



DRILL STEM TEST REPORT

Prepared For: **F.G. Holl Company LLC.**

9431 E. Central STE. 100
Wichita Ks, 67206

ATTN: Frank Greenbaum

Jost #1-29

29/21s/15w/Pawnee

Start Date: 2013.08.21 @ 14:03:00

End Date: 2013.08.21 @ 18:37:23

Job Ticket #: 18478 DST #: 5

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

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Jost #1-29

Job Ticket: 18478

DST#: 5

ATTN: Frank Greenbaum

Test Start: 2013.08.21 @ 14:03:00

GENERAL INFORMATION:

Formation: **Douglas Shale**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:33:23

Time Test Ended: 18:37:23

Test Type: Conventional Bottom Hole (Initial)

Tester: Shane Konzem

Unit No: 330/66/Great Bend

Interval: 3384.00 ft (KB) To 3461.00 ft (KB) (TVD)

Reference Elevations: 1978.00 ft (KB)

Total Depth: 3461.00 ft (KB) (TVD)

1970.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

Serial #: 8405 Inside

Press @ Run Depth: 88.29 psia @ 3457.09 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.08.21

End Date:

2013.08.21

Last Calib.:

2013.08.21

Start Time: 14:03:00

End Time:

18:37:23

Time On Btm:

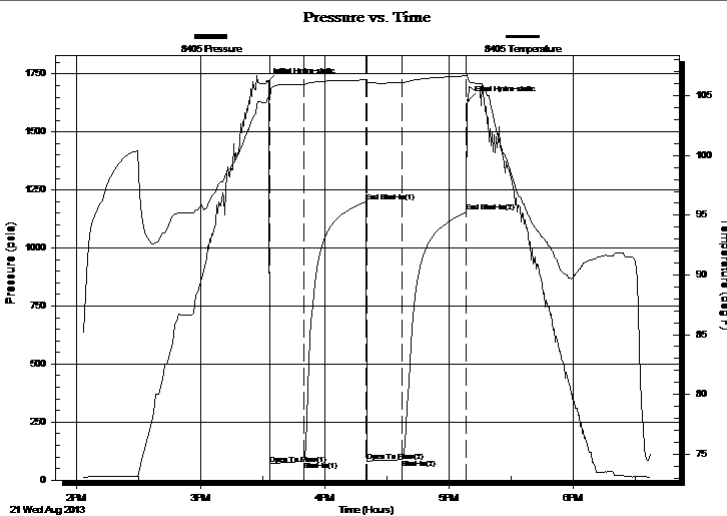
2013.08.21 @ 15:31:53

Time Off Btm:

2013.08.21 @ 17:09:23

TEST COMMENT: 1st Open/ 15 Minutes. Weak blow built to 1 inch in 5 gallon bucket.
1st Shut In/ 30 Minutes. No blow back.
2nd Open/ 15 Minutes. Weak blow built to 1/2 inch in 5 gallon bucket.
2nd Shut In/ 30 Minutes. No blow back.

PRESSURE SUMMARY



| Time (Min.) | Pressure (psia) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1713.88 | 104.50 | Initial Hydro-static |
| 2 | 69.61 | 104.73 | Open To Flow (1) |
| 18 | 80.73 | 105.98 | Shut-In(1) |
| 48 | 1199.38 | 106.33 | End Shut-In(1) |
| 49 | 81.46 | 106.04 | Open To Flow (2) |
| 66 | 88.29 | 106.12 | Shut-In(2) |
| 97 | 1154.18 | 106.69 | End Shut-In(2) |
| 98 | 1634.90 | 106.46 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 0.00 | No gas | 0.00 |
| 55.00 | 100% mud | 0.77 |
| | | |
| | | |
| | | |

Gas Rates

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



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Time Test Ended: 18:37:23

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Tester: Shane Konzem

Unit No: 330/66/Great Bend

Interval: 3384.00 ft (KB) To 3461.00 ft (KB) (TVD)

Reference Elevations: 1978.00 ft (KB)

Total Depth: 3461.00 ft (KB) (TVD)

1970.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

Serial #: 8400 Outside

Press @ RunDepth: 1142.60 psia @ 3458.09 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.08.21

End Date:

2013.08.21

Last Calib.:

2013.08.21

Start Time: 14:03:00

End Time:

18:39:30

Time On Btm:

