60001397

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-170
AUTHOR	T. Kuhl; P Grafft
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; Steven Drilling; Lac Minerals (USA), Inc; Bandar-Clegg, Inc; Chemex Labs, Inc.
COMMODITY If not obvious	gold silver
NOTES	Drill log; geology; assay; total depth 853'; handwritten notes; also referred to as RL-170C; receipt; geochemistry; directional survey 25 p.

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:	MAG	
SCANNED:		

Revised: 1/22/08

DRILL LOGS
Rosebud

RL- 170

60001397 4010

6000 1297

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

DRILL LOG SUMMARY SHEET

PROJECT Rosebud

HOLE NUMBER RL-170 TOTAL DEPTH 853 LOGGED BY RKS

Date started 4/21/91

Date completed 4/22/91

Initial bearing —

Initial inclination -90°

Elevation 5222.4

Collar coordinates:

N 2703963.0

E 482905.1

Contractor: Stevens Drilling

Drill Type: RC / Core

Hole Size: 4½"

Drilling Conditions:

Footage: Wet / Dry 0-330' Dry

330- Wet

Comments: Double Jones Splitter

Wet: Gilson Splitter dry

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

DRILL HOLE RL-170

Page 1 of ____

Start 4/21 Finish

Section 1600 N

LOGGED BY _____

FINE-GRAINED TUFF
LITHIC LAPILLI TUFF

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

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK	% WASH RECOV.
														OB - Qal	<	<		
05															<	<		
10															<	<		
15															<	<		
														18' to Bedrock	<	.05		
20									lt Green Org. Yllw					F gm tuff w/ Yllw clay	<	.06		
25															<	.04		
30															<	.03		
35									lt Green wht Yllw					w/ trace Barite x-tals & ~1% Clear to milky Qtz	<	.07		
40									Org wht lt Green Yllw					slight decr. in FeOx	<	.08		
45														slight incr in FeOx	.006	.07		
50															<	.07		
55															<	.07		
60																		
65		x							Org wht lt Green				.1	1st Sulfide show w/ ~ 1% qtz vn	.003	.17		
70									Org red				0	Oxides	<	.08		
75									Red Org wht Grey				1	Redox Boundary	.004	.15		
80									Grey wht				5	wht clay & Grey sulfides; Sulfides	.003	.17		
85													5		<	.10		
90									lt Green Grey wht				3	F gm Tuff & clay	<	.07		
95									lt Grey wht				5		<	.09		
100		x x							& flesh				2	micro-Bx zone Fault Breccia ?	.005	.18		

Fault zone

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

DRILL HOLE RL-170

Page 2 of ____

LOGGED BY _____

FINE-GRAINED TUFF
LITHIC LAPILLI TUFF

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

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK	% WASH RECOV.
									lt Green Grey wht				1	F. grn. tuff w/ Green Chloritized phenos after Biotite? C+.	<	.08		
105													1	..	<	.09		
110													2		<	.10		
115													4	strg incr in sulf.	<	.07		
120									Peach				3		<	.09		
125													1		<	.09		
130													3		<	.11		
135													.5	(Rx appear to have been sheared → almost mylonitic?)	.003	.12		
140 Shear zone													.5		.004	.12		
145									Green lt Grey				.5	(very damp)	.004	.14		
150 Fault									Green Grey				1	(w/ Grey Fault Gouge)	.006	.14		
155													1	(w/ Grey Fault Gouge)	.003	.14		
160													2		.005	.14		
165													1		.003	.11		
170													1		.004	.15		
175													2	(Strg Clay alt)	.007	.14		
180													1		<	.05		
185													.5		<	.03		
190													1		<	<		
195													.5		<	<		
200																		

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

DRILL HOLE RL-170

Page 3 of ____

LOGGED BY _____

FINE-GRAINED TUFF Dozer
LITHIC LAPILLI TUFF Bud
F. grn tuff w/ Pheno or Pheno relics
marker bed

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

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK	% WASH RECOV.
									Green Peach				.5	SAA - (slight incr. sulph	<	<		
205																		
210													.5		<	<		
215									lt Grey Peach				1		<	.06		
220									lt Green lt Grey				.5		<	.07		
225									lt. Grey lt Grey Olive				1	Bleached (minor)	.004	.14		
230													1	(w/ micro - dissem. sulfides)	<	.15		
235													.5			.05		
240													.5			<		
245													.5			.05		
250																.11		
255																.03		
260																<		
265																<		
270														Grad incr in sulf & alt		.03		
275									lt Peach							<		
280									lt Peach				1			<		
285													1			.07		
290													.5			.08		
295													.5			.05		
300													1			<		

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

DRILL HOLE RL-170

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FINE-GRAINED TUFF
LITHIC LAPILLI TUFF

ARGILLIC
SILICIFICATION
OXIDIZED
DRUZY QUARTZ
CHALCEDONIC QUARTZ
STOCKWORK QUARTZ
PROPYLITIZATION
CALCITE

LOGGED BY _____

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK	% WASH RECOV.
									lt Green lt Grey				.5	SAA	<	<		
305																		
310															<	.06		
315															<	.06		
									lt. Grey				1	(w/ dissem sulf.)	.003	.09		
320		X											1	& micro-vn qtz	.004	.11		
325		X											1	w/ Dk Grey Clay gouge & H_2O table	.005	.11		
sm. fault 330													1	(Grading back into tombstone rock)	<	.04		
335													1			<		
340																		
									lt Grey lt Green				.5	4/21 4/22		<		
345									Pale Green				.1			<		
350													.5	may be a Ct in Ct → C1C		<		
355									Peach wht Pale Green				1	Grading back into alt. Rx		.04		
360									Peach wht				1			<		
365													1			<		
370													1		.004	.10		
375									lt Grey Peach wht Pale Green				.5		<	.08		
380													.5		<	.06		
385													1	(w/ Grey Qtz (~1%) & calcite x-tals)	<	.09		
390		*																
sm. Fault(?) 395		*							lt Grey Grey wht lt Green				2	(Grey Qtz ~ 10% & calcite)	<	.07		
400									lt Green lt Grey				.5		<	<		

