60001640

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-262C
AUTHOR	C. Walck; H. McLachlan; K. Kenner; T. Kuhl M. Hallmark
DATE OF DOC(S)	1992
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 Barringer Laboratories
COMMODITY If not obvious	gold silver
NOTES	Drill log; geology; assay; total depth 1139' handwritten notes ~~45~~ p. 47

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 6/3/08
Initials Date
DB: mah
Initials Date
SCANNED: NV Blue
Initials Date

Revised: 1/22/08

DRILL LOG
Rosebud

RL-262 C

6000 1640 4010

60001640

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

DRILL LOG SUMMARY SHEET

PROJECT ROSEBUD

HOLE NUMBER RL262C TOTAL DEPTH 1139 LOGGED BY C.M. WALCK

Date started April 8, 1992

Date completed April 14, 1992

Initial bearing

Initial inclination -90°

Elevation

Collar coordinates:

N

E

Contractor: Coates/Major

Drill Type: UDR

Hole Size: HQ

Drilling Conditions: good

Footage: Wet / Dry

Comments: RC to 495', core above SRF dead, Wide SRF zone w/ abt calc.

DOWN HOLE SURVEY INFORMATION

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

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

DRILL HOLE RL-262

Page 1 of 5

RL262

LOGGED BY CMW

FINE-GRAINED TUFF
BEDDED BUD LLT
VOLCANICLASTIC
PORPHYRITIC TUFF
FLOW BANDED TUFF

VEIN TYPES

DRUZY QUARTZ
Xc CHALCEDONIC
Xk STOCKWORK
Ca CALCITE
HYDROTHERMAL BRECCIA VNS
Ba BARITE

FT.	LITHO	FRACTS FAULTS	VEIN TYPES	BLEACH W	BLEACH M	BLEACH S	CLAY W	CLAY M	CLAY S	SILIC W	SILIC M	SILIC S	COLOR	% FeOx W	% FeOx M	% FeOx S	% SULF.	COMMENTS	ROD CONN.	Ag	Au	✓
	OB																	0-28; OVERBURDEN				
05																						
10																						
15																						
20																						
25																						
30			NONE										dk grey					28-75 DK grey fg				
35																		~fresh LBT, finely granular under scope,				
40																		35-45 & 60-65 contain abt dk clays				
45													dk brown									
50																						
55																						
60																						
65													dk grey									
70																						
75													md green					75-110 lt-md green fg, w-m bleach version of above LBT finely granular under scope				
80																						
85																						
90																						
95																	Tr	w/ tr fg py				
100													lt-md green					w/ md. lt green clay				

NOTE SULFIDES IN COMMENTS: Py Mc Cp Pr Sb

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

DRILL HOLE RL-262

Page 2 of 5

FINE-GRAINED TUFF
BEDDED BUD LLT
VOLCANICLASTIC
PORPHYRITIC TUFF
FLOW BANDED TUFF

VEIN TYPES

DRUZY QUARTZ
Xc CHALCEDONIC
Xk STOCKWORK
Ca CALCITE
HYDROTHERMAL BRECCIA VNS
Ba BARITE

LOGGED BY CMW

FT.	LITHO	FRACTS FAULTS	VEIN TYPES	BLEACH W	BLEACH M	BLEACH S	CLAY W	CLAY M	CLAY S	SILIC W	SILIC M	SILIC S	COLOR	% FeOx W	% FeOx M	% FeOx S	% SULF.	COMMENTS	ROD CONN.	Ag	Au	✓
													lt-md green					75-110 cont W-M bleach LBT, f.g. lt-md green				
105																						
10													lt grey-green					110-128 Strong lt grey-green clay				
15																						
120																						
125													lt-md grey-green									
30																		128-145 same @ 75-110' green fg LBT w/ W-M clay Poss V WK silic?				
35																						
40																						
45													lt-md grey-green					145-195 lt-md grey-green & flesh fg LBT Poss WK silic? w/ TR 2% dias & spots fg py ± very fine si stkwk				
150													& flesh									
55																						
60																	TR					
65			Xk (WK)														1					
70																	1					
75			Xk (WK)														TR					
80																	TR					
85																	1					
90																	1					
95																	1					
200													lt-md grey				TR	195-210 md lt grey clay				

NOTE SULFIDES IN COMMENTS: Py Mc Cp Pr Sb

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

DRILL HOLE RL-262

Page 3 of 5

FINE-GRAINED TUFF
BEDDED BUD LLT
VOLCANICLASTIC
PORPHYRITIC TUFF
FLOW BANDED TUFF

VEIN TYPES

DRUZY QUARTZ
Xc CHALCEDONIC
XK STOCKWORK
Ca CALCITE
HYDROTHERMAL BRECCIA VNS
Ba BARITE

LOGGED BY CMW

FT.	LITHO	FRACTS FAULTS	VEIN TYPES	BLEACH W	BLEACH M	BLEACH S	CLAY W	CLAY M	CLAY S	SILIC W	SILIC M	SILIC S	COLOR	% FeOx W	% FeOx M	% FeOx S	% SULF.	COMMENTS	RQD CONN.	Ag	Au	✓
													lt gray					195-210 cont LBT				
205																						
10																						
			XK (wk)										lt-md flesh-				2	210-240 Lt-Md flesh grey & green-grey fg LBT;				
15			XK (wk)										grey & green-				2	wk silic, 1-4% diss py,				
20													grey				2	± wk silica stkwk. f.g. finely smooth surface text,				
25			XK (wk)														3					
30			XK (wk)														4					
35			XK (wk)														3					
40		fract	Ca 35% (abt)														1	240-245 as above, w/ 35% clear rhombs of calcite				
245			Ca (tr)										lt-med grey &					245-260 very f.g.				
250			Ca (trace) XK (wk)										flesh-grey				TR	smooth text, lt-md grey & flesh grey LBT				
55			Ca trace XK (wk)														TR	Prob md silic, TR diss py, TR fine si XK				
60			Ca (3%)														2	260-280 v. fg. lt-md grey				
65		fract?	Ca (20%)														4	w-m silic?, TR diss py ± clear vein calcite chips				
70			Ca (10%)														TR	& minor chips coarser py				
75			Ca (TR)														TR	↑ clay				
80			Ca (TR)														TR	280-293 finely ground v fg smooth text md flesh-grey, Md silic				
85			Ca (TR)														TR	minor chips □ py				
90			Ca (TR)														TR					
95													dk red-					293- v fg smooth surface text, dk red brown				
300													brown					~fr LBT fizzes under HCl - calc content?				

NOTE SULFIDES IN COMMENTS: Py Mc Cp Pr Sb

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

DRILL HOLE RL-262

Page 4 of 5

FINE-GRAINED TUFF
BEDDED BUD LLT
VOLCANICLASTIC
PORPHYRITIC TUFF
FLOW BANDED TUFF

VEIN TYPES

DRUZY QUARTZ
Xc CHALCEDONIC
Xk STOCKWORK
Ca CALCITE
HYDROTHERMAL BRECCIA VNS
Ba BARITE

LOGGED BY CMW

FT.	LITHO	FRACTS FAULTS	VEIN TYPES	BLEACH W	BLEACH M	BLEACH S	CLAY W	CLAY M	CLAY S	SILIC W	SILIC M	SILIC S	COLOR	% FeOx W	% FeOx M	% FeOx S	% SULF.	COMMENTS	RQD CONN.	Ag	Au	✓
													dk red-					293-324 cont fr red-brown fg LBT				
305													brown									
10																		Red-br stain on v fg				
15																		md-dk grey w/ tiny dk phenos LBT				
20																						
25																						
			Tr calc?										md flesh-					324-353 v fg smooth md silic? md finely ground md grey LBT				
30			"										grey q				Tr	± coarser xtln □ py trace calc? or contam?				
35			"										green grey				1					
40			1-3% Ca														8	abt cubes py + clear calc				
45			1-3% Ca														3					
350																						
			Tr Ca															353-365 md flesh y				
55																		green lit - possibly some 2ndary A'n? EPI				
60			"															wk silic? v. thin red FeOx vnlts				
65			"															Tr Ca or contam?				
			"										md green				Tr	365-400 EPI				
70																						
			"														Tr	md green lit, text				
75																						
			"														Tr	mostly destroyed - prob wk silic				
80																						
			"														Tr	Trace Ca				
85																						
			"																			
90																						
			"																			
95																						
			"														Tr					
400																						

NOTE SULFIDES IN COMMENTS: Py Mc Cp Pr Sb

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

DRILL HOLE RL-262

Page 5 of 5

RL 262

LOGGED BY CMW

FINE-GRAINED TUFF
BEDDED BUD LLT
VOLCANICLASTIC
PORPHYRITIC TUFF
FLOW BANDED TUFF

VEIN TYPES

DRUZY QUARTZ
Xc CHALCEDONIC
XK STOCKWORK
Ca CALCITE
HYDROTHERMAL BRECCIA VNS
Ba BARITE

FT.	LITHO	FRACTS FAULTS	VEIN TYPES	BLEACH W	BLEACH M	BLEACH S	CLAY W	CLAY M	CLAY S	SILIC W	SILIC M	SILIC S	COLOR	% FeOx W	% FeOx M	% FeOx S	% SULF.	COMMENTS	ROD CONN.	Ag	Au	✓
			TR Ca or contam?										md green				1	400–470 BUDLIKE EPI w/ LBT;				
405																	TR	md green lit – more solid & hard, less clay than the Bud.				
10																	TR	md green w/ white				
15																	TR	any clasts < 1/8"				
20																		Trace calcite or contamination?				
25																	TR	finely ground				
30																	TR					
35																	TR					
40																						
45																						
450																						
55																						
60																						
65																						
70																		470–495 BUDLIKE EPI				
75																		Mix of green lit as above w/ vfg grey chips Poss vwk silic				
80																		Some chips (~3%) stained blue-green				
85																						
90																						
495																						
00																						

NOTE SULFIDES IN COMMENTS: Py Mc Cp Pr Sb

ROSEBUD PROJECT

HOLE NO. RL 262C LOGGED BY C. M. WALCK DATE 4/92 PAGE 1 OF 11

BOX #	DEPTH (FT)	RECOVERY	STRUCTURE: FLOW + VEIN + BEDDING	STRUCTURE: FAULTS	% METALLICS	GRAPHIC LOG	ALTERATION	COLOR	VEIN TYPES /WIDTHS	VEINS PER FOOT	RQD
1	495	101	Wisps/ Bedding 74	None	None		fresh	grey green	None	None	
1	500										
2		100	Bedding 75°								
2	510										
3		100									
3	520										
4		99	graded beds 77								
4	530										
5		99	Bedding 71								
5	540		Crude to not bedded								
6		102									
6	550										
7	555										

DESCRIPTION

[0 - 495 Reverse Circulation]

495 - 559.5 'EPI' Bud-like unit in LBT; Md grey-green bedded clastic, clast rich - 90% - generally clast supported, generally relatively well-sorted. Similar to BUD but less matrix & harder/more solid. Gen. fresh. Clasts range from < 1/25" to > 1/2" sub ang to sub round.

Bedded @ 71-77° to c.a, locally see graded bedding

495-540 Well bedded 71-77° to c.a, Well sorted, Clast supp.
495-507 slightly wispy matrix.

540 - 559.5; Coarser 'EPI', clasts < 1/4" - > 2"; Clast-rich 80 - 90%. Clasts sub ang, lt green, ltgrey, md grey & black (Je?) fg, Md green & grey w/ tiny phenos. Fresh
Mod-poorly sorted. & crude to not bedded

ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
Not Sampled					

ROSEBUD PROJECT

HOLE NO. RL 262c LOGGED BY CMW DATE 4/92 PAGE 2 OF 11

BOX #	DEPTH (FT)	RECOVERY	STRUCTURE: FLOW + VEIN ∡ + BEDDING	STRUCTURE: FAULTS	% METALLICS	GRAPHIC LOG	ALTERATION	COLOR	VEIN TYPES /WIDTHS	VEINS PER FOOT	RQD
7		99	NONE	NONE	NONE		fresh	grey-green	NONE	None	
	560							red-grey			
8		101	vein 50 / None					Md grey	1/2" calc vein / None	1 vein / None	
9	570	99					wk bleach	green grey			
10	580						fresh	Md grey			
		100									
11	590										
		100									
12	600										
		100									
13	610										
		100									
14	620										

DESCRIPTION

559.5 - 597 Transitional 'EPI' to LBT generally a volcanic bxa.

