60001416

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-192C
AUTHOR	K. Kenner; N. Whitten; T Kuhl
DATE OF DOC(S)	1991
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 Bondar-Clegg, Inc; Chemex Labs, Inc
COMMODITY If not obvious	gold silver
NOTES	Drill log; geology; assay; total depth 710'; handwritten notes 27p.

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	5/10/08
DB:	mah	
SCANNED:		

Revised: 1/22/08

Drill Log R1-192
Rosebud

60001416 4010

60001416

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

DRILL LOG SUMMARY SHEET

PROJECT ROSEBUD

HOLE NUMBER RL-192C TOTAL DEPTH 710' LOGGED BY KLK

Date started 5/17/91

Date completed 5/20/91

Initial bearing

Initial inclination vertical

Elevation 5245.5

Collar coordinates:

N 2203686.0

E 481746.5

Contractor: COATES

Drill Type: UNIVERSAL

Hole Size: HQ

Drilling Conditions:

Footage: Wet / Dry

Comments:

RC to 275'
CORE to 710'

DOWN HOLE SURVEY INFORMATION

FROM	TO	SURVEY POINT	INCLI-NATION	BEARING	X (Northing)	Y (Easting)	Z (Elevation)
0	200	100'	89°	N4W			
200	400	300'	87.8°	N22W			
400	600	500'	87°	N16W			
600	710'	700'	87.2°	N16W			

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

FINE-GRAINED TUFF
LITHIC LAPILLI TUFF

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

DRILL HOLE RL-192

Page 1 of 3

0-158 CT
73-158 TMb looking CT
158-275 BUO LLT

LOGGED BY KLK

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS CHOCOLATE ?	Au	Ag	CHECK	% WASH RECOV
	CT	XK Ox X							golden orangish brown				poss tr FeOx	0-73 FINE GRAINED TUFF moderatly perv. oxidized pervasively to intermittently	<	.03		
05													replac py	bleached m-s perv. limonitic clays, perv. m-s silicification local stockwork qtz vns	.006	.04		
10														weak local silicf. brecciation local druzy qtz vns	<	.05		
15	Δ														.004	.03		
20	Δ														.007	.06		
25															.023	.05		
30															.004	.03		
35															<	.03		
40															<	.04		
45															<	<	.001	
50		↑												50-73 strong increased perv.	.003	.03		
55														bleaching	<	.05		
60															.004	<		
65															.004	.02		
70														OR bl white Choco. ?				
	TMb CT	XK X.							lt gray white				2-3%	73-158 WHAT appears to be	.002	<		
75													diss + vn py ± chal	TMb - tuff marker bed @ base of chocolate, superior	<	<		
80													copy.	to the Bedded bvd LLT. pervasively bleached white w/ poss 2-3% replaced phenos w/				
85														py wk perv. off white w/ hint gray clay alt. wk stkwk qtz vns w-m perv. silicific				
90														poss w/ chalcopy vns				
95																		
100																	<	

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XK STOCKWORK QUARTZ
P P P PROPYLITIZATION
Ca CALCITE

DRILL HOLE RL-192

Page 2 of 3

LOGGED BY KLK

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS or bl white choco?	Au	Ag	CHECK	% WASH RECOV
	TMb	XK							lt gray white				4-5% diss + vn py	73-158 TMb (continued) same description (a) above	<	<		
105														; speckled w/ red-orange mineral <1% cinnabar?	<	<		
110															.004	<		
115													2-3% diss + vn py	115-130 w/ olive mustard colored	.002	<		
120														fracture/vein fill	.004	<		
125															<	.03		
130															<	<		
135													1-2% @ above		.002	<		
140														145-158 becomes less bleached; takes	.003	<		
145														on characteristics of choco. gray tuff	<	<	<	
150																		
155																		
160									Red				<1%	158-275 BEDDED BUD				
165	B	XK							Brown; green				diss ± vn py	158-193 LITHIC LAPILLI TUFF MOTTLED RED BROWN; CELADONITE GREEN weakly argillically alt celadonite green ± buff w/ plush red burn matrix; locally green weak local fine grn stkwk possibly locally Δ + silicified				
170																		
175																		
180																		
185									flesh; brt. green									
190																		
195		poss wk X												193-275 BUD - LLT ↑ bl buff + green				
200														193-225 flesh; green LLT wk local SiO2 flooding			.006	

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

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DRILL HOLE RL-192

Page 3 of 3

LOGGED BY KLK

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK	% WASH RECOV
		XK X							flesh + brt green				<1% diss + vn py	193-225 Flesh; green LLT same @ above w/	<	<		
205														wk local SiOz flooding w/ few FGT interbeds, wk local duck butter clay				
210														VNS weakly silicified wk fine qtz stkwk				
215																		
220																		
225									BRIGHT EMERALD GREEN				<1% diss + vn py	225-275 Bedded Bud LLT pervasively ar to				
230		HNV												deep bright emerald green w/ ↑ argillic clay alt local druzy				
235														qtz encapsulated py veins local				
240														intervals of m-s clay alt				
245																	<	
250																		
255																		
260														m-s white to orange clay	.009	.03		
265															.004	<		
270															.010	.03		
275														T.D				
80																		
85																		
90																		
95																		
00																		

HOLE # RL-192C LOGGED BY KLK DATE 6-91 PAGE 1 OF 7

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
275	91	Bedding 60-65° to CA	30° 15° CaCO3 py ± Kaol vns	tr-≤1% diss py		W bl M-S STR celad	275' CORE BEGAN 275-367.5 LITHIC LAPILLI TUFF - GREEN BEDDED BUD - heterolithic w/ clasts ranging from 2-15 mm on the average locally there are zones which are in the volcanic bxa size, but are narrow interbeds, pervasive celadonite? green clay alt matrix, lithics are bleached white to pocked - clay alt & eaten out intermittent wispy collapsed lapilli revealing flow to be ~ 60-65° to C.A. weak veining throughout @ ≤1/ft w/ calcite ± Kaolinite + pyrite & local pyrite replaced marcasite w/ local open spaced vugs w/in veins 287.3 - 293 ↑ celad green coloration 303 - 331.2 wispy bedded bud 331.2 - 333.2 gray clay gouge 333.2 - 347 wispy	NO SAMPLE					
280	98												
290	99												
300	99												
310	100												
320	96												
330	73												
340	106												

