60001104

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-224-98 |
| AUTHOR | S. King; K. Allen; B. Morris |
| DATE OF DOC(S) | 1998 |
| 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; Rosebud Mining Co. LLC<br>Hecla Mining Co. |
| COMMODITY<br>If not obvious | gold; silver |
| NOTES | Drill log; geology; assay; photographs; total depth 135'<br>receipt; handwritten notes; downhole camera images<br>22p 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)

Revised: 1/22/08

| | Initials | Date |
|---|---|---|
| SS: | DP | 5/13/08 |
| DB: | mdh | |
| SCANNED: | | |

D-224-98

60001104 4/10

Hecla MINING COMPANY

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

60001104

# ROSEBUD PROJECT
# DIAMOND DRILL LOG

HOLE NUMBER D-224-98 | LOCATION East Zone Stope 42 Sec. 1475 | REMARKS
PAGE 1 OF 3 | NORTHING
DATE 5/29/98 | EASTING
LOGGED BY Brian W. Morris | ELEVATION
SCALE 1"=10' | AZIMUTH N54W
TOTAL DEPTH 135.0' | INCLINATION +73°

| ITH. | OX/RED. | LITHOLOGY | FT | GRAPHIC LOG | STRUCTURE | ALTERATION AND MINERALIZATION |
|---|---|---|---|---|---|---|
| | Reduced | 0 – Autobrecciated Dozer. Lt gry fg equigranular monolithic subangular - subrounded clast "ghosts" supported by Lt gry fg equigranular Mtx. | 5 10 15 20 25 30 35 40 45 50 | 35° 25° 12° | | 0 – 50' Wk sulf + $SiO_2$ Vnlets, Minor wk-mod sulf soaked patches + gr clay Vnlets, locally wk-mod argil + blch. 45 – 50.0' Locally mod Marc + Wh Clay. |

ANALYTICAL DATA

| FROM | TO | W | Au | Ag | Au2 | Ag2 |
|---|---|---|---|---|---|---|
| 0 | 5.0 | | | | | |
| 5.0 | 10.0 | | | | | |
| 10.0 | 15.0 | | | | | |
| 15.0 | 20.0 | | | | | |
| 20.0 | 25.0 | | | | | |
| 25.0 | 30.0 | | | | | |
| 30.0 | 35.0 | | | | | |
| 35.0 | 40.0 | | | | | |
| 40.0 | 45.0 | | | | | |
| 45.0 | 50.0 | | | | | |

HOLE NUMBER D-224-98 PAGE 2 OF 3

| LITH. | OX/RED. | LITHOLOGY | FT | GRAPHIC LOG | STRUCTURE | ALTERATION AND MINERALIZATION |
|---|---|---|---|---|---|---|
| | Reduced | 50 - Autobrecciated Dozer<br>Lt gry fg equigranular monolithic subrounded-subangular clast "ghosts" supported by gry fg equigranular MTX. | 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120 | 15°, 35°, Flt, 35°, 45°, 15°, Contact 60°, Contact 45°, 60° Shear Lower Plane | 50 - 52.5 Str gr clay + $SiO_2$ Rubble & milled bxa Vn;<br>52.5 61.0 gry $SiO_2$ healed expansion Bxa 3 gr clay + $SiO_2$ healed milled Bxa. | 52.5 - 61.0 WK - Mod diss Marc.<br>61.0 - 65 Mod Bladed Marc + gry $SiO_2$ Vn & Vnlets, Minor gr clay + $SiO_2$ + Marc Vn, Wk - Mod argil & blch of clast "ghosts", wk diss sulf.<br>67 - 69' Str Bladed Marc + $SiO_2$ Vn.<br>69 - 72.5' Wk Sulf $SiO_2$ vnlets, wk to Mod patchy blch & argil, Minor wk diss sulf patches.<br>72.5 - , wk $SiO_2$ + Bladed Marc ± gr clay Vn & vnlets, wk blch & argil of clast ghosts. |
| | | 90.3 - 98.0' BMB "Like" Porphyry<br>Sharp contact delineated by .3 - 1cm wide dk gry + $SiO_2$ sealed Vn. Raggie Edge .1 - .3mm wide wk felsic phenos supported by Lt gry - brownish gry fg groundmass. | | | | 86 - 90 Str Vuggie ≈ 1cm wide Blocky + Bladed Marc Vn.<br>88.7 - 89.6 Blk sooty dfg xl clots growth on Bladed Marc - pyrargarite?<br>90.3 - 98.0 Str argil of phenos, wk - Mod diss sulf clots, F - v.wk gr clay coating on fx. |
| | | No blk phyllite<br>105.5 - 107.0 Gr reworked epiclastic Tuff (Bud?)/(Tos?)<br>107.0 - 118.5' Mixed Tos + LBT + Vitrophyre clasts<br>Tos: Gr - Lt gr Cg reworked epiclastic Tuff w/ minor blk phyllite clasts; LBT: fg weakly laminated + br Autobxa w/ clast ghosts; Vitrophyre: v.fg wh Clay. | | | 105.5 - South Ridge Fault Zone<br>105.5 - 107.0 Milled Bxa; Well rounded, epiclastic Clast (Bud?) healed by gry - gr $SiO_2$<br>116.2 - 118.5' Rubble Bxa; Mostly Clast supported, Heterolith, Subangular LBT + Tos + Vit. Clasts healed by semi transparent $SiO_2$. | 96 - 100.0 Str $SiO_2$ + barite + bladed Marc ± gr clay Vn & stkwk,<br>100 - 101.3' wk $SiO_2$ + sulf vnlets<br>Mod diss sulf patches<br>101.3 - 105.5' v.Str Vuggie Bladed Marc + $SiO_2$ + Barite Vn & stkwk<br>116.2 - 119.5' Mod Bladed Marc + py diss in $SiO_2$ Mtx. |

ANALYTICAL DATA

| FROM | TO | W | Au | Ag | Au2 |
|---|---|---|---|---|---|
| 50.0 | 52.5 | | | | |
| 52.5 | 56.0 | | | | |
| 56.0 | 61.0 | | | | |
| 61.0 | 65.0 | | | | |
| 65.0 | 67.0 | | | | |
| 67.0 | 69.0 | | | | |
| 69.0 | 72.5 | | | | |
| 72.5 | 75.0 | | | | |
| 75.0 | 80.0 | | | | |
| 80.0 | 86.0 | | | | |
| 86.0 | 88.7 | | | | |
| 88.7 | 90.0 | | | | |
| 90.0 | 95.0 | | | | |
| 95.0 | 98.0 | | | | |
| 98.0 | 100.0 | | | | |
| 100.0 | 101.3 | | | | |
| 101.3 | 105.5 | | | | |
| 105.5 | 107.0 | | | | |
| 107.0 | 110.0 | | | | |
| 110.0 | 115.0 | | | | |
| 115.0 | 118.5 | | | | |