Medium purple grey mostly volcanic bxa; Clasts are fine-gr. even text w/ very tiny dk phenos. Clasts comprise 60-80%, range from < 1/4" to > 4", sub angular, Small interbeds of flow banded freshgrey LBT & lit

Matrix f.g. grey, same c clasts.

Fresh, locally wk bleach

597 - 1024.5 LBT

597 - 629 Generally volcanic breccia!, Md grey color, fresh. Md grey fg clasts w/ very tiny dk phenos, clasts comprise 60-80%, range from < 1/4" - > 4", subangular. Interbeds of flow banded fg grey LBT.

ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
Not Sampled					

ROSEBUD PROJECT

HOLE NO. RL 262C LOGGED BY CMW DATE 4/92 PAGE 3 OF 11

BOX #	DEPTH (FT)	RECOVERY	STRUCTURE: FLOW + VEIN + BEDDING	STRUCTURE: FAULTS	% METALLICS	GRAPHIC LOG	ALTERATION	COLOR	VEIN TYPES /WIDTHS	VEINS PER FOOT	RQD
14			NONE	NONE	NONE		fresh	Md grey	NONE	None	
		100									
15											
	630						Wk bleach	lt-med green grey			
		99									
16											
	640										
		102									
17											
	650								<1/8"-1/4" dk green & <1/8"-1/3" calc	1-2	
		99									
18											
	660										
		100									
19											
	670										
20		102							None	None	
	680										
21									minor calc	1	
	685										

DESCRIPTION

597 - 1024.5 LBT

629 - 693.5 fine grained LBT, generally a light-medium dull green-grey color; weakly bleached. W/ ~ 1-2% very tiny dk green phenos (black phenos alt to dk green)

629-645: w/ very fine network of thin fracts w/ md green

650 - 672 with irregular discontinous veinlts (random). Most abt: Dk green somewhat waxy - like dk duckbutter. Younger vnlts of calcite partly replace & x cut.

682 - 693.5 w/ very fine network thin fracts w/ med green & minor calc irreg fract fill

ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
Not Sampled					

ROSEBUD PROJECT

HOLE NO. RL 262C LOGGED BY CMW DATE 4/92 PAGE 4 OF 11

BOX #	DEPTH (FT)	RECOVERY	STRUCTURE: FLOW + VEIN + BEDDING	STRUCTURE: FAULTS	% METALLICS	GRAPHIC LOG	ALTERATION	COLOR	VEIN TYPES /WIDTHS	VEINS PER FOOT	RQD	DESCRIPTION	ASSAYS: SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
21	690	98	None	None	None		wk bleach	lt-med green grey	minor calc 1/16"-1/4"	1-2		597 - 1024.5 LBT	Not Sampled					
22	700	101					fresh	Md grey & pink grey	None	None		693.5 - 867: Med grey & pink grey mottled LBT; Varies from flow-banded to discontinous irregular flow bands (mottles) to flow breccia						
23	710	99																
24	720	90																
25	730	101																
26	740	100																
27	750	100					wk red stain	Md grey & red brown	calcite 1/8"	1-2								
28																		

693-698 flow bxa; lt gray clasts 1/4" - 3", subround in md dk gray fg matrix fresh

698-743 Mottled / banded med gray & pink gray fg fresh

743-769 Same rocktype but w/ md amount very thin fracts w/ dk red stain (3-10/ft) gives red-brown color throughout. Minor calc vnlts (1-2/ft, 1/8" wide) (RANDOM orientation)

(756-769 red brown stain less pervasive, just along selected bands & v. thin fracts)

ROSEBUD PROJECT

HOLE NO. RL 262C LOGGED BY CMW DATE 4/92 PAGE 5 OF 11

BOX #	DEPTH (FT)	RECOVERY	STRUCTURE: FLOW + VEIN + BEDDING	STRUCTURE: FAULTS	% METALLICS	GRAPHIC LOG	ALTERATION	COLOR	VEIN TYPES /WIDTHS	VEINS PER FOOT	RQD
28			None (fb is irregular)	None	None		wk red stain	Md grey & red brown	calcite 1/8"	1-2	
29		99	fb 50				v wk red stain				
	760		None (fb is irreg)								
30		99									
	770						fresh	Md grey	None	None	
31		101									
	780										
32		99									
	790										
33		100									
34	800								Calcite 1/8"-1/4"	1-2/foot	
		100							None	None	
35	810										
	815										

DESCRIPTION

597 - 1024.5 LBT (cont)

693.5 - 867 Mottled, flow banded & local flow bx a LBT continued, gro ~ fresh

769 - 803 Md grey fine grained & mottled (lt grey mottles - irreg flow bands) fresh, Locally w/ flow-breccia texture. Some mottles are lt-md pink color

w/ minor calc vnlts 798 - 804

803 - 829 Volcanic flow-breccia flow banded & mottled clasts <1/2" - >2". Matrix supp., f.gr. grey fresh

ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
Not Sampled					

ROSEBUD PROJECT

HOLE NO. RL 262C LOGGED BY CMW DATE 4/1/92 PAGE 6 OF 11

BOX #	DEPTH (FT)	RECOVERY	STRUCTURE: FLOW + VEIN + BEDDING	STRUCTURE: FAULTS	% METALLICS	GRAPHIC LOG	ALTERATION	COLOR	VEIN TYPES /WIDTHS	VEINS PER FOOT	RQD
36	820	102	None	None	None		fresh	md grey	None	None	
		100									
37	830										
		100									
38	840								Calcite thin fracts (< 1/64") 4 vnlts 1/8"-1/4"	1-2/ft	
		100									
39	850										
40	860	100							None	None	
41	870	99.5					Wk bleach	md 4 lt grey-green	V. thin fracts (< 1/32") w/calc ± hem	8-20 very thin fracs	99.5
42	880	102									102

DESCRIPTION

597 - 1024.5 LBT cont.:

693.5 - 867 cont. Mottled, fg, flow banded 4 flow breccia LBT, gen. fresh

829 - 867 Mottled md grey fg w/ some lt grey mottles to local flow bxa. Fresh, w/ tiny dk phenos.
w/ thin fracts 4 vnlts calcite 842 - 853

867 - 919 Wk bleach to md grey-green fg 4 mottled. Generally w/ very thin fractures surrounded by bleaching to lt grey-green. These thin (< 1/32") fracts gen contain calc or locally thin hematite stain - flesh color

ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
Not Sampled					

ROSEBUD PROJECT

HOLE NO. RL 262C LOGGED BY CMW DATE 4/92 PAGE 7 OF 11

BOX #	DEPTH (FT)	RECOVERY	STRUCTURE: FLOW + VEIN & + BEDDING	STRUCTURE: FAULTS	% METALLICS	GRAPHIC LOG	ALTERATION	COLOR	VEIN TYPES /WIDTHS	VEINS PER FOOT	RQD	DESCRIPTION	ASSAYS: SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
43			NONE	NONE	NONE		Weak bleach	Md grey-green & lt grey green	Thin 1/32" fracts w/ calc + hem	8-20 thin fracts/ft		597 – 1024.5 LBT	Not Sampled					
		99									99							
44	890																	
		98									98							
45	900																	
		99									99							
46	910																	
		99									96							
47	920						v wk bl	Md grey & green grey	Thin 1/32" fracts w/ dk hem ± calc	10-20 ft		919-938 Med grey fg w/ md pink-green mottles & stringers w/ abt thin (1/32") fractures w/ dk red hematite ± calc; Also some mottles of dk red hem. ~ fresh to v wk bl						
		100									100							
48	930																	
		102									102							
49	940						Wk bl	Md grey-green	Thin fracts 1/32"	10		938 – 1012 Md grey green fg ± tiny dk phenos dense LBT, wk bleach, w/ network of very thin fractures - 1/32" - 1/16" wide - bleached to lt-md grey						

ROSEBUD PROJECT

HOLE NO. RL 262 C LOGGED BY CMW DATE 4/92 PAGE 8 OF 11

BOX #	DEPTH (FT)	RECOVERY	STRUCTURE: FLOW + VEIN & + BEDDING	STRUCTURE: FAULTS	% METALLICS	GRAPHIC LOG	ALTERATION	COLOR	VEIN TYPES /WIDTHS	VEINS PER FOOT	RQD
50		100	NONE	NONE	NONE		Wk bleach	Md gray-green	Thin 1/32" fracts w/ calc	10-20 Thin	96
	950										
51		100									97
	960								1/16"-1/8" calc + thin fracts w/calc	1-2 vnlts, 10-20 thin fracts	
52		100									100
	970										
53		100									100
	980										
54		99									97
	990		15 Kaol								
55		101	NONE						As above + Kaol	1/8" 1/HE	101
	1000								Thin 1/32" fracts w/ calc	10-20 thin fracts	
56		100									88
	1010										

DESCRIPTION

597 - 1024.5 LBT

938 - 1012 cont:

958 - 1005 w/ wk calc vnlts 1/32" - 1/4" wide, locally w/ dk green

1/8" wide vnlt of white Kaol, + calc 995 - 996' @ ~ 15° to c.a.

1005 - 1012 vole 'flow' bxa text

ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
Not Sampled					
953-958	.001		.02		
958-963	.001		.01		
963-968	<		<		
968-973	<		<		
973-978	<		.01		
978-983	<	<	<		
983-988	<		<		
988-993	<		.01		
993-998	.001	.001	.01		
998-1003	<		<		
1003-1008	<		<		

ROSEBUD PROJECT

HOLE NO. RL262C LOGGED BY CMW DATE 4/92 PAGE 9 OF 11

BOX #	DEPTH (FT)	RECOVERY	STRUCTURE: FLOW + VEIN + BEDDING	STRUCTURE: FAULTS	% METALLICS	GRAPHIC LOG	ALTERATION	COLOR	VEIN TYPES/WIDTHS	VEINS PER FOOT	RQD
57			NONE	NONE	None		Wk bl	gr-grey	Thin fract	0-20	
		103			1% buck shot py		Md bl + arg	Lt green, flesh + grey	1/32" kaol, 1/8" calc	1/ft each	91
58	1020		Contact of gouge 28°						Pale green kaol 1/16"-1/8"	1-2 kaol	
		97		SRF rubbly 28° clay gouge	None		m-s arg	Mottled grey, green + flesh	kaol 1/32"-1/4"	20-30 thin	33
59	1030			rubbly broken					clayey		
		74							kaol 1/32"-1/4"	20-30 thin	16
60		130		clay-gouge					clayey		58
	1040				Trace py		Md bleach wk arg	Md grey green	green kaol 1/32"-1/8", 1/64"-1/16" calc	10-20 ft kaol, 1-2 ft calc	
61		96									47
	1050										
62		98			None			Md grey-green + flesh + white	Abt calc 1/2"-6" + Abt green kaol 1/16"-1/4"	Calc 1-2, kaol 15-30	54
	1060			SRF calc + dukb kaol vein Δ's							
63		96	3/4" calc 30/vn								80
64	1070			fine veinΔ							
	1075										

DESCRIPTION

597 - 1024.5 LBT

1012-1017: Volcanic/Flow Δ or Tectonic Δ? ; Think volcanic: Lt flesh + green fg matrix supp w/ 40% angular to sub ang 1/4" - 1" clasts flow banded md. grey + green. Md bleach, minor splotchy Buckshot py (1/ft) Minor vnlts calc + py (< 1/ft) Thin pale green kaol on fracts (< 1/32", 1/ft)

1017 - 1024.5 Mottled lt-med green, grey + flesh fg w/ abt very thin network of fracts - locally crackle Δ. Bleached to lt grey-white along these fracts. Core is more broken-up, avg 2"-3" pieces, Md. bl. + prob. arg.

