60001334

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-102
AUTHOR	N. Brewer; R. Grandin; B. Faulkner; 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 1092'; handwritten notes 50p.

Keep docs at about 250 pages if no oversized maps attached
(for every 1 oversized page (>11x17) with text reduce
the amount of pages by ~25)

SS: DD 5/19/08
Initials Date
DB: [illegible]
Initials Date
SCANNED:
Initials Date

Revised: 1/22/08

DRILLL LOG RL-102
Rosebud

60001334 4010 ✓

60001334

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

DRILL LOG SUMMARY SHEET

PROJECT Rosebud

HOLE NUMBER RL-102 TOTAL DEPTH ~~1168.5~~ 1092 LOGGED BY KNT/CMW

Date started 8-2-90

Date completed 8-10-90

Initial bearing ~~S55E~~ S56E (?)

Initial inclination -60° -59.5

Elevation 5223.9

Collar coordinates:

N 2204218

E 481507.3

Contractor: Coates

Drill Type: UDR

Hole Size: 4 3/4" RC, HQ Core

Drilling Conditions: Went wet to avoid sticking rods

Footage: Wet / Dry WET @ 65'

Comments: Several hours elapsed between tripping out RC rods and putting new longyear HQ rods down. Had to redrill for entire night shift.

DOWN HOLE SURVEY INFORMATION

0 50 -59.5 S56E

FROM	TO	SURVEY POINT	INCLI-NATION	BEARING	X (Northing)	Y (Easting)	Z (Elevation)
50	200	100	-57.5	S57E			
200	406	300	-58.5	S55E			
406	606	512'	-62°	S54E			
606	800	700'	-62	S57E			
800	995	900'	-62°	S55E			
995	1092	1090	-62°	S55E			

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 RL-102

Page 1 of ____

LOGGED BY KNT

0-440 LBT KLK

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK
									mixed wht - lt brown					0-20' Overburden well rounded, qtz rich frags	.002	<	
05									"						.002		
10									"						.001		
15									"						.003		
20		Ox							lt sage grn					20-45 lt sage grn to peach, blc FGT to lithic lapilli tuff ???	.003		
25									"								
30									wht - peach wk grn					alt. primary or secondary ?? Argillic or glauconite?	.003		
35		wk Ox							wht - wk yellow						.01		
40									lt sage grn + wk yellow					all LBT to SRF	.004		
45									olive drab					45-125' Ti Dike? Non-magnetic Fn grn, with Fn, dk grn xtals	<		
50									med-brown					+ wk $CaCO_3$ fizz w/ 10% HCL	<		
55									"						<		
60									"						<		
65									mixed O.D. grn + orange						.014		
70		Ox							" to lt grn				<1% Pyrite		<		
75									"						<		
80									grn - gry					Oxidized Reduced	<		
85									"						<		
90									"						<		
95									"						<		
100									"								

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DRILL HOLE RL-102

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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
									grn - red brn					same as Above	✓	✓	
105									"								
110									"								
115									"								
120									"								
125									dk grn to sage					125 - 160? Ti?? or f6T?? f6 w/ weak sulfide wk $CaCO_3$			
130		?															
135		?															
40		?															
145		?													✓	✓	
150		?															
155		?															
160		?												ALL LBT			
165									lt sage grn					160 - 305 lt sage grn, f6T - med grnw (1/2 - 2mm clast size discernible) lithic lapilli tuff - probably			
170																	
175														Bud Bx very wk fizz.			
180																	
185																	
190																	
95																	
200															.016	.27	

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DRILL HOLE RL-102

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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
														LBT			
	✓✓								lt sage grn to pink					li thin lapilli tuff with local bunkshot pyrite + sulfide veins overall wke to mod silicification	.011	<	
205																	
	✓✓														.004		
210																	
	✓✓														<		
215																	
	✓✓																
220																	
	✓✓																
225																	
	✓✓																
230																	
	✓✓																
235																	
	✓✓															.1	
40																	
	✓✓												2-3%		.004	.2	
245																	
	✓✓														.001	<	
250																	
	✓✓												2-3%		.009	.1	
255																	
	✓														.002	.14	
260																	
	✓✓														<	.19	
265																	
	✓✓														<	.11	
270																	
	✓														.051	1.38	
275																	
	✓✓														.002	<	
280																	
	✓✓														<	<	
285																	
	✓												2-3%		<	<	
290																	
	✓✓														<	.26	
95																	
300	✓✓												1%	sulfide vn < 1/8"	.002	.22	

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DRILL HOLE RL-102

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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
															.002	.23	
305									peach-Hgm					305-440 LBT peach-Hgm FGT with local silicification, pervasive flooding ?? to local sfg sericite alt.	.007	.20	
310															<	<	
315																.17	
320																<	
325																.10	
330																.15	
335															.008	1.13	
40															<	.16	
345															<	.15	
350															<	<	
355															.004		
360															.001		
365															<		
370															<		
375															.023	.28	
380															<	<	
385															<	<	
390															<	<	
95															.005	.44	
400																	

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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
									pink to lt stage gray						.005	.24	
405									lt stage gr to wht						<	<	
410															.20	<	
415															.002	<	
420														sericite alt	.003	<	
425									pale gr to wht						.007	.13	
430															.013	<	
435															.013	<	
40														440' End of RC			
45														Core			
50																	
55																	
60																	
65																	
70																	
75																	
80																	
85																	
90																	
95																	
00																	

HOLE # RL-102 LOGGED BY CM Walck DATE 12-90 PAGE 1 OF 10

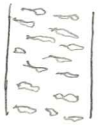
DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
441	95	Mottled at 45° to 50° to c.a.	W-M vnlts	Kaol + Mc & Qtz + py + dk green		M-S arg str bleach
450	97					
460	98					
470	98	Mottled at 40° to c.a		py + qtz ± dk green, minor Kaol + py		Mod Bleach
480	100					
490	99					
500	100	Can't tell	W-M to Mod	Dr qtz + Mc + Kaol, & Py + Qtz ± dk green		M-Str arg, str bleach
510						

DESCRIPTION

0-441 Reverse Circ

441-585 Lower Bud tuff / RBUR, amygdular, banded fgt

441-475: M-Str Argillized mottled tuff; Prob. originally amygdular texture. Background is dull white, clayey, fairly soft (usually can scratch w/ fingernail).



Contains ~ 30% elongate mottles ⬭ ⬭, a med pink-grey-tan color, these are harder than clayey background; these were prob. amygdules.
W-M to Mod vnlts 3-6/ft 1/8" wide, Kaol + Mc, Qtz + py ± dk green

Rubbly at 454-455, 463-464, 471.5-472,
Mottles at 45°-50° to c.a

475-500: Less argillized than above - fairly hard. Background is lt grey, w/ ~30% med pink-tan mottles (amygdules), at ~ 40° to c.a.
W-M vnlts 2-5/ft, 1/16"-1/8", py + qtz ± dk green, minor Kaol + Mc

500-522 Same as 441-475; M-Str arg. mottled tuff.
W-M to Mod vnlts, 3-8/ft, 1/8" wide, py + qtz ± dk green, Dr Qtz + Mc + Kaol.
Dr qtz + Kaol + Mc most abt 512-517,
514-515 wk bx'd.

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
441-446				.013	<.10
446-451				.010	.13
451-456				.005	.11
456-461				.017	<
461-466				.004	.11
466-471.5				.005	.15
471.5-476.5				.006	<
476.5-481.5				.005	<
481.5-486.5				.003	.12
486.5-492				.006	<
492-497				.019	<
497-502				.004	<
502-507				.009	<
507-512				.015	<

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
	97	Can't tell	W-M to Mod vnlts	Dr Q + mc ± kaol, Py + qtz ± dk green		M-S arg, str bleach
520	100	Mottled at 25°-30° to c.a.	wk vnlts	py + qtz ± kaol		wk arg, mod/m-s bleach
530	98	Banded at ~40° to c.a.	wk to w-m vnlts	dk green + py ± qtz ± kaol		w-m bleach
540	100					
550	100					
560	100					
570	100		w-m vnlts	dk gr + py + kaol ± qtz		
580		None	wk vnlts/ fract	dk green + py		w-m bleach / wk bleach

DESCRIPTION

441-585 cont · LBT / RBUR

522-529 Slightly less argillized than above / harder. Background lt grey / dull white w/ med-dk pink-tan mottles (amygd.) wk to W-M vnlts, 2-5 / ft, py + qtz ± kaol (1/16" - 1/8" wide) Mottles at 25-30° to c.a.

529-576: ¿flow? - banded fgt; lt & med pink-tan color, banded at ~40° to c.a. Gen. wk to w-m vnlts, dk green + py ± qtz ± kaol, (1/16"-1/8")

532-534: wk bx'd w/ abt Dr Qtz + Mc & minor kaol

Rubbly at 534.5-535.5, 554-555.

566-576: w-m vnlts: dk green + py + kaol ± qtz (more kaol)

Overall fairly hard & w-m bleached

576-583: W to w-m bleached to lt grey & med grey fgt w/ w-m amnt thin fractures w/ dk green + py.

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
512-517				.038	.12
517-522				.014	<.10
522-527				.037	<
527-532				.005	.20
532-537				.020	.23
537-542				.014	.14
542-547				.006	.13
547-552				.027	.11
552-557				.005	<
557-562				<.001	<
562-567				.003	<
567-572				.056	<
572-577				.011	<
577-582				.016	.14

HOLE # RL-102 LOGGED BY CMW DATE _____

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERAL-IZATION	GRAPHIC LOG	ALTER.
	98	None	wk vnlts	dk green ±py		wk bleach
590	97		minor vnlts	minor calc		
600	96					
610	100					
620	101					
630	95					w-m bleach
640	110					
	98					
650	95					

DESCRIPTION

441 - 585 LBT./RBUR amygdular, banded fgt

583-585: med pink-tan fgt, rough break surface text - sand grain size no vi

585 - 668 LBT/RBUR lithic lapilli tuff - VOLC bxa

585-660: Lithic lapilli tuff, matrix supported. Med grey, med green, lt grey & tan angular clasts, mostly 1/3" - 2/3", but ranging from 2mm to >4". Clasts comprise ~40-65%. Matrix is med flesh/greyish-tan color.
All fairly hard but easily scratched by metal. Prob overall wk to w-m bleach.

