60001341

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-111
AUTHOR	M. Brady; N. Brewer; R. Grondin; K. Tullar
DATE OF DOC(S)	1990
MULTI_DIST Y / (N?) Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud Project; Coates Drilling; Lac Minerals (USA) Inc
COMMODITY If not obvious	gold silver
NOTES	Drill log; geology; assay; total depth 957'; handwritten notes; also referred to as RL-111C 51p

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

SS: DD 5/19/08
Initials Date

DB: mah
Initials Date

SCANNED:
Initials Date

Revised: 1/22/08

Drill Log RL-111
Rosebud

60001341 4010 ✓

6666 1341

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

DRILL LOG SUMMARY SHEET

PROJECT ROSEBUD

HOLE NUMBER RL-111 TOTAL DEPTH 957' LOGGED BY

Date started 9.8.90 Day

Date completed 9-11-90 Day

Initial bearing DUE SOUTH

Initial inclination -45

Elevation 5100.3

Collar coordinates:

N 2203864

E 479320.4

Contractor: COATES

Drill Type: LY 44

Hole Size: HMQ

Drilling Conditions:

Footage: Wet / Dry

Comments: Set 5' casing

DOWN HOLE SURVEY INFORMATION

0 53 -45 S 0E

FROM	TO	SURVEY POINT	INCLI-NATION	BEARING	X (Northing)	Y (Easting)	Z (Elevation)
53	207	107	-45	DUE SOUTH			
207	407	307	-48	S1E			
407	607	507	-50	S5E			
607	832	707	-52	S3E			
832	957	957	-54	S6E			

HOLE # RL-111C LOGGED BY KLK DATE 4-91 PAGE 1 OF 14

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
0–70	10, 52, 32, 100, 100, 100, 103, 92, 105	35° mud seam; 45° mud seam		NIL		Fresh hem matrix wk bl clasts; hem ltc	0-65 "BADGER FM" with appearance of a volcanic tectonic breccia clasts composed of a gray fine grained tuff similar to chocolate tuff w/ fine plagioclase phenos, clasts are poorly sorted and range in size from 5-130 mm matrix is fine tuffaceous sands w/ fine clasts 10-32 mm w/ red brown coloration. Locally there are matrix rich fine grained beds. Clasts are w.m intermittently bleached few local red burn mud seams RELATIVELY FRESH 65-177 GREY LITHIC POOR FINE GRAINED TUFF possibly chocolate contact more gradational into the FGT tuff is red brown @ transition from badger to FGT becomes lt gray with depth	NO SAMPLE					

HOLE # RL-111C LOGGED BY KLK DATE 4-91 PAGE 2 OF 14

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERAL-IZATION	GRAPHIC LOG	ALTER.	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
				NIL tr wk CaCO3 string exs!		Fresh ± hemit	65-177 FINE GRAINED LITHIC POOR TUFF – CHOCO? Predominantly lt. gray w/ few weaky bleached zones, intermittent blebs ? fine stockwork 'stringers of CaCO3 riddled w/ fine 1-2mm blebs of off white waxy clay, local weak tectonic brecciation riddled w/ tr 1-2% hemitite replaced 1-2mm mineral, very fine fractures intermittently ?filled w/ hemitite ? predominantly filled w/ off white waxy clay	NO SAMPLE					
80	95												
		64 CaCO3 vn?											
90	101					W bl M ≈ Fresh							
100	99												
110	100												
120	103	26 slicken fract											
130	98		47 fract										
140	97												

HOLE # RL-111C LOGGED BY KLK DATE 4-91 PAGE 3 OF 14

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.	DESCRIPTION	ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
		4/22°		NIL		FRESH	65-177 Lt gray poorly lithic FGT – CHOCO?	No Sample					
							142-143 strong clay filled fractures @ ±22° to C.A. AND is calcareous	142-147				<	<
	100		35°/clay fill fract				142-155.5 slight increase fractures w/ clay-wax fill + local calcite + local hemititic selvages	147-152				<	<
150		63°/calc vn						152-157				<	<
	103					w-m perv bl w-m clay alt	155.5-177 weak to moderate pervasive bleaching + clay alteration. pervasive fine stockwork fracturing w/ fine hemititic selvages; locally filled w/ lt green waxy clay; weak local calcite weak green intro of poss. smectite or celadonite @ very weak perv. coloration; weak local blebs pervasive fracturing 15°-25° to C.A.	157-162				<	<
160			54/lt green wax fract					162-167				<	<
	98		Fracts 15°-25° to CA.					167-172				<	<
170						m w-m bl tr celad	177-347 LITHIC POOR TUFF TECTONIC BRECCIA - TO LOCAL CRACKLE texture - CONTACT IS FAIRLY non descrip; poss. @ bedded volc. unit w/ same fine grained tuff composition @ above clasts range in size from 3-65 mm and are composed of FGT pervasively bleached w/ weak green hue; locally stronger matrix is w-m hemitite rich w-m pervasive clay alt. riddled w/ fine hemititic fractures weak local calcite veining local bright celadonite green blebs 1-2 mm wide clasts are subangular to rounded degree of brecciation varies from crackle to rotated clast, predominantly matrix supported - buff w/ greenish hue to clasts w/ in red orange matrix	172-177				<	<
	102			1% diss Py				177-182				<	<
180								182-187				<	<
	98							187-192				.004	<
190								192-197				<	<
	98							197-202				<	.12
200								202-207				<	.15
	100							207-212				<	.11
210													

HOLE # RL-111C LOGGED BY KLK DATE 4-91 PAGE 4 OF 14

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
220	100			±1% diss +VN py +local bulk shot py		W-M bl W-M ≈ wk celad
230	100	90° CaCO3 VN	15° CaCO3 + Δ VN			
240	99	predom fract @ 50° to CA	35° CaCO3 VN; 60 py VN	~2% + diss +VN py + wk marca SITE		M-bl Tr-W X w ≈
250	102		30 py VN			
260	94	60 SiO2 enrap py VN	32 SiO2 + py Δ VN; 42 SiO2 py VN + 32 marca SiO2 VN			
270	105					
280	103		38 clay py Δ VN	2-3% @ base		

DESCRIPTION

177 - 347. LITHIC POOR TUFF - TECTONICALLY BRECCIATED (CONTINUED)

210-237 increased bleaching ; ↑ dissem ; vein pyrite from above veins are 1-2 / foot clasts are primarily rounded to subrounded pyrite vns are independent from few calcite veins

237- 347 Increased bleaching however matrix is still orange hue poss weak intro of silicification sulfides increase @ dissem and as veins assoc. w/ SiO_2 ← druzy ; or $CaCO_3$ few fine clay veinlets ; local 9% marcasite veins

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
212-217				<	<
217-222				<	<
222-227				<	<
227-232				<	<
232-237				<	<
237-242				<	<
242-247				.003	<
247-252				.001	<
252-257				.039	.21
257-262				<	<
262-267				.002	<
267-272				<	<
272-277				<	<
277-282				.002	.10

HOLE # RL-111C LOGGED BY KLK DATE 4-91 PAGE 5 OF 14

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERAL-IZATION	GRAPHIC LOG	ALTER.	DESCRIPTION
290	101		61 SiO2 py VN	+2% diss +VN py + blade sulfide		M bl W X M	177-347 LITHIC POOR TUFF - tectonic bxa continued possibly w/ secondary brecciation w/ gray bleb clasts in orange matrix
							280-298 clasts becoming more angular veins of py ± SiO2 = 1/2 ft. or trace white waxy clay
300	90		25 SiO2 py VN			W-M	@ 295.8 secondary brecciation W-M silicification w/ white clay filling interstices
							299-315 intermittent 3"-7" clay rich broken rubble zones
310	100		45 fracture	4% diss +VN py			
320	103		44 SiO2 py VNS	3% diss +VN py		M-S Fe oxide matrix W-M bl M	
				3-4% VN + diss py			322-329 Increased veining to ~ 2/ft primarily SiO2 encapsulated pyrite vns w/ local assoc pervasive silicification
330	108	15 clay py VNS	60 py VNS	2-3% diss +VN py + blade sulfide		M-S bl M	329-343 bleaching becomes more pronounced py vns are rare with intermittent chlorite alt blebs
340	105		SiO2 + clay + pyrite 1/120			M bl M X W-M	
350	102						343-351 introduction of pronounced pure quartz stockwork and assoc silicification ↑ fracturing w/ local clay + sericite + SiO2 + pyrite ↑ bl ↓ orange coloration of matrix, local ex gum duck butter vns

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
282-287				<	<
287-292				<	.12
292-297				.005	<
297-302				<	<
302-307				<	.11
307-312				.002	<
312-317				<	<
317-322				<	<
322-327				.006	.12
327-332				<	<
332-337				<	<
337-342				<	<
342-347				<	<
347-352				<	<

HOLE # RL-111C LOGGED BY KLK DATE 4-91 PAGE 6 OF 14

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
		30° SiO2 py ~1/4" VN		2% diss +VN py		M bl W≈ W X W celad
	103					
360			35 SiO2 py VN	3-4% diss +VN py		
	97		34 SiO2 py VN	2-3% diss +VN py		
370			75 1" py SiO2 VN			
	100		50-55° SiO2-py VN			
380		55° 1½" SiO2 py VN				
	100					↑ bl M.S W-M X W celad
390			37 SiO2 py VN			
	90					
400	100					
	99			1-2% diss +VN py		
410						
	99					
420						

352 ins begin

DESCRIPTION

347-794.9 FINE GRAINED TUFF - lithic poor intermittently brecciated - tectonically vs. secondary AF locally is definitely secondary. Dark grey with orange Felx along fractures increased pervasive bleaching, flesh color becomes more prominent w/ depth intro. of more W-M SiO_2 encapsulated pyrite veins + drusy qtz ins increase very fine qtz stockwork questionable qtz after calcite ins

or pass tectonically brecciated which has been secondary

347-387 pervasively brecciated pass more of a secondary feature (a) evidenced by local SiO_2 encapsulation of clasts

~360-395 veining is most pronounced averaging ~ 2+/ft.

