60001324

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-91
AUTHOR	K. Tullar; N. Brewer; J. Gaiye; R. Grandin
DATE OF DOC(S)	1990; 1996
MULTI_DIST Y / (N?) Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud Project; Coates Drilling Lac Minerals (USA) Inc
COMMODITY If not obvious	gold silver
NOTES	Drill log; geology; assay; total depth 1150' handwritten notes; also referred to as RL-91C 47p.

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

SS: DD 5/19/08
Initials Date
DB: mah
Initials Date
SCANNED:
Initials Date

Revised: 1/22/08

DRILL LOGS RL-91

ROSEBUD

60001324 4010

60001324

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

DRILL LOG SUMMARY SHEET

PROJECT Rosebud

HOLE NUMBER RL-91 TOTAL DEPTH 1150' LOGGED BY R.C. DAM

Date started May 23, 1990

Date completed June 1, 1990

Initial bearing S55E

Initial inclination -60°

Elevation 5225.5

Collar coordinates:

N 2204598

E 481489

Contractor: COATES

Drill Type: UDR

Hole Size:

Drilling Conditions: 465' RC

Footage: Wet / Dry

Comments:

DOWN HOLE SURVEY INFORMATION

FROM	TO	SURVEY POINT	INCLI-NATION	BEARING	X (Northing)	Y (Easting)	Z (Elevation)
0	50		-60	S 55 E			
50	200		-58°	S63E			
200	400	300	-59°	S61E			
400	600	500	-58°	S62E			
600	800	700	-57.5°	S63E			
800	1005	900	-57°	S63E			
1005	1150	1110	-56°	S62E			

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

CHOCOLATE TUFF
BUD BRECCIA
BUD TUFF
BUD EPICLASTIC
BUD TUFF BRECCIA
DT DOZER WELDED TUFF

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

DRILL HOLE RL-91

Page 1 of 5

LOGGED BY DAM

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK	
		~ XX							BROWN				<1%	0-30 DK BROWN FINE GR TUFF, LOCALLY FRAGMENTED —	<1	<1		
05														(BADGER?) WEAK BLEACH WEAK SILICIFIED	<1	<1		
10																		
															.001	<1		
15																		
															.001	<1		
20																		
															<1	<1		
25																		
															.001	.19		
30		~							GREEN WHITE					30-70 INTENSLY CLAY ALTERED EPICLASTIC?	.003	.15		
35																		
															.003	.12		
40																		
															.002	.10		
45																		
															.004	.15		
50																		
															.002	<1		
55																		
															.004	<1		
60																		
															.003	.15		
65																		
															.003	.18		
70									YELLOW BROWN					70-105 WEAKLY OXIDIZED? FINE GRAIN WELDED TUFF	.003	<1		
75																		
															.002	<1		
80																		
															.001	<1		
85																		
															<1	<1		
90																		
															.001	<1		
95																		
100																		

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DRILL HOLE RL-91

Page 2 of 5

LOGGED BY DAN

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK	
									YELLOW BROWN				<1%		.001	<		
105									LT PINK +					105 – 225 WEAKLY BLEACHED LAHARIC BRECCIA? GRAINY ? FRAGMENTED	.004	<		
110									GREEN						.002	.11		
115															.002	<		
120															.002	.18		
125															.004	<		
130															<	<		
135															.002	<		
140															<	<		
145															.049	.14		
150															.001	<		
155															<	<		
160															<	<		
165															.001	<		
170															<	<		
175															<	<		
180															<	<		
185															.001	<		
190															.001	<		
195															<	<		
200																		

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DRILL HOLE RR-91

Page 3 of 5

LOGGED BY DAM

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK
									LT Pink, Green				<1%		<	<	
205															<	<	
210															.001	<	
215															.002	<	
220															.007	.18	
225									DK Red Brown					225 – 325 FINE GRAIN WELDED TUFF LOCALLY BLEACHED NEAR CONTACTS FRAGMENTAL	.003	<	
230															.003	<	
235															<	<	
240																	
245									DK Gray								
250																	
255																	
260																	
265																	
270																	
275																	
280															<	<	
285															.001	<	
290															.008	<	
295															.022	<	
300																	

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DRILL HOLE RL-91

Page 4 of 5

LOGGED BY DAM

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK
		~							LT GREY				<1%		<	<	
305									GREY GREEN						<	<	
310									DK GREY						.001	<	
315		N							GREY + GREEN						<	<	
320		~							LT GREEN						.001	<	
325									DK RED BROWN				<1%	325 - 410 RED BROWN MATRIX PYROCLASTIC + GREY FINE GR TUFF FRAGMENTS, LOCALLY BLEACHED	<	.16	
330									↑ GREY						.001	<	
335															<	<	
40															<	<	
345															<	<	
350															<	<	
355															<	<	
360															<	<	
365															<	<	
370															<	<	
375															.007	<	
380															<	<	
385																	
390																	
95																	
400																	

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Page 5 of 5

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	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au	Ag	CHECK
													<1%		<	<	
405																	
410									ROSE				<1%	410-465 MED GRAIN FRAGMENTAL & WELDED TUFF FRAGMENTS			
415									ROSE + PURPLE					SPORADIC DK GREY TUFF FRAGS PRESENT. LOCALLY BLEACHED			
420																	
425		~							ROSE +								
430		~							LT GREEN								
435		~													.004	<	
440									ROSE						<	<	
445																	
450																	
455																	
460																	
465														T.D. 465			
470																	
475																	
480																	
485																	
490																	
495																	
500																	

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG
465	112	50/CA VN		NIL	bl
470	113	85 CA VN			bl
	95				
480	100	30° flo			
		68 fol	15/CA VN		
490	93	40° lineation on clast			
500	106	60° CA VN			
510	105				
	109				
520	94	fract ±5°			
530					

DESCRIPTION

CORE BEGAN @ 465'

465-505 INTRUSIVE DIKE vs. Volc bxa - CHOCOLATE?

Predominant burgundy-brown to local dark gray fine grained, locally with bleached fine grained tuff clasts + weak pumice clasts + local green (glauconite) alt. weak intermittent bleaching weak pervasive fracturing w/ predominant calcite fill w/ depth clay ± calcite ± pyrite is introduced. Pervasively hemititic. virtually no mineralization, magnetic - locally

465-465.4 pervasively bleached & clay altered.

471.4-474.2 mod. perv. bleaching

465.4-505 contains clasts varying from 2 mm to 3½" long composed predominantly of FGT w/ local flowbanding w/ few pumice frags. clasts are pervasively bleached & locally w/ green alteration

Probable Intrusive on distal edges - having plucked out Tuffaceous wall rock

505-551.2 INTRUSIVE vs. FGT - fine grained to aphanitic - dense - heavy burgundy brn to ↑ hemitite w/ depth, weakly fractured w/ mnt of calcite fill

518-551.2 Pervasive orange red oxide intermittently tectonically brecciated - dry, ie. no matrix

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
465-470				<.001	<.10
470-475				<	<
475-480				<	<
480-485				<	<
485-490				<	<
490-495				<	<
495-500				<	<
500-505				<	<
505-510				<	<
510-515				<	<
515-520				<	<
520-525				<	<
525-530				<	<

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
	100	40/ frac w/ Ca fill		NIL	+	530 - 693.2 + vs ⁘ (CONTINUED) SAME DESCRIPTION @ ABOVE	530-535				<	<
					+							
540	100	85° frac w/ Ca fill			+		535-540				<	<
					+	551.2-625 INTRUSIVE - lt-medium gray to burgbwn w/ ↓ fracturing w/ ↓ w/ assoc. hemitite, dense unaltered aphanitic, weakly locally tectonically brecciated	540-545				<	<
		30° slicks w/ Ca fill			+		545-551.2				.001	<
550	105	80° Ca VN		1-2% VN ±diss py	+ bl	INTRUSIVE vs. alt FGT 551.2 - 562.4 moderate pervasive bleaching moderatly to strongly fractured with green glauconite? fill locally fracture fill of calcite ± pyrite + local clay weak local tectonic brecciation w/ clay/calcite fill	551.2-555				.001	<
		20/ frac w/ Ca fill			Δ +		555-560				<	<
					bl +							
560	100				bl +		560-565				<	<
	80			NIL	+	562.4-591 INTRUSIVE - very fine-dense w/ pervasive gray coloration, weak fine calcite filled fractures						
		78 Ca VN			+		565-570				<	<
570	100				+		570-575				<	<
		60 Ca VN			+		575-580				<	<
580	98	20° Ca VN	45 Ca VN		+		580-585				<	<
		70° Ca VN			+		585-590				<	<
590	102	70 Ca VN			+	591-625 moderatly fractured w/ hemitite smear + local calcite fill weak local tectonic brecciation - dry - no matrix w/ weak clay/calcite fill	590-595				<	<
		frac 74			+		595-600				<	<
600												

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERAL-IZATION	GRAPHIC LOG
	99			NIL	
610	103	25 fract			
		70 ca vn			
620	99	±5° fract			
630	104	60 ca fill fract			
		±5° 65 ca vn			
640	100				
650	100	30°+ cat appho fill			
		5-10° ca fill vn			
660	100				
		35 ca filled fract			
670					

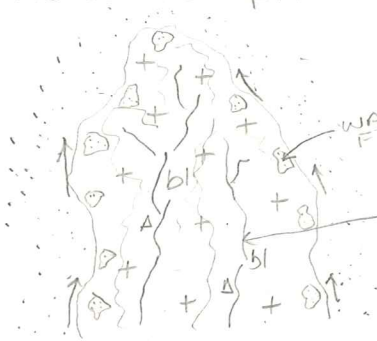
DESCRIPTION

600 - 625 Intrusive (cont.)

INTRUSIVE VS.

625 - 660 FINE GRAINED TUFF? MEDIUM GRAY w/ hint green, weakly fractured w/ zoned hemitite & local calcite ± clay fill, unmineralized - relatively fresh, dense - heavy - fine granular to aphanitic, magnetic

Probable Intrusive origin: bleached fracture zones



fractures allowing in ACIDIC H_2O bleaching area & causing preferential alt of composition ie - SiO_2 & perifrally causing rebound of tectonic brecciation.

660 - 696 INTRUSIVE - Burgundy brown dense heavy fine grained to aphanitic weakly fractured w/ calcite ± hemitite fill

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
600-605				<	<
605-610				<	<
610-615				<	<
615-620				<	<
620-625				<	<
625-630				<	<
630-635				<	<
635-640				<	<
640-645				<	<
645-650				<	<
650-655				<	<
655-660				<	<
660-665				<	<
665-670				<	<

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERAL-IZATION	GRAPHIC LOG	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
	97	Ca vn 22		NIL	+	670 - 696 INTRUSIVE (CONTINUED)	670-675				<	<
680	100	40 Ca vn; Cat Fol 87; 36 Ca fill fract			+	693.2 - 696 weakly to mod bleached	675-680				<	<
							680-685				<	<
							685-690				<	<
690	104	50° fract			+		690-693.2				<	<
				1-2% Vein + diss py	+ bl	696 - 748.7 ~~POSSIBLE~~ PROBABLE BLEACHED ALTERED INTRUSIVE preferrentially clay altered w/ background hue coloration of the burgundy brwn intrusive - dense heavy, pervasively fractured throughout w/ blue green glauconite? lining fracts. - Also intermittently lined w/ calcite ± pyrite ± clay (white soft) local fault zones - brecciated w/ strong white clay + dog tooth calcite + pyrite fill.	693.2-696				<	<
700	102	60 clay vns ±15°; 50 clay ±Ca; 66 ±15° fract			+ bl		696-701				.005	<
					+ bl		701-706				<	<
710	98				bl +		706-711				.001	<
					Δ +	FAULT 711-720 FAULT - mod strongly brecciated w/ calcite, clay, pyrite fill + blue green mineral (glauconite?) periferal to Δ zone is strong clay vns w/ local calcite ± pyrite	711-713.9				.012	<
					+ Δ		713.9-716				.003	<
720	90	73° py clay vns 63°; 67 Kaolin vns fract fill			Δ + bl		716-720				.003	<
					+ Δ +		720-725				.003	<
	90	72° py Ca vn			+ bl +	* After the fault the rock grades over ~25' back into burgundy brown hue background into fresh unalt intrusive and then back into bleached then back into fresh burg-brwn intrusive	725-732				.001	<
730	95	±20° fract fracts; fract 23			+ bl +		732-737				<	<
740	100				+ bl		737-742				<	<

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG
	100	74 Calcite frac		NIL	+
750	100			<1% VN PY; NIL	+ bl
760	100			<1%; NIL	+ bl
770	100	40° frac			
780	83	48 calcite VN		~1% diss + VN PY	bl
790	105	35° calc frac		2% diss + VN PY; ±1% py	bl
800	94	45 / 74 heavy frac		NIL	
810	105	FeOx flo 20			

DESCRIPTION

748.7 - 752.3 Fresh unaltered burg brown Intrusive - magnetic

752.3 - 759.7 Bleached intrusive due to probable fault crack @ 755 - 755.5 allowing acidic fluids to bleach peripheral rock bleached intrusive has same burg brown background hue.

