



KANSAS CORPORATION COMMISSION 1069919
OIL & GAS CONSERVATION DIVISION

Form ACO-1

June 2009

Form Must Be Typed
Form must be Signed
All blanks must be Filled

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: _____



1069919

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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Grand Mesa Operating Company
Well Name	DBY 3-16
Doc ID	1069919

Tops

Name	Top	Datum
Stone Corral	2398	+648
Bs/Stone Corral	2417	+629
Heebner	3948	-902
Lansing	3990	-944
Muncie Creek	4163	-1117
Stark	4253	-1207
Hushpuckney	4301	-1255
Marmaton	4374	-1328
Little Osage	4509	-1463
Morrow	4664	-1618
Mississippian	4727	-1681
LTD	4851	

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/>

Mark Sievers, Chairman
Ward Loyd, Commissioner
Thomas E. Wright, Commissioner

Sam Brownback, Governor

December 07, 2011

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

Re: ACO1
API 15-171-20851-00-00
DBY 3-16
SW/4 Sec.16-16S-33W
Scott 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. 036027

Federal Tax I.D.# 20-5975804

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

SERVICE POINT
Calley

DATE <i>10/27/0</i>	SEC. <i>16</i>	TWP. <i>16</i>	RANGE <i>33</i>	CALLED OUT	ON LOCATION	JOB START <i>10:30</i>	JOB FINISH <i>10:00p</i>
LEASE <i>DBY</i>	WELL# <i>3-16</i>	LOCATION <i>Scott Lake 3 1/2 W N W 1/4 Sec 16 T16 R33</i>			COUNTY <i>Scott</i>	STATE <i>Ks</i>	
OLD OR NEW (Circle one)		<i>into</i>					

CONTRACTOR <i>Martin 24</i>	OWNER <i>Same</i>
TYPE OF JOB <i>Surface</i>	
HOLE SIZE <i>12 1/4</i>	T.D.
CASING SIZE <i>8 5/8</i>	DEPTH <i>215</i>
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL	DEPTH
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT
CEMENT LEFT IN CSG. <i>15'</i>	
PERFS.	
DISPLACEMENT <i>12.74 BBL @ 0</i>	
EQUIPMENT	
PUMP TRUCK CEMENTER <i>Alan</i>	
# <i>402</i> HELPER <i>Wayne</i>	
BULK TRUCK	
# <i>404</i> DRIVER <i>Brandon-Tony</i>	
BULK TRUCK	
#	DRIVER

CEMENT AMOUNT ORDERED	<i>165 com 370cc</i>		
	<i>200gel</i>		
COMMON	<i>165</i>	@ <i>16.25</i>	<i>2681.25</i>
POZMIX		@	
GEL	<i>3</i>	@ <i>21.25</i>	<i>63.75</i>
CHLORIDE	<i>6</i>	@ <i>58.20</i>	<i>349.20</i>
ASC		@	
		@	
		@	
		@	
		@	
		@	
		@	
		@	
HANDLING	<i>104.50</i>	@ <i>2.25</i>	<i>391.50</i>
MILEAGE	<i>114.5K/mile</i>	@	<i>861.30</i>
TOTAL			<i>4397.00</i>

REMARKS:
Run Log, Circulate, Mix Cement
Displace Cement.

Cement Drill Circulate
J Hooker Alan Wayne

CHARGE TO: *Grand Mesa*
STREET _____
CITY _____ STATE _____ ZIP _____

SERVICE			
DEPTH OF JOB	<i>215'</i>		
PUMP TRUCK CHARGE			<i>1125.00</i>
EXTRA FOOTAGE		@	
MILEAGE	<i>45 x 2</i>	@ <i>7.00</i>	<i>630.00</i>
MANIFOLD		@	<i>200.00</i>
<i>Circulate</i>	<i>45 x 2</i>	@ <i>4.00</i>	<i>360.00</i>
		@	
TOTAL			<i>2615.00</i>

PLUG & FLOAT EQUIPMENT			
		@	
		@	
		@	
		@	
		@	
TOTAL			

To Allied Cementing Co., LLC.
You are hereby requested to rent cementing equipment and furnish cement 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.