Minor (1 in 1 to 4') 1/4" to 1/3" calcite vnlts.

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
582-587				<.001	<.10

HOLE # RL-102 LOGGED BY _____ DATE _____

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERAL-IZATION	GRAPHIC LOG	ALTER.
	98	None	Minor vnlts	Minor calc		w-m bleach
660	99		wk vnlts	calc + py + kaol		wk arg, mod bleach
670	97		w-m Bx'd	Qtz + py ± kaol		wk bleach
			w-m vnlts	Qtz + py ± kaol		
680	100					
690	100	faint banding at 45° to 50° to c.a.	wk vnlts	wk py + qtz		
700	97	None	w-m bx'd (fault?)	Qtz + py ± kaol		
710	100		wk bx'd			
720						

DESCRIPTION

585-668 cont: LBT- ~~lbt~~ volc bxa

660-668: lithic lapilli tuff as above, but bleached - clasts lt grey, matrix pink-flesh. wk argillized
Weak vnlts (2/ft, 1/8" - 1/4") calc + py + kaol.

668-902.5 fine grained tuff m LBT/RBU

668-675: w-m brecciated med pink-grey to pink flesh fgt w/ tiny dissem py. Clast supported (90-95% clasts) w/ qtz ± py ± kaol. veinlets/matrix (faulted?)

675-692: Med pink-grey to pink flesh fgt. w/ 3% tiny dissem py
Weak - mod vnlts (3-7/ft, 1/8") qtz + py ± kaol.
Locally crossed by 'vein bxa' (hydrothermal?)

692-707: Med pink-grey fgt w/ tiny diss py, faint banded texture at 45-50° to c.a. Weak vnlts 2-6/ft, 1/16"-1/8" py + qtz

707-723.5 w-m bx'd, med pink grey banded fgt, clast supported. Angular clasts avg 1/4"-3/4", but range from 1/8" to >4". Vein/matrix is grey qtz ± py & minor kaol. Clasts comprise ~90%. (faulted?)
715-720 less bx'd, just fract'd

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
655-660				<.001	.10
660-663.5				.001	.13
663.5-670				.006	.11
670-676				.011	.12
676-682				.004	.14
682-687				.004	<.10
687-692				.009	<
692-697				.006	.10
697-702				.002	<
702-707				.007	<
707-712				.003	<
712-715.5				.004	.20
715.5-719.5				<	<

HOLE # RL-102 LOGGED BY CMW DATE _____

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
	95	None	Bx'd	Qtz+ py ± Kaol		wk bleach
			wk vnlts	Qtz+ py ± dk green & minor Kaol + Mc		w-m bleach
730	97					
740	100		wk to w-m vnlts	py+ qtz± dk green ± kaol ± green Kaol		
750	99					
			Bx'd	Qtz ± py ± Kaol		
760	98		w-m vnlts & locally vein bx'd	Qtz+ Kaol + py		wk bleach
770	99					
780	100		wk vnlts	py+ qtz ± dk green ± Kaol, gr. Kaol, calc		
790						

DESCRIPTION

668 - 902.5 LBT/RBU fgt

723.5 ~ 757: lt to med pink-grey to grey-flesh fgt w 2-3% tiny dissem py. Hard. w-m bleach.

723.5 - 745 weak vnlts 2-5/ft; 1/8", qtz+py± dk green, minor Kaol + Mc

745 - 757: wk to w-m vnlts 3-6/ft, 1/8" - 1/4", py ± qtz ± dk green ± white Kaol ± green Kaol (duckbutter)

3" bx'd at 755'

757-759: Clast supported bx'd, med pink-grey mottled fgt 90-95% clasts, qtz ± py ± Kaol matrix.

759 - 783: Med grey-pink fgt w 2-5% tiny dissem py. Hard; wk bleach. Locally mottled w/ grey-green. Gen. w/ w-m vnlts 1/16" - 1/4" wide, py + qtz + Kaol, 2-6/ft.

Locally wk bx'd to m-str. Crackle bx'd - 1/4" - 1/2" vein matrix of qtz + Kaol, milky white color, w/ minor py. (At 765-766, 769-770, 771-772 778-779, 780.5-781.5)

783 - 801: Med flesh, pink-grey & green-grey colors fgt; hard; faint speckled texture - dissem py & tiny dk green specks. Weak vnlts: 2-6/ft 1/16" - 1/4", py + qtz ± dk green ± white Kaol, & lt green (duckbutter) Kaol & minor calc

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
719.5-724.5				.002	<.10
724.5-730				<.001	<
730-735				.008	.11
735-740.5				.006	<
740.5-745				<	<
745-750				.008	<
750-755.5				.006	<
755.5-760.5				.004	.20
760.5-766				.013	.10
766-771				.006	<
771-776				.005	<
776-781				.008	<
781-786				.007	.56
786-791.5				.002	<

HOLE # RL-102 LOGGED BY CMW DATE _____ PAGE 6 OF 10

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
	102	None	wk vnlts	py+ qtz± dk green ± kaol, gr kaol, minor calc		wk bleach
800			Bx'd	Kaol+ qtz+ py/Mc		
	100		wk to w-m vnlts			
810	100		Mod vnlts			
			wk vnlts			
820	100					
830	103		Mod vnlts			
			Bubble	Clayey		Arg
840	104		Bx'd	Qtz+ kaol ± py/ Mc		wk bleach
			wk vnlts	py+ qtz		w-m bleach
850	98		wk bx'd	qtz+ kaol		wk bleach
			wk vnlts	py+ qtz ± kaol, minor calc		w-m bleach
860						

DESCRIPTION

(668 - 902.5 cont) LBT/RBU fgt

801 - 802: bx'd; Brick w/ white spots; angular 1/2" clasts of tuff (35-40%) floating in grey siliceous matrix

802 - 831: Speckled/Spotted fgt; Background is med flesh/brick color, contains ~ 25-30% 1mm lt green spots

All fairly hard. 802 - 831.5 w/ weak vnlts; 2-4/ft, 1/8" - 1/3" wide; kaol + qtz + py/Mc; locally mod. vnlts; 814.5-816

831 - 837: same as above but more veining, 4-6/ft, 1/4" - 1" wide, kaol + qtz + Mc

837 - 838: clayey rubble of above

838 - 844.5: wk bx'd speckled tuff (above), 90-95% clasts, milky white qtz + kaol ± Mc/py matrix/veins. (M to M-S vnlts)

844.5 - 848 Lt grey fgt w/ tiny specks py, wk py+ qtz vnlts

848 - 855: wk bx'd speckled brick color tuff - similar to 838-844, but some of matrix is vein qtz+ kaol, some is same comp. as tuff. (W-M to Mod vnlts)

855 ~ 874: Lt grey fgt w/ 1% tiny specks py. Hard. V. wk vnlts py + qtz ± minor kaol, minor calc, minor olive green selvage on some fract's. (2-4 1/8" vnlts/ft)

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
791.5-796.5				.002	<.10
796.5-801.5				.004	.014
801.5-806.5				.012	.21
806.5-811.5				.007	<
811.5-816.5				.032	.23
816.5-821.5				.014	.12
821.5-826.5				.027	<
826.5-831.5				.013	<
831.5-836.5				.026	<
836.5-841.5				.021	<
841.5-846.5				.014	<
846.5-851.5				.014	<
851.5-857				.028	<
857-862				.021	<

HOLE # RL-102 LOGGED BY _____ DATE _____

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
	99	None	wk vnlts	py+ qtz ± kaol minor calc		w-m bleach
870	100		wk to w-m vnlts	py+ qtz+ dk green		wk bleach
880	99		v. wk vnlts	py+ qtz+ dk green ± kaol		
890	100		w-m vnlts	Kaol+ py+ qtz		w-m bleach
			mod vnlts	duckb. Kaol. ± py ± calc		
			Bx'd			
			w-m vnlts			
900	100		fault zone	duckb Kaol, py+ Kaol, Kaol+ qtz		mod Bleach
910	100			Kaol+ qtz		w-m bleach
	123			clay-Rubble		
	83					Arg
920				Calc	Calc	calc Arg
	100			Qtz+ Py		silic
930			w-m vnlts	py+ qtz± Kaol		Mod bleach wk silic?

DESCRIPTION

668-902.5 cont. LBT/RBU fgt

874-895: Lt-med pink-tan color fgt w/ ~10% 1-2mm lt green spots. Wk bleach. Hard.

874-883: wk vnlts, 2-4/ft 1/8" wide py+qtz+ dk green.

883-888: core mod broken up, same lithology, wk to w-m vnlts 4-7/ft, 1/8" wide, py+qtz+ dkgreen. Minor kaol.

888-892: v wk vnlts Kaol+dk green+py ± qtz.

892-895: w-m vnlts Kaol+py+qtz

895-902.5: lt-med pink-tan mottled fgt., ~20% 2mm lt green spots/mottles. Vaguely banded. Locally brecciated. Generally w-m to mod vnlts, 3-5/ft, 1/8"-1/2" wide; duckbutter Kaol, py+calcite ± duckbutter Kaol.

