60001353

Mining District File Summary Sheet

DISTRICT	Rosebud
DIST_NO	4010
COUNTY If different from written on document	Pershing
TITLE If not obvious	Rosebud Drill Hole File - Hole No. RL-124-C
AUTHOR	N. Brewer; R. Grondin; K. Tullar
DATE OF DOC(S)	1990
MULTI_DIST Y / (N?) Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud Project; Coates Drilling; Lac Minerals (USA), Inc
COMMODITY If not obvious	gold silver
NOTES	Drill log; geology; assay; total depth 972'; handwritten notes; also referred to as RL-124C 26p.

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)

	Initials	Date
SS:	DD	5/20/08
DB:	Mah	
SCANNED:		

Revised: 1/22/08

DRILL LOGS RL-124 -C
ROSEBUD

60001353 4010

60061353

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

DRILL LOG SUMMARY SHEET

PROJECT Rosebud

HOLE NUMBER RL-124 TOTAL DEPTH 972' LOGGED BY KNT/KLK

Date started 9-24-90

Date completed 10-03-90

Initial bearing S52E

Initial inclination -60°

Elevation 5200.9

Collar coordinates:

N 2204095.0

E 481322.3

Contractor: Coates

Drill Type: UDR

Hole Size: RC to 465'

Drilling Conditions:

Footage: Wet / Dry

Comments: Went to NQ@785'

DOWN HOLE SURVEY INFORMATION

FROM	TO	SURVEY POINT	INCLI-NATION	BEARING	X (Northing)	Y (Easting)	Z (Elevation)
0	50		-60	S52E			
50	200	100'	-60	S53E			
200	401	300'	-64	S51E			
401	601	502'	-62	S58E			
601	801	700'	-62	S63E			
801	937	902'	-62	S62E			
937	972	972	-62	S59E			

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

FINE-GRAINED TUFF
LITHIC LAPILLI TUFF

ARGILLIC
XX SILICIFICATION
OX OXIDIZED
XXXXXX DRUZY QUARTZ
XC CHALCEDONIC QUARTZ
XK STOCKWORK QUARTZ
P P P PROPYLITIZATION
Ca CALCITE

DRILL HOLE RL-124

Page 1 of ____

LOGGED BY KNT

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK	% WASH RECOV.
									Tan, wht brwn grn					0-30 Overburden ?? mixed clast red, brown ugly FGT + wht silic + grn, silicified pyroclastic (lithic lapilli tuff	<	<		
05									"						<			
10									"						<			
15									"						.001			
20									"					30-465 possibly Lithic lapilli tuff sequence w/ FGT interbeds	<			
25									"					± dikes or Tct ???	<			
30		~							Yellow-grn					30-80 yellow-grn to yellow/orange grn wk limonitic after pyrite,	.002			
35		~							wht-lt grn					fine grain tuff w/ fn, minot grn phenos ?? wk-mod arg.	.001			
40		~							Sage grn					v.v. wk silicification	<			
45		~							yellow/orange grn						<			
50		~							"						<			
55		~							"						.002			
60		~							"						<			
65		~							"						<			
70		~							olive drab grn						<			
75		~							"					oxidized reduced 80-105 sage grn, lithic lapilli tuff, wk silic. with wk fn grn, cubic pyrite <1%	<			
80		x							Sage grn				<1% diss		.003			
85		x							"				"		.002			
90		x							"				"		.002			
95		x							"				"		.014			
100																		

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DRILL HOLE RL-124

Page 2 of ____

LOGGED BY KNT

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK	% WASH RECOV.
	V V V	x							SAGE GRN				±1%		.004	.28		
105									Harm-flesh					105-175 Harm-flesh, wk bk, indurated wk-mod local silicification + local sulfide veins ± 1-2% diss pyrite				
110		+ x Bc													.006	.13		
115		+ x Bc													.004	.11		
120		Bc													.003	.13		
125		Bc													.001	<		
130		Bc													.001	<		
135		Bc													<	<		
140		Bc													.003	.14		
145		Bc													.002	<		
150		+ + + py Bc													.006	.21		
155		Bc													.001	<		
160		Bc													<	<		
165		Bc													<	<		
170		Bc													.002	.16		
175		+ x Bc													.005	.13		
180	V V V	+ + + py Bc							Harm				<1%	175-225 Harm, punky, soft, clay rich (glauconite??) lithic lapilli tuff v. wk Bl.	.110	.38		
185	V V V														.003	.16		
190	V V V														.003	.15		
195	V V V														.004	<		
200	V V V														.001	<		

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DRILL HOLE RL-124

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LOGGED BY KNT

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK	% WASH RECOV.
									Hgrn						<	.15		
205															<	.10		
210															<	.13		
215															.001	<		
220															.002	.23		
225		wk Blc							mixed Hgrn + flesh				1-2%	225-245 Hgrn (1-2%) wk Blc, inc. pyrite cubic, fg-med, diss	.001	.18		
230															.001	<		
235															.003	<		
240															.001	<		
245		mod Blc							flesh					245-315 flesh, mod Blc	<	.17		
250									"						.001	.14		
255									"						<	.13		
260									"						<	<		
265									"						.001	.13		
270									flesh-wht						.001	.16		
275															<	.12		
280															<	<		
285															<	<		
290		Blc ↑													<	<		
295		"							wht					Talcy (sericite??) sheen	.001	.15		
300																		

