60001305

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-71
AUTHOR	V. Kenner; N. Brewer; R. Grondin
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 Long Lac Minerals Exploration (Texas), Inc.
COMMODITY If not obvious	gold silver
NOTES	Drill log; geology; assay; total depth 887' handwritten notes 28p.

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	5/19/08
DB:	mah	
SCANNED:		

Revised: 1/22/08

DRILL LOGS RE-71
Rosebud

60001305 4010

6000 1305

LONG LAC MINERALS EXPL. (TEXAS) INC.

DRILL LOG SUMMARY SHEET

PROJECT ROSEBUD

HOLE NUMBER RE-71C TOTAL DEPTH 887 LOGGED BY KLK

Date started April 4, 1990 4:30pm moved onto site

Date completed April 8, 1990 2Am

Initial bearing S 48 E

Initial inclination -53°

Elevation 5225.4

Collar coordinates:

N 2,203,407.0

E 480,894.5

Contractor COATES DRILLING

Drill Type UNIVERSAL

Hole Size HQ CORE

Comments @ 219' went through ~50' + broken rock had to pull out & change bit - no major problems hole went well.

Au, Ag entered

DOWN HOLE SURVEY INFORMATION

FROM	TO	SURVEY POINT	INCLI-NATION	BEARING	X (Easting)	Y (Northing)	Z (Elevation)
0	50		-53°	S 48 E			
50	200		-53°	S 51 E			
200	401		-53°	S 55 E			
401	600		-55°	S 56 E			
600	790		-54°	S 59 E			
790	887		-53	S 56 E			

DRILL HOLE # RE-71C

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
						Coring began @ 30'						
30	97	30 70 VNS	55 fract	≤1% relict limon replac diss py		0-55' Fine grained tuff mod strongly pyr bleached weak to mod pyr. silicification weak perv smectite alt, mod fine qtz stockwork local brecciation and microbreccia vns mod well fractured w/ earthy limonite ± chalcedony ± kaolinite w/ tr. relict replac py: mod to mod strongly pyr oxidized	30-35				.002	-.1
			KZ									
40	55	50 fract					35-40				.002	-.1
		70 VN	35 fract		75°	34.5-35.5 broken rubble w/ mod strong earthy limonite + clay alt	40-45				.001	.20
50	40					44.3-55 broken rubble - mod strong earthy limonite + str clay alt local buggy chalcedony vns w/ earthy limonite + relict diss. pyrite	45-50				.001	-.1
		35 VN	FeOx VN	tr limon replac relict py	50		50-55				.002	.17
60	100					55-82.5 Light green to buff matrix supported pyroclastic - weak pyr smectite alt w/ assoc mod to locally strong pyr. clay alt locally fractured w/ limonite clay fill; local trace fine relict diss FeOx replac py.	55-60				.004	.23
	89	60 fract VN					60-65				.003	.26
			35 fract			61-68 mod bleached	65-70				.002	.13
70	98				0.0.0	69-73 strong clay gouge alt, weakly limonitic to smectite alt						
			10°		65		70-75				.002	-.1
						79.5-82.5 strong limonitic clay alt	75-79				.002	.16
80	98					82.5-95 mod well bleached matrix rich clay alt pyroclastic w/ hinr brown smectite alt finely clasted ~ .1 to .2" w/ clay rich matrix, weakly fractured w/ FeOx + clay fill	79-82				.004	.16
		VN 35					82-87				.001	-.1
90			55 fract				87-92				.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
						90-95 Bleached pyroclastic continued						
	100	80 FeOx + SiO2 VN		<1% diss limon replac py		95-104.5 fine to medium pyroclastic, predom clay matrix supported mixed lt to medium green - smectite ± montmorillonite alt local intermittent chalcedonic silicification weakly to mod fractured w/ chalcd. ± drusy qtz + limonitic clay fill	92-97				.003	-.1
100							97-101				.004	.26
	100			±1% diss limon replac py			101-104.6				.003	.15
			65 FeOx SiO2 VN			104.5-112 breccia contact into flesh to peach colored mod silicified local brecciated fine grained tuff w/ local poss pyroclastic slaty + local microbreccia fill of primary breccia mod fractured w/ earthy limonite to hemitite oxide fill ± drusy qtz	104.6-108				.002	.18
110							108-112				.002	.18
	100		85	1-2% very fine diss py			112-117				.003	.15
			75 fract			112-127 fine ly brecciated contact into pin. mod strongly bleached fine pyroclastic lt green w/ hint light smectite alt. w/ weak hint peach coloration w/ depth, weakly fractured w/ pyrite + clay ± smectite alt predom clast supported, finely fractured throughout. clasts ≤ .1"-.2" wide.	117-122				.002	-.1
120							122-127				.001	-.1
	98	40 py VN		2-3% diss + VN py			127-132				.001	-.1
130	100		35 80 VNS			127-157 gradational contact into coarser pyroclastic mixed peach and green w/ weak pervasive bleaching clasts vary from fine millimeters w/in matrix to coarser clasts up to 1/2" to 2-3" wide, moderately fractured w/ pyrite ± local clay fill, ↓ bleaching w/ depth	132-137				.002	-.1
140	95	45 py VN	70 VN			139.8-142 ↑ pin. clay alt	137-142				.001	-.1
			60 FeOx				142-147				.003	-.1
150	80		45 FeOx 1/10"				147-152				.002	-.1
							152-157				.003	-.1
160	100			2-3% diss + VN Fe Sulfide		157-167 fault rubble contact into pink matrix pyroclastic to laharic breccia description in depth page 3.	157-162				.005	-.1