HOLE # RL-192C LOGGED BY KLK DATE 6-91 PAGE 2 OF 7

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
350	95, 103, 99			<1% diss + VN py		W bl M-S; M-S celad	275-367.5 LLT - Bedded Bud (continued) description @ above	NO					
360	100					M bl S; M celad	356-367.5 increase argillic clay alt of matrix; becoming more matrix supported - very incompetent w/ assoc. ↑ bl						
370	101	60° contact ±60° to C.A		2-3% VN py + py replac marcasite	60°	S bl M-S w celad	367.5-639.6 LOWER BUD TUFF: FINE GRAINED tuff w/ pervasive m→s bleaching w-m argillic clay alt, variable textures from v. fine gr. to vesicular w/ celadonite green clay fill to locally tectonically brecciated, also variably silicified veining is predominantly moderate w/ Kaolinite + py fill to 528' unaltered calcite is introduced @ this point. Variability w/ in intervals follows. 2 main stgs vning fine stkwk w/ clay/mar overprint stkwk no preferred orientation 367.5-378 ↑ bl + assoc argillic alt. weak-mod veining subparelle to 30° to C.A. ~ 2 vns/ft w/ Kaolinite, $CaCO_3$, py ± SiO_2 fill + poss Ag mineral 378-413 ↓ overall bl w/ ↑ celadonite alt strong increase veining on the average ~5-15+ veins/ft; riddled w/ fine fractures which are tight, competent; filled w/ Kaolinite, py replaced marcasite, py + local calcite. Locally Kaolinite is intense - powdery; up to 1 1/2" wide	367.5-373				<	.03
380	98	30° clay SiO_2 $CaCO_3$ py VNS				M bl M-S celad w poss wx		373-378				.005	.54
								378-383				.005	.67
								383-388				.027	1.07
390	100	35° Kaolin $CaCO_3$ py + 3 py replac marcasite VNS						388-393				<	<
								393-398				.012	.06
400	83							398-403				.018	1.20
								403-408				.018	.50
410													

HOLE # RL-192C LOGGED BY KLK DATE 6-91 PAGE 3 OF 7

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
		VNS calc py clay 20°		2-3% PyN 1-2% VN tuck shat py + local py replac marcasite		M ≈ M-S bl W celad
420	109					
	100					
430						
	99					
440						
	95	25 0		2-3% py replac marcas + wk VN py		W-M XX M bl W ~ M celad
450						
	101	clay marcasite ± VNS				
460				1% py replac marcas VNS ± VN py		S bl S ≈ W celad
	99					
470						
	97					
480						M bl M ~

DESCRIPTION

367.5 - 639.8 LBT (continued)

413 - 443 ↑ peru. bl w/ assoc argillic alt
415 - 433 vesicular - speckled FGT which are 1-2 mm wide which have rimmed w/ green celadonite & fill w/ calcite + white clay
→ weak veining throughout w/ ~ average ~2VNS/ft w/ pyrite, ± Kaolinite ± calcite ± local druzy qtz + poss chalcopyrite intermittently riddled w/ v. fine stockwork w/ celad ± qtz ± py fill
Few v. fine micro breccia VNS w/ SiO2 fill
VNS predom 15°-20° to C.A. & locally subparelle
435 - 454.4 vesicular

443 - 462 ↓ bl + clay alt w/ moderate intermittent silicifi SiO2 flooding w/ light gray appearance veining increases mod from above to ~ 5-7 VNS/ft vuggy predom 0-25° to CA w/ strong Kaolinite + py replaced marcasite local druzy qtz lining calcite significantly decreases poss is being alt to clay? still riddled w/ fine green stkwk @ above
440 - 442.3 STR clay gouge alt.
458.5 - 462.4 vesicular

462 - 478 significant ↑ peru. clay alt + ↑ bl weak local SiO2 flooded seams, tighter & finer peru. fine green stkwork overprinted w/ Kaolinite + py replaced marcasite veins → 3-5/ft which are 0-20° to C.A. fine stkwk 0-90° w/ no preferred orientation. (Locally vesicular)

ASSAYS

Sample No.	% Cu	% Pb	✓ Au	oz/t Au	oz/t Ag
408-413				.009	.04
413-418				.005	.07
418-423				.003	.05
423-428				<	.03
428-433				<	<
433-438				<	<
438-443			.003	<	.03
443-448				.005	.09
448-453				.033	3.80
453-458				.005	.12
458-463				.006	.05
463-468				.004	.04
468-473				.017	.10
473-478				.007	.08

HOLE # RL-192C LOGGED BY KLK DATE 6-91 PAGE 4 OF 7

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	✓ Au	oz/t Au	oz/t Ag
	97	0°		2-3% diss + predom VN py + py replac marc		Mbl W~ W-M X W celad	367.5 - 639.8 LBT (continued)	478-483				.019	2.98
490		35° CaCO3 Kaolin py + celad VNS					478 - 510 FGT, m pervasive bleaching buff to hint green w/ mottling of flesh coloration intermittently vesicular moderate veining 3-6 VNS/ft ; filled w/ Kaolinite, calcite, pyrite replaced marcasite ± py ; local bluegreen chalcedony? local primary very fine qtz-py veining. Clay sulfide veins orientation ~ 0°-35° predom	483-488				.781	16.92
								488-493			.582	.217	2.21
								493-498				.007	.21
500								498-503				.048	5.04
								503-508				.028	2.16
510		30° 0° VNS 60° CaCO3 py + Kaolin		±3% VN py + pyrrhotite + buck shot py		W-M bl ~ W celad	510-528 tectonically brecciated LBT FGT matrix w/ LLT sized frags ie. 0-32mm local volc bxa sized frags however not the average size matrix is peach flesh colored w/ bl clasts which locally are lt green celadonite alt. local grayish tan silica flooded zones up to 4" wide which have fine SiO2 ± py stockwork riddling w-mod veining w/ pyrite, CaCO3, Kaolinite fill ~ ; local pyrrhotite	508-513				.027	.40
								513-518				.003	.06
520								518-523				.028	.18
								523-528				<	.03
530		0°		±3-4% diss + VN + buck shot py + ruby Ag		m-s bl w-m WX hint celad	528 - 572 PEACH LITHIC LAPILLI TUFF vs SECONDARY BRECCIATION OF THE LBT >50% of clasts are <25mm the larger clasts are 30-60mm all which are bleached pervasively w/ local green hint matrix is perv. flesh color, weak perv. silicification local possible 3 stages of A predominantly w-m veining w/ calcite pyrite, ruby silver 546-547 etc. + poss uk clay throughout dissem. py picks up no prominent orientation 90° → subparelle to C.A. few micro A VNS ~ 3-7 VNS/ft w/ local variabilities 540-545 ↑ CaCO3, py VNS	528-533				<	<
								533-538				<	<
540		90° VN CaCO3 py ruby Ag						538-543				.020	.25
								543-548				.119	2.86
550													

HOLE # RL-192C LOGGED BY KLK DATE 6-91 PAGE 5 OF 7

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERAL-IZATION	GRAPHIC LOG	ALTER.
560		90° CaCO3 py VNS		±4% diss +VN py		M-S bl W MXX +celad
570				3-4% diss +buck SHOT +VN py +local py replac marcasite		M-S bl W MXX
580			VN + diss py			
590		90° CaCO3 py Kaolin VNS				
600						
610						
620						

DESCRIPTION

367.5 - 639.8 LBT (continued)

550-572 intermittent microbreccia veins w/ clay (green-light) + calcite matrix

548-556 ↑ calcite, pyrite veins ± weak clay up to 19/ft locally w/ local micro Δ veins. dissem. w/ bladed sulfide.