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DRILL HOLE RL-124

Page 4 of ____

LOGGED BY KNT

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK	% WASH RECOV.
									ltgrn + flesh						<	.12		
305									flesh							<		
310									"							<		
315	?	v. wk Blc							wht + MAUVE					315-370 MAUVE to wht, blc, fGT? or dike??		<		
320	A	"							"					overall wk-mod Blc to v. wk Blc		.13		
325		"							"							<		
330		"							"							<		
335		mod Blc							wht-ltgrn				1-2%	335-390 wht - ltgrn, mod - slg Blc		.19		
340		"							"				<1%			<		
345		"							"				"					
350		v. wk Blc																
355		wk Blc																
360		"																
365	?	v. wk Blc							red-brown MAUVE									
370		mod-slg Blc							wht-wk flesh				<1%	370-400 wht - wk flesh lithic lapilli tuff w/ v. wk (<1%) diss f. G. pyrite mod-slg Blc				
375																		
380																		
385																		
390																		
395																		
400																		

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Ca CALCITE

DRILL HOLE BL-124

Page 5 of ____

LOGGED BY KALT

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK	% WASH RECOV.
	?	wk Blc							ltgry + wht					400-460 overall, red, brown, frsh, fGT w/ ltgrn clay inclusions + along fracts. Tct as dike???	✓	✓		
405	↓	"							"									
410									Red-Brown									
415																		
420																		
425																		
430																		
435																		
440																		
445																		
450																		
455																		
460	?																	
465	✓ ✓	wk-mod Blc							flesh-ltgrn					460- flesh + ltgrn, wk-mod Blc, lithic lapilli tuff	↓	↓		
70																		
75																		
80																		
85																		
90																		
95																		
00																		

HOLE # RL-124C LOGGED BY KLK DATE 12-12-90 PAGE 1 OF 8

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
465	100	60 CaCO3 VN		≤1% diss + VN + block shot py		wk-mod bl
470	100		45 clay gouge		clay gouge 43	SPE clay + gouge
		52 CaCO3 VN				
480	100					
490	100	42 CaCO3		NIL	47	RBU
500	98	36 FeOx band fract				
510	100	28 pseudo flo				
		45 CaCO3 VN				
520	100					
530						

DESCRIPTION

CORE BEGAN 465'

465 - 719.6 LOWER BUD TUFF (RBU)

VARIOUS PHASES OF unaltered Red brown aphanitic fine grained tuff w/ local bleached zones; volc. bxa's to lithic lapilli's weak pervasive calcite veins; red orange oxide filled fractures

465-467.4 BL LBT flesh to buff colored w/ glauconite filled fracture veins ± white clay + local calcite veins

467.4-475.3 Volc. bxa w/ blue green glauconite + poss. chlorite - clay matrix, local strong $CaCO_3$ fill 3-4 stages Δ clasts up to 55mm w/ fine Δ matrix 1-3mm clasts poss. fault zone 474.8-475.3 @ 45° to C.A. w/ strong fault gouge filling in shear zone clasts: flesh colored to buff bl FGT. to flow to Δ

475.3 - 496 Volc bxa - fine tuffaceous matrix supported flesh matrix w/ local fine Δ clasts are bl buff to local wk green averaging 15-20mm w/ prominent 50-90 mm clasts

496-704 RBU w/ various textures

496-510.5 unalt RBU w/ FeOx fracts

510.5-515.5 striated; verigated w/ stretched texture

515.5-524.9 clastic texture w/ 5-7% bleached flesh - clasts w/ FG purple matrix

524.9-552.1 unalt Red Brn LBT w/ FeOx fracts

ASSAYS					
Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
NO SAMPLES TAKEN FROM 465' to 705'					

HOLE # RL-124C LOGGED BY KLK DATE 12-12-90 PAGE 2 OF 8

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERAL-IZATION	GRAPHIC LOG	ALTER.	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
540	100	18 calc duck 75 butter VN; 27 Fe/Py glauco VN	calc3 VN 50	NIL		RBU	530 - 719.6 LBT continued @ above w/ intermittent FGT 552.1 - 572.0 Volc bxa poss fault related w/ FG bl clasts up to 55mm wide w/ fine Δ matrix w/ blue green glauconite clay rich 552.1 - 556 rehealed fault w/ green clay rich matrix similar to fault @ 565-569	NO SAMPLES TAKEN					
550	100	35 fract dep/vug											
560	98	56 calc3 VN	65 ALT; Δ boundary; 28 Δ VN	≤1% diss + VN + buck SHOT Py	65 Δ° Δ clay to Po Δ	mod bl STR LATER MITER Δ clay gouge	556-563 FG-bl-LBT bl due to upper fault @ 558.3 30° to CA. 6" Δ seam @ 563' 35° to CA w/ 1/4" wide green clay seam 565-569 Intermittent breccia-fault zones w/ clay + glauconite rich matrix						
570	95		35 Δ bound; 55		35 Δ dom Δ GOUGE Δ Δ 55								
580	100	28 Δ VN	52 ALT bound	NIL	52	RBU	574.5 - 619 UNALTERED RED BROWN LBT w/ red orange OXIDE rich fractures + weak fine calcite veins ± local glauconite ± duck butter fill						
590	100	±5° Fe/Py fracs; 35 duck butter VN	60 calc3 gouge Fe/Py VN										
600		5° fract fracs											

