



DRILL STEM TEST REPORT

Prepared For: **GRAND MESA OPERATING**

1700 N WATERFRONT PKWY BLDG 600
WICHITA KS 67206

ATTN: MAC ARMSTRONG

9-14S-31W GOVE

HUND 1-9

Start Date: 2011.02.26 @ 01:00:00

End Date: 2011.02.26 @ 10:32:00

Job Ticket #: 1073 DST #: 5

Eagle Testers LLC.

P.O.Box 1011, Great Bend, KS 67530

620-617-7548

Printed: 2011.02.26 @ 01:48:19

GRAND MESA OPERATING
HUND 1-9
9-14S-31W GOVE
DST # 5
JOHNSON
2011.02.26



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GRAND MESA OPERATING

HUND 1-9

1700 N WATERFRONT PKWY BLDG 600
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Test Start: 2011.02.26 @ 01:00:00

GENERAL INFORMATION:

Formation: **JOHNSON**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:02:30

Time Test Ended: 10:32:00

Test Type: Conventional Bottom Hole (Initial)

Tester: DAVID NICHOLS

Unit No: 15 52 MRT OAKLEY

Interval: 4552.00 ft (KB) To 4604.00 ft (KB) (TVD)

Reference Elevations: 2953.00 ft (KB)

Total Depth: 4604.00 ft (KB) (TVD)

2946.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 6666 Outside

Press @ RunDepth: psig @ 4601.00 ft (KB)

Capacity: 50000.00 psig

Start Date: 2011.02.26 End Date: 2011.02.26

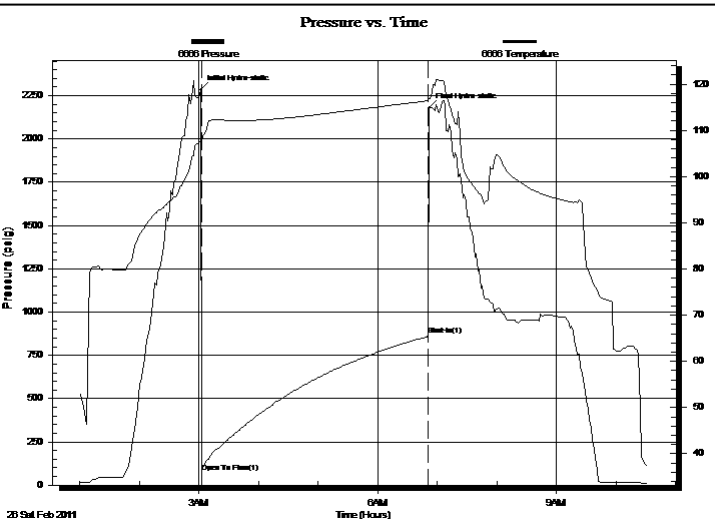
Last Calib.: 2011.02.26

Start Time: 01:00:00 End Time: 10:32:00

Time On Btm: 2011.02.26 @ 03:02:00

Time Off Btm: 2011.02.26 @ 06:52:00

TEST COMMENT: 30-INITIAL OPENING GOOD BLOW BOTTOM BUCKET IN 8 MINS
45-INITIAL SHUT IN GOOD BLOW BACK BOTTOM BUCKET
60-FINAL OPENING GOOD BLOW BOTTOM BUCKET IN 6 MINS
90-FINAL SHUT IN GOOD BLOW BACK BOTTOM BUCKET



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2284.82	107.58	Initial Hydro-static
1	76.94	107.17	Open To Flow (1)
229	864.64	116.41	Shut-In(1)
230	2180.64	116.79	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1200.00	GAS IN PIPE 100%GAS	16.38
1920.00	GASSY OIL 30%GAS70%OIL	28.08
120.00	MUD CUT OIL 30%MUD 70%OIL	1.75

Gas Rates

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



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TOOL DIAGRAM

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Test Start: 2011.02.26 @ 01:00:00

Tool Information

Drill Pipe:	Length: 4406.00 ft	Diameter: 3.88 inches	Volume: 64.43 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 65.02 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	2.75 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	4552.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	52.00 ft			
Tool Length:	80.75 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-in tool	5.00			4528.25	
Hydraulic tool	5.00			4533.25	
Change over sub	0.75			4534.00	
Jars	6.00			4540.00	
Safety Joint	2.00			4542.00	
Packer	5.00			4547.00	28.75 Bottom Of Top Packer
Packer	5.00			4552.00	
Anchor	5.00			4557.00	
change over sub	0.75			4557.75	
drill pipe	31.50			4589.25	
change over sub	0.75			4590.00	
anchor	9.00			4599.00	
Recorder	1.00	6651	Inside	4600.00	
Recorder	1.00	6666	Outside	4601.00	
bull plug	3.00			4604.00	52.00 Bottom Packers & Anchor

