



DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Co. Inc.**

1700 N. Waterfront Pkwy.
Bldg. 1200
Wichita KS 67206

ATTN: Kevin Kessler

T Jaden C #3

18-30s-7w Kingman, KS

Start Date: 2013.06.04 @ 09:38:23

End Date: 2013.06.04 @ 17:47:53

Job Ticket #: 52283 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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1700 N. Waterfront Pkwy.
Bldg. 1200
Wichita KS 67206
ATTN: Kevin Kessler

18-30s-7w Kingman, KS

T Jaden C #3

Job Ticket: 52283

DST#: 1

Test Start: 2013.06.04 @ 09:38:23

GENERAL INFORMATION:

Formation: **Miss.**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:41:53
 Time Test Ended: 17:47:53
 Interval: **4148.00 ft (KB) To 4195.00 ft (KB) (TVD)**
 Total Depth: 4195.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Gary Pevoteaux
 Unit No: 56
 Reference Elevations: 1482.00 ft (KB)
 1472.00 ft (CF)
 KB to GR/CF: 10.00 ft

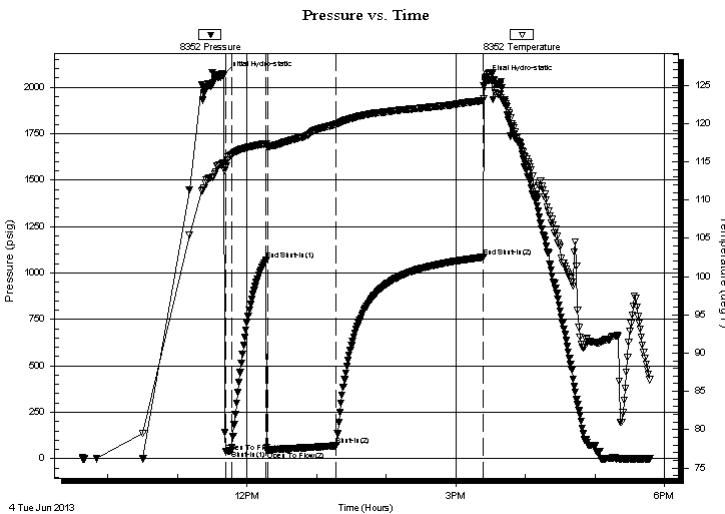
Serial #: 8352

Inside

Press @ Run Depth: 71.05 psig @ 4149.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.06.04 End Date: 2013.06.04 Last Calib.: 2013.06.04
 Start Time: 09:38:28 End Time: 17:47:52 Time On Btm: 2013.06.04 @ 11:39:38
 Time Off Btm: 2013.06.04 @ 15:25:38

TEST COMMENT: IF: Strong blow . B.O.B. in 3 - 4 secs.
 IS: Weak blow . (surface)
 FF: Strong blow . B.O.B. in 1 sec. GTS in 31 mins. (see gas flow report)
 FS: Weak blow . 1/4" or less.

PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 2065.33 | 114.77 | Initial Hydro-static |
| 3 | 36.18 | 114.31 | Open To Flow (1) |
| 8 | 43.36 | 115.90 | Shut-In(1) |
| 37 | 1071.20 | 117.37 | End Shut-In(1) |
| 38 | 40.72 | 117.03 | Open To Flow (2) |
| 98 | 71.05 | 119.89 | Shut-In(2) |
| 225 | 1085.25 | 122.97 | End Shut-In(2) |
| 226 | 2038.88 | 125.85 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|---------------------------|--------------|
| 120.00 | GOCMW 34%g 11%o 25%m 30%w | 0.59 |
| 55.00 | GOCWM 11%g 8%o 26%w 55%m | 0.77 |
| | | |
| | | |
| | | |

Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|----------------|----------------|-----------------|------------------|
| First Gas Rate | 0.25 | 2.00 | 25.70 |
| Last Gas Rate | 0.25 | 1.00 | 24.11 |
| Max. Gas Rate | 0.25 | 2.00 | 25.70 |



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DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Co. Inc.

