

TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Mai Oil Operations**

8411 Preston Rd Ste 800
Dallas, TX 75225

ATTN: Wyatt Urban

Milton Butler Unit 1

29-21S-12W Stafford,KS

Start Date: 2016.08.22 @ 18:27:50

End Date: 2016.08.23 @ 02:27:20

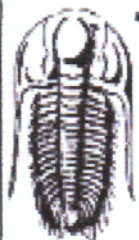
Job Ticket #: 55410 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2016.08.24 @ 08:28:01



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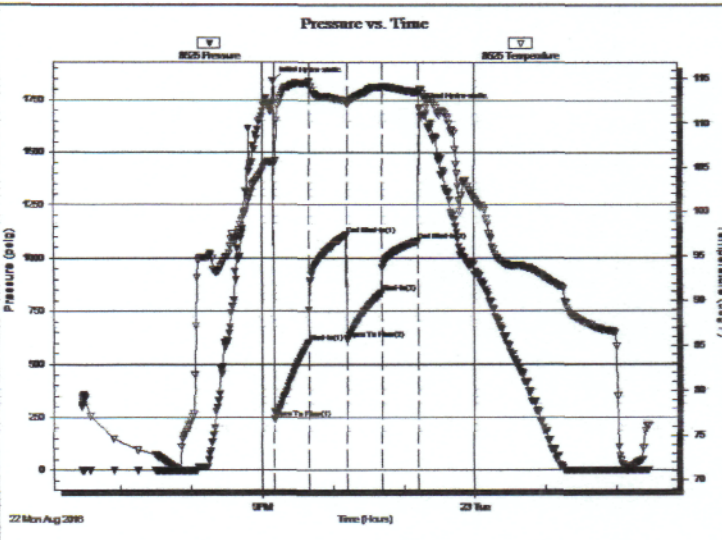
Job Ticket: 55410 DST#: 1
Test Start: 2016.08.22 @ 18:27:50

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:10:20
Time Test Ended: 02:27:20
Test Type: Conventional Bottom Hole (Initial)
Tester: Leal Cason
Unit No: 74
Interval: **3524.00 ft (KB) To 3608.00 ft (KB) (TVD)**
Reference Elevations: 1866.00 ft (KB)
Total Depth: 3608.00 ft (KB) (TVD) 1858.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 8.00 ft

Serial #: 8525 Inside
Press@RunDepth: 838.98 psig @ 3525.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2016.08.22 End Date: 2016.08.23 Last Calib.: 2016.08.23
Start Time: 18:27:51 End Time: 02:27:20 Time On Btm: 2016.08.22 @ 21:09:05
Time Off Btm: 2016.08.22 @ 23:13:20

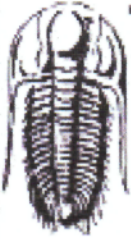
TEST COMMENT: IF: Strong Blow , BOB in 2 minutes
IS: No Blow Back
FF: Strong Blow , BOB in 2 minutes
FS: 1/2" Blow Back



| PRESSURE SUMMARY | | | |
|------------------|-----------------|--------------|----------------------|
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
| 0 | 1840.74 | 105.63 | Initial Hydro-static |
| 2 | 245.01 | 105.31 | Open To Flow (1) |
| 31 | 603.02 | 114.63 | Shut-In(1) |
| 63 | 1108.45 | 112.44 | End Shut-In(1) |
| 64 | 616.35 | 112.11 | Open To Flow (2) |
| 93 | 838.98 | 114.05 | Shut-In(2) |
| 123 | 1078.70 | 113.40 | End Shut-In(2) |
| 125 | 1713.94 | 113.77 | Final Hydro-static |

| Recovery | | |
|-------------|---------------------------|--------------|
| Length (ft) | Description | Volume (bbl) |
| 186.00 | Water | 2.61 |
| 124.00 | GMCW 10%G 10%M 80%W | 1.74 |
| 310.00 | GOMCW 20%G 20%O 10%M 50%W | 4.35 |
| 1364.00 | GMOCW 30%G 10%M 20%O 40%W | 19.13 |
| 0.00 | 620 GIP | 0.00 |

| Gas Rates | | | |
|-----------|----------------|-----------------|------------------|
| | Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
| | | | |