560-562, 565-572 > intermittent micro Δ VNS w/ calcite ± clay fill

572 - 639.8 FINE GRAINED TUFF - FLESH COLORATION, weakly locally clastic, to "pseudo flow banding" intermittent crackle fracturing local vein brecciation ; ↑ brecciation w/ depth into pervasiveness w/ calcite fill w-m pervasively silicified moderate perv. veining w/ no preferred orientation veins ~ 5-12 ft varying throughout w/ pyrite, calcite + Kaolinite

597 - 639.8 clastic texture drops out

603 - 610 VN Δ to perv Δ w/ calcite, clay + micro breccia matrix

613-619 poss ↑ bl ; ↑ pervasive silicification becomes more brittle w/ ↑ fracturing w/ green to blue green celad - clay + calcite pyrite fill w/ up to 1/2" lt green selvages permeating out from tight fractures

619-623 calcite healed breccia

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
548-553				.059	.29
553-558				.212	.76
558-563				5.36	15.69
563-568				.637	9.12
568-573				.366	3.80
573-578				2.88	6.84
578-583				.059	1.21
583-588				<	.37
588-593					.26
593-598					.07
598-603					.14
603-608					.06
608-613					.05
613-618				.002	.03

HOLE # RL-1920 LOGGED BY KLK DATE 6-9 PAGE 6 OF 7

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
630		48° Calcite py & VN; No orientation on most VNS		3-4% diss + VN thick SHOT py		M bl M W X
640			60°	2% diss + VN py		S S bl
		NO PROMINENT VNS		±1% diss py		S M bl W-M celad
650			54°	2 w/ local 3% diss ± VN powder py	54° RUBBLE GOUGE	S bl S HINT CELAD
660						
670						
680		20° 5° prominent clay CaCO3 py VNS	75°	2-3% diss + VN py	75°	M-S bl W hint celad
690						M bl W

DESCRIPTION

367.5 - 639.8 LBT (continued)
635.9 - 678.3 FAULT
639.8 - 654.3 GREEN "BUD-LIKE" EPICLASTIC
654.3 - 710 DOZER TUFF

630 - 635.9 pervasively brecciated w/ calcite ± clay fill no predominant orientation

635.9 - 639.8 breccia rubble w/ clay gouge fill

639.8 - 654.3 "BUD LIKE" GREEN CLASTIC UNIT which has been intensely altered to clay cemented rubble w/ Kaolinite + local calcite stringers filling interstices of gouge - no prominent veining of any orientation

654.3 - 710 DOZER TUFF

654.3 - 678.3 DOZER - FAULT ALTERED strongly bleached, mixed broken rubble and clay gouge w/ Kaolinite & local calcite filling interstices of gouge matrix, weak local hint of green "celadonite"? alt.

678.3 - 710 DOZER - FGT
Fine grained tuff STRONG INTO mod pervasive bleaching weak argillic clay alt mod strong veining from 678.3 - 687 primarily @ very fine stockworking w/ coarser overprinting of $CaCO_3$ + clay + py fine qtz, py ± $CaCO_3$ stkwk w/ no preferential orientation coarser VNS ~ 5°-20° to C.A
678.3 - 685 ~ 10-12 VNS/ft
** 685 - 685.3 is actually a 1.7' gray clay gouge seam

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
618-623				<	<
623-628				<	<
628-632				<	<
632-636				<	<
636-639.8				.017	.41
639.8-645				<	<
645-650				<	<
650-654.3				<	<
654.3-659				.008	.03
659-664				.112	.12
664-669				.009	.04
669-674				.033	.33
674-678.3				.010	.05
678.3-683				.002	<
683-685				<	<
685-685.3				.015	.08
685.3-690				<	<

HOLE # RL-192C LOGGED BY KLK DATE 6-91 PAGE 7 OF 7

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERAL-IZATION	GRAPHIC LOG	ALTER.	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
700 710		20°S° +VS to 60°	68° fine shear	~2% diss +VN py		Wbl w~ m celad	654.3-710 DOZER TUFF Lt sage green fine grained tuff same @ above w/ ↓ bl ; brecciation in last 10' of hole riddled w/ fine calcite stkwk ↑ green to apple green coloration @ last 10' riddled w/ fine py, qtz ± $CaCO_3$ stockwork + local kaolinite + blacked sulfide VNS 5-7 vns/ft w/ finer uncountable competent stkwk	690-695 695-700 700-705 705-710				< ↓	< ↓

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: LOGGED BY: SAS/KLK PAGE 1 OF 5

HOLE NO.: RL-192C DIP: VERTICAL CORE SIZE: HQ DATE: 5-21-91

1	2	3	4	5	6	7	8	9	10	11
FROM	TO	CORE RUN	RECOVERED CORE	TOTAL LENGTH OF CORE>4"	NO. OF FRACTURES	CORE RECOVERY (%) (4/3 X 100)	R.Q.D. (%) (5/3 X 100)	FRACTURES PER FT. (6/4)	RANGE OR AVERAGE ANGLE OF FRACTURE W.R.T. CORE AXIS	REMARKS
280	285	5'	4.6	3.4	4	92%	68%	1.1	35-40°	J/TH, FD/CLY, CAL/PL
					1				30°	VN/TH to OP, FD/CLY, MAR/R
285	290	5'	4.65	4.65	0	93	93	0	—	—
290	295	5'	4.8	4.65	1	96	93	0.2	45°	VN/TH, FD/CLY/R
295	300	5'	4.6	4.3	2	92	86	0.4	40-50°	J/TH, FD/CLY, MAR/PL
300	305	5'	4.9	4.9	2	98	98	0.4	30-35°	VN/TH to OP, FD/QTZ, CLY, PY, MAR/PL, R
305	310	5'	4.5	4.5	0	90	90	0	—	—
310	315	5'	4.95	4.7	2	99	94	0.4	15-35°	VN/TH, FD/QTZ, CAL, CLY/PL, R
315	320	5'	4.7	2.2	4	94	44	1.1	45-70°	J/TH/CLY/PL, R
					1				5-15°	VN/OP/CAL, PY, CLY/R
320	325	5'	4.9	4.4	2	98	88	0.4	70-90°	VN/TH to OP, FD/CAL, CLY/R
325	330	5'	3.6	3.6	1	72	72	0.3	50°	VN/TH, FD/CLY, PY/R
330	335	5'	4.3	1.2	2	86	24	0.5	40-45°	J, VN/TH, FD/CLY, PY/PL
—										NOTE: 332'-333' Mushy Rubble, Probable Clay Gouged Shear.
										333'-334' Broken Rubble
335	340	5'	5.1	5.1	0	102	102	0	—	—
340	345	5'	4.1	3.6	1	82	72	0.2	35-40°	FLO/TH, FD/CLY/PL, R
										NOTE: 343'-344' Broken Rubble
345	350	5'	4.9	4.7	0	98	94	0		NOTE: @ 345.7 is a highly silicified piece, 2" long, probably doesn't belong.
350	355	5'	5.0	5.0	1	100	100	0.2	60°	VN/TH, FD/CAL/PL, R
										NOTE: From 298' to ~360', Bedded Bud, breaking preferentially @ 60°-65° from core Axis, along bedding or foliation. Handling of core causes numerous breaks along this angle.
355	360	5'	5.0	4.9	4	100	98	0.8	60°	FLO/TH/CLY/PL
360	365	5'	5.0	4.8	8	100	96	1.6	60°	FLO/TH/CLY/PL