HOLE # RL-124C LOGGED BY KLK DATE 12-12-90 PAGE 3 OF 8

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
	100		5° ↓ 10° FeOx glauc CaCO3 frac	NIL		RBU bl RBU	600 - 719.6 LBT CONTINUED @ above	NO SAMPLES TAKEN					
610	95	65 duck butter VN											
		54 CaCO3 VN	15 glauc frac				619 - 628 BL FGT lt pinkish buff - wk bl w/ wk fine green fracture veinlets, wk calcite veins 1-2/ft.						
620	100	51 CaCO3 VN		>1% VN + diss py		wk-mod bl	621 - 622.5 mod str calcite veining & brecciation w/ depth w/ CaCO3 - paper - vuggy matrix						
		65 glau CaCO3 VN		NIL		RBU							
630	100		82 CaCO3 VN				628 - 634 unaltered RB - FGT w/ wk calcite and lt green duck butter veins						
		60 CaCO3 VN		<1% fine diss ± VN py		wk bl	634 - 640 very weak mottled to striated bleaching weakly to mod fractured w/ FeOx ± lt green duck butter fill weak calcite veining ~ 1/2 to 1" wide						
640	98	60 CaCO3 VN		NIL		RBU							
		35 FeOx frac					640 - 654.5 unaltered RB-FGT w/ v. few mixed calcite + duck butter veins weakly to mod fractured w/ hemitite fill. 646 - 649 mod str. hemititic fracturing; Δ FeOx filled VNS						
650	100	15 FeOx Δ VN		<1% fine diss py		wk BL	654.5 - 659 weak to mod perv. bleaching weak fracturing w/ glauconite ± CaCO3 fill 656 - 656.5 tectonically brecciated w/ local glauconite matrix						
			18 glauc frac										
660	100		75 broken bl rubble	NIL		RBU	659 - 704 Relatively unaltered RB - FGT moderate to locally strong fracturing w/ hemitite fracture fill, moderate perubsive calcite veining 663 - 663.5 bleached broken rubble 664.5 - 670 w/ breccia veins 5° to subparrell to C.A. NOT bl. w/ hemititic clay fill & wk local calcite ± lt green duck butter						
		±5° FeOx Δ VNS											
670													

45

HOLE # RL-124C LOGGED BY KLK DATE 12-12-90 PAGE 4 OF 8

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERAL-IZATION	GRAPHIC LOG	ALTER.	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
	>100	20/ FeOx fract	43/ CaCO3 VN	NIL		RBU	670-704 UNALTERED RB-FGT w/ hemititic fractures	NO SAMPLES TAKEN					
680							658-690.7 unalt. RB-FGT						
	100	30/ fract w/ CaCO3	85 CaCO3 VN		CALCITE		682.3-682.7 white calcite vein						
	100	82 CaCO3 VN	70 Δ zone Δ		Δ Δ Δ		690.7-692.3 brecciated & revealed w/ lt green clay + calcite matrix, clasts are burgundy brown						
690	100						692.3-704 FGT-RB w/ mod to mod strong fracture VNS w/ lt green (duck butter) clay + local calcite fill						
		62 CaCO3 + ff fract VN	±5° fract w/ FeOx		Δ		702-704 fracture VNS ±5° to C.A. & are hemititic w/ intermittent lt. green duck butter clay fill.						
700	100	63 ALT fract bound		≤1% fine diss ± VN py		rush - mod bl	704-719.6 weak to mod perv. bl FGT (RBU) buff to peach w/ local hint green sliage on fractures pervasive cracks & brecciation w/ weak rotation and lr green duck butter clay fill; w/ local $CaCO_3$						
710	100		38/ grn clay VN				708-712 intermittent Δ-tectonic-clast supported w/ duck butter fill						
	100	45 CaCO3 VN					712-719.6 mod perv calcite veining						
720	98		34 CaCO3 + clay gouge contact	<1% fine diss py	34	RB LLT	719.6-852 LITHIC LAPILLI TUFF - BEDDED BUD. RED BROWN VARIETY w/ bl zone @ 761.5-852 contact ~ 34°-38° to C.A. w/ ±1" calcite vein						
		30/ fract cleavg					719.6-761.5 red brown unaltered bedded bud w/ lithics averaging 3-10 mm clast supported heterolithic w/ gradational alteration into bleached zone very weak intermittent calcite veins						
730	100	45 hemy fract	±5° CaCO3 VN										
			30/ CaCO3 VN										
740													

HOLE # RL-124C LOGGED BY KLK DATE 12-12-90 PAGE 5 OF 8

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
	100			<1% fine diss py		RB LLT
750	100	48 CaCO3 vn	30 fract + lt clay CaCO3			
760	100	43 CaCO3 vns	40 CaCO3 vn	<1% fine diss + vn + buck shot py		wk bl + wk glauc + clay alt
770	100	15 + CaCO3 vn	40 CaCO3 vn			
780	100	40 CaCO3 fract				mod bl, mod clay + glauc chlor alt
	71					
790	100	22/40		1-2% vn + diss + buck shot py		
800	100					
810						

