60001415

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-190C
AUTHOR	K. Kenner; T. Kuhl; N. Whitten
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 903' handwritten notes 37p.

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

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

Revised: 1/22/08

Drill Log RL-191
Rosebud

NEVADA

6000 1415 4010

60061416

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

DRILL LOG SUMMARY SHEET

PROJECT ROSEBUD

HOLE NUMBER RL-191C TOTAL DEPTH ~~793~~ 903' LOGGED BY KLK

Date started 5/15/91

Date completed 5/17/91

Initial bearing

Initial inclination vertical

Elevation 5331.7

Collar coordinates:

N 2203994.0

E 483021.6

Contractor: COATES RC to 300' Core 300-793'

Drill Type: UNIVERSAL

Hole Size: HQ

Drilling Conditions: good

Footage: Wet / Dry

Comments: LOST CIRCULATION @ top of hole - however no major problems

DOWN HOLE SURVEY INFORMATION

FROM	TO	SURVEY POINT	INCLI-NATION	BEARING	X (Northing)	Y (Easting)	Z (Elevation)

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

CHOCOLATE TUFF
BUD
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-191

Page 1 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
	CT	X OX							RED BROWN / GOLDEN				NIL to tr OX PY	0-300 CHOCOLATE FGT ~2-3% black biotite/mafic	<	<	
05		X							GOLDEN					phenocrysts, relatively fresh, weakly oxidized wk local calcite veinlets	<	<	
10		X												5-25 weakly blt golden FeOx, mod	<	<	
15		X												silicified, wk ox py	.003	<	
20															<	<	
25									RED BROWN					25-80 relatively fresh chocolate tuff			
30														wk red brwn Ox			
35																	
40																	
45																	.001
50																	
55																	
60																	
65																	
70																	
75																	
80		wk P OX							LT green				±1% diss PY	80-93 mottled buff; lt green FGT w/m bl weak calcite veining			
85																	
90		wk OX							RED BROWN					93-127 Red brown relatively unalt choco. TUFF			
95		wk OX															< .001
100																	

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DRILL HOLE RL-191

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	Au	Ag	CHECK
	GT	ox							Red Brwn				NIL	93-127 Red brown relatively fresh Choco Tuff	<	<	
105																	
110																	
115																	
120																	
125		Ca ox							Lt gray gr				~1% diss ± VN py	127-185 FGT - mod bl w/ lt green coloration local buff mottling, weakly oxidized fractures, interm/ wk fine qtz stkwk; wk calcite veining, possibly locally tectonically brecciated			
130																	
135																	
140																.04	
145																	<.001
150																	
155																	
160																	
165																	
170																	
175													~2% diss + VN py				
180																.06	
185									Lt gray				" @ 2-3%	185-200 Intense argillic alteration - lt gray clay fault brecciated, possibly		.04	
190																.03	
195																	
200																.03	.001

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

CHOCOLATE TUFF
BUD
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ARGILLIC
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Ca CALCITE

DRILL HOLE RL-191

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LOGGED BY KLK

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK
	CT	XK							buff/ lr green				±3% vn + diss py	200-265 choco. FGT pw lt sage grn to buff w/ intermittent lr gray clay pervasive argillic alt m-s pw. druzy qtz encapsulated pyrite bns	<	.04	
205															.003	.03	
210		T												wh pw. chalcedonic alt weak reddish orange fracture surfaces	<	<	
215															<	.03	
220																<	
225																.05	
230																.03	
235																.04	
240																.05	
245															.007	.07	.002
250													5-6% diss + vn py + poss chalco py		.005	.14	
255																	
260														poss chalcopy veining	.005	.16	
265		XK												265-300 increased bleaching; acetic ↑ clay	.004	.17	
270														alt. increase sulfide veining; diseim. w/ poss introduction of	.008	.15	
275									buffy to white					chalcopyrite, m-s lr gray clay druzy qtz bns predom encapsulate	.004	.14	
280														the sulfide veins weak chalcedonic alt 280-300 ↓ in clay alt to ± mic	.005	.15	
285															.005	.15	
290														285-295 appears M silicif.	.007	.15	
295															.010	.13	
300															.003	.08	.006

HOLE # RL-191C LOGGED BY KLK DATE 5-91 PAGE 1 OF 7

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
300	92			~2% diss + vn + buck SHOT py		M BL W Celad fracts W-M X
	96					
310						
	99					
320						
	99					
330		30 py clay VN ↓ ±5°		3-4% diss + vn + buck SHOT py		
	93		RAKE 46° ? sub parell to C.A. w/ slicks / Alsg			
340						
	99					
350			w/ 30° 60° rake			
	99	50° 70° py kaolin + qtz vns	w/ kaolin py qtz slicks			
360				2-3% diss + vn + buck SHOT py		
	103					
370						

DESCRIPTION

300-372 FINE GRAINED TUFF - CT

Buff to lt. green (hint) FGT, pervasive mod bleaching SiO_2 filling fine vesicles; locally celadonite (to wh kaolin) green clay filling relict fine phenos 1-3mm wide w-m pervasive (poss.) silicification w-m fracture veining throughout w/ local strong veining 2 predom stages of veining
① premineral fine pyrite ± kaolinite
② secondary fracture veins predom subparelle to core axis w/ local brecciation w/ strong kaolinite ± pyrite fill; poss. sericite alt; local druzy qtz lining open spaced vugs

300-329 w/ weak limonitic tight fracts appearing @ very weak leisgang banding
300-320 <1 py, clay fract/ft
320-329 ~ 3-4 clay/py vn/ft

329-352 veins predom subparelle to 30° to C.A. tight to open, locally brecciated w/ strong kaolinite fill + pyrite; local druzy qtz lining ~ ± 6 vns/ft w/ local SiO_2 fill @ 336' is SiO_2 healed Δ w/ local kaolin vug fill

340-340.5 broken rubble w/ mod str argillic alt

352-372 fract-vns = druzy qtz lining w/ pyrite kaolinite ± local celadonite fill varying from 50°-70° to C.A. ~ 3-4/ft Average

ASSAYS: Sample No.	% Cu	% Pb	✓ Zn	oz/t Au	oz/t Ag
300-305				<	<
305-310				↓	↓
310-315					
315-320					↓
320-325					.03
325-330				↓	.05
330-335				.005	.16
335-340				.006	.14
340-345				.004	.09
345-350					
350-355			.003	<	.05
355-360				<	.05
360-365				.003	.06
365-370				<	.03

HOLE # RL-191C LOGGED BY KLK DATE 5-91 PAGE 2 OF 7

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
380	100	±30° fract vns		1-2% diss tvn py w/ v. fine calc3 stkwk	70-75°	M bl W-M ≈ poss WX w celad
390	98					
400	100					
410	88					
420	111					
430	89	75°		2-3% vn ≤ diss py		
440	98					

DESCRIPTION

372 - 607 LT - LITHIC LAPILLI TUFF INTO VOLC. BXA CONTACT @ ~70-75° to C.A

Possible tectonically brecciated LBT w/ LLT characteristics ie. most clasts < 25mm, locally clasts fall into volc. bxa size may well be a pyroclastic unit w/in the LBT, clasts are predom bleached! white clay altered w/ local lt green alt. hint all clast supported matrix varies from reddish orange hemititic w/ various degrees of bleaching

372 - 425 weak fracture veining tight w/ kaolinite + pyrite fill + local calcite fill predom orientation ±30° to C.A. finely riddled w/ stockworking w/ no predom orientation w/ SiO_2 fill ± py there are ±2 fract vns/3-4 ft.

425-466 riddled w/ fine stockworking ≤ 1mm w/ qtz fill w/ no preferred orientation overprinted w/ fine ± 1mm pyrite veining w/ predom orientation ~ 0°-25° to C.A. locally vuggy w/ druzy qtz lining local very fine calcite stockworking 6-12 veinlets/ft. fine stkwk is uncountable prominent zones are subparelle to C.A. poss local secondary brecciation ↑ fine calcite veinlets w/ depth @ 15°-20° to C.A. ≤ 1/ft.

ASSAYS

Sample No.	% Cu	% Pb	✓ Au	oz/t Au	oz/t Ag
370-375				<	.04
375-380					.04
380-385					<
385-390					<
390-395					<
395-400					.06
400-405			.002		.05
405-410					<
410-415					<
415-420					<
420-425					<
425-430					.04
430-435				.008	.06
435-440				<	<

HOLE # RL-191C LOGGED BY KLK DATE 5-91 PAGE 3 OF 7

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
450	99			±3% diss tvn py		W-M bl W-M ~ W X W celad
460	100	20°				
470	100			1-2% diss tvn py wk caco3 vns		
480	97	vns-celad caco3 py				↑ bl to M S
490	92	25°				M-S W-M celad
500	100					
510	98	0-25° 50-85° caco3 vnlets				M bl W ~ W X TR celad

DESCRIPTION

372-607 LLT w/in LT continued

466-476 decrease in overall veining secondary pyrite ± clay drop out fine stockwork riddle remains; very few calcite veins < 1/ft within this zone may be some secondary brecciation. Clasts ↑ to 70+mm held w/in fine breccia matrix w/ clasts averaging 2-70mm

476-503 moderate increase pervasive argillic alt. w/ prominent clay alt local zones broken rubble fracture veining increases w/ prom. orientation ~ 0-25° w/ celadonite, pyrite, calcite fill averaging ~ 3-6 fracts/ft.

