

DRILL STEM TEST REPORT

Prepared For: **Valhalla Exploratoin LLC.**

8100 East 22nd St. N BLDG.
1800-2 Wichita Kansas
67226

ATTN: Adam Nighswonger

Hullman 1-14

14-22s-13w-Stafford

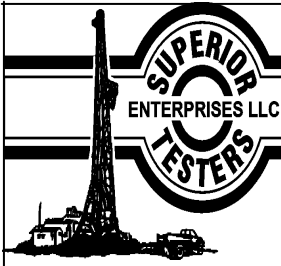
Start Date: 2013.11.01 @ 03:55:00

End Date: 2013.11.01 @ 10:50:30

Job Ticket #: 18532 DST #: 5

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

Printed: 2013.11.01 @ 09:23:39



DRILL STEM TEST REPORT

Valhalla Exploratoion LLC.

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ATTN: Adam Nighswonger

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Job Ticket: 18532

DST#: 5

Test Start: 2013.11.01 @ 03:55:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:53:30

Time Test Ended: 10:50:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Ellis

Unit No: 3315-Great Bend-35

Interval: 3816.00 ft (KB) To 3824.00 ft (KB) (TVD)

Reference Elevations: 1897.00 ft (KB)

Total Depth: 3824.00 ft (KB) (TVD)

1889.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6839 Outside

Press @ RunDepth: 112.46 psia @ 3821.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.11.01

End Date: 2013.11.01

Last Calib.: 2013.11.01

Start Time: 03:55:00

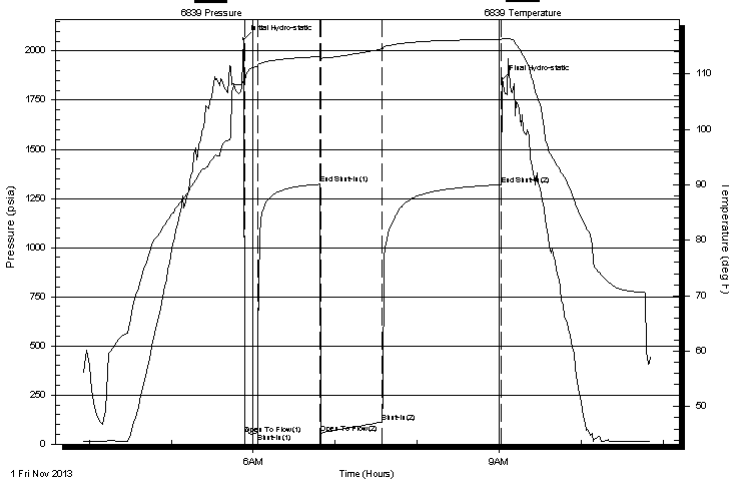
End Time: 10:50:30

Time On Btm: 2013.11.01 @ 05:53:00

Time Off Btm: 2013.11.01 @ 09:02:00

TEST COMMENT: 1st Open 10 minutes Weak blow built to 1.5 inches
1st Shut in 45 minutes No blow back
2nd Open 45 minutes Weak 1/2 inch blow through out
2nd Shut in 90 minutes No blow back

Pressure vs. Time



PRESSURE SUMMARY

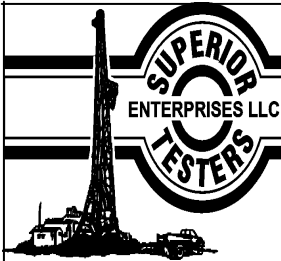
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2060.29	108.65	Initial Hydro-static
1	51.91	108.58	Open To Flow (1)
10	56.66	111.33	Shut-In(1)
56	1322.51	113.09	End Shut-In(1)
57	56.66	112.74	Open To Flow (2)
101	112.46	114.48	Shut-In(2)
189	1320.04	116.22	End Shut-In(2)
189	1856.23	116.36	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	Clean oil 100%	1.26
123.00	Oil cut muddy water	1.73
0.00	Oil 55% Mud 40% Water 5%	0.00
0.00	Gravity of oil 30 corrected	0.00

Gas Rates

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



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Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:53:30

Time Test Ended: 10:50:30

Interval: 3816.00 ft (KB) To 3824.00 ft (KB) (TVD)

