60001306

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. RE-72
AUTHOR	K. Kenner; R. Grondin; N. Brewer
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 802'; handwritten notes 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)

Revised: 1/22/08

	Initials	Date
SS:	DD	3/19/08
DB:	mah	
SCANNED:		

DRILL LOGS RE-72
Rosebud

60001306 4010 ✓

60001306

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

DRILL LOG SUMMARY SHEET

PROJECT ROSEBUD

HOLE NUMBER RE-72, 72C TOTAL DEPTH 802' LOGGED BY KLK

Date started 4-9-90 1pm 0-225' rotary
nite shift on 4-9 to 432'
Date completed 4-10 day shift to 590'
nite shift to 738'
4-11 TD @ 802'

Initial bearing S 55 E

Initial inclination -60°

Elevation 5232.1

Collar coordinates:

N 2,203,524.0

E 481,164.7

Contractor: COATES

Drill Type: Universal rotary / CORE

Hole Size: 5 Hammer ; HQ CORE

Drilling Conditions: good

Footage: Wet / Dry Dry: 0-225

WET: 225 to TD.

Comments: rotary drilling WENT SMOOTHLY, ; cruzed on CORE

DOWN HOLE SURVEY INFORMATION

FROM	TO	SURVEY POINT	INCLI-NATION	BEARING	X (Northing)	Y (Easting)	Z (Elevation)
0	50	0	-62	S 55 E			
50	205	~100	-63	S 59 E			
205	405	~300	-64	S 61 E			
405	605	~500	-64	S 62 E			
605	755	~700	-63	S 57 E			
755	802	~800	-63	S 59 E			

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

CHOCOLATE TUFF
BUD BRECCIA
BUD TUFF
BUD EPICLASTIC
BUD TUFF BRECCIA
DT DOZER WELDED TUFF

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

DRILL HOLE RE-72

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LOGGED BY KLK

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK
														NO SAMPLE			
05		~ P Xc X							lt green				tr relict FeOx vein	5-75' fine grained Tuff (chocolate) wkly perv bleach	.002	.19	
10		~ Xc X							golden orange				"	weak perv. oxidized; wkly to mod perv. silicified & upper cap - str chalced. silicif.	.007	-.1	
15	Δ	~ Xc X							"				"	wk druzy qtz vns w/ local limon clay fill wk local fine qtz stockwk	.002	-.1	
20		~ Xc HH X							"				"		.010	.26	
25		~ XK Xc X							"				"		.004	-.1	
30		~ Xc HH X							"				"		.003	-.1	
35		~ XK X							"				"		.003	-.1	
40		~ XK Xc HH X							"				"		.002	.19	
45		~ HH Xc X							"				"	wk white waxy clay vns	.003	-.1	
50		~ XK HH X							"				"		.004	-.1	
55		~ XK X							"				"		.002	-.1	
60		~ XK X							"				"		.002	-.1	
65		~ XK X							"				"		.001	-.1	
70		~ XK HH X							"				"	hv 3-6" cavity	.002	.15	
75	v v v	~ Xc P							yellow green buff				"	75-200 BUD BRECCIA pyroclastic perv. clay alt; smectite alt wks chalced vns, wkly oxidized	.002	-.1	
80	v v v	~ Xc P							"				"		.003	-.1	
85	v Δ v	HH X ~ XK P							golden orange				tr diss py	85-95 w/ silicif tuff inner bed - strong qtz stockw or K & druzy vns	.003	.13	
90	v Δ v	~ XK P							buff org				"		.002	-.1	
95	v v	~ Xc P							lt green				2% diss + vn py	fractured & w/ mod strong clay	.003	-.1	
100																	

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DRILL HOLE RE-72

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LOGGED BY KLK

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK
		Xc P							green orange				2% ot diss ±VN py	75-200 Bud Pyroclastic (continued) pw. clay alt weak brecciation pw	.004	.1	
05		Xc P							"				"	mod smectite ±mon ite alt. local chalcedony + fine qtz stockwk OX Round	.008	.25	
10		Xc P							green				"	RE	.006	.71	
15		Xc P							"				"		.003	.1	
20		Xc P							"				"		.004	.1	
25		Xc P							"				"		.004	.13	
30		Xc P							"				"		.003	.1	
35		Xc XK P							"				"		.002	.14	
40		Xc P							"				"		.002	.1	
45		Xc P							orange + green				"	145-155 whly to mod OXIDIZED	.004	.15	
50		Xc P							"				"		.003	.1	
55		Xc P							peach + green				±3% diss +VN py	155-200 *mottled peach & green alt	.002	.1	
60		Xc P							"				"		.002	.1	
65		Xc P							"				"		.003	.1	
70		Xc P							"				"	170-180 WK OXIDAT.	.002	.1	
75		Xc P							"				"		.003	.31	
80		Xc P							"				"		.003	.1	
85		Xc P							"				"	wh white clay (soft)	.003	.16	
90		Xc P							"				"		.003	.1	
95		Xc P							"				"		.004	.1	
100																	