DESCRIPTION

740 - 852 LLT continued @ above

740 - 761.5 unaltered RB-LLT w/ very weak fine calcite veins

761.5 - 852 LITHIC LAPILLI TUFF - BEDDED BUD
Pervasively bleached & green glauconite alt w/ clay rich MATRIX GRADED bedding throughout varying from clast supported to matrix supported w/ weak 1/4"-1/2" $CaCO_3$ vns, matrix is predom. lt. sage green heterolithic: bl to white to lt green to flesh to red brown clasts average lithic size 10-5mm

761.5 - 778 matrix is intermittently red brown - ↓ bl.

785 - 793 predom fine tuffaceous matrix supported w/ lithics showing flow ~ 22° to C.A.

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
NO SAMPLES TAKEN					
777.7-782				<	<
782-785				.031	<
785-791.5				<	<
791.5-796.5				<	<
796.5-802				<	<
802-807				.001	<
807-812				<	<

HOLE # RL-124C LOGGED BY KLK DATE 12-12-90 PAGE 6 OF 8

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
810	100	44 / CaCO3 PY VN	70 / CaCO3 VN	1-2% fine diss + VN PY		wk bl mod str glauc bnite mod str clay alt
820	100	65 / PY + CaCO3 VN	30 / clay fract			
830	86	85 / CaCO3 VN				
840	95					
850	84	30 / CaCO3 VNS	5-10° / CaCO3 stkwk			
860	100	PY fract	5-90° stkwk vnlets	3-4% vnt diss PY		str bl mod XX + Δ
	100	32 / CaCO3 Δ VN	70 / Sil Δ VN			
870	100	65 / SiO2 stkwk + Δ VNS	58 / Sil Δ VN			
880	100	5-10° Δ stkwk		1-2% diss + VN PY		mod bl + XX

FAULT

DESCRIPTION

810 - 852. GREEN LLT - Bedded Bucl (continued) description @ above ; being predom clast supported ; 2-12 mm @ average size green glauconite + clay rich matrix

842 - 853.6 FAULT zone - CONTACT @ 852 w/ lower Dozer Tuff exact CONTACT immeasurable

842 - 847 green lithic lapilli w/ intermittent rubble to strong clay gouge matrix w/ wk $CaCO_3$ VNS

847 - 852 brecciated w/ mod to STR. silicification w/ local 3" $CaCO_3$ VNS buff to blue green COLORATION mod $CaCO_3$ stock working

852 - 853.6 strong white bleaching strong Kaolinite alt. local 1/2" pure v. fine grained gray sulfide seam all w/in rubble zone

852 - 972. DOZER FINE GRAINED TUFF densely welded pervasively bleached

853.6 - 873 perv. strong bleaching strongly silicified, pervasive crackle brecciation ; silicified mineralized vein breccias ; CRACKLE Δ angular, only weakly locally rotated

853.6 - 855 sulfides up to 7%

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
812-817				.01	<
817-822				.008	<
822-827				.002	<
827-830				.001	<
830-837				.002	<
837-842				<	<
842-846.5				.009	<
846.5-852				.007	<
852-853.6				.001	<
853.6-857				.002	<
857-862				<	<
862-867				.005	.12
867-872				.004	<
872-877				.002	<
877-882				.001	<

HOLE # RL-124C LOGGED BY KLK DATE 12-12-90 PAGE 7 OF 8

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
880	100	13/ CaCO3 VN	19 CaCO3 py VN	~2% diss + VN py		mod perv bl wk glauc wk XX
890	100	21 Kaolin-like VN	59 py VN	2-3% VN + diss + buck shot py		
900	100	30 CaCO3 VN				
910	100	22 CaCO3 + py VN	45 VN	5-4% VN + diss ±2% diss + VN py		mod STR. bl + XX wk glauc
920	100	78 FeOx py VN				wk-mod bl wk glauc wk
930	100	65 VN				
940	100	FeOx-py glauc VN 10°				wk FeOx fracts wk bl + glauc
950		5% wk clay + SiO2 22	CaCO3 glauc py FeOx 22 VN			

DESCRIPTION

880-972 DOZER TUFF

Densely welded, weakly to mod bleached intermittent crackle brecciation perv. lt sage green mod fractured w/ glauconite ± calcite fract. fill weak-mod calcite veining intermittent riddling of SiO2 or CaCO3 stockwork few white Kaolinite veins ±2% fine diss + VN + buckshot pyrite

873-972 Lt. green, decrease in silicification

906-917 increased bleaching ; ↑ pyrite veining w/ assoc. FeOx + glauconite ± CaCO3, local vein brecciation, increased silicification (pervasive)

922-972 pervasive intermittent crackle brecciation ; vein brecciation - more tectonically related