Wk vnlts pale green kaol. Wk buckshot py

1024.5 - 1102 SRF / LBT - South ridge fault zone, broken + alt'd LBT. Rubble, gouge + breccia zones.

1024.5 - 1042 Rubbly; mix of mottled lt grey, green + flesh fg w/ abt thin fracts + abt (2-10/ft) thin 1/8" vnlts kaol, Md bl, arg + Δ zones w/ clay gouge cemented Δ; lt green, grey + flesh sub ang clasts < 1/16" - 1/2" in lt grey green clay matrix - easily crumbled

Clay cemented Δ @ 1027-1028.8 (28° to c.a.), 1030-1031, 1032-1032.2, 1038-1040

1042 - 1054 lt-md grey green fg w/ tiny dk alt'd phenos LBT, Abt thin 1/64" - 1/8" dk green kaol vnlts

ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
1008-1013	<		.01		
1013-1018	<		.01		
1018-1023	<		.01		
1023-1027	.001		.01		
1027-1028.8	.002	.002	.02		
1028.8-1033	.002		.01		
1033-1038	.001		.01		
1038-1043	.002		.02		
1043-1048	.001		.01		
1048-1053	<		.01		
1053-1058	<		.01		
1058-1063	<		.01		
1063-1068	<		.01		
1068-1073	<		.01		

ROSEBUD PROJECT

HOLE NO. RL 2626 LOGGED BY CMW DATE 4/92 PAGE 10 OF 11

BOX #	DEPTH (FT)	RECOVERY	STRUCTURE: FLOW + VEIN + BEDDING	STRUCTURE: FAULTS	% METALLICS	GRAPHIC LOG	ALTERATION	COLOR	VEIN TYPES /WIDTHS	VEINS PER FOOT	RQD
		96		SRF fine vein Δ	1% brck shot py		Md bleach wk arg	Md green & flesh	m-s duckb Kaol 1/16"-1/4" md calc 1/4"-3/4"	Kaol 10-20 Calc 1-2	60
65	1080										
		104		fine vein Δ & calc + gr Kaol matrix	NONE		Md bl & arg	lt-md grey-green flesh & white	Calc 1/4"-6" Duckb Kaol 1/16"-1/8"	Calc 2-4, Kaol 5-15	80
66	1090										
		99		Δ			M to M-S arg	grey-green & apple green	Calc + duckb matrix comprise ~30%	Δ matrix ~30%	62
67	1100		Contact 25°								
		100		SRF calc matrix Δ			Md bl	grey-green & white	Calc matrix Δ 1/2"-8"	Calc matrix ~30%	95
68	1110		Contact w/ 58 gouge								
		91		Clay + sulf gouge & Δ (END SRF)	Py + clay ~2% py		Str Arg	grey & white	gouge	gouge	10
69					1-2% py in vnlts		Wk bleach	lt-md grey green	Kaol ± calc ± py 1/16"-1/4"	10-15	
	1120	96									80
70											
71	1130	101			1% py in vnlts		v wk. bleach		1/32"-1/8" calc ± Kaol ± py	2-6 calc	90
72	1139										

TD

DESCRIPTION

1024.5 - 1102.5 SRF / LBT

1042 - 1054 cont; minor calcite stringers

1050-1054: more broken-up to rubbly, abt 1/8" vnlts green kaol, minor white kaol, calc., locally crackle Δ

1054 - 1073 lt green grey w/ hint of flesh fg w/ m-s to str veining - calc & green Kaol. Think LBT, may be Td?

15-30 1/16"-1/4" green duckb vnlts/ft - network - various directions

1-2 1/2" - 6" white calcite veins / ft, Locally vein Δ calc + duckb Kaol. Calc appears younger than Kaol.

1073 - 1082 Tectonic Δ; lt-med grey-green subangular clasts 1/16"-1", ~70%, matrix supp - Med flesh

W/ M-S dk green Kaol on thin fracts & vnlts 1/16"-1/4" wide, 10-20/ft

Md calc stringers & vnlts, locally partly replace green Kaol, 1-2/ft 1/4"-3/4"

1082 - 1093 Tectonic Δ, ang flesh-green clasts 1/16"->1" in md green matrix, W/ later duckb + calc + fg gouge vein Δ; calcite + green Kaol vein Δ'n overprinting — stronger Δ than above

Calc veins up to 6" wide; Δ'N more w/ depth

Rubble: 1083.5-1084.5, 1086-1087

Abt calc 1084-1085, 1087-1090, 1092-1093

Clasts contain many fine fracts w/ green duckb Kaol

1089: calc has 'feathery' look

ASSAYS

SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
1073-1077	<	<	.01		
1077-1081	<		.02		
1081-1086			.01		
1086-1091			<		
1091-1096			.01		
1096-1101			<		
1101-1102.5			<		
1102.5-1106.5	.001	.001	<		
1106.5-1111	.001	.001	.01		
1111-1115	.001		.03		
1115-1119	.001		.02		
1119-1124	<		.04		
1124-1129	<		.02		
1129-1134	<		.01		
1134-1139	<		.01		

ROSEBUD PROJECT

HOLE NO. RL 262 C LOGGED BY CMW DATE 4/92 PAGE 11 OF 11

BOX #	DEPTH (FT)	RECOVERY	STRUCTURE: FLOW + VEIN + BEDDING	STRUCTURE: FAULTS	% METALLICS	GRAPHIC LOG	ALTERATION	COLOR	VEIN TYPES /WIDTHS	VEINS PER FOOT	RQD	DESCRIPTION	ASSAYS: SAMPLE NO.	oz/t Au	✓ Au	oz/t Ag	✓ Ag	% Cu
												1024.5 – 1102.5 SRF – LBT						
												1093 – 1102.5: Tectonic Δ: lt-med green & flesh sub ang clasts ~ 60% in lt apple green & white-grey matrix consisting of dockbutter Kaol ± calc + rockflour. Easily crumbled by hand, locally rubbly. W-M calc vnlts 1/ft ½"-1"						
												Think orig LBT, could be Td						
												1102.5-1116 SRF – Td? Contact ~ 25° to c.a.						
												1102.5-1111.5 Tectonic breccia – think of Td, may be LBT?: Lt grey-green fg clasts in calcite matrix, tiny dk phenos; Calcite comprises ~ 40%, locally 'feathery' appearance. Clasts sub ang ¼"-3."						
												1111.5 – 1116: Strong Δ / gouge, contact w/ above c 58° to c.a. Crumbly banded grey clay + calcite gouge & fine frags - mostly < ⅛", few silic white frags ½". Banded c ~ 53° to c.a., including bands of dk sulfides						
												This grades down into more clast-rich Δ below 1113', w/ finely ground rock Δ, crumbly, abt clay dissecting larger pieces of grey-green fg Td.						
												Last 1½' is rubble of Td						
												1116 – 1139 Dozer Td						
												1116-1129 fg lt-med grey-green Td, wk bleach, w/ 'stretch marks' - thin stringers / fracts (1/16"-⅛") w/ white Kaol ± calc ± py fill. Also locally fine dk stretch marks ~ ~ dk green. Core fairly broken up into 1"- 4" pieces.						
												1129 – 1139 fg lt-med grey green Td, v. wk, bleach. Thin (1/16" - ⅛") calc ± py ± kaol vnlts 2-4/ft						

Filename: drbLOG.xls

PROJECT: ROSEBUD	STATE: Nevada	NORTHING:	TOTAL 495' Page 1/2
LOGD BY: HOLLY McLACHLAN	COUNTY: Pershing	EASTING:	BEARING:
UTM#: NK 11-10-06	SEC. T. N., R.	ELEVATION:	ANGLE:

HOLE#: DRB RL-262R

DEPTH in FEET	DRILLING NOTES (TIME, Dates, H2O, Casing, Bits, Hole C)	COLOR (WET)	STRATIGRAPHY/LITHOLOGY: ALUVM (1)	BADGER (2)	CHOCOLT (3)	BUD (4)	BRADY (5)	MKR POR (6)	LBUD (7)	DOZER (8)	WILDROS (9)	SURGTUF (10)	ASH FLO (11)	LAVA (12)	AUTOBXA (13)	INTRUSV (14)	BASALT (12)	ANDESIT (13)	RHYOLIT (14)	STRCT: ROKEN (15)	GOUGE (16)	GRAPHIC	ALTERATION & MINERALIZATION: OXD'T'N: MANGAN (17)	HEMAT (18)	LIMON (19)	PYRITE (20)	GRAPHIC	UNALTRD (21)	PROPYLT (22)	ARG (22)	RPLSIL (23)	STKWKS (24)	VEINS (25)	CALCITE (26)	(27)	GRAPHIC	COMMENTS: Sample Recovery / Composite Geochem Intervals	SAMPLE No.
10		CRM/BRN																																			0-27': Qal MIXED LITHOLOGY CHIPS & SANDY, DULL MAROON BROWN MUD.	5 10
20																																						15 20
30																																					PHENOCRYST - POOR FOR CHOCOLATE	25 30
40		DULL PURPLE																		2			2				2							2			27'-76 Tc 27-45: DUSKY PURPLE MODERATELY ARGILLIZED, PORPHRITIC FG	35 40
50		RUSTY-PURPLE						?												1			2				2										PROBABLE MARKER PORPHYRY LAVA. LIBERALLY SPOTTED WITH PLAG GLOMS ESP. AT TOP.	45 50
60								?												1			1				2							2			45-76: FINER-GRAINED PHENOCRYST-DEFICIENT DUSKY PURPLE TO REDDISH PURPLE LAVA FLOW	55 60
70		DULL PURPLE						?												2			2				2							3			OR STRONGLY WELDED FLOW. WK FOLIATION FABRIC IN CHIPS OTHERWISE HOMOGENEOUS TEXTURE. NO BASEMENT LITHICS IN EITHER.	65 70
80		YELLOW-WHT-GRN																		3									1	2							76'-210' T UPPER BUD TUFF	75 80
90		GRN/WHT-GRN																		2										1							UBT 75-80': YELLOWISH BLEACHING OF THE TOP OF THE BUD TUFF, SIMILAR TO WHAT IS SEEN IN OUTCROP.	85 90
100		WHT-GRN																		3										3							75-210': MOTTLED PALE TO MED. GRN WITH FAINT SALMON MOTTLING BELOW 135' PROBABLE UPPER BUD. SURGE TUFFS. NOW SIGNIFICANTLY BLEACHED. (STRONGLY)	95 100
110		GRN/WHT-GRN																		1										1					2				105 110
120		WHT-GRN																		3										3					3				115 120
130		WHT-GRN																		3										3					3				125
140		GRN/WHT-GRN																		2										2					3				130
		GRN/WHT/PINK																		1					1					1					2				135
150																				2										2								MINOR FINE OR ASHY INTERBEDS (OR APHANITIC FLOWS)	140 145
160																				1										1								150 155 160
170		PINK																																				165
		PINK																																				170
180	POSSIBLY UPPER BRADY ANDESITE	BRN/WHT/PINK																?																				175 180
190																		?																				185
200																				3										3					3				190 195 200
210		GRN-WHT/PINK																		2						1				2					2			210'-350' T BA	205
		WHT/PINK																		2						1				2					2				210
220																				1						2									1			210'-245': FLOW FLECKED WITH FINE ~~2NDARY(?)~~ MAG. ~~BIOTITE~~. APHANITIC STRONGLY BLEACHED GROUNDMASS. POSSIBLY BRADY ANDESITE.	215 220
230														?						1															2			225-230': RELICT EUHEDRAL AMPHIBOLE - CLEARLY IN STRONGLY BLEACHED WHT-PINK BRADY ANDESITE. ~~2NDARY BIOTITE &~~ TARNISHED SULFIDE SPECKS DISSEMINATED IN GROUNDMASS. SULFIDE MAY BE AFTER 2NDARY BIOTITE.	225 230
240		WHT/PINK/OCHER												?											1										2				235 240
250		WHT/PINK																							2	3									3				245 250

