



**WELL COMPLETION FORM**  
**WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic       Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD
- Conv. to GSW
- Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date      Date Reached TD      Completion Date or Recompletion Date

API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

**Drilling Fluid Management Plan**

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite: \_\_\_\_\_

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

**AFFIDAVIT**

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

**KCC Office Use ONLY**

- Letter of Confidentiality Received  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



1055511

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
_____ Perforate _____ Protect Casing _____ Plug Back TD _____ Plug Off Zone				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR. \_\_\_\_\_ Producing Method:  Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Grand Mesa Operating Company
Well Name	Dale 1-34
Doc ID	1055511

All Electric Logs Run

CPDCN Log
AI Shallow Focussed Electric Log
Microresistivity Log
Dual Receiver Cement Bond Log

Form	ACO1 - Well Completion
Operator	Grand Mesa Operating Company
Well Name	Dale 1-34
Doc ID	1055511

Tops

Name	Top	Datum
Stone Corral	2495	+493
Bs/Stone Corral	2518	+470
Heebner	3958	-970
Lansing	4000	-1012
Muncie Creek	4144	-1156
Hushpuckney	4263	-1275
Marmaton	4330	-1342
Pawnee	4409	-1421
Ft. Scott	4471	-1483
Morrow	4589	-1601
Mississippian	4659	-1671
LTD	4748	

Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



phone: 316-337-6200  
fax: 316-337-6211  
<http://kcc.ks.gov/>

Thomas E. Wright, Chairman  
Ward Loyd, Commissioner

Corporation Commission

Sam Brownback, Governor

May 10, 2011

Ronald N. Sinclair  
Grand Mesa Operating Company  
1700 N WATERFRONT PKWY BLDG 600  
WICHITA, KS 67206-5514

Re: ACO1  
API 15-109-20995-00-00  
Dale 1-34  
SE/4 Sec.34-12S-32W  
Logan County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,  
Ronald N. Sinclair

# ALLIED CEMENTING CO., LLC. 039796

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT: Oakley

DATE <u>3-28-11</u>	SEC <u>34</u>	TWP <u>12</u>	RANGE <u>32</u>	CALLED OUT	ON LOCATION <u>3:30</u>	JOB START <u>4:00</u>	JOB FINISH <u>4:30</u>
LEASE <u>Dale</u>	WELL # <u>1-34</u>	LOCATION <u>10 1/2 S W INTO</u>			COUNTY <u>Logan</u>	STATE <u>Ks</u>	
OLD OR <u>NEW</u> (Circle one)							

CONTRACTOR MarFin

TYPE OF JOB surface

HOLE SIZE <u>12 1/4</u>	T.D.
CASING SIZE <u>8 3/8</u>	DEPTH <u>207</u>
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL	DEPTH
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT
CEMENT LEFT IN CSG. <u>15'</u>	
PERFS.	
DISPLACEMENT <u>12-23</u>	

EQUIPMENT

PUMP TRUCK # <u>880</u>	CEMENTER <u>Danville</u>
	HELPER <u>Garren</u>
BULK TRUCK # <u>404</u>	DRIVER <u>Mike</u>
BULK TRUCK #	DRIVER

REMARKS:

Mud scaled cem

CHARGE TO: Grand Mesa  
STREET \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

To Allied Cementing Co., LLC.  
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Anthony Martin  
SIGNATURE Anthony Martin

OWNER same

CEMENT AMOUNT ORDERED 165 common 3% Cal  
1/4 Flowseal

COMMON <u>165</u>	@ <u>16<sup>25</sup></u>	<u>2681<sup>25</sup></u>
POZMIX	@	
GEL	@ <u>21<sup>25</sup></u>	<u>63<sup>25</sup></u>
CHLORIDE <u>1116 3</u>	@ <u>58<sup>20</sup></u>	<u>349<sup>20</sup></u>
ASC	@	
<del>Flowseal</del>	@	
	@	
	@	
	@	
	@	
	@	
	@	
	@	
	@	
HANDLING <u>265 174 SKs</u>	@ <u>2<sup>25</sup></u>	<u>391<sup>25</sup></u>
MILEAGE <u>11.4 SK/mi</u>		<u>382<sup>80</sup></u>
		<u>3868<sup>20</sup></u>

TOTAL 3868<sup>20</sup>

SERVICE

DEPTH OF JOB <u>207</u>		
PUMP TRUCK CHARGE <u>0-300</u>		<u>1125<sup>00</sup></u>
EXTRA FOOTAGE	@	
MILEAGE <u>20x2</u>	@ <u>7<sup>00</sup></u>	<u>280<sup>00</sup></u>
MANIFOLD	@	
<u>Lite Vehicle</u> Mileage <u>LV 20x2</u>	@ <u>4<sup>00</sup></u>	<u>160<sup>00</sup></u>

TOTAL 1565<sup>00</sup>

PLUG & FLOAT EQUIPMENT

	@	
	@	
	@	
	@	
	@	

TOTAL \_\_\_\_\_

SALES TAX (If Any) \_\_\_\_\_  
TOTAL CHARGES \_\_\_\_\_  
DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS

**JOB LOG**

**SWIFT Services, Inc.**

DATE 4-6-11 PAGE NO. 1

CUSTOMER Grand Mesa WELL NO. 1-34 LEASE Delp JOB TYPE Cement 2-Stage L.S. TICKET NO. 19444

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		TD 4750' DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1930							DN location w/ float equip.
	1940							Start 5 1/2" 1515 #1 casing to 4740'
								Insert float shoe w/ Auto-Fill
								L.D. Baffle - S.S. 10' PBTD 4730'
								Cent. collars 2-4-6-8-10-12-14-53
								Cement Baskets #3 pin & 54 pin
								D.V. collar #54 @ 2520'
								Drop Rill up ball tests out
	2150							Tag bottom - Laydown 1 st.
	2200							Start circ to Potable casing
	2230							1st stage
		6	12				300	500 gal mud flush
		6	32				300	20 BBI KCL Flush
		4					250	175 SKS EA-2 unit
			42				Var	Fin out - Washout Pump Lines
		7					300	Drop D.V. Plug - Start Displ
							700	
							600	60 H2O - 52 mud
	2300		112 1/2				900	Plug Down - Hold - Release & Hold
							1400	Drop D.V. opening device
	2315		8 1/4					Plug RH - 30 SKS MH 15 SKS
		6					1100	Open D.V. with Trk - mud
							500	Rig circ casing - wtr tank filling
	2330							Fin circ - Pump 20 BBI KCL Flush
	2400		20					255 SKS SWD @ 11.2 #/gal
	2500							Fin out - Drop D.V. closing Plug
			191					Start 60 BBI Displ
		6					300	Plug Down - D.V. closed - Hold
	0100	5 1/2	60				600	Release & Hold.
							1400	30 SKS SWD to Pit - (5 BBI)
								Job complete
								Wash up & Ruckup
								Thanks
								Alan & Doug
								John V. & Lane

**JOB LOG**

**SWIFT Services, Inc.**

DATE 04-19-11 PAGE NO. 1

CUSTOMER GRAND MESA WELL NO. 1-34 LEASE Dale JOB TYPE ACID WIRE PERKS TICKET NO. 19650

CHART NO.	TIME	RATE (BPM)	VOLUME (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0900							ONLOCATION
								ACID: 750 GAL 15% MCA
								2 7/8 x 5 1/2 PERKS 4563-67
	0915		2.0	✓				SPOT ACID PER 4589
								SET PER. PER 4525
	0935	2.5	2.0	✓		0		START ACID
		2.5	18.0	✓		0		" FLUSH
		1.3	27.1	-		0		
		1.3	0	-		0		ACID WIRE PERKS
		2.0	2.0	-		0		
		2.5	3.0	-		0		
		3.0	4.0	-		0		
		3.0	10.0	-		300		LOADED
		2.5	10.5	-		400		
		2.0	11.0	-		300		
		2.0	18.0	-		300		ACID CLEARED, START OVER FLUSH 2605
	0953	2.0	20.0	-		325		
						0		ISPP, VAC 15sec!
								TOTAL LOAD 47.0666
	1030							THANK YOU!
								Dave & Josh B





## DRILL STEM TEST REPORT

Prepared For: **GRAND MESA OPERATING**

1700 N WATERFRONT PKWY BLDG 600  
WICHITA KS 67206

ATTN: MACK ARMSTRONG

**34-12S-32W LOGAN**

**DALE 1-34**

Start Date: 2011.04.02 @ 00:00:00

End Date: 2011.04.02 @ 05:33:00

Job Ticket #: 1008                      DST #: 1

Eagle Testers LLC.

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

620-617-7548

Printed: 2011.04.02 @ 00:37:05

GRAND MESA OPERATING  
DALE 1-34  
34-12S-32W LOGAN  
DST # 1  
LKC -E-F-  
2011.04.02



# DRILL STEM TEST REPORT

GRAND MESA OPERATING

DALE 1-34

1700 N WATERFRONT PKWY BLDG 600  
WICHITA KS 67206

34-12S-32W LOGAN

Job Ticket: 1008

DST#: 1

ATTN: MACK ARMSTRONG

Test Start: 2011.04.02 @ 00:00:00

## GENERAL INFORMATION:

Formation: **LKC -E-F-**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:57:00

Time Test Ended: 05:33:00

Test Type: Conventional Bottom Hole (Initial)

Tester: DAVID NICHOLS

Unit No: 15

Interval: **4072.00 ft (KB) To 4100.00 ft (KB) (TVD)**

Reference Elevations: 2989.00 ft (KB)

Total Depth: 4100.00 ft (KB) (TVD)

2983.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

Serial #: **6663**

Inside

Press @ RunDepth: 64.69 psig @ 4096.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2011.04.02

End Date: 2011.04.02

Last Calib.: 2011.04.02

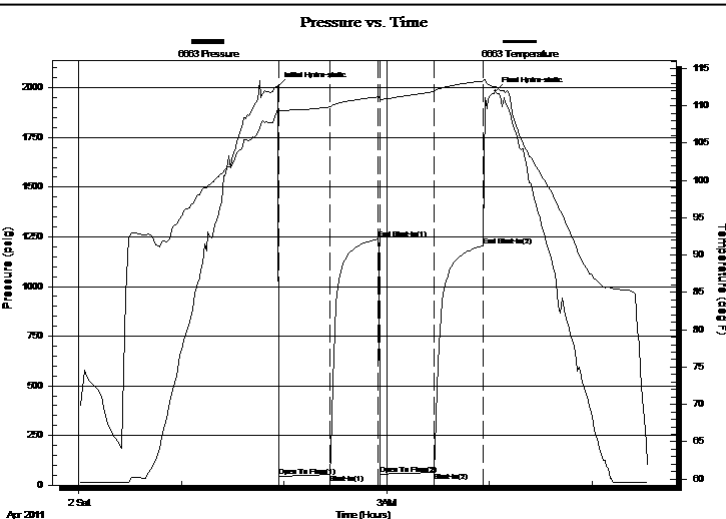
Start Time: 00:00:00

End Time: 05:33:00

Time On Btm: 2011.04.02 @ 01:56:30

Time Off Btm: 2011.04.02 @ 04:03:30

TEST COMMENT: 30-INITIAL OPENING WEAK BLOW BUILT TO 1 INCH INTO WATER  
30-INITIAL SHUT IN NO BLOW BACK  
30-FINAL OPENING VERY WEAK SURFACE BLOW  
30-FINAL SHUT IN NO BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2004.43	109.54	Initial Hydro-static
1	43.22	109.17	Open To Flow (1)
30	53.50	109.85	Shut-In(1)
59	1240.49	111.21	End Shut-In(1)
60	54.94	110.89	Open To Flow (2)
91	64.69	111.91	Shut-In(2)
120	1205.34	113.34	End Shut-In(2)
127	1982.86	112.53	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	MUD WITH A SPOT OF OIL 100% MUD	0.07

## Gas Rates

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



# DRILL STEM TEST REPORT

GRAND MESA OPERATING

DALE 1-34

1700 N WATERFRONT PKWY BLDG 600  
WICHITA KS 67206

34-12S-32W LOGAN

Job Ticket: 1008

DST#: 1

ATTN: MACK ARMSTRONG

Test Start: 2011.04.02 @ 00:00:00

## GENERAL INFORMATION:

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Test Type: Conventional Bottom Hole (Initial)

Tester: DAVID NICHOLS

Unit No: 15

Interval: **4072.00 ft (KB) To 4100.00 ft (KB) (TVD)**

Reference Elevations: 2989.00 ft (KB)

Total Depth: 4100.00 ft (KB) (TVD)

2983.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

Serial #: **6666**

Outside

Press @ Run Depth: 1204.63 psig @ 4097.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2011.04.02

