60001423

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-2076
AUTHOR	K. Kenner; T Kuhl; R. Donata; S Adams
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 1023' handwritten notes 29p.

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

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

Revised: 1/22/08

Drill Log RL-207
Rosebud

60001427 11010

60001427

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

DRILL LOG SUMMARY SHEET

PROJECT ROSEBUD RC to 400'

HOLE NUMBER RL-207C TOTAL DEPTH 1023' LOGGED BY KLK

Date started 8-14-91

Date completed 8-21-91

Initial bearing vertical

Initial inclination

Elevation 5279.0

Collar coordinates:

N 2204022.0

E 482456.7

Contractor: COATES

Drill Type: UNIVERSAL RC/CORE

Hole Size: HQ

Drilling Conditions:

Footage: Wet / Dry

Comments:

DOWN HOLE SURVEY INFORMATION

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

HOLE # RL-207C LOGGED BY KLK DATE 9-81 PAGE 1 OF 9

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.	COLOR	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
400								400-484.9 C_2C - CT 484.9-651.3 CT CORE BEGAN @ 400' 400-651.3 CHOCOLATE TUFF 400-484.9 C_2C Chocolate EPICLASTIC w/ 2 lithic frag types: bleached xtal rich choco clasts - predom flesh to buff colored + green celadonite alt clasts locally eaten out. Predominantly clast supported w/in yellow green to lt sage green to deep sea green clay alt tuffaceous matrix. Poorly sorted, clasts range from ±2mm to 40mm. No prominent bedding - however it may range from 45°-60° to C.A. Beds range from finely clasted 1-3mm to poorly sorted clasts ranging from ±1mm-45mm. Weak local Δ zones w/ micro Δ matrix w/n rounded clasts up to 30 mm. Few intermittent clay gouge seams up to 7" wide. Weakly veined w/ druzy-vuggy qtz vns possibly locally mixed w/ clay & filled w/ pyrite + local marcasite. Averaging ~ 2-7 vns/ft which are predominantly subparelle to CA. 400-410 finely clasted 410-430 poorly sorted to coarse clasted 430-445 finely clasted 445-484.9 fine to med clasted	NO SAMPLE					
410	69			±1% diss + vn py + local vn marcasite	C_2C	M bl W-M W celad	Lt mottled grn							
	145		50°		gouge									
420	98	also ±60°				W bl W-M M celad	deep sea + yellow green + flesh							
	99	qtz py ± local marcasite ± clay vns	40°											
430	100					M bl W-M W celad	Lt sage to pea grn							
440	100													
450	99						Lt sage grn w few deep sea clasts							
460														

No BOD? 3-3-92 KLK
poor CMW

HOLE # RL-207C LOGGED BY KLK DATE 9-81 PAGE 2 OF 9

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.	COLOR
470	95	0; 20°; also ±60°; py qtz ±local marcasite ±clay vns		±1% diss +vn py +vn marcasite		mbl w-m wk celad poss local	Lt sage grn w few deep sea clasts
480	101						
490	97			2-3% diss +vn py +marcasite + blk poss Cu oxide earthy	60° C.C	M-S bl w	buff clasts over matrix
500	101	0; 60°; qtz Kaoln py marcasite +poss Cu oxide				bl	buff clasts w hint flesh matrix
510	98						
520	96		40° Δ vn				
530	101						

DESCRIPTION

400 - 651.3 CT

484.9 - 537.3 C.C Choc. Tuff
Poorly sorted clastic chocolate ranging from ±1mm to ±80mm size clasts which all composed entirely of choc. tuff frags pervasively bleached to buff w/ slight local hint green. poss 2ndary Δ vs. depositional matrix is tuffaceous - overall matrix support which is real orangish flesh 484.9 - 497.5 and only hint of flesh coloration from 497.5 to 537.3 moderate veining throughout w/ 2 predominant phases 1) fine 1-2mm veining of qtz encapsulated pyrite 2) coarser veins up to ±4 mm druzy qtz lined - locally vuggy filled w/ Kaolinite + pyrite + local marcasite w/ local black earthy possibly Cu oxide. These veins are predom. subparelle to 30° to CA. Overall veining averages ~ 3-6 vno/ft

484.9 - 497.5 matrix is bright orange which contains finer tuffaceous micro Δ. veining is @ noted above + local barite

poss hanging wall mineraliz. to lower fault shear

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
NO SAMPLE					
485-490				<.002	.04/.03
490-494				.002	.04
494-498				.002	.05
498-503				.003/.002	.04/.05
503-508				.013	.05
508-513				.004	.04
513-518				.010	.04
518-523				<	<
523-528				.013	.06

HOLE # RL-207C LOGGED BY KLK DATE 9-81 PAGE 3 OF 9

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.	COLOR
	100	@ above	55°	@ above	C,C	M-S ↑bl W	buff clasts w/ hint flesh matrix
540	82	50° qtz sulf clay vns	70°	±3% diss tvn py + marcasite + W cu oxide		±S bl S celad	Peach + white
550	98					sbl ±S bl S celad	POSS FAULT SHEAR
560	76			±4% diss tvn marcasite + py		M-S bl M-S m-s celad	flesh + deep sea grn
570	98	60° qtz clay sulf. vns				m bl m-s m-s celad	
580	101						
590	99					m-s bl m w celad	Lt grn + flesh
602							

DESCRIPTION

400 - 651.3 CT

537.3 - 560.5 C,C choc. Tuff - possible fault zone - intermittent broken rubble & clay cemented rubble w/ local hydrothermal secondary breccial zones. Strong pervasive argillic clay alteration w/ local gouge zones, perv. tectonic bxa. Overall moderate veining 3 predom phases: 1) fine hairline to 2mm qtz - pyrite ± marcasite stkwk 2) Coarser druzy qtz lined vuggy open spaced veining filled w/ Kaolinite + pyrite + marcasite + local black earthy poss Cu oxide 3) pure Kaolinite seams. Average veining difficult to determine but may be ~ >50/ft which includes fine stkwk

547.7 - 548.9 hydrothermal Δ on ~ 2+ stages Δ - finely clasted w/ 1-2mm flesh or lt green clasts w/ matrix rich SiO_2 w/ interm. open spaced vuggy druzy qtz w/ py + marcas + kaolinite fill

560.5 - 651.3 C2C predominantly w/ very few zones of C1C moderatly perv. argillic clay alt. w/ few local str. argillic zones. Clasts consist of CT w/ buff to flesh coloration w/ in tuffaceous buff to green clay alt. matrix. predom. poorly sorted. moderate veining through 601.5 w/ fine hairline to 2mm qtz stkwk w/ py + clay. Predom veining in coarser druzy vuggy qtz lined vns filled w/ Kaolinite + marcasite + py. Averaging ~ 4-6 vns/ft

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
528-533				<	<
533-538				.002	.04
538-543				.007	.05
543-548				.006	.06
548-553				<c	.04
553-558				.004	.05
558-563				.003	.04
563-568				.002	.03
568-573				<	.04
573-578				c	.04
578-583				.002	.06
583-588				.005	.03 / .03
588-593				.002	.04
593-598				.002	.04

HOLE # RL-207C LOGGED BY KLK DATE 9-81 PAGE 4 OF 9

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.	COLOR
610	98	20°		±2% diss tvn py tvn marcasite		Mbl M~ M celad	Lt sage green + deep sea green
620	99	70° qtz sulf clay vns				M-S bl M~ celad	
630	97					Mbl ±M~ M celad	
640	94			3-4% py + marc + stib + barite ~2% diss tvn py tvn marcasite			
650	95		contact 30°		30°		
660	98	15° 80° qtz sulf clay vns		2-3% diss tvn py + vn marcasite		Wbl M~S celad	deep sea green matrix bl clasts
670	94						

