M. Bradford Rine

Consulting Geologist, Licensed and Certified

State License of Land Surveyor
Number 4334

Well Name: Sec. 27, R3-R4
Location: Section 27, Township 3 North, Range 4 Section 34 T3N-R3TW
Licensing Agency: MDNR, Lansing
Surface Coordinates: 45°47'N, 87 0'W
Region: Gladstone City, Cornelius
Drilling Completed: June 24, 2011

Permanent Datum: Ground Level
Elevation: 1,000 feet
Ground Elevation: 1,000 feet
Total Depth: 1,000 feet
Drilling Contractor: Cornelius Drilling Co.
Type of Drilling Fluid: Fresh Water
Fit Elevation: 0'
Log Elevation: 1,000 feet
Date Started: June 20, 2011
Date Completed: June 24, 2011

Operator

Company: Rocky Grotto Drilling Co.
Address: PO Box Number, Rocky Grotto
Phone: 906-475-7250

Geologist

Name: M. Bradford Rine
Address: 1000 Lincoln Avenue, Gladstone Ste. 1000, Rock of Ages, MI 49801
Phone: 906-428-3710, 906-428-3711
Licensing Agency: MDNR

Remarks

Based on sample observations, drill steel rate records, and electric log evaluation, it was the decision of the geologist to terminate the hole at 1,000 feet. Total Depth (TD) was reached.

Flight Hill Gas was encountered in the Trenton Formation from 950 feet, therefore the log was short-holed to cover the Trenton Formation.

Respectfully submitted,
M. Bradford Rine
Geologist, Ph.D.

Drilling Information

Rig: Mystic Rose
Mast: Derrick, 72' x 12'
Engine: Ford 6-cylinder
Compressor: 350 CFM at 8 psi
Bit: Tri-cone, 7 7/8" Hard Rock
Drill Collars: 6" x 30' Drill Collar
Drill Pipe: 4 1/2" Drill Pipe
Drilling Fluid: Fresh Water
Mud Logger: Contracted
Mud Logging Unit: Yes
Log Type: Gamma Ray, Caliper (Church Formation, Kevin Block)
Log Run: Kevin Block, Inc.
Cores: 1 Core, 10 Feet Recovered (with Gilbert Trenching, Inc.)
Core Analysis: Gilbert Trenching, Inc.

Contractor Representative:
Name: Rocky Grotto
Title: Driller

Daily Drilling Status

Date	Operations/Depth Comments
06-20-11	Spudded, Rig 12 at 0 ft. at 8:00 am
06-20-11	Drilling 0 - 100'
06-21-11	Drilling 100 - 200'
06-22-11	Drilling 200 - 300'
06-23-11	Drilling 300 - 400'
06-23-11	Drilling 400 - 500'
06-23-11	Drilling 500 - 600'
06-23-11	Drilling 600 - 700'
06-23-11	Drilling 700 - 800'
06-23-11	Drilling 800 - 900'
06-23-11	Drilling 900 - 1000'
06-23-11	Total Depth (TD) 1000' - Start up HPR hauling
06-24-11	Rig Down, Rig Up, Rig Down
06-24-11	Rig Down, Rig Up, Rig Down, spudded 24 hr at 8 am

Casing Records (Not Including Surface Casing)

CASING:

Surface: None

Production: Set 6 5/8" OD at 0 0'-0'. Hitched cable with 100 sx cement, 24 gal. 2% CC. - was dist only.

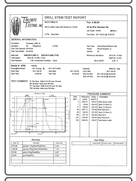
Production: None

BITS:

Size	Manufacturer	Type	Depth In	Depth Out	Footage	Hours
7 7/8	Grotto	Hard Rock	0'-0'	1000'	1000'	24
7 7/8	Grotto	Hard Rock	0'-0'	1000'	1000'	24

DEVIATION SURVEYS:

Depth	Angle
0'	0°
1000'	0°



DRILL STEM TEST REPORT

Well Name: 1
Date: Sun, June 26 2011
Location: Sec 27 T3N R4W
Operator: Rocky Grotto
Test Number: 1
Test Type: Conventional
Test Interval: 950.00' - 1000.00'
Total Depth: 1000.00'
Formation: Trenton
Drilling Contractor: Cornelius Drilling Co.
Rig Number: 12
Mud Type: Fresh Water
Mud Weight: 8.3 lb/gal
Viscosity: 28 sec/qt
Water Loss: 8.0 cc
Chlorides: 0 ppm
Drill Pipe: 4 1/2 OD x 3.826 ID
Drill Collars: 6 OD x 2.25 ID x 30 ft
Test Tool: 5 OD x 1.75 ID x 31 ft
Packer Size: 6 OD x 6.5 ID
Packer Depth: 950.00'
Hole Size: 7 7/8
Total Depth: 1000.00'
Elevation: 1000.00'
Kelly Bushing: 1000.00'
Ground Level: 1000.00'
Tester: Kevin Block
Witnessed By: Rocky Grotto
Test Type: Conventional
Formation: Trenton
Interval: 950.00' - 1000.00'
Total Depth: 1000.00'
Tool Open: 10:00 AM
Tool Closed: 11:00 AM
Initial Flow: 10:00 AM - 10:30 AM
Final Flow: 10:30 AM - 11:00 AM
Initial Shut-In: 11:00 AM - 11:30 AM
Final Shut-In: 11:30 AM - 12:00 AM
Test Comment: Tool Open 1 hr, Shut-In 1 hr
Recovery: 0 feet of Mud
Gas Rate: None
Oil Rate: None
Water Rate: None
Gas Type: None
Oil Type: None
Water Type: None
Gas Gravity: None
Oil Gravity: None
Water Gravity: None
Gas Chloride: None
Oil Chloride: None
Water Chloride: None
Gas Flow: None
Oil Flow: None
Water Flow: None
Test Comment: 1 Minute Initial Shut-In
Pressure Gauge: Amerada
Gauge Depth: 1000.00'
Gauge Type: Mechanical
Gauge Range: 0-2000 psi
Gauge Resolution: 1 psi
Gauge Accuracy: ±0.5 psi
Gauge Serial Number: 1
Gauge Calibration Date: 06-01-2011
Gauge Calibration Method: Dead Weight Tester
Gauge Calibration Temperature: 70°F
Gauge Calibration Pressure: 0 psi
Gauge Calibration Error: 0 psi
Gauge Calibration Comment: Calibrated before test
Pressure Unit: psi
Temperature Unit: °F
Time Unit: Minutes
Pressure Data Source: Mechanical Gauge
Pressure Data Quality: Good
Pressure Data Comment: Gauge functioned normally throughout test