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Milton Butler Unit 1

Job Ticket: 55410

DST#: 1

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Reference Elevations: 1866.00 ft (KB)

Total Depth: 3608.00 ft (KB) (TVD)

1858.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 6806

Outside

Press@RunDepth: psig @ 3525.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.08.22 End Date: 2016.08.23

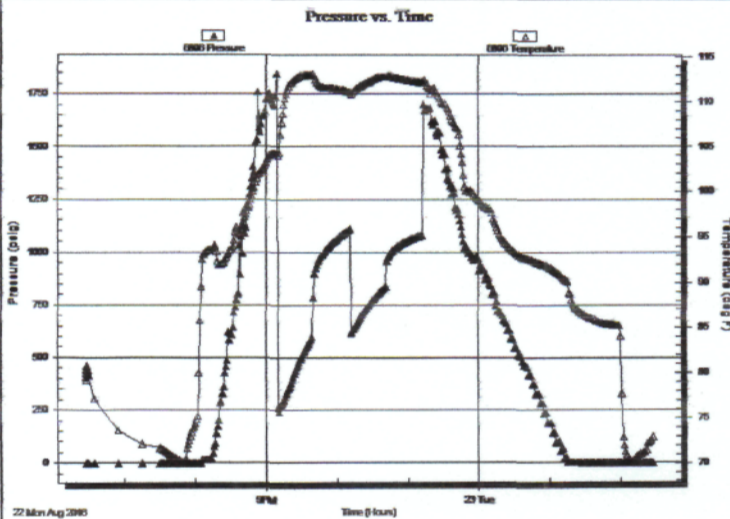
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Start Time: 18:27:51 End Time: 02:27:20

Time On Btm:

Time Off Btm:

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PRESSURE SUMMARY

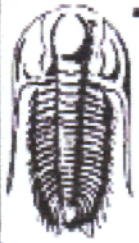
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|------------|
| | | | |
| | | | |
| | | | |
| | | | |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|---------------------------|--------------|
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| 0.00 | 620 GIP | 0.00 |
| | | |

Gas Rates

| Choke (inches) | Pressure (psig) | Gas Rate (Mcf/d) |
|----------------|-----------------|------------------|
| | | |



**TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operations

29-21S-12W Stafford,KS

8411 Preston Rd Ste 800
Dallas, TX 75225

Milton Butler Unit 1

Job Ticket: 55410

DST#: 1

ATTN: Wyatt Urban

Test Start: 2016.08.22 @ 18:27:50

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3515.00 ft | Diameter: 3.80 inches | Volume: 49.31 bbl | Tool Weight: 2100.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight set on Packer: 25000.00 lb |
| Drill Collar: | Length: 0.00 ft | Diameter: 2.25 inches | Volume: 0.00 bbl | Weight to Pull Loose: 50000.00 lb |
| | | | <u>Total Volume: 49.31 bbl</u> | Tool Chased ft |
| Drill Pipe Above KB: | 17.00 ft | | | String Weight: Initial 36000.00 lb |
| Depth to Top Packer: | 3524.00 ft | | | Final 39000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 84.00 ft | | | |
| Tool Length: | 110.00 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Shut In Tool | 5.00 | | | 3503.00 | |
| Hydraulic tool | 5.00 | | | 3508.00 | |
| Jars | 5.00 | | | 3513.00 | |
| Safety Joint | 2.00 | | | 3515.00 | |
| Packer | 5.00 | | | 3520.00 | 26.00 Bottom Of Top Packer |
| Packer | 4.00 | | | 3524.00 | |
| Stubb | 1.00 | | | 3525.00 | |
| Recorder | 0.00 | 8525 | Inside | 3525.00 | |
| Recorder | 0.00 | 6806 | Outside | 3525.00 | |
| Perforations | 10.00 | | | 3535.00 | |
| Change Over Sub | 1.00 | | | 3536.00 | |
| Drill Pipe | 63.00 | | | 3599.00 | |
| Change Over Sub | 1.00 | | | 3600.00 | |
| Perforations | 5.00 | | | 3605.00 | |
| Bullnose | 3.00 | | | 3608.00 | 84.00 Bottom Packers & Anchor |