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DRILL HOLE RE-72

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LOGGED BY KLK

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK	
	v v v	~ Xc							fresh				2-3% diss tvn	200-225 fresh LBT pyroclastic - perv. peach alt orn. hart smectite alt	.01	-.1		
205	v v v	~ Xc							"				py "	poss. wk silicif. wk perv. clay alt local chalcedony und.	.003	-.1		
210	v v v	~ Xc							"				"		.003	.13		
215	v v v	~ P							"				"		.004	-.1		
220	v v v	~ Xk P							"				"	HIT H2O	.003	.16		
225														WENT TO CORE 802' T.D.				
30																		
35																		
40																		
45																		
50																		
55																		
60																		
65																		
70																		
75																		
80																		
85																		
90																		
95																		
00																		

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERAL-IZATION	GRAPHIC LOG	DESCRIPTION
						CORE BEGAN @ 225'
230	100	15 py VN	60 fract	2-3% diss + VN py + blade sulfide		225-322 PYROCLASTIC LAHARIC BRECCIA mixed peach and green coarsely pyroclastic rock from ±9" to 1/2" clasts w/ finer pyroclastic matrix few millimeters to 1/4" clasts weak perv bleaching increasing w/depth matrix w/ peach coloration, clasts ribbon be to green locally w/ primary fracturing, heterolithic weak to moderate pervasive fracturing w/ pyrite ± SiO2 ± Kaolinite; local smectite alt and disem + vn pyrite; local blade sulfide 229-289
240	96		30 fract	gouge ~30		235.5-237 mod green nontronite + smectite alt strong clay gouge zone w/ intermittent drusy qtz sulfide veins; assoc smectite alt contact is fairly abrupt
250	100		62 fract VN			237.5 - 237.8 clay gouge similar to above
260	98	75 py VN	15° fract			240.0' → 1'-2" clay gouge seam } contacts ~ ± 80°-90° to core axis 250.7 - 250.9 clay gouge seam }
			75 fract	75 gouge		259 - 259.7 well fractured; strong clay gouge
270	100	85 py VN				269.4 - 270.1 breccia vein w/in pyroclastic very weakly silicified w/ microbreccia matrix w/ mod strong nontronite alt 3+ stages of brecciation, mod perv. clay alt
280	100	90 VN 47 py selvage VN				276 - 287 Increased nontronite alteration - pyclon. w/in matrix; assoc w/ local microbreccia w/ ↑ diss + vein pyrite
290		70 py VN 15 / 65 py-sulfide VNS		±3% diss + VN py		

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
225-230				.009	.11
230-235				.006	-.1
235-240				.007	-.1
240-245				.002	-.1
245-250				.004	-.1
250-255				.005	-.1
255-260				.004	-.1
260-265				.003	-.1
265-270				.003	-.1
270-275				.005	-.1
275-280				.003	-.1
280-285				.003	-.1
285-290				.003	-.1

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
	100	/20 py vns 78		±3% diss +vn +bleach sulf		290-322 Lahaina Breccia (cont.) 289-304 ↑ bleaching w/ ↑ assoc fracturing w/ chalcedony, clay + sericite + pyrite ± $CaCO_3$ vns	290-295				.003	-.1
300	100	±5° vns 83		±3% marcasite +py vns +diss		297.2-304.5 zone of calcite veining up to ½" wide subparallel to core axis w/ assoc clay ± sericite + marcasite; rimmed w/ dark gray metallic; weak local microbrecciation w/ post drilling oxidation locally	295-300				.031	-.1
						304-322 gradational ↑↑ bleaching into favorable pure peach alteration	300-305				.048	-.1
310	98	/60 py vn		±3% diss +vn py			305-310				.003	-.1
							310-315				.002	-.1
320	100	±5° vns /50 vns/25		4-5% diss +vn py		318.5-322 presence of subparallel to core axis veins which contain: sericite, marcasite blades, ± $CaCO_3$ ± SiO_2 ± Kaolinite	315-320				.008	-.1
							320-325				.023	-.1
330	100	vns 15-15°	35° fract	+poss bladed marcasite w/in vns		☆ 322-352 gradational contact into favorable peach alteration grades from lahaina breccia into a fine clastic pyroclastic - heterolithic which locally has been brecciated, poss weak pen silicification mod pen. clay ± alteration consistent pen stockwork veining subparallel to core axis containing local microbreccia + $CaCO_3$ + Kaolinite ± sericite + bladed metallic poss marcasite ± pyrite + local dk gray Ag mineral. throughout w/ concentrations running clasts, w/in △ matrix, independ w/ in clasts; w/in vns	325-330				.097	-.1
							330-335				.023	-.1
340	100	100	vns /45 fract 100				335-340				.051	-.1
	99		35 fract				340-345				.063	-.1
350		35 vns	10° fract				345-350				.006	-.1
						343.5-352 ↓ veining, metallic veining w/ post drilling oxidation to golden yellow	350-355				.018	-.1
360	99	85° vn /20 py + $CaCO_3$ vns		±2% diss +vn py		352-372 same lith & alteration as 322-352 w/ absence of favorable alteration and clay, $CaCO_3$, py, marcasite veins, weak pervasive hint sage green alteration ↓ peach alteration, same hetrolithic	355-360				.006	-.1