DESCRIPTION

400 - 651.3 CT

651.3 - 710 UPPER BUD

601.5 - 630 bleaching decreases; celadonite ↑, overall veining decrease to 2-3 vns/ft of druzy qtz lined locally vuggy veins w/ kaolinite + marcasite + pyrite fill. + local barite

630 - 634.5 coarse veining increases w/ druzy vuggy qtz lined vns filled w/ kaolinite + marcasite + pyrite + local pods of crystalline stibnite + barite. ~3-5 vns/ft up to 10 mm wide

634.5 - 651.3 w-m pervasive bleaching w/ w-m perv. celadonite alt. veining predom consists of druzy vuggy open spaced qtz filled w/ kaolinite + marcasite + pyrite. Averaging ~2-4 vns/ft. Locally w/ fine hairline qtz-py ± clay ± celadon stkwk

651.3 - 710 UPPER BUD

Bedded Lithic Lapilli Tuff - heterolithic, bedded @ 60 → 80° to CA. predom poorly sorted w/ few local finely clasted 1-2 mm beds. Clasts are predom bleached white; locally eaten out. Pervasive celadonite + clay alt matrix. Over all clast supported. weak to moderate veining throughout. Consisting of druzy qtz encapsulated kaolinite + pyrite + marcasite ± local barite. Averaging ~3-7 vns/ft

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
595-603				.004	.46
603-608				.002 / <	<
608-613				.031	.06
613-618				< / <	.06 / <
618-623				<	.10
623-628				.002	.04
628-633				.004	.96
633-638				.008	.29
638-643				.003	.06
643-648				.003	.03
648-653				.006	.12
653-658				# .008 / .024 / .063	.07
658-663				.016	.14
663-668				.017 / .170 / # .034	.10

HOLE # RL-207C LOGGED BY KLK DATE 9-81 PAGE 5 OF 9

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.	COLOR
680	101	0°		3% of diss + vn py + vn marcasite + barite		m bl clast M STR celad	deep sea green matrix w/ white clasts
	97	80° qtz clay sulf barite vns				S	
690	99			+ STINGER		m perv bl m-s local X w celad	med to lt sage grn clasts w/ lt grn bl matrix
700	99		60° vn Δ vn Δ vn Δ

HOLE # RL-207C LOGGED BY KLK DATE 9-81 PAGE 6 OF 9

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.	COLOR
750	95, 83, 35, 91	15, 80° qtz sulf clay vns, 25°, 30° VN	FAULT 80°	7-10% diss + VN py + blk sulf ?; 3-4% @ above	80°, 25°	wbl XXC; M-S bl S XXX	Lt gray to dk gry; Buff
760	98	60° qtz sulf clay vns		±4% diss + VN py + mbr casite or bronze metallic or chalcopy		M bl w-M poss local X	Lt gray buff + peach
770	97	65° clay sulf ±qtz vns		2-3% @ above		S bl m	chalk white
780	103			4-5% @ above		S bl S	
790	91			±3% @ above			
800	103	40°; 90° @ above					
810	104	0°; 80° @ above					

SOUTH RIDGE FAULT

Intense sericitization w/clays

DESCRIPTION

727.7-742.2 L. BUD
742.2-1003.5 DT

739.4-742.2 L Bud - w/ secondary brecciation, S perv. silicif. w/ local open spaced vns filled w/ 1-2mm cubes of barite + Kaolin + qtz + poss. stibnite

742.2-1013.5 DOZER TUFF

SRF? 742.2-749.4 Lt gray intensely silicified fault breccia poorly sorted <1mm → 20 mm sized clasts - subrounded to angular 4-5 phases of brecciation clasts are white to flesh to lt green to pure gray sulfide rich. 1) Riddled w/ fine qtz ± pyrite hairline stkwk - uncountable At least 3 phases of veining: 2) veins Δ- cross cutting most veins 3) black fine sulfide rich qtz barite + white clay vns Ranging from 10-50 vns/ft.

749.4-753 perv. silic., brecciated; riddled w/ qtz stkw w/ intermittent clay gouge zones - local broken rubble, vns w/ qtz, Kaolin ± sericite + marcasite + py vns > 50/ft

753-767.5 DT perv. m bl, Intermittently tectonically brecciated, 1) Riddled w/ fine hairline qtz stockwork 2) 1-3mm veins of qtz, Kaolinite + py + marcasite 3) few local hydrothermal breccia vns Total veining is ± 50 vns/ft; predom fine; tight

767.5-858 Chalky white intensely to mod clay + sericite alt DT. Strongly bleached. Intermittently tectonically brecciated; crackle fractured - alt textures difficult to distinguish due to intensity of argillic alt. Finely riddled w/ hairline translucent lt green clay ± qtz stkwk w/ random orientation. Intensely riddled w/ short offset veinlets of qtz + bronze bum sulfide? chalcopy? Averaging > 50 vns/ft. 779-797 broken rubble

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
742.4-746				.005	.41
746-749.4				.007/.009	.16
749.4-754				.022	.18/.21
754-759				.016	.15
759-764				.009	.15
764-769				.004	.19
769-773				.052	.16
773-778				.06	.17
778-783				.016	.35
783-788				.009	.26
788-793				.031	.17
793-798				.019	.23
798-803				.010/.011	.32
803-808				.020	.07

HOLE # RL-207C LOGGED BY KLK DATE 9-81 PAGE 1 OF 9

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.	COLOR
820	100	0°		±3% diss + vn py + chalc + bornz + metall?		sbl s	chalk white
830	99	30° chalcopy clay qtz vns		±5% diss + vn py + chalco py		m bl w-m	lt white hint grn + flesh
840	103			3% @ above			
850	104			±5% diss + vn py + chalco py vns + marcasite		sbl s	chalk white
860	101.5	0°		2-3% py + vn marcasite		w-m bl w hint grn	flesh + hint grn
870	100	4% qtz clay sulf vns		6-7% diss + vn py + chalc py + marcasite		w-m bl tr m x hint celad	flesh + lt grn
880	98	20° 75° qtz clay sulf vns; Δ vn 25°		3-4% @ above			

Intense clay + sericite alt.

DESCRIPTION

742.2 - 1003.5 DT

807.5 - 817.7 broken rubble

818 - 839 Decrease in overall argillic clay + sericite alt. to M. Remains finely tectonically to crackle brecciated. Decrease in overall lt green clay ± qtz hairline stkwk. Prominent veining consists of 1-3 mm veins filled w/ qtz Kaolinite + chalcopyrite + py + poss local dk gray earthy oxide (Cu?) Veining average ~ 4-12 vns/ft w/ local $CaCO_3$

839 - 857 Intense zone of chalky white argillic clay + sericite pervasive alt. crackle to tectonic brecciation. Riddled w/ lt green qtz ± clay fine hairline stkwk. Predominant veining consists of 1-10 mm veins filled w/ qtz + Kaolinite + sericite + chalcopyrite + pyrite + local marcasite ± $CaCO_3$ veins average ~ > 50/ft for fine stkwk; predom veining is ~ 7-12 vns/ft 852.8 - 856.7 broken rubble

857 - 867.5 Decrease in overall argillic clay + sericite alt. perv. weak smectite grn alt veining decreases to ~ 4-6 vns/ft for 1-2 mm qtz Kaolin, py, marca vns w/ drop in chalcopy content. Still riddled w/ fine lt green - qtz ± clay stkwk > 50/ft