503-543 LLT w/in LBT @ above w/ ↓ overall veining weak fine stockworking present @ predom. calcite prominent orientation 0°-25° + 50°-85°

ASSAYS

Sample No.	% Cu	% Pb	Au ✓	oz/t Au	oz/t Ag
440-445				<	.03
445-450			<		.06/.03
450-455					.03
455-460					<
460-465				.005	<
465-470				<	<
470-475					<
475-479					.03
479-484					.04
484-489					.03
489-494					.04
494-499			<		<
499-504					.06
504-509					<

HOLE # RL-191C LOGGED BY KLK DATE 5-91 PAGE 4 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
				<1% diss + VN py		W-M bl WX TR Geld W	375-607 LLT IN CT (CONT.)	509-514				<	<
	100							514-519					
520							526-543 same @ above w/ gradational decrease in bleaching; overall alt. into "unalt." red brown LLT weak calcite fine stockworking 0-30° to C.A. predom	519-524					
	100	30° CaCO3 VNS						524-529					
530								529-534					
	96							534-539					
540					60°	bl		539-543					
	96			NIL		FRESH	543-574.6 Red brown relatively unaltered Lithic Lapilli Tuff w/ predom gray tuff lithics averaging 2-25 mm w/ red brown clay matrix incompetency in rock mechanics weak calcite veining 40-60° to C.A. ~10 CaCO3 VEINS over 30'	NO SAMPLE					
550													
	101	CaCO3 VNS 40-60° to CA											
560													
	98												
570		68° CaCO3											
	100			tr disst VN py		W bl mceld WX							
580													

49

HOLE # RL-191C LOGGED BY KLK DATE 5-91 PAGE 5 OF 7

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
590	98	40° (calc vns)		2% diss + touch SHOT + VN py		W bl W-M W celad
	102	70° (calc vns)		2% diss + VN py ≤1% pyrrh VNS		
600	100		62° FAULT	2-3% d+VN py	62°	S
				2% VN + diss py		M cel S XXX M bl
610	100			20% 6t		
			47°	3% 6t diss + VN py		M-S celad S XXX M bl
				10%		M cel S XXX ↑ bl
620	100	25° contact laminated chalced SiO2 clay VN	SULF Δ silicified contact	3-4% py + mar		M-S bl W celad S XXX
				4-5% + diss w/in matrix py replac marcasite & stibnite		
630	100	0-70° Δ VNS STKWK				
640	101	45°→55° SiO2 clay sulfid VNS predom ⊥ local sub parallel		3% VN py replac marca + stib		M bl W celad S XXX
650						

DESCRIPTION

375-607 LLT IN CT (CONT.)
607 - TD DOZER TUFF

574.6 - 605 bleaching begins to pick up and increases approaching the fault w/ assoc ↑ clay alt, weak calcite veining @ 20°-40° to C.A. (↳ locally subparallel) ~1/2-3 ft. @596 start picking up pyrrhotite + calcite veins 20°-70° to C.A; averaging ~ ≤1/ft 602-605 mod lt green duck butter alt Kaolinite filling interstit. of fragmental

605-639.5 FAULT - @ 605' no reliable contact appears subperpendicular to CA

605-607 brecciated clay healed gouge shear zone w/ ply VN 75°-90° to CA. ~9/ft no

607-TD. DOZER TUFF

Hydrothermal Breccia

607-612 Silicified breccia → ±4 stages Δ buff to gray to lt sage to grass green chalcedonic silicif. appears to be previously clay alt then over printed w/ SiO2 - near to the fault for 2-3 ft 607-610 ~2-3 VN/ft of vuggy open spaced veins 50-60° filled w/ white Kaolinite + stibnite + pyrite
610-610.7 silicified semi-massive py - vuggy ; craggy open spaced w/ fine druzy qtz lining ; riddled w/ fine qtz stkwk

upper contact 62° to C.A

612-615.4 FGT - bright green to orangish flesh moderatly brecciated 2-3 stags weakly clay alt + mod-STR perv. silic. riddled w/ fine qtz ± py stkwk w/ wk local clay fill. green-celad alt is predom.

615.4-618.4 Hydrothermal breccia → 3-4 stages intensely silicified host - fine gr. tuff - buff to peach
615.4-617.6 matrix w/ intermittent strong fn sulfide content chalcedonic rims around 2 stg Δ clasts red orange OXIDE? w/in matrix ; in local clasts post Δ qtz stockwork cross cuts 2 stg Δ clasts few vugs w/ xtal qtz lining

lower contact is gradational w/ hydrothermal Δ veins becoming more of a stkwork veining and radically decreasing @ 639.5

615.4-639.5 Buff to hint lt green fine gr tuff w/ ~ 3 stages brecciation w/ intense SiO2 cement riddled w/ pre ; post fine qtz stkwk - no preferred orientation >50/ft poss later stage vuggy druzy qtz lined open spaced veins w/ Kaolinite ± stibnite ± py fill 1-2/ft 0-30° to C.A. intermittent vuggy SiO2 matrix w/ Kaolin fill pyrite predom diss throughout matrix

ASSAYS

Sample No.	% Cu	% Pb	✓ Au	oz/t Au	oz/t Ag
580-585			<	<	<
585-590				<	<
590-595				<	.03
595-600				<	<
600-605				<	<
605-607				<	.04
607-612				.012	4.10
612-615.4				.059	.12
615.4-620				.061	.12
620-625				.302 #	.49 #
625-630				.926 #	.79 #
630-635				.40	1.41 #
635-640				.210 #	.28
640-645			.167	.178	.30
645-650				.027	.16

70

HOLE # RL-191C LOGGED BY KLK DATE 5-91 PAGE 6 OF 7

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
660	101	0°		4-5% py replac vn marcasite ±stib + wk diss py		M bl SXXX w celad
670	100	90° All veining		3-4% @ above		
680	100			4% @ above		
690	100		rough cont FAULT 70 ?	3-4% @ above		
700	98			2% diss py	GOUGE	M-S bl S XXX
710	101			3-4% py replac vn marcasite ±stibnite + wk diss py	70	M bl M ≈ W X W celad
720	98			3% @ above		

DESCRIPTION

607 - TD DOZER TUFF

639.5 - 727 FINE GRAINED TUFF

Lite sage green, moderate pervasive bleaching, pervasive s silic'd to 686.7 weak green color - celadonite? poss wk pre silic. w argillic clay alt. Intermittent hydrothermal vein brecciation to brecciation of entire host. moderate to predom strong veining throughout:

1) v. fine qtz stockwork
2) hydrotherm. vn Δ
3) SiO_2 + clay + py replaced marcasite ±stibn. + weak local xtaline barite

All veining varies from 0-90° w/ pronounced vuggy clay filled SiO_2 - sulfide veins which go to 4-40mm wide average ~ 5-12 veins/ft w/ riddling of fine qtz stkwk varing in intensity

686.7 - 688.6 lt. green clay gouge w/ w/ dissem. pyrite

688.6 - 727 same description @ above w/ decrease in pervasive silicification ↑ perv. weak argillic clay alt. # of veins remains fairly constant w/ widest veins 4-21 mm which are predominantly subparelle to C.A. they also contain a dark gray possibly a Ag bering mineral

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
650-655				.020	.45
655-660				.028	.28
660-665				.014	.62
665-670				.020	.16
670-675				.024	.52
675-680				.39	.53 #
680-685				.156	.41
685-690				.085	.19
690-695				.194	.33
695-700				.201	5.04
700-705				.019	.93
705-710				.034	12.17
710-715				.012	.72
715-720				.054	1.85 #