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

PRINTED NAME *Anthony Martin*
SIGNATURE *Anthony Martin*



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Grand Mesa
1700 N Waterfront PKWY
BLDG 600 Wichita KS
67202-5514
ATTN: John Goldsmith

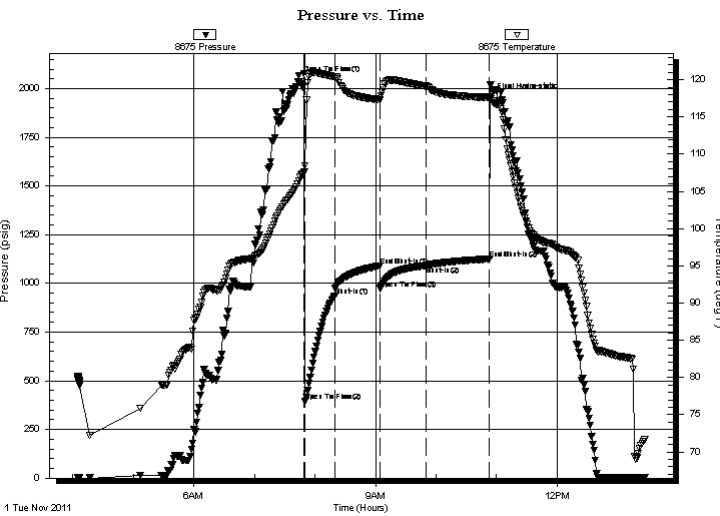
16-16s-33w
DBY 3-16
Job Ticket: 44340 **DST#: 1**
Test Start: 2011.11.01 @ 04:05:00

GENERAL INFORMATION:

Formation: **Kansas City "H"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 07:49:30
Time Test Ended: 13:27:15
Interval: **4148.00 ft (KB) To 4195.00 ft (KB) (TVD)**
Total Depth: 4195.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Initial)
Tester: Jace McKinney
Unit No: 46
Reference Elevations: 3046.00 ft (KB)
3041.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8675 Inside
Press @ Run Depth: 935.14 psig @ 4149.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.11.01 End Date: 2011.11.01 Last Calib.: 2011.11.01
Start Time: 04:05:01 End Time: 13:27:15 Time On Btm:
Time Off Btm: 2011.11.01 @ 10:53:15

TEST COMMENT: B.O.B. in 1 min.
Bled off for 5 min. No return blow
B.O.B. in 1 1/2 min.
Bled off for 5 min. No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2078.13	107.58	Open To Flow (1)
1	393.07	108.50	Open To Flow (2)
30	935.14	120.37	Shut-In(1)
75	1090.83	117.31	End Shut-In(1)
75	972.74	117.26	Open To Flow (3)
121	1091.75	119.13	Shut-In(2)
184	1125.09	117.61	End Shut-In(2)
184	1953.89	117.69	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
117.00	100% Water	0.58
1985.00	w cm 40%W 60%M Drop the bar	27.84
263.00	w cm 20%W 60%M	3.69

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Grand Mesa
1700 N Waterfront PKWY
BLDG 600 Wichita KS
67202-5514
ATTN: John Goldsmith

16-16s-33w
DBY 3-16
Job Ticket: 44340 **DST#: 1**
Test Start: 2011.11.01 @ 04:05:00

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: 62.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.79 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 4600.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
117.00	100% Water	0.575
1985.00	w cm 40%W 60%M Drop the bar	27.838
263.00	w cm 20%W 60%M	3.689

