



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: brownt1-12dst7

TIME ON: 06:41
TIME OFF: 15:54

Company Mull Drilling Co Inc Lease & Well No. Brown Trust #1-12
Contractor Duke Drilling - Rig #4 Charge to Mull Drilling Co Inc
Elevation 2945 KB Formation Johnson Zn Effective Pay -- Ft. Ticket No. S0387
Date 9-30-13 Sec. 12 Twp. 16 S Range 32 W County Scott State KANSAS
Test Approved By Kevin Kessler Diamond Representative Jacob McCallie

Formation Test No. 7 Interval Tested from 4500 ft. to 4580 ft. Total Depth 4580 ft.
Packer Depth 4495 ft. Size 6 3/4 in. Packer depth -- ft. Size 6 3/4 in.
Packer Depth 4500 ft. Size 6 3/4 in. Packer depth -- ft. Size 6 3/4 in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 4481 ft. Recorder Number 8471 Cap. 10,000 P.S.I.
Bottom Recorder Depth (Outside) 4577 ft. Recorder Number 3851 Cap. 5,700 P.S.I.
Below Straddle Recorder Depth ft. Recorder Number Cap. P.S.I.

Mud Type CHEMICAL Viscosity 60 Drill Collar Length -- ft. I.D. 2 1/4 in.
Weight 9.3 Water Loss 4.8 cc. Weight Pipe Length -- ft. I.D. 2 7/8 in.
Chlorides 2,600 P.P.M. Drill Pipe Length 4467 ft. I.D. 3 1/2 in.
Jars: Make STERLING Serial Number 3 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.
Did Well Flow? NO Reversed Out NO Anchor Length 80 (18.5p) ft. Size 4 1/2-FH in.
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: 1 1/4" Blow- Built to BB in 4 3/4 min **NOBB**
2nd Open: 2" Blow- Built to BB in 2 1/2 min **BBBB**

Recovered 1512 ft. of GIP
Recovered 239 ft. of CO 100% O GRAVITY: 28.5 @ 60 degrees F
Recovered 441 ft. of HMCO 62% O 38% M
Recovered 680 ft. of TOTAL FLUID

| | |
|--|---------------|
| Recovered <u> </u> ft. of <u> </u> | Price Job |
| Recovered <u> </u> ft. of <u> </u> | Other Charges |
| Remarks: <u> </u> | Insurance |
| Tool Sample: <u>90% O 10% M</u> | Total |

Time Set Packer(s) 9:02 AM ^{A.M.}/_{P.M.} Time Started Off Bottom 12:37 PM ^{A.M.}/_{P.M.} Maximum Temperature 127