18-30s-7w Kingman,KS

1700 N.Waterfront Pkw y.
Bldg.1200
Wichita KS 67206
ATTN: Kevin Kessler

T Jaden C #3

Job Ticket: 52283

DST#: 1

Test Start: 2013.06.04 @ 09:38:23

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 4027.00 ft | Diameter: 3.80 inches | Volume: 56.49 bbl | Tool Weight: 2400.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 24000.00 lb |
| Drill Collar: | Length: 120.00 ft | Diameter: 2.25 inches | Volume: 0.59 bbl | Weight to Pull Loose: 87000.00 lb |
| | | | <u>Total Volume: 57.08 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 27.00 ft | | | String Weight: Initial 76000.00 lb |
| Depth to Top Packer: | 4148.00 ft | | | Final 76000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 47.00 ft | | | |
| Tool Length: | 75.00 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|----------------|
|------------------|-------------|------------|----------|------------|----------------|

| | | | | | |
|--------------|-------|------|---------|---------|-------------------------------|
| C.O. Sub | 1.00 | | | 4121.00 | |
| Shut in tool | 5.00 | | | 4126.00 | |
| HMV | 5.00 | | | 4131.00 | |
| Jars | 5.00 | | | 4136.00 | |
| Safety Joint | 3.00 | | | 4139.00 | |
| Packer | 4.00 | | | 4143.00 | 28.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 4148.00 | |
| Stubb | 1.00 | | | 4149.00 | |
| Recorder | 0.00 | 8352 | Inside | 4149.00 | |
| Recorder | 0.00 | 8370 | Outside | 4149.00 | |
| Perforations | 41.00 | | | 4190.00 | |
| Bullnose | 5.00 | | | 4195.00 | 47.00 Bottom Packers & Anchor |

Total Tool Length: 75.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Co. Inc.

18-30s-7w Kingman,KS

1700 N.Waterfront Pkw y.
Bldg.1200
Wichita KS 67206
ATTN: Kevin Kessler

T Jaden C #3

Job Ticket: 52283

DST#: 1

Test Start: 2013.06.04 @ 09:38:23

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

62000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbf |
|--------------|---------------------------|---------------|
| 120.00 | GOCMW 34%g 11%o 25%m 30%w | 0.590 |
| 55.00 | GOCWM 11%g 8%o 26%w 55%m | 0.772 |

Total Length: 175.00 ft Total Volume: 1.362 bbf

Num Fluid Samples: 0

Num Gas Bombs: 1

Serial #: gp-1

Laboratory Name: Caraway

Laboratory Location: Liberal, KS

Recovery Comments: Rw .11 ohms @ 76 deg



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GAS RATES

Mull Drilling Co. Inc.

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Wichita KS 67206
ATTN: Kevin Kessler

T Jaden C #3

Job Ticket: 52283

DST#: 1

Test Start: 2013.06.04 @ 09:38:23

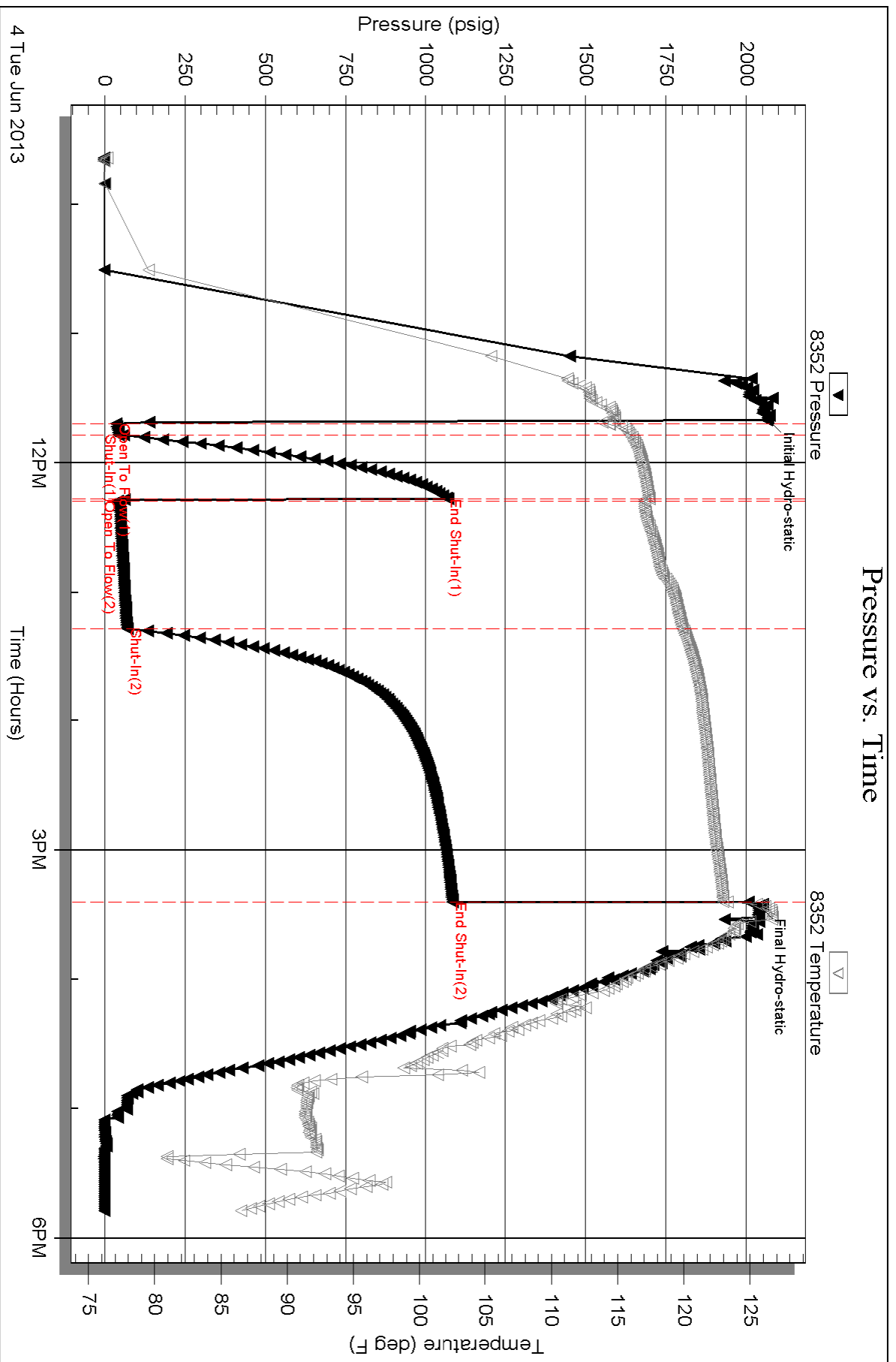
Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

