



DRILL STEM TEST REPORT

Prepared For: **Hartman Oil Co.**

10500 E Berkeley SQ Pkwy
STE 100 Wichita Kansas 67206

ATTN: Derek Patterson

Brooks 1-19

19-05s-22w-Norton

Start Date: 2013.08.24 @ 12:22:00

End Date: 2013.08.24 @ 19:16:30

Job Ticket #: 17548 DST #: 1

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

Printed: 2013.08.24 @ 05:32:13



DRILL STEM TEST REPORT

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 STE 100 Wichita Kansas 67206
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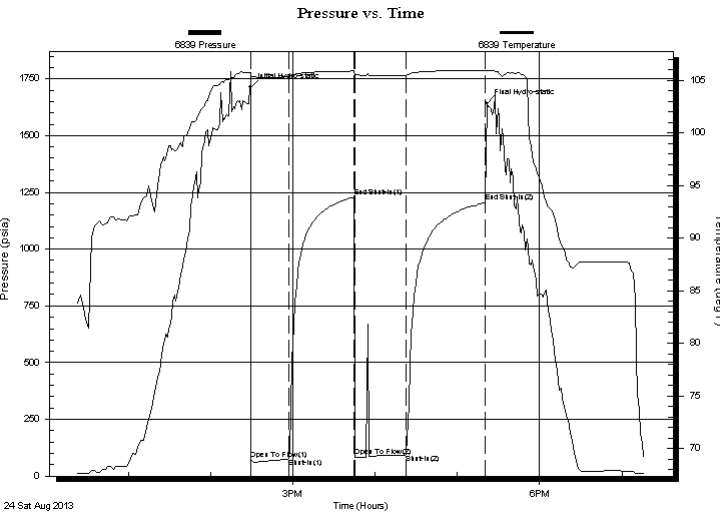
19-05s-22w-Norton
Brooks 1-19
 Job Ticket: 17548 **DST#: 1**
 Test Start: 2013.08.24 @ 12:22:00

GENERAL INFORMATION:

Formation: **Toronto**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 14:29:30
 Time Test Ended: 19:16:30
 Interval: **3360.00 ft (KB) To 3410.00 ft (KB) (TVD)**
 Total Depth: 3410.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Dustin Ellis
 Unit No: 3315-Hays-236
 Reference Elevations: 2226.00 ft (KB)
 2217.00 ft (CF)
 KB to GR/CF: 9.00 ft

Serial #: 6839 Outside
 Press @ RunDepth: 95.73 psia @ 3407.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.08.24 End Date: 2013.08.24 Last Calib.: 2013.08.24
 Start Time: 12:22:00 End Time: 19:16:30 Time On Btm: 2013.08.24 @ 14:29:00
 Time Off Btm: 2013.08.24 @ 17:21:30

TEST COMMENT: 1st Open 30 minutes Weak building blow built to 1.5 inches into a 5 gallon bucket of water.
 1st Shut in 45 minutes No blow back.
 2nd Open 37 minutes Dead, Flushed tool -Blew a very weak surface blow through out.
 2nd Shut in 60 minutes no blow back



PRESSURE SUMMARY

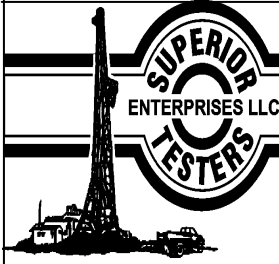
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1712.85	105.77	Initial Hydro-static
1	72.39	105.34	Open To Flow (1)
28	79.71	105.32	Shut-In(1)
76	1228.89	105.87	End Shut-In(1)
76	88.04	105.58	Open To Flow (2)
114	95.73	105.48	Shut-In(2)
172	1206.78	105.89	End Shut-In(2)
173	1642.85	105.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
68.00	Mud 100%	0.33

