6000 0649

Mining District File Summary Sheet

DISTRICT	Rosebud
DIST_NO	4010
COUNTY If different from written on document	Pershing
TITLE If not obvious	Rosebud Drill Hole File – Hole No D-165-98
AUTHOR	R. Parish; S King; K. Allen
DATE OF DOC(S)	1998
MULTI_DIST Y / N? Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Hecla Mining Co; Rosebud Project; Rosebud Mining Co, LLC
COMMODITY If not obvious	gold; silver
NOTES	drill logs; assay; geology; photographs; [redacted]; total depth 159'; receipts; down hole camera images; handwritten notes 23 p. 3 down hole camera images

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

SS: DD 4/28/2008
Initials Date

DB:
Initials Date

SCANNED:
Initials Date

Revised: 1/22/08

D-165-98

6000 0649
4010

60000649

Hecla MINING COMPANY

- quartz, chalcedony, silicification
- faults, fractures
- FeOx
- sulfide
- calcite, carbonate
- argillization, white clays
- propylitization
- potassic alteration
- Barite
- chlorite, chloritic clays

ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER	D-165-98	LOCATION	EAST ZONE
PAGE 1 OF 3		NORTHING	
DATE	1/25/98	EASTING	
LOGGED BY	R. PARISH	ELEVATION	
SCALE	1" = 10'	AZIMUTH	
TOTAL DEPTH	159'	INCLINATION	

REMARKS: STOPE 43

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
DOZER	Red.	0 – 25.2 Fine grained Dozer flows. Lt. pale greenish white. Local flow banding and auto brecciation. Numerous, scattered micro-breccia zones consisting of milled Dozer clasts in gray pyritic ± silica flooded rk. flour matrix. Surrounding rock is often crackle brecciated with vnlts of gray SiO_2 + fine pyrite or marcasite.	10, 20		2.5' 1½" microbx. vein-60° T.C.A. milled dozer clasts in gray pyritic rk flour matrix. 11.7 – 14.3 Shearing at 20° T.C.A. Numerous microbx. zones w/ rk flour matrix.	0 – 11.7 mild to mod. argillic. mild to mod. vnlts of gray SiO_2 + bladed marcasite ± white clay. often open, vuggy. 11.7 – 14.3 pyritic rk. flour breccia matrix w/ patchy silica flooding and mild marcasite in veins and vug fill w/ white clay. 14.3 – 21.7 mod. argillization, mod. gray SiO_2 + marcasite + wht. clay vnlts. and partially silicified rk flour bx matrix. 21.7 – 25.2 Decrease in argillic and silica + sulfide veining.
		25.2 – 29.2 Matrix supported Breccia. angular poorly sorted Dozer clasts in gray sulfidic Rock flour matrix. Clast supported breccia below 29.2'. nearly matrix-free – open – vuggy. 29.2 – 54 Fine grained Dozer Flows and Auto Breccias. Lt. greenish creme colored, mild marcasite ± gray SiO_2 veinlets	30, PIMA, 40, 50		25.2 – 27.5 matrix supp'd monolithic Flt or Collapse Bx 27.5 – 29.2 Clast supp'd. Flt. or collapse, monolithic Bx – open, minor silica + white clay matrix. 29.2 – 39 Dominant vnlt set at 75-90° T.C.A. 41 – 43 prominent joint set at 45-50° T.C.A.	25.2 – 27.5 Bx w/ gray variably silica flooded rk flour matrix. Tr. diss. marc? 27.5 – 29.2 minor Lt. green-white silica matrix cement with late white clay vug fill. 29.2 – 39 minor gray SiO_2 + marc. ± white clay vnlts. 36 – 36.5 pure white clay vein makes up ½ core dia. 39 – 54 weak argillization and bleaching – V. sparse marcasite ± silica veinlets, common disseminated py? marcasite? clots to 1/4" dia.

FROM	TO	W	Au	Ag	Au2	Ac
0	4					
4	8					
8	11.7					
11.7	14.3					
14.3	19					
19	21.7					
21.7	25.2					
25.2	27.5					
27.5	29.2					
29.2	34					
34	39					
39	44					
44	49					