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERAL-IZATION	GRAPHIC LOG	DESCRIPTION
	79		55 fract VN	±2% diss + VN py		360-372 lr hint green pyro. (conr.) same descrip. @ above
370						
	100	py VN	23 VN			372-395 flow banded tuff, weak pervasive bleaching mottled to verigated lr gray hued sage green; peach, weakly to mod hatty pyr. pinch fractured w/ local micro brecciation seams, v. wk calcite veining + local kaolinite vns ± local separate py vns
		50/10 flo	30 VN			
380						
	100	80 flo	40 py VN / 30 CaCO3 VN			
		13 flo	42/13 VN			
390						
	100		CaCO3 VN / 10			
						395-416. "(Tuff Breccia)" mottled peach (weak) and green (weak) lithic pyroclastic locally brecciated weakly perv. bleached, weak pervasive veining w/ $CaCO_3$ + pyrite ± sericite ± clay w/ predom of duck butter or pyrite vns
400						
	100	CaCO3 VN 5-10				
		85 VN / 30 VN	fract 18			412-415 zone of strong brecciation w/ predom of lr green duck butter sericite filling w/ 3-4 stages of brecciation; secondary post fracturing
410						
	100	40 duck butter VNS	22 35 fract			
						416-467.5 flow banded tuff locally brecciated verigated to mottled lr green + peach alteration weak pervasive bleaching weak to mod veining w/ varying contents of: $CaCO_3$, duck butter sericite, kaolinite (green), pyrite; varying from sub-parallel to 80° to core axis
420						
	100	40 fract	42 fract 5-10 VN			
		30 VN				
430						

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
360-365				.001	.1
365-369				.001	.1
369-372				.001	.1
372-376				.001	.1
376-380				.001	.1
380-385				.001	.1
385-390				.009	.1
390-395				.008	.1
395-400				.002	.1
400-405				.002	.1
405-409				.002	.1
409-412				.002	.1
412-415				.002	.1
415-420				.003	.1
420-425				.002	.1
425-430				.002	.1

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
				±2% diss +VN py		430 - 467.5 Flowbanded Tuff (cont.) verigated peach and green and intermittently brecciated	430-435				.003	-.1
	99	flo/27	fract/45				435-440				.008	-.1
440						444.8 - 445.9 strong calcite veining w/ assoc brecciated flowbanded tuff	440-445				.004	-.1
	100	flo/40					445-450				.003	-.1
450		flo/80	40/VNS			452-453, 454.8-455.2, 456.5-459: zones of pronounced brecciation clasts are bleach w/ v. fine diss sulfides w/ weak pyrite ± calcite veins	450-455				.001	-.1
	100	73 VNS/75					455-460				.001	-.1
460		50/10 VNS	28 20 VNS				460-464				.022	-.1
	100		48/fract			467.5 - 482 Brecciated lower zone @ ~50° contact w/ upper flowbanded tuff and gradational to the following, mod local $CaCO_3$ veining clast supported, well silicified w/ fine pervasive stockwork ± sericite ± pyrite ± kaolinite heterolithic w/ depth get ↑ sage green dark brown sericite alt.	464-467.5				.001	-.1
470							467.5-471				.001	-.1
	100	50-60 VN	70 VN				471-476				.003	-.1
		VN/35					476-481				.005	.19
480		80 flo				482 - 486.7 Predom flowbanded tuff w/ local fine grained texture buff to lt green coloration, weak pervasive silicification, weak perv. bleaching, weak to moderate veining w/ $CaCO_3$ + sericite (dark butter) + pyrite fill.	481-486				.003	-.1
	100	unclear 5-15					486-490				.009	-.1
490		VN/50	75 contact			486.7 - 493.3 fine grained to flowbanded tuff brecciated - clasts are subangular to rounded mod to strongly fractured w/ dark butter sericite + pyrite ± $CaCO_3$	490-493				.006	-.1
	100						493-497				.003	-.1
500		flo 70				493.7 - 495.5 brecciated gouge zone w/ strong talc/clay - kaolinite ± pyrite ± local sericite + trace montmorillonite	497-499				.008	-.1

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION	Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
	100	60 flo	5-10°	±3% diss + VN py		495.5-514 Predom flowbanded tuff, variegated pink white, peach weakly pervasively silicified locally brecciated to micro breccia vns, mod veining w/ $CaCO_3$ + py + sericite ± clay fill	494-504				.007	<.1
		55 fract					504-509				.007	<.1
510	100	60 A VN	VN 40			514-518 strongly fractured flowbanded to fine grained tuff locally brecciated pink bleached fracture fill: lt sage green buff sericite ± local $CaCO_3$ ± local pyrite ± local micro brecciation	509-513				.011	<.1
			60 A VN				513-517				.002	<.1
520	100	70 fract VN				518-526 similar appearance to "tuff breccia" hitrolithic mod to mod str. silicification local micro breccia seams, mod fracture w/ $CaCO_3$ + pyrite ± sericite ± kaolinite	517-522				.001	<.1
		10 VN	60 fract	±2% diss + VN py			522-527				.005	<.1
530	100	75 70 VN				526-555 - lt gray-green tuff fine grained tuff - locally flowbanded strongly (528.9-530 broken rubble) pervasively fractured w/ predom calcite + kaolinite local trace pyrite locally + questionable sericite wk fine qtz stockwork ⇐ pre-clay vns poss wh sericite alt. 3-4 stages veining poss wh silicified, intermittently brecciated	527-532				.009	<.1
							537-537				.013	<.1
540	100	55 60 VNS	75				537-542				.012	<.1
						541-545 moderate fracturing w/ local broken rubble zones ± brecciation strong veining w/ all components @ ↑ and ↓	542-546				.342 & .143	.53
550	87	15 VN				547.9-554 intermittent broken rubble w/ local brecciation; local strong calcite vns + assoc. kaolinite ± wh sericite ± local py.	546-550				.021	<.1
		VN 55				555-560 Entirely broken rubble w/ assoc. strong kaolinite alt w/ assoc. pyrite diss ± sericite ± drusy qtz VNS + wk local nontronite + $CaCO_3$	550-555				<.001	<.1
560	100	65 flo + VN	15				555-560				<.001	<.1
		15° VN	75 fract			560-565 mixed peach fine grained + flow banded tuff locally brecciated strongly fractured, veined w/ $CaCO_3$ + sericite + kaolinite + py + nontronite	560-565				.004	<.1
570					← abrupt contact	565-570.5 Volcanic breccia - predom matrix supported w/ strong $CaCO_3$ matrix predom clay alt. w/ amber brown silicified tuff clasts which locally are w/ primary brecciation, total of 2-3 stages of brecciation, wh to mod secondary fracture VNS	565-570				.001	<.1
						SRF						

