60001251

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. RJ-13
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 385' handwritten notes 12p

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 RJ-13
Rosebud East Dreamland

60001251 4010

6000 1251

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

DRILL LOG SUMMARY SHEET

PROJECT ROSEBUD

HOLE NUMBER RJ-13 TOTAL DEPTH 385' LOGGED BY KLK

Date started 5-26-89

Date completed 5-27-89

Initial bearing N 0.5° E

Initial inclination -60°

Elevation ~~[illegible]~~ 5430

Collar coordinates:

N 2206780

E 480282.9

Contractor: Environmental West Explor

Drill Type: Reverse Circulation

Hole Size: hammer 5½"

Drilling Conditions: Good

Footage: Wet / Dry Dry: 0-385'

Comments: hit little H_2O @ 80' but dried out hole in morning and drilled entire hole dry — extremely dusty day w/ wind

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. RJ-13 PAGE 1 OF 8

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	Lt leek green fine gr tuff, mod strong orangish lt brn clay, bit strong bleached, trace pervasive arsenic alt, weak pervasive SiO2, few leach out strongly limonitic trace tr calcedonic stringers	CALC	X Xc				LT brn				wk limon replac py		.002		<.1				
"		Fine grain tuff, brownish leek green pervasive arsenic alt, weak perv. SiO2 tr white soft clay tr chl(?) green phenos		X				Creamy yellow				tr limon replac py	tr goethite	.002		<.1				
10		Same w/ ↑ limonite, more bleached tr red brn clay wk FeOx qtz vns ± gbet lite, + vuggy		X Xv				"				"	"	.002		<.1				
15		Same w/ ↑ arsenic alt, lt/v grainy mod whitish limonitic clay component wk FeOx + goethite qtz vns tr FeOx veinlets slightly vuggy		X				"				"	"	.003		<.1				
20		Epidastic + lt/army green tuff, weak pervasive arsenic alt mod wkly limon clay - perv. tr drusy FeOx vns + vuggy intermittent pervasive limonite		X ++				"				tr limon replac py relict casts		.003		<.1				
25		Buff + hint green epidastic pervasive creamy yellow clay, weak perv limonite perv. SiO2		X				"				"		.003		<.1				
30		Same w/ mod wkly limonitic clay ↑ perv. SiO2		X ++				"				"		.004		<.1				
35		DKE white fine gr well silicified tuff tr white waxy clay wk qtz stwk tr calcedony veins, tr limonitic drusy qtz vns	CLP	Xc ++				"				"		.004		<.1				
40 X		Same - strongly pervasively silicified fine qtz stwk mod bright golden orange clay veins, calcedony veins		XXX Xk Xc				orange yellow				~2% fine diss + cluster py		.004		<.1				
45		Same @ 35-40° fine gr, lt/v gray tuff with yellow + orange clay tr white clay, tr qtz vns w/ limon replac py casts		XX Xk				orang yellow				tr limon replac py		.001		<.1				
50																				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RJ-13 PAGE 2 OF 8

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 V	Ag	As	Hg	Sb	Se
50	G O O D	Buff well silicified fine gr tuff, pervasive argillic alt wk qtz stkwk ± limonite weak pervasive yellow clay tr chl phenos		X Xk				BUFF				tr py diss		.003		<.1				
55	"	same w/ strong weakly limonitic clay - pervasively + wk gray clay		X Xk				"				≥1% finely diss py		.005		<.1				
60	"	same w/ wk yellow clay weak green hue, tr drusy vns weak green calcedonic stkwk wk epiclastic component		X Xk				lt green				"		.004		<.1				
65	"	off white w/ weak gray green hue - tuff ⇒ fine grained w/ minor epiclastic component pervasive silicif + wkly argillic tr chl phenos		X				Lr gray green				~1% fine diss + wk clusters		.004		<.1				
70	"	same w/ tr white waxy clay		X				"				" @ vn + wk diss		.004		<.1				
75	"	same w/ wk calcedonic stkwk trace peach clay		X Xck				"				2-3% fine diss py + bleeded sulfide arsenic?	marcas?	.004		<.1				
80	"	same w/ strong epiclastic component wk white waxy clay wk flesh flush coloration wk stkwk qtz		X Xk				GRAY				" @ 3-4%		.006		<.1				
85	"	same w/ mod str epiclastic component wk pervasive lt gray clay strong milky white qtz vns wk waxy white clay becoming fragmental or is Δiated		XX Xv Xk				"				" @ 4-5%		.008		.14				
90	* "	same w/ flesh blush coloration mod white milky qtz vns wk drusy qtz possible alunite		XX				"				" @ ~4%		.004		<.1				
95	"	same @ 90-95 - however more pervasively bleached to flesh w/ gray clay + SiO2 pvn + arg alt		X				BUFF				" @ ~2-3%		.002		<.1				
100																				