Total Tool Length: 110.00



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FLUID SUMMARY

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ATTN: Wyatt Urban

29-21S-12W Stafford,KS
Milton Butler Unit 1
Job Ticket: 55410 **DST#: 1**
Test Start: 2016.08.22 @ 18:27:50

Mud and Cushion Information

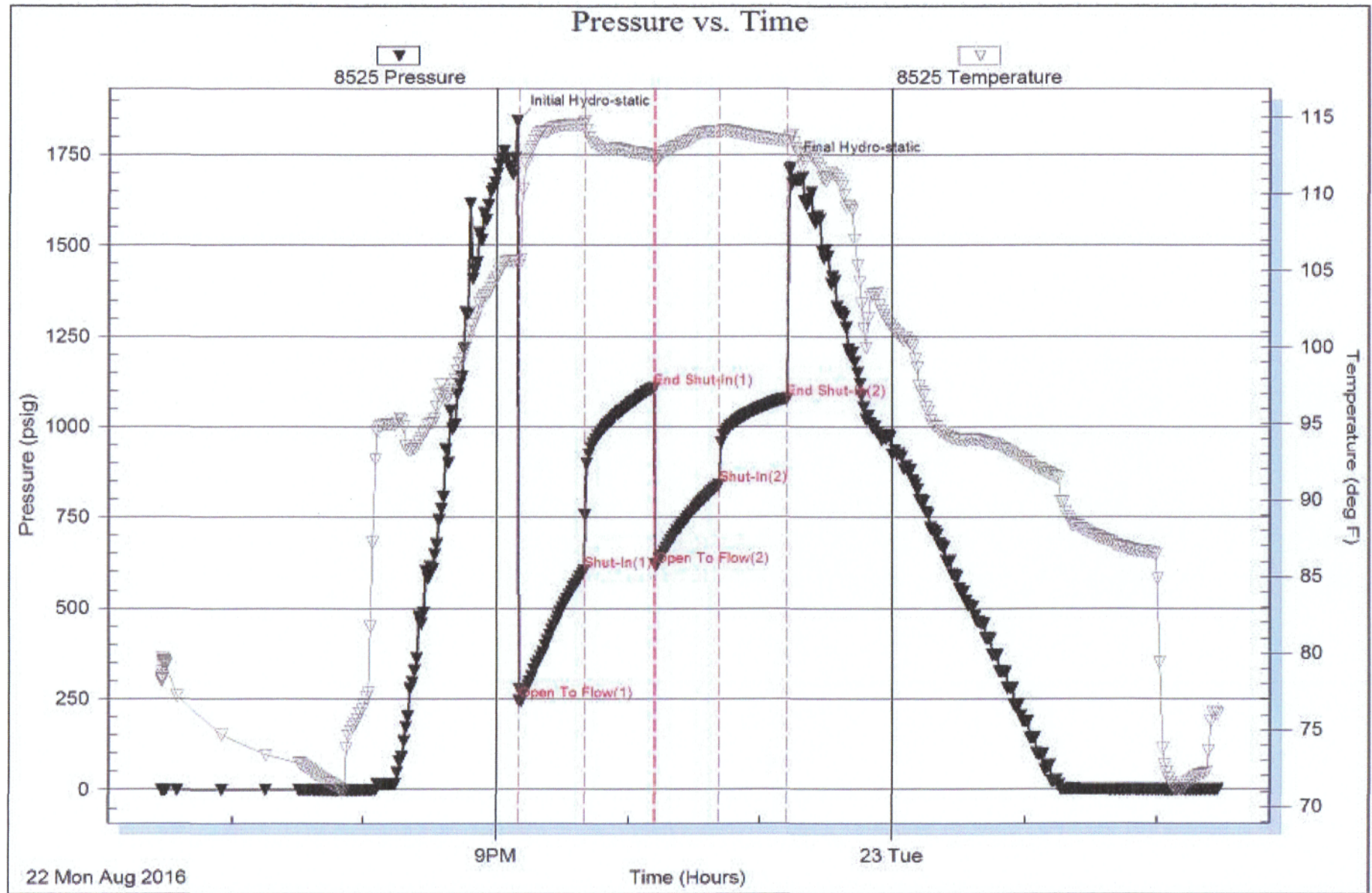
| | | | |
|-----------------------------------|----------------------------|-----------------|-----------|
| Mud Type: Gel Chem | Cushion Type: | Oil API: | deg API |
| Mud Weight: 9.00 lb/gal | Cushion Length: ft | Water Salinity: | 32000 ppm |
| Viscosity: 52.00 sec/qt | Cushion Volume: bbl | | |
| Water Loss: 10.37 in ³ | Gas Cushion Type: | | |
| Resistivity: ohm.m | Gas Cushion Pressure: psig | | |
| Salinity: 4700.00 ppm | | | |
| Filter Cake: 0.02 inches | | | |