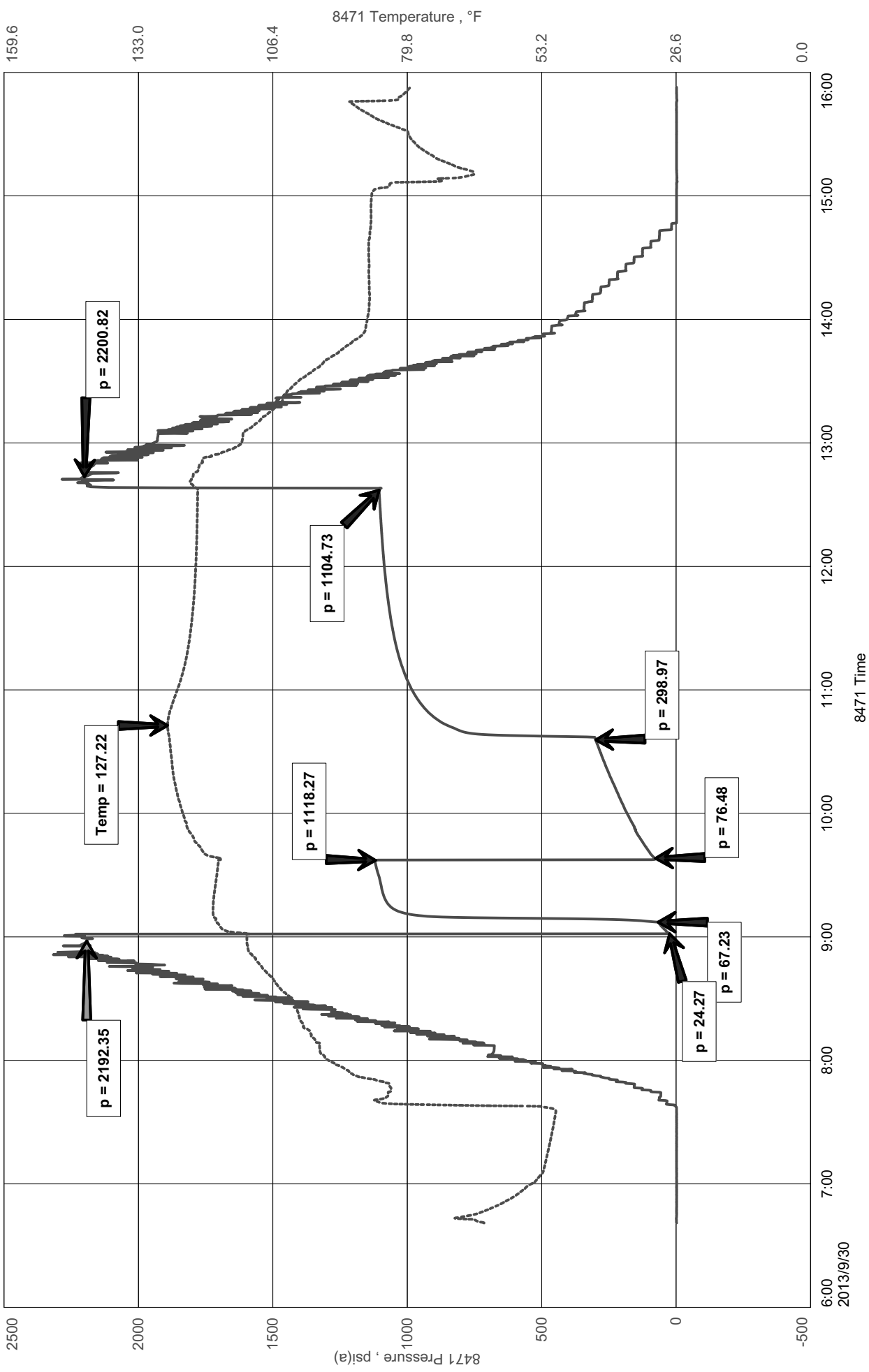
Initial Hydrostatic Pressure..... (A) 2192 P.S.I.
Initial Flow Period..... Minutes 5 (B) 24 P.S.I. to (C) 67 P.S.I.
Initial Closed In Period..... Minutes 30 (D) 1118 P.S.I.
Final Flow Period..... Minutes 60 (E) 76 P.S.I. to (F) 299 P.S.I.
Final Closed In Period..... Minutes 120 (G) 1105 P.S.I.
Final Hydrostatic Pressure..... (H) 2201 P.S.I.

Diamond Testing shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

Mull Drilling Co. Inc.
DST #7 Johnson Zn 4500-4580'
Start Test Date: 2013/09/30
Final Test Date: 2013/09/30

Brown Trust #1-12
Formation: DST #7 Johnson Zn 4500-4580'
Pool: Wildcat
Job Number: S0387

Brown Trust #1-12



Diamond Testing

General information Report

General Information

Company Name Mull Drilling Co. Inc.

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|---------------------|------------------------------|----------------|------------------------|
| Contact | Mark Shreve | Job Number | S0387 |
| Well Name | Brown Trust #1-12 | Representative | Jacob McCallie |
| Unique Well ID | DST #7 Johnson Zn 4500-4580' | Well Operator | Mull Drilling Co. Inc. |
| Surface Location | SEC 12-16S-32W Scott County | Report Date | 2013/09/30 |
| Well License Number | | Prepared By | Jacob McCallie |
| Field | Wildcat | | |
| Well Type | Vertical | | |

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|---------------------|------------------------------|-----------------|----------|
| Test Type | Drill Stem Test | Start Test Time | 06:41:00 |
| Formation | DST #7 Johnson Zn 4500-4580' | Final Test Time | 15:54:00 |
| Well Fluid Type | 01 Oil | | |
| Start Test Date | 2013/09/30 | | |
| Final Test Date | 2013/09/30 | | |
| Gauge Name | 8471 | | |
| Gauge Serial Number | | | |

Test Results

RECOVERED:

| | | | | |
|-------|-------------|-------------|--|------------------------------|
| 1512' | GIP | | | |
| 239' | CO | 100% O | | GRAVITY: 28.5 @ 60 degrees F |
| 441' | HMCO | 62% O 38% M | | |
| 680' | TOTAL FLUID | | | |

TOOL SAMPLE:

90% O 10% M