



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Woolsey Operation Company LLC

22/28S/19W/Kiowa

125 N Market
Suite 100
Wichita, Kansas 67202+1729
ATTN: Bill Klaver

McFadden B-1

Job Ticket: 63052

DST#: 3

Test Start: 2018.01.26 @ 21:44:00

GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:02

Time Test Ended: 06:26:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72 Pratt/80

Interval: 4865.00 ft (KB) To 4910.00 ft (KB) (TVD)

Reference Elevations: 2284.00 ft (KB)

Total Depth: 4910.00 ft (KB) (TVD)

2272.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Fair

KB to GR/CF: 12.00 ft

Serial #: 6755

Inside

Press@RunDepth: 126.28 psig @ 4866.00 ft (KB)

Capacity: psig

Start Date: 2018.01.26

End Date: 2018.01.27

Last Calib.: 2018.01.27

Start Time: 21:44:01

End Time: 06:26:02

Time On Btm: 2018.01.26 @ 23:59:02

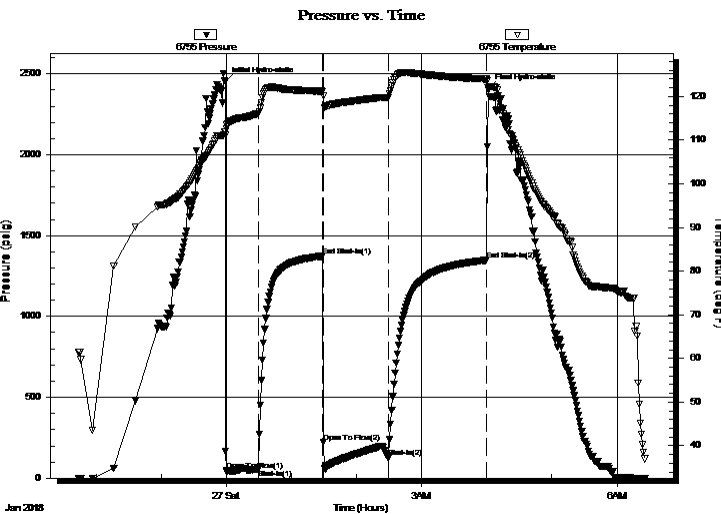
Time Off Btm: 2018.01.27 @ 04:01:17

TEST COMMENT: I.F. 30 Minutes/ Blow to BOB in 3 minutes GTS in 25

I.S.I. 60 Mintues/ No blow back

F.F. 60 Mintues/ Blow to BOB in 5 seconds

F.S.I. 90 Mintues/ 1/2 inch blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2450.54	111.99	Initial Hydro-static
1	47.13	112.66	Open To Flow (1)
31	55.21	116.08	Shut-In(1)
90	1372.86	121.17	End Shut-In(1)
91	221.70	120.09	Open To Flow (2)
151	126.28	119.74	Shut-In(2)
241	1347.96	123.96	End Shut-In(2)
243	2411.21	122.00	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
300.00	Gassy Muddy Water	2.16
0.00	Gas 30% Mud 30% Water 40%	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	26.00	15.12
Last Gas Rate	0.13	80.00	35.33
Max. Gas Rate	0.13	80.00	35.33



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McFadden B-1

Job Ticket: 63052

DST#: 3

Test Start: 2018.01.26 @ 21:44:00

GENERAL INFORMATION:

Formation: **Mississippi**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 00:00:02 Tester: Ken Swinney
 Time Test Ended: 06:26:02 Unit No: 72 Pratt/80
 Interval: **4865.00 ft (KB) To 4910.00 ft (KB) (TVD)** Reference Elevations: 2284.00 ft (KB)
 Total Depth: 4910.00 ft (KB) (TVD) 2272.00 ft (CF)
 Hole Diameter: 7.80 inches Hole Condition: Fair KB to GR/CF: 12.00 ft