HOLE # RL-191C LOGGED BY KLK DATE 5-91 PAGE 7 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
							607 - TD DOZER TUFF						
730	98	55° Δ vn sild.	SiO2 py FLT 15° 75° vake slicks	3% @ above		M bl M ≈ W X W celad	627 - 740 zone of mod - strong hydrothermal vein brecciation w/ strong SiO2 cement w/ ± 3 stages Δ w/in veins w/ local clay + SiO2 mix the sulfides present are concentrated w/in the matrix w/ very little fine dissem. pyrite w/in the Δ clasts. fine qtz stockwork veining probable relation to SiO2 flood of Δ vns. locally up to 15 vns/ft	720-725				.012	1.47
				2% @ above				725-730				.012	.04
	73	50° 60° Δ vns		3-4% diss in matrix + vn py + mar rasite		M bl W-M ≈ M-S XX W celad		730-735				.011	.80
740								735-740				.006	1.55
	70	60° 0° SiO2 py ± clay vns		2-3% diss + vn py + replac marcasite		M bl M XX W celad	740 - 752 slight decrease in perv. silicif. decrease in hydro Δ veins & overall veining predom. vning SiO2 encap py & locally py replaced marcasite - locally vuggy w/ druzy qtz lining 3-9 vns/ft & averaging 3-5 vns/ft. orientation 0-60° to C.A.	740-745				.017	.23
								745-750				.004	.06 #
750	96	±5° calcite clay Ag?	Δ vn 30°	3-4% vn + wk diss py + py replac marcasite vns & ruby Ag in vns w/ depth		M to M-S bl M XX W-M ≈	752 - 793 slight increase in overall bleaching intermittently brecciated w/ local vein brecciation which varies from green celad alt SiO2 + duck butter alt kaolinite to vein breccia healed w/ CaCO3 + kaolinite + SiO2, locally vuggy & rimmed w/ druzy qtz pyrite concen w/in Δ matrix & in veins very little to weak diss py in host tuff. vein orientation is predom subparelle to 40° to C.A.	750-755				<	.26
								755-760				<	1.23
760	98	40° 0° CaCO3 clay py + Ag vns						760-765				.003	.23
								765-770				.003	.04
770							752 - 780 strongest brecciation & veining 1) hydroth. Δ vns 2) SiO2 + green duck butter vns 3) CaCO3 + py + SiO2 vns ~ 7-10 vns/ft w/ over print of fine stkwk qtz ± py ± clay vns	770-775				.004	.05
								775-780				.006	<
780		clay vns CaCO3 Ag 60° 0° 55° 60°					780 - 789 decrease in overall veining & brecciation predom veining: SiO2 encapsulated CaCO3, py + clay ~ 5-8 vns/ft	780-785				.049	.07
							789 - 793 ↑ pervasive brecciation - 3 stgs 7-10 vns/ft composed of SiO2, CaCO3, pyrite + kaolinite ↑ dissem pyrite throughout	785-790				.010	.07
793								790-793				.049	.10

Ruby Ag w/in last 40' of core - that is readily recognizable.

HOLE # RL-191C LOGGED BY KLK DATE 6-91 PAGE 8 OF 9

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERAL-IZATION	GRAPHIC LOG	ALTER.
790	102	35° predom orientation except where noted		±3% VN + diss py + local marcasite		M-S bl W~ WX
800	98					M-S bl MXX
810	100			3% buck-shot + diss py VN w/ pyrite halo		M bl MXX poss WX w/ calcd
820	101	35° / Flo?		1-2% diss + VN + buck shot py + wk local dk gray sulfide Ag?		
830	100					
840	99	85° SiO2 py VN				M-S XX M bl W~ / W~ M bl WX
850	101	48° / CaCO3 py VN				
860						

DESCRIPTION

607 - 903 DOZER TUFF

793 - 810 FGT - buff w/ m-s veining, composed of qtz lining w/ $CaCO_3$, clay, pyrite ± marcasite fill. veins are ≤ 1mm wide w/ ~ 12-18 VNS/ft locally brecciated w/ micro breccia SiO_2 cemented matrix w/ weak orange coloration - only of matrix
806 - 807 ↑ $CaCO_3$ VNS

810 - 838 FGT - predominantly brecciated; healed w/ fine tuff w/ ↑ SiO_2 component matrix has light to med orange flush, clasts are bl very fine qtz ± py STKWK < 1mm wide is riddled w/ this stkwk - uncountable weak veining throughout, composed of qtz - py ± local marcasite ± local calcite which ↑ w/ depth. predom 3-5 VNS/ft; locally up to 17. Riddled w/ fine STKWK predom orientation 0-35° to C.A.
833 - 837 ↑ perv SiO_2 flooding of Δ matrix

838 - 868 vesicular FGT ~ 3-5% vesicles (1-3 mm wide) are light chalky sage green; composed of fairly hard waxy looking clay w/ brittle fracture; locally w/ v.v. fn. STKWK Intermittently brecciated, w-m riddled w/ v.v fine qtz - short stringers weakly veined w/ pyrite + calcite + wk clay only local local marcasite discs. weak veins predom oriented ~ 0-35° w/ few local VNS @ 48°-85° to C.A. 2-5 VNS/ft
Δ matrix locally wkly orange

Sample No.	% Cu	% Pb	✓ Au	oz/t Au	oz/t Ag
793-798				.016	.12
798-803				.012	.11
803-808				<	.08
808-813				<	.05
813-818				<	.06
818-823				<	.04
823-828				.014	.016
828-833				<	.05
833-838				<	.03
838-843			.003	<	.12
843-848				.005	.03
848-853				<	<
853-858				<	<

HOLE # RL-191C LOGGED BY KLK DATE 6-91 PAGE 9 OF 9

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
	94	0 / 40° precdm VN orientation	40° SiO2 VN	±2% VN marcasite + py + wk diss py		W-M Mbl W celad	607-903 DOZER TUFF (CONTINUED) 862-862.6 SiO2-hydro Δ VN w/ fine dissem sulfides giving matrix gray coloration 863-864 std drusy qtz-vuggy VNS w/ CaCO3, clay, marcasite fill	858-863				.005	.08
								863-868				.006	.07
870				1-2% diss + VN py + VN local marcasite			868-899.7 FGT - Intermittently brecciated v. weak pervasive celadonite alt; concentrated w/in fracts. Intermittently riddled w/ v. fine stkwk qtz ± py - brecciation (dry-tectonic) increases w/ depth. w-m veining w/ calcite, py ± marcasite ± clay. predom orientation ~ 0-40° 2 stgs veining 1) fine stkwk-riddling-uncountable 2) CaCO3 + py ± qtz ± clay ~> 2-3 VNS/f, locally up to 12	868-873				.008	.06
	96							873-878				<	<
880			15° py rich slick sided VN					878-883				<	.06
	100					↑ CELAD		883-888				<	<
890								888-893			<	<	<
	99	15° / 67°					899.7-903 POSSIBLE SHEAR zone w/ ↑ celad. w/ slickensided green waxy brittle clay locally is subparallel to C.A. slick-clay VNS v. little fine diss py VNS ~ 67° to C.A. 15° " "	893-898				<	<
900		py VN			SHEAR	W bl M-S M-S celad		898-903				<	.24
903							903 - T.D.						

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: DOZER-SE LOGGED BY: KLK / SAS

HOLE NO.: RL-191C DIP: vertical CORE SIZE: HQ DATE: 5-17-91

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
300	305	5'	4.6	4.5	4	92%	90%	.87	50° + 30°	VN / TH / CLY, CEL, CAL / PL, SM
305	310	5'	4.6	4.4	4	92	88	.87	35°→45°	VN / TH / CLY, PY / PL
310	315	5'	4.8	3.9	5	96	78	1.25	33°-36°	VN / TH / CLY, PY / PL
					1				43°	VN / TH / CLY, PY / PL
315	320	5'	4.9	4.6	1	98	92	.41	45°	J / TH / CEL, CLY / PL, SM
					1				20°	VN / TH / CLY, PY / PL, SM
320	325	5'	4.8	3.95	2	96	79	1.46	25°-30°	VN / TH / CLY, PY / PL, SM
					1				20°	VN / TH / CLY, PY / PL, SM
					4				± 60°	VN / TH / MAR, CLY, PY / PL, SM
325	330	5'	4.7	3.5	1	94	70	.85	15°	VN / TH / CLY, CEL / PL, SM
					3				36°	VN / TH / CLY, CEL / PL, SM
330	335	5'	5.0	4.5	2	100	90	1.6	5°-10°	VN / FD / QTZ, PY, CLY / PL, SM
					6				85°-90°	VN / FD / CLY, PY / R
										NOTE: 330→332 Δ / OP, FD / CLY, QTZ, PY / R
335	340	5'	4.4	4.0	1	88	80	.45	60°	VN / TH / CEL, CLY / PL, SM
					1				13°	VN / OP, FD / QTZ, CLY, PY / R
340	345	5'	4.2	2.9	1	84	58	.24	± 5°	VN / OP, FD / CLY, QTZ, PY, BA / R NOTE: 340-345 RUBBLE
345	350	5'	4.7	4.0	5	94	80	1.49	30°-40°	VN / TH / QTZ, CLY, PY / PL, SM
					2				50°	VN / TH, FD / CLY, PY, QTZ / R
350	355	5'	4.8	3.9	6	96	78	1.25	58°-60°	VN / TH, FD / CLY, PY / W
355	360	5'	4.8	2.8	7	96	56	1.46	45°-60°	VN / TH, FD / QTZ, CLY, MAR / U, S
360	365	5'	4.8	4.2	5	96	84	1.67	15°-20°	VN / FD / CLY, MAR, QTZ / PL, R
					3				60°-80°	VN / FD / CLY, MAR, QTZ / PL, R
365	370	5'	4.9	2.8	7	98	56	2.24	45°-50°	VN / FD / CLY, PY / PL, S
					4				30°-35	VN / FD / CLY, PY / PL, S
370	375	5'	4.9	4.5	3	98	90	.82	50°	VN / FD, TH / CLY, MAR / PL, S
					1				74°	VN / FD, TH / MAR, CLY / W
375	380	5'	4.9	3.4	8	98	68	1.63	45-60°	VN / FD / TH / PY, CLY, MAR / W ± R
380	385	5'	4.9	4.6	0	98	92	0		NO FRACTS
385	390	5'	4.9	4.3	2	98	86	.41	45°	VN / TH, FD / PY, CLY / W,
390	395	5'	4.7	3.3	8	94	66	1.70	40°-45°	VN / TH, FD / PY, CLY, QTZ / W.
395	400	5'	5.1	4.9	2	102	98	.39	30°-35°	VN / TH, FD / PY / W

