60001510

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 94-333
AUTHOR	L. Bernard; C. Muerhoff S. Fairchild
DATE OF DOC(S)	1994
MULTI_DIST Y / N? Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud Project; Hecla Mining Co. East Zone
COMMODITY If not obvious	gold silver
NOTES	Drill log; geology; assay; total depth 798' handwritten notes; receipt 31p.

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 5/29/08
Initials Date
DB: mah
Initials Date
SCANNED: NV Blue
Initials Date

Revised: 1/22/08

94-333 EAST ZONE

6000 1510 4010

60001510

Hecla
MINING COMPANY

ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER	94-333	LOCATION	EAST ZONE	REMARKS	
PAGE 1 OF 9		NORTHING	2204168.5	RC to 495	Rapid Log
DATE	12/12/94	EASTING	482781.7	CORE from 494 to 798	
LOGGED BY	LJB	ELEVATION	5308.0		
SCALE	RC 1"=20' CORE 1"=10'	AZIMUTH	8.5°		
TOTAL DEPTH	798'	INCLINATION	-90.0°		

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		0-25 gravel	20, 40, 60, 80, 100			0-25 mod-st FeOx
		25-85 20% dk brown clay and 80% dk brown hem chips coated in clay tr chl chips (lt green)		hem RH		25-85 hem rk w/ mod clays
		85-265 lt gray volcaniclastic chips wk wk-mod Tan-purple/brown hem matrix material both fine grain clasts + matrix				Wk FeOx 85-265 wk Argillic v. wk chl

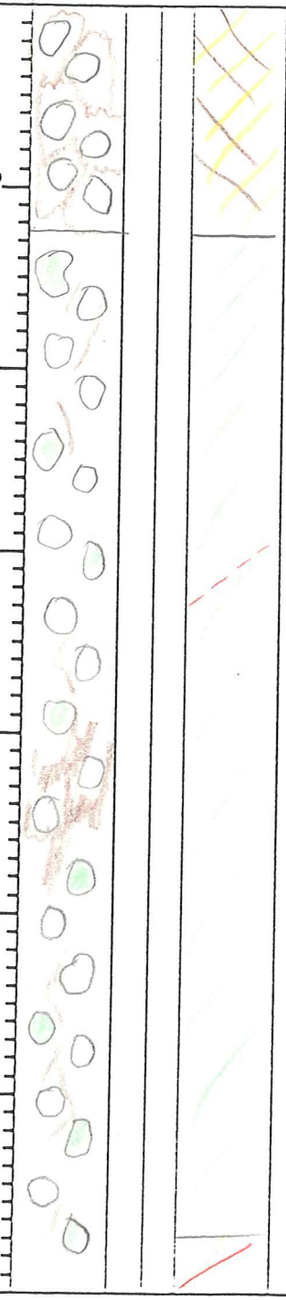
FROM	TO	W	Au	Ag	Au2	Ag2
0	15	15	ppb <5			
15	25	10	<5			
25	35	10	<5			
35	45	10	<5			
45	55	10	<5		<5 Au(R)	
55	65	10	<5			
65	75	10	<5			
75	85	10	<5			
85	95	10	<5			
95	105	10	6			

HOLE NUMBER 94-333 PAGE 2 OF 9

REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		85-265 lt gray volcanic bottles w wk-mod hem matrix material	120, 140, 160, 180, 200, 220, 240			wk argillic, v. wk chl
						wk py un
		increasing green chis				mod py un
						195-265 wk chl wk argillic
						wk sil

ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	Ag2
			ppb			
105	115	10	84			
115	125	10	<5			
125	135	10	146			
135	145	10	618			
145	155	10	52			
155	165	10	158			
165	175	10	118			
175	185	10	30			
185	195	10	8			
195	205	10	<5			
205	215	10	<5			
215	225	10	36			
225	235	10	2508		1944 (g)	
235	245	10	415			

HOLE NUMBER 94-333 PAGE 3 OF 9

REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		265-385 mixed med-lt green and tan/gray chips, fine grain clastic textures, minor hem matrix both clast + matrix fine grain fine py dissem	260 280 300 320 340 360 380			255-265 wh sil-agilla AH V. wh chl 265-385 wh chl wh py vnlets 375-415 stg ste vn. ± py

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
			ppb			
245	255	10	289			
255	265	10	49			
265	275	10	<5			
275	285	10	<5			
285	295	10	42			
295	305	10	252			
305	315	10	6			
315	325	10	<5			
325	335	10	<5			
335	345	10	76			
345	355	10	84			
355	365	10	58			
365	375	10	<5			
375	385	10	174		144 Au(R)	

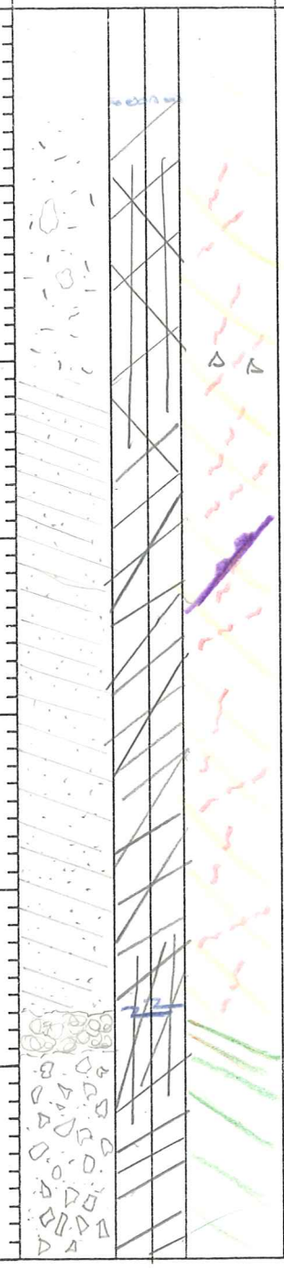
HOLE NUMBER 94-333 PAGE 4 OF 9

REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		385-455 fine grain Tan – lt gray Tuff w/ mod py dissem	400, 420, 440, 460, 480, 500, 520			385-495 wk sil-arg alt
						wk py veinlets
						Tr barite
						wk py vn
						wk py vn

