



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1104760  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed  
Form must be Signed  
All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic       Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

|                                   |                 |   |
|-----------------------------------|-----------------|---|
| Spud Date or<br>Recompletion Date | Date Reached TD | Completion Date or<br>Recompletion Date |
|-----------------------------------|-----------------|---|

API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



1104760

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

|  |   |
|--|---|
| Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No<br><i>(Attach Additional Sheets)</i><br><br>Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No<br><br>Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No<br><br>List All E. Logs Run: _____ | <input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample<br><br>Name Top Datum |
|--|---|

| CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used  |                   |                           |                   |               |                |              |                            |
|---|-------------------|---------------------------|-------------------|---------------|----------------|--------------|----------------------------|
| Report all strings set-conductor, surface, intermediate, production, etc. |                   |                           |                   |               |                |              |                            |
| Purpose of String   | Size Hole Drilled | Size Casing Set (In O.D.) | Weight Lbs. / Ft. | Setting Depth | Type of Cement | # Sacks Used | Type and Percent Additives |
|   |                   |                           |                   |               |                |              |                            |
|   |                   |                           |                   |               |                |              |                            |
|   |                   |                           |                   |               |                |              |                            |

| ADDITIONAL CEMENTING / SQUEEZE RECORD  |                  |                |              |                            |
|--|------------------|----------------|--------------|----------------------------|
| Purpose:   | Depth Top Bottom | Type of Cement | # Sacks Used | Type and Percent Additives |
| <input type="checkbox"/> Perforate<br><input type="checkbox"/> Protect Casing<br><input type="checkbox"/> Plug Back TD<br><input type="checkbox"/> Plug Off Zone |                  |                |              |                            |
|  |                  |                |              |                            |

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

| Shots Per Foot | PERFORATION RECORD - Bridge Plugs Set/Type<br>Specify Footage of Each Interval Perforated | Acid, Fracture, Shot, Cement Squeeze Record<br><i>(Amount and Kind of Material Used)</i> | Depth |
|----------------|---|--|-------|
|                |   |  |       |
|                |   |  |       |
|                |   |  |       |
|                |   |  |       |

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR: \_\_\_\_\_ Producing Method:  
 Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

| Estimated Production Per 24 Hours | Oil Bbls. | Gas Mcf | Water Bbls. | Gas-Oil Ratio | Gravity |
|-----------------------------------|-----------|---------|-------------|---------------|---------|
|                                   |           |         |             |               |         |

|  |   |   |
|--|---|---|
| <b>DISPOSITION OF GAS:</b><br><input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease<br><i>(If vented, Submit ACO-18.)</i> | <b>METHOD OF COMPLETION:</b><br><input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled<br><i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____<br><i>(Submit ACO-4)</i> | <b>PRODUCTION INTERVAL:</b><br>_____<br>_____ |
|--|---|---|

|           |                             |
|-----------|-----------------------------|
| Form      | ACO1 - Well Completion      |
| Operator  | FIML Natural Resources, LLC |
| Well Name | Larry Dearden 16A-18-1931   |
| Doc ID    | 1104760                     |

Perforations

| Shots Per Foot | Perforation Record | Material Record  | Depth |
|----------------|--------------------|--|-------|
|                |                    | Cmt mouse and rat hole w/ 50 sx 60/40 CI A/Pozmix w/ 4% gel & 0.25 pps Flo |       |
|                |                    | Cmt plug f/ 60-0' w/ 20 sx 60/40 CI A/Pozmix w/ 4% gel & 0.25 pps Flo      |       |
|                |                    | Cmt plug f/ 410-187' w/ 50 sx 60/40 CI A/Pozmix w/ 4% gel & 0.25 pps Flo   |       |
|                |                    | Cmt plug f/ 720-497' w/ 50 sx 60/40 CI A/Pozmix w/ 4% gel & 0.25 pps Flo   |       |
|                |                    | Cmt plug f/ 1520-1164' w/ 80 sx 60/40 CI A/Pozmix w/ 4% gel & 0.25 pps Flo |       |
|                |                    | Cmt plug f/ 2250-2017' w/ 50 sx 60/40 CI A/Pozmix w/ 4% gel & 0.25 pps Flo |       |

Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



Phone: 316-337-6200  
Fax: 316-337-6211  
<http://kcc.ks.gov/>

Mark Sievers, Chairman  
Thomas E. Wright, Commissioner  
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

December 13, 2012

Cassie Parks  
FIML Natural Resources, LLC  
410 17TH ST STE 900  
DENVER, CO 80202-4420

Re: ACO1  
API 15-171-20894-00-00  
Larry Dearden 16A-18-1931  
SE/4 Sec.18-19S-31W  
Scott County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,  
Cassie Parks



## DRILL STEM TEST REPORT

Prepared For: **FIML Natural Resources**

410 17th St Ste 900  
Denver CO 80202

ATTN: Jim Musgrove

**18-19s-31w Scott,KS**

**Larry Dearden #16A-18-1931**

Start Date: 2012.09.25 @ 09:20:15

End Date: 2012.09.25 @ 16:26:45

Job Ticket #: 44438                      DST #: 1

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

Printed: 2012.10.02 @ 13:35:23



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

FIML Natural Resources

410 17th St Ste 900  
Denver CO 80202

ATTN: Jim Musgrove

**Larry Dearden #16A-18-1931**

**18-19s-31w Scott,KS**

Job Ticket: 44438

**DST#: 1**

Test Start: 2012.09.25 @ 09:20:15

## GENERAL INFORMATION:

Formation: **LKC I**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:37:30

Time Test Ended: 16:26:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Mike Roberts

Unit No: 65

**Interval: 4191.00 ft (KB) To 4230.00 ft (KB) (TVD)**

Reference Elevations: 2984.00 ft (KB)

Total Depth: 4230.00 ft (KB) (TVD)

2974.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 6668**

**Inside**

Press @ Run Depth: 331.84 psig @ 4193.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.25

End Date:

2012.09.25

Last Calib.:

2012.09.25

Start Time: 09:20:15

End Time:

16:26:45

Time On Btm:

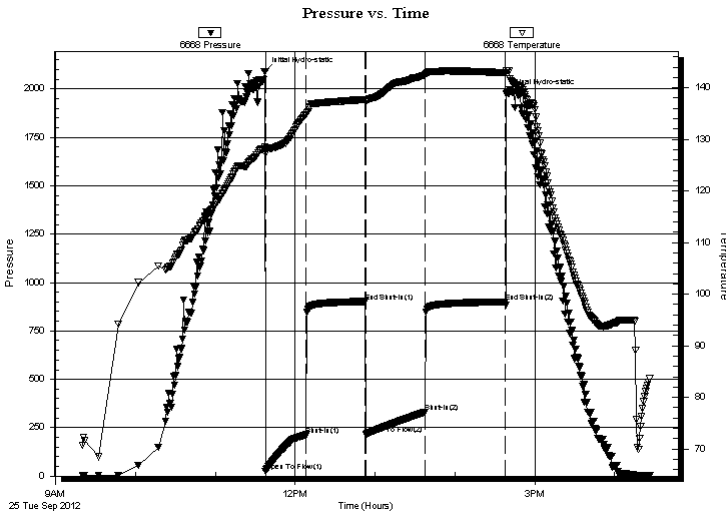
2012.09.25 @ 11:37:15

Time Off Btm:

2012.09.25 @ 14:38:45

**TEST COMMENT:** IF:BOB in 18 min.  
IS:No return blow  
FF:BOB in 24 min.  
FS:No return blow

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2089.84         | 128.47       | Initial Hydro-static |
| 1           | 25.79           | 127.20       | Open To Flow (1)     |
| 31          | 213.44          | 134.85       | Shut-In(1)           |
| 76          | 902.03          | 137.70       | End Shut-In(1)       |
| 76          | 216.15          | 137.44       | Open To Flow (2)     |
| 121         | 331.84          | 142.47       | Shut-In(2)           |
| 181         | 900.11          | 142.90       | End Shut-In(2)       |
| 182         | 1975.61         | 143.37       | Final Hydro-static   |

## Recovery

| Length (ft) | Description                    | Volume (bbl) |
|-------------|--------------------------------|--------------|
| 370.00      | sw 100%sw                      | 1.82         |
| 276.00      | mcsw with oil spots 40%m 60%sw | 3.87         |
|             |                                |              |
|             |                                |              |
|             |                                |              |

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

FIML Natural Resources

410 17th St Ste 900  
Denver CO 80202

ATTN: Jim Musgrove

**Larry Dearden #16A-18-1931**

**18-19s-31w Scott, KS**

Job Ticket: 44438

**DST#: 1**

Test Start: 2012.09.25 @ 09:20:15

## GENERAL INFORMATION:

Formation: **LKC I**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:37:30

Time Test Ended: 16:26:45

**Interval: 4191.00 ft (KB) To 4230.00 ft (KB) (TVD)**

Total Depth: 4230.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)

Tester: Mike Roberts

Unit No: 65

Reference Elevations: 2984.00 ft (KB)

2974.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8365 Outside**

Press @ Run Depth: psig @ 4193.00 ft (KB)

Start Date: 2012.09.25

End Date: 2012.09.25

Start Time: 09:20:15

End Time: 16:27:00

Capacity: 8000.00 psig

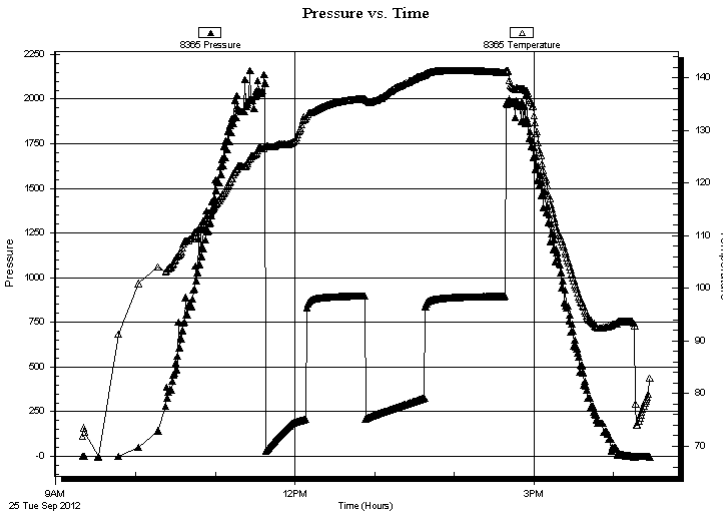
Last Calib.: 2012.09.25

Time On Btm:

Time Off Btm:

TEST COMMENT: IF:BOB in 18 min.  
IS:No return blow  
FF:BOB in 24 min.  
FS:No return blow

## PRESSURE SUMMARY



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

## Recovery

| Length (ft) | Description                    | Volume (bbl) |
|-------------|--------------------------------|--------------|
| 370.00      | sw 100%sw                      | 1.82         |
| 276.00      | mcsw with oil spots 40%m 60%sw | 3.87         |
|             |                                |              |
|             |                                |              |
|             |                                |              |
|             |                                |              |

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

ATTN: Jim Musgrove

Job Ticket: 44438

**DST#: 1**

Test Start: 2012.09.25 @ 09:20:15

## Tool Information

|                           |                    |                       |                                |                                    |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe:               | Length: 3830.00 ft | Diameter: 3.80 inches | Volume: 53.72 bbl              | Tool Weight: 1500.00 lb            |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl               | Weight set on Packer: 20000.00 lb  |
| Drill Collar:             | Length: 370.00 ft  | Diameter: 2.25 inches | Volume: 1.82 bbl               | Weight to Pull Loose: 100000.0 lb  |
|                           |                    |                       | <u>Total Volume: 55.54 bbl</u> | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 29.00 ft           |                       |                                | String Weight: Initial 70000.00 lb |
| Depth to Top Packer:      | 4191.00 ft         |                       |                                | Final 70000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                                |                                    |
| Interval between Packers: | 39.00 ft           |                       |                                |                                    |
| Tool Length:              | 59.00 ft           |                       |                                |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                                |                                    |

Tool Comments:

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

|                 |       |      |         |         |                               |
|-----------------|-------|------|---------|---------|-------------------------------|
| Change Over Sub | 1.00  |      |         | 4172.00 |                               |
| Shut In Tool    | 5.00  |      |         | 4177.00 |                               |
| Hydraulic tool  | 5.00  |      |         | 4182.00 |                               |
| Packer          | 5.00  |      |         | 4187.00 | 20.00 Bottom Of Top Packer    |
| Packer          | 4.00  |      |         | 4191.00 |                               |
| Stubb           | 1.00  |      |         | 4192.00 |                               |
| Perforations    | 1.00  |      |         | 4193.00 |                               |
| Recorder        | 0.00  | 6668 | Inside  | 4193.00 |                               |
| Recorder        | 0.00  | 8365 | Outside | 4193.00 |                               |
| Change Over Sub | 1.00  |      |         | 4194.00 |                               |
| Drill Pipe      | 30.00 |      |         | 4224.00 |                               |
| Change Over Sub | 1.00  |      |         | 4225.00 |                               |
| Bullnose        | 5.00  |      |         | 4230.00 | 39.00 Bottom Packers & Anchor |

**Total Tool Length: 59.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

Job Ticket: 44438

**DST#: 1**

ATTN: Jim Musgrove

Test Start: 2012.09.25 @ 09:20:15

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

23000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.14 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

| Length<br>ft | Description                    | Volume<br>bbbl |
|--------------|--------------------------------|----------------|
| 370.00       | sw 100%sw                      | 1.820          |
| 276.00       | mcsw with oil spots 40%m 60%sw | 3.872          |

Total Length: 646.00 ft      Total Volume: 5.692 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

