60001322

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-89C
AUTHOR	K. Kenner; N. Brewer; R. Grondin; J. Gaiga R. Dixon; P. Kortemier
DATE OF DOC(S)	1990-1991; 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; Coats Drilling; Long Lac Minerals Exploration (Texas), Inc. Lac Minerals
COMMODITY If not obvious	gold silver
NOTES	Drill log; geology; assay; total depth 1152' handwritten notes; measured section 48 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	5/19/08
DB:	Mller	
SCANNED:		

Revised: 1/22/08

DRILL LOGS RL-89

Rosebud

60001322 4010

60001322

LONG LAC MINERALS EXPL. (TEXAS) INC.

DRILL LOG SUMMARY SHEET

PROJECT ROSEBUD

HOLE NUMBER RL-89C TOTAL DEPTH 1152' LOGGED BY KLK

Date started 5-17-90

Date completed 5-20-90

Initial bearing N 55 W

Initial inclination -60°

Elevation 5298.3

Collar coordinates:

N 2,204,136.0

E 482,664.2

Contractor COATES DRILLING

Drill Type UNIVERSAL/ROTARY/CORE

Hole Size HQ CORE, 4 1/4 Hammer

Comments

DOWN HOLE SURVEY INFORMATION

FROM	TO	SURVEY POINT	INCLI-NATION	BEARING	X (Easting)	Y (Northing)	Z (Elevation)
0	50	25	-60	N 54 W			
50	200	125	-60°	N 54 W			
200	400	300	-60°	N 51 W			
400	600	500	-61°	N 53 W			
600	800	700	-61°	N 50 W			
800	1000	900	-61°	N 47 W			
1000	1152	1100	-62°	N 49 W			

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-89

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 O/T	Ag O/T	CHECK	
									BROWN					0-15 COVER	<.001	.15		
05															<	.15		
10															.002	.14		
15									DK PURPLE				<1%	15-90 RED MATRIX MED. GRAINED PYRO-CLASTIC, LOCALLY CLAY ALTERED,	.001	.10		
20														MODERATELY OXIDIZED. CLASTS PREDOMINANTLY GREY FN	.002	.10		
25									YELLOW BROWN					GRN TUFFS.	<.001	<		
30															.002	<		
35															.001	<		
40															.002	<		
45															.001	.16		
50									PURPLE BROWN						<.001	.16		
55															.003	.10		
60									YELLOW BROWN						.003	<		
65															.003	<		
70															.002	<		
75															.001	<		
80															.001	<		
85															.001	<		
90														90 - 255 MOD-STR BLEACHED MED. GR. PYROCLASTIC & LOCAL WELDED TUFF BEDS.	.003	<		
95															.003	<		
/00																		

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DRILL HOLE RL-89

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LOGGED BY DAM

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au O/T	Ag O/T	CHECK	
									GREEN + PINK				<1%		.002	<.10		
105															.002	<		
110									PINK					WELDED TUFF	.002	<		
115															.015	.20		
120									GREEN						.008	.19		
125															.002	.22		
130															.001	<		
135									LT GREEN						<.001	<		
140															<	<		
145															<	<		
150															<	<		
155															<	<		
160															<	<		
165															<	.12		
170															<	.16		
175															<	.18		
180															<	<		
185															<	<		
190															<	<		
195															<	<		
200																		

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LOGGED BY DAM

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au O/T	Ag O/T	CHECK	
									LT GREEN + PURPLE				<1%		<.001	<.10		
205															<	<		
210															<	<		
215															<	<		
220															<	<		
225																		
230																		
235																		
240																		
245																		
250																		
255									LT PURPLE					255-365 INTENSLY CLAY ALTERED MED. GRAIN PYROCLASTIC? TUFFS.				
260																		
265																		
270																		
275																		
280																		
285																		
290																		
295																		
300																		

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DRILL HOLE RL-89

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LOGGED BY DAM

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au O/T	Ag O/T	CHECK	
									LT GREEN				4%		.001	.10		
305															<	<		
310															<	<		
315															<	<		
320															<	<		
325															<	<		
330															<	<		
335															.001	.10		
340															.001	.26		
345															.002	<		
350															.002	.18		
355															.003	.11		
360															.002	.27		
365									GREEN					365-465 LOCALLY BLEACHED MED GRAIN PYROCLASTIC	.001	.15		
370															.001	.18		
375															<	.17		
380															<	<		
385		XK											1-2%		.001	.17		
390									LT GREEN				< 1%		.001	.16		
395															.001	.19		
400																		

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LOGGED BY DAM

	LITH.	ALT.	% ARG. ALT. W	M	S	% SIL'N W	M	S	COLOR	% FeOx W	M	S	% SULF.	COMMENTS	Au o/t	Ag o/t	CHECK	
		~							LT GREEN				±1%		.031	.12		
05															.002	.25		
10									GREEN						<	.15		
15															<	<		
20															<	<		
25															<	<		
30															<	.11		
35		~												INCREASE GRANULAR TUFFS	<	.13		
40															<	<		
45															<	<		
50															<	.22		
55															<	.17		
60															.022	.14		
T.D. 65																		
70																		
75																		
80																		
85																		
90																		
95																		
00																		

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
						465' CORE BEGAN						
470	100		25 fract	1-2% diss py w/ local FeOx replace		465-482.2 fine clastic pyroclastic, lt to dk green smectite altered, predom clast size ~ ±.1" with maximum size up to 1.5" lamelli are perpendicular to core axis weakly fractured, no prominent veining intermittent weak calcite veining, most pervasive argillic alteration	465-470					
	100						470-475				.002	
							475-480				<	
480	88				gouge	478.5-481.2 clay gouge zone w/ strong						
	100		1 py 25° VN; SiO2 + py VN	±2% diss + VN; py + buck shot py		481.2-494 Coarse pyroclastic - lt tan to green w/ orange tan altered matrix locally, clasts predom 1/4" to 2" wide, moderately pervasively bleached, weak drusy qtz silicate, pyrite + poss trace marcasite veining	480-485				.001	
							485-490				.001	
490	97						490-495				.001	
						494-552 moderately to strongly bleached coarse pyroclastic w/ light pervasive smectite (green) alt. possible weak pers. silicification, weakly fracture veining w/ drusy qtz, marcasite, pyrite, silicate fill, plus very fine qtz stockwork pervasively matrix supported w/ fine grained volcanic local fine altered feldspar phenos ~ 3-4 mm wide; up to 1½ to 2" wide clasts becoming coarser pyroclastic w/ depth - up to 6" wide local intermittent spotted tuffaceous beds	495-500				.001	
500			SiO2 + py VN 35									
	98		55 py VN; SiO2 + py VN 18				500-505				.003	
510							505-510				.002	
	97		70 py VN				510-515				.001	
520			25 gouge py VN				515-520				.001	
	100						520-525				.001	
530			py VN 29				525-530				.002	

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
	99		25 / sl py VN	±2% diss + VN py + local marca site		530-552 coarse bleached pyroclastic (cont.)	530-535				.001	
							535-540				.001	
540	98	±5° / VN	45 / sl py VN			544-552 w/ more lahar expression w/ mod to micro breccia matrix and moderate nontronite w/in matrix locally; concentrated along veins	540-545				.015	
							545-550				.001	
550			20 / sl py VN			552-585 ("classic" bud" pyroclastic) clast supported pyroclastic, pervasively smectite/nontronite alt matrix is predom a fine pyroclastic lahar clasts up to 8" wide, mod pervasively argillically alt fine disseminated sulfides concentrated w/in individual clasts, w/in veins w/in matrix locally, weak to moderate veining w/ drusy qtz veins + marcasite + local barite pyrite ± sericite + local barite crystals predom subparallel to concentric	550-555				<	
	100 +		17 / sl py	±3% diss + VN + buck spot py + local marca site			555-560				<	
560	99		vn / sl py 30°				560-565				<	
						552-555 ↑ bleaching + tan/orange matrix alt + weak perv. silicification	565-570				.001	
570	97		10 / sl py vn				570-575				.004	
			±5° / vn / mar / carb veins				575-580				.004	
580	98		30 / qtz + py veins				580-585				.005	
						585-597.3 same "classic pyroclastic" as immediately above with decrease in smectite alt + mod pervasive tan alteration predom w/in matrix; poss related to ↑ SiO_2 content, mod overall clay alt	585-590				.018	
590	104		15° / sl py VN				590-594				.002	
			±5°			597.3-624 Interbedded fine grained lithic tuff w/ local fine to med. clasts pyroclastic beds. → continued ↑ smect alt	594-597.3				.002	
600			vf py veins	11 @ 2%			597.3-601				.001	

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
	96		Sugy cavity 10°	≤2% diss + vn py		600-624 Interbedded fine grained to speckled lithic tuff w/ fine to medium clasted pyroclastic interbeds - medium green smectite rich mod pervasive argillic clay + weak bleaching, weak drusy vuggy qtz pyrite veins. Pyroclastic is matrix supported - clasts are bleached ; clay alt.	601-606				.001	
610	98		30° Fault				606-611				.001	
			30/ trace py vn				611-616				.001	
620	105						616-621				<	
			20/ scattered py vns 10°			624-647 Interbedded, poss graded bedded mixed fine grained lithic tuff and medium clasted pyroclastic weakly perv. bleached; mod clay alt w/ perv. medium green (smectite?) alt weak veining 5°-25° to core axis w/ pyrite, sericite ± SiO2 zones, local strong sericite / clay alt zones 635-636 ↑ tan matrix alt	621-626				<	
630	97.5		25/ SiO2 35 py vns				626-631				.007	
							631-636				.001	
640	100		20/ py vn				636-641				.002	
							641-646				<	
650	98		15 py vn	±2% diss + vn py		647-660 medium green matrix rich pyroclastic w/ perv. mbd to strong smectite ± montmorillonite alt, clast size predom 1/8-1/4" w/ few clasts up to 1" long, clasts are bleached white ; clay altered w/ local pyrite veining + concentrations, this unit is relatively unveined.	646-651				<	
							651-656				.001	
660	100						656-661				<	
						660-701.7 Wispy PYROCLASTIC - fine to medium CLASTED w/ local graded bedding ; few fine grained tuffaceous units medium green glauconite clay rich alteration, greater abundance of flatten lapilli perpendicular to core axis, weak ↓ in disseminated py very weak drusy vuggy qtz sulfide veins ± kaolinite	661-666				<	
670	100						666-671				<	

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG
	100		CaCO3 VN 25	1-2%	
680	90		40 CaCO3 VN		
690	100		± 30° PY VN; 30° Kaolinite PY VN		
700	100	± 15° glauco PY VNS	80° CONTACT w/ Tuff	2-3% disS +VN PY +blebs sulfide	80°
710	100		± 5°; 55° clay + CaCO3 + PY VNS		
720	100		25° 30°; 50°; CaCO3 PY 45 VNS		
730	96		75; PY CaCO3 20 VNS; 55		
740			15 15 VNS CaCO3 PY 50		

DESCRIPTION

670 - 701.7

Wispy green pyroclastic w/ flattened lapilli and weak drusy qtz sulfide veining (continued) weak local calcite veining

In 80° contact w/ lower tuff unit

701.7 - 791

Bleached white-orangish tan fine grained tuff pervasive weak to moderate clay + poss sericite alteration poss. weakly silicified. Possibly the speckled tuff unit - where feldspar lithics have been replaced by sulfides w/ local CaCO3 moderate to local strong veining: → or filling vesicles

1) drusy qtz sulfide veins
2) lr green clay veins (glauconite?)
3) CaCO3 + pyrite ± sericite

The CaCO3 + pyrite veins appear to be the later stage of veining. Few veins up to 3/4" wide w/ pyrite concentrations in a 500 c.w/ lr green clay + CaCO3. Predominantly mineralized veining runs subparallel to core axis

729.5 - 740 more pronounced green alteration rim on veins

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
671-676				<	
676-681				.002	
681-686				.001	
686-691				.002	
691-696				.002	
696-701.7				.002	
701.7-707				.002	
707-712				<	
712-717				.005	
717-722				.005	
722-727				.007	
727-732				.003	
732-737				.003	
737-742				.002	

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 +		80° CaCO3 py vns; 10° 4 VN + CaCO3 py VN	2-3% diss + VN py + blades fine ov diss sulfide		740-791 Bleached tan to buff fine grained tuff continued - poss the speckled tuff w/ pyrite replacing feldspar lithics or filling vesicles (as above)	742-747				.001	
750	97		clay VN 30°; 45° py + CaCO3 VN				747-752				.007	
							752-757				.001	
760	100 +						757-762				.001	
			80°; 10°; CaCO3 sericite py vns				762-767				.003	
770	104		clay + py CaCO3 VN; 2°				767-772				.002	
							772-777				.003	
			75°; py CaCO3 VN ±3°	same @ above ±3%		778-802 moderate strong increase in veining subparallel to core axis @5°-20°	777-782				.002	
780	98						782-787				.003	
			20; CaCO3 + py + clay vns				787-791				.004	
790	100		35-50; CaCO3 clay + py VN			791-802 Same fine grained tuff w/ weak decrease in speckled (relict) texture mod strong increase in veining subparallel to core axis - increased favorable alteration - tan orange poss-pervasive sericite alt w/ intermittent white - bleached zones	791-794				.002	
							794-798				.001	
800			85				798-802				.001	
	98	75 clay VN	contact w/ PYRO	1-2% diss + VN py	85	802-841.8 Weak to moderate green (glauconite?) alt medium clasted pyroclastic - pervasive wispy to chicken poop texture - the lapilli are flattened and predom ⊥ to core axis wk ↑ silicif locally cont.→	802-807				.003	<
810							807-812				.002	<