Brecciated at 896-899, 1/4"-2" ang clasts 80%, matrix ~ same as clasts

902.5-926 fault zone

902.5-910.5: Clast-supported fault bx'a; tan & pink flesh fgt clasts 1/3"-2" in matrix of rock flour or green duck butter Kaol. Wk veining: py+kaol, milky Kaol+qtz,

910.5-915: Matrix supported fault bxa: med purple-flesh angular fgt clasts 1/3"-2" (comprise 30-60%) floating in milky white qtz+kaol matrix.

915-916: Clast supp. fault bxa: med grey-green clasts (think of epiclastic material/trans. seds) clasts - 85-90%, matrix milky qtz+ Kaol

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
862-867				.017	.11
867-872				.023	.28
872-877				.033	.10
877-882				.034	<.10
882-887				.014	<
887-892				.025	<
892-897				.073	.13
897-902				.056	<
902-907				.392/.260	.65
907-912				.410/.230	.10
912-915.9				.437/.200	.69
915.9-920				.218/.156	.23
920-922.8				.004	<
922.8-926				.002	2.23
926-932				.003	1.63

HOLE # RL-102 LOGGED BY CMW DATE _____ PAGE 8 OF 10

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
	100	None	W-M vnlts	py + qtz ± Kaol		Mod bleach, wk silic?
940	100		v wk to wk vnlts	py/Mc + qtz ± Kaol, minor calc.		
950	100					
960	100		Rubble wk vnlts	Kaol ± Mc; Kaol + Mc & py + qtz		Arg W-M bleach
970	40			Kaol + py/Mc		Mod bleach
980	96					
990	100		Rubble wk to W-M vnlts	clay calc + Mc/py + Kaol ± dk green		Arg Mod Bleach
1000						

DESCRIPTION

902.5 – 926 cont

916 – 920: 1/4" – 2" rubble, lt blue-green, clayey feel, easily scratched by fingernail.

920 – 921.5: Massive calcite vein

921.5 – 922.8: Clayey rubble & calcite rubble

922.8 – 926: Matrix supp. fault bxa, lt green fgt clasts (of Dozer?) Compose 60-75% (angular, 1mm – 73") in med-dk grey siliceous matrix (py + qtz?)

926 – 1092 Dozer / sage green fgt

926 – 934 lt green-grey hard fgt w/ 2-3% dissem py. W-M vnlts: 5-10/ft, 1/16" – 1/8" wide, py + qtz ± Kaol rubbly at 927-928.

934 – 957: lt green-grey hard fgt w/ 2-3% dissem py (mod bleach) Weak to very wk vnlts. 4-8/ft, < 1/32" wide, py/Mc + qtz ± Kaol, minor calc.

957 – 959: Rubbly zone; clayey lt green rubble 1/4" – 1".

959 – 969: lt green fgt w/ 2-4% f.gr. py, partially oxidized. Weak vnlts: 2-5/ft, 1/16" – 1/8" wide, Kaol + Mc, py + qtz.

969 – 990. pale grey-green fgt w/ 2-4% tiny diss py & buckshot py. Weak vnlts Kaol + Mc/py 2-5/ft, < 1/16" wide

990 – 991: Rubbly; lt green clayey rubble

991 – 1016: pale green-grey f.gr. tuff w/ 1-2% tiny diss. py. W to W-M vnlts 2-6/ft, 1/16" – 1/8" wide, calc + Mc/py + Kaol ± dk green

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
932-937				.004	<.10
937-942				.002	<
942-947				.006	<
947-952				<.001	<
952-957				.061	<
957-962				.002	<
962-967				.002	<
967-972				.001	<
972-982				.006	.50
982-987				.002	<
987-993				.002	<
993-999				missing	

HOLE # RL-102 LOGGED BY CMW DATE 12-90 PAGE 9 OF 10

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
	100	None	Wk to W-M vnlts	calc+ Mc/Py +kaol ± dk green		Mod Bleach
1010	100		W-M vnlts	Calc ± minor py, ± kaol		
1020	103					
	75					
1030	103					
1040	100					
1050	99					
1060	96		Very wk vnlts	minor calc ± Mc		
1070						

DESCRIPTION

926 – 1092 Dozer

1016 – 1060: pale green fgt w/ 1% tiny dissem py, locally oxidized, W-M vnlts 4-8/ft, <1/32" to 1/4", mostly calcite ± minor py, and very thin <1/32" vnlts w/ py + calc? ± kaol

1060 – 1073: Same as above but v. wk. calc ± Mc vnlts (1-2/ft, 1/16"-1/8")

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
999-1004				.003	<.10
1004-1009.5				<.001	<
1009.5-1014.5				.007	<
1014.5-1019.5				.001	<
1019.5-1026				.001	<
1026-1031				<	<
1031-1036				.005	<
1036-1042				.003	<
1042-1047				.001	<
1047-1052				<	<
1052-1057				.002	<
1057-1062				<	.17
1062-1067				<	<
1067-1072				<	<

HOLE # RL-102 LOGGED BY CM Walck DATE 12-90 PAGE 10 OF 10

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	None	v. wk vnlts ⊥ wk vnlts	minor calct Mc		Mod Bleach	926-1092. Dozer						
				Calc ± Mc ± Kaol			1073-1092 T.D: same as 1016-1060 but w/ wk vnlts, calc. ± minor py ± minor Kaol	1072-1077				.001	<
1080								1077-1082				<.001	<
	102							1082-1087				.002	<
	92							1087-1092				<	<
1090													
1092 T.D.													

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

DRILL LOG SUMMARY SHEET

PROJECT Rosebud

HOLE NUMBER RL-102 TOTAL DEPTH ~~1168.5~~ 1092 LOGGED BY KNT/CMW

Date started 8-2-90

Date completed 8-10-90

Initial bearing ~~S55E~~ S56E (?)

Initial inclination ~~-60°~~ -59.5

Elevation 5223.9

Collar coordinates:

N 2204218

E 481507.3

Contractor: Coates

Drill Type: UDR

Hole Size: 4 3/4" RC, HQ Core

Drilling Conditions: Went wet to avoid sticking rods

Footage: Wet / Dry Wet @ 65'

Comments: Several hours elapsed between tripping out RC rods and putting new longyear HQ rods down. Had to redrill for entire night shift.

DOWN HOLE SURVEY INFORMATION

FROM	TO	SURVEY POINT	INCLINATION	BEARING	X (Northing)	Y (Easting)	Z (Elevation)
0	50		-59.5	S56E			
50	200	100	-57.5	S57E			
200	406	300	-58.5	S55E			
406	606	512'	-62°	S54E			
606	800	700'	-62	S57E			
800	995	900'	-62°	S55E			
995	1092	1090	-62°	S55E			

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 RL-10

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
														0-440 LBT KLK			
									mixed wht-lt brown					0-20' Overburden well rounded, qts rich & mags	.002	<	
05									"						.002		
10									"						.001		
15									"						.003		
20		Ox							lt sage grn					20-45 lt sage grn to pend, blc FGT to lithic lapilli Tuff ???	.003		
25									"								
30									wht-pea wk grn					alt. primary or secondary ?? Argillic or glauconite?	.003		
35		wk Ox							wht-wk yellow						.01		
40									lt sage grn + wk yellow					All LBT to SRF	.004		
45									olive drab					45-125' Ti Dike? Non-magnetic, Fn grn, with Fn, dk grn xtals	<		
50									red-brown					+ wk $CaCO_3$ Fizz w/ 10% HCl	<		
55									"						<		
60									"						<		
65									mixed O.D. grn + orange						.014		
70		Ox							" to lt grn				<1% Pyrite		<		
75									"						<		
80									grn-gry					Oxidized Reduced	<		
85									"						<		
90									"						<		
95									"						<		
100									"								

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

DRILL HOLE RL-102

Page 2 of ___

LOGGED BY KNT

CHOCOLATE TUFF	ARGILLIC
BUD BRECCIA	XX SILICIFICATION
BUD TUFF	OX OXIDIZED
BUD EPICLASTIC	DRUZY QUARTZ
BUD TUFF BRECCIA	XC CHALCEDONIC QUARTZ
DT DOZER WELDED TUFF	XK STOCKWORK QUARTZ
	P P P PROPYLITIZATION
	Ca CALCITE

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK
									grn - red brn					same as above	✓	✓	
105									"								
110									"								
115									"								
120									"								
125									dk grn to sage					125-160? Ti?? or FGT?? FG w/ weak sulfide wk CaCO3			
130		?															
135		?															
40		?															
145		?													✓	✓	
150		?															
155		?															
160		?												ALL LBT			
165									lt sage grn					160-305 lt sage grn, FGT - med grain (1/2-2mm clast size discernible) lithic lapilli tuff - probably			
170																	
175														Bud Bx very wk frizz.			
180																	
185																	
190																	
95																	
200															.016	.27	

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 RL-10

Page 3 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
														LBT			
	✓✓								It gray grn to pink					li thin lapilli tuff with local buckshot pyrite + sulfide veins overall wkly to mod silicified	.011	<	
205																	
	✓✓														.004		
210																	
	✓✓														<		
215																	
	✓✓																
220																	
	✓✓																
225																	
	✓✓																
230																	
	✓✓																
235																	
	✓✓															.1	
40																	
	✓✓												2-3%		.004	.2	
245																	
	✓✓														.001	<	
250																	
	✓✓												2-3%		.009	.1	
255																	
	✓														.002	.14	
260																	
	✓✓														<	.19	
265																	
	✓✓														<	.11	
270																	
	✓														.051	1.38	
275																	
	✓✓														.002	<	
280																	
	✓✓														<	<	
285																	
	✓												2-3%		<	<	
290																	
	✓✓														<	.26	
95																	
300	✓✓												1%	sulfide vn < 1/8"	.002	.22	