PROJECT: ROSEBUD	STATE: Nevada	NORTHING:	TOTAL 495' Page 2/2
LOGD BY: HSM	COUNTY: Pershing	EASTING:	BEARING:
UTM#: NK 11-10-06	SEC. T. N., R.	ELEVATION:	ANGLE:

HOLE#: DRB RL-262R

DRILLING NOTES: TIME | Dates, H20, Casing, Bits, Hole C

STRATIGRAPHY/LITHOLOGY — ALTERATION & MINERALIZATION — COMMENTS

DEPTH in FEET	COLOR (WET)	ALUVM (1)	BADGER (2)	CHOCOLT (3)	UBUD (4)	BRADY (5)	MKR POR (6)	LBUD (7)	DOZER (8)	WILDROS (9)	SURGTUF (10)	ASHOFLO (11)	LAVA0 (12)	AUTOBXA (13)	INTRUSV (11)	BASALT (12)	ANDESIT (13)	RHYOLIT (14)	BROKEN (15)	GOUGE (16)	GRAPHIC	MANGAN (17)	HEMAT (18)	LIMON (19)	PYRITE (20)	GRAPHIC	UNALTRD (21)	PROPYLT (22)	ARG (22)	RPLSIL (23)	STKWKS (24)	VEINS (25)	CALCITE (26)	(27)	GRAPHIC	COMMENTS	SAMPLE No
260	PALE PINK-GRY																						1		1			1	2				2			245'-350': APHANITIC PHENOCRYST-POOR	255
	↓																						1		1								3			LAVA FLOW OR INTRUSIVE, OR ASHFALL. STRONGLY	260
270	GRY-WHT																						1		↓											BLEACHED TO 295'.	265
	GRY-WHT/PALE PINK																						1		2												270
280	↓																						1		1												275
																							1		1												280
290	TAN-PINK																						1		1								1			295-325': FG/APHANITIC PURPLE INTERIOR.	285
	TAN-PINK																						1		2								2			PHENOCRYST- POOR; SOME FOLIATION	290
300	DULL PURPLE																						↓		1			↓	↓				1			FABRIC IN CHIPS	295
	↓																						2		0				0				2				300
310																									1												305
	↓																								0												310
320	RED-PURPLE																																				315
	DULL PURPLE																																				320
330	DULL PURPLE																																			325'-350': MODERATELY BLEACHED.	325
	TAN-LAVENDER																						↓		↓				↓								330
340	CRM																						1		1			1	1								335
	TAN-CRM																								1												340
350	GRY-CRM																								3											350-495' T LBT: ~340-345: DULL BRASSY COARSE	345
	GRY-CRM																						↓		1				↓							EUHEDRAL PYRITE. (.5-2mm)	350
360	PINK-WHT-GRN																						2		1				2							350'-495': LOWER BUD SURGE TUFFS	355
	PINK/WHT-GRN																						1		0											WITH FLOW OR ASHFLOW INTERBEDS.	360
370	PINK/WHT-GRN																						1		0			↓					↓				365
	WHT-GRN																						1		1			1					3			360-365': SMALL BLACK BASEMT LITHIC. 1ST	370
380	↓																						0		0			2					1			SEEN.	375
																									0								1				380
390																									1								2				385
																									1												390
400																									0												395
																									0												400
410																									2								↓				405
																									1												410
420																									0								3				415
	↓																						↓										2			PROBABLY	420
430	WHT/GRN/PINK-BRN																						1													420-425': BLK LITHIC, ~~POSSIBLY~~ BASEMT	425
																							1										↓				430
440	↓																						0		↓								1				435
	WHT-GRN																								1								1				440
450																									0								1				445
																									1								1				450
460																									0								3				455
	↓																						↓					↓	↓				3			460-465': BLK LITHIC, POSSIBLE BASEMT.	460
470																																	3				465
	GRN/GRY +- PINK-GRY																						2					1					1			470-495': DOMINANTLY FINE-GRAINED COMPACTED	470
480	↓																																0			ASH UNIT WITH COARSE SAND-SIZED LAPILLI	475
																																	0			BEDS LOCALLY. UNBLEACHED. TR. TO UN-PROPYLIT-	480
490	↓																																1			IZED & UNARGILLIZED. ESSENTIALLY FRESHER	485
																							↓		↓			↓					1			THAN OVERLYING MATERIAL. mm-SCALE LAYERS	490
500																																					495
																																					500

PROJECT: Rosebud JV UTM NK 11-10-06 C	NORTHING:	TOTAL DEPTH: 1138.5'	STARTED:
LOGD BY: HSM STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:
DATE: 02/04/97 SEC. T. N. E.	ELEVATION:	ANGLE:	DRILLER:

PAGE: 1

HOLE # RL-262C

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 | | | | | | | | | | | | |

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH: 1138.5
LOGD BY:	STATE: Nevada County: Pershing	EASTING:	BEARING:
DATE:	SEC. T. N. E.	ELEVATION:	ANGLE:

STARTED: COMPLETED: DRILLER:

PAGE: 2

HOLE # RL-262C

DRILLING: DEPTH FT | REC/CUT | RQD

LITHOLOGY: ALLUVUM (1) | MUDCGL (2) | (3) | LITHTUF (4) | PUMTUF (5) | SURGTUF (6) | ASHFLO (7) | LAVA (8) | AUTOBX (9) | INTRUSV (10) | BASALT (11) | ANDESIT (12) | RHYOLIT (13)

STRUCT: TEC BXA (14) | BROKEN (15) | GOUGE (16) | VOID (17)

ALTERATION/MINLIZATION: Fe MIN: MNOX (18) | HEMTIT (19) | LIMONIT (20) | PYRITE (21) | PROP (22) | ARG (23) | ARG2 (24) | RPLSIL (25) | (26) | QTZVNS (27) | CALCITE (28) | MECLAS (29)

STRAT: BADGER (30) | CHOCOLT (31) | UBUD (32) | BRADY (33) | MKRPOR (34) | LBUD (35) | WILDROS (36) | DOZER (37)

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

DEPTH FT | LITHGRAPH | ALTGRAPH | STRCT | COMMENTS | SAMPLINT

545

LOWER BUD SURGE TUFF

527.0'-559.2': SEE P.1. HETEROLITHIC COBBLE CONGL. INTERVAL. ANGULAR TO V. ANGULAR CLASTS OF: <3 TO 7% BLK LITHICS (SMALL) & MIXED VOLCANICS. SOME DEFINITE, WKLY FLOW BANDED, PINKISH DOZER. GOOD PRESERVATION OF INITIAL VOLCANICLASTIC TEXTURE - ESSENTIALLY UNALTERED. CLAST-SUPPORTED.

550 — 65° BDING

555

559.2'-~565': MODERATE MAROON HEMATITIC STAINING THRU THIS INTERVAL. LITHICS ABSENT. ANGULAR PEBBLE TO COBBLE CONGLOMERATE. ORIGINAL TEXTURE FADED SLIGHTLY PERHAPS BY HEMATITIC WASH/OVERPRINT. NOT NOTEABLY HETEROLITHIC; VERGING ON MONOLITHIC. MOD. TO WK. CALCITE

560 — 70° PASS. BDING

~565'-~574': HmOx MAROON STAINING FADES DOWNWARDS, GONE BY 567'. FINE PEBBLE CONGLOMERATE THRU'OUT THIS INTERVAL IS MED. TO PALE GRAY & INTERMITTENTLY MATRIX-SUPPORTED. GRADES DOWN INTO MONOLITHIC (APPARENT) AUTOBRECCIA AT ~574.5'

565

570 — 45° FRAX

GRADATIONAL CONTACT BETWEEN 574-575'

575 — CNTCT

574.2'- T_{DR}

574.2'-~580': SOMEWHAT STRONGER ALTERATION THAN FOUND ABOVE & BELOW. APPLE GRN TO GRAYISH CREAM & PORDUS. SUB-ANGULAR TO SUB-ROUNDED FRAGMENTS WITH ROCK FLOUR MATRIX OF THE SAME MAT'L, EQUALLY ALTERED.

50° CC VN

580

577.7': 3/4" CALCITE VN.

579': FLOW BANDS FIRST SEEN IN LARGER CLAST.

585

580'-~632': CONTINUED CLAST-SUPPORTED, MONOLITHIC AUTOBRECCIA. PALE TO MEDIUM GRAY MOTTLED WITH PINK-GRAY WHERE FLOW BANDED.

590

592': FLOW BANDING PREVALENT IN LARGER CLASTS FROM THIS POINT TO ~632'. NOT IN-PLACE.

NO SIGNIFICANT MEASURABLE STRUCTURE OR VEINS

595

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH: 1138.5
LOGD BY: 02/04/97	STATE: Nevada County Pershing	EASTING:	BEARING:
DATE:	SEC. T. N. E.	ELEVATION:	ANGLE:

STARTED:	PAGE: 3	
COMPLETED:	HOLE # RL-262C	
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 | | | | | | | | | | | | |

PROJECT: Rosebud JV	UTM NK 11-10-06 C	NORTHING:	TOTAL DEPTH: 1138.5	STARTED:	PAGE: 4
LOGD BY:	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL-262C
DATE:	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: DEPTH FT; REC/CUT; RQD

LITHOLOGY: ALLUVUM (1), MUDCGL (2), (3), LITHTUF (4), PUMTUF (5), SURGTUF (6), ASHFLO (7), ALAVA (8), AUTOBX (9), INTRUSV (10), BASALT (11), ANDESIT (12), RHYOLIT (13)

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

ALTERATION/MINLIZATION: Fe MIN: MNOX (18), HEMTIT (19), LIMON (20), PYRITE (21); PROP (22), ARG (23), ARG2 (24), RPLSIL (25), (26), QTZVNS (27), CALCITE (28), METCLAS (29)

STRAT: BADGER (30), CHOCOLT (31), UBUD (32), BRADY (33), MKRPOR (34), LBUD (35), WILDROS (36), DOZER (37)

DEPTH FT; LITHGRAPH; ALTGRAPH; STRCT NT

SAMPLINT

COMMENTS

645 — FROM ~631.5': PALE GREENISH TAN/CREAM SOLID ROCK. SOME TEXTURE OBSCURING ALT'N. DEEMED WK/MOD PROPYLITIC. FROM 648'-665' = WISPY, SHORT, IRREGULAR CHLORITE VEINLETS THREAD THRU LARGELY SOLID ROCK. COARSELY TO MOD'LY CRYSTALLINE DK GRN CHLORITE, +/- SPARRY CALCITE BY 651'. NO PREFERRED ORIENTATION.

650 — 40° FRAX; 55 FRAX

651-659': FAINT OLD MONOLITHIC CRACKLE BXA WITH ROCK FLOUR MATRIX. X-CUT BY CHL +/- CALCITE VNING & OPEN SPACE FILL.

655 — BY~661': SOME GRN CHL LOOKS TO BE FILLING OPEN SPACE WITHIN THIS ROCK FLOUR MATRIXED CRACKLE BXA.

660 — 40° CHL+CAL VN

665'-675': COARSELY XTLLINE DARK GREEN CHLORITE +/- SPARRY CALCITE FORMS CEMENT & OPEN SPACE FILLING ON A WKLY TO MODERATELY DEVELOPED MONOLITHIC ANGULAR CRACKLE BXA WITHIN THE RHYOLITE.

665

670 — 40° FLOW BAND; 50° FLOW BAND

675 — FLOW BAND 30°

678-683': WK TO MODERATELY DEVELOPED CRACKLE TO RUBBLE BXA. V. LOCAL MILLING, A/D ROUNDING OF FRAGMENTS. ROCK FLOUR MATRIX +/- GRN CHLORITE OR WHT CALCITE CEMENTING IN OPEN SPACE, LATE.

680

685 — 686-695': FAINT, SLIGHTLY RUBBLY OR MILLED CRACKLE BXA. MONOLITHIC & TIGHT OR CLAST-SUPPORTED. TRACE CHLORITE LOCALLY IN MATRIX & DISS'D COLOR.