HOLE NUMBER D-224-98 PAGE 3 OF 3

| LITH. | OX/RED. | LITHOLOGY | FT | GRAPHIC LOG | STRUCTURE | ALTERATION AND MINERALIZATION | ANALYTICAL DATA FROM | TO | W | Au | Ag | Au2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Reduced | 118.5 ~ 123.3 LBT: Pinkish Tan fg massive Tuff | | | | | 118.5 | 123.3 | | | | |
| | | 123.3 - 127.9' TOS Br Cg epiclastic reworked tuff & abundant blk phyllite clasts. | 125 | | | 123.3 - 127.9 wk - mod diss silf bleach. | 123.3 | 127.9 | | | | |
| | | 127.9 - 129.9' Milled Bxa: Gry gr $SiO_2$ flooded w/ reworked gry gr $SiO_2$ rounded clasts. | 130 | 55° SRF Upper Plane | 123.3 - 127.9' Milled Bxa: Subround TOS clasts healed by gr $SiO_2$ + Rx flour Mtx, Mod Mylonitic Text. 127.9' Upper SRF Plane | 127.9 - 129.9 str leaching of MTX w/ wk wh clay coating in Vugs. | 127.9 | 129.9 | | | | |
| | | 129.9 - 135.0' LBT: Fg Massive, Pinkish Tan ± Olive brn Fg equigranular massive Tuff. 129.9 - 135.0' Mostly clast supported subangular clasts healed by semitranslucent $SiO_2$ | 135 | | Banded Gry-Wh $SiO_2$ Vn w/ Slick surface @ Wh/gry $SiO_2$ contact w/ fg sulf coating on Slick. | 129.9 - 135.0 Mod Leaching w/ wh clay & stibnite vug filling. | 129.9 | 135.0 | | | | |
| | | T.D. 135' | | | | | | | | | | |

# HECLA MINING COMPANY – ROSEBUD PROJECT
## GEOTECHNICAL DRILL LOG

HOLE # D-224-98 DATE: 5/28/98 LOGGED BY: Brian W. Morris PAGE 1 OF ____

| 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 | 94.0 | 94.0 | 72.3 | | | | | | | | | | |
| 5 | 10 | 100.0 | 100.0 | 68.0 | | | | | | | | | | |
| 10 | 15 | 98.0 | 98.0 | 87.8 | | | | | | | | | | |
| 15 | 20 | 100.0 | 100.0 | 84.0 | | | | | | | | | | |
| 20 | 25 | 96.0 | 96.0 | 56.3 | | | | | | | | | | |
| 25 | 30 | 94.0 | 94.0 | 27.7 | | | | | | | | | | |
| 30 | 35 | 98.0 | 98.0 | 81.6 | | | | | | | | | | |
| 35 | 40 | 94.0 | 94.0 | 85.1 | | | | | | | | | | |
| 40 | 45 | 96.0 | 96.0 | 89.6 | | | | | | | | | | |
| 45 | 50 | 98.0 | 98.0 | 81.6 | | | | | | | | | | |
| 50 | 55 | 88.0 | 88.0 | 61.4 | | | | | | | | | | |

# HECLA MINING COMPANY – ROSEBUD PROJECT
## GEOTECHNICAL DRILL LOG

HOLE # D-224-98 DATE: 5/28/98 LOGGED BY: BWM PAGE 2 OF 2

| DRILL RUN FROM | DRILL RUN TO | SOLID CORE RECOVERY (%) | TOTAL CORE RECOVERY (%) | ROD | 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 | 90.0 | 90.0 | 86.7 | | | | | | | | | | |
| 60 | 65 | 100.0 | 100.0 | 30.0 | | | | | | | | | | |
| 65 | 72.5 | 106.7 | 106.7 | 75.0 | | | | | | | | | | |
| 72.5 | 80.0 | 100.0 | 100.0 | 89.3 | | | | | | | | | | |
| 80.0 | 90.0 | 97.0 | 97.0 | 68.0 | | | | | | | | | | |
| 90.0 | 100.0 | 92.0 | 92.0 | 50.0 | | | | | | | | | | |
| 100.0 | 105.5 | 89.1 | 89.1 | 69.4 | | | | | | | | | | |
| 105.5 | 115.0 | 96.8 | 96.8 | 77.2 | | | | | | | | | | |
| 115.0 | 125 | 90.0 | 90.0 | 71.1 | | | | | | | | | | |
| 125 | 135 | 92.0 | 92.0 | 51.1 | | | | | | | | | | |
| | | | | | | | | | | | | | | |

AMERICAN ASSAY LABORATORIES

# PROVISIONAL REPORT SP049095

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-224-98 RECEIVED : 8 JUN 1998

No. SAMPLES : 36 REPORTED : 15 JUN 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.



06/15/1998 14:13 7023561413 AMERICAN ASSAY LABS PAGE 01
7023561413

AMERICAN ASSAY LABORATORIES

# PROVISIONAL REPORT SP049095

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-224-98

REPORTED : 15 JUN 1998

| SAMPLES | Au(OZ) | Au(RZ) | AuGRAV | Ag(OZ) |
|---|---|---|---|---|
| D-224-98 00-05 | 0.010 | | | 0.03 |
| D-224-98 05-10 | 0.015 | 0.022 | | 0.09 |
| D-224-98 10-15 | 0.007 | | | 0.04 |
| D-224-98 15-20 | 0.005 | 0.018 | | 0.03 |
| D-224-98 20-25 | 0.003 | | | 0.03 |
| D-224-98 25-30 | 0.002 | 0.003 | | 0.03 |
| D-224-98 30-35 | <0.001 | | | 0.03 |
| D-224-98 35-40 | 0.001 | | | 0.03 |
| D-224-98 40-45 | 0.006 | 0.008 | | 0.03 |
| D-224-98 45-50 | 0.005 | | | 0.03 |
| D-224-98 50.0-52.5 | 0.004 | | | 0.02 |
| D-224-98 52.5-56.0 | 0.004 | | | 0.03 |
| D-224-98 56-61 | 0.007 | | | 0.06 |
| D-224-98 61-65 | 0.004 | | | 0.04 |
| D-224-98 65-67 | 0.003 | | | 0.03 |
| D-224-98 67-69 | 0.012 | 0.013 | | 0.11 |
| D-224-98 69.0-72.5 | 0.006 | | | 0.03 |
| D-224-98 72.5-75.0 | 0.004 | | | 0.02 |
| D-224-98 75-80 | 0.003 | | | 0.04 |
| D-224-98 80-86 | 0.004 | | | 0.03 |
| D-224-98 86.0-88.7 | 0.007 | 0.008 | | 0.03 |
| D-224-98 88.7-90.0 | 0.004 | | | 0.12 |
| D-224-98 90-95 | 0.004 | | | 0.10 |
| D-224-98 95-98 | 0.007 | | | 0.08 |
| D-224-98 98-100 | 0.030 | 0.030 | | 0.25 |



