60001779

Mining District File Summary Sheet

DISTRICT	Rosebud
DIST_NO	4010
COUNTY If different from written on document	Pershing
TITLE If not obvious	Rosebud Mine
AUTHOR	Wineteer C; Muerhoff, C; Bernard, L
DATE OF DOC(S)	
MULTI_DIST Y / N? Additional Dist_Nos:	
QUAD_NAME	Sulphur 7½'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Hecla Mining Co.; North Zone; East Zone
COMMODITY If not obvious	gold; silver
NOTES	Single page logs for drill holes: 94-306C; 94-308C to 94-310C; 94-312C; 94-314C to 94-316C, 94-317, 94-319C to 94-321C, 94-324C, 94-325C, 94-327, 94-328C, 94-329, 94-330C, 94-331, 94-332C to 94-334C, 94-335, 94-336C to 94-340C, D-7-94, D-14-94, D-16-94, D-23-94 to D-25-94, D-29-94, D-32-94, D-35-94, D-38-94, D-42-94, D-43-94, D-45-94, D-47-94, D-48-94 D-50-94, D-50A-94, D-52-94, D-54-94, D-58-94, D-60-94, D-62-94 D-64-94, D-74-94, D-81-94, D-84-94, D-85-94

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)

70p

SS: DP 2/29/08
Initials Date

DB:
Initials Date

SCANNED:
Initials Date

Revised: 1/22/08

DRILL LOGS

60001779

4010

6000 1779 4010

HECLA MINING COMPANY
ROSEBUD PROJECT

NORTH ZONE

HOLE ID: 94-306C

AZIMUTH: 296.5°

INCLINATION: -89.0°

LOGGED BY: C. Wineteer

DATE: 11/21/94

PAGE ___1___ OF ___1___

DRILL RUN FROM	TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
894.0	904.0	100	97	73	R3-R4	1.2	55	S	chl	2.48	n/a
904.0	914.0	100	97	64	R3-R4	0.8	70/15	S	chl+py	2.58	n/a
914.0	924.0	100	100	82	R3-R4	0.4	70	S,R	chl	2.55	n/a
924.0	934.0	98	98	87	R3-R4	0.5	70	S	ser+chl	2.53	n/a
934.0	944.0	100	98	79	R3-R4	0.7	65	R	ser+chl+sulf	2.56	n/a
944.0	954.0	100	98	80	R3-R4	1.1	80/40/20	R	ser+chl+sulf	2.50	n/a
954.0	964.0	100	97	75	R3	1.2	80/40/20	R,S	ser+chl+ill+bar+sulf	2.47	n/a
964.0	974.0	98	96	53	R3	1.5	5/80	R	ser+chl+ill+bar+sulf	2.55	n/a
974.0	984.0	100	100	84	R3,R4	1.4	80/5	R,S	chl+ser+sulf	2.41	n/a
984.0	994.0	98	98	76	R4	1.4	50/80/5	S	chl+ser+sulf	2.59	n/a
994.0	1004.0	100	100	90	R3-R4	0.6	70	R	chl+ser+sulf	2.51	n/a
1004.0	1014.0	98	97	90	R3-R4	0.6	5/85	R	chl+Q+sulf	2.47	n/a
1014.0	1024.0	100	100	88	R3-R4	1.2	80/15	S	ser+chl+sulf	2.57	n/a
1024.0	1034.0	98	94	65	R3-R4	1.3	55	S	ser	2.58	n/a
1034.0	1044.0	100	100	74	R2-R3	0.9	60	S-K	post-sulf+micro bx	2.67	n/a
1044.0	1054.0	100	100	87	R3	0.6	80	R	micro bx	2.46	n/a
1054.0	1064.0	100	93	67	R1,R3-R4	1.1	30/80/50	S-K	fault bx+clay gouge	2.47	n/a
1064.0	1074.0	100	94	75	R2-R3	1.0	35/60	R	ser+CaCO3+py	2.41	n/a
1074.0	1084.0	97	95	89	R3	0.3	40	R	ser+CaCO3+py+bx	2.43	n/a
1084.0	1094.0	99	98	88	R3	0.4	70	R	ser+chl	2.45	n/a
1094.0	1104.0	100	99	85	R3	0.7	45/80	R	ser+bx	2.44	n/a
1104.0	1114.0	98	94	68	R3	0.9	70/45	R-K	ser+bx	2.48	n/a
1114.0	1124.0	100	95	71	R3	0.8	60	S-K	ser+bx	2.43	n/a
1124.0	1134.0	97	91	50	R3,R2	1.4	60/25/5	S-K	ser+sulf+bx	2.53	n/a
1134.0	1144.0	100	90	61	R2,R1	1.6	60/25	S-K	er+sulf+clay gouge+b	2.51	n/a
1144.0	1154.0	96	35	36	S	2.5	35/5	K	fault bx+clay gouge	2.47	n/a
1154.0	1164.0	95	69	33	S,R2,R3	2.8	30-40/70	K-R	fault bx+ill/smec clays	2.54	n/a
1164.0	1174.0	98	72	55	R3,R2	2.5	30/70	K	waxy slicks	2.53	n/a
1174.0	1184.0	96	19	31	R2,S2	3.7	35/70	K	waxy slicks+sulf	2.44	n/a
1184.0	1194.0	93	30	15	S2,R2	3.9	70/30	K	graph slicks	2.51	n/a
1194.0	1204.0	97	65	31	R1,R2	3.7	70/30	K-S	graph slicks	2.60	n/a

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-308C

AZIMUTH: 215.5°

INCLINATION: -90.0°

LOGGED BY: LJB

DATE: 9/30/94

PAGE ___1___ OF ___1___

DRILL	RUN	TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	(g/cc)	
495.0	504.0	111	111	102	R3	0.3	30,40,50	R	qyz+barite clay films	2.20	waste
504.0	514.0	99	99	91	R3	0.7	30,80	R	qtz+sulf clay films	2.60	waste
514.0	524.0	98	98	79	R3	0.7	25	R	qtz+sulf clay films	2.60	waste
524.0	534.0	98	98	93	R3	1.0	70,60	R	qta+py+clay	2.40	waste
534.0	544.0	100	100	100	R3	0.6	60	R	qtz+sulf coatings	2.50	waste
544.0	554.0	98	98	77	R3	1.4	30,70,50	VR	qtz+sulf coatings	2.50	waste
554.0	564.0	99	99	93	R3	0.8	80	VR	qtz+sulf clay	2.60	waste
564.0	574.0	97	97	83	R3	1.3	60,70	VR	qtz+sulf clay	2.60	waste
574.0	584.0	99	99	87	R3	1.1	40,50,60	R	qtz+sulf coating	2.40	waste
584.0	594.0	99	99	99	R3	0.7	60,70	R	tz+sulf coating+clay fil	2.50	waste
594.0	604.0	100	100	77	R3	0.9	60,0-15	R	qtz+sulf coating	2.60	waste
604.0	614.0	102	102	102	"R3	0.8	60	R	nil	2.30	waste
614.0	624.0	97	97	91	R3	0.5	40	R	nil	2.20	waste
624.0	634.0	103	91	81	R3	0.7	60	R	qtz coating+clay film	2.50	waste
634.0	644.0	94	94	88	R3	0.9	40,70	R	qtz coating+clay film	2.40	waste
644.0	654.0	100	96	96	R3	0.7	70	R	qtz coating+clay film	2.50	waste
654.0	664.0	97	94	88	R3	0.7	70	VR	qtz coating	2.50	waste
664.0	674.0	92	91	90	R3	0.5	70	R	qtz coating+clay film	2.40	waste
674.0	684.0	92	87	63	R3	1.1	70	VR	qtz coating+clay film	2.50	waste
684.0	694.0	102	102	83	R3	1.2	65	R	clay films	2.50	waste
694.0	704.0	105	104	51	R3	2.1	70	R-K	sil rk+clay film	2.60	waste
704.0	714.0	100	100	83	R3	1.2	70,50,20	R	qtz+clay coating	2.40	waste
714.0	724.0	100	100	86	R3	1.2	70,45	R-S	qtz+clay films	2.40	waste
724.0	734.0	100	100	63	R3	1.2	50,60,20	S	qtz+clay films	2.40	waste
734.0	744.0	100	100	76	R3	1.2	30-60,50	S	qtz+clay films	2.60	waste
744.0	753.5	88	88	75	R3	1.3	30-50,0	R	qtz py	2.50	waste
753.5	763.7	96	96	73	R3	1.1	40,80	R	qtz+clay	2.50	waste
763.7	774.0	100	100	71	R3	1.2	60,70	R	minor py+clay	2.10	waste
774.0	784.0	100	100	85	R3	0.5	80,70	R	minor clay films	2.00	waste
784.0	794.0	100	100	47	R3	2.2	40-70,60	S	minor clay	2.50	waste
794.0	800.0	100	100	83	R3	0.7	60	S	minor py	2.50	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-309C

LOGGED BY: LJB

AZIMUTH: 122.5°

DATE: 10/2/94

INCLINATION: -89.5°

PAGE ____1_____ OF ____1_____

DRILL	RUN	TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	(g/cc)	
495.0	505.0	99	99	94	R3	1.0	70,50	R	qtz+sulf coatings	2.40	waste
505.0	515.0	100	100	87	R3	0.7	60	R	clay films	2.50	waste
515.0	525.0	102	102	93	R3	0.9	70	R	py+qtz	2.50	waste
525.0	535.0	100	100	86	R3	1.0	60	R	qtz+sulf	2.40	waste
535.0	545.0	100	100	76	R3	1.2	70	R	clay film	2.60	waste
545.0	555.0	99	99	79	R3	0.7	50,30	VR	bar+stib	2.30	waste
555.0	565.0	93	93	80	R3	1.1	50	VR	qtz+bar coating	2.50	waste
565.0	575.0	98	98	78	R3	0.9	30	VR	qtz+sulf+bar	2.40	waste
575.0	585.0	98	98	93	R3	0.9	70	R	nil	2.30	waste
585.0	595.0	97	94	90	R3	0.8	70,30	R	clay film+bar+sil	2.50	waste
595.0	605.0	98	98	87	R3	0.7	60	R	drossy qtz+clay films	2.52	waste
605.0	615.0	102	102	100	R3	0.5	45	R	drossy atz+botr+py+goe	2.51	waste
615.0	625.0	96	96	93	R3	0.8	50	R	drossy atz+botr+py+goe	2.52	waste
625.0	635.0	100	100	93	R3	0.8	65,45	R	drossy atz+botr+py+goe	2.47	waste
635.0	645.0	100	100	88	R3	0.8	60,0	R	drossy qtz+minor clay films	2.51	waste
645.0	655.0	98	98	68	R3	2.0	70	R-S	drossy qtz+minor clay films	2.56	waste
655.0	665.0	95	95	56	R3	1.6	75,15	R	drossy qtz+minor clay films	2.53	ore
665.0	675.0	97	97	61	R3	1.0	50	R	tz+marc coating+minor cla	2.46	ore
675.0	685.0	100	98	70	R3	1.5	60	R	qtz+drossy botr+py+goe	2.61	ore
685.0	695.0	94	94	70	R3	1.0	60	R	drussy qtz	2.43	LG
695.0	705.0	103	102	85	R3	1.1	65	R	clay+marc	2.37	waste
705.0	715.0	97	97	89	R3	0.6	70	R	nil	2.49	LG
715.0	725.0	100	100	66	R3	2.0	50	R	clay+marc	2.44	waste
725.0	735.0	97	97	86	R2	1.0	25,10,50	R	clay+marc	1.96	waste
735.0	745.0	100	97	91	R2	0.9	60,80	R	clay+marc	2.05	waste
745.0	755.0	100	100	97	R2,R3	0.3	70	R	nil	2.54	waste
755.0	765.0	98	98	67	R3	0.9	30	R	minor clay	2.49	waste
765.0	775.0	97	97	97	R3	0.5	70	VR	nil	2.44	waste
775.0	785.0	99	99	97	R3	0.7	40	S-K	clay+marc	2.41	waste
785.0	795.0	96	96	96	R3	0.6	70-75	S	clay+marc	2.38	waste
795.0	800.0	108	108	105	R3	0.6	40	S	nil	2.35	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-310C

AZIMUTH: 114.5°

INCLINATION: -90.0°

LOGGED BY:

DATE: 9/9/94

PAGE ___1___ OF ___1___

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	(g/cc)	
494.0	495.0	100	65	0	n/a	n/a	n/a	n/a	n/a	n/a	waste
495.0	505.0	94	93	80	n/a	1.0	60,85	R	nil	2.50	waste
505.0	513.0	100	89	66	n/a	1.5	50,60	R	qtz+clay	2.42	waste
513.0	523.0	100	100	95	n/a	0.9	75,50	R	nil	2.47	waste
532.0	533.0	100	100	96	n/a	1.0	40,50	R	qtz+py+clay	2.38	waste
533.0	535.0	100	100	90	n/a	1.0	20	R	clay coating	2.51	waste
535.0	545.0	98	98	92	n/a	1.0	70	R	qtz+clay	2.49	waste
545.0	555.0	97	97	92	n/a	0.7	50	R	clay film and powder	2.57	waste
555.0	565.0	100	100	98	n/a	0.3	80	VR	nil	2.46	waste
565.0	573.0	100	60	41	n/a	>10	n/a	VR	clay	2.46	waste
573.0	583.0	10	96	80	n/a	1.5	70	R	chl	2.42	waste
583.0	593.0	99	99	67	R1	0.7	80,15	R	nil	2.52	waste
593.0	603.0	95	85	70	R2	1.5	60	R	nil	2.47	waste
603.0	613.0	97	84	52	R2	2.0	60	R	nil	2.45	waste
613.0	615.0	85	85	60	R3	2.5	75	R	clay film	2.47	waste
615.0	625.0	99	75	51	R3	1.1	20,80	R	nil	2.59	waste
625.0	635.0	94	69	55	R3	1.0	60	R	clay film	2.38	waste
635.0	645.0	99	99	72	R3	1.8	60	S	clay film	2.54	waste
645.0	655.0	98	98	78	R3	0.9	30,80	S	nil	2.56	waste
655.0	665.0	98	90	68	R3	1.5	40,80	S	nil	2.53	waste
665.0	675.0	97	97	75	R3	1.5	50,80	S	py	2.48	waste
675.0	685.0	98	98	91	R3	1.3	40,70	S	py+clay iflm	2.49	waste
685.0	695.0	100	100	98	R3	0.9	70	S	nil	2.44	waste
695.0	700.0	100	100	90	R3	0.8	70,40	S	nil	2.28	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

NORTH ZONE

HOLE ID: 94-312C

AZIMUTH: 242.5°

INCLINATION: -89.5°

LOGGED BY: LJB

DATE: 11/8/94

PAGE ___1___ OF ___1___

DRILL RUN FROM	TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
495.0	498.0	90	90	75	R2	0.3	70	VR	drusy qtz	n/a	n/a
498.0	508.0	95	95	95	R2	0.1	60	VR	drusy qtz	2.40	n/a
508.0	518.0	102	102	91	R2	0.7	60	R	chl rk	2.30	n/a
518.0	528.0	101	101	94	R2	0.5	70	R	chl rk	2.40	n/a
528.0	538.0	100	100	85	R3	0.7	70	R	chl rk	2.40	n/a
538.0	548.0	102	102	99	R3	0.3	60,30	R	chl films	2.60	n/a
548.0	558.0	99	99	86	R3	0.6	60	R	chl film+drusy qtz+py+marc	2.50	n/a
558.0	568.0	95	95	78	R3	0.9	60	R	drusy qtz	2.40	n/a
568.0	578.0	98	95	69	R3	1.1	40	R	chl+clay films	2.50	n/a
578.0	588.0	99	84	74	R2	0.4	40,0	R	chl rk	2.60	n/a
588.0	598.0	100	100	92	R2	0.4	60	R	chl rk	2.50	n/a
598.0	608.0	96	96	88	R2	0.8	50	R	chl rk+films	2.50	n/a
608.0	618.0	100	97	75	R2	0.8	60	R	chl rk	2.50	n/a
618.0	628.0	101	101	92	R2	0.6	20	R	chl rk	2.30	n/a
628.0	638.0	99	99	84	R2	1.0	60	VR	chl rk	2.50	n/a
638.0	648.0	100	100	94	R2	0.8	60	VR	chl rk	2.50	n/a
648.0	658.0	99	99	95	R2	0.7	75	VR	chl rk	2.50	n/a
658.0	668.0	101	101	95	R2	0.4	70	R	chl rk	2.40	n/a
668.0	678.0	98	98	91	R2	0.4	60	R	chl rk	2.50	n/a
678.0	688.0	102	102	97	R2	0.3	55	S-R	chl films	2.40	n/a
688.0	698.0	100	100	96	R3	0.3	60	S	py films+chl films	2.40	n/a
698.0	705.0	100	60	40	R4	0.4	40	VR	wht clay vn+drusy qtz	2.40	n/a
705.0	708.0	100	86	30	R3	1.6	40	VR	chl+qtz	n/a	n/a
708.0	718.0	101	101	98	R3	0.3	35,60	R	qtz+clay+marc	2.60	n/a
718.0	728.0	98	98	84	R3	0.1	35	R	qtz	2.60	n/a
728.0	738.0	100	100	84	R2	0.3	40	R	chl film	2.50	n/a
738.0	748.0	101	101	94	R2	0.5	70	R	minor wht clay film	2.40	n/a
748.0	758.0	100	100	91	R3	0.9	70	S	minor chl film+clay film	2.60	n/a
758.0	768.0	100	100	96	R3	0.7	70	R	minor chl film+clay film	2.60	n/a
768.0	778.0	102	102	102	R3	0.1	40	R	minor chl film+clay film	2.60	n/a
778.0	788.0	97	97	68	R3	0.8	70,20	R	minor chl film+clay film	2.56	n/a
788.0	798.0	99	91	86	R3	0.6	25,70	R	minor chl film+clay film	2.54	n/a
798.0	808.0	101	101	86	R3	1.1	70	S	minor chl film+clay film+py coa	2.53	n/a
808.0	818.0	100	100	94	R2	0.9	70	R	chl films+py films	2.52	n/a
818.0	828.0	100	100	95	R2	0.7	70,0-10	R	drusy qtz+marc	2.48	n/a
828.0	838.0	100	100	95	R2	0.3	70	R	py films	2.45	n/a
838.0	848.0	100	100	89	R2	0.6	70,0-25	R	chl films+py+wht clay	2.42	n/a
848.0	858.0	99	60	38	R2	2.0	30,0-10	VR	chl film+wht clay+py film	2.48	n/a
858.0	868.0	99	83	59	R2	1.1	60	VR	hl film+wht clay+py film+drusy q	2.52	n/a
868.0	878.0	99	95	87	R2	0.8	60,40	VR	hl film+wht clay+py film+drusy q	2.46	n/a
878.0	888.0	90	75	56	R2	1.3	35	VR	hl film+wht clay+py film+drusy q	2.52	n/a
888.0	895.0	98	91	80	R2	1.1	70,30	R	hl film+wht clay+py film+drusy q	2.52	n/a
895.0	905.5	93	80	60	R2	1.1	70,30	R	hl film+wht clay+py film+drusy q	2.53	n/a
905.5	915.5	100	98	76	R3	0.9	70,30	R	nil	2.51	n/a
915.5	926.0	100	100	75	R2	0.3	50	R	wht clay+py	2.37	n/a
926.0	936.0	100	100	90	R2	0.7	50	R	nil	2.47	n/a
936.0	946.5	97	97	91	R2	1.3	60	R	chl rk	2.54	n/a
946.5	957.0	92	92	66	R3	0.5	60	VR	drusy qtz+py+ba	2.56	n/a
957.0	967.5	97	97	86	R3	1.0	50	VR	drusy qtz+py+ba	2.51	n/a
967.5	978.0	99	99	92	R3	0.7	70,40	R,VR	drusy qtz+marc+py+ba+clay	2.52	n/a
978.0	988.0	103	103	101	R3	0.6	70	R	chl+clay films	2.53	n/a
988.0	998.0	102	102	72	R3	1.3	80,65,20	R	chl film	2.54	n/a
998.0	1008.0	102	102	80	R3	0.8	60	R	chl+py films	2.54	n/a
1008.0	1018.0	100	100	86	R3	1.1	55,30	R	chl+py films	2.50	n/a
1018.0	1028.0	99	93	72	R3	1.5	50,0	R	chl+ser films+vnlets	2.47	n/a
1028.0	1038.0	99	98	83	R3	0.9	60,15	R	chl+ser clay films	2.45	n/a
1038.0	1048.0	98	98	95	R3	0.2	15-20	R	chl+ser clay films	2.49	n/a
1048.0	1058.0	103	103	48	R3	1.3	85,0-10	R	chl+py films	2.54	n/a
1058.0	1068.0	100	100	92	R3	0.7	75	VR	nil	2.48	n/a
1068.0	1078.0	100	100	95	R3	0.2	85	VR	chl+marc film	2.53	n/a
1078.0	1088.0	100	96	83	R3	0.7	50,0	VR	clay	2.48	n/a
1088.0	1098.0	98	98	85	R2	0.7	70	R	nil	2.44	n/a

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-314C

AZIMUTH: 40.5°

INCLINATION: -89.5°

LOGGED BY: RK

DATE: 10/6/94

PAGE ___1____ OF ___1____

DRILL FROM	RUN TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
475.0	484.0	104	104	83	R2	0.3	40,60	R	qtz+py vn	2.38	waste
484.0	494.0	97	92	56	R2	0.5	15,60,50	R	qtz+py	2.38	waste
494.0	504.0	99	91	63	R2	0.9	35,60	R	nil	2.18	waste
504.0	514.0	94	83	74	R2	0.9	40	R	qtz coat	2.38	waste
514.0	524.0	95	86	64	R2	0.8	40,70	R	qtz	2.45	waste
524.0	534.0	98	96	80	R2	0.9	50,85	R	clay films	2.44	waste
534.0	544.0	95	93	70	R2	1.0	80,40	R	sil clay films+ vns	2.37	waste
544.0	554.0	95	89	76	R2	0.4	30	R	sil clay films+ vns	2.52	waste
554.0	564.0	98	90	68	R3	1.4	70	R	nil	2.47	waste
564.0	574.0	99	99	84	R2	0.4	60	R	nil	2.40	waste
574.0	584.0	97	88	74	R2	1.3	60	R	qtz vn+sil clay vn	2.49	waste
584.0	594.0	98	98	85	R2	0.7	50	R	clay films	2.46	waste
594.0	604.0	98	97	75	R2	1.2	50,70	R	clay films	2.39	waste
604.0	614.0	97	97	73	R3	0.7	70	R	clay films+qtz vn	2.41	waste
614.0	624.0	94	89	66	R3	0.7	70	VR	qtz clay+bar	2.53	waste
624.0	634.0	96	96	65	R3	1.1	70	R-S	clay films+ sil clay	2.55	waste
634.0	644.0	100	99	70	R2	1.0	50	R	clay+sil+bar vn	2.48	waste
644.0	654.0	96	95	82	R2	0.8	70	R	qtz py+clay films	2.49	waste
654.0	664.0	98	92	75	R2	0.8	70	R	qtz py+clay films	2.49	waste
664.0	674.0	95	91	85	R2	0.6	70,40	R	qtz py vn+bar	2.52	waste
674.0	684.0	94	86	69	R2	1.0	50-60	R	qtz py vn+bar	2.50	waste
684.0	694.0	91	84	70	R2	0.9	70	VR	qtz+bar	2.55	waste
694.0	704.0	94	80	57	R3	0.8	70	VR	qtz+bar vn	2.55	LG
704.0	714.0	93	71	32	R3	1.5	60,70	S-R	qtz+bar	2.54	waste
714.0	724.0	96	92	78	R3	0.6	60	R	clay vn	2.46	waste
724.0	734.0	94	76	47	R3	1.7	75	R-S	sil rk+ clay vn+py	2.56	waste
734.0	744.0	97	75	43	R3	1.7	60,70,30	R-S	clay films+ba+py	2.56	waste
744.0	754.0	97	82	56	R3	1.2	70,10	R	clay films+marc	2.40	waste
754.0	764.0	98	87	68	R3	0.8	15,80	R	clay films+marc	2.41	waste
764.0	774.0	98	82	75	R3	0.9	50	R	clay film +sulf	2.58	waste
774.0	784.0	95	83	62	R3	0.7	50,60	R	clay films	2.40	waste
784.0	794.0	100	100	79	R3	1.0	70	R	clay films	2.43	waste
794.0	800.0	100	100	75	R3	0.6	70	R	clay films	2.46	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-315C

AZIMUTH: 236.5°

INCLINATION: -88.5°

LOGGED BY: L. Bernard

DATE: 9/19/94

PAGE ___1___ OF ___1___

DRILL RUN FROM	TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
505.0	507.5	100	100	92	R4	n/a	n/a	n/a	n/a	n/a	waste
507.3	513.0	100	100	100	R4	0.6	85	K	clay+chl+cal vn	2.41	waste
513.0	523.0	100	96	78	R3	0.8	60	VR	chl clay films	2.41	waste
523.0	533.0	100	100	88	R3	0.8	70	R	chl clay film	2.52	waste
533.0	543.0	100	100	98	R3	0.5	60	VR	minor clay	2.43	waste
543.0	553.0	100	100	84	R3	0.8	80,25	VR	ca vn+clay+sulf	2.48	waste
553.0	563.0	100	99	75	R3	1.1	70,30,50	R	sil	2.49	waste
563.0	573.0	100	100	77	R3	1.2	40,50,5	R	sil	2.54	waste
573.0	583.0	100	100	77	R3	0.8	80	S	chl clays	2.55	waste
583.0	593.0	100	100	60	R3	0.9	80,0-15	R	chl clay+bar	2.54	waste
593.0	603.0	100	100	93	R3	0.5	60	R	sil+ba	2.53	waste
603.0	613.0	100	100	88	R3	1.1	70	R	sil clay+bar	2.54	waste
613.0	621.0	100	100	61	R3	0.9	40,60	R	sil clay films	2.50	waste
621.0	631.0	100	98	78	R3	1.2	70-80	R	wht clay	2.50	waste
631.0	633.0	100	100	85	R3	0.3	25,60	R	clay+sil rk	n/a	waste
633.0	643.0	100	99	74	R3	1.0	80	R	clay coating+si rk	2.51	waste
643.0	653.0	100	100	83	R3	1.3	30,0	R	clay coating+si rk	2.49	LG
653.0	663.0	100	100	65	R3	>2	70	R	clay coating+si rk	2.45	LG
663.0	673.0	100	100	75	R3	1.2	15,70	R	qtz coating	2.43	waste
673.0	683.0	100	100	87	R3	0.8	80	R	nil	2.40	waste
683.0	693.0	100	100	99	R3	0.4	80	R	nil	2.44	waste
693.0	703.0	100	100	84	R3	1.1	80,50	R	nil	2.46	waste
703.0	713.0	100	100	79	R3	1.0	50,30	R	nil	2.37	waste
713.0	723.0	100	100	71	R3	1.7	30,0	R	nil	2.40	waste
723.0	733.0	100	100	66	R3	1.5	50,60	R	chl	2.42	waste
733.0	743.0	100	100	91	R3	0.8	60	S	chl	2.42	waste
743.0	751.0	100	100	95	R3	0.8	15,25	S	qtz clay	2.39	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-316C