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	DESCRIPTION
	98	py VN 30		1-2% diss + VN py		810-841.8 wispy to chicken pox pyroclastic (cont.) very weak veining: 1) lt green clay veins 2) pyrite veinlets 3) $CaCO_3$ ± py veins
820	102		$CaCO_3$ + py VN 80°			816-822 weak ↑ tan alt w/ poss wk silicification few tan alt tuff frags up to 1" wide
830	100		±20° $CaCO_3$ + py VN			831-841.8 more prominent chicken pox pyro texture w/ ↑ pervasive clay alt - ? strong clay matrix; weak ↑ calcite veining
840	100		35 $CaCO_3$ py VN 40° drusy qtz py clay barite VN	2-3% diss + VN py		841.8-882 50° contact w/ upper pyroclastic fine grained tuff - lt green to buff pervasively bleached w/ local pyroclastic (fragmental) beds locally w/ relict milled frags, - poss 'auto brecciation' moderate pervasive veining: 1) clay 2) pyrite ± drusy vuggy qtz + relict barite prenos 3) $CaCO_3$ + pyrite ins
850	100	10° $CaCO_3$ + py VN	50° 45° drusy qtz py $CaCO_3$ seric VN			
860	98		$CaCO_3$ 15° py VN 60° py VN	3-4% diss + VN + blebs sulf		862-867 weak ↑ pervasive bleaching zone of strong drusy quartz ± $CaCO_3$ + gray clay + pyrite + sericite ± local kaolinite clay veining - predom subparallel to contacts 5° to 25°
870	97		30° clay VN 65 py VN	±2% diss + VN py		
880			py VN 60			

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
812-817				.003	<
817-822				.001	<
822-827				<	<
827-832				<	<
832-837				<	<
837-841.8				.012	<
841.8-847				.003	<
847-852				.001	.13
852-857				.073	1.57
857-862				.038	1.03
862-867				.002	.45
867-872				<	<
872-877				.002	<
877-882				<	<

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG
890	100		22/ vn CaCO3 ±	±2% VN + diss py	(AC/A)
	100		fract VN 60°/ 10°		(AC/A)
900			clay py VN 20°/ 80°	±3% VN + diss py	
	99		SiO2 + py VN		
910			clay VNS 15°/ 85°	2-3% diss + VN + buck shot py	(AC/A)
	100		py VNS		
920			clay + py VNS 30°/ 35°		FAULT
	100		clay VN 50° CaCO3 + py VN		
930				±2% diss + VN + buck shot py	
	100		py VN 15°/ 10°		
940			clay VN 35°/ SiO2 + clay VN 30°		
	98				
950		25/50			

DESCRIPTION

882-923 Fine grained tuff, mottled to variegated medium green and flesh colored alt. very weak pervasive bleaching, moderate pervasive veining w/ prominent mineralized veining subparallel to core axis; w/ pure fracture veinlets ⊥ to mineralized vns

types of veins: 1) pure clay
2) SiO_2 + py ± local sericite ± $CaCO_3$
3) microbreccia w/ 2nd clay py-ser VNS local ↳ rehealed w/ $CaCO_3$ ± seric.

888-889 str. fract ⊥ to core axis

896.7 - 906.4
zone of 2-3 stages of brecciation, mod-strong pervasive silicification, predom clast supported w/ local SiO_2 rich matrix zones - matrix predom a micro breccia
2-3 stages of veining
1) clay ± sericite
2) SiO_2 ± py
3) $CaCO_3$ + py ± SiO_2

908-923 ↑ bleaching, ↓ green alteration, intermittent brecciation w/ 2-3 stgs, w/ strong Kaolinite matrix; ↓ local SiO_2 mod strong veining - prominence of Kaolin weak $CaCO_3$ + pyrite veining

912-913.8 clay + SiO_2 rehealed breccia
915-916 strong clay veins wk local pyrite
919-920 clay + SiO_2 rehealed breccia

923-928.5
FAULT ZONE: 1"-5" intermittent clay gouge zones + local brecciation, moderate druzy qtz sulfide veins, mod-str clay veins, wk $CaCO_3$ + py VNS

928.5-943
Fine grained tuff - mottled to variegated tan and medium green intermittently brecciated 1-2 stgs - clast supported, moderate fracture veins w/ prominence of clay fill weak pyrite ± SiO_2 vns, intermittent strong bleaching mineralized veins subparallel to core axis, w/ silicified w/ pyritic buckshot, alternating clasts w/ strong clay alt to tan silicified clasts

943-950 Fine grained Tuff similar to above w/ relict to pseudo flow banding and mod strong ↑ pervasive bleaching w/ local silicified clasts strong auto brecciation, mod fractured, mod to weak veining w/ predom pyrite ± clay vns; locally SiO_2 encapsulated w/ green rim

FGT banding → 45° to core axis

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
882-887				.01	<
887-892				.001	<
892-897				.017	<
897-902				.018	<
902-907				.082	.23
907-912				.053	.12
912-916				.016	<
916-920				.002	<
920-923				.014	.10
923-927				.018	.15
927-931				.022	.12
931-936				.017	<
936-941				.043	.18
941-946				.093	<
946-951				.159	.23

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG
	100		70 py VN; 25	±2% diss + VN + buck shot py	
			70 py VNS		
960	100		25 py ± clay VNS		
970	100	75 pseudo flo	58 drusy SiO2 py VNS; 30 fract		
980	100	90 pseudo flo	85 20 + py VN; 20° VN; fract	3-4% diss + VN + buck shot py	
990	95	75 pseudo flo	5-20° sericic py clay VNS; 85°		
1000	99		35; 20 K fract py SiO2 VN	±2% diss + VN + buck SHOT py	
1010	100		15° SiO2 py VNS		
1020			fract 50; 85 50 py VN		

DESCRIPTION

950 - 994 fine grained to flow banded tuff verigated orangish - pink to green alteration w/ sparse lithic clasts of pyroclastic, moderately perv. fractured w/ bleached rims; local green alt rims, weakly to mod pervasively bleached moderately veined w/ drusy qtz pyrite veins local clay filled breccia veins

966 - 977.5
zone of intermittent speckled - vesicle filled fine grained tuff, intermittently brecciated w/ white to green clay fill matrix, weak ↑ fracturing w/ assoc drusy qtz sulfide vns; local barite crystals

977 - 978 mod vuggy drusy qtz - pyrite + barite veining

982.5 - 983.3 clast supported breccia vein ~2 stages brecciation w/ mod strong orange alteration coloration w/ weak SiO2 encapsulated pyrite veins

985 - 994
zone of strong fracture veining predom sub parallel to core axis w/ strong white clay fill w/ local pyrite blebs; local SiO2 encapsulation

994 - 999 Intermittently brecciated fine grained tuff pervasively silicified; pink alteration color mod strong finely disseminated buckshot py, mod veining w/ SiO2 encap pyrite vns w/ local clay assoc

999 - 1024
Buff bleached with weak green fine grained tuff, weakly intermittently autobrecciated weakly veined w/ SiO2 encapsulated pyrite veins - locally vuggy; drusy

1016 - 1017 broken rubble clay rich fault zone

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
951-956				.058	.14
956-961				.005	<
961-966				.018	<
966-971				.100	<
971-976				.016	.14
976-981				.319 .390	.36
981-986				.003	<
986-991				.091	.29
991-994				.072	<
994-999				.299	.39
999-1004				.023	<
1004-1009				.004	<
1009-1014				.001	<
1014-1019				.01	<

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG
1030	104		SiO2 py VN 35	±3% VN + diss py + stibnite + marcasite	
1040	100	SS SiO2 + py VN	xm SiO2-py 4 VNS 35°		
1050	98	py 60 20 VNS	25/ py-QV 50° 5-10° SiO2 + py + sec VNS		
1060	97		15° SiO2 py VNS 50	2%+ VN + diss	
1070	100+		40 fract py-clay VN 30°		
1080	97		15 40 SiO2 + py VN ±S 55° clay VN	3-4% diss + VN py + bladed sulf.	
1090	100		35 70 SiO2 py VNS 5 75		

DESCRIPTION

1024 - 1054 mottled FGT
Bleached lt green fine grained intermittently moderately to intensely brecciated fine grained tuff, weakly fractured and moderately veined primary mineralized (looking) veins run subparallel to core axis and contain crystalline drusy qtz ± sericite ± clay + stibnite + barite, poss marcasite + pyrite and are a later stage veining — they crosscut SiO_2 encapsulated pyrite veins & locally are crosscut by fine white clay veinlets

1039.6 - 1040.5 broken rubble
1039.6 - 1043 Intensely veined and fractured

1054 - 1069 Bleached peach; weak tint green speckled - vesicle filled fine grained tuff, str to mod pen. clay/sericite alteration weakly vein fractured w/ pyrite + gray clay + sericite fill

1066-1067 white intense clay gouge + barite + sericite VN ± SiO_2 w/ contact @ 30° to core axis

1069 - 1082 Verigated tan/gray; green w/ stretch marks to speckled fine grained tuff w/ intermittent clay/sericite alt w/ preferential alteration of feldspar giving speckled to mottled appearance w/ intermittent preferential silicification locally brecciated; mod to strongly veined w/ at least 3 stages of veining 1) green duck butt clay alt. 2) fine micro SiO_2 (local drusy) pyrite veins 3) latch stage qtz breccia + sulfide veining 4) very fine SiO_2 ± sulf stockwork primary mineralized veining subparallel to core axis local fine buckshot pyrite - no primary text. left

1082 — 1091 Tan; weak local green fine grained tuff, weak to mod pen. silicification, mod well fractured w/ SiO_2 + clay ± sericite ± py fill, mod strong veining - 3+ stages intermittently brecciated veins ±5° to core axis + @ 75° SiO_2 + py + ▲ SiO_2 + py + bladed sulf VNS

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
1019-1024				.005	<
1024-1029				.139	.22
1029-1034				.027	<
1034-1039				.043	<
1039-1044				.157	.35
1044-1049				.056	.23
1049-1054				.068	.24
1054-1058				.453	.60
1058-1062				.013	.17
1062-1066				.176	.36
1066-67				.123	3.09
1067-1072				.891 1.036	1.02
1072-1077				1.35 1.4	2.08
1077-1082				.223	.41
1082-1087				.573 .703	.71
1087-1092				.211	.52

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG
1100	100	35/ A VN CONTA	15/ 40 SiO2 VN 25/ fract	±2% diss +VN py	
1110	99		40 fract SiO2 py VN 20° clay VN 10 25/ fract	3-4% diss +VN py + stib nite	
1120	100		SiO2+py VN 10 40 SiO2+py VN 40 50	±3% diss +VN py + stib nite	
1130	100				GOUGE
1140	98	SS SiO2 + barite +sulfide VN	15/ VN 30/ f10	@ 2-3% ±3% diss +VN py	
1150	96	SS chlorite 35/ f10 35/ f10	50 SiO2 py VN 30 side +py VN SiO2 py VN 80 35		gouge
1152					

DESCRIPTION

1091 - 1098.2
brecciated & broken rubble fault zone w/ fine grained tuff, fractures vary 10°-25° to core axis, mod to local strong bleaching, locally silicified, strong kaolinite + sericite alt, weak fine clay to local SiO2 vns w/ local wk py vns, local sericite, barite + sulfide veins

1098.2 - 1114.5
chalcedonic breccia: lt to medium gray to lt green w/ local tan-peach breccia frags. matrix supported w/ chalced + local clay + microbreccia, 3-4 stages of brecciation, stronger veining in upper 9' of zone w/ strong clay/sericite fill; weak sulfides, weak to mod veining w/ depth - predom SiO2 + sulfide vns, upper zone also w/ pods of stibnite + barite xtals, clasts predom FGT ? poss hetero lithic

1114.5 - 1127.6
silicified lt gray ± orange fine grained tuff chalcedonic breccia ↓ in brecciation and stages of ▲ weak veining: 1) clay 2) SiO2+py +poss stibnite blades 3) local microbreccia + SiO2 + py vns, primary mineralized vns subparallel to core axis

1127.6 - 1132 Breccia fault contact w/ mesozoic clay altered, slump? w/ local JT shales, strongly bleached gray to gray fine grained tuff SiO2 rich frags, w/ pyrite + SiO2 vns & JT clasts of shale to 1/4", weak pyrite + SiO2 vns

1132 - 1134.2
JT shale - breccia zone, strongly carbonaceous, silicified w/ matrix rich SiO2 + barite + local clay, strong barite stockwork

1134.2 - 1152
JT shales - pervasively brecciated - metamorphic: w/ pervasive silicification true apparent bedding unreliable, fine diss pyrite parallel w/ FOLIATION

(1142.7 - 1143.4 upper boundary ⊥ to core axis, lower boundary 15° to core axis)

fine cretaceous dikes throughout and parallel to foliation, moderate to strong SiO2 + barite ± clay + local sericite veining, pervasive fine disseminated sulfides throughout ∥ to f.