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AMERICAN ASSAY LABORATORIES

# PROVISIONAL REPORT SP0490095

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-224-98

REPORTED : 15 JUN 1998

| SAMPLES | Au(OZ) | Au(RZ) | AuGRAV | Ag(OZ) | |
|---|---|---|---|---|---|
| D-224-98 100.0-101.3 | 0.004 | | | 0.06 | 101.3-105.5' = 4.2@ |
| D-224-98 101.3-105.5 | 0.414 | 0.366 | 0.399 | 0.96 | |
| D-224-98 105.5-107.0 | 0.062 | | 0.067 | 0.68 | |
| D-224-98 107-110 | 0.007 | | | 0.08 | |
| D-224-98 110-115 | 0.011 | | | 0.31 | |
| D-224-98 115.0-118.5 | 0.053 | | 0.232 | 0.03 | |
| D-224-98 118.5-123.3 | 0.039 | | | 0.04 | |
| D-224-98 123.3-127.9 | 0.007 | | | 0.07 | |
| D-224-98 127.9-129.9 | 0.002 | | | 0.16 | |
| D-224-98 129.9-135.0 | 0.004 | 0.004 | | 0.48 | |
| ☆ 33755 | 0.545 | | | 4.94 | |



06/15/1998 14:13 7023561413 AMERICAN ASSAY LABS PAGE 03

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 0049095-IN
INVOICE DATE: 06/15/98

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-224-98 | DEVELOPMENT | NET 30 - DUE IN U.S. DOLLARS |

| QUANTITY | DESCRIPTION | PRICE | AMOUNT |
|---|---|---|---|
| 36 | SAMPLES RECEIVED | .00 | .00 |
| 35 | DRYING | 1.00 | 35.00 |
| 35 | JAW CRUSHING CHARGE | 1.30 | 45.50 |
| 35 | COARSE MILLING CHARGE | 4.50 | 157.50 |
| 35 | SPLITTING CHARGE | 2.40 | 84.00 |
| 35 | RING MILLING CHARGE | 2.00 | 70.00 |
| 36 | Au (1 A.T. FIRE ASSAY) | 8.00 | 288.00 |
| 3 | Au ANALYSES/GRAVIMETRIC | 8.75 | 26.25 |
| 36 | HYDROCHLORIC/NITRIC DIGESTION | 2.00 | 72.00 |
| 36 | Ag ANALYSES | 1.00 | 36.00 |

86-5110-477

| | |
|---|---|
| NET INVOICE: | 814.25 |
| LESS DISCOUNT: | 162.85 |
| FREIGHT: | .00 |
| INVOICE TOTAL: | 651.40 |

xAMERICAN ASSAY LABORATORIES

# ANALYSIS REPORT SP049095

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-224-98 RECEIVED : 8 JUN 1998

No. SAMPLES : 36 REPORTED : 15 JUN 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 SP049095

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-224-98

REPORTED : 15 JUN 1998

| SAMPLES | Au(OZ) FA30 OPT | Au(RZ) FA30 OPT | AuGRAV GRAV OPT | Ag(OZ) D210 OPT |
|---|---|---|---|---|
| D-224-98 00-05 | 0.010 | | | 0.03 |
| D-224-98 05-10 | 0.015 | 0.022 | | 0.09 |
| D-224-98 10-15 | 0.007 | | | 0.04 |
| D-224-98 15-20 | 0.005 | 0.018 | | 0.03 |
| D-224-98 20-25 | 0.003 | | | 0.03 |
| D-224-98 25-30 | 0.002 | 0.003 | | 0.03 |
| D-224-98 30-35 | <0.001 | | | 0.03 |
| D-224-98 35-40 | 0.001 | | | 0.03 |
| D-224-98 40-45 | 0.006 | 0.008 | | 0.03 |
| D-224-98 45-50 | 0.005 | | | 0.03 |
| D-224-98 50.0-52.5 | 0.004 | | | 0.02 |
| D-224-98 52.5-56.0 | 0.004 | | | 0.03 |
| D-224-98 56-61 | 0.007 | | | 0.06 |
| D-224-98 61-65 | 0.004 | | | 0.04 |
| D-224-98 65-67 | 0.003 | | | 0.03 |
| D-224-98 67-69 | 0.012 | 0.013 | | 0.11 |
| D-224-98 69.0-72.5 | 0.006 | | | 0.03 |
| D-224-98 72.5-75.0 | 0.004 | | | 0.02 |
| D-224-98 75-80 | 0.003 | | | 0.04 |
| D-224-98 80-86 | 0.004 | | | 0.03 |
| D-224-98 86.0-88.7 | 0.007 | 0.008 | | 0.03 |
| D-224-98 88.7-90.0 | 0.004 | | | 0.12 |
| D-224-98 90-95 | 0.004 | | | 0.10 |
| D-224-98 95-98 | 0.007 | | | 0.08 |
| D-224-98 98-100 | 0.030 | 0.030 | | 0.25 |

