60000887

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-133-97
AUTHOR	R. Parish; S. King K. Allen; R. Vance
DATE OF DOC(S)	1997
MULTI_DIST Y / (N?) Additional Dist_Nos:	
QUAD_NAME	Sulphur 7.5'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Rosebud Project; North Zone Hecla Mining Co.; Rosebud Mining Co. Ltd.
COMMODITY If not obvious	gold; silver
NOTES	Drill log; geology; assay; [redacted]; total depth 150; receipt; handwritten notes; downhole camera images; photographs 24 p. 4. 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 5/5/08
Initials Date
DB:
Initials Date
SCANNED:
Initials Date

Revised: 1/22/08

D - 133 - 97

6000 0887
4010

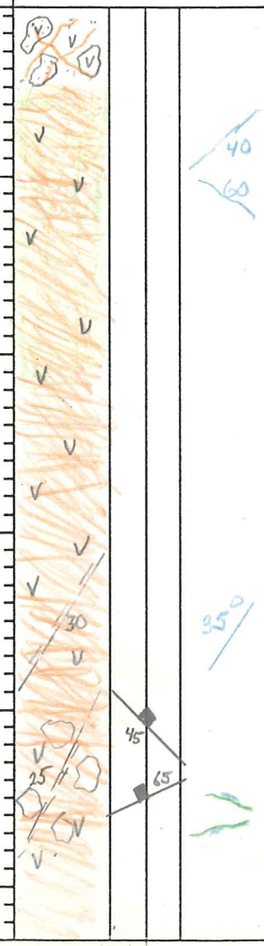
6000 0887

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

Hecla MINING COMPANY

ROSEBUD PROJECT
DIAMOND DRILL LOG

HOLE NUMBER	D-133-97	LOCATION	NORTH ZONE	REMARKS	STOPE 31
PAGE 1 OF 3		NORTHING			
DATE	12/3/97	EASTING			
LOGGED BY	R. PARISH	ELEVATION			
SCALE	1"=10'	AZIMUTH			
TOTAL DEPTH	150'	INCLINATION			

REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
LBT	Leopard Skin Tuff	0-5 Dk. gray, Hard, F. grained, Vesicular Andesitic Flow, LBT. Scattered Lapilli-Like texture from Bleaching/hematization Alt'n Front overprinting moderate propylitic alt'n. 5-48 Maroon, Leopard skin textured Flows. Uniform Color and Texture over interval Consists of Lt. gray to green background w/ ~80% dark red-brown, sub parallel, irregular, Lumpy alt'n. emmating from Very fine fractures. almost completely obscures primary textures, but appears to X-Cut bedding. 40-48' - common Lapilli-Like texture and slight decrease in hematitic alteration. 48' - Begin gradual decrease in hematitic alteration - Absent @ 55'!	0 10 20 30 40 50		0-40 - Massive, mod. hard, structure Less Flows. Bedding 30° 40'-50' Minor increase in Jointing Bedding 25°	0-9 mod. Fracturing w/ red hem. Fr. Fill and Selvages. 5-22 Str. red Brn hem alt'n as sub parallel, irregular Lumpy, Linear Stains overprinting propylitically altered Flows. V. Minor whispy Calcite Veinlets and Minor Brecciation Matrix 22-48 - Red Brown hematite alt'n as above but lacking Propylitic alt'n. Minor increase in calcite and rare chloritic clay veinlets toward 48'.

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
0	5					
5	10					
10	15					
15	20					
20	25					
25	30					
30	35					
35	40					
40	45					
45	50					