384-385 definite hydrothermal vein breccia w/ SiO_2 rich matrix well silicified ~2 stages

391.5-396 crackle brecciated w/ local rotated clasts

399-403 same @ ↑

400-420 very little veining weak fine stkwork qtz w/ general decrease in mineralization

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
352-357				.002	<
357-362				.002	.13
362-367				.002	.21
367-372				<	<
372-377				<	<
377-382				.003	<
382-387				.006	.21
387-392				<	<
392-397				.002	.22
397-402				.005	.10
402-407				.001	<
407-412				.001	<
412-417				<	<
417-422				<	<

HOLE # RL-111C LOGGED BY KLK DATE 4-90 PAGE 7 OF 14

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
			40 / py clay frac	1-2% diss py		Mbl w-M ≈ w X
	101			4% buck shot + diss vn py		
430			31 / clay-py frac	±2% diss + vn py ±mav casite		
	98	40 / py ±SiO2 vn				
440			50 / CaCO3 vn			
	102					M-S bl w ≈ w-M X
450			23 / CaCO3 vn			
	100		62 / CaCO3 vn			
460						
	100					
470			70 / py vn	3-4% diss + vn + buck shot py ±mav casite		
			20-30° / py-mav clay vn			
	100					
480			42 / py vn			
	100		SiO2 py vn 65/70			
490						

DESCRIPTION

347-794.9 FGT

420-549 Lithic Poorly fine grained tuff
~~continued~~ poss tectonically brecciated
w/ local secondary brecciation
mottled lt grn & flesh orange
becomes more of a crackle breccia w/ depth

420-447 lt grn hue w/ orange matrix
very little veining - intso
of calcite ~ 1 vn or bleb / 1'-2'

447-477 decrease in grn alt
coloration; increased peach
color alt. very little veining
only few calcite veinlets; blebs

470-494 Increased veining 3-8/ft
and buckshot pyrite
veining is principally SiO2 uncap py
local marcasite; poss some SiO2
replacement of CaCO3
increased silicification, some lt
grn auch butter clay veins
479.6-481 clay rich broken
rubble zone

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
422-427				<	<
427-432				.005	<
432-437				.006	<
437-442				<	<
442-447				<	<
447-452				<	.14
452-457				<	<
457-462				<	<
462-467				<	<
467-472				.004	<
472-477				.003	.14
477-481				.001	<
481-485				.001	<
485-489				.006	<

HOLE # RL-111C LOGGED BY KLK DATE 4-91 PAGE 8 OF 14

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.	DESCRIPTION
500	101	40 / 30 XA + py	56 SiO2 XA + py 67° XA + py	4% diss + vn py + vn marca SITE		M-S bl w/ M XX	347-794.9 LITHIC POOR FINE GRAINED TUFF same @ above 494-504 zone of several 1"-3" hydrothermal vein breccias w/ SiO2 flooding and local clay/SiO2 concentrations mod strong drusy qtz encapsulated vuggy veins and stockwork throughout w/ local marcasite fill m-s pervasive bleaching local lt grn duck butter clay veins weak pervasive silicification buff to lt flesh-pink coloration SiO2-marca/py vns w/ golden oxide (post drill) selvages
510	100	54 SiO2 + py clay	79 XA + py 42 SiO2 encr py	3-4% diss + vn + dendritic py		M-S bl w X w-M PINK	
520	102		76 SiO2 A vn	+3% diss + buck SHOT + vn py local marca SITE			504-549 LPT mottled buff & peach m-s pervasively bleached w/ few intermittent breccia zones w/ tuffaceous matrix very few local SiO2 rich microbreccia veins pervasive drusy qtz encapsulated pyrite ± marcasite veins rare pure white kaolinite 1/4"-1/2" clay veins few qtz, clay + pyrite veins. weak local crackle brecciation possible weak (very) pervasive silicification
530	101	84 clay ± py vn	70 SiO2 A py ± clay vn 83 py vn				541-549 weak increase pervasive silicification & ↑ veining = 3-6/ft.
540	100		75 clay SiO2 qtz-py bleed vn				549-554 lt grn mod bleached lithic poor tuff w/ ~2% bubs ~1-2mm of lt grn cracknite/clay alt phenos veining is weak & subparallel to core axis & filled w/ specular pyrite ± white clay (kaolin)
550	101	70 SiO2 A py vn	66 SiO2 py vn 5-10° clay py vn ±12° clay py vns	2-3% diss & buckshot py		M bl wk green M ~ wk FeOx wafts	
560	98						

ASSAYS: Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
489-494				.002	<
494-499				.003	<
499-504				.004	<
504-508				<	<
508-512				<	<
512-517				<	.11
517-522				<	<
522-527				<	<
527-532				<	<
532-537				<	<
537-542				<	<
542-547				.001	.10
547-549				<	<
549-553				<	<
553-557				<	<
557-562				<	<

HOLE # RL-111C LOGGED BY KLK DATE 4-91 PAGE 9 OF 14

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
570	102	60° dendritic py vn	80 SiO2 clay vn; 18 py fract	±3% diss + vn + buck SHOT py + vn moreas SITE		W-M bl H green M ≈ poss TR X
580	101		±5° py clay fracts			
590	93		64 SiO2 py vn; ±5° py fract	±4% diss fvn + dendritic vn py + local marca SITE + buck SHOT py		W bl M ≈ W-M XX pinkish fedy fracts
600	100		fracts 47-60° dendritic py			W-M bl green local hint pink M ≈ poss TR X
610	102			±2% diss + vn + buck SHOT py		
620	104		70 SiO2 py vn			
630	100	48° clay py vn	50 py fract			

DESCRIPTION

347-794.9 LITHIC POOR FGT

554-580 lr green buff LPT w/ 2% lr green clay clr phenos increase in SiO2/clay veins finely fractured w/ orange hem oxide + white clay + lr green dark butter clay fill and poss w/ assoc cladonite

567-569 pyrite veins take on dendritic (fine) texture

580-617 predom lr green buff LPT intermittently strong buckshot pyrite 2% replaced phenos w/ lr green (cladonite) alt ± clay veins → 4-6/ft. ; predom pyrite fill w/ local clay

600-617 veinlets - py ± clay have golden yellow sulvigs ~ 1/80 but immediate to veins ; orange sulvages begin ~ 1/2" out from veins ; are ~ 1/4"-1/2" wide

606-615 pyrite veinlets take on dendritic pattern ; is v. dark gray ; have post drilling golden yellow sulvages

617-656 pale green tuff w/ 1-2% lr green clay/cladonite alt phenos w/ 1 vein/2' composed of pyrite ± marcasite ; clay fill prominent large buckshot pyrite up to 6" wide

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
562-567				<	.15
567-572				<	<
572-577				.009	<
577-582				.006	<
582-587				<	<
587-592				.012	.28
592-597				<	<
597-602				<	.20
602-607				<	.17
607-612				<	<
612-617				<	<
617-622				<	<
622-627				<	.12
627-632				.001	.12

HOLE # RL-111C LOGGED BY KLK DATE 4-91 PAGE 10 OF 14

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
640	98		74 SiO2 py vn ± clay; 74 clay py vn	+2% diss tvn thick SHOT py		4 green M ≈ W-M bl few FeOx selvage
650	99		35 pink SiO2 layer ± clay vn ± golden FeOx			
660	103		37 py clay + golden stripe; 28 py/black	3-4% diss tvn thick SHOT py + local brecciated SITE w/in vns		M-S orange FeOx fracs MBl orange + 1% green W-M X intermittent
670	103		green clay STRW py vns 30-55°; 75 SiO2 A vn + diss py			
680	105	68 SiO2 py vn	5-20° py w/ encap SiO2 vns; 5° X A vn			M-S bl m ≈ poss WK X 1% green local mottle orang
690	102		75 X X A py vn; 45-60° py-magnetite w/ encap SiO2 vns	2-3% diss tvn py + micro		
700	102					

DESCRIPTION

347-794.9 Lithic POOR FGT

634-658 pyrite/marcasite clay veins w/ gold in oxide selvages ~ 1/4" out from veins

642.8-642.9 peach chalcedonic qtz vn w/ 1 1/2" tuff frag w/ fine cross cutting qtz stockwork; erosive vns hummocky in 1/4" pyrite, clay laminated vein