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG
	100	50 py vns	50 frac 35	2-3% diss +vn +blade sulfid	
		55 py vn			62
170	88	39 80	40 frac	±3% to 4% diss +vn +blade py	
180	95	80 py vn			
	72	86 py vn			
190	88				
	66	51 py vn			65
200	87		70 frac		
	42	85 py vn			
210	73	60 vn			
	80				
	75		35 frac		
220	78	55 vn	30 frac		
	100				
230					

DESCRIPTION

160-167 pink matrix pyro to lahar breccia continued, clasts up to 3" wide weakly bleached w/ local sericite green alt clasts mod pen. argillic clay alt mod fractured w/ kaolinite, pyrite ±sericite fill

167 - 296 Broken rubble contact into "Bull Tuff Breccia" w/ mod strong assoc. sericite kaolinite + pyrite alt mainly w/ in rubble zone. Pervasive peach color alteration throughout, heterolithic 2-3 stages of brecciation - dry locally intensely mod silicified, weak pervasive argillic alt predom matrix supported w/ fine grained volc. matrix clasts vary from few millimeters to 2" predom felsic, fine clasted locally is principally tuffaceous in composition weak to mod veining throughout w/ kaolinite + py ±sericite fill

174.5 - 184.8 strongly broken

185 - 195.5 predominantly tuffaceous texture w/ ↓ brecciation ; ↓ broken rubble poss more likely an alt pyroclastic

167.3-171.2 strong white clay + pyrite in fractures ↑ pen. clay alt

194.4 - 222 Intense broken rubble zone w/ in same lithology w/ assoc strong kaolinite ±local sericite + local blebbl sulfide + diss in pyrite mod to strong pen. clay alt throughout

222 - 296 pen. broken up ; fractured w/ kaolinite, pyrite + local drusy qtz + creamy yellow oxidized (post drilling) sericite alt ; locally white silicif

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
162-167				.007	-.1
167-172				.002	-.1
172-177				.006	-.1
177-182				.001	-.1
182-187				.003	-.1
187-192				.005	-.1
192-197				.002	-.1
197-202				.010	-.1
202-206				.003	-.1
206-216				.008	-.1
216-222				.003	-.1
222-227				.002	-.1
227-232				.003	-.1

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION
240	93, 72	70 py vn; 10 vn	5 fract	±3% diss + vn + bladed sulf + py	Rubble	230-296 "Peach Tuff Breccia" cont. 230-255 fractures w/ increased creamy yellow kaolinite alt (oxidation post drilling) however veining - stockwork still weak; max @ mod. 241-249 strongly broken - w/ assoc. str clay alt ± sericite + bladed sulfide
250	80, 60	50 vn; 60 65 stkwk	5 fract; 15 fract	3-4% diss + vn + bladed sulfide	"	252-259 strongly broken rubble similar to above
260	100	20 vn			"	
270	70	40 vn; 70 py vn	10 fract; 20 fract		"	266-279 strongly broken - poss intensely clay altered fault zone - w/ post drilling yellow-golden oxidation of kaolinite clay w/ poss coarse sericite alt ± diss + vn pyrite + poss chalcopy silver mineral - continues to be a tuff breccia where competent rock remains % of veining difficult to determine. veining stwk is fine SiO2 with more prominent fine granular pyrite encap - surrounded in SiO2. Breccia has ~2% finely diss bladed sulfide
280	55	30 fio	50		"	
290	100	5 vn	fract 10		45	279-292 VEINING: 1) Fe sulfate? stained - oxidized kaolinite * w/ tabular sulfide (prominent) 2) fine qtz stkwk 3) SiO2 encap sulfide 4) sericite Sulf: 1) pyrite 2) bladed mineral Au? Ag? 279-296 Intermittently broken rubble w/ pervasive argillic kaolinite clay alt. w/ local white talc-like 1/4" pure kaolinite vns w/ golden yellow oxidation poss due to some presence of Fe sulfate? - locally subparallel to core axis also w/ fine sulfide veinlets encapsulated in SiO2 + peru. v. fine qtz stockwork
300						296-301.5 flow banded tuff

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
232-237				.003	-.1
237-242				.005	-.1
242-247				.004	-.1
247-252				.004	-.1
252-257				.008	-.1
257-262				.005	-.1
262-267				.019	.32
267-272				.038	.17
272-278				.101	.19
278-283				.158	.66
283-288				.168	.85
288-292				.363	.70
292-296				.218	.92
296-301				.025	.19

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERAL-IZATION	GRAPHIC LOG	DESCRIPTION
	100	50/10	50/VN	±3% diss +VN py + * bladed sulfide		300 - "TUFF BRECCIA" (CONT.) VEINING: 1) clay-kaolinite 2) sericite-duck butter * 3) fine qtz fracture * stkwk 4) SiO2 encap sulf. * 301-306 broken rubble - strong clay alt predom a fine grn tuff - brecciated sericite veinlets + local SiO2 fine stockwork fract w/ ± fine pyrite w/ encap SiO2 qtz
310	100	VNS 53/5				310.6 - 312.3 broken rubble - more mixed FGT + flow banded tuff @ above 310.6 - 317.5 intense fault gouge
						Sulfides: 1) pyrite 2) bladed sulf. poss Ag+Au mineral 313. - 314.5 - broken rubble - describ. @ above
320	92	85 vn		2-3% diss +VN py		314.5 - 324 mod to mod strong duck butter sericite stockwork throughout w/ independent white kaolinite veinlets + fine SiO2 qtz stockwork - locally encapsulating sulfides
330	73 48		30 fract			VEINING: 1) CaCO3 2) sericite @ white shimmer to local w/ green duck butter 3) kaolinite 4) ↓ SiO2 encap py VNS 5) ↓ fine qtz fracture stockwork 327 - 343 predom fine grained tuff w/ pervasively soft green alteration, brown up w/ strong white shimmering sericite alt + kaolinite, beginning to pick up * CaCO3 veins, bladed sulfides tend to drop out of picture
340	100		75 vn CaCO3	2% diss +VN py		
350	100					predom veining: 1) white clay 2) CaCO3 339.5 - 362 mottled flesh & gray fine grained tuff, intermittently brecciated similar to tuff breccia, mod strongly fractured w/ intense clay ± pyrite fill & bladed metallic is absent, weak to mod CaCO3 veining
360	93	60/5	vns/5°			VEINING: 1) CaCO3 2) kaolin ± fine duck butter 3) weak local encapsulated pyr or in CaCO3 or clay 4) wk local SiO2 vnlets 5) bun chalcedony vnlets 362 - 424.3 Possible South Ridge Fault pervasively brecciated clast supported w/ predom clay matrix heterolithic mod calcite + pyrite veins - predom a tectonic breccia - wh to mod pervasively fractured w/ veins as rotated to side, below, pervasive clay alt
370			CaCO3 vn 10° fract			362 - 370 predom breccia w/ hint local green