AZIMUTH:128.5°

INCLINATION: -90.0°

LOGGED BY: RK

DATE: 9/2/94

PAGE ___1___ OF ___1___

DRILL RUN FROM	TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	POINT LOAD INDEX(lbs/2.236 in²)	FRACTURE DATA FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
495.0	503.0	92	90	46	1000	0.5	60	R	clay film	n/a	waste
503.0	513.0	93	88	61	2925	1.0	40	R	clay+py films	n/a	waste
513.0	523.0	95	85	62	2400	1.0-2.0	60,70	R	nil	n/a	waste
523.0	533.0	97	90	65	2175	2.0	40,60	R	clay film + 3" gouge	n/a	waste
533.0	543.0	94	92	78	1500	1.0	60	R	clay film+1/4" gouge	n/a	waste
543.0	553.0	93	89	62	2700	1.0	70	R	ill+qtz	n/a	ore
553.0	563.0	97	97	57	2400	2.0	60,80	R	nil	n/a	waste
563.0	573.0	98	98	60	2375	1.5	30,80	R	nil	n/a	waste
573.0	583.0	98	98	60	2100	1.5	60,80	R	nil	n/a	waste
583.0	593.0	98	95	63	3675	1.0	60,20	R	clay+py+qtz vn	n/a	LG
593.0	603.0	93	83	49	2400	>10	0-10,60,80	R-S	minor clay	n/a	waste
603.0	613.0	98	98	69	2100	0.5	40	R	clay+py film	n/a	waste
613.0	623.0	98	98	68	3375	2.0	40-50	R	clay+py films	n/a	waste
623.0	633.0	97	93	41	3075	3.0-4.0	0,50,20,80	R	clay py films	n/a	waste
633.0	643.0	100	99	79	2625	1.0	30,40	R	clorite	n/a	waste
643.0	653.0	95	94	76	2900	2.0	20,50,80	R	nil	n/a	waste
653.0	663.0	97	96	58	2700	2.0	50	R	chl films	n/a	waste
663.0	673.0	93	93	57	1500	2.0	5	R-K	ill+chl slides	n/a	waste
673.0	683.0	98	98	80	1675	1.0	50,10	R	py+sil+ill	n/a	waste
683.0	693.0	95	94	70	3325	0.5	50	R	qtz+py	n/a	waste
693.0	700.0	97	93	74	3175	1.0	40,80,50	R	qtz+py	n/a	waste
700.0	703.0	97	97	97	3275	0.5	50	R	nil	n/a	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

NORTH ZONE

HOLE ID: 94-317

AZIMUTH: 27.5°

INCLINATION: -90.0°

C. Wineteer

DATE: 11/1/94

PAGE ___1___ OF ___1___

DRILL RUN FROM	TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
935.0	945.0	100	97	82	R3	1.0	55	S	py+ser	2.48	waste
945.0	955.0	95	86	47	R3	2.2	60/15	S/R	ser+py	2.46	waste
955.0	965.0	100	92	52	R3	2.3	70/10	S/R	ser+py	2.47	waste
965.0	975.0	100	100	77	R3	1.8	55	R	ser+py	2.53	waste
975.0	985.0	100	100	92	R2	0.8	55	R	ser+marc	2.41	waste
985.0	995.0	98	92	63	R2	1.6	55/35	R/R	ser+ca+py	2.44	waste
995.0	1005.0	97	86	77	R2	0.9	80/10	S/R	Q+ill+sulf	2.45	waste
1005.0	1015.0	97	90	74	R2	1.2	80	R	Q+ill+sulf	2.49	waste
1015.0	1025.0	98	95	72	R2	1.2	65	R	Q+ill+sulf	2.49	waste
1025.0	1035.0	100	95	81	R2	1.4	80	S	chl+ser+ill+sulf	2.47	ore
1035.0	1045.0	99	98	80	R2	0.9	70	S	chl+ser+ill+sulf	2.46	ore
1045.0	1055.0	100	94	65	R3	1.5	50	R	ser+py	2.51	ore
1055.0	1065.0	97	97	81	R2,R3	0.9	50	R	ser+ill+sulf	2.48	LG
1065.0	1075.0	97	85	68	R2	1.3	75	R	ser	2.33	waste
1075.0	1085.0	98	95	59	R2	1.0	75	R	ser	2.48	waste
1085.0	1095.0	98	95	65	R2	1.1	70	R	Q+ser	2.49	waste
1095.0	1105.0	98	93	58	R1	1.0	55	R	ill+py	2.40	waste
1105.0	1115.0	97	93	82	R2	0.5	50	K	fault	2.66	waste
1115.0	1125.0	96	5	26	S2	1.3	50	K	fault	n/a	waste
1125.0	1135.0	95	80	67	R3	1.3	50	K	ill+ca	2.63	waste
1135.0	1145.0	96	26	65	S2	1.4	50	K-R	Q+py	n/a	waste
1145.0	1150.0	98	87	66	R3	1.2	50	K	graphite slicks	2.62	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

NORTH ZONE

HOLE ID: 94-319C

AZIMUTH: 87.5°

INCLINATION: -89.5°

LOGGED BY: LJB

DATE: 11/2/94

PAGE ___1___ OF ___1___

DRILL RUN FROM	TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
798.0	808.0	100	67	64	R2	0.8	60	R	whit clay+chl rk	2.60	waste
808.0	816.0	100	34	30	R2	n/a	n/a	n/a	n/a	n/a	waste
816.0	818.0	94	75	75	R2	n/a	n/a	R	wht clay	2.60	waste
818.0	828.0	95	95	62	R2	1.3	60	R	wht clay	2.40	waste
828.0	838.0	88	62	43	R4	1.6	40	R	wht clay	2.60	waste
838.0	848.0	99	72	25	R2	2.1	60	R	wht clay	2.50	waste
848.0	858.0	101	97	72	R3	1.3	60	R	wht clay	2.40	waste
858.0	868.0	100	86	64	R3	1.7	30	R	wht clay	2.50	waste
868.0	878.0	100	91	70	R2	1.0	30	R	wht clay	2.40	waste
878.0	888.0	102	101	70	R3	1.1	30,70	R	wht clay	2.50	waste
888.0	898.0	95	89	52	R3	2.0	30	R	wht clay	2.50	waste
898.0	900.0	125	125	125	R2	n/a	n/a	n/a	n/a	n/a	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-320C

AZIMUTH: 163.5°

INCLINATION: -89.5°

LOGGED BY: RK

DATE: 9/6/94

PAGE ___1___ OF ___1___

DRILL RUN FROM	TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	POINT LOAD INDEX (lbs/2.236 in²)	FRACTURE DATA FRACTURES/FT.	VG. ANGLE TO C.	ROUGHNESS	INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
303.0	313.0	93	84	65	1575	1.0	50.0	R	chl powders	2.53	waste
313.0	323.0	95	91	66	1125	1.0	80,30	R	chl+qtz clay	2.35	waste
323.0	333.0	96	94	87	975	1.0	50.0	R	chl rich rk	2.48	waste
333.0	343.0	96	89	79	1575	1.0	80.0	R	chl rich rk	2.56	waste
343.0	353.0	98	97	81	600	1.0	80.0	R	chl rich rk	2.43	waste
353.0	363.0	94	82	64	625	1.5	70.0	R	chl rich rk	2.38	waste
363.0	373.0	99	94	81	1500	1.0	70,40	R	chl rich rk	2.37	waste
373.0	383.0	94	82	69	2100	1.5	80,70	S	chl rich rk	2.30	waste
383.0	393.0	99	90	77	600	0.5	80.0	S	chl rich rk	2.23	waste
393.0	403.0	97	77	54	1350	1.5	40.0	R	py+clay	2.25	waste
403.0	413.0	97	85	52	2400	2.0	10,40	S/R	chl+qtz+py+clay	2.50	waste
413.0	423.0	98	88	51	975	1.0	30.0	R	clay+qtz	2.42	waste
423.0	433.0	96	88	59	900	2.0	40,20	S	chl	2.28	waste
433.0	440.0	n/a	n/a	n/a	n/a	1.0-3.0	60.0	R	clays+bar+bx	n/a	waste
440.0	449.0	74	53	22	2400	2.0	50.0	S-K	clay film+chl	2.63	waste
449.0	459.0	98	85	63	2100	1.5	50.0	R	qtz+clay+bar	2.63	waste
459.0	469.0	95	89	49	675	1.0	50.0	R	clay	2.48	waste
469.0	473.0	75	50	10	2550	2.5	20,40	S	chl+clay films	2.64	waste
473.0	483.0	80	63	27	2325	1.3	40,30	R	chl+clay+qtz	2.49	waste
483.0	483.5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
483.5	493.0	90	62	32	600	2.0	70,30,40	R	chl film	2.46	waste
493.0	503.0	99	98	73	550	0.5	50,70	R	chl rk	2.27	waste
503.0	513.0	100	99	81	825	0.8	70-80	R	chl rk	2.25	waste
513.0	523.0	97	90	55	900	1.3	40,50	R	chl rk	2.30	waste
523.0	533.0	98	96	57	1200	1.2	40,50	R	qtz+py vn	2.33	waste
533.0	543.0	92	88	52	675	0.9	40.0	R	clay+chl rk	2.19	waste
543.0	553.0	99	98	74	1425	0.9	70,60	R	clay+chl rk	2.40	waste
553.0	563.0	99	98	65	1575	1.0	70.0	R	clay+chl rk	2.13	waste
563.0	573.0	97	94	72	1875	0.8	70,30	R	clay+chl rk	2.23	waste
573.0	583.0	98	95	73	1050	0.9	40.0	R	qtz+marc+ill vn	2.32	waste
583.0	593.0	91	80	67	1200	3.0	70,40	R	chl films	2.29	waste
593.0	603.0	98	98	85	1575	0.5	80,55	R	chl rk	2.54	waste
603.0	613.0	95	94	56	2025	1.2	80.0	R	sil rk	2.52	waste
613.0	623.0	96	96	63	975	1.2	80,60	R	sil rk	2.44	waste
623.0	633.0	92	91	54	2325	0.8	80,60	R	qtz+clay	2.40	waste
633.0	643.0	92	89	71	2850	1.0	70.0	R	clay films	2.43	waste
643.0	653.0	94	81	56	4200	1.2	70,40,50	R	qtz+clay filled vns	2.60	waste
653.0	663.0	88	86	76	5150	0.7	80,40	VR	qtz+bar+clays	2.60	waste
663.0	673.0	95	95	57	4275	0.9	80.0	R	qtz+bar+clays	2.42	waste
673.0	683.0	97	95	64	1650	0.7	80,40	R	qtz+bar+clays	2.58	waste
683.0	692.0	83	66	34	5175	1.4	50.0	R	qtz+bar+clays	2.50	waste
692.0	696.0	80	60	30	5100	1.8	50.0	R	qtz+bar+clays	2.47	waste
696.0	703.0	81	74	23	6450	1.8	50.0	R	qtz+bar+clays	2.68	LG
703.0	711.5	88	85	49	4800	0.9	60,20,50	R	sil+clay powders+chl films	2.78	LG
711.5	712.0	40	40	0	n/a	n/a	n/a	n/a	n/a	n/a	waste
712.0	713.0	90	30	0	n/a	n/a	n/a	n/a	n/a	n/a	waste
713.0	723.0	94	89	57	3075	1.0	70.0	R	clay films	2.56	waste
723.0	733.0	94	82	56	3900	1.3	70,60	R	qtz vn+clays	2.57	waste
733.0	743.0	97	97	59	4275	0.8	70,30	R	clay	2.44	waste
743.0	753.0	95	94	65	2550	1.0	60,50	R	clay	2.38	waste
753.0	763.0	98	87	41	2325	1.7	60,50	S	clay	2.49	waste
763.0	773.0	95	79	43	1800	1.6	60,40,10	R	clay	2.43	waste
773.0	783.0	89	69	31	3150	2.1	30,40,60	VR	clay	2.49	waste
783.0	793.0	94	73	40	550	0.8	60.0	R	soft clay	2.46	waste
793.0	800.0	97	66	44	1950	1.0	30,65	R	alt rk	2.48	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-321C

AZIMUTH: 352.5°

INCLINATION: -89.5°

LOGGED BY:

DATE:

PAGE ___1___ OF ___1___

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	(g/cc)	
435.0	437.1	80	n/a	52	n/a	n/a	n/a	n/a	n/a	n/a	waste
437.1	442.0	88	n/a	76	R1	n/a	n/a	n/a	n/a	n/a	waste
442.0	452.0	90	n/a	78	R3	n/a	n/a	n/a	n/a	n/a	waste
452.0	462.0	96	n/a	85	R1	n/a	n/a	n/a	n/a	n/a	waste
462.0	472.0	98	n/a	96	R1	n/a	n/a	n/a	n/a	n/a	waste
472.0	481.0	81	n/a	31	R3	n/a	n/a	n/a	n/a	n/a	waste
481.0	484.0	90	n/a	80	R3	n/a	n/a	n/a	n/a	n/a	waste
484.0	492.0	102	n/a	83	R3	n/a	n/a	n/a	n/a	n/a	waste
492.0	502.0	90	n/a	84	R3	n/a	n/a	n/a	n/a	n/a	waste
502.0	512.0	100	n/a	95	R3	n/a	n/a	n/a	n/a	n/a	waste
512.0	522.0	100	n/a	95	R3	n/a	n/a	n/a	n/a	n/a	waste
522.0	532.0	98	n/a	80	R3	n/a	n/a	n/a	n/a	n/a	waste
532.0	542.0	100	n/a	96	R3	n/a	n/a	n/a	n/a	n/a	waste
542.0	552.0	97	n/a	94	R3	n/a	n/a	n/a	n/a	n/a	waste
552.0	562.0	100	n/a	88	R3	n/a	n/a	n/a	n/a	n/a	waste
562.0	572.0	100	n/a	85	R3	n/a	n/a	n/a	n/a	n/a	waste
572.0	582.0	94	n/a	81	R3	n/a	n/a	n/a	n/a	n/a	waste
582.0	592.0	95	n/a	78	R3	n/a	n/a	n/a	n/a	n/a	waste
592.0	602.0	98	n/a	92	R3	n/a	n/a	n/a	n/a	n/a	waste
602.0	612.0	98	n/a	86	R3	n/a	n/a	n/a	n/a	n/a	waste
612.0	622.0	100	n/a	73	R3	n/a	n/a	n/a	n/a	n/a	waste
622.0	632.0	100	n/a	91	R3	n/a	n/a	n/a	n/a	n/a	waste
632.0	641.0	100	n/a	61	R2	n/a	n/a	n/a	n/a	n/a	LG
641.0	647.5	100	n/a	61	R2,R3	n/a	n/a	n/a	n/a	n/a	ore
647.5	652.0	100	n/a	66	R1	n/a	n/a	n/a	n/a	n/a	ore
652.0	662.0	100	n/a	76	R3	n/a	n/a	n/a	n/a	n/a	ore
662.0	672.0	100	n/a	95	R3	n/a	n/a	n/a	n/a	n/a	ore
672.0	682.0	100	n/a	84	R3	n/a	n/a	n/a	n/a	n/a	ore
682.0	692.0	100	n/a	92	R3	n/a	n/a	n/a	n/a	n/a	waste
692.0	702.0	100	n/a	94	R3	n/a	n/a	n/a	n/a	n/a	waste
702.0	712.0	100	n/a	91	R1	n/a	n/a	n/a	n/a	n/a	waste
712.0	722.0	100	n/a	92	R3	n/a	n/a	n/a	n/a	n/a	waste
722.0	732.0	100	n/a	89	R1	n/a	n/a	n/a	n/a	n/a	waste
732.0	742.0	94	n/a	86	R1	n/a	n/a	n/a	n/a	n/a	waste
742.0	752.0	100	n/a	96	R1	n/a	n/a	n/a	n/a	n/a	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-324C

AZIMUTH: 302.5°

INCLINATION: -89.0°

LOGGED BY:

DATE:

PAGE ___1___ OF ___1___

DRILL RUN FROM	TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
435.0	445.0	100	n/a	87	R1	n/a	n/a	n/a	n/a	n/a	waste
445.0	455.0	100	n/a	90	R1,R3	n/a	n/a	n/a	n/a	n/a	waste
455.0	465.0	100	n/a	96	R3	n/a	n/a	n/a	n/a	n/a	waste
465.0	475.0	100	n/a	94	R3	n/a	n/a	n/a	n/a	n/a	waste
475.0	485.0	100	n/a	92	R3	n/a	n/a	n/a	n/a	n/a	waste
485.0	495.0	100	n/a	84	R3	n/a	n/a	n/a	n/a	n/a	waste
495.0	505.0	100	n/a	98	R3	n/a	n/a	n/a	n/a	n/a	waste
505.0	515.0	100	n/a	98	R3	n/a	n/a	n/a	n/a	n/a	waste
515.0	525.0	100	n/a	94	R3,R4	n/a	n/a	n/a	n/a	n/a	waste
525.0	532.0	107	n/a	93	R3,R4	n/a	n/a	n/a	n/a	n/a	waste
532.0	537.0	94	n/a	56	R3,R4	n/a	n/a	n/a	n/a	n/a	waste
537.0	545.0	80	n/a	50	R3,R4	n/a	n/a	n/a	n/a	n/a	waste
545.0	555.0	98	n/a	94	R3,R4	n/a	n/a	n/a	n/a	n/a	waste
555.0	565.0	95	n/a	87	R3,R4	n/a	n/a	n/a	n/a	n/a	waste
565.0	575.0	100	n/a	90	R3	n/a	n/a	n/a	n/a	n/a	waste
575.0	585.0	100	n/a	96	R3	n/a	n/a	n/a	n/a	n/a	waste
585.0	595.0	100	n/a	76	R1	n/a	n/a	n/a	n/a	n/a	waste
595.0	605.0	100	n/a	89	R1	n/a	n/a	n/a	n/a	n/a	waste
605.0	615.0	100	n/a	88	R1	n/a	n/a	n/a	n/a	n/a	waste
615.0	620.5	93	n/a	33	R2	n/a	n/a	n/a	n/a	n/a	waste
620.5	624.0	100	n/a	47	R2	n/a	n/a	n/a	n/a	n/a	LG
624.0	634.0	100	n/a	94	R3	n/a	n/a	n/a	n/a	n/a	ore
634.0	644.0	94	n/a	85	R3	n/a	n/a	n/a	n/a	n/a	ore
644.0	654.0	98	n/a	98	R3	n/a	n/a	n/a	n/a	n/a	ore
654.0	664.0	100	n/a	89	R3	n/a	n/a	n/a	n/a	n/a	LG
664.0	674.0	100	n/a	72	R3	n/a	n/a	n/a	n/a	n/a	waste
674.0	684.0	100	n/a	73	R3	n/a	n/a	n/a	n/a	n/a	waste
684.0	694.0	100	n/a	82	R3	n/a	n/a	n/a	n/a	n/a	waste
694.0	704.0	100	n/a	98	R3	n/a	n/a	n/a	n/a	n/a	waste
704.0	714.0	97	n/a	73	R1	n/a	n/a	n/a	n/a	n/a	waste
714.0	724.0	100	n/a	79	R1,R3	n/a	n/a	n/a	n/a	n/a	waste
724.0	732.0	87	n/a	79	R3	n/a	n/a	n/a	n/a	n/a	waste
732.0	735.0	100	n/a	73	R3	n/a	n/a	n/a	n/a	n/a	waste
735.0	745.0	100	n/a	80	R3	n/a	n/a	n/a	n/a	n/a	waste
745.0	748.1	100	n/a	29	R3	n/a	n/a	n/a	n/a	n/a	waste
748.1	755.0	100	n/a	100	R3	n/a	n/a	n/a	n/a	n/a	waste
755.0	765.0	100	n/a	95	R3,R1	n/a	n/a	n/a	n/a	n/a	waste
765.0	775.0	97	n/a	76	R3,R1	n/a	n/a	n/a	n/a	n/a	waste
775.0	784.0	100	n/a	85	R3,R1	n/a	n/a	n/a	n/a	n/a	LG
784.0	787.0	100	n/a	93	R3,R1	n/a	n/a	n/a	n/a	n/a	LG

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-325C

AZIMUTH: 34.5°

INCLINATION: -90.0°

LOGGED BY: L. Bernard

DATE: 8/3/94

PAGE ___1___ OF ___1___

DRILL RUN FROM	TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
495.0	502.0	100	n/a	96	R1	n/a	n/a	n/a	n/a	n/a	waste
502.0	511.0	98	n/a	45	R1	n/a	n/a	n/a	n/a	n/a	waste
511.0	522.0	96	n/a	66	R1	n/a	n/a	n/a	n/a	n/a	waste
522.0	532.0	99	n/a	75	R3	n/a	n/a	n/a	n/a	n/a	waste
532.0	542.0	100	n/a	50	R3	n/a	n/a	n/a	n/a	n/a	waste
542.0	552.0	95	n/a	75	R3	n/a	n/a	n/a	n/a	n/a	waste
552.0	562.0	100	n/a	75	R3,R1	n/a	n/a	n/a	n/a	n/a	waste
562.0	572.0	90	n/a	45	R3	n/a	n/a	n/a	n/a	n/a	waste
572.0	579.6	100	n/a	6	R3	n/a	n/a	n/a	n/a	n/a	waste
579.6	590.0	96	n/a	40	R3,R4	n/a	n/a	n/a	n/a	n/a	ore
590.0	600.0	100	n/a	95	R3,R4	n/a	n/a	n/a	n/a	n/a	ore
600.0	610.0	95	n/a	88	R3	n/a	n/a	n/a	n/a	n/a	ore
610.0	620.0	100	n/a	93	R3	n/a	n/a	n/a	n/a	n/a	ore
620.0	630.0	100	n/a	90	R3	n/a	n/a	n/a	n/a	n/a	ore
630.0	640.2	100	n/a	98	R3	n/a	n/a	n/a	n/a	n/a	ore
640.2	650.4	100	n/a	96	R3	n/a	n/a	n/a	n/a	n/a	LG
650.4	660.1	100	n/a	89	R3,R1	n/a	n/a	n/a	n/a	n/a	waste
660.1	670.8	100	n/a	100	R3	n/a	n/a	n/a	n/a	n/a	waste
670.8	681.0	100	n/a	79	R3	n/a	n/a	n/a	n/a	n/a	waste
681.0	691.2	100	n/a	82	R3	n/a	n/a	n/a	n/a	n/a	waste
691.2	701.4	100	n/a	93	R3	n/a	n/a	n/a	n/a	n/a	LG
701.4	711.6	100	n/a	95	R3	n/a	n/a	n/a	n/a	n/a	LG
711.6	721.8	100	n/a	95	R3	n/a	n/a	n/a	n/a	n/a	waste
721.8	732.0	100	n/a	93	R3	n/a	n/a	n/a	n/a	n/a	waste
732.0	742.0	100	n/a	88	R3	n/a	n/a	n/a	n/a	n/a	waste
742.0	752.0	100	n/a	99	R3	n/a	n/a	n/a	n/a	n/a	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

NORTH ZONE

HOLE ID: 94-327

AZIMUTH: 91.0

INCLINATION: -90.0°

LOGGED BY: C. Muerhoff

DATE: 11/1/94

PAGE ___1___ OF ___1___

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	(g/cc)
854.0	864.0	100	100	100	R3	0.5	51	V	ill+bar	n/a
864.0	874.0	100	98	89	R3	0.5	43	R	ill+bar	n/a
874.0	884.0	100	98	92	R3	0.5	56	V	ill+minor py	n/a
884.0	894.0	100	100	93	R2	0.5	47	R	ill+minor grn waxy clay	n/a
894.0	904.0	97	94	86	R2	0.4	30	R	ill+chaludony	n/a
904.0	914.0	98	97	93	R3	0.4	53	R	ill+gry clay	n/a
914.0	924.0	100	98	80	R3	1.0	36	R	ill+gry clay+py	n/a
924.0	934.0	100	98	90	R3	0.8	43	R	ill+gry clay+py+marc	n/a
934.0	944.0	98	98	84	R2	0.9	38	R	ill+gry clay+py+marc	n/a
944.0	954.0	100	100	89	R2	0.8	50	R	ill+coarse gv+py	n/a
954.0	964.0	100	97	91	R2	0.6	42	S	ill+py+marc blades	n/a
964.0	974.0	100	98	87	R2	1.0	39	S	ill+py+marc+chalc+ch	n/a
974.0	984.0	100	97	88	R3	0.6	48	S	ill+minor sulf	n/a
984.0	994.0	97	98	91	R3	0.5	46	S	ill+sulf+ca	n/a
994.0	1000.0	98	98	63	R1	0.8	60	S	bedding plane ill	n/a