656-675 lt green buff LPT w/ 1-2% lt green clay alt phenos mod veining ~ 2-4/ft composed primarily of pyrite ± clay ± local SiO2 encap. & prominent fine fracturing w/ orange oxide fill leaking out along cracks beyond main fractured veins local orange chalced vns

intermittent cracks bra

665-666 broken rubble w/ lt green clay + orange oxide + py fill

671.8-672.8 w/ upper 6" a peach brecciated chalcedony vein w/ micro breccia - SiO2 flooded matrix last 4" is a breccia vein w/ micro Δ matrix; local peach chalced fire frags w/in matrix

same @ 674.5; only 2" wide

656-696 strong - pervasive increased veining; stockwork veining predom. orientation is subparallel to core axis; are predom pyrite/clay veins. few local micro breccia veins w/ SiO2 flooded matrix. intermittent W-M silicification

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
632-637				.002	.17
637-642				.001	.10
642-646				.003	<
646-651				.001	<
651-656				.002	.14
656-661				.002	<
661-666				.002	.15
666-671				.001	.10
671-676				.004	<
676-681				.003	<
681-686				.003	<
686-691				.003	.16
691-696				.003	<
696-701				.005	<

HOLE # RL-111C LOGGED BY KLK DATE 4-91 PAGE 11 OF 14

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
	102	70 X Δ py vn	50 drusy qtz marcas vn	2-3% diss + vn + buck SHOT py + local marcasite		M-S bl M ~ poss tr X mottle lt green orang
710	100		65 drusy qtz clay marcas vn			
720	100	70 lt gray clay vn	68 X X Δ py vn	+3% diss + vn + buck SHOT py ± marcasite		
730	100		42 lt gun clay py fract			
	100		35 py vn	2-3% diss + vn py		M-S bl M ~ W cebcl fracts poss tr X
740	105					
750	105	50 clay py vn	Aug vein 73 py poss vn w Ag min			
760	102	63 soft py vn	clay py vn 74			
770						

DESCRIPTION

347-794.9 LITHIC POOR TUFF

696-716 fr grun LPT - decreased silicification w pen argillic clay alt + bl veining ~ 1-3/ft expressed @ drusy qtz encapsulated py ~ 1/8" wide intermittent fine qtz stockwork

716-745 LPT becoming more fractured w/ orange oxide ± lt grun clay fill. pervasive buckshot pyrite veining ~ 2/ft w/ specular pyrite ± clay fill & intermittently crackle brecciated w/ clay fill @ noted above

745-785 LPT pervasive lt grun clad hue throughout moderate fracturing w/ orange FeOx fill w/ assoc specular py ± local clay few local silica flooded breccia veins w/ very fine diss py w/ in matrix

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
701-706				.003	<
706-711				<	.19
711-716				.001	.15
716-721				<	<
721-726.5				<	<
726.5-731.5				<	<
731.5-736.5				.001	.13
736.5-741				<	.12
741-746				.001	<
746-751				<	<
751-756				.002	.12
756-760				<	.10
760-765				<	.10
765-770				<	.26

HOLE # RL-111C LOGGED BY KLK DATE 4-91

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
780	100		25 py VN	± 3% diss tVN py		M bl M≈ wk green
			62 SiO2 py Δ VN			X@ 777-781
	100	±60° SiO2 Δ py VN	20 py clay frack			
			15-20° clay py fracks			
790	102	60° X Δ VN	64 SiO2 Δ py VN	± 4% diss tVN py		M bl M-S XY w clad
		*	56° poss contact	1-2% v fine diss py	56°	S≈≈ W bl M clad
800	102				GOUGE SHEAR	
810	97		34 shear			
				<1% diss ±VN py		FRESH ≈ clayt bl
820	97					
		ss bed 64				
830	98	±40° bedd	thrown out 23°	2% diss tVN py + poss Ag sulfide	70°	W bl W~ W clad
			calc clay VN			
840	100					

DESCRIPTION

347-794.9 LPT continued
794.9-831 SEDS
831-854.2 TUFF

781-785 w/ intermittent silica flooded breccia zones; moderate fracturing w/ lt green black butter clay + white soft clay ridded & fine qtz stockwork vns

785-794.9 FAULT - hanging wall finely brecciated throughout varies from clast to matrix supp w/ SiO2 rich matrix m-s pyr. silicification local flesh calcedony clasts fracts are clay rich ridded w/ SiO2 encap pyrite veins 791-794.9 mod cladonite rich

SEDS
794.9-831
CONTACT @ ~ ±56° to C.A.

794.9 FAULT - footwall - GOUGE ZONE
→812.3 sediments - fine mudstone and medium grained lithic sandstones - v/in fault gouge zone zone is all sheared w/ slicks throughout; intermittently cladonite rich - strong clayat throughout.

812.3-831 Interbedded fine lt gray brown mudstones and medium grained lithic sandstones relatively fresh pyr ss beds @ 64° to C.A. Moderate to mod strong fracturing throughout w/ white clay fill ±local pyrite fill

→ contact @ 70° to C.A.

831-854.2 fine grained Tuff - pyr. lt gray green (cladonite?) filled 1-2% rilet pyrite poss wh pyr. bl & argillic clay alt. veins ~ 2/ft. prominent veining composed of calcite + white clay ± pyrite ± unrecognized dk gray sulfide (Ag?) prom. veining ~ 23-35° to C.A.

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
770-775				.001	.12
775-781				<	.26
781-787				.002	.11
787-791				.001	<
791-796.5				.004	<
796.5-801				<	.14
801-807				<	.10
807-812				<	<
812-817				<	<
817-822				<	.9
822-827				<	.15
827-831				<	<
831-837				.001	<
837-842				<	.10

HOLE # RL-111C LOGGED BY KLK DATE 4-91

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.
850	105		±35° clay py vns; 70-85 CaCO3 clay ± py vn	2% diss + vn py + Ag sulfide		W bl W ~ w celad
860	95	±30° bedding		<1% vn py + Ag mineral	20°	FRESH + pass local bl ~ clay
870	103		5-20° intense calcite clay ± wk py vns			
880	93	↑ Bedding 25-35°	±55° contact	±1% vn py + tetrahedrite	55°	vwk bl wk green
890	104 100 100	15-20° CaCO3 clay vns; 25 CaCO3 vn; ±40° clay fragments	70-80° CaCO3 clay ± py vns; 54 CaCO3 vns	STR CaCO3 vns		
900	100		80 SiO2 py vn; 45° contact	<1% vn py	45°	FRESH
910	96	50° pass bed				

DESCRIPTION

854.2 - 879 Seds
879 - 903 Tuff
903 - 957 seds

841-852 w/ prominent clay/calcite filled fractures w/ dark gray to bronze Ag rich metallic (tetrahedrite?)

854.2 - 879 Tuff/Sediment contact upper(a) ~ 20° to C.A lower contact(a) ~ 55° to C.A
Interbedded medium grained lithic sandstones and fine grained mudstones lt to med. gray brown fairly fresh w/ moderate to mod - strong calcite and or clay veins w/ very weak assoc. sulfides
865 - 869 strong calcite ± clay veins

879 - 903 Fine grained Tuff - pervasively lt green lithic poor w/ lt green pos clastic? filling silica phenocrysts. moderate to mod strong veining ~ 2-5/ft. filled w/ white clay sericite, local independent calcite veins with pyrite assoc w/ clay/sericite veins fine stockwork qtz/clay/CaCO3 throughout

903-957 Interbedded medium grained lithic sandstone and silt brunt stones. mod strong fracture veining throughout w/ clay/sericite ± SiO2 fill. lt-med gray brown bedding varies throughout from 50° → 90° becomes more 78° - 90° to C.A. w/ depth

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
842-847				<	.17
847-852				<	.15
852-857				<	.20
857-862				<	<
862-867				<	.10
867-872				<	<
872-879				<	<
879-884				.034	<
884-890				.003	<
890-896				.003	<
896-903				.001	<
903-907				.002	<
907-912				.025	<

