



DRILL STEM TEST REPORT

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

9431 East Central Suite 100
Wichita, Kansas 67206

ATTN: Ryan Greenbaum

Smith "F" #1-6

6-21s-15w

Start Date: 2014.02.21 @ 09:20:00

End Date: 2014.02.21 @ 00:00:00

Job Ticket #: 17125 DST #: 4

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

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DRILL STEM TEST REPORT

F.G.Holl Company LLC

6-21s-15w

9431 East Central Suite 100
Wichita, Kansas 67206

Smith "F" #1-6

Job Ticket: 17125

DST#: 4

ATTN: Ryan Greenbaum

Test Start: 2014.02.21 @ 09:20:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 3335

Interval: **3762.00 ft (KB) To 3772.00 ft (KB) (TVD)**

Reference Elevations: 1968.00 ft (KB)

Total Depth: 3772.00 ft (KB) (TVD)

1960.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: **6748** Outside

Press@RunDepth: 1229.19 psig @ 3769.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2014.02.21

End Date:

2014.02.21

Last Calib.:

2014.02.21

Start Time: 05:15:00

End Time:

10:16:00

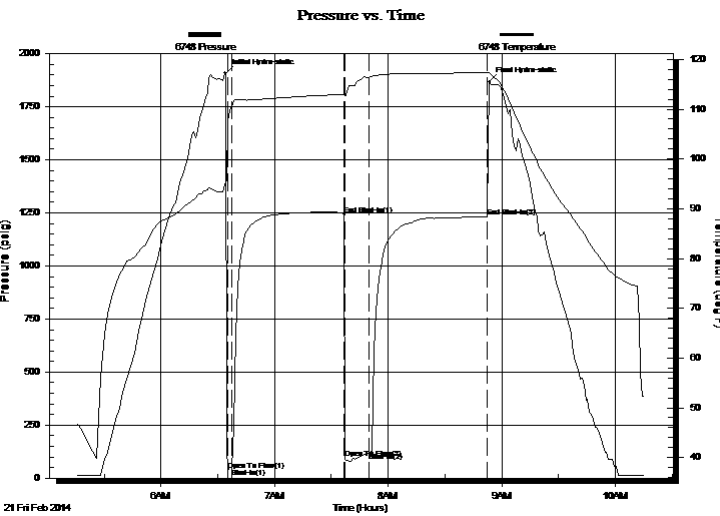
Time On Btm:

2014.02.21 @ 06:34:00

Time Off Btm:

2014.02.21 @ 08:53:30

TEST COMMENT: 1st Opening 2 Minutes-Strong blow built to the bottom of a 5 gallon bucket in 30 seconds
 1st Shut-In 60 Minutes -Fair blow back
 2nd Opening 15 Minutes-Fair blow built to the bottom of a 5 gallon bucket in 1 minute
 2nd Shut-In 60 Minutes Fair blow back



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1908.42 | 95.38 | Initial Hydro-static |
| 2 | 37.90 | 107.71 | Open To Flow (1) |
| 4 | 44.00 | 110.54 | Shut-In(1) |
| 63 | 1243.07 | 113.00 | End Shut-In(1) |
| 63 | 92.21 | 112.70 | Open To Flow (2) |
| 76 | 119.81 | 116.43 | Shut-In(2) |
| 139 | 1229.19 | 117.28 | End Shut-In(2) |
| 140 | 1867.91 | 117.40 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--|--------------|
| 180.00 | slightly muddy w ater chlorides 26,000 | 2.52 |
| 40.00 | drilling mud | 0.56 |
| 600.00 | gas in the pipe | 8.42 |
| | | |
| | | |

Gas Rates

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



DRILL STEM TEST REPORT

F.G.Holl Company LLC

6-21s-15w

9431 East Central Suite 100
Wichita, Kansas 67206

Smith "F" #1-6

Job Ticket: 17125

DST#: 4

ATTN: Ryan Greenbaum

Test Start: 2014.02.21 @ 09:20:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Gene Budig

Unit No: 3335

Interval: **3762.00 ft (KB) To 3772.00 ft (KB) (TVD)**

Reference Elevations: 1968.00 ft (KB)

Total Depth: 3772.00 ft (KB) (TVD)

1960.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: **8525** Inside

Press@RunDepth: 1232.08 psig @ 3768.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2014.02.21