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 RL-102

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
	✓✓ ✓✓														.002	.23	
305									peach-Hgm					305-440 LBT peach-Hgm FGT with local silicification, pervasive flooding ?? to local sfg sericite alt.	.007	.20	
310															<	<	
315																.17	
320																<	
325																.10	
330																.15	
335															.008	1.13	
40															<	.16	
345															<	.15	
350															<	<	
355															.004		
360															.001		
365															<		
370															<		
375															.023	.28	
380															<	<	
385															<	<	
390															<	<	
95															.005	.44	
400																	

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 RL-10

Page 5 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
									pink to lt stage gr						.005	.24	
405									lt stage gr to wht						<	<	
410															.20	<	
415															.002	<	
420														sericite alt	.003	<	
425									pale gr to wht						.007	.13	
430															.013	<	
435															.013	<	
40														440' End of RC			
45														Core			
50																	
55																	
60																	
65																	
70																	
75																	
80																	
85																	
90																	
95																	
00																	

HOLE # RL-102 LOGGED BY CM Walck DATE 12-90 PAGE 1 OF 10

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
441	95	Mottled at 45° to 50° to c.a.	W-M vnlts	Kaol + Mc & Qtz + py + dk green		M-S arg str bleach
450	97					
460	98					
470	98	Mottled at 40° to c.a		Py + qtz ± dk green, minor Kaol + py		Mod Bleach
480	100					
490	99					
500	100	Can't tell	W-M to Mod	Dr qtz + Mc + Kaol, & Py + Qtz ± dk.		M-Str arg, str bleach

DESCRIPTION

0-441 Reverse Circ

441-585 Lower Bud tuff / RBUR, amygdular, banded fgt

441-475: M-Str Argillized mottled tuff; Prob. originally amygdular texture. Background is dull white, clayey, fairly soft (usually can scratch w/ fingernail).

Contains ~ 30% elongate mottles ⬭ ⬭, - a med pink-grey-tan color, these are harder than clayey background; these were prob. amygdules.
W-M to Mod vnlts 3-6/ft 1/8" wide, Kaol + Mc, Qtz + py ± dk green

Rubbly at 454-455, 463-464, 471.5-472,
Mottles at 45°-50° to c.a

475-500: Less argillized than above - fairly hard. Background is lt grey, w/ ~30% med pink-tan mottles (amygdules), at ~ 40° to c.a.
W-M vnlts 2-5/ft, 1/16"-1/8", py + qtz ± dk green, minor Kaol + Mc

500-522 Same as 441-475; M-Str arg. mottled tuff. W-M to Mod vnlts, 3-8/ft, 1/8" wide, py + qtz ± dk green, Dr Qtz + Mc + Kaol. Dr qtz + Kaol + Mc most abt 512-517, 514-515 wk bx'd.

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
441-446				.013	<.10
446-451				.010	.13
451-456				.005	.11
456-461				.017	<
461-466				.004	.11
466-471.5				.005	.15
471.5-476.5				.006	<
476.5-481.5				.005	<
481.5-486.5				.003	.12
486.5-492				.006	<
492-497				.019	<
497-502				.004	<
502-507				.009	<
507-				.015	<

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERAL-IZATION	GRAPHIC LOG	ALTER.
	97	Can't tell	W-M to Mod vnlts	Dr Q + mc ± kaol, Py + qtz ± dk green		M-S arg, str bleach
520	100	Mottled at 25°-30° to c.a.	Wk vnlts	Py + qtz ± kaol		Wk arg, mod/M-S bleach
530	98	Banded at ~40° to c.a.	Wk to W-M vnlts	dk green + py ± qtz ± kaol		W-M bleach
540	100					
550	100					
560	100					
570	100	None	W-M vnlts; Wk vnlts/frt	dk green + py + kaol ± qtz		W-M bleach

DESCRIPTION

441-585 cont · LBT / RBUR

522-529 Slightly less argillized than above / harder. Background lt grey / dull white w/ med-dk pink-tan mottles (amygd.) Wk to W-M vnlts, 2-5 / ft, py + qtz ± kaol (1/16" - 1/8" wide) Mottles at 25-30° to c.a.

529-576: ¿flow? - banded fgt; lt & med pink-tan color, banded at ~40° to c.a. Gen. wk to W-M vnlts, dk green + py ± qtz ± kaol, (1/16"-1/8")

532-534: wk bx'd w/ abt Dr Qtz + Mc & minor kaol

Rubbly at 534.5-535.5, 554-555.

566-576: W-M vnlts: dk green + py + kaol ± qtz (more kaol)

Overall fairly hard & w-m bleached

576-583: W to W-M bleached to lt grey & med grey fgt w/ W-M amnt thin fractures w/ dk green + py.

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
512-517				.038	.12
517-522				.014	<.10
522-527				.037	<
527-532				.065	.20
532-537				.020	.23
537-542				.014	.14
542-547				.006	.13
547-552				.027	.11
552-557				.005	<
557-562				<.001	<
562-567				.003	<
567-572				.056	<
572-577				.011	<
577-					

HOLE # RL-102 LOGGED BY (MW) DATE _____

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
	98	None	wk vnlts	dk green + py		wk bleach
			Minor vnlts	Minor calc		
590						
	97					
600						
	96					
610						
	100					
620						
	101					
630						
	95					W-M bleach
640						
	110					
	98					
650	95					

DESCRIPTION

441 - 585 LBT./RBUR amygdular, banded fgt

583-585: med pink-tan fgt, rough break surface text - sand grain size no vi

585 - 668 LBT/RBUR lithic lapilli tuff - VOLC. bxa

585-660: Lithic lapilli tuff, matrix supported. Med grey, med green, lt grey & tan angular clasts, mostly 1/3" - 2/3", but ranging from 2mm to > 4". Clasts comprise ~40-65%. Matrix is med flesh/greyish-tan color.
All fairly hard but easily scratched by metal. Prob overall wk to w-m bleach.

Minor (1 in 1' to 4') 1/4" to 1/3" calcite vnlts.

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
582-587				<.001	<.10

HOLE # RL-102 LOGGED BY _____ DATE _____

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERAL-IZATION	GRAPHIC LOG	ALTER.
	98	None	Minor vnlts	Minor calc		w-m bleach
660	99		wk vnlts	calc + py + kaol		wk arg mod bleach
670	97		w-m Bx'd	Qtz + py ± Kaol		wk bleach
			w-m vnlts	Qtz + py ± Kaol		
680	100					
690	100	faint banding at 45° to 50° to c.a.	wk vnlts	wk py + qtz		
700	97	None	w-m bx'd (fault?)	Qtz + py ± Kaol		
710	100		wk bx'd			
720						

DESCRIPTION

585-668 cont: ~~LBT~~ - ~~lbt~~ volc bxa

660-668: lithic lapilli tuff as above, but bleached - clasts lt grey, matrix pink-flesh. wk argillized
Weak vnlts (2/ft, 1/8" - 1/4") calc + py + kaol.

668-902.5 fine grained tuff m LBT/RBU

668-675: w-m brecciated med pink-grey to pink flesh fgt w/ tiny dissem py. Clast supported (90-95% clasts)
w/ qtz ± py ± Kaol. veinlets/matrix (faulted?)

675-692: Med pink-grey to pink flesh fgt. w/ 3% tiny dissem py
weak-mod vnlts (3-7/ft, 1/8") qtz + py ± Kaol.
Locally crossed by 'vein bxa' (hydrothermal?)

692-707: Med pink-grey fgt w/ tiny diss py, faint banded texture at 45-50° to c.a. Weak vnlts 2-6/ft, 1/16"-1/8"
py + qtz

707-723.5 w-m bx'd, med pink grey banded fgt, clast supported.
Angular clasts avg 1/4"-3/4", but range from 1/8" to >4".
Vein/matrix is grey qtz ± py & minor Kaol.
Clasts comprise ~90%.
(faulted?)
715-720 less bx'd, just fract'd

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
655-660				<.001	.10
660-663.5				.001	.13
663.5-670				.006	.11
670-676				.011	.12
676-682				.004	.14
682-687				.004	<.10
687-692				.009	<
692-697				.006	.10
697-702				.002	<
702-707				.007	<
707-712				.003	<
712-715.5				.004	.20
715.5-719.5				<	<

HOLE # RC-102 LOGGED BY CMW DATE _____

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
	95	None	Bx'd ⊥ wk vnlts	qtz+ py ± kaol — qtz+ py ± dk green & minor kaol+ Mc		wk bleach — w-m bleach
730	97					
740	100		wk to w-m vnlts	py+ qtz± dk green ± kaol ± green kaol		
750	99		Bx'd	qtz ± py ± kaol		
760	98		w-m vnlts & locally vein bx'd	qtz+ kaol + py		wk bleach
770	99					
780	100		wk vnlts	py+ qtz± dk green ± kaol, gr. kaol		
790						

DESCRIPTION

668 - 902.5 LBT/RBU fgt

723.5 ~ 757: lt to med pink-grey to grey-flesh fgt w 2-3% tiny dissem py. Hard. w-m bleach.

723.5 - 745 weak vnlts 2-5/ft; 1/8", qtz+py± dk green, minor kaol+Mc

745 - 757: wk to w-m vnlts 3-6/ft, 1/8"-1/4", py± qtz± dkgreen ± white kaol ± green kaol (duckbutter)

3" bx'd at 755'

757-759: Clast supported bx'd, med pink-grey mottled fgt 90-95% clasts, qtz ± py ± kaol matrix.

759-783: Med grey-pink fgt w 2-5% tiny dissem py. Hard; wk bleach. Locally mottled w/ grey-green. Gen. w/ w-m vnlts 1/16"-1/4" wide, py+qtz+kaol, 2-6/ft.

