



DRILL STEM TEST REPORT

Prepared For: **GRAND MESA OPERATING**

1700 N WATERFRONT PKWY BLDG 600
WICHITA KS 67206

ATTN: BOB PETERSON

7-21S-25W HODGEMAN

FRANCES 1-7

Start Date: 2011.05.06 @ 05:00:00

End Date: 2011.05.06 @ 12:18:00

Job Ticket #: 1022 DST #: 1

Eagle Testers LLC.

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

620-617-7548

Printed: 2011.05.06 @ 05:52:30

GRAND MESA OPERATING
FRANCES 1-7
7-21S-25W HODGEMAN
DST # 1
LKC -I-
2011.05.06



DRILL STEM TEST REPORT

GRAND MESA OPERATING

FRANCES 1-7

1700 N WATERFRONT PKWY BLDG 600
WICHITA KS 67206

7-21S-25W HODGEMAN

Job Ticket: 1022

DST#: 1

ATTN: BOB PETERSON

Test Start: 2011.05.06 @ 05:00:00

GENERAL INFORMATION:

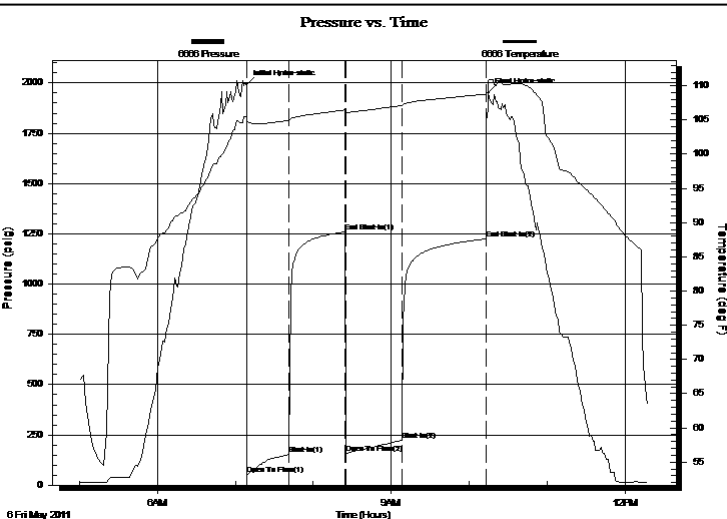
Formation: **LKC -I-**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 07:09:00
 Tester: DAVID NICHOLS
 Time Test Ended: 12:18:00
 Unit No: 15 184 MRT GREAT BE
 Interval: **3974.00 ft (KB) To 4012.00 ft (KB) (TVD)**
 Reference Elevations: 2395.00 ft (KB)
 Total Depth: 4012.00 ft (KB) (TVD)
 2390.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 5.00 ft

Serial #: 6666

Inside

Press @ Run Depth: 223.13 psig @ 4008.00 ft (KB) Capacity: 5000.00 psig
 Start Date: 2011.05.06 End Date: 2011.05.06 Last Calib.: 2011.05.06
 Start Time: 05:00:00 End Time: 12:18:00 Time On Btm: 2011.05.06 @ 07:08:30
 Time Off Btm: 2011.05.06 @ 10:15:00

TEST COMMENT: 30-INITIAL OPENING WEAK BLOW BUILT TO 7 INCHES INTO WATER
 45-INITIAL SHUT IN NO BLOW BACK
 45-FINAL OPENING WEAK BUILDING BLOW BOTTOM BUCKET IN 40 MINS
 60-FINAL SHUT IN NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1992.85	105.35	Initial Hydro-static
1	51.35	104.92	Open To Flow (1)
34	152.99	104.95	Shut-In(1)
76	1258.67	106.46	End Shut-In(1)
77	157.07	106.15	Open To Flow (2)
120	223.13	107.11	Shut-In(2)
185	1224.62	108.76	End Shut-In(2)
187	1951.08	110.63	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
80.00	WATERY MUD SHOW OF OIL	0.39
0.00	2%OIL 38%WATER 60%MUD	0.00
240.00	WATER WITH A SKIM OF OIL	2.54
0.00	99%WATER 1% OIL	0.00
60.00	MUDDY WATER 40%MUD60%WATER	0.88

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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GRAND MESA OPERATING

FRANCES 1-7

1700 N WATERFRONT PKWY BLDG 600
WICHITA KS 67206

7-21S-25W HODGEMAN

Job Ticket: 1022

DST#: 1

ATTN: BOB PETERSON

Test Start: 2011.05.06 @ 05:00:00

GENERAL INFORMATION:

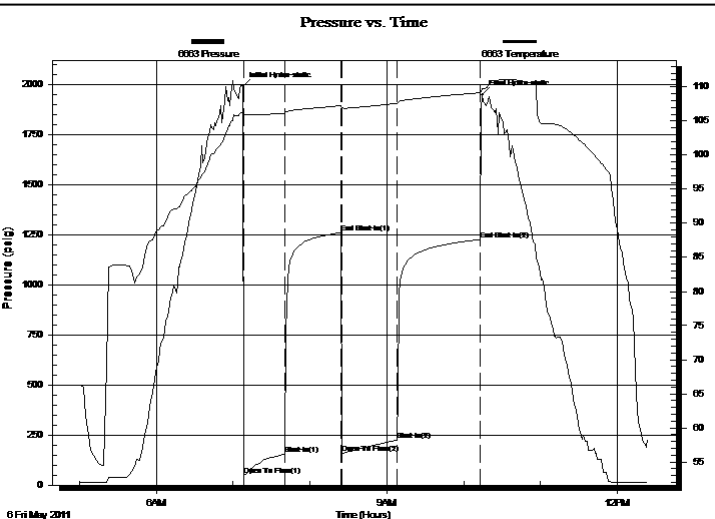
Formation: **LKC -I-**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 07:09:00
 Tester: DAVID NICHOLS
 Time Test Ended: 12:18:00
 Unit No: 15 184 MRT GREAT BE
 Interval: **3974.00 ft (KB) To 4012.00 ft (KB) (TVD)**
 Reference Elevations: 2395.00 ft (KB)
 Total Depth: 4012.00 ft (KB) (TVD)
 2390.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 5.00 ft

Serial #: 6663

Outside

Press @ Run Depth: 1226.27 psig @ 4009.00 ft (KB) Capacity: 5000.00 psig
 Start Date: 2011.05.06 End Date: 2011.05.06 Last Calib.: 2011.05.06
 Start Time: 05:00:00 End Time: 12:23:30 Time On Btm: 2011.05.06 @ 07:07:30
 Time Off Btm: 2011.05.06 @ 10:14:30

TEST COMMENT: 30-INITIAL OPENING WEAK BLOW BUILT TO 7 INCHES INTO WATER
 45-INITIAL SHUT IN NO BLOW BACK
 45-FINAL OPENING WEAK BUILDING BLOW BOTTOM BUCKET IN 40 MINS
 60-FINAL SHUT IN NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1992.29	106.41	Initial Hydro-static
1	50.98	105.97	Open To Flow (1)
33	155.39	106.11	Shut-In(1)
77	1260.38	107.24	End Shut-In(1)
78	158.25	106.91	Open To Flow (2)
120	225.45	107.57	Shut-In(2)
185	1226.27	109.15	End Shut-In(2)
187	1948.71	109.70	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
80.00	WATERY MUD SHOW OF OIL	0.39
0.00	2%OIL 38%WATER 60%MUD	0.00
240.00	WATER WITH A SKIM OF OIL	2.54
0.00	99%WATER 1% OIL	0.00
60.00	MUDDY WATER 40%MUD60%WATER	0.88

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

GRAND MESA OPERATING

FRANCES 1-7

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WICHITA KS 67206

7-21S-25W HODGEMAN

Job Ticket: 1022

DST#: 1

ATTN: BOB PETERSON

Test Start: 2011.05.06 @ 05:00:00

Tool Information

Drill Pipe:	Length: 3805.00 ft	Diameter: 3.88 inches	Volume: 55.65 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: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose:	58000.00 lb
			<u>Total Volume: 56.54 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	40.00 ft			String Weight: Initial	54000.00 lb
Depth to Top Packer:	3974.00 ft			Final	54000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	38.00 ft				
Tool Length:	67.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut-in tool	5.00			3950.00	
Hydraulic tool	5.00			3955.00	
Change over sub	1.00			3956.00	
Jars	6.00			3962.00	
Safety Joint	2.00			3964.00	
Packer	5.00			3969.00	29.00 Bottom Of Top Packer
Packer	5.00			3974.00	
Anchor	33.00			4007.00	
Recorder	1.00	6666	Inside	4008.00	
Recorder	1.00	6663	Outside	4009.00	
Bullnose	3.00			4012.00	38.00 Bottom Packers & Anchor

