



DRILL STEM TEST REPORT

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

9431 East Central STE 100
Wichita Kansas 67206

ATTN: Rene Husted

Calcara unit 1-19

19-19s-14-Barton

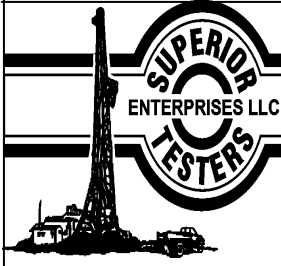
Start Date: 2014.06.08 @ 10:22:00

End Date: 2014.06.08 @ 16:20:30

Job Ticket #: 18334 DST #: 8

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

Printed: 2014.06.08 @ 17:39:16



DRILL STEM TEST REPORT

F.G. Holl Company

19-19s-14-Barton

9431 East Central STE 100
Wichita Kansas 67206

Calcara unit 1-19

Job Ticket: 18334 **DST#: 8**

ATTN: Rene Husted

Test Start: 2014.06.08 @ 10:22:00

GENERAL INFORMATION:

Formation: **Lansing I**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:46:00

Time Test Ended: 16:20:30

Interval: **3356.00 ft (KB) To 3377.00 ft (KB) (TVD)**

Total Depth: 3377.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Ellis

Unit No: 3315-Great Bend-15

Reference Elevations: 1904.00 ft (KB)

1896.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 6999 **Outside**

Press@RunDepth: 69.97 psig @ 3372.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2014.06.08

End Date:

2014.06.08

Last Calib.:

2014.06.08

Start Time: 10:22:00

End Time:

16:20:30

Time On Btm:

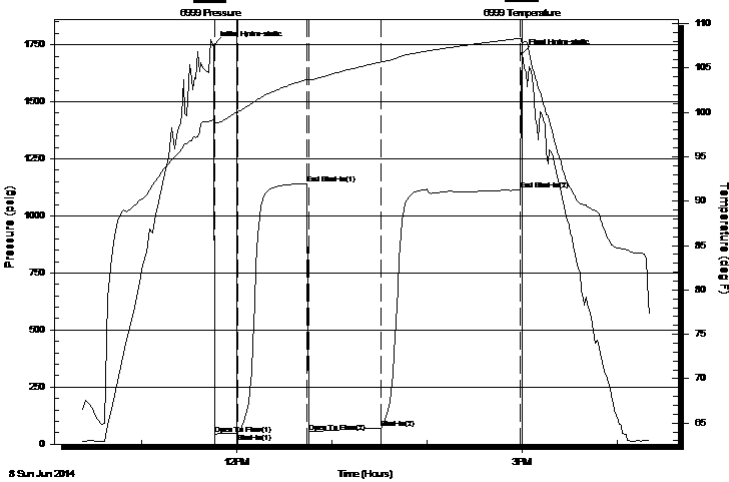
2014.06.08 @ 11:45:30

Time Off Btm:

2014.06.08 @ 15:00:00

TEST COMMENT: 1st Open 15 minutes Weak building blow built to 3 inches in a 5 gallon bucket of water.
1st Shut in 45 minutes No blow back
2nd Open 45 minutes Weak building blow built to the bottom of a 5 gallon bucket of water in 26 minutes.
2nd Shut in 90 minutes No blow back.

Pressure vs. Time



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1747.94 | 99.13 | Initial Hydro-static |
| 1 | 43.42 | 98.81 | Open To Flow (1) |
| 15 | 49.28 | 100.03 | Shut-In(1) |
| 59 | 1141.95 | 103.74 | End Shut-In(1) |
| 60 | 53.38 | 103.62 | Open To Flow (2) |
| 106 | 69.97 | 105.67 | Shut-In(2) |
| 194 | 1111.79 | 108.34 | End Shut-In(2) |
| 195 | 1710.75 | 107.70 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|----------------------------|--------------|
| 80.00 | Oil cut mud 4% Oil Mud 96% | 1.12 |
| | | |
| | | |
| | | |
| | | |

Gas Rates

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



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F.G. Holl Company

19-19s-14-Barton

9431 East Central STE 100
Wichita Kansas 67206

Calcara unit 1-19

ATTN: Rene Husted

Job Ticket: 18334

DST#: 8

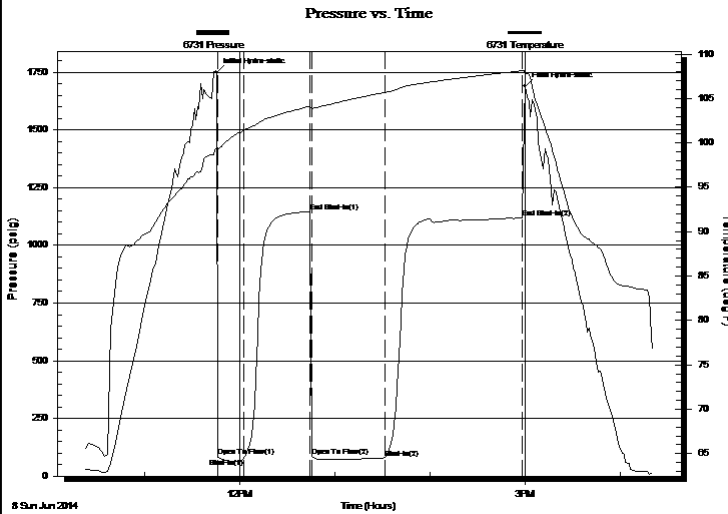
Test Start: 2014.06.08 @ 10:22:00

GENERAL INFORMATION:

| | | |
|---|----------------------|---|
| Formation: Lansing I | | Test Type: Conventional Bottom Hole (Initial) |
| Deviated: No Whipstock: | ft (KB) | Tester: Dustin Ellis |
| Time Tool Opened: 11:46:00 | | Unit No: 3315-Great Bend-15 |
| Time Test Ended: 16:20:30 | | Reference Elevations: 1904.00 ft (KB) |
| Interval: 3356.00 ft (KB) To 3377.00 ft (KB) (TVD) | | 1896.00 ft (CF) |
| Total Depth: 3377.00 ft (KB) (TVD) | | KB to GR/CF: 8.00 ft |
| Hole Diameter: 7.88 inches | Hole Condition: Fair | |

| | | |
|--|----------------------|-------------------------------------|
| Serial #: 6731 | Inside | Capacity: 5000.00 psig |
| Press@RunDepth: 1119.16 psig @ 3372.00 ft (KB) | | Last Calib.: 2014.06.08 |
| Start Date: 2014.06.08 | End Date: 2014.06.08 | Time On Btm: 2014.06.08 @ 11:45:30 |
| Start Time: 10:22:00 | End Time: 16:20:30 | Time Off Btm: 2014.06.08 @ 15:00:00 |

TEST COMMENT: 1st Open 15 minutes Weak building blow built to 3 inches into a 5 gallon bucket of water.
 1st Shut in 45 minutes No blow back
 2nd Open 45 minutes Weak building blow built to the bottom of a 5 gallon bucket of water in 26 minutes.
 2nd Shut in 90 minutes No blow back.



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1749.90 | 99.47 | Initial Hydro-static |
| 1 | 85.10 | 99.18 | Open To Flow (1) |
| 17 | 75.93 | 101.37 | Shut-In(1) |
| 59 | 1145.90 | 104.12 | End Shut-In(1) |
| 60 | 86.98 | 103.89 | Open To Flow (2) |
| 106 | 79.50 | 105.67 | Shut-In(2) |
| 193 | 1119.16 | 108.13 | End Shut-In(2) |
| 195 | 1689.16 | 107.84 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|----------------------------|--------------|
| 80.00 | Oil cut mud 4% Oil Mud 96% | 1.12 |
| | | |
| | | |
| | | |

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

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

19-19s-14-Barton
Calcara unit 1-19
 Job Ticket: 18334 **DST#: 8**
 Test Start: 2014.06.08 @ 10:22:00

Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3333.00 ft | Diameter: 3.80 inches | Volume: 46.75 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: 56000.00 lb |
| | | | <u>Total Volume: 46.75 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 5.00 ft | | | String Weight: Initial 55000.00 lb |
| Depth to Top Packer: | 3356.00 ft | | | Final 55000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 21.00 ft | | | |
| Tool Length: | 49.00 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 | | | 3333.00 | |
| Hydraulic tool | 5.00 | | | 3338.00 | |
| Jars | 6.00 | | | 3344.00 | |
| Safety Joint | 2.00 | | | 3346.00 | |
| Top Packer | 5.00 | | | 3351.00 | |
| Packer | 5.00 | | | 3356.00 | 28.00 Bottom Of Top Packer |
| Perforations | 16.00 | | | 3372.00 | |
| Recorder | 0.00 | 6731 | Inside | 3372.00 | |
| Recorder | 0.00 | 6999 | Outside | 3372.00 | |
| Bull Plug | 5.00 | | | 3377.00 | 21.00 Anchor Tool |
| Total Tool Length: | 49.00 | | | | |



DRILL STEM TEST REPORT

FLUID SUMMARY

F.G. Holl Company

19-19s-14-Barton

9431 East Central STE 100
Wichita Kansas 67206

Calcara unit 1-19

Job Ticket: 18334

DST#: 8

ATTN: Rene Husted

Test Start: 2014.06.08 @ 10:22:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 46.00 sec/qt
Water Loss: 14.40 in³
Resistivity: ohm.m
Salinity: 7500.00 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 |
|--------------|---------------------------|---------------|
| 80.00 | Oil cut mud 4%Oil Mud 96% | 1.122 |

Total Length: 80.00 ft Total Volume: 1.122 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