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
			ppb			
385	395	10	83			
395	405	10	654			
405	415	10	668		594 Au(R)	
415	425	10	90			
425	435	10	470			
435	445	10	320			
445	455	10	232			
455	465	10	150			
465	475	10	101			
475	485	10	264			
485	495	10	374			

SEE 1" = 10' CORE LOGS

HOLE NUMBER 94-333 PAGE 5 OF 9

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		a soft 495-495.7 Fault Zone? ground rock in clay+chl Alt matrix 495.7-512 fine grain aph Tuff med gray/greenish fine clay-sericite alt mica? and/or feldspar, minor clasts gradational contact 512-547.5 med grain laminated Tuff lamination every 1/5" @ 70 minor chl/clay/py on lamination most joints ⊥ to lam 526 Lam @ 60 534 lam @ 60 545 lam @ 70 547.5-549.5 spheroidal clay-chl alt ash - soft sheared at top. 549.5-470 510' homolithic volcanic breccia angular to rounded clasts 1/8-1/4" in a matrix of similar comp. fine alt mica or feldspar in both clast and matrix, v. fine py dissem matrix supported wk chl med grain	500 510 520 530 540 550 560		Fault zone 495-515 1.3 frac/ft @ 50,40,0 504-507 broken zone 515-525 1.8 frac/ft @ 60,30,0 525-535 2 frac/ft @ 50,30 535-543 1 frac/ft @ 60,30 543-555 >2 frac/ft @ 15,50,0 547.5 4" shear rock 555-565 1.6 frac/ft @ 60	495-547.5 wk-mod dilational & fine controdal pyrite veinlets @ 15, 40 ⊥ to lam etc 507 clay+py filled hydro fr 4" 522 1/2" barite vn 547.5-470 wk chl-argillic alt minor py veinlets ⊥ to frac.

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
495	500	5	.019	.11		
500	505	5	.002	.08		
505	510	5	.002	.06		
510	515	5	.003	.07	.003	
515	520	5	.001	.05		
520	525	5	.001	.04		
525	530	5	.001	.06		
530	535	5	.001	.03		
535	540	5	.002	.07		
540	545	5	.001	.03		
545	547.5	2.5	<.001	<.02		
547.5	550	2.5	<.001	.02		
550	555	5	<.001	.03		
555	560	5	<.001	.02		

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
	570 in.	470-572.5 heterolithic volcaniclastic with fine grain brown hem matrix, pink, green & green angular to rounded clasts. 1/8" → 2" diam. 572.5-601 Sub but with fine chl matrix Matrix + clast supported. (heterolithic) 601-601.7 1/10-1/8" volcaniclastics and ashy matrix foliation @ 50 601.7-602.7 1/10-1/2" Volcaniclastics - heterolithic Contact @ 50 602.7 Ashy volcaniclastics 1/10-1/8" angular to rounded homolithic matrix supported clasts, chl-Argill clasts chl matrix bedding and Ashy foliation @ 70 occational larger clasts 620 foliation @ 60 625-626 grain supported heterolithic volcaniclastic 1/8-1/4" Angular to subangular clast, mostly chl 90%, minor sil-Argillic wk foliation bedding @ 60	570 580 590 600 610 620 630		565-575 1.5 frac/ft @ 55,70 575-585 1.2 frac/ft @ 60 585-595 1.5 frac/ft @ 60 586 → 9" shear @ 50 595-605 .5 frac/ft @ 40 605-615 .6 frac/ft @ 75,35 615-625 .8 frac/ft 75,60,40 625-635 1.5 frac/ft @ 60	470-572.5 hem matrix chl, argill, wk sil clasts 572.5-601 chl matrix chl & argillic clasts mod chl 601-625 wk chl with 1/8-1/4" blocks of py rare unbrk w/ qtz-marc. 626 frac w/ barite 625-660 mod chl alt. rare fracture @ qtz-marc.

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
560	565	5	.009	.07		
565	570	5	<.001	.03		
570	572.5	2.5	<.001	<.02		
572.5	575	2.5	<.001	<.02		
575	580	5	<.001	<.02		
580	584.5	4.5	<.001	<.02		
584.5	590	5.5	<.001	<.02		
590	595	5	<.001	.02		
595	600	5	.002	.04	.002	
600	605	5	.004	.04		
605	610	5	.001	.02		
610	615	5	.001	.02		
615	620	5	<.001	.02		
620	625	5	<.001	<.02		
625	630	5	.002	.02		

