60000896

Mining District File Summary Sheet

| | |
|---|---|
| DISTRICT | Rosebud |
| DIST_NO | 4010 |
| COUNTY<br>If different from written on document | Pershing |
| TITLE<br>If not obvious | Rosebud Drill Hole File - Hole No. D-142-97 |
| AUTHOR | R Parish; K. Alka; S. King |
| DATE OF DOC(S) | 1997 |
| MULTI_DIST Y / (N?)<br>Additional Dist_Nos: | |
| QUAD_NAME | Sulphur 7.5' |
| P_M_C_NAME<br>(mine, claim & company names) | Rosebud Mine; Rosebud Project; Hecla Mining Co.; North Zone; Rosebud Mining Co LLC. |
| COMMODITY<br>If not obvious | gold; silver |
| NOTES | Drill log; geology; assay; [redacted]; total depth 150'; receipt; handwritten notes; downhole camera image; photographs<br><br>23p. 3 downhole 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 - 142 - 97

60000896

4010

6000 0896

- 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-142-97 | LOCATION | NORTH ZONE | REMARKS | STOPE 31 |
| PAGE 1 OF 3 | | NORTHING | | | |
| DATE | 12/12/97 | EASTING | | | |
| LOGGED BY | R. PARISH | ELEVATION | | | |
| SCALE | 1" = 10' | AZIMUTH | | | |
| TOTAL DEPTH | 150' | INCLINATION | | | |

| REC | RQD | LITHOLOGY | OX/Red. | FT | GRAPHIC LOG | STRUCTURE | ALTERATION AND MINERALIZATION |
|---|---|---|---|---|---|---|---|
| LBT | LST | 0 - 33.6 Leopard skin textured LBT Flows.<br>0-21.2 - Lt. pinkish, weakly bleached and argillized. Green, propylitic groundmass to 5' depth. Common disseminated pyrite.<br>21.2 - 29 - maroon. Flows w/ leopard skin texture.<br>29 - 33.6 - Lt. greenish-white, bleached leopard skin flows.<br>33.6 - 55.3 white to greenish white massive LBT Flows. Bleached, wk. argill. moderate to str. stockwork of green, waxy illite veins. Increasing in density to 43' where illite acts as sheared matrix to clast supported fault bx. | Red.<br>OX<br>Red. | 0<br>10<br>20<br>30<br>PMA<br>40<br>RMA<br>50 | 40°<br>35<br>60<br>10<br>40 | 0-33.6 massive, only weakly jointed or veined.<br>33.6 - 43 mod to abdpt clay vns @ a 60° and 30° T.C.A. - other orientations less common.<br>43' Clast supported Fault Breccia: 40° TCA sheared, mylonitic zone @ 40° T.CA., calcite, illite matrix. | 0-21.2 - wk. bleach + Argillic. mod. to str. diss. py. V. wk grn illite ± py ± marc. vns. 2' 2", irregular c.gr. calcite + green illite vn.<br>21.2 - 29 minor calcite ± pyrite veinlets.<br>29. - 33.6 wk bleaching<br>33.6 - 52 increasing green, waxy illitic vns ± pyrite and calcite<br>42.4 - 49.5 - illite vn density increases to mosaic + cxt / Breccia matrix @ 43'. Calcite common. |

## ANALYTICAL DATA

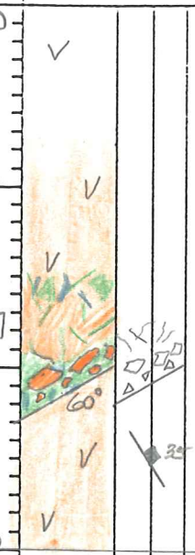
| FROM | TO | W | Au | Ag | Au2 | Ag2 |
|---|---|---|---|---|---|---|
| 0 | 5 | | | | | |
| 5 | 10 | | | | | |
| 10 | 13 | | | | | |
| 13 | 16.2 | | | | | |
| 16.2 | 21.2 | | | | | |
| 21.2 | 25.5 | | | | | |
| 25.5 | 29 | | | | | |
| 29 | 33.6 | | | | | |
| 33.6 | 38 | | | | | |
| 38 | 42.4 | | | | | |
| 42.4 | 45.9 | | | | | |
| 45.9 | 50 | | | | | |

HOLE NUMBER D-142-97 PAGE 2 OF 3

| SEC | RQD | LITHOLOGY | FT | GRAPHIC LOG | STRUCTURE | ALTERATION AND MINERALIZATION |
|---|---|---|---|---|---|---|
| LBT | LST | 55.3 – 72.3 Maroon Flows w/ Leopard skin texture, unaltered, monotonous rk. rare green illite Vns<br>70.3 – 82.3 Maroon, massive flows w/ local wk Leopard skin texture. unaltered.<br>82.3 – 89.2 Variably bleached LBT, Clast supported Fault Breccia from 84.5 to 85.7. Green illite + Calcite + Fgr. Py Matrix. Angular LBT clasts<br>89.2 – 102.4 Maroon, massive, Fine grained, textureless flows.<br>102.4 – 105.4 Bleached LBT Flows w/ mild Py + marc + calcite veining (grad. Redox Front.)<br>105.4 – 116 Bleached, wkly leached LBT. Gray to Grn Gray. Abdnt open crackle fractures - incompletely filled w/ marc. ± calcite ± white clay, minor grn clay. Several Clast supported Bx's w/ Calcite matrix.<br>114.5 – 116 – Core is broken rubble.<br>117 – 119.5 Core is bxld. and crackle fractured but is Cemented w/ green Illite and calcite | Red<br>OX<br>mixed<br>OX<br>50<br>60<br>70<br>80<br>90<br>100<br>110<br>120 | 50<br>45<br>50<br>20<br>55° | 59' Fltd calcite/clay Vn. 50° T.C.A. Rake 25° 3" zone of Fracturing @ 45° TCA w/ clay calcite matrix.<br>84.5 – 85.7 Fault Breccia 50° Lower Slip, Rake 70°<br>105.4 – 114.5 Str. open fractures and clast sp. Bxs @ 105.4, 107, 112.5.<br>114.5 – 116 – Core is broken rubble<br>CORE LOSS<br>119.3' 2" Ft. Bx. Milled Clasts in rk. flour matrix | 59' green illite + calcite ± Pyrite vein fill.<br>84.5 – 85.7 Fault Bx matrix of green illite, C.gr. calcite and brassy Py.<br>105.4 – 116 wk. bleach, Leach. minor Vns of calcite ± marc ± white clay ± sooty Py<br>117 – 119.5 Veins and matrix of green illite + calcite ± marcasite. |

| ANALYTICAL DATA | | | | | | |
|---|---|---|---|---|---|---|
| FROM | TO | W | Au | Ag | Au2 | Ag2 |
| 50 | 55.3 | | | | | |
| 55.3 | 60 | | | | | |
| 60 | 65 | | | | | |
| 65 | 70.3 | | | | | |
| 70.3 | 75 | | | | | |
| 75 | 80 | | | | | |
| 80 | 82.3 | | | | | |
| 82.3 | 83.9 | | | | | |
| 83.9 | 85.7 | | | | | |
| 85.7 | 89.2 | | | | | |
| 89.2 | 93 | | | | | |
| 93 | 97 | | | | | |
| 97 | 102.4 | | | | | |
| 102.4 | 105.4 | | | | | |
| 105.4 | 108.8 | | | | | |
| 108.8 | 112.9 | | | | | |
| 112.9 | 116 | | | | | |
| 117 | 119.5 | | | | | |

