60006789

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-1 (No. 3) - Dry Hole |
| AUTHOR | C. Muerhoff; S. Fairclotth |
| DATE OF DOC(S) | 1994 |
| MULTI_DIST Y / N?<br>Additional Dist_Nos: | |
| QUAD_NAME | Sulphur 7.5' |
| P_M_C_NAME<br>(mine, claim & company names) | Rosebud Mine; Hecla Mining Co.; Rosebud Project |
| COMMODITY<br>If not obvious | gold; silver |
| NOTES | drill logs; geology; assay; total depth 400' receipts, handwritten notes<br>9 p. |

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 9/30/08
Initials Date

DB:
Initials Date

SCANNED:
Initials Date

Revised: 1/22/08

D-1 (#3) - DRY HOLE

60000789
4010

6000 0789

HOLE D-1

# MONITORING WELL INSTALLATION SHEET

JOB NO. ROSEBUD

PIEZOMETER NO. P- DRY HOLE NO PIEZOMETER INSTALLED

LOCATION: NE 1/4, SW 1/4, SEC 24, T34N, R29E

DATE OF INSTALLATION: N/A

TOTAL DEPTH: 400'

PIEZOMETER TYPE: NONE

ELEVATION OF THE PIPE TOP:

ELEVATION OF THE TIP:

ELEVATION OF THE GROUND SURFACE:

WATER LEVEL AT COMPLETION:
DEPTH (FT.):
ELEVATION (FT.):

FLUSHING OF THE HOLE:

PROTECTION STEEL CASING:
O. D.:
FROM:
TO:

CLIENT: HECLA

DRILLING CONTRACTOR: HUMBOLDT DRILLING

FIELD ENGINEER: C MUERHOFF / L. ROBERTS

DRILLING SYSTEM: RC

DRILLING TOOLS: 5 1/2" HAMMER

PIPE MATERIAL: PVC O.D. I.D.

LENGTH OF SECTIONS:

JOINING METHOD:

PERFORATION TYPE:

SIZE OF SLOTS: NO. OF SLOTS:

PERFORATED AREA:

NON PERFORATED PIPES: FROM: TO:

PERFORATED PIPES: FROM: TO:

GRAVEL PACK: FROM: TO:

TYPE AND DEPTH OF SEALING:

HYDRO-GEO CONSULTANTS

OWNER: HECLA MINING COMPANY

PROJECT: ROSEBUD - PERSHING COUNTY, NV

LOCATION: NE 1/4, SW 1/4, SEC 24, T34N, R29E

COORDINATES N NOT SURVEYED YET E ELEV.

BORING NO. D-1 1-3

TYPE OF DRILLING RC

ANGLE FROM HORIZONTAL -90°

PAGE 1 OF 3

| ELEVATION / DEPTH | GRAPHIC LOG | DESCRIPTION OF ROCK MATERIAL | DESCRIPTION OF ROCK DEFECTS | WELL CONSTRUCTION | RQD (%) 25 50 75 | FRACTURES PER FOOT 1 3 9 27 | WEATHERING (SEE BELOW) | STRENGTH (SEE BELOW) | SAMPLE INTERVAL | OTHER DATA: ANALYTICAL Au (opt) | OTHER DATA: ANALYTICAL Ag (opt) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | | BADGER FM. REDDISH-BROWN SAND/SILT W/ OCCASSIONAL SMALL ROUNDED RHYOLITIC CLASTS. | CASED 20' | | | | | | 0'-400' IN TEN-FOOT INCREMENTS. | ALL Au ASSAYS <.001 | All Ag Assays <.02 |
| 20 | | | | | | | | | | | |
| 40 | | | | | | | | | | | |
| 60 | | SAME AS ABOVE, EXCEPT W/ ~50% CLAY CONTENT. | | | | | | | | | |
| | | GREY VFG TUFF W/ ±20% CLAY CONTENT & V. MINOR VFG PYRITE | | BACKFILLED WITH "QUICK-SEAL" CEMENT | | | | | | | |
| 80 | | ALL RETURN IS GREY "STICKY" CLAYS | | | | | | | | | |
| | | SAME AS 70'-80' | | | | | | | | | |
| 100 | | MASSIVE GREY "STICKY" CLAYS W/ NO ROCK FRAGMENTS (ROSEBUD SHEAR ZONE?) | | | | | | | | | |
| 120 | | | TEST #1 @120', 23 gpm | | | | | | | | |
| 140 | | | TEST #2 @140', 11 gpm | | | | | | | | |
| 160 | | | TEST #3 @160', NO WATER | | | | | | | | |

