red orange calcedony						" very weak				"		<.02	<.005					
330	CHANGE Dark purple brown fine particles w/ 30 to 40% clasts of lt gray - pds weakly bleached fine grained, tr calcedonic SiO2						weakly calcareous				~1% diss py		<.02	<.005					
335	same w/ 10% bleached frags						"				"		<.02	<.005					
340	same w/ wsh gray bleached frags						wk $CaCO_3$ vns + vug fill				"		<.02	<.005					
345	same " " "						"				"		<.02	.018					
350																			

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RB-3 PAGE 8 OF 10

Depth	RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	COLOR FINES	ALTERATION: ARGILLIC (W M S)	ALTERATION: SILICIFICATION (W M S)	ALTERATION: PROPYLLITIC (W M S)	COMMENTS	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		Medium gray to purple brown fine grained tuff moderate pervasive clay alt - soft clay - same color (a) gray, burg brown						tr green chl? alt wk $CaCO_3$ vns				tr diss py		<.02	.013					
355		same - mod str clay alt						"				"		<.02	<.005					
360		same - precom medium brown						"				"		<.02	<.005					
365		same										"		<.02						
370		same weak clay alt wk hemitite veinlets						weakly calcareous				?		<.02						
375		same						"				-		<.02						
380		same w/ minor fragmental component						"				-		<.02						
385		same						wk $CaCO_3$ vns				-		<.02						
390		same						"				-		<.02						
395		same						"				-		<.02						
400																				

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RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	COLOR FINES	ALTERATION: ARGILLIC (W M S)	ALTERATION: SILICIFICATION (W M S)	ALTERATION: PROPYLLITIC (W M S)	COMMENTS	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	medium gray to dk burgundy buff fine grained tuff w/ minor fragmental component w/ hemititic matrix, very weak hemititic clay, speckled w/ hemitite						WK $CaCO_3$ VNS tr green kials				–		<.02	<.005					
405	same						"				–		<.02						
410	same						"				–		<.02						
415	same						"				–		<.02						
420	same						"				trace fresh pyrite		<.02						
425	same						"				"		<.02						
430	same, pervasive lt/med gray strongly speckled w/ hemitite weak fragmental component						"				–		<.02						
435	same						"				–		<.02						
440	same lt gray - speckled w/ hemitite poss replacing biotite						"				–		<.02						
445	same						"				–		<.02						
450																			

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

Depth	RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	COLOR FINES	ALTERATION: ARGILLIC (W M S)	ALTERATION: SILICIFICATION (W M S)	ALTERATION: PROPYLLITIC (W M S)	COMMENTS	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
450		Lt gray fine grained tuff speckled w/ black metallic - poss hemitite replaced biotite						wk $CaCO_3$ VNS tr green chl?				–		<.02	<.005					
455		same						"				–		<.02						
460														<.02						
465														<.02						
470														<.02						
475														<.02						
480														<.02						
485														<.02						
490														<.02						
495														<.02						
500														<.02						

RB-4 QUICK LOG

0-25 OVERBURDEN

Mixed Frag + Tuff w/ FeOx clays

25-95 Bleached bud w/ green celadonite alt
(75-95) brecciated w/ MnO + hematite vns + jarosite + druzy qtz
w/ stv white clays + FeOx clays
35-100 stv. white to orange clays

95-145 jarosite yellow clays - Bud frags
(135-140) bl white + pink frag - silicified) 140-145 w/ calcedony vns

145-217 - lt lavender gray flow banded tuff
locally brecciated or fractured
looks like chocolate - v. whey altered
150-165 Δ 205-210 Δ

217-300 Bud breccia - celadonite green
wh clay alt feldspars whey bl
(275-280) w/ laminar amber brown beds

(300-315) transition zone mixed frag + tuff - white + PNK

300-405 Dacer bl ± clay alt tuff
w/ stkwk qtz ; finely diss py

Top 39 - Tuff - predom.

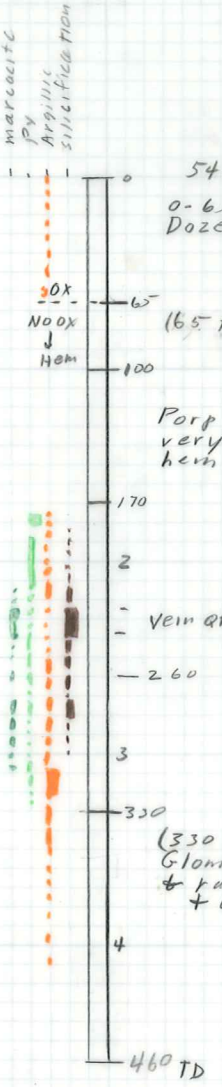
Intensity

: = 1

: = 2

: = 3

N 2,206,184.0
E 481,539.9



0-65 (Tbg Ryo)
Dozer like flow or Tuff within the Tbg weak clay alt (1) throughout

(65 to +/- 100) Hard Tbg

(slight chance this is Bleached Andesite)
Porp Ive not seen befor has dozer like text w/ rare bio & numerous very small Femags (0.1 to 0.3 mm). K spar? also. All earthy hem stained & weak clay alt (1). Poss a flow within the Tbg

From 170-330 strongly alt & cannot tell orig rock type

above 260 is occa Bx text, none below

(330 to +60)
Glomeropheric plag porp (Gorilla?) Has plag, very rare Sanidine & rare bio. matrix is dk red-brn All of it is Hem stained. + upper part is Red but very soft ? assume clay alt.

RB-3
Rosebud
1" = 100'

JPR Dec 98