



DRILL STEM TEST REPORT

Prepared For: **Carrie Exploration & Development**

210 W. 22nd
Hays Kansas, 67601

ATTN: Jeff Lawler

Hayes #C-1

8/21s/11w/Stafford

Start Date: 2013.06.21 @ 07:45:00

End Date: 2013.06.21 @ 13:30:00

Job Ticket #: 18402 DST #: 3

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

Printed: 2013.06.21 @ 13:55:05



DRILL STEM TEST REPORT

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Job Ticket: 18402

DST#: 3

ATTN: Jeff Lawler

Test Start: 2013.06.21 @ 07:45:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:24:30

Time Test Ended: 13:30:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Shane Konzem

Unit No: 3330/50/Great Bend

Interval: **3429.00 ft (KB) To 3444.00 ft (KB) (TVD)**

Reference Elevations: 1803.00 ft (KB)

Total Depth: 3444.00 ft (KB) (TVD)

1795.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8405 Inside

Press @ Run Depth: 97.00 psia @ 3440.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.06.21

End Date:

2013.06.21

Last Calib.:

2013.06.21

Start Time: 07:45:00

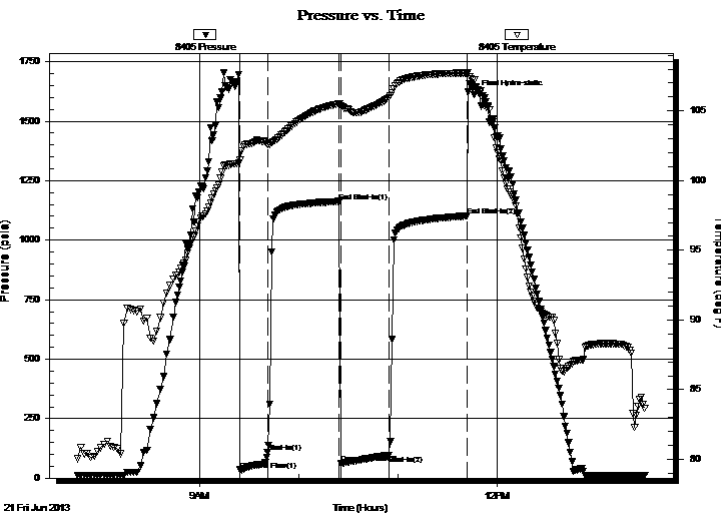
End Time:

13:30:00

Time On Btm:

Time Off Btm: 2013.06.21 @ 11:46:30

TEST COMMENT: 1st Open/ 15 Minutes. Good blow built to bottom of 5 gallon bucket in 9 minutes and 15 seconds.
1st Shut In/ 45 Minutes. No blow back.
2nd Open/ 30 Minutes. Good blow built to bottom of 5 gallon bucket in 4 minutes and 40 seconds.
2nd Shut In/ 45 Minutes. Good blow back built to bottom of bucket after bleeding pressure off 4 times.



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	34.38	101.52	Open To Flow (1)
17	107.40	102.58	Shut-In(1)
60	1162.91	105.52	End Shut-In(1)
61	60.52	105.36	Open To Flow (2)
90	97.00	105.95	Shut-In(2)
138	1101.85	107.72	End Shut-In(2)
142	1611.28	107.20	Final Hydro-static

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
0.00	1197 feet of gas.	0.00
100.00	Clean oil.	1.40
63.00	30% mud, 60% oil, 10% gas.	0.88
30.00	30% mud, 50% water, 15% oil, 5% gas.	0.42
0.00	Oil gravity was 47 corrected.	0.00

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



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Reference Elevations: 1803.00 ft (KB)

Total Depth: 3444.00 ft (KB) (TVD)

1795.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: **8400** Outside

Press @ Run Depth: 1102.57 psia @ 3441.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2013.06.21

End Date:

2013.06.21

Last Calib.:

2013.06.21

Start Time: 07:55:00

End Time:

13:40:30

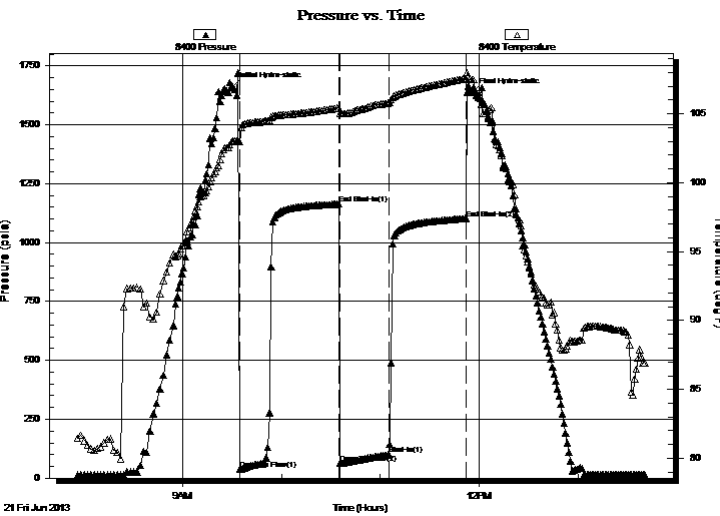
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2013.06.21 @ 09:30:00

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PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1662.34	102.99	Initial Hydro-static
5	38.91	102.96	Open To Flow (1)
65	1163.65	105.42	End Shut-In(1)
66	61.70	105.04	Open To Flow (2)
95	102.13	105.80	Shut-In(1)
142	1102.57	107.56	End Shut-In(2)
146	1637.38	107.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	1197 feet of gas.	0.00
100.00	Clean oil.	1.40
63.00	30% mud, 60% oil, 10% gas.	0.88
30.00	30% mud, 50% water, 15% oil, 5% gas.	0.42
0.00	Oil gravity was 47 corrected.	0.00

Gas Rates

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



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TOOL DIAGRAM

Carrie Exploration & Development

8/21s/11w/Stafford

210 W. 22nd
Hays Kansas, 67601

Hayes #C-1

Job Ticket: 18402

DST#: 3

ATTN: Jeff Lawler

Test Start: 2013.06.21 @ 07:45:00

Tool Information

Drill Pipe:	Length: 3430.00 ft	Diameter: 3.80 inches	Volume: 48.11 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: 46000.00 lb
			<u>Total Volume: 48.11 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 380000.0 lb
Depth to Top Packer:	3429.00 ft			Final 39000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	15.00 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
Change Over Sub	1.00			3409.00	
Shut-In Tool	5.00			3414.00	
Hydroic Tool	5.00			3419.00	
Packer	5.00			3424.00	21.00 Bottom Of Top Packer
Packer	5.00			3429.00	
Perforations	10.00			3439.00	
Recorder	1.00	8405	Inside	3440.00	
Recorder	1.00	8400	Outside	3441.00	
Bullnose	3.00			3444.00	15.00 Bottom Packers & Anchor
Total Tool Length:	36.00				



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FLUID SUMMARY

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DST#: 3

ATTN: Jeff Lawler

Test Start: 2013.06.21 @ 07:45:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 46.00 sec/qt
Water Loss: 8.20 in³
Resistivity: ohm.m
Salinity: 3000.00 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	1197 feet of gas.	0.000
100.00	Clean oil.	1.403
63.00	30% mud, 60% oil, 10% gas.	0.884
30.00	30% mud, 50% water, 15% oil, 5% gas.	0.421
0.00	Oil gravity was 47 corrected.	0.000

Total Length: 193.00 ft Total Volume: 2.708 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