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: LOGGED BY: SAS

HOLE NO. RL-192 C DIP: VERTICAL CORE SIZE: HQ DATE: 5-20-91

1	2	3	4	5	6	7	8	9	10	11
FROM	TO	CORE RUN	RECOVERED CORE	TOTAL LENGTH OF CORE>4"	NO. OF FRACTURES	CORE RECOVERY (%) (4/3 X 100)	R.Q.D. (%) (5/3 X 100)	FRACTURES PER FT. (6/4)	RANGE OR AVERAGE ANGLE OF FRACTURE W.R.T. CORE AXIS	REMARKS
365	370	5'	4.95	4.95	0	99%	99%	0	—	@ 367.5' is contact of Bud LLT and Lower unit.
—	—	—	—	—	0					contact @ ~ 33°
370	375	5'	4.8	4.8	1	96	96	0.2	85°	J/OP, FD NOTE: @ 373' a 2" gray clay seam
375	380	5'	4.6	4.45	2	92	89	0.4	50°	J/TH, FD/CLY, QTZ/PL
380	385	5'	4.9	4.45	1	98	89	0.4	0-15°	VN/OP, FD/CLY, QTZ, CAL, MAR/R
—	—	—	—	—	1				33°	J, VN/TH, FD/CLY, QTZ, MAR/PL, SM
385	390	5'	4.5	2.9	1	90	58	1.3	0-25	VN/OP, FD/CLY, CAL, QTZ/R
—	—	—	—	—	4				~40°	J, VN/TH, FD/CLY, QTZ, MAR/PL, SM
—	—	—	—	—	1				0-10°	J, VN/TH to OP, FD/CLY, QTZ, MAR/PL to W, R
390	395	5'	4.85	4.85	2	97	97	0.8	50°	J, VN/TH, FD/CLY, QTZ, MAR/PL
					2				0-10°	J, VN/TH to OP, FD/CLY, MAR, QTZ/PL, R
395	400	5'	4.6	4.2	2	92	84	0.9	35-40°	J, VN/TH, FD/CLY, MAR/PL
—	—	—	—	—	2				10-30°	J, VN/TH to OP, FD/CLY, MAR/PL
400	405	5'	4.9	3.7	4	98	74	1.2	5-30°	VN/OP/QTZ, CLY, MAR, R
—	—	—	—	—	2				45°	VN/OP/QTZ, CLY, MAR/R
405	410	5'	4.9	4.7	7	98	94	1.4	30-43°	J/TH, FD/CLY, QTZ, PY/PL
410	415	5'	4.9	4.4	3	98	88	0.8	35°	J, VN/TH to OP, FD/CLY, QTZ, MAR/PL
—	—	—	—	—	1				20°	J, VN/TH, FD/CLY, MAR, QTZ/PL
415	420	5'	5.5	5.5	0	110	110	0	—	—
420	425	5'	4.8	4.8	1	96	96	0.4	20°	VN/OP, FD/CLY, QTZ, PY, MAR/R
—	—	—	—	—	1				50°	J/TH, FD/CLY/PL, SM
425	430	5'	4.85	4.85	0	97	97	0	—	—
430	435	5'	4.85	4.85	0	97	97	0	—	—
435	440	5'	5.2	5.2	0	104	104	0	—	NOTE: 438' to 443' Strongly Argillized zone
440	445	5'	4.4	3.2	1	88	64	0.2	35-40°	VN/OP, FD/QTZ, CLY/R
—	—	—	—	—	—				—	NOTE: 443.7 to 444.5 Broken Rubble
445	450	5'	4.1	2.9	1	82	54	0.7	60°	J/TH, FD/CLY, QTZ, MAR/PL
—	—	—	—	—	2				0-30°	J/OP, FD/CLY, QTZ, MAR/R
—	—	—	—	—	—				—	NOTE: 445' to 449' Large Rubble Chunks (1" to 6" long)
450	455	5'	5.0	3.3	4	100	66	1.0	0-50°	VN/OP, FD/CLY, QTZ, MAR/R
										NOTE: 450' to 457' has lots of rubble broken from these
		(interval cont'd)								large vein fractures (continued)