759.7 - 778.5 UNALTERED INTRUSIVE LBI

(763-764 weakly Bleached) Burgundy-brown to gray aphanitic Intrusive vs. volc. extrus. weakly fractured w/ hemitite - $CaCO_3$ ± glauconite(?) fill same @ above

778.5 - 795 ALTERED - BLEACHED INTRUSIVE? probably due to minor fault - rubble zone @ 791 - 793 w/ enuclope of argillic alt. peripherally mod well fractured w/ $CaCO_3$ - py fill ± blue green mineral (glauconite?) + poss sericite

← rubble

795 - 871.5 UNALTERED GRAY + LOCAL BURGUNDY APHANITIC INTRUSIVE? pervasively fractured w/ hemitite ± chlorite(?) ½ local $CaCO_3$ fill, magnetic

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
742-748.7				<	<
748.7-752.3				<	<
752.3-755.5				<	<
755.5-759.7				<	<
759.7-765				<	<
765-771.2				<	<
771.2-778.5				<	<
778.5-781				<	<
781-786				.002	<
786-791.5				.001	<
791.5-793				.002	<
793-795				.001	<
795-800				<	<
800-805				<	<
805-810				<	<

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION
	105	fract 24		NIL	+	810 - 871.5 UNALTERED INTRUSIVE (continued) weakly fractured w/ hemitite ± chlorite? + $CaCO_3$ fill, weak local hemititic stain, locally magnetic
820	103	65 $CaCO_3$ fill fract				
830	98	20° Fe ox fract				
840	97					
850	102	65 Ca + Fe fract				
860	95	±5°				
870	100	60° Ca Fe fract		1-2% diss + vn py	bl	871.5 - 882 LBT INTRUSIVE - weakly bleached w/ weak lt green alteration - pervasively, weakly to mod fractured w/ white clay, pyrite ± chlorite(?) ± $CaCO_3$ fill
880		fract 85 /20			bl zz bl	877.6 - 878 minor fault rubble zone - channel for bleaching fluids w/ bleached alt halo - rubble

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
810-815				<	<
815-820				<	<
820-825				<	<
825-830				<	.14
830-835				<	<
835-840				<	<
840-845				<	.10
845-850				<	<
850-855				<	<
855-860				<	.10
860-865				<	<
865-870				<	<
870-873				<	<
873-877				<	<
877-880				.005	<

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION
	100	fracts 5-15°		NIL		882-892.5 medium gray unaltered intrusive @ above w/ hemititic fractures ± chlorite(?)
890	99	Cu-py vn 28/		1-2% diss + vn py		892.5-915 ALTERED INTRUSIVE? moderatly pervasively bleached w/ (burg-brwn) peach hint background of burg-brwn rock finely speckled w/ clay-preferential alt moderate fracture veining radiating out from rubble zone w/ white clay + blue green glauconite(?) + pyrite-specular filling rubble-903.8-905.8 w/ lt. brown + white clay
900	60	50 py vn			VOID 2'	← RUBBLE
	VOID 95	68 Py+clay + brn frac vn		NIL		
910	100	28/ Cu-Py vn		≤1% diss + vn py		915-920 hemitite stained Intrusive?-mod fractured w/ hemitite ± dog tooth calcite + local green duck butter Kaolinite
920	104	30/ Ca+Fe fracts				920-943 moderatly bleached intrusive w/ speckled texture due to preferential clay alt peach + buff coloration weakly to mod fractured w/ deep green to blue green mineral + calcite + pyrite local specular + duck butter → green Kaolinite
930	100	38/ Py-Ca vn				
940	100	fract vns 36/ 40				943-953.8 Purple gray relatively unaltered Intrusive? weakly fractured w/ hemitite stain ± local green chlorite(?) ± $CaCO_3$, magnetic
950		Flo x vns 30				

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
880-885				<	<
885-890				<	<
890-895				<	<
895-900				.001	.15
900-903.8				.007	.10
903.8-905.8				.005	.15
905.8-910				.002	<
910-915.5				.001	.15
915.5-920				<	<
920-925				<	<
925-930				.003	.15
930-935				<	<
935-940				<	<
940-943				<	<
943-949				<	<

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION
	100	32/ fracture		±1% diss +VN py		953.8 - 964.3 TRANSITIONAL BLEACHED INTRUSIVE into fine grained tuff: flesh colur ALTERATION of intrusive into bleached buff, grades into speckled texture, weakly to mod fractured w/ pyrite + calcite + blue green glauconite(?) ± kaolinite
960		39/ fract				
	98				65	
		47		±3% diss +VN py		* 964.3 - 975.6 FAULT - contact @ ~65° to CORE AXIS entire zone - brecciated + rubble, bleached very little introduction of SiO_2 - strong white clay - kaolinite alt + specular pyrite VNS ± poss local sericite, weak blue green mineral + local $CaCO_3$ LITHOLOGY: FGT
970		py-clay VN				
	99	20/				
		44 fract		1-2% diss +VN py	43°	* 975.6 - 989.2 FINE GRAINED TUFF mottled buff + flesh w/ local green; local speckled texture (ie bleached vesicular) moderately pervasive bleached + clay alt weakly to mod fractured w/ duck butter - kaolinite + specular pyrite, local chalcedony + green chlorite(?) + local hemitite. contact w/ rubble into flow banded unit w/ strong white kaolinite @ 989.2 weak local microbreccia veins
980		45 clay py VN				
	94		15/ py clay gyp VN fract			
		55 py gyp VN		1-2% diss +VN py		989.2 - 1037.2 FLOW BANDED TUFF pervasively mod bleached, possibly weakly silicified, very fine grained w/ poss. pseudo-flow banding - maybe more the result of alteration. weak fracture veining w/ calcite ± pyrite + blue green mineral (glauconite?) + local white clay. Local micro breccia veins w/ SiO_2 + calcite / kaolinite matrix ± sulfides; bl FGT clasts. local tectonic (dry) brecciation - clast supported ↑ fracture veining w/ depth
990						
	100					
		65 pseudo flo	73 Ca VN	1-2% diss +VN + buck shot py		
1000			50 clay VN			
	98	18/ soft flo				
		68 flo				
1010			55			
	100					
1020		5-10°	py-clay VN 80			

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
949 - 953.8				<	<
953.8 - 956				<	<
956 - 960				<	<
960 - 964.3				.001	<
964.3 - 966.2				.004	.15
966.2 - 968.6				.003	<
968.6 - 975				.002	<
975 - 975.6				.005	.15
975.6 - 980				.004	<
980 - 985				.004	<
985 - 989.2				.01	<
989.2 - 995				.01	<
995 - 1000				.008	<
1000 - 1005				.001	<
1005 - 1010				.004	<
1010 - 1015				.003	<
1015 - 1020				.001	<

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION
	100	/20 70 fract clay py vns		±2% diss +vn py		1020-1037.2 FLOW BANDED TUFF (continued) Description @ above
1030	100	50 py vn 30 sil py vn flo 57	/20 vn	±3% diss +vn py ±stibnite	FAULT	1029.2-1037.2 pervasively brecciated except for 1½' precium clast supported w/ tuff ± flowband tuff frag ? matrix of clay ? local SiO_2 entire zone is mod well silicified intermittent microbreccia vns SiO_2 rich w/ druzy vuggy qtz-$CaCO_3$-marc to stibnite + pyrite + clay fill mod strong fine stockwork: pyrite, clay
1040	100	53 SiO_2 py	±70° 63 contact	1-2% diss +vn py poss local sphalerite	1037.2 CONTACT	1037.2-1110 GREEN LITHIC LAPILLI TUFF-CLASSIC BEDDED BUD —
1050	95	65 ca vn	52 flo			MEDIUM DEEP SEA TO BLUEGREEN - clay alt matrix, clast supported w/ mod to strong bleaching of clasts composed of: FGT flow bd tuff + clay alt collapsed pumice frag. showing flow direction weak calcite ± pyrite veining poss assoc. @ fracture fill, weak pervasive dissem. pyrite
1060	102	flo 60 / 18 py vn				
1070	96	55 flo fract	30 py ca vn			*note: sample 1070-1075: MOST NOTABLE in interval is pyrite veining w/ poss. other metallic - tetra? w/ poss drilling OXIDATION
1080	106	45 / ca py vn 43				↑ GRADED bedding w/ depth w/ angle ~ 56°-66° to core axis
1090		flo 55				

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
1020-1025				.001	<
1025-1029.2				.003	<
1029.2-1033.5				.002	<
1033.5-1035.5				.021	<
1035.5-1040				<	<
1040-1045				.001	<
1045-1050				.003	<
1050-1055				<	<
1055-1060				<	<
1060-1065				.001	<
1065-1070				.001	<
1070-1075				.051 .051 .032	.10
1075-1080				<	<
1080-1085				<	<
1085-1090				<	<

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
	102	flo 56 / 66 ca VN		±1% diss +VN py w/ pass local sphal		1090 - 1110 Green Bedded Bud continued w/ increased graded bedding w/ depth	1090-1095				<	<
							1095-1100				.003	<
1100	100	ca VN	20/ py VN			1106 - 1110 weakly to mod pervasively silicified ; ↑ calcite veining	1100-1105				.001	<
							1105-1108				<	<
1110	100	38 / ca VN	46 / ca py speck VN	±1-2% diss +VN + buck shot py	65	1110 - 1142.8 FINE GRAINED TUFF (DOZER?) Light hint green bleached ; locally clay altered fine grained tuff where ↓ alteration have fine densely welded texture, however is pervasively blt clay alt. moderatly fractured w/ white clay + local calcite fill + local specular pyrite, local broken rubble w/ clay gouge (kaolin.)	1108-1112.4				.001	.10
							1112.4-1116				<	<
1120	100	1/4" + / 65 clay VN	80 / ca VN			1125 - 1139 mod str clusters - buckshot specular pyrite within strongly bleached Dozer.	1116-1120				.001	<
							1120-1125				.001	<
		ca VN 60				1139 - 1142.8 strongly brecciated up to 2stage ; mod. silicified, clast supported	1125-1130				.002	<
1130	100		±5-10° sm gch ca VN	2-3% buck shot + diss +VN py		1142 - 1142.6 → calcite vein	1130-1136.2				.001	<
1140	95	62 / 6" ca VN		4-5% semi diss mo py	62 / CA 80	1142.8 - 1150 JR BASEMENT - JURASSIC-TRIASSIC metamorphosed shales - strongly foliated ; juiced contact ~ 62° to core axis, strong folding - mod strong clay alteration, locally brecciated ; weakly silicified, pervasively weakly carbonaceous	1136.2-1139				.002	.10
				± 2% diss +VN py			1139-1142.8				.001	<
		ca 50°					1142.8-1146				.001	.10
1150		30° foliat					1146-1150				.002	<

PROJECT: Rosebud JV	UTM: NK 11 10 06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 1/
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 10/21/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-91

DRILLING			LITHOLOGY													STRUCT				ALTERATION/MINIZATION												STRAT								DEPTH	LITHOLOGY		SAMPLE
DEPTH FT	RECOVERY	RQD	ALLUVIUM	MUDCGL	SILTCGL	LITHUFT	PUMICE	SURGE	ALSAFOL	AVA	AUTOBX	INTRUSIVE	BANDSTONE	ANDESITE	RHYOLITE	TECTONITE	BRECCIA	GOUGE	VOID	Fe MIN: MNO	HEMATITE	MIMOTIN	PYRITE	PROP	ARGILLIC	ARG2	PLIS	STKWORK	EVINS	CALCITE	MELTCAS	BCAHDGE	COUDEAR	BUDDY	MARKPOR	LBUD	WILDROS	DOZER	DEPTH FT	LITHOLOGY	FAPH	SAMPLE INT
450			1	2	3	1	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	450			
455																																								455			
460																																								460			
465																																								465			
470																	3							1						1										470			
475																	4								1															475			
480																	3																							480			
485																																								485			
490																																								490			
495																	2																							495			
500																																								500			

SCALE:

LITH. EXPLANATION:
CGS Sand Mix Conglom.
CGM Mud Mix Conglom.
VO Sltl Varved/Organic Sltst.
VCS Sand Mix Volc. Clastic
VCM Mud Mix Volc. Clastic

COMMENTS

↑
RVC START CORE @ 465'

