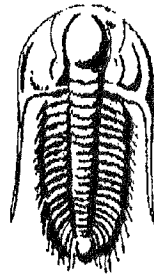


15-135-24927

16-16s-21w

IND



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

## DRILL STEM TEST REPORT

Prepared For: **Pintail Petroleum**

225 N. Market Ste. 300  
Wichita, Ks  
67202

ATTN: Flip Phillips

**16-16s-21w Ness KS**

**Lamer "CW" #1-16**

Start Date: 2009.07.11 @ 19:25:39

End Date: 2009.07.12 @ 00:20:33

Job Ticket #: 36364      DST #: 1

Trilobite Testing, Inc  
PO Box 1733 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

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**CONFIDENTIAL**



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

## DRILL STEM TEST REPORT

Pintail Petroleum

225 N. Market Ste. 300  
Wichita, Ks  
67202  
ATTN: Flip Phillips

Lamer "CW" #1-16

16-16s-21w Ness KS

Job Ticket: 36364

DST#: 1

Test Start: 2009.07.11 @ 19:25:39

### GENERAL INFORMATION:

Formation: **Pawnee Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:20:04

Time Test Ended: 00:20:33

Interval: **4180.00 ft (KB) To 4220.00 ft (KB) (TVD)**

Total Depth: 4220.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

Reference Elevations: 2352.00 ft (KB)

2347.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: **8371** Inside

Press@RunDepth: 46.76 psig @ 4183.00 ft (KB)

Start Date: 2009.07.11

End Date: 2009.07.12

Start Time: 19:25:39

End Time: 00:20:33

Capacity: 7000.00 psig

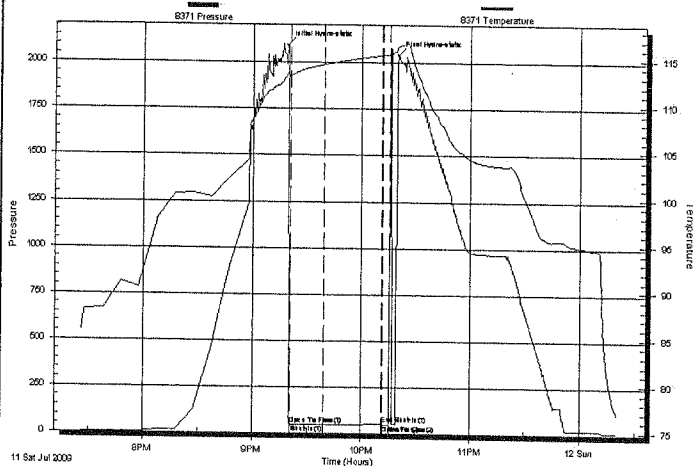
Last Calib.: 2009.07.12

Time On Btm: 2009.07.11 @ 21:18:34

Time Off Btm: 2009.07.11 @ 22:20:04

TEST COMMENT: IFP - 1/4" blow - died 20 min.  
ISI - no blow back  
FFP - no blow - flush tool - no blow  
TIME - 20-30-5-flush-5

Pressure vs. Time



### PRESSURE SUMMARY

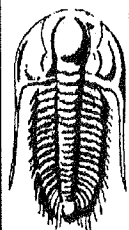
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2094.58         | 113.41       | Initial Hydro-static |
| 2           | 47.27           | 113.20       | Open To Flow (1)     |
| 21          | 46.76           | 114.45       | Shut-In(1)           |
| 53          | 50.23           | 115.43       | End Shut-In(1)       |
| 53          | 45.37           | 115.45       | Open To Flow (2)     |
| 57          | 44.47           | 115.53       | Shut-In(2)           |
| 62          | 2042.29         | 116.38       | Final Hydro-static   |