HOLE NUMBER D-165-98 PAGE 2 OF 3

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION	ANALYTICAL DATA FROM	TO	W	Au	Ag	Au2
Dozer	Red.	51-54 Foliated tabular auto breccia clasts at 20° to C.A. 54-117.9 Fine-grained Dozer Flows and Auto Brecciá'd Flows. Lt. Creme with greenish cast. Weak pink hematitic stain along flow banding and autobreccia clasts. • Stockwork veins and veinlets of marcasite ± gray SiO_2 ± white clay. 78.8-96.6 Core is broken into pieces no larger than 2" - Looks driller induced. Many pieces have spun ends.	50 60 70 80	60 70 55 60	56.3 6" mosaic to milled clast Breccia. Upper cte is a vein at 60° 66.5' Flt'd vein 60°TCA Rake 90° 68.5-69.5 Breccia vein at 70° TCA. 78-96.6 Core is broken and stockworked. Common vein orientations of 50-60° TCA.	54-68.5 Bleached and weakly argillized. Weak marcasite ± gray SiO_2 ± white clay veinlets. Abdnt disseminated pyrite or marcasite clots. 68.5-71 gray, pyritic silica matrix'd Breccia vein ~ 1' thick and qtz + marcasite veined, argillized Dozer. 71-78.8 bleached and weakly argillized Dozer w/ weak stockwork of gray SiO_2 + marc. 78.8'-Botryoidal marc. on Barite veins 78.8-96.6 Bleached and more argillized than previous interval. Weak to almost moderate veining of gray	49 54 59 64 68.5 71 75 78.8 83 86.8	54 59 64 68.5 71 75 78.8 83 86.8				
		1.8' CORE LOSS										
			90	50		SiO_2 and bladed marcasite. Most fractures with white clay coating and vug fill. Sparse Barite w/ veins.	88.6 94	94 96.6				
		2.2' CORE LOSS										
		99.8-117.9 Strong stockwork veining of silica + marcasite ± Barite and abdnt. Late fracture/vug fill white clay. 117.9-146.9 South Ridge Fault Zone 117.9-118.7 matrix supported. Fault/hydrothermal Bx. Aphanitic, streaked dk gray matrix w/ milled black to Lt gray silica. Bands of Black, Pyritic silica // to SRF.	100 PIMA 110 PIMA 120	40 35 45 50	99.8-117.9 Strong stockwk Veining. Dominant vein orientation @ 35-45° TCA 117.9 - 5+r. Hydro thermal silica streaming at 50° TCA. 118.7 - SRF Flt slick 50° TCA Rake 80°	98.8-99.8 gray silica flooded crackle breccia - silicified clasts sparse megascopic marcasite 99.8-117.9 Strong stockwork veining of Lt. to med. gray SiO_2 + Bladed and massive marcasite and abdnt Late white clay fracture fill. Considerable brecciation post-silica veining, filled by white clay. 117.9-118.7 Dark gray, Dense Silica Flooding of SRF. Bx. Bands of Black v.f.gr. Pyrite Rich silica 118.7-120.4 Dense silica flood of green Bud like Tectonic Bx - moderate diss marc. strings and vnlts.	98.8 99.8 103 105.9 110.1 114 117.9 118.7	99.8 103 105.9 110.1 114 117.9 118.7 120.4				
SRF												

HOLE NUMBER D-165-98 PAGE 3 OF 3

LITH.	OX/RED.	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
South Ridge Fault Zone	Red.	118.7-132.5 Sea green, Heterolithic Breccia - poorly sorted, rounded to subangular, milled clasts of various Bud-like rock types. matrix appears to be milled RK flour with strong Bud? component. Patchy Silicification, common disseminated blebs of blebbed marcasite to 1/4". Some clasts rimmed by marcasite and later brecciated 132.5-133.2 Sliver of crackle Brecciated, Flesh colored Dozer or Pima Porphyry. Gray silica Veining 133.2-134.1 Densely silicified matrix sppt'd Bx - Pale green	120 130	45 30 45 40	120.4-133.2 crude, irregular joints at 30-45° to Core Axis. 117.9-146.9 S.R.F. Zone Rare, local jointing or planar silica streaming generally at 45-50° TCA. 134.1-134.3 Banded gray silica at 40° TCA. 136-139 matrix sppt'd Bx cemented w/ Barite.	120.4-133.2 Argillized, Patchy silica flooding and Lt. gray silica veining. Mod. diss. marcasite clots to 1/4". minor marcasite coatings on some clast margins 133.2-136 Complete, Dense Silicification. Lt. gray, 2" Dk. gray Band at 134.1. 136-139' Dense, Complete Silicification. Lt. to Dk gray Bx clasts in c.gr. Barite matrix. Barite Comprises 30% of core
		1' CORE LOSS	140			
upper Bud		134.1-136 Lt-gray to dk gray matrix sppt'd, Heterolithic Bx. Dense silicification. Angular silicified greenish Bud? clasts. and gray silica clasts. 2" thick dk gray, hydrothermal stream zone @ 134.1'. 136-139 Matrix sppt'd Breccia. Dk gray to greenish rounded to sub rounded silicified clasts in Coarse Barite matrix. Core is 30% Barite over this interval 140-145 Densely silicified, Heterolithic Breccia mostly green - some gray, texture-obscured silicification. Abdnt Coarse grained Barite vns to 1 1/2" thick running down core axis. Barite comprises 25% of interval. Coarse stibnite + sooty sulfide in 3" pod @ 142'. white, Botryoidal late Vug fill mineral on Barite from 143-145'. 145-146.9 Heterolithic, clast sppt'd Bx green, textonized and mostly silicified. Clasts are more recognizable than previous interval - mostly Bud - some Chocolate. 146.9-153.2 Coarse, clast sppt'd Bx. Large clasts to 1' thick of Bud, possible Dozer and chocolate Lithologies. Patchy silicification - abdnt Late Barite veins with minor stibnite coatings. 153.2-159 matrix to clast sppt'd Bx. upper Bud? Fairly well sorted - clasts from 1/8" to 1" dia. characteristic Dark green volcanic clasts as well as other colors, in lighter green matrix. Matrix textures are muted by silicification and textonism.	150 160	Pima Pima 45 40 EOH 159	140-153 Matrix to clast supported Breccia - Probably SRF Related. 153-159 Post Marcasite event. Brecciation and shearing. 158' 40° TCA. gouge filled Flt? or joint	140-145 Gray to greenish gray matrix sppt'd Bx. Dense Complete silica flooding. 25% of core is Coarse gr. Barite Vns. 3" Stibnite + sooty Py Pod at 142', white Botryoidal late mineral on Barite 143-145. 145-146.9 Dense Silicification. minor Barite vns. 146.9-153.2 Lt. gray silica ± marcasite vns. abdnt Barite Veining and Bx matrix 150-153 153.2-159 Lt. gray SiO_2 Veining, Marc. Blebs and vns esp on clast margins. Local partial sulfide replacement of some clasts.

