



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Woolsey Operating Co
 125 N Market Ste 1000
 Wichita, KS 67202
 ATTN: Bill Klaver

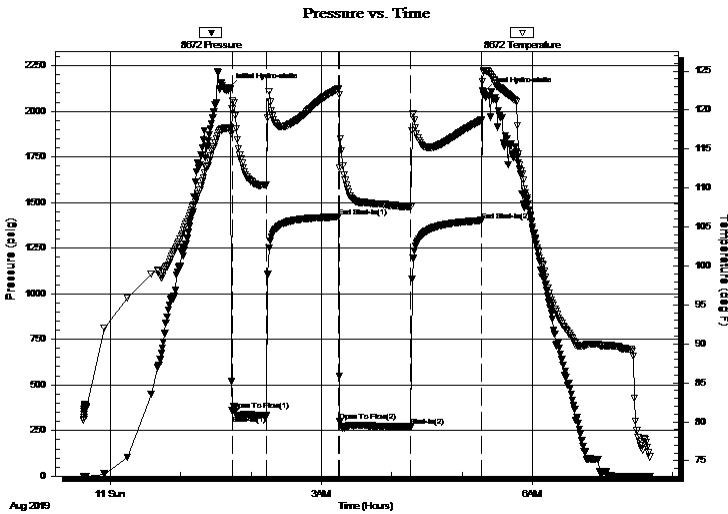
16-31S-6W Harper
Bauer 1
 Job Ticket: 65893 **DST#: 3**
 Test Start: 2019.08.10 @ 23:37:00

GENERAL INFORMATION:

Formation: **Mississippi**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 01:43:47 Tester: Leal Cason
 Time Test Ended: 07:41:02 Unit No: 74
 Interval: **4284.00 ft (KB) To 4305.00 ft (KB) (TVD)** Reference Elevations: 1473.00 ft (KB)
 Total Depth: 4305.00 ft (KB) (TVD) 1460.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 13.00 ft

Serial #: 8672 Inside
 Press@RunDepth: 270.65 psig @ 4285.00 ft (KB) Capacity: psig
 Start Date: 2019.08.10 End Date: 2019.08.11 Last Calib.: 2019.08.11
 Start Time: 23:37:01 End Time: 07:41:02 Time On Btm: 2019.08.11 @ 01:41:32
 Time Off Btm: 2019.08.11 @ 05:18:47

TEST COMMENT: IF: Strong Blow, BOB in 30 seconds, GTS in 5 minutes, Gauged & Caught Sample
 IS: Blow Back Built to 1 1/2 inches
 FF: Strong Blow, BOB & GTS Immediate, Gauged Gas
 FS: 6 inch Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2128.56	117.68	Initial Hydro-static
3	360.27	120.12	Open To Flow (1)
32	333.04	110.38	Shut-In(1)
94	1420.82	122.72	End Shut-In(1)
94	300.33	112.51	Open To Flow (2)
155	270.65	107.59	Shut-In(2)
215	1401.04	118.72	End Shut-In(2)
218	2106.01	125.03	Final Hydro-static

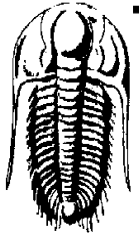
Recovery

Length (ft)	Description	Volume (bbl)
0.00	4087 GIP	0.00
179.00	GMOCW 20%G 10%M 20%O 50%W	0.88
16.00	GMOCW 14%G 12%M 30%O 44%W	0.22

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.75	38.00	818.48
Last Gas Rate	0.75	45.00	927.82
Max. Gas Rate	0.75	46.00	943.44



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DRILL STEM TEST REPORT

Woolsey Operating Co

16-31S-6W Harper

125 N Market Ste 1000
Wichita, KS 67202

Bauer 1

Job Ticket: 65893

DST#: 3

ATTN: Bill Klaver

Test Start: 2019.08.10 @ 23:37:00

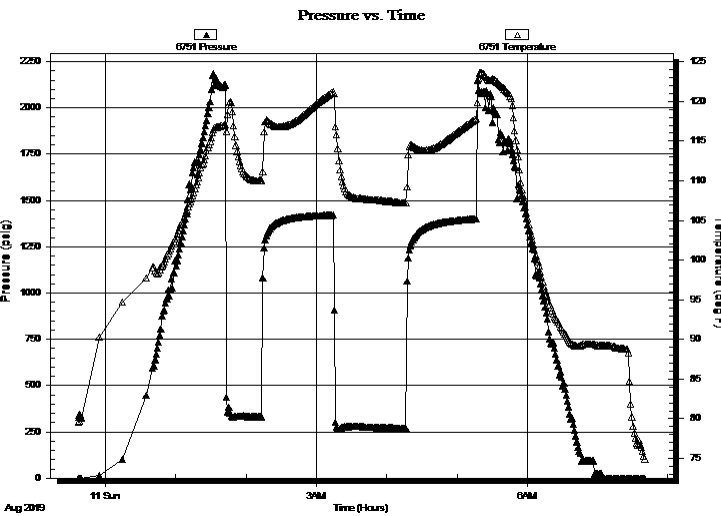
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 Reference Elevations: 1473.00 ft (KB)
 Total Depth: 4305.00 ft (KB) (TVD)
 1460.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 13.00 ft

Serial #: 6751 Outside

Press@RunDepth: psig @ 4285.00 ft (KB) Capacity: psig
 Start Date: 2019.08.10 End Date: 2019.08.11 Last Calib.: 2019.08.11
 Start Time: 23:37:01 End Time: 07:41:02 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF: Strong Blow, BOB in 30 seconds, GTS in 5 minutes, Gauged & Caught Sample
 IS: Blow Back Built to 1 1/2 inches
 FF: Strong Blow, BOB & GTS Immediate, Gauged Gas
 FS: 6 inch Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
0.00	4087 GIP	0.00
179.00	GMOCW 20%G 10%M 20%O 50%W	0.88
16.00	GMOCW 14%G 12%M 30%O 44%W	0.22

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.75	38.00	818.48
Last Gas Rate	0.75	45.00	927.82
Max. Gas Rate	0.75	46.00	943.44



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DRILL STEM TEST REPORT

FLUID SUMMARY

Woolsey Operating Co
125 N Market Ste 1000
Wichita, KS 67202
ATTN: Bill Klaver

16-31S-6W Harper
Bauer 1
Job Ticket: 65893 **DST#: 3**
Test Start: 2019.08.10 @ 23:37:00

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:	71000 ppm
Viscosity: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4000.00 ppm			
Filter Cake: 0.02 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	4087 GIP	0.000
179.00	GMOCW 20%G 10%M 20%O 50%W	0.880
16.00	GMOCW 14%G 12%M 30%O 44%W	0.224

Total Length: 195.00 ft Total Volume: 1.104 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW w as .095 @ 80 degrees



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DRILL STEM TEST REPORT

GAS RATES

Woolsey Operating Co

16-31S-6W Harper

125 N Market Ste 1000
Wichita, KS 67202

Bauer 1

Job Ticket: 65893

DST#: 3

ATTN: Bill Klaver

Test Start: 2019.08.10 @ 23:37:00

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)
1	10	0.75	38.00	818.48
1	20	0.75	41.00	865.34
1	30	0.75	40.00	849.72
2	10	0.75	46.00	943.44
2	20	0.75	46.00	943.44
2	30	0.75	46.00	943.44
2	40	0.75	45.00	927.82
2	50	0.75	45.00	927.82
2	60	0.75	45.00	927.82

Pressure vs. Time