LITTLE H2O

V = ? Δ

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RJ-13 PAGE 3 OF 8

Depth	RECOVERY	LITHOLOGIC DESCRIPTION v = ? 4	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
100	GOOD	Bubb to lt gray epiclastic + fine fragmental pervasive argillic alt weak pervasive silic; wk qtz stkwk, wk limonite veinlets tr chl phenos, tr translucent deep burgundy mineral, mod off white pervy clay		X K X				Lt gray buff				~2% fine diss py + blade & sulfide wk vein	ng	.004		<.1				
105	"	Same w/ strong gray clay w/ limonitic center ↑ vein pyrite	CLAY	X K X				"				" @ 2-3%		.002		<.1				
110	"	Same - tuff + epiclastic wkly mod lt gray clay	CLAY	X X K				"				1-2% fine diss py + vns		<.001		<.1				
115	"	Same w/ weak tan to gray clay		X X K				"				"		<.001		<.1				
120	"	Same predom gn gr siliceous tuff		X X K				"				≥ 1% fine diss py		<.001		<.1				
125	POOR	Same w/ weak limonitic-pervasive very strong gray clay	CLAY	X X K				Lt gray				~1% diss ±vn py		<.001		<.1				
130	POOR	Same w/ very strong gray clay tuff rich	CLAY	X X K				"				"		<.001		<.1				
135	GOOD	Lt gray tn gr tuff flow banded to lithic unevenly mottled pervasive limonite mod sticky gray clay pervy arg wk per stk felsic units tr green phenos wk epiclastic component		X X K				"				2% vn + diss py		.002		<.1				
140	"	Same @ 135-140 wkly mod lt gray sticky clay wk calcite vns wk qtz vns		X X CA				"				"		.001		<.1				
145	"	Flow banded tuff predom Same @ 135-140 w/ ↑ pervasive SiO2 + soft gray clay tr white chalky clay wkly calcar wk stkwk		X X X K CA				"				2-3% vn + diss py + blade sulfide		.001		<.1				
150																				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RT-13 PAGE 4 OF 9

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
150	GOOD	Fine gr tuff, flow banded, pervasive argillic alt, pyritized, weak limonite, locally lithic to finely fragmental, weak to open calcedonic stockw, intermit SiO2 silicification, weakly calcareous, wk gray		X XK XCK				lt gray				~2% VN + disc py	+ bladed sulf	<.001		<.1				
155	"	same w/ more lt tan-brn color, ↓ limonitic fine fragmental, tr SiO2 encap py lens		XX XK XC				"				" @ 1-2%	"	.001		<.1				
160	"	same ↓ limonite, perv. lt gray coloration, tr lt gray clay		X XK				"				"	"	<.001		<.1				
165	"	Lt gray fine gr tuff, pervasively silicified, weak argillic alt, lt tanish buff coloration, v. weak intermittent FeOx, weak fine calcite veins, tr open fine calcedonic stockwork, weak limonitic & SiO2 veinlets		XX XKC CA				Buff				~1% diss + VN py	"	<.001		<.1				
170	"	same becoming darker purple gray, to ↓ pervasive alt		X XK				Lt gray				"		<.001		<.1				
175	"	tr calcite VNs, weak argillic alt, tr green phenos, medium gray fine gr tuff - chocolate bleached w/ black mineral (specular hemitite?) weakly perv. silicified, wk-mod perv hemitite tr/green (altered) tr hemitite veinlets, tr white clay (VNs)		X CA XCK				Burg Brun				—		<.001		<.1				
180	"	same ↓ argillic alt		X CA XCK				"				—		<.001		<.1				
185	"	same w/ mod burgundy brown clay to red		X CA XCK				"				—		<.001		<.1				
190	"	same w/ weak red brown clay		X CA XCK				"				—								
195	"	same		X CA XCK				"				—								
200																				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RJ-13 PAGE 5 OF 8

RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	GRAPHIC DET.	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	medium purple gray fine grained weak pervasive argillic alt, high perv silicification, wk fine qtz stwk, wkly calcareous tr green phenos, wk perv hemit wk calcedonic ± FeOx stwk		X XK CA				BURG BURN + GRAY				tr fine diss ± vn py								
205- ✓ "	same w/ stronger perv. argillic alt pervasive wk bleach buff to lt gray		X XK XCK CA				Lt gray				"		<.001		<.1				
210- "	same tr perv. argillic alt tr calcite vns, buff to lt gray		X XK CA				"				>1% diss py ± vns		.001		<.1				
215- "	same w/ mod bleach - lt perv. gray ↑ perv. SiO2, ↓ perv argillic alt		XK XK CA				"				1% diss + vn py		<.001		<.1				
220- "	buff - lt buff to lt gray, pervasively silic w/ perv argillic alt locally wkly wk fine hairline stwk ± FeOx few lt translucent emerald green phenos tr white clay		XK XK CA				"				≥ 1% vn + diss py		<.001		<.1				
225- ✓ "	same w/ ↓ overall alt becoming more purple gray		X XK CA				"				"		.001		<.1				
230- "	same moving away from alt overall w/ lt green calcedonic vns		X XCK CA				Lt gray to burg burn				"								
235- "	faintly alt chocolate tuff wk hint argillic + perv. SiO2 wk adular + green calced stwk fleck w/ specular hematite, tr tan clay		X XCK CA				burg burn				tr diss py								
240- "	same w/ ↓ overall alt predom unalt		X XCK				"				–								
245- ✓ "	same @ 240-245		X XK				"				–		<.001		<.1				
250-																			

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RJ-13 PAGE 6 OF 8

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
250	GOOD	medium to dk gray fine or tuffs - chloritic - slightly unaltered wk burn clays wk argillic alt wk pervasive silicification to grun calcedony veinlets weakly colored		X Xck Ca				Burg Burn to GRAY				—								
255	"	same -		X Xck Ca				GRAY				—								
260	"	same		Xck X Ca				"				—								
265 ✓	"	same		X Xck Ca				Burg Burn				—		<.001		<.1				
270	"	same w/ ↑ argillic alt ↑ stkwk hairline qtz slight hint bleaching wk calcedony pods & veinlets		X Xc Xk Ca				"				—								
275	"	same - ↓ overall alt		X Xck Xk Ca				GRAY				—								
280	"	same " " "		X Xck Xc Ca				Burg Gray				—								
285 ✓	"	same w/ few calcite + chl assoc veinlets pervasively unalt		X Xck Ca				"				—		<.001		<.1				
290	"	same " " " " " " "		X Xck Ca				"				—								
295	"	" " " " " "		X Xck Ca				"				—								
300																				

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PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RJ-13 PAGE 7 OF 8