867.5 - 875.5 DT - pervasively brecciated w/ predom red orange/flesh colored clasts w/ in lt green matrix, fracture surfaces w/ lt green clay, m-s perv. silicification. strongly veined w/ 2-3 phases: 1) fine qtz - lt grn ± clay hairline stkwk > 50/ft 2) $CaCO_3$ ± py 3) qtz + Kaolinite + $CaCO_3$ + py + chalco + marcasite ~ 7 → 40 + 50 vns/ft

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
808-813				.038	.13
813-818				.008	.16
818-823				<	.05
823-828				≤	≤
828-833				.012	.07
833-838				.008	.03
838-843				.006	.14 / .14
843-848				≤	.09
848-853				.008	.13
853-858				.025	.86
858-863				.003	.14
863-868	263-268 (in assay report)			.002	.26
868-873				.003	.07
873-878				.006	.08

HOLE # RC-207C LOGGED BY KLK DATE 9-81 PAGE 8 OF 9

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.	COLOR
890	100	predom sub ∥		±3% diss +VN py+ VN marca site		w-m bl w poss hint grn select	buff w hint grn w/ intermittent wk flesh coloration
	100	30° plus 50°-70° qtz sulfid clay CaCO3 VNS		±5% diss +VN py+ VN marca site +chal copy.			
900	99		Δ 45° VN	±2% diss +VN py +VN marca site			
910	101			3-4% @ above			
920	101	40° CaCO3 clay sulf ±qtz VNS	10°	2-3% diss +VN py +VN marca site + wk local chalco py			
930	96		chaled VN 30°				
940	100						
950							

DESCRIPTION

742.2 - 1003.5 DT

875.5 - 1003.5 Dozer Tuff - fine grained densely welded, intermittently tectonically brecciated to crackle fracture w/ local rotation of subrounded to angular clasts. Weak intermittent hard waxy textured clay along fractures & filling interstices of tectonically fractured rock fabric > 50 fine fracts / ft. Predominant veining is primarily subparelle to core axis & is composed of calcite + py + Kaolinite + local marcasite w/ wk local chalcopy ± qtz. The veining varies throughout:

875.5 - 888 ~ 11-25 vns/ft; are tight vns ± 1-2 mm

888 - 901: veins average ~ 5-17 vns/ft & intensely riddled w/ fine hairline qtz stkwk; > 50/ft composed of qtz - py ± clay + CaCO3

901 - 975.2 veins average ~ 5-8/ft @ describ above & become predom sub ∥ to CA. from 918-975.2. Fine hairline qtz stkwk intermittently riddled thruout.

902.1 - 902.5 vein breccia @ 45° to CA. finely clasted ~ 2 stgs Δ - clast supported w/ str SiO2 matrix locally w/ m-s concentra. of py clasts are subrounded to angular.

924 - 927 w/ yellow clay + green chalcedony + CaCO3 + py + marc. VNS ± 30° to CA.

942 - 942.3 same @ above

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
878-883				.002	.06
883-888				<	.06
888-893				<	.03
893-898				<	.09
898-903				.004	.08
903-908				< / <	.02
908-913				<	.04
913-918				.003	.07
918-923				.002	.06
923-928				.005	.07 / .08
928-933				<	.04
933-938				<	.05
938-943				<	.05
943-948				.002 / .002	.05 / .06

HOLE # RL-207 LOGGED BY KLK DATE 9-81 PAGE 9 OF 9

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.	COLOR
960	95	0-40°		2-3% diss tuns py tun marcasite + local chalcopy		M bl M ≈	yellow buff w hint grn
970	102	±60°				M bl M ≈ poss w smect	
980	101	CaCO3 qtz sulf clay vns	2' ±30° 2 shear zone		30°	S bl 3 ≈	lt sage green + flesh
990	102					M bl w ≈ wx tu smect	
1000	95	40° 99 ±30° 45 ΔVN 45°	1	+4% @ above		m bl tu ≈ m-s xx w smect	lt grn buff + GRAY
1010	95	qtz CaCO3 sulf VNS 65° 90°	FAULT CONTACT	S-7% @ above ±3% disc tun py + local replac marcasite		M xx w ≈ carbonaceous	BLACK
TD 1023	44	FOLIATION 30° qtz CaCO3 py VNS					

FAULT @ 45° to CA

DESCRIPTION

742.2 - 1003.5 DT
1003.5 - 1023 JURASSIC Shales

949 - 954 ↑ pervasive argillic alt w/ probable poss drilling wk OXIDATION giving wk golden hue content of $CaCO_3$ ↑ in veins w/ assoc chalcopy

975.2 - 977.2 pure clay gouge shear zone w/ pervasive lt green to buff hue

977.2 - 1003.5 argillic alt. decreases throughout. Any Δ is predom. dry tectonic & clast supported

977.2 - 993.5 Veins are tighter & finer mostly 1-2 mm w/ $CaCO_3$ + py + marcasite + local chalcopy + kaolinite ± qtz ~ 6-15 vns/ft Riddled w/ fine qtz or $CaCO_3$ + sulf hairline stkwk - un countable

993.5 - 1003.5 strongly veined 3 phases 1) fine hairline qtz or $CaCO_3$ + sulf. ± clay 2) hydro Δ uno 3) ≤ 2mm qtz - $CaCO_3$ + clay + py + marcas. ± chalco + barite averag ~ 30-50 vns/ft

1001.5 - 1002.4 vein breccia - intensely silicified SiO_2 + sulf rich matrix supported w/ angular to subrounded clasts. 3-4 stgs Δ. clast bl buff to lt grn.

1002.4 - 1003.5 DT - argillic - w - tect bxa

1003.5 - 1023 Jurassic Shale -

1003.5 - 1004.5 transitional DT + JT breccia mod xx w/ seams of py + qtz @ contact clast rounded to ¾

1004.5 - 1023 Foliated black shales @ 60-90° to CA w/ fine gray sandy seams ∥ to foliat. carbonaceous most veining is perpendicular to foliat. consisting of qtz + py + $CaCO_3$ ± local marcas + local grn clay

VNS ≤ 2mm @ 3-6 uno/ft 1004.5 - 1005.5 is silicif - ms

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
948-953				<	.06
953-958				.002/.002	.05
958-963				.002	.03
963-968				.003	.05
968-973				<	.03
973-978				<	.03
978-983				<	.04
983-988				<	<
988-993				.015	.03
993-998				<	<
998-1003.5				<	.04
1003.5-1008				.006	.05
1008-1013				.004/.010	.04
1013-1018				<	.05/.05
1018-1023				<	.05