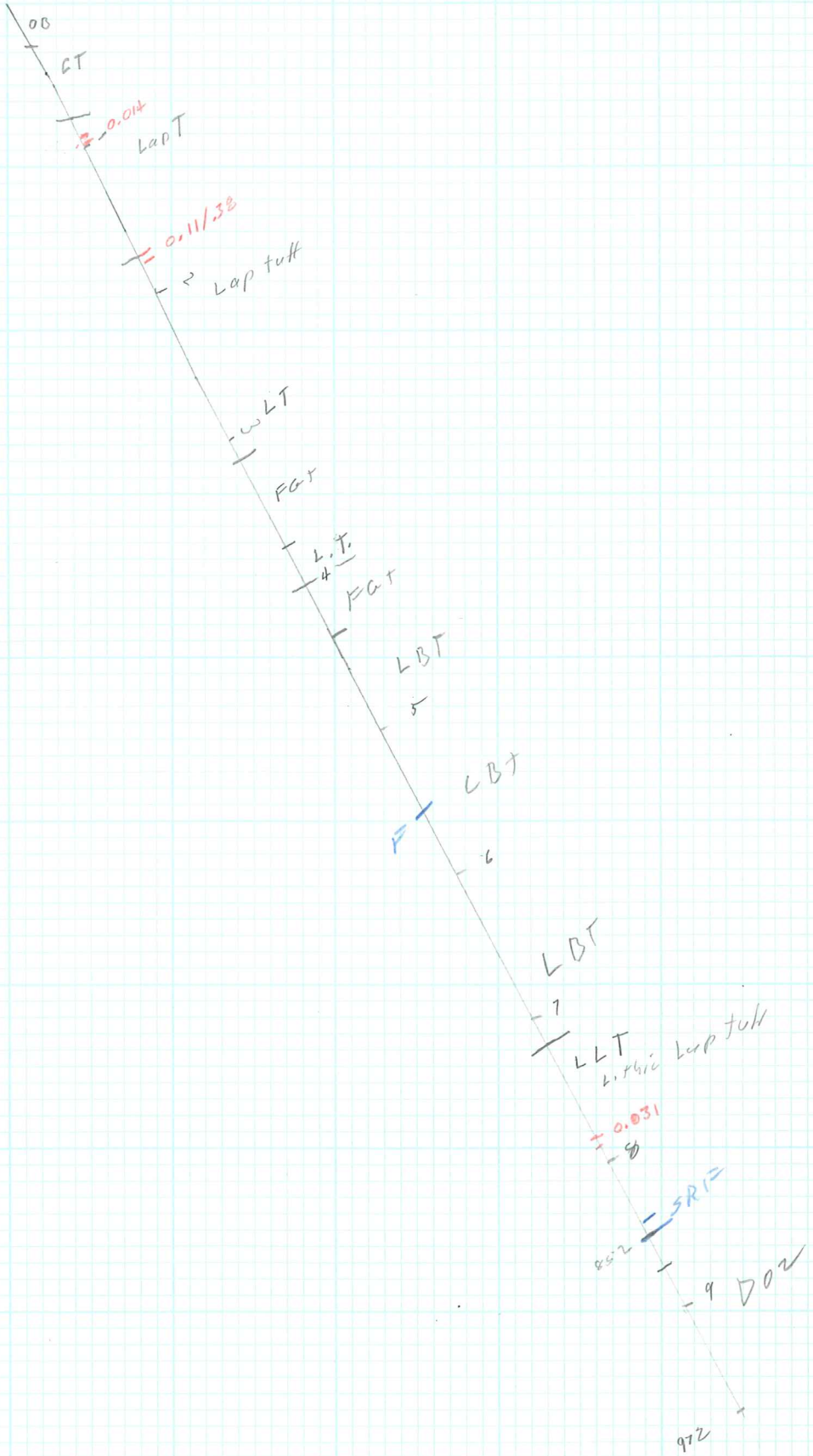
938-963 vein ; crackle brecciation has associated reddish orange OXIDE along fracts ; w/in matrix wk local white clay VNS

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
882-887				.001	.15
887-892				.002	.11
892-897				<	<
897-902				<	<
902-907				.002	<
907-912				.002	<
912-917				.001	<
917-922				<	<
922-927				<	<
927-932				<	<
932-937				.001	<
937-942				.001	.11
942-947				<	<
947-952				.001	<

HOLE # RL-124C LOGGED BY KLK DATE 12-12-90 PAGE 8 OF 8

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERAL-IZATION	GRAPHIC LOG	ALTER.	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
	100	70 A VN		1-2% VNT + diss py		wk-mod bl wk glauc	950-972 Dozer Tuff (description @ above) w/ prominent CRACKLE & vein brecciation wk-mod perv. bl veins - v. fine due to brittleness of Dozer - filled w/ $CaCO_3$ ± py ± Kaolinite ± glauconite	952-957				.001	<
960	100	52 A VN						957-962				.001	<
								962-967				.001	<
		Cracks 60 ∠	75 A VN					967-972				.001	<
972							T.D. 972						



ROSE BUD
RL-124
1"=100

RL-124
RC Ø - 465'