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
301-305.6				.153	1.69
305.6-310.6				.127	.90
310.6-314.5				.156	1.41
314.5-319.5				.049	.30
319.5-323				.17	.10
323-328				.03	-.1
328-333				.001	-.1
333-339.5				.006	-.1
339.5-344				.002	-.1
344-349				.003	-.1
349-354				.005	-.1
354-358				.004	-.1
358-362				.003	-.1
362-367				.001	-.1
367-372				.001	-.1

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION
	100	30 calcite vn		±2% diss +vn py		370 - 424.3 SOUTH RIDGE TECTONIC BRECCIA (CONT.)
	98	65 calcite vn			rubble	376 - Intensity of tectonic brecciation decreases w/ depth w/ local variations w/ increase green smectite & local nontronite alt locally with depth.
380	100	65 clay vn			gouge	383-385 intense clay gouge
390	100	85 py vn			GOUGE	390-392 weakly to mod perv. silicified 393-400 Intermittent intense clay gouge
400	100	opaline chert vein 35°	35 fract			401-408 ↑ nontronite alt along brecciation; fracture rims
410	100		up py vn			401-417.6 Pervasive weak to mod green to buff subangular to subrounded fine to medium grained breccia (vs. pyroclastic) weak perv smectite w/ weak local nontronite alt clasts prism fm millimeters to 1/4" wide weakly fractured weak lt green w/ py clay vesicle and fracture fill, perv. clay alt
9' interval	100		vn/85			
420	99					417.6-424.3 Coarsely Brecciated weak intermittently w/ clay gouge - is the transitional coarse breccia contact into fine grained welded Dozer Tuff almost appears to be a lahar breccia matrix is a microbreccia w/ strong clay content ± weak local chalcedony
11' interval				1-2% diss +vn py	DT	
430	100		30 calcite vn			424.3 - 887' Light sage green densely welded Dozer fine grained tuff 424.3-429.3 pervasively fractured filled w/ calcite + white clay locally ± pyrite weakly perv. bleached
			60 50 vn			
440						

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
372-377				.004	.11
377-382				.003	-.1
382-387				.001	-.1
387-392				.001	-.1
392-397				.005	.12
397-402				.010	.13
402-407				.001	.25
407-412				.006	.12
412-417				.007	.28
417-421				.001	.21
421-424.3				-.001	-.1
424.3-429				-.001	-.1
429-434				-.001	.11
434-439				-.001	.11

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION
	75	20/flo w/ 11 VNs	75 VNs	1-2% diss + VN py	DT gouge	440 - TD DOZER TUFF (CONT.) weak pervasive bleaching, densely welded weak perv. smectite? alt (lt. green) weakly fractured w/ $CaCO_3$ ± clay ± pyrite fill, local breccia to micro breccia seams
450	100	70/30 VNs				442.7-443 clay gouge
		30/VNs		2-4% VN diss		436-442 verigated bleaching -- poss showing relict flow texture
460	99	60/flo	60/VN	<1% diss + VN py		455-457 pyrite veins subparallel to core axis w/ assoc. slicken features looks similar to serpentine, poss weak to mod perv. silicification
470	99	60/flo	90/VN			457-474 bleaching pattern is verigated (ie. stripped)
		50/flo				
		50/flo 65	45 micro breccia VN			474-480 ↑ fracturing w/ predom pyrite fill
480	100	50/flo	60/VN			
	100	50/flo				485-492 prominent verigated bleaching relation to flow?
490	95	48/flo	VNs			
	100 +					
500			35/VN			
	100		15 fract			509 - 510.4 fracturing w/ assoc micro brecciation subparallel to core axis
510						

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
439-444				.003	.22
444-449				.001	-.1
449-454				.001	-.1
454-460				.001	-.1
460-465				.001	-.1
465-470				.001	-.1
470-475				.001	-.1
475-480				.002	-.1
480-485				.001	-.1
485-490				.001	-.1
490-495				-.001	-.1
495-500				-.001	-.1
500-505				.001	-.1
505-510				-.001	-.1