Locally wk bx'd to m-str crackle bx'd — 1/4"-1/2" vein matrix of qtz+kaol, milky white color, w/ minor py. (At 765-766, 769-770, 771-772 778-779, 780.5-781.5)

783 - 801: Med flesh, pink-grey & green-grey colors fgt; hard; faint speckled texture - dissem py & tiny dk green specks. Weak vnlts: 2-6/ft 1/16"-1/4", py+qtz± dk green ± white kaol, & lt green (duckbutter) kaol & minor calc

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
719.5-724.5				.002	<.10
724.5-730				<.001	<
730-735				.008	.11
735-740.5				.006	<
740.5-745				<	<
745-750				.008	<
750-755.5				.006	<
755.5-760.5				.004	.20
760.5-766				.013	.10
766-771				.006	<
771-776				.005	<
776-781				.008	<
781-786				.007	.56
786-791				.002	<

HOLE # RL-102 LOGGED BY CMW DATE _____ PAGE 6 OF 10

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
	102	None	Wk vnlts	py + qtz ± dk green ± kaol, gr kaol, minor calc		Wk bleach
800	100		Bx'd	Kaol + qtz + py/Mc		
			Wk to w-m vnlts			
810	100		Mod vnlts			
820	100		Wk vnlts			
830	103		Mod vnlts			
840	104		Bubble	Clayey		Arg
			Bx'd	Qtz + kaol ± py/mc		Wk bleach
			Wk vnlts	py + qtz		W-m bleach
850	98		Wk bx'd	qtz + kaol		Wk bleach
			Wk vnlts	py + qtz ± kaol, minor		W-m bleach

DESCRIPTION

(668-902.5 cont) LBT/RBU fgt

801-802: bx'd; Brick w/ white spots angular 1/2" clasts of tuff (35-40%) floating in grey siliceous matrix

802-831: Speckled/Spotted f.g.t; Background is med flesh/brick color, contains ~ 25-30% 1mm lt green spots

All fairly hard. 802-831.5 w/ weak vnlts; 24/ft, 1/8"-1/3" wide; kaol + qtz + py/Mc; locally mod. vnlts; 814.5-816

831-837: same as above but more veining, 4-6/ft, 1/4"-1" wide, kaol + qtz + Mc

837-838: clayey rubble of above

838-844.5: Wk bx'd speckled tuff (above), 90-95% clasts, milky white qtz + kaol ± Mc/py matrix/veins. (M to M-S vnlts)

844.5-848 Lt grey fgt w/ tiny specks py, wk py + qtz vnlts

848-855: Wk bx'd speckled brick color tuff - similar to 838-844, but some of matrix is vein qtz + kaol, some is same comp. as tuff. (W-M to Mod vnlts)

855~874: Lt grey fgt w/ 1% tiny specks py. Hard. V. wk vnlts py + qtz ± minor kaol, minor calc, minor olive green selvage on some fracts. (2-4 1/8" wide, 1/4)

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
791.5-796.5				.002	<.10
796.5-801.5				.004	.014
801.5-806.5				.012	.21
806.5-811.5				.007	<
811.5-816.5				.032	.23
816.5-821.5				.014	.12
821.5-826.5				.027	<
826.5-831.5				.013	<
831.5-836.5				.026	<
836.5-841.5				.021	<
841.5-846.5				.014	<
846.5-851.5				.014	<
851.5-857				.028	<
857-				.021	<

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
	98	None	wk vnlts	py+ qtz ±kaol minor calc		w-m bleach
870	100			py+ qtz+ dk green		wk bleach
880	99		wk to w-m vnlts; v.wk vnlts	py+ qtz+ dk green ±kaol		
890	100		w-m vnlts; mod vnlts; Bx'd; w-m vnlts	Kaol+ py+ qtz; duckb. Kaol, ± py ±calc		w-m bleach
900	100		fault zone	duckb. kaol, py+ Kaol, Kaol+ qtz; Kaol+ qtz		mod Bleach
910	100					w-m bleach
	123			clay-Rubble		
920	83			Calc	Calc	Arg; calc
	100			Qtz+ py; py+ qtz± Kaol		Arg; silic; Mod bleach wk silic?
930			w-m vnlts			

DESCRIPTION

668-902.5 cont. LBT/RBU fgt

874-895: Lt-med pink-tan color fgt w/ ~10% 1-2mm lt green spots. Wk bleach. Hard.

874-883: wk vnlts, 2-4/ft 1/8" wide py+qtz+ dk green.

883-888: core mod broken up, same lithology, wk to w-m vnlts 4-7/ft, 1/8" wide, py+qtz+ dkgreen. Minor kaol.

888-892: v wk vnlts Kaol+dk green+py ± qtz.

892-895: w-m vnlts Kaol+py+qtz

895-902.5: lt-med pink-tan mottled fgt., ~20% 2mm lt green spots/mottles. Vaguely banded. Locally brecciated. Generally w-m to mod vnlts, 3-5/ft, 1/8"-1/2" wide; duckbutter Kaol, py+calcite ± duckbutter Kaol.

Brecciated at 892-899, 1/4"-2" ang clasts 80%, matrix ~ same as clasts

902.5-926 fault zone

902.5-910.5: Clast-supported fault bx'a; tan & pink flesh fgt clasts 1/3"-2" in matrix of rock flour or green duck butter Kaol. Wk veining: py+kaol, milky Kaol+qtz,

910.5-915; Matrix supported fault bxa: med purple-flesh angular fgt clasts 1/3"-2" (comprise 30-60%) floating in milky white qtz+kaol matrix.

915-916: Clast supp. fault bxa: med grey-green clasts (think of epiclastic material) (Kaol, Sericite) clasts ~85-90% matrix milky qtz

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
862-867				.017	.11
867-872				.023	.28
872-877				.033	.10
877-882				.034	<.10
882-887				.014	<
887-892				.025	<
892-897				.073	.13
897-902				.056	<
902-907				.392/.260	.65
907-912				.410/.230	.10
912-915.9				.437/.200	.69
915.9-920				.219/.156	.23
920-922.8				.004	<
922.8-926				.002	2.23
926-932				.003	1.63

HOLE # RL-102 LOGGED BY (MW) DATE _____ PAGE 8 OF 10

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
	100	None	W-M vnlts	py + qtz ± Kaol		Mod bleach, wk silic?
940	100		Vwk to wk vnlts	pyl Mc + qtz ± Kaol, minor calc.		
950	100					
960	100		Rubble; wk vnlts	Kaol ± Mc; Kaol + Mc & py + qtz		Arg; W-M bleach
970	40			Kaol + pyl Mc		Mod bleach
980	96					
990	100		Rubble; wk to W-M vnlts	clay; calc + Mc/py + Kaol ± dk green		Arg; Mod Bleach
1000						

DESCRIPTION

902.5–926 cont

916–920: 1/4"–2" rubble, lt blue-green, clayey feel, easily scratched by fingernail.

920–921.5: Massive calcite vein

921.5–922.8: Clayey rubble & calcite rubble

922.8–926: Matrix supp. fault bxa, lt green fgt clasts (of Dozer?) compose 60–75% (angular, 1mm – >3") in med-dk grey siliceous matrix (py + qtz?)

926–1092 Dozer / sage green fgt

926–934 lt green-grey hard fgt w/ 2–3% dissem py. W-M vnlts; 5–10/ft, 1/16"–1/8" wide, py + qtz ± Kaol rubbly at 927–928.

934–957: lt green-grey hard fgt w/ 2–3% dissem py (mod bleach) Weak to very wk vnlts. 4–8/ft, < 1/32" wide, py/Mc + qtz ± Kaol, minor calc.

957–959: Rubbly zone; clayey lt green rubble 1/4"–1".

959–969: lt green fgt w/ 2–4% f.gr. py, partially oxidized. Weak vnlts: 2–5/ft, 1/16"–1/8" wide, Kaol + Mc, py + qtz.

969–990: pale grey-green fgt w/ 2–4% tiny diss py & buckshot py. Weak vnlts Kaol + Mc/py 2–5/ft, < 1/16" wide

990–991: Rubbly; lt green clayey rubble

991–1012: pale green-grey f.gr. tuff w/ 1–2% tiny diss. py. W to W-M vnlts 2–6/ft, 1/16"–1/8" wide, calc + Mc/py + Kaol ± dk green

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
932–937				.004	<.10
937–942				.002	<
942–947				.006	<
947–952				<.001	<
952–957				.001	<
957–962				.002	<
962–967				.002	<
967–972				.001	<
972–982				.006	.50
982–987				.002	<
987–993				.002	<
993–999				missing	

HOLE # RC-102 LOGGED BY CMW DATE 12-90 PAGE 9 OF 10

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
	100	None	wk to W-M vnlts	calc + mc/py + kaol ± dk green		Mod Bleach
1010	100		W+M vnlts	calc ± minor py, ± kaol		
1020	103					
	75					
1030						
	103					
1040						
	100					
1052						
	99					
1060			very wk vnlts	minor calc ± mc		
	96					
1070						

DESCRIPTION

926 – 1092 Dozer

1016 – 1060: pale green fgt w/ 1% tiny dissem py, locally oxidized, W-M vnlts 4-8/ft, <1/32" to 1/4", mostly calcite ± minor py, and very thin <1/32" vnlts w/ py + calc? ± kaol

1060 – 1073: Same as above but v. wk. calc ± mc vnlts (1-2/ft, 1/16"-1/8")

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
999-1004				.003	<.10
1004-1009.5				<.001	<
1009.5-1014.5				.007	<
1014.5-1019.5				.001	<
1019.5-1026				.001	<
1026-1031				<	<
1031-1036				.005	<
1036-1042				.003	<
1042-1047				.001	<
1047-1052				<	<
1052-1057				.002	<
1057-1062				<	.17
1062-1067				<	<
1067-1072				<	<

HOLE # RL-102 LOGGED BY CM Walck DATE 12-90 PAGE 10 OF 10

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERAL-IZATION	GRAPHIC LOG	ALTER.	DESCRIPTION
	100	None	v. wk vnlts ⊥ wk vnlts	minor calct Mc; Calc ± Mc ± Kaol		Mod Bleach	926-1092. Dozer
1080	102						1073-1092 T.D: same as 1016-1060 but w/ wk vnlts, calc ± minor py ± minor Kaol
1090	92						
1092 T.D.							

