



DRILL STEM TEST REPORT

Prepared For: **F G Holl Company**

9431 East Central STE 100
Wichita Kansas 67206

ATTN: Renna Husted

Neuforth 1-7

7-19s-14w-Barton

Start Date: 2013.07.10 @ 08:25:00

End Date: 2013.07.10 @ 15:29:30

Job Ticket #: 17532 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

7-19s-14w-Barton

9431 East Central STE 100
Wichita Kansas 67206

Neuforth 1-7

Job Ticket: 17532

DST#: 4

ATTN: Renna Hustead

Test Start: 2013.07.10 @ 08:25:00

GENERAL INFORMATION:

Formation: **Lansing B-C-D-E-F-G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:53:30

Time Test Ended: 15:29:30

Test Type: Conventional Straddle (Initial)

Tester: Dustin Ellis

Unit No: 3315-Great Bend-35

Interval: 3283.00 ft (KB) To 3309.00 ft (KB) (TVD)

Reference Elevations: 1938.00 ft (KB)

Total Depth: 3315.00 ft (KB) (TVD)

1931.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 6839 Outside

Press @ Run Depth: 406.20 psia @ 3285.16 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.07.10

End Date:

2013.07.10

Last Calib.: 2013.07.11

Start Time: 08:25:00

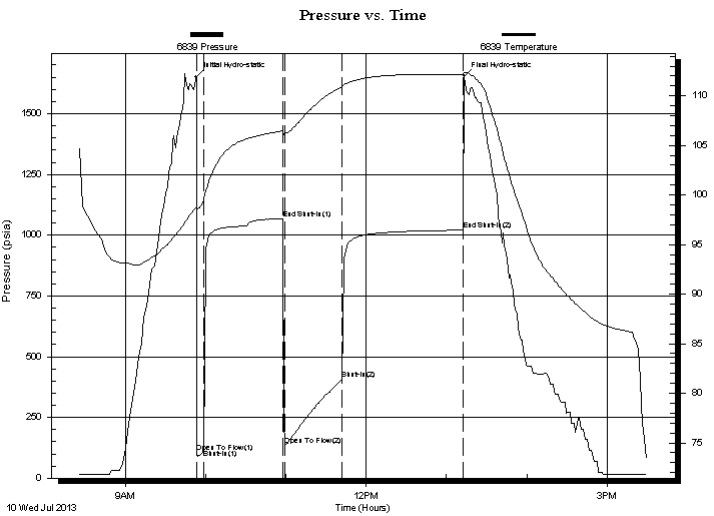
End Time:

15:29:30

Time On Btm: 2013.07.10 @ 09:53:00

Time Off Btm: 2013.07.10 @ 13:13:30

TEST COMMENT: 1st Open 5 minutes Strong blow built to the bottom of a 5 gallon bucket of water in 1 minute.
1st Shut in 60 minutes No blow back
2nd Open 45 minutes Strong blow built to the bottom of a 5 gallon bucket of water in 2 minutes.
2nd Shut in 90 minutes Yes blow back



PRESSURE SUMMARY

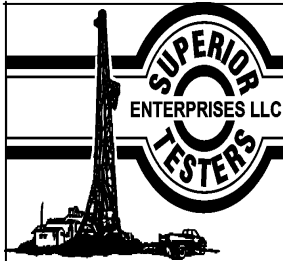
| Time (Min.) | Pressure (psia) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1652.22 | 98.75 | Initial Hydro-static |
| 1 | 104.33 | 98.48 | Open To Flow (1) |
| 6 | 118.55 | 99.66 | Shut-In(1) |
| 65 | 1067.30 | 106.47 | End Shut-In(1) |
| 66 | 133.49 | 106.25 | Open To Flow (2) |
| 109 | 406.20 | 110.90 | Shut-In(2) |
| 200 | 1020.27 | 112.19 | End Shut-In(2) |
| 201 | 1653.38 | 112.36 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------------------------------|--------------|
| 183.00 | Gassy oil cut mud | 2.57 |
| 0.00 | Oil 60% Gas 25% Mud 15% | 0.00 |
| 366.00 | Clean gassy oil 100% | 5.13 |
| 305.00 | Water 100% | 4.28 |
| 0.00 | Chlorides 16,000 ..2ohms @54degrees | 0.00 |

Gas Rates

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



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F G Holl Company
 9431 East Central STE 100
 Wichita Kansas 67206
 ATTN: Renna Husted

7-19s-14w-Barton
Neuforth 1-7
 Job Ticket: 17532 **DST#: 4**
 Test Start: 2013.07.10 @ 08:25:00

GENERAL INFORMATION:

Formation: **Lansing B-C-D-E-F-G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:53:30

Time Test Ended: 15:29:30

Test Type: Conventional Straddle (Initial)

Tester: Dustin Ellis

Unit No: 3315-Great Bend-35

Interval: 3283.00 ft (KB) To 3309.00 ft (KB) (TVD)