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: Dozer LOGGED BY: SAS

HOLE NO.: RL-207C DIP: Vertical CORE SIZE: HQ DATE: 8-23

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	7	96	82	1.5	40-65°	VN, ± VG/TH-OP, FD/CLY, ± QTZ/R
405	410	5'	5.2	4.3		104	86	0.8		Note: Clay gouge 405'-405.5'
					4				10-40°	VN, ±VG/TH-OP, FD/CLY, ±QTZ/R
410	415	5'	5.0	4.65	4	100	93	0.8	50-65°	VN, ±VG/TH, FD/CLY, ±QTZ/R
415	420	5'	4.65	4.5	7	93	90	1.5	30-60°	VN, ±VG/TH-OP, FD/QTZ, CLY, ±PY/PL-R
420	425	5'	5.0	4.65	3	100	93	0.6	50-65°	VN/TH, FD/CLY/PL-R
425	430	5'	4.8	4.8	1	96	96	0.2	50°	VN/TH, FD/CLY/PL
430	435	5'	4.95	4.95	4	99	99	0.8	50-60°	VN, ±VG/TH, FD/CLY, ± QTZ/PL, W-R
435	440	5'	4.9	4.9	6	98	98	1.2	20-60°	J, VN/TH, FD/CLY, ±PY/W
440	445	5'	5.05	4.5	8	101	90	1.6	0-70°	J, VN/TH, FD/CLY, ±QTZ/W-R
445	450	5'	5.1	5.1	7	102	102	1.4	0-75°	J, VN/TH, FD/CLY, ±QTZ/R
450	455	5'	5.05	4.5	7	101	90	1.4	25-75°	J, VN/TH, FD/CLY/R
455	460	5'	4.7	4.4	5	94	88	1.1	70-85°	J, VN/TH, FD/CLY/W-R
460	465	5'	5.05	4.35	8	101	87	1.6	50-85°	J, VN/TH, FD/CLY/W-R
465	470	5'	4.55	4.25	1	91	85	2.0	35°	VN, VG/OP, FD/QTZ, CLY, MAR/R
					8				40-90°	J, VN/TH, FD/CLY/W
470	475	5'	5.0	4.6	6	100	92	1.2	20-60°	J, VN/TH, FD/CLY/R
475	480	5'	5.0	5.0	3	100	100	0.6	40-50°	J, VN, ±VG/TH, FD/CLY, ±QTZ/R
480	485	5'	5.05	5.05	6	101	101	1.2	40-65	J, VN/TH, FD/CLY/R
										Note: 485', contact of Bedded "Bud" with LBT
485	490	5'	4.95	4.95	3	99	99	0.6	20-80°	VN, ±VG/TH-OP, FD/QTZ, CLY/W-R
490	495	5'	4.8	4.8	6	96	96	1.3	20-75°	VN, ±VG/TH-OP, FD/QTZ, CLY, ±PY/W-R
495	500	5'	5.05	4.8	7	101	96	1.4	20-70°	VN/TH, FD/QTZ, CLY, ±PY/W-R
500	505	5'	4.9	4.9	4	98	98	0.8	20-90°	VN/TH, FD/CLY, ±PY/W
505	510	5'	4.75	4.35	10	95	87	2.1	10-90°	VN, ±VG/TH-OP, FD/QTZ, CLY/W-R
510	515	5'	4.95	4.4	8	99	88	1.6	0-85°	VN, ±VG/TH-OP, FD/CLY, ±QTZ/W-R
515	520	5'	4.2	3.6	6	84	72	1.4	20-55°	VN, ±VG/TH-OP, FD/CLY, QTZ/W-R
520	525	5'	5.0	4.7	8	100	94	1.6	20-65°	VN, ±VG/TH-OP, FD/QTZ, CLY, ±MAR/R
525	530	5'	4.95	4.85	4	99	97	0.8	20-55°	VN, VG/TH-OP, FD/QTZ, CLY/R
530	535	5'	5.0	5.0	5	100	100	1.0	35-80°	VN, ±VG/TH, FD/CLY, ±QTZ, MAR/W-R
535	540	5'	5.0	5.0	9	100	100	1.8	30-65°	VN, ±VG/TH-OP, FD/QTZ, CLY/W-R

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: Dozer LOGGED BY: SAS

HOLE NO.: RL-207 C DIP: vertical CORE SIZE: HQ DATE: 8-23-91

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
540	545	5'	5.0	3.3	13	100	66	2.6	30-80°	VN, ±VG/TH, FD/CLY, ±QTZ/W-R
545	550	5'	3.7	1.9		74	38	2.4		Note 544.5'-547.7' Clay-gouged and Crumbly
					9				60-85°	VN, ±VG/TH, FD/CLY, ±QTZ/R
550	555	5'	3.8	1.6		76	32	3.4		Note: 550'-560' contains zones of
										broken rubble, and easily crumbled core.
					13				25-70°	J, VN/TH, FD/CLY/R
555	560	5'	4.5	1.75	12	90	35	2.7	45-85°	J, VN, ±VG/TH, FD/CLY, ±QTZ/R
560	565	5'	4.95	4.15	7	99	83	1.4	50-70°	VN/TH, FD/CLY, ±QTZ/R
565	570	5'	4.3	4.1		86	82	0.2		Note: 568.5'-569.7' Clay gouge.
					1				60°	J, VN/TH, FD/CLY/R
570	575	5'	5.0	4.75	6	100	95	1.2	30-60°	J, VN/TH, FD/CLY/W-R
575	580	5'	5.05	4.7	5	101	94	1.0	55-65°	J, VN, ±VG/TH, FD/CLY, ±QTZ/R
580	585	5'	4.65	4.65	2	93	93	0.4	40-75°	J, VN/TH, FD/CLY/PL, W
585	590	5'	5.05	5.05	2	101	101	0.4	55°	VN, VG/TH, FD/QTZ, CLY/R
590	595	5'	4.95	4.95	6	99	99	1.2	0-75°	VN, ±VG/TH-OP, FD/QTZ, CLY/R
595	600	5'	4.95	4.15	7	99	83	1.4	40-75°	J, VN/TH, FD/CLY/W-R
600	605	5'	4.8	4.45	7	96	89	1.5	40-70°	VN, ±VG/TH-OP, FD/QTZ, CLY/R
										Note: Clay gouge at 602.5'
605	610	5'	4.85	4.85	3	97	97	0.6	30-60°	VN, ±VG/TH-OP, FD/QTZ, CLY/R
610	615	5'	5.05	5.05	5	101	101	1.0	35-50°	VN, ±VG/TH-OP, FD/CLY, QTZ/R
615	620	5'	4.9	4.9	6	98	98	1.2	45-80°	VN, ±VG/TH-OP, FD/QTZ, CLY/R
620	625	5'	4.95	4.95	5	99	99	1.0	25-55°	VN, VG/TH-OP, FD/QTZ, CLY/R
625	630	5'	4.75	4.75	4	95	95	0.8	35-50°	VN, ±VG/TH, FD/CLY, QTZ, MAR/W-R
630	635	5'	4.85	4.7	9	97	94	1.9	30-85°	VN, ±VG/TH-OP, FD/CLY, QTZ, ±BAR/R
635	640	5'	4.45	4.45	5	89	89	1.1	20-55°	VN, VG/TH-OP, FD/QTZ, CLY, ±MAR/R
640	645	5'	4.65	4.05		93	81	1.3		Note: Clay gouge at 642' and 643'
					6				45-60°	VN/±VG/TH-OP, FD/CLY, ±QTZ/R
645	650	5'	4.65	4.15	4	93	83	0.9	30-45°	J, VN/TH, FD/CLY/R
650	655	5'	4.9	4.15	8	98	83	1.6	20-75°	VN, ±VG/TH-OP, FD/CLY, ±QTZ/W-R
655	660	5'	4.9	4.6	6	98	92	1.2	35-75°	VN, ±VG/TH, FD/QTZ, CLY/R
660	665	5'	5.0	4.4	6	100	88	1.2	45-75°	J, VN/TH, FD/CLY/R