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
	97	80 VN	65	≤1% diss ±VN py	A DT	570.5-802 DOZER TUFF lr sage green, weakly bleached fine grained tuff densely welded moderately fine fractured veinlets composed of $CaCO_3$ ± SiO_2 ± local clay w/ assoc silicification alt, weak local micro brecciation w/ local mass brecciation	570-575				.001	.1
			120 fract VN				575-580				.001	.1
580	100		35 fract		A		580-585				.001	.1
		50° VN	30 fract		A	578-582 more broken-fractured ± brecciated w/ green chlorite? concentrated along fracts + wk py + white clay ± $CaCO_3$						
		50° VN					585-590				.001	.1
590	100				A		590-595				.001	.1
		70 flo			A		595-600				.001	.1
600	100 +		20 fract VN			604-609 wk ↑ verigated bleaching + wk local fractures w/ $CaCO_3$ fill ± fe py	600-605				.001	.1
							605-610				.001	.1
610		85 VN	40 fract			609-619 w/ pervasive gray hue ↓ alteration	610-615				.001	.1
	100						615-620				.001	.1
620		30 VN				620-626 weak gray green hue w/ maroon-brown weak lis gang banding	620-625				.001	.1
	100		15° $CaCO_3$ + FeOx fract VN				625-630				.001	.1
630		70 fract VN			A	626-641 wk ↑ bleaching 629-637 mod to mod strong fracturing						
	100						630-635				.001	.1
			fract VN 25				635-640				.001	.1
640												

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION
	100 +	35 fract VN		≤1% diss ±VN py	RT	640 - 802 DOZER TUFF (continued) lt sage grn densely welded fine grained tuff
650	100 +	20 grn clay VN				641 - 665 pervasive light gray hue
						642 - 646 weak ↑ fracturing w/ assoc ↑ weak pervasive bleaching, wk local micro-brecciation
660	94		27°/±5° fract VNS			665 - 670 weak perv. bleaching w/ assoc wk to mod fracturing w/ chlorite, $CaCO_3$ ± py fill
670	100		±5° fract micro ΔVNS			673 - 675 mod strong fracturing w/ local microbrecciation + wk silicification + assoc. intermittent bleaching wk ↑ calcite veining
680	100	45/±10	85° fract VNS			675 - 693 pervasive gray hue possible local flow banding textures present
690	100	60° fract VN	70 VN			
700	100		20 fract VN			699 - 707 zone of pervasive bleaching local mod strong fracturing w/ chlorite + calcite fill and local micro brecciation
		60/±67	15			707 - pervasive gray hue
710						

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
640-645				.001	.1
645-650				.001	.1
650-655				.001	.1
655-660				.001	.1
660-665				.001	.1
665-670				.001	.1
670-675				.001	.1
675-680				.001	.1
680-685				.001	.1
685-690				.001	.1
690-695				.001	.1
695-700				.001	.1
700-702				.001	.1
702-707				.001	.1
707-712				.001	.1

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
	100		5° VN	≤1% class ±VN py	DT	710-802 DOZER TUFF (CONT.) mottled pur. lt to medium gray fine grained densely welded tuff, intermittently bleached to brecciated w/ micro breccia and mod pur fracturing	712-717				.001	.1
720		65 VN				711-730 pervasively brecciated Dozer clast supported w/ micro breccia matrix w/ strong chlorite + SiO_2 ± pyrite + local calcite fill w/ assoc mod to mod strong fracturing	717-722				.001	.24
	100		5° VN				722-727				.001	.1
			75 Frac VN									
230							727-732				.001	.1
	99		35 VN			732.5 – 738 weak pur. bleaching, local micro breccia vns						
							732-737				.001	.1
740			1° 5° VN				737-742				.001	.1
	100		80 VN			742-746 weak ↑ pur. bleaching, weak local brecciation, local strong fracturing w/ assoc calcite matrix w/ in breccia	742-747				.001	.1
750		55 Flat	30 VN 50			750-757 pervasively brecciated and strongly fractured w/ mod strong SiO_2 rehealing w/ tr pyrite ± local $CaCO_3$, ± local clay clast supported breccia, poss local flo textures	747-752				.001	.1
	100						752-757				.001	.1
760			40 Frac VNS				757-762				.001	.1
	100						762-767				.001	.1
			85 VN									
770						770-772.5 zone of weak ↑ bleaching, mod. fractured local breccia vns w/ SiO_2 matrix supported w/ gum alt w/ tr pyrite	767-772				.001	.1
	100		Frac VNS 5°				772-777				.001	.1
780			25 5° VN				777-782				.001	.1