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: DOZER - SE LOGGED BY: SAS / KLK

HOLE NO.: RL-191C DIP: VERTICAL CORE SIZE: HQ DATE: 5-18-91

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
400	405	5'	4.8	4.1	2	96 %	82%	.42	35-40°	VN/TH,FD/CLY,PY/R
405	410	5'	3.9	3.2	3	78	64	.77	40-45°	VN/TH,FD/CLY,MAR/R
410	415	5'	4.9	4.6	2	98	92	.41	15-25°	VN/TH,FD/CLY,CAL,PY/W
415	420	5'	6.0	6.0	1	120	120	.17	80°	FLO/TH,FD/CLY/C,SM
420	425	5'	5.0	4.8	1	100	96	.20	30°	VN/TH,FD/CLY,PY/SM C
425	430	5'	4.9	4.8	2	98	96	.41	±25	VN/TH,FD/CLY,PY,CAL,±BA/U,R
430	435	5'	5.3	4.9	2	106	99	.38	5°-25	VN/OP,FD/CAL,PY,CLY/W,R
435	440	5'	4.5	3.7	6	90	74	1.33	5-15°	VN/TH-OP/CLY,PY,CAL/C
440	445	5'	5.0	5.0	3	100	100	.60	10-15°	VN/TH-OP/CLY,PY/W
445	450	5'	4.7	4.4	5	94	88	1.06	35-50°	VN/TH,FD/QTZ,CLY,PY/S
450	455	5'	5.0	5.0	1	100	100	.20	50°	VN/TH,FD/CLY,PY/W
455	460	5'	4.9	4.8	0	98	96	0	—	—
460	465	5'	5.2	4.6	1	104	92	.19	15°	VN/TH,FD/CLY,PY/S
465	470	5'	4.8	3.7	4	96	74	.83	15-35	VN/TH,FD/CLY,PY/R-W,S
470	475	5'	4.9	4.9	1	98	98	.20	37°	VN/TH,FD/CLY,PY/C
475	480	5'	5.0	3.7	19	100	74	3.8	30-35°	VN/TH,FD/CLY,PY,CAL/PL,S-R
480	485	5'	4.4	2.2	10	88	44	2.27	5-30°	VN/TH,-OP,FD/CLY,PY/S,W
—	—	—	—	—	—				—	NOTE: 484-485 BROKEN RUBBLE
485	490	5'	4.7	3.6		94	72	1.06		NOTE: 486.4-487.4 BROKEN RUBBLE
					5				20-35°	VN/TH,FD/PY,CLY,MAR,CAL/W-PL
490	495	5'	4.2	3.4	5	84	68	1.19	15-20°	VN/TH,FD/CLY,PY,CEL/W,PL
495	500	5'	5.3	4.3	9	106	86	1.70	20-45°	VN/TH,FD/CLY,CEL,PY,PL to W
500	505	5'	5.0	4.2	3	100	84	.60	15-35°	VN/TH,FD/CLY,PL,CEL,PL to W
505	510	5'	4.4	4.3	1	88	86	.23	±50°	VN/TH,FD/CLY/PL,SM
510	515	5'	5.0	4.6	1	100	92	.20	50°	SH/TH,FD/CLY/SM,PL
515	520	5'	5.0	5.0	0	100	100	0	—	—
520	525	5'	5.0	5.0	0	100	100	0	—	—
525	530	5'	5.0	5.0	0	100	100	0	—	—
530	535	5'	5.0	5.0	1	100	100	.20	40	VN/TH,FD/CLY/W
535	540	5'	5.0	5.0	0	100	100	0	—	—
540	545	5'	4.7	3.7	2	94	74	.85	55°	VN/TH/CLY/PL
					2				65-70°	J/TH/PL

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: DOZER-SE LOGGED BY: SAS/KLK

HOLE NO.: RL-191C DIP: vertical CORE SIZE: HQ DATE: 5-18-91

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
545	550	5'	4.3	3.8	5	86 %	76 %	1.16	40-55°	J/TH/CAL, ± CLY/R-C
550	555	5'	5.25	2.7	2	105	54	.76	60°	SH/FD/CLY, CAL/R-W
—	—	—	—	—	2				35°	J/TH/CLY/S, C
555	560	5'	5.0	3.9	3	100	78	.60	25-35°	J/TH/CLY/S, PL
560	565	5'	5.1	3.1	4	102	62	.78	40-50°	J, VN/CAL, ± CLY/PL-C
565	570	5'	4.7	3.7	6	94	74	1.49	55-65°	J/TH/CLY, ± CAL/S, W
—	—	—	—	—	1				65°	J, VN/TH, FD/CAL, CLY/S, W
570	575	5'	4.8	4.0	5	96	80	1.04	45-75°	J, VN/TH, FD/CLY, ± CAL/I-W
575	580	5'	4.6	4.6	1	92	92	.43	0-5°	VN/TH, FD/CAL, CLY/PL, SM
—	—	—	—	—	1				35-45°	VN/TH, FD/CAL, CLY, PY/PL, R
580	585	5'	4.9	4.9	0	98	98	0	—	—
585	590	5'	4.8	4.8	2	96	96	.63	45-65°	VN/TH, FD/CLY, CAL/R, SM
"	"	"	"	"	1				42°	VN/TH, FD/CLY, CAL/P, SM
590	595	5'	4.5	3.6	9	90	72	2.2	70-75°	J, VN/TH, FD/CLY, CAL/PL, SM
"	"	"	"	"	1				5°	SH, VN/TH, FD/CLY, CAL/PL-C, SM
595	600	5'	5.1	4.0	4	102	80	1.18	40-65°	J, VN/TH, FD/CLY, CAL/PL-W, SM
"	"	"	"	"	2				45-70°	J, VN/TH, FD, CLY, CAL/W, R
600	605	5'	4.6	3.7	1	92	74	1.09	25-30°	J, VN/TH, FD/CLY, ± CAL/PL, SM
					4				65-85°	VN/TH, FD/CLY, PY/R
605	610	5'	4.8	3.9	1	96	78	1.46	CONTACT upper 34° lower 36°	605.2-606.5 CLAY GOUGE SHEAR w/ clay cement
					6				55°-65°	VN/OP, FD/CLY, QTZ + 1 @ VN/TH/CLAY, QTZ PY/P, S
									25°	VN/OP, VG, FD/CLY, QTZ, STB/R
610	615	5'	4.95	4.2	1	99	84	1.21	20°	VN/OP/QTZ, PY, STB/R
					3				60°	VN/OP/QTZ, PY, STB/R
					2				50-60°	VN/TH, FD/QTZ, CLY/PL, R
615	620	5'	4.9	4.35	3	98	87	.61	50-65°	VN/TH, FD/QTZ, PY, CLY/PL, S
620	625	5'	4.95	4.95	0	99	99	0	—	—
625	630	5'	5.0	5.0	0	100	100	0	—	—
630	635	5'	5.0	4.7	3	100	94	.60	5-30°	VN/OP, FD/QZT, PY, CLY/R
635	640	5'	4.9	4.7	2	98	94	.41	50-80°	VN/OP, FD/QTZ, CLY, PY, MAR/R
640	645	5'	4.9	4.6	4	98	92	.82	30-60°	VN/FD, OP/QTZ, CLY, MAR, BA/R
645	650	5'	5.0	5.0	5	100	100	1.0	15-35°	VN/OP/QTZ, BAR, MAR/R

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: DOZER - SE LOGGED BY: SAS/KLK