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: Dozer LOGGED BY: SAS

HOLE NO.: RL-207C DIP: Vertical CORE SIZE: HQ DATE: 8-25-91

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
665	670	5'	4.5	4.5	3	90	90	0.7	45°	J, VN / TH, FD / CLY / R
670	675	5'	5.0	5.0	4	100	100	0.8	50-55°	J, VN / TH, FD / CLY / R
675	680	5'	5.0	4.7	7	100	94	1.4	40°-60°	VN, ±VG / TH-OP, FD / CLY, ±QTZ / R
680	685	5'	4.9	4.4	6	98	88	1.2	0-65°	VN, ±VG / TH-OP, FD / CLY, ±QTZ, BAR / R
										Note: 684.5'-686' strongly argillized, crumbles easily.
685	690	5'	4.5	3.8	7	90	76	1.6	30-75°	VN, TH, FD / CLY / W-R
690	695	5'	4.9	4.9	1	98	98	0.6	15°	VN, VG / TH-OP, FD / QTZ, CLY, BAR / R
					2				45-75°	J, VN / TH, FD / CLY, ±QTZ / W-R
695	700	5'	4.75	4.3	6	95	86	1.3	5-80°	J, VN / TH, FD / CLY / W-R
700	705	5'	5.05	4.85	2	101	97	1.6	70°	J, VN / TH, FD / CLY / W-R
					6				0-65°	VN, ±VG / TH-OP, FD / QTZ, CLY, ±MAR / R
705	710	5'	4.8	4.8	4	96	96	0.8	35-70°	VN, VG / TH-OP, FD / QTZ, CLY, ±BAR / R
710	715	5'	4.95	4.3	20	99	86	4.0	5-65°	VN, ±VG / TH-OP, FD / CLY, ±QTZ / W-R
715	720	5'	4.8	3.7	13	96	74	2.7	0-50°	VN / TH-OP, FD / CLY, ±QTZ / W-R
720	725	5'	5.0	4.35	13	100	87	2.6	15-90°	VN, ±VG / TH-OP, FD / CLY, QTZ / W-R
725	730	5'	5.85	4.9	12	117	98	2.1	0-80°	J, VN / TH, FD / CLY, ±QTZ / W-R
730	735	5'	5.0	5.0	5	100	100	1.0	0-70°	J, VN / TH, FD / CLY, ±QTZ, MAR / R
735	740	5'	4.75	4.75	7	95	95	1.5	0-60°	VN, ±VG / TH-OP, FD / CLY, ±QTZ, MAR / R
740	745	5'	5.05	3.65	14	101	73	2.8	35-70°	VN, ±VG / TH-OP, FD / CLY, ±QTZ, ±BAR / R
745	750	5'	3.65	3.05	7	73	61	1.8	25-60°	VN / TH, FD / CLY, QTZ / W-R
750	755	5'	3.0	1.05		60	11	1.7		Note: 752'-753', Clay gouge
					5				0-85°	VN / TH, FD / CLY, QTZ / R
755	760	5'	4.9	4.6	10	98	92	2.0	0-90°	VN / TH, FD / CLY, ±QTZ / W-R Note: Clay Gouge at 759'
760	765	5'	4.9	3.35	13	98	67	2.7	0-60°	VN / TH, FD / CLY, ±QTZ / W-R
										Note: 760.5'-761.5' Broken rubble.
765	770	5'	4.5	4.0	6	90	80	1.3	40-75°	VN / TH, FD / CLY, ±QTZ / W-R
770	775	5'	5.0	4.4	9	100	88	1.8	20-65°	VN / TH, FD / CLY / W-R
775	780	5'	4.9	3.75	6	98	75	1.2	0-55°	VN / TH, FD / CLY / R
										Note: 779.5'-780' Clay gouge and rubble
780	785	5'	4.3	2.95	6	86	59	1.4	20-55°	VN / TH, FD / CLY / W-R
										Note: 782'-783' Broken rubble.

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: Dozer LOGGED BY: SAS

HOLE NO.: RL-207C DIP: Vertical CORE SIZE: HQ DATE: 8-25-91

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
785	790	5'	5.15	5.15	3	103	103	0.6	20-70°	VN, ± VG/TH-OP, FD/CLY, ± QTZ/W-R
790	795	5'	5.0	5.0	1	100	100	0.2	55°	VN/TH, FD/CLY, QTZ/R
795	800	5'	4.3	4.3	2	86	86	0.5	30-45°	VN/TH, FD/CLY, ± QTZ/R
800	805	5'	5.0	5.0	2	100	100	0.4	85-55°	VN/TH, FD/CLY, ± QTZ/W-R
805	810	5'	5.05	3.7	3	101	74	3.0	0-45°	VN/TH, FD/CLY, ± PY, CAL/PL, W-R
					12				40-90°	J, VN/TH, FD/CLY/PL, W
810	815	5'	5.15	5.15		103	103	0.4		Note: 810'-817.4' strongly argillized.
					2				45-60°	VN/TH, FD/CLY, ± CAL, ± QTZ/R
815	820	5'	4.9	4.9	2	98	98	0.4	30-70°	VN/TH, FD/CLY, CAL ± PY/R
820	825	5'	5.05	4.8	1	101	96	0.2	60°	VN/TH, FD/CLY, CAL/R
825	830	5'	4.8	4.8	0	96	96	0.0	—	—
830	835	5'	4.95	4.5	2	99	90	0.4	25-35°	VN/TH, FD/CLY, ± PY, CAL/R
835	840	5'	5.15	5.15	4	103	103	0.8	25-75°	VN/TH, FD/CLY, ± QTZ, PY, CAL/W-R
840	845	5'	5.0	4.3	9	100	86	1.8	35-55°	VN/TH, FD/CLY ± PY, ± CAL/W-R
845	850	5'	5.1	4.75	11	102	95	2.2	25-70°	VN/TH, FD/CLY, ± CAL, PY/W-R
850	855	5'	4.85	3.95	6	97	89	1.2	40-90°	J, VN/TH, FD/CLY, ± CAL/W-R
855	860	5'	4.95	4.95	4	99	99	0.8	35-50°	VN/TH, FD/CLY, ± CAL/PL, W
860	865	5'	4.95	4.95	3	99	99	0.6	35-40°	VN/TH, FD/CLY, ± PY/PL, W
865	870	5'	4.85	4.4	7	97	88	1.4	40-75°	VN/TH, FD/CLY, CAL, ± PY/PL-R
870	875	5'	4.95	4.95	7	99	99	1.4	0-85°	VN/TH, FD/CLY, ± PY/W-R
875	880	5'	4.8	4.8	6	96	96	1.3	25-65°	VN/TH, FD/CLY, ± CAL, PY/PL-R
880	885	5'	5.05	5.05	7	101	101	1.4	15-70°	VN/TH, FD/CLY, ± CAL, ± MAR/W-R
885	890	5'	4.95	4.95	5	99	99	1.0	0-45°	VN/TH, FD/CLY, CAL/W-R
890	895	5'	4.95	4.95	3	99	99	0.6	35-65°	VN/TH, FD/CLY, ± PY/W-R
895	900	5'	5.1	4.8	2	102	96	0.4	60-70°	VN/TH, FD/CLY/R
900	905	5'	5.0	4.85	3	100	97	0.6	35-40°	VN/TH, FD/CLY, ± CAL/W-R
905	910	5'	4.65	2.95	10	93	59	2.2	20-65°	VN/TH, FD/CLY, ± CAL, PY, MAR/PL, W
										Note: 907.5'-910': Rubble, preferential angles indicated.
910	915	5'	4.85	3.6	8	97	72	1.6	30-60°	VN/TH, FD/CLY, ± CAL/W-R
915	920	5'	5.1	4.8	7	102	96	1.4	0-60°	VN/TH, FD/CLY ± PY/R
920	925	5'	4.9	4.7	6	98	94	1.2	40-60°	VN/TH, FD/CLY/W-R