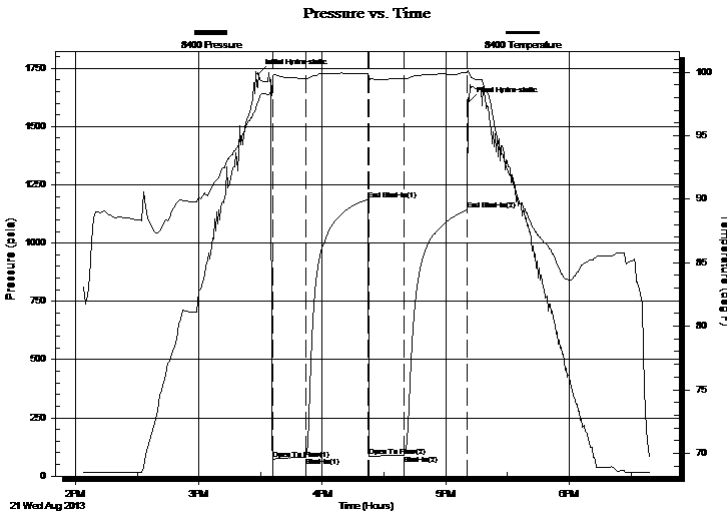
2013.08.21 @ 15:29:00

Time Off Btm:

2013.08.21 @ 17:11:30

TEST COMMENT: 1st Open/ 15 Minutes. Weak blow built to 1 inch in 5 gallon bucket.
1st Shut In/ 30 Minutes. No blow back.
2nd Open/ 15 Minutes. Weak blow built to 1/2 inch in 5 gallon bucket.
2nd Shut In/ 30 Minutes. No blow back.

PRESSURE SUMMARY



| Time (Min.) | Pressure (psia) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1726.73 | 97.76 | Initial Hydro-static |
| 7 | 72.99 | 99.70 | Open To Flow (1) |
| 23 | 82.67 | 99.45 | Shut-In(1) |
| 53 | 1187.71 | 99.86 | End Shut-In(1) |
| 54 | 86.21 | 99.26 | Open To Flow (2) |
| 71 | 90.26 | 99.45 | Shut-In(2) |
| 102 | 1142.60 | 99.93 | End Shut-In(2) |
| 103 | 1608.40 | 99.90 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 0.00 | No gas | 0.00 |
| 55.00 | 100% mud | 0.77 |
| | | |
| | | |
| | | |

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G. Holl Company LLC.

29/21s/15w/Pawnee

9431 E. Central STE. 100
Wichita Ks, 67206

Jost #1-29

Job Ticket: 18478

DST#: 5

ATTN: Frank Greenbaum

Test Start: 2013.08.21 @ 14:03:00

Tool Information

| | | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------|-------------|
| Drill Pipe: | Length: 3370.00 ft | Diameter: 3.80 inches | Volume: 47.27 bbl | Tool Weight: | 2000.00 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: 0.00 ft | Diameter: 0.00 inches | Volume: 0.00 bbl | Weight to Pull Loose: | 68000.00 lb |
| | | | <u>Total Volume: 47.27 bbl</u> | Tool Chased | 0.00 ft |
| Drill Pipe Above KB: | 15.00 ft | | | String Weight: Initial | 48000.00 lb |
| Depth to Top Packer: | 3384.00 ft | | | Final | 48000.00 lb |
| Depth to Bottom Packer: | ft | | | | |
| Interval between Packers: | 77.09 ft | | | | |
| Tool Length: | 106.09 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 | | | 3356.00 | |
| Shut-In Tool | 5.00 | | | 3361.00 | |
| Hydroic Tool | 5.00 | | | 3366.00 | |
| Jars | 6.00 | | | 3372.00 | |
| Safety Joint | 2.00 | | | 3374.00 | |
| Packer | 5.00 | | | 3379.00 | 29.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 3384.00 | |
| Perforations | 5.00 | | | 3389.00 | |
| Change Over Sub | 0.75 | | | 3389.75 | |
| Drill Pipe | 31.59 | | | 3421.34 | |
| Change Over Sub | 0.75 | | | 3422.09 | |
| Perforations | 34.00 | | | 3456.09 | |
| Recorder | 1.00 | 8405 | Inside | 3457.09 | |
| Recorder | 1.00 | 8400 | Outside | 3458.09 | |
| Bullnose | 3.00 | | | 3461.09 | 77.09 Bottom Packers & Anchor |

Total Tool Length: 106.09



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FLUID SUMMARY

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Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 50.00 sec/qt

Water Loss: 7.60 in³

Resistivity: ohm.m

Salinity: 4900.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psia

Oil API:

Water Salinity: deg API

ppm

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-------------|---------------|
| 0.00 | No gas | 0.000 |
| 55.00 | 100% mud | 0.772 |

Total Length: 55.00 ft Total Volume: 0.772 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