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
	100		49/85 VN FRACT	≤1% diss ±VN py	DT	780-TD. DOZER TUFF						
						783-791 pervasively brecciated and silicified predom clast supported w/ tr pyrite w/ micro breccia matrix w/ grun wispy veinlets to mod fractured w/ grun wispy clay + tr local pyrite ± calcite fill	782-787				.001	.1
790	100	50/50	40/65 VNS				787-792				.001	.1
		15° VN				792-794.5 mod strongly fractured w/ micro breccia matrix w/ grun to locally wh tr clay ±calcite + tr pyrite fill	792-797				.001	.1
800			80/VN				797-802				.001	19
802						802' T.D.						

RE-72C

Run Footage	% Recovery	Sample Intervals	Lithology
			353 - 372
372 - 382	100%	372 - 376	↑ bleached
		376 - 380	Tuff Breccia
382 - 392	100%	380 - 385	↑ white ↓ flesh
		385 - 390	w/ hint green
392 - 402	100%	390 - 395	
		395 - 400	
402 - 412	100%	400 - 405	372 - 395
		405 - 409	Bleached flow
412 - 422	100%	409 - 412	banded tuff
		412 - 415	locally brecciat
422 - 432	100%	415 - 420	
		420 - 425	395 - 412
432 - 442	98%	425 - 430	flesh to bleached
		*430 - 435	tuff breccia
442 - 452	100%	435 - 440	to brecciated
		440 - 445	flow banded tuff
452 - 462	100%	445 - 450	wk green alt per
		450 - 455	412 - 415 Breccia
462 - 472	100%	455 - 460	fault w/ green
		460 - 464	clay fill predim fl
472 - 482	100%	464 - 467.5	or to flow banded
		467.5 - 471	tuff frags
482 - 492	100%	471 - 476	415 - 467.5
		476 - 481	flow banded tuff
492 - 502	100%	481 - 486	locally brecciate
		486 - 490	wk green alt
502 - 512	100%	490 - 493.3	green clay in fracts.
		493.3 - 497	467.5 - 471
512 - 522	100%	497 - 499	brecciated
		499 - 504	fault zone
		504 - 509	mod str clay alt
		509 - 513	471 - 482
		513 - 517	Brecciated tuff
		517 - 522	FGT to flow band
		522 - 526.8	w/ calcite & chalcedony
		526.8 -	482 - 486.7
			Flow banded tuff

2/3/8

RE-72C

Priority cutting begin @ 305'
box #9

Run Footage	% Recovery	Sample Intervals	Lithology (278)
225-232	100%	225-230	225-322
		230-235	pyroclastic
232-242	96%	235-240	clastic
		240-245	breccia
242-252	100%+	245-250	fresh colormatr
		250-255	w/ bleached
252-262	98%	255-260	heterolithic clast
		260-265	w/ local hint
262-272	100%	265-270	grn alt
		270-275	predom 2-3%
272-282	100%	275-280	diom. py
		280-285	w/ fracturing w/
282-292	100%	285-290	py fill
		290-295	225-289
292-302	100%	295-300	mod grenal
		300-305	289-304
302-312	100%	305-310	↑ bleached
		310-315	w/ ↑ fracturing
312-322	98%	315-320	w/ chalcedony
		320-325	clay + pyrite
322-332	100%	325-330	± calcite vns
		330-335	
332-342	100%	* 335-340	304-322
		340-345	↑↑ pyr.
342-352	99%	345-380	bleaching
		350-355	(318-322 ↑ pyr
352-362	99%	355-360	+ clay fracture
		360-365	fill vns
362-372	99%	365-369	322-353
		369-372	Flesh tuff
			breccia
			high grade
			w/ fracture
			filled w/ white
			clay, pyrite
			± Ag (argentite?)
			locally

GRADED ↑ IN bleaching w/ depth

RE-72C

Run Footage	% Recovery	Sample Intervals
522-532	100%	527-532
		532-537
532-542	100%	537-542
		542-546
542-552	100%	546-550
		550-555
552-560	87%	555-560
		560-565
560-570.5	100%	565-570.5
		570.5-575
570.5-581	97%	575-580
		580-585
		585-590

LITHOLOGY

486.7 - 493.3
FGT to flowbanded tuff breccia

493.3 - 499
Fault + breccia gouge

499 - 517
Flowbanded to FGT locally vitated

517 - 526.8
brecciated fgt to flow banded tuff

526.8 - 555
FGT to flowbanded tuff
mod strong fracturing w/ white clay ± CALC fill lt grey buff w/ hint grn

555-560
Intense clay rich fault gouge

560 - 565
Flesh color
FGT to flow banded tuff mod well fract w/ white clay + $CaCO_3$

565 - 570.5
Tuff breccia + fault gouge
South Ridge Fault

570.5 - 802
DOZER FGT

46.0
1.9
7.9

44

NEVADA GSI

APR 30 1990

GEOCHEMICAL ANALYSIS REPORT

April 26, 1990

Ms. Kristen Kenner
Lac Minerals
1395 Greg St. #107
Sparks, NV 89431

Number of Samples: 44
Project #: URBD-79014
GSI #: 6989
Analysis: Fire Assay for Gold and Silver, with an A.A. finish.