Total Tool Length: 67.00



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FLUID SUMMARY

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Job Ticket: 1022

DST#: 1

ATTN: BOB PETERSON

Test Start: 2011.05.06 @ 05:00:00

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: 68.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.40 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
80.00	WATERY MUD SHOW OF OIL	0.393
0.00	2%OIL 38%WATER 60%MUD	0.000
240.00	WATER WITH A SKIM OF OIL	2.539
0.00	99%WATER 1% OIL	0.000
60.00	MUDDY WATER 40%MUD60%WATER	0.877

Total Length: 380.00 ft Total Volume: 3.809 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

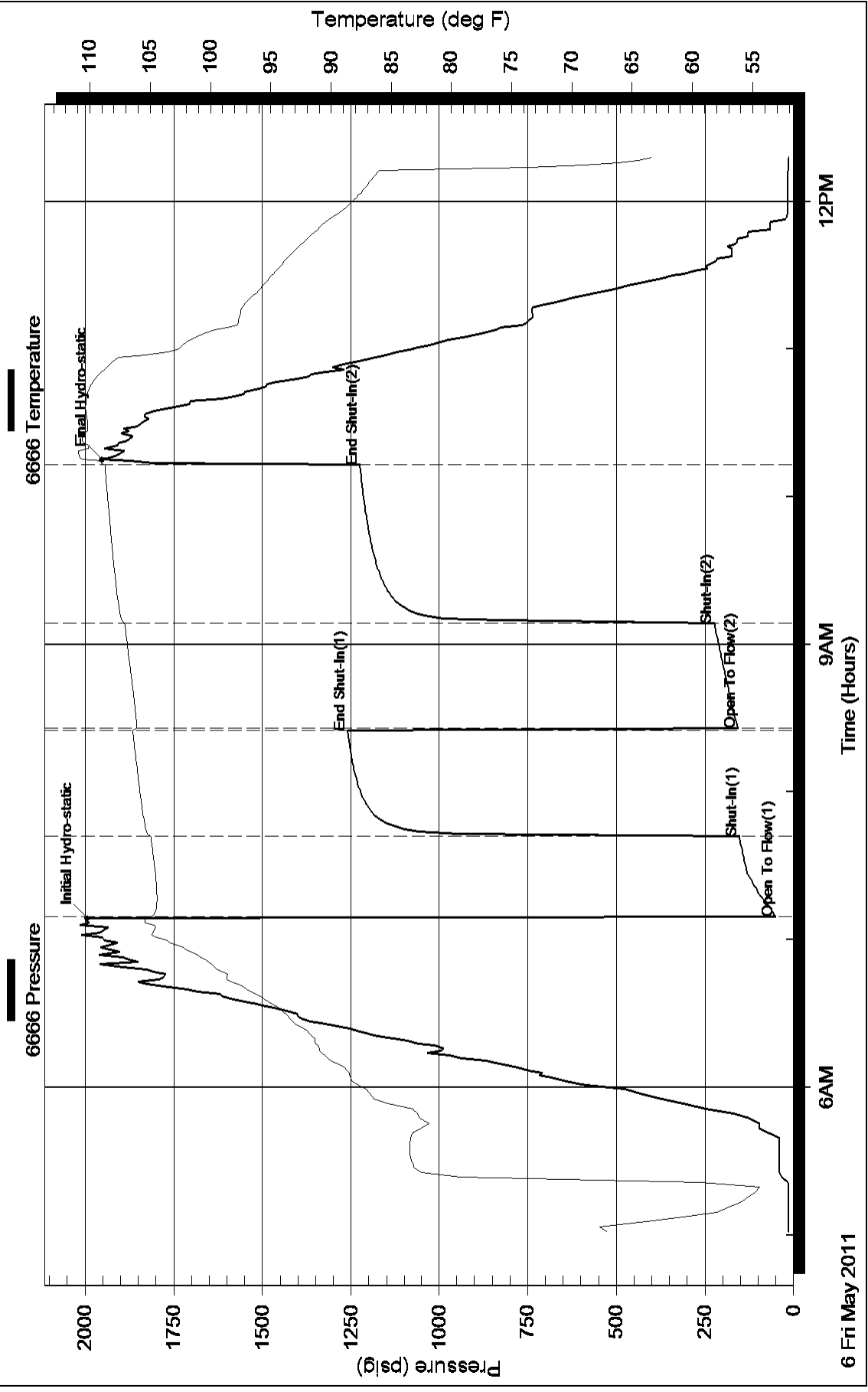
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RECOVERY CHLORIDES WERE 47 PPM

Pressure vs. Time



Pressure vs. Time