690 — 45° FLOW BAND

690-693': 7-10 mm Py DOLLARS OR BLEBS OVERPRINT A CHLORITE CRACKLE VNLT ZONE. SEMI-OXIDIZED TO REDDISH-BROWN. TO ~5% IN THIS INTERVAL. 691': HOMOGENEOUS TAN/CRM GIVES WAY TO MOTTLED MEDIUM BLUISH-GRAY & PINKISH TAN/CRM. THIS MOTTLING HIGHLIGHTS THE FAINT BRECCIA TEXTURE.

695

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH: 1138.5	STARTED:	PAGE: 5
LOGD BY: Holly McLace	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #: RL-262C
DATE: 02/05/97	SEC. T. N. E.	ELEVATION:	ANGLE:	DRILLER:	

DRILLING: DEPTH FT; REC/CUT; RQD

LITHOLOGY: ALLUVUM (1), MUDCGL (2), (3), LITHTUF (4), PUMTUF (5), SURGTUF (6), ASHFLO (7), LAVA (8), AUTOBX (9), INTRUSV (10), BASALT (11), ANDESIT (12), RHYOLIT (13)

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

ALTERATION/MINLIZATION: Fe MIN: MNOX (18), HEMTIT (19), LIMONIT (20), PYRITE (21); PROP (22), ARG (23), ARG2 (24), RPLSIL (25), (26), QTZVNS (27), CALCITE (28), METCLAS (29)

STRAT: BADGER (30), CHOCOLT (31), (32), BUD (33), BRADY (34), MKRPOR (35), LBUD (36), WILDROS (37), DOZER

DEPTH FT; LITHGRAPH; ALTGRAPH; STRCT NT

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

695 — 691'-707': BLUISH GRAY & TAN-CREAM MOTTLING PICKS OUT A FAINT OLD RUBBLE BRECCIA TEXTURE, BTWN 694'-698', & MOSAIC TO RUBBLE BXA BTWN 699'-703'. BEGINNING AT 699': CREAM CHALKY-TEXTURED CLAY (?) BLEBS ~~BEG~~ REPLACEMT IN FLOW BANDS & ELSEWHERE.

700 — 699-703': CLAST-SUPPORTED, MOSAIC BRECCIA WITH FLOW BANDED FRAGMENTS AND ROCK FLOUR MATRIX. MONOLITHIC & ESSENTIALLY UNTRANSPORTED.

705

710 — 45° FLOW BAND — 707-714': TAN-CRM, FLOW BANDED, ESSENTIALLY INTACT RHYOLITE.

715 — 70° FLOW BAND; 70° FLOW BAND — 714'-723': STRONG BLUISH-GREY + TAN-CRM MOTTLING PICKS OUT DISRUPTED/CONTORTED FLOW BANDING. BEGINNING ~ 715' MAROON HMOX STAINING ACCOMPANIES THIS COLOR CHANGE. PREVALENT ON FRAX & IN INTERSTICES OF BRECCIA.

720 — 40° FLOW BAND — 723'-~750': DOMINANTLY BLUISH-GREY, WITH FLOW BANDING PICKED OUT BY CREAM, CHALKY-TEXTURED CLAY (?) REPLACEMENT.

725 — 725-727': FAINT MOSAIC/PEBBLE BRECCIA. RK FLOUR MATRIX.

730 — 50° FLOW BAND

735 — GENERALLY MORE CALCIC BELOW COLOR CHANGE, IN GRAY-BLUE ROCK.

740 — 45° FLOW BAND

745 — 50° FLOW BAND

PROJECT: Rosebud JV	UTM NK 11-10-06 C	NORTHING:	TOTAL DEPTH: 1385'
LOGGED BY: Holly Molloy	STATE: Nevada County: Pershing	EASTING:	BEARING:
DATE: 02/06/97	SEC. T. N. E.	ELEVATION:	ANGLE:

STARTED:
COMPLETED:
DRILLER:

PAGE: 6
HOLE #: RL-262C

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: ALUVUM (1), MUDCGL (2), (3), LITHTUF (4), PUMTUF (5), SURGTUF (6), ASHFLO (7), ALAVA (8), AUTOBX (9), INTRUSIV (10), BASALT (11), ANDESITE (12), RHYOLITE (13)

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

ALTERATION/MINLIZATION: Fe MIN: MNOX (18), HEMTIT (19), LIMONITE (20), PYRITE (21); PROP (22), ARG (23), ARG2 (24), REPLSIL (25), (26), QTZVNS (27), CALCITE (28), METCLAS (29)

STRAT: ADGER (30), CHOCOLT (31), (32), BUD (33), BRADY (34), MKRPOR (35), LBUD (36), WILDROS (37), DOZER

DEPTH FT; LITHGRAPH; ALTGRAPH; STRCNT; SAMPLINT

COMMENTS

746'-757': INTERMITTENT, OFTEN FAINT, CLAST-SUPPORTED, WKLY MILLED RUBBLE TO CRACKLE BRECCIA. MONOLITHIC. PROBABLE AUTOBRECCIA WITH RK FLOOR MATRIX.

~750: CREAM CHALKY-TEXTURED REPLACEMENT ROCK DISAPPEARS BY THIS POINT.

~750'-868': ROCK CONTINUES BLUE-GRAY, LOCALLY PALE GREY. PALER GREY BLEACHED MATERIAL PICKS OUT FLOW BANDING. HEMATITIC STAINING ~~W~~ MODERATE TO TRACE. PREVALENT IN POORLY HEALED BRECCIA & ON FRAX. LOCALLY DISS'D AS A COLOR WASH INTO GROUNDMASS.

40° FLOW BAND

35° JNT

50° FLOW BAND

30° JNT

HmOx STAINING FADES BY ~770'.

770'-830': AS DESCRIBED ABOVE: INTERMITTENT, FAINT, CLAST-SUPPORTED, TIGHTLY PACKED RUBBLE TO CRACKLE BRECCIA. MONOLITHIC AUTOBRECCIA. DISRUPTED FLOW BANDING IN FRAGMENTS.

25° FLOW BAND

MINOR (TR.) CHLORITE ON FRAX, THRU OUT INTERVAL

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH: 1138.5'	STARTED:	PAGE: 7
LOGD BY: H McLachlan	STATE: Nevada	County: Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #: RL-262C
DATE: 02/06/97	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: DEPTH FT; REC/CUT; RQD

LITHOLOGY: 1 ALLUVUM; 2 MUDCGL; 3; 4 LITHTUF; 5 PUMTUF; 6 SURGTUF; 7 ASHFLO; 8 LAVA; 9 AUTOBX; 10 INTRUSV; 11 BASALT; 12 ANDESIT; 13 RHYOLIT

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 CALCITE; 29 METCLAS

STRAT: 30 ADGER; 31 CHOCOLT; 32 BUD; 33 BRADY; 34 MKRPOR; 35 LBUD; 36 WILDROS; 37 DOZER

DEPTH FT; LITHGRAPH; ALTGRAPH; STRCT NT

SAMPL INT

COMMENTS

795

800

805

810

815

820

825

830

835

840

845

20° CALVN

770'-830': INTERMITTENT, CLAST- & MATRIX SUPPORTED MONOLITHIC AUTOBRECCIA. RANGES FROM MOSAIC TO RUBBLE BXA. RK FLOUR MATRIX.

798-814': HmOX ON FRAX & FILLING OPEN SPACE.

65° JNT

20° CALVN

795-845': CONTINUED MEDIUM TO PALE GREY & AUTOBRECCIATED AS ABOVE. FLOW BANDING IS INTERMITTENTLY PRESENT BUT ONLY IN ROTATED FRAGMENTS.

70° FLOW BAND

PROBABLY NOT IN PLACE.

70° BXA VN

~835-840': MONOLITHIC CRACKLE BXA WITH RK FLOUR MATRIX AS ABOVE.

MICROLITIC FLOW UNIT? ROUGH TOP.

~835-867': DARK ACICULAR MICROLITES, LOCALLY FELTED, ARE SCATTERED SPARSELY THRU THE GROUNDMASS IN THIS INTERVAL. POSSIBLY SOME RELICT PLAG LATHS; BUT PRIMARILY AMPHIBOLES, SOME WITH GOOD EUHEDRAL SHAPES.

PROJECT: Rosebud JV	UTM: NK 11-10-05 C	NORTHING:	TOTAL DEPTH: 1138.5'	STARTED:	PAGE: 8
LOGD BY: H McLachlan	STATE: Nevada	County: Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #: RL-262C
DATE: 02/06/97	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: DEPTH FT; REC/CUT; RQD

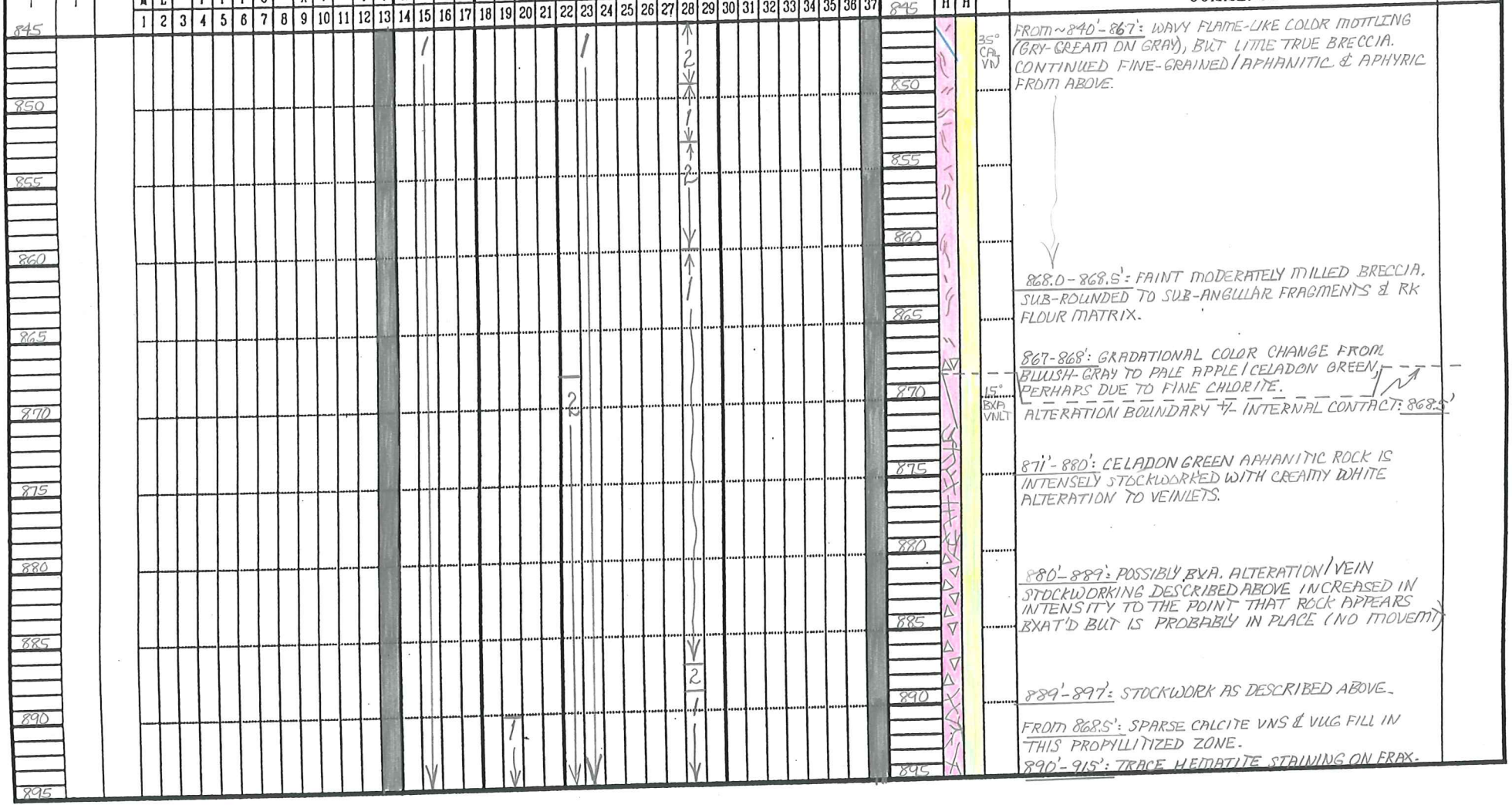
LITHOLOGY: ALLUVUM (1); MUDCGL (2); (3); LITHTUF (4); PUMTUF (5); SURGTUF (6); ASHFLO (7); LAVA (8); AUTOBX (9); INTRUSIV (10); BASALT (11); ANDESITE (12); RHYOLITE (13)

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

ALTERATION/MINLIZATION: Fe MIN: MNOX (18); HEMTIT (19); LIMONITE (20); PYRITE (21); PROP (22); ARG (23); ARG2 (24); RPLSIL (25); (26); QTZ VNS (27); CALCITE (28); METCLAS (29)

STRAT: BADGER (30); CHOCOLT (31); UBUD (32); BRADY (33); NKRPOR (34); LBUD (35); WILDROS (36); DOZER (37)

DEPTH FT; LITHGRAPH; ALTGRAPH; STRCT; SAMPL INT



COMMENTS

FROM ~840'-867': WAVY FLAME-LIKE COLOR MOTTLING (GRY-CREAM ON GRAY), BUT LITTLE TRUE BRECCIA. CONTINUED FINE-GRAINED/APHANITIC & APHYRIC FROM ABOVE.