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		626 - 655.7 SAB but matrix supported Some larger clast 1/2 - 2" V. wk bedding @60 Ashy chl matrix	640 650		631 → 4" shear @ 65 635-645 1.6 frac/ft @70 638.7 1 1/2" band of disseminated py, healed shear ?? 645-655 .7 frac/ft @ 50-60 15 655-665 .4 frac/ft @ 50-60	
		655.7 - 660 Clast supported MOZAIC volcanic clasts in ashy matrix Angular to rounded 1/8 - 1" heterolithic green chl pink rk feldspathic phenos	660		658.2 → 10" wk shear @ 60	660 - 677 Mod silicic rk 1-2 py veinlets (< 1/8") per foot
		660 - 690 Volcanic breccia Tuff, dense silicic rock rounded partially assimulated heterolithic clasts, floating in matrix fine - med grain matrix varies in color: 660-665 yellow 665 - 672 gray/yellow/white 672 - 677 pink/green/gray 677 - 685 brown hematitic 685 - 90 Jarocitic - hematitic 1/4 - 3" clasts Poss qtz pheno dike ?? finer grain clasts 1/8 - 1/4" clast	670 680		665-675 .6 frac/ft @ 20 675-685 .6 frac/ft @ 45 684 1" chl shear @50 685-695 .6 frac/ft @ 60, 80	677 - 690 Mod sil, wk hem 1-2 py veinlets/ft
		690 - 708.5 Ashy homolithic volcaniclastic wk lamination and orientation of elongated clasts @ 80-90 1/10 - 1/8 → 1/10 - 1/4"	690 700		690 → 3" wk chl shear @ 90 695-705 .6 frac/ft @50	690 - 708.5 wk chl matrix wk chl and argillic clasts

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
630	635	5	<.001	<.02		
635	640	5	<.001	<.02		
640	645	5	.003	.06		
645	650	5	.012	.03		
650	655	5	.019	.05		
655	660	5	.001	.02		
660	665	5	.008	2.26		
665	666	1	.017	5.56	.014	
666	670	4	.023	.21		
670	675	5	.003	.09		
675	677	2	.006	.58		
677	680	3	.001	.05		
680	685	5	.003	.06		
685	690	5	.002	.04		
690	695	5	.003	.06		
695	700	5	.002	.10		

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
		708.5 - 716 hydro/Tectonicly brecciated volcaniclastic, heterolithic clasts silica saturated green chl clasts and silicic tan/gray clasts 716 - 720.5 mainly bk & white vn material with minor silicic tectonic bx volcaniclastic 720.5 - 723.5 silica saturated tectonic breccia and vein material 723.5 - 784 EOH med gray fine-med grain volcaniclastic Tuff. homolithic clasts, some of which are glassy and lapilli or spherulitic, other are very ashy str to mod crackle bx some clasts are sort like, most have been fractured by repeated pre + post mineral hydro bx Is this term nec. to preface each sent?	710 720 730 740 750 760 770		705 - 715 1st frac/ft @ 60 711.5 - 713 broken Rock 713 1" ground rk and bk/gray gouge @ 60 715 - 725 .1 frac/ft @ 60 725 - 735 .6 frac/ft @ 40, 50 735 - 745 .8 frac/ft @ 60 745 - 755 .4 frac/ft @ 80, 10 755 - 765 .7 frac/ft @ 30, 40, 50 762 1" white clay gouge @ 50 765 - 775 .7 frac/ft @ 50	minor 711 barite on frac. 705 - 716 mod sil w/ 1-3 white + dk sy stg vn 1/8-1/4" fine sulf. 716 - 720.5 silica saturated Tectonic bx w/ fractured py veinlets 720 - 723.5 bk, dk gy, & wh qtz vn w/ fine disseminated sulfide, sil tectonic bx with bx vein material 723.5 - 740.5 v. str crackle bx with qtz - marc - py cements, and white sil clay - marc veinlets, 740.5 - 757 mod crackle bx w/ qtz - sulf cements 757 → 6" clay + marcasite filled rubble bx 757.5 - 798. EOH str crackle bx w/ sil chl cements ± fine sulf and qtz - marc fem and clay - marc fills

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Au(AA3) ~~Age~~
700	705	5	.004	.06		
705	708.5	3.5	.020	.07		
708.5	713	4.5	.016	.71		
713	717	4	.016	.71		
717	721	4	.012	1.88	.009	.017
721	723.5	2.5	.028	3.04	.010	
723.5	725	1.5	.016	.30	.030	.010
725	730	5	.042	.80		
730	735	5	.059	.52	.077 (2)	
735	740	5	.036	1.08		
740	745	5	.008	1.61		
745	750	5	.022	.17		
750	755	5	.004	1.34		
755	760	5	.012	40.66		
760	765	5	.006	5.26		
765	770	5	.002	.49		

HOLE NUMBER 94-333 PAGE 9 OF 9

%REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2	Ag2
		SEE ABOVE				SEE Above	770	775	5	.001	.04		
					775-785 .2 frac/ft @40		775	780	5	.004	.06		
			780				780	785	5	.003	.07		
					785-795 .7 frac/ft @65		785	790	5	.007	.41		
							790	795	5	.010	.98		
			790				795	798	3	.008	.09		
					795-798 .1 frac/ft @40								
			798										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # 94-333 DATE: 10-4-94 LOGGED BY: RK PAGE 1 OF 3