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: Dozer LOGGED BY: SAS

HOLE NO.: RL-207C DIP: Vertical CORE SIZE: HQ DATE: 8-26-91

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
925	930	5'	5.15	5.15	1	103	103	0.2	40°	VN/TH, FD/CLY, ± CAL/W
930	935	5'	4.95	4.95	7	99	99	1.4	25-60°	VN/TH, FD/CLY, CAL/W-R
935	940	5'	4.55	4.55	2	91	91	0.4	40-65°	VN/TH, FD/CLY/W-R
940	945	5'	4.9	4.55	4	98	91	0.8	25-30°	VN/TH, FD/CLY, ± CAL/PL, W
945	950	5'	4.8	4.8	2	96	96	0.4	10-55°	VN/TH, FD/CLY, CAL/R
950	955	5'	4.8	4.6	4	96	92	0.8	40-45°	VN/TH, FD/CLY, CAL/R
955	960	5'	4.5	4.5	3	90	90	0.7	50-65°	VN/TH, FD/CLY, ± CAL, PY/PL, W
960	965	5'	4.9	4.9	1	98	98	0.2	65°	VN/TH, FD/CLY, CAL/R
965	970	5'	4.95	4.6	3	99	92	0.6	30-60°	VN/TH, FD/CLY, ± CAL/R
										Note: 967'-967.5' Argillized rubble.
970	975	5'	5.0	4.9	3	100	98	0.6	0-65°	VN/TH, FD/CLY, ± CAL/PL-W
975	980	5'	5.0	3.35		100	67	1.8		Note: 976'-977.5' Argillized rubble and small core chunks
					9				30-55°	J, VN/TH, FD/CLY, ± CAL/W-R
980	985	5'	5.0	3.95	9	100	79	1.8	25-60°	VN/TH, FD/CLY, CAL/PL-R
985	990	5'	5.15	5.15	1	103	103	0.2	40°	VN/TH, FD/CLY, CAL, MAR/W
990	995	5'	5.0	4.45	4	100	89	0.8	40-65°	VN/TH, FD/CLY, CAL/R
995	1000	5'	4.7	4.7	5	94	94	1.1	45-65°	VN/TH, FD/CLY, ± CAL/W-R
1000	1005	5'	4.9	4.25	11	98	85	2.4	30-65°	VN/TH, FD/CLY/W-R
					1				20°	VN, VG/TH-OP, FD/QTZ/PL, R
										Note: Contact w/ black shale, @ 1003.5'
1005	1010	5'	4.4	3.1	15	88	62	3.4	25-90°	J, VN/TH, FD/QTZ, CLY/W
1010	1015	5'	4.8	2.65	17	96	53	3.5	45-75°	J, VN/TH, FD/CLY/W
1015	1023	8'	2.7	1.5	7	34	19	2.6	40-85°	J, VN/TH, FD/CLY/W
										Note: Broken rubble, core loss 1017'-1023'
	T.D. 1023'									

RL207C

Bondar-Clegg, Inc.
625 Spice Island Dr.
Building 1, Unit A
Sparks, Nevada 89431
702 (359-9330)

BONDAR-CLEGG

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

Geochemical Lab Report

SEP 23 1991

REPORT: R91-11923.4 (COMPLETE)

REFERENCE INFO: RL207C 20 TO 400

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

SUBMITTED BY: KENNER
DATE PRINTED: 18-SEP-91

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au DUP Gold Duplicate	3	0.002 OPT		Fire Assay
2	Au Gold	22	0.002 OPT		Fire Assay
3	AG DUP AG DUPLICATE	3	0.02 OPT		Fire Assay
4	Ag Silver	22	0.02 OPT		Fire Assay

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
Z OTHER DRILL TYPES	21	2 -150	21	SAMPLE PREP <100 GS	21
P PREPARED PULP	1	4 AS REC'D	1	AS RECEIVED, NO SP	1

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

INVOICE TO: MR. TIM KUHL

Bondar-Clegg, Inc.
625 Spice Island Dr.
Building 1, Unit A
Sparks, Nevada 89431
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BONDAR-CLEGG

Geochemical Lab Report

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

REPORT: R91-11923.4 (COMPLETE)

DATE PRINTED: 18-SEP-91
PROJECT: ROSEBUD

STANDARD NAME	ELEMENT UNITS	Au DUP OPT	Au OPT	AG DUP OPT	Ag OPT
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
ASSAY STD		-	0.012	-	0.32
Number of Analyses		-	1	-	1
Mean Value		-	0.0120	-	0.320
Standard Deviation		-	-	-	-
Accepted Value		-	0.012	-	0.24

RL207

Bondar-Clegg, Inc.
625 Spice Island Dr.
Building 1, Unit A
Sparks, Nevada 89431
702 (359-9330)

BONDAR-CLEGG

SEP 30 1991

Geochemical Lab Report

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

REPORT: R91-11844.4 (COMPLETE)

REFERENCE INFO: RL 207C 263-1023

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

SUBMITTED BY: KENNER
DATE PRINTED: 24-SEP-91

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au Gold	115	0.002 OPT		Fire Assay
2	Au DUP Gold Duplicate	16	0.002 OPT		Fire Assay
3	AG DUP AG DUPLICATE	10	0.02 OPT		Fire Assay
4	Ag Silver	115	0.02 OPT	MULT ACID TOT DIG	Atomic Absorption
5	AU Dup Gold Duplicate	3	0.002 OPT		Fire Assay

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
D DRILL CORE	110	2 -150	110	CRUSH,PULVERIZE -150	110
P PREPARED PULP	5	4 AS REC'D	5	AS RECEIVED, NO SP	5

NOTES: # indicates ERRATIC RESULTS

REMARKS: SAMPLE #RL207C 863-868 WAS LISTED AS INCLUDED BUT IS MISSING. SAMPLE RL207C 263-268 WAS NOT LISTED BUT IS INCLUDED. THE SUBMITTAL LISTED 385-390 THRU 868-873. THE SAMPLES READ 485-490 THRU 1018-1023.

#ERRATIC RESULTS

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

INVOICE TO: MR. TIM KUHL

Rickey L Smith

Bondar-Clegg, Inc.
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702 (359-9330)

BONDAR-CLEGG

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

Geochemical Lab Report

DATE PRINTED: 24-SEP-91

REPORT: R91-11844.4 (COMPLETE)

PROJECT: ROSEBUD

STANDARD NAME	ELEMENT UNITS	Au OPT	Au DUP OPT	AG DUP OPT	Ag OPT	AU Dup OPT
AU ASSAY STD		0.149	-	-	-	-
AU ASSAY STD		0.148	-	-	-	-
Number of Analyses		2	-	-	-	-
Mean Value		0.1485	-	-	-	-
Standard Deviation		0.000071	-	-	-	-
Accepted Value		0.150	-	-	-	-
ANALYTICAL BLANK		<0.002	-	-	-	-
ANALYTICAL BLANK		<0.002	-	-	-	-
ANALYTICAL BLANK		<0.002	-	-	-	-
Number of Analyses		3	-	-	-	-
Mean Value		0.0010	-	-	-	-
Standard Deviation		0.000000	-	-	-	-
Accepted Value		0.002	-	-	-	-
GEO TRACE STD1(1989)		-	-	-	0.96	-
GEO TRACE STD1(1989)		-	-	-	0.96	-
GEO TRACE STD1(1989)		-	-	-	0.98	-
GEO TRACE STD1(1989)		-	-	-	1.00	-
Number of Analyses		-	-	-	4	-
Mean Value		-	-	-	0.973	-
Standard Deviation		-	-	-	0.0232	-
Accepted Value		-	-	-	1.05	-
AG ASSAY		-	-	-	3.10	-
AG ASSAY		-	-	-	3.12	-
AG ASSAY		-	-	-	3.16	-
AG ASSAY		-	-	-	2.90	-
Number of Analyses		-	-	-	4	-
Mean Value		-	-	-	3.070	-
Standard Deviation		-	-	-	0.1157	-
Accepted Value		-	-	-	3.03	-