Total Depth: 3824.00 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-35

Reference Elevations: 1897.00 ft (KB)

1889.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8524 Inside

Press @ RunDepth: 1326.03 psia @ 3820.00 ft (KB)

Start Date: 2013.11.01

End Date: 2013.11.01

Start Time: 03:55:00

End Time: 10:50:00

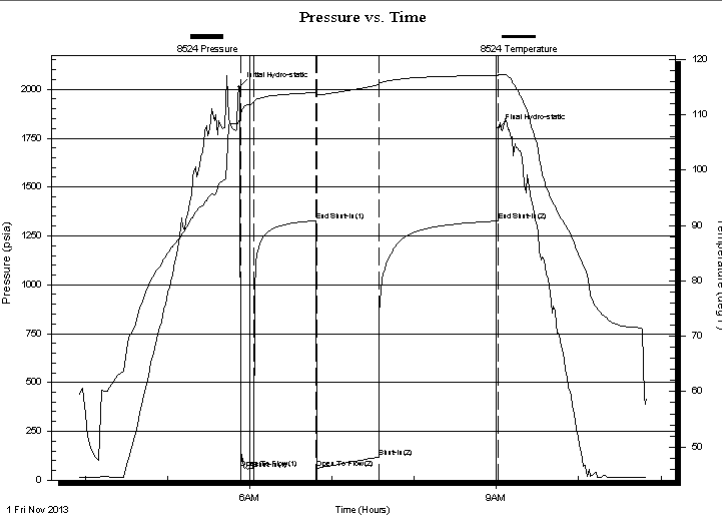
Capacity: 5000.00 psia

Last Calib.: 2013.11.01

Time On Btm: 2013.11.01 @ 05:52:30

Time Off Btm: 2013.11.01 @ 09:01:30

TEST COMMENT: 1st Open 10 minutes Weak blow built to 1.5 inches
1st Shut in 45 minutes No blow back
2nd Open 45 minutes Weak 1/2 inch blow through out
2nd Shut in 90 minutes No blow back



PRESSURE SUMMARY

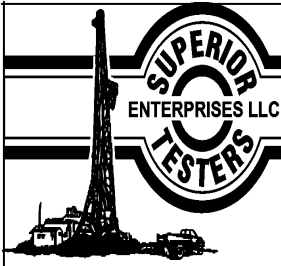
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2011.73	109.32	Initial Hydro-static
1	60.63	109.88	Open To Flow (1)
11	100.59	112.19	Shut-In(1)
56	1327.91	113.97	End Shut-In(1)
57	63.03	113.49	Open To Flow (2)
102	118.12	115.36	Shut-In(2)
189	1326.03	117.09	End Shut-In(2)
189	1799.31	117.25	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	Clean oil 100%	1.26
123.00	Oil cut muddy water	1.73
0.00	Oil 55% Mud 40% Water 5%	0.00
0.00	Gravity of oil 30 corrected	0.00

Gas Rates

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



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TOOL DIAGRAM

Valhalla Exploratoion LLC.

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Hullman 1-14

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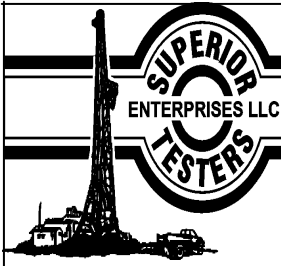
Test Start: 2013.11.01 @ 03:55:00

Tool Information

Drill Pipe:	Length: 3816.00 ft	Diameter: 3.80 inches	Volume: 53.53 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: 53.53 bbl</u>	Tool Chased 3.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 57000.00 lb
Depth to Top Packer:	3816.00 ft			Final 5700.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	8.00 ft			
Tool Length:	36.00 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			3793.00	
Hydraulic Tool	5.00			3798.00	
Jars	6.00			3804.00	
Safety Joint	2.00			3806.00	
Packer	5.00			3811.00	28.00 Bottom Of Top Packer
Packer	5.00			3816.00	
Anchor	3.00			3819.00	
Recorder	1.00	8524	Inside	3820.00	
Recorder	1.00	6839	Outside	3821.00	
Bull Plug	3.00			3824.00	8.00 Bottom Packers & Anchor
Total Tool Length:	36.00				



