



DRILL STEM TEST REPORT

Prepared For: **Carrie Exploration & Development**

210 w 22nd Street Hays Ks 67601

ATTN: Jeff Lawler

Ricker #C-1

15-20s-10w Rice

Start Date: 2013.06.09 @ 06:40:00

End Date: 2013.06.09 @ 11:54:00

Job Ticket #: 17467 DST #: 1

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

Printed: 2013.06.09 @ 12:25:28



DRILL STEM TEST REPORT

Carrie Exploration & Development
 210 w 22nd Street Hays Ks 67601
 ATTN: Jeff Lawler

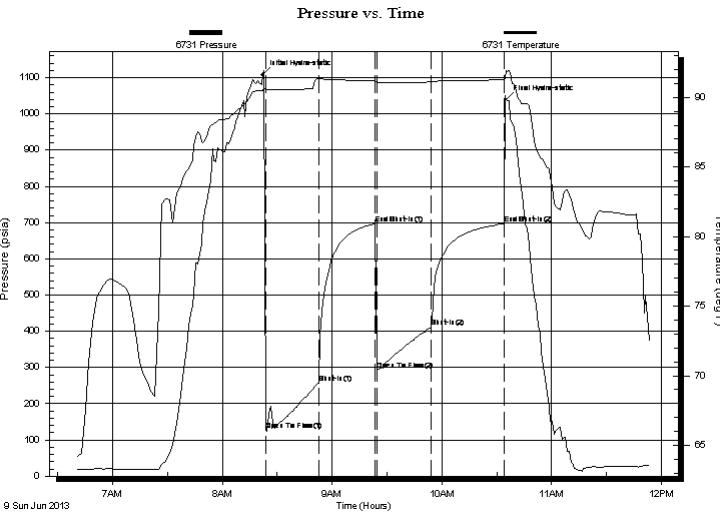
15-20s-10w Rice
Ricker #C-1
 Job Ticket: 17467 **DST#: 1**
 Test Start: 2013.06.09 @ 06:40:00

GENERAL INFORMATION:

Formation: **Tarkio Sand**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 08:24:00 Tester: Jared Scheck
 Time Test Ended: 11:54:00 Unit No: 3320-50-Great Bend
 Interval: **2318.00 ft (KB) To 2379.00 ft (KB) (TVD)** Reference Elevations: 1837.00 ft (KB)
 Total Depth: 2379.00 ft (KB) (TVD) 1829.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 6731 Inside
 Press@RunDepth: 410.68 psia @ 2375.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.06.09 End Date: 2013.06.09 Last Calib.: 2013.06.09
 Start Time: 06:40:00 End Time: 11:54:00 Time On Btm: 2013.06.09 @ 08:22:00
 Time Off Btm: 2013.06.09 @ 10:35:00

TEST COMMENT: 1st Opening 30 Minutes-Strong blow built bottom of bucket in 1 minute
 1st Shut-in 30 Minutes-No blow back
 2nd Opening 30 Minutes-Strong blow built bottom of bucket in 1 minute
 2nd Shut-in 30 Minutes-Very weak blow back 3/4 inch



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1108.36	90.52	Initial Hydro-static
2	126.61	90.55	Open To Flow (1)
31	256.89	91.35	Shut-In(1)
62	697.24	91.20	End Shut-In(1)
63	293.68	91.09	Open To Flow (2)
92	410.68	91.11	Shut-In(2)
132	697.05	91.26	End Shut-In(2)
133	1039.94	91.93	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	gas in pipe	0.00
240.00	slightly oil gas cut w water mud	3.37
0.00	2%oil 13%gas 30%Water55%mud	0.00
780.00	water	10.94
0.00	chlorides 100,000 resistivity .6@70 deg	0.00