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STANDARD NAME	ELEMENT UNITS	Au OPT	Au DUP OPT	AG DUP OPT	Ag OPT	AU Dup OPT
AU ASSAY STD		0.014	-	-	-	-
Number of Analyses		1	-	-	-	-
Mean Value		0.0141	-	-	-	-
Standard Deviation		-	-	-	-	-
Accepted Value		0.015	-	-	-	-

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PROJECT: ROSEBUD

SAMPLE NUMBER	ELEMENT UNITS	Au DUP OPT	Au OPT	AG DUP OPT	Ag OPT
Z2 RL207C 20 25			<0.002		<0.02
Z2 RL207C 30 35			<0.002		<0.02
Z2 RL207C 50 55			0.002		0.02
Z2 RL207C 70 75		<0.002	<0.002	<0.02	0.02
Z2 RL207C 80 85			<0.002		<0.02
Z2 RL207C 95 100			<0.002		<0.02
Z2 RL207C 115 120			<0.002		0.02
Z2 RL207C 135 140			<0.002		<0.02
Z2 RL207C 155 160			0.007		0.04
Z2 RL207C 175 180			0.005		0.08
Z2 RL207C 195 200			0.004		0.07
Z2 RL207C 215 220			0.005		0.04
Z2 RL207C 235 240			0.004		0.07
Z2 RL207C 255 260		<0.002	<0.002	0.04	0.04
Z2 RL207C 275 280			<0.002		<0.02
RL207C 295 300			0.008		0.04
Z2 RL207C 315 320			<0.002		<0.02
Z2 RL207C 355 360			0.004		1.32
Z2 RL207C 370 375			0.006		0.04
Z2 RL207C 390 395		<0.002	0.003	0.06	0.04
P4 BA 92			0.032		0.14
Z2 RL207C 395 400			<0.002		0.05

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863-868?

SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Au DUP OPT	AG DUP OPT	Ag OPT	AU Dup OPT
D2 RL207C 263 268		0.002			0.26	
D2 RL207C 485 490		<0.002	0.002	0.04	0.03	
D2 RL207C 490 494		0.002			0.04	
D2 RL207C 494 498		0.002			0.05	
D2 RL207C 498 503		0.003	0.002	0.04	0.05	
D2 RL207C 503 508		0.013			0.05	
D2 RL207C 508 513		0.004			0.04	
D2 RL207C 513 518		0.010			0.04	
D2 RL207C 518 523		<0.002			<0.02	
D2 RL207C 523 528		0.013			0.06	
D2 RL207C 528 533		<0.002			<0.02	
D2 RL207C 533 538		0.002			0.04	
D2 RL207C 538 543		0.007			0.05	
D2 RL207C 543 548		0.006			0.06	
D2 RL207C 548 553		<0.002	<0.002		0.04	
D2 RL207C 553 558		0.004			0.05	
D2 RL207C 558 563		0.003			0.04	
D2 RL207C 563 568		0.002			0.03	
D2 RL207C 568 573		<0.002			0.04	
D2 RL207C 573 578		<0.002			0.04	
P4 BA 183		0.097			0.08	
D2 RL207C 578 583		0.002			0.06	
D2 RL207C 583 588		0.005		0.03	0.03	
D2 RL207C 588 593		0.002			0.04	
D2 RL207C 593 598		0.002			0.04	
D2 RL207C 598 603		0.004			0.46	
D2 RL207C 603 608		0.002	<0.002		<0.02	
D2 RL207C 608 613		0.031			0.06	
D2 RL207C 613 618		<0.002	<0.002		0.06	<0.002
D2 RL207C 618 623		<0.002			0.10	
D2 RL207C 623 628		0.002			0.04	
D2 RL207C 628 633		0.004			0.96	
D2 RL207C 633 638		0.008			0.29	
D2 RL207C 638 643		0.003			0.06	
D2 RL207C 643 648		0.003			0.03	
D2 RL207C 648 653		0.006			0.12	
D2 RL207C 653 658		0.008#	0.024		0.07	0.063
D2 RL207C 658 663		0.016			0.14	
D2 RL207C 663 668		0.170#	0.017		0.10	0.034
D2 RL207C 668 673		0.011			0.19	

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SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Au DUP OPT	AG DUP OPT	Ag OPT	AU Dup OPT
D2 RL207C 673 678		0.018		0.13	0.13	
P4 BA 184		0.033			0.24	
D2 RL207C 678 683		0.011			0.37	
D2 RL207C 683 688		0.007			0.07	
D2 RL207C 688 692		0.009			3.80	
D2 RL207C 692 696		0.010			0.14	
D2 RL207C 696 700		<0.002			0.12	
D2 RL207C 700 705		0.012	0.010		0.12	
D2 RL207C 705 710		0.005			0.67	
D2 RL207C 710 715		0.005			0.23	
D2 RL207C 715 720		0.006			0.09	
D2 RL207C 720 724		0.007			0.75	
D2 RL207C 724 727.7		0.004			0.12	
D2 RL207C 727.7 732		<0.002			0.28	
D2 RL207C 732 737		0.006			0.63	
D2 RL207C 737 742.4		<0.002			0.08	
D2 RL207C 742.4 746		0.005			0.41	
D2 RL207C 746 749.4		0.007	0.009		0.16	
D2 RL207C 749.4 754		0.022		0.21	0.18	
D2 RL207C 754 759		0.016			0.15	
D2 RL207C 759 764		0.009			0.15	
D2 RL207C 764 769		0.004			0.19	
P4 BA 185		0.021			0.25	
D2 RL207C 769 773		0.052			0.16	
D2 RL207C 773 778		0.060			0.17	
D2 RL207C 778 783		0.016			0.35	
D2 RL207C 783 788		0.009			0.26	
D2 RL207C 788 793		0.031			0.17	
D2 RL207C 793 798		0.019			0.23	
D2 RL207C 798 803		0.010	0.011		0.32	
D2 RL207C 803 808		0.020			0.07	
D2 RL207C 808 813		0.038			0.13	
D2 RL207C 813 818		0.008			0.16	
D2 RL207C 818 823		<0.002			0.05	
D2 RL207C 823 828		<0.002	0.002	<0.02	<0.02	
D2 RL207C 828 833		0.012			0.07	
D2 RL207C 833 838		0.008			0.03	
D2 RL207C 838 843		0.006		0.14	0.14	
D2 RL207C 843 848		<0.002	<0.002		0.09	
D2 RL207C 848 853		0.008			0.13	