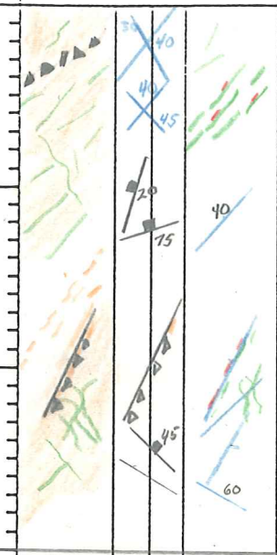
HOLE NUMBER D-133-97 PAGE 2 OF 2

EC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
LBT		55 – 111.8 Lt. gray to pinkish gray, Fine-grained, Andesitic? Flows. Same rock as above but w/o hematitic alteration. Rare but persistent, angular, black Lithic Clasts (argillite?) to ½" dia. 55-75 – Weak to moderate pink hematite stain, Pervasive. 75 – 89 – Gray, weakly flow banded 89 – 98.5 – Pinkish gray – Flow banded 98.5 – 111.8 gray, massive, unaltered Flows. 111.8 – 118.1 Lt. greenish gray LBT Flows – increasingly Bleached toward Fault zone @ 118.1 Though still Fairly hard. 118.1 – 119.2 Fault Breccia – Argillized, Milled LBT clasts, up to 2" rounded, Clast supported. Green chloritic clay in matrix.	50 60 70 80 90 100 110 120		1" calcite vein – Bx'd walls ⅛" calcite lined Fault 25° – Rake 30° Calcite slip – 30° Rake 50° Numerous Joints 30 + 55° TCA clay/chlorite lined. 30° Flow banding ¼" Sheeted qtz + CaCO3 + FeOx Vein 55° TCA Rake 60° ⅛" red hem. clay lined slip. Numerous chlorite lined slips and joints @ 20-40° TCA 117'-3" wide zone of chlorite/clay lined slips @ ~ 30° TCA. 118.1-119.2 Fault Breccia. Sharp upper slip 55° TCA Rake 35° Rounded, milled LBT clasts. Irregular lower etc.	48-55 – Gradual decrease in hem. altn TO NIL @ 55' 57-75 Weak, Pervasive pink hematite Stain, stronger on fractures. 75-81 – Common hematite Veinlets and Fracture Coatings, minor green chlorite clay Fract. Fill. 89-96 Common hematite Stained and Filled Joints and Fractures and minor green chloritic Clay fracture fill. 110-113 Several hairline white Calcite vnlts, NO sulfide 113-115.3 Common white cgr Calcite + Bladed marcasite Veinlets to ¼" Veins. appx. 1 vnlt/inch. 118.1-119.2 Flt. Bx – mod. Arg., minor marcasite blebs and vnlts, w/ white calcite, chlorite/clay in matrix

ANALYTICAL DATA

FROM	TO	W	Au	Ag	Au2	Ag2
50	55					
55	60					
60	65					
65	70					
70	75					
75	80					
80	85					
85	90					
90	95					
95	99.6					
99.6	104.2					
104.2	108.5					
108.5	113					
113	115.3					
115.3	118.1					
118.1	119.2					

HOLE NUMBER D-133-97 PAGE 3 OF 3

REC	RQD	LITHOLOGY	FT	GRAPHIC LOG	STRUCTURE	ALTERATION AND MINERALIZATION
LBT		119.2 – 134 Pale greenish gray LBT Flows. Mottled, speckled lt green gray and Gray. Mild to moderate bleaching and argillization. Numerous green clay ± rare Marcasite Fracture Filling and Fault gouge. 134-138.7 Med. gray LBT Flows – Fresh, no argillization, but minor speckled red hematite alt'n eminating from fractures @ 136'-138 138.7 – 147 Pale greenish LBT Flows. Mild bleaching and moderate local argillization and Leaching. Several matrix supported Bx w/ greenish clay matrix and leached clasts and Walls. Sg. @ 140.5'. Numerous greenish clay veinlets and Fract. Fill. 147 – 150	120 130 140 150	 EOH 150'	40° TCA 70° Rake 124-127 - Prominent joint set @ ∠ 40 TCA - filled w/ green chlorite/clay ± Marcasite 140.5 – 3" matrix supported Bx, Angular LBT clasts in green clay matrix. 142' - Strong Jointing and Fracturing healed w/ green clay gouge - Breaks @ ∠ 48 TCA	119-131 - Common green Chlorite/clay filled fracts w/ spotty, minor Marcasite blades. weakly bleached, argillized wall RX. 1/8" Calcite Vn. 140.3 - 1/4" clay ± Calcite ± Marcasite Vn. 143' + 145' white, c.gr. Vuggy Calcite Vns - 2" thick

ANALYTICAL DATA						
FROM	TO	W	Au	Ag	Au2	Ag2
119.2	125					
125	128.9					
128.9	134					
134	138.7					
138.7	143					
143	147					
147	150					

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-133-97 DATE: 12/2/97 LOGGED BY: R. PARISH PAGE 1 OF 3