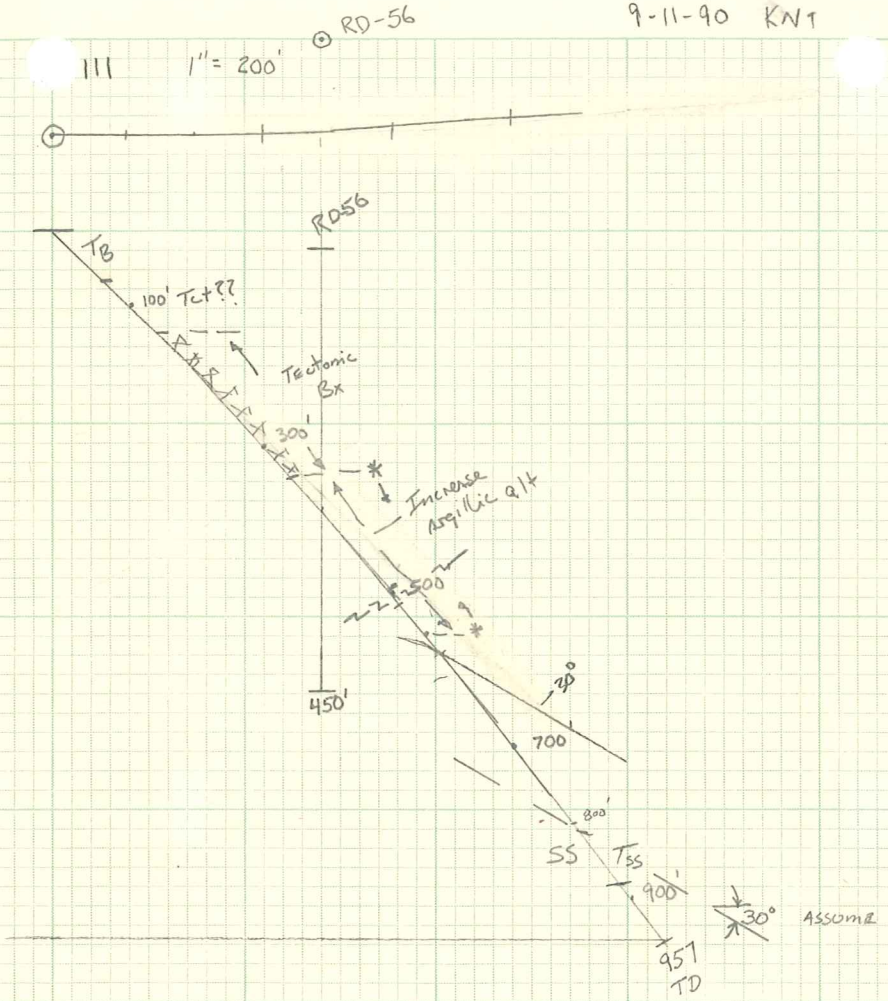
HOLE # RL-111C LOGGED BY KLK DATE 4-91

DEPTH (ft)	RECOVERY	Structure: Bd. Fol.	Structure: Faults	MINERALIZATION	GRAPHIC LOG	ALTER.	DESCRIPTION
		83 bed		<1% vn py		FRESH	903-957 Sicls
		34 pass bed					
920	100						930-936 Interbedded fine grained tuff and mudstone - relatively fresh w/ wh bl veining is white clay ± SiO_2 with local calcite veining.
	102		5-10° clay vns				
930						W/bl of tuffs	
		90°	±5° $CaCO_3$ vn				936-957 Predominantly fine bedded mudstone w/ fine interbeds of lithic sands ranging from 1/4"-1" wide medium to lt gray brown muds; green gray sands, moderate fracture veining = calcite, local white clay ± sericite ± SiO_2 rid dled w/ very fine qtz stockwork tr. sulfides assoc w/ calcite veinlets bronze-irredescent
940	100	reading		NIL to TR py		FRESH	
	102						
950		78 bedding	20-30° $CaCO_3$ vns		78		954-957 lt gray green lithic sandstones - FRESH w/ v. few clay ± SiO_2 and or $CaCO_3$ vns
957							957' T.D.

ASSAYS

Sample No.	% Cu	% Pb	% Zn	oz/t Au	oz/t Ag
912-917				<	<
917-922				<	<
922-927				.068	.11
927-932				<	.11
932-937				<	.12
937-942				<	.14
942-947				<	<
947-952				<	.14
952-957				<	<

9-11-90 KNT



SS > post Tc, pre-T

"Rite in the Rain" WEATHERPROOF
No. 1110
J. L. DARLING CORP. TACOMA, WASH. U.S.A.

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 1/19
LOGD BY: MWB	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL 111
DATE:	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:	STARTED:	PAGE: 2/ 19
LOGD BY: MWB	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL 111
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			LITHOLOGY													STRUCT				ALTERATION/MINLIZATION											STRAT								LITH GRAPH	ALT GRAPH	STRUCT	COMMENTS	SAMPLE INT
DEPTH FT	REC/CUT	RQD	ALLUVUM	MUDCGL		LITHTUF	PUMTUF	SURGTUF	ASHFLO	LAVA	AUTOBX	INTRUSV	BASALT	ANDESIT	RHYOLIT	TEC. BEXA	BROKEN	GOUGE	VOID	Fe MIN: MNOX	HEMTIT	LIMONIT	PYRITE	PROP	ARG	ARG2	RPLSIL		QTZVNS	CALCITES	METCLAS	BADGE	CHOCOLT	BUD	BRADY	MKRPOR	LBUD	WILDROS	DOZER	DEPTH FT				
			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					
65																																											1-3 inch subrounded multi-Lithic Frags (50%) in red brown mud matrix (50%) no alteration → Badger
																																											red weathered Tc 67-69
70																																											
75																																											crushed zone @75 no alteration.
80																																											
85																																											0.5' calcite veinlet 75° CA 1" calcite veinlet 70° CA
90																																											
95																																											
100																																											
105																																											
110																																											

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 3/19
LOGD BY: MWB	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL 111
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 | | | LITHOLOGY | | | | | | | | | | | | | STRUCT | | | | ALTERATION/MINLIZATION | | | | | | | | | | | STRAT | | | | | | | | | | | | |

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 4/19
LOGD BY: MWB	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL 111
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			LITHOLOGY												STRUCT				ALTERATION/MINLIZATION											STRAT								DEPTH FT	LITHGRAPH	ALTGRAPH	STRCNT	SAMPLINT
																			Fe MIN																							
DEPTH FT	REC/CUT	RQD	ALLUVUM	MUDCGL		LITHTUF	PUMTUF	SURGTUF	ASHFLO	LAVA	AUTOBX	INTRUSV	BASALT	ANDESIT	RHYOLIT	TE.CBXA	BROKEN	GOUGE	VOID	MNOX	HEMTIT	LIMON	PYRITE	PROP	ARG	ARG2	RPLSIL		QTZVNS	CALCITES	METCLAS	BADGER	CHOCOLT	BUD	BRADY	MKRPOR	LBUD	WILDROS	DOZER				
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37				
165																																										
170																																										
175																																										
180																																										
185																																										
190																																										
195																																										
200																																										
205																																										
210																																										

COMMENTS

Cholocate(?) ash rich, xtal poor devitrified AFT

Chocolate tuff frags in chocolate tuff matrix Tuff bxa.

ctc 35°CA sharp contact rhy intr intrudes chocolate, No clay @ctc. doesn't looks baked

py (Tr) extends 2-5 ft into chocolate

bleached (argillic) 160-171

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 5/19
LOGD BY: MWG	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL 111
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 | | | LITHOLOGY | | | | | | | | | | | | | STRUCT | | | | ALTERATION/MINLIZATION | | | | | | | | | | | STRAT | | | | | | | | | | | | |

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 6/19
LOGD BY: MWB	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL 111
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 | | | LITHOLOGY | | | | | | | | | | | | STRUCT | | | | ALTERATION/MINLIZATION | | | | | | | | | | | | STRAT | | | | | | | | | | | |

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 7/19
LOGD BY: MWG	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL 111
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 | | | LITHOLOGY | | | | | | | | | | | | | STRUCT | | | | ALTERATION/MINLIZATION | | | | | | | | | | | STRAT | | | | | | | | | | | | |

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 8/19
LOGD BY: MWB	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL 111
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			LITHOLOGY												STRUCT				ALTERATION/MINLIZATION											STRAT												
																			Fe MIN																							
DEPTH FT	REC/CUT	RQD	ALLUVUM	MUDCGL		LITHTUF	PUMTUF	SURGTUF	ASHFLO	LAVA	AUTOBX	INTRUSV	BASALT	ANDESIT	RHYOLIT	TE.CBXA	BROKEN	GOUGE	VOID	MNOX	HEMTIT	LIMONIT	PYRITE	PROP	ARG	ARG2	RPLSIL		QTZVNS	CALCITES	METCLAS	BADGER	CHOCOLT	BUD	BRADY	MKRPOR	LBUD	WILDROS	DOZER			
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37			
365																																										
370																																										
375																																										
380																																										
385																																										
390																																										
395																																										
400																																										
405																																										
410																																										

DEPTH FT	LITHGRAPH	ALTGRAPH	STRCNT	COMMENTS	SAMPLINT
				wte equigranular rhy(?) intr(?) wk lithics local wk diss py	
365				fluid bxa(?) to 370 no incr sulf	
370					
375					
380					
385				silica flooded zone 2" w/ py	
390					
395				qtz veinlets w/py	
400				fluid bxa? no sulf Tan-Lt brn rock flowet. matrix	
405				intrusive sparce 1/8-1/4 inch lithics	
410					

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 9/19
LOGD BY: MWB	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL 111
DATE:	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	

DRILLING			LITHOLOGY												STRUCT				ALTERATION/MINLIZATION										STRAT								LITH GRAPH	ALT GRAPH	STRCT
																			Fe MIN																				
DEPTH FT	REC/CUT	R Q D	ALLUVUM	MUDCGL		LITHTUF	PUMTUF	SURGTUF	ASHFLO	LAVA	AUTOBX	INTRUSV	BASALT	ANDESIT	RHYOLIT	TE.CBXA	BROKEN	GOUGE	VOID	MNOX	HEMTIT	LIMONIT	PYRITE	PROP	ARG	ARG2	RPLSIL		QTZVNS	CALCITE	METCCLAS	BADGER	CHOCOLT	BUD	BRADY	MKRPOR	LBUD	WILDROS	DOZER	DEPTH FT			
			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				
415																	1						Tr		1					1													
420																	2						1		2																		
425																																											
430																																											
435																																											
440																							Tr		2					1													
445																	1																										
450																																											
455																																											
460																																											

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

wte equigranular rhy (?) intr. 1/8-1/4 inch lithics to 427

crush zone no orientation

shear 60° CA no sdf.

increasing 1/8-1/4" diameter lithics-green (clay)

SAMPLE INT

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 10/19
LOGD BY: MWB	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL. 111
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 | | | LITHOLOGY | | | | | | | | | | | | | STRUCT | | | | ALTERATION/MINLIZATION | | | | | | | | | | | STRAT | | | | | | | | | | | | |

