



DRILL STEM TEST REPORT

Prepared For: **FG Holl Company LLC**

9431 E. Central STE. 100 Wichita Kansas
67208-2563

ATTN: Frank Greenbaum

Binford/Campbell #1

31/20s/15w/Barton

Start Date: 2013.05.03 @ 08:15:00

End Date: 2013.05.03 @ 16:07:53

Job Ticket #: 17578 DST #: 2

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

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DRILL STEM TEST REPORT

FG Holl Company LLC

31/20s/15w/Barton

9431 E. Central STE. 100 Wichita Kansas 67208-2563

Binford/Campbell #1

Job Ticket: 17578

DST#: 2

ATTN: Frank Greenbaum

Test Start: 2013.05.03 @ 08:15:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:00:53

Time Test Ended: 16:07:53

Test Type: Conventional Bottom Hole (Initial)

Tester: Shane Konzem

Unit No: 3330/50/Great Bend

Interval: **3764.00 ft (KB) To 3775.00 ft (KB) (TVD)**

Reference Elevations: 2022.00 ft (KB)

Total Depth: 3775.00 ft (KB) (TVD)

2014.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

Serial #: **8405** Inside

Press @ Run Depth: 560.38 psia @ 3771.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.05.03

End Date: 2013.05.03

Last Calib.: 2013.05.03

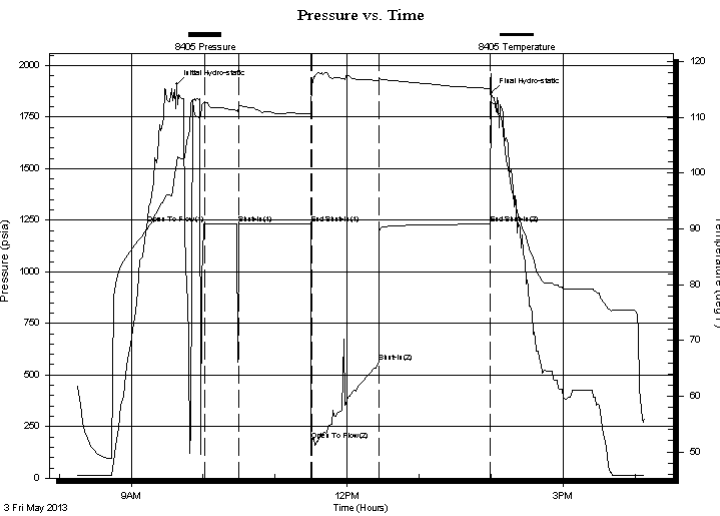
Start Time: 08:15:00

End Time: 16:07:53

Time On Btm: 2013.05.03 @ 09:37:53

Time Off Btm: 2013.05.03 @ 14:00:23

TEST COMMENT: 1st Open/ 30 Minutes. Fair blow built to 6 inches and died to 4 inches in 30 minutes, in 5 gallon bucket.
 1st Shut In/ 60 Minutes. No blow back.
 2nd Open/ 45 Minute. Good blow built to bottom of 5 gallon bucket in 2 minutes. No gas to surface.
 2nd Shut In/ 90 Minutes. Gas to surface in 5 minutes. Strong blow to bottom of bucket in 2 minutes. Gas died out



PRESSURE SUMMARY

| Time (Min.) | Pressure (psia) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1907.75 | 101.92 | Initial Hydro-static |
| 23 | 1230.71 | 112.58 | Open To Flow (1) |
| 52 | 1231.70 | 111.68 | Shut-In(1) |
| 112 | 1233.74 | 110.66 | End Shut-In(1) |
| 113 | 182.43 | 115.76 | Open To Flow (2) |
| 169 | 560.38 | 116.65 | Shut-In(2) |
| 261 | 1230.93 | 115.18 | End Shut-In(2) |
| 263 | 1866.50 | 112.88 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|---|--------------|
| 0.00 | Gas w as at surface. | 0.00 |
| 62.00 | 100% mud | 0.87 |
| 248.00 | 40% w ater, 60% mud | 3.48 |
| 806.00 | 100% w ater | 11.31 |
| 0.00 | Chloride recovery: 30000 ppm | 0.00 |
| 0.00 | resist recovery: .21 ohms at 50 degrees | 0.00 |