HOLE NUMBER D-142-97 PAGE 3 OF 3

| REC | RQD | LITHOLOGY | FT | GRAPHIC LOG | STRUCTURE | ALTERATION AND MINERALIZATION |
|---|---|---|---|---|---|---|
| LBT | | 119.5-128.2 Bleached Massive LBT Flows. Hard, mild to mod veining of clay + calcite + sulfides.<br><br>128.2-150 Maroon Brown to Brown gry LBT Flows - Massive - fine-grained. weak local spotting, incipient Leopard skin texture.<br><br>135.8-141.3 Str. green illite ± calcite veining in oxidized LBT. Two matrix supported. Collapse Bx's. Angular clasts in green illite + calcite matrix. Lower most grades from veined rx to clast supported bx to matrix supported Bx over 2½'. | Reduc<br>OX<br>120<br>130<br>PMA<br>140<br>150<br>EOH |  | 139-141.3 collapse? bx Angular clasts. Grading down hole to matrix sppt. Bx. | 119.5-128.2 grn. illite ± merc. ± calc. ± py veins in Bleached LBT.<br><br>128.2-150 V. sparse green illite veins except 135.8-141.3. w/ str. green illite ± calcite veins and Bx matrix. minor diss. Py. |

| ANALYTICAL DATA | | | | | | |
|---|---|---|---|---|---|---|
| FROM | TO | W | Au | Ag | Au2 | Ag2 |
| 119.5 | 125 | | | | | |
| 125 | 128.2 | | | | | |
| 128.2 | 132.6 | | | | | |
| 132.6 | 135.8 | | | | | |
| 135.8 | 141.3 | | | | | |
| 141.3 | 145 | | | | | |
| 145 | 150 | | | | | |

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # 0-142-97 DATE: 12/12/97 LOGGED BY: R. PARISH PAGE 1 OF 2

| 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 | 5 | 104 | 104 | 78 | | | | | | | | | | |
| 5 | 10 | 96 | 96 | 39 | | | | | | | | | | |
| 10 | 20 | 95 | 95 | 59 | | | | | | | | | | |
| 20 | 30 | 100 | 100 | 43 | | | | | | | | | | |
| 30 | 40 | 96 | 96 | 49 | | | | | | | | | | |
| 40 | 50 | 97 | 97 | 38 | | | | | | | | | | |
| 50 | 60 | 100 | 100 | 31 | | | | | | | | | | |
| 60 | 63.5 | 86 | 86 | 14 | | | | | | | | | | |
| 63.5 | 67 | 100 | 100 | 17 | | | | | | | | | | |
| 67 | 75 | 100 | 100 | 47 | | | | | | | | | | |
| 75 | 80 | 90 | 90 | 38 | | | | | | | | | | |

HECLA MINING COMPANY – ROSEBUD PROJECT
GEOTECHNICAL DRILL LOG

HOLE # D-142-97 DATE: 12/12/97 LOGGED BY: R. PARISH 

| 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) |
| 80 | 85 | 104 | 104 | 78 | | | | | | | | | | |
| 85 | 93 | 94 | 94 | 20 | | | | | | | | | | |
| 93 | 100 | 104 | 104 | 56 | | | | | | | | | | |
| 100 | 110 | 91 | 91 | 40 | | | | | | | | | | |
| 110 | 114.5 | 87 | 87 | 13 | | | | | | | | | | |
| 114.5 | 117 | 30 | 64 | 0 | | | | | | | | | | |
| 117 | 125 | 94 | 94 | 55 | | | | | | | | | | |
| 125 | 135 | 98 | 98 | 67 | | | | | | | | | | |
| 135 | 144 | 98 | 98 | 42 | | | | | | | | | | |
| 144 | 150 | 107 | 107 | 63 | | | | | | | | | | |
| | | | | | | | | | | | | | | |

AMERICAN ASSAY LABORATORIES

# PROVISIONAL REPORT SP047684

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

## HECLA MINING COMPANY

COPIES TO : KURT ALLEN
:
:
:

NSI

CLIENT REFERENCE No: D-142-97 RECEIVED : 16 DEC 1997

No. SAMPLES : 37 REPORTED : 31 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 SP047684

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-142-97

REPORTED : 31 DEC 1997

| SAMPLES | Au(OZ) | Au(RZ) | Ag(OZ) |
|---|---|---|---|
| D-142-97 00-05 | <0.001 | | <0.02 |
| D-142-97 05-10 | 0.005 | | 0.05 |
| D-142-97 10-13 | 0.002 | | 0.04 |
| D-142-97 13.0-16.2 | 0.025 | | 0.07 |
| D-142-97 16.2-21.2 | 0.001 | <0.001 | <0.02 |
| D-142-97 21.2-25.5 | <0.001 | | <0.02 |
| D-142-97 25.5-29.0 | <0.001 | | <0.02 |
| D-142-97 29.0-33.6 | <0.001 | | <0.02 |
| D-142-97 33.6-38.0 | 0.001 | | 0.04 |
| D-142-97 38.0-42.4 | <0.001 | | <0.02 |
| D-142-97 42.4-45.9 | <0.001 | | <0.02 |
| D-142-97 45.9-50.0 | 0.001 | <0.001 | 0.03 |
| D-142-97 50.0-55.3 | <0.001 | | <0.02 |
| D-142-97 55.3-60.0 | <0.001 | | <0.02 |
| D-142-97 60-65 | <0.001 | | <0.02 |
| D-142-97 65.0-70.3 | <0.001 | | <0.02 |
| D-142-97 70.3-75.0 | <0.001 | | <0.02 |
| D-142-97 75-80 | <0.001 | | <0.02 |
| D-142-97 80.0-82.3 | <0.001 | | <0.02 |
| D-142-97 82.3-83.9 | <0.001 | | <0.02 |
| D-142-97 83.9-85.7 | 0.001 | | 0.03 |
| D-142-97 85.7-89.2 | <0.001 | | <0.02 |
| D-142-97 89.2-93.0 | <0.001 | | <0.02 |
| D-142-97 93-97 | <0.001 | | <0.02 |
| D-142-97 97.0-102.4 | <0.001 | | <0.02 |

AMERICAN ASSAY LABORATORIES

# PROVISIONAL REPORT SP047684

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PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-142-97