Reference Elevations: 1938.00 ft (KB)

Total Depth: 3315.00 ft (KB) (TVD)

1931.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 6806 Outside

Press @ Run Depth: 1020.43 psia @ 3285.16 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.07.10 End Date: 2013.07.10

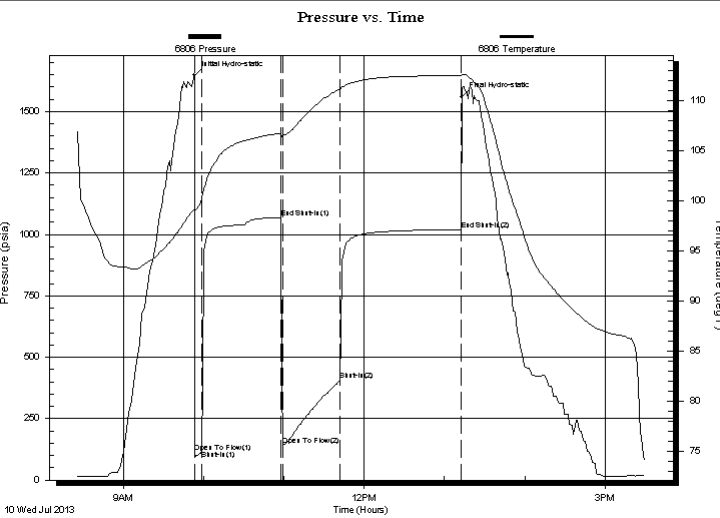
Last Calib.: 2013.07.11

Start Time: 08:25:00 End Time: 15:29:30

Time On Btm: 2013.07.10 @ 09:53:00

Time Off Btm: 2013.07.10 @ 13:13:00

TEST COMMENT: 1st Open 5 minutes Strong blow built to the bottom of a 5 gallon bucket of water in 1 minute.
 1st Shut in 60 minutes No blow back
 2nd Open 45 minutes Strong blow built to the bottom of a 5 gallon bucket of water in 2 minutes.
 2nd Shut in 90 minutes Yes blow back



PRESSURE SUMMARY

| Time (Min.) | Pressure (psia) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1648.01 | 99.18 | Initial Hydro-static |
| 1 | 114.33 | 98.92 | Open To Flow (1) |
| 6 | 121.32 | 100.42 | Shut-In(1) |
| 65 | 1068.20 | 106.78 | End Shut-In(1) |
| 66 | 140.99 | 106.58 | Open To Flow (2) |
| 109 | 405.38 | 111.17 | Shut-In(2) |
| 200 | 1020.43 | 112.49 | End Shut-In(2) |
| 200 | 1560.43 | 112.61 | Final Hydro-static |

Recovery

Gas Rates

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------------------------------|--------------|
| 183.00 | Gassy oil cut mud | 2.57 |
| 0.00 | Oil 60% Gas 25% Mud 15% | 0.00 |
| 366.00 | Clean gassy oil 100% | 5.13 |
| 305.00 | Water 100% | 4.28 |
| 0.00 | Chlorides 16,000 ..2ohms @54degrees | 0.00 |

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



DRILL STEM TEST REPORT

F G Holl Company
 9431 East Central STE 100
 Wichita Kansas 67206
 ATTN: Renna Hustead

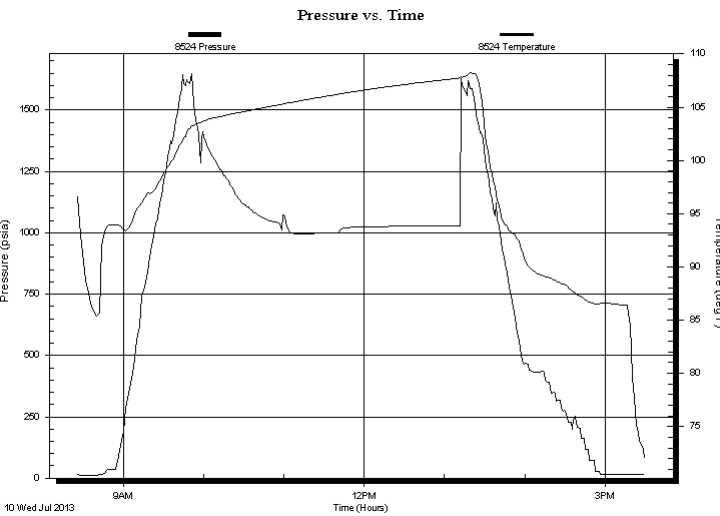
7-19s-14w-Barton
Neuforth 1-7
 Job Ticket: 17532 **DST#: 4**
 Test Start: 2013.07.10 @ 08:25:00

GENERAL INFORMATION:

Formation: **Lansing B-C-D-E-F-G**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:53:30
 Time Test Ended: 15:29:30
 Interval: **3283.00 ft (KB) To 3309.00 ft (KB) (TVD)**
 Total Depth: 3315.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Straddle (Initial)
 Tester: Dustin Ellis
 Unit No: 3315-Great Bend-35
 Reference Elevations: 1938.00 ft (KB)
 1931.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8524 Below
 Press @ Run Depth: psia @ 3312.89 ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.07.10 End Date: 2013.07.10 Last Calib.: 2013.07.11
 Start Time: 08:25:00 End Time: 15:29:30 Time On Btm:
 Time Off Btm:

TEST COMMENT: 1st Open 5 minutes Strong blow built to the bottom of a 5 gallon bucket of water in 1 minute.
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 2nd Shut in 90 minutes Yes blow back



PRESSURE SUMMARY

| Time (Min.) | Pressure (psia) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|------------|
| | | | |
| | | | |
| | | | |
| | | | |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------------------------------|--------------|
| 183.00 | Gassy oil cut mud | 2.57 |
| 0.00 | Oil 60% Gas 25% Mud 15% | 0.00 |
| 366.00 | Clean gassy oil 100% | 5.13 |
| 305.00 | Water 100% | 4.28 |
| 0.00 | Chlorides 16,000 ..2ohms @54degrees | 0.00 |
| | | |

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

F G Holl Company

7-19s-14w-Barton

9431 East Central STE 100
Wichita Kansas 67206

Neuforth 1-7

Job Ticket: 17532

DST#: 4

ATTN: Renna Hustead

Test Start: 2013.07.10 @ 08:25:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3276.00 ft | Diameter: 3.80 inches | Volume: 45.95 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: 58000.00 lb |
| | | | <u>Total Volume: 45.95 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 15.61 ft | | | String Weight: Initial 48000.00 lb |
| Depth to Top Packer: | 3283.00 ft | | | Final 49000.00 lb |
| Depth to Bottom Packer: | 3309.37 ft | | | |
| Interval between Packers: | 26.37 ft | | | |
| Tool Length: | 53.28 ft | | | |
| Number of Packers: | 2 | Diameter: 6.75 inches | | |

Tool Comments:

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

| | | | | | |
|------------------|-------|------|---------|---------|----------------------------|
| P.O. Sub | 0.31 | | | 3260.70 | |
| C.O. Sub | 0.31 | | | 3261.01 | |
| P.O. Sub | 0.31 | | | 3261.32 | |
| Recorder | 1.80 | | Fluid | 3263.12 | |
| Conv. S.I. Tool | 1.52 | | | 3264.64 | |
| Sampler | 1.10 | | | 3265.74 | |
| HMV | 2.10 | | | 3267.84 | |
| Recorder | 1.80 | | Inside | 3269.64 | |
| Telemetry Tool | 7.01 | | | 3276.65 | |
| Jars | 2.05 | | | 3278.70 | |
| Bypass Hanger | 0.32 | | | 3279.02 | |
| Safety Joint | 0.78 | | | 3279.80 | |
| Packer | 1.78 | | | 3281.58 | 22.61 Bottom Of Top Packer |
| Packer | 1.42 | | | 3283.00 | |
| Stubb | 0.36 | | | 3283.36 | |
| Recorder Carrier | 1.80 | | | 3285.16 | |
| Recorder | 0.00 | 6839 | Outside | 3285.16 | |
| Recorder | 0.00 | 6806 | Outside | 3285.16 | |
| Perforations | 23.00 | | | 3308.16 | |
| Bypass Receiver | 0.85 | | | 3309.01 | |
| Blank Spacing | 0.00 | | | 3309.01 | |
| Stubb | 0.36 | | | 3309.37 | 26.37 Tool Interval |
| Packer | 1.42 | | | 3310.79 | |
| Bypass Hanger | 0.30 | | | 3311.09 | |
| Recorder | 1.80 | 8524 | Below | 3312.89 | |
| Collar | 0.00 | | | 3312.89 | |



DRILL STEM TEST REPORT

FLUID SUMMARY

F G Holl Company

7-19s-14w-Barton

9431 East Central STE 100
Wichita Kansas 67206

Neuforth 1-7

Job Ticket: 17532

DST#: 4

ATTN: Renna Hustead

Test Start: 2013.07.10 @ 08:25:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 52.00 sec/qt
Water Loss: 9.20 in³
Resistivity: ohm.m
Salinity: 8400.00 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 |
|--------------|-------------------------------------|---------------|
| 183.00 | Gassy oil cut mud | 2.567 |
| 0.00 | Oil 60% Gas 25% Mud 15% | 0.000 |
| 366.00 | Clean gassy oil 100% | 5.134 |
| 305.00 | Water 100% | 4.278 |
| 0.00 | Chlorides 16,000 ..2ohms @54degrees | 0.000 |

Total Length: 854.00 ft Total Volume: 11.979 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time