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 11/19
LOGD BY: MWB	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL 111
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 | | | LITHOLOGY | | | | | | | | | | | | STRUCT | | | | ALTERATION/MINLIZATION | | | | | | | | | | | | STRAT | | | | | | | | | | | |

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 12/19
LOGD BY: MWB	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL 111
DATE:	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	

DRILLING			LITHOLOGY													STRUCT				ALTERATION/MINLIZATION											STRAT								DEPTH FT	LITH GRAPH	ALT GRAPH	STRCT	SCALE: 1" =10 ft	SAMPL INT
																				Fe MIN																								
DEPTH FT	REC/CUT	RQD	ALLUVUM	MUDCGL		LITHTUF	PUMTUF	SURGTUF	ASHFLO	LAVA	AUTOBX	INTRUSV	BASALT	ANDESIT	RHYOLIT	TE.COBXA	BROKEN	GOUGE	VOID	MNOXIDE	HEMTIT	LIMONIT	PYRITE	PROP	ARG	ARGG2	RPLSIL		QTZVNS	CALCITES	METCLAS	BADGER	CHOCOLT		BUD	BRADY	MKRPOR	LBUD	WILDROS	DOZER					LITH. EXPLANATION:
			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					
																																											MUD CGL Mud matrix conglomerate
																																											LITH TUF Lithic clast dominant tuff
																																											PUM TUF Pumice rich tuff
																																											SURGE TUF Bedded matrix rich lithic tuff
565																	2						1		2																			
570																																												
575																									2																			
580																																												
585																	2						1		1																			
590																																												
595																																												
600																																												
605																																												
610																																												

wte equigranular rhy (?) intr (?) w/diss py

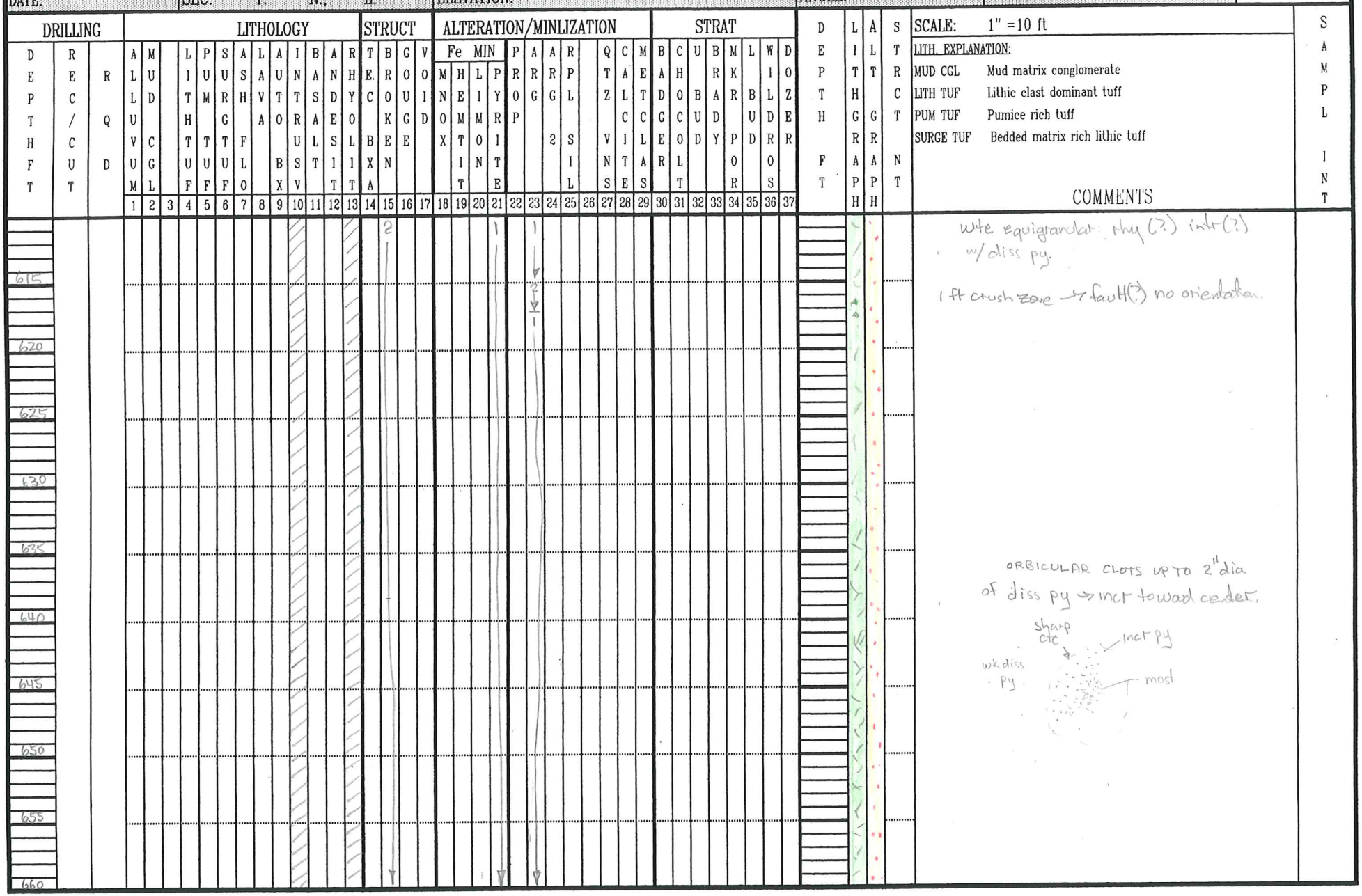
- desilicified corroded vugs w/d-qtz on vug walls. @ 591

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 13/19
LOGD BY: MWB	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL 111
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



PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 14/19
LOGD BY: MWB	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL-111
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

DEPTH FT.	DRILLING REC/CUT	DRILLING RQD	LITHOLOGY 1 ALLUVIUM	2 MUD CGL	3	4 LITHTUF	5 PUMTUF	6 SURGTUF	7 ASHFALO	8 LAVA	9 AUTOBX	10 INTRUSV	11 BASALT	12 ANDESIT	13 RHYOLIT	STRUCT 14 TECBXA	15 BROKEN	16 GOUGE	17 VOID	ALTERATION/MINLIZATION Fe MIN 18 MNOX	19 HEMTIT	20 LIMON	21 PYRITE	22 PROP	23 ARG	24 ARG2	25 REPLSIL	26	27 QTZVNS	28 CALCITES	29 METCLAS	STRAT 30 BADGER	31 CHOCOLT	32 UBUD	33 BRADY	34 MKRPOR	35 LBUD	36 WILDROS	37 DOZER	DEPTH FT	LITHGRAPH	ALTGRAPH	STRCT NT	COMMENTS	SAMPLINT
665																	2						1		2																					white equigranular rhy(?) intr(?) diss py throughout.
670																																														
675																																														
680																													3																	
685																																														more intense irregular qtz veinlets w/py + diss py throughout wk clay
690																																														
695																																														desilicified voids along narrow fractures w/d-qtz redeposited as void linings
700																	2						1		2																					wtc equigranular intrusive diss py + wk pervasive argillic qtz+py veinlets cut at random
705																																														
710																																														

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 15/19
LOGD BY: MWB	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL 111
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

DEPTH FT	REC/CUT	RQD	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)	TECBXA (14)	BROKEN (15)	GOUGE (16)	VOID (17)	Fe MIN: MNOX (18)	HEMTIT (19)	LIMONIT (20)	PYRITE (21)	PROP (22)	ARG (23)	ARG2 (24)	REPLSIL (25)	(26)	QTZVNS (27)	CALCITES (28)	METCLAS (29)	BACHDOLT (30)	COBUD (31)	(32)	BRADY (33)	MKPOR (34)	LBUD (35)	WILDROS (36)	DOZER (37)	LITHGRAPH	ALTGRAPH	STRCNT	COMMENTS	SAMPLINT
																	2						1		2																			wte equigranular Phy(?) intr(?) diss py feldspar wk green clay + matrix wk argillic
715																																												3' wide zone of gray fine grained silica flooding in intr bxa → no increase in py. 716 = narrow zone of desilicified vugs w/d-qtz lining
720																																												
725																																												
730																																												
735																																												crushed zone no orientation. clay alt → feldspars Lt green. + chalky matrix diss py + local qtz py veinlets of random orientations
740																																												
745																																												
750																																												753 6" wide crushed 70° CA
755																																												
760																																												narrow silica flooded zone @ 759

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 16/19
LOGD BY: MWB	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL 111
DATE:	SEC. T. N., E.	ELEVATION:	ANGLE:	DRILLER:	

DRILLING			LITHOLOGY												STRUCT				ALTERATION/MINLIZATION										STRAT								DEPTH	LITHGRAPH	ALTGRAPH	STRCT	SAMPLINT
																			Fe MIN																							
DEPTHFT	REC/CUT	R Q D	ALLUVUM	MUDCGL		LITHTUFF	PUMTUFF	SURGTUFF	ASHFLO	LAVA	AUTOBXA	INTRUSV	BASALT	ANDESITE	RHYOLITE	TE.CBXA	BROKEN	GOUGE	VOID	MNOX	HEMTIT	LIMONIT	PYRITE	PROP	ARG	ARGS	RPLSIL		QTZVNS	CALCITES	METCLAS	BADGER	CHOCOLT	UBUD	BRADY	MKRPOR	LBUD	WILDROS	DOZER	DEPTH FT			
			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				
765																	2						1		1																		
770																																											
775																																											
780																			1								1																
785																									1																		
790																									2																		
795																	3																										
800																																											
805																																											
810																																											