FROM 465' TO _____
DK PURPLISH RED MOD TO WELL LITHIFIED SILT TO MUD MATRIX VOLCANIC BXA. CLASTS ARE HETEROLITHIC BOMBS & LAPILLI BOTH ALTERED & UNALTERED NO XTALS OR SHARDS NOTED IN GMASS.
CLASTS DOMINATED BY WHITE BLEACHED DOZER. LOCAL MINOR CHLORITE IN G-MASS CLASTS INCLUDE F.G. REDDH SILTSTONE.
THIS LAHARIC ROCK IS ASSIGNED TO BADGER BECAUSE OF LACK OF JUVENILE MATERIAL, LOW DEGREE OF ALTERATION OF MATRIX RELATIVE CLASTS, PAUCITY OF TYPICAL CHOCOLATE PORPHYRY TEXTURES IN MATRIX OR CLASTS.
CLASTS LOCALLY RIMMED BY CALCITE W NO ALTN SELVAGE W GMASS
(ON X-C AS FG INTRUSIVE)

FLT 45° 60° RAKE
20° FLT 90° RAKE SLICKED CALCITE
FAULT ZONE

Created by The Golden Eagle Exploration Team: ADE, CPK, DAC, DTT, ECS, RAY

CRBLOG1.xls

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 2/
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 10/21/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-91

SCALE: ~1"=10'

LITH. EXPLANATION:
CGS-Sand Mix Conglom.
CGM-Mud Mix Conglom.
VO Silt-Varved/Organic Sltst.
VCS-Sand Mix Volc. Clastic
VCM-Mud Mix Volc. Clastic

DRILLING			LITHOLOGY													STRUCT				ALTERATION/MINLIZATION											STRAT								DEPTH FT	LITH GRAPH	ALT GRPH	STRCT	SAMPLE INT
DEPTH FT	REC/CUT	RQD	ALLUVUM	MUDCGL	SILTCGL	LITHUTF	PUMTUF	SUGTUF	ASHFLO	LAVA	AUTOX	INTRUSV	BANDSALT	ARHYOSIT	TEC	BROKEN	GOUGE	VOID	Fe MIN: MONOX	HEMATITE	LIMONITE	PYRITE	PROP	ARG	ARG2	RPLSIL	STKWKS	VEINS	CALCITE	METCCLITE	BADGER	CHODEUTE	BURROW	MARKER	LUD	WILDROS	DOZER	500				
500			1	2	3	1	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37					

COMMENTS

FROM 465' TO 551.3

DK REDDH PURPLE UNALTERED SILTY LAHARIC VOLCANIC BXA VERY MINOR WHT CALCITE VEINING, LOCAL CONCENTRATIONS HEMATITE ON FRACTS.

NO SIGNIFICANT HYDROTHERMAL ALTERATION

NO IMBRICATION, PARTING OR OTHER INDICATION OF BEDDING NOTED.

HEMATITE PART OF G-MASS RELATED TO SEDIMENTARY/WEATHERING PROCESSES ∴ NOT LOGGED UNDER ALTN/MINLZN

FROM 540 to 551.3 NO DOZER CLASTS SILTY ZONE & FRAGMENTAL ZONES

FLT 25° 70° RAKE

Created by the Golden Eagle Exploration Team: ADE, CPK, DAC, DTT, ECS, RAY

CRBLOG1.xls

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 3/
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 10/21/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-91

SCALE: ~1"=10'

LITH EXPLANATION:
CGS Sand Mix Conglom.
CGM Mud Mix Conglom.
VO Silt-Varved/Organic Siltst.
VCS-Sand Mix Volc. Clastic
VCM-Mud Mix Volc. Clastic

DRILLING: DEPTH (550–600); RECOVERY/CUT; R; Q; D

LITHOLOGY: ALLUVIUM; MUDDY; SILTY; CGL; LITHIC; PUMICE; SUGAR; ALVA; LAUTO; INTRUS; BASALT; ANDESITE; RHYOLITE

STRUCT: TECTONIC; BRECCIA; GOUGE; VOID

ALTERATION/MINERALIZATION: Fe MIN; MOXIDE; HEMATITE; LIMONITE; PYRITE; PROPYLITE; ARGILLIC; ARGILLIC 2; SILICIFIED; SILICIFIED; SERPENTINE; KAOLINITE; CALCITE; CALCITE; MALACHITE

STRAT: BADDY; COUBAD; MARKBUD; LWIDDER; DOZER

DEPTH; FAULT; GRAPH; STRUCT; COMMENTS; SAMPLE INT

Depth	Fault	Graph	Struct	Comments
550				FROM 465 TO 551.3 BADGER LAHARS & SILTS & BXAS ↑
			70° FLT NEAR 0° RAKE 20/VER 70/TO	FROM 551.3 TO 556. BLEACHED ALTERED GOUGY FAULT ZONE & BXA FORMING CONTACT
555				
			30° FLT 0° RK	FROM 556 TO 594' MEDIUM GRAY FINE GRAINED BASALT ALTERATION DECREASING FROM MARGINS INWARD
560				
				FN GRND COMPACT PLAG + TR CPX + TR BRIGHT RED "IDDINGSITIZED" OL? PROBABLE DIKE IN ROSEBUD SHEAR ZONE
565				
				BY 565' CHLORITE & CLY ON FRACTS ONLY. G-MASS BLEACHED?? BUT NOT SOFTENED
570				
575				
580				
585				
590				
			45° FLT 45° RAKE VERT GO	FROM 594 TO 620 FAULTED, BROKEN, CALCITE VEINED HEMATITE FLOODED BASALT ROSEBUD SHEAR ZONE??
595				
600				

Created by The Golden Eagle Exploration Team: ADE, CPK, DAC, DTT, ECS, RAY

CRBLOG1.xls

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 4/
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 10/21/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-91

DRILLING: DEPTH (6700); RECOVERY; RQD

LITHOLOGY: ALLUVIUM; MUD; SILT; LITHIC; PUMICE; SUGAR; ALAVA; AUTO BX; INTRUSIVE; BASALT; ANDESITE; RHYOLITE

STRUCT: TEC; BROKEN; GOUGE; VOID

ALTERATION/MINERALIZATION: Fe MIN: MNOX; HEMATITE; LIMONITE; PYRITE; PROP; ARG; ARGPL; SILICA; VEINS; CALCITE; METALS

STRAT: BACHOD; CUBADY; MARKBED; LIDRO; WEDZ

DEPTH; LITHGRAPH; ALTGRAPH; STRAT; SCALE:

LITH. EXPLANATION:
CGS Sand Mix Conglom.
CGM-Mud Mix Conglom.
VO Silt-Varved/Organic Sltst.
VCS-Sand Mix Volc. Clastic
VCM-Mud Mix Volc. Clastic

COMMENTS

FROM 594 TO 620'
FAULTED, BROKEN, HEMATITE FLOODED BASALT? INTRUSIVE

10° FLT HAS HORIZONTAL SLIKS

GRADATIONAL CTC

FROM 620' TO 660'
LT TO MED GRY BASALT INTRUSIVE (VY FN GRND) W HEMATITE & CHLORITE ON FRACTURES

Created by the Golden Eagle Exploration Team: ADE, CPK, DAC, DTT, ECS, RAY

CRBLOG1.xls

PROJECT: Rosebud JV	UTM: NK 11 10 06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 5/
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 10/21/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-91

DRILLING: DEPTH (650–700 ft); REC/CUT; RQD

LITHOLOGY: 1 ALLUVIUM; 2 MUDCGL; 3 SILTCGL; 4 LITHUFT; 5 PUMICEUF; 6 SUGRUF; 7 ASHFALL; 8 ALAVA; 9 AUTOBXV; 10 INTRUSIV; 11 BANDALT; 12 ANDESITE; 13 RHYOLITE

STRUCT: 11 TECTONIC; 15 BOUNDKEEN; 16 GOUGE; 17 OID

ALTERATION/MINERALIZATION: 18 Fe MIN MONOMINERAL; 19 HEMATITE; 20 LIMONITE; 21 PYRITE; 22 PROPYLITIC; 23 ARGILLIC; 24 ARGILLIC 2; 25 REPLACE SILICA; 26 STOCKWORK; 27 VEINS; 28 CALCITE; 29 METACALCITE

STRAT: 30 BADGEOLOGY; 31 CHOUD; 32 BUD; 33 BARRY; 34 MKPOR; 35 LBUD; 36 WILDROS; 37 DOZER

DEPTH (650–700 ft); LITHGRAPH; ALTGRAPH; STRUCT

SCALE:

LITH. EXPLANATION:
CGS–Sand Mtx Conglom.
CGM–Mud Mtx Conglom.
VO Silt–Varved/Organic Siltst.
VCS–Sand Mtx Volc. Clastic
VCM–Mud Mtx Volc. Clastic

SAMPLE INT

COMMENTS

FROM 620 TO 660'
BASALT INTRUSIVE? AS ABOVE

GRADATIONAL CONTACT

FROM 660' TO 693'
CLAY CALCITE VEINED HEMATITE FLOODED
OXIDIZED FINE GRAINED BASALT
INTRUSIVE (DIKE?)

ARGILLIC ALTERATION FRACTURE CONTROLLED
FROM 668 - 680'
LOCAL ROUND SPOTTED TEXTURE
(INCREASED OXIDATION @ PHEND SITES)

SHARP GRADATIONAL CTC

FROM 693' TO 748.7
BLEACHED ARGILLIZED LOCALLY
BXTD FINE GRAINED BASALT

Created by the Golden Eagle Exploration Team: ADE, CPK, DAC, DIT, ECS, RAY

CRBLOG1.xls

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 6/
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 10/22/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-91

DRILLING: DEPTH (FT) | RECOVERY | CORE

LITHOLOGY: ALLUVIUM | MUDSTONE | SILTSTONE | LITHIC TUFF | PUMICE TUFF | SUBGRAUWACKE | ASHFALL | LAVA | AUTOBRECCIA | INTRUSIVE | BANDED ASSEMBLAGE | HYDROLIGNITE

STRUCT: TECTONIC | BRECCIA | GOUGE | VOID

ALTERATION/MINERALIZATION: Fe MINERALS: MONOXIDE | HEMATITE | MOTTLE | INTERTEXTURE | PROPYLITIC | ARGILLIC | ARGILLIC 2 | PHYLLIC | SILICIFIED | STOCKWORK | VEINS | CALCITE VEINS | MELANTERITE

STRAT: BACKDOOR | CHUBBY | BRAKE | MARKER | LIMESTONE | WILDROSE | DOZER

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
			3	4																2	2	3					3									
				3																		2					2									
				4																																
													4		2							3					3									

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 7/
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 11/8/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-91

DRILLING: DEPTH (FT) | RECOVERY | RQD

LITHOLOGY: ALLUVIUM | MUDCGL | SILTCGL | LITHTUF | PUMTUF | SUGRUF | ASHFUL | ALAVTO | AUTOBX | INTRUSIV | BASALT | ANDESITE | RHYOLITE

STRUCT: TECTONIC | BROKEN | GOUGE | VOID

ALTERATION/MINERALIZATION: Fe MIN: MINOR MINERALIZATION | HEMATITE | LIMONITE | PYRITE | PROP | ARG | ARG2 | PLIS | STKWKS | VEINS | CALCITE | MECALTAS

STRAT: BADGER | CHOUT | UBADY | MKRPOR | LBUD | WLDROS | DOZER

DEPTH (FT)	LITHGRAPH	ALTRGRAPH	STRCNT	SAMPLINT
750				
755				
760				
765				
770				
775				
780				
785				
790				
795				
800				

SCALE:

LITH EXPLANATION:
CGS-Sand Mix Conglom.
CGM-Mud Mix Conglom.
VO Silt-Varved/Organic Sltst.
VCS-Sand Mix Volc. Clastic
VCM-Mud Mix Volc. Clastic

COMMENTS

FROM 748.7 TO 759.7'
WHT BLEACHED "BASALT" ILLITE W LATE CHLORITE & PY ON FRAX
SHARP GRADATIONAL CTC OVER 1 CM. IRREGULAR REACTION FRONT

GRADATIONAL CTC

FROM 759.7 TO 967.0
DK PURPLE GRAY "BASALT" TO LT GRAY GRN. INTRUSIVE W FRACTURE CONTROLLED ALTERATION ZONES
ALTN IS PALE TAN & WHT AND DK GRN ASSEMBLAGE TRANSITIONAL BTWN PROP & ARG.
HEMATITE FLOODING & OXIDATION APPEAR PERIPHERAL TO PROP/ARG AND SULFIDATION HEM SLIGHTLY FRACTURE CONTROLLED

FROM 779 TO 793 FRACT CONTROLLED ALTERATION IN INTRUSIVE

Created by the Golden Eagle Exploration Team: ADE, CPK, DAC, DTT, ECS, RAY

CRBLOG1.xls

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 8/
LOGD BY: CDK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 11/8/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-99

