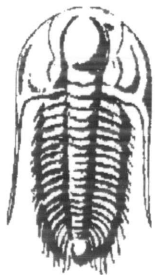


15-08-14W

KCS ✓

15-141-20394-0000



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

**DRILL STEM TEST REPORT**

Prepared For: **Bruce Oil**

1701 Limestone Rd.  
McPherson, Ks  
67460

ATTN: Bob Petersen

**15 8s 14w Osborne KS**

**Bowen Spears Unit #1**

Start Date: 2008.11.04 @ 20:41:22

End Date: 2008.11.05 @ 03:54:46

Job Ticket #: 33150      DST #: 1

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

Bruce Oil

Bowen Spears Unit #1

15 8s 14w Osborne KS

DST # 1

LKC "A-D"

2008.11.04



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

## DRILL STEM TEST REPORT

Bruce Oil

1701 Limestone Rd.  
McPherson, Ks  
67460  
ATTN: Bob Petersen

**Bowen Spears Unit #1**

**15 8s 14w Osborne KS**

Job Ticket: 33150

**DST#: 1**

Test Start: 2008.11.04 @ 20:41:22

### GENERAL INFORMATION:

Formation: **LKC "A-D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:27:17

Time Test Ended: 03:54:46

Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

Interval: **2987.00 ft (KB) To 3070.00 ft (KB) (TVD)**

Total Depth: 3070.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 1806.00 ft (KB)

1802.00 ft (CF)

KB to GR/CF: 4.00 ft

**Serial #: 8371**

**Inside**

Press@RunDepth: 134.64 psig @ 2993.00 ft (KB)

Start Date: 2008.11.04

End Date:

2008.11.05

Start Time: 20:41:22

End Time:

03:54:46

Capacity: 7000.00 psig

Last Calib.: 2008.11.05

Time On Btm: 2008.11.04 @ 22:26:17

Time Off Btm: 2008.11.05 @ 01:26:46

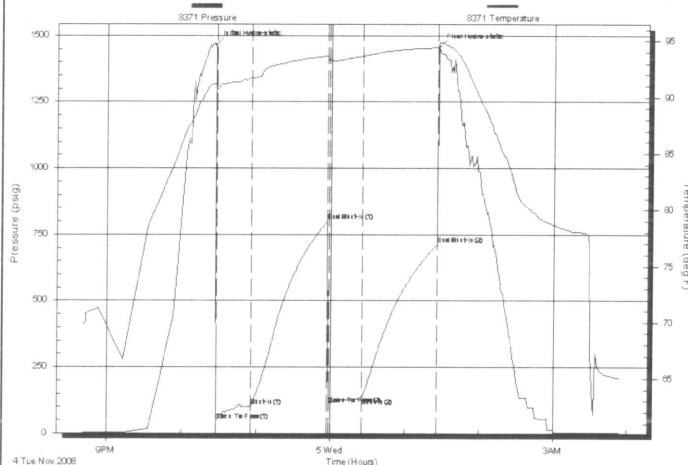
TEST COMMENT: IFF - BOB 4 1/2 min.

ISI - 1/8" blow back - died 13 min.

FFP - BOB 10 min.

FSI - 1/2" blow back - died 21 min.

Pressure vs. Time



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation           |
|-------------|-----------------|--------------|----------------------|
| 0           | 1464.67         | 91.20        | Initial Hydro-static |
| 1           | 46.82           | 90.74        | Open To Flow (1)     |
| 29          | 100.52          | 91.73        | Shut-In(1)           |
| 91          | 799.03          | 93.67        | End Shut-In(1)       |
| 92          | 109.68          | 93.32        | Open To Flow (2)     |
| 119         | 134.64          | 93.66        | Shut-In(2)           |
| 180         | 713.05          | 94.44        | End Shut-In(2)       |
| 181         | 1456.35         | 94.82        | Final Hydro-static   |

Recovery

| Length (ft) | Description                    | Volume (bbl) |
|-------------|--------------------------------|--------------|
| 95.00       | G & WMCO 5%G, 50%O, 15%W, 30%M | 1.33         |
| 95.00       | VSG & OCM 10%G, 3%O, 87%M      | 1.33         |
| 70.00       | HOCM 40%O, 60%M                | 0.98         |
| 15.00       | FREEOIL 95%O, 5%M              | 0.21         |
| 0.00        | 135' GIP                       | 0.00         |