DRILL RUN FROM	DRILL RUN TO	SOLID CORE RECOVERY (%)	TOTAL CORE RECOVERY (%)	RQD	ROCK STRENGTH DOWNHOLE DEPTH	ROCK STRENGTH POINT LOAD INDEX (psi)	FRACTURE DATA FRACTURE DENSITY/FT.	FRACTURE DATA AVG. ANGLE TO C.A.	FRACTURE DATA ROUGHNESS	FRACTURE DATA INFILL	DENSITY DATA DOWNHOLE DEPTH	DENSITY DATA SAMPLE WEIGHT (g)	DENSITY DATA DISPLACEMENT (cc)	DENSITY DATA DENSITY (g/cc)
0	5	96.0	96.0	44.0										
5	10	102.0	102.0	96.0										
10	15	100.0	100.0	76.0										
15	20	102.0	102.0	96.0										
20	25	100.0	100.0	98.0										
25	30	98.0	98.0	86.0										
30	35	96.0	96.0	96.0										
35	40	100.0	100.0	90.0										
40	45	106.0	106.0	96.0										
45	50	92.0	92.0	68.0										
50	55	98.0	98.0	92.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-133-97 DATE: 12/3/97 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)
55	60	100.0	100.0	86.0										
60	65	90.0	90.0	54.0										
65	70	106.0	106.0	32.0										
70	75	100.0	100.0	72.0										
75	80	100.0	100.0	66.0										
80	85	88.0	88.0	40.0										
85	90	108.0	108.0	70.0										
90	98.5	91.0	91.0	68.0										
98.5	108.5	100.0	100.0	80.0										
108.5	115	100.0	100.0	52.0										
115	125	85.0	90.0	74.0										

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-133-97 DATE: 12/3/97 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)
125	134	93.0	93.0	34.0										
134	140	103.0	103.0	72.0										
140	150	95.0	95.0	39.0										

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP047547

PO BOX 11539
RENO NV.USA
Ph.(702) 356-0606. Fax.(702) 356-1413

HECLA MINING COMPANY

COPIES TO : KURT ALLEN
:
:
:

NSI

CLIENT REFERENCE No: D-133-97 RECEIVED : 5 DEC 1997

No. SAMPLES : 33 REPORTED : 16 DEC 1997

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
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP047547

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-133-97

REPORTED : 16 DEC 1997

SAMPLES	Au(OZ)	Au(RZ)	Ag(OZ)
D-133-97 00-05	<0.001		<0.02
D-133-97 05-10	<0.001		<0.02
D-133-97 10-15	<0.001		<0.02
D-133-97 15-20	<0.001		<0.02
D-133-97 20-25	<0.001		<0.02
D-133-97 25-30	<0.001	<0.001	<0.02
D-133-97 30-35	<0.001		<0.02
D-133-97 35-40	<0.001		<0.02
D-133-97 40-45	<0.001		<0.02
D-133-97 45-50	<0.001		<0.02
D-133-97 50-55	<0.001		<0.02
D-133-97 55-60	<0.001		<0.02
D-133-97 60-65	<0.001		<0.02
D-133-97 65-70	<0.001		<0.02
D-133-97 70-75	<0.001		<0.02
D-133-97 75-80	<0.001	<0.001	<0.02
D-133-97 80-85	<0.001		<0.02
D-133-97 85-90	0.001		<0.02
D-133-97 90-95	<0.001		<0.02
D-133-97 95.0-99.6	<0.001		<0.02
D-133-97 99.6-104.2	<0.001		<0.02
D-133-97 104.2-108.5	<0.001		<0.02
D-133-97 108.5-113.0	<0.001		<0.02
D-133-97 113.0-115.3	0.006		0.03
D-133-97 115.3-118.1	<0.001		<0.02

AMERICAN ASSAY LABORATORIES

PROVISIONAL REPORT SP047547

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-133-97

REPORTED : 16 DEC 1997

SAMPLES	Au(OZ)	Au(RZ)	Ag(OZ)
D-133-97 118.1-119.2	0.001		0.05
D-133-97 119.2-125.0	<0.001		<0.02
D-133-97 125.0-128.9	<0.001		<0.02
D-133-97 128.9-134.0	<0.001		<0.02
D-133-97 134.0-138.7	<0.001		<0.02
D-133-97 138.7-143.0	<0.001		<0.02
D-133-97 143-147	<0.001		<0.02
D-133-97 147-150	<0.001		<0.02