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2
120.4	125.6				
125.6	129				
129	133.2				
133.2	134.1				
134.1	136				
136	139				
140	142				
142	145				
145	146.9				
146.9	151				
151	153.2				
153.2	156				
156	159				

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-165-98 DATE 1/25/98 LOGGED BY: R. PARISH PAGE 1 OF 3

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
0	4	88	88	0										
4	9	88	88	82										
9	14	94	98	18										
14	19	86	86	61										
19	24	94	94	53										
24	29	106	106	64										
29	34	100	100	61										
34	39	96	96	54										
39	44	88	88	34										
44	54	102	102	59										
54	64	92	92	78										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-165-98 DATE: 1/25/98 LOGGED BY: R. PARISH PAGE 2 OF 3

DRILL RUN FROM	DRILL RUN TO	SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH DOWNHOLE DEPTH	ROCK STRENGTH POINT LOAD INDEX (psi)	FRACTURE DATA FRACTURE DENSITY /FT.	FRACTURE DATA AVG. ANGLE TO C.A.	FRACTURE DATA ROUGHNESS	FRACTURE DATA INFILL	DENSITY DATA DOWNHOLE DEPTH	DENSITY DATA SAMPLE WEIGHT (g)	DENSITY DATA DISPLACEMENT (cc)	DENSITY DATA DENSITY (g/cc)
64	71	97	97	35										
71	79	96	96	50										
79	89	82	82	0										
89	94	82	82	0	Actual RQD could be higher, ROCK appears to have been Driller abused.									
94	99	56	56	0										
99	104	104	104	16										
104	109	90	90	60										
109	114	102	102	50										
114	119	87	87	46										
119	124	100	100	56										
124	129	100	100	52										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-165-98 DATE: 1/26/98 LOGGED BY: R. PARISH PAGE 3 OF 3

DRILL RUN		SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH		FRACTURE DATA				DENSITY DATA			
FROM	TO				DOWNHOLE DEPTH	POINT LOAD INDEX (psi)	FRACTURE DENSITY/FT.	AVG. ANGLE TO C.A.	ROUGHNESS	INFILL	DOWNHOLE DEPTH	SAMPLE WEIGHT (g)	DISPLACEMENT (cc)	DENSITY (g/cc)
129	134	89	89	54										
134	135.5	93	93	0										
135.5	139	81	81	13										
139	144	76	76	17										
144	149	97	97	42										
149	154	100	100	8										
154	159	100	100	34										

American Assay Laboratories

INVOICE

Remit To: P.O. Box11530
Reno, Nevada 89510
Phone NO.: 702-356-0606
Fax No.: 702-356-1413

AMERICAN ASSAY LABORATORIES
1500 GLENDALE AVE.
SPARKS, NV 89431

(702) 356-0606

INVOICE NO: SP 0048098-IN
INVOICE DATE: 02/27/98

INVOICE TO:
THE ROSEBUD MINING CO., LLC
HECLA MINING COMPANY, OPERATOR
P.O. BOX 2610
WINNEMUCCA NV 89446

THE ROSEBUD MINING CO., LLC
HECLA MINING COMPANY, OPERATOR
P.O. BOX 2610
WINNEMUCCA NV 89446

CUSTOMER P.O.	PROJECT	TERMS
D-165-98	DEVELOPMENT	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
46	SAMPLES RECEIVED	.00	.00
45	DRYING	1.00	45.00
45	JAW CRUSHING CHARGE	1.30	58.50
45	COARSE MILLING CHARGE	4.50	202.50
45	SPLITTING CHARGE	2.40	108.00
45	RING MILLING CHARGE	2.00	90.00
46	Au (1 A.T. FIRE ASSAY)	8.00	368.00
22	Au ANALYSES/GRAVIMETRIC	8.75	192.50
46	HYDROCHLORIC/NITRIC DIGESTION	2.00	92.00
46	Ag ANALYSES	1.00	46.00
6	Ag (ore grade) ANALYSES	5.00	30.00