REPORTED : 31 DEC 1997

| SAMPLES | Au(OZ) | Au(RZ) | Ag(OZ) |
|---|---|---|---|
| D-142-97 102.4-105.4 | <0.001 | | <0.02 |
| D-142-97 105.4-108.8 | 0.002 | | 0.07 |
| D-142-97 108.8-112.9 | 0.003 | | 0.09 |
| D-142-97 112.9-116.0 | <0.001 | | <0.02 |
| D-142-97 117.0-119.5 | 0.004 | 0.003 | 0.07 |
| D-142-97 119.5-125.0 | <0.001 | | <0.02 |
| D-142-97 125.0-128.2 | <0.001 | | <0.02 |
| D-142-97 128.2-132.6 | <0.001 | | <0.02 |
| D-142-97 132.6-135.8 | <0.001 | | <0.02 |
| D-142-97 135.8-141.3 | <0.001 | | <0.02 |
| D-142-97 141.3-145.0 | <0.001 | <0.001 | <0.02 |
| D-142-97 145-150 | <0.001 | | <0.02 |

**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 0047684-IN
INVOICE DATE: 12/31/97

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-142-97 | DEVELOPMENT | NET 30 - DUE IN U.S. DOLLARS |

| QUANTITY | DESCRIPTION | PRICE | AMOUNT |
|---|---|---|---|
| 37 | SAMPLES RECEIVED | .00 | .00 |
| 37 | DRYING | 1.00 | 37.00 |
| 37 | JAW CRUSHING CHARGE | 1.30 | 48.10 |
| 37 | COARSE MILLING CHARGE | 4.50 | 166.50 |
| 37 | SPLITTING CHARGE | 2.40 | 88.80 |
| 37 | RING MILLING CHARGE | 2.00 | 74.00 |
| 37 | Au (1 A.T. FIRE ASSAY) | 8.00 | 296.00 |
| 37 | HYDROCHLORIC/NITRIC DIGESTION | 2.00 | 74.00 |
| 37 | Ag ANALYSES | 1.00 | 37.00 |

86-5110-477
DA

| | |
|---|---|
| NET INVOICE: | 821.40 |
| LESS DISCOUNT: | 164.28 |
| FREIGHT: | .00 |
| INVOICE TOTAL: | 657.12 |

xAMERICAN ASSAY LABORATORIES
# ANALYSIS REPORT SP047684

American Assay Laboratories

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

## HECLA MINING COMPANY

COPIES TO : KURT ALLEN
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CLIENT REFERENCE No: D-142-97 RECEIVED : 16 DEC 1997

No. SAMPLES : 37 REPORTED : 31 DEC 1997

MAIN SAMPLE TYPE : DRILL CORE

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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 SP047684

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-142-97

REPORTED : 31 DEC 1997

| SAMPLES | Au(OZ) FA30 OPT | Au(RZ) FA30 OPT | Ag(OZ) D210 OPT |
|---|---|---|---|
| D-142-97 00-05 | <0.001 | | <0.02 |
| D-142-97 05-10 | 0.005 | | 0.05 |
| D-142-97 10-13 | 0.002 | | 0.04 |
| D-142-97 13.0-16.2 | 0.025 | | 0.07 |
| D-142-97 16.2-21.2 | 0.001 | <0.001 | <0.02 |
| D-142-97 21.2-25.5 | <0.001 | | <0.02 |
| D-142-97 25.5-29.0 | <0.001 | | <0.02 |
| D-142-97 29.0-33.6 | <0.001 | | <0.02 |
| D-142-97 33.6-38.0 | 0.001 | | 0.04 |
| D-142-97 38.0-42.4 | <0.001 | | <0.02 |
| D-142-97 42.4-45.9 | <0.001 | | <0.02 |
| D-142-97 45.9-50.0 | 0.001 | <0.001 | 0.03 |
| D-142-97 50.0-55.3 | <0.001 | | <0.02 |
| D-142-97 55.3-60.0 | <0.001 | | <0.02 |
| D-142-97 60-65 | <0.001 | | <0.02 |
| D-142-97 65.0-70.3 | <0.001 | | <0.02 |
| D-142-97 70.3-75.0 | <0.001 | | <0.02 |
| D-142-97 75-80 | <0.001 | | <0.02 |
| D-142-97 80.0-82.3 | <0.001 | | <0.02 |
| D-142-97 82.3-83.9 | <0.001 | | <0.02 |
| D-142-97 83.9-85.7 | 0.001 | | 0.03 |
| D-142-97 85.7-89.2 | <0.001 | | <0.02 |
| D-142-97 89.2-93.0 | <0.001 | | <0.02 |
| D-142-97 93-97 | <0.001 | | <0.02 |
| D-142-97 97.0-102.4 | <0.001 | | <0.02 |

AMERICAN ASSAY LABORATORIES

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American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-142-97

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| SAMPLES | Au(OZ) FA30 OPT | Au(RZ) FA30 OPT | Ag(OZ) D210 OPT |
|---|---|---|---|
| D-142-97 102.4-105.4 | <0.001 | | <0.02 |
| D-142-97 105.4-108.8 | 0.002 | | 0.07 |
| D-142-97 108.8-112.9 | 0.003 | | 0.09 |
| D-142-97 112.9-116.0 | <0.001 | | <0.02 |
| D-142-97 117.0-119.5 | 0.004 | 0.003 | 0.07 |
| D-142-97 119.5-125.0 | <0.001 | | <0.02 |
| D-142-97 125.0-128.2 | <0.001 | | <0.02 |
| D-142-97 128.2-132.6 | <0.001 | | <0.02 |
| D-142-97 132.6-135.8 | <0.001 | | <0.02 |
| D-142-97 135.8-141.3 | <0.001 | | <0.02 |
| D-142-97 141.3-145.0 | <0.001 | <0.001 | <0.02 |
| D-142-97 145-150 | <0.001 | | <0.02 |

xAMERICAN ASSAY LABORATORIES

# ANALYSIS REPORT SP047684

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Ph.(702) 356-0606, Fax.(702) 356-1413

## HECLA MINING COMPANY

COPIES TO : KURT ALLEN

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CLIENT REFERENCE No: D-142-97 RECEIVED : 16 DEC 1997

No. SAMPLES : 37 REPORTED : 31 DEC 1997

MAIN SAMPLE TYPE : DRILL CORE

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|---|---|---|---|---|
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SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