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
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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: _____ Purchase Order Number: _____

Date Submitted: 12/4/97 Number of Samples: 33

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

SAMPLE IDENTIFICATION D-133-97			TYPE	ELEMENTS REQUIRED
0-5	75-80	138.7-143	CORE	Au-Ag
5-10	80-85	143-147		
10-15	85-90	147-150		
15-20	90-95			
20-25	95-99.6			
25-30	99.6-104.2			
30-35	104.2-108.5			
35-40	108.5-113			
40-45	113-115.3			
45-50	115.3-118.1			
50-55	118.1-119.2			
55-60	119.2-125			
60-65	125-128.9			
65-70	128.9-134			
70-75	134-138.7			

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
RANDY VANCE

Comments:

CLIENT FILE COPY

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 0047547-IN
INVOICE DATE: 12/17/97

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-133-97	KURT ALLEN	NET 30 - DUE IN U.S. DOLLARS

QUANTITY	DESCRIPTION	PRICE	AMOUNT
33	SAMPLES RECEIVED	.00	.00
33	DRYING	2.00	66.00
33	JAW CRUSHING CHARGE	2.60	85.80
33	COARSE MILLING CHARGE	9.00	297.00
33	SPLITTING CHARGE	2.40	79.20
33	FINE MILLING CHARGE	2.00	66.00
33	Au (1 A.T. FIRE ASSAY)	8.00	264.00
33	HYDROCHLORIC/NITRIC DIGESTION	2.00	66.00
33	Ag ANALYSES	1.00	33.00

OK DWC
~~8167~~ - 86 - 5110 - 720

NET INVOICE:	957.00
LESS DISCOUNT:	191.40
FREIGHT:	.00
INVOICE TOTAL:	765.60

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ANALYSIS REPORT SP047547

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-133-97 RECEIVED : 5 DEC 1997

No. SAMPLES : 33 REPORTED : 17 DEC 1997

MAIN SAMPLE TYPE : DRILL CORE

NEVADA LEGISLATIVE DISCLAIMER :-
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ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au(OZ)	FA30	15%	OPT	0.001
Au(RZ)	FA30	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP047547

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-133-97

REPORTED : 17 DEC 1997

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag(OZ) D210 OPT
D-133-97 00-05	<0.001		<0.02
D-133-97 05-10	<0.001		<0.02
D-133-97 10-15	<0.001		<0.02
D-133-97 15-20	<0.001		<0.02
D-133-97 20-25	<0.001		<0.02
D-133-97 25-30	<0.001	<0.001	<0.02
D-133-97 30-35	<0.001		<0.02
D-133-97 35-40	<0.001		<0.02
D-133-97 40-45	<0.001		<0.02
D-133-97 45-50	<0.001		<0.02
D-133-97 50-55	<0.001		<0.02
D-133-97 55-60	<0.001		<0.02
D-133-97 60-65	<0.001		<0.02
D-133-97 65-70	<0.001		<0.02
D-133-97 70-75	<0.001		<0.02
D-133-97 75-80	<0.001	<0.001	<0.02
D-133-97 80-85	<0.001		<0.02
D-133-97 85-90	0.001		<0.02
D-133-97 90-95	<0.001		<0.02
D-133-97 95.0-99.6	<0.001		<0.02
D-133-97 99.6-104.2	<0.001		<0.02
D-133-97 104.2-108.5	<0.001		<0.02
D-133-97 108.5-113.0	<0.001		<0.02
D-133-97 113.0-115.3	0.006		0.03
D-133-97 115.3-118.1	<0.001		<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP047547

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-133-97

REPORTED : 17 DEC 1997

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag(OZ) D210 OPT
D-133-97 118.1-119.2	0.001		0.05
D-133-97 119.2-125.0	<0.001		<0.02
D-133-97 125.0-128.9	<0.001		<0.02
D-133-97 128.9-134.0	<0.001		<0.02
D-133-97 134.0-138.7	<0.001		<0.02
D-133-97 138.7-143.0	<0.001		<0.02
D-133-97 143-147	<0.001		<0.02
D-133-97 147-150	<0.001		<0.02

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ANALYSIS REPORT SP047547

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HECLA MINING COMPANY

COPIES TO : KURT ALLEN
:
:
:

CLIENT REFERENCE No: D-133-97 RECEIVED : 5 DEC 1997

No. SAMPLES : 33 REPORTED : 17 DEC 1997

MAIN SAMPLE TYPE : DRILL CORE

NEVADA LEGISLATIVE DISCLAIMER :-
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ANALYSIS	ANALYTICAL METHOD	QUALITY PARAMETER	UNIT	DETECTION
Au(OZ)	FA30	15%	OPT	0.001
Au(RZ)	FA30	15%	OPT	0.001
Ag(OZ)	D210	10%	OPT	0.02

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP047547

American Assay Laboratories

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PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-133-97

REPORTED : 17 DEC 1997

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag(OZ) D210 OPT
D-133-97 00-05	<0.001		<0.02
D-133-97 05-10	<0.001		<0.02
D-133-97 10-15	<0.001		<0.02
D-133-97 15-20	<0.001		<0.02
D-133-97 20-25	<0.001		<0.02
D-133-97 25-30	<0.001	<0.001	<0.02
D-133-97 30-35	<0.001		<0.02
D-133-97 35-40	<0.001		<0.02
D-133-97 40-45	<0.001		<0.02
D-133-97 45-50	<0.001		<0.02
D-133-97 50-55	<0.001		<0.02
D-133-97 55-60	<0.001		<0.02
D-133-97 60-65	<0.001		<0.02
D-133-97 65-70	<0.001		<0.02
D-133-97 70-75	<0.001		<0.02
D-133-97 75-80	<0.001	<0.001	<0.02
D-133-97 80-85	<0.001		<0.02
D-133-97 85-90	0.001		<0.02
D-133-97 90-95	<0.001		<0.02
D-133-97 95.0-99.6	<0.001		<0.02
D-133-97 99.6-104.2	<0.001		<0.02
D-133-97 104.2-108.5	<0.001		<0.02
D-133-97 108.5-113.0	<0.001		<0.02
D-133-97 113.0-115.3	0.006		0.03
D-133-97 115.3-118.1	<0.001		<0.02