End Date: 2014.02.21

Last Calib.: 2014.02.21

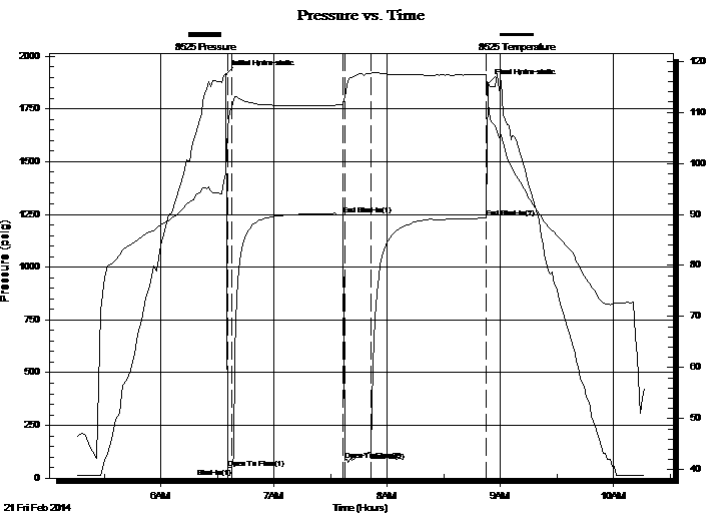
Start Time: 05:15:00

End Time: 10:17:00

Time On Btm: 2014.02.21 @ 06:34:30

Time Off Btm: 2014.02.21 @ 08:53:30

TEST COMMENT: 1st Opening 2 Minutes-Strong blow built to the bottom of a 5 gallon bucket in 30 seconds
 1st Shut-In 60 Minutes -Fair blow back
 2nd Opening 15 Minutes-Fair blow built to the bottom of a 5 gallon bucket in 1 minute
 2nd Shut-In 60 Minutes Fair blow back



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1912.37 | 98.15 | Initial Hydro-static |
| 1 | 46.81 | 107.28 | Open To Flow (1) |
| 3 | 46.32 | 110.89 | Shut-In(1) |
| 62 | 1246.59 | 111.45 | End Shut-In(1) |
| 63 | 85.04 | 113.06 | Open To Flow (2) |
| 77 | 123.74 | 117.55 | Shut-In(2) |
| 138 | 1232.08 | 117.36 | End Shut-In(2) |
| 139 | 1870.32 | 111.85 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|--|--------------|
| 180.00 | slightly muddy w ater chlorides 26,000 | 2.52 |
| 40.00 | drilling mud | 0.56 |
| 600.00 | gas in the pipe | 8.42 |
| | | |
| | | |

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

F.G.Holl Company LLC

6-21s-15w

9431 East Central Suite 100
Wichita, Kansas 67206

Smith "F" #1-6

Job Ticket: 17125

DST#: 4

ATTN: Ryan Greenbaum

Test Start: 2014.02.21 @ 09:20:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3745.00 ft | Diameter: 3.80 inches | Volume: 52.53 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: 52.53 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 6.00 ft | | | String Weight: Initial 57000.00 lb |
| Depth to Top Packer: | 3762.00 ft | | | Final 57000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 10.00 ft | | | |
| Tool Length: | 33.00 ft | | | |
| Number of Packers: | 1 | Diameter: 6.75 inches | | |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|---------------------------|--------------|------------|----------|------------|----------------------------|
| Shut-In Tool | 5.00 | | | 3744.00 | |
| Hydraulic Tool | 5.00 | | | 3749.00 | |
| Jars | 6.00 | | | 3755.00 | |
| Safety Joint | 2.00 | | | 3757.00 | |
| Packer | 5.00 | | | 3762.00 | 23.00 Bottom Of Top Packer |
| Anchor | 5.00 | | | 3767.00 | |
| Recorder | 1.00 | 8525 | Inside | 3768.00 | |
| Recorder | 1.00 | 6748 | Outside | 3769.00 | |
| Bull Plug | 3.00 | | | 3772.00 | 10.00 Anchor Tool |
| Total Tool Length: | 33.00 | | | | |