	Sample I.D.			Au o/t	Ag o/t
1	RE-72	5	10	0.002	0.19
2	RE-72	10	15	0.007	<.10
3	RE-72	15	20	0.002	<.10
4	RE-72	20	25	0.010	0.26
5	RE-72	25	30	0.004	<.10
6	RE-72	30	35	0.003	<.10
7	RE-72	35	40	0.003	<.10
8	RE-72	40	45	0.002	0.19
9	RE-72	45	50	0.003	<.10
10	RE-72	50	55	0.004	<.10
11	RE-72	55	60	0.002	<.10
12	RE-72	60	65	0.002	<.10
13	RE-72	65	70	0.001	<.10
14	RE-72	70	75	0.002	0.15
15	RE-72	75	80	0.002	<.10
16	RE-72	80	85	0.003	<.10
17	RE-72	85	90	0.003	0.13
18	RE-72	90	95	0.002	<.10
19	RE-72	95	100	0.003	<.10
20	RE-72	100	105	0.004	<.10
21	RE-72	105	110	0.008	0.25
22	RE-72	110	115	0.006	0.71
23	RE-72	115	120	0.003	<.10
24	RE-72	120	125	0.004	<.10
25	RE-72	125	130	0.004	0.13
26	RE-72	130	135	0.003	<.10
27	RE-72	135	140	0.002	0.14
28	RE-72	140	145	0.002	<.10
29	RE-72	145	150	0.004	0.15
30	RE-72	150	155	0.003	<.10

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	Sample I.D.	Au o/t	Ag o/t
31	RE-72 155 160	0.002	<.10
32	RE-72 160 165	0.002	<.10
33	RE-72 165 170	0.003	<.10
34	RE-72 170 175	0.002	<.10
35	RE-72 175 180	0.003	0.31
36	RE-72 180 185	0.003	<.10
37	RE-72 185 190	0.003	0.16
38	RE-72 190 195	0.003	<.10
39	RE-72 195 200	0.004	<.10
40	RE-72 200 205	0.010	<.10
41	RE-72 205 210	0.003	<.10
42	RE-72 210 215	0.003	0.13
43	RE-72 215 220	0.004	<.10
44	RE-72 220 225	0.003	0.16

This report reviewed and approved by:

Richard A. Grondin

Richard Grondin, Operations Manager

NEVADA GSI

APR 30 1990

GEOCHEMICAL ANALYSIS REPORT

April 26, 1990

Mr. Nate Brewer
Lac Minerals
1395 Greg St. #107
Sparks, NV 89431

Number of Samples: 83
Project #: URBD-79014
GSI #: 6991
Analysis: Fire Assay for Gold and Silver, with an A.A. finish.

	Sample I.D.			Au o/t	Ag o/t
1	RE-72	5	10	0.002	0.19
2	RE-72	10	15	0.007	<.10
3	RE-72	15	20	0.002	<.10
4	RE-72	20	25	0.010	0.26
5	RE-72	25	30	0.004	<.10
6	RE-72	30	35	0.003	<.10
7	RE-72	35	40	0.003	<.10
8	RE-72	40	45	0.002	0.19
9	RE-72	45	50	0.003	<.10
10	RE-72	50	55	0.004	<.10
11	RE-72	55	60	0.002	<.10
12	RE-72	60	65	0.002	<.10
13	RE-72	65	70	0.001	<.10
14	RE-72	70	75	0.002	0.15
15	RE-72	75	80	0.002	<.10
16	RE-72	80	85	0.003	<.10
17	RE-72	85	90	0.003	0.13
18	RE-72	90	95	0.002	<.10
19	RE-72	95	100	0.003	<.10
20	RE-72	100	105	0.004	<.10
21	RE-72	105	110	0.008	0.25
22	RE-72	110	115	0.006	0.71
23	RE-72	115	120	0.003	<.10
24	RE-72	120	125	0.004	<.10
25	RE-72	125	130	0.004	0.13
26	RE-72	130	135	0.003	<.10
27	RE-72	135	140	0.002	0.14
28	RE-72	140	145	0.002	<.10
29	RE-72	145	150	0.004	0.15
30	RE-72	150	155	0.003	<.10

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	Sample I.D.	Au o/t	Ag o/t
31	RE-72 155 160	0.002	<.10
32	RE-72 160 165	0.002	<.10
33	RE-72 165 170	0.003	<.10
34	RE-72 170 175	0.002	<.10
35	RE-72 175 180	0.003	0.31
36	RE-72 180 185	0.003	<.10
37	RE-72 185 190	0.003	0.16
38	RE-72 190 195	0.003	<.10
39	RE-72 195 200	0.004	<.10
40	RE-72 200 205	0.010	<.10
41	RE-72 205 210	0.003	<.10
42	RE-72 210 215	0.003	0.13
43	RE-72 215 220	0.004	<.10
44	RE-72 220 225	0.003	0.16

This report reviewed and approved by:

Richard A. Grondin

Richard Grondin, Operations Manager

NEVADA GSI

GEOCHEMICAL ANALYSIS REPORT

May 3, 1990

Mr. Nate Brewer
Lac Minerals
1395 Greg Street #107
Sparks, Nv. 89431

Number of Samples: 79
Project: URBD
GSI Number: 7002
Analysis: Fire Assay for Gold and Silver, with an A.A. finish.