End Date: 2011.04.02

Last Calib.: 2011.04.02

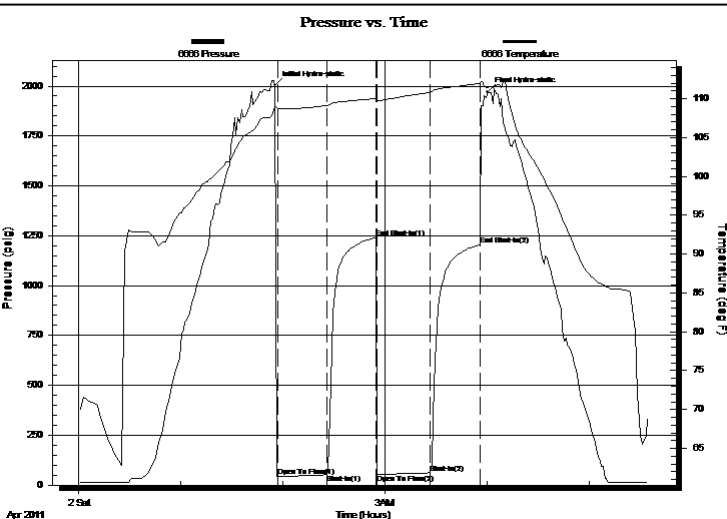
Start Time: 00:00:00

End Time: 05:34:30

Time On Btm: 2011.04.02 @ 01:55:30

Time Off Btm: 2011.04.02 @ 04:00:30

TEST COMMENT: 30-INITIAL OPENING WEAK BLOW BUILT TO 1 INCH INTO WATER  
30-INITIAL SHUT IN NO BLOW BACK  
30-FINAL OPENING VERY WEAK SURFACE BLOW  
30-FINAL SHUT IN NO BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2003.17	109.02	Initial Hydro-static
2	42.15	108.76	Open To Flow (1)
31	52.08	109.08	Shut-In(1)
59	1239.68	110.02	End Shut-In(1)
60	53.14	109.74	Open To Flow (2)
91	61.58	110.81	Shut-In(2)
121	1204.63	111.94	End Shut-In(2)
125	1970.38	111.49	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	MUD WITH A SPOT OF OIL 100%MUD	0.07

## Gas Rates

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



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

GRAND MESA OPERATING

**DALE 1-34**

1700 N WATERFRONT PKWY BLDG 600  
WICHITA KS 67206

**34-12S-32W LOGAN**

Job Ticket: 1008

**DST#: 1**

ATTN: MACK ARMSTRONG

Test Start: 2011.04.02 @ 00:00:00

## Tool Information

Drill Pipe:	Length: 3926.00 ft	Diameter: 3.88 inches	Volume: 57.41 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: 70000.00 lb
			<u>Total Volume: 58.00 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	4072.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	28.00 ft			
Tool Length:	57.00 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			4048.00	
Hydraulic tool	5.00			4053.00	
Change over sub	1.00			4054.00	
Jars	6.00			4060.00	
Safety Joint	2.00			4062.00	
Packer	5.00			4067.00	29.00 Bottom Of Top Packer
Packer	5.00			4072.00	
Anchor	23.00			4095.00	
Recorder	1.00	6663	Inside	4096.00	
Recorder	1.00	6666	Outside	4097.00	
Bullnose	3.00			4100.00	28.00 Bottom Packers & Anchor

**Total Tool Length: 57.00**



# DRILL STEM TEST REPORT

## FLUID SUMMARY

GRAND MESA OPERATING

DALE 1-34

1700 N WATERFRONT PKWY BLDG 600  
WICHITA KS 67206

34-12S-32W LOGAN

Job Ticket: 1008

DST#: 1

ATTN: MACK ARMSTRONG

Test Start: 2011.04.02 @ 00:00:00

### 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: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.40 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	MUD WITH A SPOT OF OIL 100%MUD	0.074

Total Length: 15.00 ft      Total Volume: 0.074 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

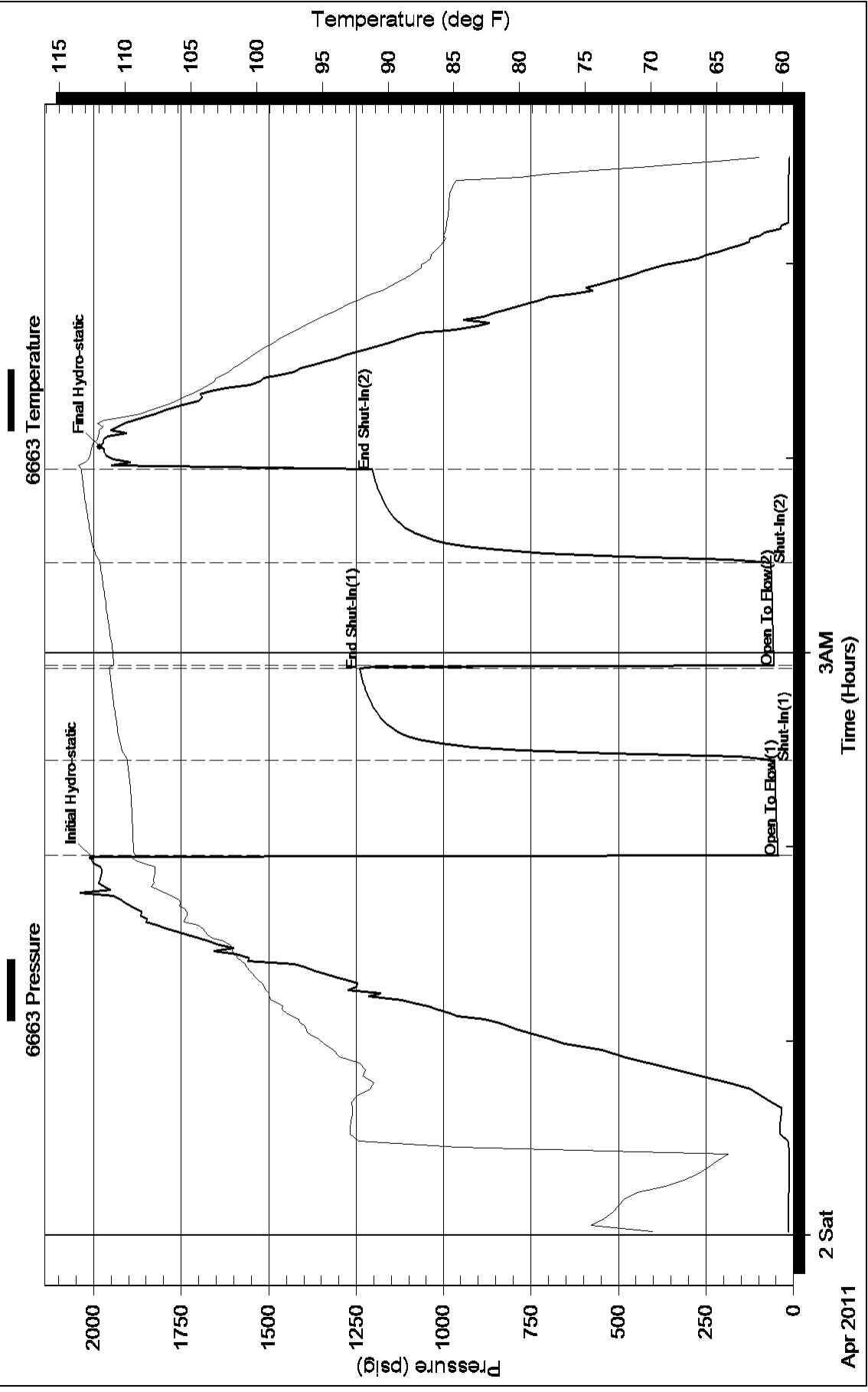
Serial #:

Laboratory Name:

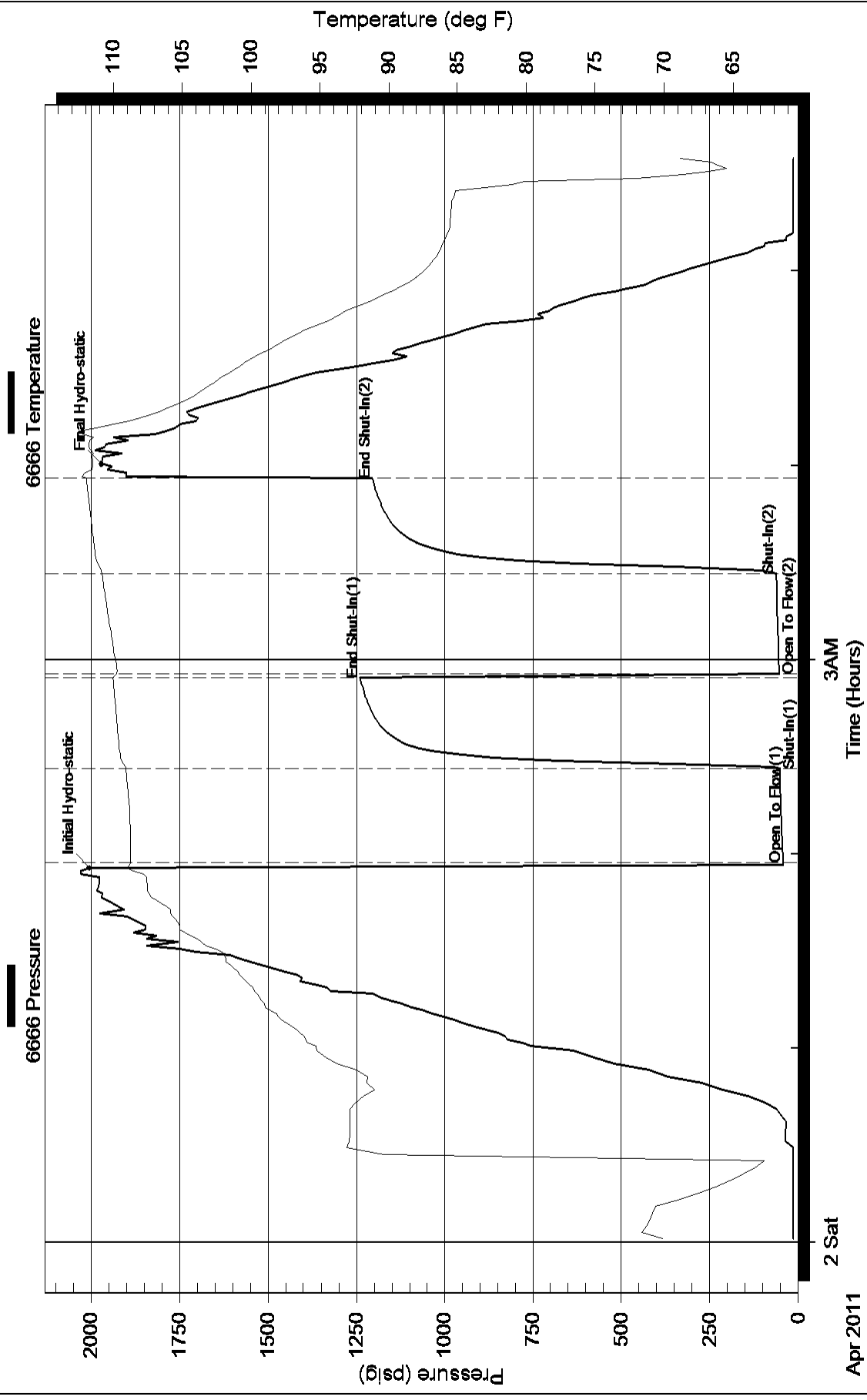
Laboratory Location:

Recovery Comments:

### Pressure vs. Time



### Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **GRAND MESA OPERATING**

1700 N WATERFRONT PKWY BLDG 600  
WICHITA KS 67206

ATTN: MACK ARMSTRONG

**34-12S-32W LOGAN**

**DALE 1-34**

Start Date: 2011.04.02 @ 21:00:00

End Date: 2011.04.03 @ 04:17:30

Job Ticket #: 1009                      DST #: 2

Eagle Testers LLC.