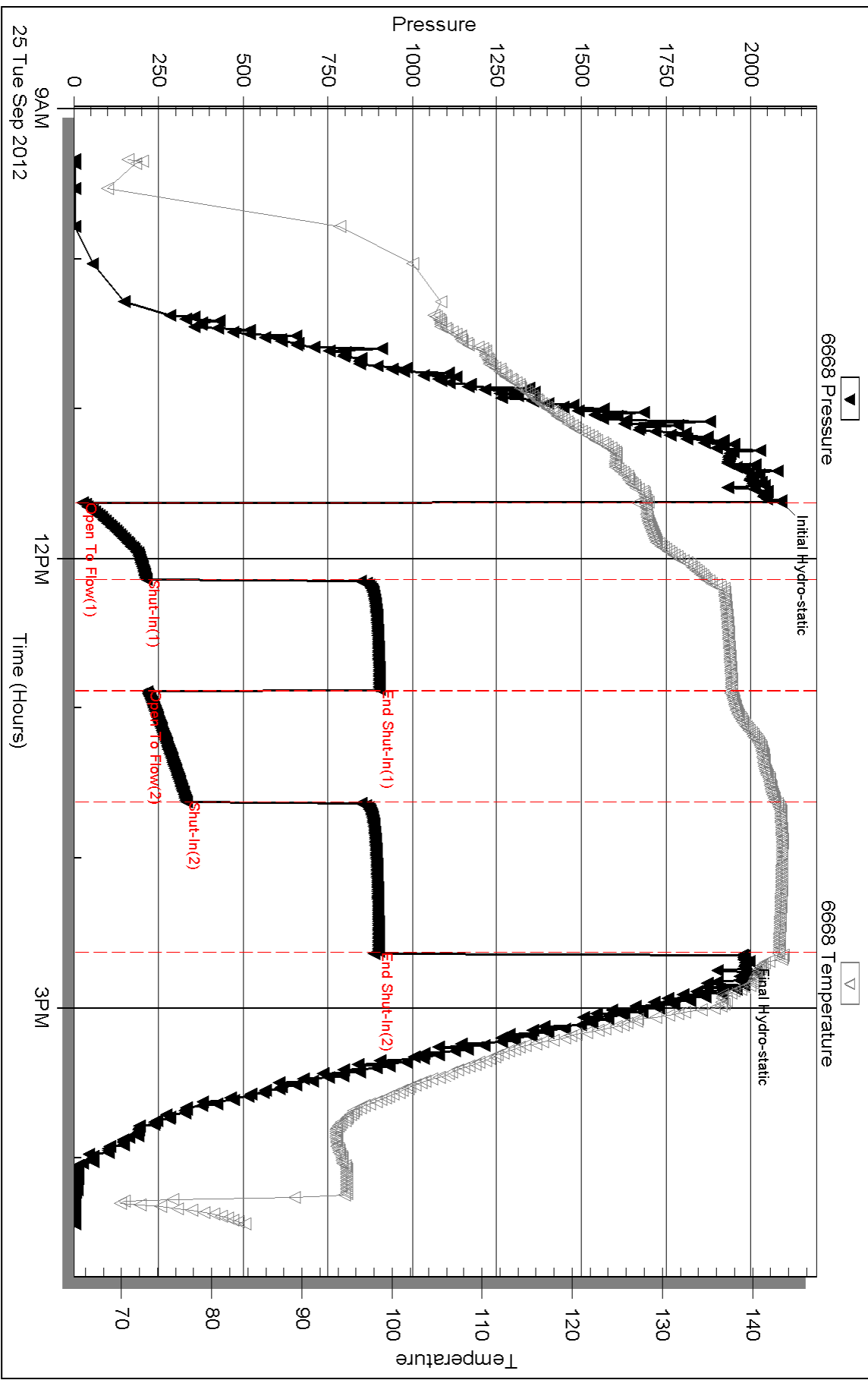
Serial #:

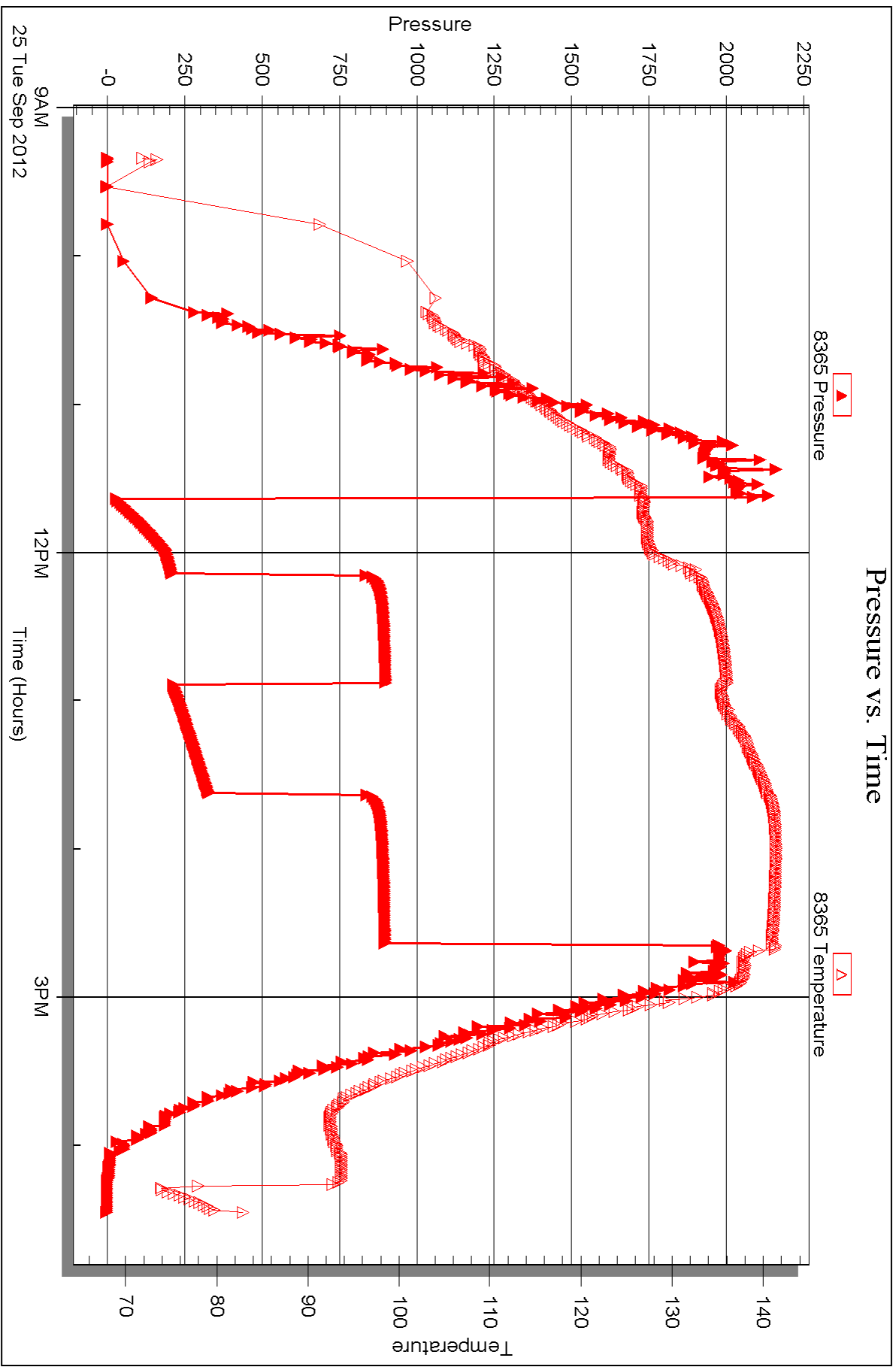
Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .250@89.9\*=23,000 ppm

### Pressure vs. Time







## DRILL STEM TEST REPORT

Prepared For: **FIML Natural Resources**

410 17th St Ste 900  
Denver CO 80202

ATTN: Jim Musgrove

**18-19s-31w Scott,KS**

**Larry Dearden #16A-18-1931**

Start Date: 2012.09.26 @ 09:53:15

End Date: 2012.09.26 @ 16:42:00

Job Ticket #: 44439                      DST #: 2

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

Printed: 2012.10.02 @ 13:34:39



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

FIML Natural Resources

410 17th St Ste 900  
Denver CO 80202

ATTN: Jim Musgrove

**Larry Dearden #16A-18-1931**

**18-19s-31w Scott,KS**

Job Ticket: 44439

**DST#: 2**

Test Start: 2012.09.26 @ 09:53:15

## GENERAL INFORMATION:

Formation: **J-K-L**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:50:30

Time Test Ended: 16:42:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 65

**Interval: 4261.00 ft (KB) To 4350.00 ft (KB) (TVD)**

Total Depth: 4350.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2984.00 ft (KB)

2974.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 6668**

**Inside**

Press @ Run Depth: 279.83 psig @ 4263.00 ft (KB)

Start Date: 2012.09.26

End Date:

2012.09.26

Start Time: 09:53:15

End Time:

16:42:00

Capacity: 8000.00 psig

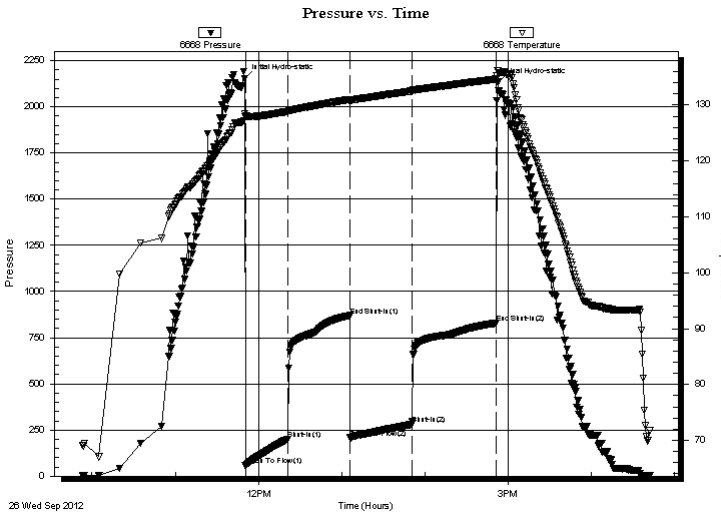
Last Calib.: 2012.09.26

Time On Btm: 2012.09.26 @ 11:50:15

Time Off Btm: 2012.09.26 @ 14:52:30

**TEST COMMENT:** IF:BOB in 26 min.  
IS:No return blow  
FF:BOB in 38 min.  
FS:No return blow

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2151.94         | 128.41       | Initial Hydro-static |
| 1           | 56.39           | 127.90       | Open To Flow (1)     |
| 31          | 201.54          | 128.87       | Shut-In(1)           |
| 76          | 870.23          | 131.03       | End Shut-In(1)       |
| 76          | 207.25          | 130.57       | Open To Flow (2)     |
| 121         | 279.83          | 132.53       | Shut-In(2)           |
| 182         | 828.61          | 134.64       | End Shut-In(2)       |
| 183         | 2133.57         | 136.21       | Final Hydro-static   |

## Recovery

| Length (ft) | Description     | Volume (bbl) |
|-------------|-----------------|--------------|
| 554.00      | mcw 50% m 50% m | 4.40         |
|             |                 |              |
|             |                 |              |
|             |                 |              |
|             |                 |              |

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

Job Ticket: 44439

**DST#: 2**

ATTN: Jim Musgrove

Test Start: 2012.09.26 @ 09:53:15

## Tool Information

|                           |                    |                       |                                |                                    |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe:               | Length: 3893.00 ft | Diameter: 3.80 inches | Volume: 54.61 bbl              | Tool Weight: 1500.00 lb            |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl               | Weight set on Packer: 20000.00 lb  |
| Drill Collar:             | Length: 370.00 ft  | Diameter: 2.25 inches | Volume: 1.82 bbl               | Weight to Pull Loose: 95000.00 lb  |
|                           |                    |                       | <u>Total Volume: 56.43 bbl</u> | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 22.00 ft           |                       |                                | String Weight: Initial 70000.00 lb |
| Depth to Top Packer:      | 4261.00 ft         |                       |                                | Final 71000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                                |                                    |
| Interval between Packers: | 89.00 ft           |                       |                                |                                    |
| Tool Length:              | 109.00 ft          |                       |                                |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                                |                                    |

Tool Comments:

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

|                 |       |      |         |         |                               |
|-----------------|-------|------|---------|---------|-------------------------------|
| Change Over Sub | 1.00  |      |         | 4242.00 |                               |
| Shut In Tool    | 5.00  |      |         | 4247.00 |                               |
| Hydraulic tool  | 5.00  |      |         | 4252.00 |                               |
| Packer          | 5.00  |      |         | 4257.00 | 20.00 Bottom Of Top Packer    |
| Packer          | 4.00  |      |         | 4261.00 |                               |
| Stubb           | 1.00  |      |         | 4262.00 |                               |
| Perforations    | 1.00  |      |         | 4263.00 |                               |
| Recorder        | 0.00  | 6668 | Inside  | 4263.00 |                               |
| Recorder        | 0.00  | 6625 | Outside | 4263.00 |                               |
| Change Over Sub | 1.00  |      |         | 4264.00 |                               |
| Drill Pipe      | 63.00 |      |         | 4327.00 |                               |
| Change Over Sub | 1.00  |      |         | 4328.00 |                               |
| Perforations    | 17.00 |      |         | 4345.00 |                               |
| Bullnose        | 5.00  |      |         | 4350.00 | 89.00 Bottom Packers & Anchor |

**Total Tool Length: 109.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

Job Ticket: 44439

**DST#: 2**

ATTN: Jim Musgrove

Test Start: 2012.09.26 @ 09:53:15

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

25000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.93 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2200.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description   | Volume<br>bbl |
|--------------|---------------|---------------|
| 554.00       | mcw 50%m 50%m | 4.401         |

Total Length: 554.00 ft      Total Volume: 4.401 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