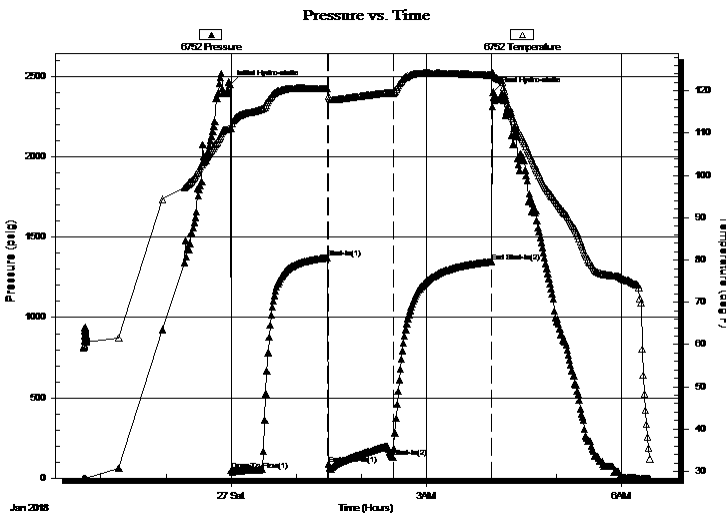
Serial #: 6752

Outside

Press@RunDepth: 1348.62 psig @ 4867.00 ft (KB) Capacity: psig
 Start Date: 2018.01.26 End Date: 2018.01.27 Last Calib.: 2018.01.27
 Start Time: 21:44:01 End Time: 06:26:02 Time On Btm: 2018.01.26 @ 23:59:17
 Time Off Btm: 2018.01.27 @ 04:01:32

TEST COMMENT: I.F. 30 Minutes/ Blow to BOB in 3 minutes GTS in 25
 I.S.I. 60 Mintues/ No blow back
 F.F. 60 Mintues/ Blow to BOB in 5 seconds
 F.S.I. 90 Mintues/ 1/2 inch blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2449.65	111.38	Initial Hydro-static
1	48.43	111.06	Open To Flow (1)
90	1373.03	120.53	Shut-In(1)
91	85.81	118.71	End Shut-In(1)
150	127.06	119.52	Shut-In(2)
241	1348.62	123.79	End Shut-In(2)
243	2404.54	123.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
300.00	Gassy Muddy Water	2.16
0.00	Gas 30% Mud 30% Water 40%	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	26.00	15.12
Last Gas Rate	0.13	80.00	35.33
Max. Gas Rate	0.13	80.00	35.33



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DRILL STEM TEST REPORT

FLUID SUMMARY

Woolsey Operation Company LLC

22/28S/19W/Kiowa

125 N Market
Suite 100
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ATTN: Bill Klaver

McFadden B-1

Job Ticket: 63052

DST#: 3

Test Start: 2018.01.26 @ 21:44:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 56.00 sec/qt

Water Loss: 8.78 in³

Resistivity: ohm.m

Salinity: 4500.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API: deg API

Water Salinity: 28000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
300.00	Gassy Muddy Water	2.164
0.00	Gas 30% Mud 30% Water 40%	0.000

Total Length: 300.00 ft Total Volume: 2.164 bbl

Num Fluid Samples: 0

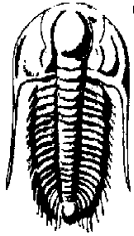
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Recovery Resistivity .520 ohms @ 32 deg.



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GAS RATES

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McFadden B-1

Job Ticket: 63052

DST#: 3

Test Start: 2018.01.26 @ 21:44:00

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 (psig)	Gas Rate (Mcf/d)
2	10	0.13	26.00	15.12
2	20	0.13	37.00	19.24
2	30	0.13	50.00	24.10
2	40	0.13	65.00	29.72
2	50	0.13	75.00	33.46
2	60	0.13	80.00	35.33

Pressure vs. Time