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

DRILL HOLE RL-170

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LOGGED BY _____

FINE-GRAINED TUFF
LITHIC LAPILLI TUFF

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

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK	% WASH RECOV.
									lt Grey Grey-Olive				.5	SAA- C,C - primary Ct in Ct breccia texture	<	<		
405									& Brn-red				.1	(Sharp Δ color to Brn-red)				
410									Grey-lav Brn-red				0					
415																		
420																		
425									Brn-red Pale Green									
430									lt Grey-red Pale Green				.5					
435									Peach-red lt Grey lt Green				.5	(w/ calc vein & trace Gray Qtz)				
440													.5	(micro-veining)				
445													.5	Ran out of H_2O		.04		
450													.5	H_2O run 9:30 am drilling 10:45 am		.05		
455													1			.04		
460									lt Grey lt Green wht				.5	(w/calcite)		.05		
465									Brn-red lt Green				.5			.07		
470									Peach lt Green				1			.04		
475									Flesh lt Grey				1			<		
480									& lt Green				.5	(w/minor secondary Bx)				
485													.5					
490													.5	(trace Qtz/Py vn)				
495									Flesh Green				.5					
400																		

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

DRILL HOLE RL-170

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Orpiment

LOGGED BY _____

FINE-GRAINED TUFF
LITHIC LAPILLI TUFF

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

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK	% WASH RECOV.
505									Green lt Green lt Grey				.5	SAA -	<	<		
510													.5		<	<		
515															<	<		
520															<	<		
525									Peach-red lt Green lt Grey					(Minor secondary Bx)	.004	.04		
530									Peach lt Green lt Grey						.003	.08		
535														Note: Not very much inject H_2O in hole → H_2O	<	.05		
540															<	.06		
545															.003	.06		
550															.003	.05		
555 frax									lt Grey lt Green					Brecciated & sltd w/ Barite & Stibnite(?)	.005 / .006	.08 / .07		
560															.009	.08		
565									& flesh				1		.005	.05		
570													.5		.004	.06		
575 Sheared														Brecciated sltd Barite & Stibnite(?) or Rutile? (Rx look sheared)	.007	.24		
580															.008	.23		
585														Note: tons of H_2O now → from 570' down	.011	.66		
590 SRF zone									lt Green flesh wht Grey				1	Breccia! w/ Barite Stibnite(?) Kick in Booster	.028	4.62		
595													1		.014	4.59		
600													.5		.017 / .033 / .09	22.47		

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

DRILL HOLE RL-170

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FINE-GRAINED TUFF
LITHIC LAPILLI TUFF

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

LOGGED BY _____

SRF ↑

Frat

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK	% WASH RECOV.
605									Flesh Green wht grey				.5	SAA - Brecciated	.069 .023 .138	26.42		
610													.5		.036 .103 .056	1.93		
615									Flesh Green wht				.5	~50% Breccia : 50% Green Tuff	.024	5.75		
620									Green				.5	Protolith ? Dozer (w/ ~10% contamination)	.168 .209	.90		
625									Wht to Pale Green				.5	v.f. grn tuff Featureless tuff - Dozer	.160 .096	.47		
630													.5	(micro - Bx) (< 1% contam.)	.060	.20		
635													.5	(~5% contam)	.133 .241	.48 .47		
640													2	Breccia	.188 .257	1.91		
645													2		.053	.80		
650													.5	v.f. grn tuff w/ ~5% Breccia : (~10% contam from Oxide zone)	.109	.41		
655													.5	(w/ ~3% contam.)	.067 .073 .074	.47		
660													.5	(w/ ~5% contam)	.011	.10		
665													.1	(w/ ~25% contam)	.011	.13		
670														EOH				
675														TD = 665'				
680														Note: Do not trust the last sample Assay report				
685																		
690														50 gal/minute				
695																		
700																		

HOLE # RL-170C LOGGED BY KLK DATE 6-91 PAGE 1 OF 3

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
670	100	0°	45° Δ VN; 50° Δ VN	±4% diss tVN py + VN marcasite		M-S bl hint sage green w ~ M-S local XXX
680	95	63° py qtz clay ± marc VNS	55° Δ perv.		SiO2	
690	93		54° Δ VN			
700	96			±3% diss tVN py + VN marcasite		M-S bl w ~ WX hint sage green
710	100	15°				
720	104	90°	20° Δ; 30°	3-4% py + marcasite		S bl SXXX
730	97	30° 40°		±3% VN + diss py + VN marcas		M-S bl MXX w ~

DESCRIPTION

CORE BEGAN @ 665'