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERAL-IZATION	GRAPHIC LOG	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
	97	60/vn	5/fract	±1% diss ±vn py	DT	510 - TD DOZER TUFF (cont.)	510-515				.001	.1
520	100	55/flo	45/vn			515.4-522 prominent light gray chalcedonic silicification and veining parallel to pseudo? flow texture ~516 micro brecciation 516-517 w/ ↑ fracturing	515-520				.001	.1
							520-525				.001	.1
530	100	60/flo	fract vn/15			522-540 ↑ pervasive variegated bleaching 536.5-537.7 brecciated - clast supported w/ microbreccia + local SiO2 matrix ± local CaCO3 ± black pyrite	525-530				.001	.1
							530-535				.001	.1
540	99	80/flo	fract 20 vn			540-544 poss wk calcedonic silicification	535-540				.001	.1
							540-545				.001	.1
550	80	15 CaCO3 vn	55 fract			545-555 Calcite veining - mod and subparallel to core axis	545-550				.001	.1
							550-555				.001	.1
560	100						555-560				.001	.1
							560-565				.001	.1
570	100		20 / 5 fract vn			578-581 mod strong fracturing w/ assoc microbrecciation and strong fine qtz ± calcite stockwork	565-570				.001	.1
							570-575				.001	.1
580			75° vn				575-580				.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	vn/5°		≥1% diss tvn py	DT	580-TD DOZER TUFF (CONT.) FINE GR. WELDED TUFF, weakly pervasively bleached	580-585				-.001	-.1
590						582-584 strong fracturing w/ microbrecciation & fine qtz ± $CaCO_3$ stockwork ± chlorite	585-590				.001	-.1
	100	vns/63 42					590-595				-.001	-.1
600		80 vns					595-600				.001	-.1
	100					606-609 strongly fractured w/ strong stockwork qtz ± $CaCO_3$, microbrecciation ± chlorite?	600-605				.001	-.1
610		vn/75					605-610				-.001	-.1
	98	vn/15				614.8-631.6 Light to medium gray fine gr. welded tuff, pervasively bleached, moderate fracturing w/ SiO_2 ± $CaCO_3$ ± chlorite fill fracturing w/ weak bleaching rim	610-615				-.001	-.1
620							615-620				-.001	-.1
	100		fract 50				620-625				-.001	-.1
630		vn/35					625-630				-.001	-.1
	100						630-635				-.001	-.1
						631.6-637 Moderate fracturing w/ local microbrecciation fracture fill w/ $CaCO_3$ ± chlorite ± tr pyrite ± SiO_2	635-640				-.001	-.1
640		vn/5°										
	100					643-654 Intermittent gray, relatively unaltered, weak local bleaching rim on fractures	640-645				-.001	-.1
650		vns 82 10					645-650				-.001	-.1

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION
	98			≥1% diss +VN py	DT	670-TD DOZER TUFF (CONT.)
660	83	62 VN	slickensides 10°			659-670 weak increase bleaching intermittently strongly fractured to intermediate w/ mod increase in calcite brecciated w/ mod increase in calcite veining local slickensides ~10° to core & axis
670	77				BROKEN RUBBLE	670-685 Broken rubble zone - strongly to roughness w/ local asbc. strong fracturing w/ $CaCO_3$ + pyrite ± clay fill
680	60					
	35					
690	70		Fault 5°			
	90				BROKEN RUBBLE	694.5-700 BROKEN RUBBLE weak clay ± calcite ± pyrite along fractures
700	85					702.6-704
	100	70 $CaCO_3$ VN	5°			706-711 fractures predom subparallel to core axis w/ fine pyrite + calcite fill
710	100		5-10°			
720		75 VN				

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
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
700-705				<.001	<.1
705-710				<.001	<.1
710-715				<.001	<.1
715-720				<.001	<.1

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION
	100	DOG'S TOOTH CALCITE VN 10°		NIL to local tr	DT	720-TD. DOZER TUFF (CONT.)
730	100					722-829 Dozer Tuff is predom. lr-medium gray weakly pyr. fractured w/ local bleached rim, few local bleached brecciated zones w/ micro breccia vns 730' ± major dog's tooth calcite vn
740	100	70 VN				
750	100	35 VN				
760	100	50 Fract VN				
770	100	65 VN, fract		TR diss + VN py	60	769' - weak brecciation + fracture vns 770-790 Intermittent breccia seams w/ associated variable bleaching along fracturing + chlorite, local silicification w/ pyrite locally
780	100	15 70°				
790		VN				

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
720-725				<.001	<.1
725-730				<.001	<.1
730-735				<.001	<.1
735-740				<.001	<.1
740-745				<.001	<.1
745-750				<.001	<.1
750-755				<.001	<.1
755-760				<.001	<.1
760-765				<.001	<.1
765-770				<.001	<.1
770-775				<.001	<.1
775-780				<.001	<.1
780-785				<.001	<.1
785-790				<.001	<.1

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION
	100			NIL TO TR PY	DT	790-TD. DOZER TUFF (cont.)
800	100	fract vns 65/15				
						807-813 Light to medium gray fine grained dust ally welded tuff & intermittent brecciation and assoc mod strong fracturing w/ chlorite? + pyrite ± SiO_2 fill ± local dup blood red garnet
810	100	50 fract vn				
820	100	32 fract vn				
	100		60 vns			
						829-881.7 Increase in pervasive bleaching locally slightly more intense assoc w/ strongly fractured / brecciated zones
830	100	35 vn				
840	98	75 fract vn	70 vn	1-2% vn + fracture fill py		838.3-839.3 Structural brecciation of Dozer tuff, well silicified and locally matrix supported w/ gray sulfide / SiO_2 rich micro breccia fill. Local lt gray clay fracture fill, followed by mod strong SiO_2 + py fill fracturing betw/ 839.3 to 844.3
		15-10 fract vns				844.3-845.5 Subparallel to core axis - ±1" wide breccia vein w/ silicified micro breccia matrix w/ strong SiO_2 + pyrite content
850	100	15°				
			fract vns 75			856-865 Mod strong fracturing w/ local structural brecciation w/ micro breccia fill w/ mod str. assoc. SiO_2 ± local pyrite
860						

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
790-795				.001	.1
795-800				.001	.1
800-805				.001	.1
805-810				.001	.1
810-815				.001	.1
815-820				.001	.1
820-825				.001	.1
825-830				.001	.1
830-835				.001	.1
835-840				.001	.1
840-845				.001	.1
845-850				.001	.1
850-855				.001	.1
855-860				.001	.1

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION
	100		10° VNS	1% diss + VN py local up to 2% w/in VNS	DT	860 - 887 TD. DOZER TUFF
	100					861 - 864.5 mod strong to strong brecciation w/ primary & secondary fracturing - 2ndary has pyrite veining cross cut w/ Jr. Breccia matrix w/ microbreccia + SiO2 + local diss pyrite ± local dark butter silicate
870			50 fract VNS			873 - 877.5 Intermittent brecciation - clasts becoming increasingly milled & more rounded w/ intensity of brecciation; fracturing decreasing
	100					
880			35 fract VN			881.5 - 884 mill'd breccia w/ clasts up to 2" wide; very rounded gray w/ bleached rims & 2ndary fracturing crosscutting brecciation, locally w/ pyrite ± SiO2 fill w/in fractures, trace lime dup blood red - diss mineral w/in fractures
887			20 fract VN			887' T.D.