DRILLING: DEPTH (800); RECOVERY; RQD

LITHOLOGY: ALLUVIUM (1), MUDCGL (2), SILTCGL (3), LITHUFF (4), PUMICE (5), SUGRUFF (6), SHALE (7), AVA (8), AUTOBX (9), INTRUSIV (10), BASALT (11), ANDESITE (12), RHYOLITE (13)

STRUCT: TECTONITE (14), BRECCIA (15), GOUGE (16), VOID (17)

ALTERATION/MINERALIZATION: Fe MIN: MNOX (18), HEMATITE (19), LIMONITE (20), PYRITE (21); PROP (22), ARG (23), ARGILLIC 2 (24), SILICIFIED (25), STOCKWORK (26), VEIN (27), CALCITE (28), METASOMATIC (29)

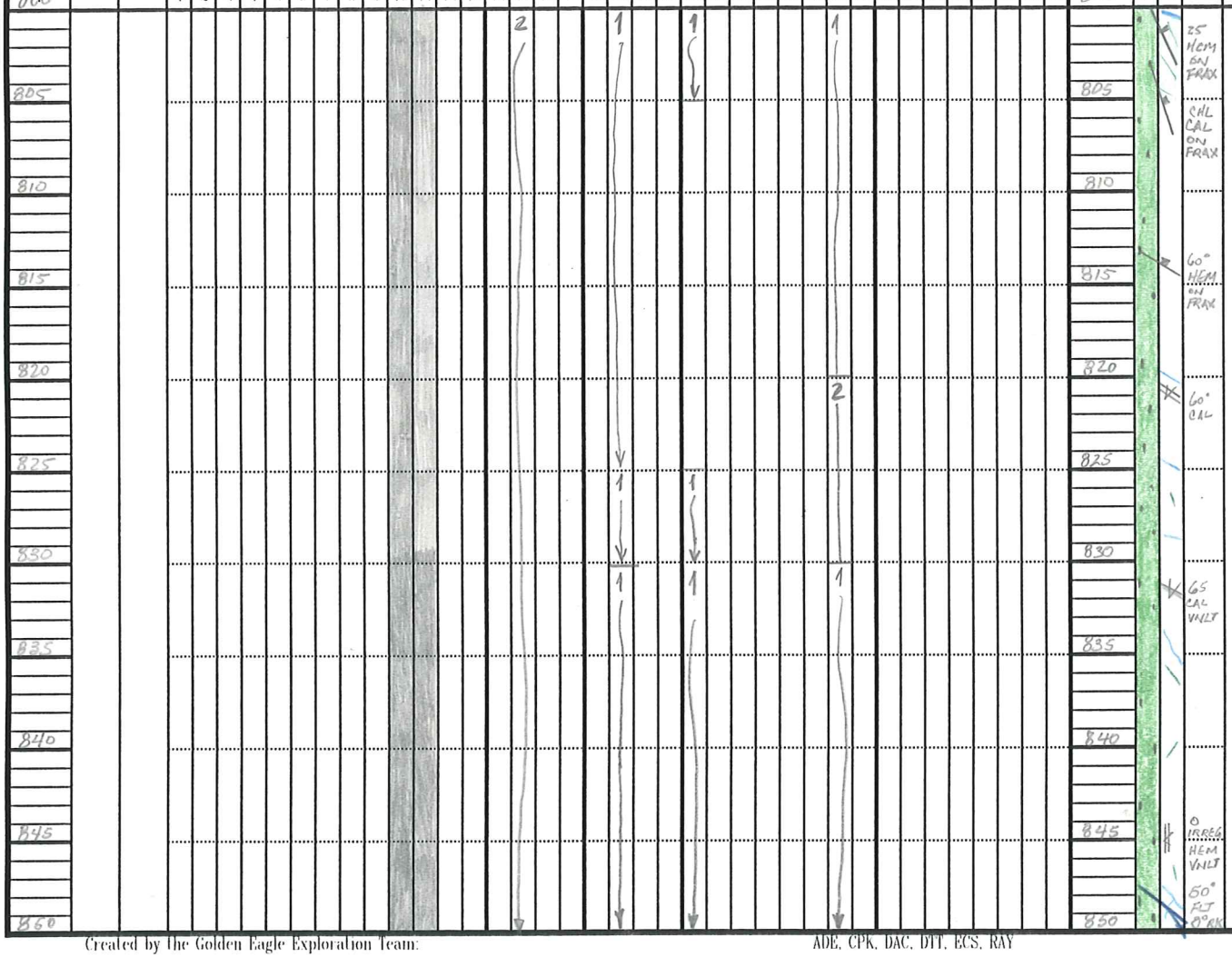
STRAT: BCDOGEARR (30), CHCOLOR (31), CUBOUD (32), BRAD (33), MARKER (34), LUBRIDOR (35), WIDE (36), DOZER (37)

DEPTH; LITHGRAPH; ALTAGRAP; STRCNT; SAMPLINT

SCALE:

LITH. EXPLANATION:
CGS Sand Mix Conglom.
CGM-Mud Mix Conglom.
VO Silt-Varved/Organic Siltst.
VCS-Sand Mix Volc. Clastic
VCM-Mud Mix Volc. Clastic

COMMENTS



FROM 759.7 TO 961.0

GRAY TO RED TO GREEN FINE GRAINED "BASALTIC" INTRUSIVE LOCAL MINOR CALCITE VEINING & HEMATITE FLOODING PERIPHERAL TO ALTERED ZONES AS ABOVE

FUNDAMENTALLY SAME UNIT W MINOR ALTERATION ZONES

VERY MINOR AMTS CHLORITE ON FRACT SURFACES

Created by The Golden Eagle Exploration Team: ADE, CPK, DAC, DTT, ECS, RAY

CRBLOG1.xls

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 9/
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 11/8/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-91

SCALE: 1" =10 ft

LITH. EXPLANATION:

MUD CGL	Mud matrix conglomerate
LITH TUF	Lithic clast dominant tuff
PUM TUF	Pumice rich tuff
SURGE TUF	Bedded matrix rich lithic tuff

DRILLING			LITHOLOGY													STRUCT				ALTERATION/MINLIZATION												STRAT								DEPTH	LITH	ALT	STRUCT	SAMPLE
																				Fe MIN																								
DEPTH FT	REC/CUT	RQD	ALLUVUM	MUDCGL		LITHTUF	PUMTUF	SURGTUF	ASHFLO	LAVA	AUTOBX	INTRUSIV	BASALT	ANDESIT	RHYOLIT	TE.CBXA	BROKEN	GOUGE	VOID	MNOX	HEMIT	LIMONIT	PYRITE	PROP	ARG	ARG2	RPLSIL		QTZVNS	CALCITES	METALS	BADGER	CHOCOLT		BUD	BADRY	MKRPOR	BUD	WILDROS	DOZER	DEPTH FT	LITH GRAPH	ALT GRAPH	STRUCT	SAMPLE INT
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37					
850																																								850	H	H		

COMMENTS

FROM 759.7 TO _____

FINE GRAINED "BASALTIC" INTRUSIVE W LOCAL FRACTURE CONTROLLED ALTERN. VY WKLY ALTERED & MAGNETIC IN MIDDLE

30° IRREG VLTS W HEM

30° CAL VNLT

35 O.S. CHL CTING FRACT

ALTERATION APPEARS TO INCREASE DOWNHOLE.

FROM 872 TO 883'

BLEACHED ALTERED ZONE GRADATIONAL CTC

35 CHL VNLT

50° IRREG DASH VNLTS

85° IRREG CHL FRACT

FROM 892 TO ____

ALTERED ZONE W BLEACHING OF G-MASS CHL-CAL-PY ON VNLTS CTING FRACTS.

30° DIP NEAR ZERO PARAS

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 101
LOGD BY: CPW	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 11/8/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-91

DRILLING: DEPTH (FT), REC/CUT, RQD

LITHOLOGY: ALLUVUM, MUD CGL, LITHTUF, PUMTUF, SURGTUF, ASH FLO, LAVA, AUTOBX, INTRUSIV, BASALT, ANDESITE, RHYOLITE

STRUCT: TEC BOXA, BROKEN, GOUGE, VOID

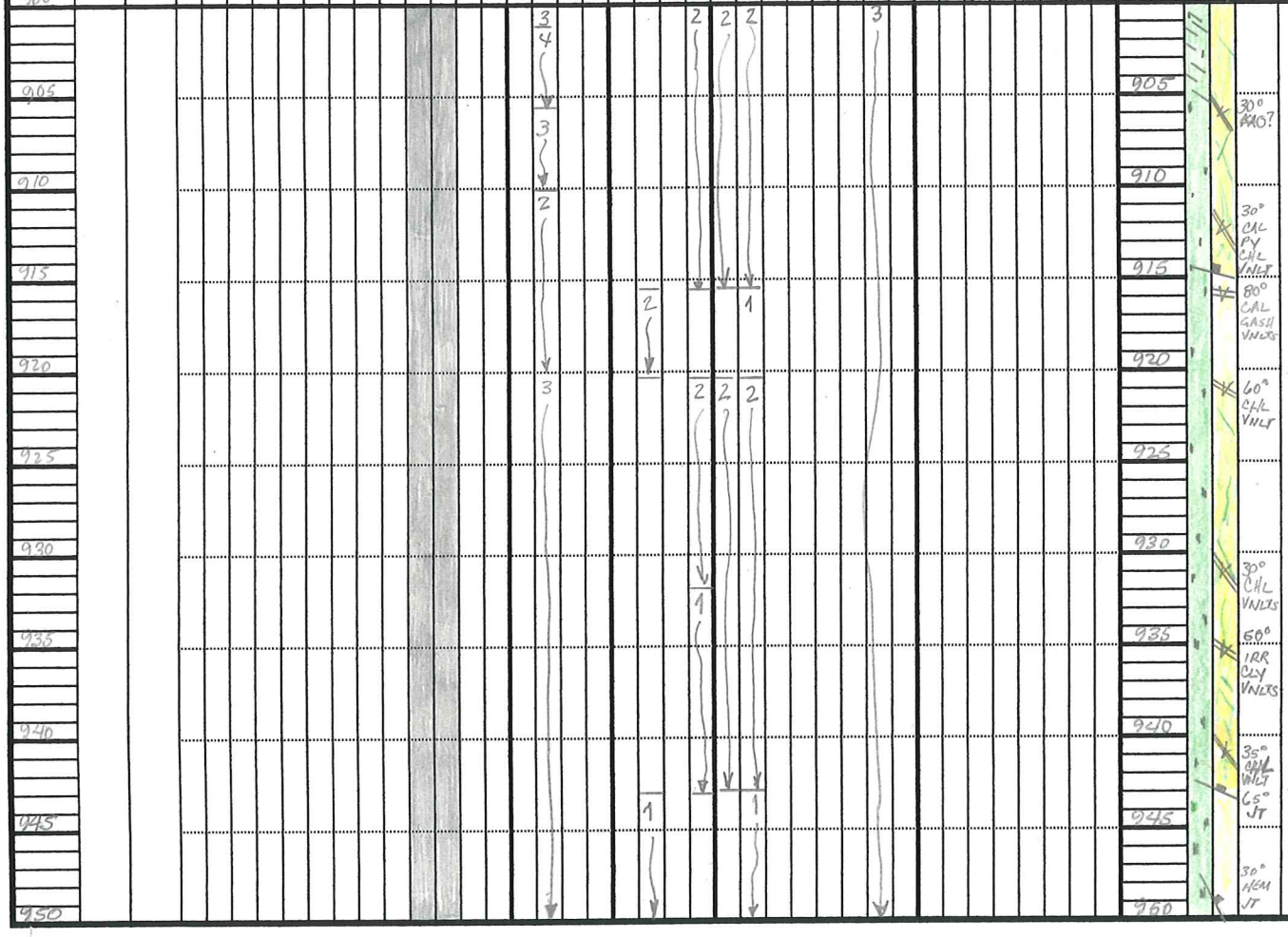
ALTERATION/MINLIZATION: Fe MIN (MNOX, HEMTIT, LIMONITE, PYRITE), PROP, ARG, ARGIL, RPLSIL, QTZVNS, CALCITES, METCLAS

STRAT: BADGER, CHOCOLT, BUD, BRADY, MKRPOR, LBUD, WILDROS, DOZER

SCALE: 1" =10 ft

LITH. EXPLANATION:

MUD CGL	Mud matrix conglomerate
LITH TUF	Lithic clast dominant tuff
PUM TUF	Pumice rich tuff
SURGE TUF	Bedded matrix rich lithic tuff



COMMENTS

FROM 759.7 TO 967.0

FINE GRAINED BASALTIC INTRUSIVE W LOCAL FRACTURE CONTROLLED ALTERATION.