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-328C

AZIMUTH: 276.5°

INCLINATION: -90.0°

LOGGED BY: RK

DATE: 9/27/94

PAGE ___1___ OF ___1___

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	(g/cc)	
495.0	503.0	96	88	62	R2	0.4	70	VR	nil	2.35	waste
503.0	513.0	98	86	65	R2	0.4	50	S	clay film+ca	2.52	waste
513.0	517.0	93	93	75	R2	1.0	70	R	clay film	2.42	waste
517.0	524.0	94	94	78	R2	.1,.7	60,40,70	R	chl film+py	2.24	waste
524.0	534.0	90	88	75	R2	0.9	70	R	chl film	2.37	waste
534.0	544.0	98	97	77	R2	0.7	70,40	R	chl film	2.41	waste
544.0	554.0	93	68	49	R2	1.2	70,40	R	chl film	2.49	waste
554.0	562.0	89	41	35	S3	0.8	40	R	clay+py+qtz	2.28	waste
562.0	572.0	97	80	73	R2	0.7	50,60	R	qtz+py+clay film	2.39	waste
572.0	584.0	97	94	71	R2	0.8	40,20	S	qtz	2.42	waste
584.0	594.0	96	89	63	R3	0.8	50	S	nil	2.45	waste
594.0	604.0	99	83	44	R3	1.4	50	S	clay film	2.31	waste
604.0	614.0	97	95	63	R2	0.6	50	R	nil	2.34	waste
614.0	624.0	98	94	71	R2	0.4	50,20	R	qtz+py	2.38	waste
624.0	634.0	98	88	77	R2	0.6	50,30	R	qtz+py	2.36	waste
634.0	644.0	99	98	71	R2	0.5	50,40	R	qtz+py	2.41	waste
644.0	654.0	96	86	70	R2	0.8	50,20	R	clay films	2.41	waste
654.0	664.0	95	73	57	R1	0.9	50,20	R	nil	2.29	waste
664.0	674.0	96	65	53	R1	1.2	30,40	R	qtz coating+clay films	2.31	waste
674.0	684.0	98	86	52	R2	1.3	60,40,20	R	clay films	2.31	waste
684.0	694.0	92	85	51	R2	1.3	40	R	clay films	2.39	waste
694.0	704.0	94	78	59	R2	1.2	60,30,5	R	clay films	2.42	waste
704.0	714.0	85	84	58	R2	1.3	50,80	R	nil	2.51	waste
714.0	724.0	98	88	68	R3	0.9	50	R	qtz vn	2.56	ore
724.0	734.0	98	84	39	R2	0.8	40,70,30	R	qtz vn+clays	2.52	ore
734.0	744.0	94	74	28	R2	1.3	40,70	R	qtz vnlets+clays	n/a	LG
744.0	754.0	93	90	68	R2	0.7	50	R	clay films+qtz vn	2.57	LG
754.0	764.0	89	57	31	R2	2.2	50,15	R	qtz vn+clay films	2.57	LG
764.0	774.0	99	87	63	R2	1.1	40	R	qtz vn+clay films	2.43	ore
774.0	784.0	99	94	68	R2	0.9	60,75	R	clay films	2.38	ore
784.0	794.0	96	87	69	R2	0.6	50	R	clay films	2.47	ore
794.0	804.0	99	98	69	R3	0.8	45	R	clay films	2.53	ore
804.0	814.0	96	84	51	R3	0.6	30	R	qtz+clay films	2.51	LG
814.0	824.0	95	77	46	R2	0.7	40	R	qtz+clay films	2.49	LG
824.0	834.0	97	77	50	R2	0.7	40	R	qtz+clay films	2.50	ore
834.0	844.0	97	79	66	R3	1.3	30,60	R-S	qtz+clay films	2.51	waste
844.0	850.0	94	55	43	R3	2.1	40,0,50	S	qtz+clay films	2.48	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-329

AZIMUTH: 279.5°

INCLINATION: -88.0°

LOGGED BY: LJB

DATE: 9/21/94

PAGE ___1___ OF ___1___

DRILL RUN FROM	TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
495.0	505.0	92	92	79	R3	0.7	35	R	qtz+py vn	2.51	waste
505.0	515.0	94	83	70	R3	1.2	40	S	qtz+py+chl vn	2.52	waste
515.0	525.0	96	96	82	R3	1.2	40,60	R	nil	2.50	waste
525.0	535.0	95	92	60	R3	1.6	50	R	qtz+py	2.52	waste
535.0	545.0	97	97	74	R3	1.1	40	R	qtz+py	2.49	waste
545.0	555.0	108	106	77	R3	1.7	80,70,40	S	chl	2.48	waste
555.0	557.0	100	100	90	R3	1.5	70	R	chl rk	2.46	waste
557.0	565.0	98	98	71	R3	1.3	50	R	chl rk	2.50	waste
565.0	575.0	100	100	78	R4	0.9	70	R	chl rk	2.48	waste
575.0	585.0	98	98	72	R4	0.8	50	R	chl rk	2.49	waste
585.0	595.0	100	98	70	R3	0.7	50	R	chl rk	2.47	waste
595.0	605.0	100	100	95	R3	1.0	70	R	chl rk	2.40	waste
605.0	615.0	100	100	88	R3	0.5	70	R	qtz+clay vn	2.33	waste
615.0	625.0	96	96	79	R3	0.7	50	R	qtz+py vn	2.46	waste
625.0	635.0	100	85	83	R3	1.0	50	R	nil	2.75	waste
635.0	645.0	100	100	88	R3	0.7	50	R	nil	2.54	waste
645.0	655.0	95	95	63	R3	1.0	70,15	R/VR	nil	2.58	waste
655.0	663.0	100	100	60	R3	2.4	80	R	bar+qtz vn+sil rk	2.57	waste
663.0	665.0	75	75	51	R3	2.4	80	R	bar+qtz vn+sil rk	n/a	LG
665.0	666.0	0	0	0	R3	0.8	65,60,30	VR-R	qtz+ba vn+sil rk	2.56	waste
666.0	666.5	100	100	0	R3	0.8	65,60,30	VR-R	qtz+ba vn+sil rk	n/a	waste
665.5	667.0	100	100	100	R3	0.8	65,60,30	VR-R	qtz+ba vn+sil rk	n/a	waste
667.0	670.0	94	93	93	R3	0.7	70	R	qtz vn+sil rk	2.54	LG
670.0	676.0	100	100	66	R3	2.0	50,60	R	sil rk	2.58	waste
676.0	685.0	108	108	95	R3	1.2	40	VR	sil rk	2.55	waste
685.0	695.0	90	60	48	R1	<10	30	VR	chl+sil rk	n/a	ore
695.0	699.0	100	80	20	R1	<10	50,60	VR	chl+sil rk	n/a	ore
699.0	704.0	100	100	68	n/a	n/a	n/a	n/a	n/a	n/a	waste
704.0	714.0	100	100	70	R3	1.0	70,5	R	sil rk	2.44	waste
714.0	724.0	100	100	74	R3	0.3	80	R	clay	2.45	LG
724.0	734.0	100	100	85	R3	0.8	75	R	sil rk	2.42	ore
734.0	744.5	105	105	72	R3	0.9	80,40	VR	sil rk	2.41	LG
744.5	745.0	100	100	70	R3	0.9	80,40	VR	sil rk	n/a	waste
745.0	755.0	100	100	96	R3	0.2	30	R	nil	2.49	waste
755.0	765.0	100	100	95	R3	0.6	80	R	nil	2.46	waste
765.0	775.0	100	100	94	R3	0.7	65	R	nil	2.44	waste
775.0	785.0	100	100	90	R3	1.0	60	R	clay film	2.43	waste
785.0	795.0	98	98	95	R3	0.7	40	R	clay films	2.52	ore
795.0	800.0	112	112	112	R3	0.2	60	R	clay films	2.45	LG

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-330C

AZIMUTH: 338.5°

INCLINATION: -89.5°

LOGGED BY: J. Bernard

DATE: 8/4/94

PAGE ___1___ OF ___1___

DRILL RUN FROM	TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
435.0	442.0	92	n/a	77	R3	n/a	n/a	n/a	n/a	n/a	waste
442.0	452.0	100	n/a	80	R3	n/a	n/a	n/a	n/a	n/a	waste
452.0	462.0	100	n/a	71	R1	n/a	n/a	n/a	n/a	n/a	waste
462.0	472.0	98	n/a	73	R1	n/a	n/a	n/a	n/a	n/a	waste
472.0	482.0	99	n/a	69	R1	n/a	n/a	n/a	n/a	n/a	waste
482.0	492.0	100	n/a	70	R1	n/a	n/a	n/a	n/a	n/a	waste
492.0	502.0	98	n/a	95	R1,R3	n/a	n/a	n/a	n/a	n/a	waste
502.0	512.0	100	n/a	91	R3	n/a	n/a	n/a	n/a	n/a	waste
512.0	522.0	100	n/a	60	R3,R1	n/a	n/a	n/a	n/a	n/a	waste
522.0	532.0	100	n/a	52	R3,R4	n/a	n/a	n/a	n/a	n/a	waste
532.0	542.0	100	n/a	79	R3	n/a	n/a	n/a	n/a	n/a	ore
542.0	551.0	91	n/a	56	R3	n/a	n/a	n/a	n/a	n/a	ore
551.0	558.0	114	n/a	95	R3	n/a	n/a	n/a	n/a	n/a	ore
558.0	562.0	92	n/a	65	R3	n/a	n/a	n/a	n/a	n/a	waste
562.0	572.0	100	n/a	n/a	R3	n/a	n/a	n/a	n/a	n/a	waste
572.0	582.0	100	n/a	60	R3,R1	n/a	n/a	n/a	n/a	n/a	LG
582.0	592.0	98	n/a	80	R3	n/a	n/a	n/a	n/a	n/a	waste
592.0	602.0	96	n/a	90	R3	n/a	n/a	n/a	n/a	n/a	waste
602.0	612.0	97	n/a	86	R3	n/a	n/a	n/a	n/a	n/a	waste
612.0	622.0	100	n/a	90	R4	n/a	n/a	n/a	n/a	n/a	waste
622.0	624.0	100	n/a	70	R3	n/a	n/a	n/a	n/a	n/a	waste
624.0	632.0	100	n/a	93	R3	n/a	n/a	n/a	n/a	n/a	waste
632.0	642.0	100	n/a	92	R3	n/a	n/a	n/a	n/a	n/a	waste
642.0	652.0	95	n/a	91	R3	n/a	n/a	n/a	n/a	n/a	waste
652.0	662.0	100	n/a	97	R3	n/a	n/a	n/a	n/a	n/a	waste
662.0	672.0	100	n/a	86	R3	n/a	n/a	n/a	n/a	n/a	waste
672.0	682.0	100	n/a	86	R3	n/a	n/a	n/a	n/a	n/a	waste
682.0	692.0	96	n/a	80	R3	n/a	n/a	n/a	n/a	n/a	waste
692.0	702.0	78	n/a	65	R3	n/a	n/a	n/a	n/a	n/a	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-331

AZIMUTH: 197.5°

INCLINATION: -88.5°

LOGGED BY: RK

DATE: 9/1/94

PAGE ___1___ OF ___1___

DRILL RUN FROM	TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	POINT LOAD INDEX (lbs/2.236 in²)	FRACTURE DATA FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
495.0	503.0	99	80	34	1500	>10	30,60	S	py	n/a	waste
503.0	509.5	85	18	14	1800	>10	60.0	S	minor py+chl	n/a	waste
509.5	519.5	93	87	50	2925	1.0-2.0	60.0	S	minor py+minor clay	n/a	waste
519.5	529.5	99	99	89	3675	1.0	55,60	R	minor clay	n/a	waste
529.5	533.0	80	80	54	2550	1.0	50.0	R	minor clay	n/a	waste
533.0	543.0	94	92	66	2250	1.0	30,40,5	S,R,S	minor py+wht clay	n/a	waste
543.0	553.0	93	93	67	2550	1.0	40,50	VR	mod clay	n/a	waste
553.0	563.0	88	82	57	1350	1.0-2.0	70.0	R	py+minor clay	n/a	waste
563.0	573.0	94	94	71	2700	1.0	60.0	VR	clay gouge	n/a	waste
573.0	583.0	83	56	39	2700	>10	60.0	VR	minor clay+ qtz vn	n/a	waste
583.0	593.0	98	94	70	2550	1.0-2.0	70.0	VR	minor clay+ qtz vn	n/a	waste
593.0	603.0	93	79	56	3900	1->10	60.0	R	wht clay+ill	n/a	waste
603.0	613.0	93	90	55	2925	1.0-2.0	70.0	R	minor chl+clay	n/a	waste
613.0	623.0	87	87	73	2250	1.0-2.0	60.0	R	sil+py	n/a	waste
623.0	633.0	90	59	41	975	3.0	40.0	VR	chl+clay shear	n/a	waste
633.0	643.0	93	82	57	2100	2.0	65.0	VR	chl+clay shear	n/a	waste
643.0	653.0	94	88	72	2100	1.0	55.0	R-S,K	chl+clay shear	n/a	waste
653.0	663.0	94	83	43	4425	2.0-3.0	30,70	VR	wht ill clay	n/a	waste
663.0	673.0	97	97	63	4650	1.0	30,50	R	minor ill	n/a	waste
673.0	683.0	96	96	81	3825	1.0	80,40	R	n/a	n/a	waste
683.0	693.0	95	95	56	3000	1.0	40,80	R	n/a	n/a	LG
693.0	703.0	93	93	85	3350	1.0	70,80	R	n/a	n/a	waste
703.0	713.0	98	98	92	3375	1.5	70-80	VR	chl+clay film+py	n/a	ore
713.0	723.0	96	96	77	3600	1.0	70.0	R	chl film	n/a	waste
723.0	733.0	98	98	89	3100	1.0	80.0	R	nil	n/a	waste
733.0	743.0	99	99	76	2700	1.0	80.0	S	nil	n/a	waste
743.0	753.0	96	96	88	3675	1.0	80.0	S-R	chl+clay film	n/a	waste
753.0	763.0	96	96	84	3900	2.0	50,80	R,P	nil	n/a	LG
763.0	773.0	99	99	78	3600	1.0	70.0	R	ill+chl film	n/a	waste
773.0	783.0	94	94	78	3600	1.5	20,70	R	ill+chl film	n/a	waste
783.0	793.0	96	96	78	4200	1.5	80.0	R	nil	n/a	waste
793.0	800.0	100	100	94	5400	1.0	70-80	R	nil	n/a	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-332C

AZIMUTH: 90.5°

INCLINATION: -89.0°

LOGGED BY: RK

DATE: 9/2/94

PAGE ___1___ OF ___1___

DRILL RUN FROM	TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	POINT LOAD INDEX (lbs/2.236 in²)	FRACTURE DATA FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
622.0	627.8	86	62	40	3450	3.0	30-40	VR	nil	n/a	waste
627.8	638.0	96	92	75	2250	2.0	40.0	R	nil	n/a	waste
638.0	648.0	98	98	89	3600	2.0	80.0	R	nil	n/a	waste
648.0	658.0	97	97	89	3675	1.0	30,80	R	py+chl film	n/a	waste
658.0	668.0	95	95	93	3450	1.0	80.0	R	nil	n/a	waste
668.0	678.0	95	94	80	3075	0.5	30,80,20	S	py	n/a	waste
678.0	688.0	99	99	85	2550	0.5	80.0	R	nil	n/a	waste
688.0	698.0	100	100	91	3300	0.5	80,50	R,S	py film	n/a	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-333C

AZIMUTH: 368.5°

INCLINATION: -90.0°

LOGGED BY: RK

DATE: 10/4/94

PAGE ___1___ OF ___1___

DRILL FROM	RUN TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
495.0	505.0	96	81	64	R2	1.0	50,40,0	R-S	nil	2.43	waste
505.0	515.0	98	78	34	R2	1.6	50,40,0	R	clay	2.46	waste
515.0	525.0	98	87	41	R3	1.8	60,30,0	R-S	clay films	2.44	waste
525.0	535.0	95	81	35	R3	2.0	50,30	S	clay films	2.43	waste
535.0	543.0	88	73	87	R3	1.0	60,30	R	clay+py films	2.47	waste
543.0	555.0	102	83	55	R2	>2	15,50,0	S	chl films	2.45	waste
555.0	565.0	92	90	71	R2	1.6	60	R	chl films	2.42	waste
565.0	575.0	99	86	70	R2	1.5	55,70	S	chl films	2.42	waste
575.0	585.0	100	97	67	R2	1.2	60	R	chl films	2.48	waste
585.0	595.0	100	91	88	R3	1.5	60	R	chl rk	2.30	waste
595.0	605.0	101	101	97	R3	0.5	40	R	chl rk	2.40	waste
605.0	615.0	97	97	96	R3	0.6	75,35	R	chl rk	2.40	waste
615.0	625.0	97	93	93	R3	0.8	60,40,75	R	chl rk	2.20	waste
625.0	635.0	102	92	85	R3	1.5	60	R	chl rk	2.70	waste
635.0	645.0	100	98	84	R3	1.6	70	R	chl rk	2.50	waste
645.0	655.0	99	99	64	R3	0.7	50-60,15	R	qtz coat+marc	2.40	waste
655.0	665.0	101	99	85	R3	0.4	50-60	R	nil	2.50	waste
665.0	675.0	99	99	80	R3	0.6	20	R	qtz coat+clay+py films	2.60	waste
675.0	685.0	100	99	87	R3	0.6	45	R	chl films	2.50	waste
685.0	695.0	100	97	97	R3	0.6	60,50	S	chl films	2.50	waste
695.0	705.0	98	96	89	R3	0.6	50	R	clay films	2.40	waste
705.0	715.0	98	88	79	R4	1.0	60	R	qtz+bar	2.60	waste
715.0	725.0	98	98	78	R4	1.0	60	R	qtz+py+clay	2.50	waste
725.0	735.0	102	102	88	R4	0.6	40,50	R	qtz+py+clay	2.40	LG
735.0	745.0	98	98	88	R4	0.8	60	R	qtz+py+clay	2.40	waste
745.0	755.0	99	99	99	R4	0.4	80,10	R	qtz+py+clay	2.50	waste
755.0	765.0	100	99	82	R3	0.7	30,40,50	R	clay films	2.42	waste
765.0	775.0	100	100	92	R3	0.7	50	R-K	minor clay	2.33	waste
775.0	785.0	100	100	97	R3	0.2	40	R	clay films	2.44	waste
785.0	795.0	100	100	95	R3	0.7	65	VR	clay film+py coating	2.47	waste
795.0	798.0	112	112	75	R3	0.1	40	VR	clay films	n/a	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

NORTH ZONE

HOLE ID: 94-334C

AZIMUTH: 317.5°

INCLINATION: -88.5°

LOGGED BY: LJB

DATE:11/22/94

PAGE ____1_____ OF ____1_____

DRILL RUN FROM	TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
817.0	827.0	102	102	77	R3	0.7	50	R	chl+py films	2.45	n/a
827.0	837.0	99	99	77	R2	0.7	40	R	chl+ser films	2.47	n/a
837.0	847.0	93	93	48	R2	1.0	30,70	S	chl+ser films	2.44	n/a
847.0	857.0	107	104	82	R3	1.2	30,70	S	chl+ser films	2.55	n/a
857.0	867.0	102	102	62	R3	1.8	70	S	chl+ser films	2.47	n/a
867.0	877.0	97	97	70	R3	1.4	40,70	VR,S	chl+ser films	2.46	n/a
877.0	887.0	102	102	97	R3	1.0	70,40	S,R	chl+ser films	2.52	n/a
887.0	897.0	95	95	82	R3	1.0	70,40	S	chl+ser film+rare ca	2.42	n/a
897.0	907.0	100	97	81	R2	0.8	50	R	chl+ser film	2.45	n/a
907.0	917.0	99	96	79	R2	0.9	50	R	chl+ser film	2.42	n/a
917.0	927.0	100	80	73	R2	0.5	70	R	chl+ser film	2.45	n/a
927.0	937.0	101	100	89	R3	0.9	50	R	wht clay+bar	2.55	n/a
937.0	947.0	99	99	86	R3	0.6	35	VR	wht clay+bar	2.56	n/a
947.0	957.0	97	97	87	R3	0.9	80	R	graphite film+wht clay	2.56	n/a
957.0	967.0	100	100	87	R3	1.0	40	R	r graphite+cht clay+p	2.60	n/a
967.0	977.0	98	98	80	R3	1.3	50	R	minor clay films	2.49	n/a
977.0	987.0	100	100	84	R3	0.9	60	R	minor clay films+bar	2.60	n/a
987.0	997.0	100	100	85	R3	1.4	60	R	minor py	2.61	n/a
997.0	1007.0	99	99	90	R3	1.5	60,70	R	graphite	2.55	n/a
1007.0	1017.0	98	90	80	R3	1.6	70	R	clay+bar+qtz coat	2.60	n/a
1017.0	1027.0	100	100	90	R3	1.0	70	R	lay+bar+qtz coat+gra	2.59	n/a
1027.0	1037.0	106	505	63	R3	2.3	70,25	R	lay+bar+qtz coat+gra	2.62	n/a
1037.0	1047.0	100	100	74	R3	1.9	60	R	graphite	2.57	n/a
1047.0	1057.0	102	102	85	R3	0.9	60	R	graphite+bar	2.60	n/a
1057.0	1067.0	100	100	94	R3	0.7	70	R	graphite	2.63	n/a
1067.0	1077.0	100	100	76	R3	0.8	25	S	graphite qtz	2.56	n/a
1077.0	1087.0	99	99	68	R3	1.8	30	S	graphite	2.61	n/a

HECLA MINING COMPANY
ROSEBUD PROJECT

NORTH ZONE

HOLE ID: 94-335

AZIMUTH: 60.5°

INCLINATION: -90.0°

LOGGED BY: RK

DATE: 10/8/94

PAGE ___1___ OF ___1___

DRILL FROM	RUN TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
439.0	444.0	100	100	88	R2	0.2	60	R	nil	2.27	waste
444.0	454.0	100	100	93	R2	0.2	60	R	nil	2.22	waste
454.0	464.0	100	100	99	R2	0.1	60	R	nil	2.22	waste
464.0	474.0	100	94	83	R2	0.6	40	R	chl films	2.21	waste
474.0	484.0	98	92	70	R2	0.8	40,30	R	chl films	2.33	waste
484.0	494.0	96	94	77	R2	0.5	75	R	qtz coating+chl films	2.41	waste
494.0	504.0	98	92	80	R2	0.7	75,40	R	chl films+clay films	2.42	waste
504.0	514.0	99	91	82	R2	1.0	75,60	R	chl films	2.38	waste
514.0	524.0	96	93	72	R2	0.8	60/30	R	clay film+qtz+py coating	2.37	waste
524.0	534.0	95	91	71	R3	0.5	30	R	qtz+py+clay	2.39	waste
534.0	544.0	98	97	87	R3	0.4	40	R	qtz+py coatings +vnlets	2.41	waste
544.0	554.0	96	91	62	R2	1.7	40	R	py coatings	2.38	waste
554.0	564.0	99	99	77	R2	1.1	50	R	clay films	2.33	waste
564.0	574.0	97	92	81	R2	0.4	30,20	R	nnil	2.32	waste
574.0	584.0	98	91	61	R2	0.8	40,50,70	S	nil	2.26	waste
584.0	594.0	95	85	52	R2	1.3	35,45	R-S	nil	2.33	waste
594.0	604.0	97	93	82	R2	0.1	35	S	nil	2.29	waste
604.0	614.0	97	86	72	R2	0.3	40	R	clay films+py coatings	2.39	waste
614.0	624.0	98	98	89	R2	0.1	40	R	nil	2.38	waste
624.0	634.0	100	100	100	R2	0.3	50	R	clay films+py	2.30	waste
634.0	644.0	100	97	92	R2	1.5	90,75	R	chl films	2.30	waste
644.0	654.0	100	100	100	R2	0.1	50	R	minor py+chl films	2.40	waste
654.0	664.0	99	99	97	R2	0.0	n/a	n/a	n/a	2.30	waste
664.0	674.0	100	100	93	R2	0.5	40,50	R	clay films+minor py	2.40	ore
674.0	684.0	102	102	90	R3	0.9	60,30	R	clay films+minor py	2.40	LG
684.0	694.0	99	99	97	R2	0.4	70	R	clay films	2.60	waste
694.0	704.0	100	100	91	R3	0.6	25,40	R	clay films	2.40	waste
704.0	714.0	100	100	87	R3	0.4	15,0	R	nil	2.60	waste
714.0	724.0	100	100	81	R3	1.0	65,5	R	clay films	2.30	waste
724.0	734.0	100	100	100	R3	0.3	30,75	R-S	clay films	2.40	waste
734.0	744.0	99	96	70	R3	0.8	5,60	R-S	clay films	2.40	waste
744.0	754.0	100	100	92	R3	0.9	5,40	R	clay films	2.50	waste
754.0	764.0	101	101	74	R3	1.0	0-5,35,80	R	qtz+py+clay films	2.40	waste
764.0	774.0	94	94	64	R3	1.5	70,5	S	chl+py	2.40	waste
774.0	784.0	102	76	75	R2	1.0	40,40,80	R	chl films	2.50	waste
784.0	794.0	102	98	94	R3	0.9	65	R	chl rk	2.60	waste
794.0	804.0	101	99	79	R3	1.3	65	R	clay+ba	2.70	waste
804.0	814.0	85	85	69	R5	1.2	50	R-S	sil rk	2.60	waste
814.0	823.5	95	91	66	R3	1.0	50	R	clay films+sulf coating	2.50	waste
823.5	833.5	106	102	80	R4	1.2	65	R	clay films+sulf coating	2.60	waste
833.5	841.0	84	79	52	R3	1.2	65,30	R	clay+sulf+ba	2.30	waste
841.0	854.0	101	101	99	R3	0.8	45-50	R	clay+sulf vn	2.60	waste
854.0	858.0	107	107	107	R3	0.3	30	R	sil rk+ba+qtz	2.60	waste
858.0	864.0	100	100	88	R3	0.3	30	R	sil rk+ba+qtz	2.60	waste
864.0	869.0	68	68	48	R3	0.6	65,55,0,30	VR	sil rk+qtz+ba	2.70	waste
869.0	874.0	108	108	106	R3	0.6	65,55,0,30	VR	sil rk+qtz+ba	2.70	waste
874.0	884.0	99	97	77	R4	0.6	85	R	qtz coating+wht clay	2.60	LG
884.0	894.0	100	99	76	R3	0.6	85,40	R	clay films+qtz+py	2.50	waste
894.0	904.0	102	102	89	R3	0.3	85,75	R	py+carbon	2.50	waste
904.0	914.0	98	80	39	R2	2.1	85,15	S	clay films+py	2.50	waste
914.0	924.0	100	93	48	R2	2.0	85,15	R	py+carbon	2.50	waste
924.0	934.0	98	73	59	R2	3.2	80-85,20	R	py+carbon	2.40	waste
934.0	944.0	100	100	75	R2	1.5	75,60,15	R	py+carbon	2.40	waste
944.0	954.0	97	93	57	R2	2.2	60-65,10	R	py+clay films	2.40	waste
954.0	964.0	100	100	88	R3	1.0	70	S	carbon shale	2.60	waste
964.0	974.0	99	99	78	R3	1.0	65,30,15	S	carbon+ca	2.60	waste
974.0	984.0	94	94	90	R4	1.7	80,50	S	nil	2.60	waste
984.0	990.0	100	100	88	R2	n/a	n/a	n/a	n/a	n/a	waste
990.0	994.0	99	99	72	R3	1.0	40-60	R	ca+py	2.50	waste
994.0	1004.0	92	92	60	R1	2.5	60-75	S	py+carbon+shale+ca	2.60	waste
1004.0	1014.0	97	97	47	R3	4.1	65,35,15	S	carbon shale+clay films	2.70	waste
1014.0	1024.0	102	98	36	R1	3.7	75-85	S	carbon+clay films+minor ca	2.60	waste
1024.0	1034.0	99	98	49	R1	3.2	80,50	S	carbon+clay films+minor ca	2.60	waste
1034.0	1044.0	96	96	52	R3	2.8	50,60	S	carbon+clay films+minor ca	2.90	waste
1044.0	1050.0	100	100	69	R3	2.6	50,60	S	carbon+clay films+minor ca	2.80	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-336C