AMERICAN ASSAY LABORATORIES

# ANALYSIS REPORT SP049095

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-224-98

REPORTED : 15 JUN 1998

| SAMPLES | Au(OZ) FA30 OPT | Au(RZ) FA30 OPT | AuGRAV GRAV OPT | Ag(OZ) D210 OPT |
|---|---|---|---|---|
| D-224-98 100.0-101.3 | 0.004 | | | 0.06 |
| D-224-98 101.3-105.5 | 0.414 | 0.366 | 0.399 | 0.96 |
| D-224-98 105.5-107.0 | 0.062 | | 0.067 | 0.68 |
| D-224-98 107-110 | 0.007 | | | 0.08 |
| D-224-98 110-115 | 0.011 | | | 0.31 |
| D-224-98 115.0-118.5 | 0.053 | | 0.232 | 0.03 |
| D-224-98 118.5-123.3 | 0.039 | | | 0.04 |
| D-224-98 123.3-127.9 | 0.007 | | | 0.07 |
| D-224-98 127.9-129.9 | 0.002 | | | 0.16 |
| D-224-98 129.9-135.0 | 0.004 | 0.004 | | 0.48 |
| 33755 | 0.545 | | | 4.94 |

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# ANALYSIS REPORT SP049095

American Assay Laboratories

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

## HECLA MINING COMPANY

COPIES TO : KURT ALLEN

CLIENT REFERENCE No: D-224-98 RECEIVED : 8 JUN 1998

No. SAMPLES : 36 REPORTED : 15 JUN 1998

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 |
| AuGRAV | GRAV | 15% | OPT | 0.001 |
| Ag(OZ) | D210 | 10% | OPT | 0.02 |

SIGNATORY : Susan King M.S.

AMERICAN ASSAY LABORATORIES

# ANALYSIS REPORT SP049095

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-224-98

REPORTED : 15 JUN 1998

| SAMPLES | Au(OZ) FA30 OPT | Au(RZ) FA30 OPT | AuGRAV GRAV OPT | Ag(OZ) D210 OPT |
|---|---|---|---|---|
| D-224-98 00-05 | 0.010 | | | 0.03 |
| D-224-98 05-10 | 0.015 | 0.022 | | 0.09 |
| D-224-98 10-15 | 0.007 | | | 0.04 |
| D-224-98 15-20 | 0.005 | 0.018 | | 0.03 |
| D-224-98 20-25 | 0.003 | | | 0.03 |
| D-224-98 25-30 | 0.002 | 0.003 | | 0.03 |
| D-224-98 30-35 | <0.001 | | | 0.03 |
| D-224-98 35-40 | 0.001 | | | 0.03 |
| D-224-98 40-45 | 0.006 | 0.008 | | 0.03 |
| D-224-98 45-50 | 0.005 | | | 0.03 |
| D-224-98 50.0-52.5 | 0.004 | | | 0.02 |
| D-224-98 52.5-56.0 | 0.004 | | | 0.03 |
| D-224-98 56-61 | 0.007 | | | 0.06 |
| D-224-98 61-65 | 0.004 | | | 0.04 |
| D-224-98 65-67 | 0.003 | | | 0.03 |
| D-224-98 67-69 | 0.012 | 0.013 | | 0.11 |
| D-224-98 69.0-72.5 | 0.006 | | | 0.03 |
| D-224-98 72.5-75.0 | 0.004 | | | 0.02 |
| D-224-98 75-80 | 0.003 | | | 0.04 |
| D-224-98 80-86 | 0.004 | | | 0.03 |
| D-224-98 86.0-88.7 | 0.007 | 0.008 | | 0.03 |
| D-224-98 88.7-90.0 | 0.004 | | | 0.12 |
| D-224-98 90-95 | 0.004 | | | 0.10 |
| D-224-98 95-98 | 0.007 | | | 0.08 |
| D-224-98 98-100 | 0.030 | 0.030 | | 0.25 |

AMERICAN ASSAY LABORATORIES

# ANALYSIS REPORT SP049095

American Assay Laboratories

CLIENT : HECLA MINING COMPANY
PROJECT : ROSEBUD DEVELOPMENT
REFERENCE : D-224-98

REPORTED : 15 JUN 1998

| SAMPLES | Au(OZ) FA30 OPT | Au(RZ) FA30 OPT | AuGRAV GRAV OPT | Ag(OZ) D210 OPT |
|---|---|---|---|---|
| D-224-98 100.0-101.3 | 0.004 | | | 0.06 |
| D-224-98 101.3-105.5 | 0.414 | 0.366 | 0.399 | 0.96 |
| D-224-98 105.5-107.0 | 0.062 | | 0.067 | 0.68 |
| D-224-98 107-110 | 0.007 | | | 0.08 |
| D-224-98 110-115 | 0.011 | | | 0.31 |
| D-224-98 115.0-118.5 | 0.053 | | 0.232 | 0.03 |
| D-224-98 118.5-123.3 | 0.039 | | | 0.04 |
| D-224-98 123.3-127.9 | 0.007 | | | 0.07 |
| D-224-98 127.9-129.9 | 0.002 | | | 0.16 |
| D-224-98 129.9-135.0 | 0.004 | 0.004 | | 0.48 |
| 33755 | 0.545 | | | 4.94 |

SP

# SUBMITTAL FORM


American Assay Laboratories

Geochemical • Environmental • Metallurgical

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Santiago, Chile
Mendoza, Argentina


Company: Rosebud Mine

Address: P.O. Box 2610

City Winnemucca State NV Zip 89446

Telephone Number: (702) 623-6916 Fax Number: (702) 623-6967

Project Name: Development Purchase Order Number:

Date Submitted: 6/05/98 Number of Samples: 35

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

| D-224-98 SAMPLE IDENTIFICATION | | | TYPE | ELEMENTS REQUIRED |
|---|---|---|---|---|
| 0.0-5.0 | 67.0-69.0 | 115.0-118.5 | core | |
| 5.0-10.0 | 69.0-72.5 | 118.5-123.3 | | |
| 10.0-15.0 | 72.5-75.0 | 123.3-127.9 | | |
| 15.0-20.0 | 75.0-80.0 | 127.9-129.9 | | |
| 20.0-25.0 | 80.0-86.0 | 129.9-135.0 | | |
| 25.0-30.0 | 86.0-88.7 | | | |
| 30.0-35.0 | 88.7-90.0 | | | |
| 35.0-40.0 | 90.0-95.0 | | | |
| 40.0-45.0 | 95.0-98.0 | | | |
| 45.0-50.0 | 98.0-100.0 | | | |
| 50.0-52.5 | 100.0-101.3 | | | |
| 52.5-56.0 | 101.3-105.5 | | | |
| 56.0-61.0 | 105.5-107.0 | | | |
| 61.0-65.0 | 107.0-110.0 | | | |
| 65.0-67.0 | 110.0-115.0 | | | |

**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:**

Au-Ag ~~Rosebud~~ According to Rosebud protocol.