Gas Rates

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



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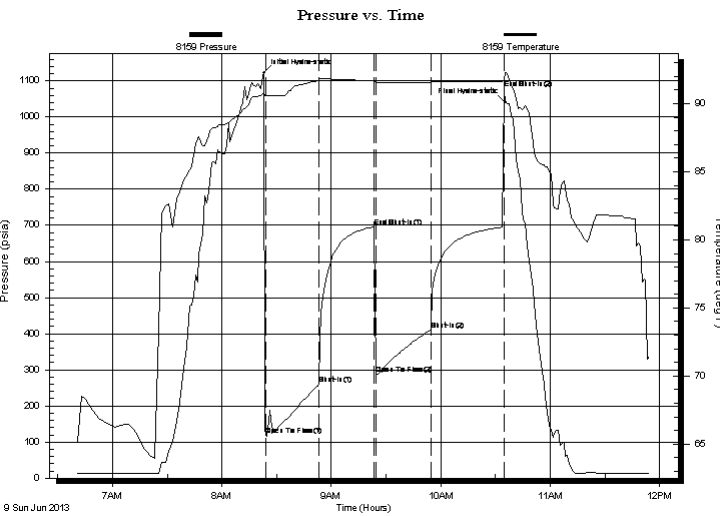
GENERAL INFORMATION:

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 Total Depth: 2379.00 ft (KB) (TVD) 1829.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 8159

Press@RunDepth: 1079.36 psia @ ft (KB) Capacity: 5000.00 psia
 Start Date: 2013.06.09 End Date: 2013.06.09 Last Calib.: 2013.06.09
 Start Time: 06:40:00 End Time: 11:54:30 Time On Btm: 2013.06.09 @ 08:23:00
 Time Off Btm: 2013.06.09 @ 10:35:30

TEST COMMENT: 1st Opening 30 Minutes-Strong blow built bottom of bucket in 1 minute
 1st Shut-in 30 Minutes-No blow back
 2nd Opening 30 Minutes-Strong blow built bottom of bucket in 1 minute
 2nd SHut-in 30 Minutes-Very weak blow back 3/4 inch



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1121.69	90.84	Initial Hydro-static
1	119.29	90.62	Open To Flow (1)
30	259.79	91.79	Shut-In(1)
61	696.74	91.69	End Shut-In(1)
62	286.78	91.56	Open To Flow (2)
92	411.23	91.56	Shut-In(2)
132	1079.36	91.78	End Shut-In(2)
133	1040.15	92.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	gas in pipe	0.00
240.00	slightly oil gas cut w water mud	3.37
0.00	2%oil 13%gas 30%Water55%mud	0.00
780.00	water	10.94
0.00	chlorides 100,000 resistivity .6@70 deg	0.00

Gas Rates

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



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TOOL DIAGRAM

Carrie Exploration & Development
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Tool Information

Drill Pipe:	Length: 2304.00 ft	Diameter: 3.80 inches	Volume: 32.32 bbl	Tool Weight: 1000.00 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: 40000.00 lb
			<u>Total Volume: 32.32 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 34000.00 lb
Depth to Top Packer:	2318.00 ft			Final 38000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	61.00 ft			
Tool Length:	81.00 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			2303.00	
Hydraulic Tool	5.00			2308.00	
Packer	5.00			2313.00	20.00 Bottom Of Top Packer
Packer	5.00			2318.00	
Anchor	0.00			2318.00	
Change Over Sub	0.75			2318.75	
Drill Pipe	30.50			2349.25	
Change Over Sub	0.75			2350.00	
Anchor	24.00			2374.00	
Recorder	1.00	6731	Inside	2375.00	
Recorder	1.00		Outside	2376.00	
Bullnose	3.00			2379.00	61.00 Bottom Packers & Anchor

Total Tool Length: 81.00



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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: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	gas in pipe	0.000
240.00	slightly oil gas cut w ater mud	3.367
0.00	2%oil 13%gas 30%Water55%mud	0.000
780.00	w ater	10.941
0.00	chlorides 100,000 resistivity .6@70 deg	0.000