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

620-617-7548

Printed: 2011.04.02 @ 22:03:03

GRAND MESA OPERATING  
DALE 1-34  
34-12S-32W LOGAN  
DST # 2  
LKC-J-  
2011.04.02





# DRILL STEM TEST REPORT

GRAND MESA OPERATING

DALE 1-34

1700 N WATERFRONT PKWY BLDG 600  
WICHITA KS 67206

34-12S-32W LOGAN

Job Ticket: 1009

DST#: 2

ATTN: MACK ARMSTRONG

Test Start: 2011.04.02 @ 21:00:00

## GENERAL INFORMATION:

Formation: **LKC -J-**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:31:00

Time Test Ended: 04:17:30

Test Type: Conventional Bottom Hole (Initial)

Tester: DAVID NICHOLS

Unit No: 15 21 MRT OAKLEY

Interval: **4200.00 ft (KB) To 4232.00 ft (KB) (TVD)**

Total Depth: 4232.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2989.00 ft (KB)

2983.00 ft (CF)

KB to GR/CF: 6.00 ft

Serial #: **6663**

Inside

Press @ Run Depth: 150.11 psig @ 4228.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2011.04.02

End Date:

2011.04.03

Last Calib.:

2011.04.02

Start Time: 21:00:00

End Time:

04:17:30

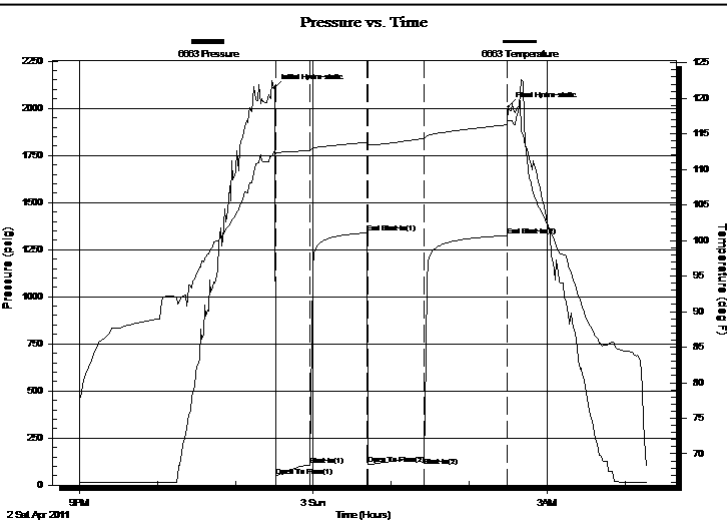
Time On Btm:

2011.04.02 @ 23:30:00

Time Off Btm:

2011.04.03 @ 02:30:30

TEST COMMENT: 30-INITIAL OPENING WEAK BLOW BUILT TO 4 INCHES INTO WATER  
45-INITIAL SHUT IN NO BLOW BACK  
45-FINAL OPENING VERY WEAK SURFACE BLOW DIED AFTER 15 MINS  
60-FINAL SHUT IN NO BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2107.53	112.51	Initial Hydro-static
1	47.47	112.19	Open To Flow (1)
28	106.40	112.61	Shut-In(1)
72	1338.99	113.84	End Shut-In(1)
72	108.56	113.49	Open To Flow (2)
116	150.11	114.36	Shut-In(2)
179	1324.58	116.27	End Shut-In(2)
181	2007.52	116.90	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
225.00	MUDDY WATER WITH A SPOT OF OIL	2.13
0.00	40%MUD 60 % WATER	0.00

## Gas Rates

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



# DRILL STEM TEST REPORT

GRAND MESA OPERATING

DALE 1-34

1700 N WATERFRONT PKWY BLDG 600  
WICHITA KS 67206

34-12S-32W LOGAN

Job Ticket: 1009

DST#: 2

ATTN: MACK ARMSTRONG

Test Start: 2011.04.02 @ 21:00:00

## GENERAL INFORMATION:

Formation: **LKC -J-**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:31:00

Time Test Ended: 04:17:30

Test Type: Conventional Bottom Hole (Initial)

Tester: DAVID NICHOLS

Unit No: 15 21 MRT OAKLEY

Interval: **4200.00 ft (KB) To 4232.00 ft (KB) (TVD)**

Reference Elevations: 2989.00 ft (KB)

Total Depth: 4232.00 ft (KB) (TVD)

2983.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

Serial #: **6666** Outside

Press @ RunDepth: 1323.36 psig @ 4229.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2011.04.02

End Date:

2011.04.03

Last Calib.:

2011.04.02

Start Time: 21:00:00

End Time:

04:18:00

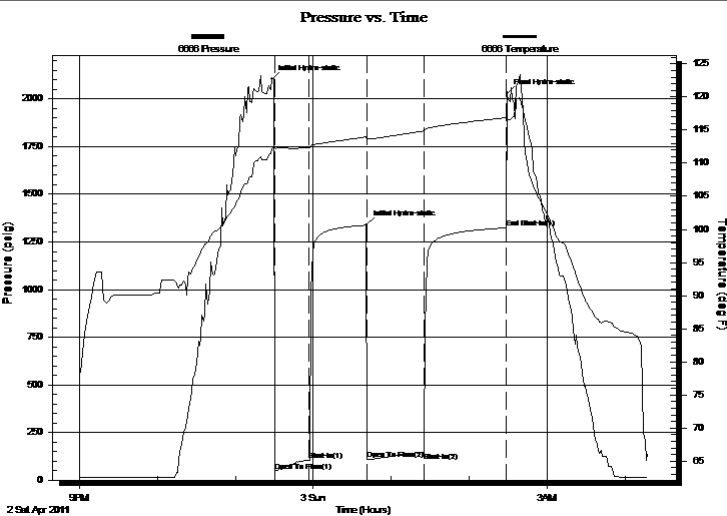
Time On Btm:

2011.04.02 @ 23:28:30

Time Off Btm:

2011.04.03 @ 02:29:30

TEST COMMENT: 30-INITIAL OPENING WEAK BLOW BUILT TO 4 INCHES INTO WATER  
45-INITIAL SHUT IN NO BLOW BACK  
45-FINAL OPENING VERY WEAK SURFACE BLOW DIED AFTER 15 MINS  
60-FINAL SHUT IN NO BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2102.93	112.17	Initial Hydro-static
2	45.49	112.28	Open To Flow (1)
29	104.60	112.36	Shut-In(1)
73	1337.77	113.99	Initial Hydro-static
73	106.95	113.71	Open To Flow (2)
117	147.99	114.86	Shut-In(2)
180	1323.36	116.88	End Shut-In(1)
181	2030.58	116.69	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
225.00	MUDDY WATER WITH A SPOT OF OIL	2.13
0.00	40%MUD 60 % WATER	0.00

## Gas Rates

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



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

GRAND MESA OPERATING

**DALE 1-34**

1700 N WATERFRONT PKWY BLDG 600  
WICHITA KS 67206

**34-12S-32W LOGAN**

Job Ticket: 1009

**DST#: 2**

ATTN: MACK ARMSTRONG

Test Start: 2011.04.02 @ 21:00:00

## Tool Information

Drill Pipe:	Length: 4054.00 ft	Diameter: 3.88 inches	Volume: 59.29 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: 65000.00 lb
			<u>Total Volume: 59.88 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4200.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	32.00 ft			
Tool Length:	61.00 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			4176.00	
Hydraulic tool	5.00			4181.00	
Change over sub	1.00			4182.00	
Jars	6.00			4188.00	
Safety Joint	2.00			4190.00	
Packer	5.00			4195.00	29.00 Bottom Of Top Packer
Packer	5.00			4200.00	
Anchor	27.00			4227.00	
Recorder	1.00	6663	Inside	4228.00	
Recorder	1.00	6666	Outside	4229.00	
Bullnose	3.00			4232.00	32.00 Bottom Packers & Anchor

**Total Tool Length: 61.00**



# DRILL STEM TEST REPORT

## FLUID SUMMARY

GRAND MESA OPERATING

DALE 1-34

1700 N WATERFRONT PKWY BLDG 600  
WICHITA KS 67206

34-12S-32W LOGAN

Job Ticket: 1009

DST#: 2

ATTN: MACK ARMSTRONG

Test Start: 2011.04.02 @ 21:00:00

### 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: 66.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 71.96 in<sup>3</sup>

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
225.00	MUDDY WATER WITH A SPOT OF OIL	2.126
0.00	40%MUD 60 % WATER	0.000

Total Length: 225.00 ft      Total Volume: 2.126 bbl

Num Fluid Samples: 0

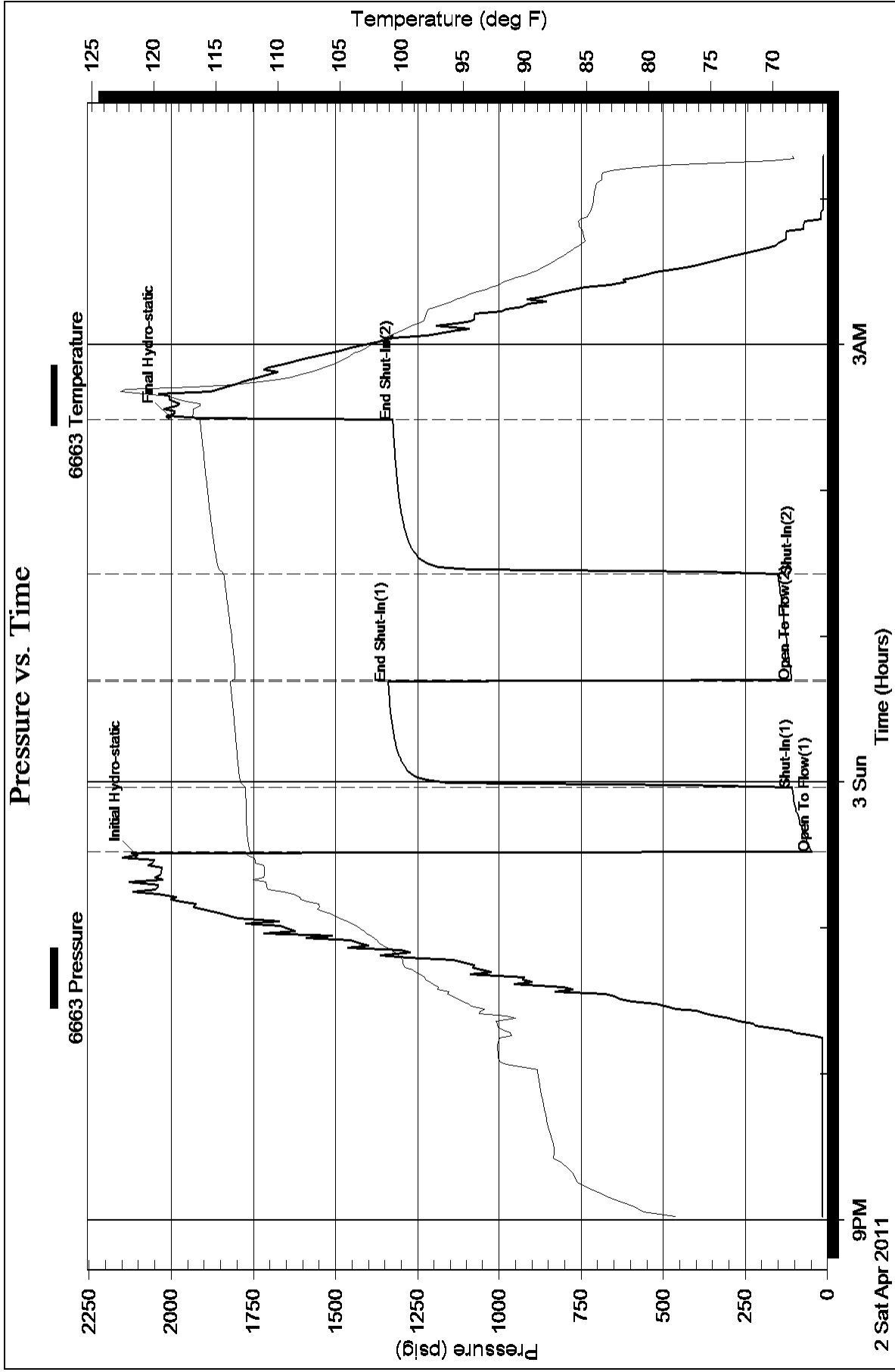
Num Gas Bombs: 0

Serial #:

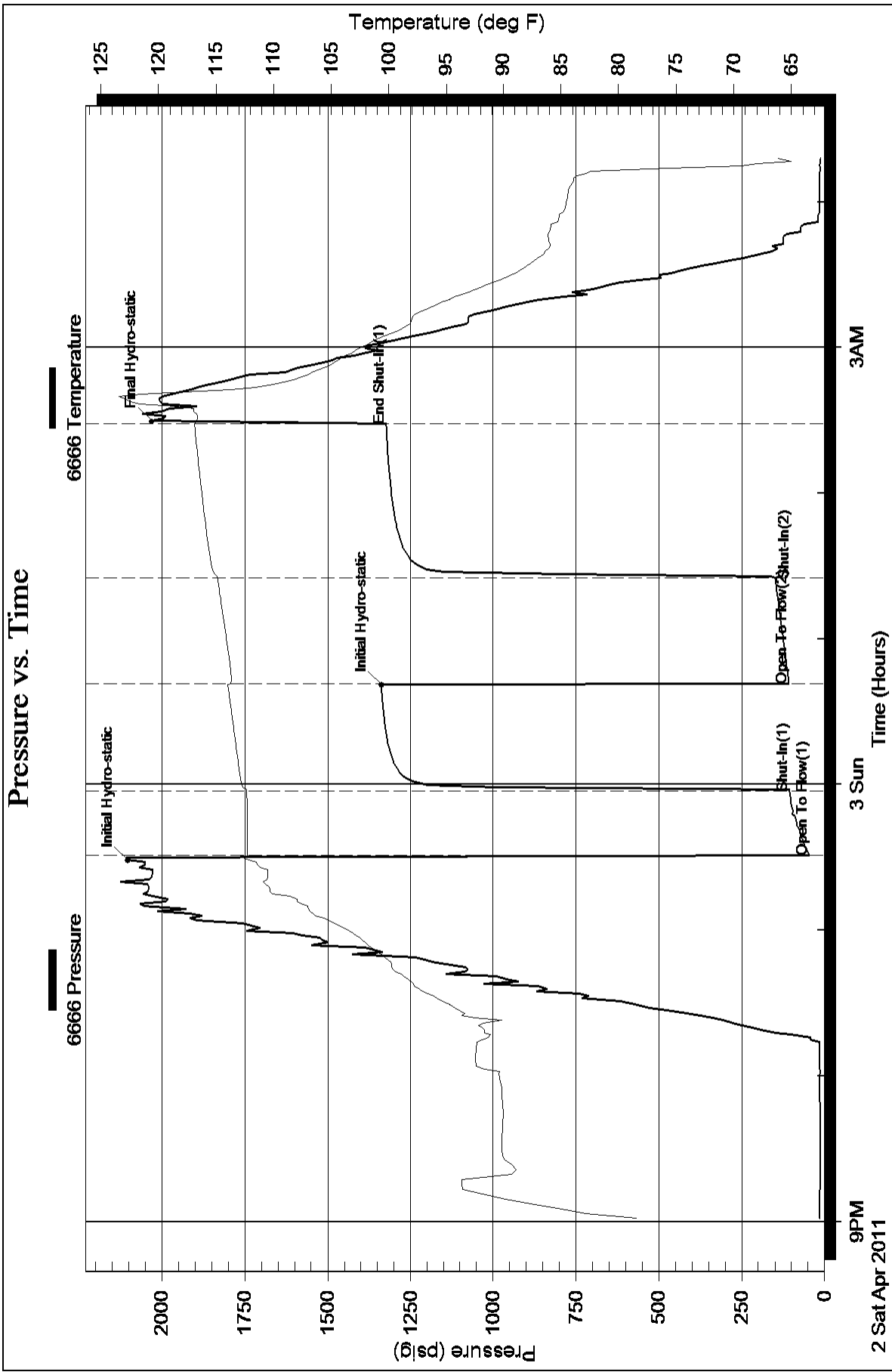
Laboratory Name:

Laboratory Location:

Recovery Comments:



### Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **GRAND MESA OPERATING**

1700 N WATERFRONT PKWY BLDG 600  
WICHITA KS 67206

ATTN: MACK ARMSTRONG

**34-12S-32W LOGAN**

**DALE 1-34**

Start Date: 2011.04.03 @ 12:00:00

End Date: 2011.04.03 @ 17:46:30

Job Ticket #: 1010                      DST #: 3

Eagle Testers LLC.

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

620-617-7548

Printed: 2011.04.04 @ 12:25:51

GRAND MESA OPERATING  
DALE 1-34  
34-12S-32W LOGAN  
DST # 3  
SWOPE  
2011.04.03



# DRILL STEM TEST REPORT

GRAND MESA OPERATING

DALE 1-34

1700 N WATERFRONT PKWY BLDG 600  
WICHITA KS 67206

34-12S-32W LOGAN

Job Ticket: 1010

DST#: 3

ATTN: MACK ARMSTRONG

Test Start: 2011.04.03 @ 12:00:00

## GENERAL INFORMATION:

Formation: **SWOPE**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:10:00

Time Test Ended: 17:46:30

Interval: **4226.00 ft (KB) To 4260.00 ft (KB) (TVD)**

Total Depth: 4260.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)

Tester: DAVID NICHOLS

Unit No: 15 21 MRT OAKLEY KS

Reference Elevations: 2989.00 ft (KB)

2983.00 ft (CF)

KB to GR/CF: 6.00 ft

Serial #: **6663**

Inside

Press @ RunDepth: 72.06 psig @ 4256.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2011.04.03

End Date: 2011.04.03

Last Calib.: 2011.04.03

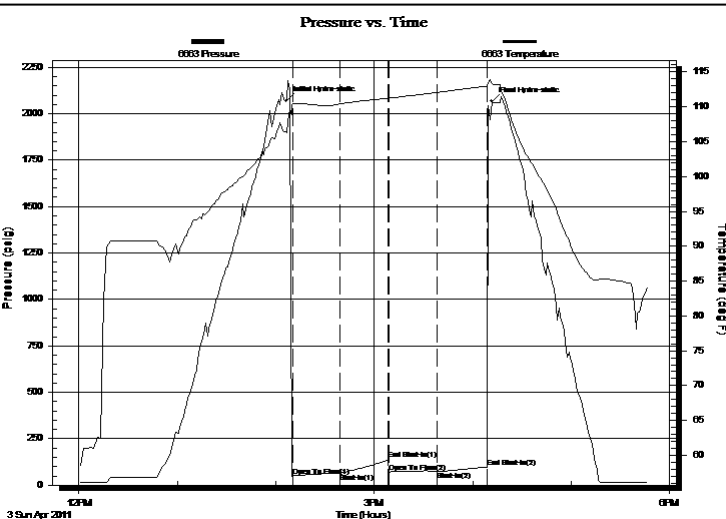
Start Time: 12:01:00

End Time: 17:46:30

Time On Btm: 2011.04.03 @ 14:06:30

Time Off Btm: 2011.04.03 @ 16:11:30

TEST COMMENT: 30-INITIAL OPENING WEAK SURFACE BLOW DIED AFTER 25 MINS  
30-INITIAL SHUT IN NO BLOW BACK  
30-FINAL OPENING VERY WEAK BLOW DIED AFTER 15 MINS  
30-FINAL SHUT IN NO BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2068.53	106.37	Initial Hydro-static
4	48.34	110.29	Open To Flow (1)
33	65.04	110.43	Shut-In(1)
62	138.19	111.28	End Shut-In(1)
63	71.47	111.26	Open To Flow (2)
92	72.06	112.07	Shut-In(2)
123	98.58	112.98	End Shut-In(2)
125	2066.80	113.38	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	CLEAN OIL 100%OIL	49.18
60.00	OIL CUT MUD 10%OIL 90%MUD	2950.70

## Gas Rates

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





# DRILL STEM TEST REPORT

GRAND MESA OPERATING

DALE 1-34

1700 N WATERFRONT PKWY BLDG 600  
WICHITA KS 67206

34-12S-32W LOGAN

Job Ticket: 1010

DST#: 3

ATTN: MACK ARMSTRONG

Test Start: 2011.04.03 @ 12:00:00

## GENERAL INFORMATION:

Formation: **SWOPE**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:10:00

Time Test Ended: 17:46:30

Test Type: Conventional Bottom Hole (Initial)

Tester: DAVID NICHOLS

Unit No: 15 21 MRT OAKLEY KS

Interval: **4226.00 ft (KB) To 4260.00 ft (KB) (TVD)**

Reference Elevations: 2989.00 ft (KB)

Total Depth: 4260.00 ft (KB) (TVD)

2983.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

Serial #: **6666** Outside

Press @ Run Depth: 96.81 psig @ 4257.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2011.04.03

End Date: 2011.04.03

Last Calib.: 2011.04.03

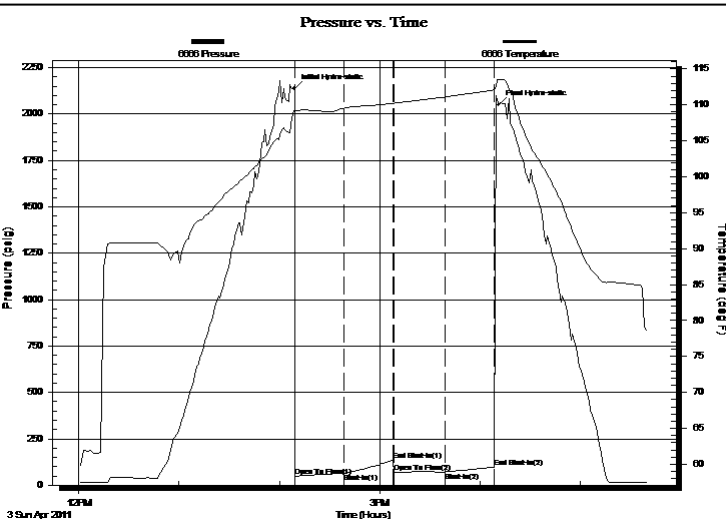
Start Time: 12:01:00

End Time: 17:40:30

Time On Btm: 2011.04.03 @ 14:09:00

Time Off Btm: 2011.04.03 @ 16:11:30

TEST COMMENT: 30-INITIAL OPENING WEAK SURFACE BLOW DIED AFTER 25 MINS  
30-INITIAL SHUT IN NO BLOW BACK  
30-FINAL OPENING VERY WEAK BLOW DIED AFTER 15 MINS  
30-FINAL SHUT IN NO BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2138.73	109.34	Initial Hydro-static
1	46.32	109.03	Open To Flow (1)
30	63.04	109.54	Shut-In(1)
59	136.30	110.20	End Shut-In(1)
60	69.97	110.20	Open To Flow (2)
90	70.89	111.09	Shut-In(2)
120	96.81	112.06	End Shut-In(2)
123	2050.46	113.54	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	CLEAN OIL 100%OIL	49.18
60.00	OIL CUT MUD 10%OIL 90%MUD	2950.70

## Gas Rates

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



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

GRAND MESA OPERATING

**DALE 1-34**

1700 N WATERFRONT PKWY BLDG 600  
WICHITA KS 67206

**34-12S-32W LOGAN**

Job Ticket: 1010

**DST#: 3**

ATTN: MACK ARMSTRONG

Test Start: 2011.04.03 @ 12:00:00

## Tool Information

Drill Pipe:	Length: 4080.00 ft	Diameter: 3.88 inches	Volume: 59.67 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: 225.00 inches	Volume: 5901.40 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 5961.07 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial	58000.00 lb
Depth to Top Packer:	4226.00 ft			Final	58000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	34.00 ft				
Tool Length:	63.00 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			4202.00	
Hydraulic tool	5.00			4207.00	
Change over sub	1.00			4208.00	
Jars	6.00			4214.00	
Safety Joint	2.00			4216.00	
Packer	5.00			4221.00	29.00 Bottom Of Top Packer
Packer	5.00			4226.00	
Anchor	29.00			4255.00	
Recorder	1.00	6663	Inside	4256.00	
Recorder	1.00	6666	Outside	4257.00	
Bullnose	3.00			4260.00	34.00 Bottom Packers & Anchor

**Total Tool Length: 63.00**



# DRILL STEM TEST REPORT

## FLUID SUMMARY

GRAND MESA OPERATING

DALE 1-34

1700 N WATERFRONT PKWY BLDG 600  
WICHITA KS 67206

34-12S-32W LOGAN

Job Ticket: 1010

DST#: 3

ATTN: MACK ARMSTRONG

Test Start: 2011.04.03 @ 12:00:00

### 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: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
1.00	CLEAN OIL 100%OIL	49.178
60.00	OIL CUT MUD 10%OIL 90%MUD	2950.702