86-5110-477
DA

NET INVOICE:	1,232.50
LESS DISCOUNT:	246.50
FREIGHT:	.00
INVOICE TOTAL:	986.00

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP048098

American Assay Laboratories

PO BOX 11530
RENO NV,USA
Ph.(702) 356-0606, Fax.(702) 356-1413

HECLA MINING COMPANY

COPIES TO : KURT ALLEN

:

:

:

CLIENT REFERENCE No: D-165-98 RECEIVED : 11 FEB 1998

No. SAMPLES : 46 REPORTED : 26 FEB 1998

MAIN SAMPLE TYPE : DRILL CORE

NEVADA LEGISLATIVE DISCLAIMER :-
The results of this assay were based solely upon the content of the sample submitted. Any decision to invest should be made only after the potential investment value of the claim or deposit has been determined based on the results of assays of multiple samples of geological materials collected by the prospective investor or by a qualified person selected by him and based on an evaluation of all engineering data which is available concerning any proposed project.

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au(OZ)	FA30	15%	OPT	0.001
Au(RZ)	FA30	15%	OPT	0.001
AuGRAV	GRAV	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP048098

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-165-98

REPORTED : 26 FEB 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-165-98 0-4	0.005			0.24
D-165-98 4-8	0.006			0.08
D-165-98 8.0-11.7	0.006			0.09
D-165-98 11.7-14.3	0.008			0.08
D-165-98 14.3-19.0	0.075		0.077	0.10
D-165-98 19.0-21.7	0.024			0.08
D-165-98 21.7-25.2	0.009			0.11
D-165-98 25.2-27.5	0.011			0.10
D-165-98 27.5-29.2	0.015			0.12
D-165-98 29.2-34.0	0.033			0.09
D-165-98 34-39	0.010			0.09
D-165-98 39-44	0.005			0.07
D-165-98 44-49	0.006			0.07
D-165-98 49-54	0.007			0.05
D-165-98 54-59	0.083		0.075	0.18
D-165-98 59-64	0.087		0.081	0.96
D-165-98 64.0-68.5	0.029			0.10
D-165-98 68.5-71.0	0.110		0.125	0.37
D-165-98 71-75	0.052		0.043	0.12
D-165-98 75.0-78.8	0.080		0.067	0.16
D-165-98 78.8-83.0	0.302		0.330	0.82
D-165-98 83.0-86.8	0.155		0.122	0.25
D-165-98 86.8-94.0	0.260		0.224	0.11
D-165-98 94.0-96.6	0.435		0.501	0.25
D-165-98 98.8-99.8	0.456		0.444	0.20

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP048098

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-165-98

REPORTED : 26 FEB 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-165-98 99.8-103.0	0.426		0.416	0.54
D-165-98 103.0-105.9	0.206		0.166	0.11
D-165-98 105.9-110.1	0.809		0.740	1.44
D-165-98 110.1-114.0	0.524		0.500	0.98
D-165-98 114.0-117.9	1.578		1.542	0.80
D-165-98 117.9-118.7	1.468		1.431	1.95
D-165-98 118.7-120.4	0.238		0.220	1.35
D-165-98 120.4-125.6	5.004		4.781	7.55
D-165-98 125.6-129.0	0.049			0.08
D-165-98 129.0-133.2	0.069		0.077	0.29
D-165-98 133.2-134.1	0.250		0.248	0.70
D-165-98 134.1-136.0	0.055		0.055	2.90
D-165-98 136-139	0.008			1.54
D-165-98 140-142	0.009			0.76
D-165-98 142-145	0.009			1.54
D-165-98 145.0-146.9	0.002			0.43
D-165-98 146.9-151.0	0.004			1.19
D-165-98 151.0-153.2	0.003			0.47
D-165-98 153.2-156.0	0.003			0.17
D-165-98 156-159	0.003			0.13
26738	0.126			2.37

xAMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP048098

American Assay Laboratories

PO BOX 11530
RENO NV,USA
Ph.(702) 356-0606, Fax.(702) 356-1413

HECLA MINING COMPANY

COPIES TO : KURT ALLEN

:

:

:

CLIENT REFERENCE No: D-165-98 RECEIVED : 11 FEB 1998

No. SAMPLES : 46 REPORTED : 26 FEB 1998

MAIN SAMPLE TYPE : DRILL CORE

NEVADA LEGISLATIVE DISCLAIMER :-
The results of this assay were based solely upon the content of the sample submitted. Any decision to invest should be made only after the potential investment value of the claim or deposit has been determined based on the results of assays of multiple samples of geological materials collected by the prospective investor or by a qualified person selected by him and based on an evaluation of all engineering data which is available concerning any proposed project.