Gas Rates

| | Choke (inches) | Pressure (psia) | Gas Rate (Mcf/d) |
|----------------|----------------|-----------------|------------------|
| First Gas Rate | 0.25 | 3.71 | 5.89 |
| Last Gas Rate | 0.25 | 3.35 | 5.32 |
| Max. Gas Rate | 0.25 | 3.71 | 5.89 |



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DST#: 2

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Reference Elevations: 2022.00 ft (KB)

Total Depth: 3775.00 ft (KB) (TVD)

2014.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 8.00 ft

Serial #: 8400 Outside

Press @ Run Depth: 1222.51 psia @ 3772.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.05.03

End Date: 2013.05.03

Last Calib.: 2013.05.03

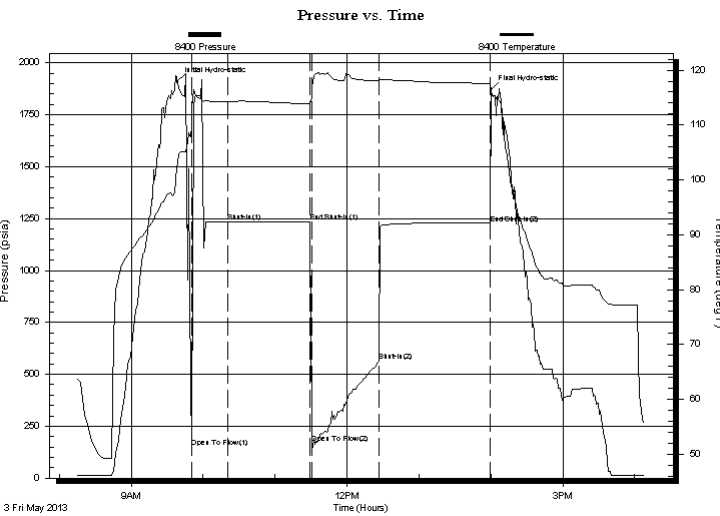
Start Time: 08:15:00

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 2nd Shut In/ 90 Minutes. Gas to surface in 5 minutes. Strong blow to bottom of bucket in 2 minutes. Gas died out



PRESSURE SUMMARY

| Time (Min.) | Pressure (psia) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1909.46 | 102.36 | Initial Hydro-static |
| 12 | 149.49 | 109.94 | Open To Flow (1) |
| 42 | 1234.37 | 114.22 | Shut-In(1) |
| 111 | 1234.85 | 113.83 | End Shut-In(1) |
| 113 | 168.38 | 117.04 | Open To Flow (2) |
| 169 | 562.92 | 118.06 | Shut-In(2) |
| 261 | 1222.51 | 117.53 | End Shut-In(2) |
| 262 | 1873.08 | 115.57 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|---|--------------|
| 0.00 | Gas w as at surface. | 0.00 |
| 62.00 | 100% mud | 0.87 |
| 248.00 | 40% w ater, 60% mud | 3.48 |
| 806.00 | 100% w ater | 11.31 |
| 0.00 | Chloride recovery: 30000 ppm | 0.00 |
| 0.00 | resist recovery: .21 ohms at 50 degrees | 0.00 |

Gas Rates

| | Choke (inches) | Pressure (psia) | Gas Rate (Mcf/d) |
|----------------|----------------|-----------------|------------------|
| First Gas Rate | 0.25 | 3.71 | 5.89 |
| Last Gas Rate | 0.25 | 3.35 | 5.32 |
| Max. Gas Rate | 0.25 | 3.71 | 5.89 |