HOLE NO.: RL-191C DIP: VERTICAL CORE SIZE: HQ DATE: 5-8-91

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
650	655	5'	4.85	4.45	1	97%	89%	.62	5°	VN/TH, FD/CLY, QTZ, PY/R
					2				35° and 70°	VN/TH, FD/CLY, QTZ, PY/R
655	660	5'	5.0	5.0	2	100	100%	.80	30→40°	VN/OP, FD/CLY, QTZ, MAR/R
					2				5°	VN/OP, FD/CLY, QTZ, MAR/R
660	665	5'	4.8	4.5	2	96	90	.42	5-40°	VN/OP, FD/QTZ, MAR, CLY, BA/R
665	670	5'	4.95	4.95	3	99	99	.81	25-30°	VN/OP, FD/QTZ, CLY, MAR BA/R
					1				45°	VN/TH, FD/QTZ, CLY, MAR, P
670	675	5'	4.95	4.95	2	99	99	1.01	±60°	VN/OP to TH, FD/QTZ, CLY, MAR/R
					3				5°-15°	VN/OP to TH, FD/QTZ, CLY, MAR/R
675	680	5'	4.7	4.7	6	94	94	1.28	5-30°	VN/OP to TH, FD/QTZ, BA, CLY, MAR/R
680	685	5'	4.75	4.2	7	95	84	1.47	50-75°	J, VN/TH, FD/QTZ, CLY, MAR/PL, R
685	690	5'	4.2	3.7	4	84	74	.95	45-55	VN/TH to OP, FD/QTZ, BA, MAR, CLY/R
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]						NOTE: 686.4'-688.0' Clay gouged shear
690	695	5'	4.9	3.8	0	98	76	0		NOTE: 692'-695'; Areas of clayey rubble, some broken up.
695	700	5'	4.6	4.1	2	92	82	.43	75-85°	J/TH, FD/CLY/R
700	705	5'	4.5	4.2	1	90	84	.22	70°	VN/OP, FD/CLY, BA, MAR/R
					1				50°	J/TH, FD/CLY, QTZ/R
705	710	5'	4.6	4.4	1	92	88	.22	25-45°	VN/OP, FD/CLY, QTZ/R
710	715	5'	5.25	5.25	0	105	105	0	—	—
715	720	5'	4.7	4.7	1	94	94	.21	20°	VN/TH, FD/CLY/R
720	725	5'	4.8	4.8	0	96	96	0	—	—
725	730	5'	4.7	4.7	1	94	94	.21	30°	J/TH/PL
730	735	5'	4.4	3.7	3	88	74	.68	25-35°	J, VN/TH, FD/QTZ/PL
					2				0-10°	VN/TH-OP, FD, QTZ/PL-R
735	740	5'	1.7	1.0	2	34	20	1.18	40°-45°	VN/TH-OP, FD, QTZ, CLY/R
										NOTE: 735'-740'; Areas of rubble.
740	745	5'	4.6	4.3		92	86	.22		NOTE: 743' Block followed by small clayey rubble
					1				60°	J, VN/TH, FD/QTZ, CLY/PL
										NOTE: @ 744', a 0.25' oxydized, silicified piece was found
745	750	5'	5.3	5.3	1	106	106	.19	30°	VN/TH, FD/QTZ, MAR, BA, CLY/PL
750	755	5'	5.0	5.0	1	100	100	.20	65-70°	VN/TH, FD/QTZ, CLY/PL, R
755	760	5'	4.8	4.8	1	96	96	.21	55°	VN/TH, FD/CLY, ± QTZ/PL

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: DOZER - SE LOGGED BY: SAS/KLK

HOLE NO.: RL-191-C DIP: VERTICAL CORE SIZE: HQ DATE: 5-18-91

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
760	765	5'	4.7	4.7	1	94 %	94 %	.213	50°	VN/TH, FD/CLY, QTZ, PY, MAR/PL
765	770	5'	5.1	5.1	0	102	102	0	—	—
770	775	5'	4.9	4.9	2	98	98	.408	45-50°	VN/TH, FD/CLY, QTZ/PL, R
775	780	5'	4.5	4.5	5	90	90	1.11	50-60°	VN/TH, FD/CLY, QTZ/PL
780	785	5'	5.1	5.1	0	102	102	0	—	—
785	790	5'	5.0	5.0	0	100	100	0	—	—
790	793 T.D.	3'	3.0	3.0	0	100	100	0	—	—

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: DOZER LOGGED BY: SAS PAGE 1 OF 1 (supplimental log)

HOLE NO.: RL-191C DIP: VERTICAL CORE SIZE: HQ DATE: 5-31-91

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
795	800	5'	5.0	5.0	2	100%	100%	0.4	30-40°	J,VN/TH,FD/QTZ,CLY,CAL,MAR/PL
800	805	5'	5.05	5.05	3	101	101	0.6	35-50°	J,VN/TH,FD/QTZ,CLY,PY/PL
805	810	5'	4.55	4.55	0	91	91	0.0	—	—
810	815	5'	4.95	4.95	1	99	99	0.2	35°	J,VN/TH,FD/QTZ,MAR,CAL/PL
815	820	5'	4.5	4.5	2	90	90	0.4	35-55°	J,VN/TH,FD/QTZ,CLY,CAL,MAR/PL
820	825	5'	5.0	5.0	0	100	100	0.0	—	—
825	830	5'	4.8	4.8	2	96	96	0.4	40-60°	J/TH,FD/CLY,CAL/PL
830	835	5'	5.0	5.0	0	100	100	0.0	—	—
835	840	5'	5.0	5.0	0	100	100	0.0	—	—
840	845	5'	4.85	4.85	1	97	97	0.2	40°	VN/TH,FD/CLY/PL-R
845	850	5'	4.65	4.65	1	93	93	0.2	40	VN/TH,FD/CLY/PL
850	855	5'	5.0	5.0	2	100	100	0.4	45-55°	VN/TH,FD/CLY,CAL,PY/R
855	860	5'	4.95	4.95	0	99	99	0.0	—	—
860	865	5'	5.0	4.8	1	100	96	0.2	25-30°	VN,VG/OP,FD/QTZ,CLY/R vuggy
865	870	5'	3.5	3.5	1	70	70	0.3	30°	VN/TH,FD/CLY,MAR/PL
870	875	5'	4.8	2.65	5	96	53	1.0	40-65	J,VN/TH-OP,FD/CLY,QTZ/PL-R
										NOTE: 870'-872' strongly argillized rubble and
										clay-cemented core.
875	880	5'	4.2	4.2	2	84	84	0.5	70-90°	VN/TH,FD/CLY/R
880	885	5'	4.9	4.9	1	98	98	0.2	45°	VN/TH,FD/CLY/PL-R
885	890	5'	4.8	4.5	5	96	90	1.0	20-75°	VN/TH,FD/CLY,CAL/R
890	895	5'	4.85	4.85	0	97	97	0.0	—	—
895	900	5'	4.7	4.7	1	94	94	0.6	50°	VN/OP,FD/CAL/R
					1				45-90°	J,VN/TH,FD/CLY,CAL/W-R
					1				60°	VN/TH,FD/CLY,PY/R
900	903	3'	3.0	3.0	1	100	100	0.3	25-35°	VN/TH,FD/CLY/R
T.D.	903'									

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A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

Geochemical Lab Report

DATE PRINTED: 4-JUN-91

REPORT: R91-10932.4 (COMPLETE)

PROJECT: ROSEBUD

STANDARD NAME	ELEMENT UNITS	Au OPT	Ag OPT
AG ASSAY		0.042	2.84
Number of Analyses		1	1
Mean Value		0.0419	2.840
Standard Deviation		-	-
Accepted Value		0.048	3.03
ANALYTICAL BLANK		<0.002	<0.02
Number of Analyses		1	1
Mean Value		0.0010	0.010
Standard Deviation		-	-
Accepted Value		0.002	0.02

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Controlled TOK

RL191C
300-605
core @ 300'

BONDAR-CLEGG

Geochemical Lab Report

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

JUN 3 1991

REPORT: R91-10956.4 (COMPLETE)

REFERENCE INFO: RL191 300-605

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

SUBMITTED BY: KENNER
DATE PRINTED: 30-MAY-91

ORDER	ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au	Gold	56	0.002 OPT		Fire Assay
2	Ag	Silver	56	0.02 OPT		Fire Assay

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
D DRILL CORE	54	2 -150	54	CRUSH,PULVERIZE -150	54
P PREPARED PULP	2	4 AS REC'D	2	AS RECEIVED, NO SP	2

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MS. KRISTIN KENNER

INVOICE TO: MR. TIM KUHI

Nicole Wrutten

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A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

Geochemical Lab Report

REPORT: R91-10956.4 (COMPLETE)

DATE PRINTED: 30-MAY-91
PROJECT: ROSEBUD

STANDARD NAME	ELEMENT UNITS	Au OPT	Ag OPT	STANDARD NAME	ELEMENT UNITS	Au OPT	Ag OPT
AG ASSAY		0.050	-				
AG ASSAY		0.050	-				
Number of Analyses		2	-				
Mean Value		0.0498	-				
Standard Deviation		0.00031	-				
Accepted Value		0.048	3.03				
ANALYTICAL BLANK		<0.002	<0.02				
Number of Analyses		1	1				
Mean Value		0.0010	0.010				
Standard Deviation		-	-				
Accepted Value		0.002	0.02				

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Controlled Tox

RL191C
0-300

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A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

Geochemical Lab Report

JUN 10 1991

REPORT: R91-10955.4 (COMPLETE)

REFERENCE INFO: RL191 0-300

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

SUBMITTED BY: STOEBERI
DATE PRINTED: 30-MAY-91

ORDER	ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au	Gold	63	0.002 OPT		Fire Assay
2	Ag	Silver	63	0.02 OPT		Fire Assay