665-853 DOZER TUFF

665-700 FGT buff w/ hint lt sage green color pervasively brecciated to crackle breccia w/depth, intermittent hydrothermal breccia w/ SiO2 rich matrix ~ 2-3 stages Δ clasts are perv. argillically wk clay alt matrix is a micro Δ pervasive hydrotherm vein Δ throughout matrix is intermittently rich w/ sulfides. Moderatly strong veining throughout composed of qtz to druzy qtz encapsulating kaolinite ± SiO2, marcasite, pyrite ± sericite + locally possible dk gray to black Ag mineral. Vein quantity varies however averages ~ 4-8 VNS/ft Orientation is 0-63° to C.A. however is predominantly subparelle to C.A + intermitt. fine qtz hairline stkwk

hydro Δ over print
- 672-673.2 > vein brecciation
- 676-681.6
- 681.6-686.6 pervas Δ grading into VN Δ
- 691.5-699 intermittent vein Δ

THIS IS ALL OVER PRINTED w/ hydro Δ
- 665-686.5 pervasive primary Δ
- 686.5-700 intermittent crackle Δ

700-723.4 FGT - intermittently crackle brecciated w/ crackle fractures of lt. orangish selvages weak perv. silicif. moderate pervasive veining ~ 7-12 VNS/ft ranging from 15°-90°; predom subparelle to C.A. Veins composed of druzy qtz filled w/ pyrite, marcasite + kaolinite very fine hairline qtz stkwk riddled throughout

723.4-725.6 20° to C.A. contact of pervasive hydrotherm Δ - SiO2 micro Δ matrix supported ± 4 stages Δ v. fine dissem sulfides w/in matrix, fingered w/ vugy - open spaced druzy qtz VNS w/local marcasite; dk clay/sericite fill lower contact 30° to C.A. VNS locally filled w/ gray clay

725.6-729.5 intermittently riddled w/ hydrothermal vein brecciation w/ SiO2 rich micro Δ matrix

ASSAYS: Sample No.	% Cu	% Pb	✓ Au	oz/t Au	oz/t Ag
665-670				.009	.28
670-675				.011	.14
675-680				.017	.05
680-685				.013 / .017	.06 / .07
685-690				.068	.09
690-695				.023	.11
695-700				.066	.05
700-705				.014	.04
705-710				.005	.03
710-715			.011	.009	.04
715-720				.016	.03
720-725				.006	.04
725-730				.006	.04

HOLE # RL-170C LOGGED BY KLK DATE 6-91 PAGE 2 OF 3

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERAL-IZATION	GRAPHIC LOG	ALTER.	DESCRIPTION
740	103	10° 50°	24° Δ VN	2-3% diss tVN py± VN marcasite		M bl M-S WX lt sage green	665-853 DOZER TUFF 726.5-744 FGT pervasively crackle brecciated w/ poss lt sage green clay / SiO2 fill riddled w/ fine hairline qtz stkwk; prominent veining composed of qtz encapsulated clay ± sericite + py + marcasite ~ 5-10 vns/ft fine stkwk - uncountable
750	97			3-4% diss tVN py + VN marcasite		M-S bl WW MXX	744-798.3 Buff to lt orange FGT pervasive tectonic primary brecciation; crackle brecciation w/ few local secondary hydrothermal breccia vns w/ str. SiO2 cement. The matrix of the primary Δ is a v. fine micro Δ w/ lt fleshy orange coloration giving the rock an overall orange hue pervasively riddled w/ fine qtz stkwk - uncountable
760	99	0 85°	35° hydro Δ VN	±5% fine diss tVN py + VN marcasite + fine black bladed diss sulf			744-755 weak to mod veining predom subparallel to C.A. however ranges up to 85° to C.A. composed of qtz; locally druzy qtz encapsulated qtz marcasite, py clay (white); local lt green duck butter alt / kaolin? 3-5 vns/ft
770	100					m-S bl W MXX S	755-794 ↑ overall veining up to 20-50 vns per foot @ mini stringers ranging from <1 to 2 mm wide. Riddled w/ very fine qtz stkwk vns composed of qtz encap. pyrite, marcasite clay ± sericite fill 755.8-765 intermittent hydroth. Δ vns
780	96		Δ VN / 54°				794-798.3 veining decreases to ~ 3-4 prominent veins/ft as described above STILL riddled w/ fine qtz stkwk
790	102						796.5-798.3 ↑ orange mineral w/ in matrix w/ prominent Δ-up to 3 stages w/ str SiO2 filling interstices
800	97		15° Δ VN	2-3% diss + VN py + marca		S bl W M X	

ASSAYS

Sample No.	% Cu	% Pb	✓ Au	oz/t Au	oz/t Ag
730-735				.012 / .013	.04
735-740				.008 / .011	<
740-745				.029	<
745-750				.011	.09
750-755				.008	.07
755-760				.014	.07
760-765			.024	.039	.19
765-770				.005	.03 / .05
770-775				.003	.06
775-780				.003	.05
780-785				.004	.13
785-790				< / <	.07
790-795				.002	<
795-800				<	<

HOLE # RL-170C LOGGED BY KLK DATE 6-91 PAGE 3 OF 3

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERAL-IZATION	GRAPHIC LOG	ALTER.
810	99	55° pseudo flo		±1% diss ±vn py		Sbl w ~ SXXX tr green
820	102	0° 47° sulf vns				Sbl w ~ SXXX perv. orange
830	99					
840	96					
850	95	46° 80°	pseudo flo 70°			Sbl w ~ SXXX mnt grn
853						

DESCRIPTION

665 - 853 DOZER TUFF

798.3 - 815 FGT buff w/ hint lt green w/ "pseudo" flo texture @ ~ 55° to C.A. weak intermittent crackle fracturing w/ fine orange selvages, riddled w/ fine hairline qtz stk wk - uncountable, only trace mineralized veining - qtz + py ≤ 1/ft subparallel to C.A. few local tectonic Δ vns