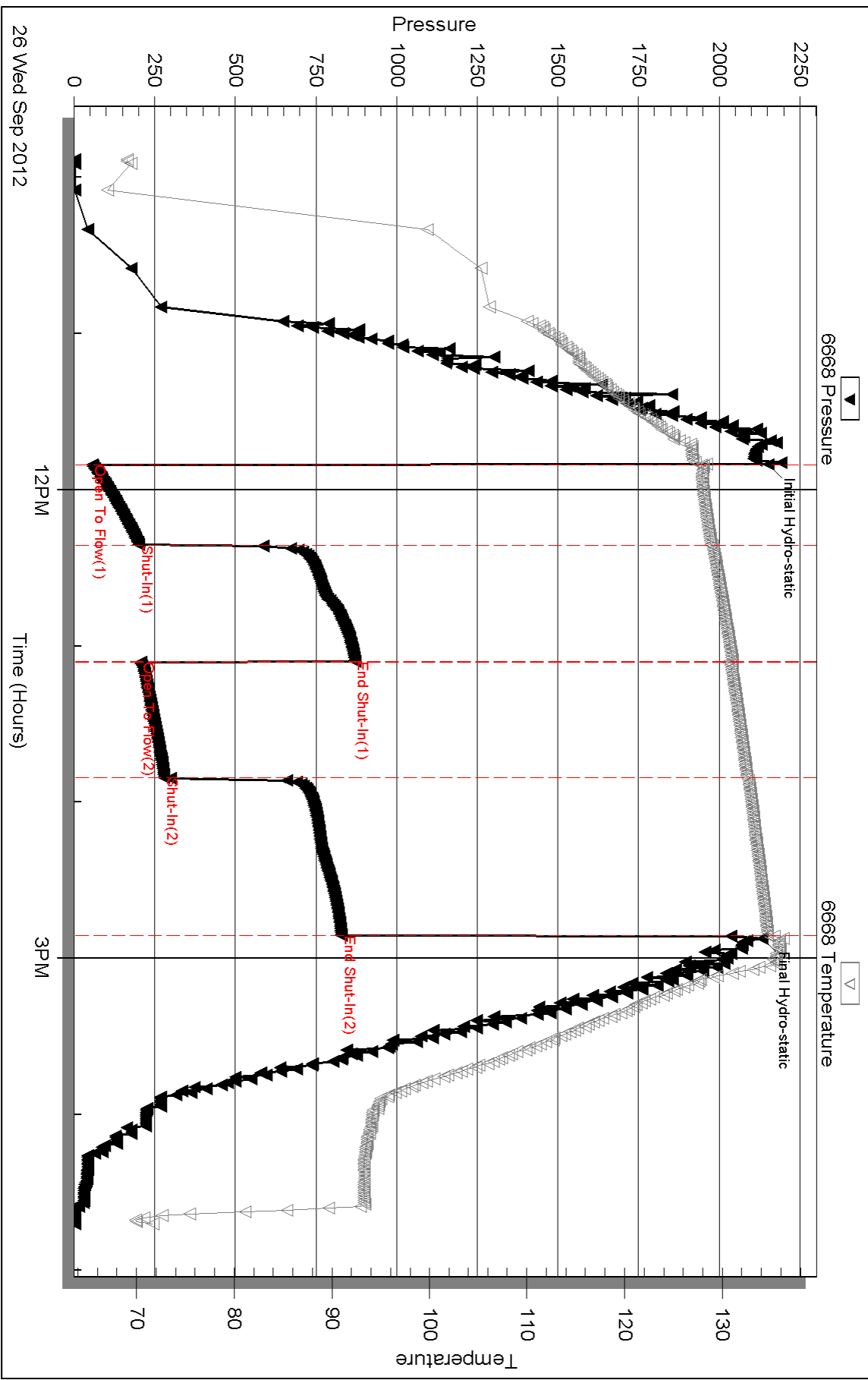
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .261 @87.4= 25,000 ppm

### Pressure vs. Time







## DRILL STEM TEST REPORT

Prepared For: **FIML Natural Resources**

410 17th St Ste 900  
Denver CO 80202

ATTN: Jim Musgrove

**18-19s-31w Scott,KS**

**Larry Dearden #16A-18-1931**

Start Date: 2012.09.27 @ 04:57:15

End Date: 2012.09.27 @ 12:48:30

Job Ticket #: 4440                      DST #: 3

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

Printed: 2012.10.02 @ 13:33:57

FIML Natural Resources

Larry Dearden #16A-18-1931

18-19s-31w Scott,KS

DST # 3

Marmaton

2012.09.27



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

FIML Natural Resources

410 17th St Ste 900  
Denver CO 80202

ATTN: Jim Musgrove

**Larry Dearden #16A-18-1931**

**18-19s-31w Scott,KS**

Job Ticket: 4440

**DST#: 3**

Test Start: 2012.09.27 @ 04:57:15

## GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:19:00

Time Test Ended: 12:48:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 65

**Interval: 4335.00 ft (KB) To 4420.00 ft (KB) (TVD)**

Reference Elevations: 2984.00 ft (KB)

Total Depth: 4335.00 ft (KB) (TVD)

2974.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8365 Outside**

Press @ Run Depth: 694.00 psig @ 4337.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.27

End Date: 2012.09.27

Last Calib.: 2012.09.27

Start Time: 04:57:15

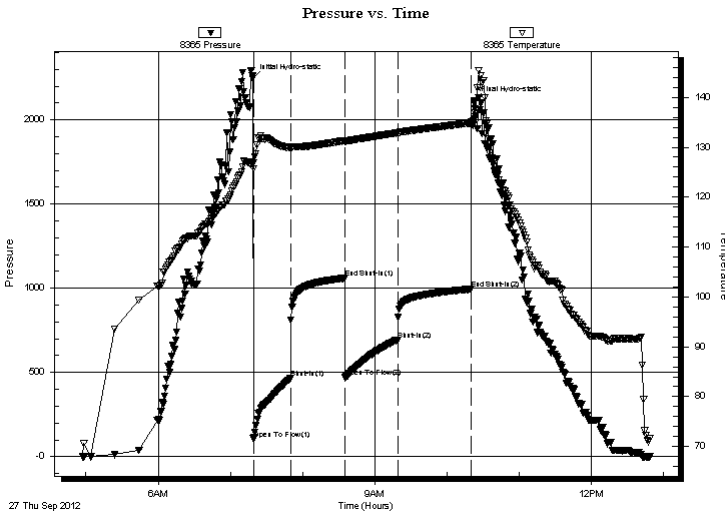
End Time: 12:48:30

Time On Btm: 2012.09.27 @ 07:18:45

Time Off Btm: 2012.09.27 @ 10:22:30

**TEST COMMENT:** IF:BOB in 2 min.  
IS:Return blow built to 3 1/2"  
FF:BOB in 3 min.  
FS:Return blow built to 6"

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2243.42         | 126.78       | Initial Hydro-static |
| 1           | 105.98          | 125.65       | Open To Flow (1)     |
| 31          | 464.03          | 129.93       | Shut-In(1)           |
| 77          | 1060.12         | 131.33       | End Shut-In(1)       |
| 77          | 472.52          | 131.16       | Open To Flow (2)     |
| 121         | 694.00          | 132.89       | Shut-In(2)           |
| 181         | 994.48          | 134.87       | End Shut-In(2)       |
| 184         | 2115.29         | 136.16       | Final Hydro-static   |

## Recovery

| Length (ft) | Description                | Volume (bbl) |
|-------------|----------------------------|--------------|
| 738.00      | ocsw 5%o 95%sw             | 6.98         |
| 92.00       | ocgmw 10%o 10%g 10%m 70%w  | 1.29         |
| 276.00      | ocgw m 10%o 20%w 30%g 40%m | 3.87         |
| 276.00      | ocgw m 15%o 30%g 30%m 25%w | 3.87         |
| 0.00        | GIP= 186 ft                | 0.00         |

\* Recovery from multiple tests

## Gas Rates

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



# TRILOBITE TESTING, INC.

## DRILL STEM TEST REPORT

FIML Natural Resources

410 17th St Ste 900  
Denver CO 80202

ATTN: Jim Musgrove

**Larry Dearden #16A-18-1931**

**18-19s-31w Scott,KS**

Job Ticket: 4440

**DST#: 3**

Test Start: 2012.09.27 @ 04:57:15

### GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:19:00

Time Test Ended: 12:48:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 65

Interval: **4335.00 ft (KB) To 4420.00 ft (KB) (TVD)**

Total Depth: 4335.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2984.00 ft (KB)

2974.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 6668**

**Inside**

Press @ Run Depth: psig @ 4337.00 ft (KB)

Start Date: 2012.09.27

End Date:

2012.09.27

Start Time: 05:22:00

End Time:

13:46:09

Capacity: 8000.00 psig

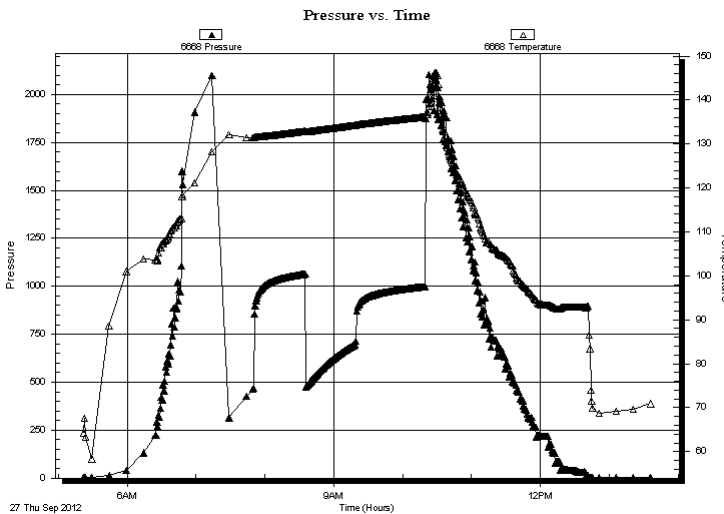
Last Calib.: 1899.12.30

Time On Btm:

Time Off Btm:

TEST COMMENT: IF:BOB in 2 min.  
IS:Return blow built to 3 1/2"  
FF:BOB in 3 min.  
FS:Return blow built to 6"

### PRESSURE SUMMARY



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

### Recovery

| Length (ft) | Description                | Volume (bbl) |
|-------------|----------------------------|--------------|
| 738.00      | ocsw 5%o 95%sw             | 6.98         |
| 92.00       | ocgmw 10%o 10%g 10%m 70%w  | 1.29         |
| 276.00      | ocgw m 10%o 20%w 30%g 40%m | 3.87         |
| 276.00      | ocgw m 15%o 30%g 30%m 25%w | 3.87         |
| 0.00        | GIP= 186 ft                | 0.00         |

### Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

ATTN: Jim Musgrove

Job Ticket: 4440

**DST#: 3**

Test Start: 2012.09.27 @ 04:57:15

## Tool Information

|                           |                    |                       |                                |                                    |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe:               | Length: 3956.00 ft | Diameter: 3.80 inches | Volume: 55.49 bbl              | Tool Weight: 1500.00 lb            |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl               | Weight set on Packer: 20000.00 lb  |
| Drill Collar:             | Length: 370.00 ft  | Diameter: 2.25 inches | Volume: 1.82 bbl               | Weight to Pull Loose: 80000.00 lb  |
|                           |                    |                       | <u>Total Volume: 57.31 bbl</u> | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 11.00 ft           |                       |                                | String Weight: Initial 70000.00 lb |
| Depth to Top Packer:      | 4335.00 ft         |                       |                                | Final 75000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                                |                                    |
| Interval between Packers: | 85.00 ft           |                       |                                |                                    |
| Tool Length:              | 105.00 ft          |                       |                                |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                                |                                    |

Tool Comments:

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

|                 |       |      |         |         |                               |
|-----------------|-------|------|---------|---------|-------------------------------|
| Change Over Sub | 1.00  |      |         | 4316.00 |                               |
| Shut In Tool    | 5.00  |      |         | 4321.00 |                               |
| Hydraulic tool  | 5.00  |      |         | 4326.00 |                               |
| Packer          | 5.00  |      |         | 4331.00 | 20.00 Bottom Of Top Packer    |
| Packer          | 4.00  |      |         | 4335.00 |                               |
| Stubb           | 1.00  |      |         | 4336.00 |                               |
| Perforations    | 1.00  |      |         | 4337.00 |                               |
| Recorder        | 0.00  | 6668 | Inside  | 4337.00 |                               |
| Recorder        | 0.00  | 8365 | Outside | 4337.00 |                               |
| Change Over Sub | 1.00  |      |         | 4338.00 |                               |
| Drill Pipe      | 64.00 |      |         | 4402.00 |                               |
| Change Over Sub | 1.00  |      |         | 4403.00 |                               |
| Perforations    | 12.00 |      |         | 4415.00 |                               |
| Bullnose        | 5.00  |      |         | 4420.00 | 85.00 Bottom Packers & Anchor |

**Total Tool Length: 105.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

Job Ticket: 4440

**DST#: 3**

ATTN: Jim Musgrove

Test Start: 2012.09.27 @ 04:57:15

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

26000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.94 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2200.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description                | Volume<br>bbbl |
|--------------|----------------------------|----------------|
| 738.00       | ocsw 5%o 95%sw             | 6.982          |
| 92.00        | ocgmw 10%o 10%g 10%m 70%w  | 1.291          |
| 276.00       | ocgw m 10%o 20%w 30%g 40%m | 3.872          |
| 276.00       | ocgw m 15%o 30%g 30%m 25%w | 3.872          |
| 0.00         | GIP= 186 ft                | 0.000          |