FROM 900' TO 915.2
UNIT IS MODERATELY BLEACHED & CHLORITIZED
IRREG CTC ~70°

915.2 – 920 HEMATITE FLOODED ZONE
WHITE BLEBS <0.1MM LEUCOXENE + CLY + TRY CLY
IRI

FROM 920 – 943
MOD BLEACHED PROPYLITIZED
FINE GRAINED BASALTIC INTRUSIVE

@ 934.5' PALE GRN TRANSLUCENT CLY VEINLETS TO 4 MM WIDE

CONTACT GRADATIONAL OVER 1 FT

FROM 943. TO
MEDIUM PURPLISH GRAY
FINE GRAINED "BASALTIC" INTRUSIVE

SAMPLE INT

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 11/14
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 11/9/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-92

SCALE: 1" =10 ft

LITH. EXPLANATION:

MUD CGL	Mud matrix conglomerate
LITH TUF	Lithic clast dominant tuff
PUM TUF	Pumice rich tuff
SURGE TUF	Bedded matrix rich lithic tuff

DRILLING: DEPTH FT; REC/CUT; RQD

LITHOLOGY: ALLUVUM, MUDCGL, LITHTUF, PUMTUF, SURGTUF, ASHFLO, ALAVA, AUTOBX, INTRUSIV, BASALT, ANDESIT, RHYOLIT

STRUCT: TEC, BRKEN, GOUGE, VOID

ALTERATION/MINLIZATION: Fe MIN (MNOX, HEMTIT, LIMONIT, PYRITE), PROP, ARG, ARG2, RPLSIL, QTZVNS, CALCITES, METCLAS

STRAT: BADGER, CHOCOLT, BUD, BRADY, MKRPOR, LBUD, WILDROS, DOZER

DEPTH FT: 950, 955, 960, 965, 970, 975, 980, 985, 990, 995, 1000

LITHGRAPH / ALTGRAPH

STRCNT: HEM JT; 45° HEM JT; 45° FLO BND; 30° CHL-ILL-PY; 10° JTW FRX; 30° CLY CTD FRX; 20° CLY CTD FRX; 30° PY VNLT; 45° FLO FOL.; 35° CHL CAL-PY VNLT; 30° CLY PY; 25° FLO FOL.; 35° CHL CAL-PY; 30° CHL CAL PY; 60° FLO FOL

SAMPLINT: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37

COMMENTS

FROM 759.7 TO 967.0

GRAY PURPLE TAN & GREEN VARIABLY ALTERED FINE-GRAINED INTRUSIVE ALTERATION INCREASES APPROACHING CTC.

LOCAL INCIPIENT VESICULATION GIVING SPOTTED TEXTURE. 956-964

964-967 AUTOBXA

INTRUSIVE BADGER AGED??

ALTN PARAGEN
1) G-MASS
2) ILLITE/CHL VNLTS
3) CHL ON SELVAGE
4) PY
5) KAOLINITE

FROM 967.0 TO 975.6 TECTONIC BXA WITH ABUNDANT WHT POWDERY CLAY COATING FRAX MODERATELY SILICIFIED KAOLINITE BY DIMA MATRIX 972-975.6

FAULT FOLLOWS CTC W INTRUSIVE & THINS MBA

FROM 975.6 TO 1035.5'

VY PALE PURPLH TAN & PALE GREEN FLOW BANDED LAVA. PLAG → CLAY G-MASS HAS ABUNDANT WHT LEUCOXENE DOTS X-CUT BY WHT & PL GRN CLAY VEINLTS

LOCAL MINOR CHLORITE ON FRACTS

FLOW FOLIATION VY PLANAR & AVG 5 MM THICK.

VY FINE GRAINED, BUT DEFINETY PORPHYRITIC. PROBABLY BLEACHED EQUIVALENT OF BRADY ANDESITE

CALCITE MOSTLY AS DISCRETE VEINLETS.

CLEARLY X-CUTS FOLIATION (MOST VNLTS DO)

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 12/14
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 11/9/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-91

DRILLING: DEPTH FT | REC/CUT | R Q D

LITHOLOGY: 1 ALLUVUM, 2 MUD CGL, 3, 4 LITH TUF, 5 PUM TUF, 6 SURGE TUF, 7 ASH FLO, 8 ALAVA, 9 AUTOBXX, 10 INTRUSIV, 11 BASALT, 12 ANDESITE, 13 RHYOLITE

STRUCT: 14 TEC BXA, 15 BROKEN, 16 GOUGE, 17 VOID

ALTERATION/MINLIZATION: Fe MIN: 18 MNOX, 19 HEMTIT, 20 LIMONIT, 21 PYRITE; 22 PROP, 23 ARG, 24 ARG2, 25 RPL SIL, 26, 27 QTZ VNS, 28 CALCITES, 29 METCLAS

STRAT: 30 BADGER, 31 CHOCOLT, 32 BUD, 33 BRADY, 34 MKR POR, 35 LBUD, 36 WILDROS, 37 DOZER

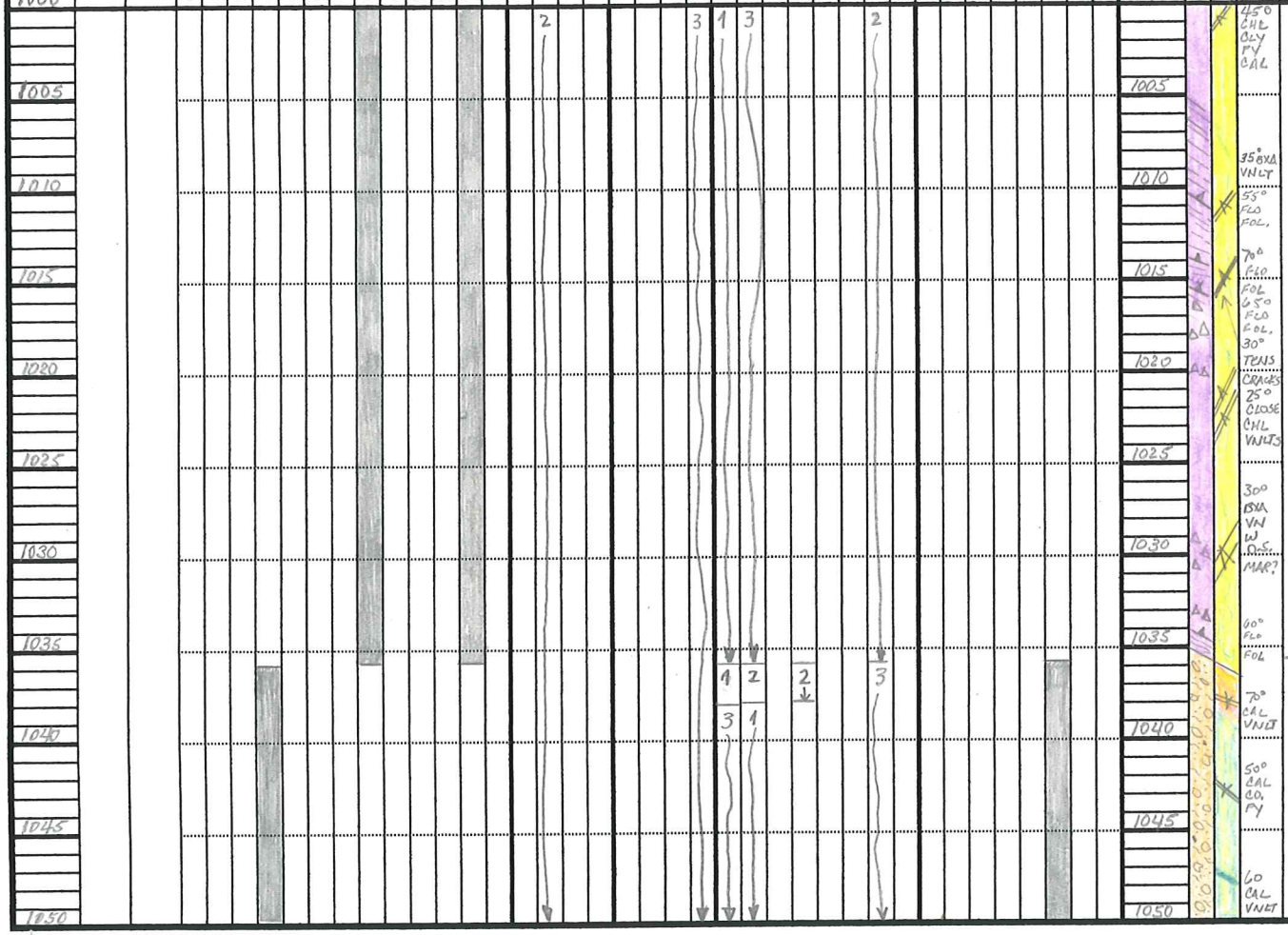
DEPTH FT | LITHGRAPH | ALTGRAPH | STRCNT

SCALE: 1" =10 ft

LITH. EXPLANATION:

MUD CGL	Mud matrix conglomerate
LITH TUF	Lithic clast dominant tuff
PUM TUF	Pumice rich tuff
SURGE TUF	Bedded matrix rich lithic tuff

SAMPLE INT



COMMENTS

FROM 975.6 TO 1035.5'
FINE GRAINED FLOW BANDED PORPHYRITIC BLEACHED BRADY ANDESITE

FROM 1000.3' TO 10005 FLOW BANDING ABSENT. BELOW 1000.3' ROCK IS FINER GRAINED SLIGHTLY MORE PYRITIC & LIGHTER IN COLOR ∴ SLIGHTLY MORE ALTD
PY CONTENT PROB ~ 2.5 %

MASSIVE TEXTURED W LOCAL NARROW AUTO BXA'S 1015 - 1033

60° DIPPING IRREGULAR CONFORM CONTACT

FROM 1035.5 TO 1109'
LOWER BUD TUFF: MEDIUM GREEN; WHT. MOD CHLORITIZED & PYRITIZED ~ 5% CALCITE AS BLEBS & IRREG VNLTS. ~ 5% OR LESS PHYLLITE CHIPS.
PY DISTRIBUTION MORE DISCRETE
REPL BIOT IN MATRIX?

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH: 1150'	STARTED:	PAGE: 13/14
LOGD BY: CPL	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL-91
DATE: 11/9/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	

DRILLING: DEPTH FT; REC/CUT; R Q D

LITHOLOGY: 1 ALLUVIUM; 2 MUD; 3 CGL; 4 LITHTUF; 5 PUMTUF; 6 SURGTUF; 7 ASH FLO; 8 LAVA; 9 AUTOBX; 10 INTRUSIV; 11 BASALT; 12 ANDESITE; 13 RHYOLITE

STRUCT: 14 TEC BXA; 15 BROKEN; 16 GOUGE; 17 VOID

ALTERATION/MINLIZATION: 18 Fe MIN NOX; 19 HEMTIT; 20 LIMONIT; 21 PYRITE; 22 PROP; 23 ARG; 24 ARG2; 25 RPL SIL; 26; 27 QTZ VNS; 28 CALCITE; 29 METCLAS