AZIMUTH: 75.5°

INCLINATION: -89.0°

LOGGED BY: LJB

DATE: 9/17/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	(g/cc)	
475.0	483.0	100	100	100	R4	0.2	70	R	nil	2.46	waste
483.0	493.0	100	100	91	R4	0.2	70,90	S	nil	2.43	waste
493.0	503.0	100	97	92	R4	1.1	30	R	nil	2.42	waste
503.0	513.0	100	100	100	R4	0.9	30	R	chl silc+ca vn	2.40	waste
513.0	523.0	100	100	93	R4	0.6	70,30	R	nil	2.39	waste
523.0	533.0	100	100	64	R4	1.7	70,30,10	R	nil	2.41	waste
533.0	543.0	100	100	79	R4	1.5	70,30,10	R	nil	2.38	waste
543.0	553.0	100	100	100	R3	0.6	70,30	R	nil	2.43	waste
553.0	563.0	100	100	95	R3	0.6	70,40	R	nil	2.37	waste
563.0	573.0	100	100	80	R3	1.2	70,10	R	clay film+py	2.33	waste
573.0	583.0	100	100	92	R3	1.2	70,10	R	clay films+py	2.42	waste
583.0	593.0	100	100	72	R3	1.7	50-60	R	clay+py films	2.41	waste
593.0	603.0	100	98	79	R3	1.5	50	R	clay+py films	2.36	waste
603.0	613.0	93	93	73	R3	1.2	60	R	clay films	2.40	LG
613.0	623.0	98	96	61	R3	1.4	70,40	R	clay films	2.42	LG
623.0	633.0	100	98	70	R3	1.9	70	R	clay+chl film	2.45	waste
633.0	643.0	100	97	65	R3	1.9	70,30	R	clay film	2.45	waste
643.0	653.0	97	97	79	R3	1.5	40	R	clay film	2.44	waste
653.0	663.0	80	57	45	S5	0.7	60	VR	clay alt rk	2.40	waste
663.0	673.0	92	84	72	S5	1.1	40	VR	clay alt rk	2.43	waste
673.0	677.5	106	106	106	R3	1.1	40.0	VR	clay alt rk	2.37	waste
677.5	678.0	104	104	0	R3	0.2	70	R	minor clay	n/a	waste
678.0	683.0	100	99	88	R3	0.1	70	R	minor clay	2.42	waste
683.0	689.5	95	93	38	R3	1.4	30,60,80	R	clay film	2.45	waste
689.5	699.5	102	102	89	R2	0.8	60	R	clay film	2.49	ore
699.5	709.5	100	100	95	R2	0.9	60	R	clay	2.45	LG
709.5	720.0	95	95	80	R2	0.9	60	R	minor clay+py	2.38	waste
720.0	730.0	100	100	95	R2	0.8	70-80	R	chl film	2.39	waste
730.0	740.5	98	98	97	R2	0.3	50,70	R	minor clay	2.38	waste
740.5	750.5	103	103	103	R3	0.9	80	R	minor clay	2.43	waste
750.5	761.0	99	99	97	R3	0.7	80	R	minor clay	2.44	waste
761.0	771.5	98	98	91	R3	0.8	70-80	R	minor clay	2.42	waste
771.5	781.5	100	100	97	R3	0.0	n/a	n/a	n/a	2.40	waste
781.5	791.5	100	100	87	R3	0.4	5	R	qtz+clay+bar	2.40	waste
791.5	800.0	100	100	93	R3	0.7	70	R	qtz+bar	2.43	LG

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-337C

AZIMUTH: 332.0°

INCLINATION: -89.5°

LOGGED BY: RK

DATE: 9/14/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	(g/cc)	
475.0	483.0	115	112	73	R2	n/a	n/a	n/a	n/a	2.24	waste
483.0	493.0	100	97	85	R2	0.8	70	R	nil	2.35	waste
493.0	503.0	96	78	50	R2	2.0	60,30	R	clay+ca	2.54	waste
503.0	513.0	98	92	83	R2	1.1	30	R	nil	2.50	waste
513.0	523.0	98	98	96	R2	0.5	60	R	nil	2.48	waste
523.0	533.0	99	99	77	R2	1.1	80	R	nil	2.45	waste
533.0	543.0	99	97	82	R2	0.9	50,30	R	nil	2.38	waste
543.0	553.0	100	98	82	R2	1.0	70	R	chl film	2.35	waste
553.0	563.0	98	91	72	R1	1.3	60,5	R	nil	2.34	waste
563.0	573.0	98	63	33	R1	1.8	50	R	nil	2.41	waste
573.0	583.0	96	86	59	R1	2.1	80	R	nil	2.40	waste
583.0	593.0	98	83	69	R1	1.7	60,80	S,R	clay	2.46	waste
593.0	603.0	94	92	78	R2	1.1	70	R	minor clay film	2.41	waste
603.0	613.0	96	90	89	R3	1.8	80,70,70	R	chl film	2.49	waste
613.0	623.0	100	94	85	R3	1.0	50,40	R	nil	2.47	waste
623.0	633.0	100	100	94	R3	1.1	65-75	R	clay film	2.52	waste
633.0	643.0	99	99	90	R3	0.8	85,40	R	nil	2.43	waste
643.0	653.0	100	100	100	R3	0.8	80	R	nil	2.49	waste
653.0	663.0	98	98	98	R2	0.4	80	R	nil	2.37	waste
663.0	673.0	100	100	100	R2	0.1	80	R	py vnlet	2.43	waste
673.0	683.0	98	98	86	R2	0.3	40	R	py+qtz	2.33	waste
683.0	693.0	100	100	97	R2	0.3	60	VR	nil	2.30	waste
693.0	703.0	96	96	84	R3	0.6	10,70	R	qtz+py	2.47	waste
703.0	713.0	100	100	88	R2	0.3	40	R	clay film	2.36	waste
713.0	723.0	100	100	90	R2	1.5	50	R	clay film	2.37	waste
723.0	733.0	100	100	98	R3	0.8	50,80	R	nil	2.45	waste
733.0	743.0	100	100	91	R3	1.0	80	R	nil	2.44	waste
743.0	750.0	110	110	98	R3	n/a	n/a	n/a	n/a	2.39	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-338C

AZIMUTH: 246.5°

INCLINATION: -89.0°

LOGGED BY: L. Bernard

DATE: 8/3/94

PAGE ___1___ OF ___1___

DRILL FROM	RUN TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA				SPECIFIC GRAVITY (g/cc)	ORE/WASTE
						FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL		
490.0	493.0	100	n/a	13	R3	n/a	n/a	n/a	n/a	"n/a	waste
493.0	503.0	85	n/a	57	R1,R3	n/a	n/a	n/a	n/a	"n/a	waste
503.0	513.0	98	n/a	89	R3	n/a	n/a	n/a	n/a	"n/a	waste
513.0	523.0	98	n/a	90	R3	n/a	n/a	n/a	n/a	"n/a	waste
523.0	533.0	96	n/a	86	R3	n/a	n/a	n/a	n/a	"n/a	waste
533.0	543.0	98	n/a	91	R3	n/a	n/a	n/a	n/a	"n/a	waste
543.0	553.0	98	n/a	90	R3	n/a	n/a	n/a	n/a	"n/a	waste
553.0	563.0	93	n/a	92	R3	n/a	n/a	n/a	n/a	"n/a	waste
563.0	573.0	97	n/a	73	R3,R1,R2	n/a	n/a	n/a	n/a	"n/a	waste
573.0	583.0	100	n/a	66	R3,R4	n/a	n/a	n/a	n/a	"n/a	waste
583.0	593.0	95	n/a	70	R3	n/a	n/a	n/a	n/a	"n/a	waste
593.0	603.0	n/a	n/a	n/a	R3,R1,R2	n/a	n/a	n/a	n/a	"n/a	waste
603.0	613.0	100	n/a	91	R2,R3	n/a	n/a	n/a	n/a	"n/a	LG
613.0	617.0	82	n/a	82	R2,R3	n/a	n/a	n/a	n/a	"n/a	waste
617.0	620.0	116	n/a	113	R2,R3	n/a	n/a	n/a	n/a	"n/a	ore
620.0	622.0	93	n/a	53	R2,R3	n/a	n/a	n/a	n/a	"n/a	waste
622.0	633.0	100	n/a	100	R2,R3	n/a	n/a	n/a	n/a	"n/a	waste
633.0	643.0	98	n/a	98	R2,R3	n/a	n/a	n/a	n/a	"n/a	waste
643.0	653.0	108	n/a	108	R2,R3	n/a	n/a	n/a	n/a	"n/a	waste
653.0	663.0	93	n/a	78	R2,R3	n/a	n/a	n/a	n/a	"n/a	waste
663.0	673.0	100	n/a	94	R2,R3	n/a	n/a	n/a	n/a	"n/a	waste
673.0	683.0	100	n/a	87	R2,R3	n/a	n/a	n/a	n/a	"n/a	waste
683.0	693.0	100	n/a	88	R2,R3	n/a	n/a	n/a	n/a	"n/a	waste
693.0	701.0	100	n/a	97	R2,R3	n/a	n/a	n/a	n/a	"n/a	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

NORTH ZONE

HOLE ID: 94-339C

AZIMUTH: 116.0°

INCLINATION: -90.0°

LOGGED BY: RK

DATE: 10/17/94

PAGE ___1___ OF ___1___

DRILL RUN FROM	TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
494.0	504.0	93	81	75	R2	0.4	50	S	nil	2.48	waste
504.0	514.0	95	67	60	R2	0.9	50,40	R	chl coating	2.51	waste
514.0	524.0	98	73	45	R3	0.8	45,30	R	qtz coating+marc+chl films	2.52	waste
524.0	534.0	98	25	22	R3	1.0	55,15	VR	chl coating	2.54	waste
534.0	544.0	98	67	40	R3	0.7	40-50,5	VR	drusy qtz	2.59	waste
544.0	554.0	97	77	57	R2	0.7	35,60	R	drusy qtz+chl films	2.43	waste
554.0	564.0	98	97	79	R2	0.2	60	VR	nil	2.27	waste
564.0	574.0	99	99	86	R2	0.0	n/a	n/a	n/a	2.32	waste
574.0	584.0	99	98	84	R2	0.0	n/a	n/a	n/a	2.43	waste
584.0	594.0	98	97	89	R2	0.1	70	R	nil	2.40	waste
594.0	604.0	95	75	65	R2	0.8	60	R	chl rk	2.49	waste
604.0	614.0	101	101	76	R2	0.5	70,20	R	chl rk	2.40	waste
614.0	622.0	96	96	91	"R2	0.3	40,50	R	clay	2.30	waste
622.0	624.0	101	101	75	n/a	0.5	20,0	R	drusy qtz+marc	n/a	waste
624.0	634.0	100	100	86	R2	0.5	20,0	R	drusy qtz+marc	2.50	waste
634.0	644.0	101	101	86	R2	0.6	40	R	drusy qtz+marc	2.20	waste
644.0	654.0	100	98	74	R2	1.2	40	R	chl rx	2.40	waste
654.0	664.0	100	100	90	R2	0.7	70	R	chl rx	2.40	waste
664.0	674.0	100	100	86	R3	0.7	40	R	qtz coating+marc	2.50	waste
674.0	684.0	100	100	78	R3	0.8	70,40	R	nil	2.41	waste
684.0	694.0	99	98	84	R3	0.6	50,20	R	rusy qtz+wht clay+marc+chl fil	2.41	waste
694.0	704.0	94	78	54	R3	0.4	25	R	rusy qtz+wht clay+marc+chl fil	2.48	waste
704.0	714.0	98	96	79	R3	0.4	25,80	R	rusy qtz+wht clay+marc+chl fil	2.40	waste
714.0	724.0	99	95	83	R3	0.2	80	S	chl+ca films+py	2.39	waste
724.0	734.0	99	89	63	R3	0.6	45	R	chl+py films	2.38	waste
734.0	744.0	98	87	64	R3	1.1	65,0	R	chl+py films	2.43	waste
744.0	754.0	97	90	63	R3	0.9	65,0	R	chl+py films	2.38	waste
754.0	764.0	97	83	59	R3	1.3	50	R	chl+py films+red hem	2.46	waste
764.0	775.0	72	30	19	R3	1.1	40,5	R	chl+py films+red hem	2.41	waste
775.0	863.2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
863.2	873.5	100	100	64	R2	n/a	40	R	clay films	2.30	waste
873.5	883.6	100	97	83	R2	0.8	60	R	clay+py films	2.40	waste
883.6	888.0	86	86	68	R3	0.8	50	R	clay films	2.60	waste
888.0	894.0	99	90	30	R3	0.3	45	K	sil rk	n/a	waste
894.0	896.5	60	0	0	R3	0.3	45.0	K	sil rk	2.80	waste
896.5	904.0	100	80	60	R3	0.5	45	VR	sil rk	n/a	waste
904.0	914.0	100	100	84	R3	0.5	45	VR	sil rk	2.60	waste
914.0	924.0	100	100	94	R3	0.5	45	R	sil rk+py films	2.70	waste
924.0	934.0	98	98	71	R3	1.0	60	R	clay film	2.50	waste
934.0	944.0	97	97	56	R3	1.3	70,30	R	nil	2.50	waste
944.0	950.0	106	106	40	R3	1.7	70,30	R	nil	2.60	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-340C

AZIMUTH: 94.5°

INCLINATION: -87.5°

LOGGED BY: C. Wineteer

DATE: 7/26/94

PAGE ___1____ OF ___1____

DRILL RUN FROM	TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA FRACTURES/FT.	VG. ANGLE TO C.A	ROUGHNESS	INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
495.0	503.0	100		100	R3						waste
503.0	513.0	97		88	R3						waste
513.0	523.0	94		81	R3						waste
523.0	533.0	93		86	R1						waste
533.0	543.0	100		95	R3						waste
543.0	553.0	98		92	R3						waste
553.0	563.0	91		63	R3						waste
563.0	573.0	100		98	R3						waste
573.0	582.0	100		96	R3						waste
582.0	592.0	99		93	R3						waste
592.0	602.0	100		95	R3						waste
602.0	612.0	97		85	R3						waste
612.0	622.0	100		64	R1,R3						waste
622.0	632.0	93		55	R1,R3						waste
632.0	642.0	100		83	R3						waste
642.0	652.0	95		83	R3,R2						waste
652.0	662.0	96		80	R2						waste
662.0	672.0	97		82	R3						waste
672.0	682.0	99		95	R3						waste
682.0	692.0	83		64	R3						waste
692.0	705.0	88		61	R3,R2						waste
705.0	713.0	83		n/a	R3,R2						waste
713.0	723.0	86		64	R3,R2						waste
723.0	727.0	93		60	R3,R2						waste
727.0	733.0	97		73	R3,R2						waste
733.0	743.0	93		72	R3,R2						waste
743.0	750.0	100		100	R3,R2						waste
750.0	751.5	100		87	R3,R2						waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D-60-94

AZIMUTH: 130.5°

INCLINATION: -49.0°

LOGGED BY: M. Nelson

DATE: 10/22/94

PAGE ___1____ OF ___1____

DRILL RUN FROM	TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
0.0	7.0	62	34	19	R3	2.0	60	R	wht clay+marc	2.45	waste
7.0	15.0	90	66	61	R3	1.8	70	R	CaCO3+marc	2.40	waste
15.0	25.0	95	81	68	R3	2.1	70	R	rk flour+CaCO3+marc	2.39	waste
25.0	30.0	86	56	44	R3	2.6	70	R	CaCO3+grnd rk	2.37	waste
30.0	36.0	78	25	0	R3	5.2	80	S-R	clay+marc	2.33	waste
36.0	46.0	86	59	33	R3	2.9	80	S-R	CaCO3+grnd rk	2.47	waste
46.0	56.0	69	46	25	R3	10.0	80-90	S	CaCO3+marc	2.45	waste
56.0	66.0	92	81	65	R3	1.9	80	S/R	CaCO3+marc	2.56	ore
66.0	76.0	97	94	55	R3	1.9	75	S/R	chl+marc+CaCO3	2.50	ore
76.0	86.0	97	84	64	R3	2.5	70	S	marc+CaCO3	2.51	ore
86.0	96.0	93	71	32	R3	2.8	80	S	py+chl wht clay	2.53	LG
96.0	106.0	90	82	63	R3	1.7	70	S	marc+CaCO3+wht clay	2.51	waste
106.0	116.0	94	89	72	R3	2.2	55	S	marc+chl+CaCO3	2.51	LG
116.0	120.0	94	80	75	R3	2.0	60	S,R	CaCO3+wht clay	2.52	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D–64–94

AZIMUTH: 305.5°

INCLINATION: 81.0°

LOGGED BY: C. Wineteer

DATE: 9/30/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
0.0	8.0	100	90	70	R3	1.0	60	K	ser+py	2.54	LG
8.0	18.0	100	95	65	R3	0.8	35/70	K/R	ser+py+ca+marc	2.42	waste
18.0	28.0	95	65	19	R2	3.7	60/20	S	ser+py	2.27	LG
28.0	38.0	98	87	69	R3	1.2	70	R	ser+py	2.38	waste
38.0	48.0	100	100	88	R3	0.3	60	R	marc+CaCO3	2.45	waste
48.0	58.0	95	83	69	R3	1.3	55	R	ser slick clay	2.39	waste
58.0	68.0	100	93	86	R2	0.6	65	R	ser+py	2.32	waste
68.0	78.0	94	68	57	R2	0.8	65	K–R	ser+chl+py	2.37	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D-62-94

AZIMUTH: 129.5°

INCLINATION: 31.5°

LOGGED BY: C. Wineteer

DATE: 9/28/94

PAGE ___1___ OF ___1___

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
0.0	8.0	62	36	35	R3	2.4	30	S	py	2.48	LG
8.0	18.0	92	76	61	R3	1.4	40	S-R	py+CaCO3+micro bx	2.46	ore
18.0	28.0	100	83	72	R3	1.2	30	S	py+CaCO3	2.49	ore
28.0	38.0	100	91	85	R3	0.7	30	S	CaCO3+marc+ill	2.50	ore
38.0	48.0	100	83	74	R3	0.4	30	S	Q+ill+marc	2.44	waste
48.0	58.0	100	84	65	R3	1.0	40	S	Q+marc+ill	2.47	waste
58.0	68.0	100	87	84	R3	0.6	65	S	ill+marc	2.43	waste
68.0	78.0	100	90	93	R2	0.0	n/a	n/a	n/a	2.42	waste
78.0	88.0	104	91	93	R2	0.2	70	R	pale grn ser clay	2.44	waste
88.0	98.0	100	77	76	R2	0.7	60	K	CaCO3+ser+py	2.37	waste
98.0	108.0	97	82	69	R2	0.5	50	R	ser+py	2.39	LG
108.0	118.0	97	86	60	R1	1.5	55	S	chl+CaCO3+py	2.43	ore
118.0	128.0	100	84	55	R3	1.0	60	R	chl+ca+py	2.45	ore
128.0	138.0	96	84	74	R3	0.8	30	R	ill+ca+marc	2.40	ore
138.0	148.0	100	87	89	R2	0.0	n/a	n/a	n/a	2.42	waste
148.0	155.0	110	96	67	R3	0.3	70	R	chl+py	2.39	waste
155.0	160.0	105	100	91	R3	0.4	70	R	chl+py	2.45	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D-52-94

AZIMUTH: 130.5°

INCLINATION: -7.0°

LOGGED BY: LJB

DATE: 10/24/94

PAGE ___1____ OF ___1____

DRILL RUN FROM	TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
0.0	8.0	72	50	25	R3	0.5	50	R	chl films	2.50	waste
8.0	10.0	95	90	45	R3	2.0	40	R	nil	n/a	waste
10.0	16.0	108	105	60	R3	1.0	50	R	nil	2.50	LG
16.0	21.0	66	54	8	R3	1.0	70	R	ca film+py	n/a	ore
21.0	30.0	102	102	78	R3	1.2	45	R	ca+py films	2.40	ore
30.0	40.0	99	91	75	R3	1.2	50	R	py films	2.40	ore
40.0	44.0	85	75	65	R3	1.0	50	R	clay/py films	n/a	ore
44.0	54.0	105	96	60	R3	1.4	50	R	sas	2.50	LG
54.0	64.0	96	94	83	R3	1.5	50	R	chl+py films	2.60	waste
64.0	70.0	85	85	70	R3	0.8	50	R	ca+py films	2.50	waste
70.0	80.0	98	94	86	R3	0.7	60	R	py coat	2.40	waste
80 ~~89.0~~ 89 ~~80.0~~		105	102	70	R3	2.0	30	R	ca+py films	2.40	waste
89.0	95.0	100	87	45	R3	0.5	30	R	ca+py+clay films	2.50	waste
95.0	105.0	98	98	88	R3	0.5	60	R	ca+py+clay films	2.20	LG
105.0	115.0	96	94	73	R3	0.8	45	VR	clay+py films	2.30	waste
115.0	125.0	87	82	62	R3	1.0	40	VR	sab	2.40	waste
125.0	135.0	97	93	57	R3 R#	1.3	40	R	py inlets	2.40	waste
135.0	145.0	98	98	69	R3	0.9	50	R	clay films	2.40	ore
145.0	155.0	95	85	32	R3	1.7	30-40	R	clay films+py coating	2.40	ore
155.0	161.0	97	75	18	R3	0.3	10	R	clay films	n/a	ore
161.0	165.0	95	75	40	R3	0.0	n/a	n/a	n/a	2.10	ore
165.0	173.0	110	77	35	R3	1.2	0-15	n/a	n/a	n/a	waste
173.0	179.0	76	61	16	R3	1.4	70	VR	clay+py+qtz coat	2.30	waste
179.0	187.0	92	92	75	R3	0.8	70	R	clay films+py coat	2.40	waste
187.0	191.0	99	98	9	R2	2.5	60	R	sab	2.30	waste
191.0	201.0	97	91	58	R2	2.1	50	R-S	sas	2.40	waste
201.0	211.0	100	98	50	R2	1.8	35	R	sab	2.40	waste
211.0	221.0	100	44	78	R1	1.3	50	R	sas	n/a	waste
221.0	226.0	100	0	0	S4-S1 S3	n/a	n/a	n/a	n/a	n/a	waste
226.0	229.0	223	0	80	S4-S3	n/a	n/a	n/a	n/a	n/a	waste
229.0	240.0	50	27	31	S4-S3	0.8	50	R	gouge+soft rk	n/a	waste
240.0	250.0	110	87	68	S4-S3	0.5	60	R	gouge+soft rk	2.30	waste
250.0	260.0	99	30	15	S4-S3	n/a	n/a	n/a	gouge+soft rk	2.40	waste
260.0	263.0	93	33	23	S3	n/a	n/a	n/a	n/a	n/a	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D-54-94

AZIMUTH: 133.5°

INCLINATION: 18.5°

LOGGED BY: M. Nelson

DATE: 10/23/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
0.0	10.0	86	59	36	R3	2.4	70	R-VR	py+clay	2.41	waste
10.0	20.0	96	94	74	R3	1.7	70	S-R	marc+wht clay	2.41	LG
20.0	30.0	97	86	74	R3	1.6	80	S	fine py+CaCO3	2.34	LG
30.0	40.0	99	98	89	R3	1.3	80	R	py	2.31	ore
40.0	50.0	93	76	55	R3	1.6	60	R	py+ser	2.43	waste
50.0	60.0	96	84	65	R3	1.6	65	R	py+clay	2.35	waste
60.0	70.0	94	64	46	R3	1.9	65	R-VR	marc	2.34	waste
70.0	80.0	96	75	68	R3	1.5	65	R	ser+marc	2.46	ore
80.0	89.0	73	40	25	R2	1.3	60	R	marc+ser	2.46	ore
89.0	99.0	97	78	63	R2	1.7	65	S-R	ser+marc	2.41	ore
99.0	109.0	95	83	72	R2	2.0	70	R	marc+clay	2.38	waste
109.0	119.0	94	79	67	R2	1.6	65	R	clay+ser+marc	2.32	waste
119.0	129.0	93	66	59	R3	1.5	75	S-R	ser+wht clay+py	2.34	waste
129.0	139.0	95	85	52	R3	2.4	65	S-R	chl+py+wht clay	2.50	waste
139.0	149.0	95	79	65	R3	1.9	70	R	marc+CaCO3+wht clays	2.32	ore
149.0	159.0	96	92	75	R3	1.4	70	R	marc+wht clays	2.42	ore
159.0	169.0	97	79	74	R3	1.6	65	R	wht clays+marc	2.36	ore
169.0	179.0	92	61	54	R3	2.6	60	R	wht powdery clay+marc	2.39	ore
179.0	189.0	85	51	25	R3	3.7	60	R-S	wht powdery clay+marc	2.40	ore
189.0	199.0	91	68	51	R2	2.0	70	S	wht powdery clay	2.38	waste
199.0	209.0	90	67	43	R2	2.2	45	S	wht powdery clay	2.42	LG
209.0	219.0	87	60	44	R2	1.3	50	R	ser+marc+wht clay	2.38	waste
219.0	224.0	86	58	38	R2	1.6	80	R-S	rk fgs+gry clay+wht powd clay	2.32	waste
224.0	230.0	110	86	80	R2	2.3	50	R	py+marc	2.34	waste
230.0	240.0	94	70	49	R3	2.0	75	S	ser+clay	2.34	waste
240.0	250.0	90	69	44	R2	1.5	60	R-VR	rk fgs+ser+py	2.33	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D-58-94

AZIMUTH: 305.0°

INCLINATION: -54.0°

LOGGED BY: C. Wineteer

DATE: 10/12/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
0.0	9.0	82	43	30	R3	1.9	0/40	R	ser+ca+py	2.37	waste
9.0	19.0	79	70	44	R3	0.4	20	K	py+ca+ser	2.41	waste
19.0	29.0	94	92	66	R3	0.6	30	R-K	ca+ser+py	2.36	waste
29.0	34.0	94	86	68	R3	1.6	30	R-K	ser+ca	2.43	waste
34.0	44.0	100	100	81	R3	0.5	60	R	ca+ser	2.52	waste
44.0	54.0	97	74	53	R3	1.8	30	R	ca+ser	2.57	waste
54.0	62.0	75	29	25	R3	>>10	30	S	FeOx+ca	2.55	waste
62.0	70.0	94	61	45	R3	2.1	30	S	FeOx+ca	2.58	waste
70.0	80.0	100	75	56	R3	1.0	25	S	ca+ser+py	2.51	waste
80.0	90.0	98	71	61	R2	1.4	35	S	ca+py+ill	2.50	waste
90.0	100.0	85	62	52	R2	1.3	40	R	ser+ill+py	2.51	waste
100.0	110.0	82	34	18	R1	3.3	40	R	ill+py	2.38	LG
110.0	120.0	93	70	57	R2	1.2	35	R	ill+py	2.39	LG