Total Length: 1382.00 ft      Total Volume: 16.017 bbl

Num Fluid Samples: 0

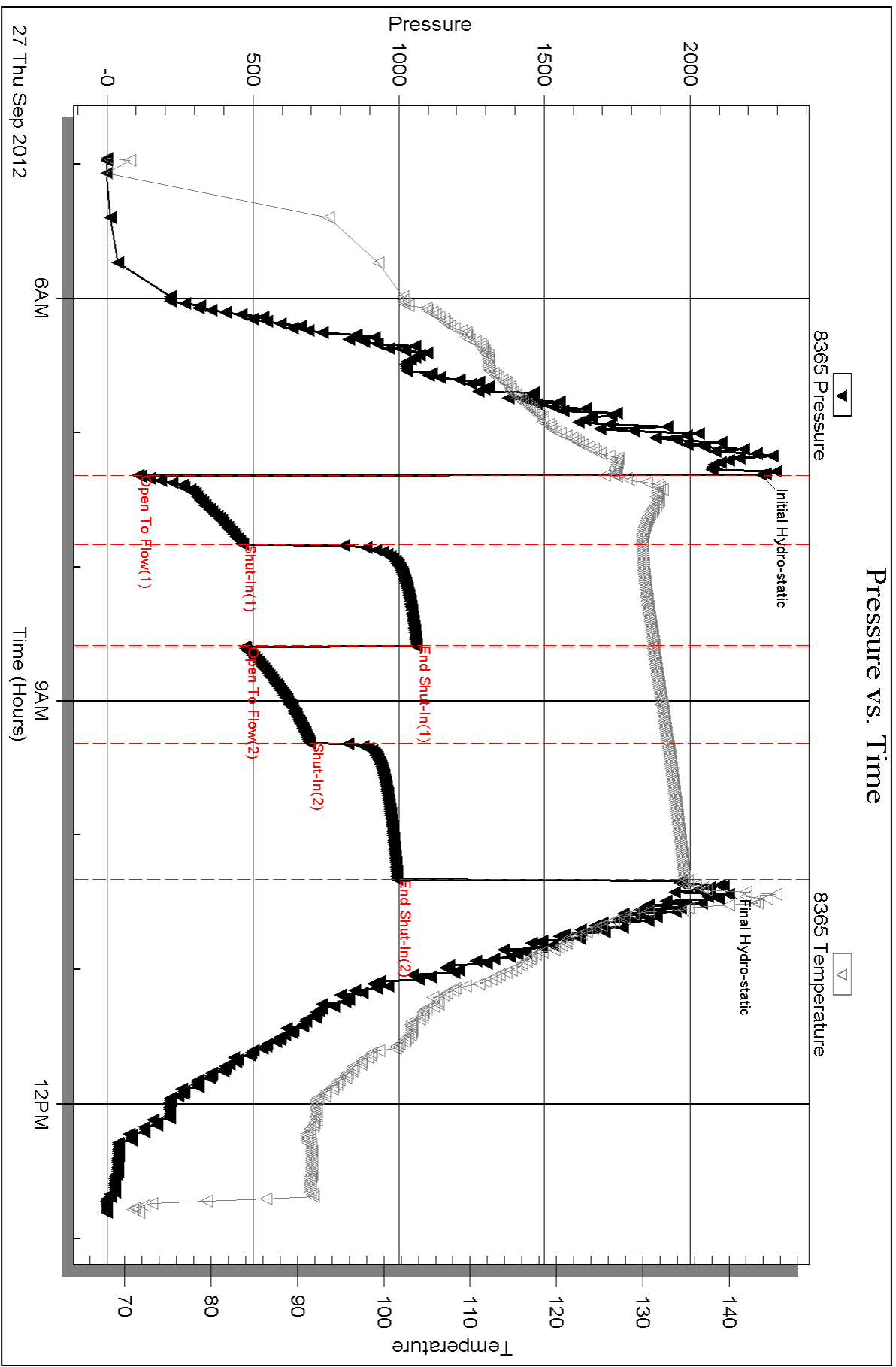
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .267 @ 88.7=26,000 ppm



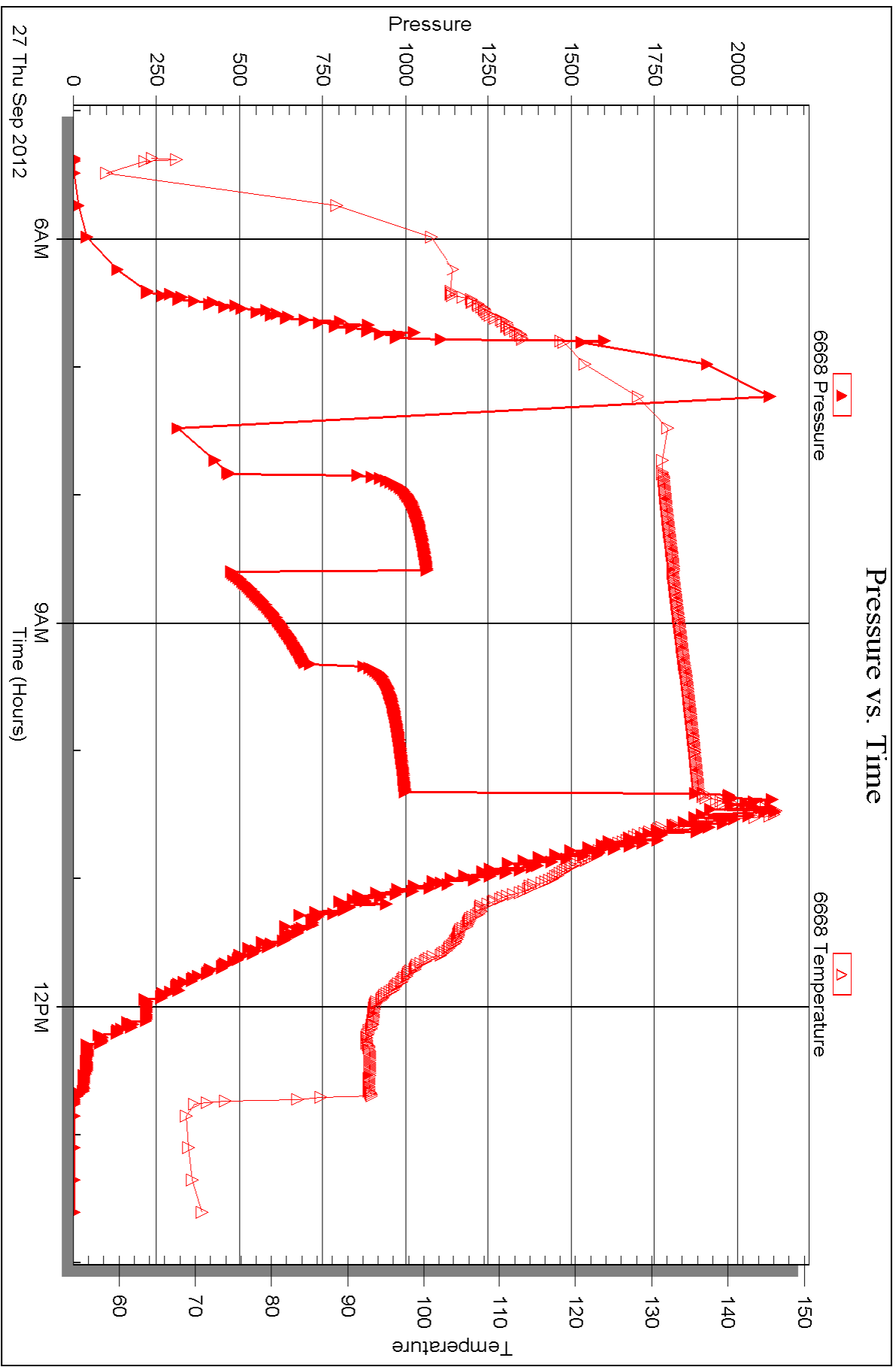
Serial #: 6668

Inside

FIML Natural Resources

18-19s-31w Scott, KS

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 4440

Printed: 2012.10.02 @ 13:34:02



## DRILL STEM TEST REPORT

Prepared For: **FIML Natural Resources**

410 17th St Ste 900  
Denver CO 80202

ATTN: Jim Musgrove

**18-19s-31w Scott,KS**

**Larry Dearden #16A-18-1931**

Start Date: 2012.09.28 @ 14:08:15

End Date: 2012.09.28 @ 20:37:00

Job Ticket #: 44441                      DST #: 4

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

Printed: 2012.10.02 @ 13:33:18





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

FIML Natural Resources

410 17th St Ste 900  
Denver CO 80202

ATTN: Jim Musgrove

**Larry Dearden #16A-18-1931**

**18-19s-31w Scott,KS**

Job Ticket: 44441

**DST#: 4**

Test Start: 2012.09.28 @ 14:08:15

## GENERAL INFORMATION:

Formation: **Cherokee Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:08:15

Time Test Ended: 20:37:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 65

**Interval: 4574.00 ft (KB) To 4637.00 ft (KB) (TVD)**

Reference Elevations: 2984.00 ft (KB)

Total Depth: 4637.00 ft (KB) (TVD)

2974.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 6668**

**Inside**

Press @ Run Depth: 42.74 psig @ 4576.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.28

End Date:

2012.09.28

Last Calib.:

2012.09.28

Start Time:

14:08:15

End Time:

20:37:00

Time On Btm:

2012.09.28 @ 16:08:00

Time Off Btm:

2012.09.28 @ 18:39:00

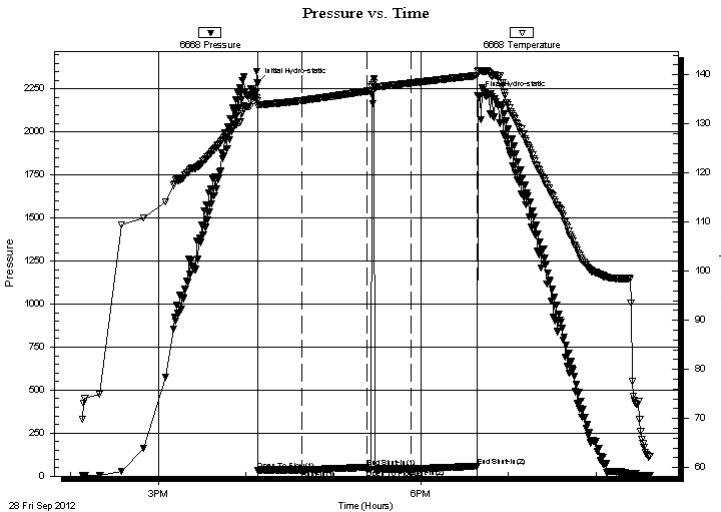
**TEST COMMENT:** IF:Weak ssurface blow that died in 12 min.

IS:No return blow

FF:No blow ---flushed tool--no blow

FS:No return blow

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2285.08         | 134.68       | Initial Hydro-static |
| 1           | 34.63           | 133.65       | Open To Flow (1)     |
| 31          | 36.74           | 134.74       | Shut-In(1)           |
| 75          | 51.85           | 136.67       | End Shut-In(1)       |
| 76          | 37.60           | 136.67       | Open To Flow (2)     |
| 105         | 42.74           | 138.31       | Shut-In(2)           |
| 151         | 58.44           | 139.85       | End Shut-In(2)       |
| 151         | 2210.59         | 140.70       | Final Hydro-static   |

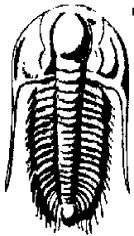
## Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 10.00       | mud 100% m  | 0.05         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

FIML Natural Resources

Larry Dearden #16A-18-1931

410 17th St Ste 900  
Denver CO 80202

18-19s-31w Scott, KS

ATTN: Jim Musgrove

Job Ticket: 44441

DST#: 4

Test Start: 2012.09.28 @ 14:08:15

## GENERAL INFORMATION:

Formation: **Cherokee Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:08:15

Time Test Ended: 20:37:00

Interval: **4574.00 ft (KB) To 4637.00 ft (KB) (TVD)**

Total Depth: 4637.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 65

Reference Elevations: 2984.00 ft (KB)

2974.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8365 Outside**

Press @ Run Depth: psig @ 4576.00 ft (KB)

Start Date: 2012.09.28

End Date:

2012.09.28

Start Time: 14:08:15

End Time:

20:37:00

Capacity: 8000.00 psig

Last Calib.:

2012.09.28

Time On Btm:

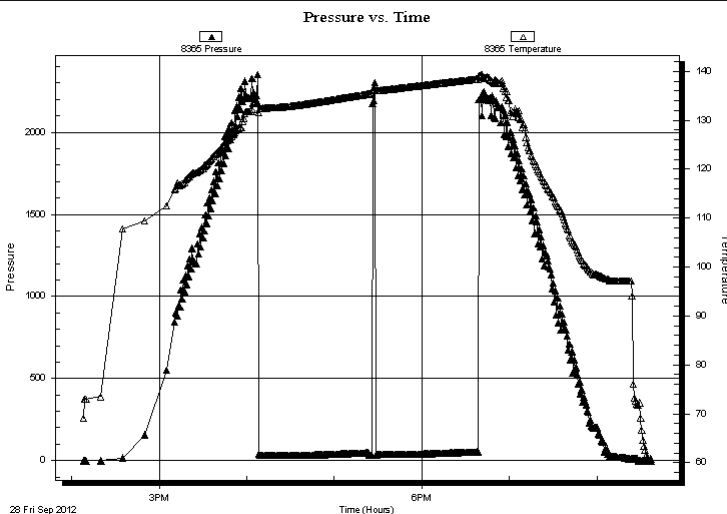
Time Off Btm:

TEST COMMENT: IF: Weak ss surface blow that died in 12 min.