STRAT: 30 BADGER; 31 CHOCOLT; 32 BUD; 33 BRADY; 34 MKR POR; 35 LUD; 36 WILDROS; 37 DOZER

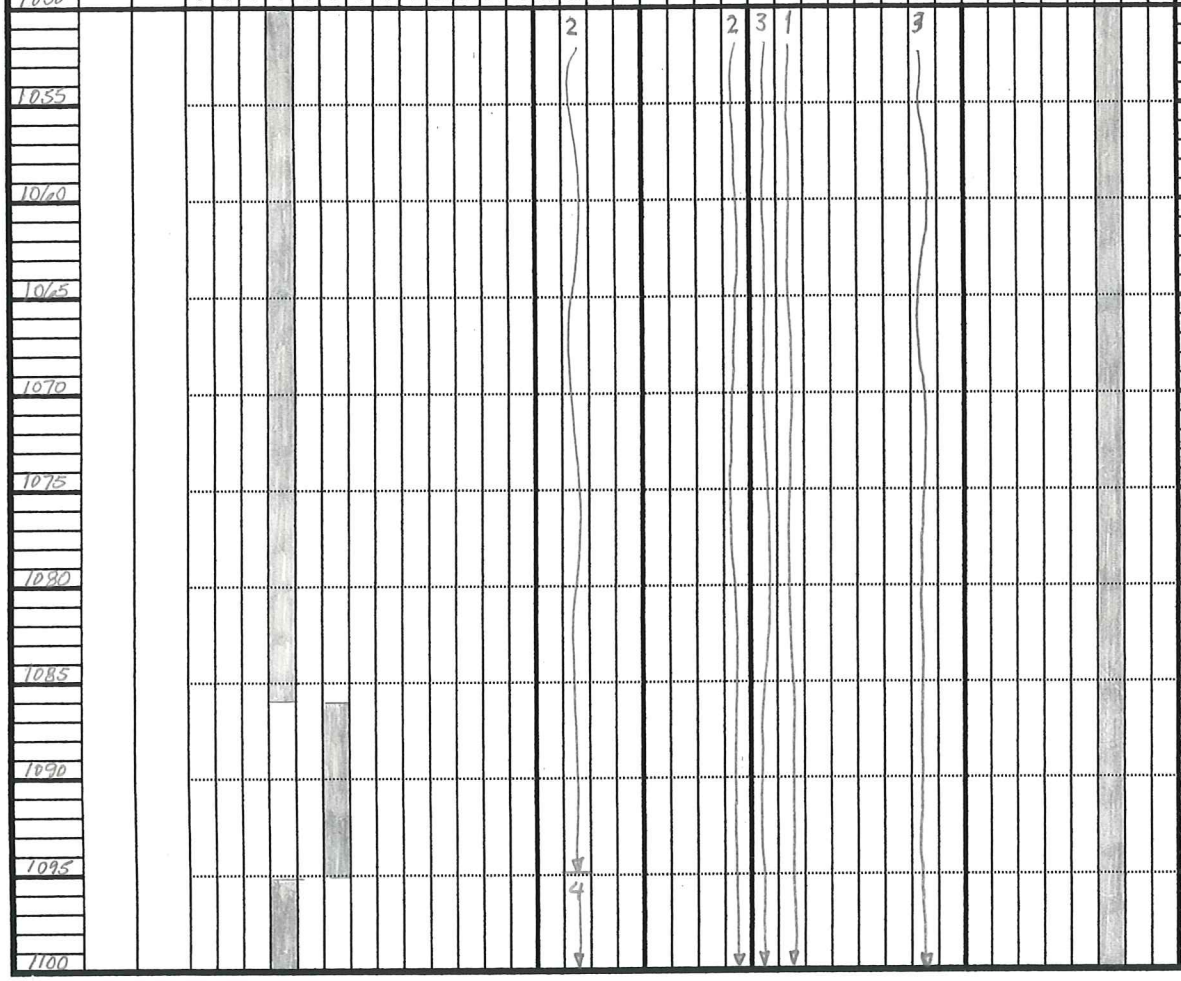
DEPTH FT; LITHGRAPH; ALTGRAPH; STRCNT

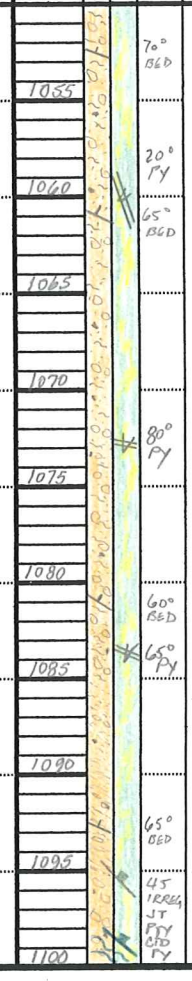
SCALE: 1" =10 ft

LITH. EXPLANATION:

MUD CGL	Mud matrix conglomerate
LITH TUF	Lithic clast dominant tuff
PUM TUF	Pumice rich tuff
SURGE TUF	Bedded matrix rich lithic tuff

SAMPLE INT





COMMENTS

FROM 1035.5 TO 1109.0'
MODERATELY CHLORITIZED LOWER BUD TUFF AS ABOVE

1086 TO 1095 FINER GRAINED MATRIX RICH BEDDED TO MASSIVE SURGE TUFF

TYPICAL CHLORITIZED LOWER BUD TUFF
SHEARED CHLORITIC FAULTS 1197-1198

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH: 1150'	STARTED:	PAGE: 14/14
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL-91
DATE: 11/9/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	

SCALE: 1" =10 ft

LITH. EXPLANATION:

MUD CGL	Mud matrix conglomerate
LITH TUF	Lithic clast dominant tuff
PUM TUF	Pumice rich tuff
SURGE TUF	Bedded matrix rich lithic tuff

| DRILLING | | | LITHOLOGY | | | | | | | | | | | | | STRUCT | | | | ALTERATION/MINLIZATION | | | | | | | | | | STRAT | | | | | | | | | | | | |

RL-91 0-465' RC

Footage Recovery	% Recovery	Sample Interval	Lithology
465-472	7.8/7 ~112%	465-470	465-551.2
472-476	4.5/4 ~113%	470-475	dk red, hematitic
476-482	5.7/6 ~95%	475-480	dike/sill ??
482-492	100%	480-485	w/ altered clasts
492-500	7.4/8 93%	485-490	
500-508	8.5/8 106%	490-495	551.2-660
508-512	4.2/4 105%	495-500	FGT;
512-518.5(520)	7.1/6.5 109%	500-505	551.2-563 wlt, blc + bx
520-530	94%	505-510	563 ≈ 592 dk grn, blc
530-540	100%+	510-515	592 ≈ 622 dk red, wk alt
540-550	100%+	515-520	622-660
550-560	105%	520-525	
560-565	5/5 ~100%	525-530	660-693.2
565-572	5.6/7 80%	530-535	red, brown FGT
572-581	9.1/9 ~100%+	535-540	wk fracture
581-590.5	9.3/9.5 98%	540-545	693.2-711
590.5-600.5	103%	545-551.2	wk paleo, sty fract
600.5-608.5	7.9/8 ~99%	551.2-555	FGT
608.5-618.5	103%	555-560	
618.5-629	10.4/10.5 99%	560-565	711-720
629-(635)639	~~6.9~~/104%	565-570	Fault Zone
649	100%+	570-575	720-748.7 lt grn FGT
659	100%+	575-580	720-732 sty fract
669.5	100%	580-585	
680	10.2/10.5 ~97%	585-590	748.7 - red brown, FGT
690	100%	590-595	
700	104%	595-600	
710	102%	600-605	=> mod local bx
720	98%	605-610	
725	4.5/5 ~90%	610-615	
731	5.4/6 ~90%	615-620	
739	7.6/8 ~95%	620-625	
749	100%+	625-630	
		630-635	
		635-640	

RL-91

2/4

Recovery Footage	Recovery %	Sample Interval	Lithology
		640-645	
749-759	100%	645-650	748.7-752.3
759-769	100%	650-655	red, brown, FGT
769-779	100%	655-660	
779-788	7.5/9 ~ 83%	660-665 ✓	752.3-759.7
788-798	105%	665-670	peach, mod fract,
798-809	10.3/11 ~ 94%	670-675	blc, FGT
809-819	105%	675-680	759.7-771.2
819-829	103%	680-685	red, brown, FGT
829-839.5	10.3/10.5 ~98%	685-690	w/ fracts
839.5-849.5	97%	690-693.2 ✓	771.2-778.5
849.5-859.5	102%	693.2-696 ✓	grn, red FGT
859.5-870	10/10.5 ~95%	696-701 ✓	
870-880	100%	701-706 ✓	778.5-795
880-890.5	100%	706-711 ✓	lt grn, wk blc
890.5-901	10.4/10.5	711-713.9	FGT
901-905	2.4/4	713.9-716	791.5-793
903.8-905.82' void	Ø	716-720	Fault Zone
905-912	6.6/7	720-725	calcite cement
912-922	100%	725-732	
922-932	104%	732-737	795-
932-942	100%	737-742	red to gry, grn
942-952	100%+	742-748.7	FGT
952-962	100%	748.7-752.3	871-882
962-972	98%	752.3-755.5 ✓	wk blc, lt grn FGT
972-982	99%	755.5-759.7	877-882
982-992	94%	759.7-765	fault zone, qtz
992-1002	100%	765-771.2	sulfide veining
1002-1012	98%	771.2-778.5	
		778.5-781	
		781-786	
		786-791.5	
		791.5-793	
		793-795	
		795-800	
		800-805	
		805-810	
		810-815	
		815-820	
		820-825	

RL-91 (cont.)

Sample Interval	Lithology
825-830	
830-835	
835-840	
840-845	
845-850	
850-855	
855-860	
860-865	
865-870	
870-873	
873-877	
877-880	
880-885	
885-890	
✓ 890-895	795-892.7
895-900	gy, FGT
900-903.8	
903.8-905.8	892.7-915.5
905.8-910	blk, pend FGT
910-915.5	903.8-905.8
915.5-920	2' void
920-925	915.5-920
925-930	red, brown, FGT
930-935	local bx
935-940	920-943
940-943	FGT, pend + gm
943-949	w/ dolomite veins
949-953.8	943-953.8
953.8-956	gy-red FGT
956-960	gm fractured
✓ 960-964.3	953.8-
964.3-966.2	wht to pend, blk
966.2-968.6	FGT
968.6-975	964.3-985
975-975.6	Frmnt
975.6-980	
980-985	

RL-91

Recovery Footage	Recovery
1012 - 1022	100%
1022 - 1032	100% +
1032 - 1042	100% +
1042 - 1052	100%
1052 - 1062	95%
1062 - 1072	103%
1072 - 1082	96%
1082 - 1090	8.5 /8 ~106%
1090 - 1100	102%
1100 - 1110	100% +
1110 - 1119.5	9.5 /9.5 ~100%
1119.5 - 1129.5	100%
1129.5 - 1139.5	100% +
1139.5 - 1150	10 /10.5 ~95%
TD	

Sample Interval	Lithology
985 - 989.2	953.8 - 1035.5
989.2 - 995	FGT
995 - 1000	
1000 - 1005	
1005 - 1010	
1010 - 1015	* 1035.5 - 1105
1015 - 1020	grn, pyroclastic
1020 - 1025	
1025 - 1029.2	
1029.2 - 1033.5	1105 - 1112.4
1033.5 - 1035.5	fault zone
1035.5 - 1040	Intense bx
1040 - 1045	
1045 - 1050	* 1112.4 - 1136.2
1050 - 1055	wht-grn, bk, FGT
1055 - 1060	U wins Avg.
1060 1065	Dozer ?
1065 - 1070	1029.2 - 1033.5 Flt
1070 - 1075	1136.2 - 1142.8
1075 - 1080	ltgrn, bk, int sy.
1080 - 1085	int. bx fault
1085 - 1090	
1090 - 1095	1142.8 - 1150
1095 - 1100	JR shale / bx zone
1100 - 1105	
1105 - 1108	
1108 - 1112.4	
1112.4 - 1116	
1116 - 1120	
1120 - 1125	
1125 - 1130	
1130 - 1136.2	
1136.2 - 1139	
1139 - 1142.8	
1142.8 - 1146	
1146 - 1150	
TD	

NEVADA GSI

JUL 05 1990

GEOCHEMICAL ANALYSIS REPORT

June 28, 1990

CUST. CODE: LOA
PROJECT: URBD-79014
P.O. #: XXXX
LOT ID: 7581

GEOLOGIST: NATE BREWER
COPIES TO: KEN TULLAR
COMPANY: LAC MINERALS
ANALYSIS: FIRE ASSAY FOR GOLD AND SILVER, WITH AN A.A. FINISH.