1152' T.D.

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
1092-1097				.035	.27
1097-98.2				.011	.33
1098.2-1103				.003	1.72
1103-1108				.005	.71
1108-1113				.001	.28
1113-1118				.002	.33
1118-1123				.005	.84
1123-1127.6				.006	.33
1127.6-1132				.003	.40
1132-1135				.024	1.35
1135-1140				.002	.20
1140-1145				.005	1.72
1145-1149				.004	.42
1149-1152				.011	1.21

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 1/14
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 10/18/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-89

SCALE: ~1" = 10'

DRILLING			LITHOLOGY													STRUCT				ALTERATION/MINLIZATION												STRAT								DEPTH	LITH GRAPH	ALT GRAPH	SAMPLE
DEPTH FT	REC/CUT	RQD	ALLUVUM	AMUDCGL	SLTCGL	LITHTUFF	PUMTUF	SUGTUF	ASHFLO	LAVA	AUTOBX	INTRUSV	BASALT	ANDESIT	RHYOLIT	TEC.	BRECCIA	GOUGE	VOID	Fe MIN: MNOX	HEMTIT	LIMONIT	PYRITE	PROP	ARGG	ARG2	RPLSIL	STKWKS	VEINS	CALCITE	METALS	BADGER	CHOCOLATE	OUBUD	BRADY	MKRPOR	BUD	LIDROS	WIDER	DEPTH FT			
450																																								450			
455																																								455			
460																																								460			
465																																								465			
470																																								470			
475																																								475			
480																																								480			
485																																								485			
490																																								490			
495																	3						2	1 2	3															495			
500																																								500			

COMMENTS

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

BOX #4 FIRST BOX FOUND
FROM 492.5 TO 506.0'
CHOCOLATE TUFF. NON WELDED
LITHIC XTAL TUFF WHITE MOD
STRNGLY ARGILLIZED ~2.5% PY
DISSEMS ON FRACT SURFS

35 PY YN

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: 2/14
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 10/18/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-89

SCALE: ~1"=10'

DRILLING: DEPTH (FT) | RECOVERY | RQD

LITHOLOGY: ALLUVIUM | CCGL | MUDSTONE | SILTSTONE | LITHIC TUFF | PUMICE TUFF | QUARTZ GLASS | SAL | ALAVA | AUTOBXA | INTRUSIVE | BASALT | ANDESITE | RHYOLITE

STRUCT: TECTONIC | BRECCIA | GOUGE | VEIN

ALTERATION/MINERALIZATION: Fe MIN: MINOR | HEMATITE | LIMONITE | PYRITE | PROPYLITIC | ARGILLIC | ARGILLIC 2 | PHYLLIC | SILICIFIED | KAOLIN | VEINS QTZ | CALCITE | CALCITE

STRAT: BACKGROUND | CORDED | UNDERGROUND | BRAKE | MARKER | LUBE | WILDROSE | DOZER

DEPTH	LITHOLOGY	ALTERATION	STRUCT	SAMPLE
500				
505				
510				
515				
520				
525				
530				
535				
540				
545				
550				

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 492.5 TO 506.0 WHT TO TAN MOD ARGILLIZED NON-WELDED LITHIC CRYSTAL TUFF. ~2.5% PY LOCAL QTZ-PY VNLTS & DISSEM PY. BRN CTC.

FROM 506.0 TO 552.0' WHT TO VY PALE BLUH GREEN MONOLITHIC AUTO BXA. <3% HETEROLITHIC CLASTS. MATRIX & CLASTS ~25% STUBBY PLAG? TO 3MM LONG. MAFICS → PYRITE COARSER PLAG'S CLEARLY GLOMEROPORPHYRITIC APPROXIMATELY 2.5% PY. PY HAS 2 MODES OF OCCURRENCE DISSEM IN G.MAS 0.1-0.5 mm EUHEDRAL XTLS & IN PY VNLTS 0.5mm WIDE APPROX 3/FT LINEAL

EARLY BLU-GRN "CELADONITIC" ALTERATION OVER PRINTED BY LATE WHT ARGILLIC ALTN

VERY SIMILAR CPK SURFACE SAMPLE RBR 18025 LITHOLOGY.

LOCAL 5 mm O.S. QTZ VEINS W COMB QTZ CTING SULFIDE CLUMPS (ESP. @ 510')

MOD AMTS RESIDUAL SILICA IN ROCK G-MASS DOES NOT APPEAR TO BE MOBILIZED

FROM 545 TO 550 ABDNT BLH GRY CELADONITIC CLY FILLING CLAST SUPPTD BXA. @ 545 BLADED PSEUDO HEX MARCASITE TO 3mm WIDE IN QTZ VNLT.

75 IRRG PY GASH VNLT

70 JT

35 QTZ PY VNLT

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: 3/14
LOGD BY: CPK	STATE: Nevada County: Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 10/18/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-89

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: DEPTH (FT), RECOVERY (%), RQD

LITHOLOGY: ALLUVIUM, MUD, SILT, LITHIC, PUMICE, SUGRAFUL, ASH, ALAVA, AUTOBX, INTRUSIV, BASALT, ANDESITE, RHYOLITE

STRUCT: TECTONIC, BROKEN, GOUGE, VOID

ALTERATION/MINERALIZATION: Fe MIN (MNOP, HEMATITE, MAGNETITE, LIMONITE, PYRITE), PROPYLITIC, ARGILLIC, ARGILLIC 2, PLISTIC, STKWSS, STKSS, VEINS QTZ, CALCITE, MALACHITE

STRAT: BADGER, CHOCOLATE, UBADY, MARPO, BLUD, LIDRO, WIDOZER

Depth (ft)	Lithology	Struct	Alteration/Mineralization	Strat	Comments
550	2	2	2 1 2	1	FROM 506 TO 552.0 CHOC. PORPHY & AUTOBXA
555	3	3	3 3 3		FROM 552.0 TO 597.3' TAN AND WHITE & GREEN CELADONITIC LITHIC BXA (NON-WELDED TUFF) CLASTS ARE DIVERSE & PORPHYRITIC CLASTS ARE F.G. BLUH GRN CELADONITIC CLY IN BOTH G-MASS & CLASTS PY TO 3mm EUHEDRAL FIRST OCCURRENCE OF VOLC. BXA AS CLASTS.
560	2		1		
565					
570					BOX 12 MISSING
575	3		3 3 2	2	LOCAL MOD, INCOMPLETE REPL. SILIC ADJACENT TO VEINS, ~3% PYRITE AS DISSEM REPLACEMENTS OF MAFICS & AS QTZ SULFIDE & SULFIDE ONLY VNLTS
580	2		3	1	VERT C.S. QTZ VNLT; 60 QPVN; QTZ PY 50 VN
585				2	@ 589' WELL DEFINED TRACTION LAYER SHOWS BEDDING MAY?? CORRESPOND TO PURPLE WAFT ON S. RIDGE; OBVIOUS CHOCOLATE CLASTS @ 579', 587'
590				1	35° PY VN; 80°; BDDING VERT IRR QTZ SULF
595				2	EUHEDRAL BARITE @ 597' COATING QTZ SULFIDE QS. VNLT; BaSO4; SHARP CTC DIP 80CA
600			1 3 1?	0	FROM 597.3' TO 622. PALE GREEN PUMICEOUS WRLY WELDED TUFF

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: 4/14
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 10/18/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-89

DRILLING: DEPTH (600–650); RECOVERY; RQD

LITHOLOGY: ALLUVIUM, MUDDY CGS, LITHIC CGM, PUMICEOUS VO, SUGARY VCS, FAULT VCM, ALAVA, AUTOBRECCIA, INTRUSIVE, BASALT, ANDESITE, RHYOLITE

STRUCT: TEC, ROCK, GOUGE, VOID

ALTERATION/MINERALIZATION: Fe MIN (MNO, HEM, LIMONITE, PYRITE), PROPYLITIC, ARGILLIC, ARGILLIC 2, PHYLLIC, SILICIFIED, VEINING, CALCITE, MEDIUM, QTZ, SILICIFIED, TAS

STRAT: BCGD, HOGCO, BUBEL, UDRY, MARP, UDO, LRO, WIDRS, DOZER

DEPTH, LITHOLOGY, AGE, PAPH

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 597.3 TO 622'
PALE TO MEDIUM GREEN PUMICEOUS LITHIC TUFF. SHOWING COMPACTION FOLIATION. HETEROLITHIC CLASTS 4 mm to 4 cm HENCE RELATIVELY WELL SORTED COMPARED TO TUFFS UP HOLE CLASTS ARE FINE GRAINED.
UNIT IS PERVASIVELY "CELADONITIZED"
LOCAL CALCITE VNLTS TO 3 mm WIDE
PY OCCURS AS LOCAL BLEBS & POORLY FORMED VEINLETS UNIT BECOMES MORE LITHIC RICH DOWN HOLE TO SOMEWHAT ARBITRARY GRADATIONAL
--CTC @ 622--
FROM 622 TO ____
MOD WELL TO SOMEWHAT SORTED LITHIC BXA, POSSIBLE CORRELATIVE TO BRADY'S SURGE SEQUENCE
LOCAL WHT CLAY VNLTS & CLY + PY VNLTS
633-635 IRREG VNLTS BLUE GRN CHLORITE
640-642: MOD WELL SORTED VOLCANIC SANDSTONE (SAND WAVE FACIES?)
FROM 642 TO 660
DK GRN & WHITE LITHIC SURGE TUFFS WITH WHITE CLASTS. CLASTS MOSTLY IN 2-POPULATIONS
WHITE FN GRND NO VIS PHENOS
WHITE PORPHYRITIC W 5-10% MAF/PYRITE REPL. BIOT.?

SAMPLE INT

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: 5/14
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 10/19/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-89

SCALE: ~1" = 10'

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

DEPTH	LITHOLOGY (ALLUVIUM, CGL, CGL, LITHUFF, PUMICE, SUGRUFF, SALTFLAT, ALVIUM, AUTOBX, INTRUSIV, BANTAS, ANDESIT, RHYOLIT)	STRUCT (TECTONIC, BRECCIA, GOUGE, VOID)	ALTERATION/MINERALIZATION (Fe MIN: MNOXIDE, HEMATITE, LIMONITE, PYRITE; PROPYLITIC, ARGILLIC, ARGPROP, SILICIFIED, VEINING, CALCITE, MEALTERED)	STRAT (BCDADOG, CUBAND, MKARP, LBUDR, WILDRO, DOZER)	COMMENTS
650		2	2 4 1	2	FROM 622.0' TO _____ U. BUD SURGE TUFFS: GREEN & WHITE CELADONITICALLY ALTD & ARGILLIZED WITH MOD AMTS RESIDUAL SILICA IN G-MASS
655					PY AVGS 1-3% MOSTLY AS DISSEMINATIONS IN G-MASS
660			3 2		LOCAL VARIANT — LOCAL BLEBS OR VEINLETS
		3			FROM 662' TO 685'
665					SURGE TUFF HAS VY FN GRND MATRIX AND ABUNDANT BALLISTIC LITHIC BOMBS W SAG STRUCTURES & WISPY OR "SHEARED" LOOKING COMPACTION FOLIATION
670				2	
675		2		3	@ 676 5 cm WIDE CALCITE VEIN W PSEUDO HEXAGONAL MARCASITE LOCAL INTERGROWN W AND REPL CALCITE ALONG CLEAVAGE
680		3			
685			3 2 2	3	LOCAL VARIANT @ SURGE PACKAGE
690		2	2		FROM 685 TO MATRIX BECOMES MUCH COARSER G-MASS MORE TAN COLORED
695		2		2	PYRITE VEINLETS NUCLEATED ON CLASTS @ 686 IRREGULAR O.S. FILLING OF SUCROSIC QTZ & MARCASITE ROSETTES @ 694 QTZ + BLACK SOOTY SULFIDE & MARCASITE ROSETTES
700		2			

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: 6/14
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 10/19/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-89

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 (700, 705, 710, 715, 720, 725, 730, 735, 740, 745, 750); RECOVERY; RQD