IS: No return blow

FF: No blow --- flushed tool --- no blow

FS: No return blow



## PRESSURE SUMMARY

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

## Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 10.00       | mud 100% m  | 0.05         |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |
|             |             |              |

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

Job Ticket: 44441

**DST#: 4**

ATTN: Jim Musgrove

Test Start: 2012.09.28 @ 14:08:15

## Tool Information

|                           |                    |                       |                                |                                    |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe:               | Length: 4204.00 ft | Diameter: 3.80 inches | Volume: 58.97 bbl              | Tool Weight: 1500.00 lb            |
| Heavy Wt. Pipe:           | Length: 0.00 ft    | Diameter: 0.00 inches | Volume: 0.00 bbl               | Weight set on Packer: 20000.00 lb  |
| Drill Collar:             | Length: 370.00 ft  | Diameter: 2.25 inches | Volume: 1.82 bbl               | Weight to Pull Loose: 90000.00 lb  |
|                           |                    |                       | <u>Total Volume: 60.79 bbl</u> | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 20.00 ft           |                       |                                | String Weight: Initial 70000.00 lb |
| Depth to Top Packer:      | 4574.00 ft         |                       |                                | Final 70000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                       |                                |                                    |
| Interval between Packers: | 63.00 ft           |                       |                                |                                    |
| Tool Length:              | 83.00 ft           |                       |                                |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                                |                                    |

Tool Comments:

## Tool Description

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Change Over Sub  | 1.00        |            |          | 4555.00    |                               |
| Shut In Tool     | 5.00        |            |          | 4560.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 4565.00    |                               |
| Packer           | 5.00        |            |          | 4570.00    | 20.00 Bottom Of Top Packer    |
| Packer           | 4.00        |            |          | 4574.00    |                               |
| Stubb            | 1.00        |            |          | 4575.00    |                               |
| Perforations     | 1.00        |            |          | 4576.00    |                               |
| Recorder         | 0.00        | 6668       | Inside   | 4576.00    |                               |
| Recorder         | 0.00        | 8365       | Outside  | 4576.00    |                               |
| Change Over Sub  | 1.00        |            |          | 4577.00    |                               |
| Drill Pipe       | 32.00       |            |          | 4609.00    |                               |
| Change Over Sub  | 1.00        |            |          | 4610.00    |                               |
| Change Over Sub  | 22.00       |            |          | 4632.00    |                               |
| Bullnose         | 5.00        |            |          | 4637.00    | 63.00 Bottom Packers & Anchor |

**Total Tool Length: 83.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

Job Ticket: 44441

**DST#: 4**

ATTN: Jim Musgrove

Test Start: 2012.09.28 @ 14:08:15

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.37 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description | Volume<br>bbl |
|--------------|-------------|---------------|
| 10.00        | mud 100% m  | 0.049         |

Total Length: 10.00 ft      Total Volume: 0.049 bbl

Num Fluid Samples: 0

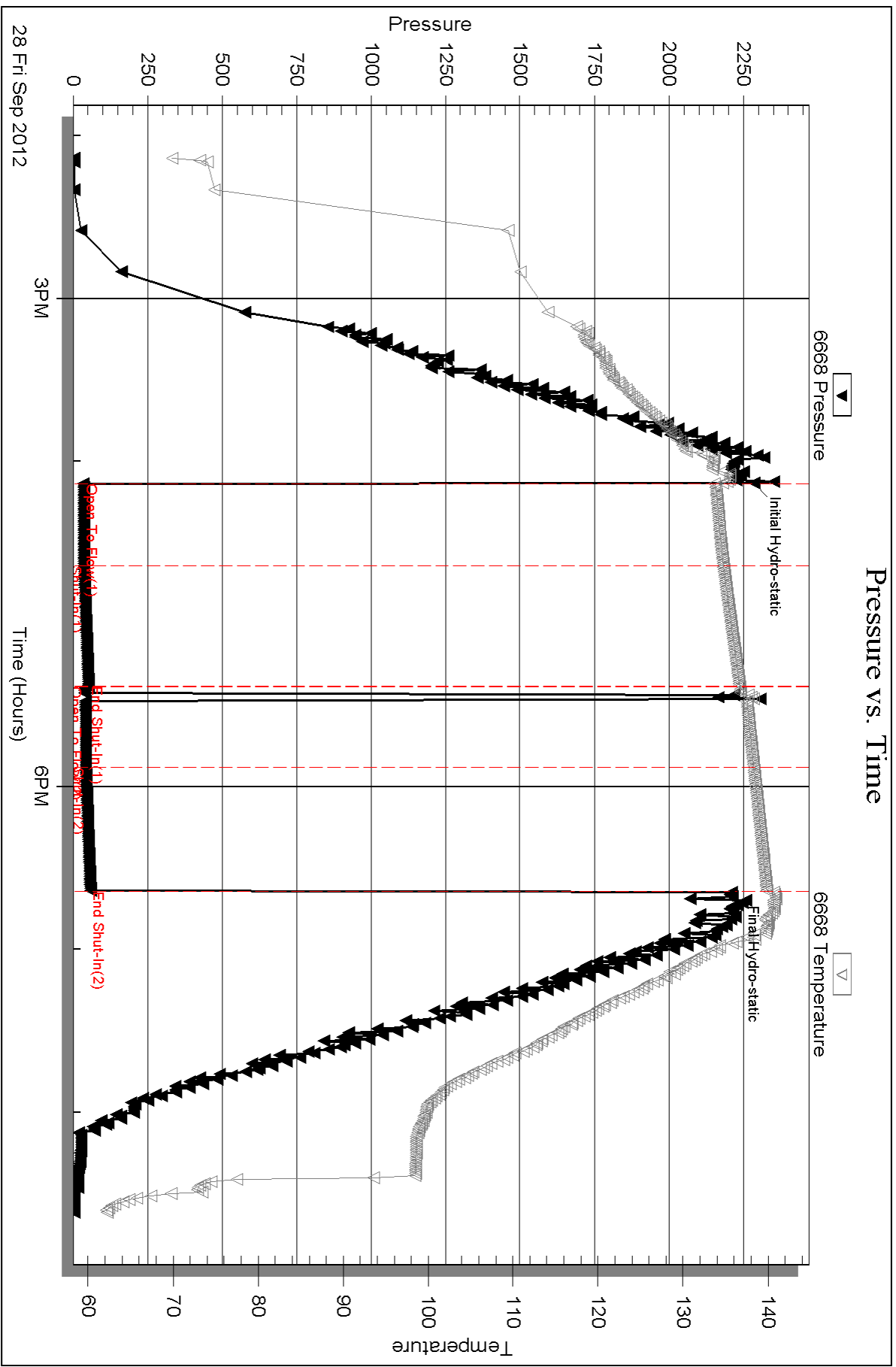
Num Gas Bombs: 0

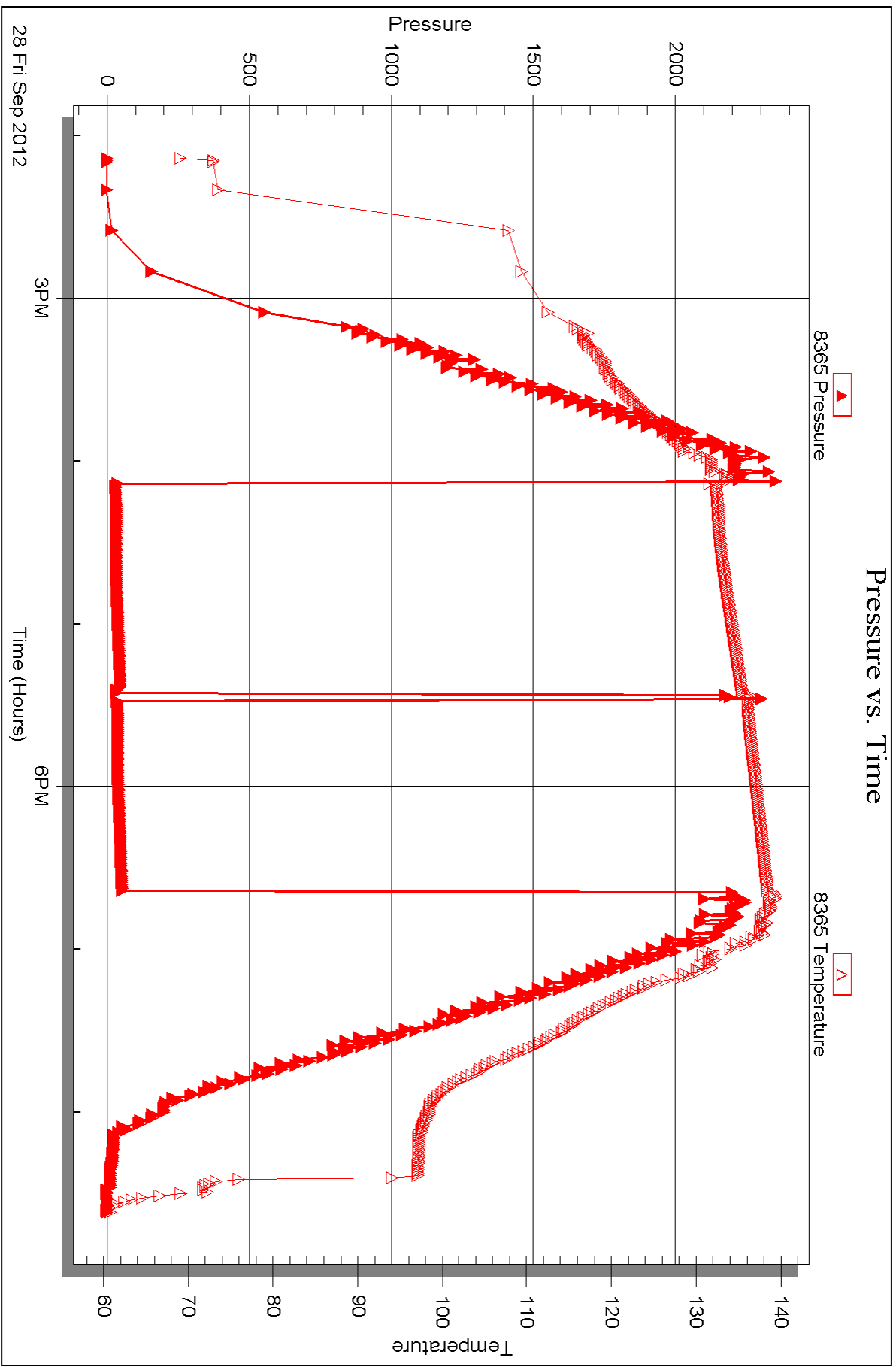
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **FIML Natural Resources**

410 17th St Ste 900  
Denver CO 80202

ATTN: Jim Musgrove

**18-19s-31w Scott,KS**

**Larry Dearden #16A-18-1931**

Start Date: 2012.09.29 @ 23:50:15

End Date: 2012.09.30 @ 07:24:15

Job Ticket #: 44442                      DST #: 5

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

Printed: 2012.10.02 @ 13:32:38



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

ATTN: Jim Musgrove

Job Ticket: 44442

**DST#: 5**

Test Start: 2012.09.29 @ 23:50:15

## GENERAL INFORMATION:

Formation: **Lansing**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:26:15

Time Test Ended: 07:24:15

Test Type: Conventional Straddle (Reset)

Tester: Mike Roberts

Unit No: 65

**Interval: 4166.00 ft (KB) To 4191.00 ft (KB) (TVD)**

Reference Elevations: 2984.00 ft (KB)

Total Depth: 4191.00 ft (KB) (TVD)

2974.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8646**

**Inside**

Press @ RunDepth: 34.16 psig @ 4187.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.29

End Date:

2012.09.30

Last Calib.:

2012.09.30

Start Time:

23:50:15

End Time:

07:24:15

Time On Btm:

2012.09.30 @ 02:26:00

Time Off Btm:

2012.09.30 @ 04:56:30

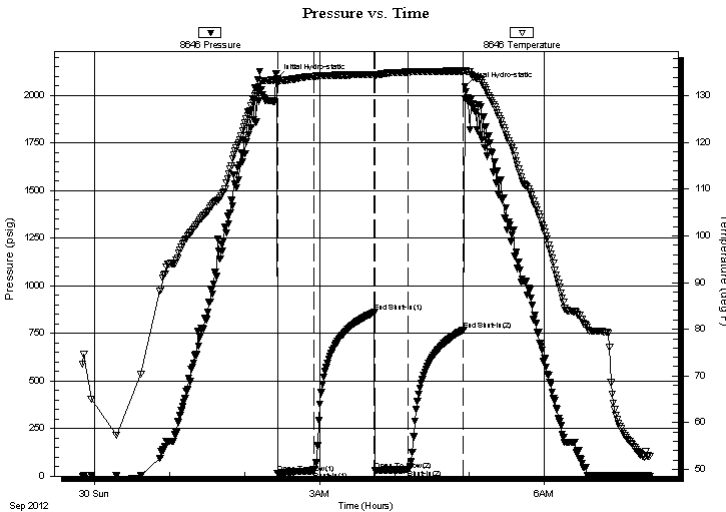
TEST COMMENT: IF: Built to weak surface blow

IS: No return blow

FF: No blow

FS: No return blow

## PRESSURE SUMMARY



| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2089.50         | 133.47       | Initial Hydro-static |
| 1           | 16.65           | 132.55       | Open To Flow (1)     |
| 30          | 27.45           | 134.16       | Shut-In(1)           |
| 78          | 859.98          | 134.56       | End Shut-In(1)       |
| 79          | 29.59           | 134.35       | Open To Flow (2)     |
| 105         | 34.16           | 135.07       | Shut-In(2)           |
| 150         | 769.24          | 135.28       | End Shut-In(2)       |
| 151         | 2048.40         | 135.39       | Final Hydro-static   |

## Recovery

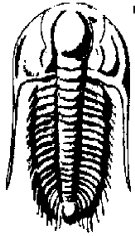
| Length (ft) | Description        | Volume (bbl) |
|-------------|--------------------|--------------|
| 10.00       | mud with oil spots | 0.05         |
|             |                    |              |
|             |                    |              |
|             |                    |              |
|             |                    |              |

## Gas Rates

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

\* Recovery from multiple tests





**TRILOBITE**  
**TESTING, INC.**

### DRILL STEM TEST REPORT

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

ATTN: Jim Musgrove

Job Ticket: 44442

**DST#: 5**

Test Start: 2012.09.29 @ 23:50:15

**GENERAL INFORMATION:**

Formation: **Lansing**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:26:15

Time Test Ended: 07:24:15

**Interval: 4166.00 ft (KB) To 4191.00 ft (KB) (TVD)**

Total Depth: 4191.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Straddle (Reset)

Tester: Mike Roberts

Unit No: 65

Reference Elevations: 2984.00 ft (KB)

2974.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8365 Outside**

Press @ Run Depth: psig @ 4187.00 ft (KB)

Start Date: 2012.09.29 End Date: 2012.09.30

Start Time: 23:50:15 End Time: 07:24:15

Capacity: 8000.00 psig

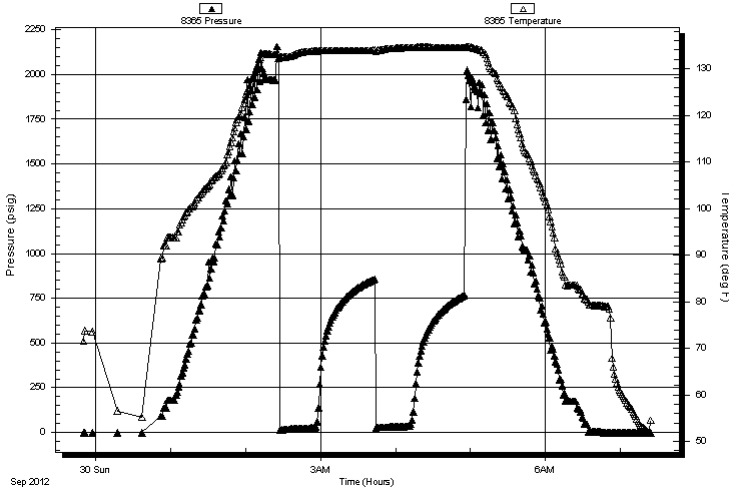
Last Calib.: 2012.09.30

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF: Built to weak surface blow  
IS: No return blow  
FF: No blow  
FS: No return blow