AMERICAN ASSAY LABORATORIES

ANALYSIS REPORT SP047547

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-133-97

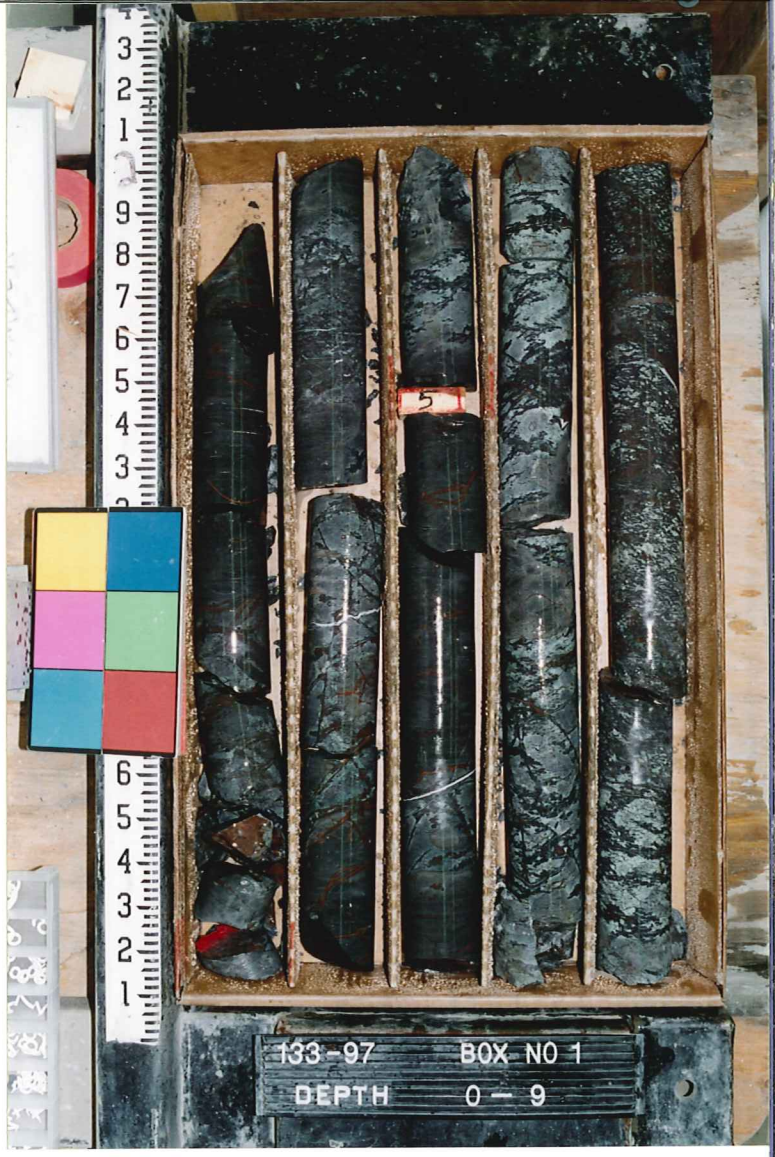
REPORTED : 17 DEC 1997

SAMPLES	Au(OZ) FA30 OPT	Au(RZ) FA30 OPT	Ag(OZ) D210 OPT
D-133-97 118.1-119.2	0.001		0.05
D-133-97 119.2-125.0	<0.001		<0.02
D-133-97 125.0-128.9	<0.001		<0.02
D-133-97 128.9-134.0	<0.001		<0.02
D-133-97 134.0-138.7	<0.001		<0.02
D-133-97 138.7-143.0	<0.001		<0.02
D-133-97 143-147	<0.001		<0.02
D-133-97 147-150	<0.001		<0.02

DOWNHOLE SURVEY D-133-97 DECLINATION = 15.7°

FILM FOOTAGE	BEARING	TRUE DIP	TRUE BEARING	DIP
COLLAR	S66°E	-1°	N50.3°W	-1
35'	S66°E	-1°	N50.3°W	-1
70'	S63°E	~~-6°~~ -1°	N ~~50.3~~ 47.3° W	-1
140'	S74.5E	-1°	N58.8°W	-1