DRILL RUN FROM	DRILL RUN TO	SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH DOWNHOLE DEPTH	ROCK STRENGTH POINT LOAD INDEX (psi)	FRACTURE DATA FRACTURE DENSITY/FT.	FRACTURE DATA AVG. ANGLE TO C.A.	FRACTURE DATA ROUGHNESS	FRACTURE DATA INFILL	DENSITY DATA DOWNHOLE DEPTH	DENSITY DATA SAMPLE WEIGHT (g)	DENSITY DATA DISPLACEMENT (cc)	DENSITY DATA DENSITY (g/cc)
495	505	81	96	.64	500	R2	1	50⊥40 0	R-S	nil	500	486	200	2.43
505	515	78	98	.34	510	R2	1.6	50⊥40 0	R	1/10" clay	510	488	198	2.46
515	525	87	98	.41	520	R3	1.8	60, 30 0	R-S	clay films	520	402	165	2.44
525	535	81	95	.35	530	R3	2	50, 30	S	clay films	530	377.5	155	2.43
535	543	73	88	.87	539	R3	1	60, 30	R	clays py films	539	322	130	2.47
543	555	83	102	.55	549	R2	>2+	15, 50 0	S	chl films	549	623.5	255	2.45
555	565	90	92	.71	560	R2	1.6	60	R	chl films	560	484	200	2.42
565	575	86	99	.70	570	R2	1.5	55, 70	S	chl films	570	507	210	2.42
575	585	97	100	.67	580	R2	1.2	60	R	chl films	580	460	185	2.48

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # 94-333 DATE: 10/5/94 LOGGED BY: LJB PAGE 2 OF 3

	DRILL RUN FROM	DRILL RUN TO	SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH DOWNHOLE DEPTH	ROCK STRENGTH POINT LOAD INDEX (psi)	FRACTURE DATA FRACTURE DENSITY/FT.	FRACTURE DATA AVG. ANGLE TO C.A.	FRACTURE DATA ROUGHNESS	FRACTURE DATA INFILL	DENSITY DATA DOWNHOLE DEPTH	DENSITY DATA SAMPLE WEIGHT (g)	DENSITY DATA DISPLACEMENT (cc)	DENSITY DATA DENSITY (g/cc)	
1	585	595	91	100	.88		R3	1.5	@60	R	nil chloritic Rock	591	523.2	225	2.3	
2	595	605	101	101	.97		R3	.5	40	R	SAB	599.5	542.1	225	2.4	
3	605	615	97	97	.96		R3	.6	75, 35	R	SAB	609	554.0	230	2.4	
4	615	625	93	97	.93		R3	.8	60, 40 75	R	SAB	621	527.5	240	2.2	
5	625	635	.92	102	.85		R3	1.5	60	R	SAB	628	617.7	255	~~2.7~~	2.42
6	635	645	98	100	.84		R3	1.6	70	R	SAB	641	515.0	205	2.5	
7	645	655	99	99	.64		R3	.7	50-60 15	R	qtz cont + marcasite	649.5	484.9	205	2.4	
8	655	665	99	101	.85		R3	.4	50-60	R	nil	661	619.4	245	2.5	
9	665	675	99	99	.80		R3	.6	20	R	qtz cont chl+py films	669	723.6	280	2.6	
10	675	685	99	100	.87		R3	.6	45	R	chl films	677	788.8	320	2.5	
11	685	695	97	100	.97		R3	.6	60, 80	S	chl film	686	841.6	340	2.5	

1730
1450
280

660
320
340

605
320
285

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # 94-333 DATE: 10/5/94 LOGGED BY: LJB PAGE 3 OF 3

	DRILL RUN FROM	DRILL RUN TO	SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH DOWNHOLE DEPTH	ROCK STRENGTH POINT LOAD INDEX (psi)	FRACTURE DATA FRACTURE DENSITY/FT.	FRACTURE DATA AVG. ANGLE TO C.A	FRACTURE DATA ROUGHNESS	FRACTURE DATA INFILL	DENSITY DATA DOWNHOLE DEPTH	DENSITY DATA SAMPLE WEIGHT (g)	DENSITY DATA DISPLACEMENT (cc)	DENSITY DATA DENSITY g/cc
12	695	705	96	98	.89		R 3	.6	50	R	clay films	699	693.1	285	2.4
13	705	715	88	98	.79		R 4	1+ 8" rubble	60	R	qtz barite	709	674.6	260	2.6
14	715	725	98	98	.78		R 4	1	60	R, (lk)	qtz-py clay	721	558.3	220	vein 2.5
15	725	735	102	102	.88		R 4	.6	40, 50	R	sab	730	564.1	230	2.4
16	735	745	98	73+25 98	66+22 .88		R 4	.8	60	R	sab	741	598.5	210	2.4
	745	755	99	99	.99		R4	.4	80, 10	R	"	750	475	190	2.5
	755	765	99	100	.82		R3	.7	30, 40, 50	R	clay films	760	519.5	215	2.42
	765	775	100	100	.92		R3	.7	50	R-K	nil minor clay	770	465	200	2.33
	775	785	100	100	.97		RB	.2	40	R	clay films	780	525	215	2.44
	785	795	100	100	.95		R3	.7	65	VR	clay film py coating	790	642	260	2.47
	795	798	112	112	.75		R3	.1	40	VR	clay films				

1900

American Assay Laboratories

INVOICE

Remit To: P.O. Box 71060
Reno, NV 89570
Phone No.: 702-356-0606
Fax No.: 702-356-1413