XW — VW
HW — W
MW — MS
SW — S
FR — VS

# LOG OF BORING

HYDRO-GEO CONSULTANTS

OWNER

PROJECT

LOCATION

COORDINATES N E ELEV.

BORING NO. D-1

TYPE OF DRILLING

ANGLE FROM HORIZONTAL

PAGE 2 OF 3

| ELEVATION / DEPTH | GRAPHIC LOG | DESCRIPTION OF ROCK MATERIAL | DESCRIPTION OF ROCK DEFECTS | WELL CONSTRUCTION | RQD (%) 25 50 75 | FRACTURES PER FOOT 3 10 27 | WEATHERING (SEE BELOW) | STRENGTH (SEE BELOW) | OTHER DATA | |
|---|---|---|---|---|---|---|---|---|---|---|
| 180 | | 'MASSIVE' CLAYS CONTINUE, ONLY COLOR CHANGES TO DARK GREEN (FW OF ROSEBUD SHEAR?) | TEST #4 @180', NO WATER | | | | | | All Au Assays <.001 | All Ag Assays <.02 |
| 200 | | REDDISH-GREY VFG TUFF. WEAKLY PROPYLITIZED W/ NO DISCERNIBLE SULFIDES. OCCASIONAL LIMONITE COATING ON TUFF GRAINS. | TEST #5 @200', 2 gpm | | | | | | | |
| 220 | | | TEST #6 @220', 4 gpm | BACK FILLED WITH "QUICK-SEAL" CEMENT | | | | | | |
| 240 | | | TEST #7 @240', 4 gpm | | | | | | | |
| | | REDDISH-GREY CLAYS | | | | | | | | |
| 260 | | DARK GREEN CLAYS | TEST #8 @260', 6 gpm | | | | | | | |
| 280 | | LIGHT GREY FG TUFF w/ ± ½% EUHEDRAL PYRITE. | TEST #9 @290', 3 gpm | | | | | | | |
| 300 | | GREY CLAY | TEST #10 @300', 5 gpm | | | | | | | |
| 320 | | GREY FG TUFF. SAME AS INTERVAL 200'-230' | TEST #11 @320', 7 gpm | | | | | | | |

SW — VW
FW — W
NW — WS
SW — S
FR — VS

# LOG OF BORING

HYDRO-GEO CONSULTANTS

OWNER

PROJECT

LOCATION

COORDINATES N E ELEV.

BORING NO. D-1

TYPE OF DRILLING

ANGLE FROM HORIZONTAL

PAGE 3 OF 3

| ELEVATION / DEPTH | GRAPHIC LOG | DESCRIPTION OF ROCK MATERIAL | DESCRIPTION OF ROCK DEFECTS | WELL CONSTRUCTION | 25 50 75 RQD (%) | FRACTURES PER FOOT 1 3 9 27 | WEATHERING (SEE BELOW) | STRENGTH (SEE BELOW) | OTHER DATA | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | GREY FG TUFF CONTINUES | | | | | | | All Au Assays <.001 | All Ag Assays <.02 |
| 340 | | | TEST #12 @340', 12 gpm → | | | | | | | |
| | | | | BACK-FILLED W/ "QUICK-SEAL" CEMENT | | | | | | |
| 360 | | | TEST #13 @360', 14 gpm → | | | | | | | |
| 380 | | | TEST #14 @380', 8 gpm → | | | | | | | |
| | | BROWNISH-GREY CLAYS | | | | | | | | |
| 400 | | SAME AS INTERVAL 310'-380' EXCEPT W/±30% CLAY CONTENT. | TEST #15 @400', 9 gpm → | | | | | | | |
| | | T.D. 400' | | | | | | | | |