133-97 BOX NO 2
DEPTH 9 -18.5


133-97 BOX NO 1
DEPTH 0 - 9

133-97 BOX NO 3
DEPTH 18.5 - 28

40
45
133-97 BOX NO 5
DEPTH 37.5- 46

35
30
133-97 BOX NO 4
DEPTH 28 - 37.5

55
133-97 BOX NO 6
DEPTH 46 - 55.5

70
133-97 BOX NO 8
DEPTH 65 – 74

65
60
133-97 BOX NO 7
DEPTH 55.5 – 65

75
80
133-97 BOX NO 9
DEPTH 74 – 83

133-97 BOX NO 11
DEPTH 92 -101.5
98.5

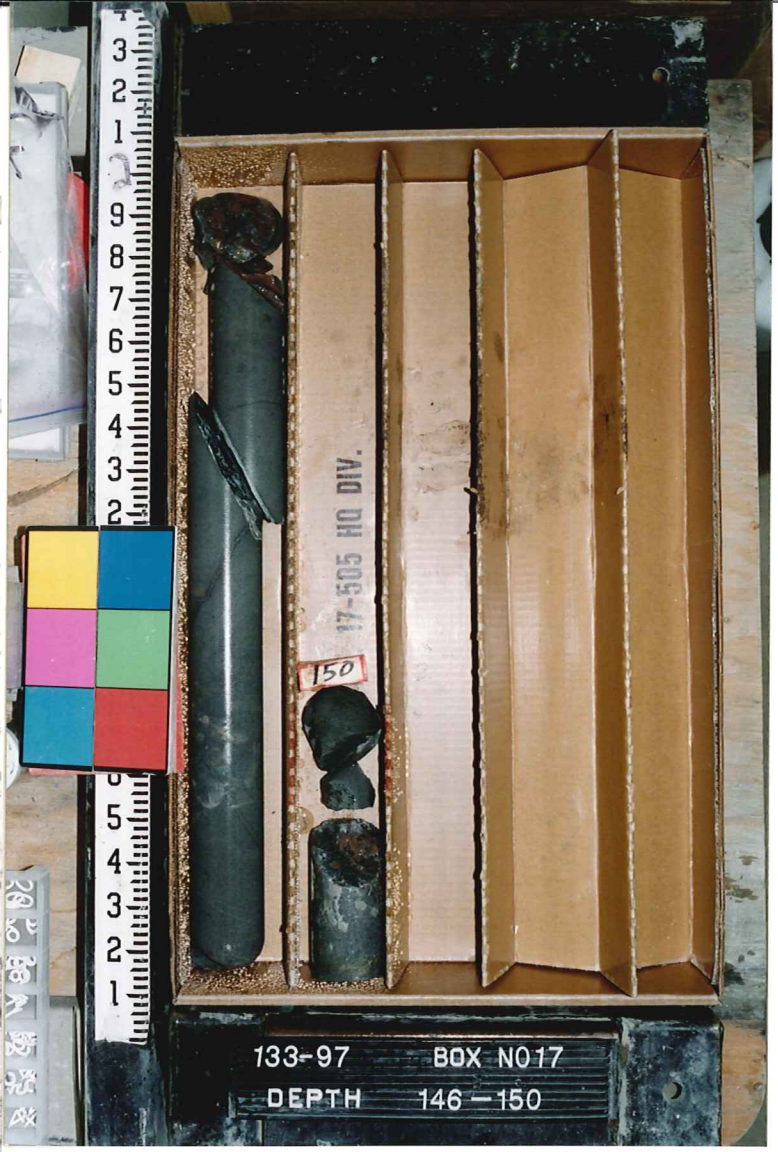
133-97 BOX NO 10
DEPTH 83-92
85
90

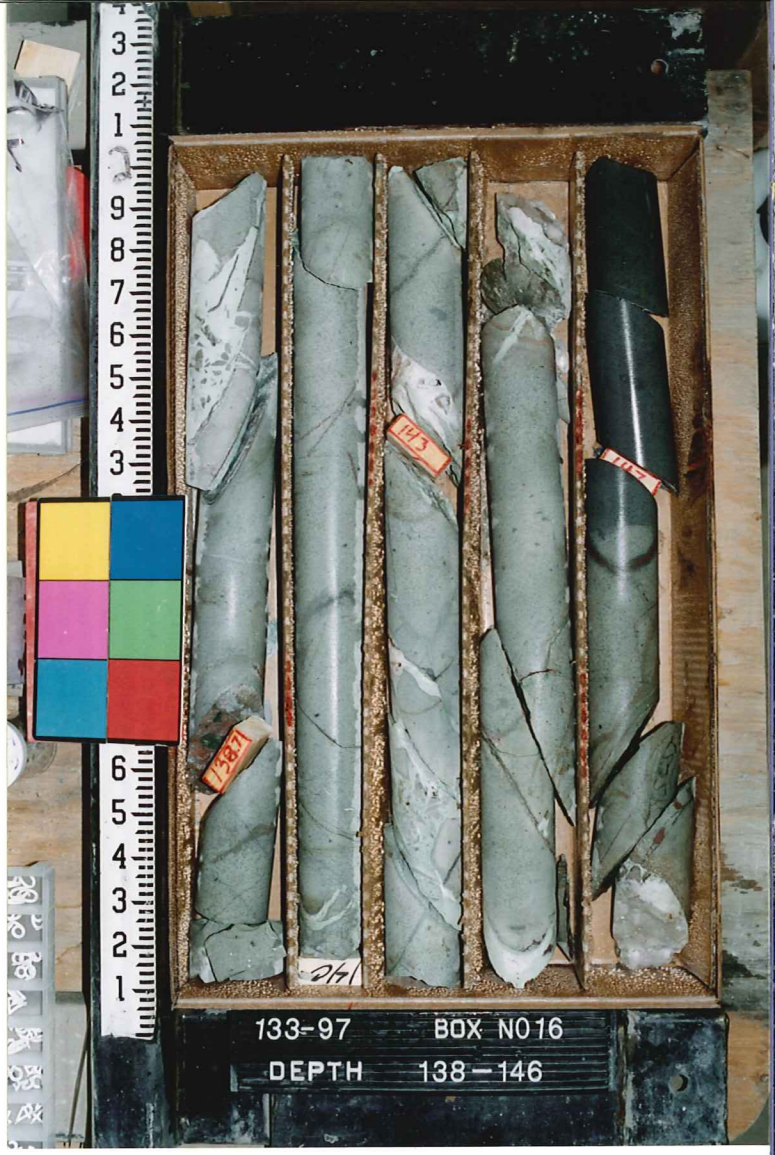
133-97 BOX NO 12
DEPTH 101.5-110.5
104.2
108.5