LITHOLOGY: ALL UNIT; MULTI CUT; SILT; LITHUM; PUSH; SURFACE; ALLOY; LAUNTS; INTERSAND; BANDED; ARHYOLITE; TEBRIC; BOUGEE; GOUGED; VOID; Fe MINERALS: MNOX; HEMATITE; LIMONITE; PYRITE; PROPYLITIC; ARGILLIC; ARGILLIC 2; PLASTIC; SKWIS; VEINS; CALCITE; MEAT; STRAT: BADLANDS; CAUDY; BARREN; MARKED; BLUE; WILDER; DOZER; GEOLOGY; LEDGE; ROCK; BURIED; LUDRO; WORS; DEPTH; LITHOLOGY; GRAPHIC; STRUCTURE; SAMPLE INTERVAL

COMMENTS:

FROM 622.0 TO 701.0 UPPER BUD SURGE TUFF
CONFORMABLE CTC

FROM 701.0 TO 802.1
WHT TO PALE PINK TAN PORPHYRITIC LAVA. ROCK IS PERVASIVELY ARGILLIZED LEADING TO TEXTURALLY ENHANCIVE ALTERATION OF PLAG PHENOS, REMOVAL OF Fe FROM G-MASS. REPLACEMENT OF MAFICS BY PY. PY ALSO OCCURS AS CIRCULAR CONCRETIONS TO 3 CM IN DIAM.
UPPER CONTACT APPEARS CONFORMABLE
VEIN TYPES PRESENT
1.) GRANULAR QTZ
2) RUTILE COLORED QTZ + SULFIDE (MAR) VNLTS W CHL SELVAGES
3) QTZ-CAL MAR VEINLETS
4) PALE GREEN SILICA + CLAY VNLTS (OPAL?)
ONLY PLACE W FLOW BANDING
CHLORITE & "CELADONITE" HAVE FRACTURE CONTROL
ROCK APPEARS TO HAVE APPROX 15 % PHENOS WITH MAFICS (NOW PY-MAR) & PLAG. PLAG IS SLIGHTLY BLOCKY MOSTLY SIMPLE XTALS 0.5 TO 1 mm X 3 mm
SULFIDE REPLACEMENTS ARE 1 x 4 mm PSEUDOMORPHS OF POSS H.B.?? PROTOLITH UNCERTAIN
DOES NOT HAVE STRONG AFFINITIES TO CHOCOLATE
IS MOST REMINESCENT OF OSCAR??
TOTAL PY CONTENT APPROX 3%
G MASS APHANITIC

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: 7/14
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 10/19/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-89

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

DRILLING			LITHOLOGY													STRUCT				ALTERATION/MINIEIZATION												STRAT								DEPTH	LITHOLOGY	ALTERATION	STRUCTURE	COMMENTS	SAMPLE
DEPTH	RECOVERY	RQD	ALLUVIUM	MUDDY	SILTY	LITHIC	PUMICITY	SORTING	ALTERATION	AUTOBRECCIATION	INTRUSIVE	BASALT	ANDESITE	RHYOLITE	TEXTURE	BROKEN	GOUGE	VOID	Fe MIN: MINERAL	Fe MIN: HEMATITE	Fe MIN: LIMONITE	Fe MIN: PYRITE	PROP	ARG	ARG	RPLS	STKWS	VEINS	ALCIT	METALS	BADGE	CONGLOMERATE	HOODY	BRAD	MARKER	LIBUD	WIDDER	DOZER						
750			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	750					
755																	2						3	1	3		1		2	2										755			20° QTZ BLY PY	FROM 701 TO 802.1' PORPHYRITIC LAVA CORRESPONDS TO BUD MARKER BED. SEE DETAILED DESCRIPTION ABOVE	
760																																								760			80° PY 150° CHL SELV		
765																																								765			VERT IRR CLY VN 70° FOL		
770																																								770			20° CHL	@ 770' 2 CM VNLT W SYMMETRIC CHL SELVAGE & PALE GRN CLAY + CALCITE BLEBS	
775																																								775			80° PY	PY-MAR DOMINANT VEINLET SEEN X-CUTTING PALE BLUE-GRN CLAY VNLT	
780																																								780			15° PY CHL VNLT		
785																																								785					
790																																								790			80° FOL 20° BXA VNLT BXT SULF		
795																												2												795			20° GRN CLY	FINE NETWORK OF HAIRLINE VNLTS	
800																																								800					

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: 8/14
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 10/19/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-89

DRILLING: DEPTH, RECOVERY, RQD

LITHOLOGY: ALLUVIUM, MUDDY, SILTY, LITHIC, PUMICEOUS, SUSHIVA, GRAIN, FAULT, ALAVA, AUTO, AUTO BX, INTRUSIVE, BASALT, ANDESITE, RHYOLITE

STRUCT: TECTONITE, BRECCIA, GOUGE, VEIN

ALTERATION/MINERALIZATION: Fe MIN, MINERAL, INTENSITY, PARGILLIC, ARGILLIC, ARGILLIC, PROPYLITIC, SILICIFICATION, VEIN, CALCITE, MELANITE

STRAT: BACHOCO, CUBADY, BARRIO, MARKAPO, LUDERO, WIDOS, DOZER

DEPTH, LITHOLOGY, ALTERATION, STRUCTURE

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

SAMPLE

COMMENTS

FROM 701 to 802.1 MARKER PORPHYRY SEE ABOVE

FROM 802.1 TO 841.8'
CONFORMABLE CR
GRAY TO GREENISH GRAY SURGE TUFFS AS BEFORE
HETEROLITHIC NON WELDED TUFF
SAG STRUCTURES BENEATH 5-10% OF LITHICS (TO 5CM)
G-MASS MOD RESISTANT DUE TO RESIDUAL SILICA. CLAST RANGE FROM NON ARG TO ARG 5

@ 826 POSSIBLE QTZITE LITHIC NOTED BSMNT?

FROM 841.8 TO 885
WHT, TAN & GRN VY FN GRND LAVA MODERATELY TO STRONGLY PERVASIVELY ALTERED. PROTOLITH CORRELATION UNCERT.

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CRBLOG1.xls

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 9/14
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 10/19/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-89

DRILLING: DEPTH (85 to 900); RECOVERY; RQD

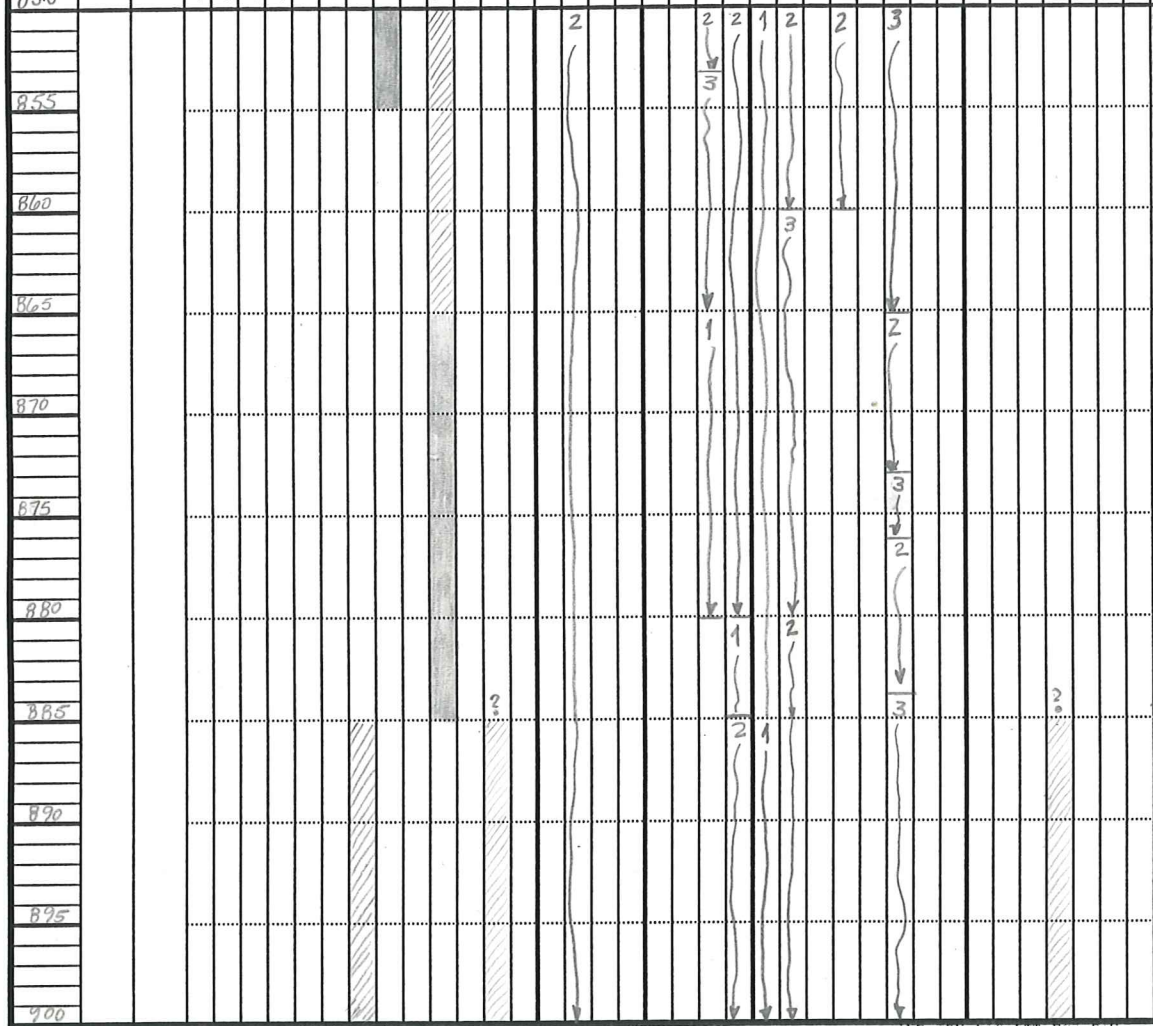
LITHOLOGY: ALL UNIT, AMUL CODE, SULDT, LITHCGCTF, PUTTUF, SURGTUF, ASHFL, ALAVO, AUTOB, INTRUX, BASALT, ANDESX, HYDOLITS, TEXTURE

STRUCT: BROKEN, GOUGE, VOID

ALTERATION/MINERALIZATION: Fe MIN (MOXIDES, HEMATITE, LIMONITE, PYRITE); PROPIL, ARGIL, ARG2, SILICIFIED, STKWK, VEINS, CALCITE, METALS

STRAT: BADOBX, CGLOMERATE, UNDIFF, BRADY, MARPOR, BLUDR, WLDOS, DOZER

DEPTH | LITHOLOGY | ALTERATION | STRAT | COMMENTS



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

SAMPLE INT

COMMENTS

FROM 841.8 TO 885

VY FINE GRAINED ROCK IS COMPOSED OF APPROXIMATELY 25% PLAG MICROLITES <0.5 MM IN LENGTH NOW→ WHT CLY

FINE GRAINED VOLCANIC ROCK

LOCAL STRONG VEIN BXA POSSIBLE??

AUTO BXA

UPPER PORTION HARD TO SCRATCH RESIDUAL SILICA + REPLACEMENT SiO_2?

CHL FRAX CUT BY PY VNLTS — GRADATIONAL CONTACT

G-MASS BECOMING MORE GRANULAR. PLAG MICROLITES >50% OF ROCK USUALLY ALMOST TOUCHING. CHOICES OF CORRELATION SEEM TO BE BETWEEN DOZER & BRADY. THIS GRANULAR TEXTURE HAS NOT BEEN OBSERVED IN THE BRADY ∴ ≈ DOZER

@ 880 ARGILLIC ALTN & SULFIDATION DECREASE SLIGHTLY FINE GRAINED GRANULAR H.B. POSS BIOT DISCERNIBLE

PY ONLY IN VEINLETS — BXA VNLT @ CTC.

FROM 885' TO

REDDH PURPL & PL GREEN W WHITE PLATY FLOW BANDED LAVA? TEXTURE SIMILAR TO BRADY ANDESITE

PLATEY LAMINA RANGE FROM 1 TO 2 cm THICK & FOCUS BLEACHING & ALTERATION PARALLEL TO THEM. ARG RATES #2 BUT IS LESS PERVASIVE MORE FRACT CONTROLED AWAY FROM FRACTS IS PROB #1 ARG.