# ANALYSIS REPORT SP047684

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| D-142-97 05-10 | 0.005 | | 0.05 |
| D-142-97 10-13 | 0.002 | | 0.04 |
| D-142-97 13.0-16.2 | 0.025 | | 0.07 |
| D-142-97 16.2-21.2 | 0.001 | <0.001 | <0.02 |
| D-142-97 21.2-25.5 | <0.001 | | <0.02 |
| D-142-97 25.5-29.0 | <0.001 | | <0.02 |
| D-142-97 29.0-33.6 | <0.001 | | <0.02 |
| D-142-97 33.6-38.0 | 0.001 | | 0.04 |
| D-142-97 38.0-42.4 | <0.001 | | <0.02 |
| D-142-97 42.4-45.9 | <0.001 | | <0.02 |
| D-142-97 45.9-50.0 | 0.001 | <0.001 | 0.03 |
| D-142-97 50.0-55.3 | <0.001 | | <0.02 |
| D-142-97 55.3-60.0 | <0.001 | | <0.02 |
| D-142-97 60-65 | <0.001 | | <0.02 |
| D-142-97 65.0-70.3 | <0.001 | | <0.02 |
| D-142-97 70.3-75.0 | <0.001 | | <0.02 |
| D-142-97 75-80 | <0.001 | | <0.02 |
| D-142-97 80.0-82.3 | <0.001 | | <0.02 |
| D-142-97 82.3-83.9 | <0.001 | | <0.02 |
| D-142-97 83.9-85.7 | 0.001 | | 0.03 |
| D-142-97 85.7-89.2 | <0.001 | | <0.02 |
| D-142-97 89.2-93.0 | <0.001 | | <0.02 |
| D-142-97 93-97 | <0.001 | | <0.02 |
| D-142-97 97.0-102.4 | <0.001 | | <0.02 |

AMERICAN ASSAY LABORATORIES

# ANALYSIS REPORT SP047684

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-142-97

REPORTED : 31 DEC 1997

| SAMPLES | Au(OZ) FA30 OPT | Au(RZ) FA30 OPT | Ag(OZ) D210 OPT |
|---|---|---|---|
| D-142-97 102.4-105.4 | <0.001 | | <0.02 |
| D-142-97 105.4-108.8 | 0.002 | | 0.07 |
| D-142-97 108.8-112.9 | 0.003 | | 0.09 |
| D-142-97 112.9-116.0 | <0.001 | | <0.02 |
| D-142-97 117.0-119.5 | 0.004 | 0.003 | 0.07 |
| D-142-97 119.5-125.0 | <0.001 | | <0.02 |
| D-142-97 125.0-128.2 | <0.001 | | <0.02 |
| D-142-97 128.2-132.6 | <0.001 | | <0.02 |
| D-142-97 132.6-135.8 | <0.001 | | <0.02 |
| D-142-97 135.8-141.3 | <0.001 | | <0.02 |
| D-142-97 141.3-145.0 | <0.001 | <0.001 | <0.02 |
| D-142-97 145-150 | <0.001 | | <0.02 |

SP

# SUBMITTAL FORM


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Santiago, Chile
Mendoza, Argentina


Company: ROSEBUD MINE INC

Address: PO BOX 2610

City WINNEMUCCA State NV Zip 89446

Telephone Number: (702) 623-6912 Fax Number: (702) 623-6917

Project Name: DEVELOPMENT Purchase Order Number:

Date Submitted: 12-13-97 Number of Samples: 28

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

| SAMPLE IDENTIFICATION | | TYPE | ELEMENTS REQUIRED |
|---|---|---|---|
| D 142-97 | | | Au/Ag as per Rosebud Development method |
| 0-5 | 60-65 | | |
| 5-10 | 65-70.3 | | |
| 10-13 | 70.3-75 | | |
| 13-16.2 | 75-80 | | |
| 16.2-21.2 | 80-82.3 | | |
| 21.2-25.5 | 82.3-83.9 | | |
| 25.5-29 | 83.9-85.7 | | |
| 29-33.6 | 85.7-89.2 | | |
| 33.6-38 | 89.2-93 | | |
| 38-42.4 | 93-97 | | |
| 42.4-45.9 | 97-102.4 | | |
| 45.9-50 | 102.4-105.4 | | |
| 50-55.3 | 105.4-108.8 | | |
| 55.3-60 | 108.8-112.9 | | |

**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

SP

# SUBMITTAL FORM


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Lima, Peru
Santiago, Chile
Mendoza, Argentina


Company: ROSEBUD MINE INC

Address: PO 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: 12-13-97 Number of Samples: 9

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

| SAMPLE IDENTIFICATION | TYPE | ELEMENTS REQUIRED |
|---|---|---|
| D42-97 | | Au/Ag As per Rosebud development method |
| 112.9-116 | | |
| 117-119.5 | | |
| 119.5-125 | | |
| 125-128.2 | | |
| 128.2-132.6 | | |
| 132.6-135.8 | | |
| 135.8-141.3 | | |
| 141.3-145 | | |
| 145-150 | | |
| | | |
| | | |
| | | |
| | | |
| | | |