| Flow Period | Elapsed Time | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|-------------|--------------|----------------|-----------------|------------------|
| 2 | 30 | 0.25 | 2.00 | 25.70 |
| 2 | 40 | 0.25 | 2.00 | 25.70 |
| 2 | 50 | 0.25 | 1.00 | 24.11 |

Pressure vs. Time

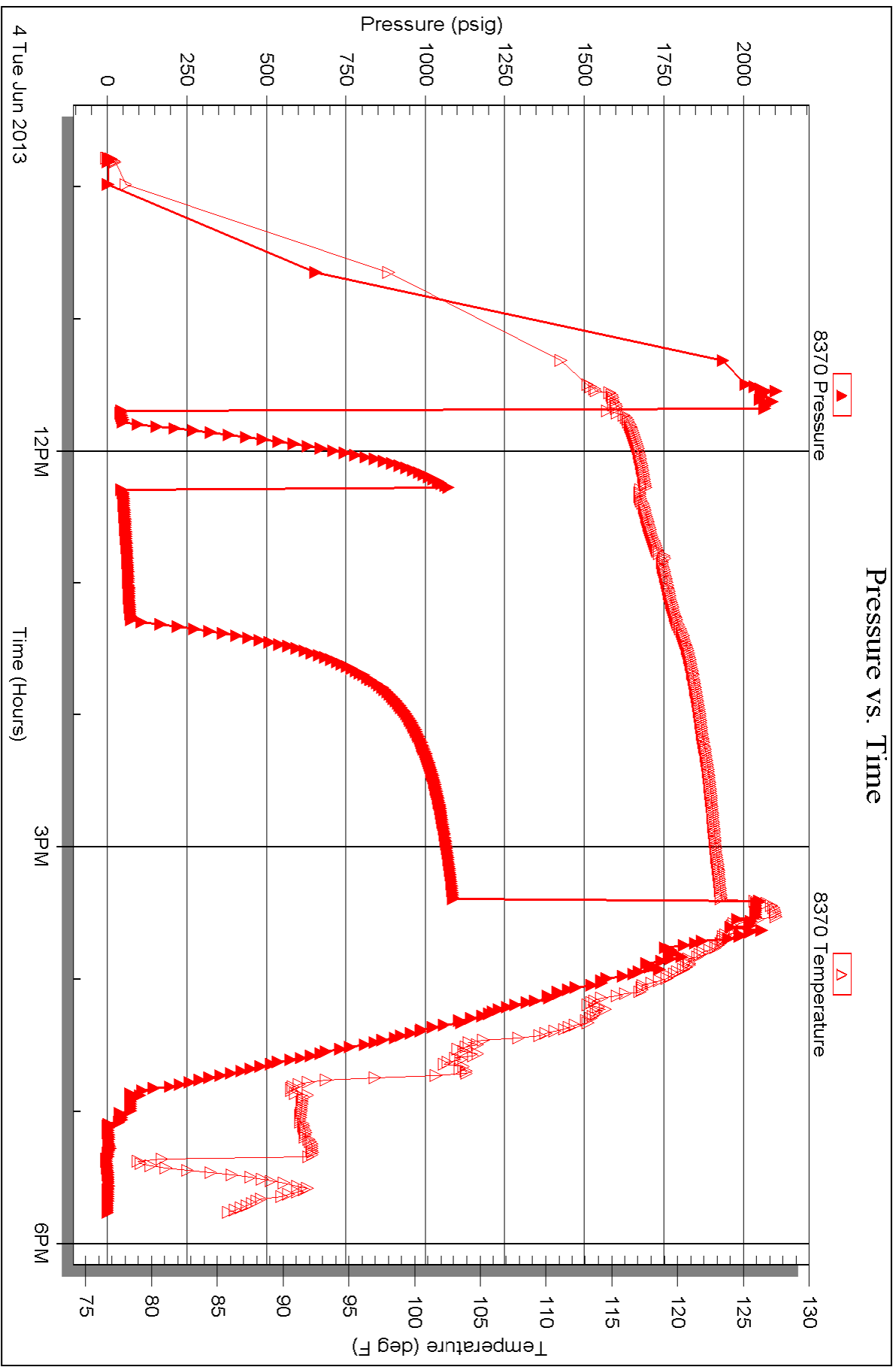


Serial #: 8370

Outside Mull Drilling Co. Inc.

T Jaden C#3

DST Test Number: 1





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52283

4/10

Well Name & No. TADEN C#3 Test No. 1 Date 6-4-13
 Company Mull Drug Co. Inc. Elevation 1482 KB 1472 GL
 Address 1700 N. WATERFRONT PARKWAY, BLDG. 1200, WICHITA KS, 67206
 Co. Rep / Geo. KEVIN KESSLER Rig PERKRELL DRUG, II
 Location: Sec. 18 Twp. 30^S Rge. 7^W Co. KENGMAN State Ks.

Interval Tested 4148 ~ 4195' Zone Tested MISS.
 Anchor Length 47' Drill Pipe Run 4027' Mud Wt. 9.4
 Top Packer Depth 4143' Drill Collars Run 120' Vis 48
 Bottom Packer Depth 4148' Wt. Pipe Run 0 WL 8.0
 Total Depth 4195' Chlorides 4,000 ppm System LCM 2#

Blow Description IF: Strong blow. B.O.B. in 3-4 sec. IST: Weak blow (surface)

FF: Strong blow. B.O.B. in 1 sec. GTS in 31 mins. (see gas flow report) FTI: Weak blow. 1/4" or less.

| Rec | Feet of | %gas | %oil | %water | %mud |
