



## DRILL STEM TEST REPORT

Prepared For: **GRAND MESA OPERATING**

1700 N WATERFRONT  
PKWY BLDG 600  
WICHITA KS 67206

ATTN: STEVE CARL

**22-13S-32W- LOGAN**

**VAILE 1-22**

Start Date: 2010.12.09 @ 03:00:00

End Date: 2010.12.09 @ 10:50:00

Job Ticket #: 1060                      DST #: 5

Eagle Testers LLC.

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

620-617-7548

Printed: 2010.12.09 @ 03:14:39

GRAND MESA OPERATING  
VAILE 1-22  
22-13S-32W- LOGAN  
DST # 5  
LKC-L-  
2010.12.09



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GRAND MESA OPERATING

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Job Ticket: 1060

DST#: 5

Test Start: 2010.12.09 @ 03:00:00

## GENERAL INFORMATION:

Formation: **LKC -L-**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:29:00

Time Test Ended: 10:50:00

Test Type: Conventional Bottom Hole (Initial)

Tester: DAVID NICHOLS

Unit No: 15 62 MRT SCOTT CIT

Interval: **4300.00 ft (KB) To 4336.00 ft (KB) (TVD)**

Total Depth: 4336.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 3039.00 ft (KB)

3033.00 ft (CF)

KB to GR/CF: 6.00 ft

Serial #: **6651**

Inside

Press @ Run Depth: 194.97 psig @ 4332.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2010.12.09 End Date: 2010.12.09

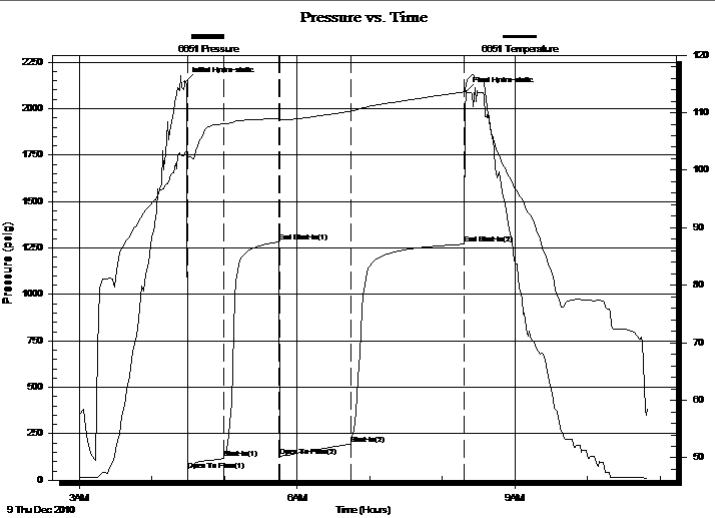
Last Calib.: 2010.12.09

Start Time: 03:00:00 End Time: 10:50:00

Time On Btm: 2010.12.09 @ 04:27:30

Time Off Btm: 2010.12.09 @ 08:19:30

TEST COMMENT: 30-INITIAL OPENING FAIR BLOW BOTTOM BUCKET IN 18 MINS  
45-INITIAL SHUT IN 5 INCHES INTO WATER  
60-FINAL OPENING FAIR BLOW BOTTOM BUCKET IN 15 MINS  
90-FINAL SHUT IN BOTTOM BUCKET



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2144.57	103.24	Initial Hydro-static
2	53.73	101.81	Open To Flow (1)
32	116.43	108.03	Shut-In(1)
77	1282.59	109.07	End Shut-In(1)
79	130.41	108.76	Open To Flow (2)
137	194.97	110.26	Shut-In(2)
231	1270.37	113.61	End Shut-In(2)
232	2093.05	114.88	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1140.00	GAS IN PIPE 100%GAS	15.51
260.00	GASSY OIL 20%GAS80%OIL	3.80
120.00	MUD CUT OIL 60%OIL40%M	1.75

## Gas Rates

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





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**TOOL DIAGRAM**

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Job Ticket: 1060 **DST#: 5**  
 Test Start: 2010.12.09 @ 03:00:00

## Tool Information

Drill Pipe:	Length: 4157.00 ft	Diameter: 3.88 inches	Volume: 60.79 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: 58000.00 lb
			<u>Total Volume: 61.38 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	0.00 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	4300.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	36.00 ft			
Tool Length:	59.00 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			4282.00	
HYD S.I. Tool	5.00			4287.00	
jars	6.00			4293.00	
safty joint	2.00			4295.00	
TRAVEL COLER	2.00			4297.00	
Packer	3.00			4300.00	23.00 Bottom Of Top Packer
travel collar	2.00			4302.00	36.00 Tool Interval
Packer	3.00			4305.00	
Anchor	26.00			4331.00	
Recorder	1.00	6651	Inside	4332.00	
Recorder	1.00	8525	Outside	4333.00	
BULL PLUG	3.00			4336.00	1000058.00 Bottom Packers & Anchor