H.B. + FELTED PLAG IN G-MASS UNIT 3LBT

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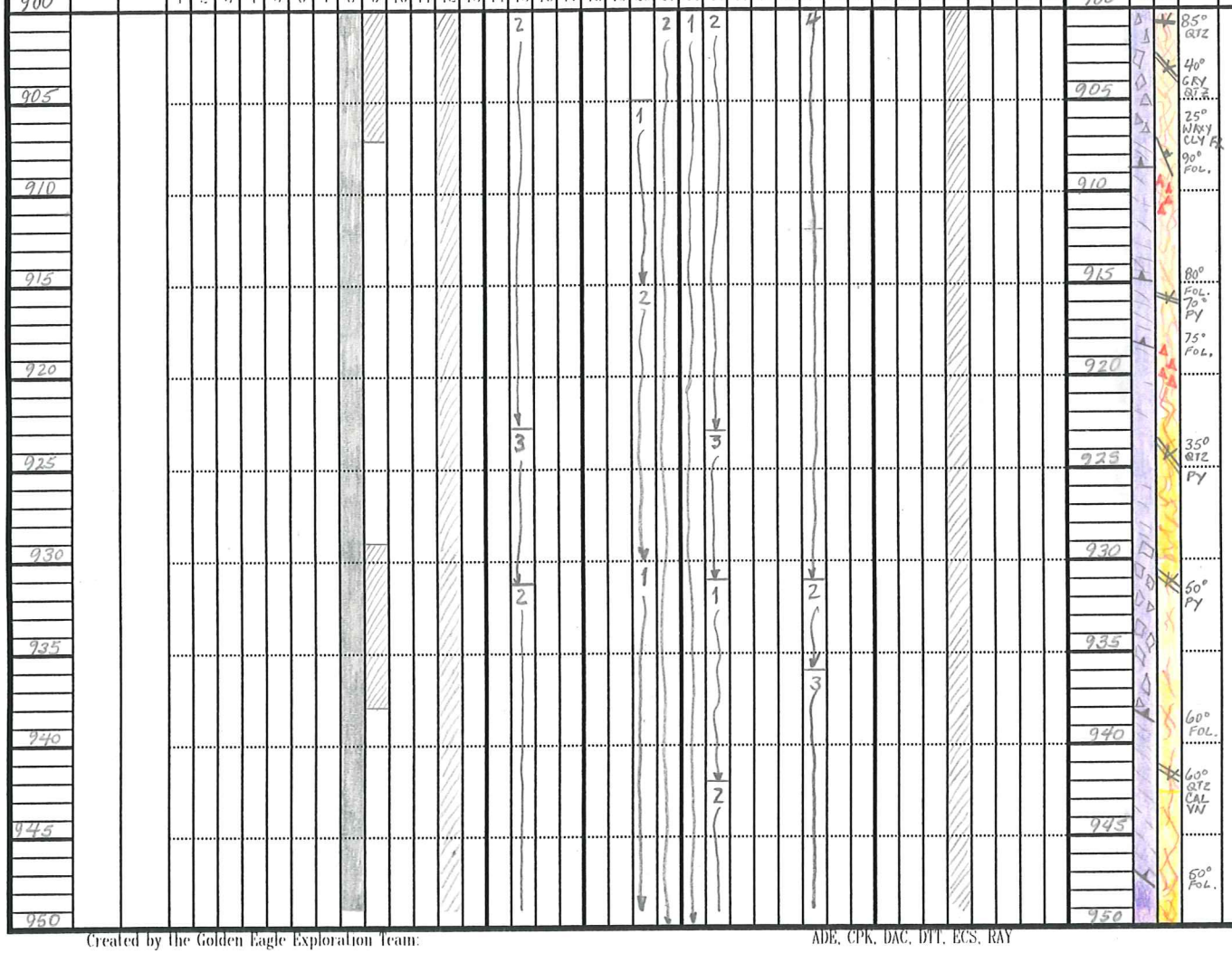
CRBLOG1.xls

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 10/14
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 10/19/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-89

SCALE: ~1"=10'

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



FROM 885' TO

PLAY FLOW BANDED LAVA PURPLH W WHITE & GREEN FLOW LAMINAE PARALLEL & VERY PLANAR

LOCALLY AUTOBXTD 900-907 (NOT KNOWN TO BE TYPICAL OF BRADY ANDESITE) ALSO AUTO BXA 929-938'

HYDROTHERMAL BXA @ 912' & 918'

O.S. INCOMPLETELY FILLED WHITE POWDERY CLAY ESR 926'

BANDED FLOW FOLIATION FORMED BY MICRO SPHERULITES < 0.5mm DIAM NOT SEEN IN BRADY ON SURFACE

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: 11/14
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 10/20/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-89

SCALE: 1" = 10'

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

DEPTH	LITH	ALT	STRUCT	COMMENTS
950				FROM 885 TO 994'
			70° FOL	PLATY FLOW BANDED LAVA
955			30° QTZ VNLT	INCOMPLETELY ARGILLIZED
				LOCALLY PINKH, & PURPLH, INCOMPLTLY
			80° FOL	SULFIDIZED HEM REMAINS IN G.MASS
960			70 QTZ SULF 50° PY	FLOW LAMINAE STRAIGHT,
				CONSPICUOUSLY PLANAR
			60° FOL	MINOR AMTS OXIDATION IN & ADJACENT
965				TO SULFIDE RICH ZONES
			VERT W CLY SELV.	
970			70° FOL.	
				LOCAL TEXTURAL
				FROM 972 TO 978 VARIANT
			75° FOL	FRAGMENTAL WITH WAVY SPOTTED
975			30° MAIN TREND	VESICULAR TEXTURE
980			80° FOL, 80° PY	978-994' FLOW LAMINAE DEFINED
				IN PART BY MICRO-SPHERULITES
			20° CLY CTDD FRAX	
985				
			90° FOL	
990			30° UNT QTZ	
995			35° QTZ	994-
				FELTED FELDS LAVA AUTOBXA. G-MASS
			50° QTZ-CAL-LIM	SIMILAR ABOVE, NOT PLATEY
1000				

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CRBLOG1.xls

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 # RL-89
DATE: 10/20/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	

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

LITHOLOGY: 1 ALLUVIUM, 2 AMUDCGL, 3 SILCT, 4 LITHTUFF, 5 PUMTUFF, 6 SURGTUFF, 7 ASHFLO, 8 ALAVA, 9 AUTOBXA, 10 INTRUSIV, 11 BASALT, 12 ANDESITE, 13 RHYOLITE

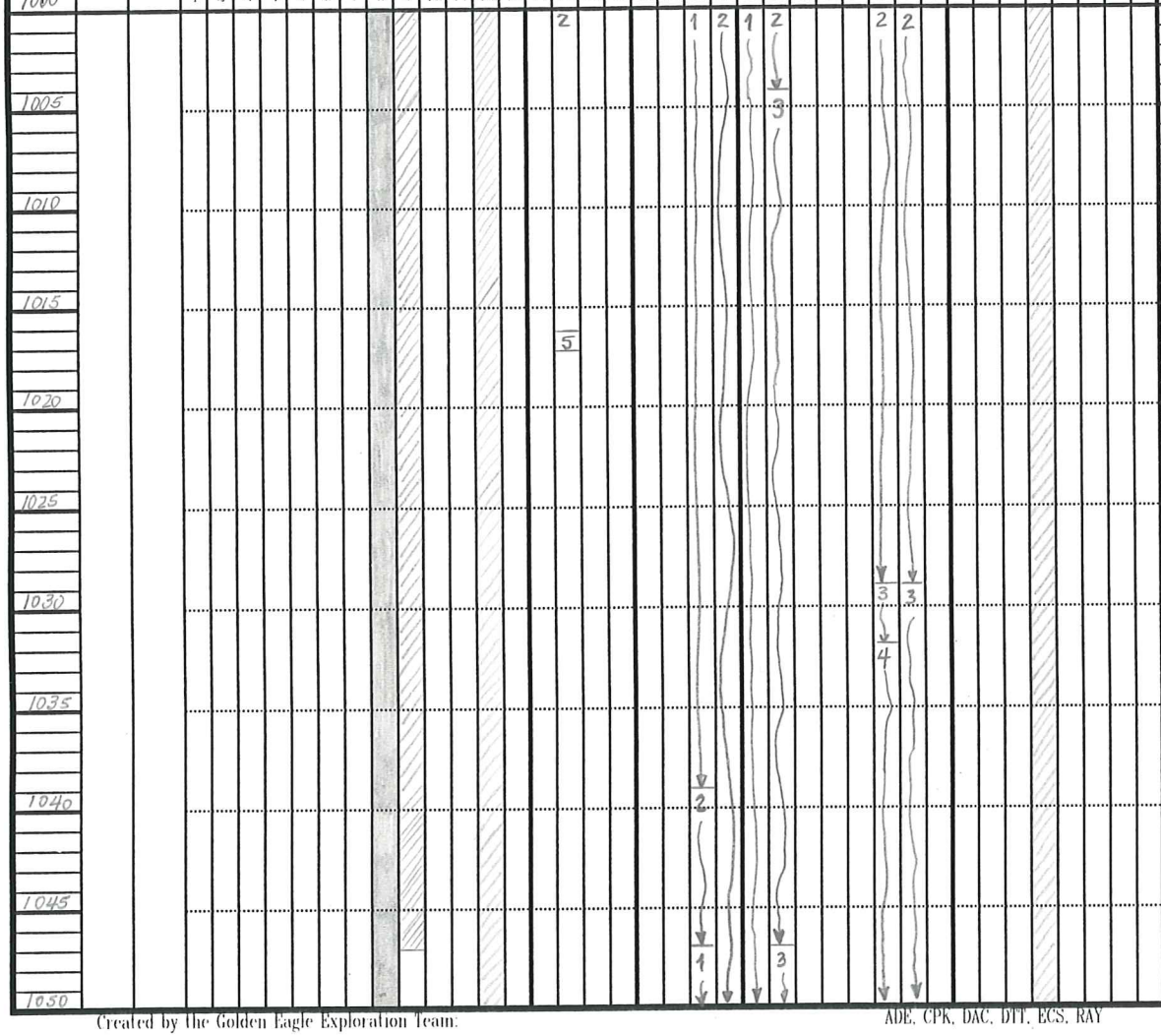
STRUCT: 14 TECTONIC, 15 BROKEN, 16 GOUGE, 17 VOID

ALTERATION/MINERALIZATION: 18 Fe MINERALS, 19 HEMATITE, 20 MINERALIZATION, 21 PYRITE, 22 PROPYLITIC, 23 ARGILLIC, 24 ARGILLIC 2, 25 SILICIFIED, 26 STOCKWORK, 27 VEINS QTZ, 28 CALCITE, 29 METASOMATIC

STRAT: 30 BADGER, 31 CHOCOLATE, 32 UBADY, 33 BRADY, 34 MARPOR, 35 LUBRUD, 36 WILDROS, 37 DOZER

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



COMMENTS:

FROM 994.0' TO 1047.0'
ALTERATION INCREASES DOWNWARD
PROTOLITH APPEARS TO BE LAVA AUTOBXA WITH FELTED PLAG OF SIMILAR SIZE & SHAPE AS BRADY.
UNIT IS MORE PERVASIVELY BLEACHED
G-MASS HAS LOST COLOR, G-MASS HAS RESID SiO_2
SUBSTANTIAL AMOUNTS CLAY AS SELVAGE AND VEIN FILLING

VEIN TYPES NOTED: (NO PARAGENETIC SEQUENCE IMPLIED)

1021' PIMA

1) BANDED MULTIPHASE SULFIDE VNLTS
2) EARLY? CHLORITIC SEAMS
3) WHT CLAY VNLTS
4) COMPLEX VEINS W BANDED
   QTZ
   WHT QTZ (+ ADL??)
   PY-MARCASITE
   CALCITE
   & WHT CLY

HIGH SULFIDE VEINS #1 & #4 USUALLY PARTIALLY OXIDIZED

THIS UNIT WOULD CORRELATE TO HECLA'S
1041' LBT IN GENERAL TEXTURE #7 PROB.
PIMA

@1047
OPEN SPACE VEINS CONTAIN 20% CALCITE AS EUHEDRAL XTALS >4mm LENGTH

FROM 1047.0' TO 1082'
WAVY IRREGULAR VESICULATED LAVA "LST"

SAMPLE INT

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: 13/14
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #
DATE: 10/20	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	RL-89

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: DEPTH (F), RECOVERY, Q

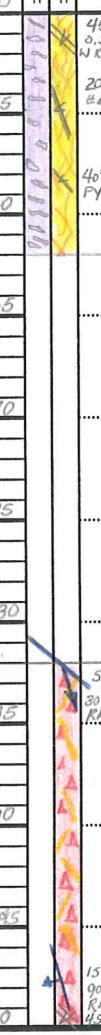
LITHOLOGY: ALLUVIUM, MUDCGL, SILTCGL, PUMICE, SUSHCGL, ALAVF, AUTOBX, INTRUSIV, BASALT, ANDESITE, RHYOLITE

STRUCT: TECTONITE, BRECCIA, GOUGE, VOID

ALTERATION/MINERALIZATION: Fe MINERALS (MNOX, HEMATITE, MIMOTITE, PYRITE), PROPYLITIC, ARGILLIC, ARGILLIC 2, SILICIFIED, STOCKWORK, VEINS, CALCITE, METALS

STRAT: BADDOGS, CGCORL, UBD, BRADY, MKRPOR, LBUD, WILDROS, DOZER

DEPTH (F) / LITHOLOGY / ALTERATION / STRAT / STRUCT



Depth (F)	Lithology	Alteration	Structure
1050			
1055			45° O.S AJ KAO; 20° #4
1060			40° PY
1065			
1070			
1075			
1080			
1085			50°; 30° RAKE
1090			
1095			15°; 90° RAKE; 45° KAOL VNLT
1100			

COMMENTS

FROM 1047.0' TO
IRREGULARLY MOTTLED VESICULATED?
LAVA VY SIMILAR TEXTURALLY TO
972-978 INTVL. PLAG & HB?? MICROLITES
TR AMTS HEM IN G-MASS GIVES PURPLISH
HUE ~15% MICRO XTALS. CORRELATIVE
TO BRADY? ANDESITE?
LOCAL TRACE CHLORITE HECLA LST

ORE ZONE?
PIMA CORE CONSUMED
@ ON SKELETON
1066

ARGILLIZED? VEINED LST?