Gas Rates

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



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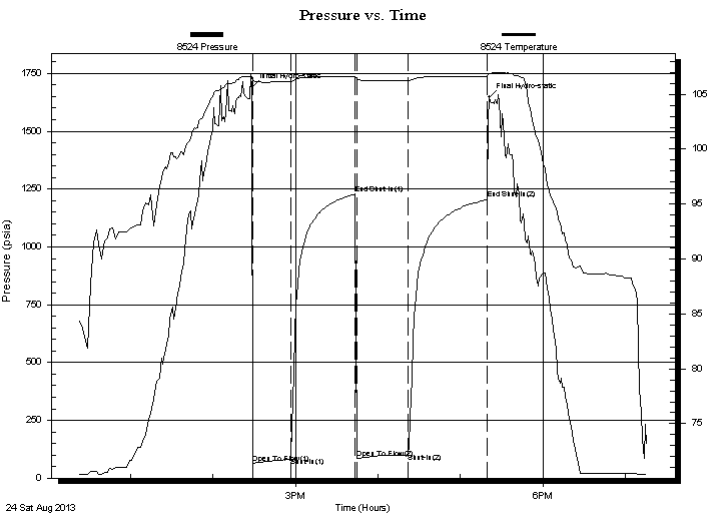
19-05s-22w-Norton
Brooks 1-19
Job Ticket: 17548 **DST#: 1**
Test Start: 2013.08.24 @ 12:22:00

GENERAL INFORMATION:

Formation: **Toronto**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 14:29:30
Time Test Ended: 19:16:30
Interval: **3360.00 ft (KB) To 3410.00 ft (KB) (TVD)**
Total Depth: 3410.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Initial)
Tester: Dustin Ellis
Unit No: 3315-Hays-236
Reference Elevations: 2226.00 ft (KB)
2217.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 8524 Inside
Press @ RunDepth: 1206.66 psia @ 3406.00 ft (KB) Capacity: 5000.00 psia
Start Date: 2013.08.24 End Date: 2013.08.24 Last Calib.: 2013.08.24
Start Time: 12:22:00 End Time: 19:15:30 Time On Btm: 2013.08.24 @ 14:28:30
Time Off Btm: 2013.08.24 @ 17:21:00

TEST COMMENT: 1st Open 30 minutes Weak building blow built to 1.5 inches into a 5 gallon bucket of water.
1st Shut in 45 minutes No blow back.
2nd Open 37 minutes Dead, Flushed tool -Blew a very weak surface blow through out.
2nd Shut in 60 minutes no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1689.43	106.59	Initial Hydro-static
1	63.60	106.26	Open To Flow (1)
28	89.92	106.17	Shut-In(1)
75	1228.72	106.64	End Shut-In(1)
76	85.40	106.40	Open To Flow (2)
114	105.54	106.27	Shut-In(2)
171	1206.66	106.61	End Shut-In(2)
173	1646.82	106.86	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
68.00	Mud 100%	0.33

Gas Rates

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



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TOOL DIAGRAM

Hartman Oil Co.
 10500 E Berkeley SQ Pkwy
 STE 100 Wichita Kansas 67206
 ATTN: Derek Patterson

19-05s-22w-Norton
Brooks 1-19
 Job Ticket: 17548 **DST#: 1**
 Test Start: 2013.08.24 @ 12:22:00

Tool Information

Drill Pipe:	Length: 3103.00 ft	Diameter: 3.80 inches	Volume: 43.53 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: 234.79 ft	Diameter: 2.25 inches	Volume: 1.15 bbl	Weight to Pull Loose: 63000.00 lb
			<u>Total Volume: 44.68 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.79 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3360.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	78.00 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			3337.00	
Hydraulic Tool	5.00			3342.00	
Jars	6.00			3348.00	
Safety Joint	2.00			3350.00	
Packer	5.00			3355.00	28.00 Bottom Of Top Packer
Packer	5.00			3360.00	
Anchor	45.00			3405.00	
Recorder	1.00	8524	Inside	3406.00	
Recorder	1.00	6839	Outside	3407.00	
Bull Plug	3.00			3410.00	50.00 Bottom Packers & Anchor
Total Tool Length:	78.00				



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FLUID SUMMARY

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Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 57.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.40 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 400.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
68.00	Mud 100%	0.334

Total Length: 68.00 ft Total Volume: 0.334 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Pressure vs. Time