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
Z OTHER DRILL TYPES	60	2 -150	60	CRUSH,PULVERIZE -150	60
P PREPARED PULP	3	4 AS REC'D	3	AS RECEIVED, NO SP	3

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A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

Geochemical Lab Report

REPORT: R91-10955.4 (COMPLETE)

DATE PRINTED: 30-MAY-91
PROJECT: ROSEBUD

STANDARD NAME	ELEMENT UNITS	Au OPT	Ag OPT
ANALYTICAL BLANK		<0.002	<0.02
ANALYTICAL BLANK		<0.002	<0.02
Number of Analyses		2	2
Mean Value		0.0010	0.010
Standard Deviation		0.000010	0.0000
Accepted Value		0.002	0.02
AG ASSAY		0.050	-
Number of Analyses		1	-
Mean Value		0.0499	-
Standard Deviation		-	-
Accepted Value		0.048	3.03
ASSAY STD		0.014	0.26
Number of Analyses		1	1
Mean Value		0.0139	0.258
Standard Deviation		-	-
Accepted Value		0.012	0.24

11024

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A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

original billed w/ RL 191C

Geochemical Lab Report

JUN 19 1991

REPORT: R91-11024.4 (COMPLETE)

REFERENCE INFO: RL191. 193. 194, ~~195~~

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

SUBMITTED BY: KENNER
DATE PRINTED: 14-JUN-91

ORDER	ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au	Gold	102	0.002 OPT		Fire Assay
2	Ag	Silver	3	0.02 OPT		Fire Assay
3	Ag	Silver	102	0.02 OPT	MULT ACID TOT DIG	Atomic Absorption

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
D DRILL CORE	98	2 -150	98		
P PREPARED PULP	4	4 AS REC'D	4		

NOTES: # indicates ERRATIC RESULTS

REMARKS: #ERRATIC RESULTS OBSERVED ON THE FOLLOWING:
RL-193 538-543--.045 AND .053 OPT.
RL-193 633-638--.114 OPT.
RL-195 673-678--.108 OPT.
RL-195 678-683--.099 OPT.
RL-194 568-573--.010 AND .007 OPT.
RL-194 598-603--.007 AND .002 OPT.
****CORRECTED REPORT**** SAMPLE ID'S HAVE BEEN CORRECTED FOR RL-193 638-703. PREVIOUSLY THEY WERE ERRONEOUSLY IDENTIFIED AS "RL-195".

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INVOICE TO: MR. TIM KUHL

Nicole Witter

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Geochemical Lab Report

REPORT: R91-11024.4 (COMPLETE)

DATE PRINTED: 14-JUN-91
PROJECT: ROSEBUD

STANDARD NAME	ELEMENT UNITS	Au OPT	Ag OPT	Ag OPT
AU ASSAY STD		0.014	-	-
AU ASSAY STD		0.012	-	-
Number of Analyses		2	-	-
Mean Value		0.0130	-	-
Standard Deviation		0.00141	-	-
Accepted Value		0.015	-	-
ANALYTICAL BLANK		<0.002	-	-
ANALYTICAL BLANK		<0.002	-	-
Number of Analyses		2	-	-
Mean Value		0.0010	-	-
Standard Deviation		0.000000	-	-
Accepted Value		0.002	0.02	-
GEO TRACE STD1(1989)		-	-	0.98
GEO TRACE STD1(1989)		-	-	1.10
GEO TRACE STD1(1989)		-	-	1.00
Number of Analyses		-	-	3
Mean Value		-	-	1.027
Standard Deviation		-	-	0.0621
Accepted Value		-	-	1.05
AG ASSAY		-	-	3.11
AG ASSAY		-	-	3.10
AG ASSAY		-	-	3.16
Number of Analyses		-	-	3
Mean Value		-	-	3.123
Standard Deviation		-	-	0.0327
Accepted Value		-	3.03	3.03

STANDARD NAME	ELEMENT UNITS	Au OPT	Ag OPT	Ag OPT
AU ASSAY STD		0.150	-	-
Number of Analyses		1	-	-
Mean Value		0.1500	-	-
Standard Deviation		-	-	-
Accepted Value		0.150	-	-

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A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

RL191C
605-793
core portion

Geochemical Lab Report

JUN 7 1991

REPORT: R91-10932.4 (COMPLETE)

REFERENCE INFO: ROSEBUD

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	39	0.002 OPT		Fire Assay
2	Ag	Silver	39	0.02 OPT		Fire Assay

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
D DRILL CORE	39	2 -150	39	SAMPLE PREP <100LBS	39

NOTES: # indicates ERRATIC RESULTS

REMARKS: #ERRATIC RESULTS OBSERVED ON THE FOLLOWING:
RL-191 620-625--AG VALUE <.02,.26,.05,1.56 OPT
AU VALUE .361 OPT.
RL-191 625-630--AG VALUE .49 OPT AND AU VALUE
1.056 OPT.
RL-191 630-635--AG VALUE .16,.20,.02 OPT.
RL-191 635-640--AU VALUE .133 OPT.
RL-191 675-680--AG VALUE .11,.32,.06,.13 OPT.
RL-191 715-720--AU VALUE 2.07 OPT.
RL-191 745-750--AG VALUE <.02 OPT.

REPORT COPIES TO: MR. TIM KUHL
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Nicole Witter

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A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

Geochemical Lab Report

REPORT: R91-10955.4 (COMPLETE)

DATE PRINTED: 30-MAY-91
PROJECT: ROSEBUD

SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT		
Z2 RL-191 0-5		<0.002	<0.02		
Z2 RL-191 5-10		<0.002	<0.02		
Z2 RL-191 10-15		<0.002	<0.02		
Z2 RL-191 15-20		0.003	<0.02		
Z2 RL-191 20-25		<0.002	<0.02		
Z2 RL-191 25-30		<0.002	<0.02	-.002	-.02
Z2 RL-191 30-35		<0.002	<0.02		
Z2 RL-191 35-40		<0.002	<0.02		
Z2 RL-191 40-45		<0.002	<0.02		
Z2 RL-191 45-50		<0.002	<0.02		
Z2 RL-191 50-55		<0.002	<0.02		
Z2 RL-191 55-60		<0.002	<0.02		
Z2 RL-191 60-65		<0.002	<0.02		
Z2 RL-191 65-70		<0.002	<0.02		
Z2 RL-191 70-75		<0.002	<0.02		
Z2 RL-191 75-80		<0.002	<0.02	-.002	-.02
Z2 RL-191 80-85		<0.002	<0.02	-.002	-.02
Z2 RL-191 85-90		<0.002	<0.02		
Z2 RL-191 90-95		<0.002	<0.02		
Z2 RL-191 95-100		<0.002	<0.02		
P4 BA-63		0.068	0.06		
Z2 RL-191 100-105		<0.002	<0.02		
Z2 RL-191 105-110		<0.002	<0.02		
Z2 RL-191 110-115		<0.002	<0.02		
Z2 RL-191 115-120		<0.002	<0.02		
Z2 RL-191 120-125		<0.002	<0.02		
Z2 RL-191 125-130		<0.002	<0.02		
Z2 RL-191 130-135		<0.002	<0.02	-.002	-.02
Z2 RL-191 135-140		<0.002	<0.02		
Z2 RL-191 140-145		<0.002	0.04		
Z2 RL-191 145-150		<0.002	<0.02		
Z2 RL-191 150-155		<0.002	<0.02		
Z2 RL-191 155-160		<0.002	<0.02		
Z2 RL-191 160-165		<0.002	<0.02		
Z2 RL-191 165-170		<0.002	<0.02		
Z2 RL-191 170-175		<0.002	<0.02		
Z2 RL-191 175-180		<0.002	<0.02		
Z2 RL-191 180-185		<0.002	0.06	.002	.09
Z2 RL-191 185-190		<0.002	0.04		
Z2 RL-191 190-195		<0.002	0.03		
Z2 RL-191 195-200		<0.002	0.03		
P4 BA-64		0.051	0.06		
Z2 RL-191 200-205		<0.002	0.04		
Z2 RL-191 205-210		0.003	0.03		
Z2 RL-191 210-215		<0.002	<0.02		
Z2 RL-191 215-220		<0.002	0.03		
Z2 RL-191 220-225		<0.002	<0.02		
Z2 RL-191 225-230		<0.002	0.05		
Z2 RL-191 230-235		<0.002	0.03	-.002	.03
Z2 RL-191 235-240		<0.002	0.04		
Z2 RL-191 240-245		<0.002	0.05		
Z2 RL-191 245-250		<0.002	0.07		
Z2 RL-191 250-255		0.005	0.14		
Z2 RL-191 255-260		0.005	0.16		
Z2 RL-191 260-265		0.004	0.17		
Z2 RL-191 265-270		0.008	0.15		
Z2 RL-191 270-275		0.004	0.14		
Z2 RL-191 275-280		0.005	0.15		
Z2 RL-191 280-285		0.005	0.15	.005	.15
Z2 RL-191 285-290		0.007	0.15		
Z2 RL-191 290-295		0.010	0.13		
Z2 RL-191 295-300		0.003	0.08	.005	.07
P4 BA-65		0.084	0.08	.	