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D-7-94

AZIMUTH: 126.5°

INCLINATION: 20.0°

LOGGED BY: C. Wineteer

DATE: 8/31/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	POINT LOAD	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		INDEX (lbs/2.236 in²)	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
0.0	10.0	67	28	19	2775	3.2	60,35	K	py+chl	n/a	ore
10.0	17.0	73	20	7	0	7.3	45	S	ill+py	n/a	waste
17.0	25.0	89	45	21	0	3.7	20	K/R	CaCO3+py+ill	n/a	waste
25.0	35.0	93	84	62	2100	1.1	10, 45	S	ill+py	n/a	waste
35.0	45.0	93	83	61	1725	1.2	25	R	ill+py+CaCO3	n/a	waste
45.0	55.0	95	94	77	525	0.8	70	R	CaCO3+ill	n/a	waste
55.0	65.0	86	35	23	2325	~~+~~10	variable	R	ill	n/a	waste
65.0	72.0	65	13	0	0	~~+~~10	20	R	ill	n/a	waste
72.0	80.0	68	16	5	0	~~+~~10	50,15	R	ill	n/a	waste
80.0	90.0	73	21	20	2025	< 10	60,15	R	ill	n/a	waste
90.0	100.0	88	55	39	925	1.9	50	R	ill+CaCO3	n/a	waste
100.0	110.0	87	78	71	1650	0.5	70	R	CaCO3	n/a	waste
110.0	120.0	38	4	0	0	~~+~~ 10	variable	R	fault bx+gouge	n/a	waste
120.0	130.0	46	0	0	0	~~+~~10	variable	R	fault bx+gouge	n/a	waste
130.0	140.0	48	27	18	0	n/a	n/a	n/a	n/a	n/a	waste
140.0	150.0	83	68	29	900	n/a	n/a	n/a	n/a	n/a	waste
150.0	160.0	66	24	5	0	n/a	n/a	n/a	n/a	n/a	waste
160.0	168.0	50	14	0	0	n/a	n/a	n/a	n/a	n/a	waste
168.0	175.0	69	9	0	0	n/a	n/a	n/a	n/a	n/a	waste
175.0	185.0	83	60	32	2025	n/a	n/a	n/a	n/a	n/a	waste
185.0	195.0	87	70	52	1500	n/a	n/a	n/a	n/a	n/a	waste
195.0	205.0	96	78	55	1500	n/a	n/a	n/a	n/a	n/a	waste
205.0	214.0	89	84	49	2475	n/a	n/a	n/a	n/a	n/a	waste
214.0	215.0	80	30	0	0	0.6	50	S	CaCO3+py	n/a	waste
215.0	225.0	n/a	n/a	n/a	n/a	1.7	30,50,70	S	CaCO3+py	n/a	waste
225.0	234.0	107	103	92	5175	1.0 1	30	S	S.A.A.	2.38	waste
234.0	244.5	86	76	34	4500	0.8	70	S	S.A.A.	2.43	waste
244.5	254.0	104	101	76	3700	1.0 1	70	S	S.A.A.	2.20	waste
254.0	260.0	85	80	68	3600	1.0 1	70,50	S	S.A.A.	2.45	waste
260.0	270.0	99	97	71	5700	0.4	70	S	S.A.A.	2.46	waste
270.0	280.0	99	99	80	4500	0.5	45	S	S.A.A.	2.53	waste
280.0	290.0	97	96	83	6150	0.4	45	S	CaCO3	2.43	waste
290.0	300.0	95	93	76	5250	0.4	70	S	CaCO3	2.49	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D–14–94

AZIMUTH: 133.0°

INCLINATION: 75.0°

1 decimal place

LOGGED BY: C. Wineteer

DATE: 8/29/94

PAGE ___1____ OF ___1____

DRILL RUN FROM	DRILL RUN TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	POINT LOAD INDEX (lbs/2.236 in²)	FRACTURE DATA: FRACTURES/FT.	FRACTURE DATA: AVG. ANGLE TO C.A.	FRACTURE DATA: ROUGHNESS	FRACTURE DATA: INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
0.0	5.0	73	30	10	n/a	>10	50,15	R,S	grn clay+sulf+CaCO3	n/a	waste
5.0	10.0	93	83	70	6000	2	40,60	R,S	grn clay+sulf	n/a	waste
10.0	15.0	93	84	46	3675	1.5	45.0	R	grn clay+sulf	n/a	waste
15.0	20.0	88	47	27	3800	4	45.0	S	clay+sulf	n/a	waste
20.0	28.0	80	42	34	1590	4.3	15.0	S	pale grn clay	n/a	waste
28.0	35.0	97	86	55	3900	1.8	40.0	S	pale grn clay+ill	n/a	waste
35.0	45.0	90	87	54	3300	1	25.0	S	pale grn clay+CaCO3+ill+sulf	n/a	waste
45.0	55.0	93	88	77	3500	0.5	15.0	S	CaCO3+clay+pale grn	n/a	waste
55.0	65.0	97	97	76	1500	0.2	30.0	S	pale grn clay	n/a	waste
65.0	75.0	88	68	40	1800	0.8	45,10	S, S	clay	n/a	waste
75.0	85.0	84	79	50	2775	1	25.0	V	clay	n/a	waste
85.0	93.0	75	64	19	n/a	1	25.0	S	clay	n/a	waste
93.0	100.0	98	93	47	1600	1	30.0	K	pale grn clay w/Lt Gr	n/a	waste
100.0	110.0	86	78	50	3975	1.2	75.0	S	sulf	n/a	waste
110.0	120.0	94	93	78	3600	0.3	45.0	K-S ~~K,S~~	pale grn clay	n/a	waste
120.0	130.0	88	85	71	1875	0.6	50.0	R	CaCO3+~~clay~~ pale grn clay	n/a	waste
130.0	140.0	97	92	90	3000	0.3	65.0	R	py+CaCO3	n/a	waste
140.0	150.0	95	88	84	2550	0.3	60.0	S	grn clay	n/a	waste
150.0	160.0	94	90	81	1650	0.6	45.0	R	marc+ill	n/a	waste
160.0	170.0	93	89	81	1800	0.5	50.0	K-R K,R	grn clay+sulf	n/a	waste
170.0	180.0	82	67	57	1500	0.6	15.0	S	py+marc+ill	n/a	waste
180.0	190.0	82	62	49	1500	1.0	25.0	S	py+marc+ill	n/a	waste
190.0	200.0	89	84	70	1800	0.7	30.0	S	py+marc+~~clay+gouge~~ grn clay	n/a	waste
200.0	210.0	89	79	61	1500	0.3	40.0	S	ill+clay+marc grn	n/a	waste
210.0	220.0	79	59	38	n/a	1.5	20.0	S	ill+clay+chl+marc	n/a	waste

grn chl clay

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94–310C

AZIMUTH: 114.5°

INCLINATION: –90.0°

LOGGED BY:

DATE: 9/9/94

PAGE ___1____ OF ___1____

DRILL RUN FROM	DRILL RUN TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA: FRACTURES/FT.	FRACTURE DATA: AVG. ANGLE TO C.A.	FRACTURE DATA: ROUGHNESS	FRACTURE DATA: INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
494.0	495.0	100	65	0	n/a	n/a	n/a	n/a	n/a	n/a	waste
495.0	505.0	94	93	80	n/a	1.0	60,85	R	nil	2.50	waste
505.0	513.0	100	89	66	n/a	1.5	50,60	R	qtz+clay	2.42	waste
513.0	523.0	100	100	95	n/a	0.9	75,50	R	nil	2.47	waste
532.0	533.0	100	100	96	n/a	1.0	40,50	R	qtz+py+clay	2.38	waste
533.0	535.0	100	100	90	n/a	1.0	20	R	clay coating	2.51	waste
535.0	545.0	98	98	92	n/a	1.0	70	R	qtz+clay	2.49	waste
545.0	555.0	97	97	92	n/a	0.7	50	R	clay film and powder	2.57	waste
555.0	565.0	100	100	98	n/a	0.3	80	VR	nil	2.46	waste
565.0	573.0	100	60	41	n/a	>10	n/a	VR	clay	2.46	waste
573.0	583.0	10	96	80	n/a	1.5	70	R	chl	2.42	waste
583.0	593.0	99	99	67	R1	0.7	80,15	R	nil	2.52	waste
593.0	603.0	95	85	70	R2	1.5	60	R	nil	2.47	waste
603.0	613.0	97	84	52	R2	2.0	60	R	nil	2.45	waste
613.0	615.0	85	85	60	R3	2.5	75	R	clay film	2.47	waste
615.0	625.0	99	75	51	R3	1.1	20,80	R	nil	2.59	waste
625.0	635.0	94	69	55	R3	1.0	60	R	clay film	2.38	waste
635.0	645.0	99	99	72	R3	1.8	60	S	clay film	2.54	waste
645.0	655.0	98	98	78	R3	0.9	30,80	S	nil	2.56	waste
655.0	665.0	98	90	68	R3	1.5	40,80	S	nil	2.53	waste
665.0	675.0	97	97	75	R3	1.5	50,80	S	py	2.48	waste
675.0	685.0	98	98	91	R3	1.3	40,70	S	py+clay iflm	2.49	waste
685.0	695.0	100	100	98	R3	0.9	70	S	nil	2.44	waste
695.0	700.0	100	100	90	R3	0.8	70,40	S	nil	2.28	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D–23–94

AZIMUTH: 125.0°

INCLINATION: 0°

LOGGED BY: C. Wineteer

DATE: 8/30/94

PAGE ___1____ OF ___1____

DRILL RUN FROM	DRILL RUN TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	POINT LOAD INDEX (lbs/2.236 in²)	FRACTURE DATA: FRACTURES/FT.	FRACTURE DATA: AVG. ANGLE TO C.A.	FRACTURE DATA: ROUGHNESS	FRACTURE DATA: INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
0.0	10.0	88	70	47	1925	3.5	15,80	K-S ~~K,S~~	CaCO3+py	n/a	waste
10.0	20.0	89	77	65	3300	3.0	15,30	S	CaCO3+chl+py	n/a	waste
20.0	28.0	75	55	33	3000	3.0	55,0	R	CaCO3+chl+py	n/a	waste
28.0	38.0	91	80	63	1950	3.0	65,5	S	CaCO3+chl+py	n/a	waste
38.0	48.0	79	52	43	1500	3.3	55,30	S	py+CaCO3+chl	n/a	waste
48.0	58.0	82	52	28	1950	4.5	70,40,10	S	CaCO3+chl+py+ill	n/a	waste
58.0	61.0	77	26	0	n/a	x 10.0	70,30,15	S-R ~~S,R~~	CaCO3+chl+py+bx	n/a	waste
61.0	70.0	64	22	9	n/a	x 10.0	50,15	S	CaCO3+chl+py	n/a	waste
70.0	80.0	78	59	16	2325	4.7	25.0	K-S ~~K,S~~	CaCO3+chl+py	n/a	waste
80.0	90.0	77	36	18	1425	x 10.0	50,25	~~S,R~~	chl+py	n/a	waste
90.0	95.0	61	10	0	0	8.0	55,15	~~S,R~~	clay	n/a	waste
95.0	105.0	83	67	49	1200	5.0	55,15	S/S ~~S~~	clay+ill	n/a	waste
105.0	115.0	78	42	20	0	3.5	50,25	S/S S	chl+ill	n/a	waste
115.0	125.0	78	39	15	0	7.3	35.0	S	chl+ill	n/a	waste
125.0	135.0	74	23	14	0	5.0	35.0	R	fault bx+~~ill~~ grn chl clay gouge	n/a	waste
135.0	139.0	67	15	0	0	2.0	30.0	R	fault bx+~~clay~~ grn gouge + clay	n/a	waste
139.0	142.0	47	15	0	0	2.0	30.0	R	~~CaCO3+clay~~ CaCO3 vns + fault bx + grn clay gouge	n/a	waste
142.0	147.0	106	96	76	8025	2.0	20-30, ~~20,30,65~~	S	CaCO3+chl	n/a	waste
147.0	155.0	98	98	92	6000	0.4	65.0	S	ill+py	n/a	waste
155.0	159.0	70	60	33	5100	1.0	35.0	R	ill+CaCO3	n/a	waste
159.0	169.0	110	105	99	5475	0.5	60.0	S	ill+CaCO3+py	n/a	waste
169.0	178.0	86	86	78	5400	0.3	50.0	S	CaCO3+ill+py	n/a	waste
178.0	189.0	85	85	75	4200	0.5	30.0	S	py+chl	n/a	waste
189.0	199.0	96	95	89	5250	0.0	65.0	R	py	n/a	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D–16–94

AZIMUTH: 133.5°

INCLINATION: 34.0°

LOGGED BY: M. Nelson

DATE: 9/6/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	POINT LOAD	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		INDEX (lbs/2.236 in²)	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
231.0	235.0	90	90	70	300	0.3	40.0	R	clay gouge	2.15	waste
235.0	245.0	80	49	31	0	1.4	50.0	S-K ~~S,K~~	clay gouge+ill	2.17	waste
245.0	255.0	86	26	14	0	1.2	20.0	S	py+ill	2.26	waste
255.0	260.0	78	62	52	375	1.2	45.0	S	ill+py	2.21	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D-81-94

AZIMUTH: 121.0°

INCLINATION: -31.0°

LOGGED BY: C. Wineteer

DATE: 9/22/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
0.0	10.0	68	54	45	R3	3.2	70	R	ser+py+chl	2.38	waste
10.0	20.0	96	88	60	R3	1.7	50	R	ser+py+chl	2.44	waste
20.0	30.0	96	93	93	R3	0.3	70	R	CaCO3	2.43	LG
30.0	39.0	100	90	87	R2	0.6	5	K	ser+chl+caCO3	2.35	waste
39.0	49.0	100	70	55	R2	1.4	5/60	K/R	ser+chl+ca	2.34	waste
49.0	59.0	100	89	78	R2	0.3	85	R	none	2.38	waste
59.0	67.0	87	85	76	R2	0.3	65	R	none	2.41	waste
67.0	77.0	98	95	84	R2	0.8	65	R	none	2.46	waste
77.0	87.0	93	90	90	R2	0.6	70	R	py+SiO2	2.39	waste
87.0	97.0	91	82	68	R2	1.0	80	R	py+SiO2	2.38	waste
97.0	107.0	87	75	65	S5	2.0	70	R	ca+py+chl+SiO2	2.40	waste
107.0	117.0	85	68	53	S5	1.7	70	R	Q+ill+marc	2.47	waste
117.0	127.0	90	85	73	R1	1.4	75	R	marc+py+ill+Q	2.43	waste
127.0	135.0	91	88	45	R1	1.3	75	R	chl+ill+py+Q	2.42	waste
135.0	145.0	88	68	30	R2	2.2	70	R	Q+ill+chl+py	2.43	waste
145.0	155.0	87	72	50	R2	1.5	10/60	S/R	Q+ill+py+marc	2.43	waste
155.0	175.0	78	27	7	S5	5.0	60	S	chl+py+ill	2.37	waste
175.0	185.0	83	60	40	R1	2.8	75	R	Q+ill+py	2.07	waste
185.0	194.0	89	53	27	R1	1.9	45/60	S	chl+ill+py+Q	2.33	waste
194.0	200.0	92	50	32	R1	2.4	70	S	chl+il+py+Q	2.33	waste
200.0	210.0	78	29	14	R1	3.2	0/60	S	chl+ill+py	2.38	waste
210.0	220.0	84	64	47	R2	2.0	40	S	ill+py	2.41	waste
220.0	230.0	65	43	25	R2	2.2	65	S	ill+SiO2+py	2.42	waste
230.0	240.0	74	45	31	R3	1.2	60	R	ill+py+SiO2	2.36	waste
240.0	250.0	74	34	12	R1	5.7	15/70	R	ill	2.38	waste
250.0	260.0	85	83	50	S5	0.7	60	R	ill	2.19	waste
260.0	265.0	80	75	43	S5	1.1	40	R	minor ill	2.20	waste
265.0	274.0	83	54	41	S5	0.8	35	R	minor ill	2.22	waste
274.0	280.0	96	96	86	S5	0.3	55	R	SiO2+marc	2.24	waste
280.0	290.0	99	82	78	S5	0.9	50	R	py	2.32	waste
290.0	300.0	n/a	n/a	n/a	n/a	2.3	50	S-K	py+clay	n/a	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D-42-94

AZIMUTH: 126.5°

INCLINATION: 65.0°

LOGGED BY: C. Muerhoff

DATE: 10/25/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
0.0	10.0	96	96	82	R3	0.4	13	R	minor fg sulf	n/a	waste
10.0	20.0	100	100	84	R3	1.1	36	S	gry clay+grn clay+py	n/a	waste
20.0	30.0	100	100	92	R3	0.4	33	R	grn/gry waxy clay+(c2)+py cal	n/a	waste
30.0	40.0	97	97	83	R3	0.8	35	S-R	lght grn waxy clay+py	n/a	ore
40.0	50.0	97	91	85	R2	0.5	35	S-R	gry clay+rk flour+py	n/a	ore
50.0	60.0	98	89	83	R2	0.5	50	S	gr/gry clay+rk flour	n/a	ore
60.0	70.0	95	93	74	R2	0.6	50	S-R	gry clay+py	n/a	waste
70.0	80.0	100	98	93	R2	0.3	51	S-R	lght grn clay	n/a	waste
80.0	90.0	100	100	92	R2	0.6	65,30	S, S	gry/grn clay	n/a	waste
90.0	100.0	100	100	90	R3	0.8	43	S	chl clay+py	n/a	waste
100.0	110.0	99	99	88	R3	0.8	65	S	chl clay+ py	n/a	waste
110.0	120.0	100	100	94	R2	0.7	70	S	chl+bedding plane frac	n/a	waste
120.0	130.0	100	100	95	R2	0.9	70,60	S, S	S.A.A.+chl	n/a	waste
130.0	140.0	100	100	95	R3	.2,.7	35 ~~30~~,70	S	chl+bedding plane	n/a	waste
140.0	150.0	100	100	100	R3	0.3	52	R	chl+py	n/a	waste
150.0	160.0	100	100	89	R3	0.5	47	S	chl+py	n/a	waste
160.0	170.0	100	100	95	R2	0.5	70	S	minor py	n/a	waste
170.0	180.0	98	96	97	R2	0.3	70	S	none	n/a	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D-38-94

AZIMUTH: 133.5°

INCLINATION: 0° -1.0°

LOGGED BY: M. Nelson

DATE: 10/20/94

PAGE 1 OF 1

DRILL RUN FROM	DRILL RUN TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA: FRACTURES/FT.	FRACTURE DATA: AVG. ANGLE TO C.A.	FRACTURE DATA: ROUGHNESS	FRACTURE DATA: INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
0.0	8.0	90	70	47	R3	1.9	50	S/R	CaCO3+chl	2.46	waste
8.0	18.0	95	80	63	R3	1.0	75	R	little infill+rk flour	2.44	waste
18.0	28.0	97	89	70	R3	1.7	60	VR-R	little infill+scant clay	2.46	waste
28.0	38.0	85	55	33	R3 r3	2.6	70	R-VR	ground rk	2.45	waste
38.0	48.0	75	50	31	R2	2.3	55	VR	ground rk+CaCO3+marc	2.51	waste
48.0	58.0	80	57	23	R2	2.8	70	S-R	CaCO3+white clay	2.44	waste
58.0	65.0	73	29	17	R3	3.7	80	S	no infilling	2.43	waste
65.0	70.0	76	46	38	R3	2.8	45	R	rk flour+chl+CaCO3	2.44	waste
70.0	78.0	78	32	10	R2	3.8	55	R	wht clay+ chl	2.44	waste
78.0	88.0	91	59	42	R2	2.5	70	R	wht clay+chl+marc	2.45	waste
88.0	98.0	88	60	39	R2	2.3	80	VR	CaCO3+chl+marc	2.38	ore
98.0	108.0	91	70	56	R2	1.3	60	R-VR	chl+wht clay+marc	2.34	ore
108.0	115.0	66	6	0	S1	n/a	n/a	n/a	wht clay+marc+py	n/a	ore
115.0	125.0	85	47	18	R1	2.9	40	VR	wht clay+marc	2.41	waste
125.0	135.0	85	48	34	R2	2.7	35	R	ser+wht clay+py	2.42	waste
135.0	145.0	90	42	30	R1	1.8	50	R-VR	ser+wht clay+marc	2.40	waste
145.0	155.0	83	54	36	R1	2.0	45	VR	ser+chl/marc	2.42	waste
155.0	164.0	97	73	50	R3	2.0	40	S	CaCO3+tr marc	2.43	waste
164.0	174.0	97	83	67	R3	1.5	40	S	CaCO3+marc/ser	2.44	waste
174.0	184.0	99	92	62	R3	1.5	60	S-R	CaCO3+py+marc	2.37	waste
184.0	194.0	97	71	58	R3	1.6	70	S-R	CaCO3+py+marc	2.42	waste
194.0	204.0	93	80	54	R3	1.6	75	S-R	wht clay+CaCO3+py	2.43	waste
204.0	214.0	97	85	73	R3	1.4	55	S-R	ser+wht clay+marc	2.41	waste
214.0	224.0	97	96	71	R3	1.5	60	S-R	CaCO3+marc+clay	2.43	waste
224.0	229.5	100	99	91	R3	1.8	70	S	CaCO3+py+marc	2.43	waste
229.5	239.5	97	95	70	R3	1.5	70	S-R	CaCO3+clay+py+marc	2.44	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D–35–94

AZIMUTH: 131.5°

INCLINATION: 40.°

LOGGED BY: C. Wineteer

DATE: 9/29/94

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
0.0	10.0	75	41	21	R3	4.5	55	S	minor marc+ill	2.46	waste
10.0	20.0	88	59	23	R1	2.8	50	S	chl+CaCO3+py	2.53	waste
20.0	30.0	96	69	48	R1	1.6	15	K–R	chl+ser+py	2.33	waste
30.0	40.0	95	82	77	R3	1.1	50	S	CaCO3+py	2.33	waste
40.0	50.0	96	89	79	R3	0.9	45	R	py+CaCO3	2.34	waste
50.0	60.0	100	94	95	R3	0.5	85	R	py+CaCO3	2.48	LG
60.0	70.0	100	94	91	R3	0.7	30	S	py	2.33	waste
70.0	80.0	98	91	74	R3	0.7	40	S	py+CaCO3	2.39	LG
80.0	90.0	98	83	58	R3	0.9	30	R	micro bx	2.37	waste
90.0	100.0	100	88	57	R3	0.9	25	R–K	chl+ser+marc	2.35	waste
100.0	110.0	100	93	74	R2	0.8	30,5	K	S.A.A.	2.32	waste
110.0	120.0	97	75	70	R2	2.0	55	K	ser+chl+py	2.30	waste
120.0	130.0	90	44	42	R3	3.4	5,20	K	ser+chl slicks	2.39	waste
130.0	140.0	94	42	29	R1	5.9	70	S	chl+py	2.50	waste
140.0	150.0	100	82	67	R3	2.7	80	S	chl+py	2.34	LG
150.0	160.0	96	70	64	R3	1.6	75	R	ill+marc	2.44	ore
160.0	170.0	94	65	77	R2	1.7	40	R	ill+marc	2.30	ore
170.0	180.0	100	65	63	R3	2.8	75,25	S/R	chl+ill+py	2.31	ore
180.0	190.0	98	58	59	R3	1.0	0	R	marc+ill+Q	2.33	waste
190.0	200.0	91	70	61	R3	0.9	12	R	chl+py+Q	2.30	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D-32-94

AZIMUTH: ~~125.0°~~ 169.0°

INCLINATION: 87.0°

LOGGED BY: C. Wineteer

DATE: 9/21/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
0.0	5.0	87	32	30	R3	3.1	10,50	S	none or minor ill	2.51	waste
5.0	10.0	100	68	48	R3	2.2	20	S	chl+ser+py	2.51	waste
10.0	15.0	87	87	84	R3	0.4	40	S	ser+chl+py	2.49	waste
15.0	24.0	95	84	60	R3	1.5	30	S	ser+ca+chl+py	2.45	waste
24.0	34.0	97	73	24	R2	4.7	65	S	ser+ill+chl+py	2.43	waste
34.0	36.0	75	54	40	R3	6.1	50	S	ill+ser	n/a	waste
36.0	45.0	80	65	49	R3	1.9	40	K	chl+ca+ill+py	2.44	waste
45.0	55.0	96	83	78	R3	1.6	70	S	chl+ca+py	2.46	waste
55.0	65.0	79	50	43	R3	5.3	30	S	chl+ca+ill+py	2.45	waste
65.0	75.0	73	47	35	R2	2.9	15	S	py+chl+ser	2.40	waste
75.0	85.0	90	86	62	R2	2.1	30,50	S	ser+py	2.35	waste
85.0	95.0	91	83	60	R2	1.8	25	S	ca+ser+py	2.24	waste
95.0	105.0	86	75	55	R2	2.5	40	S	py+chl+ca	2.23	waste
105.0	113.0	98	69	50	R2	2.8	50	R	ca+py+ser	2.22	waste
113.0	120.0	108	102	87	R2	1.1	50	R	ser+ca+py	2.26	waste
120.0	130.0	100	95	71	R2	1.2	10,50	R	ser+ca+py	2.30	waste
130.0	140.0	100	97	88	R2	0.2	60	R	ca+ill minor	2.33	waste
140.0	150.0	95	95	73	R2	0.8	30	R	none+py	2.33	waste
150.0	160.0	96	92	57	R2	0.7	40	R	py	2.30	waste
160.0	170.0	97	91	36	R2	2.2	30	R	py+ca	2.40	waste
170.0	180.0	98	75	45	R2	1.6	30	R	ser+ca+py	2.39	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D-29-94