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

wte fine equigranular rhy(?) intr(?) diss py. feldspar wk clay (green) altered. cut by sparce qtz+py veinlets

random Lt green clay veinlets

corroded, decilicified voids. Rock wkly silica flooded, vugs w/cl-qtz

argillic groundmass + clay rich fractures

tectonic breccia Tan matrix angular frags → green clay

good slicks 55°CA
slicks 70°CA

fault zone
slicks 70°CA

slicks 50°CA

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 17/19
LOGD BY: MWB	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL 111
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			LITHOLOGY													STRUCT				ALTERATION/MINLIZATION										STRAT								DEPTH	LITHGRAPH	ALTGRAPH	STRCT	COMMENTS	SAMPLINT
																				Fe MIN																								
DEPTHFT	REC/CUT	RQD	ALUVUM	MUDCGL		LITHTUF	PUMTUF	SURGTUF	ASHFLO	LAVA	AUTOBX	INTRUSV	BASALT	ANDESIT	RHYOLIT	TE.CBXA	BROKEN	GOUGE	VOID	MNOXIT	HEMIT	LIMONIT	PYRITE	PROP	ARG	ARG2	RPLSIL		QTZVNS	CALCITE	METCLAS	BADGER	BRAD	MKRPOR	LBUD	WILDROS	DOZER							
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37		LITH	ALT	STRCT		INT
815																																												
820																																											mudstone + sandstone w/ carbon on partings bedding 55°CA	
825																																												
830																																												
835																							2			2																	non-welded AFT w/ qtz xtals Disspy local cut by random clay + calcite veinlets	
840																																												
845																																												
850																																												
855																																											Tertiary mudstone local bedding laminations w/ carbon along partings + pervasive humate impregnations. bedding 30°CA	
860																																												

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 18/19
LOGD BY: MWB	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL 111
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 | | | LITHOLOGY | | | | | | | | | | | | | STRUCT | | | | ALTERATION/MINLIZATION | | | | | | | | | | | | STRAT | | | | | | | | | | | | |

PROJECT: Rosebud JV	UTM: NK 11-10-06 C	NORTHING:	TOTAL DEPTH:	STARTED:	PAGE: 19/19
LOGD BY: MWB	STATE: Nevada County Pershing	EASTING:	BEARING:	COMPLETED:	HOLE # RL 111
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 | | | LITHOLOGY | | | | | | | | | | | | | STRUCT | | | | ALTERATION/MINLIZATION | | | | | | | | | | | STRAT | | | | | | | | | | | | |

STARTED 9.8.90 -45, DUE SOUTH LY-44 HMQ CORE

RL-111 Page 1 of 5

Sample Recovered	% Recovered	Sample Interval	Lithology
0-11	10%		0-65 "BADGER"
11-21.5	5.5/10.5		GREY TUFF CLASTS
21.5-26.5	4.5/5.5	No sample to be taken	10-132mm IN ROD
26.5-33.5	100+%		BROWN MATRIX.
33.5-43	10/105%		
43-47	100+%		
47-57	103%		65- BADGER/GATOR/
57-67	92%		(CHOCOLATE EGG?) GREY LITHIC
67-77	105%		POOR TUFF.
7-87	95%		
87-97	101%		
97-107	99%		
107-117 (8.1)	100%	142-147	
117-127	103%	147-152	
127-137	98%	152-157	
137-147	97%	157-162	
147-157	100%	162-167	
157-167	103%	167-172	
167-177	98%	172-177	* ~150-347
177-187	102%	177-182	Tectonic bxa texture
187-197	98%	182-187	to crackle bxa;
197-207	98%	187-192	Large greenish angular
207-217 (1.9)	100%	192-197	clasts in red-brown
		197-202	matrix, wk-mod arg
		202-207	
		207-212	

Split

RL-111 page 2 of 5

Sample Recovered	% Recovered	Sample Int	Lithology
217-227	100%	212-217	Brecciated lithic-poor
227-237	100%	217-222	tuff; degree of
237-247	99%	222-227	bxia varies from
247-257	102%	227-232	crackle bxa to rotated,
257-267	94%	232-237	matrix supported; greenish color
267-277	105%	237-242	Bleaching increases
277-287 (5.1)	103%	242-247	at ~227 ↓, Abt
287-297	101%	247-252	dissem pyrite, wk qtz-solf
297-307	90%	252-257	veining.
307-317	100%	257-262	280 ↓ occasional drusy
317-327	103%	262-267	qtz vugs & py veinlets
327-337 (9.3)	108%	267-272	
337-347 (7.4)	105%	272-277	* 347-549 INCREASE
347-357	102%	277-282	ARGILLIC ALTERATION? RE
357-367	103%	282-287	LT FLESH COLOR. INCREA
367-377	97%	287-292	(wk-mod) FINE QSULFIDE VEINS
377-387	100%	292-297	? Drusy Qtz Vns. INCREASE
387-397	100%	297-302	Very Fine Qtz Stkwk
397-400	90%	302-307	Abt Pyrite, Lume Q
400-407	100%	307-312	Replace Ca?
407-417	99%	312-317	
417-427	99%	317-322	
427-437	101%	322-327	
437 (5.9)		327-332	
		332-337	
		337-342	
		342-347	

RL-111 Page 3 of 5

SAMPLE INTERVAL	% RECOVERED
437-447	98%
447-457	102%
457-467	100%
467-477	100%
477-487	100%
481-487	100%
487-497	100%
497-507	101%
507-517	100%
517-527	102%
527-537	101%
537-547	100%
547-557	101%
557-567	98%
567-577	102%
577-587	101%
587-597	93%
597- (8.2)	

SAMPLE INTERVAL
485-489
489-494
494-499
499-504
504-508
508-512
512-517
517-522
522-527
527-532
532-537
537-542
542-547
547-549
549-553
553-557
557-562
562-567
567-572
572-577
577-582
582-587
587-592
592-597
597-602
602-607

SAMPLE INTERVAL	LITHOLOGY (GREY LITHIC ROCK TO BX'D)
347-352	
352-357	
357-362	
362-367	
367-372	
372-377	
377-382	
382-387	
387-392	
392-397	
397-402	
402-412	
412-417	
417-422	
422-427	
427-432	
432-437	
437-442	
442-447	
447-452	
452-457	
457-462	
462-467	
467-472	
472-477	
477-481	
481-485	

LITHOLOGY
494-504 ZONE OF
SEVERAL 1-3" SILICA FL
BX'S IN MOD BL, MOD
Q SULFIDE L.P.T.
549 - BL.
FGT - LITHIC POOR? OR ~~SILICIFIED~~
~~POOR?~~ ~~WK~~ MOD BL LOCAL
BX'D WK MOD Q SULFIDE
VEINING INCREASED CHTY
VEINS DECREASED BX'S

RC 111

page 4 of 5

Sample Recovered	% Recovered
-17 - 607 (8.2)	100%
607 - 617	102%
617 - 627	104%
627 - 637	100%
637 - 646	8.5/9
646 - 656	99%
656 - 666	103%
666 - 676	103%
676 - 686	105%
686 - 696 (6.7)	102%
696 - 706	102%
706 - 716	108%
716 - 726.5	100%
726.5 - 736.5	100%
736.5 - 745	100%
745 - 755 (9.2)	105%
755 - 765	105%
765 - 775	102%
775 - 781	100+%
781 - 787	100+%
787 - 797	102%
797 - 807	108%
807 - 817	97%
817 - 827	97%
- 837	98%
837 - 847	100%
847 - 3.1	

Sample Interval	LITHOLOGY 549 — 796
607 - 612	Lithic-poor tuff; generally a pale grey-green color → bleached w/ 5% 1/4 to 1cm lithics alt to pale green. Abt dissem pyr & local 'shotgun pyrite', wk-mod pyr veining, rare drusy vugs
612 - 617	
617 - 622	
622 - 627	
627 - 632	
632 - 637	
637 - 642	
642 - 646	
646 - 651	
651 - 656	
656 - 661	796 — MED Gr. LITH SANDSTONES & INTERBEDDED FGT WELDED & Calcedony filled VUGS.
661 - 666	
666 - 671	
671 - 676	
split 676 - 681	
split 681 - 686	
split 686 - 691	796.5 — 802 FAULT GOUGE Gr. & Grey
split 691 - 696	
split 696 - 701	
split 701 - 706	
split 706 - 711	
split 711 - 716	
split 716 - 721	
split 721 - 726.5	
split 726.5 - 731.5	
split 731.5 - 736.5	
split 736.5 - 741	
split 741 - 746	
split 746 - 751	
split 751 - 756	
split 756 - 760	
split 760 - 765	
split 765 - 770	
split 770 - 775	
split 775 - 781	
split 781 - 787	
split 787 - 791	
split 791 - 796.5	
split 796.5 - 801	
split 801 - 807	
split 807 - 812	

RL-111 page 5 of 5

Sample Recovered	%	sample interval	Lithology
7 (3.7) - 857	105%	812 - 817	MED - FINE GR. SS w
857 - 867	95%	817 - 822	INTERBEDDED VOLCANICS
867 - 877	103%	822 - 827	(RHYOLITES?) GRADI
877 - 887	93%	827 - 832	TO BEDDED SILTST
887 - 888	104%	832 - 837	w DEPTH WK GR
888 - 890	100+%	837 - 842	CLAY VEINING
890 - 897	100+%	842 - 847	
897 - 907	100%	847 - 852	
907 - 917	96%	852 - 857	
917 - 927	100%	857 - 862	
927 - 937	102%	862 - 867	
937 - 947	100%	867 - 872	
9[illegible] - 957	102% T.D.	872 - 877	
		877 - 884	
		884 - 890	
		890 - 896	
		896 - 903	
		903 - 907	
		907 - 912	
		912 - 917	
		917 - 922	
		922 - 927	
		927 - 932	
		932 - 937	
		937 - 942	
		942 - 947	
		947 - 952	
		952 - 957 T.D.	

