



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 @ 14:15:00

End Date: 2016.10.24 @ 00:00:00

Job Ticket #: 01136 DST #: 2

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

Printed: 2016.10.24 @ 19:24:08



DRILL STEM TEST REPORT

CARRIE EXPLOATION LLC

35-19S-11W BARTON

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Job Ticket: 01136

DST#: 2

ATTN: HERB DEINES

Test Start: 2016.10.24 @ 14:15:00

GENERAL INFORMATION:

Formation: **KANSAS CITY D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:31:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: GENE BUDIG

Unit No: 1-30

Interval: **3052.00 ft (KB) To 3075.00 ft (KB) (TVD)**

Reference Elevations: 1778.00 ft (KB)

Total Depth: 3075.00 ft (KB) (TVD)

1770.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 9139

Press@RunDepth: 832.62 psia @ ft (KB)

Capacity: psia

Start Date: 2016.10.24

End Date: 2016.10.24

Last Calib.: 1899.12.30

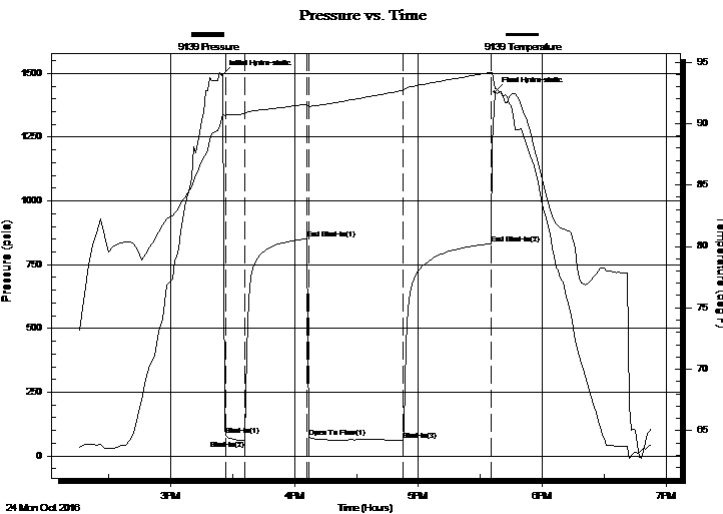
Start Time: 14:15:00

End Time: 18:53:00

Time On Btm: 2016.10.24 @ 15:25:00

Time Off Btm: 2016.10.24 @ 17:37:00

TEST COMMENT: 1ST OPENING 10 MINUTES STRONG BLOW GAS TO SURFACE IN 8 MINUTES
1ST SHUT-IN 30 MINUTES-NO BLOW BACK
2ND OPENING 45 MINUTES STRONG BLOW SEE GAS FLOW REPORT
2ND SHUT-IN 45 MINUTES-NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1494.56	90.74	Initial Hydro-static
2	80.45	90.74	Shut-In(1)
11	60.63	90.79	Shut-In(2)
42	850.98	91.58	End Shut-In(1)
42	74.23	91.41	Open To Flow (1)
88	63.01	92.69	Shut-In(3)
131	832.62	94.17	End Shut-In(2)
132	1427.05	92.83	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	MUD	0.21
0.00	THERE WAS A SLIGHT SHOW OF OIL BE0.00EN	0.00
0.00	THE SHUT-IN AND HYDRAULIC TOOS	0.00

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	1.00	7.75	222.80
Last Gas Rate	1.00	7.50	215.62
Max. Gas Rate	1.00	7.75	222.80



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Time Test Ended: 00:00:00

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Tester: GENE BUDIG

Unit No: 1-30

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Reference Elevations: 1778.00 ft (KB)

Total Depth: 3075.00 ft (KB) (TVD)

1770.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 93335

Press@RunDepth: 831.47 psia @ ft (KB)