AZIMUTH: 132.0° 131.0

INCLINATION: 5.0°

LOGGED BY: C. Wineteer

DATE: 9/8/94

PAGE 1 OF 1

DRILL RUN FROM	DRILL RUN TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	POINT LOAD INDEX (lbs/2.236 in²)	FRACTURE DATA: FRACTURES/FT.	FRACTURE DATA: AVG. ANGLE TO C.A.	FRACTURE DATA: ROUGHNESS	FRACTURE DATA: INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
0.0	7.5	73	51	40	3825	5.0	40.0	S	chl+py	2.46	waste
7.5	14.0	75	55	43	450	4.0	50.0	S	ill+chl+py	2.56	waste
14.0	19.0	94	70	20	3075	4.0	20.0	S	chl+py	2.35	waste
19.0	29.0	77	75	50	3450	2.5	40.0	S	CaCO3+chl+py	2.44	waste
29.0	40.0	83	67	45	3450	1.7	45.0	S to R	chl+py+CaCO3	2.54	waste
40.0	49.0	90	53	20	1500	6.5	35,50	S	chl+py	2.48	waste
49.0	54.0	90	38	8	975	4.9	35.0	S	chl+py+gouge	2.34	waste
54.0	60.0	77	57	18	600	5.1	35.0	S	ill+chl+py	2.41	waste
60.0	70.0	85	70	33	2550	3.4	45.0	S	chl+py	2.36	waste
70.0	80.0	91	78	39	1575	3.1	55 65.0	R	ill+py	2.49	waste
80.0	90.0	93	89	60	2400	1.0	55.0	R	ill+py	2.50	waste
90.0	100.0	94	91	70	3150	1.1	35.0	K	chl+py	2.41	waste
100.0	110.0	88	76	50	1950	1.2	60.0	R	ill+chl+py	2.35	waste
110.0	120.0	94	82	46	2100	1.7	40.0	K-R	chl+py+ill	2.40	waste
120.0	130.0	97	83	76	3900	1.5	20.0	R	clay gouge+bx	2.48	waste
130.0	140.0	85	71	45	360	1.7	40.0	K-R	CaCO3+chl+py	2.50	ore
140.0	150.0	88	47	31	n/a	2.9	50.0	K-R	clay gouge	2.41	ore
150.0	160.0	88	67	41	n/a	2.8	70.0	R	pale grn clay gouge	2.45	LG
160.0	170.0	76	62	37	n/a	1.5	30.0	K-S	chl+py	2.53	waste
170.0	178.0	113	113	61	n/a	1.2	60.0	R	py+chl	2.48	waste
178.0	188.0	100	100	80	n/a	0.2	50.0	K-S	chl+py	2.56	waste
188.0	198.0	95	95	61	n/a	0.8	50.0	R	chl	2.63	waste
198.0	207.0	92	77	51	n/a	2.2	20.0	R	micro bx	2.59	waste
207.0	215.0	106	100	64	n/a	1.7	20.0	R	micro bx	2.54	waste
215.0	225.0	90	88	76	n/a	1.1	30.0	S	CaCO3+py	2.49	waste
225.0	230.0	72	48	34	n/a	1.1	60.0	S	chl clay	2.43	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D-25-94

AZIMUTH: 125.0°

INCLINATION: 25.0°

LOGGED BY: C. Wineteer

DATE: 9/12/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
0.0	10.0	83	65	63	R2	1.0	25	S	ca+chl+py	2.41	waste
10.0	20.0	81	55	44	R2	2.2	70	S	ca+py	2.44	waste
20.0	30.0	100	51	40	R2	3.6	15	R	bx+gouge	2.41	waste
30.0	40.0	92	62	55	R3	2.7	50	R	chl+py	2.45	waste
40.0	50.0	90	58	48	R3	1.9	15	K	chl+py+gouge	2.47	waste
50.0	60.0	94	62	46	R3	2.6	15	R	ca+py	2.35	waste
60.0	70.0	97	78	70	R3	1.2	30	R	py	2.22	waste
70.0	80.0	93	50	38	R2	3.6	30	R	ill+py	2.57	waste
80.0	90.0	97	49	44	R3	2.5	30	R	ill+py	2.43	waste
90.0	100.0	95	73	63	R2	1.8	35	R	ill+py	2.40	waste
100.0	110.0	90	51	47	R2	2.4	35	R	ca+ill+py	2.35	waste
110.0	120.0	92	55	36	R2	1.9	30	S	ill+py+clay gouge+bx	2.29	waste
120.0	127.0	72	60	33	R2	5.1	30	S	ill+py	2.30	waste
127.0	137.0	80	54	51	R2	1.9	15	R	ca+ill+py	2.35	waste
137.0	144.0	78	30	28	R1	>10	all	K	bx+clay gouge	2.51	waste
144.0	154.0	105	30	21	R1	>10	25	K,R	bx+clay gouge	2.44	waste
154.0	164.0	80	51	46	R1	1.4	25,70	R	ill clay	2.39	waste
164.0	174.0	84	34	26	R1	4.3	40	R	ill clay	2.31	waste
174.0	183.0	79	37	37	R1	3.3	20,80	R	ill+py+chl	2.34	waste
183.0	193.0	82	8	8	S5	>10	20,75	R	ill+chl+py	2.42	LG
193.0	203.0	69	0	0	S5	>10	35,65	R	chl+ill+py	2.38	LG
203.0	210.0	65	0	0	S5	>10	35,65	R	chl+ill+py	2.40	ore

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D–24–94

AZIMUTH: 125.0°

INCLINATION: 17.0°

LOGGED BY: C. Wineteer

DATE: 9/9/94

PAGE 1 OF 1

DRILL RUN FROM	DRILL RUN TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	POINT LOAD INDEX (lbs/2.236 in²)	FRACTURE DATA: FRACTURES/FT.	FRACTURE DATA: AVG. ANGLE TO C.A.	FRACTURE DATA: ROUGHNESS	FRACTURE DATA: INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
0.0	9.0	89	70	61	3000	1.7	40.0	R	chl+ca+py	2.46	waste
9.0	19.0	83	70	48	600	2.3	35.0	R	chl+ca+py+ill	2.51	waste
19.0	29.0	90	57	46	300	3.6	20.0	R	chl+ca+py+ill	2.41	waste
29.0	36.0	94	30	23	300	3.2	25.0	R	S.A.A	2.67	waste
36.0	45.0	83	50	20	300	2.8	30.0	R	S.A.A	2.53	waste
45.0	55.0	90	50	63	2475	2.2	40.0	R	S.A.A.	2.47	LG
55.0	65.0	91	55	48	375	4.1	30.0	S	chl+ca+py	2.62	waste
65.0	75.0	96	96	78	2700	0.8	30.0	R	ca+py	2.44	waste
75.0	85.0	93	52	40	3525	2.5	35.0	R	ill+ca+py	2.41	waste
85.0	95.0	100	70	63	n/a	1.9	20.0	R	ca+ill+py	2.49	waste
95.0	105.0	100	52	41	n/a	3.4	60.0	R	ill+ca+gouge+py	2.45	waste
105.0	115.0	100	100	81	n/a	0.9	20.0	R	py+chl	2.40	waste
115.0	125.0	98	95	72	n/a	0.6	70.0	R	ill+ca	2.43	waste
125.0	135.0	95	78	69	n/a	1.4	40.0	R	ill+ca	2.34	waste
135.0	145.0	97	97	77	n/a	0.9	55.0	R	ill+ca	2.39	waste
145.0	155.0	93	69	66	n/a	1.0	60.0	R	ca+py	2.46	waste
155.0	165.0	95	95	86	n/a	0.4	50.0	R	ill	2.43	waste
165.0	175.0	98	48	33	n/a	2.7	20.0	K	chl+ill+py	2.42	waste
175.0	185.0	98	80	68	n/a	1.6	70.0	S	ill+chl+py	2.40	waste
185.0	195.0	98	59	45	n/a	3.2	30.0	R	ill	2.38	waste
195.0	205.0	96	43	37	n/a	3.3	40.0	R	ill	2.47	waste
205.0	215.0	90	10	5	n/a	>10.0	all	S	clay gouge	2.18	waste
215.0	225.0	63	0	0	n/a	>10.0	50.0	S	clay	2.13	waste
225.0	235.0	50	0	0	n/a	>10.0	all	S	clay	2.33	waste
235.0	245.0	83	0	0	n/a	>10.0	all	S	clay	2.29	ore
245.0	255.0	90	0	0	n/a	>10.0	all	S	clay	1.98	waste
255.0	260.0	110	50	32	n/a	1.4	60.0	R	gouge+bx	1.98	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D-85-94

AZIMUTH: 77.0°

INCLINATION: -71.0°

LOGGED BY: C. Wineteer

DATE: 10/6/94

PAGE ___1___ OF ___1___

DRILL RUN FROM	DRILL RUN TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA: FRACTURES/FT.	FRACTURE DATA: AVG. ANGLE TO C.A.	FRACTURE DATA: ROUGHNESS	FRACTURE DATA: INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
0.0	5.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
5.0	10.0	79	63	34	S5	2.4	35	K	micro bx+ser+chl+py slicks	2.35	waste
10.0	15.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
15.0	20.0	88	87	79	S5	0.0	n/a	n/a	n/a	2.38	waste
20.0	25.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
25.0	30.0	100	99	86	S5	0.2	80	R	py	2.31	waste
30.0	35.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
35.0	40.0	100	95	74	S5	1.8	40	R	ser+py	2.40	LG
40.0	43.5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	LG
43.5	48.5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
48.5	50.0	97	96	88	R2	0.2	40	R	py	2.40	LG
50.0	55.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	LG
55.0	60.0	97	91	45	R1	3.1	60	S	chl+Q+py	2.41	waste
60.0	65.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
65.0	70.0	92	89	52	R1	3.9	65	S	chl+Q+py	2.53	waste
70.0	75.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
75.0	80.0	87	85	42	R1	3.5	65	S	chl+Q+py+~~marc~~ Smec	2.47	waste
80.0	85.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
85.0	90.0	95	80	52	R1	3.6	60	S	chl+Q+py+~~marc~~ Smec	2.41	waste
90.0	95.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
95.0	100.0	86	75	45	R1	2.3	60	S/R	chl+Q+py+~~marc~~ Smec	2.36	waste
100.0	105.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
105.0	110.0	94	85	70	R3	2.2	50	S	chl+Q+py+~~marc~~ Smec	2.39	waste
110.0	115.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
115.0	120.0	83	75	50	R3	2.1	55	S	chl+Q+py+~~marc~~ Smec	2.49	waste
120.0	125.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
125.0	130.0	94	88	55	R1	1.8	50	R	Q+marc+chl	2.39	waste
130.0	135.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
135.0	140.0	93	90	65	R3	1.7	50	R	Q+marc+chl	2.44	waste
140.0	145.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
145.0	150.0	97	91	54	R3	2.3	55	S-K	ser+py	2.49	waste
150.0	155.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	ore
155.0	160.0	87	86	53	R3	2.1	35	S-K	ser+py	2.51	waste
160.0	165.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
165.0	170.0	93	92	67	R3	1.2	30	R	Q+py+marc	2.55	waste
170.0	175.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
175.0	180.0	81	68	32	R3	2.8	45	S	chl+ill+marc	2.52	ore
180.0	185.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	ore
185.0	190.0	89	77	32	R3	4.1	40	S	chl+ser+py	2.42	waste
190.0	195.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
195.0	200.0	97	77	26	R3	4.4	20	S	chl+ser+py	2.49	waste
200.0	205.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
205.0	210.0	95	90	62	R3	1.6	70	S	chl+ca+py	2.50	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D-84-94

AZIMUTH: 125.0°

INCLINATION: 75.0°

LOGGED BY: C. Wineteer\R. Keller

DATE: 9/28/94

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
0.0	4.0	100	n/a	60	R2	1.0	30	S	Q+ill+marc	2.27	waste
4.0	9.0	90	n/a	83	R2	0.4	70	S	py+Q	2.46	LG
9.0	14.0	100	n/a	74	R3	0.4	25	R	S:0.2Q+marc	2.40	LG
14.0	18.0	85	n/a	8	R1	4.2	65	S	ill+ser	2.36	ore
18.0	23.0	90	n/a	32	R1	2.6	60	R	ill+chl+py	2.42	ore
23.0	28.0	60	n/a	0	R1	4.6	70/15	S/R	ill+chl+py	2.42	waste
28.0	35.0	64	n/a	31	R1	2.8	65/10	S	ill+chl+py	2.41	ore
35.0	40.0	90	n/a	0	R3	7.0	75	S	chl	2.42	waste
40.0	44.0	100	n/a	54	R2	1.8	75	R	chl	2.40	waste
44.0	49.0	85	n/a	50	R2	0.3	15	R	py+Q	2.30	waste
49.0	54.0	97	n/a	64	R2	0.6	20	R	ill+marc+Q	2.29	LG
54.0	59.0	100	n/a	64	R2	0.8	20	S	chl+Q+ill+py	2.43	waste
59.0	64.0	90	n/a	64	R3	1.4	20/80	R	chl+ill	2.46	waste
64.0	69.0	98	n/a	80	R3	1.2	5/30	R	ill+py	2.42	waste
69.0	74.0	87	n/a	87	R3	1.0	75	R	chl+ill+py	2.44	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D–45–94

AZIMUTH: 123.5°

INCLINATION: 45.5°

LOGGED BY: C. Wineteer

DATE: 10/26/94

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
0.0	20.0	92.5	83	77.5	R3	0.5	45	R	sulf	2.36	waste
20.0	30.0	100	92	56	R4	0.5	40	R	CaCO3+sulf	2.51	waste
30.0	40.0	100	92	63	R4	0.8	30	R	sulf+ser	2.36	waste
40.0	50.0	100	89	67	R3	0.7	20	R	ser+CaCO3+sulf	2.62	waste
50.0	60.0	100	77	52	R3	1.2	30	K	ser+sulf	2.42	waste
60.0	70.0	99	84	66	R2–R3	0.5	40	R	ser+sulf	2.36	waste
70.0	80.0	100	92	72	R1–R2	0.5	35	R	ser+sulf+chl	2.46	waste
80.0	90.0	95	56	28	R1	2.1	65	S	ser+sulf+chl	2.23	waste
90.0	94.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
94.0	97.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
97.0	103.0	93	57	44	R2	1.9	55	R	chl+ser	2.41	waste
103.0	107.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
107.0	115.0	83	50	32	R1	4.3	5,75	S	chl+ill	2.68	waste
115.0	116.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
116.0	120.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
120.0	124.0	91	24	20	R3	3.9	20,65	S	chl+ill	2.35	waste
124.0	134.0	95	75	50	R3–R2	2.3	65	S	ill	2.08	LG
134.0	144.0	96	87	63	R2	1.3	60	S	ill	2.31	ore
144.0	154.0	98	79	60	R1	1.7	65	S	chl+ill	2.22	LG
154.0	164.0	98	91	78	R1	0.7	30,80	R	ill+chl	2.28	waste
164.0	174.0	100	100	87	R2	0.4	65	R	chl+sulf	2.11	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D-43-94

AZIMUTH: 123.5°

INCLINATION: 89.5°

LOGGED BY: C. Muerhoff

DATE: 10/15/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
0.0	5.0	100	98	86	n/a	0.4	20	S	gry clay	n/a	waste
5.0	10.0	96	96	76	R3	1.2	51	S	gry clay+ sulf+ca	2.53	waste
10.0	20.0	78	39	14	R3	3.8	50	R	ill+py+ser	2.38	waste
20.0	29.0	71	40	20	R3	4.2	55	R	ser+py	2.49	waste
29.0	39.0	93	62	50	R3	3.5	60	S	ser+py	2.47	LG
39.0	49.0	94	72	50	R3	3.3	45	S	ser+py	2.44	ore
49.0	59.0	94	90	66	R3	1.2	45	R	ser + minor ox	2.37	ore
59.0	65.0	88	58	22	R3	3.4	70,35	S	ser+py+micro bx	2.36	waste
65.0	75.0	93	67	50	R2	2.3	75	S	ser+py	2.42	waste
75.0	85.0	93	75	61	R2	2.3	65	S	ser+py	2.45	waste
85.0	95.0	94	80	55	R2	1.4	60	S	ser+py	2.44	waste
95.0	105.0	96	63	58	R1	1.2	30,50	R-K	ser+chl+py	2.46	waste
105.0	115.0	98	96	76	R2	0.8	55	S	chl+py+ser	2.36	waste
115.0	125.0	94	66	58	R3	1.7	40	S	chl+ill+marc	2.41	waste
125.0	135.0	89	55	39	R3	2.2	27	S	chl+ill+marc	2.38	waste
135.0	145.0	95	82	67	R3	2.3	40	S	chl+ill+marc	2.51	waste
145.0	154.0	92	92	70	R3	1.2	45	S	chl+CaCO3+marc	2.56	waste
154.0	160.0	82	45	30	R3	3.2	50	S	chl+CaCO3+py	2.53	waste
160.0	170.0	85	56	49	R3	3.2	60	S	chl+ill+py	2.56	waste
170.0	180.0	93	75	43	R3	2.2	40	S	chl+CaCO3+py	2.54	waste
180.0	190.0	89	60	55	R2	2.1	30	R	Q+ill+marc	2.25	waste
190.0	200.0	97	94	69	R2	1.0	70	S	ill+marc	2.25	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D-47-94

AZIMUTH: 122.0°

INCLINATION: 0° -1.0°

LOGGED BY: C. Wineteer

DATE: 9/13/94

PAGE ___1____ OF ___1____

DRILL RUN FROM	DRILL RUN TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA: FRACTURES/FT.	FRACTURE DATA: AVG. ANGLE TO C.A.	FRACTURE DATA: ROUGHNESS	FRACTURE DATA: INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
0.0	5.0	74	24	14	R2	>10	35	R	micro fault bx	2.38	waste
5.0	10.0	98	88	80	R2	1.0	60	R	py	2.45	waste
10.0	17.0	98	98	81	R3	0.8	85	R	chl+py	2.42	waste
17.0	27.0	97	92	76	R3	1.9	75	R	chl+py	2.65	waste
27.0	37.0	94	69	61	R1	3.2	30,60	R/S	py+chl	2.49	waste
37.0	47.0	78	78	78	R2	1.8	30	S	ca+py+chl	2.49	waste
47.0	52.0	82	62	56	R2	3.2	30,60	R	micro bx+ca	2.37	waste
52.0	57.0	75	20	0	R1	8.6	30	R	chl+ca	2.41	waste
57.0	67.0	93	75	59	R2	2.5	45	S	py	2.42	waste
67.0	77.0	93	72	60	R2	2.2	40	R	chl+py+ca	2.44	waste
77.0	87.0	94	84	68	R2	2.8	30	S	py+ca	2.44	waste
87.0	97.0	89	35	35	R1	4.2	30	K	chl+py+ca+ill	2.40	ore
97.0	107.0	95	38	19	R1	3.3	30	K	bx+clay gouge+chl	2.36	ore
107.0	117.0	93	77	65	R2	1.4	30	R	py+chl+ill	2.36	LG
117.0	127.0	62	42	32	R1	1.4	30	R	py+ill+ca	2.35	ore
127.0	131.0	73	15	0	R1	5.1	30	S	ill+py	2.36	ore
131.0	137.0	94	37	32	S5	2.8	30 35,60	S	ill+py	2.44	waste
137.0	147.0	87	78	59	R1	1.6	30	R	ca+py+ill	2.43	waste
147.0	157.0	85	47	40	S5	5.2	60	S	ill+py	2.39	waste
157.0	163.0	67	17	10	S5	>10	all	R	bx+ill	2.35	waste
163.0	166.0	33	0	0	S5	>10	all	R	ill+bx	2.53	waste
166.0	175.0	59	50	38	S5	6.0	70	R	ill+py	2.42	waste
175.0	177.0	59	0	0	S4	>10	all	S	ill	2.38	waste
177.0	182.0	52	32	14	S4	3.2	70	S	ill+py	2.42	waste
182.0	187.0	72	42	27	S4	>10	all	S	ill+py	2.33	waste
187.0	197.0	39	0	0	S4	>10	all	S	ill+py	2.37	waste
197.0	207.0	84	7	7	S4	>10	all	S-R	ill+bx+gouge	2.38	waste
207.0	217.0	50	0	0	S1	>>10	all	n/a	fault bx	2.50	waste
217.0	227.0	40	0	0	S1	>>10	all	n/a	fault bx	2.43	waste
227.0	237.0	53	23	10	S3	>10	all	n/a	fault bx	2.29	waste
237.0	241.0	54	0	0	S3	>5	all	n/a	fault bx	2.34	waste
241.0	247.0	80	50	28	S4	3.0	30	K-S	chl+slicks	2.41	waste
247.0	257.0	59	34	17	S4	2.6	40	K	chl+ic clay gouge	2.34	waste
257.0	267.0	33	8	4	S3	>5	all	K	fault bx+chlic clay gouge	2.43	waste
267.0	272.0	54	22	12	S4	3.7	40	R	fault bx	2.46	waste
272.0	277.0	74	42	22	R2	3.3	25	K	gry sulf clay	2.43	waste
277.0	287.0	92	92	52	R3	2.0	45	R	py+chl+ca	2.25	waste
287.0	292.0	82	66	12	R3	5.0	60	R	py+ca	2.46	waste
292.0	302.0	43	27	15	R3	3.0	15,20 80	R	py+ca	2.55	waste
302.0	305.0	27	8	12	R3	5.0	15,80	K	py+chl+ca	2.48	waste
305.0	309.0	98	88	33	R3	3.8	40	R	py+chl	2.48	waste
309.0	311.0	65	25	0	R3	+10	15 10,40	R	py+chl	2.46	waste
311.0	317.0	38	13	0	R3	4.8	15,40	R	py+ill	2.34	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D-48-94

AZIMUTH: 122° 132.5

INCLINATION: 46.0° 46.5

LOGGED BY: C. Wineteer

DATE: 9/15/94

PAGE 1 OF 1

DRILL RUN FROM	DRILL RUN TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA: FRACTURES/FT.	FRACTURE DATA: AVG. ANGLE TO C.A.	FRACTURE DATA: ROUGHNESS	FRACTURE DATA: INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
0.0	7.0	62	31	18	R2	1.0	20	R	py	2.37	waste
7.0	17.0	84	80	51	R2	1.3	20	K	py	2.41	waste
17.0	27.0	93	90	66	R2	0.8	50	R	py	2.44	waste
27.0	37.0	88	85	65	R2	1.3	45	R	marc+ca	2.41	waste
37.0	47.0	95	90	66	R2	1.2	20	R-K	py+ca	2.35	LG
47.0	57.0	90	80	58	R2	1.1	40	R	chlic clay	2.43	waste
57.0	67.0	83	70	53	R2	1.7	30	R	ca+py	2.43	waste
67.0	77.0	90	85	71	R2	0.7	30/50 60	K	chlic clay	2.46	waste
77.0	87.0	100	97	67	R2	1.6	60	R-K	chl+py	2.43	waste
87.0	97.0	83	70	45	R2	2.3	10	K	clay gouge	2.42	waste
97.0	107.0	87	47	33	R1	3.3	80/20	R/K	chl+py	2.38	waste
107.0	117.0	85	39	26	R2	6.0	80	R	chl+py	2.42	waste
117.0	127.0	87	59	46	R2	4.0	70/5	R	chl+py+ill	2.40	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D-50-94

AZIMUTH: 130.5°

INCLINATION: -90.0°

LOGGED BY: C. Wineteer

DATE: 9/15/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
0.0	5.0	84	70	68	n/a	1.2	25	K-R	chl slick+py	n/a	waste
5.0	8.0	106	106	103	n/a	1.0	75	R	no	n/a	waste
8.0	15.0	84	84	35	n/a	1.4	50	K-R	chl slick	n/a	waste
15.0	17.0	70	70	45	n/a	1.4	50	K-R	chl+py slick	n/a	waste
17.0	27.0	90	75	52	n/a	2.8	20	K	chl+ca+marc	n/a	waste
27.0	35.0	88	63	46	n/a	2.1	30	K	chl+ca	n/a	waste
35.0	42.0	72	35	43	n/a	1.5	30	R	py+chl	n/a	waste
42.0	50.0	85	49	35	n/a	4.2	30	R	py+chl	n/a	waste
50.0	53.0	73	35	25	n/a	2.7	55	S	chl+ca	n/a	waste
53.0	55.0	90	50	40	n/a	5.0	60	S	chl+ca	n/a	waste
55.0	58.0	90	35	10	n/a	5.1	60	S	chl+ca	n/a	waste
58.0	63.0	80	44	33	n/a	3.4	55	R	ser+py	n/a	waste
63.0	68.0	95	47	33	n/a	6.2	15/60	R	ser+chl+py	n/a	waste
68.0	73.0	96	49	28	n/a	5.6	30	R	ser+py	n/a	waste
73.0	78.0	100	65	34	n/a	3.8	10/60	R	py+ser	n/a	LG
78.0	83.0	96	80	64	n/a	3.1	60	R	py+ser	n/a	LG

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D-50A-94

AZIMUTH: 130.5°

INCLINATION: -88.0°

LOGGED BY: C. Wineteer

DATE: 9/15/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
0.0	4.0	60	20	0	R3	4.3	15	R	no	2.48	waste
4.0	9.0	92	80	74	R3	1.3	50	R	ser+py	2.46	waste
9.0	14.0	94	84	60	R2	2.2	40	S	py	2.37	waste
14.0	19.0	97	95	86	R2	1.0	40	R	py	2.41	waste
19.0	24.0	92	87	76	R2	1.1	40	R	py	2.44	waste
24.0	29.0	100	100	100	R2	0.4	40	R	py	2.36	waste
29.0	34.0	100	96	96	R2	1.0	40	R	py+chl+ca+micro bx	2.39	waste
34.0	39.0	92	22	22	R1	7.6	20	S	chl+ca+marc	2.40	waste
39.0	45.0	100	80	73	R1	1.2	45	R	micro bx+chl+ca+py	2.42	waste
45.0	50.0	92	87	87	S4	1.9	30	S	chlic clay	2.38	ore
50.0	55.0	92	44	20	S4	7.0	30	R	chlic clay gouge	2.33	ore
55.0	60.0	100	18	18	R1	>10	25	S	chlic clay+ca+py	2.40	waste
60.0	65.0	94	28	30	R1	>10	25/50	S	S.A.A.	2.40	waste
65.0	70.0	96	40	40	R1	6.7	60	S	chl+ca+py	2.42	waste
70.0	75.0	85	24	19	R1	5.8	10/50	S	chl+py	2.39	waste
75.0	80.0	97	66	58	R2	4.6	30/60/10	S	chlic clay gouge	2.43	waste
80.0	85.0	97	95	78	R2	1.8	40	S	pyic gouge	2.38	waste
85.0	90.0	100	90	70	R2	2.2	55	S	py+chl+ca	2.41	waste
90.0	95.0	n/a	n/a	n/a	n/a	1.8	40	S	chl+py	n/a	waste
95.0	100.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
100.0	105.0	92	76	76	R3	1.6	65	S	py+ser	2.47	waste
105.0	110.0	92	88	72	R3	1.8	40/75	S	chl+py	2.52	waste
110.0	115.0	100	100	92	R3	1.0	55	S	CaCO3+py	2.53	waste
115.0	120.0	91	90	90	R4	0.8	65	S	CaCO3+py	2.59	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