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au(OZ)	FA30	15%	OPT	0.001
Au(RZ)	FA30	15%	OPT	0.001
AuGRAV	GRAV	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP048098

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-165-98

REPORTED : 26 FEB 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-165-98 0-4	0.005			0.24
D-165-98 4-8	0.006			0.08
D-165-98 8.0-11.7	0.006			0.09
D-165-98 11.7-14.3	0.008			0.08
D-165-98 14.3-19.0	0.075		0.077	0.10
D-165-98 19.0-21.7	0.024			0.08
D-165-98 21.7-25.2	0.009			0.11
D-165-98 25.2-27.5	0.011			0.10
D-165-98 27.5-29.2	0.015			0.12
D-165-98 29.2-34.0	0.033			0.09
D-165-98 34-39	0.010			0.09
D-165-98 39-44	0.005			0.07
D-165-98 44-49	0.006			0.07
D-165-98 49-54	0.007			0.05
D-165-98 54-59	0.083		0.075	0.18
D-165-98 59-64	0.087		0.081	0.96
D-165-98 64.0-68.5	0.029			0.10
D-165-98 68.5-71.0	0.110		0.125	0.37
D-165-98 71-75	0.052		0.043	0.12
D-165-98 75.0-78.8	0.080		0.067	0.16
D-165-98 78.8-83.0	0.302		0.330	0.82
D-165-98 83.0-86.8	0.155		0.122	0.25
D-165-98 86.8-94.0	0.260		0.224	0.11
D-165-98 94.0-96.6	0.435		0.501	0.25
D-165-98 98.8-99.8	0.456		0.444	0.20

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP048098

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-165-98

REPORTED : 26 FEB 1998

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	AuGRAV GRAV OPT	Ag(OZ) D210 OPT
D-165-98 99.8-103.0	0.426		0.416	0.54
D-165-98 103.0-105.9	0.206		0.166	0.11
D-165-98 105.9-110.1	0.809		0.740	1.44
D-165-98 110.1-114.0	0.524		0.500	0.98
D-165-98 114.0-117.9	1.578		1.542	0.80
D-165-98 117.9-118.7	1.468		1.431	1.95
D-165-98 118.7-120.4	0.238		0.220	1.35
D-165-98 120.4-125.6	5.004		4.781	7.55
D-165-98 125.6-129.0	0.049			0.08
D-165-98 129.0-133.2	0.069		0.077	0.29
D-165-98 133.2-134.1	0.250		0.248	0.70
D-165-98 134.1-136.0	0.055		0.055	2.90
D-165-98 136-139	0.008			1.54
D-165-98 140-142	0.009			0.76
D-165-98 142-145	0.009			1.54
D-165-98 145.0-146.9	0.002			0.43
D-165-98 146.9-151.0	0.004			1.19
D-165-98 151.0-153.2	0.003			0.47
D-165-98 153.2-156.0	0.003			0.17
D-165-98 156-159	0.003			0.13
26738	0.126			2.37

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP04B098

PO BOX 11530
RENO NV,USA
Ph.(702) 356-0606, Fax.(702) 356-1413

HECLA MINING COMPANY

COPIES TO : KURT ALLEN

:

:

:

CLIENT REFERENCE No: D-165-98 RECEIVED : 11 FEB 1998

No. SAMPLES : 46 REPORTED : 26 FEB 1998

MAIN SAMPLE TYPE : DRILL CORE

NEVADA LEGISLATIVE DISCLAIMER :-
The results of this assay were based solely upon the content of the sample submitted. Any decision to invest should be made only after the potential investment value of the claim or deposit has been determined based on the results of assays of multiple samples of geological materials collected by the prospective investor or by a qualified person selected by him and based on an evaluation of all engineering data which is available concerning any proposed project.

ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au(OZ)	FA30	15%	OPT	0.001
Au(RZ)	FA30	15%	OPT	0.001
AuGRAV	GRAV	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

02/26/1998 12:49 7023561413 AMERICAN ASSAY LABS PAGE 01
7023561413

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP048098

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-165-98

REPORTED : 26 FEB 1998

SAMPLES		Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)	
D-165-98 0-4		0.005			0.24	
D-165-98 4-8		0.006			0.08	
D-165-98 8.0-11.7		0.006			0.09	
D-165-98 11.7-14.3		0.008			0.08	
D-165-98 14.3-19.0		0.075		0.077	0.10	
D-165-98 19.0-21.7		0.024			0.08	
D-165-98 21.7-25.2		0.009			0.11	
D-165-98 25.2-27.5		0.011			0.10	
D-165-98 27.5-29.2		0.015			0.12	
D-165-98 29.2-34.0		0.033			0.09	
D-165-98 34-39		0.010			0.09	
D-165-98 39-44		0.005			0.07	
D-165-98 44-49		0.006			0.02	
D-165-98 49-54		0.007			0.05	
D-165-98 54-59		0.083		0.075	0.18	
D-165-98 59-64		0.087		0.081	0.96	
D-165-98 64.0-68.5		0.029			0.10	(44.2
D-165-98 68.5-71.0		0.110		0.125	0.37	
D-165-98 71-75		0.052		0.043	0.12	78.8'-125.6' =
D-165-98 75.0-78.8		0.080		0.067	0.16	46.8' @ 1.051 Au
D-165-98 78.8-83.0	4.2	0.302		0.330	0.82	& 1.45 Ag
D-165-98 83.0-86.8	3.8	0.155		0.122	0.25	
D-165-98 86.8-94.0	7.2	0.260		0.224	0.11	
D-165-98 94.0-96.6	2.6	0.435		0.501	0.25	
D-165-98 98.8-99.8	1.0	0.456		0.444	0.20	