SPLIT

SPLIT

NEVADA GSI, INC.

PREP QUALITY ASSURANCE CERTIFICATION

Date _____

Company LAC MINERALS

Job # 8444

Geologist N. BREWER

No. Samples 73

Sample ID	Time	Bowl #	Weight	-150 Wt	% -150
RL-111 19 242-247			50.69	46.09	90.9%
RL-111C 20 337-342			50.26	50.12	99.7%
RL-111 21 437-442			50.25	49.26	98.0%
RL-111 22 485-489			50.48	46.37	91.8

☑ PASSED ☐ FAILED

Explanation/Actions

Approved By Richard A. Grondin

Richard Grondin, Lab Manager

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

NEVADA GSI, INC.

PREP QUALITY ASSURANCE CERTIFICATION

Date 9/26/90

Company LAC-MINERALS

Job # 8503

Geologist NATE BREWER

No. Samples 107

Sample ID	Weight	+150Wt	-150 Wt	% -150
(6) RL-111 542-541	49.38	1.54	47.84	96.9%
(7) RL-111 552-551	49.13	.11	49.02	99.8%
(8) RL-107 732-737	48.01	.32	47.69	99.3%
(9) RL-107 840-845	49.75	.83	48.92	98.3%
(10) RL-109 936-940	49.87	3.37	46.5	93.2%

☑ PASSED ☐ FAILED

Explanation/Actions

Approved By Richard A. Grondin

Richard Grondin, Lab Manager

file:prep.frm

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NEVADA GSI, INC.

PREP QUALITY ASSURANCE CERTIFICATION

Date 9/18

Company Lac Minerals

Job # 8448

Geologist Nate Brewer

No. Samples 51

Sample ID	Time	Bowl #	Weight	-150 Wt	% -150
RL-111C 10 696-701			50.08	49.54	98.9%
RL-111C 11 781-787			50.08	47.71	95.3%
RL-111-C 12 817-822			50.03	47.67	95.3%

☑ PASSED ☐ FAILED

Explanation/Actions

Approved By Richard A. Grondin

Richard Grondin, Lab Manager

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SEP 27 1990

NEVADA GSI, INC.

GEOCHEMICAL ANALYSIS REPORT

September 25, 1990

CUST. CODE: LOA
PROJECT: URBD
P.O. #: XXXX
LOT ID: 8444

GEOLOGIST: NATE BREWER
COPIES TO: KEN TULLAR
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-111C	142	147	-0.001	-0.10	-
2.	M-93			0.030	0.16	-
3.	RL-111C	147	152	-0.001	-0.10	-
4.	RL-111C	152	157	-0.001	-0.10	-
5.	RL-111C	157	162	-0.001	-0.10	-
6.	RL-111C	162	167	-0.001	-0.10	-
7.	RL-111C	167	172	-0.001	-0.10	-
8.	RL-111C	172	177	-0.001	-0.10	-
9.	RL-111C	177	182	-0.001	-0.10	-
10.	RL-111C	182	187	-0.001	-0.10	-
11.	RL-111C	187	192	0.004	-0.10	-
12.	RL-111C	192	197	-0.001	-0.10	-
13.	RL-111C	197	202	-0.001	0.12	-
14.	RL-111C	202	207	-0.001	0.15	-
15.	RL-111C	207	212	-0.001	0.11	-
16.	RL-111	212	217	-0.001	-0.10	-
17.	RL-111	217	222	-0.001	-0.10	-
18.	RL-111	222	227	-0.001	-0.10	-
19.	RL-111	227	232	-0.001	-0.10	-
20.	RL-111	232	237	-0.001	-0.10	-
21.	RL-111	237	242	-0.001	-0.10	-
22.	M-94			0.083	-0.10	-
23.	RL-111	242	247	0.003	-0.10	-
24.	RL-111	247	252	0.001	-0.10	-
25.	RL-111	252	257	0.039	0.21	-
26.	RL-111	257	262	-0.001	-0.10	-
27.	RL-111	262	267 A	0.002	-0.10	-

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	SAMPLE I.D.			Au o/t	Ag o/t	Checks Au o/t
28.	RL-111	~~262~~	~~267~~ 272 B	-0.001	-0.10	-
29.	RL-111	272	277	-0.001	-0.10	-
30.	RL-111	277	282	0.002	0.10	-
31.	RL-111	282	287	-0.001	-0.10	-
32.	RL-111C	287	292	-0.001	0.12	-
33.	RL-111C	292	297	0.005	-0.10	-
34.	RL-111C	297	302	-0.001	-0.10	-
35.	RL-111C	302	307	-0.001	0.11	-
36.	RL-111C	307	312	0.002	-0.10	-
37.	RL-111C	312	317	-0.001	-0.10	-
38.	RL-111C	317	322	-0.001	-0.10	-
39.	RL-111C	322	327	0.006	0.12	-
40.	RL-111C	327	332	-0.001	-0.10	-
41.	RL-111C	332	337	-0.001	-0.10	-
42.	M-95			0.107	-0.10	0.099
43.	RL-111C	337	342	-0.001	-0.10	-
44.	RL-111C	342	347	-0.001	-0.10	-
45.	RL-111C	347	352	-0.001	-0.10	-
46.	RL-111C	352	357	0.002	-0.10	-
47.	RL-111C	357	362	0.002	0.13	-
48.	RL-111C	362	367	0.002	0.21	-
49.	RL-111C	367	372	-0.001	-0.10	-
50.	RL-111C	372	377	-0.001	-0.10	-
51.	RL-111C	377	382	0.003	-0.10	-
52.	RL-111C	382	387	0.006	0.21	-
53.	RL-111C	387	392	-0.001	-0.10	-
54.	RL-111C	392	397	0.002	0.22	-
55.	RL-111C	397	402	0.005	0.10	-
56.	RL-111C	402	407	0.001	-0.10	-
57.	RL-111C	407	412	0.001	-0.10	-
58.	RL-111C	412	417	-0.001	-0.10	-
59.	RL-111C	417	422	-0.001	-0.10	-
60.	RL-111	422	427	-0.001	-0.10	-
61.	RL-111	427	432	0.005	-0.10	-
62.	M-96			0.028	-0.10	-
63.	RL-111	432	437	0.006	-0.10	-
64.	RL-111	437	442	-0.001	-0.10	-
65.	RL-111	442	447	-0.001	-0.10	-
66.	RL-111	447	452	-0.001	0.14	-
67.	RL-111	452	457	-0.001	-0.10	-
68.	RL-111	457	462	-0.001	-0.10	-
69.	RL-111	462	467	-0.001	-0.10	-
70.	RL-111	467	472	0.004	-0.10	-
71.	RL-111	472	477	0.003	0.14	-
72.	RL-111	477	481	0.001	-0.10	-
73.	RL-111	481	485	0.001	-0.10	-

	SAMPLE I.D.			Au o/t	Ag o/t	Checks Au o/t
74.	RL-111	485	489	0.006	-0.10	-
75.	RL-111	489	494	0.002	-0.10	-
76.	RL-111	494	499	0.003	-0.10	-
77.	RL-111	499	504	0.004	-0.10	-
78.	M-97			0.020	-0.10	-

==========

This report reviewed and approved by:

Richard A. Grondin

Richard Grondin, Laboratory Director

NEVADA GSI, INC.