@ 1077' SKELETON PIECE W SWELLING?
CLAY

FAULTED CTC 50°
SLICKS RAKE 30°

FROM 1082' TO 1127.6'
SILICIFIED HYDROTHERMAL BXA
& VEIN PROBABLE S. RIDGE FAULT
VOLCANIC CLAST FLOATING IN WHITE
TO PALE GREEN SILICA ARE
VERY FINE GRAINED PINKH PORCELANEOUS
ROCK PROBABLE DOZER RHYOLITE
LOCAL POST SILICIFICATION KAOL & CALCITE
VEINLETS CUT SILICIFICATION
@ 1098' 15 CA FAULT W DIP SLIP (90° RAKE)
SLICKEN SIDES

SAMPLE INT

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: 14/14
LOGD BY: CPK	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL-89
DATE: 10/20/96	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	

DEPTH	DRILLING: REC %	DRILLING: RQD	LITHOLOGY: ALLUVIUM	AMUD	CGL	SILT	LITHIC TUFF	PUMICE TUFF	SUGRAIN TUFF	ALFALFA	AUXO BX	INTRUSIVE	BASALT	ANDESITE	RHYOLITE	STRUCT: TECTONIC	BRECCIA	GOUGE	VEIN	ALTERATION/MINERALIZATION: Fe MIN: MNOX	HEMATITE	LIMONITE	PYRITE	PROPYLITIC	ARGILLIC	ARGILLIC 2	PROPYLITIC	STOCKWORK	VEINS	CALCITE	METALS	STRAT: BCAD	CGOD	UGRL	BARYTE	MARKER	LUD	WILDER	DOZER	DEPTH	LITHOLOGY	ALTERATION	STRUCT	SAMPLE
1100			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	1100				
1105																	4 2						2	1	1		4		5											1105				
1110																																								1110				
1115																						1																		1115				
1120																	3						1																	1120				
1125																	4						1		1		2		1											1125				
1130																																								1130				
1135																																								1135				
1140																																								1140				
1145																	2 4 3										2		2											1145				
1150																																								1150				

DEPTH	LITHOLOGY	ALTERATION	STRUCT
1100			
1105			
1110			
1115			
1120			
1125			
1130			
1135			
1140			
1145			
1150			

SCALE:

LITH. EXPLANATION:

CGS Sand Mix Conglom.
CGM Mud Mix Conglom.
VO Sill Varved/Organic Sltst.
VCS Sand Mix Volc. Clastic
VCM Mud Mix Volc. Clastic

COMMENTS

FROM 1082' TO 1126.7
SILICIFIED HYDROTHERMAL BXA & VN
PROBABLE S RIDGE FAULT ZONE
PALE GREEN & WHITE SILICA MATRIX WITH
DOZER? VOLCANIC FRAGMENTS & SULFIDE
FRAGMENTS ~ 1108 FRAGS APPEAR
MILLED, PARTIALLY ROUNDED.
BXA IS X-CUT BY WHT KAOLINITE VEINLETS
AND QTZ+CALCITE ± SULFIDE VEINLETS

IRREGULAR CTC
DOES NOT APPEAR PRT'D

FROM 1126.7' TO 1132'.
GRAY GRANULAR ROCK FLOUR & GOUGE?
NON SILICIFIED FAULT ZONE

60° FOL WK SLIGHT

1141.8 TO 1152' TD
BLACK CARBONACEOUS PHYLLITE
AULD LANG SYNE GROUP
VEINED & LOCALLY BXTD RELATING TO
ABOVE FAULT?

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CRBLOG1.xls

T.D. @ 1151.5 or 1152
DRILLERS LAC

RL-89

Footage Recovery	% Recovery	Sample Interval	Lithology
465-470.5	100% +	465-470	465-478.5
470.5-478.5	100% +	470-475	H to dk grn, smectite
478.5-483	88%	475-480	alt, Fn clast pyroclastic
483-492	100% +	480-485	local clasts to 1.5".
492-502	97%	485-490	Lamelli ⊥ to core axis
502-512	98%	490-495	478.5-481.2 Clay gouge
512-522	97%	495-500	zone, sty alt.
522-532	100%	500-505	481.2-494 H tan to grn,
532-542	99%	505-510	coarse clast pyroclastic
542-552	98%	510-515	(spherulitic pyrite noted) –
552-562	100% +	515-520	orang-tan altered matrix
562-572	99%	520-525	wk-mod.
572-582	97%	525-530	494-552
582-592	98%	530-535	Bleached, coarse pyroclastic
592-602	104%	535-540	lit smectite alt., poss silk
602-612	96%	540-545	trace SiO_2, wk fractured
612-622	98%	545-550	w/ white clay, drusy
622-632	105%	550-555	qtz, marcasite, pyrite
632-642	97.5%	555-560	552-597.3 grn, coarse
642-652	100% +	560-565	pyroclastic, smectite
652-659.5	98%	565-570	rich, w/ high angle qtz
659.5-669.5	100%	570-575	pyrite veins w/ barite,
669.5-679.5	100% +	575-580	drusy Si; overall wk Si
679.5-690	90%	580-585	$\boxed{585-597.3}$ Note: decrease
		585-590	in smectite increase Si +
		590-594	tan bleaching (Overall mod clay alt.
		594-597.3	597.3-624
		597.3-601	grn, smectite rich, Fn grn
		601-606	lithic tuff to Fn to med
		606-611	pyroclastic. Pervasive
		611-616	clay alt., local drusy
			Si ovgs. Increase in sulfides

RL-89 (cont.)

Footage Recovery	% Recovery
690 - 700	100% +
700 - 710	100% +
710 - 720	100% +
720 - 730.5	100% +
730.5 - 741	96%
741 - 751	100% +
751 - 761.5	97%
761.5 - 772	100% +
772 - 782	104%
782 - 792	98%
792 - 802	100%
802 - 812	98%
812 - 822	98%
822 - 832	102%
832 - 842	100%
842 - 852	100% +
852 - 862	100% +
862 - 872	98%

Sample Interval	Lithology
616 - 621	624 - 660
621 - 626	qtz, smectite rich mod
626 - 631	clast pyroclastic, mod
631 - 636	clay alt + hi angle
636 - 641	si stockwork uns
641 - 646	with sulfide.
646 - 651	Local stg clay alt
651 - 656	660 - 701.7
656 - 661	qtz, smectite rich,
661 - 666	greater abundance of
666 - 671	lmellae ⊥ to core axis
671 - 676	+ decrease in sulfides
676 - 681	- hi angle si uns to devitrif.
681 - 686	- overall clay alt increases
686 - 691	
691 - 696	* 701.7 - 791
696 - 701.7	wht - orange tan, fn qtz
701.7 - 707	tuff; overall mod clay
707 - 712	alt., abundant high angle
712 - 717	fractures to 3/4" w/ sulfide
717 - 722	clots; dk to lt gn fracture
722 - 727	filling chlorite? + lt gn
727 - 732	smectite
732 - 737	
737 - 742	791 - 802
742 - 747	FGT w/ high angle
747 - 452	fractures w/ green
752 - 757	smectite clay fil
* 757 - 762	w/ perv. tan oran
762 - 767	favorable altera
767 - 772	w/ intermittent
772 - 777	white bl zones
777 - 782	
782 - 787	
787 - 791	
791 - 794	
794 - 798	
798 - 802	

RL-89 CONTINUED

Footage Recovery	% Recovery	Sample Interval	Lithology
872-882	97%	802-807	802-841.8
882-892	100%+	807-812	Green, medium sized clast - pyroclastic perv. smectite alt w/ intermittent nontronite? alt
892-902	100%+	812-817	lapilli - flattened; ⊥ to core axis
902-912	99%	817-822	wk ↑ silicific.
912-922	100%	822-827	
922-932	100%+	827-832	
932-942	100%+	832-837	
942-952	98%	837-841.8	
952-962	100%+	841.8-847	841.8-882
962-972	100%+	847-852	Lr green to white ~~bleached~~ FGT locally is a pyro-fragmental mod. high & py veining
972-982	100%	852-857	
982-992	100%+	857-862	
992-1002	95%	862-867	
1002-		867-872	★ 882-923
		* 872-877	FGT w/ ↑ local strong vein ⊿ iac w/ orang tan als w/ wk ↑ silicif w/ local drusy vug ± pyrite, perv veining
		877-882	
		882-887	
		887-892	
		892-897	
		897-902	
		902-907	923-931 FAULT
		907-912	strong clay zone fault gouge lr green sulfide rich
		912-916	
		916-920	
		920-923	
		923-927	★ 931-943
		927-931	Brecciated FGT w/ high & veining w/ silicified w/ pyr clasts attributed clasts of strong clay w/ tan silicif clasts
		931-936	
		936-941	
		941-946	
		946-951	
		951-956	943-950 Lr green FGT ± verigated gray w/ high & cross cutting veins w/ silica-⊥ enveloping pyrite also pyrite veinlets w/ similar envelop FGT banding ~45° to core
		956-961	
		961-966	
		966-971	
		971-976	
		976-981	950-994
		981-986	green FGT w/ sparse fine clasts pyroclastic, mod fractured w/ wk clay altered w/ local var tan bel along fracts + local ± SiO2-py envelop
		986-	

81.0
3.5
1.5

RL-89 continued

Footage Recovery	% Recovery	Sample Interval	Lithology
1002-1012	99%	986-991	950-994
1012-1022	100%+	991-994	
1022-1032	104%	994-999	994-999
1032-1042	100%+	999-1004	perch-grn, FGT w/ local
1042-1052	98%	1004-1009	Si-sulfide bx + hi angle
1052-1062	97%	1009-1014	structure
1062-1072	100%+	1014-1019	999-1024
1072-1081.5	9.2/9.5 = 97%	1019-1024	wht, bleached to green clay alt
1081.5-1092	/10.5 = 100%	1024-1029	FGT w/ overall wk alt
1092-1102	100%	1029-1034	+ wk veining
1102-1112	99%	1034-1039	~~of~~ 1024-1054
1112-1122	100%	1039-1044	Hgrn fn grn to LF, stg to local
1122-1132	100%	1044-1049	intense bx, hi angle sulfide
1132-1142	98%	1049-1054	vns + stock wk Si w/ sulfides
1142-1152	96%	✓ 1054-1058	minor vugs, with minor sit
TD		1058-1062	+ barite
		1062-1066	1054-1066
		✓ 1066-1067	wht-grn FGT w/ stg
		1067-1072	clay alt
		1072-1077	1066-1067
		1077-1082	wht intense clay gouge
		1082-1087	to 1066.6; hi angle structure
		1087-1092	w/ wht stockwork Si an veinlets
		1092-1097	1067-1098.2
		1097-1098.2	wht-perch-grn FGT
		1098.2-1103	w/ stockwork Si in hi
		1103-1108✓	angle fractures to stg
		1108-1113	local bx; vns w/ sulfides
		1113-1118	
		1118-1123	[1094-1098.2] wht Si wheeled
		1123-1127.6	cemented fault zone??
		1127.6-1132	1098.2-1127.6
		1132-1135	grn-gry-wht intense
		1135-1140	bx zone w/ multi stage
		1140-1145	bx + barite in fracts.
		1145-1149	possible Alunite
		1149-1152	veinfilling

40/10

Lithology

1127.6 - 1132
Contact Zone -
bx/slump?? stg clay alt
to local stg Si, lt grn
to grn fn grn Tuff +
Fe chsts of shale to 1/4"
Apparent high angle contact?

1132 - 1135
Fe shale + barite stock work
w/ angular bx Fe.
+ sulfides
1135 - 1152
Fe shales? - no apparent bedding
bx, silicified w/ stg barite
veing to xtals in vugs
blk, sulfidic.