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
860-865				.001	.1
865-870				.001	.1
870-875				.001	.1
875-880				.001	.1
880-885				.001	.1
885-887				.001	.1

RE-71

Box Footage	Recovery	Sample Interval	Lithology
30-40	97%	30-35	0-55 bleached silicified brecciated FGT mod str red orange clay filled fractures RE/ox Bound @ 5
		35-40	
40-50	55%	40-45	
		45-50	
		50-55	
50-55	40%	55-60	
		60-65	55-82.5 Lt green Bud fine pyroclast locally fractur w/limon clays 61-68 mod bl 68-82.5 strong clay alt
55-62	100%	65-70	
		70-75	
		75-79	
62-72	89%	79-82	
		82-87	
72-82	98%	87-92	79.5-82.5 strong limonitic clay alt
		92-97	
82-92	98%	97-101	82.5-95 wk to mod bleach hint green Bud finely pyroclast w/ FeOx fracture
		101-104.6	
92-102	100%		
102-112	100%		95-104.5 Green pyro ↓ bl ↑ smectite alt whity vuggy ; wk drusy qtz + FeOx cl fill
112-122	100%		
122-131	98%	104.6-108	104.6-112 flesh colored brecciated whity silicified pyro ± vuggy w/ fill of drusy qtz + FeOx clay
		108-112	
131-139	100%+	112-117	
		117-122	
		122-127	
		127-132	112-127 mod bleach probable fine pyro hour could be tuff, mottled lt green to hint flesh
		132-137	
		137-142	
		142-147	
		147-152	(147.5) 127-153 Coarsely clasted pyroclastic, mod pen bleached, mottled lt green; peach color fine 3% dis py throughou w/ pyrite filling fracture locally whity silicified (139.8 & 142) pen clay

RE-71

Box Footage	Recovery	Sample Intervals	Lithology
139 - 149.5	95%	152 - 157	153 - 167 Pink matrix pyroclastic volcanic breccia clasts up to 3" bleached to green clay alt. perv. mod argillic clay alt. w/ bleaching, pyrite + white clay fracture fill
		157 - 162	
149.5 - 158	86%	162 - 167	
		167 - 172	
158 - 168.5	100%+	172 - 177	
		177 - 182	
168.5 - 179	88%	182 - 187	* 167 - (175.5) possible tuff breccia (locally looks like welded pyroclastic) * perv. flush coloration 174.5 - 184.8 strongly bustication 185 - 195.5 prism tuffs texture - flush color ↓ Δiation ; bustication 167.3 - 171.2 strong white clay + pyrite in fractures ↑ perv. clay alt
		187 - 192	
179 - 184.5	95%		
184.5 - 188	92%		
188 - 192	88%		

*Note: by 202' we ended up w/ 3' extra thus between 158± to 202' blocks were miss placed thus areas of short runs (many) in this zone are incorrect however gor back on line @ 222'

**2nd note: according to drillers - fact — misplacement of blocks - unknown

192 - 199	66%	192 - 197	"TUFF BRECCIA" 194.4' - 222' Intense broken up same lithology @ above
		197 - 202	
199 - 205	87%	202 - 206	
		206 - 216	
205 - 212	42%	216 - 222	
212 - 216	73%		
216 - 217	80%		
216 - 222	75%		

RE-71

* 167 to 296 * Priority Cut

Run Footage	% Recovery	Sample Intervals	Lithology
222 - 227	78%	222 - 227	222-296
		227 - 232	Pink Tuff Breccia
227 - 232	100%+	232 - 237	lithic, matrix
		237 - 242	is flesh to bleached
232 - 242	93%	242 - 247	pervasively broken up
		247 - 252	fractured w/ white wax clay + pyrite; chalcedony
242 - 249	72%	252 - 257	locally weathering
		257 - 262	silicified
249 - 256	80%	262 - 267	
		267 - 272	
256 - 260	68%	272 - 278	
		278 - 283	296 - 301.5
260 - 268	100%+	283 - 288	Flow banded tuff
		288 - 292	perv. bleached
268 - 278	70%	292 - 296	wh - mod fracture
		296 - 301	filled w/ waxy white cla + pyrite
278 - 288	55%	301 - 305.6	301.5 - 305.6
		305.6 - 310.6	strongly clay alt
288 - 302	100%+	310.6 - 314.5	and brecciated
		314.5 - 319.5	Tuff - lt green
302 - 312	100%	319.5 - 323	305.6 - 314.5
		323 - 328	Pink Tuff to flow
312 - 322	100%		banded tuff breccia
		328 - 333	fairly broken up
322 - 328	92%		w/ white clay + pyrite fill
			310.6 - 317.5 fault gouge
328 - 331	73%	significant core loss	314.5 - 328
			FGT to flow banded
331 - 341	48%		lt green + light
			w/ green waxy clay
			± white + pyrite fill
			pervasively brecciated
		333 - 339.5	328 - 339.5
		339.5 - 344	lt green fine
341 - 351.5	100%	344 - 349	grained tuff w/ texture
		349 - 354	SGT well broken
			326 - 341 well broken up
351.5 - 362	100%	354 - 358	
		358 - 362	*339.5 - 362 (356)
362 - 370	93%	362 - 367	mottled flesh;
		367 - 372	FGT - intermittently
370 - 374	100%	372 - 377 South Ridge Fault ?	brecciated
			similar to T
			strongly
			w/ white
			fill ± py