RECOVERY	LITHOLOGIC DESCRIPTION	GRAPHIC LOG	GRAPHIC ALT	ALTERATION: ARGILLIC (W M S)	ALTERATION: SILICIFICATION (W M S)	ALTERATION: PROPYLLITIC (W M S)	COLOR OF 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
300 GOOD	unaltered chocolate gray tuff - welded less wkly silicified, pervasively white calcareous, tr green calcedony veinlets		X Xcc Ca				Burg Grody				–								
305 ✓ "	same		X Xcc Ca				"				–		<.001		<.1				
310 "	same		X Xcc Ca				"				–								
315 "	same		X Xcc Ca				"				–								
320 "	same		X Xcc Ca				"				–								
325 ✓ "	same		X Xc Ca				"				–		<.001		<.1				
330 "	same		X Xc Ca				"				✓								
335 "	same		X Xcc Ca				"				–								
340 "	same		X Xc Ca				"				–								
345 ✓ "	same		X Xcc Ca				"				–		<.001		<.1				
350																			

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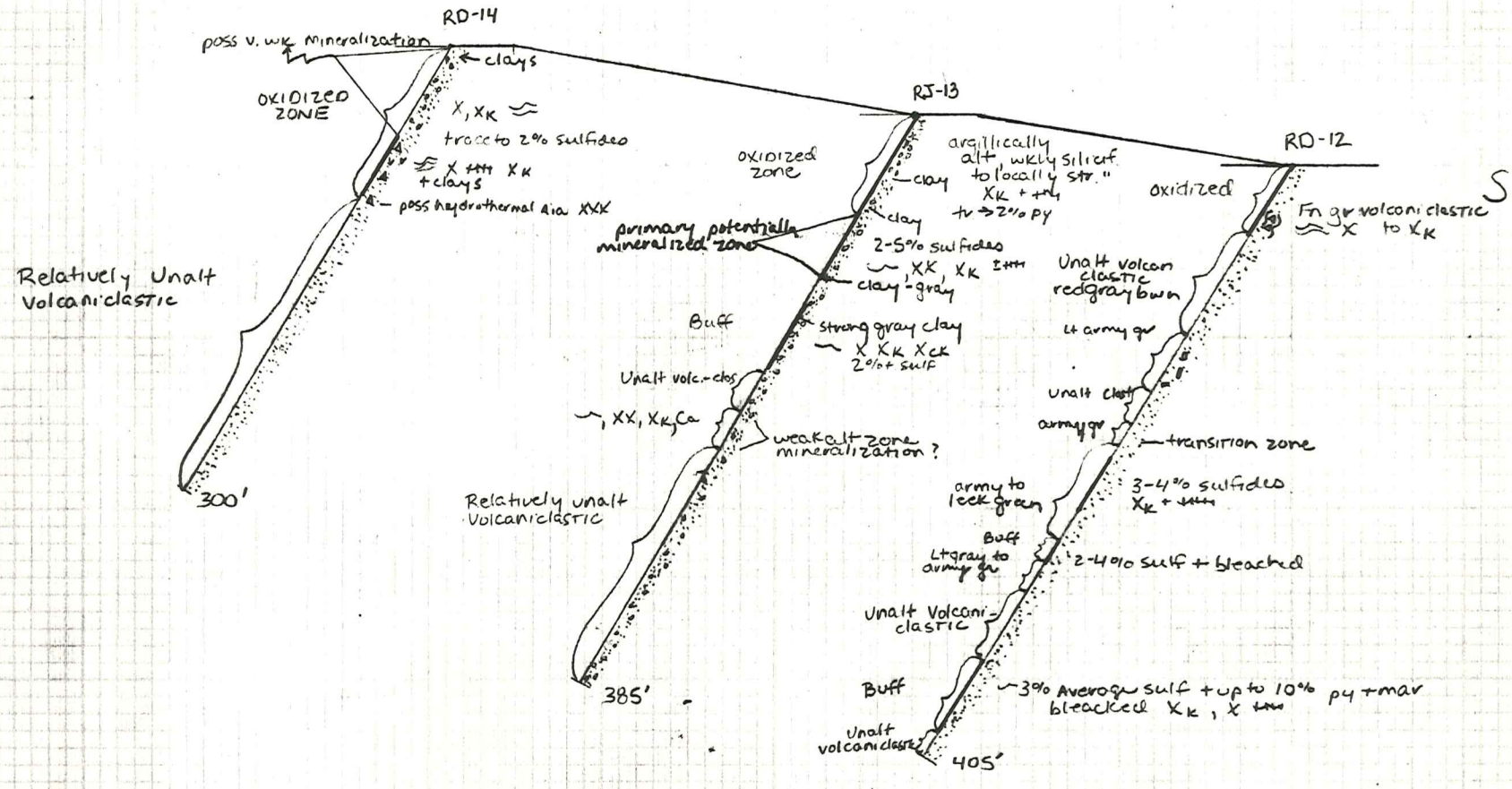
PROJECT ROSEBUD LOGGED BY KLK HOLE NO. RJ-13 PAGE 8 OF 8