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP048098

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-165-98

REPORTED : 26 FEB 1998

SAMPLES	Au(OZ)	Au(RZ)	AuGRAV	Ag(OZ)
D-165-98 99.8-103.0 3.2	0.425		0.416	0.54
D-165-98 103.0-105.9 2.9	0.206		0.166	0.11
D-165-98 105.9-110.1 4.2	0.809		0.740	1.44
D-165-98 110.1-114.0 3.9	0.524		0.500	0.98
D-165-98 114.0-117.9 3.9	1.578		1.542	0.80
D-165-98 117.9-118.7 0.8	1.468		1.431	1.95
D-165-98 118.7-120.4 1.7	0.238		0.220	1.35
D-165-98 120.4-125.6 5.2	5.004		4.781	7.55
D-165-98 125.6-129.0	0.049			0.08
D-165-98 129.0-133.2	0.069		0.077	0.29
D-165-98 133.2-134.1	0.250		0.248	0.70
D-165-98 134.1-136.0	0.055		0.055	2.90
D-165-98 136-139	0.008			1.54
D-165-98 140-142	0.009			0.76
D-165-98 142-145	0.009			1.54
D-165-98 145.0-146.9	0.002			0.43
D-165-98 146.9-151.0	0.004			1.19
D-165-98 151.0-153.2	0.003			0.47
D-165-98 153.2-156.0	0.003			0.17
D-165-98 156-159	0.003			0.13
26738	0.126			2.37

133.2-134.1
0.9'

SP

SUBMITTAL FORM

American Assay Laboratories

Geochemical • Environmental • Metallurgical

Sparks Office
1500 Glendale Ave.
Nevada 89431
Box 11530
Reno, NV 89510
Telephone
(702) 356-0606
Fax
(702) 356-1413

Tucson Office
2775 E. Ganley
Tucson, AZ 85706
Telephone
(520) 294-8078
Fax
(520) 294-6352

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

Mazatlan Office
Telephone/Fax
011-52-69-170035

Other Offices
Lima, Peru
Santiago, Chile
Mendoza, Argentina

Company: ROSEBUD MINING Co. LLT

Address: P.O BOX 2610

City WINNEMUCCA State NV Zip 89446

Telephone Number: (702) 623-6912 Fax Number: (702) 623-6967

Project Name: DEVELOPMENT Purchase Order Number:

Date Submitted: 02/10/98 Number of Samples: 45

RESULTS REPORTED IN: ppm [ ] ppb [ ] opt [X]

D-165-98 SAMPLE IDENTIFICATION			TYPE	ELEMENTS REQUIRED
0-4	59.0-64.0	114-117.9	CORE	AU-Ag ACCORDING TO ROSEBUD MINE PROTOCOL
4-8	64.0-68.5	117.9-118.7		
8-11.7	68.5-71.0	118.7-120.4		
11.7-14.3	71.0-75.0	120.4-125.6		
14.3-19.0	75.0-78.8	125.6-129		
19.0-21.7	78.8-83.0	129-133.2		153.2-156
21.7-25.2	83.0-86.8	133.2-134.1		156-159
25.2-27.5	86.8-94.0	134.1-136		
27.5-29.2	94.0-96.6	136-139		
29.2-34.0				
34.0-39.0	98.8-99.8	140-142		
39.0-44.0	99.8-103	142-145		
44.0-49.0	103-105.9	145-146.9		
49.0-54.0	105.9-110.1	146.9-151		
54.0-59.0	110.1-114	151-153.2		

COARSE REJECTS (Normally Discarded After 60 Days)

[ ] Return COD after analysis complete

PULPS (Normally Stored Free For One Month)

[ ] Discard after one month
[ ] Return COD after one month

RESULTS AND INVOICES TO BE SENT TO:

Invoice to:

KURT ALLEN

Results to:

KURT ALLEN

Comments:

CLIENT FILE COPY

11.7
14.3
14
19
D 165-98 BOX NO 2
DEPTH 10 — 20

4
9
D -165-98 BOX NO 1
DEPTH 0.0 — 10

21.7
24
24.32
24.53
24.72
29
D 165-98 BOX NO 3
DEPTH 20 — 29.5

D 165-98 BOX NO 5
DEPTH 39. — 48.5
39
44

D 165-98 BOX NO 4
DEPTH 29.5 — 39.
34

D 165-98 BOX NO 6
DEPTH 48.5 — 58.
49

D 165-98 BOX NO 8
DEPTH 68. — 77.5

D 165-98 BOX NO 7
DEPTH 58. — 68.

D 165-98 BOX NO 9
DEPTH 77.5 — 80.