Total Tool Length: 80.75



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FLUID SUMMARY

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Test Start: 2011.02.26 @ 01:00:00

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:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
1200.00	GAS IN PIPE 100%GAS	16.384
1920.00	GASSY OIL 30%GAS70%OIL	28.078
120.00	MUD CUT OIL 30%MUD 70%OIL	1.755

Total Length: 3240.00 ft Total Volume: 44.462 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

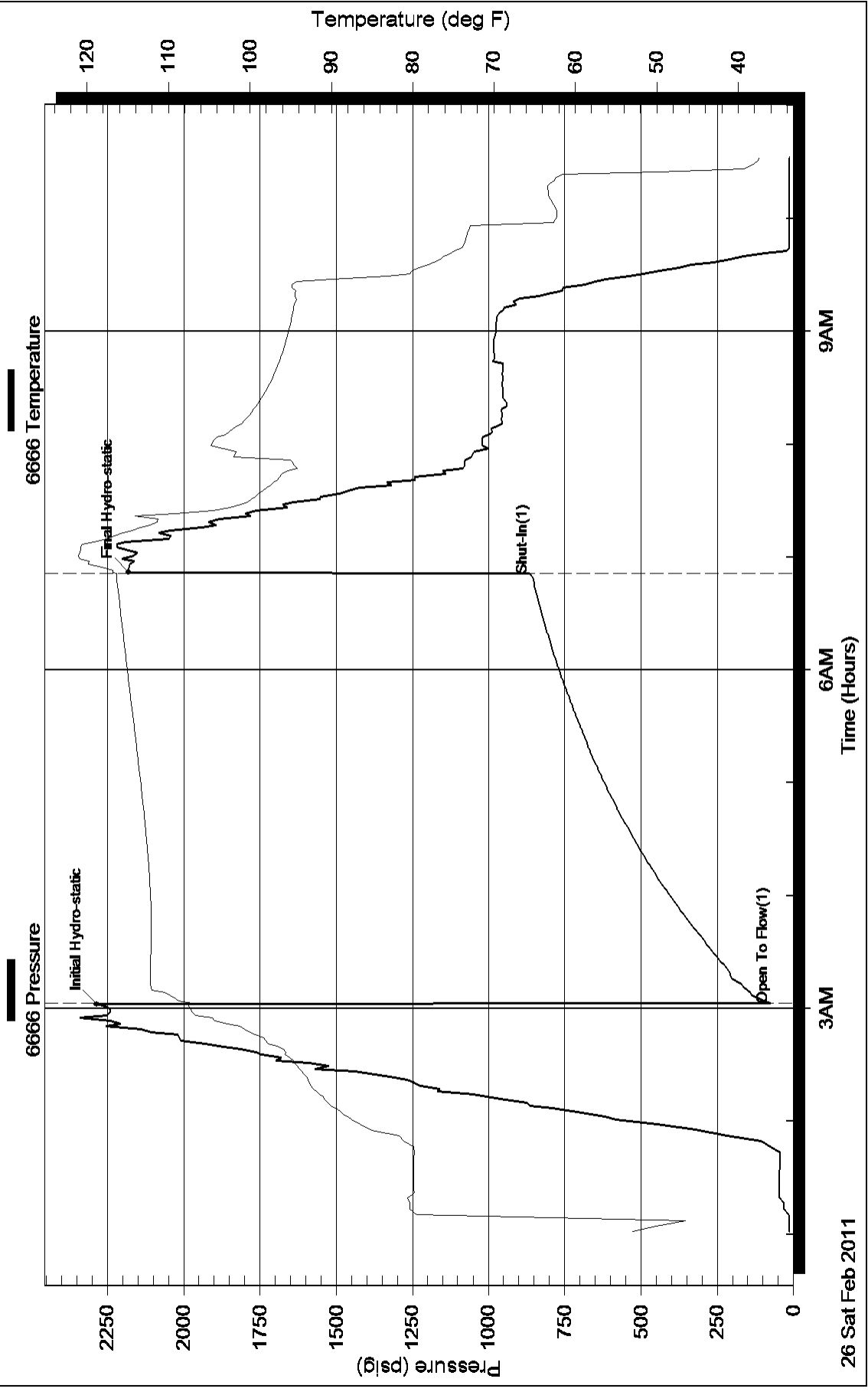
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: GRAVITY OF OIL 36

Pressure vs. Time



Serial #: 6651

Inside

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9-14S-31W GOVE

DST Test Number: 5