Sample Rec	% Rec	Sample Int.	Lithology
465 - 472	>100		
472 - 482	>100	No Sample	(465) - 496
482 - 492	100	(465 - 705)	pasely to lt grn, blc
492 - 502	100		lithic tuff + local
502 - 512	98%		bx w/ grn clay?
512 - 521	>100		
521 - 531	>100		(465) - (705) Tct ??
531 - 541	100		red, brown to maroon,
541 - 550.5	>100		density welded, FGT.
550.5 - 561	98%		minor local lt grn
561 - 569.5	95%		blc zones
569.5 - 580	>100		552 - 572 lt grn blc
580 - 590	>100		
590 - 600	100		620 - ±628 lt grn blc
600 - 610	100		
610 - 621	95%		653 - 658 lt grn blc
621 - 631	100		
631 - 641	100		±712 ±720 - pasely FGT
641 - 651.5	98		+ mod fract w/ grn clay
651.5 - 662	100		720 - 761.5
662 - 672	>100		red, brown, matrix clast
672 - 682	>100		supported Lithic Lapilli tuff
682 - 687	100%		
687 - 697	100		761.5 - ±852
697 - 702	100		grn, matrix + clast
702 - (2.7) 708	100%		lithic lapilli tuff
708 - 712	100		w/ local calcite veins
712 - 722	100		to 1/2"
722 - 732	98		
732 - (8.6) 742	100		±842 - 853.6
742 - 752	100		Fault Zone, stg
752 - 762	100		calcite veining + clay
762 - 772	100		alt
772 - (5.7) 782	100		
782 - 785	100		852 - 972
785 - 791.5	516.5		
791.5 - 802	100%		wht - lt grn, FGT
802 - 812	100		wk - mod fractured,
812 - 822	100		silicified + grn matrix
822 - 830	100		Si flooding.

RL-124

Sample Rec	% Rec		Sample Int.	Lithology
830-837	6/7		777.6-782	
837-846.5	95%		782-785	785-791.5
846.5-852	4.6/5.5		791.5-796.5	
852-862	100	S	796.5-802	
862-872	100	P	802-807	
872-882 (2.2)	700	L	807-812	
882-890	100	I	812-817	
890-892	100	T	817-822	
892-902	100		822-827	
902-912	100		827-830	
912-922	100		830-837	
922-932	100		837-842	
932-942	100		842-846.5	
942-952	100	C	846.5-852	
952-962	100	U	852-853.6	
962-972	100	T	853.6-857	
TD			857-862	
			862-867	
			867-872	
			872-877 ✓	
			877-882	
			882-887	
		S	887-892	
		P	892-897	
		L	897-902	
		I	902-907	
		T	907-912	
		Cut	912-917	
			917-922	
			922-927	
			927-932	
		S	932-937	
		P	937-942	
		L	942-947	
		I	947-952	
		T	952-957	
			957-962	
			962-967	
			967-972 TD	

NEVADA GSI, INC.

PREP QUALITY ASSURANCE CERTIFICATION

Date 10/2/90

Company LAC MINERALS

Job # 8545

Geologist NATE BREWER

No. Samples 93

Sample ID	Weight	+150Wt	-150 Wt	% -150
7 RL-124 0-5	46.41	1.73	44.68	96.3%
8 RL-124 185-190	46.66	.73	45.93	98.4%
9 RL-124 375-380	47.71	.11	47.6	99.8%
10 RL-124 460-465	47.44	2.21	45.23	95.3%

☑ PASSED ☐ FAILED

Explanation/Actions

Approved By Richard A. Grondin

Richard Grondin, Lab Manager

file:prep.frm

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OCT 12 1990

NEVADA GSI, INC.

GEOCHEMICAL ANALYSIS REPORT

October 9, 1990

CUST. CODE: LOA
PROJECT: URBD
P.O. #: XXXX
LOT I.D. #: 8545

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

	SAMPLE I.D.			Au o/t	Ag o/t
1	RL-124	0	5	-0.001	-0.10
2	M-87			0.099	-0.10
3	RL-124	5	10	-0.001	-0.10
4	RL-124	10	15	-0.001	-0.10
5	RL-124	15	20	0.001	-0.10
6	RL-124	20	25	-0.001	-0.10
7	RL-124	25	30	-0.001	-0.10
8	RL-124	30	35	0.002	-0.10
9	RL-124	35	40	0.001	-0.10
10	RL-124	40	45	-0.001	-0.10
11	RL-124	45	50	-0.001	-0.10
12	RL-124	50	55	-0.001	-0.10
13	RL-124	55	60	0.002	-0.10
14	RL-124	60	65	-0.001	-0.10
15	RL-124	65	70	-0.001	-0.10
16	RL-124	70	75	-0.001	-0.10
17	RL-124	75	80	-0.001	-0.10
18	RL-124	80	85	0.003	-0.10
19	RL-124	85	90	0.002	-0.10
20	RL-124	90	95	0.002	-0.10
21	RL-124	95	100	0.014	-0.10
22	M-88			0.050	0.10
23	RL-124	100	105	0.004	0.28
24	RL-124	105	110	0.006	0.13
25	RL-124	110	115	0.004	0.11
26	RL-124	115	120	0.003	0.13
27	RL-124	120	125	0.001	-0.10
28	RL-124	125	130	0.001	-0.10
29	RL-124	130	135	-0.001	-0.10
30	RL-124	135	140	0.003	0.14
31	RL-124	140	145	0.002	-0.10
32	RL-124	145	150	0.006	0.21
33	RL-124	150	155	0.001	-0.10
34	RL-124	155	160	-0.001	-0.10
35	RL-124	160	165	-0.001	-0.10
36	RL-124	165	170	0.002	0.16