D 165-98 BOX NO 11
DEPTH 100.- 109.5
103
105.9
104
99.6

D 165-98 BOX NO 10
DEPTH 87. - 100.-
89
66
98.8
2.2 loss
96.6
88.6
1.8 loss
86.8

D 165-98 BOX NO 12
DEPTH 109.5 - 118.5
110.1
114
117.9
118.7

135.5'
133.2
134.1
136
137
D 165-98 BOX NO 14
DEPTH 128. — 137.5

120.4
124
125.4
121
D 165-98 BOX NO 13
DEPTH 118.5 — 128.

140
1' loss
139
141
142
143
144
145
146.9
D 165-98 BOX NO 15
DEPTH 137.5 — 148.5

149
151
153
154
156
D 165-98 BOX NO 16
DEPTH 148.5 – 157.

149
151
153
154
156
D 165-98 BOX NO 16
DEPTH 148.5 – 157.

159
D 165-98 BOX NO 17
DEPTH 157. – 159. TD

69
70
75
D-169 98 BOX NO 8
DEPTH 65. — 75.

58
60.6
65.4
D-169 98 BOX NO 7
DEPTH 56. — 66.

78
79.5
83.3
D-169 98 BOX NO 9
DEPTH 75. — 84.

D-169 98 BOX NO 11
DEPTH 93.5 — 104.5
104.1
98
102
96
1.2' LOSS
94.8

D-169 98 BOX NO 10
DEPTH 84. — 93.5
92.6
1' LOSS
91.6
86.2
1' LOSS
89
84.5
93

D-169 98 BOX NO 12
DEPTH 104.5 — 114.
105
106.1
110
110.5
D.H.
R.H.

125.4
125'
132.2
130'
D-169 98 BOX NO 14
DEPTH 124. — 133.5

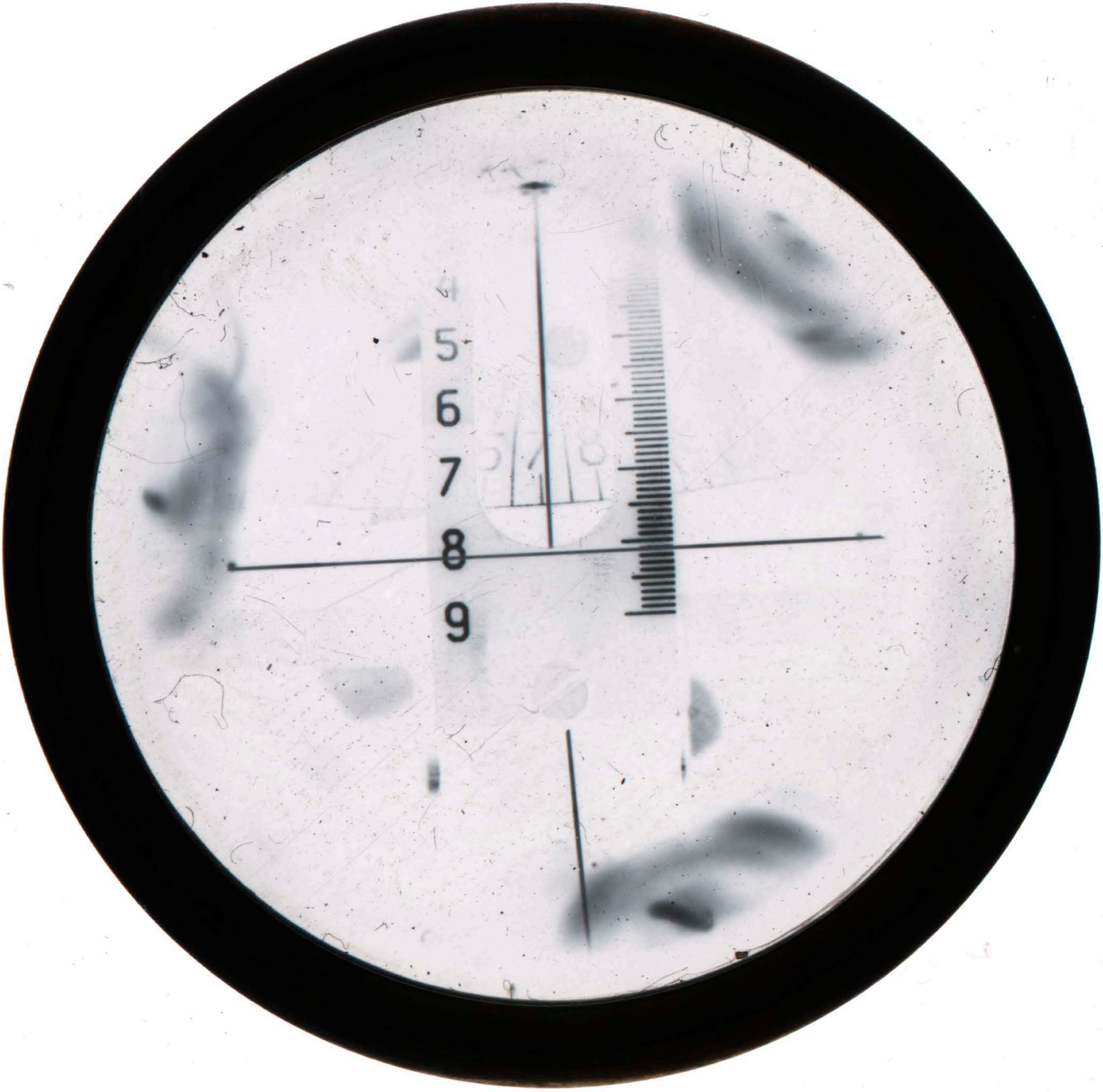
120'
117'
115
125.1
D-169 98 BOX NO 13
DEPTH 114. — 124.5