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 ✓	Ag	As	Hg	Sb	Se
350 GOOD	Relatively unaltered fine grained chocolate tuff med gray to darker pervasively silicified, wk fine grained calcedonic veinlets, tr calcite vns wkly pervasively calcareous		X Xcx Ca				Burg Gray				—								
355 "	Same		X Xcx Ca				"				—								
360 ✓ "	Same		X Xcx Ca				"				—		<.001		<.1				
365 "	Same		X Xcx Ca				"				—								
370 "	Same		X Xcx Ca				"				—								
375 "	Same		X Xcx Ca				"				—								
380 ✓ "	Same		X Xcx Ca				"				—		.004		<.1				
385	T.D.																		
390																			
395																			
400																			

E

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

——— delineates potential Au Zones



from GSI 4376

Sample I.D.				Au o/t	Ag o/t
173	RD-12	385	390	0.001	<.10
174	RD-12	390	395	0.001	<.10
175	RD-12	395	400	0.001	<.10
176	RD-12	400	405	<.001	<.10
177	RJ-13	0	5	0.002	<.10
178	RJ-13	5	10	0.002	<.10
179	RJ-13	10	15	0.002	<.10
180	RJ-13	15	20	0.003	<.10
181	RJ-13	20	25	0.003	<.10
182	RJ-13	25	30	0.003	<.10
183	RJ-13	30	35	0.004	<.10
184	RJ-13	35	40	0.004	<.10
185	RJ-13	40	45	0.004	<.10
186	RJ-13	45	50	0.001	<.10
187	RJ-13	50	55	0.003	<.10
188	RJ-13	55	60	0.005	<.10
189	RJ-13	60	65	0.004	<.10
190	RJ-13	65	70	0.004	<.10
191	RJ-13	70	75	0.004	<.10
192	RJ-13	75	80	0.004	<.10
193	RJ-13	80	85	0.006	<.10
194	RJ-13	85	90	0.008	0.14
195	RJ-13	90	95	0.004	<.10
196	RJ-13	95	100	0.002	<.10
197	RJ-13	100	105	0.004	<.10
198	RJ-13	105	110	0.002	<.10
199	RJ-13	110	115	<.001	<.10
200	RJ-13	115	120	<.001	<.10
201	RJ-13	120	125	<.001	<.10
202	RJ-13	125	130	<.001	<.10
203	RJ-13	130	135	<.001	<.10
204	RJ-13	135	140	0.002	<.10
205	RJ-13	140	145	0.001	<.10
206	RJ-13	145	150	0.001	<.10
207	RJ-13	150	155	<.001	<.10
208	RJ-13	155	160	0.001	<.10
209	RJ-13	160	165	<.001	<.10
210	RJ-13	165	170	<.001	<.10
211	RJ-13	170	175	<.001	<.10
212	RJ-13	175	180	<.001	<.10
213	RJ-13	180	185	<.001	<.10
214	RJ-13	185	190	<.001	<.10
215	RJ-13	205	210	<.001	<.10
216	RJ-13	210	215	0.001	<.10
217	RJ-13	215	220	<.001	<.10
218	RJ-13	220	225	<.001	<.10
219	RJ-13	225	230	0.001	<.10

from GSI 4376

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