	SAMPLE I.D.			Au o/t	Ag o/t
1.	RL-91C	465	470	-0.001	-0.10
2.	RL-91C	470	475	-0.001	-0.10
3.	RL-91C	475	480	-0.001	-0.10
4.	RL-91C	480	485	-0.001	-0.10
5.	RL-91C	485	490	-0.001	-0.10
6.	RL-91C	490	495	-0.001	-0.10
7.	RL-91C	495	500	-0.001	-0.10
8.	RL-91C	500	505	-0.001	-0.10
9.	RL-91C	505	510	-0.001	-0.10
10.	RL-91C	510	515	-0.001	-0.10
11.	RL-91C	515	520	-0.001	-0.10
12.	RL-91C	520	525	-0.001	-0.10
13.	RL-91C	525	530	-0.001	-0.10
14.	RL-91C	530	535	-0.001	-0.10
15.	RL-91C	535	540	-0.001	-0.10
16.	RL-91C	540	545	-0.001	-0.10
17.	RL-91C	545	551.2	0.001	-0.10
18.	RL-91C	551.2	555	0.001	-0.10
19.	RL-91C	555	560	-0.001	-0.10
20.	RL-91C	560	565	-0.001	-0.10
21.	RL-91C	565	570	-0.001	-0.10
22.	RL-91C	570	575	-0.001	-0.10
23.	RL-91C	575	580	-0.001	-0.10
24.	RL-91C	580	585	-0.001	-0.10
25.	RL-91C	585	590	-0.001	-0.10
26.	RL-91C	590	595	-0.001	-0.10
27.	RL-91C	595	600	-0.001	-0.10
28.	RL-91C	600	605	-0.001	-0.10
29.	RL-91C	605	610	-0.001	-0.10
30.	RL-91C	610	615	-0.001	-0.10

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	SAMPLE I.D.			Au o/t	Ag o/t
31.	RL-91C	615	620	-0.001	-0.10
32.	RL-91C	620	625	-0.001	-0.10
33.	RL-91C	625	630	-0.001	-0.10
34.	RL-91C	630	635	-0.001	-0.10
35.	RL-91C	635	640	-0.001	-0.10
36.	RL-91C	640	645	-0.001	-0.10
37.	RL-91C	645	650	-0.001	-0.10
38.	RL-91C	650	655	-0.001	-0.10
39.	RL-91C	655	660	-0.001	-0.10
40.	RL-91C	660	665	-0.001	-0.10
41.	RL-91C	665	670	-0.001	-0.10
42.	RL-91C	670	675	-0.001	-0.10
43.	RL-91C	675	680	-0.001	-0.10
44.	RL-91C	680	685	-0.001	-0.10
45.	RL-91C	685	690	-0.001	-0.10
46.	RL-91C	690	693.2	-0.001	-0.10
47.	RL-91C	693.2	696	-0.001	-0.10
48.	RL-91C	696	701	0.005	-0.10
49.	RL-91C	701	706	-0.001	-0.10
50.	RL-91C	706	711	0.001	-0.10
51.	RL-91C	711	713.9	0.012	-0.10
52.	RL-91C	713.9	716	0.003	-0.10
53.	RL-91C	716	720	0.003	-0.10
54.	RL-91C	720	725	0.003	-0.10
55.	RL-91C	725	732	0.001	-0.10
56.	RL-91C	732	737	-0.001	-0.10
57.	RL-91C	737	742	-0.001	-0.10
58.	RL-91C	742	748.7	-0.001	-0.10
59.	RL-91C	748.7	752.3	-0.001	-0.10
60.	RL-91C	752.3	755.5	-0.001	-0.10
61.	RL-91C	755.5	759.7	-0.001	-0.10
62.	RL-91C	759.7	765	-0.001	-0.10
63.	RL-91C	765	771.2	-0.001	-0.10
64.	RL-91C	771.2	778.5	-0.001	-0.10
65.	RL-91C	778.5	781	-0.001	-0.10
66.	RL-91C	781	786	0.002	-0.10
67.	RL-91C	786	791.5	0.001	-0.10
68.	RL-91C	791.5	793	0.002	-0.10
69.	RL-91C	793	795	0.001	-0.10
70.	RL-91C	795	800	-0.001	-0.10
71.	RL-91C	800	805	-0.001	-0.10

THIS REPORT REVIEWED AND APPROVED BY:

Jerry Gaige

JERRY GAIGE, CHIEF CHEMIST

NEVADA GSI

JUL 0 2 1990

GEOCHEMICAL ANALYSIS REPORT

June 29, 1990

CUST. CODE: LOA
PROJECT: XXXX
P.O. #: XXXX
LOT ID: 7466

GEOLOGIST: NATE BREWER
COPIES TO: XXXX
COMPANY: LAC MINERALS
ANALYSIS: FIRE ASSAY FOR GOLD AND SILVER, WITH AN A.A. FINISH.

	SAMPLE I.D.				Au o/t	Ag o/t
1	RL-90	0	5		0.002	-0.10
2	RL-90	5	10		0.010	-0.10
3	RL-90	10	15		0.009	-0.10
4	RL-90	15	20		0.002	-0.10
5	RL-90	20	25		0.002	-0.10
6	RL-90	25	30		0.003	-0.10
7	RL-90	30	35		0.002	-0.10
8	RL-90	35	40		0.002	-0.10
9	RL-90	40	45		0.003	-0.10
10	RL-90	45	50		0.003	-0.10
11	RL-90	50	55		0.007	0.11
12	RL-90	55	60		0.011	0.23
13	RL-90	60	65		0.009	-0.10
14	RL-90	65	70		0.018	-0.10
15	RL-90	70	75		0.013	0.10
16	RL-90	75	80		0.006	-0.10
17	RL-90	80	85		-0.001	0.35
18	RL-90	85	90		0.001	-0.10
19	RL-90	90	95		0.001	-0.10
20	RL-90	95	100	A	0.001	-0.10
21	RL-90	95	100	B	0.002	-0.10
22	RL-90	100	105		0.002	-0.10
23	RL-90	105	110		0.001	-0.10
24	RL-90	110	115		-0.001	-0.10
25	RL-90	115	120		-0.001	-0.10
26	RL-90	120	125		0.001	-0.10
27	RL-90	125	130		0.001	-0.10
28	RL-90	130	135		-0.001	-0.10
29	RL-90	135	140		0.009	-0.10
30	RL-90	140	145		0.005	-0.10

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

	SAMPLE I.D.			Au o/t	Ag o/t
31	RL-90	145	150	0.001	-0.10
32	RL-90	150	155	-0.001	-0.10
33	RL-90	155	160	0.002	-0.10
34	RL-90	160	165	0.002	-0.10
35	RL-90	165	170	0.002	-0.10
36	RL-90	170	175	0.001	-0.10
37	RL-90	175	180	0.001	-0.10
38	RL-90	180	185	-0.001	-0.10
39	RL-90	185	190	-0.001	-0.10
40	RL-90	190	195	0.001	0.12
41	RL-90	195	200	0.002	-0.10
42	RL-90	200	205	0.001	-0.10
43	RL-90	205	210	-0.001	-0.10
44	RL-90	210	215	0.001	-0.10
45	RL-90	215	220	0.005	0.15
46	RL-90	220	225	0.003	0.29
47	RL-90	225	230	0.012	-0.10
48	RL-90	230	235	0.006	0.16
49	RL-90	235	240	0.001	0.13
50	RL-90	240	245	-0.001	-0.10
51	RL-90	245	250	0.001	-0.10
52	RL-90	250	255	0.002	-0.10
53	RL-90	255	260	0.001	-0.10
54	RL-90	260	265	0.001	-0.10
55	RL-90	265	270	0.006	0.21
56	RL-90	270	275	0.002	0.19
57	RL-90	275	280	0.001	-0.10
58	RL-90	280	285	0.001	0.12
59	RL-90	285	290	-0.001	-0.10
60	RL-90	290	295	0.001	0.11
61	RL-90	295	300	0.079	0.25
62	RL-90	300	305	0.011	0.14
63	RL-90	305	310	0.008	0.11
64	RL-90	310	315	0.005	-0.10
65	RL-90	315	320	0.013	0.12
66	RL-90	320	325	0.018	-0.10
67	RL-90	325	330	0.006	0.18
68	RL-90	330	335	0.023	-0.10
69	RL-90	335	340	0.016	-0.10
70	RL-90	340	345	0.008	-0.10
71	RL-90	345	350	0.008	-0.10
72	RL-90	350	355	0.004	0.19
73	RL-90	355	360	0.011	-0.10
74	RL-90	360	365	0.012	0.20
75	RL-90	365	370	0.002	0.13

	SAMPLE I.D.			Au g/t	Ag g/t
76	RL-90	370	375	0.002	0.11
77	RL-90	375	380	0.002	-0.10
78	RL-90	380	385	0.003	-0.10
79	RL-90	385	390	-0.001	-0.10
80	RL-90	390	395	0.001	-0.10
81	RL-90	395	400	0.001	-0.10
82	RL-90	400	405	0.001	-0.10
83	RL-90	405	410	0.001	-0.10
84	RL-90	410	415	-0.001	-0.10
85	RL-90	415	420	0.002	-0.10
86	RL-90	420	425	0.002	0.10
87	RL-90	425	430	-0.001	-0.10
88	RL-90	430	435	-0.001	-0.10
89	RL-90	435	440	0.001	-0.10
90	RL-90	440	445	0.002	0.10
91	RL-90	445	450	0.019	0.31
92	RL-90	450	455	0.001	-0.10
93	RL-90	455	460	0.001	0.12
94	RL-90	460	465	-0.001	-0.10
95	RL-91	0	5	-0.001	-0.10
96	RL-91	5	10	-0.001	-0.10
97	RL-91	10	15	0.001	-0.10
98	RL-91	15	20	0.001	-0.10
99	RL-91	20	25	-0.001	-0.10
100	RL-91	25	30	0.001	0.19
101	RL-91	30	35	0.003	0.15
102	RL-91	35	40	0.003	0.12
103	RL-91	40	45	0.002	0.10
104	RL-91	45	50	0.004	0.15
105	RL-91	50	55	0.002	-0.10
106	RL-91	55	60	0.004	-0.10
107	RL-91	60	65	0.003	0.15
108	RL-91	65	70	0.003	0.18
109	RL-91	70	75	0.003	-0.10
110	RL-91	75	80	0.002	-0.10
111	RL-91	80	85	0.001	-0.10
112	RL-91	85	90	-0.001	-0.10
113	RL-91	90	95	0.001	-0.10
114	RL-91	100	105	0.001	-0.10
115	RL-91	105	110	0.006	-0.10
116	RL-91	110	115	0.002	0.11
117	RL-91	115	120	0.002	-0.10
118	RL-91	120	125	0.002	0.18
119	RL-91	125	130	0.004	-0.10
120	RL-91	130	135	-0.001	-0.10

	SAMPLE I.D.			Au g/t	Ag g/t
121	RL-91	135	140	0.002	-0.10
122	RL-91	140	145	-0.001	-0.10
123	RL-91	145	150	0.049	0.14
124	RL-91	150	155	0.001	-0.10
125	RL-91	155	160	-0.001	-0.10
126	RL-91	160	165	-0.001	-0.10
127	RL-91	165	170	0.001	-0.10
128	RL-91	170	175	-0.001	-0.10
129	RL-91	175	180	-0.001	-0.10
130	RL-91	180	185	-0.001	-0.10
131	RL-91	185	190	0.001	-0.10
132	RL-91	190	195	0.001	-0.10
133	RL-91	195	200	-0.001	-0.10
134	RL-91	200	205	-0.001	-0.10
135	RL-91	205	210	-0.001	-0.10
136	RL-91	210	215	0.001	-0.10
137	RL-91	215	220	0.002	-0.10
138	RL-91	220	225	0.007	0.18
139	RL-91	225	230	0.003	-0.10
140	RL-91	230	235	0.003	-0.10
141	RL-91	235	240	-0.001	-0.10
142	RL-91	240	245	-0.001	-0.10
143	RL-91	245	250	-0.001	-0.10
144	RL-91	250	255	-0.001	-0.10
145	RL-91	255	260	-0.001	-0.10
146	RL-91	260	265	-0.001	-0.10
147	RL-91	265	270	-0.001	-0.10
148	RL-91	270	275	-0.001	-0.10
149	RL-91	275	280	-0.001	-0.10
150	RL-91	280	285	-0.001	-0.10
151	RL-91	285	290	0.001	-0.10
152	RL-91	290	295	0.008	-0.10
153	RL-91	295	300	0.022	-0.10
154	RL-91	300	305	-0.001	-0.10
155	RL-91	305	310	-0.001	-0.10
156	RL-91	310	315	0.001	-0.10
157	RL-91	315	320	-0.001	-0.10
158	RL-91	320	325	0.001	-0.10
159	RL-91	325	330	-0.001	0.16
160	RL-91	330	335	0.001	-0.10
161	RL-91	335	340	-0.001	-0.10
162	RL-91	340	345	-0.001	-0.10
163	RL-91	345	350	-0.001	-0.10
164	RL-91	350	355	-0.001	-0.10
165	RL-91	355	360	-0.001	-0.10

	SAMPLE I.D.			Au o/t	Ag o/t
166	RL-91	360	365	-0.001	-0.10
167	RL-91	365	370	-0.001	-0.10
168	RL-91	370	375	-0.001	-0.10
169	RL-91	375	380	0.007	-0.10
170	RL-91	380	385	-0.001	-0.10
171	RL-91	385	390	-0.001	-0.10
172	RL-91	390	395	-0.001	-0.10
173	RL-91	395	400	-0.001	-0.10
174	RL-91	400	405	-0.001	-0.10
175	RL-91	405	410	-0.001	-0.10
176	RL-91	410	415	-0.001	-0.10
177	RL-91	415	420	-0.001	-0.10
178	RL-91	420	425	-0.001	-0.10
179	RL-91	425	430	-0.001	-0.10
180	RL-91	430	435	-0.001	-0.10
181	RL-91	435	440	0.004	-0.10
182	RL-91	440	445	-0.001	-0.10
183	RL-91	445	450	-0.001	-0.10
184	RL-91	450	455	-0.001	-0.10
185	RL-91	455	460	-0.001	-0.10
186	RL-91	460	465	-0.001	-0.10

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THIS REPORT REVIEWED AND APPROVED BY:

Jerry Gaige

JERRY GAIGE, CHIEF CHEMIST

NEVADA GSI

JUL 05 1990

GEOCHEMICAL ANALYSIS REPORT

June 28, 1990

CUST. CODE: LOA
PROJECT: URBD-79014
P.O. #: XXXX
LOT ID: 7581

GEOLOGIST: NATE BREWER
COPIES TO: KEN TULLAR
COMPANY: LAC MINERALS
ANALYSIS: FIRE ASSAY FOR GOLD AND SILVER, WITH AN A.A. FINISH.