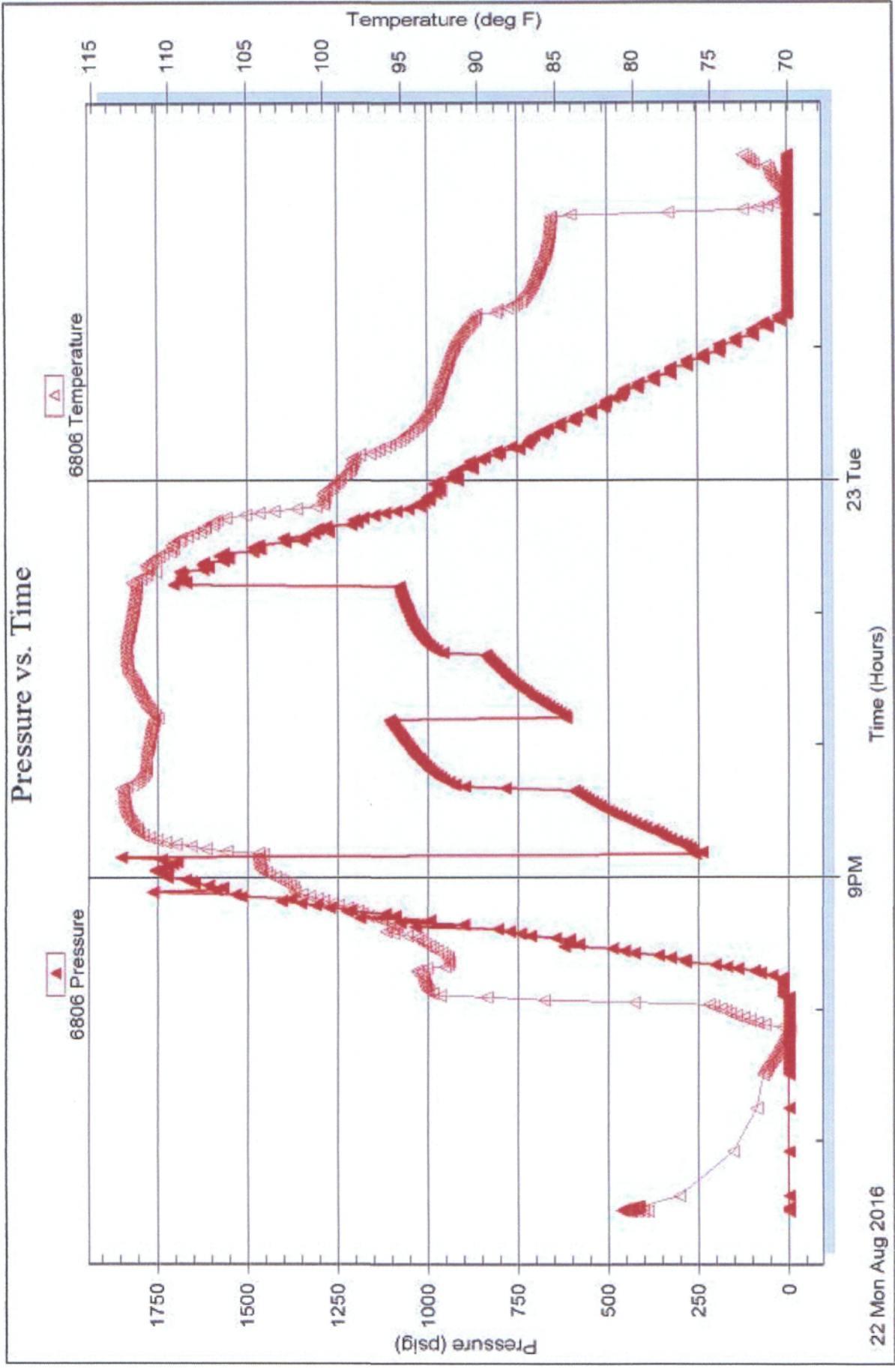
Recovery Information

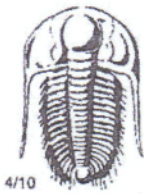
Recovery Table

| Length ft | Description | Volume bbl |
|--------------|---------------------------|---------------|
| 186.00 | Water | 2.609 |
| 124.00 | GMCW 10%G 10%M 80%W | 1.739 |
| 310.00 | GOMCW 20%G 20%O 10%M 50%W | 4.348 |
| 1364.00 | GMOCW 30%G 10%M 20%O 40%W | 19.133 |
| 0.00 | 620 GIP | 0.000 |

Total Length: 1984.00 ft Total Volume: 27.829 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: RW was .2 @ 77 degrees







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55410

Well Name & No. Milton Butler Unit 1 Test No. 1 Date 08/22/16
 Company Mai Oil Operations Elevation 1868 KB 1858 GL
 Address 8411 Preston Rd Ste 800 Dallas TX 75225
 Co. Rep / Geo. Wyatt Urban Rig Southwind 3
 Location: Sec. 29 Twp. 21S Rge. 12W Co. Stafford State KS

Interval Tested 3524 - 3608 Zone Tested Arbuckle
 Anchor Length 84 Drill Pipe Run 3515 Mud Wt. 9.4
 Top Packer Depth 3519 Drill Collars Run 0 Vis 52
 Bottom Packer Depth 3524 Wt. Pipe Run 0 WL 10.4
 Total Depth 3608 Chlorides 4700 ppm System LCM

Blow Description IF: strong Blow, BOB in 2 minutes
ISI: NO Blow Back
FF: strong Blow, BOB in 2 minutes