868.0-868.5': FAINT MODERATELY MILLED BRECCIA. SUB-ROUNDED TO SUB-ANGULAR FRAGMENTS & RK FLOUR MATRIX.

867-868': GRADATIONAL COLOR CHANGE FROM BLUISH-GRAY TO PALE APPLE/CELADON GREEN, PERHAPS DUE TO FINE CHLORITE.

ALTERATION BOUNDARY +/- INTERNAL CONTACT: 868.5'

871'-880': CELADON GREEN APHANITIC ROCK IS INTENSELY STOCKWORKED WITH CREAMY WHITE ALTERATION TO VEINLETS.

880'-889': POSSIBLY BXA. ALTERATION/VEIN STOCKWORKING DESCRIBED ABOVE INCREASED IN INTENSITY TO THE POINT THAT ROCK APPEARS BXAT'D BUT IS PROBABLY IN PLACE (NO MOVEMT)

889'-897': STOCKWORK AS DESCRIBED ABOVE.

FROM 868.5': SPARSE CALCITE VNS & VUG FILL IN THIS PROPYLITIZED ZONE.

890'-915': TRACE HEMATITE STAINING ON FRAX.

PROJECT: Rosebud JV	PROJ. #: UTM NK 11-10-06 C	NORTHING:	TOTAL DEPTH: 1138.5'	STARTED:	PAGE: 9
LOGD BY: H McLachlan	STATE: Nevada COUNTY: Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #: RL-262C
DATE: 02/06/97	SEC. T. N. E.	ELEVATION:	ANGLE:	DRILLER:	

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

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH: 1138.5	STARTED:	PAGE: 10
LOGD BY: H. McLACHLAN	STATE: Nevada	County: Pershing	EASTING:	BEARING:	COMPLETED:	HOLE #: RL-262C
DATE: 02/06/97	SEC. T. N. E.	ELEVATION:	ANGLE:	DRILLER:	

DRILLING: DEPTH FT; REC/CUT; RQD

LITHOLOGY: 1 ALLUVUM; 2 MUDCGL; 3; 4 LITHTUF; 5 PUMTUF; 6 SURGTUF; 7 ASHFLO; 8 LAVA; 9 AUTOBX; 10 INTRUSV; 11 BASALT; 12 ANDESIT; 13 RHYOLIT

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 REPLSIL; 26; 27 QTZVNS; 28 CALCITE; 29 METCLAS

STRAT: 30 ADGER; 31 CHOCOLT; 32 UBUD; 33 BRADY; 34 MKRPOR; 35 LBUD; 36 WILDROS; 37 DOZER

DEPTH FT: 945, 950, 955, 960, 965, 970, 975, 980, 985, 990, 995

LITH GRAPH / ALT GRAPH / STRCT:

50° CALVN; 30° CALVN; 30° CALVN; 0° CALVN; 35 35 40° CALVN; 35° CALVN

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

943.5'-949': ALTERATION PSEUDO-CRACKLE BRECCIA, AS DESCRIBED ABOVE.
PALE GRN TO CRM STKWK CUTS CELADON GRN, APHANITIC, APHYRIC, GROUNDMASS, FORMING AN EFFECTIVE CRACKLE BRECCIA TO 949' & GRADING INTO STRONG STKWK BETWEEN 949'-965'.

SPARSE TO WK WHT SPARRY CALCITE VNS & VUG FILL CUT THIS OLD, FADED BXA & STKWK.

~952': FIRST TRACE BRASSY ~~DISS~~ PY DISS'D ON FRAX, PRESENT INTERMITTENTLY TO 964'.

~965'-974' : PALE GRN (WK BLEACHING?) UN-BRECCIATED ROCK.

974'-980' : ALTERATION ~~PSEUDO~~ BRECCIA: MONO-LITHIC MOSAIC BRECCIA WITH CELADON GRN, SUB-ROUNDED PSEUDOCLASTS IN A PALE GRN TO CREAM PSEUDOSTOCKWORK MATRIX. STRONGLY HEALED. (THIS STRETCH IS PROBABLY TRUE BRECCIA)
~979': BLADED MARCASITE +/- SILICA BLEB.
980'-999' : UNBRECCIATED, SLIGHTLY MOTTLED RK. PALE SALMON PINK SWIRLS IN PALE CELADON GREEN BASE COLOR. CONTINUED APHANITIC & APHYRIC.

991-992': LARGE (1-2cm DIA.), IRREGULAR, DULL BRASSY PYRITE BLEBS GROWN INTO WALLRK.

SAMPLE INT

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH: 1138.5'
LOGD BY: H McLACHLAN	STATE: Nevada	County: Pershing	EASTING:
DATE: 02/07/97	SEC.	T.	N.	E.	ELEVATION:

STARTED:	PAGE: 11
BEARING:	COMPLETED:	HOLE # RL-262C
ANGLE:	DRILLER:

DRILLING: DEPTH FT; REC/CUT; RQD

LITHOLOGY: ALUVUM; MUDCGL; LITHTUF; PUMTUF; SURGTUF; ASHFLO; LAVA; AUTOBX; INTRUSV; BASALT; ANDESIT; RHYOLIT

STRUCT: TEC BXA; BROKEN; GOUGE; VOID

ALTERATION/MINLIZATION: Fe MIN: MNOX; HEMTIT; LIMONIT; PYRITE; PROP; ARG; ARG 2; REPL SIL; QTZ VNS; CALCITE; METCLAS

STRAT: BADGER; CHOCOLT; UBUD; 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

DEPTH FT; LITHGRAPH; ALTGRAPH; STRCT; SAMPLE INT

COMMENTS

999'-1012': INTERMITTENT ALTERATION PSEUDO-BRECCIA & STOCKWORK. PALE GREEN TO CRM STOCKWORK; CELADON GREEN SUB-ROUNDED FRAGMENTS. AS DESCRIBED ABOVE.

TRACE Py

60° CALVN

1012'-1019': PALER SLIGHTLY BLEACHED ROCK, APPARENTLY MORE "INFLATED" PSEUDOBRECCIA & ROTATED. STILL WEAKLY GREENISH. TRACE DISSEMINATED BRASSY PYRITE ON FRAX.

~1020': SCATTERED DULL BRASSY PYRITE BLEBS, CULY OVERPRINT, PSEUDO.BXA.

1019 - 1023': CRACKLE TO WEAK MOSAIC BRECCIA. STOCKWORK ALTERATION BRECCIA AS ABOVE, BUT INCREASED ARGILLIZATION OF THE MATRIX ROCK FLOUR. GRADES DOWN BETWEEN 1023-1024' INTO MODERATELY TECTONIZED, SEMI-HEALED BRECCIA.

1023' - 1044': INTERMITTENT, MODERATELY MILLED, SEMI-HEALED MONOLITHIC BRECCIA. ROUNDED TO SUB-ROUNDED FRAGMENTS OF PALE CRM-GRY RHYOLITE IN A SAND-SIZE TO ROCK FLOUR MATRIX OF THE SAME. X-CUTS A/O OVERPRINTS ALTERATION STOCKWORK, WHICH IS MOTTLED PALE SALMON PINK & PALE GRN ON CRM-GRY IN THIS INTERVAL.

WK DULL BRASSY PYRITE BLEBS SCATTERED PRIMARILY IN MATRIX.

SOFT WHITE CLAY SEAMS & VNLTS SHOWING UP IN MATRIX.

FROM 1012': CLEARE INCREASE IN BLEACHING

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH: 1138.5'	STARTED:	PAGE: 12
LOGD BY: H McLACHLA	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL-262C
DATE: 02/07/97	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

1043': FIRST APPEARANCE OF WAXY GREEN CLAY VNS

DRILLING: DEPTH FT; REC/CUT; RQD

LITHOLOGY: ALUVUM; MUDCGL; LITHTUF; PUMTUF; SURGTUF; ASHFLO; ALAVA; AUTOBX; INTRUSV; BASALT; ANDESIT; RHYOLIT

STRUCT: TEC BXA; BRKEN; GOUGE; VOID

ALTERATION/MINLIZATION: Fe MIN: MNOX; HEMTIT; LIMONIT; PYRITE; PROP; ARG; ARG2; RPLSIL; QTZVNS; CALCITE; METCLAS

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

DEPTH FT; LITHGRAPH; ALTGRAPH; STRCT NT; SAMPLE INT

COMMENTS

1044-1050': UNBRECCIATED, INCREASINGLY FINE-GRAINED RHYOLITE.

1050'-1055': WKLY OR PARTIALLY MILLED MOSAIC TO CRACKLE BRECCIA WITH MINIMAL ROCK FLOUR MATRIX & SIGNIFICANT SPARRY/COARSE WHT CALCITE CEMENT (TO ~ 50% OF MATRIX IS CALCITE). LARGELY MATRIX-SUPPORTED, MONOLITHIC & LATE WRT COLOR ALTERATION. FULLY HEALED.

SOME CALCITE OPEN SPACE FILL & VNETS

1055'-1071': APPARENTLY UNBRECCIATED ROCK, CUT BY LARGE COARSELY CRYSTALLINE WHITE CALCITE VEINS.

1071-1138.5': TECTONIC/HYDROTHERMAL BRECCIA LOCALLY MILLED WITH RK FLOUR, PRIMARILY CALCIC.

1071-1083': ROCK FLOUR MATRIX > CALCITE CEMENT. SUB-ANGULAR TO SUB-ROUND, MONOLITHIC FRAGMENT POPULATION. MATRIX-SUPPORTED MOSAIC BRECCIA CUT BY MEDIUM GRN CLAY VEINS. ESSENTIALLY A FULLY HEALED BXA.

NOTE WAXY GRN CLAY INFILLS OPEN SPACE IN BXA. THIS CLAY IS GENERALLY LATE WRT CALCITE, & AVERAGE 30-50° TO C/A.

1087'-1093': COARSELY CRYSTALLINE CALCITE CEMENT DOMINATES. ~ 1089' ROCK FLOUR IS AGAIN PRESENT & HAS A SALMON RED CAST.

1043'-1095': WAXY GRN CLAY VNS WK TO STRONG DISTRIBUTION THRU THIS INTERVAL.