815 - 842.7 FGT - pervasively brecciated to crackle brecciated w/ orange micro Δ matrix SiO2 filling interstices of fabric of rock & Δ. finely riddled w/ hairline qtz stk wk uncountable. No real prominent mineralized veins only few v. fine < 1 mm black sulfide veins ~ 1-3/ft

840.4 - 842.3 pervasively brecciated w/ orange + SiO2 matrix

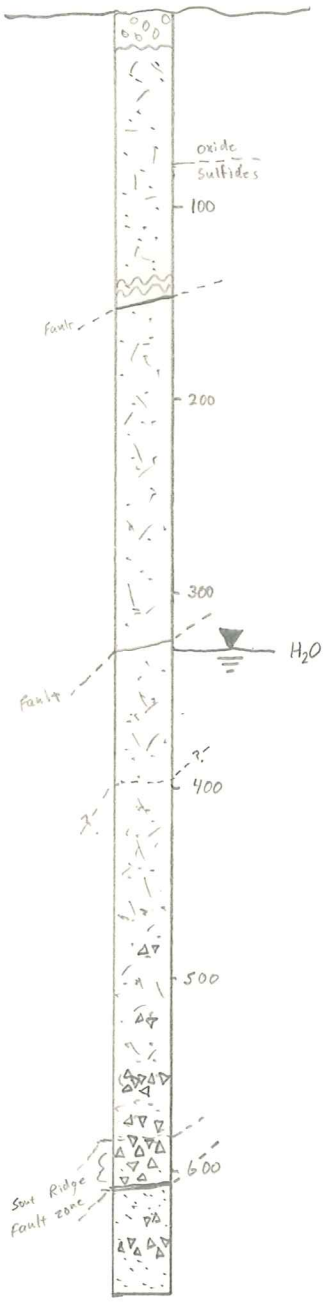
842.7 - 853 FGT - lt sage green weakly crackle fractured w/ associated orange (oxide?) densely welded, mod v. fine hairline qtz stk wk. A couple mineralized vns 1-2/ft w/ diss to vn py 46-80° to C.A. strongly perv. bl minimal mineralizing alt.

ASSAYS

Sample No.	% Cu	% Pb	✓ Au	oz/t Au	oz/t Ag
800-805				<	<
805-810				<	<
810-815			<		<
815-820					.03
820-825					<
825-830					
830-835					
835-840					
840-845					
845-850					
850-853					

RL - 170

Section 1600 NE ; 866 SE



TD= 665'

0 - 20'	O.B. (Qal)
20' - 585'	Chocolate tuff
585' - 615'	Fault Breccia
615'	S.R.F.
615 - 665'	Dozer tuff or Dozer tuff Breccia

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

MAY 10 1991

FILE COPY

LAC MINERALS (USA) INC.
MR. TIM KUHI
1395 GREG STREET #107
SPARKS, NV
89431

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

DATE PRINTED: 7-MAY-91

REPORT: R91-10707.4 (COMPLETE)

PROJECT: ROSEBUD

STANDARD NAME	ELEMENT UNITS	Au OPT	Ag OPT	STANDARD NAME	ELEMENT UNITS	Au OPT	Ag OPT
ANALYTICAL BLANK		<0.002	<0.02				
ANALYTICAL BLANK		<0.002	<0.02				
ANALYTICAL BLANK		<0.002	<0.02				
ANALYTICAL BLANK		<0.002	<0.02				
Number of Analyses		4	4				
Mean Value		0.0010	0.010				
Standard Deviation		0.00000	0.0000				
Accepted Value		0.002	0.02				
Number of Analyses		-	-				
Mean Value		-	-				
Standard Deviation		-	-				
Accepted Value		-	-				
ASSAY STD		0.012	0.34				
Number of Analyses		1	1				
Mean Value		0.0120	0.340				
Standard Deviation		-	-				
Accepted Value		-	-				
Number of Analyses		-	-				
Mean Value		-	-				
Standard Deviation		-	-				
Accepted Value		-	-				
PD SYN STD AU/AG		0.038	0.41				
PD SYN STD AU/AG		0.039	0.39				
Number of Analyses		2	2				
Mean Value		0.0385	0.400				
Standard Deviation		0.00071	0.0141				
Accepted Value		0.040	0.40				
Number of Analyses		-	-				
Mean Value		-	-				
Standard Deviation		-	-				
Accepted Value		-	-				

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

DATE PRINTED: 7-MAY-91

REPORT: R91-10707.4 (COMPLETE)

PROJECT: ROSEBUD

SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT
RL-170 35-40		<0.002	0.07
Duplicate		<0.002	0.07
Prep Duplicate		<0.002	0.08
RL-170 85-90		<0.002	0.07
Duplicate		<0.002	0.06
RL-170 140-145		0.004	0.12
Duplicate		0.004	0.13
Prep Duplicate		<0.002	0.08
Duplicate		<0.002	0.08
RL-170 200-205		<0.002	<0.02
Prep Duplicate		<0.002	<0.02
RL-170 240-245		<0.002	0.05
Duplicate		<0.002	0.05
RL-170 290-295		<0.002	0.05
Duplicate		<0.002	0.04
RL-170 345-350		<0.002	<0.02
Duplicate		<0.002	<0.02
RL-170 390-395		<0.002	0.07
Duplicate		<0.002	0.08
RL-170 395-400		<0.002	<0.02
Duplicate		<0.002	<0.02
RL-170 445-450		<0.002	0.04
Duplicate		<0.002	0.04
BA-21		0.027	0.19
Duplicate		0.030	0.22
RL-170 500-505		<0.002	<0.02
Prep Duplicate		<0.002	<0.02
RL-170 550-555		0.006	0.07
Duplicate		0.005	0.08
BA-22		0.051	0.07
Duplicate		0.051	0.07
RL-170 630-635		0.133#	0.48
Prep Duplicate		0.211	0.47
RL-170 650-655		0.073#	0.47
Duplicate		0.061	0.43