**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

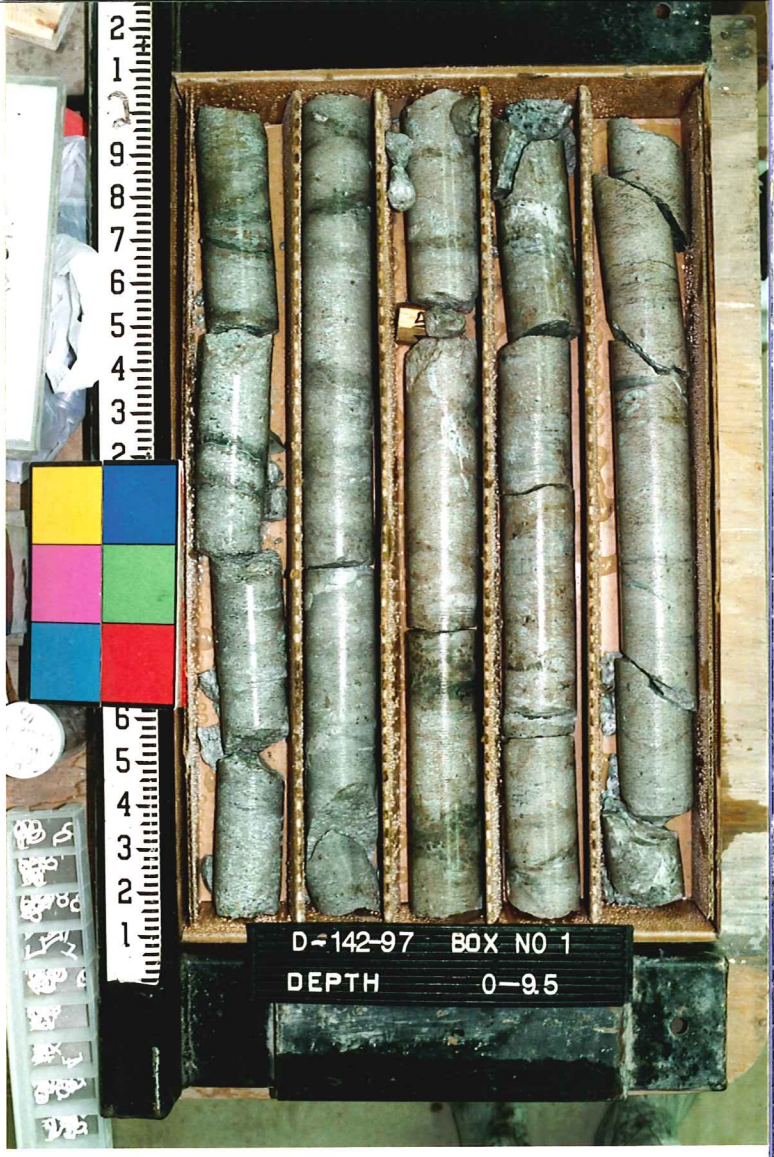
**Comments:**

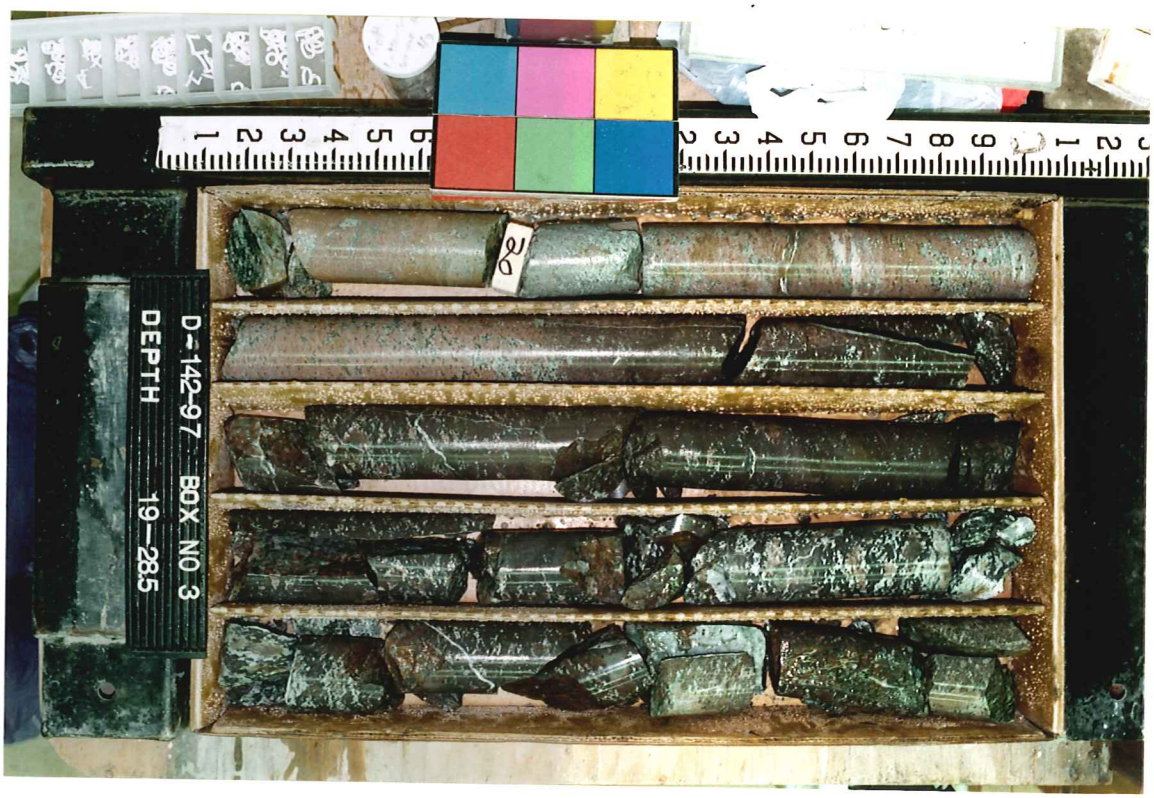
CLIENT FILE COPY

D-142-97

| | SURVEY | | TRUE | |
|---|---|---|---|---|
| FILM FOOTAGE | BEARING | DIP | BEARING | DIP |
| COLLAR | ? 65 ? | 76.8 | N 49.3° W | 13° |
| 75 | ? 65.5 ? | 75.8 | N 49.8° W | 14° |
| 150 | ? 65.0 ? | 75.6 | N 49.3° W | 14° |

D-142-97 BOX NO 2
DEPTH 9.5—19


D-142-97 BOX NO 1
DEPTH 0—9.5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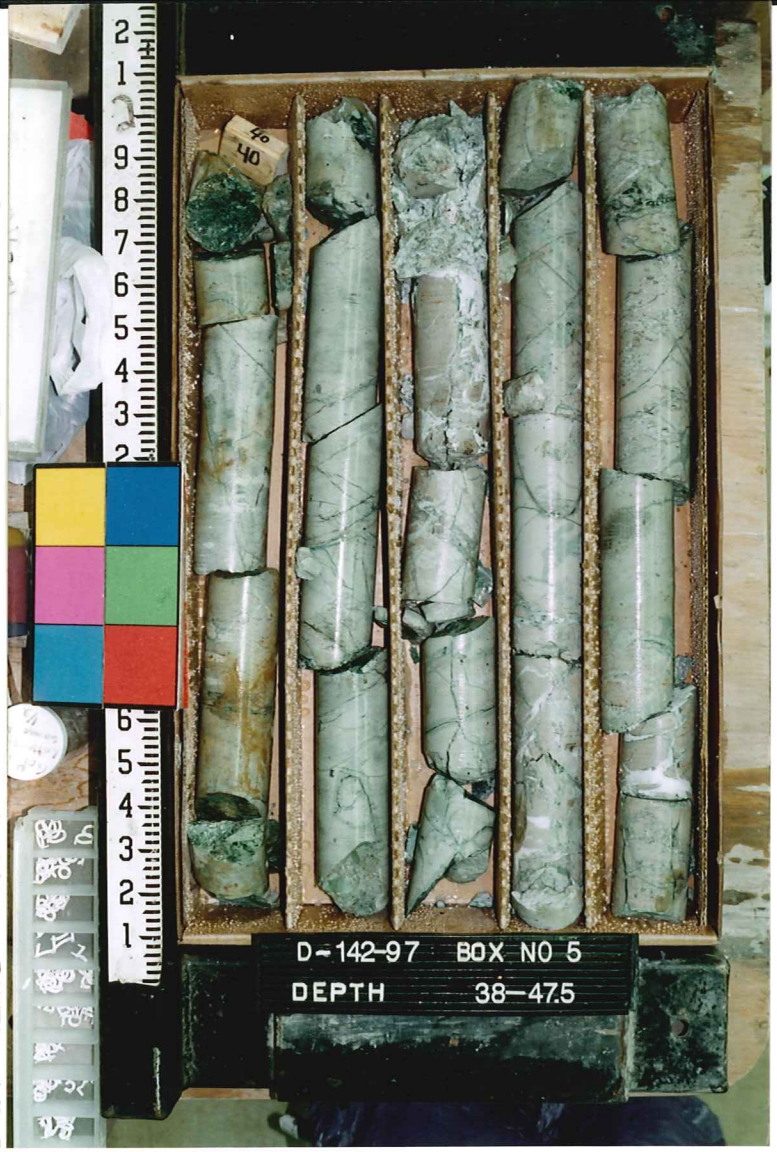
DEPTH 19—28.5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DEPTH 38—47.5