Total Length: 61.00 ft      Total Volume: 2999.880 bbl

Num Fluid Samples: 0

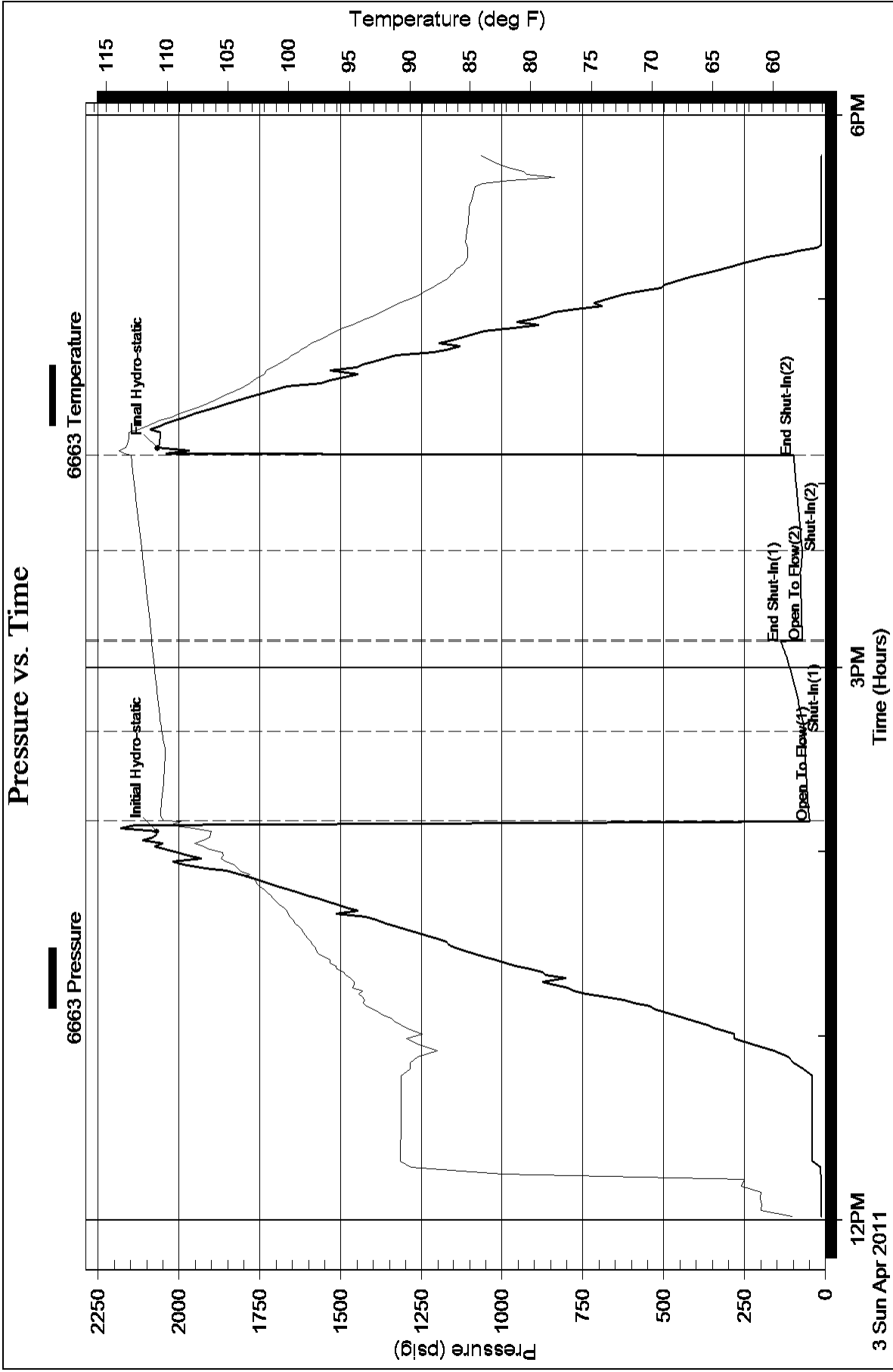
Num Gas Bombs: 0

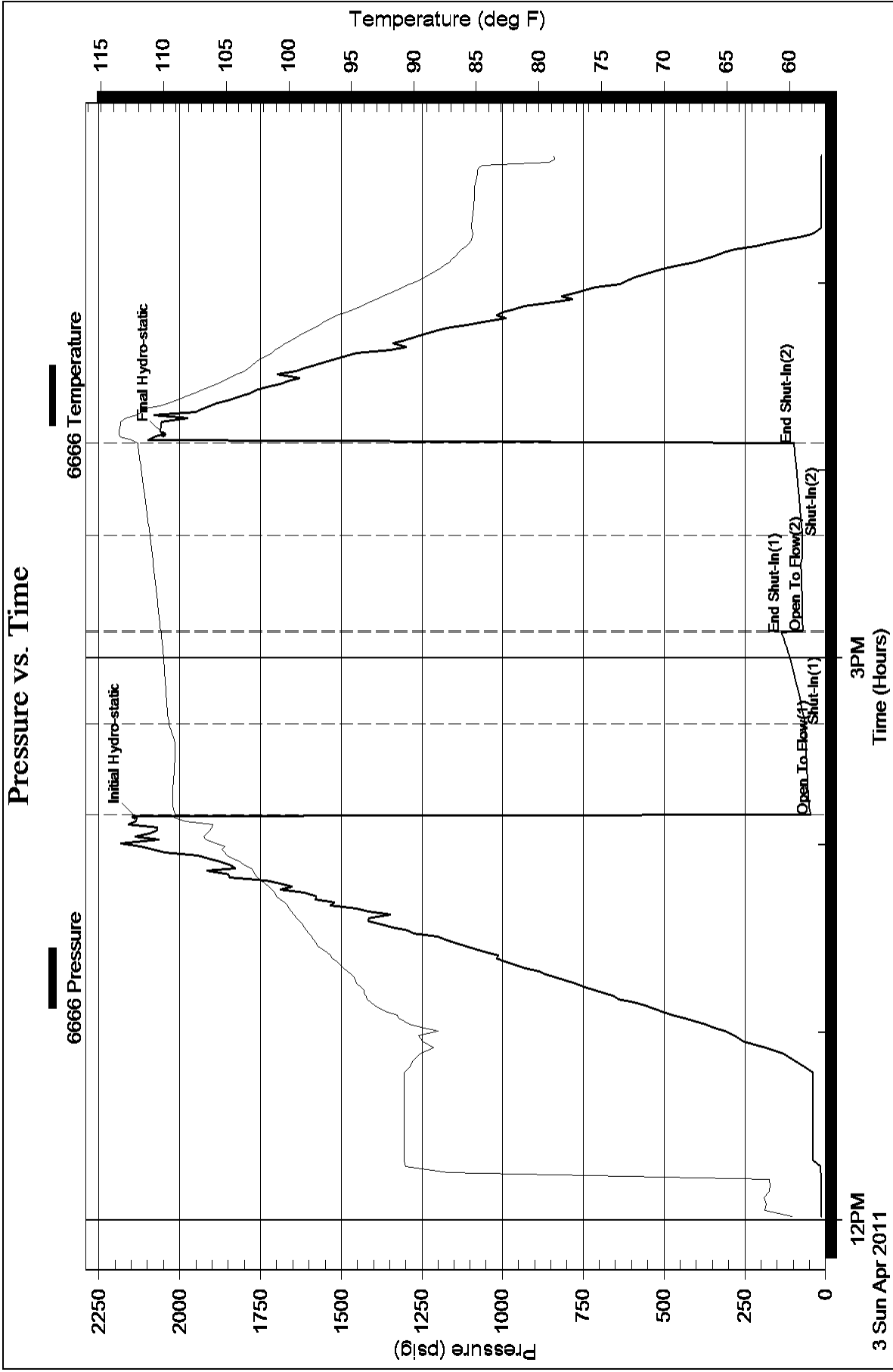
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **GRAND MESA OPERATING**

1700 N WATERFRONT PKWY BLDG 600  
WICHITA KS 67206

ATTN: MACK ARMSTRONG

**34-12S-32W LOGAN**

**DALE 1-34**

Start Date: 2011.04.05 @ 07:00:00

End Date: 2011.04.05 @ 15:48:00

Job Ticket #: 1011                      DST #: 4

Eagle Testers LLC.

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

620-617-7548

Printed: 2011.04.05 @ 08:07:20

GRAND MESA OPERATING  
DALE 1-34  
34-12S-32W LOGAN  
DST # 4  
JOHNSON  
2011.04.05



# DRILL STEM TEST REPORT

GRAND MESA OPERATING

DALE 1-34

1700 N WATERFRONT PKWY BLDG 600  
WICHITA KS 67206

34-12S-32W LOGAN

Job Ticket: 1011

DST#: 4

ATTN: MACK ARMSTRONG

Test Start: 2011.04.05 @ 07:00:00

## GENERAL INFORMATION:

Formation: **JOHSON**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:25:30

Time Test Ended: 15:48:00

Test Type: Conventional Bottom Hole (Initial)

Tester: DAVID NICHOLS

Unit No: 15 21 MRT OAKLEY

Interval: **4538.00 ft (KB) To 4575.00 ft (KB) (TVD)**

Total Depth: 4575.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2989.00 ft (KB)

2983.00 ft (CF)

KB to GR/CF: 6.00 ft

Serial #: **6666**

Inside

Press @ Run Depth: 210.09 psig @ 4571.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2011.04.05

End Date:

2011.04.05

Last Calib.:

2011.04.05

Start Time: 07:00:00

End Time:

15:48:00

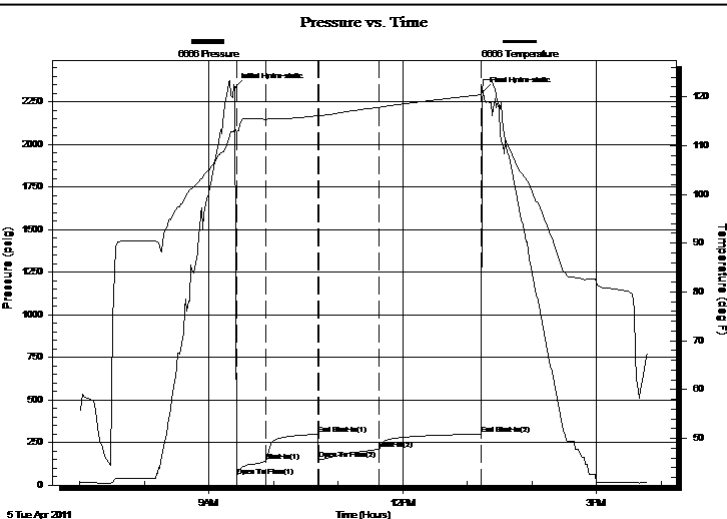
Time On Btm:

2011.04.05 @ 09:24:30

Time Off Btm:

2011.04.05 @ 13:14:30

TEST COMMENT: 30-INITIAL OPENING GOOD BLOW BOTTOM BUCKET IN 12 MINS  
45-INITIAL SHUT IN FAIR BLOW BACK BUILT TO 4 INCHES INTO WATER  
60-FINAL OPENING GOOD BLOW BOTTOM BUCKET IN 10 MINS  
90-FINAL SHUT IN SRFACE BLOW BACK



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2330.81	113.41	Initial Hydro-static
1	51.38	112.85	Open To Flow (1)
29	139.96	115.40	Shut-In(1)
77	298.53	116.14	End Shut-In(1)
78	150.90	116.10	Open To Flow (2)
134	210.09	117.86	Shut-In(2)
228	299.55	120.40	End Shut-In(2)
230	2311.70	123.44	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
660.00	GAS IN PIPE 100%GAS	8.49
120.00	CLEAN GASSY OIL 20%GAS80%OIL	1.75
330.00	MUD CUT GASSY OIL	4.83
0.00	30% MUD 15% GAS 55% OIL	0.00

## Gas Rates

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



# DRILL STEM TEST REPORT

GRAND MESA OPERATING

DALE 1-34

1700 N WATERFRONT PKWY BLDG 600  
WICHITA KS 67206

34-12S-32W LOGAN

Job Ticket: 1011

DST#: 4

ATTN: MACK ARMSTRONG

Test Start: 2011.04.05 @ 07:00:00

## GENERAL INFORMATION:

Formation: **JOHSON**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:25:30

Time Test Ended: 15:48:00

Test Type: Conventional Bottom Hole (Initial)

Tester: DAVID NICHOLS

Unit No: 15 21 MRT OAKLEY

Interval: **4538.00 ft (KB) To 4575.00 ft (KB) (TVD)**

Reference Elevations: 2989.00 ft (KB)

Total Depth: 4575.00 ft (KB) (TVD)

2983.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

Serial #: **6663** Outside

Press @ RunDepth: 301.16 psig @ 4572.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2011.04.05

End Date:

2011.04.05

Last Calib.:

2011.04.05

Start Time: 07:00:00

End Time:

15:40:30

Time On Btm:

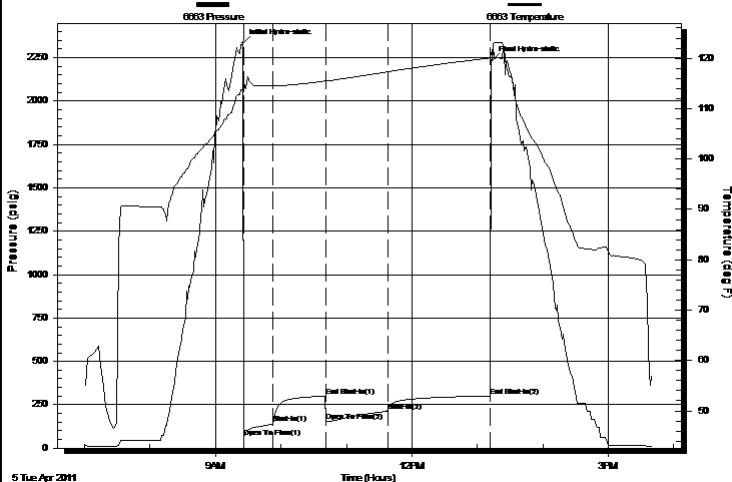
2011.04.05 @ 09:25:00

Time Off Btm:

2011.04.05 @ 13:13:30

TEST COMMENT: 30-INITIAL OPENING GOOD BLOW BOTTOM BUCKET IN 12 MINS  
45-INITIAL SHUT IN FAIR BLOW BACK BUILT TO 4 INCHES INTO WATER  
60-FINAL OPENING GOOD BLOW BOTTOM BUCKET IN 10 MINS  
90-FINAL SHUT IN SRFACE BLOW BACK