EW — VW
FW — W
NM — MS
SW — S
FR — VS

# LOG OF BORING

HYDRO-GEO CONSULTANTS

# HISTORY OF HOLE

Sheet ___ of ___

Job # ___ Boring # ~~MW-~~ DH 1

Date 5/17/94 Temperature 30 °F

Geologist J.N. / W.H. Weather [illegible]

Driller [illegible] Surface Elevation ___ Depth ___ to ___

Contractor [illegible] Drill Fluid [illegible] Casing Size [illegible] Bore Size 4" roll

Location [illegible] Type of Barrel ___

**BEGINNING OF SHIFT**

Time ___ Depth of Hole ___

Depth to WL ___ Depth to Casing ___

**END OF SHIFT**

Time ___ Hrs. Productive ___ Hrs. Delayed ___

Depth of Hole ___ Depth of Casing ___ Depth to WL ___

5/17/94 D-1

1:30 pm [illegible] 200' [illegible] - [illegible] 20' [illegible] No water (confined to thin clay seam)

2:25 pm hit brown clay & water ~ 1-2 gpm for approx 3-4 minutes

4:14 pm hit water @ 120' → 13 secs to fill 5 gal bucket ⇒ 23 gpm @ 85 psi downhole

4:33 pm test 2: 28 secs to fill 5 gal bucket @ 160' 11 gpm @ 90 psi downhole

4:47 pm 160' no water flow

5:02 pm 180' no water flow

5:20 pm 200' 2 min 30 secs to fill 5 gal bucket @ 75 psi downhole ⇒ 2 gpm

[illegible] change from gray cuttings to brownish/red

5:28 pm 215' color change back to gray

5:35 pm 220' [illegible] to fill 5 gal bucket @ 100 psi ⇒ 4 gpm

5:35 pm pulled rods all [illegible] - [illegible] for the day @ 220'

5/18/94 OVERCAST W/ SHOWERS

7:00 AM REPLACE RODS IN HOLE START DRILLING HARD BROWN FRAG

7:15 AM W.T. @ 240' 4.2 gpm 100 PSI DOWNHOLE

7:45 am W.T @ 260' 5.5 gpm 125 PSI DOWNHOLE

8:15 am W.T @ 280' 2.6 gpm 125 PSI DOWNHOLE COLOR CHANGES FROM BROWN - GREY

8:50 am W.T @ 300' 5.0 gpm 125 PSI DOWNHOLE

9:20 am W.T @ 320' 7.3 gpm @ 125 PSI DOWNHOLE

9:50 am 340' 11.5 gpm @ 125 PSI DOWNHOLE

10:25 am 360' 14.2 gpm @ 125 PSI DOWNHOLE

11:00 am 380' 8.3 gpm @ 125 PSI DOWNHOLE

11:30 am 400' 8.6 gpm @ 125 PSI DOWNHOLE.

11:45 am UNLOAD MUD & PIPE

2:45 pm TRIP MUD 400 lbs QUICK SEAL

3:00 pm MOVE

3:30 pm SET UP

5:30 pm SET CASING 20' RED & BROWN CLAY

5/19/94 OVERCAST W/ SHOWERS & HAIL ? MW-6

7:30 am - CHANGE TO 5 7/8 BIT

8:15 am - 40' RED/BROWN CLAYS

8:55 am - 80' RED/BROWN CLAYS MOIST

9:20 am - 120' RED/BROWN MOIST CLAY - NO [illegible]