362 - (374) Breccia w/ calcite and clast supported w/ clay matrix

RE-71

Footage Run	% Recovery	Sample Intervals	Lithology
374 - 382	98%	377 - 382	362 - 424.3 South Ridge fault zone - litho lithic - breccia calcite + pyrite veins
		382 - 387	
382 - 392	100%	387 - 392	
		392 - 397	383 - 385 intense clay gouge
392 - 402	100%	397 - 402	
		402 - 407	
402 - 412	100%	407 - 412	393 - 399 intermittent intense clay gouge zones
		412 - 417	
412 - 422	100%	417 - 421	
		421 - 424.3	417.6 - 424.3 very coarsely Diat w/ intense clay gouge
422 - 432	99%	424.3 - 429	
		429 - 434	
432 -		*434 - 439	424.3 - to TD Classic SGT welded Donger Tuff
		439 - 444	
		444 - 449	
		449 - 454	

DOZER INTERVALS - POSS SAMPLE ZONE

529.5 - 538 BOX # 52

501 - 505

605 - 610

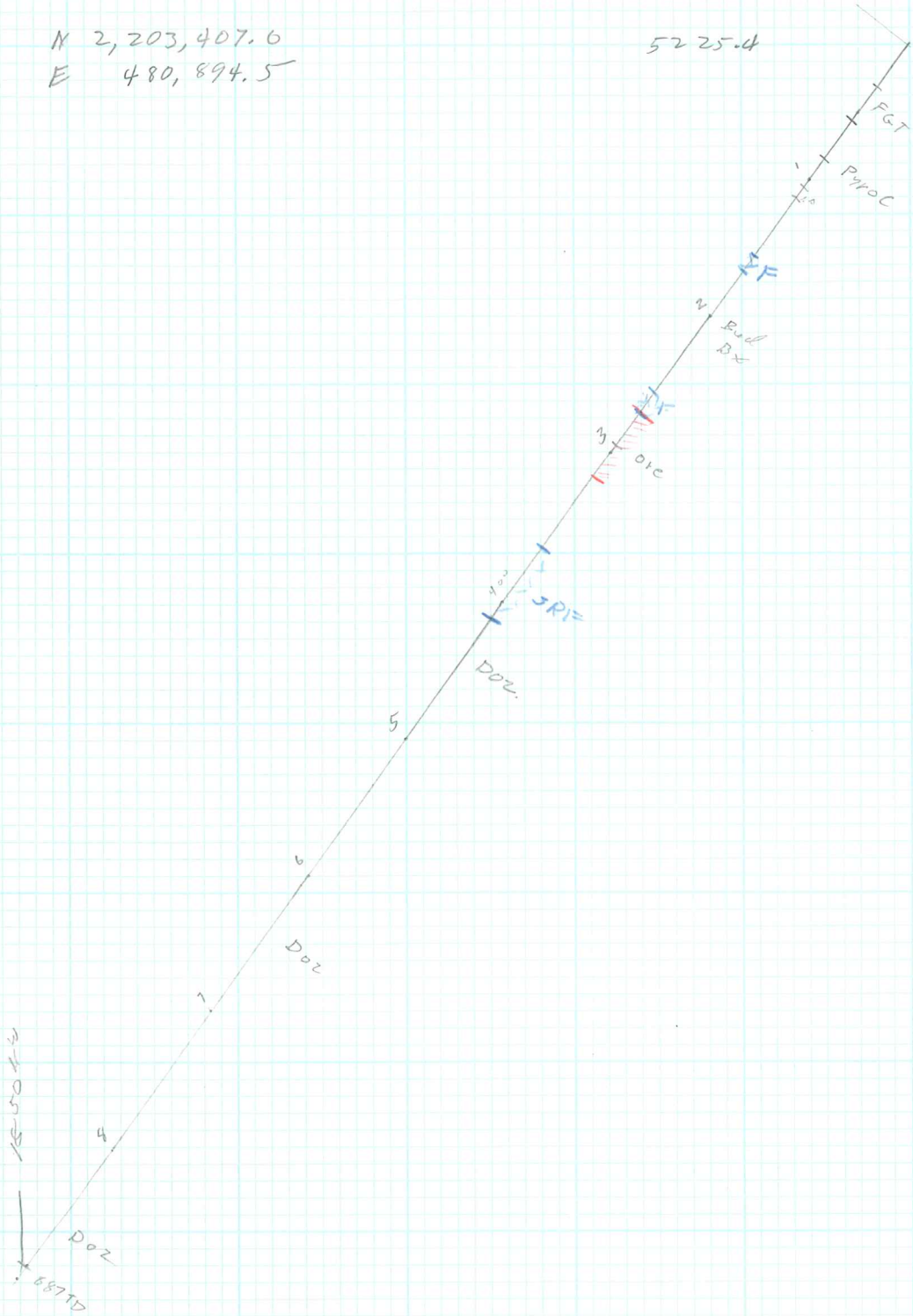
645 - 650

708 - 713

840 to TD

N 2,203,407.0
E 480,894.5

5225.4



ROSEBUD
RE-71C
1" = 100'
in plane of hole

NEVADA GSI

APR 25 1990

GEOCHEMICAL ANALYSIS REPORT

April 20, 1990

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

Number of Samples: 28
Project #: URBD
GSI #: 6976
Analysis: Fire Assay for Gold and Silver, with an A.A. finish.