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2333.14	113.88	Initial Hydro-static
1	61.14	113.28	Open To Flow (1)
28	141.53	114.49	Shut-In(1)
76	300.30	115.52	End Shut-In(1)
77	152.74	115.47	Open To Flow (2)
133	212.41	117.31	Shut-In(2)
227	301.16	120.07	End Shut-In(2)
229	2230.55	120.75	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
660.00	GAS IN PIPE 100%GAS	8.49
120.00	CLEAN GASSY OIL 20%GAS80%OIL	1.75
330.00	MUD CUT GASSY OIL	4.83
0.00	30% MUD 15% GAS 55% OIL	0.00

## Gas Rates

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





# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

GRAND MESA OPERATING

**DALE 1-34**

1700 N WATERFRONT PKWY BLDG 600  
WICHITA KS 67206

**34-12S-32W LOGAN**

Job Ticket: 1011

**DST#: 4**

ATTN: MACK ARMSTRONG

Test Start: 2011.04.05 @ 07:00:00

## Tool Information

Drill Pipe:	Length: 4392.00 ft	Diameter: 3.88 inches	Volume: 64.23 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: 64.82 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4538.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	37.00 ft			
Tool Length:	66.00 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			4514.00	
Hydraulic tool	5.00			4519.00	
Change over sub	1.00			4520.00	
Jars	6.00			4526.00	
Safety Joint	2.00			4528.00	
Packer	5.00			4533.00	29.00 Bottom Of Top Packer
Packer	5.00			4538.00	
Anchor	32.00			4570.00	
Recorder	1.00	6666	Inside	4571.00	
Recorder	1.00	6663	Outside	4572.00	
Bullnose	3.00			4575.00	37.00 Bottom Packers & Anchor

**Total Tool Length: 66.00**



# DRILL STEM TEST REPORT

## FLUID SUMMARY

GRAND MESA OPERATING

DALE 1-34

1700 N WATERFRONT PKWY BLDG 600  
WICHITA KS 67206

34-12S-32W LOGAN

Job Ticket: 1011

DST#: 4

ATTN: MACK ARMSTRONG

Test Start: 2011.04.05 @ 07:00:00

### 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: 79.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
660.00	GAS IN PIPE 100%GAS	8.487
120.00	CLEAN GASSY OIL 20%GAS80%OIL	1.755
330.00	MUD CUT GASSY OIL	4.826
0.00	30% MUD 15% GAS 55% OIL	0.000

Total Length: 1110.00 ft      Total Volume: 15.068 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

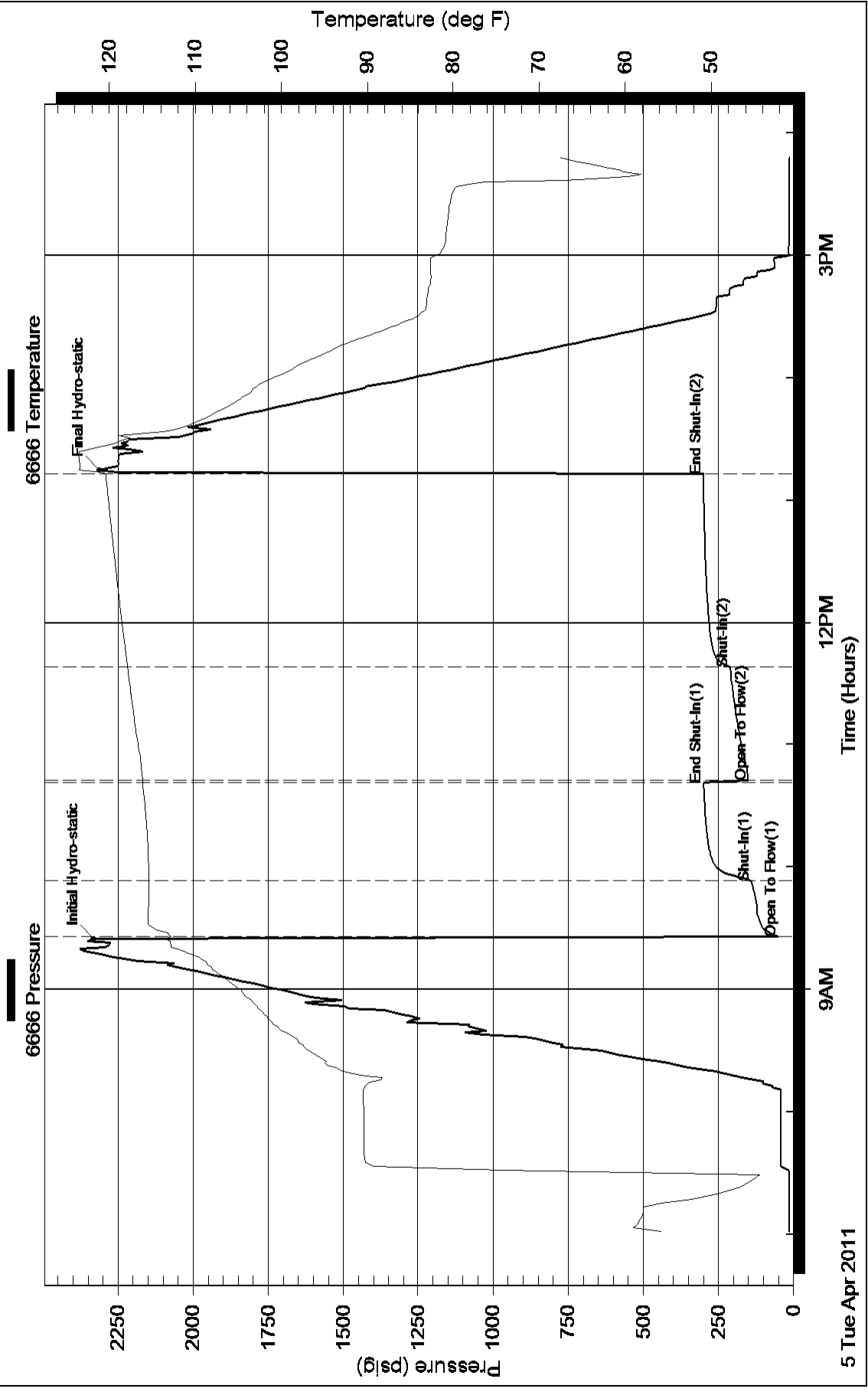
Serial #:

Laboratory Name:

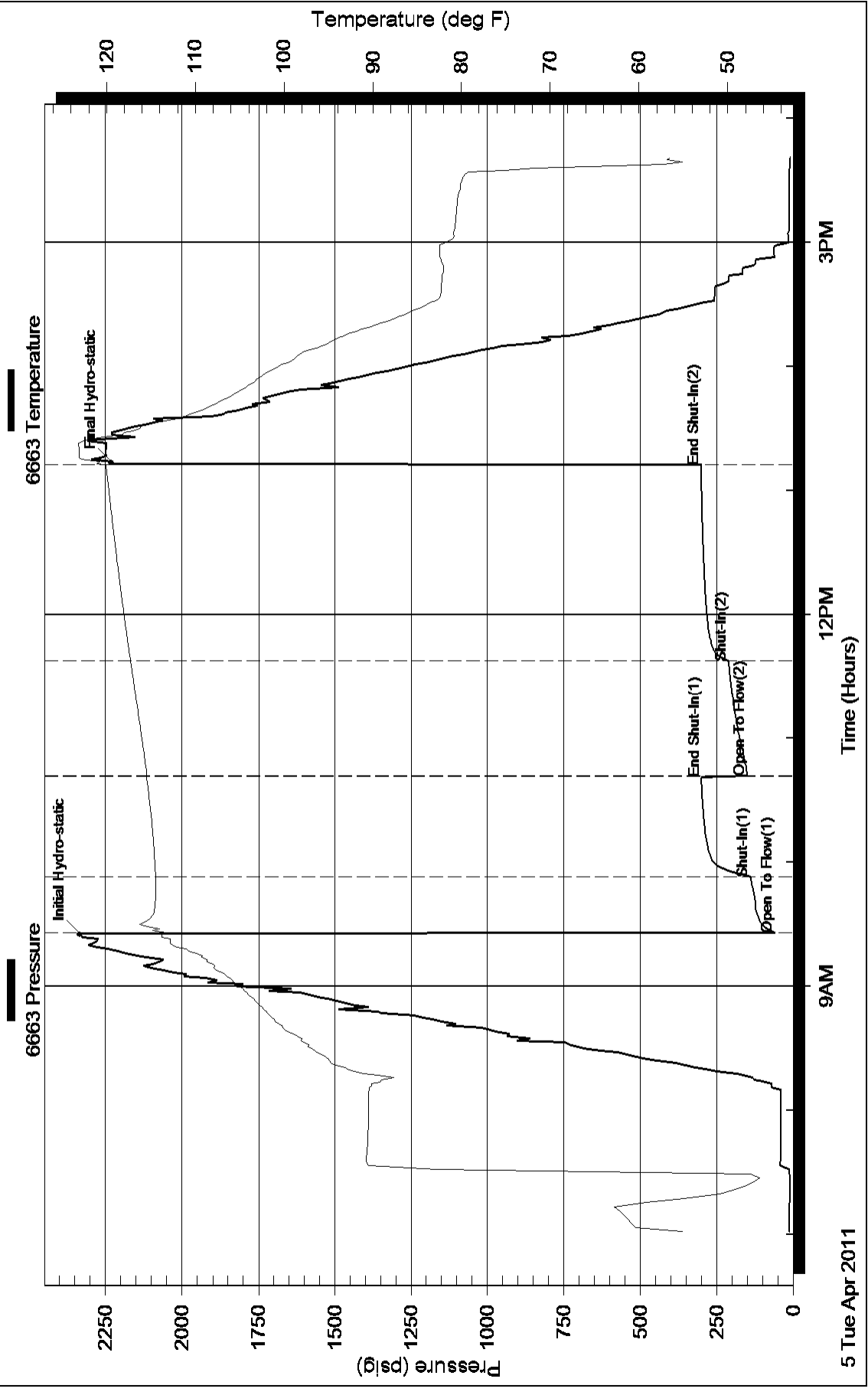
Laboratory Location:

Recovery Comments: GRAVITY OF OIL 32

# Pressure vs. Time



### Pressure vs. Time



# LITHOLOGY STRIP LOG

## WellSight Systems

Scale 1:240 (5"=100') Imperial

Measured Depth Log

Well Name: Dale No. 1-34

Location: 2548'FSL & 352'FEL of Section 34-T12S-R32W Logan County, KS

License Number: API: 15-109-20995

Region: Wildcat

Spud Date: 3-28-11

Drilling Completed: 4-7-11

Surface Coordinates:

Bottom Hole Vertical hole

Coordinates:

Ground Elevation (ft): 2983'

K.B. Elevation (ft): 2988'

Logged Interval (ft): 3600' To: RTD

Total Depth (ft): 4750

Formation: Mississippian at RTD

Type of Drilling Fluid: Chemical

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

### OPERATOR

Company: Grand Mesa Operating Company

Address: 1700 N. Waterfront Parkway

Bldg. 600

Wichita, KS 67206-5514

### GEOLOGIST

Name: Macklin M. Armstrong, P.G.

Company:

Address: 5140 North Valentine Road

Wichita, Kansas 67219

### COMMENTS

Morning Report Depth/Activity at 7 a.m.

3-28-11 Spud

3-29-11 Drilling at 800'

3-30-11 Drilling at 3010'

3-31-11 Drilling at 3515'

4-01-11 Cir for Slps at 3994'

4-02-11 Drilling at 4135'

4-03-11 DST No. 3 at 4260'

4-04-11 Drilling at 4395'

4-05-11 DST No. 4 at 4575'

4-06-11 Logging at 4750'

4-07-11 Set 5 1/2" casing

Contractor: Murfin Drilling Company Rig #24

Pusher: Tony Martin

Surface Casing: 8 5/8" 23# set at 216'

Production Casing: 5 1/2" 15.5# set at 4740'

Mud by: MudCo/Service Mud, Inc.