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
1072-1077				.001	<
1077-1082				<.001	<
1082-1087				.002	<
1087-1092				<	<

RL-102 PAGE 3 of 6 8-6-90 100°F

Recovery Interval	% Recovery	Sample Interval	Lithology
441-451	95%	441-446	*441-585.5
451-461	97%	446-461	ltgrn-pink FGT
461-471.5	98%	461-466	mod fract.
471.5-481.5	98%	466-471.5	local bx w/ wk-
481.5-492	100%	471.5-476.5	mod Si-sulfide
492-502	99%	476.5-481.5	uns
502-512	100%	481.5-486.5	w/local "chicken
512-522	97%	486.5-492	pox" alt. Texture
522-532	100%	492-497	
532-542	98%	497-502	
542-552	100%	502-507	585.5-663.5 BB x(2
552-562	100%	507-512	
562-572	100%+	512-517	ltgrn-pink,
572-582	100%+	517-522	lithic lapilli tuff
582-592	98%	522-527 ✓	ldc + wk calcite
592-		527-537	veining
		532-537	585.5-610
		537-542	clast support
		542-547	ltgrn, sligh
		547-552	
		552-557	610-663.5
		557-562	pinkish-red
		562-567	matrix supports
		567-572	to volcanic b
		572-577	(clasts to 12")
		577-582	
		582-587	663.5- Fn Gr
			Porphyr Tuff
		(587-634.5)	No sample
		-655	*663.5-926 Fn Gr
		655-660	MOD-STR BLCH, Tur.
		660-663.5	MOD-STR FRACTURES,
		663.5-670	Bx & Silica FLOODING
		670-676	Q-MARCASITE VEINS,
		676-682	VUG FILL
		682-687	
		687-692	
		692-697	
		697-702	
		702-707	

SPLIT

(634.5)-641	6.3/	
641-643	2.2/2.0	
643-648	4.9/5 = 98%	
648-652	3.8/4	
652-662	98%	
662-672	99%	
672-682	97%	
682-692	100%	
692-702	100%	
702-709.5	7.3/7.5 =	
709.5-719.5	100%	
719.5-730	10/10.5	
730-740.5	10.2/10.5	
740.5-	(5.6+	

CUT

CUT
712 - 715.5
715.5 - 719.5
719.5 - 724.5

SILIT
724.5 - 730
730 - 735
735 - 740.5
740.5 - 745
745 - 750 ✓
750

* 670-683 FAU[illegible] pend, PGT slg bx zone pebbled fault? pervasive si flooding min. CACO3

+ 707-715.5 Fault- slg silica/PGT bx w/qtz mve. veins. Lacks CACO3

*? 753-758.5 FAULT/FRACTURE SI-FLOODED BX ZONE

*? 764-783 ZONE OF (L-2) FRAC's: FAULTS CHARACTERIZED = FRACTURES BRECCIAS, Q-SULFIDE VEINS, ALU[illegible]

*? 800.5 - 819.5 1/4" Q-S[illegible] VNS, CRACKS, FAULT BX

*? 830-856 FAULTS/FRACTURE BX, MICROBX, Q SULFIDE VN[illegible]

*? 892-900 FAULT BX, SI-FLOODED BX, LT. RED MATRIX

RL-102

SAMPLE COVERED	% RECOVERED		SAMPLE INTERVAL	LITHOLOGY
		Split	750 - 755.5 ✓	903 - 926 Fault Zone
740.5 - 750.5	+4.4/100%		755.5 - 760.5	
750.5 - 760.5	99%		760.5 - 766	
760.5 - 771	10.3/10.5		766 - 771	903 - 915.9
771 - 781	99%	Cut	771 - 776	Fault Zone
781 - 791.5	100%		776 - 781	wht - pnk, FG T
791.5 - 801.5	102%		781 - 786	local $CaCO_3$
801.5 - 811.5	100%		786 - 791.5	pervasive wht,
811.5 - 821.5	100%	Split	791.5 - 796.5	clay/sericite?
821.5 - 831.5	100%		796.5 - 801.5	matrix dominant
831.5 - 841.5	103%		801.5 - 806.5	
841.5 - 851.5	104%		806.5 - 811.5	915.9 - 920
851.5 - 862	10.3/10.5	Cut	811.5 - 816.5	lt sage grn
862 - 872	98%		816.5 - 821.5	Fault, clay
872 - (1.9) 882	100%		821.5 - 826.5	gouge
882 - 892	99%	Split	826.5 - 831.5	$CaCO_3$
~~(9.5)~~ 892 - 902	100%		831.5 - 836.5	920 - 922.8
902 - 907	100%		836.5 - 841.5	wht, massive
907 - 912	100%	Cut	841.5 - 846.5	$CaCO_3$ vein
912 - 915	3.7/3		846.5 - 851.5	922.8 - 926
915 - 922	5.8/7		851.5 - 857	Fault - silica
922 - 932	100%		857 - 862	matrix supported -
932 - 942	100%		862 - 867	gry silica w/
942 - 952	100%		867 - 872	FG sulfides
952 - 962	100%	Split	872 - 877	No $CaCO_3$
962 - (1.5) 972	100%		877 - 882	
972 - 982	46%		882 - 887	926 - 1016
982 - 990	7.7/8.0		887 - 892	wht, blc FG T
990 - 999	100%		892 - 897	w/ local wk -
999 - 1009.5	100%	Cut	897 - 902 ✓	mod fracts ✓
1009.5 - (6.0) 1020	100%		902 - 907	sulfide veing
			907 - 912	
			912 - 915.9	962 - 967 ✓
		Cut	915.9 - 920	
			920 - 922.8	
			922.8 - 926	
			926 - 932	

Split 9/3

932 - 937
937 - 942
942 - 947
947 - 952
952 - 957
957 - 962

RL-102

SAMPLE COVERED	% RECOVERED
1020 - 1026	103%
-1036	75%
-1042	103%
-1052	100%
-1062	99%
-1072	96%
-1082	100%
-1087	102%
-1092 TD	92%

Sample Interval	LITHOLOGY (FGT - BLC, local @ sulfide fracturing)
967-972	
972-982 L ONLY 4' ACTUAL SAMPLE	
982-987	1016-1092
987-993	mostly w-m
993-999	bleached sgt
999-1004	(vfg, mass.
1004-1009.5	"dozer")
1009.5-1014.5	w/ local
1014.5-1020.0	minor autob
-1026	& patchy S⁻
-1031	
-1036	1086-1088
-1042	v. broken zone
-1047	
-1052	
-1057	
-1062	
-1067	
-1072	
-1077	
-1082	
-1087	
-1092 TD (8/10/90)	

Split

NEVADA GSI, INC.

PREP QUALITY ASSURANCE CERTIFICATION

Date 8/17/90

Company LAC MINERALS

Job # 8169

Geologist N. BREWER

No. Samples 88 D/C

Sample ID	Time	Bowl #	Weight	-150 Wt.	% -150
RL-102 175-180	7:15AM		151.92	146.88	96.68

☑ PASSED ☐ FAILED

Explanation/Actions

Approved By _____
Richard Grondin, Lab Manager

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

NEVADA GSI, INC.

PREP QUALITY ASSURANCE CERTIFICATION

Date 8/16/90

Company LAC MINERALS

Job # 8216

Geologist N. BREWER

No. Samples 56 CORE

Sample ID	Time	Bowl #	Weight	-150 Wt.	% -150
RL-102C 806.5-811.5	10:30AM		185.55	179.22	96.59

☒ PASSED ☐ FAILED

Explanation/Actions

Approved By Richard A. Grondin

Richard Grondin, Lab Manager

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

NEVADA GSI, INC.

Procedure and Quality Assurance Guidelines for Rocks and Drill Cuttings.

Goal: To pulverize each sample to yield >90% -150 mesh with a 95% confidence level.

The procedure is after drying and crushing, a 150 gram split is pulverized for 120 seconds in a ring pulverizer. This method consistently produces >90% -200 mesh material in testing using silica sand.

1. At the beginning of each shift, a 150 gram sample of silica sand will be pulverized and wet screened from each bowl. The results will be recorded in a permanent record with the following format: Date, time, prep bowl #, total weight, -200 mesh weight and % -200 mesh. No setup may be used unless >90% -200 mesh is achieved.

2. At random times throughout the day, samples of pulp will be wet screened at -150 mesh to monitor the prep quality in actual samples. These results will be recorded as above with the addition of sample type(rock or drill cuttings) and rock type(if known). Any deviation from the spec will cause a stoppage until the operations manager determines the action to be taken and approves the continuation of the job.

3. All jobs will have at least 2% of the samples tested, the percentage increasing with smaller job sizes. 50 grams from each sample to be tested will be wet screened at -150 mesh. From these data a Lot Tolerance Percent Defective (LTPD) calculation will be performed using the binomial algorithm. The job will be failed and repreped if there is less than 95% probability that at least 90% of the samples in the job pass the prep spec of -150 mesh. All data on the prep quality will be recorded as above on a *Prep Quality Assurance Certification* form. This data will be sent to the geologist or other designated person.

All data from the above procedures will be sent to Mike Rogers to be reviewed and added to GSI's central quality assurance database.

Bill Faulkner
President

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

NEVADA GSI, INC.