	SAMPLE I.D.			Au o/t	Ag o/t
1.	RL-91C	465	470	-0.001	-0.10
2.	RL-91C	470	475	-0.001	-0.10
3.	RL-91C	475	480	-0.001	-0.10
4.	RL-91C	480	485	-0.001	-0.10
5.	RL-91C	485	490	-0.001	-0.10
6.	RL-91C	490	495	-0.001	-0.10
7.	RL-91C	495	500	-0.001	-0.10
8.	RL-91C	500	505	-0.001	-0.10
9.	RL-91C	505	510	-0.001	-0.10
10.	RL-91C	510	515	-0.001	-0.10
11.	RL-91C	515	520	-0.001	-0.10
12.	RL-91C	520	525	-0.001	-0.10
13.	RL-91C	525	530	-0.001	-0.10
14.	RL-91C	530	535	-0.001	-0.10
15.	RL-91C	535	540	-0.001	-0.10
16.	RL-91C	540	545	-0.001	-0.10
17.	RL-91C	545	551.2	0.001	-0.10
18.	RL-91C	551.2	555	0.001	-0.10
19.	RL-91C	555	560	-0.001	-0.10
20.	RL-91C	560	565	-0.001	-0.10
21.	RL-91C	565	570	-0.001	-0.10
22.	RL-91C	570	575	-0.001	-0.10
23.	RL-91C	575	580	-0.001	-0.10
24.	RL-91C	580	585	-0.001	-0.10
25.	RL-91C	585	590	-0.001	-0.10
26.	RL-91C	590	595	-0.001	-0.10
27.	RL-91C	595	600	-0.001	-0.10
28.	RL-91C	600	605	-0.001	-0.10
29.	RL-91C	605	610	-0.001	-0.10
30.	RL-91C	610	615	-0.001	-0.10

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	SAMPLE I.D.			Au o/t	Ag o/t
31.	RL-91C	615	620	-0.001	-0.10
32.	RL-91C	620	625	-0.001	-0.10
33.	RL-91C	625	630	-0.001	-0.10
34.	RL-91C	630	635	-0.001	-0.10
35.	RL-91C	635	640	-0.001	-0.10
36.	RL-91C	640	645	-0.001	-0.10
37.	RL-91C	645	650	-0.001	-0.10
38.	RL-91C	650	655	-0.001	-0.10
39.	RL-91C	655	660	-0.001	-0.10
40.	RL-91C	660	665	-0.001	-0.10
41.	RL-91C	665	670	-0.001	-0.10
42.	RL-91C	670	675	-0.001	-0.10
43.	RL-91C	675	680	-0.001	-0.10
44.	RL-91C	680	685	-0.001	-0.10
45.	RL-91C	685	690	-0.001	-0.10
46.	RL-91C	690	693.2	-0.001	-0.10
47.	RL-91C	693.2	696	-0.001	-0.10
48.	RL-91C	696	701	0.005	-0.10
49.	RL-91C	701	706	-0.001	-0.10
50.	RL-91C	706	711	0.001	-0.10
51.	RL-91C	711	713.9	✓ 0.012	-0.10
52.	RL-91C	713.9	716	0.003	-0.10
53.	RL-91C	716	720	0.003	-0.10
54.	RL-91C	720	725	0.003	-0.10
55.	RL-91C	725	732	0.001	-0.10
56.	RL-91C	732	737	-0.001	-0.10
57.	RL-91C	737	742	-0.001	-0.10
58.	RL-91C	742	748.7	-0.001	-0.10
59.	RL-91C	748.7	752.3	-0.001	-0.10
60.	RL-91C	752.3	755.5	-0.001	-0.10
61.	RL-91C	755.5	759.7	-0.001	-0.10
62.	RL-91C	759.7	765	-0.001	-0.10
63.	RL-91C	765	771.2	-0.001	-0.10
64.	RL-91C	771.2	778.5	-0.001	-0.10
65.	RL-91C	778.5	781	-0.001	-0.10
66.	RL-91C	781	786	0.002	-0.10
67.	RL-91C	786	791.5	0.001	-0.10
68.	RL-91C	791.5	793	0.002	-0.10
69.	RL-91C	793	795	0.001	-0.10
70.	RL-91C	795	800	-0.001	-0.10
71.	RL-91C	800	805	-0.001	-0.10

THIS REPORT REVIEWED AND APPROVED BY:

Jerry Gaige

JERRY GAIGE, CHIEF CHEMIST

NEVADA GSI

JUL 0 6 1990

GEOCHEMICAL ANALYSIS REPORT

July 2, 1990

CUST. CODE: LOA
PROJECT: URBD
P.O. #: XXXX
LOT ID: 7607

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

	SAMPLE I.D.		Au o/t	Ag o/t	Checks Au o/t	Checks Au o/t
1.	RL-91C 805	810	-0.001	-0.10	-	-
2.	RL-91C 810	815	-0.001	-0.10	-	-
3.	RL-91C 815	820	-0.001	-0.10	-	-
4.	RL-91C 820	825	-0.001	-0.10	-	-
5.	RL-91C 825	830	-0.001	0.14	-	-
6.	RL-91C 830	835	-0.001	-0.10	-	-
7.	RL-91C 835	840	-0.001	-0.10	-	-
8.	RL-91C 840	845	-0.001	0.10	-	-
9.	RL-91C 845	850	-0.001	-0.10	-	-
10.	RL-91C 850	855	-0.001	-0.10	-	-
11.	RL-91C 855	860	-0.001	0.10	-	-
12.	RL-91C 860	865	-0.001	-0.10	-	-
13.	RL-91C 865	870	-0.001	-0.10	-	-
14.	RL-91C 870	873	-0.001	-0.10	-	-
15.	RL-91C 873	877	-0.001	-0.10	-	-
16.	RL-91C 877	880	0.005	-0.10	-	-
17.	RL-91C 880	885	-0.001	-0.10	-	-
18.	RL-91C 885	890	-0.001	-0.10	-	-
19.	RL-91C 890	895	-0.001	-0.10	-	-
20.	RL-91C 895	900	0.001	0.15	-	-
21.	RL-91C 900	903.8	0.007	0.10	-	-
22.	RL-91C 903.8	905.8	0.005	0.15	-	-
23.	RL-91C 905.8	910	0.002	-0.10	-	-
24.	RL-91C 910	915.5	0.001	0.15	-	-
25.	RL-91C 915.5	920	-0.001	-0.10	-	-
26.	RL-91C 920	925	-0.001	-0.10	-	-
27.	RL-91C 925	930	0.003	0.15	-	-
28.	RL-91C 930	935	-0.001	-0.10	-	-
29.	RL-91C 935	940	-0.001	-0.10	-	-
30.	RL-91C 940	943	-0.001	-0.10	-	-

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	SAMPLE I.D.			Au o/t	Ag o/t	Checks Au o/t	Checks Au o/t
31.	RL-91C	943	949	-0.001	-0.10	-	-
32.	RL-91C	949	953.8	-0.001	-0.10	-	-
33.	RL-91C	953.8	956	-0.001	-0.10	-	-
34.	RL-91C	956	960	-0.001	-0.10	-	-
35.	RL-91C	960	964.3	0.001	-0.10	-	-
36.	RL-91C	964.3	966.2	0.004	0.15	-	-
37.	RL-91C	966.2	968.6	0.003	-0.10	-	-
38.	RL-91C	968.6	975	0.002	-0.10	-	-
39.	RL-91C	975	975.6	0.005	0.15	-	-
40.	RL-91C	975.6	980	0.004	-0.10	-	-
41.	RL-91C	980	985	0.004	-0.10	-	-
42.	RL-91C	985	989.2	0.010	-0.10	-	-
43.	RL-91C	989.2	995	0.010	-0.10	-	-
44.	RL-91C	995	1000	0.008	-0.10	-	-
45.	RL-91C	1000	1005	0.001	-0.10	-	-
46.	RL-91C	1005	1010	0.004	-0.10	-	-
47.	RL-91C	1010	1015	0.003	-0.10	-	-
48.	RL-91C	1015	1020	0.001	-0.10	-	-
49.	RL-91C	1020	1025	0.001	-0.10	-	-
50.	RL-91C	1025	1029.2	0.003	-0.10	-	-
51.	RL-91C	1029.2	1033.5	0.002	-0.10	-	-
52.	RL-91C	1033.5	1035.5	0.021	-0.10	-	-
53.	RL-91C	1035.5	1040	-0.001	-0.10	-	-
54.	RL-91C	1040	1045	0.001	-0.10	-	-
55.	RL-91C	1045	1050	0.003	-0.10	-	-
56.	RL-91C	1050	1055	-0.001	-0.10	-	-
57.	RL-91C	1055	1060	-0.001	-0.10	-	-
58.	RL-91C	1060	1065	0.001	-0.10	-	-
59.	RL-91C	1065	1070	0.001	-0.10	-	-
60.	RL-91C	1070	1075	0.051	0.10	0.051	0.032
61.	RL-91C	1075	1080	-0.001	-0.10	-	-
62.	RL-91C	1080	1085	-0.001	-0.10	-	-
63.	RL-91C	1085	1090	-0.001	-0.10	-	-
64.	RL-91C	1090	1095	-0.001	-0.10	-	-
65.	RL-91C	1095	1100	0.003	-0.10	-	-
66.	RL-91C	1100	1105	0.001	-0.10	-	-
67.	RL-91C	1105	1108	-0.001	-0.10	-	-
68.	RL-91C	1108	1112.4	0.001	0.10	-	-
69.	RL-91C	1112.4	1116	-0.001	-0.10	-	-
70.	RL-91C	1116	1120	0.001	-0.10	-	-

	SAMPLE I.D.		Au o/t	Ag o/t	Checks Au o/t	Checks Au o/t
71.	RL-91C 1120	1125	0.001	-0.10	-	-
72.	RL-91C 1125	1130	0.002	-0.10	-	-
73.	RL-91C 1130	1136.2	0.001	-0.10	-	-
74.	RL-91C 1136.2	1139	0.002	0.10	-	-
75.	RL-91C 1139	1142.8	0.001	-0.10	-	-
76.	RL-91C 1142.8	1146	0.001	0.10	-	-
77.	RL-91C 1146	1150	0.002	-0.10	-	-

THIS REPORT REVIEWED AND APPROVED BY:

Richard A. Grondin

RICHARD GRONDIN, LABORATORY MANAGER

RL-91 Rotary Summary Log

0 - 30 overburden

30 - 115 FGT weakly oxidized CHOCO
w/ few fine phenos

30-70 intense clay alt

115 - 210 Volc. breccia vs. lithic lapilli tuff

210 - 223 Lr grey FGT

223 - 410 Intrusive

300 - 307 Bl. FGT vs. intrusive

307 - 317 fresh intrusive

317 - 330 Bl FGT vs. intrusive

385 - 390 w/ banding - flo related?

355 - 370 Intru. breccia

375 - 380 bl + gray clasts in red matrix

410 - 465 Yllsh & grey FGT (vs. bl intrusive)
locally brecciated
→ 430 - 435, 440 - 445, 445 - 450

RL-91C Summary LOG

CORE:

465 - 964.3 INTRUSIVE?

465 - 505 Intrusive bxa w/ plucked tuff frags.

518 - 551.2 oxidized orange red intrusive

551.2 - 562.4 bleached

625 - 660 bleached w/ FeOx fracts.

696 - 748.7 bleached

* 711 - 720 fault

752.3 - 759.7 bleached

778.5 - 795 bleached

871.5 - 882 bleached

877.6 - 878 minor fault rubble

892.5 - 915 bleached

920 - 943 bleached

953.8 - 964.3 transitional zone intrusive into FGT w/ mottled preferentially alt - clay

964.3 - 975.6 Fault Δ + clay gouge

975.6 - 989.2 FGT buff + flesh

989.2 - 1037.2 flow banded tuff bl ± SiO_2

* 1029.2 - 1037.2 fault significant

1037.2 - 1110 Green lithic Lapilli Tuff

1110 - 1142.8 Dark FGT

1110 - 1142.8 bl + Δ + rubble + gouge

1142.8 - 1150 Jurassic basement