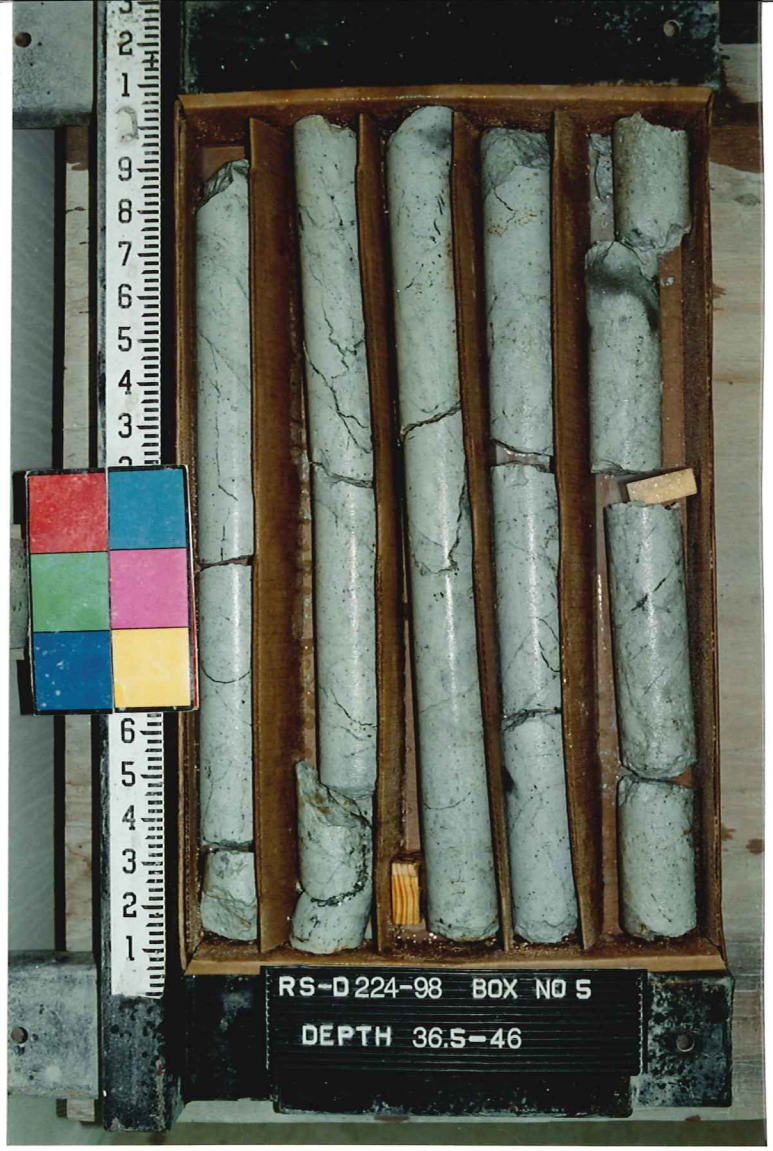
CLIENT FILE COPY

| | | | |
|---|---|---|---|
| D-224-98 | 0 | 72.5 | 305.7 |
| | 70 | 72.2 | 306.7 |
| | 135 | 72.5 | 306.7 |

10'
15'
RS-D224-98 BOX NO 2
DEPTH 9-18