	Sample I.D.			Au o/t	Ag o/t
1	RE-71C	30	35	0.002	<.10
2	RE-71C	35	40	0.002	<.10
3	RE-71C	40	45	0.001	0.20
4	RE-71C	45	50	0.001	<.10
5	RE-71C	50	55	0.002	0.17
6	RE-71C	55	60	0.004	0.23
7	RE-71C	60	65	0.003	0.26
8	RE-71C	65	70	0.002	0.13
9	RE-71C	70	75	0.002	<.10
10	RE-71C	75	79	0.002	0.16
11	RE-71C	79	82	0.004	0.16
12	RE-71C	82	87	0.001	<.10
13	RE-71C	87	92	0.001	<.10
14	RE-71C	92	97	0.003	<.10
15	RE-71C	97	101	0.004	0.26
16	RE-71C	100	104.6	0.003	0.15
17	RE-71C	104.6	108	0.002	0.18
18	RE-71C	108	112	0.002	0.18
19	RE-71C	112	117	0.003	0.15
20	RE-71C	117	122	0.002	<.10
21	RE-71C	122	127	0.001	<.10
22	RE-71C	127	132	0.001	<.10
23	RE-71C	132	137	0.002	<.10
24	RE-71C	137	142	0.001	<.10

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	Sample I.D.			Au o/t	Ag o/t
25	RE-71C	142	147	0.003	<.10
26	RE-71C	147	152	0.002	<.10
27	RE-71C	152	157	0.003	<.10
28	RE-71C	157	162	0.005	<.10

This report reviewed and approved by:

Richard A. Grondin

Richard Grondin, Operations Manager

NEVADA GSI

APR 25 1990

GEOCHEMICAL ANALYSIS REPORT

April 23, 1990

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

Number of Samples: 38
Project #: URBD
GSI #: 6926
Analysis: Fire Assay for Gold and Silver, with an A.A. finish

	Sample I.D.			Au o/t	Ag o/t
1	RE-71C	162	167	0.007	<.10
2	RE-71C	167	172	0.002	<.10
3	RE-71C	172	177	0.006	<.10
4	RE-71C	177	182	0.001	<.10
5	RE-71C	182	187	0.003	<.10
6	RE-71C	187	192	0.005	<.10
7	RE-71C	192	197	0.002	<.10
8	RE-71C	197	202	0.010	<.10
9	RE-71C	202	206	0.003	<.10
10	RE-71C	206	216	0.008	<.10
11	RE-71C	216	222	0.003	<.10
12	RE-71C	222	227	0.002	<.10
13	RE-71C	227	232	0.003	<.10
14	RE-71C	232	237	0.003	<.10
15	RE-71C	237	242	0.005	<.10
16	RE-71C	242	247	0.004	<.10
17	RE-71C	247	252	0.004	<.10
18	RE-71C	252	257	0.008	<.10
19	RE-71C	257	262	0.005	<.10
20	RE-71C	262	267 5	0.019	0.32
21	RE-71C	267	272 5	0.038	0.17
22	RE-71C	272	278 6	0.101	0.19
23	RE-71C	278	283 5	0.158	0.66
24	RE-71C	283	288 5	0.168	0.85
25	RE-71C	288	292 4	0.363	0.70
26	RE-71C	292	296 4	0.218	0.92
27	RE-71C	296	301 5	0.025	0.19
28	RE-71C	301	305.6 4.6	0.153	1.69
29	RE-71C	305.6	310.6 4.0	0.127	0.90
30	RE-71C	310.6	314.5 3.9	0.156	1.41

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	Sample I.D.			Au o/t	Ag o/t
31	RE-71C	314.5	319.5 5	0.049	0.30
32	RE-71C	319.5	323 3.5	0.017	0.10
33	RE-71C	323	328 5	0.030	<.10
34	RE-71C	328	333	0.001	<.10
35	RE-71C	333	339.5	0.006	<.10
36	RE-71C	339.5	344	0.002	<.10
37	RE-71C	344	349	0.003	<.10
38	RE-71C	349	354	0.005	<.10

This report reviewed and approved by:

Richard A. Grondin

Richard Grondin, Operations Manager

NEVADA GSI

APR 25 1990

GEOCHEMICAL ANALYSIS REPORT

April 23, 1990

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

Number of Samples: 22
Project #: URBO
GSI #: 6977
Analysis: Fire Assay for Gold and Silver, with an A.A. finish.

	Sample I.D.			Au o/t	Ag o/t
1	RE-71C	354	358	0.004	<.10
2	RE-71C	358	362	0.003	<.10
3	RE-71C	362	367	0.001	<.10
4	RE-71C	367	372	0.001	<.10
5	RE-71C	372	377	0.004	0.11
6	RE-71C	377	382	0.003	<.10
7	RE-71C	382	387	0.001	<.10
8	RE-71C	387	392	0.001	<.10
9	RE-71C	392	397	0.005	0.12
10	RE-71C	397	402	0.010	0.13
11	RE-71C	402	407	0.001	0.25
12	RE-71C	407	412	0.006	0.12
13	RE-71C	412	417	0.007	0.28
14	RE-71C	417	421	0.001	0.21
15	RE-71C	421	424.3	<.001	<.10
16	RE-71C	424.	429	<.001	<.10
17	RE-71C	429	434	<.001	0.11
18	RE-71C	434	439	<.001	0.11
19	RE-71C	439	444	0.003	0.22
20	RE-71C	444	449	<.001	<.10
21	RE-71C	449	454	<.001	<.10
? 22	RE-71C	440	445	<.001	0.20

This report reviewed and approved by:

Richard A. Grondin

Richard Grondin, Operations Manager

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NEVADA GSI

MAY 21 1990

GEOCHEMICAL ANALYSIS REPORT

May 14, 1990

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

Number of Samples: 81
Project #: URBD
GSI #: 7099
Analysis: Fire Assay for Gold and Silver, with an A.A. finish.