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: LOGGED BY: SAS

HOLE NO.: RL-192C DIP: VERTICAL CORE SIZE: HQ DATE: 5-20-91

1	2	3	4	5	6	7	8	9	10	11
FROM	TO	CORE RUN	RECOVERED CORE	TOTAL LENGTH OF CORE>4"	NO. OF FRACTURES	CORE RECOVERY (%) (4/3 X 100)	R.Q.D. (%) (5/3 X 100)	FRACTURES PER FT. (6/4)	RANGE OR AVERAGE ANGLE OF FRACTURE W.R.T. CORE AXIS	REMARKS
450	455	(continued)			1				55°	VN/TH, FD/QTZ, CLY, MAR/PL
455	460	5'	4.25	3.85	4	85%	77	0.9	5-30°	VN/TH to OP, FD/QTZ, CLY, MAR/R
460	465	5'	5.0	5.0	0	100	100	0	—	—
465	470	5'	4.4	4.4	0	88	88	0	—	Note: 465' to 470' Strongly Argillized Zone
470	475	5'	5.0	4.7	2	100	94	0.6	40°	J, VN/TH, FD/QTZ, CLY, MAR/PL
—	—	—	—	—	1				60-75	J/TH, FD/CLY, MAR/C, SM
475	480	5'	4.6	4.6	4	92	92	1.1	45-55°	J/TH, FD/CLY, ±QTZ/PL, SM
—	—	—	—	—	1				20°	J/TH to OP, FD/CLY, QTZ, MAR/PL, SM
480	485	5'	4.9	4.4	3	98	88	0.6	60°	J/TH/FD/CLY, QTZ, PY/PL, SM
485	490	5'	4.5	3.3	2	90	66	1.8	40-45°	J/TH, FD/CLY, QTZ, PY/PL+R
					6				±60°	J/TH, FD/CLY/PL, S
490	495	5'	5.5	4.2	7	110	84	1.5	50-60°	J/TH, FD/CLY, CEL/PL, S
					1				25-30°	J/TH, FD/CLY, PY/PL, S
495	500	5'	4.75	4.25	4	95	85	0.8	55-60°	J/TH, FD/CLY, PY/CEL/PL, S
500	505	5'	5.0	4.3	7	100	86	1.8	40-50°	J/TH, FD/CLY, PY/PL, S
					2				±20°	VN/TH-OP FD/CLY, CAL/PL, S
505	510	5'	5.1	4.3	4	102	86	1.0	40-60°	J/TH, FD/CLY, PY/PL, S
					1				80-90°	VN/TH, FD/CLY, CAL, PY/R
510	515	5'	4.9	4.2	2	98	84	0.6	55°	VN/TH, FD/CLY/R
					1				55°	VN/OP→FD/CAL, CLY/R
515	520	5'	4.4	3.3	6	88	66	1.4	55°	VN/TH, FD/CLY, CAL/R
520	525	5'	4.9	2.95	6	98	59	1.2	45-55°	J, VN/TH, FD/CLY, CAL/PL, SM
										NOTE: 523'-525' contains large pieces of fractured
										Rubble.
525	530	5'	3.8	2.9	6	76	58	2.1	30-45°	J, VN/TH, FD/CLY/PL
					2				70-80°	J/TH/W, SM
530	535	5'	4.8	3.85	4	96	77	1.25	60-65°	J, VN/TH, FD/CLY, CAL/PL, R
					2				70-80°	J, VN/TH, FD/CLY, CAL, MAR/R
535	540	5'	4.7	4.1	3	94	82	0.6	60-65°	J, VN/TH, FD/CLY, CAL/PL
540	545	5'	5.0	5.0	1	100	100	0.2	±60°	VN/TH, FD/CLY, CAL, PY/PL
545	550	5'	4.85	4.7	4	97	94	0.8	55-60°	J, VN/TH, FD/CLY, CAL/W
550	555	5'	5.0	4.2	4	100	84	0.8	30-50°	VN/TH to OP/CLY, CAL/R

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: DOZER LOGGED BY: SAS/KLK PAGE 4 OF 5

HOLE NO.: RL-192C DIP: VERTICAL CORE SIZE: HQ DATE: 5-21/91

1	2	3	4	5	6	7	8	9	10	11
FROM	TO	CORE RUN	RECOVERED CORE	TOTAL LENGTH OF CORE>4"	NO. OF FRACTURES	CORE RECOVERY (%) (4/3 X 100)	R.Q.D. (%) (5/3 X 100)	FRACTURES PER FT. (6/4)	RANGE OR AVERAGE ANGLE OF FRACTURE W.R.T. CORE AXIS	REMARKS
555	560	5'	4.5	4.05	5	90%	81%	1.1	55°	VN/TH, FD/CLY, CAL/PL
560	565	5'	4.9	1.6	5	98	32	1.0	40-50°	VN/TH, FD/CAL, CLY/PL, R
										NOTE; 563.4'-565' Broken Rubble
565	570	5'	4.4	3.6	3	88	72	1.1	55-65°	VN/TH, FD/CLY, CAL/R
					2				30-40°	VN/TH, FD/CLY, CAL/R
570	575	5'	5.0	2.2	9	100	44	2.0	30-60°	VN/TH, FD/CLY, CAL/PL
					1				10°-30°	J/VN/TH, FD/CLY/U
575	580	5'	4.7	2.1	10	94	42	2.1	10-80°	VN/TH, FD/CLY, CAL/R
580	585	5'	5.1	3.3	13	102	66	2.5	30-75°	VN/TH, FD/CLY/R
585	590	5'	4.45	4.1	6	89	82	1.8	60-70°	VN/TH, FD/CLY/PL, R
					2				30-35	VN/TH to OP, FD/CLY/R
590	595	5'	4.9	2.55	12	98	51	2.7	45-60°	VN/TH, FD/CLY/PL
					1				5-10	VN/TH, FD/CLY/R
										NOTE: 593.5' to 594' Broken Rubble
595	600	5'	2.75	2.4	4	55	48	1.5		VN/TH, FD/CLY/R
600	605	5'	4.9	2.2	17	98	44	3.5	15-80°	VN/TH-OP, FD/CLY/R
										NOTE: 603' to 606', Even the longer pieces of core
										are held intact w/Clay-filled veins
605	610	5'	4.3	3.2	9	86	64	2.1	25-80°	VN/TH-OP, FD/CLY, CAL/PL-R
										NOTE: 609.3' to 609.6' a mushy, argillized plug.
610	615	5'	4.7	2.5	2	94	50	0.4	30°, 60°	VN/TH-OP, FD/CLY, CAL/PL
										NOTE: 610.7'-613' Broken Rubble, broken along
										numerous clay/calcite veins.
615	620	5'	4.4	3.2	15	88	64	4.1	40°-50°	J, VN/TH to OP, FD/CLY, CAL/PL
										Note: 617'-618' broken rubble w/ similar
										orientation to jointing 40-50°
					3				70-75°	J, VN/TH to OP, FD/CLY, CAL/PY
620	625	5'	4.75	4.5	2	95	90	0.4	45	VN/TH, FD/CLY, CAL/PL, S
										Note: 619.6-623.2 coarse breccia w/ calcite
										matrix no preferred orientation except between
										622.5-623.2 is @ 24° to C.A.
625	630	5'	4.3	4.2	3	86	84	0.7	65-75°	J, VN/TH, FD/CAL, CLY/PL
										NOTE: 626-628 COARSE breccia w/ calcite matrix

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: DOZER LOGGED BY: SAS/KLK PAGE 5 OF 5