Bondar-Clegg, Inc.
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A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

Geochemical Lab Report

DATE PRINTED: 7-MAY-91

REPORT: R91-10707.4 (COMPLETE)

PROJECT: ROSEBUD

SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT
Z2 RL-170 385-390		<0.002	0.09
Z2 RL-170 390-395		0.07	0.07
Z2 RL-170 395-400		<0.002	<0.02
P4 BA-20		0.035=	0.05
Z2 RL-170 400-405		<0.002	<0.02
Z2 RL-170 405-410		<0.002	<0.02
Z2 RL-170 410-415		<0.002	<0.02
Z2 RL-170 415-420		<0.002	<0.02
Z2 RL-170 420-425		<0.002	<0.02
Z2 RL-170 425-430		<0.002	<0.02
Z2 RL-170 430-435		<0.002	<0.02
Z2 RL-170 435-440		<0.002	<0.02
Z2 RL-170 440-445		<0.002	<0.02
Z2 RL-170 445-450		<0.002	0.04
Z2 RL-170 450-455		<0.002	0.05
Z2 RL-170 455-460		<0.002	0.04
Z2 RL-170 460-465		<0.002	0.05
Z2 RL-170 465-470		<0.002	0.07
Z2 RL-170 470-475		<0.002	0.04
Z2 RL-170 475-480		<0.002	<0.02
Z2 RL-170 480-485		<0.002	<0.02
Z2 RL-170 485-490		<0.002	<0.02
Z2 RL-170 490-495		<0.002	<0.02
Z2 RL-170 495-500		<0.002	<0.02
P4 BA-21		0.027	0.19
Z2 RL-170 500-505		<0.002	<0.02
Z2 RL-170 505-510		<0.002	<0.02
Z2 RL-170 510-515		<0.002	<0.02
Z2 RL-170 515-520		<0.002	<0.02
Z2 RL-170 520-525		0.004	0.04
Z2 RL-170 525-530		0.003	0.08
Z2 RL-170 530-535		<0.002	0.05
Z2 RL-170 535-540		<0.002	0.06
Z2 RL-170 540-545		0.003	0.06
Z2 RL-170 545-550		0.003	0.05
Z2 RL-170 550-555		0.006	0.07
Z2 RL-170 555-560		0.009	0.08
Z2 RL-170 560-565		0.005	0.05
Z2 RL-170 565-570		0.004	0.06
Z2 RL-170 570-575		0.007	0.24
Z2 RL-170 575-580		0.008	0.23
Z2 RL-170 580-585		0.011	0.66
Z2 RL-170 585-590		0.028	4.62
Z2 RL-170 590-595		0.014	4.59
Z2 RL-170 595-600		0.033#	22.47
P4 BA-22		0.051	0.07
Z2 RL-170 600-605		0.023#	26.42
Z2 RL-170 605-610		0.103#	1.93
Z2 RL-170 610-615		0.024	5.75
Z2 RL-170 615-620		0.168#	0.90
Z2 RL-170 620-625		0.096#	0.47
Z2 RL-170 625-630		0.060	0.20
Z2 RL-170 630-635		0.133#	0.48
Z2 RL-170 635-640		0.188#	1.91
Z2 RL-170 640-645		0.053	0.80
Z2 RL-170 645-650		0.109#	0.41
Z2 RL-170 650-655		0.073#	0.47
Z2 RL-170 655-660		0.011	0.10
Z2 RL-170 660-665		0.011	0.13

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

DATE PRINTED: 7-MAY-91

REPORT: R91-107007.4 (COMPLETE)