9:45 am - 140' COLOR CHANGE - GREY/GREEN MOIST CLAY START INJECTION

10:[illegible] am - 160' GREY GREEN CLAYS

12:15 pm - 220' HIT $H_2O$ @ 6.5 gpm 100 PSI DOWNHOLE FOM/GREEN

12:44 pm - 240' W.T @ 240' = 18.9 gpm 100 PSI DOWNHOLE

1:10 pm - 260' WT @ 260' = 45.5 gpm 125 PSI DOWN HOLE RED/BROWN CLAY/GREY/GREEN

1:25 pm - 280' W.T. @ 280' = 50.0 gpm 125 PSI DOWN HOLE

1:50 pm - 300' WT @ 300' = 43 gpm 150 PSI DOWN HOLE

2:25 pm - 320' WT @ 320' = 50 gpm 150 PSI DOWN HOLE

3:10 pm - 340' WT @ 340' = 50 gpm 150 PSI DOWNHOLE

3:45 pm - 360' WT @ 360' = 50 gpm 150 PSI DOWNHOLE INC. RED/BROWN

4:10 pm - 380' WT @ 380' = 50 gpm

Checked by:

# HISTORY OF HOLE

Sheet ___ of ___

Job # ___ Date 5/17/94 Boring # ~~[illegible]~~ DH 1

ologist J.N. / W.H. Weather [illegible] Temperature 60 °F

iller [illegible] Surface Elevation ___ Depth ___ to ___

ntractor [illegible] Drill Fluid [illegible] Casing Size [illegible] Bore Size 4" rock

ocation [illegible] Type of Barrel ___

| BEGINNING OF SHIFT | | END OF SHIFT | |
|---|---|---|---|
| me ___ | Depth of Hole ___ | Time ___ | Hrs. Productive ___ Hrs. Delayed ___ |
| epth to WL ___ | Depth to Casing ___ | Depth of Hole ___ | Depth of Casing ___ Depth to WL ___ |

5-17-94 D-1

1:30 pm [illegible] for approx 3-4 minutes then no water (assumed to have clay seam)

2:45 pm hit brown clay & water ~ 1-2 gpm

4:14 pm hit water @ 120' → 13 secs to fill 5 gal bucket ⇒ 23 gpm @ 85 psi downhole

4:33 pm test: 28 secs to fill 5 gal bucket @ 160' 11 gpm [illegible] psi downhole

4:47 pm 160' no water flow

5:02 pm 180' no water flow

5:20 pm 200' 2 min 30 secs to fill 5 gal bucket @ 75 psi downhole ⇒ 2 gpm

color change from green surface to brown subsurface

5:28 pm 215' color change back to green

5:33 pm 220' 1 min 30 secs to fill 5 gal bucket @ 100 psi ⇒ 4 gpm

5:35 pm pulled rods off bottom - gain very dry @ 220'

5/18/94 ONGOING DRILLING SHOWERS

7:00 AM REPLACE RODS IN HOLE START DRILLING HARD BROWN FINE

7:15 am W.T @ 240' 4.2 gpm 100 PSI DOWNHOLE

7:45 am W.T @ 260' 5.5 gpm 125 PSI DOWNHOLE

8:15 am W.T @ 280' 2.6 gpm 125 PSI DOWNHOLE COLOR CHANGES FROM BROWN - GREY

8:50 am W.T @ 300' 5.0 gpm [illegible] PSI DOWNHOLE

9:20 am W.T @ 320' 7.3 gpm @ 125 PSI DOWNHOLE

9:50 am 340' 11.5 gpm @ 125 PSI DOWNHOLE

10:25 am 360' 14.2 gpm @ 125 PSI DOWNHOLE

11:00 am 380' 8.3 gpm @ 125 PSI DOWNHOLE

11:30 am 400' 8.6 gpm @ 125 PSI DOWNHOLE

11:45 am UNLOAD MUD & PIPE

2:45 pm TRIP MUD 400 lbs QUICK SEAL

3:00 pm MOVE

3:30 pm SET UP

5:30 pm SET CASING 20' RED & BROWN CLAY

# ANALYSIS REPORT

American Assay Laboratories Inc.

