



DRILL STEM TEST REPORT

Prepared For: **F.G. Holl Company LLC**

9431 East Central Suite 100
Wichita, Kansas 67206-2563

ATTN: Ryan Greenbaum

Mermis"A"Unit #1-21

21-20s-15w Barton

Start Date: 2012.09.23 @ 00:00:00

End Date: 2012.09.23 @ 00:00:00

Job Ticket #: 17755 DST #: 5

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

Printed: 2012.09.23 @ 21:38:30



DRILL STEM TEST REPORT

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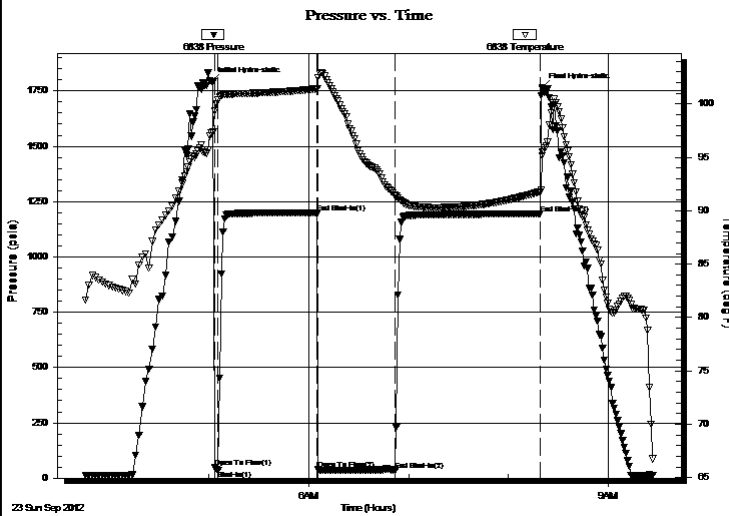
21-20s-15w Barton
Mermis"A"Unit #1-21
 Job Ticket: 17755 **DST#: 5**
 Test Start: 2012.09.23 @ 00:00:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 00:00:00 Tester: Gene Budig
 Time Test Ended: 00:00:00 Unit No: 3335
 Interval: **3750.00 ft (KB) To 3760.00 ft (KB) (TVD)** Reference Elevations: 2012.00 ft (KB)
 Total Depth: 3760.00 ft (KB) (TVD) 2004.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 6838 Inside
 Press @ Run Depth: 1194.31 psia @ 3756.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2012.09.23 End Date: 2012.09.23 Last Calib.: 2012.09.23
 Start Time: 03:46:00 End Time: 09:27:00 Time On Btm: 2012.09.23 @ 05:01:30
 Time Off Btm: 2012.09.23 @ 08:20:00

TEST COMMENT: 1st Open 3 Minutes-Strong Blow built to the bottom of a 5 gallon bucket in 30 seconds
 1st Shut-In 60 Minutes-Fair blow back
 2nd Opening 45 Minutes-Strong blow with gas to surface see gas flow report
 2nd Shut-In 90 Minutes-Fair blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1792.83	97.25	Initial Hydro-static
2	47.93	99.32	Open To Flow (1)
4	36.83	100.43	Shut-In(1)
64	1197.23	101.42	End Shut-In(1)
64	39.48	102.46	Open To Flow (2)
111	36.92	91.40	End Shut-In(2)
198	1194.31	91.78	End Shut-In(3)
199	1763.32	95.16	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Drilling Mud	0.22

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	1.00	4.20	120.75
Last Gas Rate	1.00	3.85	110.68
Max. Gas Rate	1.00	4.20	120.75



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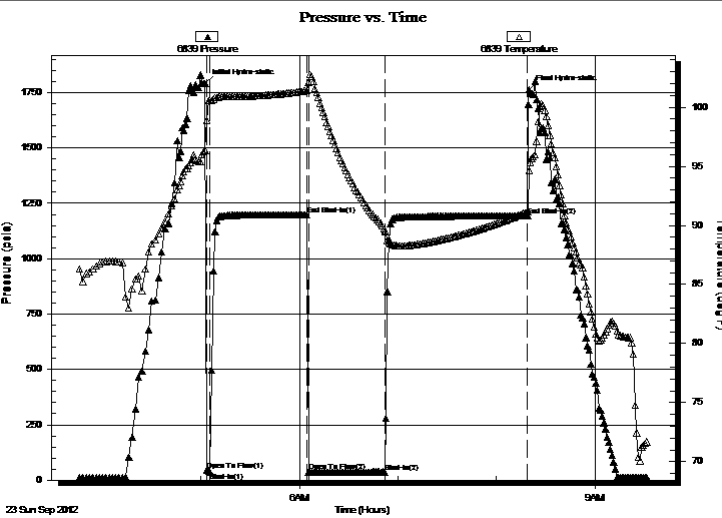
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 Total Depth: 3760.00 ft (KB) (TVD) 2004.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 6839 Outside
 Press @ Run Depth: 1193.71 psia @ 3757.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2012.09.23 End Date: 2012.09.23 Last Calib.: 2012.09.23
 Start Time: 03:46:00 End Time: 09:32:00 Time On Btm: 2012.09.23 @ 05:02:30
 Time Off Btm: 2012.09.23 @ 08:20:00

TEST COMMENT: 1st Open 3 Minutes-Strong Blow built to the bottom of a 5 gallon bucket in 30 seconds
 1st Shut-In 60 Minutes-Fair blow back
 2nd Opening 45 Minutes-Strong blow with gas to surface see gas flow report
 2nd Shut-In 90 Minutes-Fair blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1790.91	96.37	Initial Hydro-static
1	46.49	98.92	Open To Flow (1)
3	35.98	100.58	Shut-In(1)
62	1197.75	101.40	End Shut-In(1)
63	38.24	102.13	Open To Flow (2)
110	36.23	89.58	Shut-In(2)
197	1193.71	91.17	End Shut-In(2)
198	1762.28	94.68	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Drilling Mud	0.22

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
First Gas Rate	1.00	4.20	120.75
Last Gas Rate	1.00	3.85	110.68
Max. Gas Rate	1.00	4.20	120.75



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TOOL DIAGRAM

F.G. Holl Company LLC
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Mermis"A"Unit #1-21
 Job Ticket: 17755 **DST#: 5**
 Test Start: 2012.09.23 @ 00:00:00

Tool Information

Drill Pipe:	Length: 3726.00 ft	Diameter: 3.90 inches	Volume: 55.05 bbl	Tool Weight: 2000.00 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: 63000.00 lb
			<u>Total Volume: 55.05 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3750.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	10.00 ft			
Tool Length:	39.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3722.00	
Shut-In Tool	5.00			3727.00	
Hydroic Tool	5.00			3732.00	
Jars	6.00			3738.00	
Safety Joint	2.00			3740.00	
Packer	5.00			3745.00	29.00 Bottom Of Top Packer
Packer	5.00			3750.00	
Perforations	5.00			3755.00	
Recorder	1.00	6838	Inside	3756.00	
Recorder	1.00	6839	Outside	3757.00	
Bullnose	3.00			3760.00	10.00 Bottom Packers & Anchor

Total Tool Length: 39.00



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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: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.19 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 6800.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	Drilling Mud	0.222

Total Length: 15.00 ft Total Volume: 0.222 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	5	1.00	4.20	120.75
2	15	1.00	3.50	100.62
2	25	1.00	3.85	110.68
2	35	1.00	3.85	110.68
2	45	1.00	3.85	110.68

Pressure vs. Time