HOLE NO.: RL-192C DIP: VERTICAL CORE SIZE: HQ DATE: 5-22-91

1	2	3	4	5	6	7	8	9	10	11
FROM	TO	CORE RUN	RECOVERED CORE	TOTAL LENGTH OF CORE>4"	NO. OF FRACTURES	CORE RECOVERY (%) (4/3 X 100)	R.Q.D. (%) (5/3 X 100)	FRACTURES PER FT. (6/4)	RANGE OR AVERAGE ANGLE OF FRACTURE W.R.T. CORE AXIS	REMARKS
630	635	5'	4.85	4.85	1	97%	97%	0.2	35°	J/TH, FD/CLY, CAL/PL
										Note: 632-635 coarse breccia w/ calcite matrix
										634.5-635.2 becomes strongly clay alt. gouge
635	640	5'	3.75	3.35	3	75%	67	0.8	20-40°	J, VN/TH, FD/CLY, CAL/PL to R
										** Note: FAULT 634.5-678.3
									gradational contact	634.5-639.8 upper LBT - flesh clay healed
									@ 639.8 is ~ CONTACT	broken rubble; breccia w/ minor $CaCO_3$ matrix
640	645	5'	4.6	3.5		92	70	0.7		639.8-654.3 Lt-med green intensely clay
										altered gouge @ 654.3 contact is 60° to CA
										654.3-678.3 FGT predom. broken rubble;
										clay healed to clay gouge zones up to 7" long
										contact @ 678.3 is ~ 70° to C.A. **
					3				55°	J/TH/PL
645	650	5'	4.4	4.2	1	88	84	0.2	5-10	VN/TH-OP/CAL, CLY/R
650	655	5'	5.2	4.8	SEE NOTE *	104	96	*		
655	660	5'	4.1	2.5	2	82	50	0.5	50-55°	J, VN/TH, FD/CLY/PL
660	665	5'	5.2	1.7	*	104	34	*		
665	670	5'	1.4	0	*	28	0	*		
670	675	5'	3.3	2.0	*	66	40	*		
675	680	5'	4.9	3.95	1	98	79	0.4	70°	F, J/TH, FD/CLY, CAL/PL, SM
					1				40°	J, VN/TH, FD/CLY, CAL/PL, R
680	685	5'	4.1	3.8	2	82	76	0.5	70°	VN/TH, FD/CLY, CAL/R
685	690	5'	6.0	4.55	3	120	91	0.5	55-65°	VN/TH, FD/CLY, CAL/PL, R
										NOTE: @ 685' is ~1.5' of clay gouge
690	695	5'	4.35	4.0	3	87	80	0.7	40-65°	VN/TH, FD/CLY, CAL/R
695	700	5'	5.0	4.6	6	100	92	1.2	55-60°	VN/TH, FD/CLY, CAL, PY/R
700	705	5'	5.0	4.7	2	100	94	0.8	60-65°	VN/TH, FD/CLY, CAL/R
					2				~60°	J, VN/TH, FD/CLY, CAL/PL, SM
705	710	5'	4.25	2.4	6	85	48	2.6	65-80°	VN/TH, FD/CLY, CAL/R
					5				35-55°	VN/TH, FD/CLY, CAL/PL
	T.D. @	710'								

Bondar-Clegg, Inc.
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Building 1, Unit A
Sparks, Nevada 89431
(359-9330)

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RL192C
0-528

BONDAR-CLEGG

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

Geochemical Lab Report

JUN 7 1991

REPORT: R91-10957.4 (COMPLETE)

REFERENCE INFO: RL192 367-528

CLIENT: LAC MINERALS (USA) INC.
PROJECT: ROSEBUD

SUBMITTED BY: KENNER
DATE PRINTED: 4-JUN-91

ORDER	ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au	Gold	91	0.002 OPT		Fire Assay
2	Ag	Silver	91	0.02 OPT		Fire Assay

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
Z OTHER DRILL TYPES	55	2 -150	87	CRUSH,PULVERIZE -150	87
P PREPARED PULP	4	4 AS REC'D	4	AS RECEIVED, NO SP	4
~~D DRILL CORE~~	~~32~~				

NOTES: # indicates ERRATIC RESULTS

~~REMARKS: #ERRATIC RESULTS OBSERVED ON THE FOLLOWING:~~
RL-192 478-483--AG VALUE 3.39 OPT.

REPORT COPIES TO: MR. TIM KUHI
MR. TIM KUHI
~~MS. KRISTIN KENNER~~

INVOICE TO: MR. TIM KUHI

Nicole Whitten

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BONDAR-CLEGG

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

Geochemical Lab Report

DATE PRINTED: 4-JUN-91

REPORT: R91-10957.4 (COMPLETE)

PROJECT: ROSEBUD

STANDARD NAME	ELEMENT UNITS	Au OPT	Ag OPT	STANDARD NAME	ELEMENT UNITS	Au OPT	Ag OPT
ANALYTICAL BLANK		<0.002	<0.02				
ANALYTICAL BLANK		<0.002	<0.02				
ANALYTICAL BLANK		<0.002	<0.02				
Number of Analyses		3	3				
Mean Value		0.0010	0.010				
Standard Deviation		0.00000	0.0000				
Accepted Value		0.002	0.02				
ASSAY STD		0.014	0.28				
ASSAY STD		0.014	0.26				
Number of Analyses		2	2				
Mean Value		0.0140	0.270				
Standard Deviation		0.00001	0.0142				
Accepted Value		0.012	0.24				

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BONDAR-CLEGG

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

Geochemical Lab Report

DATE PRINTED: 10-JUN-91

REPORT: R91-10984.4 (COMPLETE)

PROJECT: ROSEBUD

STANDARD NAME	ELEMENT UNITS	Au OPT	Ag OPT	Ag OPT
AU ASSAY STD		0.012	-	-
Number of Analyses		1	-	-
Mean Value		0.0120	-	-
Standard Deviation		-	-	-
Accepted Value		0.015	-	-
ANALYTICAL BLANK		<0.002	-	-
Number of Analyses		1	-	-
Mean Value		0.0010	-	-
Standard Deviation		-	-	-
Accepted Value		0.002	-	0.02
GEO TRACE STD1(1989)		-	1.00	-
GEO TRACE STD1(1989)		-	0.99	-
Number of Analyses		-	2	-
Mean Value		-	0.991	-
Standard Deviation		-	0.0077	-
Accepted Value		-	1.05	-
AG ASSAY		-	2.97	-
AG ASSAY		-	3.14	-
Number of Analyses		-	2	-
Mean Value		-	3.056	-
Standard Deviation		-	0.1254	-
Accepted Value		-	3.03	3.03

Bondar-Clegg, Inc.
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Sparks, Nevada 89431
702 (359-9330)

Controlled TOK

RL192
528-710

BONDAR-CLEGG

Geochemical Lab Report

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

JUN 13 1991

REPORT: R91-10984.4 (COMPLETE)

REFERENCE INFO: RL192 528-710

CLIENT: LAC MINERALS (USA) INC.
PROJECT: ROSEBUD

SUBMITTED BY: KENNER
DATE PRINTED: 10-JUN-91

ORDER		ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au	Gold	40	0.002 OPT		Fire Assay
2	Ag	Silver	39	0.02 OPT	MULT ACID TOT DIG	Atomic Absorption
3	Ag	Silver	1	0.02 OPT		Fire Assay

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
~~D DRILL CORE~~	~~39~~	~~2 -150~~	~~39~~	~~SAMPLE PREP <10LBS~~	~~39~~
P PREPARED PULP	1	4 AS REC'D	1	DRYING/SAMPLE	39
				AS RECEIVED, NO SP	1

NOTES: # indicates ERRATIC RESULTS

REMARKS: #ERRATIC RESULTS OBSERVED ON THE FOLLOWING:
RL-192 548-553--.045 AND .066 OPT.