SOUTH ZONE

HOLE ID: D-74-94

AZIMUTH: 120°

INCLINATION: -36.0°

LOGGED BY: C. Wineteer

DATE: 10/8/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
0.0	9.0	97	82	64	R3	1.8	70	S	Q+ill+py+marc	2.39	waste
9.0	19.0	100	100	86	R3	0.6	60/40	S	ca+py	2.39	waste
19.0	29.0	98	97	86	R3	0.3	65	R	py+ca	2.39	waste
29.0	39.0	100	98	88	R3	0.7	75	R	Q+ill+py+marc	2.42	waste
39.0	49.0	98	96	78	R3	0.9	55	R	Q+ill+py+marc	2.37	LG
49.0	59.0	89	72	68	R3 S4	2.1	60/20	r	Q+ill+py+marc	2.47	LG
59.0	69.0	95	84	65	R3	2.0	55	R	Q+ill+py+marc	2.35	waste
69.0	79.0	96	93	75	R2	1.2	55	R	Q+ill+py+marc+chl	2.34	waste
79.0	89.0	94	91	87	R2	0.7	65	R	Q+chl+ill+sulf	2.38	waste
89.0	99.0	98	95	77	R2	1.2	50/15	R/R	Q+chl+ill+sulf	2.37	ore
99.0	109.0	100	98	98	R2	0.8	70	R	Q+py	2.36	LG
109.0	119.0	99	95	86	R2	0.5	80	S	ca+py+marc	2.36	ore
119.0	129.0	100	100	92	R2	0.5	80	S-R	ca+py+marc	2.46	waste
129.0	139.0	98	96	81	R2	0.2	85	R	py+marc+ill	2.30	waste
139.0	149.0	100	99	86	R2	0.6	80	R	chl+Q+marc+ill	2.34	waste
149.0	159.0	96	74	63	R2	0.9	80	R	Q+ill+py	2.48	waste
159.0	169.0	96	90	59	R2	1.8	75	S	Q+py	2.36	waste
169.0	179.0	95	85	60	R2	2.3	75	S	chl+Q+py	2.35	waste
179.0	189.0	98	95	49	R2	3.4	60	S-K	ser+marc slicks	2.35	waste
189.0	199.0	97	96	67	R2	1.1	30	S-K	ser+chl+Q+sulf	2.36	waste
199.0	209.0	98	73	35	R2	3.7	50	S-K	ser+chl+Q+sulf	2.36	waste
209.0	219.0	93	58	37	R2	2.9	60	S-K	ser+chl+Q+sulf	2.39	waste
219.0	229.0	96	91	51	R2	1.9	40	S/R	chl+ser+ill+sulf	2.39	waste
229.0	239.0	99	90	55	R2	1.6	65	K	clay gouge	2.42	LG
239.0	248.0	88	50	28	R2	1.9	30	R	micro bx	2.42	waste
248.0	258.0	98	96	85	R3	1.0	35	R	ser+py	2.47	waste
258.0	268.0	78	30	10	R3	4.9	50	R	ill+ser+sulf	2.43	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

NORTH ZONE

HOLE ID: 94-306C

AZIMUTH: 296.5°

INCLINATION: -89.0°

LOGGED BY: C. Wineteer

DATE: 11/21/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
894.0	904.0	100	97	73	R3-R4	1.2	55	S	chl	2.48	n/a
904.0	914.0	100	97	64	R3-R4	0.8	70/15	S	chl+py	2.58	n/a
914.0	924.0	100	100	82	R3-R4	0.4	70	S,R	chl	2.55	n/a
924.0	934.0	98	98	87	R3-R4	0.5	70	S	ser+chl	2.53	n/a
934.0	944.0	100	98	79	R3-R4	0.7	65	R	ser+chl+sulf	2.56	n/a
944.0	954.0	100	98	80	R3-R4	1.1	80/40/20	R	ser+chl+sulf	2.50	n/a
954.0	964.0	100	97	75	R3	1.2	80/40/20	R,S	ser+chl+ill+bar+sulf	2.47	n/a
964.0	974.0	98	96	53	R3	1.5	5/80	R	ser+chl+ill+bar+sulf	2.55	n/a
974.0	984.0	100	100	84	R3,R4	1.4	80/5	R,S	chl+ser+sulf	2.41	n/a
984.0	994.0	98	98	76	R4	1.4	50/80/5	S	chl+ser+sulf	2.59	n/a
994.0	1004.0	100	100	90	R3-R4	0.6	70	R	chl+ser+sulf	2.51	n/a
1004.0	1014.0	98	97	90	R3-R4	0.6	5/85	R	chl+Q+sulf	2.47	n/a
1014.0	1024.0	100	100	88	R3-R4	1.2	80/15	S	ser+chl+sulf	2.57	n/a
1024.0	1034.0	98	94	65	R3-R4	1.3	55	S	ser	2.58	n/a
1034.0	1044.0	100	100	74	R2-R3	0.9	60	S-K	post-sulf+micro bx	2.67	n/a
1044.0	1054.0	100	100	87	R3	0.6	80	R	micro bx	2.46	n/a
1054.0	1064.0	100	93	67	R1,R3-R4	1.1	30/80/50	S-K	fault bx+clay gouge	2.47	n/a
1064.0	1074.0	100	94	75	R2-R3	1.0	35/60	R	ser+CaCO3+py	2.41	n/a
1074.0	1084.0	97	95	89	R3	0.3	40	R	ser+CaCO3+py+bx	2.43	n/a
1084.0	1094.0	99	98	88	R3	0.4	70	R	ser+chl	2.45	n/a
1094.0	1104.0	100	99	85	R3	0.7	45/80	R	ser+bx	2.44	n/a
1104.0	1114.0	98	94	68	R3	0.9	70/45	R-K	ser+bx	2.48	n/a
1114.0	1124.0	100	95	71	R3	0.8	60	S-K	ser+bx	2.43	n/a
1124.0	1134.0	97	91	50	R3,R2	1.4	60/25/5	S-K	ser+sulf+bx	2.53	n/a
1134.0	1144.0	100	90	61	R2,R1	1.6	60/25	S-K	ser+sulf+clay gouge+bx	2.51	n/a
1144.0	1154.0	96	35	36	S	2.5	35/5	K	fault bx+clay gouge	2.47	n/a
1154.0	1164.0	95	69	33	S,R2,R3	2.8	30-40/70	K-R	fault bx+ill/smec clays	2.54	n/a
1164.0	1174.0	98	72	55	R3,R2	2.5	30/70	K	waxy slicks	2.53	n/a
1174.0	1184.0	96	19	31	R2,S2	3.7	35/70	K	waxy slicks+sulf	2.44	n/a
1184.0	1194.0	93	30	15	S2,R2	3.9	70/30	K	graph slicks	2.51	n/a
1194.0	1204.0	97	65	31	R1,R2	3.7	70/30	K-S	graph slicks	2.60	n/a

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94–309C

AZIMUTH: 122.5°

INCLINATION: –89.5°

LOGGED BY: LJB

DATE: 10/2/94

PAGE ___1____ OF ___1____

DRILL RUN FROM	DRILL RUN TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA FRACTURES/FT.	FRACTURE DATA AVG. ANGLE TO C.A.	FRACTURE DATA ROUGHNESS	FRACTURE DATA INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
495.0	505.0	99	99	94	R3	1.0	70,50	R	qtz+sulf coatings	2.40	waste
505.0	515.0	100	100	87	R3	0.7	60	R	clay films	2.50	waste
515.0	525.0	102	102	93	R3	0.9	70	R	py+qtz	2.50	waste
525.0	535.0	100	100	86	R3	1.0	60	R	qtz+sulf	2.40	waste
535.0	545.0	100	100	76	R3	1.2	70	R	clay film	2.60	waste
545.0	555.0	99	99	79	R3	0.7	50,30	VR	bar+stib	2.30	waste
555.0	565.0	93	93	80	R3	1.1	50	VR	qtz+bar coating	2.50	waste
565.0	575.0	98	98	78	R3	0.9	30	VR	qtz+sulf+bar	2.40	waste
575.0	585.0	98	98	93	R3	0.9	70	R	nil	2.30	waste
585.0	595.0	97	94	90	R3	0.8	70,30	R	clay film+bar+sil	2.50	waste
595.0	605.0	98	98	87	R3	0.7	60	R	drossy qtz+clay films	2.52	waste
605.0	615.0	102	102	100	R3	0.5	45	R	drossy atz+botr+py+goe	2.51	waste
615.0	625.0	96	96	93	R3	0.8	50	R	drossy atz+botr+py+goe	2.52	waste
625.0	635.0	100	100	93	R3	0.8	65,45	R	drossy atz+botr+py+goe	2.47	waste
635.0	645.0	100	100	88	R3	0.8	60,0	R	drossy qtz+minor clay films	2.51	waste
645.0	655.0	98	98	68	R3	2.0	70	R–S	drossy qtz+minor clay films	2.56	waste
655.0	665.0	95	95	56	R3	1.6	75,15	R	drossy qtz+minor clay films	2.53	ore
665.0	675.0	97	97	61	R3	1.0	50	R	qtz+marc coating+minor clay	2.46	ore
675.0	685.0	100	98	70	R3	1.5	60	R	qtz+drossy botr+py+goe	2.61	ore
685.0	695.0	94	94	70	R3	1.0	60	R	drussy qtz	2.43	LG
695.0	705.0	103	102	85	R3	1.1	65	R	clay+marc	2.37	waste
705.0	715.0	97	97	89	R3	0.6	70	R	nil	2.49	LG
715.0	725.0	100	100	66	R3	2.0	50	R	clay+marc	2.44	waste
725.0	735.0	97	97	86	R2	1.0	25,10,50	R	clay+marc	1.96	waste
735.0	745.0	100	97	91	R2	0.9	60,80	R	clay+marc	2.05	waste
745.0	755.0	100	100	97	R2,R3	0.3	70	R	nil	2.54	waste
755.0	765.0	98	98	67	R3	0.9	30	R	minor clay	2.49	waste
765.0	775.0	97	97	97	R3	0.5	70	VR	nil	2.44	waste
775.0	785.0	99	99	97	R3	0.7	40	S–K	clay+marc	2.41	waste
785.0	795.0	96	96	96	R3	0.6	70–75	S	clay+marc	2.38	waste
795.0	800.0	108	108	105	R3	0.6	40	S	nil	2.35	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94–308C

AZIMUTH: 215.5°

INCLINATION: –90.0°

LOGGED BY: LJB

DATE: 9/30/94

PAGE ___1____ OF ___1____

DRILL RUN FROM	DRILL RUN TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA FRACTURES/FT.	FRACTURE DATA AVG. ANGLE TO C.A.	FRACTURE DATA ROUGHNESS	FRACTURE DATA INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
495.0	504.0	111	111	102	R3	0.3	30,40,50	R	qyz+barite clay films	2.20	waste
504.0	514.0	99	99	91	R3	0.7	30,80	R	qtz+sulf clay films	2.60	waste
514.0	524.0	98	98	79	R3	0.7	25	R	qtz+sulf clay films	2.60	waste
524.0	534.0	98	98	93	R3	1.0	70,60	R	qta+py+clay	2.40	waste
534.0	544.0	100	100	100	R3	0.6	60	R	qtz+sulf coatings	2.50	waste
544.0	554.0	98	98	77	R3	1.4	30,70,50	VR	qtz+sulf coatings	2.50	waste
554.0	564.0	99	99	93	R3	0.8	80	VR	qtz+sulf clay	2.60	waste
564.0	574.0	97	97	83	R3	1.3	60,70	VR	qtz+sulf clay	2.60	waste
574.0	584.0	99	99	87	R3	1.1	40,50,60	R	qtz+sulf coating	2.40	waste
584.0	594.0	99	99	99	R3	0.7	60,70	R	qtz+sulf coating+clay film	2.50	waste
594.0	604.0	100	100	77	R3	0.9	60,0–15	R	qtz+sulf coating	2.60	waste
604.0	614.0	102	102	102	R3	0.8	60	R	nil	2.30	waste
614.0	624.0	97	97	91	R3	0.5	40	R	nil	2.20	waste
624.0	634.0	103	91	81	R3	0.7	60	R	qtz coating+clay film	2.50	waste
634.0	644.0	94	94	88	R3	0.9	40,70	R	qtz coating+clay film	2.40	waste
644.0	654.0	100	96	96	R3	0.7	70	R	qtz coating+clay film	2.50	waste
654.0	664.0	97	94	88	R3	0.7	70	VR	qtz coating	2.50	waste
664.0	674.0	92	91	90	R3	0.5	70	R	qtz coating+clay film	2.40	waste
674.0	684.0	92	87	63	R3	1.1	70	VR	qtz coating+clay film	2.50	waste
684.0	694.0	102	102	83	R3	1.2	65	R	clay films	2.50	waste
694.0	704.0	105	104	51	R3	2.1	70	R–K	sil rk+clay film	2.60	waste
704.0	714.0	100	100	83	R3	1.2	70,50,20	R	qtz+clay coating	2.40	waste
714.0	724.0	100	100	86	R3	1.2	70,45	R–S	qtz+clay films	2.40	waste
724.0	734.0	100	100	63	R3	1.2	50,60,20	S	qtz+clay films	2.40	waste
734.0	744.0	100	100	76	R3	1.2	30–60,50	S	qtz+clay films	2.60	waste
744.0	753.5	88	88	75	R3	1.3	30–50,0	R	qtz py	2.50	waste
753.5	763.7	96	96	73	R3	1.1	40,80	R	qtz+clay	2.50	waste
763.7	774.0	100	100	71	R3	1.2	60,70	R	minor py+clay	2.10	waste
774.0	784.0	100	100	85	R3	0.5	80,70	R	minor clay films	2.00	waste
784.0	794.0	100	100	47	R3	2.2	40–70,60	S	minor clay	2.50	waste
794.0	800.0	100	100	83	R3	0.7	60	S	minor py	2.50	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-325C

AZIMUTH: 34.5°

INCLINATION: -90.0°

LOGGED BY: L. Bernard

DATE: 8/3/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
495.0	502.0	100	n/a	96	R1	n/a	n/a	n/a	n/a	n/a	waste
502.0	511.0	98	n/a	45	R1	n/a	n/a	n/a	n/a	n/a	waste
511.0	522.0	96	n/a	66	R1	n/a	n/a	n/a	n/a	n/a	waste
522.0	532.0	99	n/a	75	R3	n/a	n/a	n/a	n/a	n/a	waste
532.0	542.0	100	n/a	50	R3	n/a	n/a	n/a	n/a	n/a	waste
542.0	552.0	95	n/a	75	R3	n/a	n/a	n/a	n/a	n/a	waste
552.0	562.0	100	n/a	75	R3,R1	n/a	n/a	n/a	n/a	n/a	waste
562.0	572.0	90	n/a	45	R3	n/a	n/a	n/a	n/a	n/a	waste
572.0	579.6	100	n/a	6	R3	n/a	n/a	n/a	n/a	n/a	waste
579.6	590.0	96	n/a	40	R3,R4	n/a	n/a	n/a	n/a	n/a	ore
590.0	600.0	100	n/a	95	R3,R4	n/a	n/a	n/a	n/a	n/a	ore
600.0	610.0	95	n/a	88	R3	n/a	n/a	n/a	n/a	n/a	ore
610.0	620.0	100	n/a	93	R3	n/a	n/a	n/a	n/a	n/a	ore
620.0	630.0	100	n/a	90	R3	n/a	n/a	n/a	n/a	n/a	ore
630.0	640.2	100	n/a	98	R3	n/a	n/a	n/a	n/a	n/a	ore
640.2	650.4	100	n/a	96	R3	n/a	n/a	n/a	n/a	n/a	LG
650.4	660.1	100	n/a	89	R3,R1	n/a	n/a	n/a	n/a	n/a	waste
660.1	670.8	100	n/a	100	R3	n/a	n/a	n/a	n/a	n/a	waste
670.8	681.0	100	n/a	79	R3	n/a	n/a	n/a	n/a	n/a	waste
681.0	691.2	100	n/a	82	R3	n/a	n/a	n/a	n/a	n/a	waste
691.2	701.4	100	n/a	93	R3	n/a	n/a	n/a	n/a	n/a	LG
701.4	711.6	100	n/a	95	R3	n/a	n/a	n/a	n/a	n/a	LG
711.6	721.8	100	n/a	95	R3	n/a	n/a	n/a	n/a	n/a	waste
721.8	732.0	100	n/a	93	R3	n/a	n/a	n/a	n/a	n/a	waste
732.0	742.0	100	n/a	88	R3	n/a	n/a	n/a	n/a	n/a	waste
742.0	752.0	100	n/a	99	R3	n/a	n/a	n/a	n/a	n/a	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94–340C

AZIMUTH: 94.5°

INCLINATION: –87.5°

LOGGED BY: C. Wineteer

DATE: 7/26/94

PAGE ___1____ OF ___1____

DRILL RUN FROM	DRILL RUN TO	TOTAL CORE RECOVERY (%)	SOLID CORE RECOVERY (%)	RQD	ROCK STRENGTH	FRACTURE DATA: FRACTURES/FT.	FRACTURE DATA: AVG. ANGLE TO C.A.	FRACTURE DATA: ROUGHNESS	FRACTURE DATA: INFILL	SPECIFIC GRAVITY (g/cc)	ORE/WASTE
495.0	503.0	100		100	R3						waste
503.0	513.0	97		88	R3						waste
513.0	523.0	94	N/A	81	R3	N/A	N/A	N/A	N/A	N/A	waste
523.0	533.0	93		86	R1						waste
533.0	543.0	100		95	R3						waste
543.0	553.0	98		92	R3						waste
553.0	563.0	91		63	R3						waste
563.0	573.0	100		98	R3						waste
573.0	582.0	100		96	R3						waste
582.0	592.0	99		93	R3						waste
592.0	602.0	100		95	R3						waste
602.0	612.0	97		85	R3						waste
612.0	622.0	100		64	R1,R3						waste
622.0	632.0	93		55	R1,R3						waste
632.0	642.0	100		83	R3						waste
642.0	652.0	95		83	R3,R2						waste
652.0	662.0	96		80	R2						waste
662.0	672.0	97		82	R3						waste
672.0	682.0	99		95	R3						waste
682.0	692.0	83		64	R3						waste
692.0	705.0	88		61	R3,R2						waste
705.0	713.0	83		n/a	R3,R2						waste
713.0	723.0	86		64	R3,R2						waste
723.0	727.0	93		60	R3,R2						waste
727.0	733.0	~~97~~ 96		73	R3,R2						waste
733.0	743.0	93		72	R3,R2						waste
743.0	750.0	100		100	R3,R2						waste
750.0	751.5	100		87	R3,R2						waste

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94–330C

AZIMUTH: 338.5°

INCLINATION: –89.5°

LOGGED BY: J. Bernard

DATE: 8/4/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
435.0	442.0	92	n/a	77	R3	n/a	n/a	n/a	n/a	n/a	waste
442.0	452.0	100	n/a	80	R3	n/a	n/a	n/a	n/a	n/a	waste
452.0	462.0	100	n/a	71	R1	n/a	n/a	n/a	n/a	n/a	waste
462.0	472.0	98	n/a	73	R1	n/a	n/a	n/a	n/a	n/a	waste
472.0	482.0	99	n/a	69	R1	n/a	n/a	n/a	n/a	n/a	waste
482.0	492.0	100	n/a	70	R1	n/a	n/a	n/a	n/a	n/a	waste
492.0	502.0	98	n/a	95	R1,R3	n/a	n/a	n/a	n/a	n/a	waste
502.0	512.0	100	n/a	91	R3	n/a	n/a	n/a	n/a	n/a	waste
512.0	522.0	100	n/a	60	R3,R1	n/a	n/a	n/a	n/a	n/a	waste
522.0	532.0	100	n/a	52	R3,R4	n/a	n/a	n/a	n/a	n/a	waste
532.0	542.0	100	n/a	79	R3	n/a	n/a	n/a	n/a	n/a	ore
542.0	551.0	91	n/a	56	R3	n/a	n/a	n/a	n/a	n/a	ore
551.0	558.0	114	n/a	95	R3	n/a	n/a	n/a	n/a	n/a	ore
558.0	562.0	92	n/a	65	R3	n/a	n/a	n/a	n/a	n/a	waste
562.0	572.0	100	n/a	n/a	R3	n/a	n/a	n/a	n/a	n/a	waste
572.0	582.0	100	n/a	60	R3,R1	n/a	n/a	n/a	n/a	n/a	LG
582.0	592.0	98	n/a	80	R3	n/a	n/a	n/a	n/a	n/a	waste
592.0	602.0	96	n/a	90	R3	n/a	n/a	n/a	n/a	n/a	waste
602.0	612.0	97	n/a	86	R3	n/a	n/a	n/a	n/a	n/a	waste
612.0	622.0	100	n/a	90	R4	n/a	n/a	n/a	n/a	n/a	waste
622.0	624.0	100	n/a	70	R3	n/a	n/a	n/a	n/a	n/a	waste
624.0	632.0	100	n/a	93	R3	n/a	n/a	n/a	n/a	n/a	waste
632.0	642.0	100	n/a	92	R3	n/a	n/a	n/a	n/a	n/a	waste
642.0	652.0	95	n/a	91	R3	n/a	n/a	n/a	n/a	n/a	waste
652.0	662.0	100	n/a	97	R3	n/a	n/a	n/a	n/a	n/a	waste
662.0	672.0	100	n/a	86	R3	n/a	n/a	n/a	n/a	n/a	waste
672.0	682.0	100	n/a	86	R3	n/a	n/a	n/a	n/a	n/a	waste
682.0	692.0	96	n/a	80	R3	n/a	n/a	n/a	n/a	n/a	waste
692.0	702.0	78	n/a	65	R3	n/a	n/a	n/a	n/a	n/a	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-321C

AZIMUTH: 352.5°

INCLINATION: -89.5°

LOGGED BY:

DATE:

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
435.0	437.1	80	n/a	52	n/a	n/a	n/a	n/a	n/a	n/a	waste
437.1	442.0	88	n/a	76	R1	n/a	n/a	n/a	n/a	n/a	waste
442.0	452.0	90	n/a	78	R3	n/a	n/a	n/a	n/a	n/a	waste
452.0	462.0	96	n/a	85	R1	n/a	n/a	n/a	n/a	n/a	waste
462.0	472.0	98	n/a	96	R1	n/a	n/a	n/a	n/a	n/a	waste
472.0	481.0	81	n/a	31	R3	n/a	n/a	n/a	n/a	n/a	waste
481.0	484.0	90	n/a	80	R3	n/a	n/a	n/a	n/a	n/a	waste
484.0	492.0	102	n/a	83	R3	n/a	n/a	n/a	n/a	n/a	waste
492.0	502.0	90	n/a	84	R3	n/a	n/a	n/a	n/a	n/a	waste
502.0	512.0	100	n/a	95	R3	n/a	n/a	n/a	n/a	n/a	waste
512.0	522.0	100	n/a	95	R3	n/a	n/a	n/a	n/a	n/a	waste
522.0	532.0	98	n/a	80	R3	n/a	n/a	n/a	n/a	n/a	waste
532.0	542.0	100	n/a	96	R3	n/a	n/a	n/a	n/a	n/a	waste
542.0	552.0	97	n/a	94	R3	n/a	n/a	n/a	n/a	n/a	waste
552.0	562.0	100	n/a	88	R3	n/a	n/a	n/a	n/a	n/a	waste
562.0	572.0	100	n/a	85	R3	n/a	n/a	n/a	n/a	n/a	waste
572.0	582.0	94	n/a	81	R3	n/a	n/a	n/a	n/a	n/a	waste
582.0	592.0	95	n/a	78	R3	n/a	n/a	n/a	n/a	n/a	waste
592.0	602.0	98	n/a	92	R3	n/a	n/a	n/a	n/a	n/a	waste
602.0	612.0	98	n/a	86	R3	n/a	n/a	n/a	n/a	n/a	waste
612.0	622.0	100	n/a	73	R3	n/a	n/a	n/a	n/a	n/a	waste
622.0	632.0	100	n/a	91	R3	n/a	n/a	n/a	n/a	n/a	waste
632.0	641.0	100	n/a	61	R2	n/a	n/a	n/a	n/a	n/a	LG
641.0	647.5	100	n/a	61	R2,R3	n/a	n/a	n/a	n/a	n/a	ore
647.5	652.0	100	n/a	66	R1	n/a	n/a	n/a	n/a	n/a	ore
652.0	662.0	100	n/a	76	R3	n/a	n/a	n/a	n/a	n/a	ore
662.0	672.0	100	n/a	95	R3	n/a	n/a	n/a	n/a	n/a	ore
672.0	682.0	100	n/a	84	R3	n/a	n/a	n/a	n/a	n/a	ore
682.0	692.0	100	n/a	92	R3	n/a	n/a	n/a	n/a	n/a	waste
692.0	702.0	100	n/a	94	R3	n/a	n/a	n/a	n/a	n/a	waste
702.0	712.0	100	n/a	91	R1	n/a	n/a	n/a	n/a	n/a	waste
712.0	722.0	100	n/a	92	R3	n/a	n/a	n/a	n/a	n/a	waste
722.0	732.0	100	n/a	89	R1	n/a	n/a	n/a	n/a	n/a	waste
732.0	742.0	94	n/a	86	R1	n/a	n/a	n/a	n/a	n/a	waste
742.0	752.0	100	n/a	96	R1	n/a	n/a	n/a	n/a	n/a	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-324C

AZIMUTH: 302.5°

INCLINATION: -89.0°

LOGGED BY:

DATE:

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
435.0	445.0	100	n/a	87	R1	n/a	n/a	n/a	n/a	n/a	waste
445.0	455.0	100	n/a	90	R1,R3	n/a	n/a	n/a	n/a	n/a	waste
455.0	465.0	100	n/a	96	R3	n/a	n/a	n/a	n/a	n/a	waste
465.0	475.0	100	n/a	94	R3	n/a	n/a	n/a	n/a	n/a	waste
475.0	485.0	100	n/a	92	R3	n/a	n/a	n/a	n/a	n/a	waste
485.0	495.0	100	n/a	84	R3	n/a	n/a	n/a	n/a	n/a	waste
495.0	505.0	100	n/a	98	R3	n/a	n/a	n/a	n/a	n/a	waste
505.0	515.0	100	n/a	98	R3	n/a	n/a	n/a	n/a	n/a	waste
515.0	525.0	100	n/a	94	R3,R4	n/a	n/a	n/a	n/a	n/a	waste
525.0	532.0	107	n/a	93	R3,R4	n/a	n/a	n/a	n/a	n/a	waste
532.0	537.0	94	n/a	56	R3,R4	n/a	n/a	n/a	n/a	n/a	waste
537.0	545.0	80	n/a	50	R3,R4	n/a	n/a	n/a	n/a	n/a	waste
545.0	555.0	98	n/a	94	R3,R4	n/a	n/a	n/a	n/a	n/a	waste
555.0	565.0	95	n/a	87	R3,R4	n/a	n/a	n/a	n/a	n/a	waste
565.0	575.0	100	n/a	90	R3	n/a	n/a	n/a	n/a	n/a	waste
575.0	585.0	100	n/a	96	R3	n/a	n/a	n/a	n/a	n/a	waste
585.0	595.0	100	n/a	76	R1	n/a	n/a	n/a	n/a	n/a	waste
595.0	605.0	100	n/a	89	R1	n/a	n/a	n/a	n/a	n/a	waste
605.0	615.0	100	n/a	88	R1	n/a	n/a	n/a	n/a	n/a	waste
615.0	620.5	93	n/a	33	R2	n/a	n/a	n/a	n/a	n/a	waste
620.5	624.0	100	n/a	47	R2	n/a	n/a	n/a	n/a	n/a	LG
624.0	634.0	100	n/a	94	R3	n/a	n/a	n/a	n/a	n/a	ore
634.0	644.0	94	n/a	85	R3	n/a	n/a	n/a	n/a	n/a	ore
644.0	654.0	98	n/a	98	R3	n/a	n/a	n/a	n/a	n/a	ore
654.0	664.0	100	n/a	89	R3	n/a	n/a	n/a	n/a	n/a	LG
664.0	674.0	100	n/a	72	R3	n/a	n/a	n/a	n/a	n/a	waste
674.0	684.0	100	n/a	73	R3	n/a	n/a	n/a	n/a	n/a	waste
684.0	694.0	100	n/a	82	R3	n/a	n/a	n/a	n/a	n/a	waste
694.0	704.0	100	n/a	98	R3	n/a	n/a	n/a	n/a	n/a	waste
704.0	714.0	97	n/a	73	R1	n/a	n/a	n/a	n/a	n/a	waste
714.0	724.0	100	n/a	79	R1,R3	n/a	n/a	n/a	n/a	n/a	waste
724.0	732.0	87	n/a	79	R3	n/a	n/a	n/a	n/a	n/a	waste
732.0	735.0	100	n/a	73	R3	n/a	n/a	n/a	n/a	n/a	waste
735.0	745.0	100	n/a	80	R3	n/a	n/a	n/a	n/a	n/a	waste
745.0	748.1	100	n/a	29	R3	n/a	n/a	n/a	n/a	n/a	waste
748.1	755.0	100	n/a	100	R3	n/a	n/a	n/a	n/a	n/a	waste
755.0	765.0	100	n/a	95	R3,R1	n/a	n/a	n/a	n/a	n/a	waste
765.0	775.0	97	n/a	76	R3,R1	n/a	n/a	n/a	n/a	n/a	waste
775.0	784.0	100	n/a	85	R3,R1	n/a	n/a	n/a	n/a	n/a	LG
784.0	787.0	100	n/a	93	R3,R1	n/a	n/a	n/a	n/a	n/a	LG

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94-338C

AZIMUTH: 246.5°

INCLINATION: -89.0°

LOGGED BY: L. Bernard

DATE: 8/3/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
490.0	493.0	100	n/a	13	R3	n/a	n/a	n/a	n/a	n/a	waste
493.0	503.0	85	n/a	57	R1,R3	n/a	n/a	n/a	n/a	n/a	waste
503.0	513.0	98	n/a	89	R3	n/a	n/a	n/a	n/a	n/a	waste
513.0	523.0	98	n/a	90	R3	n/a	n/a	n/a	n/a	n/a	waste
523.0	533.0	96	n/a	86	R3	n/a	n/a	n/a	n/a	n/a	waste
533.0	543.0	98	n/a	91	R3	n/a	n/a	n/a	n/a	n/a	waste
543.0	553.0	98	n/a	90	R3	n/a	n/a	n/a	n/a	n/a	waste
553.0	563.0	93	n/a	92	R3	n/a	n/a	n/a	n/a	n/a	waste
563.0	573.0	97	n/a	73	R3,R1,R2	n/a	n/a	n/a	n/a	n/a	waste
573.0	583.0	100	n/a	66	R3,R4	n/a	n/a	n/a	n/a	n/a	waste
583.0	593.0	95	n/a	70	R3	n/a	n/a	n/a	n/a	n/a	waste
593.0	603.0	n/a	n/a	n/a	R3,R1,R2	n/a	n/a	n/a	n/a	n/a	waste
603.0	613.0	100	n/a	91	R2,R3	n/a	n/a	n/a	n/a	n/a	LG
613.0	617.0	82	n/a	82	R2,R3	n/a	n/a	n/a	n/a	n/a	waste
617.0	620.0	116	n/a	113	R2,R3	n/a	n/a	n/a	n/a	n/a	ore
620.0	622.0	93	n/a	53	R2,R3	n/a	n/a	n/a	n/a	n/a	waste
622.0	633.0	100	n/a	100	R2,R3	n/a	n/a	n/a	n/a	n/a	waste
633.0	643.0	98	n/a	98	R2,R3	n/a	n/a	n/a	n/a	n/a	waste
643.0	653.0	108	n/a	108	R2,R3	n/a	n/a	n/a	n/a	n/a	waste
653.0	663.0	93	n/a	78	R2,R3	n/a	n/a	n/a	n/a	n/a	waste
663.0	673.0	100	n/a	94	R2,R3	n/a	n/a	n/a	n/a	n/a	waste
673.0	683.0	100	n/a	87	R2,R3	n/a	n/a	n/a	n/a	n/a	waste
683.0	693.0	100	n/a	86	R2,R3	n/a	n/a	n/a	n/a	n/a	waste
693.0	701.0	100	n/a	97	R2,R3	n/a	n/a	n/a	n/a	n/a	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

NORTH ZONE

HOLE ID: 94-312C

AZIMUTH: 242.5°

INCLINATION: -89.5°

LOGGED BY: LJB

DATE: 11/8/94

PAGE ___1___ OF ___1___

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
495.0	498.0	90	90	75	R2	0.3	70	VR	drusy qtz	n/a	n/a
498.0	508.0	95	95	95	R2	0.1	60	VR	drusy qtz	2.40	n/a
508.0	518.0	102	102	91	R2	0.7	60	R	chl rk	2.30	n/a
518.0	528.0	101	101	94	R2	0.5	70	R	chl rk	2.40	n/a
528.0	538.0	100	100	85	R3	0.7	70	R	chl rk	2.40	n/a
538.0	548.0	102	102	99	R3	0.3	60,30	R	chl films	2.60	n/a
548.0	558.0	99	99	86	R3	0.6	60	R	chl film+drusy qtz+py+marc	2.50	n/a
558.0	568.0	95	95	78	R3	0.9	60	R	drusy qtz	2.40	n/a
568.0	578.0	98	95	69	R3	1.1	40	R	chl+clay films	2.50	n/a
578.0	588.0	99	84	74	R2	0.4	40,0	R	chl rk	2.60	n/a
588.0	598.0	100	100	92	R2	0.4	60	R	chl rk	2.50	n/a
598.0	608.0	96	96	88	R2	0.8	50	R	chl rk+films	2.50	n/a
608.0	618.0	100	97	75	R2	0.8	60	R	chl rk	2.50	n/a
618.0	628.0	101	101	92	R2	0.6	20	R	chl rk	2.30	n/a
628.0	638.0	99	99	84	R2	1.0	60	VR	chl rk	2.50	n/a
638.0	648.0	100	100	94	R2	0.8	60	VR	chl rk	2.50	n/a
648.0	658.0	99	99	95	R2	0.7	75	VR	chl rk	2.50	n/a
658.0	668.0	101	101	95	R2	0.4	70	R	chl rk	2.40	n/a
668.0	678.0	98	98	91	R2	0.4	60	R	chl rk	2.50	n/a
678.0	688.0	102	102	97	R2	0.3	55	S-R	chl films	2.40	n/a
688.0	698.0	100	100	96	R3	0.3	60	S	py films+chl films	2.40	n/a
698.0	705.0	100	60	40	R4	0.4	40	VR	wht clay+drusy qtz/m	2.40	n/a
705.0	708.0	100	86	30	R3	1.6	40	VR	chl+qtz	n/a	n/a
708.0	718.0	101	101	98	R3	0.3	35,60	R	qtz+clay+marc	2.60	n/a
718.0	728.0	98	98	84	R3	0.1	35	R	qtz	2.60	n/a
728.0	738.0	100	100	84	R2	0.3	40	R	chl film	2.50	n/a
738.0	748.0	101	101	94	R2	0.5	70	R	minor wht clay film	2.40	n/a
748.0	758.0	100	100	91	R3	0.9	70	S	minor chl film+clay film	2.60	n/a
758.0	768.0	100	100	96	R3	0.7	70	R	minor clay film+clay film	2.60	n/a
768.0	778.0	102	102	102	R3	0.1	40	R	minor clay film+clay film	2.60	n/a
778.0	788.0	97	97	68	R3	0.8	70,20	R	minor clay film+clay film	2.56	n/a
788.0	798.0	99	91	86	R3	0.6	25,70	R	minor clay film+clay film	2.54	n/a
798.0	808.0	101	101	86	R3	1.1	70	S	minor chl film+clay film+py coat	2.53	n/a
808.0	818.0	100	100	94	R2	0.9	70	R	chl films+py films	2.52	n/a
818.0	828.0	100	100	95	R2	0.7	70,0-10	R	drusy qtz+marc	2.48	n/a
828.0	838.0	100	100	95	R2	0.3	70	R	py films	2.45	n/a
838.0	848.0	100	100	89	R2	0.6	70,0-25	R	chl films+py+wht clay	2.42	n/a
848.0	858.0	99	60	38	R2	2.0	30,0-10	VR	chl film+wht clay+py film	2.48	n/a
858.0	868.0	99	83	59	R2	1.1	60	VR	chl film+wht clay+py film+drusy qtz	2.52	n/a
868.0	878.0	99	95	87	R2	0.8	60,40	VR	chl film+wht clay+py film+drusy qtz	2.46	n/a
878.0	888.0	90	75	56	R2	1.3	35	VR	chl film+wht clay+py film+drusy qtz	2.52	n/a
888.0	895.0	98	91	80	R2	1.1	70,30	R	chl film+wht clay+py film+drusy qtz	2.52	n/a
895.0	905.5	93	80	60	R2	1.1	70,30	R	chl film+wht clay+py film+drusy qtz	2.53	n/a
905.5	915.5	100	98	76	R3	0.9	70,30	R	nil	2.51	n/a
915.5	926.0	100	100	75	R2	0.3	50	R	wht clay+py	2.37	n/a
926.0	936.0	100	100	90	R2	0.7	50	R	nil	2.47	n/a
936.0	946.5	97	97	91	R2	1.3	60	R	chl rk	2.54	n/a
946.5	957.0	92	92	66	R3	0.5	60	VR	drusy qtz+py+ba	2.56	n/a
957.0	967.5	97	97	86	R3	1.0	50	VR	drusy qtz+py+ba	2.51	n/a
967.5	978.0	99	99	92	R3	0.7	70,40	R,VR	drusy qtz+marc+py+ba+clay	2.52	n/a
978.0	988.0	103	103	101	R3	0.6	70	R	chl+clay films	2.53	n/a
988.0	998.0	102	102	72	R3	1.3	80,65,20	R	chl film	2.54	n/a
998.0	1008.0	102	102	80	R3	0.8	60	R	chl+py films	2.54	n/a
1008.0	1018.0	100	100	66	R3	1.1	55,30	R	chl+py films	2.50	n/a
1018.0	1028.0	99	93	72	R3	1.5	50,0	R	chl+ser films+vnlets	2.47	n/a
1028.0	1038.0	99	98	83	R3	0.9	60,15	R	chl+ser clay films	2.45	n/a
1038.0	1048.0	98	98	95	R3	0.2	15-20	R	chl+ser clay films	2.49	n/a
1048.0	1058.0	103	103	48	R3	1.3	85,0-10	R	chl+py films	2.54	n/a
1058.0	1068.0	100	100	92	R3	0.7	75	VR	nil	2.48	n/a
1068.0	1078.0	100	100	95	R3	0.2	85	VR	chl+marc film	2.53	n/a
1078.0	1088.0	100	96	83	R3	0.7	50,0	VR	clay	2.48	n/a
1088.0	1098.0	98	98	85	R2	0.7	70	R	nil	2.44	n/a

HECLA MINING COMPANY
ROSEBUD PROJECT

NORTH ZONE

HOLE ID: 94–334C

AZIMUTH: 317.5°

INCLINATION: –88.5°

LOGGED BY: LJB

DATE:11/22/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
817.0	827.0	102	102	77	R3	0.7	50	R	chl+py films	2.45	n/a
827.0	837.0	99	99	77	R2	0.7	40	R	chl+ser films	2.47	n/a
837.0	847.0	93	93	46	R2	1.0	30,70	S	chl+ser films	2.44	n/a
847.0	857.0	107	104	82	R3	1.2	30,70	S	chl+ser films	2.55	n/a
857.0	867.0	102	102	62	R3	1.8	70	S	chl+ser films	2.47	n/a
867.0	877.0	97	97	70	R3	1.4	40,70	VR,S	chl+ser films	2.46	n/a
877.0	887.0	102	102	97	R3	1.0	70,40	S,R	chl+ser films	2.52	n/a
887.0	897.0	95	95	82	R3	1.0	70,40	S	chl+ser film+rare ca	2.42	n/a
897.0	907.0	100	97	81	R2	0.8	50	R	chl+ser film	2.45	n/a
907.0	917.0	99	96	79	R2	0.9	50	R	chl+ser film	2.42	n/a
917.0	927.0	100	80	73	R2	0.5	70	R	chl+ser film	2.45	n/a
927.0	937.0	101	100	89	R3	0.9	50	R	wht clay+bar	2.55	n/a
937.0	947.0	99	99	86	R3	0.6	35	VR	wht clay+bar	2.56	n/a
947.0	957.0	97	97	87	R3	0.9	80	R	graphite film+ wht clay	2.56	n/a
957.0	967.0	100	100	87	R3	1.0	40	R	tr graphite+cht clay+py	2.60	n/a
967.0	977.0	98	98	80	R3	1.3	50	R	minor clay films	2.49	n/a
977.0	987.0	100	100	84	R3	0.9	60	R	minor clay films+bar	2.60	n/a
987.0	997.0	100	100	85	R3	1.4	60	R	minor py	2.61	n/a
997.0	1007.0	99	99	90	R3	1.5	60,70	R	graphite	2.55	n/a
1007.0	1017.0	98	90	80	R3	1.6	70	R	clay+bar+qtz coat	2.60	n/a
1017.0	1027.0	100	100	90	R3	1.0	70	R	clay+bar+qtz coat+graph	2.59	n/a
1027.0	1037.0	106	505	63	R3	2.3	70 (20,25)	R	clay+bar+qtz coat+graph	2.62	n/a
1037.0	1047.0	100	100	74	R3	1.9	60	R	graphite	2.57	n/a
1047.0	1057.0	102	102	85	R3	0.9	60	R	graphite+bar	2.60	n/a
1057.0	1067.0	100	100	94	R3	0.7	70	R	graphite	2.63	n/a
1067.0	1077.0	100	100	76	R3	0.8	25	S	graphite qtz	2.56	n/a
1077.0	1087.0	99	99	68	R3	1.8	30	S	graphite	2.61	n/a

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94–336C

AZIMUTH: 39.0°

INCLINATION: –89.0°

LOGGED BY: LJB

DATE: 9/17/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
475.0	483.0	100	100	100	R4	0.2	70	R	nil	2.46	waste
483.0	493.0	100	100	91	R4	0.2	70,90	S	nil	2.43	waste
493.0	503.0	100	97	92	R4	1.1	30	R	nil	2.42	waste
503.0	513.0	100	100	100	R4	0.9	30	R	chl silc+ca vn	2.40	waste
513.0	523.0	100	100	93	R4	0.6	70,30	R	nil	2.39	waste
523.0	533.0	100	100	64	R4	1.7	70,30,10	R	nil	2.41	waste
533.0	543.0	100	100	79	R4	1.5	70,30,10	R	nil	2.38	waste
543.0	553.0	100	100	100	R3	0.6	70,30	R	nil	2.43	waste
553.0	563.0	100	100	95	R3	0.6	70,40	R	nil	2.37	waste
563.0	573.0	100	100	80	R3	1.2	70,10	R	clay film+py	2.33	waste
573.0	583.0	100	100	92	R3	1.2	70,10	R	clay films+py	2.42	waste
583.0	593.0	100	100	72	R3	1.7	50–60	R	clay+py films	2.41	waste
593.0	603.0	100	98	79	R3	1.5	50	R	clay+py films	2.36	waste
603.0	613.0	93	93	73	R3	1.2	60	R	clay films	2.40	LG
613.0	623.0	98	96	61	R3	1.4	70,40	R	clay films	2.42	LG
623.0	633.0	100	98	70	R3	1.9	70	R	clay+chl film	2.45	waste
633.0	643.0	100	97	65	R3	1.9	70,30	R	clay film	2.45	waste
643.0	653.0	97	97	79	R3	1.5	40	R	clay film	2.44	waste
653.0	663.0	80	57	45	S5	0.7	60	VR	clay alt rk	2.40	waste
663.0	673.0	92	84	72	S5	1.1	40	VR	clay alt rk	2.43	waste
673.0	677.5	106	106	106	R3	1.1 ~~n/a~~	40 ~~n/a~~	VR ~~n/a~~	clay Alt ~~n/a~~	2.37	waste
677.5	678.0	104	104	0	R3	0.2	70	R	minor clay	n/a	waste
678.0	683.0	100	99	88	R3	0.1	70	R	minor clay	2.42	waste
683.0	689.5	95	93	38	R3	1.4	30,60,80	R	clay film	2.45	waste
689.5	699.5	102	102	89	R2	0.8	60	R	clay film	2.49	ore
699.5	709.5	100	100	95	R2	0.9	60	R	clay	2.45	LG
709.5	720.0	95	95	80	R2	0.9	60	R	minor clay+py	2.38	waste
720.0	730.0	100	100	95	R2	0.8	70–80	R	chl film	2.39	waste
730.0	740.5	98	98	97	R2	0.3	50,70	R	minor clay	2.38	waste
740.5	750.5	103	103	103	R3	0.9	80	R	minor clay	2.43	waste
750.5	761.0	99	99	97	R3	0.7	80	R	minor clay	2.44	waste
761.0	771.5	98	98	91	R3	0.8	70–80	R	minor clay	2.42	waste
771.5	781.5	100	100	97	R3	0.0	n/a	n/a	n/a	2.40	waste
781.5	791.5	100	100	87	R3	0.4	5	R	qtz+clay+bar	2.40	waste
791.5	800.0	100	100	93	R3	0.7	70	R	qtz+bar	2.43	LG

HECLA MINING COMPANY
ROSEBUD PROJECT

EAST ZONE

HOLE ID: 94–337C

AZIMUTH: 296.0°

INCLINATION: –89.5°

LOGGED BY: RK

DATE: 9/14/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
475.0	483.0	115	112	73	R2	n/a	n/a	n/a	n/a	2.24	waste
483.0	493.0	100	97	85	R2	0.8	70	R	nil	2.35	waste
493.0	503.0	96	78	50	R2	2.0	60,30	R	clay+ca	2.54	waste
503.0	513.0	98	92	83	R2	1.1	30	R	nil	2.50	waste
513.0	523.0	98	98	96	R2	0.5	60	R	nil	2.48	waste
523.0	533.0	99	99	77	R2	1.1	80	R	nil	2.45	waste
533.0	543.0	99	97	82	R2	0.9	50,30	R	nil	2.38	waste
543.0	553.0	100	98	82	R2	1.0	70	R	chl film	2.35	waste
553.0	563.0	98	91	72	R1	1.3	60,5	R	nil	2.34	waste
563.0	573.0	98	63	33	R1	1.8	50	R	nil	2.41	waste
573.0	583.0	96	86	59	R1	2.1	80	R	nil	2.40	waste
583.0	593.0	98	83	69	R1	1.7	60,80	S,R	clay	2.46	waste
593.0	603.0	94	92	78	R2	1.1	70	R	minor clay film	2.41	waste
603.0	613.0	96	90	89	R3	1.8	80,70,70 ~~80,70~~	R	chl film	2.49	waste
613.0	623.0	100	94	85	R3	1.0	50,40	R	nil	2.47	waste
623.0	633.0	100	100	94	R3	1.1	65–75	R	clay film	2.52	waste
633.0	643.0	99	99	90	R3	0.8	85,40	R	nil	2.43	waste
643.0	653.0	100	100	100	R3	0.8	80	R	nil	2.49	waste
653.0	663.0	98	98	98	R2	0.4	80	R	nil	2.37	waste
663.0	673.0	100	100	100	R2	0.1	80	R	py vnlet	2.43	waste
673.0	683.0	98	98	86	R2	0.3	40	R	py+qtz	2.33	waste
683.0	693.0	100	100	97	R2	0.3	60	VR	nil	2.30	waste
693.0	703.0	96	96	84	R3	0.6	10,70	R	qtz+py	2.47	waste
703.0	713.0	100	100	88	R2	0.3	40	R	clay film	2.36	waste
713.0	723.0	100	100	90	R2	1.5	50	R	clay film	2.37	waste
723.0	733.0	100	100	98	R3	0.8	50,80	R	nil	2.45	waste
733.0	743.0	100	100	91	R3	1.0	80	R	nil	2.44	waste
743.0	750.0	110	110	98	R3	n/a	n/a	n/a	n/a	2.39	waste

HECLA MINING COMPANY
ROSEBUD PROJECT

NORTH ZONE

HOLE ID: 94–339C

AZIMUTH: 116.0°

INCLINATION: –90.0°

LOGGED BY: RK

DATE: 10/17/94

PAGE ___1____ OF ___1____

DRILL RUN		TOTAL CORE	SOLID CORE	RQD	ROCK	FRACTURE DATA				SPECIFIC GRAVITY	ORE/WASTE
FROM	TO	RECOVERY (%)	RECOVERY (%)		STRENGTH	FRACTURES/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	(g/cc)	
494.0	504.0	93	81	75	R2	0.4	50	S	nil	2.48	waste
504.0	514.0	95	67	60	R2	0.9	50,40	R	chl coating	2.51	waste
514.0	524.0	98	73	45	R3	0.8	45,30	R	qtz coating+marc+chl films	2.52	waste
524.0	534.0	98	25	22	R3	1.0	55,15	VR	chl coating	2.54	waste
534.0	544.0	98	67	40	R3	0.7	40–50,5	VR	drusy qtz	2.59	waste
544.0	554.0	97	77	57	R2	0.7	35,60	R	drusy qtz+chl films	2.43	waste
554.0	564.0	98	97	79	R2	0.2	60	VR	nil	2.27	waste
564.0	574.0	99	99	86	R2	0.0	n/a	n/a	n/a	2.32	waste
574.0	584.0	99	98	84	R2	0.0	n/a	n/a	n/a	2.43	waste
584.0	594.0	98	97 ~~98~~	89	R2	0.1	70	R	nil	2.40	waste
594.0	604.0	95	75	65	R2	0.8	60	R	chl rk	2.49	waste
604.0	614.0	101	101	76	R2	0.5	70,20	R	chl rk	2.40	waste
614.0	622.0	96	96	91	R2	0.3	40,50	R	clay	2.30	waste
622.0	624.0	101	101	75	n/a	.5 ~~n/a~~	20,0 ~~n/a~~	R ~~n/a~~	drusy altered ~~n/a~~	n/a	waste
624.0	634.0	100	100	86	R2	0.5	20,0	R	drusy qtz+marc	2.50	waste
634.0	644.0	101	101	86	R2	0.6	40	R	drusy qtz+marc	2.20	waste
644.0	654.0	100	98	74	R2	1.2	40	R	chl rx	2.40	waste
654.0	664.0	100	100	90	R2	0.7	70	R	chl rx	2.40	waste
664.0	674.0	100	100	86	R3	0.7	40	R	qtz coating+marc	2.50	waste
674.0	684.0	100	100	78	R3	0.8	70,40	R	nil	2.41	waste
684.0	694.0	99	98	84	R3	0.6	50,20	R	drusy qtz+wht clay+marc+chl films	2.41	waste
694.0	704.0	94	78	54	R3	0.4	25	R	drusy qtz+wht clay+marc+chl films	2.48	waste
704.0	714.0	98	96	79	R3	0.4	25,80	R	drusy qtz+wht clay+marc+chl films	2.40	waste
714.0	724.0	99	95	83	R3	0.2	80	S	chl+ca films+py	2.39	waste
724.0	734.0	99	89	63	R3	0.6	45	R	chl+py films	2.38	waste
734.0	744.0	98	87	64	R3	1.1	65,0	R	chl+py films	2.43	waste
744.0	754.0	97	90	63	R3	0.9	65,0	R	chl+py films	2.38	waste
754.0	764.0	97	83	59	R3	1.3	50	R	chl+py films+red hem	2.46	waste
764.0	775.0	72	30	19	R3	1.1	40,5	R	chl+py films+red hem	2.41	waste
775.0	863.2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	waste
863.2	873.5	100	100	64	R2	n/a	40	R	clay films	2.30	waste
873.5	883.6	100	97	83	R2	0.8	60	R	clay+py films	2.40	waste
883.6	888.0	86	86	68	R3	0.8	50	R	clay films	2.60	waste
888.0	894.0	99	90	30	R3	0.3	45	K	sil rk	n/a	waste
894.0	896.5	60	0	0	R3	.3 n/a	45 n/a	R n/a	sil rk n/a	2.80	waste
896.5	904.0	100	80	60	R3	0.5	45	VR	sil rk	n/a	waste
904.0	914.0	100	100	84	R3	0.5	45	VR	sil rk	2.60	waste
914.0	924.0	100	100	94	R3	0.5	45	R	sil rk+py films	2.70	waste
924.0	934.0	98	98	71	R3	1.0	60	R	clay film	2.50	waste
934.0	944.0	97	97	56	R3	1.3	70,30	R	nil	2.50	waste
944.0	950.0	106	106	40	R3	1.7	70,30	R	nil	2.60	waste