1095': BRECCIA BECOMES HETROLITHIC

PROJECT: Rosebud JV	UTM NK 11-10-06 C	NORTHING:	TOTAL DEPTH: 1138.5	STARTED:	PAGE: 13
LOGD BY: HSM	STATE: Nevada	County: Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL-262C
DATE: 02/07/97	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: DEPTH FT; REC/CUT; RQD

LITHOLOGY: ALLUVUM (1), MUDCGL (2), (3), LITHTUF (4), PUMTUF (5), SURGTUF (6), ASHFLO (7), LAVA (8), AUTOBX (9), INTRUSV (10), BASALT (11), ANDESITE (12), RHYOLITE (13)

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

ALTERATION/MINLIZATION: Fe MIN: MNOX (18), HEMTIT (19), LIMONITE (20), PYRITE (21); PROP (22), ARG (23), ARG2 (24), RPLSIL (25), (26), QTZVNS (27), CALCITE (28), METCLAS (29)

STRAT: BADGER (30), CHOCOLT (31), UBUD (32), BRADY (33), MXRPOR (34), LBUD (35), WILDROS (36), DOZER (37)

DEPTH FT; LITHGRAPH; ALTGRAPH; STRCT NT

SAMPLINT

COMMENTS

1093'-1102.5': ROCK FLOUR MATRIX COMMONLY WKLY PINK IN COLOR. POSSIBLY HETEROLITHIC BUT DOMINANTLY RHYOLITE FRAGMENTS; SUB-ANGULAR MOSAIC BXA. MATRIX PREFERENTIALLY ARGILLIZED & CHALKY. SEMI-HEALED.

~1101': LOCALLY TRACE MARCASITE AFTER MAFIC OR BLADED ALTERED MARCASITE W/IN CALCITE.

1103-1111': COARSE CALCITE CEMENTED, WKLY MILLED MOSAIC BRECCIA. MONOLITHIC.

1111'-1116': SEMI- TO UNHEALED, MILLED MOSAIC BRECCIA. PREFERENTIALLY ARGILLIZED ROCK FLOUR MATRIX.

60° BXA MATRIX FOLIATION

50° BXA VN/Py

1116-1138.5': SOLID RHYOLITE, LOCALLY WITH WKLY DEVELOPED CRACKLE BRECCIA. STRONG STKWK - UN- TO SEMI-HEALED WITH CALCITE. MODERATE REGULAR FLOW FOLIATION. MODERATE CALCITE + Py VNING.

45° STKS

40° FLOW BANDS

40° FLOW BANDS

1137': SLICKED CALCITE + Py VNLT. SLICKS RAKE AT 70°. VNLT IS 40° TO C/A.

15° CAL-Py VN 40°/70°

T.D. 1138.5'

GEOTECHNICAL LOG

PROJECT: ROSEBUD

LOCATION: Dip CAT #1

LOGGED BY: KLK

PAGE 1 OF 3

HOLE NO.: RL-262C

DIP: vertical

CORE SIZE: HQ

DATE: 4-15-92

1	2	3	4	5	6	7	8	9	10	11
FROM	TO	CORE RUN	RECOVERED CORE	TOTAL LENGTH OF CORE>4"	NO. OF FRACTURES	CORE RECOVERY (%) (4/3 X 100)	R.Q.D. (%) (5/3 X 100)	FRACTURES PER FT. (6/4)	RANGE OR AVERAGE ANGLE OF FRACTURE W.R.T. CORE AXIS	REMARKS
863	873	10'	9.95	9.95	0	99.5	99.5	0		863-1012 Alteration: only wk bl
873	883	10'	10.2	10.2	0	102	102	0		
883	893	10'	9.9	9.9	1	99	99	.1	58°	Fract / tight w/ tr $CaCO_3$ ± tr hemit. / planar, smooth
893	903	10'	9.8	9.8	0	98	98	0		
903	913	10'	9.9	9.9	2	99	99	.2	12°	Fract / JNT / tight w/ tr $CaCO_3$ + tr hemit / planar, smooth
913	923	10	9.9	9.6	1	99	96	.1	32°	Frt / JNT / tight w/ tr $CaCO_3$ + tr hemit / planar, smooth
923	933	10	10.0	10.0	0	100	100	0		
933	943	10	10.2	10.2	0	102	102	0		
943	953	10	10.0	9.6	3	100	96	.3	58-60°	
953	963	10	10.0	9.7	0	100	97	0		
963	973	10	10.0	10.0	1	100	100	.1	45-50°	tight ⌐ stepped tr chl fract
973	983	10	10.0	10.0	0	100	100	0		
983	993	10	9.9	9.7	0	99	97	0		
993	1003	10'	10.1	10.1	0	101	101	0		
1003	1013	10'	10.0	8.8	2	100	88	.2	40-50°	Fract / tight w/ wk clay fill / rough
1013	1023	10'	10.3	9.1	2	103	91	.4	25-35°	Fract filled ~ 5mm $CaCO_3$ + clay cemented / rough
					2				~50°	Fract / weak to tr. greenish clay / rough
										1023-1038 Intermittent broken rubble -
										frags are fairly to mod competent w/ w-m argillic alt
										local clay cemented rubble
1023	1033	10'	9.7	3.3	3	97	33	.6	25-35°	tight / rough / weak green clay coating / rough
					3				0-5°	tight / rough weak to mod green or white clay fill / rough
										1-2 mm at most open
										1034.3 - 1036 lt. green gray clay cemented rubble
										1031 - 1031.4 grn clay cemented rubble
										1030.6 - 1030 mod clay rich rubble
1033	1038	5'	3.7'		0	74		0		predom weak / mod clay alt rubble
1038	1043	5'	6.5			130				1st - 1.2' clay cemented rubble stuff from end o' run
										1039.2 - 1040 is actually 2.5' and is fairly
										competent wkly-mod argillic tuff frags w/ clay cement
					3			.5	30-40°	1040 - 1043 more competent
										tight w/ green clay fill ±1mm fill

GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: Dip Cat #1 LOGGED BY: KLK

HOLE NO.: RL-262C DIP: vertical CORE SIZE: HQ DATE: 4-15-92

1	2	3	4	5	6	7	8	9	10	11
FROM	TO	CORE RUN	RECOVERED CORE	TOTAL LENGTH OF CORE>4"	NO. OF FRACTURES	CORE RECOVERY (%) (4/3 X 100)	R.Q.D. (%) (5/3 X 100)	FRACTURES PER FT. (6/4)	RANGE OR AVERAGE ANGLE OF FRACTURE W.R.T. CORE AXIS	REMARKS
1043	1053	10'	9.6	4.7'		96	47			1043-1043.4 rubble sluff from end of run
					8			1.1	30-40°	tight to 1mm open w/ lt green clay fill + $CaCO_3$ / smooth to rippled
					3				± 10°	tight / weak grn clay + tr $CaCO_3$ / ≤1mm / rough
										1043 - 1044.5 rubbly
										1052 - 1053 clay cemented rubble
1053	1063	10'	9.8	5.4	18	98	54	1.8	40-60°	Fractures w/ mod clay ± wk $CaCO_3$ fill / Rough 1-3mm fill
1063	1073	10'	9.6	8.0	11	96	80	1.1	20-40°	same @ above; only 1-2mm fill / rough
1073	1081	8'	7.7'	4.8	13	96	60	1.7	50-60°	clay filled fract 1-2mm clay ± $CaCO_3$ fill / rough
										1073 - 1075 Intermittently rubble
1081	1091	10'	10.4	8'		104	80			1084-1085.5 broken rubble w/ wk argillic, fairly competent frags
					5			.5	10-25°	tight fract w/ weak <1mm clay fill
										1082.2 - 1082.6 poss mechanically broken rubble w/ green clay coating
										1090.5 - 1091 poss mechanically broken rubble
1091	1101	10'	9.9'	6.2		99	62			1091.6 - 1093.4 Intermittent broken rubble wk clay all compt. frags
										1091.8 - 1092.5 Solid $CaCO_3$ cemented Δ
					1			.2	20°	tight w/ dk gray black mineral coating
					1				40-50°	same @ above
										1095 - 1097.3 broken rubble w/ competent w ~ frags
										1094 - 1102.2 ↑ argillic clay alt to mod w/ competent clay ± clay cemented Δ
1101	1111	10'	10.0	9.5'		100	95			1101 - 1102.3 lower contact @ 40°
										↳ clay + $CaCO_3$ well cemented Δ
					3			.3	40°	fract smooth tight w/ weak to tr clay coating 4mm
1111	1119	8'	7.3			91				1111 - 1115.3 shear gouge cemented rubble @ 40° to CA @ upper contact Intermittent; predom clay gouge cemented
										1116.3 - 1116.8 rubble
										1118.6 - 1119.4 rubble w/ clay coated frags w/ ending lower contact @ 70° to CA
					1			.1	25°	tight fract w/ weak clay coating <1mm ≠ smooth or rough

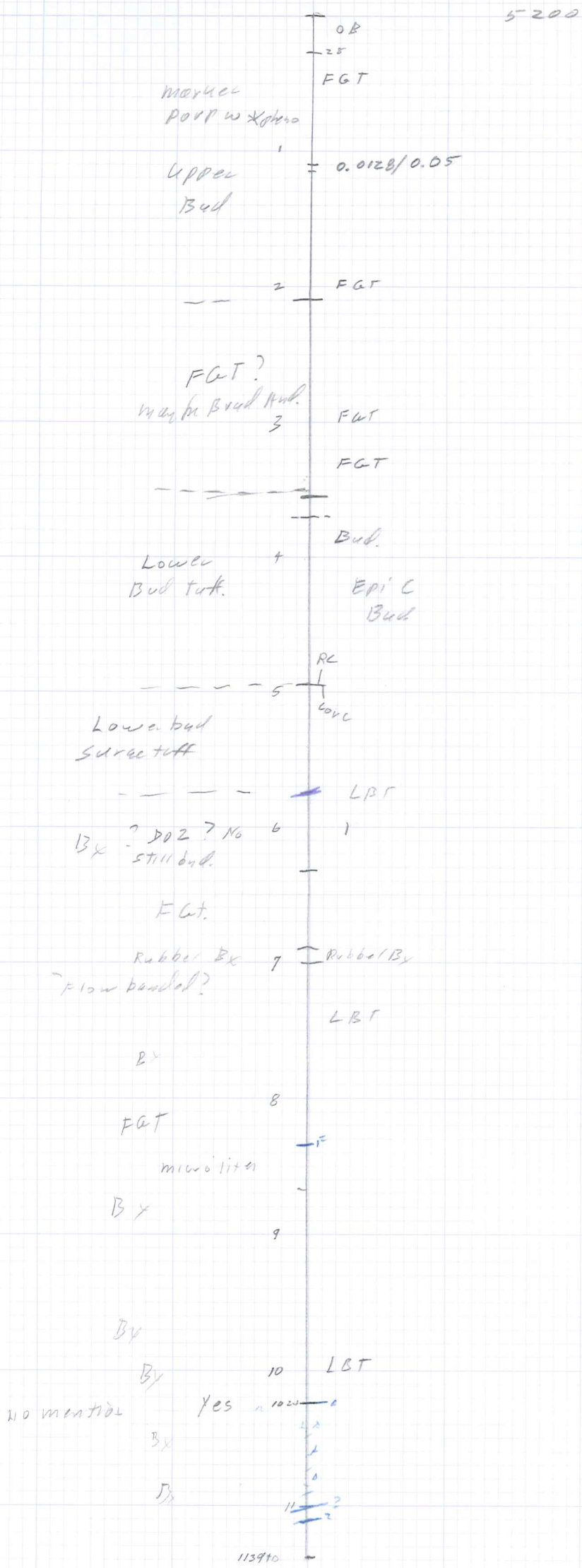
GEOTECHNICAL LOG

PROJECT: ROSEBUD LOCATION: DIPCAT #1 LOGGED BY: KLK

HOLE NO.: RL-262C DIP: vertical CORE SIZE: HQ DATE: 4-15-92

1	2	3	4	5	6	7	8	9	10	11
FROM	TO	CORE RUN	RECOVERED CORE	TOTAL LENGTH OF CORE>4"	NO. OF FRACTURES	CORE RECOVERY (%) (4/3 X 100)	R.Q.D. (%) (5/3 X 100)	FRACTURES PER FT. (6/4)	RANGE OR AVERAGE ANGLE OF FRACTURE W.R.T. CORE AXIS	REMARKS
1119	1129	10'	9.6'	8'	12	96	80	1.2	35-45°	Fracts / tight / weak <1mm clay fill / smooth planar
1129	1139	10'	10.1	9'	10	101	90	.9		
TD.					joint like but poss mechanically derived					
									± 50°	Fracts vs Joint* / tight, weak clay fill / smooth planar

N 2,204,251
E 481 294



ROSEBUD
RL-262C
1" = 100'

BARRINGER LABORATORIES INC.