133-97 BOX NO14
DEPTH 119.5-129.5

133-97 BOX NO13
DEPTH 110.5-119.5

133-97 BOX NO15
DEPTH 129.5-138


17-505 HQ DIV.
150
133-97 BOX N017
DEPTH 146 — 150


143
142
133-97 BOX N016
DEPTH 138 — 146

5
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7
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9

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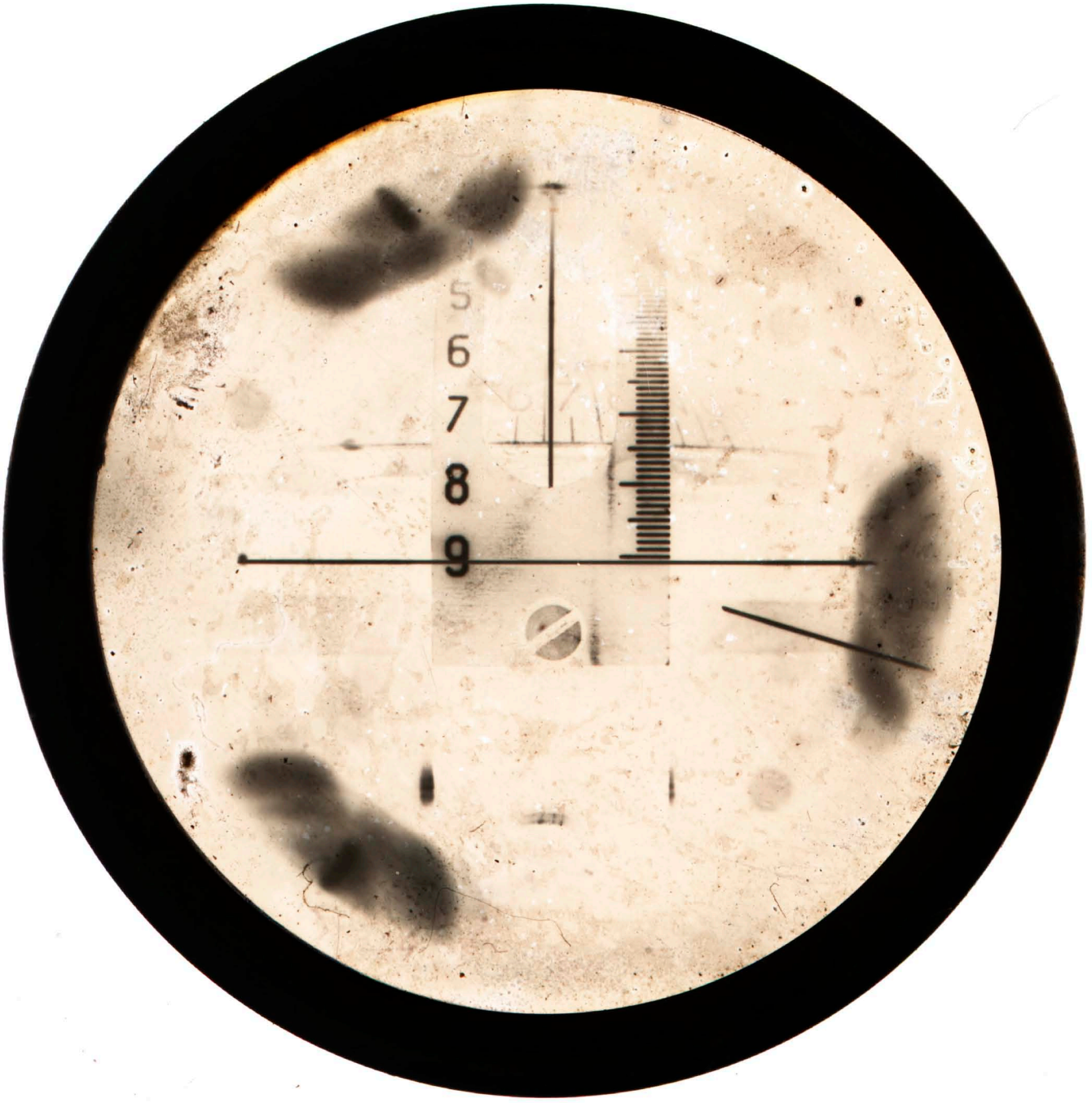
9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