**Total Tool Length: 59.00**



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FLUID SUMMARY

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## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 49.00 sec/qt  
Water Loss: 7.20 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 2500.00 ppm  
Filter Cake: inches

Cushion Type:  
Cushion Length: ft  
Cushion Volume: bbl  
Gas Cushion Type:  
Gas Cushion Pressure: psig

Oil API: deg API  
Water Salinity: ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1140.00	GAS IN PIPE 100%GAS	15.507
260.00	GASSY OIL 20%GAS80%OIL	3.802
120.00	MUD CUT OIL 60%OIL40%M	1.755

Total Length: 1520.00 ft Total Volume: 21.064 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

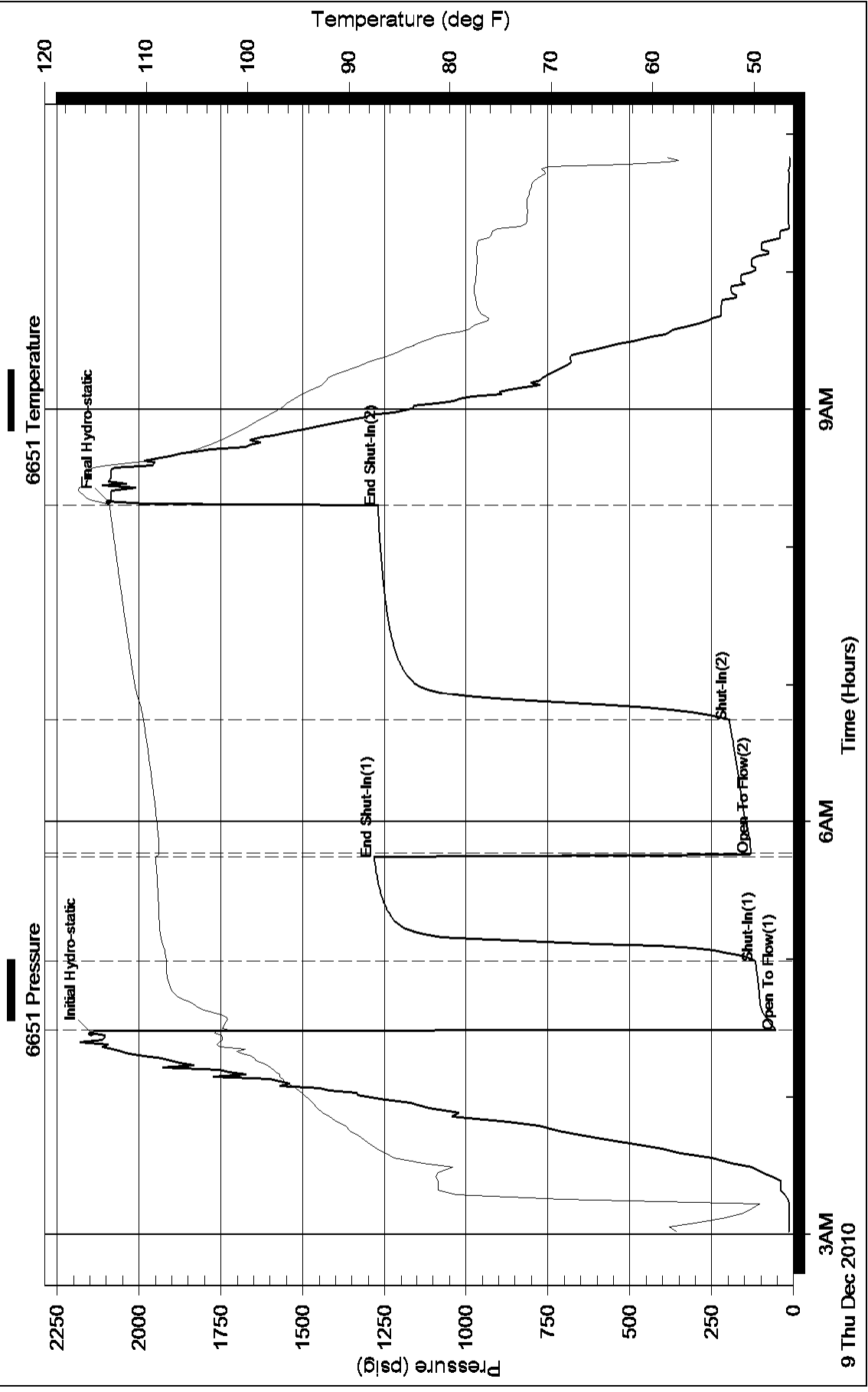
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: GRAVITY OF OIL 34

### Pressure vs. Time



Serial #: 8525

Outside GRAND MESA OPERATING

22-13S-32W- LOGAN

DST Test Number: 5