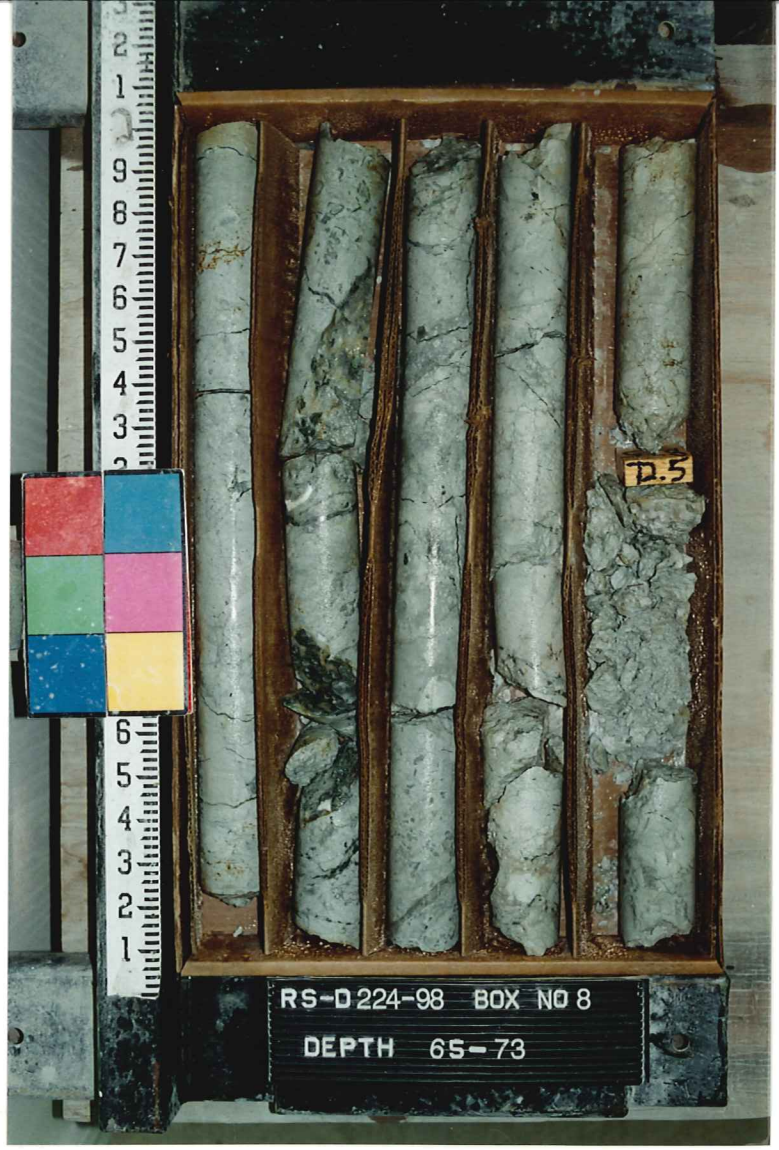
5'
RS-D224-98 BOX NO 1
DEPTH 0-9

5'
RS-D224-98 BOX NO3
DEPTH 18-27


RS-D 224-98 BOX NO 5
DEPTH 36.5-46

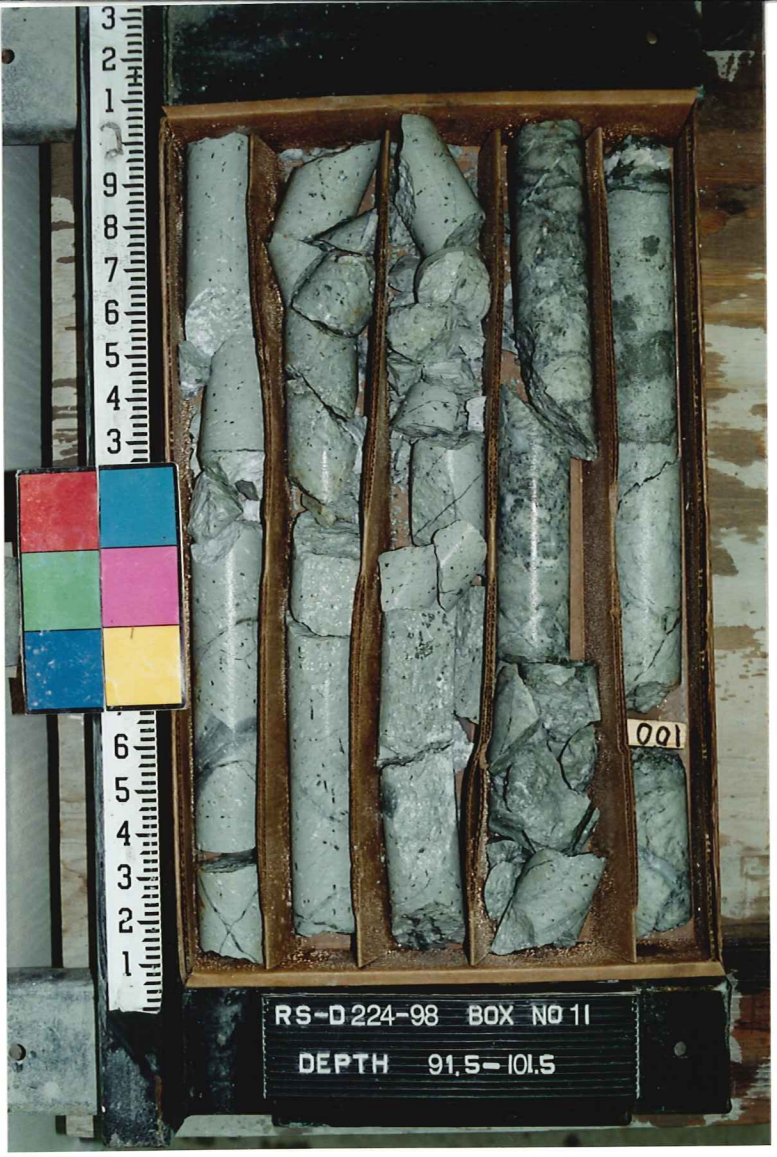
30'
35'
RS-D 224-98 BOX NO 4
DEPTH 27-36.5