AMERICAN ASSAY LABORATORIES
1500 GLENDALE AVE.
SPARKS, NV 89431

(702) 356-0606

INVOICE NO: SP 0030955-IN
INVOICE DATE: 09/30/94

East Zone

INVOICE TO:
HECLA MINING COMPANY
1225 UPPER VALLEY ROAD
P. O. BOX 1861
LOVELOCK NV 89419

HECLA MINING COMPANY
1225 UPPER VALLEY ROAD
P. O. BOX 1861
LOVELOCK NV 89419

CUSTOMER P.O.	PROJECT	TERMS
C. MUERHOFF	ROSEBUD 94-333	NET 30

QUANTITY	DESCRIPTION	PRICE	AMOUNT
19	SAMPLES RECEIVED	.00	.00
19	DRYING	.80	39.20
19	JAW CRUSHING CHARGE	1.20	58.80
19	SPLITTING CHARGE	.50	24.50
49	KEEGOR MILLING CHARGE	2.00	98.00
19	Au (1 A.T. FIRE ASSAY)	7.25	355.25
1	Au ANALYSES/GRAVIMETRIC	7.75	7.75

OK to pay
P.O.# 400027, line 4
Charles V. Muerhoff

NET INVOICE:	583.50
LESS DISCOUNT:	175.05
FREIGHT:	.00
INVOICE TOTAL:	408.45

ANALYSIS REPORT

American Assay Laboratories

P.O. BOX 71060
RENO, NV,,U.S.A.,
Ph.1-702-356-0606, Fax.1-702-356-1413
Telex:

HECLA MINING CO.

COPIES TO : CHARLIE MUERHOFF
:
:
:

CLIENT REFERENCE No: 94-333
LABORATORY JOB No. : SP030955
SAMPLE TYPE :

RECEIVED : 20 SEP 1994
REPORTED :
No. SAMPLES : 49

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au	FA30	15%	ppb	5
Au(R)	FA30	15%	ppb	5
AuGRAV	GRAV	15%	ppb	5

SIGNATORY : Sue Faircloth M.S.

AMERICAN ASSAY LABORATORIES
ANALYSIS REPORT

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 94-333
JOB NUMBER : SP030955
REPORTED :

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	AuGRAV GRAV ppb
94-333 00-15	<5		
94-333 15-25	<5		
94-333 25-35	<5		
94-333 35-45	<5		
94-333 45-55	<5	<5	
94-333 55-65	<5		
94-333 65-75	<5		
94-333 75-85	<5		
94-333 85-95	<5		
94-333 95-105	6		
94-333 105-115	84		
94-333 115-125	<5		
94-333 125-135	146		
94-333 135-145	618		
94-333 145-155	52		
94-333 155-165	158		
94-333 165-175	118		
94-333 175-185	30		
94-333 185-195	8		
94-333 195-205	<5		
94-333 205-215	<5		
94-333 215-225	36		
94-333 225-235	2508		1944
94-333 235-245	415		
94-333 245-255	289		

AMERICAN ASSAY LABORATORIES
ANALYSIS REPORT

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 94-333
JOB NUMBER : SP030955
REPORTED :

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	AuGRAV GRAV ppb
94-333 255-265	49		
94-333 265-275	<5		
94-333 275-285	<5		
94-333 285-295	42		
94-333 295-305	252		
94-333 305-315	6		
94-333 315-325	<5		
94-333 325-335	<5		
94-333 335-345	76		
94-333 345-355	84		
94-333 355-365	58		
94-333 365-375	<5		
94-333 375-385	174	144	
94-333 385-395	83		
94-333 395-405	654		
94-333 405-415	668	594	
94-333 415-425	90		
94-333 425-435	470		
94-333 435-445	320		
94-333 445-455	232		
94-333 455-465	150		
94-333 465-475	101		
94-333 475-485	264		
94-333 485-495	374		

ANALYSIS REPORT

American Assay Laboratories

P.O. BOX 71060
RENO, NV,,U.S.A.,
Ph.1-702-356-0606, Fax.1-702-356-1413
Telex:

HECLA MINING CO.

COPIES TO : CHARLIE MUERHOFF
:
:
:

CLIENT REFERENCE No: 94-333
LABORATORY JOB No. : SP030955
SAMPLE TYPE :

RECEIVED : 20 SEP 1994
REPORTED :
No. SAMPLES : 49

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au	FA30	15%	ppb	5
Au(R)	FA30	15%	ppb	5
AuGRAV	GRAV	15%	ppb	5

SIGNATORY : Sue Faircloth M.S.

AMERICAN ASSAY LABORATORIES
ANALYSIS REPORT

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 94-333
JOB NUMBER : SP030955
REPORTED :

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	AuGRAV GRAV ppb
94-333 00-15	<5		
94-333 15-25	<5		
94-333 25-35	<5		
94-333 35-45	<5		
94-333 45-55	<5	<5	
94-333 55-65	<5		
94-333 65-75	<5		
94-333 75-85	<5		
94-333 85-95	<5		
94-333 95-105	6		
94-333 105-115	84		
94-333 115-125	<5		
94-333 125-135	146		
94-333 135-145	618		
94-333 145-155	52		
94-333 155-165	158		
94-333 165-175	118		
94-333 175-185	30		
94-333 185-195	8		
94-333 195-205	<5		
94-333 205-215	<5		
94-333 215-225	36		
94-333 225-235	2508		1944
94-333 235-245	415		
94-333 245-255	289		

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT

American Assay Laboratories

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 94-333
JOB NUMBER : SP030955
REPORTED :