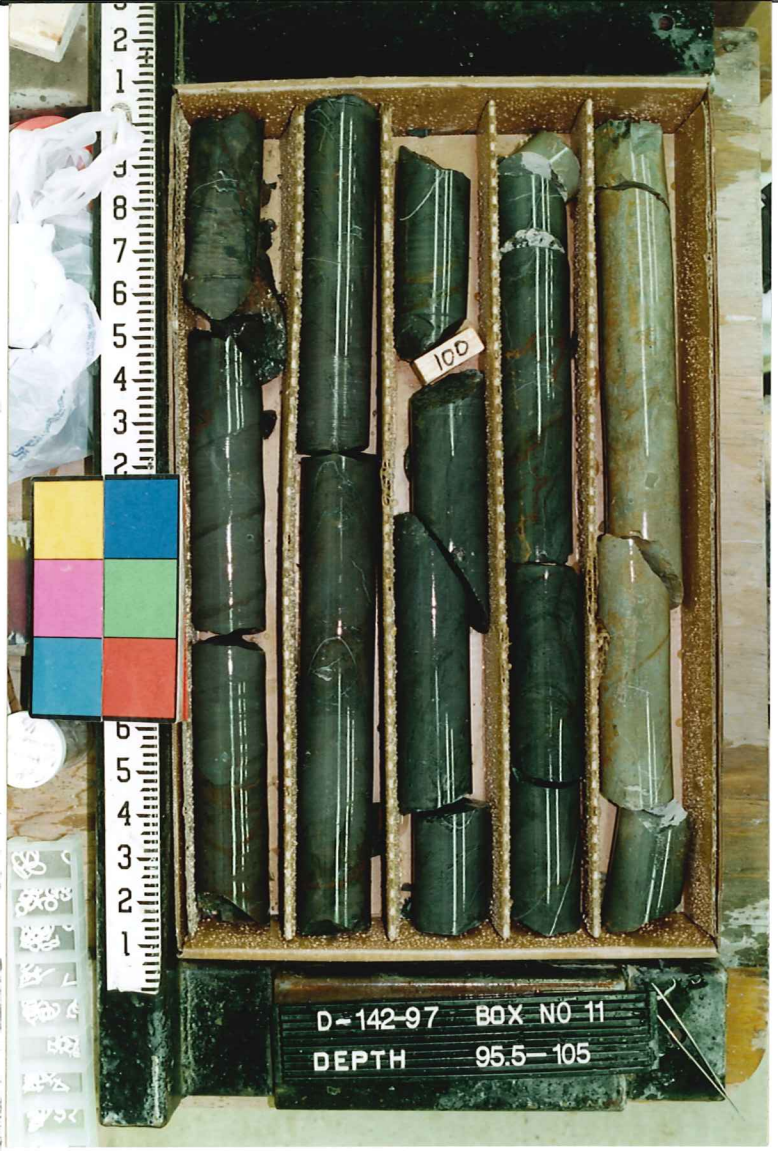
D-142-97 BOX NO 4
DEPTH 28.5—38

D-142-97 BOX NO 6
DEPTH 47.5—57

D-142-97 BOX NO 8
DEPTH 66.5—76
67
75

D-142-97 BOX NO 7
DEPTH 57—66.5
60
65

D-142-97 BOX NO 9
DEPTH 76—86
80
85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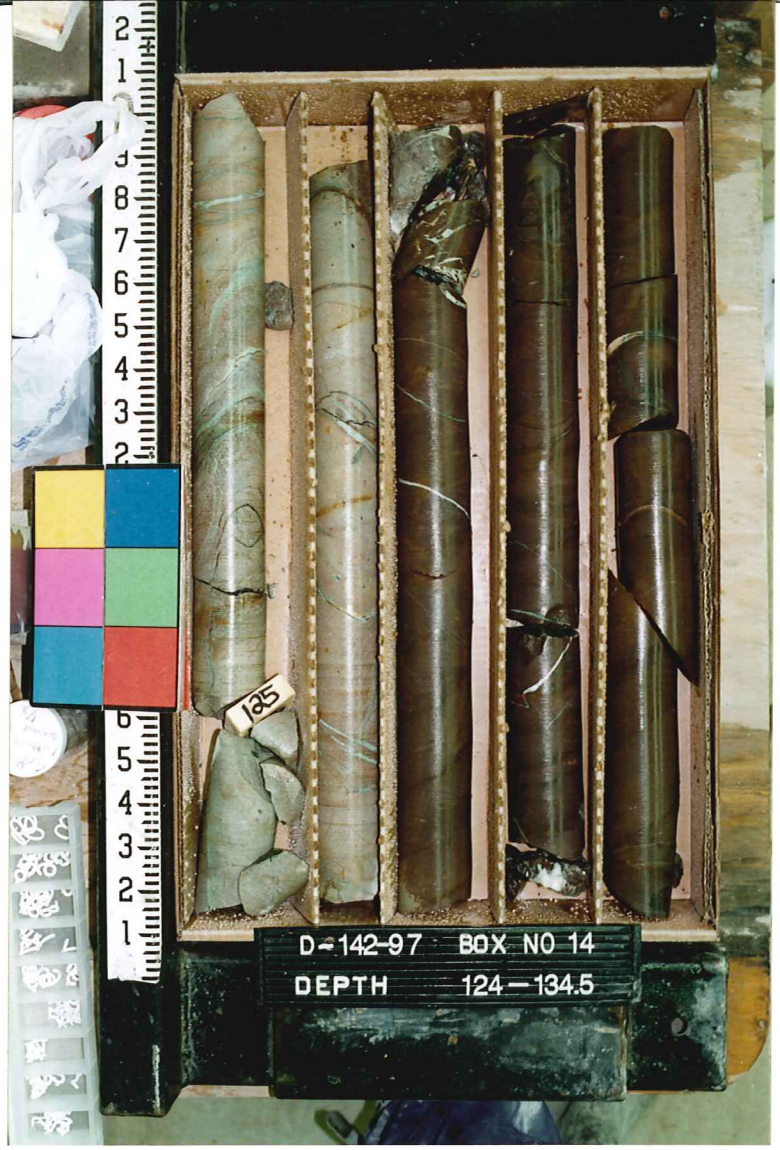
DEPTH 95.5—105