RS-D 224-98 BOX NO 6
DEPTH 46-55.5
50
55

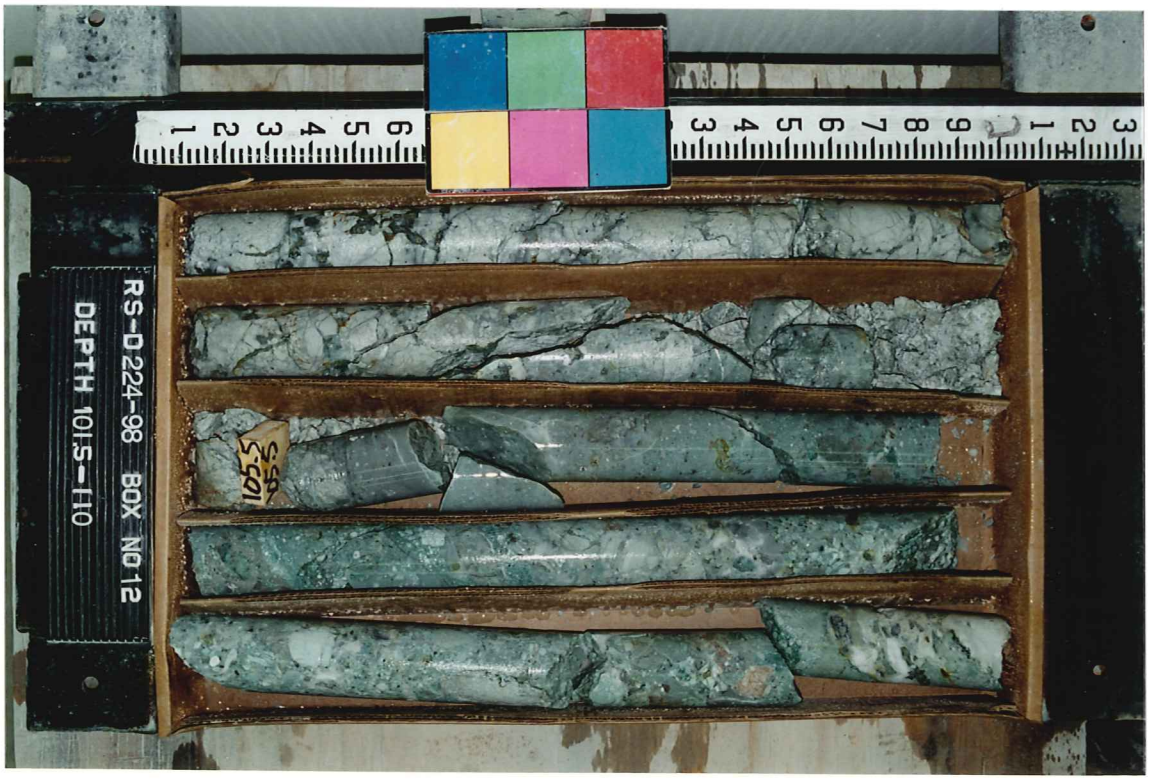

72.5
RS-D 224-98 BOX NO 8
DEPTH 65-73

RS-D 224-98 BOX NO 7
DEPTH 55.5-65

RS-D 224-98 BOX NO 9
DEPTH 73-82.5


RS-D 224-98 BOX NO 11
DEPTH 91.5-101.5
100

RS-D 224-98 BOX NO 10
DEPTH 82.5-91.5
90


RS-D 224-98 BOX NO 12
DEPTH 101.5-110
S-90
S-100

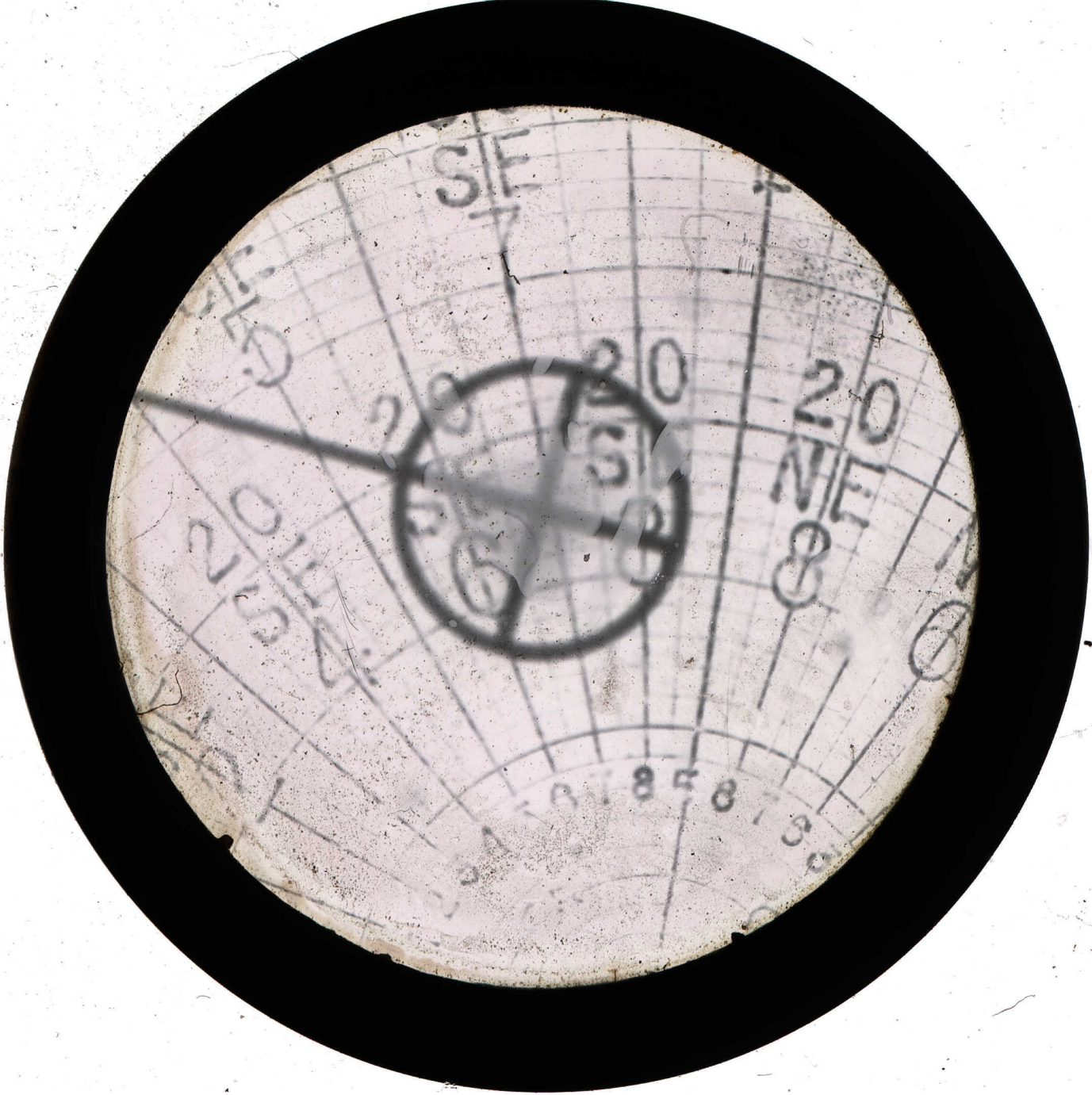
RS-D 224-98 BOX NO 14
DEPTH 120 - 130

RS-D 224-98 BOX NO 13
DEPTH 110-120

RS-D 224-98 BOX NO 15
DEPTH 130-135 TD

SINGLE SH
PHOTO DISC

COMPANY Hecla
WELL NAME D-22B-94
LEASE
TAKEN BY
DEPTH 135'
DATE 4-9-94
DRIFT ANGLE ±73°
DIRECTION
TYPE
JOB NO.
HI-1408


SE
20
NE
8

# SINGLE SHOT
# PHOTO DISC RECORD

COMPANY Hecla

WELL NAME D-224-98

LEASE

TAKEN BY

DEPTH 70'