**Pressure vs. Time**



**PRESSURE SUMMARY**

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

**Recovery**

| Length (ft) | Description        | Volume (bbl) |
|-------------|--------------------|--------------|
| 10.00       | mud with oil spots | 0.05         |
|             |                    |              |
|             |                    |              |
|             |                    |              |
|             |                    |              |
|             |                    |              |
|             |                    |              |

\* Recovery from multiple tests

**Gas Rates**

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

ATTN: Jim Musgrove

Job Ticket: 44442

**DST#: 5**

Test Start: 2012.09.29 @ 23:50:15

## GENERAL INFORMATION:

Formation: **Lansing**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:26:15

Time Test Ended: 07:24:15

Test Type: Conventional Straddle (Reset)

Tester: Mike Roberts

Unit No: 65

**Interval: 4166.00 ft (KB) To 4191.00 ft (KB) (TVD)**

Reference Elevations: 2984.00 ft (KB)

Total Depth: 4191.00 ft (KB) (TVD)

2974.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 6668 Below (Straddle)**

Press @ Run Depth: psig @ 4773.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.29

End Date: 2012.09.30

Last Calib.: 2012.09.30

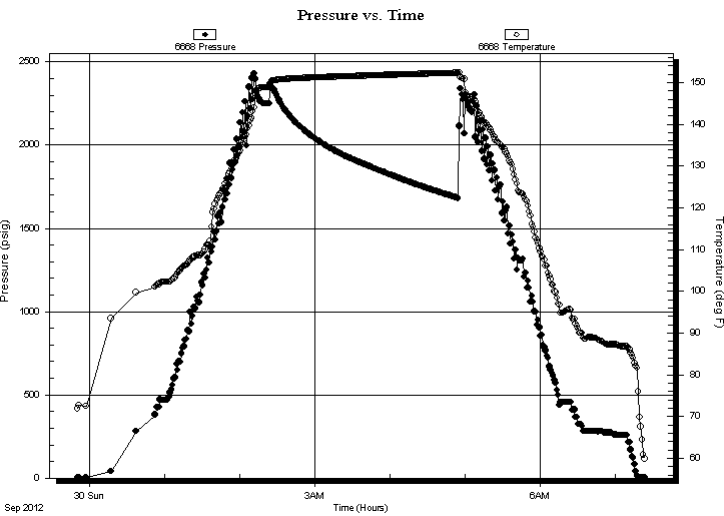
Start Time: 23:50:15

End Time: 07:23:45

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF: Built to weak surface blow  
IS: No return blow  
FF: No blow  
FS: No return blow



## PRESSURE SUMMARY

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

## Recovery

| Length (ft) | Description         | Volume (bbl) |
|-------------|---------------------|--------------|
| 10.00       | mud w ith oil spots | 0.05         |
|             |                     |              |
|             |                     |              |
|             |                     |              |
|             |                     |              |

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

Job Ticket: 44442

**DST#: 5**

ATTN: Jim Musgrove

Test Start: 2012.09.29 @ 23:50:15

## Tool Information

|                           |                    |                       |                                |                                    |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe:               | Length: 3795.00 ft | Diameter: 3.80 inches | Volume: 53.23 bbl              | Tool Weight: 1500.00 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: 370.00 ft  | Diameter: 2.25 inches | Volume: 1.82 bbl               | Weight to Pull Loose: 90000.00 lb  |
|                           |                    |                       | <u>Total Volume: 55.05 bbl</u> | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 14.00 ft           |                       |                                | String Weight: Initial 72000.00 lb |
| Depth to Top Packer:      | 4166.00 ft         |                       |                                | Final 72000.00 lb                  |
| Depth to Bottom Packer:   | 4188.00 ft         |                       |                                |                                    |
| Interval between Packers: | 22.00 ft           |                       |                                |                                    |
| Tool Length:              | 627.00 ft          |                       |                                |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches |                                |                                    |

Tool Comments:

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

|                 |        |      |         |         |                                |
|-----------------|--------|------|---------|---------|--------------------------------|
| Change Over Sub | 1.00   |      |         | 4152.00 |                                |
| Shut In Tool    | 5.00   |      |         | 4157.00 |                                |
| Hydraulic tool  | 5.00   |      |         | 4162.00 |                                |
| Packer          | 4.00   |      |         | 4166.00 | 15.00 Bottom Of Top Packer     |
| Stubb           | 1.00   |      |         | 4167.00 |                                |
| Perforations    | 20.00  |      |         | 4187.00 |                                |
| Recorder        | 0.00   | 8646 | Inside  | 4187.00 |                                |
| Recorder        | 0.00   | 8365 | Outside | 4187.00 |                                |
| Blank Off Sub   | 1.00   |      |         | 4188.00 |                                |
| Packer          | 5.00   |      |         | 4193.00 |                                |
| Stubb           | 1.00   |      |         | 4194.00 | 22.00 Tool Interval            |
| Packer          | 5.00   |      |         | 4199.00 |                                |
| Perforations    | 5.00   |      |         | 4204.00 |                                |
| Change Over Sub | 1.00   |      |         | 4205.00 |                                |
| Drill Pipe      | 567.00 |      |         | 4772.00 |                                |
| Change Over Sub | 1.00   |      |         | 4773.00 |                                |
| Recorder        | 0.00   | 6668 | Below   | 4773.00 |                                |
| Bullnose        | 5.00   |      |         | 4778.00 | 590.00 Bottom Packers & Anchor |

**Total Tool Length: 627.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

Job Ticket: 44442

**DST#: 5**

ATTN: Jim Musgrove

Test Start: 2012.09.29 @ 23:50:15

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

| Length<br>ft | Description         | Volume<br>bbf |
|--------------|---------------------|---------------|
| 10.00        | mud w ith oil spots | 0.049         |

Total Length: 10.00 ft      Total Volume: 0.049 bbf

Num Fluid Samples: 0

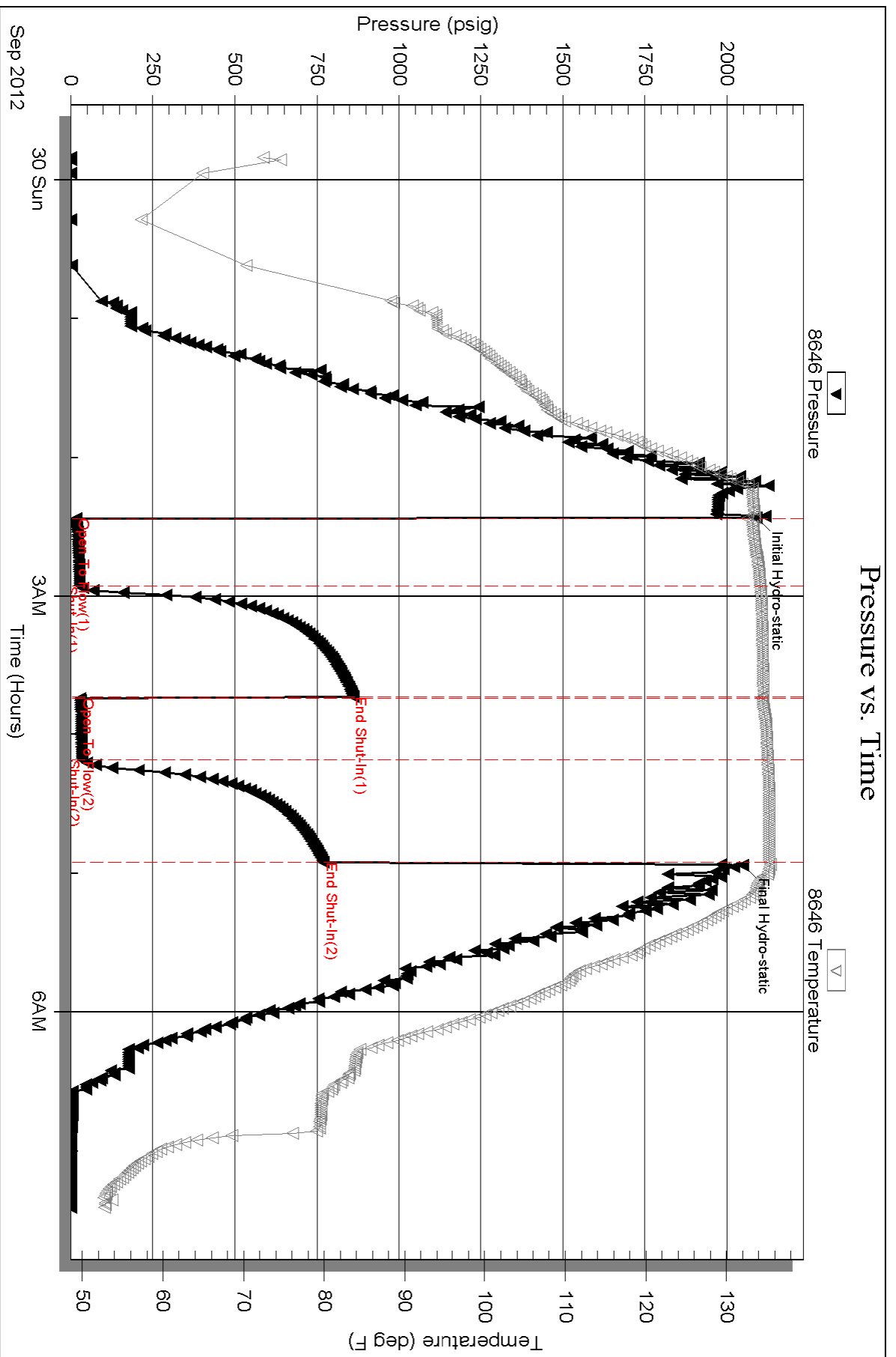
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