GEOCHEMICAL ANALYSIS REPORT

August 30, 1990

CUST. CODE: LOA
PROJECT: URBD-79014
P.O. #: XXXX
LOT ID: 8169

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-100	380	381.5	0.007	-0.10
2.	RL-102	0	5	0.002	-0.10
3.	RL-102	5	10	0.002	-0.10
4.	RL-102	10	15	0.001	-0.10
5.	RL-102	15	20	0.003	-0.10
6.	RL-102	20	25	0.003	-0.10
7.	RL-102	25	30	0.003	-0.10
8.	RL-102	30	35	0.003	-0.10
9.	RL-102	35	40	0.010	-0.10
10.	RL-102	40	45	0.004	-0.10
11.	RL-102	45	50	-0.001	-0.10
12.	RL-102	50	55	-0.001	-0.10
13.	RL-102	55	60	-0.001	-0.10
14.	RL-102	60	65	-0.001	-0.10
15.	RL-102	65	70	0.004	-0.10
16.	RL-102	70	75	-0.001	-0.10
17.	RL-102	75	80	-0.001	-0.10
18.	RL-102	80	85	-0.001	-0.10
19.	RL-102	85	90	-0.001	-0.10
20.	RL-102	90	95	-0.001	-0.10
21.	RL-102	95	100	-0.001	-0.10
22.	RL-102	100	105	-0.001	-0.10
23.	RL-102	105	110	-0.001	-0.10
24.	RL-102	110	115	-0.001	-0.10
25.	RL-102	115	120	-0.001	-0.10
26.	RL-102	120	125	-0.001	-0.10
27.	RL-102	125	130	-0.001	-0.10
28.	RL-102	130	135	-0.001	-0.10
29.	RL-102	135	140	-0.001	-0.10

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

LAC MINERALS
LOT ID # 8169

	SAMPLE I.D.			Au o/t	Ag o/t
30.	RL-102	140	145	-0.001	-0.10
31.	RL-102	145	150	-0.001	-0.10
32.	RL-102	150	155	-0.001	-0.10
33.	RL-102	155	160	-0.001	-0.10
34.	RL-102	160	165	-0.001	-0.10
35.	RL-102	165	170	-0.001	-0.10
36.	RL-102	170	175	-0.001	-0.10
37.	RL-102	175	180	-0.001	-0.10
38.	RL-102	180	185	-0.001	-0.10
39.	RL-102	185	190	-0.001	-0.10
40.	RL-102	190	195	-0.001	-0.10
41.	RL-102	195	200	0.016	0.27
42.	RL-102	200	205	0.011	-0.10
43.	RL-102	205	210	0.004	-0.10
44.	RL-102	210	215	-0.001	-0.10
45.	RL-102	215	220	-0.001	-0.10
46.	RL-102	220	225	-0.001	-0.10
47.	RL-102	225	230	-0.001	-0.10
48.	RL-102	230	235	-0.001	-0.10
49.	RL-102	235	240	-0.001	0.10
50.	RL-102	240	245	0.004	0.20
51.	RL-102	245	250	0.001	-0.10
52.	RL-102	250	255	0.009	0.10
53.	RL-102	255	260	0.002	0.14
54.	RL-102	260	265	-0.001	0.19
55.	RL-102	265	270	-0.001	0.11
56.	RL-102	270	275	0.051	1.38
57.	RL-102	275	280	0.002	-0.10
58.	RL-102	280	285	-0.001	-0.10
59.	RL-102	285	290	-0.001	-0.10
60.	RL-102	290	295	-0.001	0.26
61.	RL-102	295	300	0.002	0.22
62.	RL-102	300	305	0.002	0.23
63.	RL-102	305	310	0.007	0.20
64.	RL-102	310	315	-0.001	-0.10
65.	RL-102	315	320	-0.001	0.17
66.	RL-102	320	325	-0.001	-0.10
67.	RL-102	325	330	-0.001	0.10
68.	RL-102	330	335	-0.001	0.15
69.	RL-102	335	340	0.008	1.13
70.	RL-102	340	345	-0.001	0.16
71.	RL-102	345	350	-0.001	0.15
72.	RL-102	350	355	-0.001	-0.10
73.	RL-102	355	360	0.004	-0.10
74.	RL-102	360	365	0.001	-0.10
75.	RL-102	365	370	-0.001	-0.10
76.	RL-102	370	375	-0.001	-0.10
77.	RL-102	375	380	0.023	0.28

	SAMPLE I.D.			Au o/t	Ag o/t
78.	RL-102	380	385	-0.001	-0.10
79.	RL-102	385	390	-0.001	-0.10
80.	RL-102	390	395	-0.001	-0.10
81.	RL-102	395	400	0.005	0.44
82.	RL-102	400	405	0.005	0.24
83.	RL-102	405	410	-0.001	-0.10
84.	RL-102	410	415	0.020	-0.10
85.	RL-102	415	420	0.002	-0.10
86.	RL-102	420	425	0.003	-0.10
87.	RL-102	425	430	0.007	0.13
88.	RL-102	430	435	0.013	-0.10
89.	RL-102	435	440	0.013	-0.10

This report reviewed and approved by:

Richard A. Grondin

Richard Grondin, Laboratory Director

AUG 28 1990

NEVADA GSI, INC.

GEOCHEMICAL ANALYSIS REPORT

August 25, 1990

CUST. CODE: LOA
PROJECT: URBD
P.O. #: XXXX
LOT ID: 8216

GEOLOGIST: NATE BREWER
COPIES TO: SAME
COMPANY: LAC MINERALS
ANALYSIS: FIRE ASSAY FOR GOLD AND SILVER, WITH AN A.A. FINISH.
FIRE ASSAY FOR GOLD, 1 ASSAY TON GRAVIMETRIC. (CHECKS)

	SAMPLE I.D.			Au o/t	Ag o/t	Checks Au o/t
1.	RL-102C	655	660	-0.001	0.10	-
2.	RL-102C	660	663.5	-0.001	0.13	-
3.	RL-102C	663.5	670	0.006	0.11	-
4.	RL-102C	670	676	0.011	0.12	-
5.	RL-102C	676	682	0.004	0.14	-
6.	RL-102C	682	687	0.004	-.10	-
7.	RL-102C	687	692	0.009	-.10	-
8.	RL-102C	692	697	0.006	0.10	-
9.	RL-102C	697	702	0.002	-.10	-
10.	RL-102C	702	707	0.007	-.10	-
11.	RL-102C	707	712	0.003	-.10	-
12.	RL-102C	712	715.5	0.004	0.20	-
13.	RL-102C	715.5	719.5	-0.001	-.10	-
14.	RL-102C	719.5	724.5	0.002	-.10	-
15.	RL-102C	724.5	730	-0.001	-.10	-
16.	RL-102C	730	735	0.008	0.11	-
17.	RL-102C	735	740.5	0.006	-.10	-
18.	RL-102C	740.5	745	-0.001	-.10	-
19.	RL-102C	745	750	0.008	-.10	-
20.	RL-102C	750	755.5	0.006	-.10	-
21.	RL-102C	755.5	760.5	0.004	0.20	-
22.	RL-102C	760.5	766	0.013	0.10	-
23.	RL-102C	766	771	0.006	-.10	-
24.	RL-102C	771	776	0.005	-.10	-
25.	RL-102C	776	781	0.008	-.10	-
26.	RL-102C	781	786	0.007	0.56	-
27.	RL-102C	786	791.5	0.002	-.10	-
28.	RL-102C	791.5	796.5	0.002	-.10	-

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LAC MINERALS
LOT I.D. #: 8216

	SAMPLE I.D.			Au o/t	Ag o/t	Checks Au o/t
29.	RL-102C	796.5	801.5	0.004	0.14	-
30.	RL-102C	801.5	806.5	0.012	0.21	-
31.	RL-102C	806.5	811.5	0.007	-.10	-
32.	RL-102C	811.5	816.5	0.032	0.23	-
33.	RL-102C	816.5	821.5	0.014	0.12	-
34.	RL-102C	821.5	826.5	0.027	-.10	-
35.	RL-102C	826.5	831.5	0.013	-.10	-
36.	RL-102C	831.5	836.5	0.026	-.10	-
37.	RL-102C	836.5	841.5	0.021	-.10	-
38.	RL-102C	841.5	846.5	0.014	-.10	-
39.	RL-102C	846.5	851.5	0.014	-.10	-
40.	RL-102C	851.5	857	0.028	-.10	-
41.	RL-102C	857	862	0.021	-.10	-
42.	RL-102C	862	867	0.017	0.11	-
43.	RL-102C	867	872	0.023	0.28	-
44.	RL-102C	872	877	0.033	0.10	-
45.	RL-102C	877	882	0.034	-.10	-
46.	RL-102C	882	887	0.014	-.10	-
47.	RL-102C	887	892	0.025	-.10	-
48.	RL-102C	892	897	0.073	0.13	-
49.	RL-102C	897	902	0.056	-.10	-
50.	RL-102C	902	907	0.260	0.65	0.392
51.	RL-102C	907	912	0.230	0.10	0.410
52.	RL-102C	912	915.9	0.200	0.69	0.437
53.	RL-102C	915.9	920	0.156	0.23	0.218
54.	RL-102C	920	922.8	0.004	-.10	-
55.	RL-102C	922.8	926	0.002	2.23	-
56.	RL-102C	926	932	0.003	1.63	-

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This report reviewed and approved by:

Richard A. Grondin

Richard Grondin, Laboratory Director

SEP 12 1990

NEVADA GSI, INC.

