



DRILL STEM TEST REPORT

Prepared For: **CARRIE EXPLOATION LLC**

1611 COPPER CREEK C-2
HAYS, KANSAS 67601-2667

ATTN: HERB DEINES

BOB THOMAS C-2

35-19S-11W BARTON

Start Date: 2016.10.24 @ 02:15:00

End Date: 2016.10.24 @ 00:00:00

Job Ticket #: 01135 DST #: 1

Eagle Testers
1309 Patton Road Great Bend, Kansas 67530
620-791-7394

Printed: 2016.10.26 @ 07:33:09



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Test Start: 2016.10.24 @ 02:15:00

GENERAL INFORMATION:

Formation: **KANSAS CITY A-B-C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:39:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG 30

Unit No: 1

Interval: **3006.00 ft (KB) To 3050.00 ft (KB) (TVD)**

Reference Elevations: 1778.00 ft (KB)

Total Depth: 3050.00 ft (KB) (TVD)

1770.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 9139

Inside

Press@RunDepth: 886.88 psia @ 3044.76 ft (KB)

Capacity: psia

Start Date: 2016.10.24

End Date:

2016.10.24

Last Calib.:

1899.12.30

Start Time: 02:16:00

End Time:

07:50:30

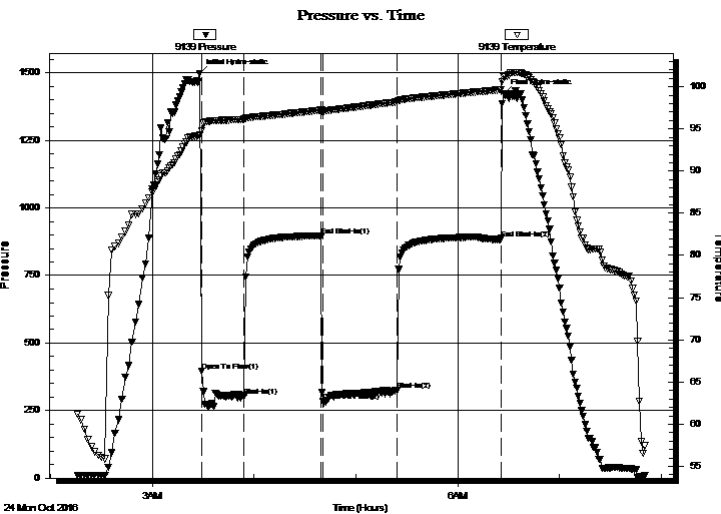
Time On Btm:

2016.10.24 @ 03:28:00

Time Off Btm:

2016.10.24 @ 06:27:00

TEST COMMENT: 1ST OPENING 15 MINUTES STRONG BLOW GAS TO SURFACE IN 2 MINUTES
1ST SHUT-IN 45 MINUTES NO BLOW BACK
2ND OPENING 30 MINUTES STRONG BLOW SEE GAS FLOW REPORT
2ND SHUT-IN 60 MINUTES WEAK BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1497.92	94.26	Initial Hydro-static
1	395.99	94.77	Open To Flow (1)
27	304.18	96.14	Shut-In(1)
72	896.94	97.23	End Shut-In(1)
73	283.99	97.08	Open To Flow (2)
116	323.82	98.20	Shut-In(2)
178	886.88	99.66	End Shut-In(2)
179	1423.60	101.19	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
80.00	THICK HEAVY MUD	1.12
60.00	MUDDY WATER 30 MUD 70 WATER	0.84
60.00	MUDDY WATER 15 MUD 85 WATER	0.84
0.00	CHLORIDES 88000	0.00

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	1.00	33.10	951.59
Last Gas Rate	1.00	34.60	994.71
Max. Gas Rate	1.00	34.60	994.71



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TOOL DIAGRAM

CARRIE EXPLOATION LLC

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DST#: 1

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Test Start: 2016.10.24 @ 02:15:00

Tool Information

Drill Pipe:	Length: 3016.00 ft	Diameter: 3.80 inches	Volume: 42.31 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.76 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.80 inches	Volume: 0.00 bbl	Weight to Pull Loose: 54000.00 lb
			<u>Total Volume: 42.31 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 34000.00 lb
Depth to Top Packer:	3006.00 ft			Final 34000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	43.76 ft			
Tool Length:	63.76 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			2991.00	
Hydraulic tool	5.00			2996.00	
Top Packer	5.00			3001.00	
Packer	5.00			3006.00	20.00 Bottom Of Top Packer
Anchor	1.00			3007.00	
Change Over Sub	0.75			3007.75	
Drill Pipe	31.26			3039.01	
Change Over Sub	0.75			3039.76	
Anchor	5.00			3044.76	
Recorder	0.00	9139	Inside	3044.76	
Recorder	0.00	91719	Outside	3044.76	
Bullnose	5.00			3049.76	43.76 Anchor Tool

Total Tool Length: 63.76



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FLUID SUMMARY

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Test Start: 2016.10.24 @ 02:15:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 48.00 sec/qt

Water Loss: in³

Resistivity: ohm.m

Salinity: ppm

Filter Cake: inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psia

Oil API:

Water Salinity: deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
80.00	THICK HEAVY MUD	1.122
60.00	MUDDY WATER 30 MUD 70 WATER	0.842
60.00	MUDDY WATER 15 MUD 85 WATER	0.842
0.00	CHLORIDES 88000	0.000

Total Length: 200.00 ft Total Volume: 2.806 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



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GAS RATES

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Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
1	10	1.00	33.10	951.59
2	10	1.00	34.60	994.71
2	20	1.00	34.60	994.71
2	30	1.00	34.60	994.71
2	40	1.00	34.60	994.71
2	45	1.00	34.60	994.71

Pressure vs. Time