DATE 4-9-98

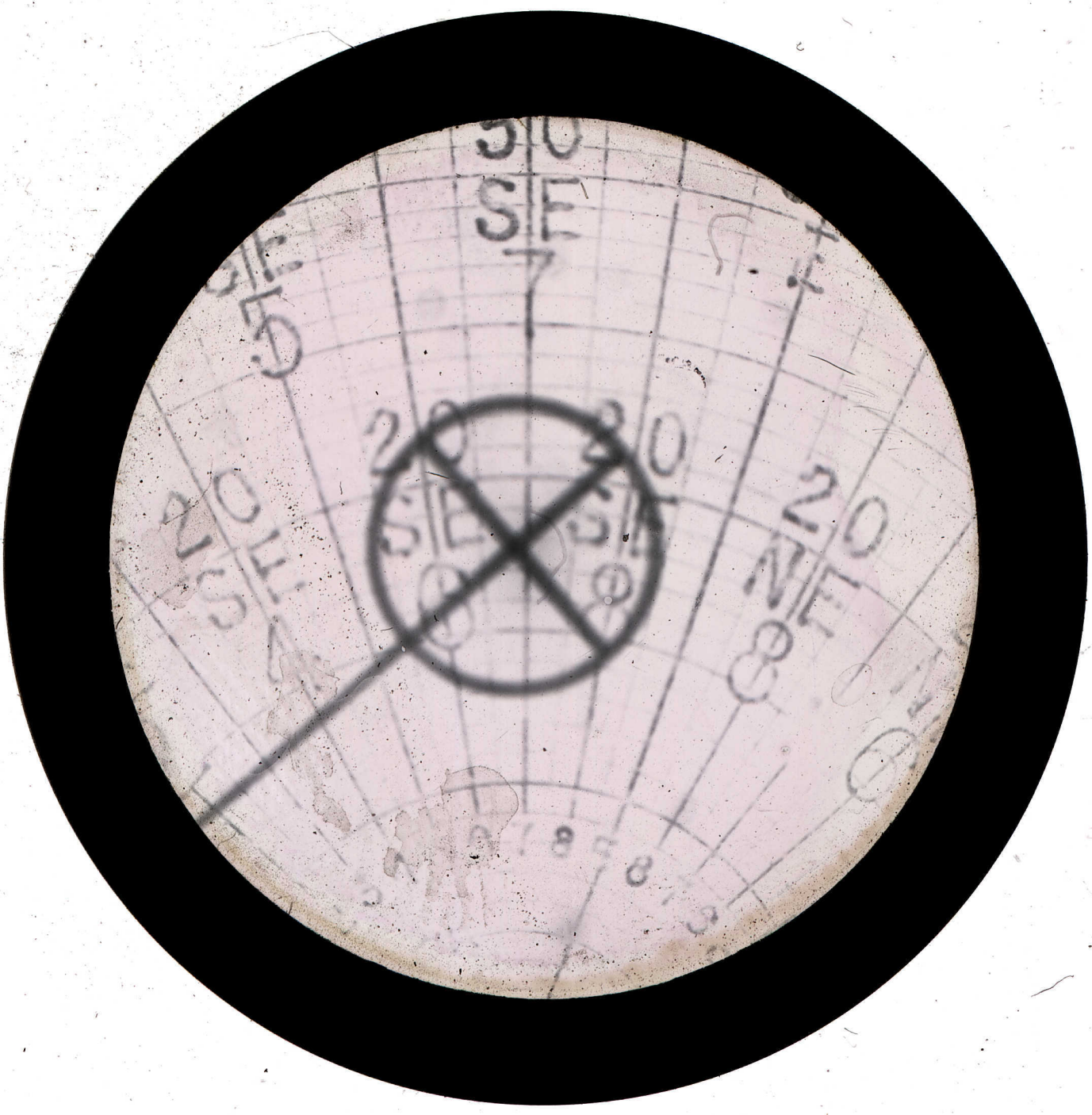
DRIFT ANGLE +73°

DIRECTION

TYPE

JOB NO.

HI-1408


SE
SE
NE
NE

# SINGLE SHOT
# PHOTO DISC RECORD

COMPANY Hecla

WELL NAME D-224-98

LEASE

TAKEN BY

DEPTH Collar

DATE 4-9-98

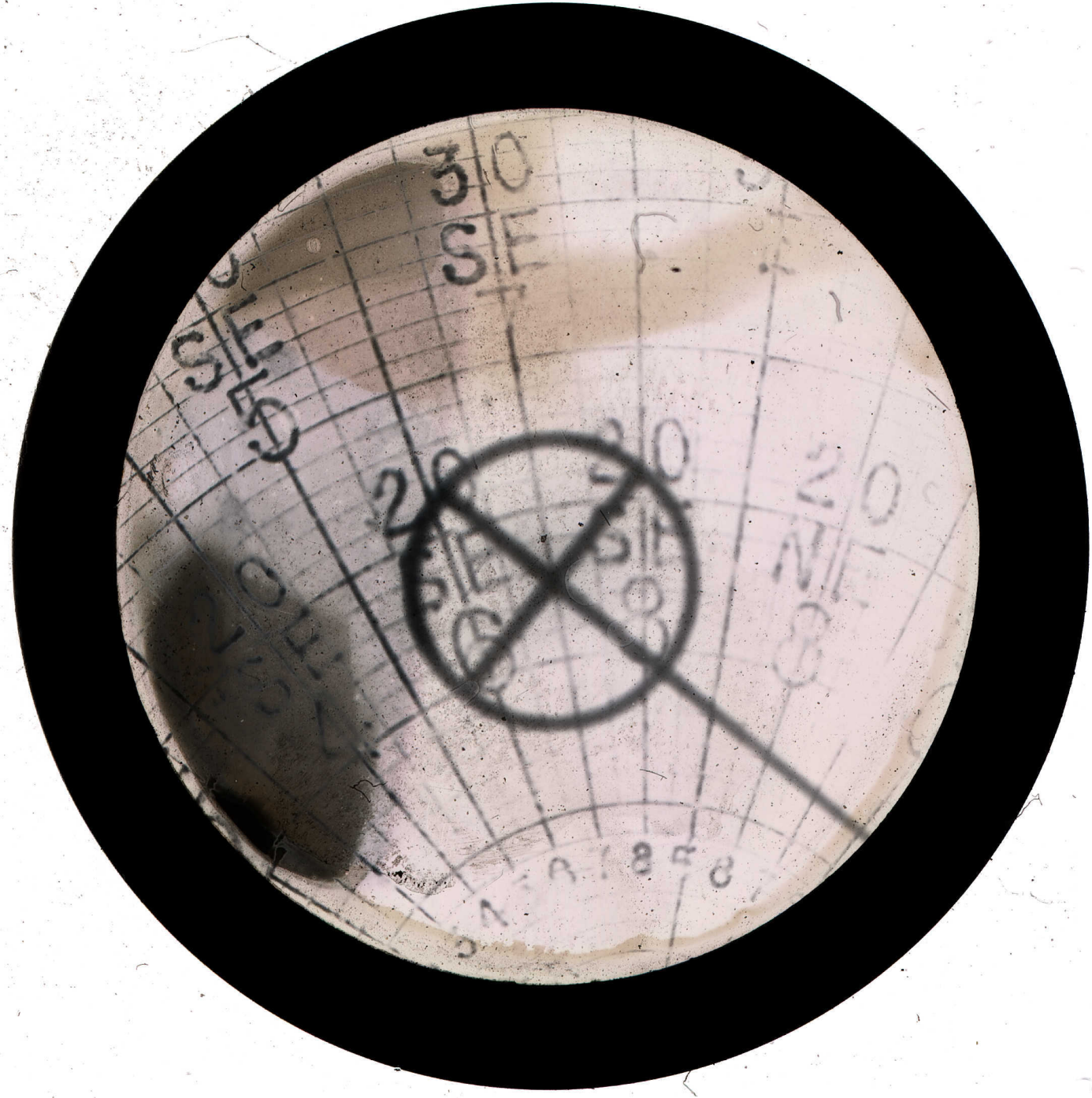
DRIFT ANGLE +73°

DIRECTION

TYPE

JOB NO.

HI-1408


30
SE
SE
20
NE