SAMPLES	Au FA30 ppb	Au(R) FA30 ppb	AuGRAV GRAV ppb
94-333 255-265	49		
94-333 265-275	<5		
94-333 275-285	<5		
94-333 285-295	42		
94-333 295-305	252		
94-333 305-315	6		
94-333 315-325	<5		
94-333 325-335	<5		
94-333 335-345	76		
94-333 345-355	84		
94-333 355-365	58		
94-333 365-375	<5		
94-333 375-385	174	144	
94-333 385-395	83		
94-333 395-405	654		
94-333 405-415	668	594	
94-333 415-425	90		
94-333 425-435	470		
94-333 435-445	320		
94-333 445-455	232		
94-333 455-465	150		
94-333 465-475	101		
94-333 475-485	264		
94-333 485-495	374		

American Assay Laboratories

INVOICE

Remit To: P.O. Box 71060
Reno, NV 89570
Phone No.: 702-356-0606
Fax No.: 702-356-1413

AMERICAN ASSAY LABORATORIES
1500 GLENDALE AVE.
SPARKS, NV 89431

(702) 356-0606

INVOICE NO: SP 0031226-IN
INVOICE DATE: 10/26/94

INVOICE TO:
HECLA MINING COMPANY
1225 UPPER VALLEY ROAD
P. O. BOX 1861
LOVELOCK NV 89419

HECLA MINING COMPANY
1225 UPPER VALLEY ROAD
P. O. BOX 1861
LOVELOCK NV 89419

CUSTOMER P.O.	PROJECT	TERMS
C. MUERHOFF	ROSEBUD 94-333	NET 30

QUANTITY	DESCRIPTION	PRICE	AMOUNT
67	SAMPLES RECEIVED	.00	.00
67	JAW CRUSHING CHARGE	2.40	160.80
67	COARSE MILLING CHARGE	8.00	536.00
67	SPLITTING CHARGE	2.00	134.00
67	KEEGOR MILLING CHARGE	2.00	134.00
67	BLENDING CHARGE	1.00	67.00
67	RING MILLING CHARGE	1.50	100.50
67	Au (2 A.T. FIRE ASSAY)	9.50	636.50
1	Au ANALYSES/GRAVIMETRIC	10.00	10.00
67	HYDROCHLORIC/NITRIC DIGESTION	2.00	134.00
67	Ag ANALYSES	.80	53.60
7	Ag (ore grade) ANALYSES	5.00	35.00

OK to pay
~~140140~~ 140195-477
Charles Muerhoff

NET INVOICE:	2,001.40
LESS DISCOUNT:	600.42
FREIGHT:	.00
INVOICE TOTAL:	1,400.98

ANALYSIS REPORT

American Assay Laboratories Inc.

P.O. BOX 71060
RENO, NV,,U.S.A.,
Ph.1-702-356-0606, Fax.1-702-356-1413
Telex:

HECLA MINING CO.

COPIES TO : CHARLIE MUERHOFF

:

:

:

CLIENT REFERENCE No: 94-333

LABORATORY JOB No. : SP031226

SAMPLE TYPE :

RECEIVED : 10 OCT 1994

REPORTED : 24 OCT 1994

No. SAMPLES : 67

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au(OZ)	FA60	15%	OPT	0.001
Au(RZ)	FA60	15%	OPT	0.001
Au RZ2	FA60	15%	OPT	0.001
AuGRAV	GRAV	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Sue Faircloth M.S.

AMERICAN ASSAY LABORATORIES
ANALYSIS REPORT

American Assay Laboratories Inc.

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 94-333
JOB NUMBER : SP031226
REPORTED : 24 OCT 1994

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Au RZ2 FA60 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
94-333 495-500	0.019				0.11
94-333 500-505	0.002				0.08
94-333 505-510	0.002				0.06
94-333 510-515	0.003	0.003			0.07
94-333 515-520	0.001				0.05
94-333 520-525	0.001				0.04
94-333 525-530	0.001				0.06
94-333 530-535	0.001				0.03
94-333 535-540	0.002				0.07
94-333 540-545	0.001				0.03
94-333 545-547.5	<0.001				<0.02
94-333 547.5-550	<0.001				0.02
94-333 550-555	<0.001				0.03
94-333 555-560	<0.001				0.02
94-333 560-565	0.009				0.07
94-333 565-570	<0.001				0.03
94-333 570-572.5	<0.001				<0.02
94-333 572.5-575	<0.001				<0.02
94-333 575-580	<0.001				<0.02
94-333 580-584.5	<0.001				<0.02
94-333 584.5-590	<0.001				<0.02
94-333 590-595	<0.001				0.02
94-333 595-600	0.002	0.002			0.04
94-333 600-605	0.004				0.04
94-333 605-610	0.001				0.02

AMERICAN ASSAY LABORATORIES
ANALYSIS REPORT

American Assay Laboratories Inc.

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 94-333
JOB NUMBER : SP031226
REPORTED : 24 OCT 1994

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Au RZ2 FA60 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
94-333 610-615	0.001				0.02
94-333 615-620	<0.001				0.02
94-333 620-625	<0.001				<0.02
94-333 625-630	0.002				0.02
94-333 630-635	<0.001				<0.02
94-333 635-640	<0.001				<0.02
94-333 640-645	0.003				0.06
94-333 645-650	0.012				0.03
94-333 650-655	0.019				0.05
94-333 655-660	0.001				0.02
94-333 660-665	0.008				2.26
94-333 665-666	0.017	0.014			5.56
94-333 666-670	0.023				0.21
94-333 670-675	0.003				0.09
94-333 675-677	0.006				0.59
94-333 677-680	0.001				0.05
94-333 680-685	0.003				0.06
94-333 685-690	0.002				0.04
94-333 690-695	0.003				0.06
94-333 695-700	0.002				0.10
94-333 700-705	0.004				0.06
94-333 705-708.5	0.020				0.07
94-333 708.5-713	0.016				0.71
94-333 713-717	0.016				0.71
94-333 717-721	0.012	0.009	0.017		1.88

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT

American Assay Laboratories Inc.