### Recovery

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

### Gas Rates

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



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

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Pintail Petroleum

Lamer "CW" #1-16

225 N. Market Ste. 300

16-16s-21w Ness KS

Wichita, Ks

Job Ticket: 36364

DST#: 1

67202

Test Start: 2009.07.11 @ 19:25:39

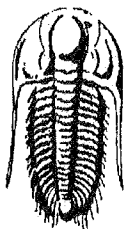
ATTN: Flip Phillips

### Tool Information

|                           |                    |                       |                   |                                   |
|---------------------------|--------------------|-----------------------|-------------------|-----------------------------------|
| Drill Pipe:               | Length: 3923.00 ft | Diameter: 3.80 inches | Volume: 55.03 bbl | Tool Weight: 2500.00 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: 246.00 ft  | Diameter: 2.25 inches | Volume: 1.21 bbl  | Weight to Pull Loose: 60000.00 lb |
|                           |                    | Total Volume:         | 56.24 bbl         | Tool Chased 0.00 ft               |
| Drill Pipe Above KB:      | 16.00 ft           |                       |                   | String Weight: Initial 48.00 lb   |
| Depth to Top Packer:      | 4180.00 ft         |                       |                   | Final 48000.00 lb                 |
| Depth to Bottom Packer:   | ft                 |                       |                   |                                   |
| Interval between Packers: | 40.00 ft           |                       |                   |                                   |
| Tool Length:              | 67.00 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        |            |          | 4158.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 4163.00    |                               |
| Jars             | 5.00        |            |          | 4168.00    |                               |
| Safety Joint     | 2.00        |            |          | 4170.00    |                               |
| Packer           | 5.00        |            |          | 4175.00    | 27.00 Bottom Of Top Packer    |
| Packer           | 5.00        |            |          | 4180.00    |                               |
| Stubb            | 1.00        |            |          | 4181.00    |                               |
| Perforations     | 1.00        |            |          | 4182.00    |                               |
| Change Over Sub  | 1.00        |            |          | 4183.00    |                               |
| Recorder         | 0.00        | 8018       | Inside   | 4183.00    |                               |
| Recorder         | 0.00        | 8371       | Inside   | 4183.00    |                               |
| Blank Spacing    | 31.00       |            |          | 4214.00    |                               |
| Change Over Sub  | 1.00        |            |          | 4215.00    |                               |
| Perforations     | 2.00        |            |          | 4217.00    |                               |
| Bullnose         | 3.00        |            |          | 4220.00    | 40.00 Bottom Packers & Anchor |

**Total Tool Length: 67.00**



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

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Pintail Petroleum

Lamer "CW" #1-16

225 N. Market Ste. 300

16-16s-21w Ness KS

Wichita, Ks

Job Ticket: 36364

DST#: 1

67202

ATTN: Flip Phillips

Test Start: 2009.07.11 @ 19:25:39

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.75 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

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

Total Length:

10.00 ft

Total Volume:

0.049 bbl

Num Fluid Samples: 0

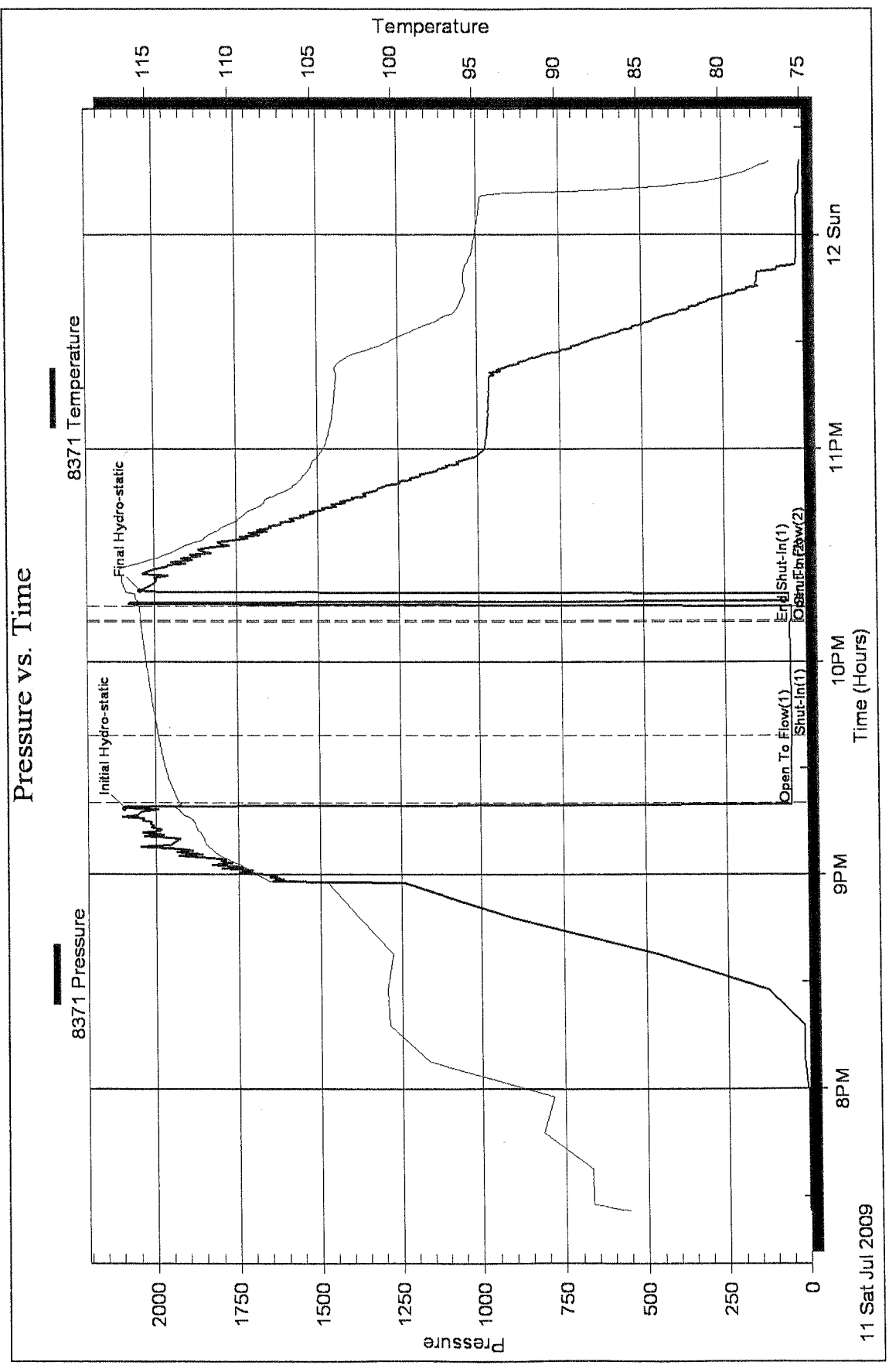
Num Gas Bombs: 0

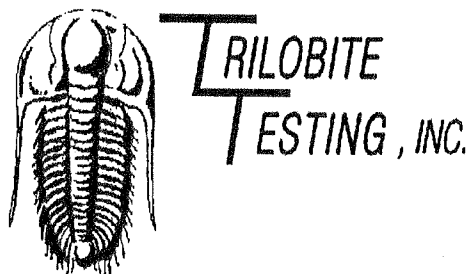
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





## DRILL STEM TEST REPORT

Prepared For: **Pintail Petroleum**

225 N. Market Ste. 300  
Wichita, Ks  
67202

ATTN: Flip Phillips

**16-16s-21w Ness KS**

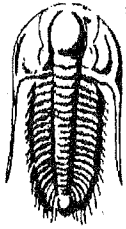
**Lamer "CW" #1-16**

Start Date: 2009.07.12 @ 05:36:11

End Date: 2009.07.12 @ 11:50:05

Job Ticket #: 36365      DST #: 2

Trilobite Testing, Inc  
PO Box 1733 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Pintail Petroleum  
225 N. Market Ste. 300  
Wichita, Ks  
67202  
ATTN: Flip Phillips

**Lamer "CW" #1-16**

**16-16s-21w Ness KS**

Job Ticket: 36365

**DST#: 2**

Test Start: 2009.07.12 @ 05:36:11

### GENERAL INFORMATION:

Formation: **Cherokee Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:56:06

Time Test Ended: 11:50:05

Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

Interval: **4185.00 ft (KB) To 4235.00 ft (KB) (TVD)**

Total Depth: 4235.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 2352.00 ft (KB)

2347.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 8371**

**Inside**

Press@RunDepth: 131.05 psig @ 4188.00 ft (KB)

Start Date: 2009.07.12

End Date:

2009.07.12

Start Time: 05:36:17

End Time:

11:50:11

Capacity: 7000.00 psig

Last Calib.: 2009.07.12

Time On Btm: 2009.07.12 @ 07:55:12

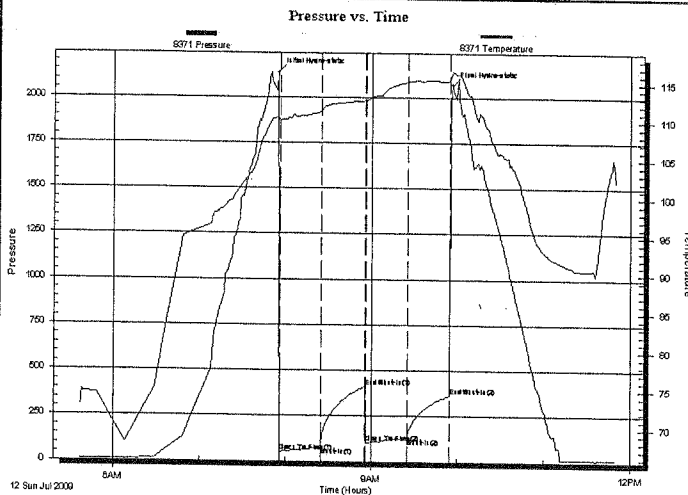
Time Off Btm: 2009.07.12 @ 09:56:11

TEST COMMENT: IFF - weak to fair blow 1/2" - 5"