NEVADA GSI

JUN 19 1990

GEOCHEMICAL ANALYSIS REPORT

June 12, 1990

Posted KNT 8-14-90

CUST. CODE: LOA
PROJECT: XXXX
P.O. #: XXXX
LOT ID: 7399

GEOLOGIST: NATE BREWER
COPIES TO: KENNER
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-89	0	5	-0.001	0.15
2	RL-89	5	10	-0.001	0.15
3	RL-89	10	15	0.002	0.14
4	RL-89	15	20	0.001	-0.10
5	RL-89	20	25	0.002	-0.10
6	RL-89	25	30	-0.001	-0.10
7	RL-89	30	35	0.002	-0.10
8	RL-89	35	40	0.001	-0.10
9	RL-89	40	45	0.002	-0.10
10	RL-89	45	50	0.001	0.16
11	RL-89	50	55	-0.001	0.16
12	RL-89	55	60	0.003	0.10
13	RL-89	60	65	0.003	-0.10
14	RL-89	65	70	0.003	-0.10
15	RL-89	70	75	0.002	-0.10
16	RL-89	75	80	0.001	-0.10
17	RL-89	80	85	0.001	-0.10
18	RL-89	85	90	0.001	-0.10
19	RL-89	90	95	0.003	-0.10
20	RL-89	95	100	0.003	-0.10
21	RL-89	100	105	0.002	-0.10
22	RL-89	105	110	0.002	-0.10
23	RL-89	110	115	0.002	-0.10
24	RL-89	115	120	0.015	0.20
25	RL-89	120	125	0.008	0.19
26	RL-89	125	130	0.002	0.22
27	RL-89	130	135	0.001	-0.10
28	RL-89	135	140	-0.001	-0.10
29	RL-89	140	145	-0.001	-0.10
30	RL-89	145	150	-0.001	-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-89	150	155	-0.001	-0.10
32	RL-89	155	160	-0.001	-0.10
33	RL-89	160	165	-0.001	-0.10
34	RL-89	165	170	-0.001	0.12
35	RL-89	170	175	-0.001	0.16
36	RL-89	175	180	-0.001	0.18
37	RL-89	180	185	-0.001	-0.10
38	RL-89	185	190	-0.001	-0.10
39	RL-89	190	195	-0.001	-0.10
40	RL-89	195	200	-0.001	-0.10
41	RL-89	200	205	-0.001	-0.10
42	RL-89	205	210	-0.001	-0.10
43	RL-89	210	215	-0.001	-0.10
44	RL-89	215	220	-0.001	-0.10
45	RL-89	220	225	-0.001	-0.10
46	RL-89	225	230	-0.001	-0.10
47	RL-89	230	235	-0.001	-0.10
48	RL-89	235	240	-0.001	-0.10
49	RL-89	240	245	-0.001	-0.10
50	RL-89	245	250	-0.001	-0.10
51	RL-89	250	255	-0.001	-0.10
52	RL-89	255	260	-0.001	-0.10
53	RL-89	260	265	-0.001	-0.10
54	RL-89	265	270	-0.001	-0.10
55	RL-89	270	275	-0.001	-0.10
56	RL-89	275	280	-0.001	-0.10
57	RL-89	280	285	-0.001	-0.10
58	RL-89	285	290	-0.001	-0.10
59	RL-89	290	295	-0.001	-0.10
60	RL-89	295	300	-0.001	-0.10
61	RL-89	300	305	-0.001	-0.10
62	RL-89	305	310	-0.001	-0.10
63	RL-89	310	315	-0.001	-0.10
64	RL-89	315	320	-0.001	-0.10
65	RL-89	320	325	-0.001	-0.10
66	RL-89	325	330	-0.001	-0.10
67	RL-89	330	335	-0.001	-0.10
68	RL-89	335	340	0.001	-0.10
69	RL-89	340	345	0.001	0.26
70	RL-89	345	350	0.002	-0.10
71	RL-89	350	355	0.002	0.18
72	RL-89	355	360	0.003	0.11
73	RL-89	360	365	0.002	0.27
74	RL-89	365	370	0.001	0.15
75	RL-89	370	375	-0.001	0.18

	SAMPLE I.D.			Au o/t	Ag o/t
76	RL-89	375	380	-0.001	0.17
77	RL-89	380	385	-0.001	-0.10
78	RL-89	385	390	0.001	0.17
79	RL-89	390	395	-0.001	0.16
80	RL-89	395	400	0.001	0.19
81	RL-89	400	405	0.031	0.12
82	RL-89	405	410	0.002	0.25
83	RL-89	410	415	-0.001	0.15
84	RL-89	415	420	-0.001	-0.10
85	RL-89	420	425	-0.001	-0.10
86	RL-89	425	430	-0.001	-0.10
87	RL-89	430	435	-0.001	0.11
88	RL-89	435	440	-0.001	0.13
89	RL-89	440	445	-0.001	-0.10
90	RL-89	445	450	-0.001	-0.10
91	RL-89	450	455	-0.001	0.22
92	RL-89	455	460	-0.001	0.17
93	RL-89	460	465	0.022	0.14

THIS REPORT REVIEWED AND APPROVED BY:

Richard A. Grondin

RICHARD GRONDIN, LABORATORY MANAGER

NEVADA GSI

JUL 0 2 1990

GEOCHEMICAL ANALYSIS REPORT

June 29, 1990

CUST. CODE: LOA
PROJECT: XXXX
P.O. #: XXXX
LOT ID: 7516

GEOLOGIST: NATE BREWER
COPIES TO: XXXX
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
1	RL-89C	465	470	0.051	0.12	0.051
2	RL-89C	470	475	0.002	-0.10	-
3	RL-89C	475	480	-0.001	-0.10	-
4	RL-89C	480	485	0.001	-0.10	-
5	RL-89C	485	490	0.001	-0.10	-
6	RL-89C	490	495	0.001	-0.10	-
7	RL-89C	495	500	0.001	-0.10	-
8	RL-89C	500	505	0.003	-0.10	-
9	RL-89C	505	510	0.002	-0.10	-
10	RL-89C	510	515	0.001	-0.10	-
11	RL-89C	515	520	0.001	-0.10	-
12	RL-89C	520	525	0.001	-0.10	-
13	RL-89C	525	530	0.002	-0.10	-
14	RL-89C	530	535	0.001	-0.10	-
15	RL-89C	535	540	0.001	-0.10	-
16	RL-89C	540	545	0.015	-0.10	-
17	RL-89C	545	550	0.001	-0.10	-
18	RL-89C	550	555	-0.001	-0.10	-
19	RL-89C	555	560	-0.001	-0.10	-
20	RL-89C	560	565	-0.001	-0.10	-
21	RL-89C	565	570	0.001	-0.10	-
22	RL-89C	570	575	0.004	-0.10	-
23	RL-89C	575	580	0.004	-0.10	-
24	RL-89C	580	585	0.005	-0.10	-
25	RL-89C	585	590	0.018	-0.10	-
26	RL-89C	590	594	0.002	-0.10	-
27	RL-89C	594	597.3	0.002	-0.10	-
28	RL-89C	597.3	601	0.001	-0.10	-
29	RL-89C	601	606	0.001	-0.10	-
30	RL-89C	606	611	0.001	-0.10	-

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	SAMPLE I.D.				Au o/t	Ag o/t	Checks Au o/t
31	RL-89C	611	616		0.001	-0.10	-
32	RL-89C	616	621		-0.001	-0.10	-
33	RL-89C	621	626		-0.001	-0.10	-
34	RL-89C	626	631		0.007	-0.10	-
35	RL-89C	631	636		0.001	-0.10	-
36	RL-89C	636	641		0.002	-0.10	-
37	RL-89C	641	646	A	-0.001	-0.10	-
38	RL-89C	641	646	B	-0.001	0.24	-
39	RL-89C	651	656		0.001	0.18	-
40	RL-89C	656	661		-0.001	-0.10	-
41	RL-89C	661	666		-0.001	-0.10	-
42	RL-89C	666	671		-0.001	-0.10	-
43	RL-89C	671	676	A	-0.001	-0.10	-
44	RL-89C	671	676	B	0.002	-0.10	-
45	RL-89C	681	686		0.001	-0.10	-
46	RL-89C	686	691		0.002	-0.10	-
47	RL-89C	691	696		0.002	0.11	-
48	RL-89C	696	701.7		0.002	-0.10	-
49	RL-89C	701.7	707		0.002	0.12	-
50	RL-89C	707	712		-0.001	-0.10	-
51	RL-89C	712	717		0.005	-0.10	-
52	RL-89C	717	722		0.005	0.14	-
53	RL-89C	722	727		0.007	0.18	-
54	RL-89C	727	732		0.003	0.10	-
55	RL-89C	732	737		0.003	-0.10	-
56	RL-89C	737	742		0.002	-0.10	-
57	RL-89C	742	747		0.001	-0.10	-
58	RL-89C	747	752		0.001	-0.10	-
59	RL-89C	752	757		0.001	0.10	-
60	RL-89C	757	762		0.001	-0.10	-
61	RL-89C	762	767		0.003	0.10	-
62	RL-89C	767	772		0.002	0.13	-
63	RL-89C	772	777		0.003	-0.10	-
64	RL-89C	777	782		0.002	-0.10	-
65	RL-89C	782	787		0.003	0.15	-
66	RL-89C	787	791		0.004	-0.10	-
67	RL-89C	792	794		0.002	-0.10	-
68	RL-89C	794	798		0.001	-0.10	-
69	RL-89C	798	802		0.001	-0.10	-

THIS REPORT REVIEWED AND APPROVED BY:

Jerry Gaige

JERRY GAIGE, CHIEF CHEMIST

NEVADA GSI

JUN 19 1990

GEOCHEMICAL ANALYSIS REPORT

June 18, 1990

CUST. CODE: LOA
PROJECT: URBD
P.O. #: XXXX
LOT ID: 7526

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
1.	RL-89C	802	807	0.003	-0.10	-
2.	RL-89C	807	812	0.002	-0.10	-
3.	RL-89C	812	817	0.003	-0.10	-
4.	RL-89C	817	822	0.001	-0.10	-
5.	RL-89C	822	827	-0.001	-0.10	-
6.	RL-89C	827	832	-0.001	-0.10	-
7.	RL-89C	832	837	-0.001	-0.10	-
8.	RL-89C	837	841.8	0.012	-0.10	-
9.	RL-89C	841.8	847	0.003	-0.10	-
10.	RL-89C	847	852	0.001	0.13	-
11.	RL-89C	852	857	0.073	1.57	-
12.	RL-89C	857	862	0.038	1.03	-
13.	RL-89C	862	867	0.002	0.45	-
14.	RL-89C	867	872	-0.001	-0.10	-
15.	RL-89C	872	877	0.002	-0.10	-
16.	RL-89C	877	882	-0.001	-0.10	-
17.	RL-89C	882	887	0.010	-0.10	-
18.	RL-89C	887	892	0.001	-0.10	-
19.	RL-89C	892	897	0.017	-0.10	-
20.	RL-89C	897	902	0.018	-0.10	-
21.	RL-89C	902	907	0.082	0.23	-
22.	RL-89C	907	912	0.053	0.12	-
23.	RL-89C	912	916	0.016	-0.10	-
24.	RL-89C	916	920	0.002	-0.10	-
25.	RL-89C	920	923	0.014	0.10	-
26.	RL-89C	923	927	0.018	0.15	-
27.	RL-89C	927	931	0.022	0.12	-
28.	RL-89C	931	936	0.017	-0.10	-
29.	RL-89C	936	941	0.043	0.18	-
30.	RL-89C	941	946	0.093	-0.10	-

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	SAMPLE I.D.			Au o/t	Ag o/t	Checks Au o/t
31.	RL-89C	946	951	0.159	0.23	-
32.	RL-89C	951	956	0.058	0.14	-
33.	RL-89C	956	961	0.005	-0.10	-
34.	RL-89C	961	966	0.018	-0.10	-
35.	RL-89C	966	971	0.100	-0.10	-
36.	RL-89C	971	976	0.016	0.14	-
37.	RL-89C	976	981	0.319	0.36	0.390
38.	RL-89C	981	986	0.003	-0.10	-
39.	RL-89C	986	991	0.091	0.29	-
40.	RL-89C	991	994	0.072	-0.10	-
41.	RL-89C	994	999	0.299	0.39	-
42.	RL-89C	999	1004	0.023	-0.10	-
43.	RL-89C	1004	1009	0.004	-0.10	-
44.	RL-89C	1009	1014	0.001	-0.10	-
45.	RL-89C	1014	1019	0.010	-0.10	-
46.	RL-89C	1019	1024	0.005	-0.10	-
47.	RL-89C	1024	1029	0.139	0.22	-
48.	RL-89C	1029	1034	0.027	-0.10	-
49.	RL-89C	1034	1039	0.043	-0.10	-
50.	RL-89C	1039	1044	0.157	0.35	-
51.	RL-89C	1044	1049	0.056	0.23	-
52.	RL-89C	1049	1054	0.068	0.24	-
53.	RL-89C	1054	1058	0.453	0.60	0.339
54.	RL-89C	1058	1062	0.013	0.17	-
55.	RL-89C	1062	1066	0.176	0.36	-
56.	RL-89C	1066	1067	0.123	3.09	-
57.	RL-89C	1067	1072	0.891	1.02	1.036
58.	RL-89C	1072	1077	1.350	2.08	1.400
59.	RL-89C	1077	1082	0.223	0.41	-
60.	RL-89C	1082	1087	0.573	0.71	0.703
61.	RL-89C	1087	1092	0.211	0.52	-
62.	RL-89C	1092	1097	0.035	0.27	-
63.	RL-89C	1097	1098.2	0.011	0.33	-
64.	RL-89C	1098.2	1103	0.003	1.72	-
65.	RL-89C	1103	1108	0.005	0.71	-
66.	RL-89C	1108	1113	0.001	0.28	-
67.	RL-89C	1113	1118	0.002	0.33	-
68.	RL-89C	1118	1123	0.005	0.84	-
69.	RL-89C	1123	1127.6	0.006	0.33	-
70.	RL-89C	1127.6	1132	0.003	0.40	-

	SAMPLE I.D.			Au o/t	Ag o/t	Checks Au o/t
71.	RL-89C	1132	1135	0.024	1.35	-
72.	RL-89C	1135	1140	0.002	0.20	-
73.	RL-89C	1140	1145	0.005	1.72	-
74.	RL-89C	1145	1149	0.004	0.42	-
75.	RL-89C	1149	1152	0.011	1.21	-

==========

THIS REPORT REVIEWED AND APPROVED BY:

Richard A. Grondin

RICHARD GRONDIN, LABORATORY MANAGER

file RL-89

NEVADA GSI, INC.