Engineer: Reid Atkins

DST's by: Eagle Testers

Tester: David Nichols

Logs by: Weatherford (DIL, CN-CD, ML)

Deviation Surveys: 1/4 deg. at 216'; 1/4 deg. at 3403'; 1/2 deg. at 4100'; 1 deg. at 4575'; 1 deg. at 4750'

Bit Record: 12 1/4" Smith RDS 0 to 216' 2 hours  
 7 7/8" Smith MI616 216 to 3403' 37 3/4 hours  
 7 7/8" Smith GX225 3403 to 4260' 43 1/2 hours  
 7 7/8" Smith F271 4260 to 4575' 27 hours  
 7 7/8" Smith F271 4575 to 4750' 13 1/2 hours

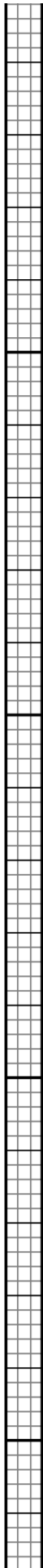
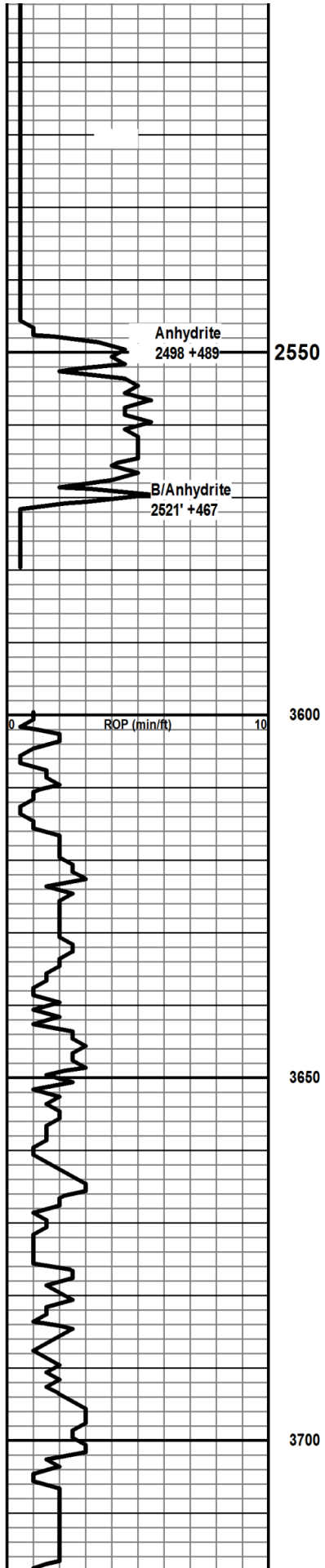
Reference Well: Murfin Drilling Company Kuhlman 'E' No. 1-35 SE NW NW SW Sec 35 T12S R32W Logan County, Kansas

Pipe was set to further test the Johnson Zone.

FORMATION TOPS AND STRUCTURAL COMPARISON

FORMATION	SAMPLE TOPS		LOG TOPS		Murfin Kuhlman 'E' No.1-35
	Depth	Datum	Depth	Datum	
Anhydrite	2498'	+489	2493'	+495	
B/Anhydrite	2521'	+467	2517'	+471	
Heebner	3963'	-975	3959'	-971	+9
Toronto	3992'	-1004	3987'	-999	+10
Lansing	4006'	-1018	4000'	-1012	+10
Muncie Creek	4148'	-1160	4145'	-1157	+7
Stark	4231'	-1243	4225'	-1237	+10
Hushpuckney	4268'	-1280	4263'	-1275	+7
B/KansasCity	4301'	-1313	4298'	-1310	+5
Marmaton	4330'	-1342	4328'	-1340	+5
Pawnee	4409'	-1421	4404'	-1416	+1
Fort Scott	4476'	-1488	4471'	-1483	+2
Cherokee Shale	4524'	-1536	4519'	-1531	-2
Johnson Zone	4566'	-1578	4561'	-1573	-1
Morrow Shale	4589'	-1601	4585'	-1597	-4
Morrow Sand	4619'	-1631	4614'	-1626	-12
Mississippi	4662'	-1674	4658'	-1670	-22
Total Depth	4750'	-1762	4747'	-1759	

Curve Track 1 ROP (min/ft)		Depth	Lithology	SSO, EFG, HWS	Geological Descriptions	Remarks
0	10					
2500						



Bit Trip at 3404'

Pipe Strap at 3404' 0.55' short

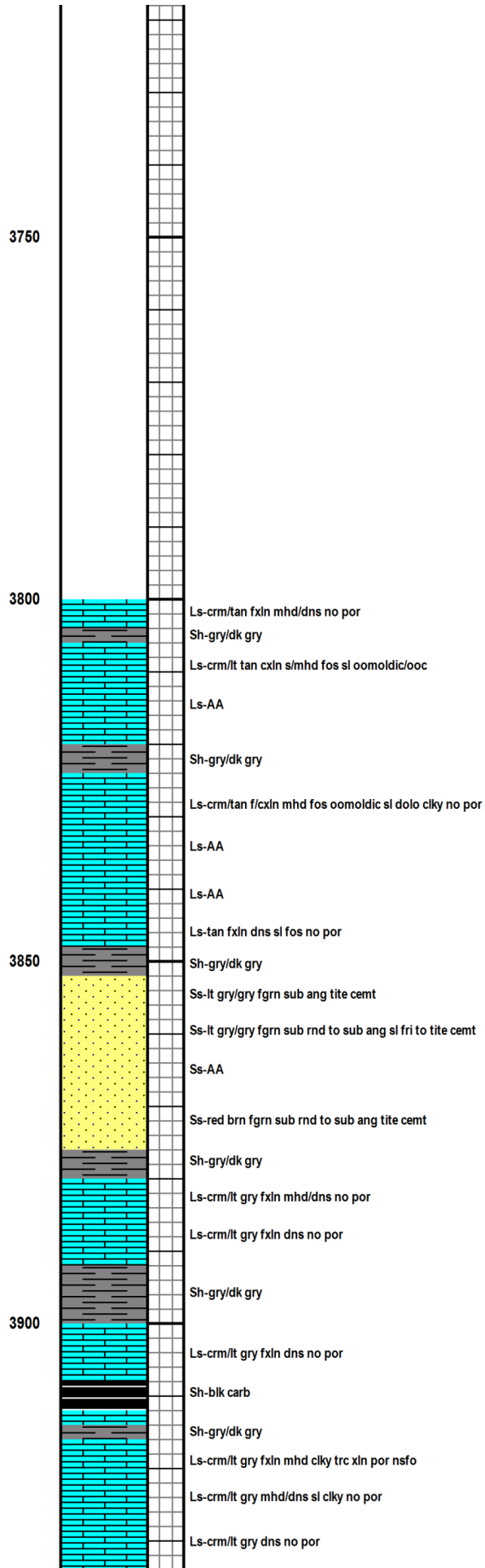
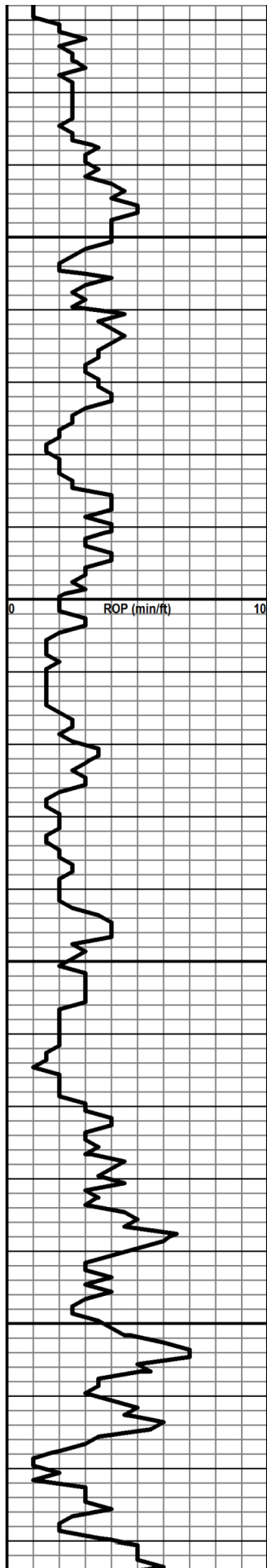
Geologist on Loc at 3600' at 9:24 p.m. on 3-31-11

Sample Cuttings: KGS Well Sample Library

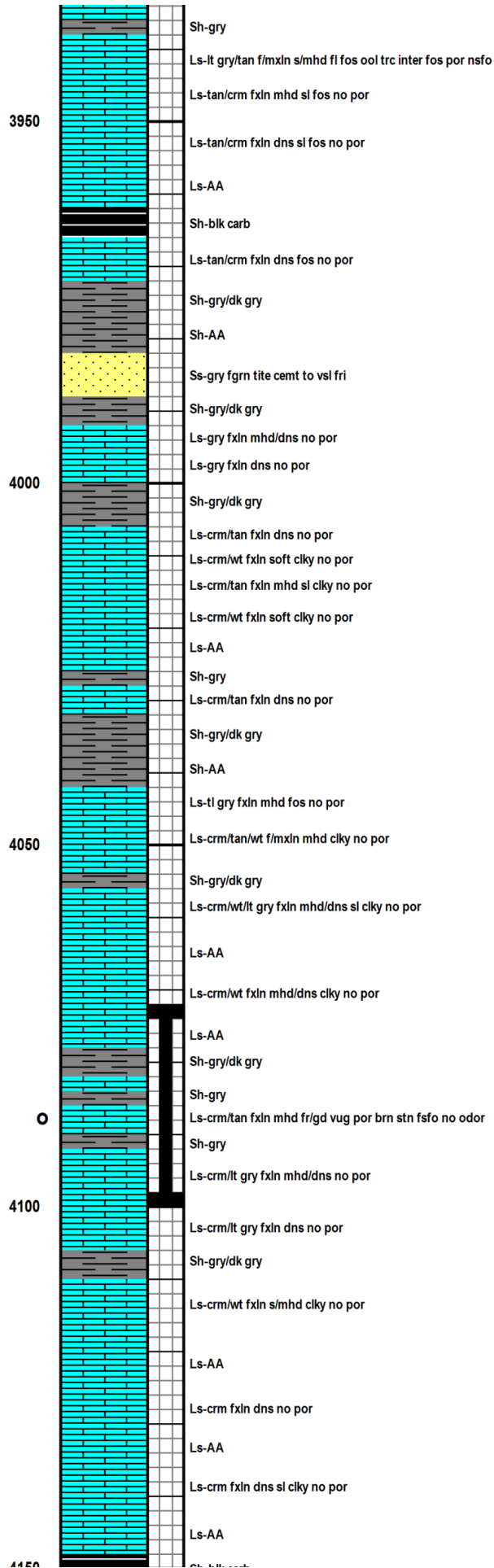
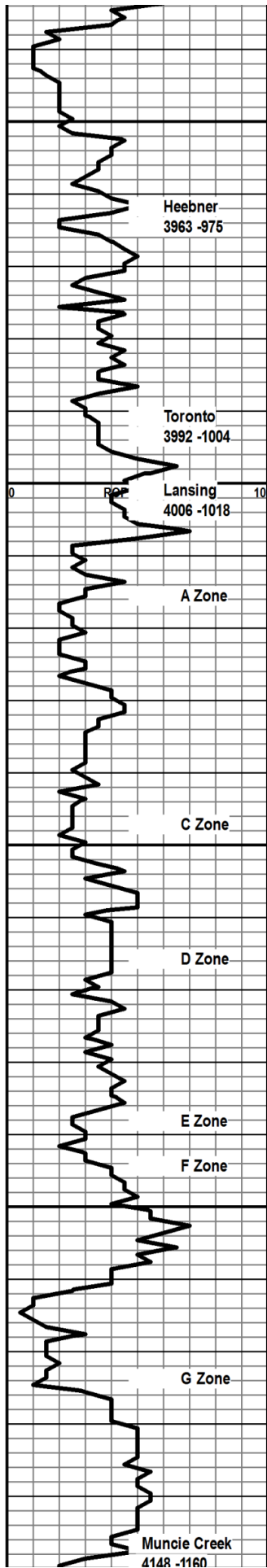
Testing: Eagle Testers

Deviation:  
 216' - 1/4  
 3404' - 1/4  
 4100' - 1/2  
 4575' - 1  
 4750' - 1

Electric Logs:  
 Westherford:  
 DIL-GR-SP  
 CN/CDL-GR-PE  
 MICRO LOG







CFS at 3994' - 45"