~~REPORT COPIES TO: MR. TIM KUHL~~
MR. TIM KUHL
MS. KRISTIN KENNER

~~INVOICE TO: MR. TIM KUHL~~

Nicole Written

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BONDAR-CLEGG

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

Geochemical Lab Report

DATE PRINTED: 4-JUN-91

REPORT: R91-10957.4 (COMPLETE)

PROJECT: ROSEBUD

SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT		SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT	
Z2 RL-192 0-5		<0.002	0.03		Z2 RL-192 195-200		<0.002	<0.02	
Z2 RL-192 5-10		0.006	0.04		P4 BA-69		0.030	0.16	
Z2 RL-192 10-15		<0.002	0.05		Z2 RL-192 200-205		<0.002	<0.02	
Z2 RL-192 15-20		0.004	0.03		Z2 RL-192 205-210		<0.002	<0.02	
Z2 RL-192 20-25		0.007	0.05		Z2 RL-192 210-215		<0.002	<0.02	
Z2 RL-192 25-30		0.023	0.05		Z2 RL-192 215-220		<0.002	<0.02	
Z2 RL-192 30-35		0.004	0.03		Z2 RL-192 220-225		<0.002	<0.02	
Z2 RL-192 35-40		<0.002	0.03	-.002, .03	Z2 RL-192 225-230		<0.002	0.04	
Z2 RL-192 40-45		<0.002	0.04		Z2 RL-192 230-235		<0.002	0.02	
Z2 RL-192 45-50		<0.002	<0.02		Z2 RL-192 235-240		<0.002	<0.02	
Z2 RL-192 50-55		0.003	0.03		Z2 RL-192 240-245		<0.002	<0.02	-.002, -.02
Z2 RL-192 55-60		<0.002	0.05		Z2 RL-192 245-250		<0.002	<0.02	
Z2 RL-192 60-65		0.004	<0.02		Z2 RL-192 250-255		<0.002	<0.02	
Z2 RL-192 65-70		0.004	0.02		Z2 RL-192 255-260		<0.002	<0.02	
Z2 RL-192 70-75		0.002	<0.02		Z2 RL-192 260-265		0.004	0.03	
Z2 RL-192 75-80		<0.002	<0.02		Z2 RL-192 265-270		0.004	<0.02	.005, -.02
Z2 RL-192 80-85		<0.002	<0.02		Z2 RL-192 270-275		0.010	0.03	
Z2 RL-192 85-90		<0.002	<0.02	-.002, -.02	D2 RL-192 367.5-373		<0.002	0.03	
Z2 RL-192 90-95		<0.002	<0.02		D2 RL-192 373-378		0.005	0.54	
Z2 RL-192 95-100		<0.002	<0.02		D2 RL-192 378-383		0.005	0.67	
P4 BA-68		0.050	0.06		D2 RL-192 383-388		0.027	1.07	.027, 1.08
Z2 RL-192 100-105		<0.002	<0.02		D2 RL-192 388-393		<0.002	<0.02	
Z2 RL-192 105-110		<0.002	<0.02		P4 BA-70		0.032	0.16	
Z2 RL-192 110-115		0.004	<0.02		D2 RL-192 393-398		0.012	0.06	
Z2 RL-192 115-120		0.002	<0.02		D2 RL-192 398-403		0.018	1.20	
Z2 RL-192 120-125		0.004	<0.02		D2 RL-192 403-408		0.018	0.50	
Z2 RL-192 125-130		<0.002	0.03		D2 RL-192 408-413		0.009	0.04	
Z2 RL-192 130-135		<0.002	<0.02		D2 RL-192 413-418		0.005	0.07	
Z2 RL-192 135-140		0.002	<0.02		D2 RL-192 418-423		0.003	0.05	
Z2 RL-192 140-145		0.003	<0.02	-.002, -.02	D2 RL-192 423-428		<0.002	0.03	
Z2 RL-192 145-150		<0.002	<0.02		D2 RL-192 428-433		<0.002	<0.02	
Z2 RL-192 150-155		<0.002	<0.02		D2 RL-192 433-438		<0.002	<0.02	
Z2 RL-192 155-160		<0.002	<0.02	-.002, -.02	D2 RL-192 438-443		<0.002	0.03	.003, -.02
Z2 RL-192 160-165		<0.002	<0.02		D2 RL-192 443-448		0.005	0.09	
Z2 RL-192 165-170		<0.002	<0.02		D2 RL-192 448-453		0.033	3.80	
Z2 RL-192 170-175		<0.002	<0.02		D2 RL-192 453-458		0.005	0.12	
Z2 RL-192 175-180		<0.002	<0.02		D2 RL-192 458-463		0.006	0.05	
Z2 RL-192 180-185		<0.002	<0.02		D2 RL-192 463-468		0.004	0.04	
Z2 RL-192 185-190		<0.002	<0.02		D2 RL-192 468-473		0.017	0.10	
Z2 RL-192 190-195		<0.002	<0.02		D2 RL-192 473-478		0.007	0.08	.006, .09

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(359-9330)

BONDAR-CLEGG

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

Geochemical Lab Report

DATE PRINTED: 4-JUN-91

REPORT: R91-10957.4 (COMPLETE)

PROJECT: ROSEBUD

SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT
D2 RL-192 478-483		0.079	2.98#
D2 RL-192 483-488		0.781	16.92
D2 RL-192 488-493		0.277	2.21
P4 BA-71		0.024	0.08
D2 RL-192 493-498		0.007	0.21
D2 RL-192 498-503		0.048	5.04
D2 RL-192 503-508		0.028	2.16
D2 RL-192 508-513		0.027	0.40
D2 RL-192 513-518		0.003	0.06
D2 RL-192 518-523		0.028	0.18
D2 RL-192 523-528		<0.002	0.03

.792, 16.97, 2.31

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Geochemical Lab Report

DATE PRINTED: 10-JUN-91

REPORT: R91-10984.4 (COMPLETE)