PROJECT: ROSEBUD

SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT	SAMPLE NUMBER	ELEMENT UNITS	Au OPT	Ag OPT
Z2 RL-170 0-5		<0.002	<0.02	Z2 RL-170 195-200		<0.002	<0.02
Z2 RL-170 5-10		<0.002	<0.02	P4 BA-18		0.029	0.18
Z2 RL-170 10-15		<0.002	<0.02	Z2 RL-170 200-205		<0.002	<0.02
Z2 RL-170 15-20		<0.002	0.05	Z2 RL-170 205-210		<0.002	<0.02
Z2 RL-170 20-25		<0.002	0.06	Z2 RL-170 210-215		<0.002	0.06
Z2 RL-170 25-30		<0.002	0.04	Z2 RL-170 215-220		<0.002	0.07
Z2 RL-170 30-35		<0.002	0.03	Z2 RL-170 220-225		0.004#	0.14
Z2 RL-170 35-40		<0.002	0.07	Z2 RL-170 225-230		<0.002	0.15
Z2 RL-170 40-45		<0.002	0.08	Z2 RL-170 230-235		<0.002	0.05
Z2 RL-170 45-50		0.006	0.07	Z2 RL-170 235-240		<0.002	<0.02
Z2 RL-170 50-55		<0.002	0.07	Z2 RL-170 240-245		<0.002	0.05
Z2 RL-170 55-60		<0.002	0.07	Z2 RL-170 245-250		<0.002	0.11
Z2 RL-170 60-65		0.003	0.17	Z2 RL-170 250-255		<0.002	0.03
Z2 RL-170 65-70		<0.002	0.08	Z2 RL-170 255-260		<0.002	<0.02
Z2 RL-170 70-75		0.004	0.15	Z2 RL-170 260-265		<0.002	<0.02
Z2 RL-170 75-80		0.003	0.17	Z2 RL-170 265-270		<0.002	0.03
Z2 RL-170 80-85		<0.002	0.10	Z2 RL-170 270-275		<0.002	<0.02
Z2 RL-170 85-90		<0.002	0.07	Z2 RL-170 275-280		<0.002	<0.02
Z2 RL-170 90-95		<0.002	0.09	Z2 RL-170 280-285		<0.002	0.07
Z2 RL-170 95-100		0.005	0.18	Z2 RL-170 285-290		<0.002	0.08
P4 BA-17		0.020	0.08	Z2 RL-170 290-295		<0.002	0.05
Z2 RL-170 100-105		<0.002	0.08	Z2 RL-170 295-300		<0.002	<0.02
Z2 RL-170 105-110		<0.002	0.09	P4 BA-19		0.029	0.16
Z2 RL-170 110-115		<0.002	0.10	Z2 RL-170 300-305		<0.002	<0.02
Z2 RL-170 115-120		<0.002	0.07	Z2 RL-170 305-310		<0.002	0.06
Z2 RL-170 120-125		<0.002	0.09	Z2 RL-170 310-315		<0.002	0.06
Z2 RL-170 125-130		<0.002	0.09	Z2 RL-170 315-320		0.003	0.09
Z2 RL-170 130-135		<0.002	0.11	Z2 RL-170 320-325		0.004	0.11
Z2 RL-170 135-140		0.003	0.12	Z2 RL-170 325-330		0.005	0.11
Z2 RL-170 140-145		0.004	~~0.12~~	Z2 RL-170 330-335		<0.002	0.04
Z2 RL-170 145-150		0.004	0.14	Z2 RL-170 335-340		<0.002	<0.02
Z2 RL-170 150-155		0.006	0.14	Z2 RL-170 340-245		<0.002	<0.02
Z2 RL-170 155-160		0.003	0.14	Z2 RL-170 345-350		<0.002	<0.02
Z2 RL-170 160-165		0.005	0.14	Z2 RL-170 350-355		<0.002	<0.02
Z2 RL-170 165-170		0.003	0.11	Z2 RL-170 355-360		<0.002	0.04
Z2 RL-170 170-175		0.004	0.15	Z2 RL-170 360-365		<0.002	<0.02
Z2 RL-170 175-180		0.007	0.14	Z2 RL-170 365-370		<0.002	<0.02
Z2 RL-170 180-185		<0.002	0.05	Z2 RL-170 370-375		0.004	0.10
Z2 RL-170 185-190		<0.002	0.03	Z2 RL-170 375-380		<0.002	0.08
Z2 RL-170 190-195		<0.002	<0.02	Z2 RL-170 380-385		<0.002	0.06

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

BONDAR-CLEGG

A DIVISION OF INCHCAPE INSPECTION & TESTING SERVICES

Geochemical Lab Report

REPORT: R91-10707.4 (COMPLETE)

REFERENCE INFO: RL170 U-665

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

SUBMITTED BY: WALCK
DATE PRINTED: 7 MAY-91

ORDER	ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au	Gold	139	0.002 OPT		Fire Assay
2	Ag	Silver	139	0.02 OPT		Fire Assay

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
Z OTHER DRILL TYPES	133	2 -150	133	CRUSH,PULVERIZE -150	133
P PREPARED PULP	6	4 AS REC'D	6	AS RECEIVED, NO SP	6
				EXCESS WEIGHT/SAMP	68
				OVERWEIGHT/LBS	250

NOTES: # indicates ERRATIC RESULTS
= indicates SEE REMARKS

REMARKS: #ERRATIC RESULTS OBSERVED ON THE FOLLOWING:
RL-170 220-225--AU VALUE .011 AND .007 OPT.
RL-170 595-600--AU VALUE .077 AND .055 OPT.
RL-170 600-605--AU VALUE .069 AND .138 OPT.
RL-170 605-610--AU VALUE .036 AND .056 OPT.
RL-170 615-620--AU VALUE .209 OPT.
RL-170 620-625--AU VALUE .160 OPT.
RL-170 630-635--AU VALUE .211 OPT.
RL-170 635-640AU .232 OPT.RL-170 645-650--AU
.139 OPT.RL-170 650-655--AU .057 AND .074 OPT.

REPORT COPIES TO: MS. CYNDIE WALCK
MR. TIM KUHL
MR. RANDY STOEBERI

INVOICE TO: MR. TIM KUHI

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

INVOICE NUMBER I9114367

BILLING INFORMATION

Date: 9-MAY-91
Project:
P.O. No.:
Account: IZR

Comments:

Billing: For analysis performed on Certificate A9114367

Terms: Payment due on receipt of invoice 1.5% per month (18% per annum) charged on overdue accounts

Please Remit Payments to:

CHEMEX LABS, INC.
994 West Glendale Ave.,
Suite 7, Sparks, Nevada,
U.S.A. 89431

COPY

# OF SAMPLES	ANALYSED FOR CODE - DESCRIPTION	UNIT PRICE	SAMPLE PRICE	AMOUNT
17	205 - Geochem - RING	1.65		
	294 - 0-10 lb Crush + split	2.25		
	ROCK-20	8.75	12.65	215.05
			Total Cost $	215.05
			TOTAL PAYABLE (U.S.) $	215.05

Bill Figueroa

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

A9114367

Comments: ATTN: BOB THOMAS CC: GARFIELD MACVEIGH

CERTIFICATE A9114367

LAC MINERALS U.S.A. INC

Project:
P.O. # :

Samples submitted to our lab in Sparks, NV.
This report was printed on 9-MAY-91.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	17	Geochem ring to approx 150 mesh
294	17	Crush and split (0-10 pounds)
232	17	PERCHLORIC-NITRIC-HYDROFLUORIC D

* NOTE 1:

Code 1000 is used for repeat gold analyses It shows typical sample variability due to coarse gold effects. Each value is correct for its particular subsample.