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SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Au DUP OPT	AG DUP OPT	Ag OPT	AU Dup OPT
D2 RL207C 853 858		0.025			0.86	
D2 RL207C 858 863		0.003			0.14	
D2 RL207C 868 873		0.003			0.07	
P4 BA 186		0.268			0.07	
D2 RL207C 873 878		0.006			0.08	
D2 RL207C 878 883		0.002			0.06	
D2 RL207C 883 888		<0.002			0.06	
D2 RL207C 888 893		<0.002			0.05	
D2 RL207C 893 898		<0.002			0.09	
D2 RL207C 898 903		0.004			0.08	
D2 RL207C 903 908		<0.002	<0.002		0.02	
D2 RL207C 909 913		<0.002			0.04	
D2 RL207C 913 918		0.003			0.07	
D2 RL207C 918 923		0.002			0.06	
D2 RL207C 923 928		0.005		0.07	0.08	
D2 RL207C 928 933		<0.002			0.04	
D2 RL207C 933 938		<0.002			0.05	
D2 RL207C 938 943		<0.002			0.05	
D2 RL207C 943 948		0.002	0.002	0.06	0.05	
D2 RL207C 948 953		<0.002			0.06	
D2 RL207C 953 958		0.002	0.002		0.05	
D2 RL207C 958 963		0.002			0.03	
D2 RL207C 963 968		0.003			0.05	
D2 RL207C 968 973		<0.002			0.03	
P4 BA 187		0.027			0.24	
D2 RL207C 973 978		<0.002			0.03	
D2 RL207C 978 983		<0.002			0.04	
D2 RL207C 983 988		<0.002			<0.02	
D2 RL207C 988 993		0.015			0.03	
D2 RL207C 993 998		<0.002			<0.02	
D2 RL207C 998 1003.5		<0.002			0.04	
D2 RL207C 1003.5 1008		0.006			0.05	
D2 RL207C 1008 1013		0.004#	0.010		0.04	
D2 RL207C 1013 1018		<0.002		0.05	0.05	
D2 RL207C 1018 1023		<0.002			0.05	

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SAMPLE NUMBER	ELEMENT UNITS	Au DUP OPT	Au OPT	AG DUP OPT	Ag OPT
RL207C 70 75		<0.002	<0.002	<0.02	0.02
Duplicate			<0.002		<0.02
RL207C 255 260		<0.002	<0.002	0.04	0.04
Duplicate			<0.002		0.04
RL207C 390 395		<0.002	0.003	0.06	0.04
Prep Duplicate			<0.002		0.06

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SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Au DUP OPT	AG DUP OPT	Ag OPT	AU Dup OPT
RL207C 485 490		<0.002	0.002	0.04	0.03	
Prep Duplicate		0.002			0.04	
RL207C 498 503		0.003	0.002	0.04	0.05	
Duplicate		0.002			0.04	
RL207C 548 553		<0.002	<0.002		0.04	
Duplicate		<0.002				
RL207C 583 588		0.005		0.03	0.03	
Duplicate					0.03	
RL207C 603 608		0.002	<0.002		<0.02	
Duplicate		<0.002				
RL207C 653 658		0.0084	0.024		0.07	0.063
Duplicate		0.049				
RL207C 673 678		0.018		0.13	0.13	
Duplicate					0.13	
RL207C 700 705		0.012	0.010		0.12	
Duplicate		0.010				
RL207C 746 749.4		0.007	0.009		0.16	
Duplicate		0.009				
RL207C 749.4 754		0.022		0.21	0.18	
Duplicate					0.21	
RL207C 798 803		0.010	0.011		0.32	
Duplicate		0.011				
RL207C 823 828		<0.002	0.002	<0.02	<0.02	
Prep Duplicate		0.002			<0.02	
RL207C 838 843		0.006		0.14	0.14	
Duplicate					0.14	
RL207C 843 848		<0.002	<0.002		0.09	
Duplicate		<0.002				
RL207C 903 908		<0.002	<0.002		0.02	
Duplicate		<0.002				
RL207C 923 928		0.005		0.07	0.08	
Duplicate					0.07	

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RL207C 943 948		0.002	0.002	0.06	0.05	
Prep Duplicate		0.002			0.06	
RL207C 953 958		0.002	0.002		0.05	
Duplicate		0.002				
RL207C 1008 1013		0.004#	0.010		0.04	
Duplicate		0.010				
RL207C 1013 1018		<0.002		0.05	0.05	
Duplicate					0.05	

Chemex Labs Inc.

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

To: LAC MINERALS U.S.A. INC

1395 GREG ST., STE 107
SPARKS, NEVADA
89431

Project : ROSEBUD
Comments: ATTN: TIM KUHL

Certificate Date: 12-SEP-91
Invoice No. :I9121257
P.O. Number :

CERTIFICATE OF ANALYSIS A9121257

SAMPLE DESCRIPTION	PREP CODE		Au oz/T
C-00820	205	294	0.001
C-00821	205	294	0.001
C-00822	205	294	0.001
C-00823	205	294	0.001
C-00824	205	294	0.003
C-00825	205	294	0.002
C-00826	205	294	< 0.001
C-00827	205	294	< 0.001
C-00828	205	294	< 0.001
C-00829	205	294	< 0.001
C-00830	205	294	< 0.001
RL104 787-792	205	294	0.074
RL104 837-842	205	294	0.141
RL104 887-892	205	294	0.026
RL104 937-942	205	294	0.029
RL104 982-987	205	294	0.010
RL206C 828-833	205	294	0.006
RL206C 833-838	205	294	0.004
RL206C 838-843	205	294	0.005
RL206C 843-848	205	294	0.003
RL206C 848-853	205	294	0.009
RL206C 853-858	205	294	0.017
RL206C 858-863	205	294	0.006
RL206C 863-868	205	294	0.001
RL206C 868-873	205	294	0.001
RL206C 873-878	205	294	0.001
RL207C 523-528	205	294	0.002
RL207C 573-578	205	294	0.001
RL207C 623-628	205	294	0.002
RL207C 673-678	205	294	0.012
RL207C 720-724	205	294	0.004
RL207C 764-769	205	294	0.002
RL207C 813-818	205	294	0.008
RL207C 918-923	205	294	0.003
RL207C 968-973	205	294	< 0.001
RL207C 1018-1023	205	294	0.001
RL208C 477-482	205	294	0.011
RL208C 528-533	205	294	0.484
RL215 095-100	205	294	0.002
RL215 145-150	205	294	0.002

LAC

CERTIFICATION: Sandra M Adam

Chemex Labs Inc.

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PHONE: 702-356-5395

To: LAC MINERALS U.S.A. INC

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Project : ROSEBUD
Comments: ATTN: TIM KUHL

Page Number : 1
Total Pages : 1
Certificate Date: 14-SEP-91
Invoice No. : I9121509
P.O. Number :

CERTIFICATE OF ANALYSIS A9121509

SAMPLE DESCRIPTION	PREP CODE		Au oz/T
RL207C 175-180	208	294	0.004
RL207C 390-395	208	294	0.002
RL208C 165-170	208	294	0.001
RL208C 220-225	208	294	< 0.001
RL208C 315-320	208	294	0.002
RL208C 607-611.5	208	294	0.005
RL208C 649-652	208	294	0.014
RL209C 145-150	208	294	< 0.001
RL210C 100-105	208	294	0.001
RL210C 215-220	208	294	0.001
RL210C 302.5-306	208	294	0.002
RL210C 353-358	208	294	0.001
RL210C 400-405	208	294	0.003
RL210C 448-453	208	294	0.006
RL210C 492-497	208	294	0.008
RL210C 542-547	208	294	0.017
RL216 045-050	208	294	0.003
RL216 095-100	208	294	0.002
RL216 145-150	208	294	0.002
RL216 195-200	208	294	0.003
RL216 245-250	208	294	0.002
RL216 295-300	208	294	0.007
RL216 345-350	208	294	0.005
RL241C 059-064	208	294	0.001
RL241C 117-122	208	294	0.002
RL241C 164-167	208	294	0.003

CERTIFICATION: Sandra M Adam