	Sample I.D.			Au o/t	Ag o/t
1	RE-72C	225	230	0.009	0.11
2	RE-72C	230	235	0.006	<.10
3	RE-72C	235	240	0.007	<.10
4	RE-72C	240	245	0.002	<.10
5	RE-72C	245	250	0.004	<.10
6	RE-72C	250	255	0.005	<.10
7	RE-72C	255	260	0.004	<.10
8	RE-72C	260	265	0.003	<.10
9	RE-72C	265	270	0.003	<.10
10	RE-72C	270	275	0.005	<.10
11	RE-72C	275	280	0.003	<.10
12	RE-72C	280	285	0.003	<.10
13	RE-72C	285	290	0.003	<.10
14	RE-72C	290	295	0.003	<.10
15	RE-72C	295	300	0.031	<.10
16	RE-72C	300	305	0.048	<.10
17	RE-72C	305	310	0.003	<.10
18	RE-72C	310	315	0.002	<.10
19	RE-72C	315	320	0.008	<.10
20	RE-72C	320	325	0.023	<.10
21	RE-72C	325	330	0.097	<.10
22	RE-72C	330	335	0.023	<.10
23	RE-72C	335	340	0.051	<.10
24	RE-72C	340	345	0.063	<.10
25	RE-72C	345	350	0.006	<.10
26	RE-72C	350	355	0.018	<.10
27	RE-72C	355	360	0.006	<.10
28	RE-72C	360	365	<.001	<.10
29	RE-72C	365	369	<.001	<.10
30	RE-72C	369	372	<.001	<.10
31	RE-72C	372	376	<.001	<.10
32	RE-72C	376	380	<.001	<.10
33	RE-72C	380	385	<.001	<.10
34	RE-72C	385	390	0.009	<.10

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	Sample I.D.			Au o/t	Ag o/t	Au o/t	Au o/t	Au o/t
35	RE-72C	390	395	0.008	<.10			
36	RE-72C	395	400	0.002	<.10			
37	RE-72C	400	405	0.002	<.10			
38	RE-72C	405	409	0.002	<.10			
39	RE-72C	409	412	0.002	<.10			
40	RE-72C	412	415	0.002	<.10			
41	RE-72C	415	420	0.003	<.10			
42	RE-72C	420	425	0.002	<.10			
43	RE-72C	425	430	0.002	<.10			
44	RE-72C	430	435	0.003	<.10			
45	RE-72C	435	440	0.008	0.18			
46	RE-72C	440	445	0.004	<.10			
47	RE-72C	445	450	0.003	<.10			
48	RE-72C	450	455	0.001	<.10			
49	RE-72C	455	460	0.001	<.10			
50	RE-72C	460	464	0.022	<.10			
51	RE-72C	464	467.5	0.001	<.10			
52	RE-72C	467.5	471	0.001	<.10			
53	RE-72C	471	476	0.003	<.10			
54	RE-72C	476	481	0.005	0.19			
55	RE-72C	481	486	0.003	<.10			
56	RE-72C	486	490	0.009	<.10			
57	RE-72C	490	493	0.006	<.10			
58	RE-72C	493	497	0.003	<.10			
59	RE-72C	497	499	0.008	<.10			
60	RE-72C	499	504	0.007	<.10			
61	RE-72C	504	509	0.007	<.10			
62	RE-72C	509	513	0.011	<.10			
63	RE-72C	513	517	0.002	<.10			
64	RE-72C	517	522	0.001	<.10			
65	RE-72C	522	527	0.005	<.10			
66	RE-72C	527	532	0.009	<.10			
67	RE-72C	532	537	0.013	<.10			
68	RE-72C	537	542	0.012	<.10			$\bar{x}$
69	RE-72C	542	546	0.342	0.53	0.164	0.021	0.043 .143
70	RE-72C	546	550	0.021	<.10			
71	RE-72C	550	555	<.001	<.10			
72	RE-72C	555	560	<.001	<.10			
73	RE-72C	560	565	0.004	<.10			
74	RE-72C	565	570	0.001	<.10			
75	RE-72C	570	575	<.001	<.10			
76	RE-72C	575	580	<.001	<.10			
77	RE-72C	580	585	<.001	<.10			
78	RE-72C	585	590	<.001	<.10			
79	RE-72C	590	595	<.001	<.10			

This report reviewed and approved by:

Richard A. Grondin

Richard Grondin, Operations Manager

NEVADA GSI

GEOCHEMICAL ANALYSIS REPORT

May 10, 1990

Lac Minerals
1395 Greg Street #107
Sparks, NV 89431

Number of Samples: 22
Project #: URBD
GSI #: 8011
Analysis: Fire Assay for Gold and Silver, with an A.A. finish.