PROJECT: ROSEBUD

SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT	Ag OPT	
D2 RL-192 528-533		<0.002	<0.02		
D2 RL-192 533-538		<0.002	<0.02		.255
D2 RL-192 538-543		0.020	0.25		
D2 RL-192 543-548		0.119	2.86		
D2 RL-192 548-553		0.059	0.24	.041	.30
D2 RL-192 553-558		0.212	0.76		.317
D2 RL-192 558-563		0.536		15.69	
D2 RL-192 563-568		0.637	9.12		
D2 RL-192 568-573		0.366	3.80		
D2 RL-192 573-578		0.288	6.84		
D2 RL-192 578-583		0.059	1.21		
D2 RL-192 583-588		<0.002	0.37		
D2 RL-192 588-593		<0.002	0.26		
D2 RL-192 593-598		<0.002	0.07		
D2 RL-192 598-603		<0.002	0.14	-.002	
D2 RL-192 603-608		<0.002	0.06		
D2 RL-192 608-613		<0.002	0.05		
D2 RL-192 613-618		0.002	0.03	-.002	.03
D2 RL-192 618-623		<0.002	<0.02		
D2 RL-192 623-628		<0.002	<0.02		
P4 BA-72		0.027	0.22		
~~D2 RL-192 628-632~~		<0.002	<0.02		
D2 RL-192 633-636		<0.002	<0.02		-.02
D2 RL-192 636-639.8		0.017	0.41		
D2 RL-192 639.8-645		<0.002	<0.02		
D2 RL-192 645-650		<0.002	<0.02		
D2 RL-192 650-654.3		<0.002	<0.02	-.002	
D2 RL-192 654.3-659		0.008	0.03		
D2 RL-192 659-664		0.112	0.12		
D2 RL-192 664-669		0.009	0.04		
D2 RL-192 669-674		0.033	0.33		
D2 RL-192 674-678.3		0.010	0.05		
D2 RL-192 678.3-683		0.002	<0.02		
D2 RL-192 683-685		<0.002	<0.02		
D2 RL-192 685-685.3		0.015	0.08		
D2 RL-192 685.3-690		<0.002	<0.02		
D2 RL-192 690-695		<0.002	<0.02	-.002	
D2 RL-192 695-700		<0.002	<0.02		
D2 RL-192 700-705		<0.002	<0.02		
D2 RL-192 705-710		<0.002	<0.02		

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SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT
RL-192 35-40		<0.002	0.03
Duplicate		<0.002	0.03
RL-192 85-90		<0.002	<0.02
Duplicate		<0.002	<0.02
RL-192 140-145		0.003	<0.02
Duplicate		<0.002	<0.02
RL-192 155-160		<0.002	<0.02
Prep Duplicate		<0.002	<0.02
		<0.002	<0.02
Duplicate		<0.002	<0.02
RL-192 240-245		<0.002	<0.02
Duplicate		<0.002	<0.02
RL-192 265-270		0.004	<0.02
Prep Duplicate		0.005	<0.02
RL-192 383-388		0.027	1.07
Duplicate		0.027	1.08
RL-192 438-443		<0.002	0.03
Duplicate		0.003	<0.02
RL-192 473-478		0.007	0.08
Prep Duplicate		0.006	0.09
RL-192 483-488		0.781	16.92
Duplicate		0.792	16.97
RL-192 488-493		0.277	2.21
Duplicate			2.31

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REPORT: R91-10984.4 (COMPLETE)

PROJECT: ROSEBUD

SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT	Ag OPT
RL-192 548-553		0.059#	0.24	
Duplicate		0.041	0.30	
RL-192 598-603		<0.002	0.14	
Duplicate		<0.002		
RL-192 613-618		0.002	0.03	
Prep Duplicate		<0.002	0.03	
RL-192 633-636		<0.002	<0.02	
Duplicate			<0.02	
RL-192 650-654.3		<0.002	<0.02	
Duplicate		<0.002		
RL-192 690-695		<0.002	<0.02	
Duplicate		<0.002		

Chemex Labs Inc.

Analytical Chemists * Geochemists * Registered Assayers
994 West Glendale Ave., Suite 7, Sparks,
Nevada, U.S.A. 89431
PHONE: 702-356-5395

To: LAC MINERALS U.S.A. INC

1395 GREG ST., STE 107
SPARKS, NEVADA
89431

Project :
Comments: ATTN: TIM KUHL

Certificate Date: 07-JUN-91
Invoice No. : I9115628
P.O. Number :

CERTIFICATE OF ANALYSIS A9115628

SAMPLE DESCRIPTION	PREP CODE		Au oz/T
RL-178 570-575	205	294	0.004
RL-178 620-625	205	294	0.009
RL-178 670-675	205	294	0.009
RL-178 720-725	205	294	0.032
RL-178 770-775	205	294	0.001
RL-191 045-050	205	294	0.001
RL-191 095-100	205	294	< 0.001
RL-191 145-150	205	294	< 0.001
RL-191 195-200	205	294	0.001
RL-191 245-250	205	294	0.002
RL-191 295-300	205	294	0.006
RL-191 350-355	205	294	0.003
RL-191 400-405	205	294	0.002
RL-191 445-450	205	294	< 0.001
RL-191 494-499	205	294	< 0.001
RL-191 580-585	205	294	< 0.001
RL-192 045-050	205	294	0.001
RL-192 095-100	205	294	< 0.001
RL-192 145-150	205	294	< 0.001
RL-192 195-200	205	294	0.006
RL-192 245-250	205	294	< 0.001
RL-192 438-443	205	294	0.003
RL-192 488-493	205	294	0.582

CERTIFICATION: Handler M. Adam

Chemex Labs Inc.

Analytical Chemists * Geochemists * Registered Assayers
994 West Glendale Ave., Suite 7, Sparks,
Nevada, U.S.A. 89431
PHONE: 702-356-5395

To: LAC MINERALS U.S.A. INC

1395 GREG ST., STE 107
SPARKS, NEVADA
89431

Project : 75350
Comments: ATTN: TIM KUHL

Certificate Date: 22-JUL-91
Invoice No. : I9118188
P.O. Number :

CERTIFICATE OF ANALYSIS A9118188

SAMPLE DESCRIPTION	PREP CODE		Au FA oz/T
RL191 680-685	214	227	0.168
RL191 685-690	214	227	0.100
RL191 690-695	214	227	0.183
RL191 695-700	214	227	0.171
RL191 700-705	214	227	0.026
RL191 705-710	214	227	0.083
RL191 710-715	214	227	0.016
RL191 715-720	214	227	0.034
RL192 538-543	214	227	0.034
RL192 543-548	214	227	0.102
RL192 548-553	214	227	0.047
RL192 553-558	214	227	0.185
RL192 558-563	214	227	0.637
RL192 563-568	214	227	0.656
RL192 568-573	214	227	0.360
RL192 573-578	214	227	0.310
RL192 578-583	214	227	0.055
RL194 773-778	214	227	0.085
RL194 778-783	214	227	0.106
RL194 783-788	214	227	0.145
RL194 788-793	214	227	0.144
RL194 793-798	214	227	0.077
RL194 798-803	214	227	0.022
RL194 803-807	214	227	0.022
RL194 807-810	214	227	0.011
RL194 810-815	214	227	0.015
RL194 815-820	214	227	0.118
RL195 588-593	214	227	0.021
RL195 593-598	214	227	0.004
RL195 598-603	214	227	0.002
RL195 603-608	214	227	0.121
RL195 608-613	214	227	0.224
RL195 613-618	214	227	0.035
RL195 618-623	214	227	0.006
RL195 623-628	214	227	0.324
RL195 628-633	214	227	0.085
RL195 633-638	214	227	0.071
RL195 638-643	214	227	0.136
RL195 648-653	214	227	0.177
RL195 653-658	214	227	0.311

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CERTIFICATION: _____