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BONDAR-CLEGG

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

Geochemical Lab Report

REPORT: R91-10956.4 (COMPLETE)

DATE PRINTED: 30-MAY-91
PROJECT: ROSEBUD

SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT	
D2 RL-191 300-305		<0.002	<0.02	
D2 RL-191 305-310		<0.002	<0.02	
D2 RL-191 310-315		<0.002	<0.02	-.002 , .05
D2 RL-191 315-320		<0.002	<0.02	
D2 RL-191 320-325		<0.002	0.03	
D2 RL-191 325-330		<0.002	0.05	
D2 RL-191 330-335		0.005	0.16	.005 , .16
D2 RL-191 335-340		0.006	0.14	
D2 RL-191 340-345		0.004	0.09	
D2 RL-191 350-355		<0.002	0.05	
D2 RL-191 355-360		<0.002	0.05	
D2 RL-191 360-365		0.003	0.06	
D2 RL-191 365-370		<0.002	0.03	
D2 RL-191 370-375		<0.002	0.04	
D2 RL-191 375-380		<0.002	0.04	
D2 RL-191 380-385		<0.002	<0.02	
D2 RL-191 385-390		<0.002	<0.02	-.002 , -.02
D2 RL-191 390-395		<0.002	<0.02	
D2 RL-191 395-400		<0.002	0.06	
D2 RL-191 400-405		<0.002	0.05	
P4 BA-66		0.018	0.08	
D2 RL-191 405-410		<0.002	<0.02	
D2 RL-191 410-415		<0.002	<0.02	
D2 RL-191 415-420		<0.002	<0.02	
D2 RL-191 420-425		<0.002	<0.02	
D2 RL-191 425-430		<0.002	0.04	
D2 RL-191 430-435		0.008	0.06	
D2 RL-191 435-440		<0.002	<0.02	
D2 RL-191 440-445		<0.002	0.03	-.002 , .03
D2 RL-191 445-450		<0.002	0.06	
D2 RL-191 445-450 DUP		<0.002	0.03	
D2 RL-191 450-455		<0.002	0.03	
D2 RL-191 455-460		<0.002	<0.02	
D2 RL-191 460-465		0.005	<0.02	
D2 RL-191 465-470		<0.002	<0.02	
D2 RL-191 470-475		<0.002	<0.02	
D2 RL-191 475-479		<0.002	0.03	
D2 RL-191 479-484		<0.002	0.04	
D2 RL-191 484-489		<0.002	0.03	-.002 , .03
D2 RL-191 489-494		<0.002	0.04	
D2 RL-191 494-499		<0.002	<0.02	
P4 BA-67		0.033	0.06	
D2 RL-191 499-504		<0.002	<0.02	
D2 RL-191 504-509		<0.002	<0.02	
D2 RL-191 509-514		<0.002	<0.02	-.002 , .02
D2 RL-191 514-519		<0.002	<0.02	
D2 RL-191 519-524		<0.002	<0.02	
D2 RL-191 524-529		<0.002	<0.02	
D2 RL-191 529-534		<0.002	<0.02	
D2 RL-191 534-539		<0.002	<0.02	-.002 -.02
D2 RL-191 539-543		<0.002	<0.02	
D2 RL-191 580-585		<0.002	<0.02	
D2 RL-191 585-590		<0.002	<0.02	
D2 RL-191 590-595		<0.002	0.03	
D2 RL-191 595-600		<0.002	<0.02	
D2 RL-191 600-605		<0.002	<0.02	

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A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

Geochemical Lab Report

DATE PRINTED: 4-JUN-91

REPORT: R91-10932.4 (COMPLETE)

PROJECT: ROSEBUD

SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT	
D2 RL-191 605-607		<0.002	0.04	
D2 RL-191 607-612		0.012	4.10	.014, 4.07
D2 RL-191 612-615.4		0.059	0.12	.062, .13
D2 RL-191 615.4-620		0.061	0.12	
D2 RL-191 620-625		0.302#	0.49#	
D2 RL-191 625-630		0.926#	0.79#	
D2 RL-191 630-635		0.400	1.41#	
D2 RL-191 635-640		0.210#	0.28	
D2 RL-191 640-645		0.178	0.30	
D2 RL-191 645-650		0.027	0.16	
D2 RL-191 650-655		0.020	0.45	
D2 RL-191 655-660		0.028	0.28	
D2 RL-191 660-665		0.016	0.62	.014, .64
D2 RL-191 665-670		0.020	0.16	
D2 RL-191 670-675		0.024	0.52	
D2 RL-191 675-680		0.390	0.53#	
D2 RL-191 680-685		0.156	0.41	
D2 RL-191 685-690		0.085	0.19	
D2 RL-191 690-695		0.194	0.33	
D2 RL-191 695-700		0.201	5.04	
D2 RL-191 700-705		0.019	0.93	
D2 RL-191 705-710		0.034	12.17	
D2 RL-191 710-715		0.012	0.72	
D2 RL-191 715-720		0.054	1.85#	
D2 RL-191 720-725		0.012	1.47	.019, 1.45
D2 RL-191 725-730		0.012	0.04	
D2 RL-191 730-735		0.011	0.80	
D2 RL-191 735-740		0.006	1.55	
D2 RL-191 740-745		0.017	0.23	
D2 RL-191 745-750		0.004	0.06#	
D2 RL-191 750-755		<0.002	0.26	
D2 RL-191 755-760		<0.002	1.23	
D2 RL-191 760-765		0.003	0.23	
D2 RL-191 765-770		0.003	0.04	
D2 RL-191 770-775		0.004	0.05	.004, .03
D2 RL-191 775-780		0.006	<0.02	
D2 RL-191 780-785		0.049	0.07	
D2 RL-191 785-790		0.010	0.07	
D2 RL-191 790-793		0.049	0.10	

No Controls.

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A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

Geochemical Lab Report

REPORT: R91-11024.4 (COMPLETE)

~~DATE PRINTED: 14 JUN 91~~
PROJECT: ROSEBUD

SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT	Ag OPT	SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT	Ag OPT
D2 RL-191 793-798		0.016		0.12	D2 RL-193 618-623		12.281	14.84	
D2 RL-191 798-803		0.012		0.11	P4 BA-86		0.030		0.28
D2 RL-191 803-808		<0.002		0.08	D2 RL-193 623-628		3.122		3.97
D2 RL-191 808-813		<0.002		0.05	D2 RL-193 628-633		0.180		0.40
D2 RL-191 813-818		<0.002	-.002	0.06 .06	D2 RL-193 633-638		0.089#		0.21
D2 RL-191 818-823		<0.002		0.04	D2 RL-193 638-643		0.063		0.21
D2 RL-191 823-828		0.014		0.06	D2 RL-193 643-648		0.054		0.17
D2 RL-191 828-833		<0.002		0.05	D2 RL-193 648-653		0.243		0.53
D2 RL-191 833-838		<0.002		0.03	D2 RL-193 653-658		0.054		0.17
D2 RL-191 838-843		<0.002		0.12	D2 RL-193 658-663		0.023		0.09
D2 RL-191 843-848		0.005		0.03	D2 RL-193 663-668		0.053		0.14
D2 RL-191 848-853		<0.002		<0.02	D2 RL-193 668-673		0.134		0.47
D2 RL-191 853-858		<0.002		<0.02	D2 RL-193 673-678		0.156#		0.25
D2 RL-191 858-863		0.005		0.08	D2 RL-193 678-683		0.084#		0.31
D2 RL-191 863-868		0.006	-.002	0.07	D2 RL-193 683-688		0.332		0.58
D2 RL-191 868-873		0.008		0.06	D2 RL-193 688-693		0.247		0.70
D2 RL-191 873-878		<0.002		<0.02	D2 RL-193 693-698		0.599		0.59
D2 RL-191 878-883		<0.002		0.06	D2 RL-193 698-703		0.395		0.70
D2 RL-191 883-888		<0.002		<0.02	D2 RL-193 703-708		0.152		0.50
D2 RL-191 888-893		<0.002		<0.02	D2 RL-193 708-712		0.101		0.13
P4 BA-85		0.028		0.20	D2 RL-193 712-716		0.287		0.23
D2 RL-191 893-898		<0.002		<0.02	D2 RL-193 716-721		0.012		0.07
D2 RL-191 898-903		<0.002		0.24 .25	P4 BA-87		0.032		0.23
D2 RL-193 533-538		0.009		0.24	D2 RL-193 721-726		0.062		0.09
D2 RL-193 538-543		0.128#		0.30	D2 RL-193 726-730		0.012		0.05
D2 RL-193 543-548		0.006		0.11	D2 RL-193 730-733		0.008		<0.02
D2 RL-193 548-553		0.002		0.15	D2 RL-193 733-738		0.012		0.03
D2 RL-193 553-558		0.130		1.33	D2 RL-193 738-743		0.010		0.02
D2 RL-193 558-563		2.384		3.63	D2 RL-193 743-748		0.005		<0.02
D2 RL-193 563-568		2.075		6.33	D2 RL-193 748-753		0.006		0.03
D2 RL-193 568-573		0.297		7.45	D2 RL-193 753-758		0.011		0.05
D2 RL-193 573-578		0.555	12.86		D2 RL-193 758-763		0.005		0.03
D2 RL-193 578-583		0.615	10.20		D2 RL-193 763-768		0.007		0.03
D2 RL-193 583-588		0.007		0.43	D2 RL-193 768-773		0.008		<0.02
D2 RL-193 588-593		0.022		0.16	D2 RL-193 773-778		0.012		0.03
D2 RL-193 593-598		<0.002		0.07	D2 RL-193 778-783.3		0.004		<0.02
D2 RL-193 598-603		0.078		0.49	D2 RL-193 783.3-788		0.003		<0.02
D2 RL-193 603-608		0.084		0.74	D2 RL-193 788-793		0.002		<0.02
D2 RL-193 608-613		0.343		8.61	D2 RL-193 793-798		0.004		<0.02
D2 RL-193 613-618		0.165		6.26	D2 RL-193 798-803		0.010		0.05