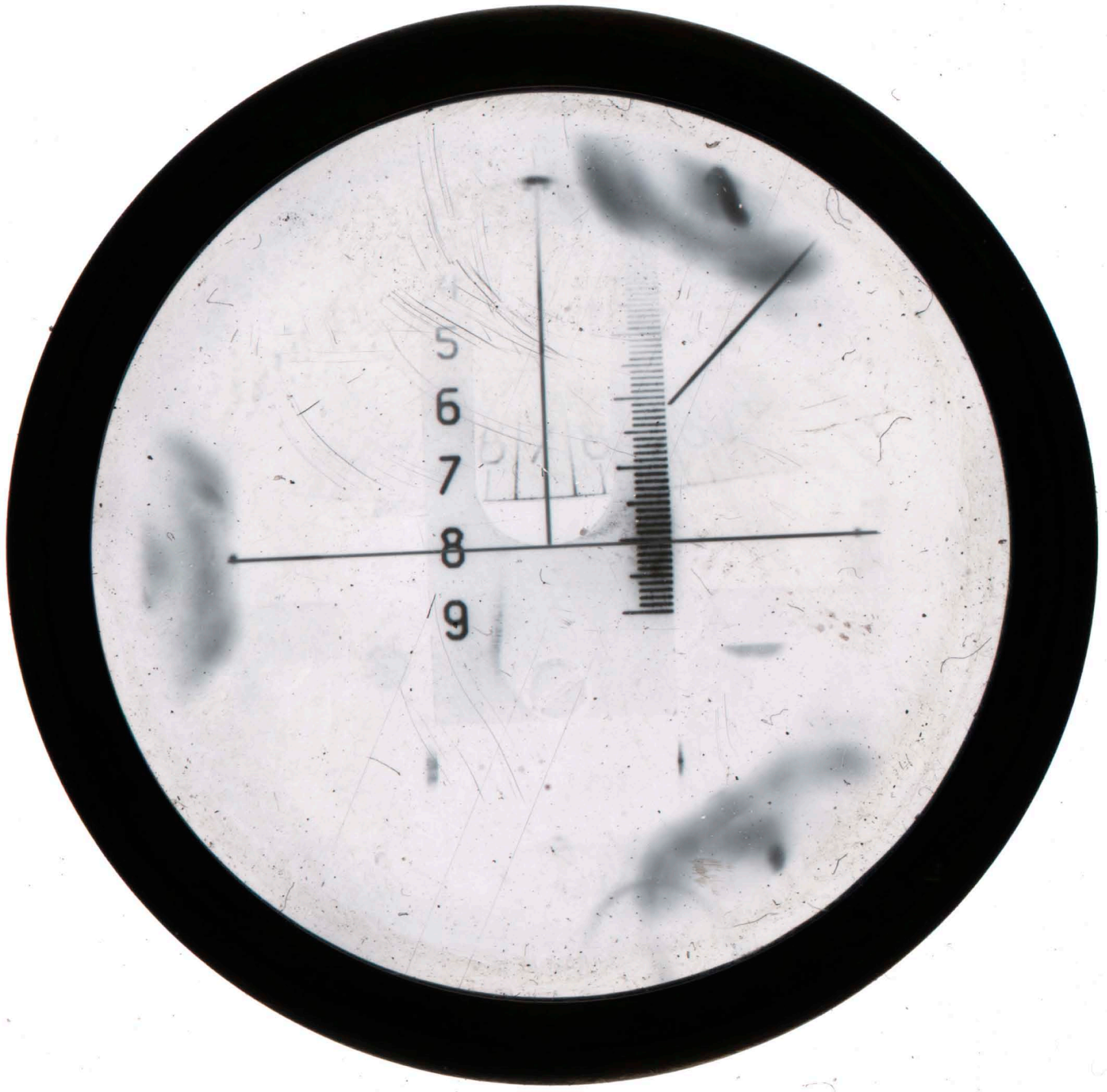
135'
135.8
140'
D-169 98 BOX NO 15
DEPTH 133.5 — 140. TD

DOWNHOLE SURVEY

MAGNETIC DECLINATION: 15.7°

DRILLHOLE #	FILM FOOTAGE	BEARING	DIP	TRUE BEARING	TRUE DIP
D-165-98	COLLAR	S69.5°E	80.0°	N53.8°W	+10.0°
	80'	70.0°	80.0°	N54.3°W	+10.0°
	159'	71.0°	81.0°	N55.3W	+9.0°


5
6
7
8
9


5
6
7
8
9

5
6
7
8
9