Capacity: psia

Start Date: 2016.10.24

End Date: 2016.10.24

Last Calib.: 1899.12.30

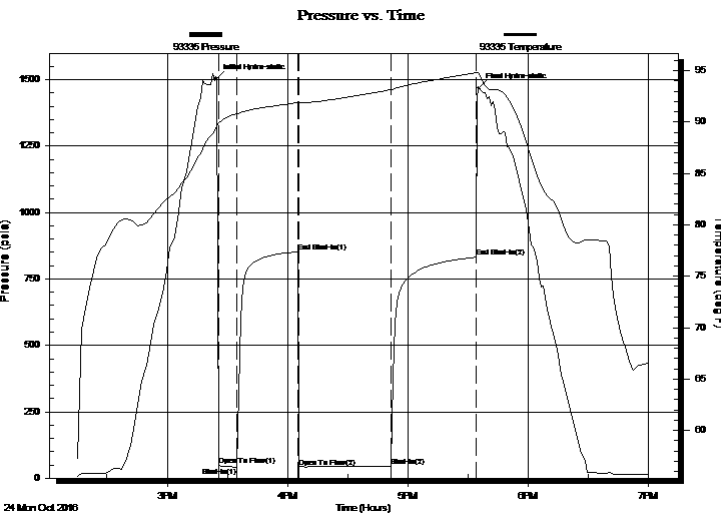
Start Time: 14:15:00

End Time: 19:01:00

Time On Btm: 2016.10.24 @ 15:24:30

Time Off Btm: 2016.10.24 @ 17:35:30

TEST COMMENT: 1ST OPENING 10 MINUTES STRONG BLOW GAS TO SURFACE IN 8 MINUTES
1ST SHUT-IN 30 MINUTES-NO BLOW BACK
2ND OPENING 45 MINUTES STRONG BLOW SEE GAS FLOW REPORT
2ND SHUT-IN 45 MINUTES-NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1503.93	89.61	Initial Hydro-static
1	46.92	89.89	Open To Flow (1)
10	42.20	90.78	Shut-In(1)
41	851.88	91.89	End Shut-In(1)
41	42.09	91.90	Open To Flow (2)
87	45.33	93.14	Shut-In(2)
130	831.47	94.80	End Shut-In(2)
131	1468.84	94.74	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	MUD	0.21
0.00	THERE WAS A SLIGHT SHOW OF OIL BE	0.00EN
0.00	THE SHUT-IN AND HYDRAULIC TOOS	0.00

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	1.00	7.75	222.80
Last Gas Rate	1.00	7.50	215.62
Max. Gas Rate	1.00	7.75	222.80



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TOOL DIAGRAM

CARRIE EXPLOATION LLC

35-19S-11W BARTON

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

BOB THOMAS C-2

Job Ticket: 01136

DST#: 2

ATTN: HERB DEINES

Test Start: 2016.10.24 @ 14:15:00

Tool Information

Drill Pipe:	Length: 3048.00 ft	Diameter: 3.80 inches	Volume: 42.76 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.86 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 630090.0 lb
			<u>Total Volume: 42.76 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3052.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 ft			
Tool Length:	43.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3037.00	
Hydraulic tool	5.00			3042.00	
Top Packer	5.00			3047.00	
Packer	5.00			3052.00	20.00 Bottom Of Top Packer
Anchor	18.00			3070.00	
Recorder	0.00	9139	Inside	3070.00	
Recorder	0.00	91716	Outside	3070.00	
Bullnose	5.00			3075.00	23.00 Anchor Tool

Total Tool Length: 43.00



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FLUID SUMMARY

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Job Ticket: 01136

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ATTN: HERB DEINES

Test Start: 2016.10.24 @ 14:15:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 43.00 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
15.00	MUD	0.210
0.00	THERE WAS A SLIGHT SHOW OF OIL BETWE	0.000
0.00	THE SHUT-IN AND HYDRAULIC TOOS	0.000

Total Length: 15.00 ft Total Volume: 0.210 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)
2	10	1.00	7.75	222.80
2	20	1.00	7.50	215.62
2	30	1.00	7.50	215.62
2	40	1.00	7.50	215.62
2	45	1.00	7.50	215.62

Pressure vs. Time