FSI: 1/2 inch Blow Back

| Rec | Feet of | %gas | %oil | %water | %mu |
|-------------|---------------|-----------|-----------|-----------|-----------|
| <u>620</u> | <u>GIP</u> | | | | |
| <u>1364</u> | <u>G MOCW</u> | <u>30</u> | <u>20</u> | <u>40</u> | <u>10</u> |
| <u>310</u> | <u>G OMCW</u> | <u>20</u> | <u>20</u> | <u>50</u> | <u>10</u> |
| <u>124</u> | <u>G MCW</u> | <u>10</u> | | <u>80</u> | <u>10</u> |
| <u>186</u> | <u>Water</u> | | | | |

Rec Total 1984 BHT 114 Gravity NIC API RW .2 @ 77° F Chlorides 32000 ppr

(A) Initial Hydrostatic 1841 Test 1050 T-On Location 15:45
 (B) First Initial Flow 245 Jars 250 T-Started 18:27
 (C) First Final Flow 603 Safety Joint 75 T-Open 21:10
 (D) Initial Shut-In 1108 Circ Sub _____ T-Pulled 23:12
 (E) Second Initial Flow 616 Hourly Standby _____ T-Out 02:27
 (F) Second Final Flow 839 Mileage 80 120 Comments loaded 10:00 8/23
 (G) Final Shut-In 1079 Sampler _____
 (H) Final Hydrostatic 1714 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total _____
 Day Standby _____ Total 1495
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1495

Initial Open 30
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 30
 Approved By _____ Our Representative [Signature]