D-142-97 BOX NO 10
DEPTH 86—95.5

D-142-97 BOX NO 12
DEPTH 105—114.5
115


D-142-97 BOX NO 14
DEPTH 124—134.5
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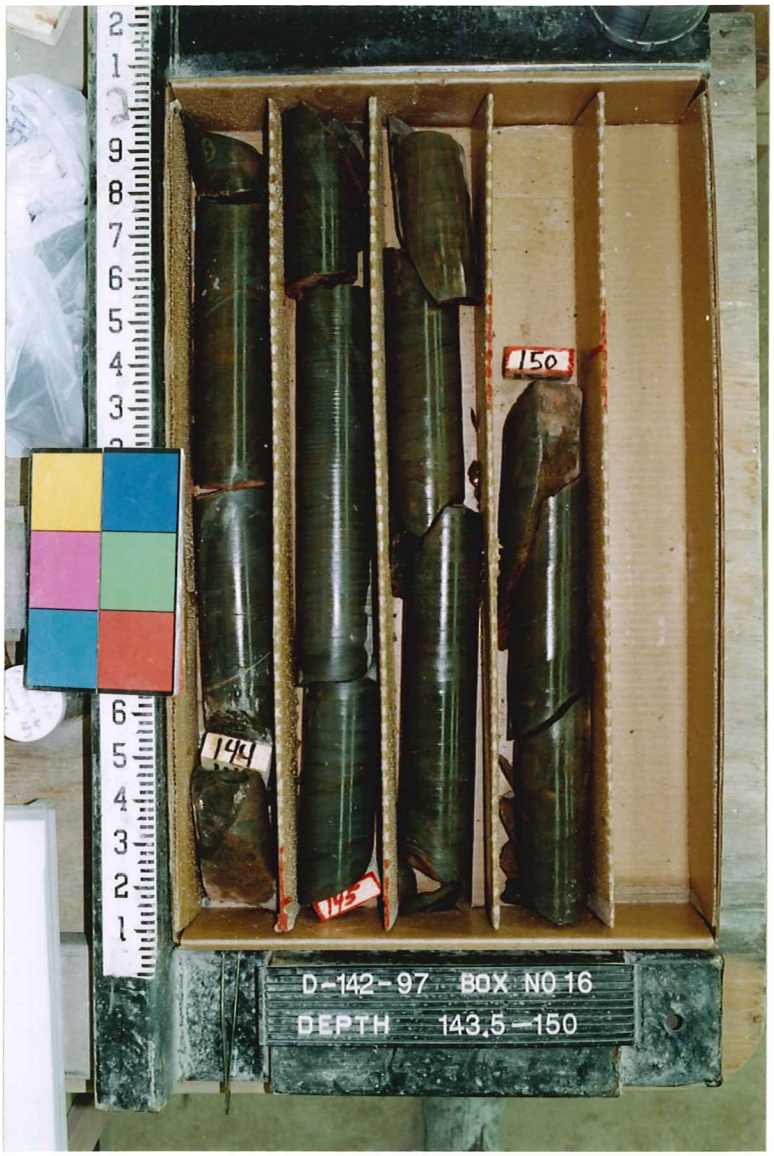
D-142-97 BOX NO 13
DEPTH 114.5—124
117