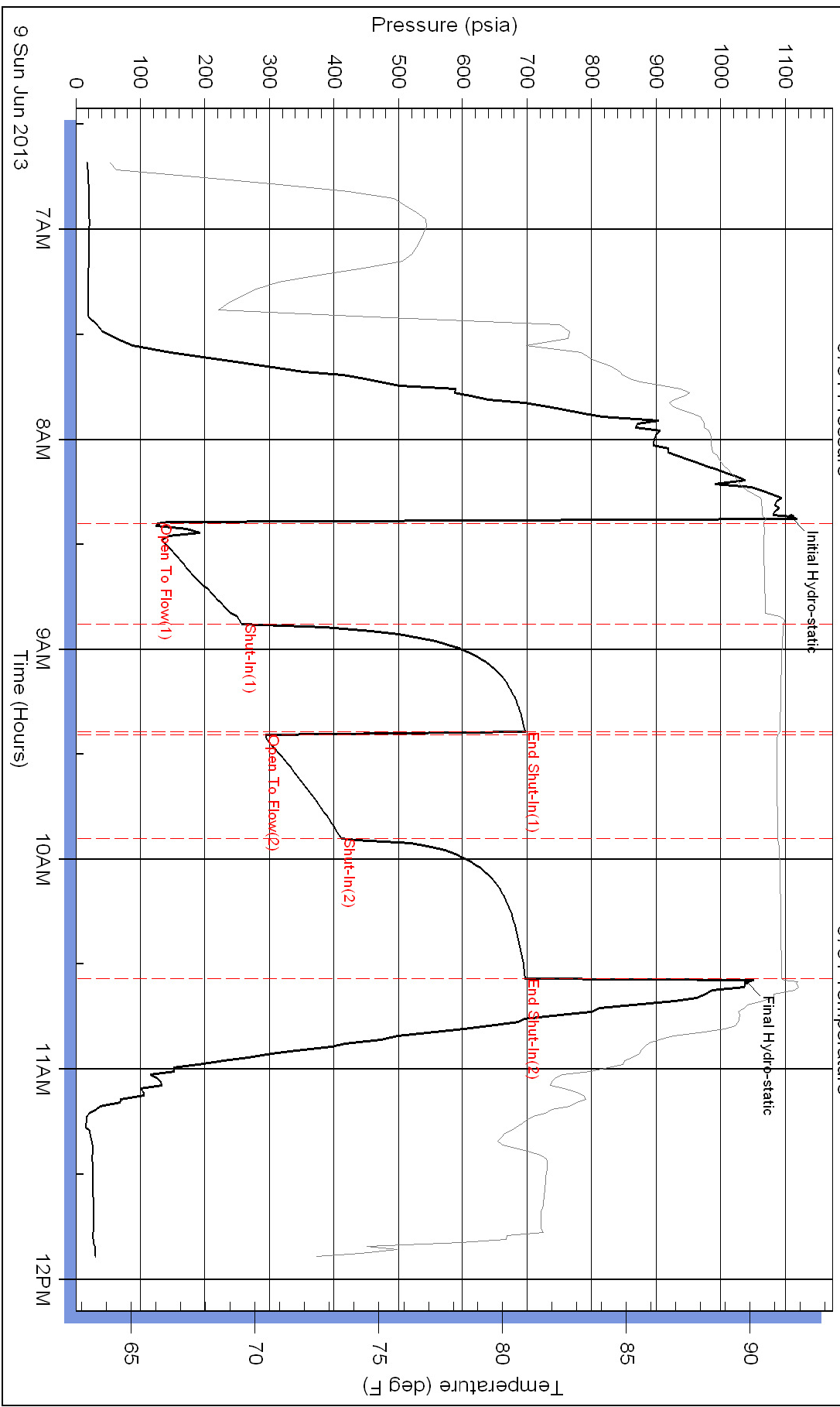
Total Length: 1020.00 ft Total Volume: 14.308 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: chlorides 100,000 resistivity .6 @ 70 degrees

Pressure vs. Time



Pressure vs. Time