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LAC MINERALS
LOT I.D. #: 8545

	SAMPLE I.D.			Au o/t	Ag o/t
37	RL-124	170	175	0.005	0.13
38	RL-124	175	180	0.110	0.38
39	RL-124	180	185	0.003	0.16
40	RL-124	185	190	0.003	0.15
41	RL-124	190	195	0.004	-0.10
42	M-89			0.248	-0.10
43	RL-124	195	200	0.001	-0.10
44	RL-124	200	205	-0.001	0.15
45	RL-124	205	210	-0.001	0.10
46	RL-124	210	215	-0.001	0.13
47	RL-124	215	220	0.001	-0.10
48	RL-124	220	225	0.002	0.23
49	RL-124	225	230	0.001	0.18
50	RL-124	230	235	0.001	-0.10
51	RL-124	235	240	0.003	-0.10
52	RL-124	240	245	0.001	-0.10
53	RL-124	245	250	-0.001	0.17
54	RL-124	250	255	0.001	0.14
55	RL-124	255	260	-0.001	0.13
56	RL-124	260	265	-0.001	-0.10
57	RL-124	265	270	0.001	0.13
58	RL-124	270	275	0.001	0.16
59	RL-124	275	280	-0.001	0.12
60	RL-124	280	285	-0.001	-0.10
61	RL-124	285	290	-0.001	-0.10
62	M-92			0.018	0.16
63	RL-124	290	295	-0.001	-0.10
64	RL-124	295	300	0.001	0.15
65	RL-124	300	305	-0.001	0.12
66	RL-124	305	310	-0.001	-0.10
67	RL-124	310	315	-0.001	-0.10
68	RL-124	315	320	-0.001	-0.10
69	RL-124	320	325	-0.001	0.13
70	RL-124	325	330	-0.001	-0.10
71	RL-124	330	335	-0.001	-0.10
72	RL-124	335	340	-0.001	0.19
73	RL-124	340	345	-0.001	-0.10
74	RL-124	345	350	-0.001	-0.10
75	RL-124	350	355	-0.001	-0.10
76	RL-124	355	360	-0.001	-0.10
77	RL-124	360	365	-0.001	-0.10
78	RL-124	365	370	-0.001	-0.10
79	RL-124	370	375	-0.001	-0.10
80	RL-124	375	380	-0.001	-0.10
81	RL-124	380	385	-0.001	-0.10
82	M-98			0.092	-0.10
83	RL-124	385	390	-0.001	-0.10
84	RL-124	390	395	-0.001	-0.10
85	RL-124	395	400	-0.001	-0.10

	SAMPLE I.D.			Au o/t	Ag o/t
86	RL-124	400	405	-0.001	-0.10
87	RL-124	405	410	-0.001	-0.10
88	RL-124	410	415	-0.001	-0.10
89	RL-124	415	420	-0.001	-0.10
90	RL-124	420	425	-0.001	-0.10
91	RL-124	425	430	-0.001	-0.10
92	RL-124	430	435	-0.001	-0.10
93	RL-124	435	440	-0.001	-0.10
94	RL-124	440	445	-0.001	-0.10
95	RL-124	445	450	-0.001	-0.10
96	RL-124	450	455	-0.001	-0.10
97	RL-124	455	460	-0.001	-0.10
98	RL-124	460	465	-0.001	-0.10
99	M-99			0.051	0.14

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This report reviewed and approved by:

Richard A. Grondin

Richard Grondin, Laboratory Director

OCT 22 1990

NEVADA GSI, INC.

GEOCHEMICAL ANALYSIS REPORT

October 18, 1990

NATE BREWER
LAC MINERALS
1395 GREG ST.
SPARKS, NV 89431

PROJECT #:VRBD
LOT ID: 8610
SAMPLES:40
ANALYSIS: FIRE ASSAY WITH AA FINISH

	SAMPLE I.D.			Au o/t	Ag o/t
1.	RL-124	777.6	782	-0.001	-0.10
2.	P-25			0.031	-0.10
3.	RL-124	782	785	-0.001	-0.10
4.	RL-124	785	791.5	-0.001	-0.10
5.	RL-124	791.5	796.5	-0.001	-0.10
6.	RL-124	796.5	802	0.001	-0.10
7.	RL-124	807	812A	-0.001	-0.10
8.	RL-124	807	812B	0.009	-0.10
9.	RL-124	812	817	0.010	-0.10
10.	RL-124	817	822	0.008	-0.10
11.	RL-124	822	827	0.002	-0.10
12.	RL-124	827	830	0.001	-0.10
13.	RL-124	830	837	0.002	-0.10
14.	RL-124	837	842	-0.001	-0.10
15.	RL-124	842	846.5	0.009	-0.10
16.	RL-124	846.5	852	0.007	-0.10
17.	RL-124	852	853.6	0.001	-0.10
18.	RL-124	853.6	857	0.002	-0.10
19.	RL-124	857	862	-0.001	-0.10
20.	RL-124	862	867	0.005	0.12
21.	RL-124	867	872	0.004	-0.10
22.	P-26			0.030	0.20
23.	RL-124	872	877	0.002	-0.10
24.	RL-124	877	882	0.001	-0.10
25.	RL-124	882	887	0.001	0.15
26.	RL-124	887	892	0.002	0.11
27.	RL-124	892	897	-0.001	-0.10
28.	RL-124	897	902	-0.001	-0.10
29.	RL-124	902	907	0.002	-0.10
30.	RL-124	907	912	0.002	-0.10
31.	RL-124	912	917	0.001	-0.10
32.	RL-124	917	922	-0.001	-0.10
33.	RL-124	922	927	-0.001	-0.10
34.	RL-124	927	932	-0.001	-0.10
35.	RL-124	932	937	0.001	-0.10
36.	RL-124	937	942	0.001	0.11