|------------|--------------|-----------|-----------|-----------|-----------|
| <u>55</u> | <u>GOCMM</u> | <u>11</u> | <u>8</u> | <u>26</u> | <u>55</u> |
| <u>120</u> | <u>GOCMW</u> | <u>34</u> | <u>11</u> | <u>30</u> | <u>25</u> |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |
| Rec | Feet of | %gas | %oil | %water | %mud |

Rec Total 175 BHT 123° Gravity N/A API RW 11 @ 76 °F Chlorides 63,000 ppm

(A) Initial Hydrostatic 2065 Test 1250 T-On Location 0745
 (B) First Initial Flow 36 Jars 250 T-Started 0938
 (C) First Final Flow 43 Safety Joint 75 T-Open 1041
 (D) Initial Shut-In 1071 Circ Sub _____ T-Pulled 1517
 (E) Second Initial Flow 41 Hourly Standby _____ T-Out 1747
 (F) Second Final Flow 71 Mileage 108 167.40 Comments _____
 (G) Final Shut-In 1085 Sampler _____
 (H) Final Hydrostatic 2039 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 5 Extra Packer _____ Extra Copies _____
 Initial Shut-In 30 Extra Recorder _____ Sub Total 0
 Final Flow 60 Day Standby _____ Total 1742.40
 Final Shut-In 120 Accessibility _____ MP/DST Disc't _____
 Sub Total 1742.40

Approved By Kevin Kessler Our Representative Gary P. [Signature]

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