* NOTE 2:

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
1008	17	Al203 %: 20 element, rock ID	ICP-AES	0.01	50.0
565	17	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
1009	17	CaO%: 20 element, rock ID	ICP-AES	0.01	35.0
563	17	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	17	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	17	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
1010	17	Fe203%: 20 element, rock ID	ICP-AES	0.01	35.0
1011	17	K20 %: 20 element, rock ID	ICP-AES	0.01	10.00
1006	17	La ppm: 20 element, rock ID	ICP-AES	20	10000
1012	17	MgO %: 20 element, rock ID	ICP-AES	0.01	35.0
568	17	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	17	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
1013	17	Na20 %: 20 element, rock ID	ICP-AES	0.01	10.00
564	17	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	17	P ppm: 24 element, rock & core	ICP-AES	10	10000
1007	17	Pb ppm: 20 element, rock ID	ICP-AES	5	10000
582	17	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
1014	17	Ti02 %: 20 element, rock ID	ICP-AES	0.01	10.00
572	17	V ppm: 24 element, rock & core	ICP-AES	1	10000
558	17	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

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: BOB THOMAS CC: GARFIELD MACVEIGH

Certificate Date: 09-MAY-91
Invoice No. : I9114367
P.O. Number :

CERTIFICATE OF ANALYSIS A9114367

SAMPLE DESCRIPTION	PREP CODE		Mn ppm (ICP)	Mo ppm (ICP)	Na2O % ICP	Ni ppm (ICP)	P ppm (ICP)	Pb ppm (ICP)	Sr ppm (ICP)	TiO2 % ICP	V ppm (ICP)	Zn ppm (ICP)
RL-170 045-050	205	294	75	< 1	0.22	1	320	25	247	0.20	2	50
RL-170 095-100	205	294	100	1	0.17	3	440	5	394	0.23	2	146
RL-170 145-150	205	294	105	< 1	0.17	3	310	15	183	0.22	2	214
RL-170 195-200	205	294	750	3	0.90	1	290	5	46	0.25	1	136
RL-170 245-250	205	294	405	2	0.74	< 1	270	20	56	0.23	2	80
RL-170 295-300	205	294	600	< 1	1.17	< 1	320	10	81	0.25	1	110
RL-170 345-350	205	294	1180	< 1	1.43	1	290	75	91	0.24	< 1	118
RL-170 395-400	205	294	435	1	1.59	1	370	20	86	0.25	< 1	120
RL-170 445-450	205	294	615	< 1	0.85	1	410	30	106	0.28	< 1	118
RL-170 495-500	205	294	570	< 1	1.54	2	310	20	149	0.22	< 1	114
RL-170 595-600	205	294	25	1	0.08	5	140	5	569	0.07	1	142
RL-170 645-650	205	294	45	< 1	0.23	4	90	25	70	0.08	< 1	74
RL-171 045-050	205	294	60	5	0.30	4	90	100	55	0.09	< 1	60
RL-171 095-100	205	294	40	3	0.14	3	110	55	64	0.06	< 1	44
RL-171 145-150	205	294	50	< 1	0.14	3	140	210	56	0.08	< 1	158
RL-171 195-200	205	294	45	2	0.15	2	60	10	38	0.07	< 1	62
RL-171 245-250	205	294	55	< 1	0.16	2	80	35	49	0.07	< 1	106

CERTIFICATION: B. Caylin

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: BOB THOMAS CC: GARFIELD MACVEIGH

Certificate Date: 09-MAY-91
Invoice No. : I9114367
P.O. Number :

CERTIFICATE OF ANALYSIS A9114367

SAMPLE DESCRIPTION	PREP CODE		Al2O3 % ICP	Ba ppm (ICP)	CaO % ICP	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)	Fe2O3 % ICP	K2O % ICP	La ppm ICP	MgO % ICP
RL-170 045-050	205	294	10.40	260	0.21	2	45	8	2.82	1.80	20	0.36
RL-170 095-100	205	294	13.55	330	0.14	4	12	5	3.12	2.10	20	0.30
RL-170 145-150	205	294	11.20	400	0.17	5	31	7	2.71	2.20	20	0.29
RL-170 195-200	205	294	11.65	90	1.05	2	14	7	3.51	3.50	20	0.35
RL-170 245-250	205	294	10.85	70	1.02	3	50	6	3.43	3.10	20	0.35
RL-170 295-300	205	294	11.90	90	1.14	2	40	6	3.59	3.80	20	0.32
RL-170 345-350	205	294	12.30	630	1.64	3	42	10	3.05	3.60	40	0.44
RL-170 395-400	205	294	13.15	290	1.03	2	49	7	2.33	4.50	20	0.46
RL-170 445-450	205	294	13.75	250	1.65	3	30	8	3.18	4.40	40	0.50
RL-170 495-500	205	294	14.45	880	1.69	3	36	6	2.93	4.00	40	0.43
RL-170 595-600	205	294	4.49	180	0.12	35	134	31	1.10	0.80	< 20	0.19
RL-170 645-650	205	294	8.32	140	0.17	2	76	34	2.28	2.50	40	0.22
RL-171 045-050	205	294	12.40	1390	0.18	2	34	12	2.12	5.20	20	0.24
RL-171 095-100	205	294	9.06	540	0.11	2	77	13	1.41	2.20	20	0.20
RL-171 145-150	205	294	12.20	540	0.13	3	39	23	1.67	2.60	20	0.21
RL-171 195-200	205	294	10.15	470	0.14	4	32	5	1.61	2.60	20	0.20
RL-171 245-250	205	294	11.05	500	0.18	3	34	11	1.68	2.90	20	0.32