Gas Rates

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



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

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Bruce Oil

**Bowen Spears Unit #1**

1701 Limestone Rd.  
McPherson, Ks  
67460

**15 8s 14w Osborne KS**

Job Ticket: 33150

**DST#: 1**

ATTN: Bob Petersen

Test Start: 2008.11.04 @ 20:41:22

### Tool Information

|                           |                    |                         |                   |                                    |
|---------------------------|--------------------|-------------------------|-------------------|------------------------------------|
| Drill Pipe:               | Length: 2987.00 ft | Diameter: 3.80 inches   | Volume: 41.90 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: 0.00 ft    | Diameter: 0.00 inches   | Volume: 0.00 bbl  | Weight to Pull Loose: 42000.00 lb  |
|                           |                    | Total Volume: 41.90 bbl |                   | Tool Chased 0.00 ft                |
| Drill Pipe Above KB:      | 27.00 ft           |                         |                   | String Weight: Initial 33000.00 lb |
| Depth to Top Packer:      | 2987.00 ft         |                         |                   | Final 38000.00 lb                  |
| Depth to Bottom Packer:   | ft                 |                         |                   |                                    |
| Interval between Packers: | 83.00 ft           |                         |                   |                                    |
| Tool Length:              | 110.00 ft          |                         |                   |                                    |
| Number of Packers:        | 2                  | Diameter: 6.75 inches   |                   |                                    |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths                |
|------------------|-------------|------------|----------|------------|-------------------------------|
| Shut In Tool     | 5.00        |            |          | 2965.00    |                               |
| Hydraulic tool   | 5.00        |            |          | 2970.00    |                               |
| Jars             | 5.00        |            |          | 2975.00    |                               |
| Safety Joint     | 2.00        |            |          | 2977.00    |                               |
| Packer           | 5.00        |            |          | 2982.00    | 27.00 Bottom Of Top Packer    |
| Packer           | 5.00        |            |          | 2987.00    |                               |
| Stubb            | 1.00        |            |          | 2988.00    |                               |
| Perforations     | 4.00        |            |          | 2992.00    |                               |
| Change Over Sub  | 1.00        |            |          | 2993.00    |                               |
| Recorder         | 0.00        | 8018       | Inside   | 2993.00    |                               |
| Recorder         | 0.00        | 8371       | Inside   | 2993.00    |                               |
| Blank Spacing    | 63.00       |            |          | 3056.00    |                               |
| Change Over Sub  | 1.00        |            |          | 3057.00    |                               |
| Perforations     | 10.00       |            |          | 3067.00    |                               |
| Bullnose         | 3.00        |            |          | 3070.00    | 83.00 Bottom Packers & Anchor |

**Total Tool Length: 110.00**



**TRILOBITE**  
TESTING, INC

## DRILL STEM TEST REPORT

### FLUID SUMMARY

Bruce Oil

**Bowen Spears Unit #1**

1701 Limestone Rd.  
McPherson, Ks  
67460

**15 8s 14w Osborne KS**

Job Ticket: 33150

**DST#: 1**

ATTN: Bob Petersen

Test Start: 2008.11.04 @ 20:41:22

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API: 36 deg API

Mud Weight: 9.00 lb/gal

Cushion Length: ft

Water Salinity: 29000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume: bbl

Water Loss: 9.56 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 2000.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

| Length<br>ft | Description                    | Volume<br>bbl |
|--------------|--------------------------------|---------------|
| 95.00        | G & WMCO 5%G, 50%O, 15%W, 30%M | 1.333         |
| 95.00        | VSG & OCM 10%G, 3%O, 87%M      | 1.333         |
| 70.00        | HOCM 40%O, 60%M                | 0.982         |
| 15.00        | FREEOIL 95%O, 5%M              | 0.210         |
| 0.00         | 135' GIP                       | 0.000         |

Total Length: 275.00 ft      Total Volume: 3.858 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .285 @ 61F Chlorides 29000 ppm  
BHT 94F Gravity 36 API D