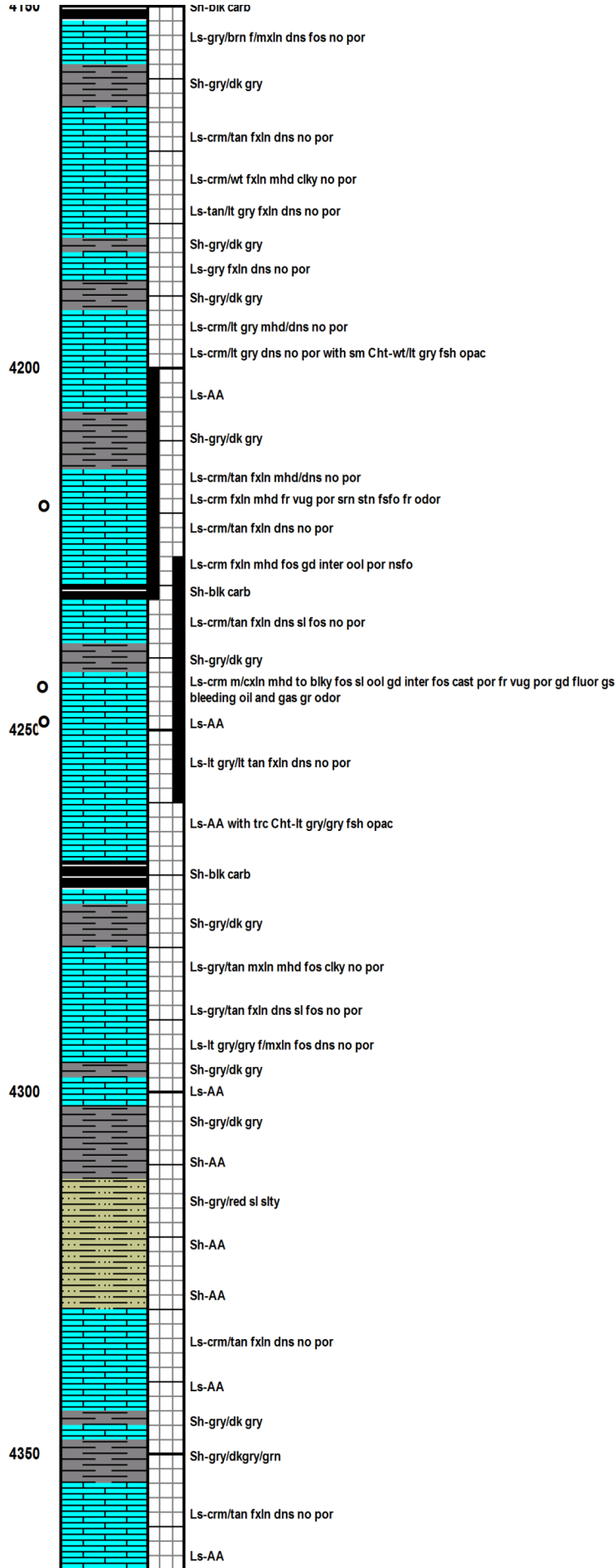
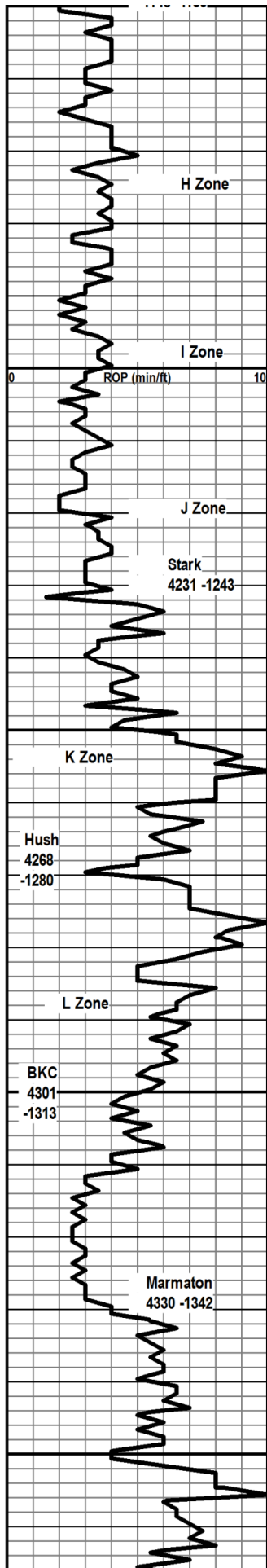
Mud Data at 4016' at  
9 a.m. on 4-1-11 Wt 9 Vis  
59 WL 6.4 pH 10.5 Chlor  
1500 YP 19

CFS at 4054' - 45"

DST No. 1  
4072' to 4100'

CFS at 4090' - 45"

CFS at 4100' - 45"



Mud Data at 4180' at 10:30 a.m. on 4-2-11 Wt 9.2 Vis 66 WL 7.2 pH 10 Chlor 2000 YP 22

DST No. 2 4200' to 4232'

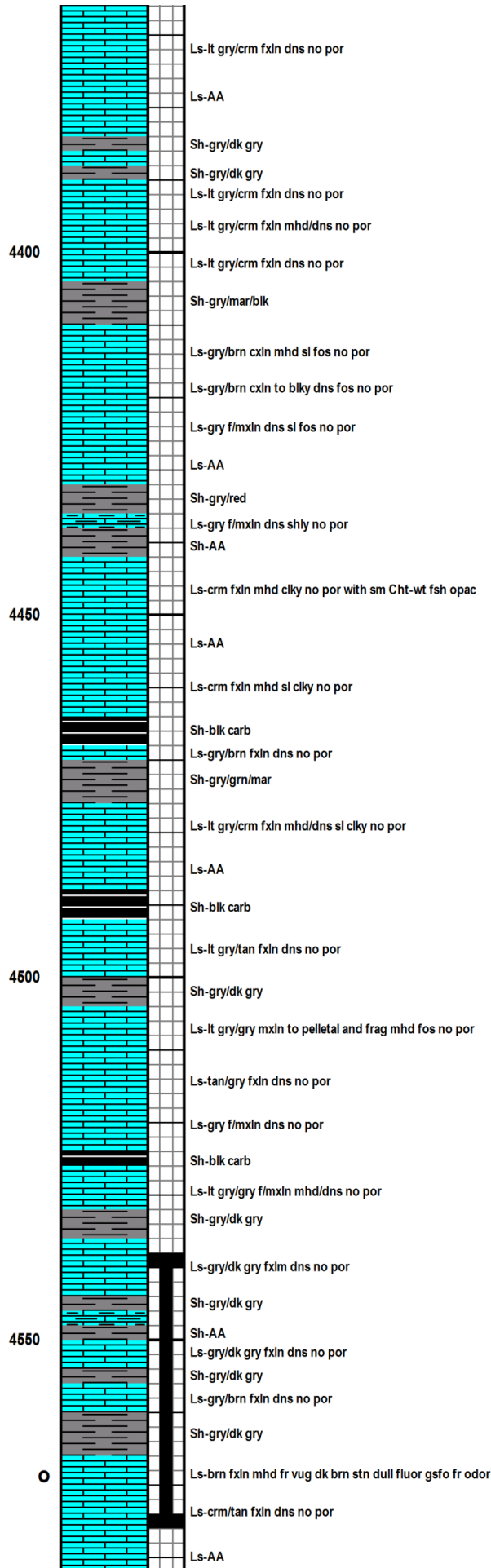
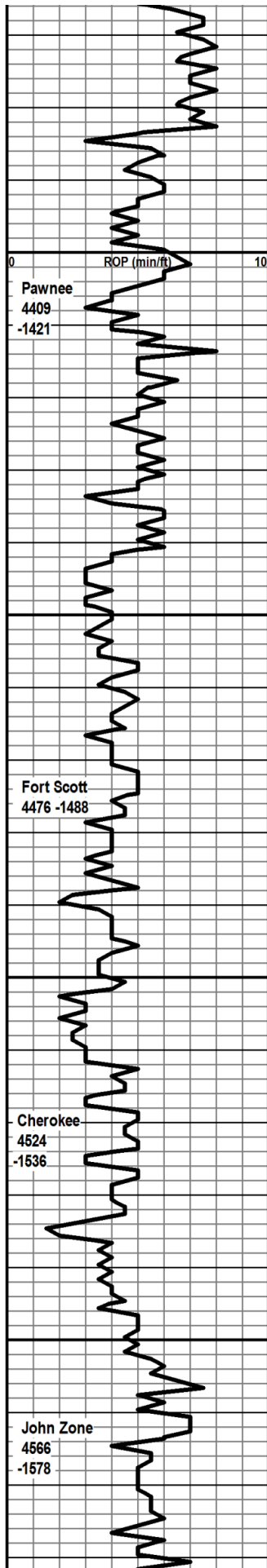
CFS at 4210' - 45"

DST No. 3 4226' to 4260'

CFS at 4232' - 45"

CFS at 4260' - 45"

Mud Data at 4260' at 6 a.m. on 4-3-11 Wt 9.3 Vis 58 WL 8 pH 10.5 Chlor 2500 YP 18

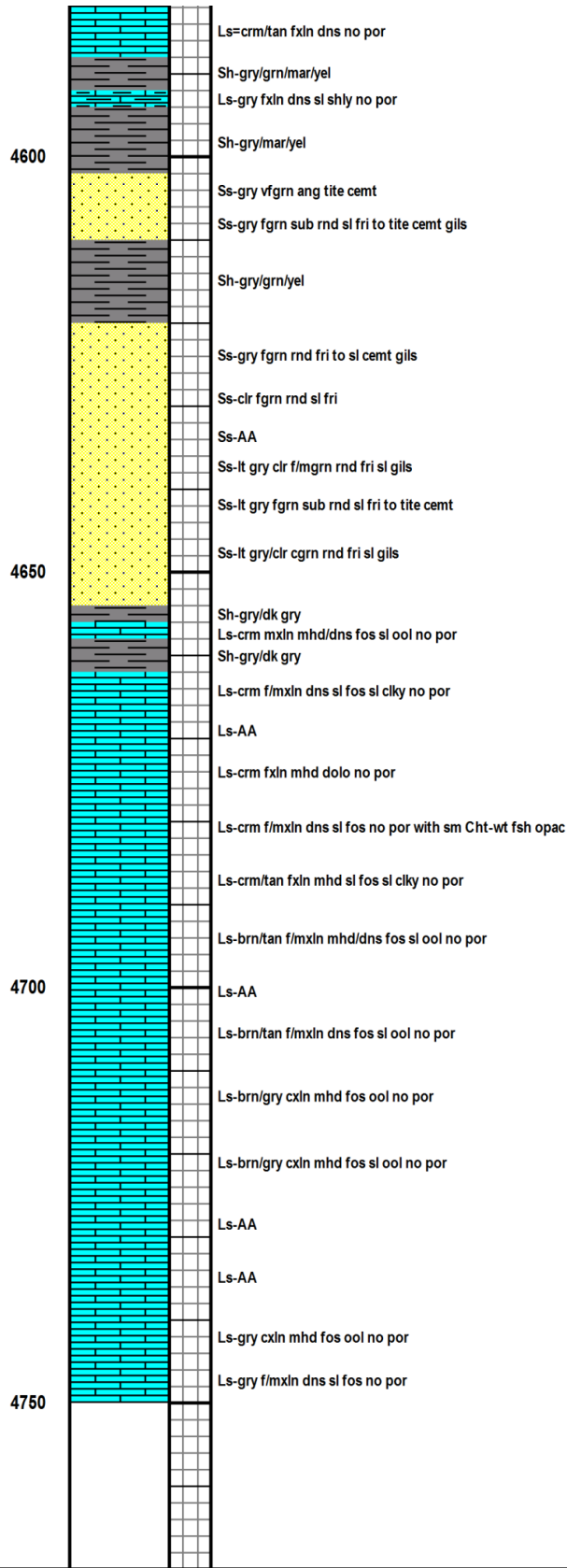
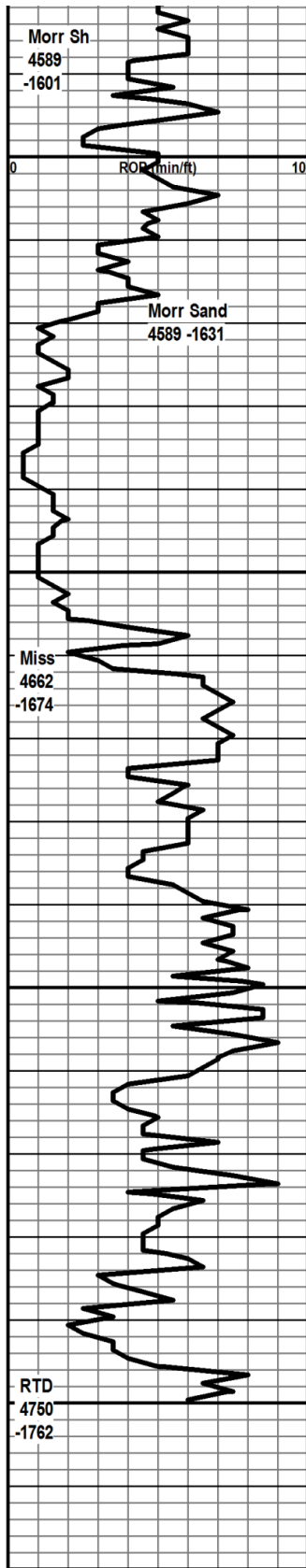


Mud Data at 4412' at 8:30  
a.m. on 4-4-11 Wt 9.4 Vis  
79 WL 7.2 pH 10.5 Chlor  
3000  
YP 26

DST No. 4  
4538' to 4575'

CFS at 4575' - 45"

Mud Data at 4575' at 8:30



a.m. on 4-5-11 Wt 9.7 Vis  
54 WL 10.4 pH 9 Chlor  
3500 YP 17

CFS at 4630' - 45"

Finished Drilling at 5:02  
a.m. on 4-6-11 Cir for Log  
- 90"

Finished logging at 12:05  
p.m. on 4-6-11