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 94-333
JOB NUMBER : SP031226
REPORTED : 24 OCT 1994

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Au RZ2 FA60 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
94-333 721-723.5	0.028	0.010			3.04
94-333 723.5-725	0.016	0.030	0.010		0.30
94-333 725-730	0.042				0.80
94-333 730-735	0.059			0.077	0.52
94-333 735-740	0.036				1.08
94-333 740-745	0.008				1.61
94-333 745-750	0.022				0.17
94-333 750-755	0.004				1.34
94-333 755-760	0.012				40.66
94-333 760-765	0.006				5.26
94-333 765-770	0.002				0.49
94-333 770-775	0.001				0.04
94-333 775-780	0.004				0.06
94-333 780-785	0.003				0.07
94-333 785-790	0.007				0.41
94-333 790-795	0.010				0.98
94-333 795-798	0.008				0.09

ANALYSIS REPORT

American Assay Laboratories Inc.

P.O. BOX 71060
RENO, NV,,U.S.A.,
Ph.1-702-356-0606, Fax.1-702-356-1413
Telex:

HECLA MINING CO.

COPIES TO : CHARLIE MUERHOFF

:

:

:

CLIENT REFERENCE No: 94-333

LABORATORY JOB No. : SP031226

SAMPLE TYPE :

RECEIVED : 10 OCT 1994

REPORTED : 24 OCT 1994

No. SAMPLES : 67

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au(OZ)	FA60	15%	OPT	0.001
Au(RZ)	FA60	15%	OPT	0.001
Au RZ2	FA60	15%	OPT	0.001
AuGRAV	GRAV	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Sue Faircloth M.S.

AMERICAN ASSAY LABORATORIES
ANALYSIS REPORT

American Assay Laboratories Inc.

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 94-333
JOB NUMBER : SP031226
REPORTED : 24 OCT 1994

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Au RZ2 FA60 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
94-333 495-500	0.019				0.11
94-333 500-505	0.002				0.08
94-333 505-510	0.002				0.06
94-333 510-515	0.003	0.003			0.07
94-333 515-520	0.001				0.05
94-333 520-525	0.001				0.04
94-333 525-530	0.001				0.06
94-333 530-535	0.001				0.03
94-333 535-540	0.002				0.07
94-333 540-545	0.001				0.03
94-333 545-547.5	<0.001				<0.02
94-333 547.5-550	<0.001				0.02
94-333 550-555	<0.001				0.03
94-333 555-560	<0.001				0.02
94-333 560-565	0.009				0.07
94-333 565-570	<0.001				0.03
94-333 570-572.5	<0.001				<0.02
94-333 572.5-575	<0.001				<0.02
94-333 575-580	<0.001				<0.02
94-333 580-584.5	<0.001				<0.02
94-333 584.5-590	<0.001				<0.02
94-333 590-595	<0.001				0.02
94-333 595-600	0.002	0.002			0.04
94-333 600-605	0.004				0.04
94-333 605-610	0.001				0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT

American Assay Laboratories Inc.

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 94-333
JOB NUMBER : SP031226
REPORTED : 24 OCT 1994

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Au RZ2 FA60 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
94-333 610-615	0.001				0.02
94-333 615-620	<0.001				0.02
94-333 620-625	<0.001				<0.02
94-333 625-630	0.002				0.02
94-333 630-635	<0.001				<0.02
94-333 635-640	<0.001				<0.02
94-333 640-645	0.003				0.06
94-333 645-650	0.012				0.03
94-333 650-655	0.019				0.05
94-333 655-660	0.001				0.02
94-333 660-665	0.008				2.26
94-333 665-666	0.017	0.014			5.56
94-333 666-670	0.023				0.21
94-333 670-675	0.003				0.09
94-333 675-677	0.006				0.59
94-333 677-680	0.001				0.05
94-333 680-685	0.003				0.06
94-333 685-690	0.002				0.04
94-333 690-695	0.003				0.06
94-333 695-700	0.002				0.10
94-333 700-705	0.004				0.06
94-333 705-708.5	0.020				0.07
94-333 708.5-713	0.016				0.71
94-333 713-717	0.016				0.71
94-333 717-721	0.012	0.009	0.017		1.88

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT

American Assay Laboratories Inc.

CLIENT : HECLA MINING CO.
PROJECT : ROSEBUD
REFERENCE : 94-333
JOB NUMBER : SP031226
REPORTED : 24 OCT 1994

SAMPLES	Au(OZ) FA60 OPT	Au(RZ) FA60 OPT	Au RZ2 FA60 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
94-333 721-723.5	0.028	0.010			3.04
94-333 723.5-725	0.016	0.030	0.010		0.30
94-333 725-730	0.042				0.80
94-333 730-735	0.059			0.077	0.52
94-333 735-740	0.036				1.08
94-333 740-745	0.008				1.61
94-333 745-750	0.022				0.17
94-333 750-755	0.004				1.34
94-333 755-760	0.012				40.66
94-333 760-765	0.006				5.26
94-333 765-770	0.002				0.49
94-333 770-775	0.001				0.04
94-333 775-780	0.004				0.06
94-333 780-785	0.003				0.07
94-333 785-790	0.007				0.41
94-333 790-795	0.010				0.98
94-333 795-798	0.008				0.09

SAMPLE SUBMITTAL FORM

American Assay Laboratories Inc.