	Sample I.D.			Au o/t	Ag o/t
1	RE-72C	595	600	-0.001	-0.10
2	RE-72C	600	605	-0.001	-0.10
3	RE-72C	605	610	-0.001	-0.10
4	RE-72C	610	615	-0.001	-0.10
5	RE-72C	615	620	-0.001	-0.10
6	RE-72C	620	625	-0.001	-0.10
7	RE-72C	625	630	-0.001	-0.10
8	RE-72C	630	635	-0.001	-0.10
9	RE-72C	635	640	-0.001	-0.10
10	RE-72C	640	645	-0.001	-0.10
11	RE-72C	645	650	-0.001	-0.10
12	RE-72C	650	655	-0.001	-0.10
13	RE-72C	655	660	-0.001	-0.10
14	RE-72C	660	665	-0.001	-0.10
15	RE-72C	665	670	-0.001	-0.10
16	RE-72C	670	675	-0.001	-0.10
17	RE-72C	675	680	-0.001	-0.10
18	RE-72C	680	685	-0.001	-0.10
19	RE-72C	685	690	-0.001	-0.10
20	RE-72C	690	695	-0.001	-0.10
21	RE-72C	695	700	-0.001	-0.10
22	RE-72C	700	702	-0.001	-0.10

This report reviewed and approved by:

Richard A. Grondin

Richard Grondin, Operations Manager

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

NEVADA GSI

GEOCHEMICAL ANALYSIS REPORT

May 2, 1990

Mr. Nate Brewer
Lac Minerals
1395 Greg Street #107
Sparks, Nv. 89431

Number of Samples: 20
Project: URBD
GSI Number: 7031
Analysis: Fire Assay for Gold and Silver, with an A.A. finish.

	Sample I.D.			Au o/t	Ag o/t
1	RE-72C	702	707	<.001	<.10
2	RE-72C	707	712	<.001	<.10
3	RE-72C	712	717	<.001	<.10
4	RE-72C	717	722	<.001	0.24
5	RE-72C	722	727	<.001	<.10
6	RE-72C	727	732	<.001	<.10
7	RE-72C	732	737	<.001	<.10
8	RE-72C	737	742	<.001	<.10
9	RE-72C	742	747	<.001	<.10
10	RE-72C	747	752	<.001	<.10
11	RE-72C	752	757	<.001	<.10
12	RE-72C	757	762	<.001	<.10
13	RE-72C	762	767	<.001	<.10
14	RE-72C	767	772	<.001	<.10
15	RE-72C	772	777	<.001	<.10
16	RE-72C	777	782	<.001	<.10
17	RE-72C	782	787	<.001	<.10
18	RE-72C	787	792	<.001	<.10
19	RE-72C	792	797	<.001	<.10
20	RE-72C	797	802	<.001	0.19

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This report reviewed and approved by:

Richard A. Grondin

Richard Grondin, Operations Manager

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

SAMPLE # RE-61 735-740
A = -100 Fraction Au oz/t = 0.0120 & 0.0350 = 0.0235
B = -100 Fraction wt gm = 161.79
C = 29.167 gm
D = Total Sample wt gm = 176.74
E = +100 Fraction Au mg = 0.0210
Weighted Au average (oz/t) based on Course Gold Screen Analysis = 0.0250

SAMPLE # RE-61 740-745
A = -100 Fraction Au oz/t = 0.1140 & 0.0100 = 0.0620
B = -100 Fraction wt gm = 140.06
C = 29.167 gm
D = Total Sample wt gm = 153.87
E = +100 Fraction Au mg = 0.0560
Weighted Au average (oz/t) based on Course Gold Screen Analysis = 0.0671

SAMPLE # RE-61 745-750
A = -100 Fraction Au oz/t = 0.0090 & 0.0200 = 0.0145
B = -100 Fraction wt gm = 151.00
C = 29.167 gm
D = Total Sample wt gm = 166.85
E = +100 Fraction Au mg = -0.0025
Weighted Au average (oz/t) based on Course Gold Screen Analysis = 0.0131

SAMPLE # RE-61 750-755
A = -100 Fraction Au oz/t = 0.0260 & 0.0200 = 0.0230
B = -100 Fraction wt gm = 154.17
C = 29.167 gm
D = Total Sample wt gm = 170.72
E = +100 Fraction Au mg = 0.0100
Weighted Au average (oz/t) based on Course Gold Screen Analysis = 0.0225

SAMPLE # RE-72C 542-546
A = -100 Fraction Au oz/t = 0.0300 & 0.0240 = 0.0270
B = -100 Fraction wt gm = 126.42
C = 29.167 gm
D = Total Sample wt gm = 142.51
E = +100 Fraction Au mg = -0.0025
Weighted Au average (oz/t) based on Course Gold Screen Analysis = 0.0240

RE-72

0-75 wbl CT (Xc Xk)
mX 45-50 warpy clay
w FeOx 0-110
golden orange

95-200 poso Bud w/ wal tuff bldo
110 reflop
95-200 m ~
bl
flush + green - clad
Xc + +++

95-145
Bud
or
Cepi

200 - 3

RE-72

mod ox thru 0-110' FeOx
0-75 CT wk bl
0-20 ms x
20-45 mx
45-65 wx
65-75 mx

Standard data pull

bl
clay ~
silic Se
colon
FeOx
Δ
smw/clad

Veins
Ca
SiO_2
Δ hydro ins
chalc ins