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FLUID SUMMARY

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Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 72.00 sec/qt
Water Loss: 11.60 in³
Resistivity: ohm.m
Salinity: 12800.00 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
90.00	Clean oil 100%	1.262
123.00	Oil cut muddy w ater	1.725
0.00	Oil 55% Mud 40% Water 5%	0.000
0.00	Gravity of oil 30 corrected	0.000

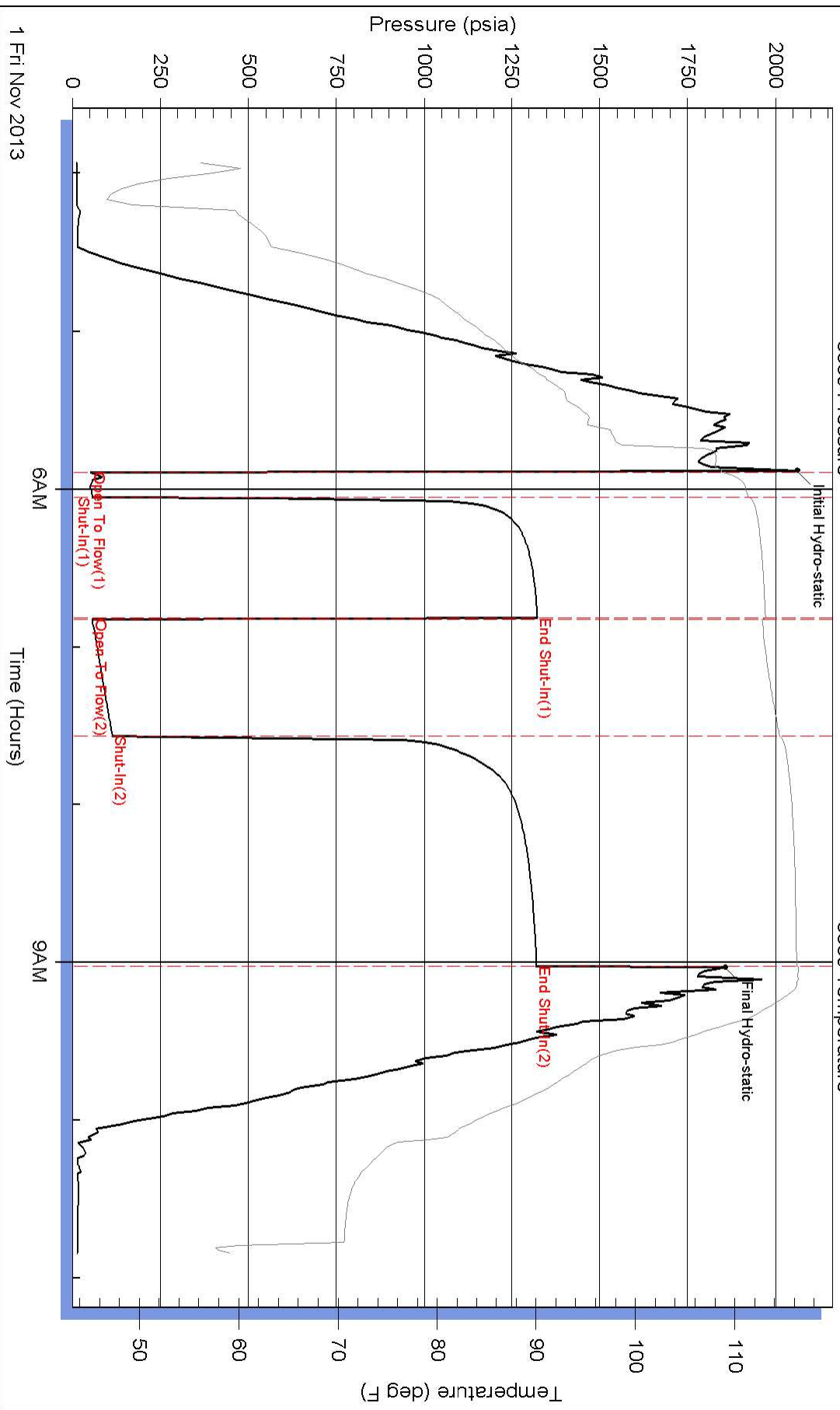
Total Length: 213.00 ft Total Volume: 2.987 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time



Pressure vs. Time