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

BC BONDAR-CLEGG

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

Geochemical Lab Report

REPORT: R91-11024.4 (COMPLETE)

DATE PRINTED: 14-JUN-91
PROJECT: ROSEBUD

SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT	Ag OPT	SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT	Ag OPT
D2 RL-193 803-808		0.006		0.09					
D2 RL-193 808-811		0.006		<0.02					
D2 RL-193 811-816		0.005		0.04					
P4 BA-88		0.026		0.05					
D2 RL-193 816-821		0.004		0.03					
D2 RL-193 821-826		<0.002		<0.02					
D2 RL-193 826-831		0.012		<0.02					
D2 RL-193 831-836		<0.002		<0.02					
D2 RL-193 836-840		<0.002		<0.02					
D2 RL-194 563-568		<0.002		<0.02					
D2 RL-194 568-573		<0.002#		0.05					
D2 RL-194 573-578		0.005		0.03					
D2 RL-194 578-583		0.016		0.04					
D2 RL-194 583-588		0.006		0.07					
D2 RL-194 588-593		<0.002		0.05					
D2 RL-194 593-598		<0.002		0.07					
D2 RL-194 598-603		0.012#		0.11					
D2 RL-194 603-608		<0.002		<0.02					
D2 RL-194 608-613		<0.002		<0.02					
D2 RL-194 613-618		<0.002		0.03					
D2 RL-194 618-623		<0.002		0.44					
D2 RL-194 623-628		<0.002		<0.02					

Bondar-Clegg, Inc.
625 Spice Island Dr.
Building 1, Unit A
Sparks, Nevada 89431
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A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

Geochemical Lab Report

REPORT: R91-10955.4 (COMPLETE)

DATE PRINTED: 30-MAY-91
PROJECT: ROSEBUD

SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT
RL-191 25-30		<0.002	<0.02
Duplicate		<0.002	<0.02
RL-191 75-80		<0.002	<0.02
Duplicate		<0.002	<0.02
RL-191 80-85		<0.002	<0.02
Prep Duplicate		<0.002	<0.02
RL-191 130-135		<0.002	<0.02
Duplicate		<0.002	<0.02
RL-191 180-185		<0.002	0.06
Duplicate		0.002	0.09
RL-191 230-235		<0.002	0.03
Duplicate		<0.002	0.03
RL-191 280-285		0.005	0.15
Duplicate		0.005	0.15
RL-191 295-300		0.003	0.08
Prep Duplicate		0.005	0.07

Bondar-Clegg, Inc.
625 Spice Island Dr.
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A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

Geochemical Lab Report

REPORT: R91-10956.4 (COMPLETE)

DATE PRINTED: 30-MAY-91
PROJECT: ROSEBUD

SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT
RL-191 310-315		<0.002	<0.02
Prep Duplicate		<0.002	0.05
RL-191 330-335		0.005	0.16
Duplicate		0.005	0.16
RL-191 385-390		<0.002	<0.02
Duplicate		<0.002	<0.02
RL-191 440-445		<0.002	0.03
Duplicate		<0.002	0.03
RL-191 484-489		<0.002	0.03
Duplicate		<0.002	0.03
RL-191 509-514		<0.002	<0.02
Prep Duplicate		<0.002	<0.02
RL-191 534-539		<0.002	<0.02
Duplicate		<0.002	<0.02

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Geochemical Lab Report

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

DATE PRINTED: 4-JUN-91

REPORT: R91-10932.4 (COMPLETE)

PROJECT: ROSEBUD

SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT
RL-191 607-612		0.012	4.10
Prep Duplicate		0.014	4.07
RL-191 612-615.4		0.059	0.12
Duplicate		0.062	0.13
RL-191 660-665		0.016	0.62
Duplicate		0.014	0.64
RL-191 720-725		0.012	1.47
Duplicate		0.019	1.45
RL-191 770-775		0.004	0.05
Duplicate		0.004	0.03

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625 Spice Island Dr.
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Geochemical Lab Report

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

REPORT: R91-11024.4 (COMPLETE)

DATE PRINTED: 14-JUN-91
PROJECT: ROSEBUD

SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT	Ag OPT
RL-191 813-818		<0.002		0.06
Duplicate		<0.002		0.06
RL-191 863-868		0.006		0.07
Duplicate		<0.002		
RL-191 898-903		<0.002		0.24
Duplicate				0.25
RL-193 538-543		0.128#		0.30
Prep Duplicate		0.080		0.35
RL-193 548-553		0.002		0.15
Duplicate		0.003		
RL-193 598-603		0.078		0.49
Duplicate		0.074		
RL-193 618-623		12.281	14.84	
Duplicate				>10.00
RL-193 648-653		0.243		0.53
Duplicate		0.280		
RL-193 673-678		0.156#		0.25
Prep Duplicate		0.069		0.30
RL-193 698-703		0.395		0.70
Duplicate		0.457		
RL-193 703-708		0.152		0.50
Duplicate				0.52
RL-193 748-753		0.006		0.03
Duplicate		0.006		
RL-193 788-793		0.002		<0.02
Duplicate				<0.02
RL-193 793-798		0.004		<0.02
Duplicate		0.003		
RL-194 568-573		<0.002#		0.05
Duplicate		0.007		
RL-194 588-593		<0.002		0.05
Duplicate				0.03

SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT	Ag OPT
RL-194 598-603		0.012#		0.11
Prep Duplicate		0.005		0.15
RL-194 618-623		<0.002		0.44
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: Vaudia 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 :
Comments:

Certificate Date: 11-JUN-91
Invoice No. : I9116208
P.O. Number :

CERTIFICATE OF ANALYSIS A9116208

SAMPLE DESCRIPTION	PREP CODE		Au oz/T
RL-179 985-990	208	294	0.004
RL-191 838-843	208	294	0.003
RL-191 888-893	208	294	< 0.001
RL-193 568-573	208	294	0.160
RL-193 583-588	208	294	0.006
RL-193 618-623	208	294	11.235
RL-193 668-673	208	294	0.192
RL-193 716-721	208	294	0.006
RL-193 793-798	208	294	0.019

CERTIFICATION: _____

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

27 EG
13 LAC

CERTIFICATION: [signature]

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
RL170 595-600A	214	227	0.027
RL170 600-605	214	227	0.035
RL170 605-610	214	227	0.245
RL170 610-615	214	227	0.128
RL170 615-620	214	227	0.219
RL170 620-625	214	227	0.164
RL170 625-630	214	227	0.088
RL170 630-635	214	227	0.264
RL170 635-640	214	227	0.188
RL170 640-645	214	227	0.094
RL170 645-650	214	227	0.143
RL170 645-650A	214	227	0.195
RL170 650-655	214	227	0.057
RL170 655-660	214	227	0.011
RL170 660-665	214	227	0.012
RL170C 665-670	214	227	0.009
RL170C 670-675	214	227	0.022
RL170C 675-680	214	227	0.029
RL170C 680-685	214	227	0.007
RL170C 685-690	214	227	0.043
RL170C 690-695	214	227	0.014
RL170C 695-700	214	227	< 0.002
RL170C 700-705	214	227	0.009
RL170C 705-710	214	227	0.005
RL170C 710-715	214	227	0.006
RL191 607-612	214	227	0.012
RL191 612-615.4	214	227	0.054
RL191 615.4-620	214	227	0.098
RL191 620-625	214	227	0.385
RL191 625-630	214	227	0.982
RL191 630-635	214	227	0.300
RL191 635-640	214	227	0.211
RL191 640-645	214	227	0.167
RL191 645-650	214	227	0.030
RL191 650-655	214	227	0.022
RL191 655-660	214	227	0.041
RL191 660-665	214	227	0.015
RL191 665-670	214	227	0.031
RL191 670-675	214	227	0.026
RL191 675-680	214	227	0.403

40 Eg

CERTIFICATION: _____