GEOCHEMICAL ANALYSIS REPORT

September 7, 1990

CUST. CODE: LOA
PROJECT: URBD
P.O. #: XXXX
LOT ID: 8256

GEOLOGIST: NATE BREWER
COPIES TO: SAME
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-102C	441	446	0.013	-0.10	
2.	RL-102C	446	451	0.010	0.13	
3.	RL-102C	451	456	0.005	0.11	
4.	RL-102C	456	461	0.017	-0.10	
5.	RL-102C	461	466	0.004	0.11	
6.	RL-102C	466	471.5	0.005	0.15	
7.	RL-102C	471.5	476.5	0.006	-0.10	
8.	RL-102C	476.5	481.5	0.005	-0.10	
9.	RL-102C	481.5	486.5	0.003	0.12	
10.	RL-102C	486.5	492	0.006	-0.10	
11.	RL-102C	492	497	0.019	-0.10	
12.	RL-102C	497	502	0.004	-0.10	
13.	RL-102C	502	507	0.009	-0.10	
14.	RL-102C	507	512	0.015	-0.10	
15.	RL-102C	512	517	0.038	0.12	40' @
16.	RL-102C	517	522	0.014	-0.10	
17.	RL-102C	522	527	0.037	-0.10	.020/.10
18.	RL-102C	527	532	0.005	0.20	
19.	RL-102C	532	537	0.020	0.23	
20.	RL-102C	537	542	0.014	0.14	
21.	RL-102C	542	547	0.006	0.13	
22.	RL-102C	547	552	0.027	0.11	
23.	RL-102C	552	557	0.005	-0.10	
24.	RL-102C	557	562	-0.001	-0.10	
25.	RL-102C	562	567	0.003	-0.10	
26.	RL-102C	567	572	0.056	-0.10	
27.	RL-102C	572	577	0.011	-0.10	.026/.05
28.	RL-102C	577	582	0.016	0.14	
29.	RL-102C	582	587	-0.001	-0.10	
30.	RL-102C	932	937	0.004	-0.10	
31.	RL-102C	937	942	0.002	-0.10	
32.	RL-102C	942	947	0.006	-0.10	
33.	RL-102C	947	952	-0.001	-0.10	

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AUG 28 1990

NEVADA GSI, INC.

GEOCHEMICAL ANALYSIS REPORT

August 25, 1990

CUST. CODE: LOA
PROJECT: URBD
P.O. #: XXXX
LOT ID: 8216

GEOLOGIST: NATE BREWER
COPIES TO: SAME
COMPANY: LAC MINERALS
ANALYSIS: FIRE ASSAY FOR GOLD AND SILVER, WITH AN A.A. FINISH.
FIRE ASSAY FOR GOLD, 1 ASSAY TON GRAVIMETRIC. (CHECKS)

	SAMPLE I.D.			Au o/t	Ag o/t	Checks Au o/t
1.	RL-102C	655	660	-0.001	0.10	-
2.	RL-102C	660	663.5	-0.001	0.13	-
3.	RL-102C	663.5	670	0.006	0.11	-
4.	RL-102C	670	676	0.011	0.12	-
5.	RL-102C	676	682	0.004	0.14	-
6.	RL-102C	682	687	0.004	-.10	-
7.	RL-102C	687	692	0.009	-.10	-
8.	RL-102C	692	697	0.006	0.10	-
9.	RL-102C	697	702	0.002	-.10	-
10.	RL-102C	702	707	0.007	-.10	-
11.	RL-102C	707	712	0.003	-.10	-
12.	RL-102C	712	715.5	0.004	0.20	-
13.	RL-102C	715.5	719.5	-0.001	-.10	-
14.	RL-102C	719.5	724.5	0.002	-.10	-
15.	RL-102C	724.5	730	-0.001	-.10	-
16.	RL-102C	730	735	0.008	0.11	-
17.	RL-102C	735	740.5	0.006	-.10	-
18.	RL-102C	740.5	745	-0.001	-.10	-
19.	RL-102C	745	750	0.008	-.10	-
20.	RL-102C	750	755.5	0.006	-.10	-
21.	RL-102C	755.5	760.5	0.004	0.20	-
22.	RL-102C	760.5	766	0.013	0.10	-
23.	RL-102C	766	771	0.006	-.10	-
24.	RL-102C	771	776	0.005	-.10	-
25.	RL-102C	776	781	0.008	-.10	-
26.	RL-102C	781	786	0.007	0.56	-
27.	RL-102C	786	791.5	0.002	-.10	-
28.	RL-102C	791.5	796.5	0.002	-.10	-

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	SAMPLE I.D.			Au o/t	Ag o/t	Checks Au o/t
29.	RL-102C	796.5	801.5	0.004	0.14	-
30.	RL-102C	801.5	806.5	0.012	0.21	-
31.	RL-102C	806.5	811.5	0.007	-.10	-
32.	RL-102C	811.5	816.5	0.032	0.23	-
33.	RL-102C	816.5	821.5	0.014	0.12	-
34.	RL-102C	821.5	826.5	0.027	-.10	-
35.	RL-102C	826.5	831.5	0.013	-.10	-
36.	RL-102C	831.5	836.5	0.026	-.10	-
37.	RL-102C	836.5	841.5	0.021	-.10	-
38.	RL-102C	841.5	846.5	0.014	-.10	-
39.	RL-102C	846.5	851.5	0.014	-.10	-
40.	RL-102C	851.5	857	0.028	-.10	-
41.	RL-102C	857	862	0.021	-.10	-
42.	RL-102C	862	867	0.017	0.11	-
43.	RL-102C	867	872	0.023	0.28	-
44.	RL-102C	872	877	0.033	0.10	-
45.	RL-102C	877	882	0.034	-.10	-
46.	RL-102C	882	887	0.014	-.10	-
47.	RL-102C	887	892	0.025	-.10	-
48.	RL-102C	892	897	0.073	0.13	-
49.	RL-102C	897	902	0.056	-.10	-
50.	RL-102C	902	907	0.260	0.65	0.392
51.	RL-102C	907	912	0.230	0.10	0.410
52.	RL-102C	912	915.9	0.200	0.69	0.437
53.	RL-102C	915.9	920	0.156	0.23	0.218
54.	RL-102C	920	922.8	0.004	-.10	-
55.	RL-102C	922.8	926	0.002	2.23	-
56.	RL-102C	926	932	0.003	1.63	-

This report reviewed and approved by:

Richard A. Grondin

Richard Grondin, Laboratory Director

LAC MINERAL
LOT ID # 8256

	SAMPLE I.D.		Au o/t	Ag o/t
34.	RL-102C 952	957	0.001	-0.10
35.	RL-102C 957	962	0.002	-0.10
36.	RL-102C 962	967	0.002	-0.10
37.	RL-102C 967	972	0.001	-0.10
38.	RL-102C 972	982	0.006	0.50
39.	RL-102C 982	987	0.002	-0.10
40.	RL-102C 987	993	0.002	-0.10

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THIS REPORT REVIEWED AND APPROVED BY:

Richard A. Grondin

RICHARD GRONDIN, LABORATORY DIRECTOR

SEP 14 1990

NEVADA GSI, INC.

GEOCHEMICAL ANALYSIS REPORT

September 11, 1990

CUST. CODE: LOA
PROJECT: URBD
P.O. #: XXXX
LOT ID: 8285

Where is 993-999? See Job # 8255

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-102C 0999	1004	0.003	-0.10
2.	RL-102C 1004	1009.5	-0.001	-0.10
3.	RL-102C 1000.5	1014.5	0.007	-0.10
4.	RL-102C 1014.5	1019.5	0.001	-0.10
5.	RL-102C 1020	1026	0.001	-0.10
6.	RL-102C 1026	1031	-0.001	-0.10
7.	RL-102C 1031	1036	0.005	-0.10
8.	RL-102C 1036	1042	0.003	-0.10
9.	RL-102C 1042	1047	0.001	-0.10
10.	RL-102C 1047	1052	-0.001	-0.10
11.	RL-102C 1052	1057	0.002	-0.10
12.	RL-102C 1057	1062	-0.001	0.17
13.	RL-102C 1062	1067	-0.001	-0.10
14.	RL-102C 1067	1072	-0.001	-0.10
15.	RL-102C 1072	1077	0.001	-0.10
16.	RL-102C 1077	1082	-0.001	-0.10
17.	RL-102C 1082	1087	0.002	-0.10
18.	RL-102C 1087	1092	-0.001	-0.10

THIS REPORT REVIEWED AND APPROVED BY:

Richard A. Grondin

RICHARD GRONDIN, LABORATORY DIRECTOR

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

CMW 12/90

RL-102 Summary

441-585 LBT / RBUR amyg & fgt

441-529 amygdular / mottled fgt Mod amy, gen m-str bleach. w-m vnlts. White & tan.

529-576 banded fgt w-m bleach, w-m vnlts

576-585 w to w-m bleach (grey) fgt wk vnlts

585-668 LBT / RBUR lgt, wk to w-m bleach (grey) minor vnlts

668-902.5 fgt LBT / RBUR, ~~wk bleach~~ (med pink-grey)

668-707 wk to w-m vnlts, wk bleach (med pink-grey)

707-723.5 w-m bx'd pink-grey banded fgt (90% clasts)

723.5-757: pink grey wk bleach fgt wk vnlts

757-783: med pink-grey fgt, wk bleach, w to w-m vnlts, locally bx'd w/ vein matrix qtz + kaol

783-801: wk bleach fgt wk vnlts

801-~~855~~: speckled brick color fgt, wk bleach, wk to w-m vnlts. Locally bx'd: 801-802, 838-844 ~~844-850~~ 848-855

855-895: lt grey / tan fgt w to w-m bleach. wk vnlts

895-902.5: lt-med pink-tan fgt, mottled, mod vnlts, w-m bleach, locally bx'd 896-899

902.5-926: fault zone / bx'd

~~902.5~~ 902.5-926 bx'd fgt (flesh), qtz + kaol matrix

RL-102

916-922 rubble & calcite
922-926 bx'd Dozer

926-1092 Dozer
Mod bleach wk to w-m vnlts