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G.Holl Company LLC

6-21s-15w

9431 East Central Suite 100
Wichita, Kansas 67206

Smith "F" #1-6

Job Ticket: 17125

DST#: 4

ATTN: Ryan Greenbaum

Test Start: 2014.02.21 @ 09:20:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 10.00 lb/gal
Viscosity: 45.00 sec/qt
Water Loss: 6.00 in³
Resistivity: ohm.m
Salinity: 4700.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|---------------------------------------|---------------|
| 180.00 | slightly muddy water chlorides 26,000 | 2.525 |
| 40.00 | drilling mud | 0.561 |
| 600.00 | gas in the pipe | 8.416 |

Total Length: 820.00 ft Total Volume: 11.502 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

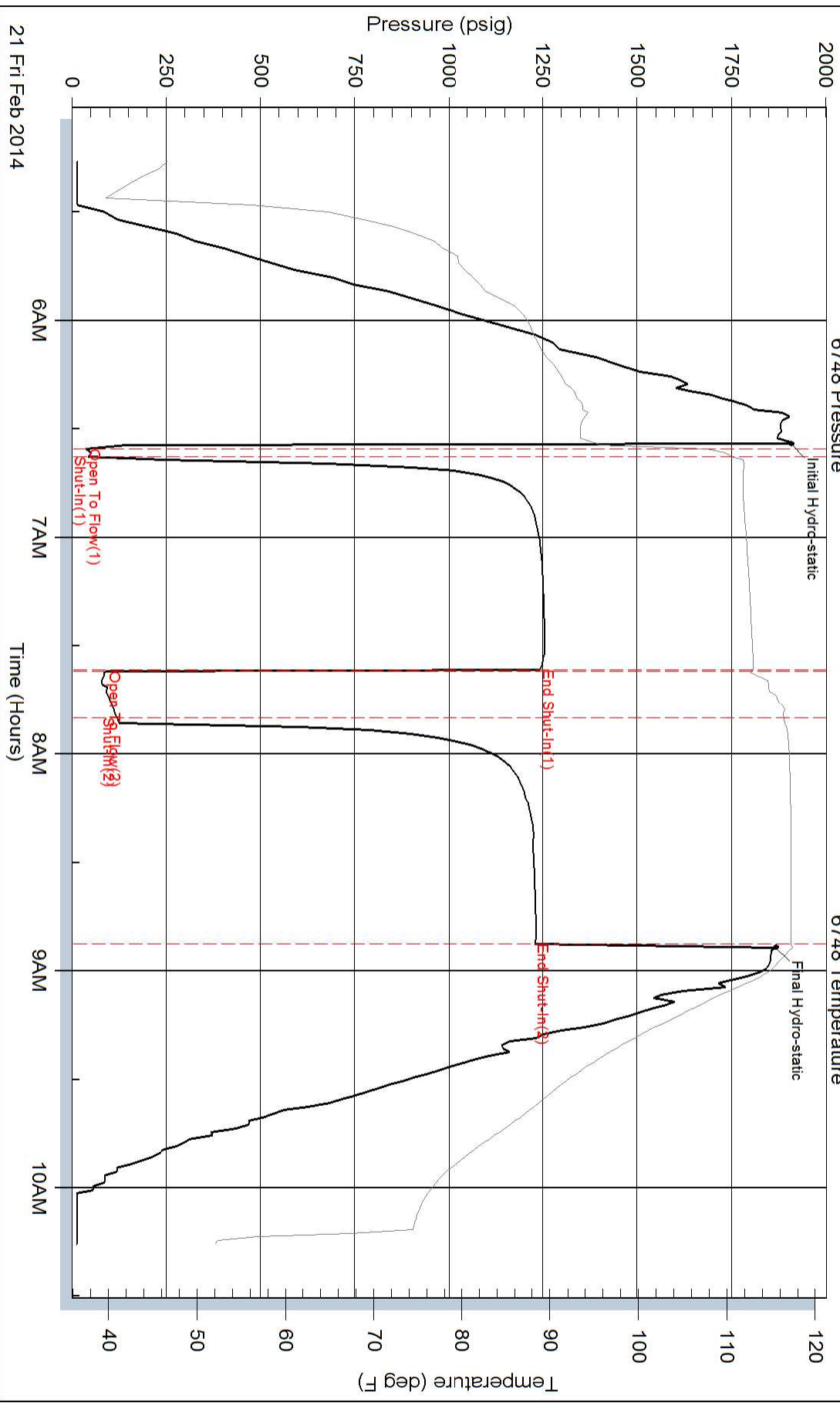
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



Pressure vs. Time