D-142-97 BOX NO 15
DEPTH 134.5—143.5
135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DEPTH 143.5-150
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145
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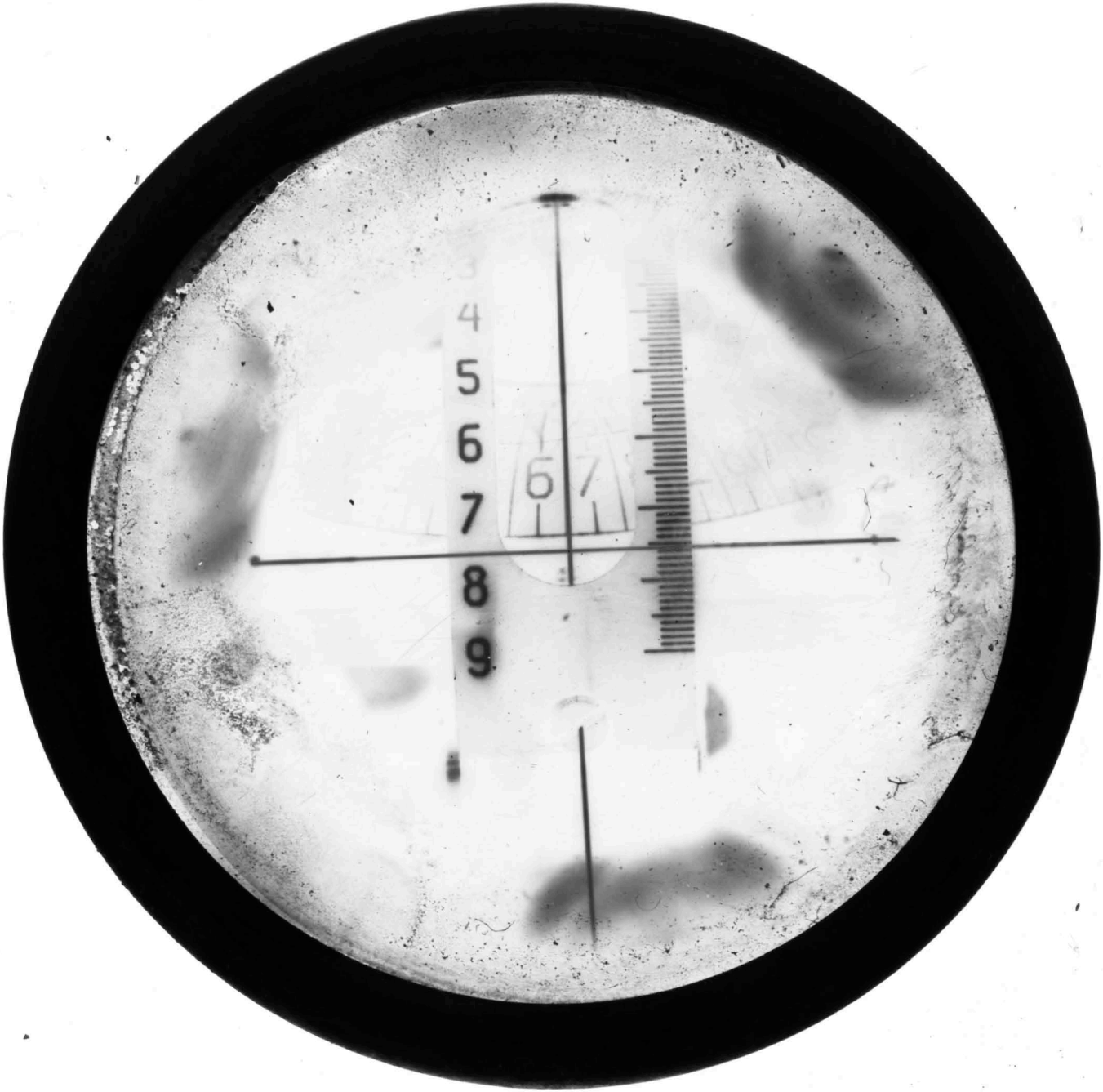
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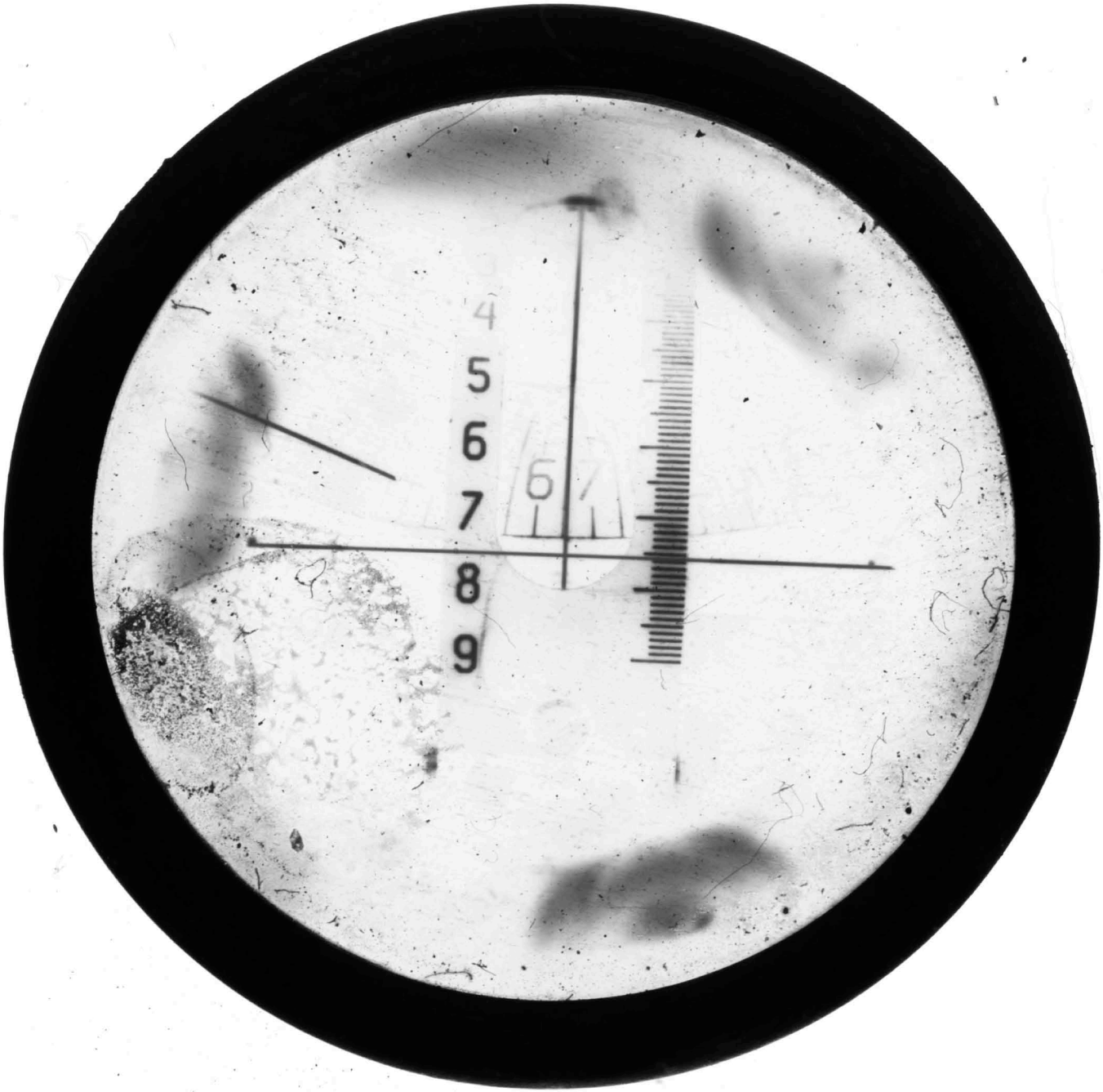
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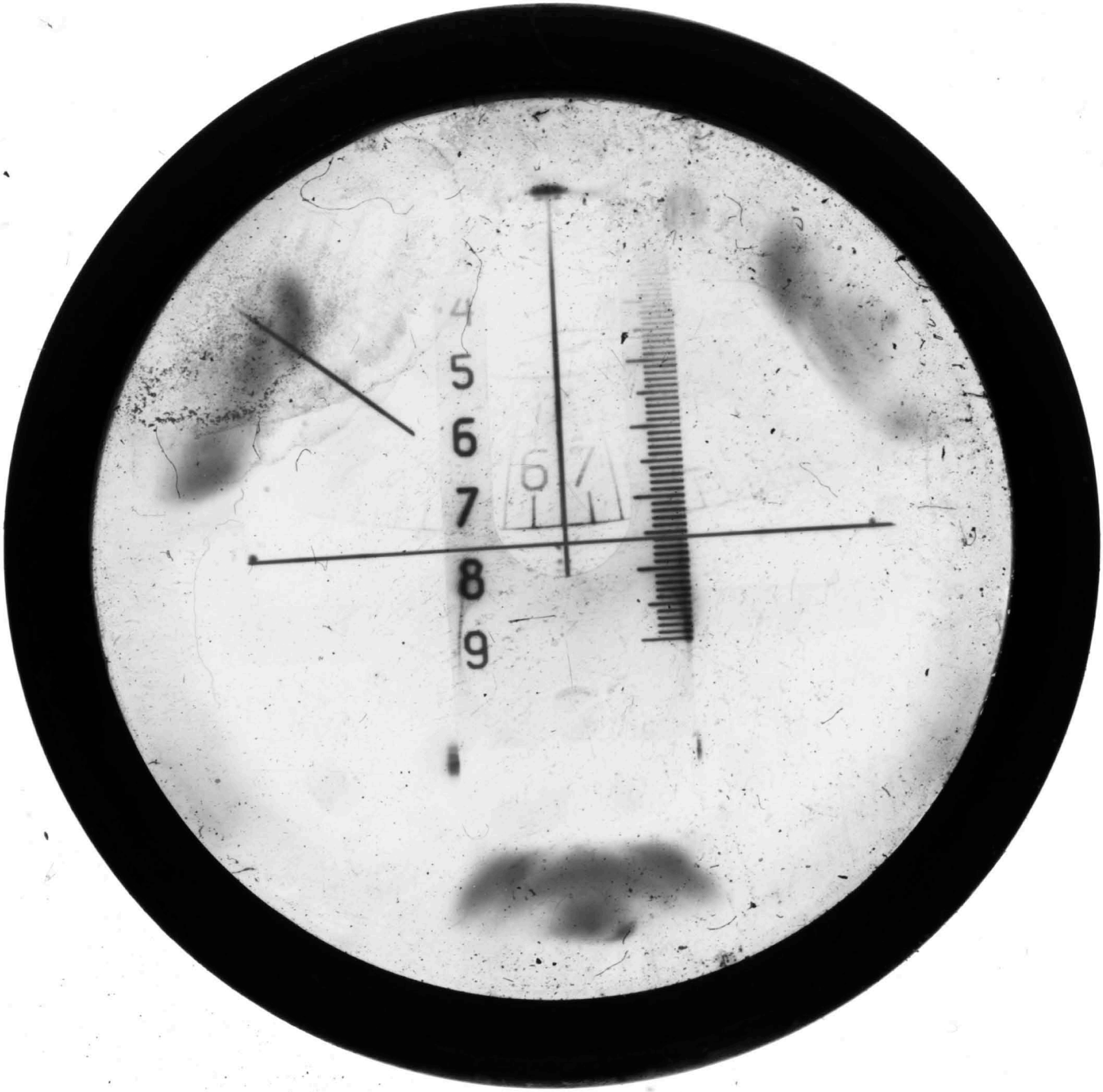
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