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	SAMPLE I.D.		Au o/t	Ag o/t
37.	RL-124 942	947	-0.001	-0.10
38.	RL-124 947	952	0.001	-0.10
39.	RL-124 952	957	0.001	-0.10
40.	RL-124 957	962	0.001	-0.10
41.	RL-124 962	967	0.001	-0.10
42.	P-27		0.052	-0.10
43.	RL-124 967	972	0.001	-0.10

This report approved by:

Richard Grondin

Richard Grondin, Laboratory Director

Bl RBU

465 - 467.4 flesh FGT w/ dkpsea grn filled fracture veins ± white clay + local $CaCO_3$ vns

Bl auto bxa RBU local str $CaCO_3$ fill

467.4 - 475.3 Volc bxa w/ blue grn to chlorite grn matrix - clay 3-4 step Δ clasts up to 55 mm

fine Δ matrix 1-3 mm clasts

poss fault zone 474.8 - 475.3 @ 45° to axis w/ str. fault gouge filling in shear zone clasts : flesh colored to buff bl FGT to flow to Δ

alt auto bxa RBU

475.3 496 Volc bxa matrix support - fg tuff flesh matrix w/ local fine Δ clasts are bl buff to local wk grn aver - 15-20 mm w/ prominent 50-90 mm clasts

496 - 704 RBU w/ various textures

496 - 510.5 unalt FG RBU burg brn

510.5 - 515.5 striated ; veinlated w/ stretched texture

515.5 - 524.9 clastic texture w/ ~ 5-7% bleached flesh - clasts w/ FG purple matrix

524.9 - 552.1 unalt RBU - FG

552.1 - 572.0 volc bxa poss fault related w/ FG bl clasts up to 55 mm wide w/ fine Δ matrix w/ blue grn similar to 567.3 - 575.3 rehealed

w/ fault

556 - 563 FG - bl - RBU bl due to upper fault 558.3 30° to axis 6" Δ seam @ 563 35° to axis w/ w 1/4" grn clay seam

563 - 620 (670.7) unalt FG RBU

620-628 bl RBU lt grn

653-658 lt grn bl

658-690.9 unalt RBU

682 - 690.9 mod calcite ± dk lt grn butter clay vns

690.9 - 692.3 Δ w/ rehealed clay hat lt grn matrix clasts are burg brn

692.3 - 704 FG RBU w/ mod to mod str fract vns w/ lt grn clay fill

702-704 fract vns ± 5° to axis are hematitic

DL-124

704 - 719.6 wh BL FG RBU bl to peach/buff w/ local lt/dk green selvaging fracts mod to str fracture uno w/ lt green duch butter clay

708-712 intermittently Δ - AUTO - Dry w/ lt green clay fill clast support

712-719.6 mod calcite veining

contact 40° \ to core axis w/ ± 1" $CaCO_3$ on

719.6 - 761.5 Lithic Lapilli tuff - red burn variety w/ burg-burn matrix hetero lithic

gradational alteration contact

761.5 - 852 Bleached Bedded Lithic Lapilli Tuff w/ weak 1/4" - 1/2" $CaCO_3$ uno matrix is predom lt sage green clast supported heterolithic: bl to white to lt green to flesh to ~~burn~~ red burn; all varieties of shades, graded beds throughout

FAULT 842 - 853.6 @ 852 contact ~~ not signif measurable

842 - 847 green lithic lapilli intermittent rubble to str clay alt matrix w/ wk $CaCO_3$ uno

847 - 852 ↑ brecciation w/ mod to mod str XX w/ local 3" $CaCO_3$ on buff to blue green coloration

852 - 853.6 str. white bleaching, str wh clay alt local 1/2" pure sulfide seam rubble zone

852 - 972 TD upper bl white to lt green FGT Dozer? perv. bleached

853.6 - 873 perv. white bl. strongly silicified ← perv. strong fracture veining w/ SiO_2 ± pyrite + local perv. (Δ) fill, intermittently throughout brecciated 3-4% sulfides ~ up to 7% @ 853.6 - 855

873 - 972 Lt green ↓ X intermit bl + auto Δ mod fracturing w/ $CaCO_3$ w/ local py.

906 - 917 ↑ bl ↑ py + $CaCO_3$ uno local (Δ) ± org FeO X