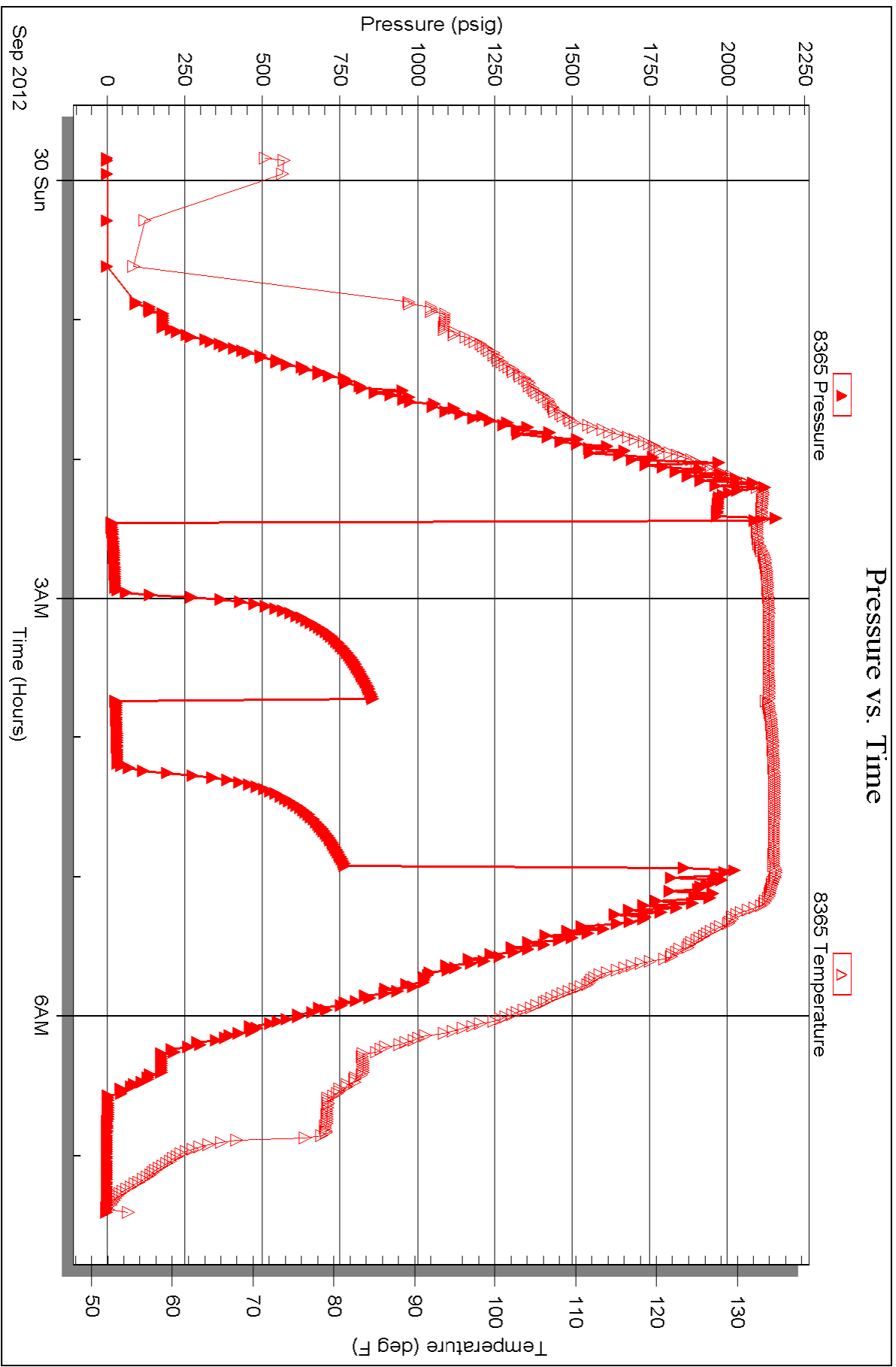


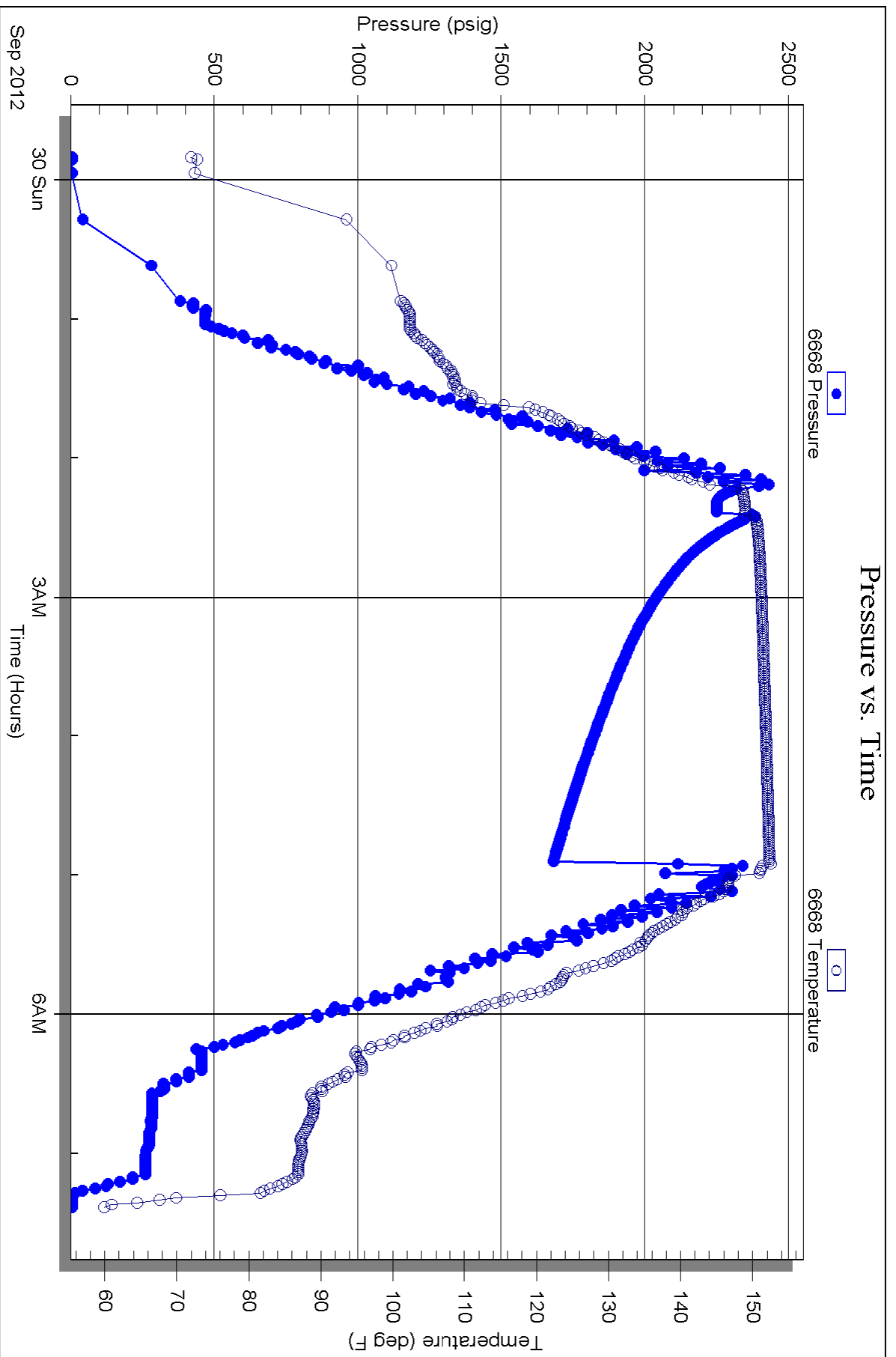
Serial #: 8365

Outside FIML Natural Resources

18-19s-31w Scott, KS

DST Test Number: 5







# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 44438

Well Name & No. Larry Dearden #16 A18-1931 Test No. 1 Date 9-25-12  
 Company FIML Natural Resources Elevation 2984 KB 2974 GL  
 Address 410 17th ST STE 900 Denver Co 80202  
 Co. Rep / Geo. Jim Musgrave Rig H2 Rig #1  
 Location: Sec. 18 Twp. 99S Rge. 31W Co. Scott State KS

Interval Tested 4191-4230 Zone Tested LKC F  
 Anchor Length 39 Drill Pipe Run 3830 Mud Wt. 9.3  
 Top Packer Depth 4187 Drill Collars Run 370 Vis 48  
 Bottom Packer Depth 4191 Wt. Pipe Run Ø WL 7.2  
 Total Depth 4230 Chlorides 2000 ppm System LCM 3  
 Blow Description IF: BOB IN 18 MIN  
IS: No Return Blow  
FF: BOB IN 24 MIN  
FS: No Return Blow

| Rec        | Feet of                    | %gas | %oil       | %water    | %mud |
|------------|----------------------------|------|------------|-----------|------|
| <u>276</u> | <u>MCSW with oil spots</u> |      | <u>60</u>  | <u>40</u> |      |
| <u>370</u> | <u>SW</u>                  |      | <u>100</u> |           |      |
|            |                            |      |            |           |      |
|            |                            |      |            |           |      |
|            |                            |      |            |           |      |

Rec Total 676 BHT 142 Gravity — API RW 1250 @ 89.7°F Chlorides 23,000 ppm  
 (A) Initial Hydrostatic 2089  Test 1250 1225 T-On Location 08:45  
 (B) First Initial Flow 25  Jars \_\_\_\_\_ T-Started 09:20  
 (C) First Final Flow 213  Safety Joint \_\_\_\_\_ T-Open 11:37  
 (D) Initial Shut-In 902  Circ Sub NC T-Pulled 14:37  
 (E) Second Initial Flow 216  Hourly Standby \_\_\_\_\_ T-Out 16:26  
 (F) Second Final Flow 331  Mileage 24 RT 1.55 <sup>37.20</sup> Comments \_\_\_\_\_  
 (G) Final Shut-In 900  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1975  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_

Initial Open 30  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Shut-In 45  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Flow 45  Day Standby \_\_\_\_\_ Total 1437.20  
 Final Shut-In 60  Accessibility 150 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1437.20

Approved By [Signature] Our Representative Mike Roberts

Trilobite Testing Inc. shall not be liable for damaged of any kind of 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 statements or opinion concerning the results 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.





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 44439

Well Name & No. Larry Dearden #1/A1B-1931 Test No. 2 Date 9-26-12  
 Company FIML Natural Resources Elevation 2984 KB 2974 GL  
 Address 410 17th ST STE 900 Denver Co 80202  
 Co. Rep / Geo. Jim Musgrave Rig H2 Rig #1  
 Location: Sec. 18 Twp. 19S Rge. 31W Co. SCOTT State KS

Interval Tested 4261-4350 Zone Tested 5-K-2  
 Anchor Length 89' Drill Pipe Run 3893 Mud Wt. 9.1  
 Top Packer Depth 4257 Drill Collars Run 370 Vis 53  
 Bottom Packer Depth ~~4257~~ 4261 Wt. Pipe Run Ø WL 8.0  
 Total Depth 4350 Chlorides 2200 ppm System LCM 3

Blow Description IF: BOB in 26 Min  
IS: No Return Blow  
FF: BOB in 38 Min.  
FS: No Return Blow

| Rec        | Feet of    | %gas | %oil | %water    | %mud      |
|------------|------------|------|------|-----------|-----------|
| <u>554</u> | <u>NEW</u> |      |      | <u>50</u> | <u>50</u> |
| Rec        | Feet of    | %gas | %oil | %water    | %mud      |
| Rec        | Feet of    | %gas | %oil | %water    | %mud      |
| Rec        | Feet of    | %gas | %oil | %water    | %mud      |

Rec Total 554 BHT 135 Gravity ✓ API RW 261 @ 87.4 °F Chlorides 25,000 ppm  
 (A) Initial Hydrostatic 2151  Test 1250 ~~1225.00~~ T-On Location 09:45  
 (B) First Initial Flow 56  Jars \_\_\_\_\_ T-Started 09:53  
 (C) First Final Flow 201  Safety Joint \_\_\_\_\_ T-Open 11:50  
 (D) Initial Shut-In 870  Circ Sub NL T-Pulled 14:50  
 (E) Second Initial Flow 207  Hourly Standby \_\_\_\_\_ T-Out 16:42  
 (F) Second Final Flow 279  Mileage 24 RT 37.20% Comments \_\_\_\_\_  
 (G) Final Shut-In 828  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2133  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1437.20  
 Accessibility 150.00/- MP/DST Disc't \_\_\_\_\_  
 Sub Total 1437.20 ~~1412.20/-~~

Initial Open 30  
 Initial Shut-In 45  
 Final Flow 45  
 Final Shut-In 60

Approved By [Signature]

Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damages of any kind of 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 statements or opinion concerning the results 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.



# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 44440

Well Name & No. Larry Dearden #16A/B-1931 Test No. 3 Date 9-27-12  
 Company FML Natural Resources Elevation 2984 KB 2974 GL  
 Address 410 17th St Ste 900 Denver CO 80202  
 Co. Rep / Geo. Jim Musgrave Rig H2 Rigi  
 Location: Sec. 18 Twp. 19S Rge. 31W Co. Scott State KS

Interval Tested 4335-4420 Zone Tested Marathon  
 Anchor Length 85 Drill Pipe Run 3956 Mud Wt. 9.1  
 Top Packer Depth 4331 Drill Collars Run 370 Vis 53  
 Bottom Packer Depth 4335 Wt. Pipe Run Ø WL 8.0  
 Total Depth 4420 Chlorides 2200 ppm System LCM 3  
 Blow Description IF: BOB in 2 Min  
IS: Return Blow Built to 3 1/2"  
FF: BOB in 3 Min  
FS: Return Blow Built to 6"

| Rec        | Feet of          | %gas       | %oil      | %water    | %mud      |
|------------|------------------|------------|-----------|-----------|-----------|
| <u>Ø</u>   | <u>GIP = 186</u> | <u>186</u> |           |           |           |
| <u>276</u> | <u>OCGWM</u>     | <u>30</u>  | <u>15</u> | <u>25</u> | <u>30</u> |
| <u>276</u> | <u>OCGWM</u>     | <u>30</u>  | <u>10</u> | <u>20</u> | <u>40</u> |
| <u>92</u>  | <u>OCGWM</u>     | <u>10</u>  | <u>10</u> | <u>20</u> | <u>10</u> |
| <u>768</u> | <u>OCGWM</u>     | <u>5</u>   | <u>5</u>  | <u>80</u> | <u>10</u> |

Rec Total 1382 BHT 135 Gravity — API RW .267 @ 88.7° F Chlorides 26,000 ppm  
 Test 1250 ~~1275.00~~ T-On Location 04:45  
 Jars T-Started 04:57  
 Safety Joint NC T-Open 07:19  
 Circ Sub NC T-Pulled 10:19  
 Hourly Standby T-Out 12:48  
 Mileage 24 RT 37.20 Comments \_\_\_\_\_  
 Sampler \_\_\_\_\_  
 Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Initial Open 30  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Shut-In 95  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Flow 95  Day Standby \_\_\_\_\_ Total 1437.20  
 Final Shut-In 60  Accessibility 150.00 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1437.20

Approved By [Signature] Our Representative Mike Roberts

Trilobite Testing Inc. shall not be liable for damaged of any kind of 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 statements or opinion concerning the results 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.



# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 44441

Well Name & No. Larry Dearden #16A18-1931 Test No. 4 Date 9-28-12  
 Company FIML Natural Resources Elevation 2984 KB 2974 GL  
 Address 410 17th ST STE 900 Denver CO 80202  
 Co. Rep / Geo. Kurt Talbot Rig H2 Rig #1  
 Location: Sec. 18 Twp. 19S Rge. 31W Co. Scott State KS

Interval Tested 4574-4637 Zone Tested Cherokee Sand  
 Anchor Length 63 Drill Pipe Run 4204 Mud Wt. 9.4  
 Top Packer Depth 4500 Drill Collars Run 370 Vis 50  
 Bottom Packer Depth 4574 Wt. Pipe Run Ø WL 6.4  
 Total Depth 4637 Chlorides 2000 ppm System LCM 3  
 Blow Description IF: Weak Surface Blow Died in 12 Min  
IS: No Return Blow  
FF: No Blow - ~~Died~~ # Flusted - NO Blow  
FS: No Return Blow

| Rec       | Feet of    | %gas | %oil | %water     | %mud |
|-----------|------------|------|------|------------|------|
| <u>10</u> | <u>MUD</u> |      |      | <u>100</u> |      |
| Rec       | Feet of    | %gas | %oil | %water     | %mud |
| Rec       | Feet of    | %gas | %oil | %water     | %mud |
| Rec       | Feet of    | %gas | %oil | %water     | %mud |

Rec Total 10 BHT 137 Gravity ✓ API RW ✓ °F Chlorides ✓ ppm  
 (A) Initial Hydrostatic 2285  Test 1250 1225.00 T-On Location 13:25  
 (B) First Initial Flow 34  Jars \_\_\_\_\_ T-Started 14:08  
 (C) First Final Flow 36  Safety Joint \_\_\_\_\_ T-Open 16:08  
 (D) Initial Shut-In 51  Circ Sub NC T-Pulled 18:38  
 (E) Second Initial Flow 37  Hourly Standby \_\_\_\_\_ T-Out 20:37  
 (F) Second Final Flow 42  Mileage 24 RT = 37.20 Comments \_\_\_\_\_  
 (G) Final Shut-In 58  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2210  Straddle \_\_\_\_\_

Ruined Shale Packer  
 Ruined Packer  
 Extra Copies  
 Initial Open 30  Extra Packer  
 Initial Shut-In 45  Extra Recorder  
 Final Flow 30  Day Standby  
 Final Shut-In 45  Accessibility 150.00% Total 1437.20  
 Sub Total 1437.20 MP/DST Disc't \_\_\_\_\_

Approved By [Signature] Our Representative [Signature]

TriLOBITE Testing Inc. shall not be liable for damaged of any kind of 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 statements or opinion concerning the results 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.



# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 44442

Well Name & No. Larry Dearden #16A-18-1931 Test No. 5 Date 9-29-12  
 Company FML Natural Resources Elevation 2984 KB 2974 GL  
 Address 410 17th ST STE 900 Denver CO 80202  
 Co. Rep / Geo. Kurt Talbot Rig H2 Rig #1  
 Location: Sec. 18 Twp. 19S Rge. 31W Co. Scott State KS

Interval Tested 4166 - 4191 Zone Tested Landing  
 Anchor Length 25 Drill Pipe Run 3795 Mud Wt. 9.4  
 Top Packer Depth 4162 Drill Collars Run 370 Vis 50  
 Bottom Packer Depth 4166 4202 Wt. Pipe Run 9 WL 6.4  
 Total Depth 4191 Chlorides 2000 ppm System LCM 4  
 Blow Description TF: Built to weak surface Blow  
TS: No Return Blow  
FF: No Blow  
FS: No Return Blow

| Rec       | Feet of                           | %gas | %oil | %water     | %mud |
|-----------|-----------------------------------|------|------|------------|------|
| <u>10</u> | <u>Feet of mud with oil spots</u> |      |      | <u>100</u> |      |
| Rec       | Feet of                           | %gas | %oil | %water     | %mud |
| Rec       | Feet of                           | %gas | %oil | %water     | %mud |
| Rec       | Feet of                           | %gas | %oil | %water     | %mud |
| Rec       | Feet of                           | %gas | %oil | %water     | %mud |

Rec Total 10 BHT 135 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2089  Test 1250 1225.00% T-On Location 23:00  
 (B) First Initial Flow 16  Jars — T-Started 23:50  
 (C) First Final Flow 27  Safety Joint — T-Open 02:25  
 (D) Initial Shut-In 859  Circ Sub N/C T-Pulled 04:55  
 (E) Second Initial Flow 29  Hourly Standby — T-Out 07:24  
 (F) Second Final Flow 34  Mileage 24 RT 37.20% Comments —  
 (G) Final Shut-In 769  Sampler —  
 (H) Final Hydrostatic 2048  Straddle 600.00%  Ruined Shale Packer

Initial Open 30  Shale Packer —  
 Initial Shut-In 45  Extra Packer —  
 Final Flow 30  Extra Recorder —  
 Final Shut-In 45  Day Standby —  
 Sub Total 2037.20  Accessibility 150.00%  Extra Copies —  
 Total 2037.20  Ruined Packer —  
 MP/DST Disc't —

Approved By [Signature] Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of 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 statements or opinion concerning the results 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.



PO Box 93999  
 Southlake, TX 76092

Voice: (817) 546-7282  
 Fax: (817) 246-3361

# INVOICE

Invoice Number: 132799

Invoice Date: Sep 21, 2012

Page: 1



| Bill To:  |
|---|
| FIML Natural Resources LLC<br>410 17th St., Suite 900<br>Denver, CO 80202 |

| Customer ID  | Well Name# or Customer P.O. | Payment Terms |          |
|--------------|-----------------------------|---------------|----------|
| FIML         | L Dearden16A-18-1931        | Net 30 Days   |          |
| Job Location | Camp Location               | Service Date  | Due Date |
| KS1-01       | Oakley                      | Sep 21, 2012  | 10/21/12 |

| Quantity | Item        | Description                      | Unit Price | Amount    |
|----------|-------------|----------------------------------|------------|-----------|
| 240.00   | MAT         | Class A Common                   | 17.90      | 4,296.00  |
| 5.00     | MAT         | Gel                              | 23.40      | 117.00    |
| 9.00     | MAT         | Chloride                         | 64.00      | 576.00    |
| 60.00    | MAT         | Flo Seal                         | 2.97       | 178.20    |
| 263.52   | SER         | Cubic Feet                       | 2.48       | 653.53    |
| 712.20   | SER         | Ton Mileage                      | 2.60       | 1,851.72  |
| 1.00     | SER         | Surface                          | 1,512.25   | 1,512.25  |
| 60.00    | SER         | Pump Truck Mileage               | 7.70       | 462.00    |
| 1.00     | SER         | Manifold Head Rental             | 275.00     | 275.00    |
| 60.00    | SER         | Light Vehicle Mileage            | 4.40       | 264.00    |
| 3.00     | EQP         | 8.5/8 Centralizer                | 74.88      | 224.64    |
| 1.00     | JOB DISC    | Job Discount if paid by 10-21-12 | 2,342.32   | -2,342.32 |
| 1.00     | CEMENTER    | LaRene Wentz                     |            |           |
| 1.00     | EQUIP OPER  | Tyler Flipse                     |            |           |
| 1.00     | OPER ASSIST | Brandon Wilkinson                |            |           |

ALL PRICES ARE NET, PAYABLE  
 30 DAYS FOLLOWING DATE OF  
 INVOICE. 1 1/2% CHARGED  
 THEREAFTER. IF ACCOUNT IS  
 CURRENT, TAKE DISCOUNT OF

\$

ONLY IF PAID ON OR BEFORE  
**Oct 16, 2012**

|                        |                 |
|------------------------|-----------------|
| Subtotal               | 8,068.02        |
| Sales Tax              | 447.52          |
| Total Invoice Amount   | 8,515.54        |
| Payment/Credit Applied |                 |
| <b>TOTAL</b>           | <b>8,515.54</b> |

# ALLIED OIL & GAS SERVICES, LLC 056318

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT:  
Darley, KS

|                                    |                           |                                       |                 |                      |                           |                         |                          |
|------------------------------------|---------------------------|---------------------------------------|-----------------|----------------------|---------------------------|-------------------------|--------------------------|
| DATE <u>9-21-12</u>                | SEC. <u>18</u>            | TWP. <u>19</u>                        | RANGE <u>31</u> | CALLED OUT           | ON LOCATION <u>2:30am</u> | JOB START <u>5:30am</u> | JOB FINISH <u>6:30am</u> |
| LEASE <u>Larry Dearden</u>         | WELL # <u>167-18-1931</u> | LOCATION <u>Scott City 82, 55, 1a</u> |                 |                      | COUNTY <u>Scott</u>       | STATE <u>KS</u>         |                          |
| OLD OR NEW (Circle one) <u>NEW</u> |                           |                                       |                 | <u>1/2 S, winter</u> |                           |                         |                          |

CONTRACTOR H2 #1 OWNER same

TYPE OF JOB Surface

HOLE SIZE 12 1/4" T.D. 378' CEMENT

CASING SIZE 2 3/8" DEPTH 376.38' AMOUNT ORDERED 240 SK cement 3% SCC

TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_ 2% gel 1/4" flo-seal

DRILL PIPE \_\_\_\_\_ DEPTH \_\_\_\_\_

TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_

PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_ COMMON 240 SK @ 17.90 4296.00

MEAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_ POZMIX \_\_\_\_\_ @ \_\_\_\_\_

CEMENT LEFT IN CSG. 35' GEL 55 SK @ 23.90 112.00

PERFS. \_\_\_\_\_ CHLORIDE 95 SK @ 64.00 576.00

DISPLACEMENT 21.85 bbl ASC \_\_\_\_\_ @ \_\_\_\_\_

**EQUIPMENT**

PUMP TRUCK CEMENTER Lakane Wantz

# 423/281 HELPER Tyler Flores

BULK TRUCK \_\_\_\_\_ @ \_\_\_\_\_

# 347 DRIVER Brandon Wilkenson

BULK TRUCK \_\_\_\_\_ @ \_\_\_\_\_

# \_\_\_\_\_ DRIVER \_\_\_\_\_ @ \_\_\_\_\_

HANDLING 263.57 SF<sup>3</sup> @ 2.48 653.53

MILEAGE 11.87 hrs x 60 x 2.60 1856.22

TOTAL 2672.45

**REMARKS:**

MIX 240 SK cement  
Displace with water

Cement did circulate

**SERVICE**

DEPTH OF JOB 376.38'

PUMP TRUCK CHARGE 1512.25

EXTRA FOOTAGE \_\_\_\_\_ @ \_\_\_\_\_

MILEAGE 60 @ 7.70 462.00

MANIFOLD, road @ 275.00

L.U. mileage 60 @ 4.40 264.00

\_\_\_\_\_ @ \_\_\_\_\_

CHARGE TO: FILL Natural Resources

STREET \_\_\_\_\_

TOTAL 2513.25

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**PLUG & FLOAT EQUIPMENT**

(3) Centralizers @ 24.88 224.64

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

TOTAL 224.64

To: Allied Oil & Gas Services, LLC.

You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Gary Dole

SIGNATURE [Signature]

SALES TAX (If Any) \_\_\_\_\_

TOTAL CHARGES 10,410.34

DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS

22.5%



PO Box 93999  
 Southlake, TX 76092

Voice: (817) 546-7282  
 Fax: (817) 246-3361

# INVOICE

Invoice Number: 132900

Invoice Date: Sep 30, 2012

Page: 1



| Bill To:  |
|---|
| FIML Natural Resources LLC<br>410 17th St., Suite 900<br>Denver, CO 80202 |

| Customer ID  | Well Name/# or Customer P.O. | Payment Terms |          |
|--------------|------------------------------|---------------|----------|
| FIML         | LDearden#16A-18-1931         | Net 30 Days   |          |
| Job Location | Camp Location                | Service Date  | Due Date |
| KS1-03       | Oakley                       | Sep 30, 2012  | 10/30/12 |

| Quantity | Item        | Description                      | Unit Price | Amount    |
|----------|-------------|----------------------------------|------------|-----------|
| 180.00   | MAT         | Class A Common                   | 17.90      | 3,222.00  |
| 120.00   | MAT         | Pozmix                           | 9.35       | 1,122.00  |
| 10.00    | MAT         | Gel                              | 23.40      | 234.00    |
| 75.00    | MAT         | Flo Seal                         | 2.97       | 222.75    |
| 322.20   | SER         | Cubic Feet                       | 2.48       | 799.06    |
| 807.00   | SER         | Ton Mileage                      | 2.60       | 2,098.20  |
| 1.00     | SER         | Plug to Abandon                  | 2,483.59   | 2,483.59  |
| 60.00    | SER         | Pump Truck Mileage               | 7.70       | 462.00    |
| 60.00    | SER         | Light Vehicle Mileage            | 4.40       | 264.00    |
| 1.00     | JOB DISC    | Job Discount if paid by 10-30-12 | 3,108.66   | -3,108.66 |
| 1.00     | CEMENTER    | Darren Racette                   |            |           |
| 1.00     | EQUIP OPER  | Tyler Flipse                     |            |           |
| 1.00     | OPER ASSIST | Brandon Wilkinson                |            |           |

ALL PRICES ARE NET, PAYABLE  
 30 DAYS FOLLOWING DATE OF  
 INVOICE. 1 1/2% CHARGED  
 THEREAFTER. IF ACCOUNT IS  
 CURRENT, TAKE DISCOUNT OF

\$

ONLY IF PAID ON OR BEFORE  
 Oct 25, 2012

|                        |                 |
|------------------------|-----------------|
| Subtotal               | 7,798.94        |
| Sales Tax              | 905.33          |
| Total Invoice Amount   | 8,704.27        |
| Payment/Credit Applied |                 |
| <b>TOTAL</b>           | <b>8,704.27</b> |

# ALLIED OIL & GAS SERVICES, LLC 058926

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 93999  
SOUTHLAKE, TEXAS 76092

SERVICE POINT

*Oakley*

|  |                      |                                     |                  |            |                     |                          |                           |
|--|----------------------|-------------------------------------|------------------|------------|---------------------|--------------------------|---------------------------|
| DATE <u>9-30-12</u>                                      | SEC. <u>18</u>       | TWP. <u>19</u>                      | RANGE <u>31</u>  | CALLED OUT | ON LOCATION         | JOB START <u>3:00 PM</u> | JOB FINISH <u>4:20 PM</u> |
| LEASE <u>Larry Darden</u>                                | WELL# <u>16A-18-</u> | LOCATION <u>Scott City 8E-55-1W</u> |                  |            | COUNTY <u>Scott</u> | STATE <u>Ks.</u>         |                           |
| OLD OR <input checked="" type="radio"/> NEW (Circle one) |                      |                                     | <u>125 Winto</u> |            |                     |                          |                           |

CONTRACTOR H2 #1

TYPE OF JOB PTA

HOLE SIZE 7 7/8 T.D. 4775

CASING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

DRILL PIPE 4 1/2 DEPTH 2250

TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_

PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_

MEAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_

CEMENT LEFT IN CSG. \_\_\_\_\_

PERFS. \_\_\_\_\_

DISPLACEMENT 24.88

EQUIPMENT \_\_\_\_\_

OWNER Same

CEMENT

AMOUNT ORDERED 300 SKS 60% 4% Gel

1/4" Flo Seal

COMMON 180 SKS @ \$17.90 \$3222.00

POZMIX 120 SKS @ \$9.35 \$1122.00

GEL 10 SKS @ \$23.40 \$234.00

CHLORIDE @ \_\_\_\_\_

ASC @ \_\_\_\_\_

Flo Seal 75# @ \$2.92 \$222.75

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

HANDLING 322.2 CFx @ \$2.48 \$799.06

MILEAGE 13.45 x 60 X @ \$2.90 \$2098.70

TOTAL \$7698.01

PUMP TRUCK CEMENTER Darren Racette

# 423-281 HELPER Tyler Flipse

BULK TRUCK

# 540-287 DRIVER Brandon Wilkison

BULK TRUCK

# \_\_\_\_\_ DRIVER \_\_\_\_\_

REMARKS:

mix 50 SKs Cement 2250'

mix 80 SKs Cement 1520'

mix 50 SKs Cement 720'

mix 50 SKs Cement 410'

mix 20 SKs Cement 60'

Plug mousehole 20 SKs Cement

Plug Rathole 30 SKs Cement

SERVICE

DEPTH OF JOB \_\_\_\_\_

PUMP TRUCK CHARGE \$2,483.59

EXTRA FOOTAGE @ \_\_\_\_\_

MILEAGE 60 @ \$7.70 \$462.00

MANIFOLD @ \_\_\_\_\_

LV mileage @ \$4.40 \$264.00

\_\_\_\_\_ @ \_\_\_\_\_

TOTAL \$3,209.59

CHARGE TO: FI ML Natural Resources

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

PLUG & FLOAT EQUIPMENT

~~1 Top mount Plug @ \$900.00~~

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

TOTAL ~~\$900.00~~

To: Allied Oil & Gas Services, LLC.  
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Gary Duke

SIGNATURE [Signature]

SALES TAX (If Any) \_\_\_\_\_

TOTAL CHARGES 10,907.60

DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS

28.520