GEOCHEMICAL ANALYSIS REPORT

October 2, 1990

RL-111C
504 - 696
RL-107C
637 - 865
RL-109C 874.7 - 967

CUST. CODE: LOA
PROJECT: URBD
P.O. #: XXXX
LOT ID: 8503

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

	SAMPLE I.D.				Au o/t	Ag o/t
1.	RL-111	504	508		-0.001	-0.10
2.		M-80			0.015	0.22
3.	RL-111	508	512		-0.001	-0.10
4.	RL-111	512	517		-0.001	0.11
5.	RL-111	517	522		-0.001	-0.10
6.	RL-111	522	527		-0.001	-0.10
7.	RL-111	527	532		-0.001	-0.10
8.	RL-111	532	537		-0.001	-0.10
9.	RL-111	~~542~~ 537	~~547~~ 542	A	-0.001	-0.10
10.	RL-111	542	547	B	0.001	0.10
11.	RL-111	547	549		-0.001	-0.10
12.	RL-111	549	553		-0.001	-0.10
13.	RL-111	553	557		-0.001	-0.10
14.	RL-111	557	562		-0.001	-0.10
15.	RL-111	567	572		-0.001	-0.10
16.	RL-111	572	577		0.009	-0.10
17.	RL-111	577	582		0.006	-0.10
18.	RL-111	582	587		-0.001	-0.10
19.	RL-111	587	592		0.012 ✓	0.28
20.	RL-111	592	597		-0.001	-0.10
21.	RL-111	597	602		-0.001	0.20
22.		M-81			0.095	0.26
23.	RL-111	602	607		-0.001	0.17
24.	RL-111	607	612		-0.001	-0.10
25.	RL-111	612	617		-0.001	-0.10
26.	RL-111	617	622		-0.001	-0.10
27.	RL-111	622	627		-0.001	0.12
28.	RL-111	627	632		0.001	0.12
29.	RL-111	632	637		0.002	0.17
30.	RL-111	637	642		0.001	0.10
31.	RL-111	642	646		0.003	-0.10
32.	RL-111	646	651		0.001	-0.10
33.	RL-111	651	656		0.002	0.14
34.	RL-111	656	661		0.003	-0.10

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LAC MINERALS
LOT I.D. #: 8503

	SAMPLE I.D.				Au o/t	Ag o/t
35.	RL-111	661	666		0.002	0.15
36.	RL-111	666	671		0.001	0.10
37.	RL-111	671	676		0.004	-0.10
38.	RL-111	676	681		0.003	-0.10
39.	RL-111	681	686		0.003	-0.10
40.	RL-111	686	691		0.003	0.16
41.	RL-111	691	696		0.003	-0.10
42.		M-82		562-567	0.048	0.10
43.	RL-111	552	557		-0.001	0.15 *
44.	RL-107	637	642		0.001	0.23
45.	RL-107	642	647		-0.001	0.20
46.	RL-107	647	652		-0.001	-0.10
47.	RL-107	652	657		-0.001	0.24
48.	RL-107	662	667	A ?	0.004	-0.10
49.	RL-107	662	667	B ?	0.005	-0.10
50.	RL-107	667	672		0.016 ✓	0.20
51.	RL-107	672	678		0.004	0.10
52.	RL-107	678	682		0.025 ✓	-0.10
53.	RL-107	682	687		0.006	0.17
54.	RL-107	687	692		0.002	0.13
55.	RL-107	692	697		0.001	-0.10
56.	RL-107	697	702		0.003	-0.10
57.	RL-107	702	707		0.001	-0.10
58.	RL-107	707	712		0.001	-0.10
59.	RL-107	712	717		0.003	-0.10
60.	RL-107	717	722		-0.001	-0.10
61.	RL-107	722	727		-0.001	-0.10
62.		M-83			0.101	0.13
63.	RL-107	727	732		-0.001	-0.10
64.	RL-107	732	737		-0.001	-0.10
65.	RL-107	737	741		0.001	-0.10
66.	RL-107	741	745		-0.001	-0.10
67.	RL-107	745	749		0.002	-0.10
68.	RL-107	749	753.5		0.003	0.10
69.	RL-107	753.5	758		0.005	0.11
70.	RL-107	758	763		0.002	0.10
71.	RL-107	763	768		0.003	-0.10
72.	RL-107	768	772		0.003	0.35
73.	RL-107	772	777		0.005	0.69
74.	RL-107	777	782		0.023 ✓	1.30
75.	RL-107	782	787		0.006	1.16
76.	RL-107	787	792		0.006	1.00
77.	RL-107	792	797		0.007	0.60
78.	RL-107	797	802		0.001	-0.10
79.	RL-107	802	807		0.002	0.12
80.	RL-107	807	812		0.008	0.24
81.	RL-107	812	816		0.006	0.12
82.		M-84			0.016	0.29

	SAMPLE I.D.			Au o/t	Ag o/t
83.	RL-107	816	820	0.006	0.19
84.	RL-107	820	825	0.007	0.35
85.	RL-107	825	830	0.003	0.14
86.	RL-107	830	835	-0.001	0.20
87.	RL-107	835	840	0.003	0.18
88.	RL-107	840	845	0.025	-0.10
89.	RL-107	845	850	0.005	0.19
90.	RL-107	850	855	0.014	0.19
91.	RL-107	855	860	0.009	0.34
92.	RL-107	860	865	0.005	-0.10
93.	RL-109	874.7	879.5	0.005	-0.10
94.	RL-109	879.5	884	-0.001	-0.10
95.	RL-109	884	889	0.008	0.24
96.	RL-109	889	894	0.063	0.35
97.	RL-109	894	898.8	0.027	0.10
98.	RL-109	898.8	902.5	0.017	0.20
99.	RL-109	902.5	906.5	0.077	0.30
100.	RL-109	906.5	912	0.023	0.24
101.	RL-109	912	916.5	-0.001	0.27
102.		M-86		~~0.077~~	0.23
103.	RL-109	916.5	921	0.067	0.23
104.	RL-109	921	925.5	0.023	0.24
105.	RL-109	925.5	931	0.001	-0.10
106.	RL-109	931	936	0.007	0.17
107.	RL-109	936	940	0.042	0.17
108.	RL-109	940	944	0.163	0.44
109.	RL-109	944	948	0.023	0.41
110.	RL-109	948	953.2	0.008	0.24
111.	RL-109	953	957	0.036	0.27
112.	RL-109	957	962	0.026	0.31
113.	RL-109	962	967	0.033	0.34
114.		M-88		~~0.054~~	~~0.29~~

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NEVADA GSI, INC.

GEOCHEMICAL ANALYSIS REPORT

September 25, 1990

CUST. CODE: LOA
PROJECT: URBD
P.O. #: XXXX
LOT ID: 8448

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

	SAMPLE I.D.			Au o/t	Ag o/t
1.	RL-111C	696	701	0.005	-0.10
2.		M-25		0.029	0.18
3.	RL-111C	701	706	0.003	-0.10
4.	RL-111C	706	711	-0.001	0.19
5.	RL-111C	711	716	0.001	0.15
6.	RL-111C	716	721	-0.001	-0.10
7.	RL-111C	721	726.5	-0.001	-0.10
8.	RL-111C	726.5	731.5	-0.001	-0.10
9.	RL-111C	731.5	736.5	0.001	0.13
10.	RL-111C	736.5	741	-0.001	0.12
11.	RL-111C	741	746	0.001	-0.10
12.	RL-111C	746	751	-0.001	-0.10
13.	RL-111C	751	756	0.002	0.12
14.	RL-111C	756	760	-0.001	0.10
15.	RL-111C	760	765	-0.001	0.10
16.	RL-111C	765	770	-0.001	0.26
17.	RL-111C	770	775	0.001	0.12
18.	RL-111C	775	781	-0.001	0.26
19.	RL-111C	781	787	0.002	0.11
20.	RL-111C	787	791	0.001	-0.10
21.	RL-111C	791	796.5	0.004	-0.10
22.		M-28		0.056	0.14
23.	RL-111C	796.5	801	-0.001	0.10
24.	RL-111C	801	807	-0.001	-0.10
25.	RL-111C	807	812	-0.001	-0.10
26.	RL-111C	812	817	-0.001	-0.10
27.	RL-111C	817	822	-0.001	0.19
28.	RL-111C	822	827	-0.001	0.15
29.	RL-111C	827	831	-0.001	-0.10
30.	RL-111C	831	837	0.001	-0.10
31.	RL-111C	837	842	-0.001	0.10
32.	RL-111C	842	847	-0.001	0.17

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	SAMPLE I.D.			Au o/t	Ag o/t
33.	RL-111C	847	852	-0.001	0.15
34.	RL-111C	852	857	-0.001	0.20
35.	RL-111C	857	862	-0.001	-0.10
36.	RL-111C	862	867	-0.001	0.10
37.	RL-111C	867	872	-0.001	-0.10
38.	RL-111C	872	879	-0.001	-0.10
39.	RL-111C	879	884	0.034	-0.10
40.	RL-111C	884	890	0.003	-0.10
41.	RL-111C	890	896	0.003	-0.10
42.		M-29		0.020	-0.10
43.	RL-111C	896	903	0.001	-0.10
44.	RL-111C	903	907	0.002	-0.10
45.	RL-111C	907	912	0.025	-0.10
46.	RL-111C	912	917	-0.001	-0.10
47.	RL-111C	917	922	-0.001	-0.10
48.	RL-111C	922	927	0.068	0.11
49.	RL-111C	927	932	-0.001	0.11
50.	RL-111C	932	937	-0.001	0.12
51.	RL-111C	937	942	-0.001	0.14
52.	RL-111C	942	947	-0.001	-0.10
53.	RL-111C	947	952	-0.001	0.14
54.	RL-111C	952	957	-0.001	-0.10

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BRIEF SUMMARY LOG RL-111C

0-65 BADGER
67-177 Grey Lithic Poor Fine GRAINED Tuff
177-347 LITHIC POOR TUFF TECTONIC BRECCIA
347-794.9 FINE GRAINED TUFF

CONTACTS

794.9-831 LITHIC SANDSTONES & MUDSTONES
785-812.3 FAULT
56° CONTACT to CA ← 785-794.9 hanging wall XXΔΔ FGT
794.9-812.3 footwall - clay gouge
70° to C.A. ← 831-854.2 Fine GRAINED Tuff
20° to C.A. ← 854.2-879 Lithic SS + MUDSTONES
55° to C.A. ← 879-903 FG Tuff
45° to C.A. ← 903-957 Lithic SS + MUDSTONES