Client: Mr. Nate Brewer

Lac Minerals
1395 Greg Street, Suite 107
Sparks, NV 89431 tel 702/356-8058

Job #: LOAS7579
Samples: 8
Project:
Product: Fire Screen
P.O. #:

This report has been reviewed and approved by:

Jerry Gaige, Production Manager

3-6-91
Date

1498 Kleppe Lane • Sparks, Nevada 89431 • 702/359-5600 FAX: 702/359-5605

SAMPLE # RL-89C 1067-1072
A = -150 Fraction Au oz/t = 0.2670 & 0.2550 = 0.2610
B = -150 Fraction wt gm = 493.98
C = 29.167 gm
D = Total Sample wt gm = 523.18
E = +150 Fraction Au mg = 10.8300
Weighted Au average (oz/t) based on Course Gold Screen
Analysis = 0.8502

SAMPLE # RL-89C 1072-1077
A = -150 Fraction Au oz/t = 0.4340 & 0.4290 = 0.4315
B = -150 Fraction wt gm = 453.79
C = 29.167 gm
D = Total Sample wt gm = 482.97
E = +150 Fraction Au mg = 11.5090
Weighted Au average (oz/t) based on Course Gold Screen
Analysis = 1.1005

SAMPLE # RL-89C 1077-1082
A = -150 Fraction Au oz/t = 0.0910 & 0.0720 = 0.0815
B = -150 Fraction wt gm = 491.58
C = 29.167 gm
D = Total Sample wt gm = 520.78
E = +150 Fraction Au mg = 0.7120
Weighted Au average (oz/t) based on Course Gold Screen
Analysis = 0.1168

SAMPLE # RL-89C 1082-1087
A = -150 Fraction Au oz/t = 0.1860 & 0.1930 = 0.1895
B = -150 Fraction wt gm = 505.73
C = 29.167 gm
D = Total Sample wt gm = 531.89
E = +150 Fraction Au mg = 2.3260
Weighted Au average (oz/t) based on Course Gold Screen
Analysis = 0.3077

==========

This report reviewed and approved by:

Richard A. Grondin

Richard Grondin, Laboratory Director

NEVADA GSI, INC.

Coarse Gold Fire Screens
Job No.: S7579

Sample # RL-89C 1067-1072
A = -150 Fraction Au. Oz. = 0.2670 & 0.2550 =0.5220
B = -150 Fraction Wt gm. = 493.98
C = 29.167 gm.
D = Total Sample wt gm. = 523.18
E = +150 Fraction Au mg. = 10.8300
Weighted Au average (Oz/t) based on Coarse Gold Screen Analysis = 1.0960

Sample # RL-89C 1072-1077
A = -150 Fraction Au. Oz. = 0.4340 & 0.4290 =0.8630
B = -150 Fraction Wt gm. = 453.79
C = 29.167 gm.
D = Total Sample wt gm. = 482.97
E = +150 Fraction Au mg. = 11.5090
Weighted Au average (Oz/t) based on Coarse Gold Screen Analysis = 1.5060

Sample # RL-89C 1077-1082
A = -150 Fraction Au. Oz. = 0.0910 & 0.0720 =0.1630
B = -150 Fraction Wt gm. = 491.58
C = 29.167 gm.
D = Total Sample wt gm. = 520.78
E = +150 Fraction Au mg. = 0.7120
Weighted Au average (Oz/t) based on Coarse Gold Screen Analysis = 0.1940

Sample # RL-89C 1082-1087
A = -150 Fraction Au. Oz. = 0.1860 & 0.1930 =.03790
B = -150 Fraction Wt gm. = 505.73
C = 29.167 gm.
D = Total Sample wt gm. = 531.89
E = +150 Fraction Au mg. = 2.3260
Weighted Au average (Oz/t) based on Coarse Gold Screen Analysis = 0.4080

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NEVADA GSI

JUL 31 1990

GEOCHEMICAL ANALYSIS REPORT

July 27, 1990

CUST. CODE: LOA
PROJECT: XXXX
P.O. #: XXXX
LOT ID: 7579

GEOLOGIST: NATE BREWER
COPIES TO: XXXX
COMPANY: LAC MINERALS
ANALYSIS: COARSE GOLD SCREEN FRACTIONS.

SAMPLE # RL-89C 1054-1058
A = -150 Fraction Au oz/t = 0.1880 & 0.2020 = 0.1950
B = -150 Fraction wt gm = 437.64
C = 29.167 gm
D = Total Sample wt gm = 466.78
E = +150 Fraction Au mg = 10.4490
Weighted Au average (oz/t) based on Course Gold Screen Analysis = 0.8357

SAMPLE # RL-89C 1058-1062
A = -150 Fraction Au oz/t = 0.0510 & 0.0410 = 0.0460
B = -150 Fraction wt gm = 504.79
C = 29.167 gm
D = Total Sample wt gm = 534.19
E = +150 Fraction Au mg = 0.3030
Weighted Au average (oz/t) based on Course Gold Screen Analysis = 0.0600

SAMPLE # RL-89C 1062-1066
A = -150 Fraction Au oz/t = 0.0440 & 0.0410 = 0.0425
B = -150 Fraction wt gm = 464.61
C = 29.167 gm
D = Total Sample wt gm = 493.62
E = +150 Fraction Au mg = 0.5980
Weighted Au average (oz/t) based on Course Gold Screen Analysis = 0.0753

SAMPLE # RL-89C 1066-1067
A = -150 Fraction Au oz/t = 0.0580 & 0.0460 = 0.0520
B = -150 Fraction wt gm = 515.95
C = 29.167 gm
D = Total Sample wt gm = 545.11
E = +150 Fraction Au mg = 0.5410
Weighted Au average (oz/t) based on Course Gold Screen Analysis = 0.0782

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NEVADA GSI, INC.

Coarse Gold Fire Screens
Job No.: S7579

Sample # RL-89C 1054-1058
A = -150 Fraction Au. Oz. = 0.1880 & 0.2020 =0.3900
B = -150 Fraction Wt gm. = 437.64
C = 29.167 gm.
D = Total Sample wt gm. = 466.78
E = +150 Fraction Au mg. = 10.4490
Weighted Au average (Oz/t) based on Coarse Gold Screen Analysis = 1.0180

Sample # RL-89C 1058-1062
A = -150 Fraction Au. Oz. = 0.0510 & 0.0410 =0.0920
B = -150 Fraction Wt gm. = 504.79
C = 29.167 gm.
D = Total Sample wt gm. = 534.19
E = +150 Fraction Au mg. = 0.3030
Weighted Au average (Oz/t) based on Coarse Gold Screen Analysis = 0.1030

Sample # RL-89C 1062-1067
A = -150 Fraction Au. Oz. = 0.0440 & 0.0410 =0.0850
B = -150 Fraction Wt gm. = 464.61
C = 29.167 gm.
D = Total Sample wt gm. = 493.62
E = +150 Fraction Au mg. = 0.5980
Weighted Au average (Oz/t) based on Coarse Gold Screen Analysis = 0.1150

Sample # RL-89C 1066-1067
A = -150 Fraction Au. Oz. = 0.0580 & 0.0460 =0.1040
B = -150 Fraction Wt gm. = 515.95
C = 29.167 gm.
D = Total Sample wt gm. = 545.11
E = +150 Fraction Au mg. = 0.5410
Weighted Au average (Oz/t) based on Coarse Gold Screen Analysis = 0.1270

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SFPG Composite
Measured Section
South Ridge

2750

Chocolate Porphyritic Lava >300' thick

Medium gray, dense, flow banded, sparsely porphyritic pheno andesite. Contact poorly exposed. Lower contact appears uncfm. Flow foliation discordant w bedding.

2500

2250

Chocolate Tuffs >300' thick

Non-welded lithic tuffs w Chocolate frags.

Marker Porphyries >125' thick

Thin 5- 30' glomeroporphyritic lava flows

2000

Upper Bud Tuff >150' thick

Tan, brown, white, and red poorly sorted lithic tuff breccias

1750

Upper Brady Andesite:(see below) 90' thick

Brady Tuff: Mottled xtal lithic tuff. 26.5' thick

1500

Lower Brady Andesite 184.7' Thick

Pale green to dark purple very fine grained pheno-andesite. Conspicuously flow bnded on mm to cm scale. 5% amphibole to 2mm

1250

Lower Bud Tuff >1000' Thick

Heterolithic non-welded tuffs.
Largely pink rhyolite dominant clasts
Local phyllite chips from bsmnt.

1000

750

Local medium brown pumice rich moderately welded ash flow tuff

500

Coarse lithic tuffs contain pink flow banded rhyoliteclasts. Tuffs are deformed near contact.

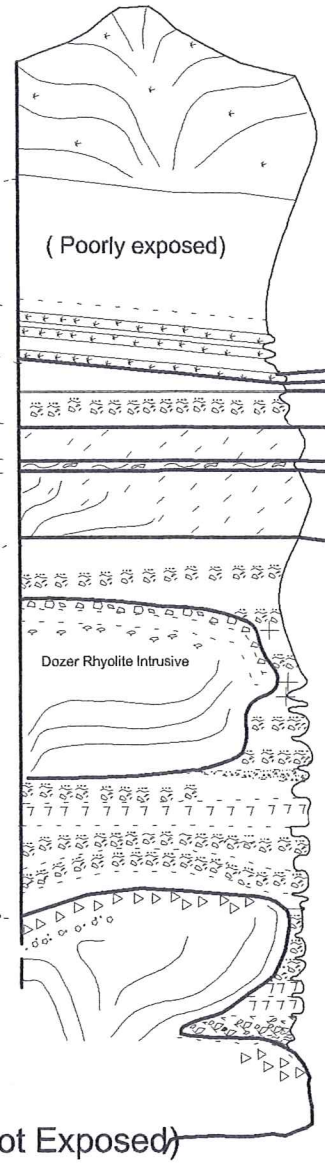
Dozer Rhyolite (Upper laminated member)

250

Pale tan, white to pinkish flow banded rhyolite.Locally spherulitic especially near contact. Well developed monolithic autobreccia within 100'feet of contact.

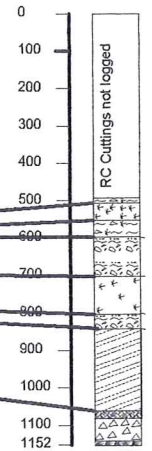
0

Dozer Rhyolite (Lower granular member)



(Base Not Exposed)

RL-89c



Chocolate non-welded lithic tuff. Lithics coarsely porphyritic.
Chocolate porphyry with glomeroporphyritic plagioclase
Chocolate lithic tuffs. Possible correlary with 3' WAFT

Bud Tuffs: Lithics non-porphyritic. Pumiceous.

Marker porphyry. Correlates to Hecla Bud Marker Bed.
Mod coarsely porphyritic. Must be considered as Upper Brady equivalent, although it appears more porphyritic.
Bud Tuffs: Lithics non-porphyritic. Pumiceous.
Lower Brady Andesite: Correlates to Hecla LBT of Mine Sequence. Weakly porphyritic Planar flow foliation. Very fine grained groundmass. When altered, relatively hematite and leucoxene rich: mafic(?)

ORE ZONE: Missing. Consumed for Metallurgy.
SOUTH RIDGE (?) FAULT: Silicified Hydrothermal Breccia.
Mesozoic Basement: Sheared Auld Lang Syne group.

SFPG Rosebud JV

Stratigraphic Correlation RL-89c & Measured Section Ver. 3

Pershing Co. NV
R. L. Dixon, C. P. Kortemeier

NK 11-10-06c
Date: 11/10/96

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