15000 W. 6TH AVE., SUITE 300
GOLDEN, COLORADO 80401
PHONE: (303) 277-1687

5301 LONGLEY LANE
BUILDING E, SUITE 178
RENO, NEVADA 89511
PHONE: (702) 828-1158

19-Jun-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Page: 3
Copy: 1 of 2
Set : 2

Attn: Tim Kuhl
Received: 9-Jun-92 09:32
Project:
PO #:

Job: 921079R
Status: Final

Abbreviations:

Parameters:

Au	: Gold
Ag	: Silver

Methods:

FA/AA/AAS	: Fire Assay/AA Finish
FA/AA	: Fire Assay with AA finish
AA	: Atomic Absorption

Units:

oz/ton	: ounces per ton

Quality codes:

<	: less than
NA	: Not Analyzed

Job approved by:

Signed: Marie Hallmark
Marie Hallmark
Assistant Laboratory Manager

BARRINGER LABORATORIES INC.

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22-Apr-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Page: 3
Copy: 1 of 3
Set : 2

Attn: Tim Kuhl
Project:

PO #:

Received: 17-Apr-92 11:24

Job: 92563R

Status: Final

Abbreviations:

Parameters:

Au	: Gold
Ag	: Silver

Methods:

FA/AA/AAS	: Fire Assay/AA Finish
FA/AA	: Fire Assay with AA finish
AA	: Atomic Absorption

Units:

oz/ton	: ounces per ton

Quality codes:

<	: less than
MS	: Missing
NA	: Not Analyzed

Job approved by:

Signed:

.....
Vernon K. Peterson
Laboratory Manager

cc: KRISTEN KENNER, LAC MINERALS

BARRINGER LABORATORIES INC.

15000 W. 6TH AVE., SUITE 300
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19-Jun-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Attn: Tim Kuhl
Project:

Received: 9-Jun-92 09:32

PO #:

Job: 921079R

Status: Final

Sample Type: Rock Chip

Sample Id	Au FA/AA/AAS oz/ton	Au FA/AA oz/ton	Ag AA oz/ton
RL-262C 230 235	0.0010	NA	0.035
RL-262C 235 240	0.0013	NA	0.047
RL-262C 240 245	0.0004	NA	0.026
RL-262C 245 250	0.0002	NA	0.006
RL-262C 250 255	0.0004	NA	0.009
RL-262C 255 260	0.0004	NA	0.009
RL-262C 260 265	0.0002	NA	0.006
BL-073	0.0442	NA	NA
RL-262C 265 270	0.0093	0.0110	0.096
RL-262C 270 275	0.0021	0.0023	0.038
RL-262C 275 280	0.0012	NA	0.006
RL-262C 280 285	0.0006	NA	0.009
RL-262C 285 290	0.0007	NA	0.009
RL-262C 290 295	0.0002	NA	0.003
RL-262C 325 330	0.0004	NA	0.003
RL-262C 330 335	0.0006	NA	0.018
RL-262C 335 340	0.0001	NA	0.003
RL-262C 340 345	0.0021	0.0020	0.038
RL-262C 345 350	0.0006	NA	0.041
RL-262C 350 355	0.0002	NA	0.018
RL-262C 355 360	0.0001	NA	0.012
RL-262C 360 365	0.0008	NA	0.003
RL-262C 365 370	0.0006	NA	0.006
RL-262C 370 375	0.0001	NA	0.006
RL-262C 450 455	<0.0001	NA	0.003
BL-074	0.0482	NA	<0.003

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23-Apr-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Attn: Tim Kuhl
Project:

Received: 17-Apr-92 09:18

PO #:

Job: 92561R

Status: Final

Drill Core

Sample Id	Au FA/AA/AAS oz/ton	Au FA/AA oz/ton	Ag AA oz/ton
RL-261-C 1164 1169	0.0011	NA	0.032
RL-261-C 1169 1174	0.0022	NA	0.047
RL-261-C 1174 1183	0.0004	NA	0.012
RL-261-C 1183 1187	0.0014	NA	0.009
RL-261-C 1187 1190	0.0014	NA	0.015
RL-261-C 1190 1195	0.0011	NA	0.015
RL-261-C 1195 1200	0.0011	0.0010	0.018
BL-56	~~<0.0001~~	~~NA~~	~~NA~~
RL-261-C 1200 1205	0.0009	NA	0.015
RL-261-C 1205 1210	0.0028	NA	0.015
RL-262-C 953 958	0.0006	NA	0.015
RL-262-C 958 963	0.0007	NA	0.009
RL-262-C 963 968	0.0001	NA	0.003
RL-262-C 968 973	<0.0001	NA	0.003
RL-262-C 973 978	0.0001	NA	0.006
RL-262-C 978 983	<0.0001	0.0001	0.003
RL-262-C 983 988	<0.0001	NA	<0.003
RL-262-C 988 993	<0.0001	NA	0.006

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BARRINGER LABORATORIES INC.

22-Apr-92

LAC MINERALS
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RENO NV 89515

Page: 1
Copy: 1 of 3
Set : 1

Attn: Tim Kuhl
Project:

Received: 17-Apr-92 11:24

PO #:

Job: 92563R

Status: Final

Drill Core

Sample Id	Au FA/AA/AAS oz/ton	Au FA/AA oz/ton	Ag AA oz/ton
RL-262-C 993 998	0.0006	0.0011	0.006
BL-57	~~0.0216~~	~~NA~~	~~NA~~
RL-262-C 998 1003	<0.0001	NA	0.003
RL-262-C 1003 1008	<0.0001	NA	0.003
RL-262-C 1008 1013	0.0003	NA	0.006
RL-262-C 1013 1018	0.0002	NA	0.012
RL-262-C 1018 1023	0.0004	NA	0.009
RL-262-C 1023 1027	0.0013	NA	0.012
RL-262-C 1027 1028.8	0.0024	0.0024	0.015
RL-262-C 1028.8 1033	0.0015	NA	0.009
RL-262-C 1033 1038	0.0014	NA	0.006
RL-262-C 1038 1043	0.0016	NA	0.018
RL-262-C 1043 1048	0.0006	NA	0.009
RL-262-C 1048 1053	0.0003	NA	0.012
RL-262-C 1053 1058	0.0003	NA	0.006
RL-262-C 1058 1063	0.0002	NA	0.006
RL-262-C 1063 1068	0.0003	NA	0.006
RL-262-C 1068 1073	0.0003	NA	0.006
RL-262-C 1073 1077	0.0001	0.0002	0.006
BL-58	~~0.0149~~	~~NA~~	~~MS~~
RL-262-C 1077 1081	0.0002	NA	0.015
RL-262-C 1081 1086	0.0001	NA	0.006
RL-262-C 1086 1091	<0.0001	NA	0.003
RL-262-C 1091 1096	<0.0001	NA	0.006
RL-262-C 1096 1101	0.0003	NA	0.003
RL-262-C 1101 1102.5	0.0001	NA	0.003
RL-262-C 1102.5 1106.5	0.0008	0.0012	0.003
RL-262-C 1106.5 1111	0.0005	0.0006	0.006
RL-262-C 1111 1115	0.0008	NA	0.026
RL-262-C 1115 1119	0.0006	NA	0.020

BARRINGER LABORATORIES INC.

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PHONE: (702) 828-1158

22-Apr-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Page: 2
Copy: 1 of 3
Set : 1

Attn: Tim Kuhl
Project:

Received: 17-Apr-92 11:24

PO #:

Job: 92563R

Status: Final

Drill Core

Sample Id	Au FA/AA/AAS oz/ton	Au FA/AA oz/ton	Ag AA oz/ton
RL-262-C 1119 1124	0.0004	NA	0.044
RL-262-C 1124 1129	0.0003	NA	0.018
RL-262-C 1129 1134	0.0003	NA	0.006
RL-262-C 1134 1139	0.0001	NA	0.012

File

JUN 23 1992

BARRINGER LABORATORIES INC.

15000 W. 6TH AVE., SUITE 300
GOLDEN, COLORADO 80401
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19-Jun-92

LAC MINERALS
P O BOX 21390
RENO NV 89515

Page: 1
Copy: 1 of 2
Set : 1

Attn: Tim Kuhl
Project:

Received: 9-Jun-92 09:32

PO #:

Job: 921079R

Status: Final

Sample Type: Rock Chip

Sample Id	Au FA/AA/AAS oz/ton	Au FA/AA oz/ton	Ag AA oz/ton
RL-262C 90 95	0.0001	0.0001	0.012
BL-071	0.0454	NA	NA
RL-262C 95 100	0.0015	NA	0.012
RL-262C 100 105	0.0002	NA	0.035
RL-262C 105 110	0.0022	NA	0.035
RL-262C 110 115	0.0128	0.0146	0.055
RL-262C 115 120	0.0049	NA	0.044
RL-262C 120 125	0.0040	NA	0.088
RL-262C 125 130	0.0001	NA	0.026
RL-262C 130 135	0.0010	NA	0.035
RL-262C 135 140	0.0017	NA	0.041
RL-262C 140 145	0.0002	NA	0.015
RL-262C 145 150	0.0005	NA	0.029
RL-262C 150 155	0.0017	NA	0.023
RL-262C 155 160	0.0036	NA	0.026
RL-262C 160 165	0.0004	NA	0.012
RL-262C 165 170	0.0006	NA	0.015
RL-262C 170 175	0.0006	NA	0.018
RL-262C 175 180	<0.0001	NA	0.015
BL-072	0.0211	NA	NA
RL-262C 180 185	0.0005	0.0005	0.012
RL-262C 185 190	0.0003	NA	0.015
RL-262C 190 195	0.0005	NA	0.020
RL-262C 195 200	0.0004	NA	0.023
RL-262C 200 205	0.0006	NA	0.018
RL-262C 205 210	0.0004	NA	0.012
RL-262C 210 215	0.0025	0.0022	0.038
RL-262C 215 220	0.0006	NA	0.018
RL-262C 220 225	0.0002	NA	0.009
RL-262C 225 230	0.0006	NA	0.020

LAC MINERALS — REJECTS TO KEEP

DATE Recieved	work order #	REJECTS TO KEEP
4-23-92	92601	RL-264
	this is written up @ RL-263 but it is RL-264	818-823 → 843-848
		686.7-687.9 → 868-87[illegible] on a diff. job. # 92598
	from 92601	RL-263
		534-539 → 544-549
		679-684 → 702-706
	this is actually RL-264 was written up wrong	818-823 → 843-848
4-23-92	92598	RL-264
		686.7-687.9 → 813-818
4-23-92	92602	RL-272
		80-85 → 95-100
		140-145 → 155-160
		185-190 → 200-205
		280-285 → 475-480
		510-515 → 520-525
4-23-92	92600	RL-259
		550-555 → 640-645
4-17-92	92564	3 Rock chip samples TOSS
4-17-92	92563	RL-262
		1023-1027 → 1134-1139

LAC MINERALS — REJECTS TO KEEP

WORK ORDER #	REJECTS TO KEEP
921081	RL-267 200-205 → 220-225
921080	RL-263 285-290 → 330-335
921079	RL-262 105-110 → 120-125
921078	RL-270C 40-45 → 50-55
92990	RL-270C 167-171 → 442-446
92914	RL-270C TOSS
92913	RL-270C 823-828 → 853-858
92810	RL-275 75-80 → 125-130 175-180 → 230-235 325-330 → 395-400