ISI - no blow back

FFP - weak blow throughout sur - 1 1/2"

FSI - no blow back



### PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 2135.39         | 110.64       | Initial Hydro-static |
| 1           | 51.66           | 110.08       | Open To Flow (1)     |
| 30          | 77.37           | 111.28       | Shut-In(1)           |
| 61          | 410.23          | 112.75       | End Shut-In(1)       |
| 61          | 105.11          | 112.61       | Open To Flow (2)     |
| 90          | 131.05          | 115.23       | Shut-In(2)           |
| 120         | 364.67          | 115.38       | End Shut-In(2)       |
| 121         | 2069.11         | 116.59       | Final Hydro-static   |

### Recovery

| Length (ft) | Description   | Volume (bbl) |
|-------------|---------------|--------------|
| 125.00      | MW 50%W, 50%M | 0.61         |
| 70.00       | MJD 100%      | 0.34         |
|             |               |              |
|             |               |              |
|             |               |              |
|             |               |              |

### Gas Rates

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



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

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Pintail Petroleum

Lamer "CW" #1-16

225 N. Market Ste. 300

16-16s-21w Ness KS

Wichita, Ks

Job Ticket: 36365

DST#: 2

67202

Test Start: 2009.07.12 @ 05:36:11

ATTN: Flip Phillips

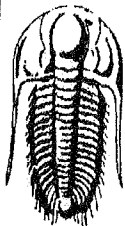
### Tool Information

|                           |                    |                         |                   |                                    |
|---------------------------|--------------------|-------------------------|-------------------|------------------------------------|
| Drill Pipe:               | Length: 3923.00 ft | Diameter: 3.80 inches   | Volume: 55.03 bbl | Tool Weight: 2500.00 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: 246.00 ft  | Diameter: 2.25 inches   | Volume: 1.21 bbl  | Weight to Pull Loose: 70000.00 lb  |
|                           |                    | Total Volume: 56.24 bbl |                   | Tool Chased 3.00 ft                |
| Drill Pipe Above KB:      | 11.00 ft           |                         |                   | String Weight: Initial 48000.00 lb |
| Depth to Top Packer:      | 4185.00 ft         |                         |                   | Final 50000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                         |                   |                                    |
| Interval between Packers: | 40.00 ft           |                         |                   |                                    |
| Tool Length:              | 67.00 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        |            |          | 4163.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 4168.00    |                               |
| Jars             | 5.00        |            |          | 4173.00    |                               |
| Safety Joint     | 2.00        |            |          | 4175.00    |                               |
| Packer           | 5.00        |            |          | 4180.00    | 27.00 Bottom Of Top Packer    |
| Packer           | 5.00        |            |          | 4185.00    |                               |
| Stubb            | 1.00        |            |          | 4186.00    |                               |
| Perforations     | 1.00        |            |          | 4187.00    |                               |
| Change Over Sub  | 1.00        |            |          | 4188.00    |                               |
| Recorder         | 0.00        | 8018       | Inside   | 4188.00    |                               |
| Recorder         | 0.00        | 8371       | Inside   | 4188.00    |                               |
| Blank Spacing    | 31.00       |            |          | 4219.00    |                               |
| Change Over Sub  | 1.00        |            |          | 4220.00    |                               |
| Perforations     | 2.00        |            |          | 4222.00    |                               |
| Bullnose         | 3.00        |            |          | 4225.00    | 40.00 Bottom Packers & Anchor |

**Total Tool Length: 67.00**



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

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Pintail Petroleum

Lamer "CW" #1-16

225 N. Market Ste. 300  
Wichita, Ks  
67202

16-16s-21w Ness KS

ATTN: Flip Phillips

Job Ticket: 36365

DST#: 2

Test Start: 2009.07.12 @ 05:36:11

### Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 60.00 sec/qt

Water Loss: 14.75 in<sup>3</sup>

Resistivity: ohm.m

Salinity: 4000.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

deg API

Water Salinity:

16000 ppm

### Recovery Information

Recovery Table

| Length<br>ft | Description   | Volume<br>bbl |
|--------------|---------------|---------------|
| 125.00       | MW 50%W, 50%M | 0.615         |
| 70.00        | MUD 100%      | 0.344         |

Total Length: 195.00 ft

Total Volume: bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

DST Test Number: 2

16-16s-21w Ness KS

Front Petroleum

Inside

Serial #: 8371

# Pressure vs. Time