RENO: 1500 Glendale Ave,SPARKS 89431
P.O. Box 71060, RENO 89570
Ph (702)356 0606 Fax 3561413

HECLA MINING CO.

REPORT : SP 029241 2 Page(s) Date : 06/08/94

Client reference : #3 D-1 Project : ROSEBUD

Cost code :

Copies to : CHARLIE MUERHOFF

Samples : Type Preparation code
Received : 05/25/94

| Analysis | Code | Quality Parameter | Detection | Units |
|---|---|---|---|---|
| Au(OZ) | FA30 | Acc. 15 % | 0.001 | OZ/TON |
| Au(RZ) | FA30 | Acc. 15 % | 0.001 | OZ/TON |
| Ag(OZ) | D210 | Prec.10 % | 0.02 | OZ/TON |

QA Manager : Sue Faircloth M.S.

# ANALYSIS REPORT

American Assay Laboratories Inc.

REPORT : SP 029241



| Sample | Au(OZ) OZ/TON | Au(RZ) OZ/TON | Ag(OZ) OZ/TON |
|---|---|---|---|
| #3 0-10 | <0.001 | D-1 | <0.02 |
| #3 10-20 | <0.001 | | <0.02 |
| #3 20-30 | <0.001 | | <0.02 |
| #3 30-40 | <0.001 | | <0.02 |
| #3 40-50 | <0.001 | | <0.02 |
| #3 50-60 | <0.001 | | <0.02 |
| #3 60-70 | <0.001 | | <0.02 |
| #3 70-80 | <0.001 | <0.001 | <0.02 |
| #3 80-90 | <0.001 | | <0.02 |
| #3 90-100 | <0.001 | | <0.02 |
| #3 100-110 | <0.001 | | <0.02 |
| #3 110-120 | <0.001 | | <0.02 |
| #3 120-130 | <0.001 | | <0.02 |
| #3 130-140 | <0.001 | | <0.02 |
| #3 140-150 | <0.001 | | <0.02 |
| #3 150-160 | <0.001 | | <0.02 |
| #3 160-170 | <0.001 | | <0.02 |
| #3 170-180 | <0.001 | | <0.02 |
| #3 180-190 | <0.001 | | <0.02 |
| #3 190-200 | <0.001 | | <0.02 |
| #3 200-210 | <0.001 | <0.001 | <0.02 |
| #3 210-220 | <0.001 | | <0.02 |
| #3 220-230 | <0.001 | | <0.02 |
| #3 230-240 | <0.001 | | <0.02 |
| #3 240-250 | <0.001 | | <0.02 |

Please refer to the cover sheet for further analysis details

# ANALYSIS REPORT

American Assay Laboratories Inc.

REPORT : SP 029241



| Sample | Au(OZ) OZ/TON | Au(RZ) OZ/TON | Ag(OZ) OZ/TON |
|---|---|---|---|
| #3 250-260 | <0.001 | D-1 | <0.02 |
| #3 260-270 | <0.001 | | <0.02 |
| #3 270-280 | <0.001 | | <0.02 |
| #3 280-290 | <0.001 | | <0.02 |
| #3 290-300 | <0.001 | | <0.02 |
| #3 300-310 | <0.001 | | <0.02 |
| #3 310-320 | <0.001 | | <0.02 |
| #3 320-330 | <0.001 | | <0.02 |
| #3 330-340 | <0.001 | | <0.02 |
| #3 340-350 | <0.001 | | <0.02 |
| #3 350-360 | <0.001 | | <0.02 |
| #3 360-370 | <0.001 | | <0.02 |
| #3 370-380 | <0.001 | | <0.02 |
| #3 380-390 | <0.001 | <0.001 | <0.02 |
| #3 390-400 | <0.001 | | <0.02 |

Please refer to the cover sheet for further analysis details.