	Sample I.D.			Au o/t	Ag o/t
1	RE-71C	454	460	0.001	-0.10
2	RE-71C	460	465	0.001	-0.10
3	RE-71C	465	470	0.001	-0.10
4	RE-71C	470	475	0.001	-0.10
5	RE-71C	475	480	0.002	-0.10
6	RE-71C	480	485	0.001	-0.10
7	RE-71C	485	490	0.001	-0.10
8	RE-71C	490	495	-0.001	-0.10
9	RE-71C	495	500	-0.001	-0.10
10	RE-71C	500	505	0.001	-0.10
11	RE-71C	505	510	-0.001	-0.10
12	RE-71C	510	515	-0.001	-0.10
13	RE-71C	515	520	-0.001	-0.10
14	RE-71C	520	525	-0.001	-0.10
15	RE-71C	525	530	-0.001	-0.10
16	RE-71C	530	535	0.001	-0.10
17	RE-71C	535	540	0.001	-0.10
18	RE-71C	540	545	-0.001	-0.10
19	RE-71C	545	550	-0.001	-0.10
20	RE-71C	550	555	0.001	-0.10
21	RE-71C	555	560	-0.001	-0.10
22	RE-71C	560	565	-0.001	-0.10
23	RE-71C	565	570	-0.001	-0.10
24	RE-71C	570	575	0.001	-0.10
25	RE-71C	575	580	0.001	-0.10
26	RE-71C	580	585	-0.001	-0.10
27	RE-71C	585	590	0.001	-0.10
28	RE-71C	590	595	-0.001	-0.10
29	RE-71C	595	600	0.001	-0.10
30	RE-71C	600	605	0.001	-0.10

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	Sample I.D.			Au o/t	Ag o/t
31	RE-71C	605	610	-0.001	-0.10
32	RE-71C	610	615	-0.001	-0.10
33	RE-71C	615	620	-0.001	-0.10
34	RE-71C	620	625	-0.001	-0.10
35	RE-71C	625	630	-0.001	-0.10
36	RE-71C	630	635	-0.001	-0.10
37	RE-71C	635	640	-0.001	-0.10
38	RE-71C	640	645	-0.001	-0.10
39	RE-71C	645	650	-0.001	-0.10
40	RE-71C	650	655	-0.001	-0.10
41	RE-71C	655	660	-0.001	-0.10
42	RE-71C	660	665	-0.001	-0.10
43	RE-71C	665	670	-0.001	-0.10
44	RE-71C	670	675	-0.001	-0.10
45	RE-71C	675	680	-0.001	-0.10
46	RE-71C	680	685	-0.001	-0.10
47	RE-71C	685	690	-0.001	-0.10
48	RE-71C	690	695	-0.001	-0.10
49	RE-71C	695	700	-0.001	-0.10
50	RE-71C	700	705	-0.001	-0.10
51	RE-71C	705	710	-0.001	-0.10
52	RE-71C	710	715	-0.001	-0.10
53	RE-71C	715	720	-0.001	-0.10
54	RE-71C	720	725	-0.001	-0.10
55	RE-71C	725	730	-0.001	-0.10
56	RE-71C	730	735	-0.001	-0.10
57	RE-71C	735	740	-0.001	-0.10
58	RE-71C	740	745	-0.001	-0.10
59	RE-71C	745	750	-0.001	-0.10
60	RE-71C	750	755	-0.001	-0.10
61	RE-71C	755	760	-0.001	-0.10
62	RE-71C	760	765	-0.001	-0.10
63	RE-71C	765	770	-0.001	-0.10
64	RE-71C	770	775	-0.001	-0.10
65	RE-71C	775	780	-0.001	-0.10
66	RE-71C	780	785	-0.001	-0.10
67	RE-71C	785	790	-0.001	-0.10
68	RE-71C	790	795	-0.001	-0.10
69	RE-71C	795	800	-0.001	-0.10
70	RE-71C	800	805	-0.001	-0.10
71	RE-71C	805	810	-0.001	-0.10
72	RE-71C	810	815	-0.001	-0.10
73	RE-71C	815	820	-0.001	-0.10
74	RE-71C	820	825	-0.001	-0.10
75	RE-71C	825	830	-0.001	-0.10

	Sample I.D.		Au o/t	Ag o/t
76	RE-71C	830 835	-0.001	-0.10
77	RE-71C	C 2662	0.002	-0.10
78	RE-71C	C 2663	0.003	-0.10
79	RE-71C	C 2664	0.004	-0.10
80	RE-71C	C 2665	0.007	-0.10
81	RE-71C	C 2666	0.002	-0.10

This report reviewed and approved by:

Richard A. Grondin

Richard Grondin, Operations Manager

NEVADA GSI

APR 25 1990

GEOCHEMICAL ANALYSIS REPORT

April 20, 1990

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

Number of Samples: 10
Project #: URBD
GSI #: 6978
Analysis: Fire Assay for Gold and Silver, with an A.A. finish.

	Sample I.D.			Au o/t	Ag o/t
1	RE-71C	835	840	0.001	<.10
2	RE-71C	845	850	<.001	<.10
3	RE-71C	850	855	<.001	<.10
4	RE-71C	855	860	<.001	<.10
5	RE-71C	860	865	<.001	<.10
6	RE-71C	865	870	0.001	<.10
7	RE-71C	870	875	<.001	<.10
8	RE-71C	875	880	<.001	<.10
9	RE-71C	880	885	<.001	<.10
10	RE-71C	885	887	<.001	<.10

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This report reviewed and approved by:

Richard A. Grondin

Richard Grondin, Operations Manager

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