DRILL STEM TEST REPORT

TOOL DIAGRAM

FG Holl Company LLC

31/20s/15w/Barton

9431 E. Central STE. 100 Wichita Kansas 67208-2563

Binford/Campbell #1

Job Ticket: 17578

DST#: 2

ATTN: Frank Greenbaum

Test Start: 2013.05.03 @ 08:15:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3767.00 ft | Diameter: 3.80 inches | Volume: 52.84 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: 60000.00 lb |
| | | | <u>Total Volume: 52.84 bbl</u> | Tool Chased 4.00 ft |
| Drill Pipe Above KB: | 31.00 ft | | | String Weight: Initial 44000.00 lb |
| Depth to Top Packer: | 3764.00 ft | | | Final 48000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 11.00 ft | | | |
| Tool Length: | 39.00 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |

Tool Comments:

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

| | | | | | |
|---------------------------|--------------|------|---------|---------|-------------------------------|
| SHut-InTool | 5.00 | | Inside | 3741.00 | |
| Hydraulic Tool | 5.00 | | | 3746.00 | |
| Jars | 6.00 | | | 3752.00 | |
| Safety Joint | 2.00 | | | 3754.00 | |
| Packer | 5.00 | | | 3759.00 | 28.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 3764.00 | |
| Anchor | 6.00 | | | 3770.00 | |
| Recorder | 1.00 | 8405 | Inside | 3771.00 | |
| Recorder | 1.00 | 8400 | Outside | 3772.00 | |
| Bullnose | 3.00 | | | 3775.00 | 11.00 Bottom Packers & Anchor |
| Total Tool Length: | 39.00 | | | | |



DRILL STEM TEST REPORT

FLUID SUMMARY

FG Holl Company LLC

31/20s/15w/Barton

9431 E. Central STE. 100 Wichita Kansas 67208-2563

Binford/Campbell #1

Job Ticket: 17578

DST#: 2

ATTN: Frank Greenbaum

Test Start: 2013.05.03 @ 08:15:00

Mud and Cushion Information

Mud Type: Gel Chem
 Mud Weight: 9.00 lb/gal
 Viscosity: 52.00 sec/qt
 Water Loss: 7.20 in³
 Resistivity: ohm.m
 Salinity: 4800.00 ppm
 Filter Cake: 1.00 inches

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

Oil API: deg API
 Water Salinity: ppm

Recovery Information

Recovery Table

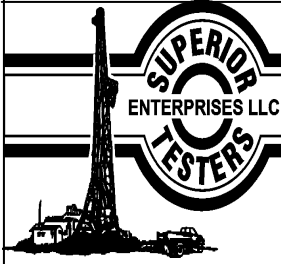
| Length ft | Description | Volume bbl |
|--------------|---|---------------|
| 0.00 | Gas was at surface. | 0.000 |
| 62.00 | 100% mud | 0.870 |
| 248.00 | 40% water, 60% mud | 3.479 |
| 806.00 | 100% water | 11.306 |
| 0.00 | Chloride recovery: 30000 ppm | 0.000 |
| 0.00 | resist recovery: .21 ohms at 50 degrees | 0.000 |

Total Length: 1116.00 ft Total Volume: 15.655 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: Dropped bar and reversed out to reserve pit. Per Ryan Greenbaum.



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GAS RATES

FG Holl Company LLC

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Binford/Campbell #1

Job Ticket: 17578

DST#: 2

ATTN: Frank Greenbaum

Test Start: 2013.05.03 @ 08:15:00

Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

| Flow Period | Elapsed Time | Choke (inches) | Pressure (psia) | Gas Rate (Mcf/d) |
|-------------|--------------|----------------|-----------------|------------------|
| 4 | 15 | 0.25 | 3.71 | 5.89 |
| 4 | 15 | 0.25 | 3.71 | 5.89 |
| 4 | 25 | 0.25 | 3.35 | 5.32 |