Sparks Office
1500 Glendale Ave.
Nevada 89431
Box 71060
Reno, NV. 89570
Telephone
(702) 356-0606
Fax
(702) 356-1413

Elko Office
2320 Last Chance Rd.
Nevada 89801
Box 2908
Elko, NV. 89801
Telephone
(702) 738-9100
Fax
(702) 738-2594

Company: Hecla Mining Co

Address:

Telephone Number: ( ) Fax Number: ( )

Project Name: Rosebud Purchase Order Number:

Transport Company: Waybill Number:

Date Shipped: 10/7/94 Number of Packages: 20 [ ] Prepaid [ ] Collect

Sampled 10/5

ANALYSIS REQUIRED

94-333	SAMPLE	TYPE	ELEMENTS REQUIRED
495-500	565-570	CORE	Au & Ag 2 AT FA
500-505	570-572.5		w/ Hecla-Rosebud
505-510	572.5-575		custom prep.
510-515	575-580		
515-520	~~580-584.5~~		* if Au ≥ .05 opt
520-525	580-584.5		then Repeat with
525-530			grav. finish.
530-535			
535-540			
540-545			
545-547.5			
547.5-550			
550-555			
555-560			
560 565			

COARSE REJECTS (Normally Discarded)

[ ] Return COD after analysis complete
[ ] By prior arrangements

PULPS (Normally Stored Free For One Month)

[ ] Discard after one month
[ ] Return COD after one month
[ ] By prior arrangements

RESULTS AND INVOICES TO BE SENT TO:

Please mark invoice person and address [I]

(1) Charlie Muerhoff

(2)

(3)

Comments:

CLIENT FILE COPY

SAMPLE SUBMITTAL FORM

American Assay Laboratories Inc.

Sparks Office
1500 Glendale Ave.
Nevada 89431
Box 71060
Reno, NV. 89570
Telephone
(702) 356-0606
Fax
(702) 356-1413

Elko Office
2320 Last Chance Rd.
Nevada 89801
Box 2908
Elko, NV. 89801
Telephone
(702) 738-9100
Fax
(702) 738-2594

Company: Hecla Mining Company

Address:

Telephone Number: ( ) Fax Number: ( )

Project Name: Rosebud Purchase Order Number:

Transport Company: Waybill Number:

Date Shipped: 10/7/94 Number of Packages: 47 [ ] Prepaid [ ] Collect

SAMPLED 10/6

ANALYSIS REQUIRED

94-333 SAMPLE			TYPE	ELEMENTS REQUIRED
584.5 - 590	660 - 665	721 - 723.5		790 - 795
590 - 595	665 - 666	723.5 - 725		795 - 798
595 - 600	666 - 670	725 - 730	CORE	
600 - 605	670 - 675	730 - 735		Au & Ag 2AT FA
605 - 610	675 - 677	735 - 740		w/ Hecla - Rosebud
610 - 615	677 - 680	740 - 745		Custom Prep.
615 - 620	680 - 685	745 - 750		
620 - 625	685 - 690	750 - 755		* if Au ≥ .05 OPT
625 - 630	690 - 695	755 - 760		then repeat with
630 - 635	695 - 700	760 - 765		Grav. finish
635 - 640	700 - 705	765 - 770		
640 - 645	705 - 708.5	770 - 775		
645 - 650	708.5 - 713	775 - 780		
650 - 655	713 - 717	780 - 785		
655 - 660	717 - 721	785 - 790		

COARSE REJECTS (Normally Discarded)

[ ] Return COD after analysis complete
[ ] By prior arrangements

PULPS (Normally Stored Free For One Month)

[ ] Discard after one month
[ ] Return COD after one month
[ ] By prior arrangements

RESULTS AND INVOICES TO BE SENT TO:

Please mark invoice person and address [I]

(1) Charlie Muerhoff

(2)

(3)

Comments:

CLIENT FILE COPY

SAMPLE SUBMITTAL FORM

American Assay Laboratories Inc.

Sparks Office
1500 Glendale Ave.
Nevada 89431
Box 71060
Reno, NV. 89570
Telephone
(702) 356-0606
Fax
(702) 356-1413

Elko Office
2320 Last Chance Rd.
Nevada 89801
Box 2908
Elko, NV. 89801
Telephone
(702) 738-9100
Fax
(702) 738-2594

Company: Hecla Mining Co

Address:

Telephone Number: ( ) Fax Number: ( )

Project Name: Rosebud Purchase Order Number:

Transport Company: Waybill Number:

Date Shipped: 5/16/94 Number of Packages: 49 [ ] Prepaid [ ] Collect

ANALYSIS REQUIRED

SAMPLE	TYPE	ELEMENTS REQUIRED
94-333 0-15	RC	Au 1AT FA
15-25		
25-35		
35-45		
10 ft		
samples		
465-475		
475-485		
485-495		

COARSE REJECTS (Normally Discarded)

[ ] Return COD after analysis complete
[ ] By prior arrangements

PULPS (Normally Stored Free For One Month)

[ ] Discard after one month
[ ] Return COD after one month
[ ] By prior arrangements

RESULTS AND INVOICES TO BE SENT TO:

Please mark invoice person and address [I]

(1) Charlie Muerhoff

(2)

(3)

Comments:

CLIENT FILE COPY