CERTIFICATION: B. Caylin

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
DL169 585-590	214	227	0.019
DL169 590-595	214	227	0.016
DL169 595-600	214	227	0.052
DL169 595-600A	214	227	0.069
DL169 600-605	214	227	0.107
DL169 605-610	214	227	0.318
DL169 610-615	214	227	0.197
DL169 615-620	214	227	0.014
DL169 620-625	214	227	0.020
DL169 625-630	214	227	0.014
DL169 630-635	214	227	0.010
DL169 635-640	214	227	0.054
DL169 640-645	214	227	0.058
DL169 645-650	214	227	0.163
DL169 645-650A	214	227	0.076
DL169 650-655	214	227	0.046
DL169 655-660	214	227	0.086
DL169 660-665	214	227	0.080
DL169 665-670	214	227	0.065
DL169 670-675	214	227	0.057
DL169 675-680	214	227	0.049
DL169 680-685	214	227	0.014
DL169 685-690	214	227	0.046
DL169 690-695	214	227	0.018
DL169 695-700	214	227	0.033
DL169 695-700A	214	227	0.048
DL169 700-705	214	227	0.022
DL169 705-710	214	227	0.025
DL169 710-715	214	227	0.009
DL169 715-720	214	227	0.010
DL169 720-725	214	227	0.010
DL169 725-730	214	227	0.020
DL169 730-735	214	227	0.034
DL169 735-740	214	227	0.029
DL169 740-745	214	227	0.273
DL169 745-750	214	227	0.014
RL170 580-585	214	227	0.016
RL170 585-590	214	227	0.025
RL170 590-595	214	227	0.010
RL170 595-600	214	227	0.065

40 E4

CERTIFICATION: [signature]

BOYLES-WELNAV
ELKO, NEVADA

GYROSCOPIC DIRECTIONAL SURVEY
BY MINIMUM CURVATURE

FOR

****
* **LAC MINERALS** *
****

JOB NUMBER: 029-0313-12CCGY

HOLE NUMBER: RL #170

LOCATION: ROSEBUD

SURVEY DATE: 4-25-91

SURVEY ENGINEER: PHIL GRAFFT

GYRO REFERENCE BEARING: 041-00

********** **********
****** DEPTH MEASURED IN FEET ******* **********
********** *** THIS DIRECTIONAL SURVEY REPORT IS ****
** CORRECT TO THE BEST OF MY KNOWLEDGE ***
COMMENTS: * AND IS SUPPORTED BY ACTUAL FIELD DATA! *
** **
** Phil Graffit **
** ********** **
** COMPANY REPRESENTATIVE **
****
****

BOYLES-WELNAV
ELKO, NEVADA

JOB NUMBER: 029-0313-12CCGY HOLE NUMBER: RL #170

INRUN SURVEY
BY MINIMUM CURVATURE

MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	INCL	DIRECTION AZIMUTH	COORDINATES NORTH/SOUTH	COORDINATES EAST/WEST	D-LEG /100	D-LEG /CL	STATION DISP.	DISPLACEMENT DIRECTION
50.0	50.00	0.08	-89.42	158.93	0.24 S	0.09 E	1.16	0.58	0.25 AT	158.93
100.0	99.99	0.89	-88.29	101.28	0.62 S	0.91 E	2.97	1.48	1.10 AT	124.09
150.0	149.97	2.24	-88.57	095.20	0.82 S	2.27 E	0.65	0.33	2.41 AT	109.91
200.0	199.96	3.29	-88.99	080.23	0.80 S	3.32 E	1.05	0.52	3.42 AT	103.58
250.0	249.95	4.03	-89.25	066.00	0.59 S	4.06 E	0.68	0.34	4.10 AT	098.34
300.0	299.95	4.59	-89.25	048.77	0.25 S	4.60 E	0.45	0.22	4.61 AT	093.06
350.0	349.94	5.25	-88.94	060.50	0.20 N	5.25 E	0.72	0.36	5.25 AT	087.85
400.0	399.94	5.93	-89.34	067.75	0.53 N	5.92 E	0.83	0.41	5.94 AT	084.84
450.0	449.93	6.56	-89.11	063.58	0.82 N	6.53 E	0.47	0.24	6.58 AT	082.88
500.0	499.93	7.10	-89.52	113.87	0.90 N	7.07 E	1.38	0.69	7.13 AT	082.71
550.0	549.93	7.54	-89.26	125.35	0.63 N	7.53 E	0.57	0.29	7.55 AT	085.20
600.0	599.92	8.07	-89.37	081.25	0.49 N	8.06 E	1.05	0.52	8.08 AT	086.54
650.0	649.92	8.69	-89.12	114.55	0.37 N	8.68 E	0.99	0.49	8.69 AT	087.56
665.0	664.92	8.98	-88.55	089.13	0.32 N	8.98 E	5.04	0.76	8.98 AT	087.93

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*************************************************************
*                          ********                         *
*      THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF          *
*                          ********                         *
*   665.0 FEET EQUALS      8.98    FEET AT   087.93          *
*                          ********                         *
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