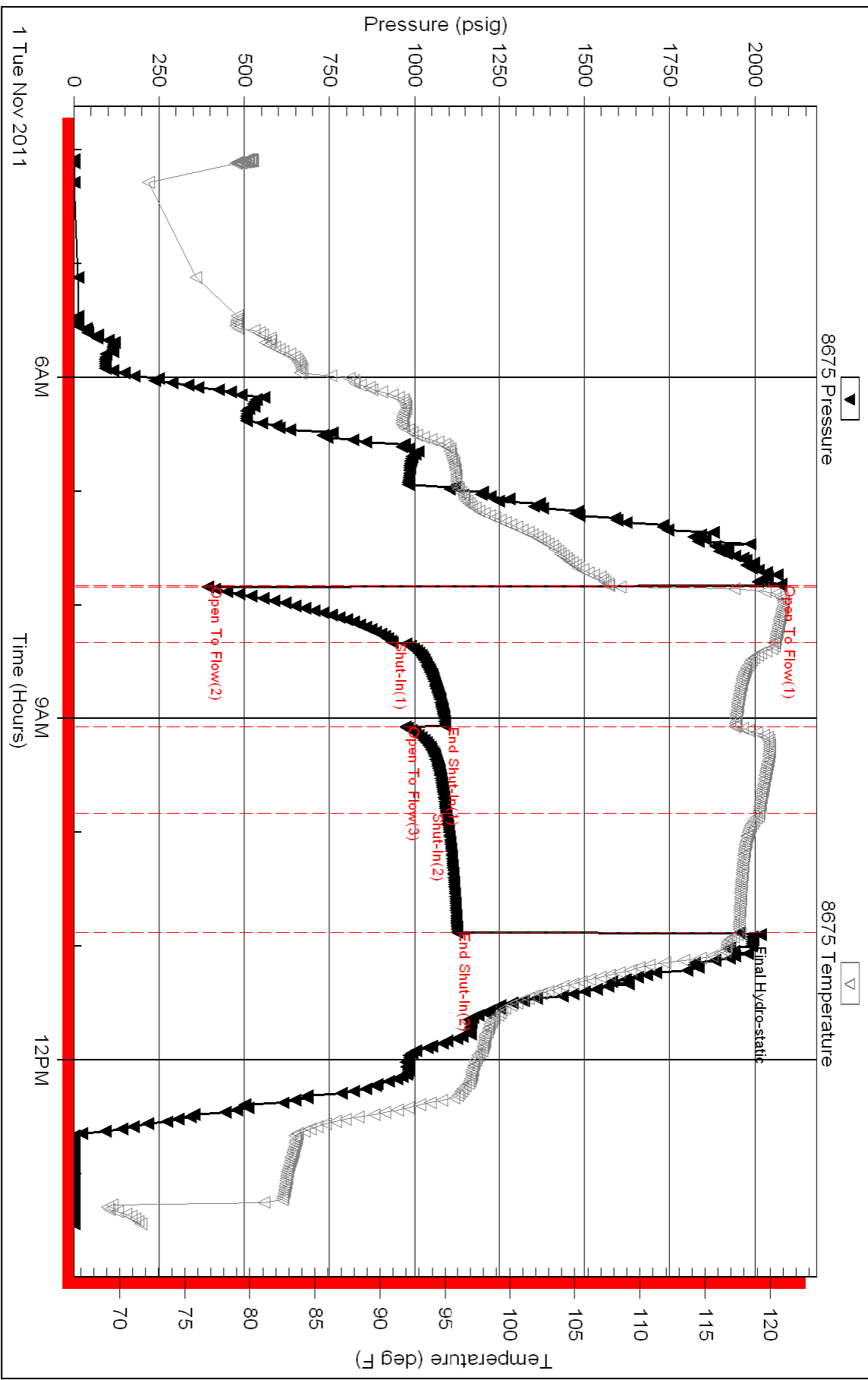
Total Length: 2365.00 ft Total Volume: 32.102 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: RW: .28 @ 60 F = 30,000

Pressure vs. Time





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Grand Mesa
1700 N Waterfront PKWY
BLDG 600 Wichita KS
67202-5514
ATTN: John Goldsmith

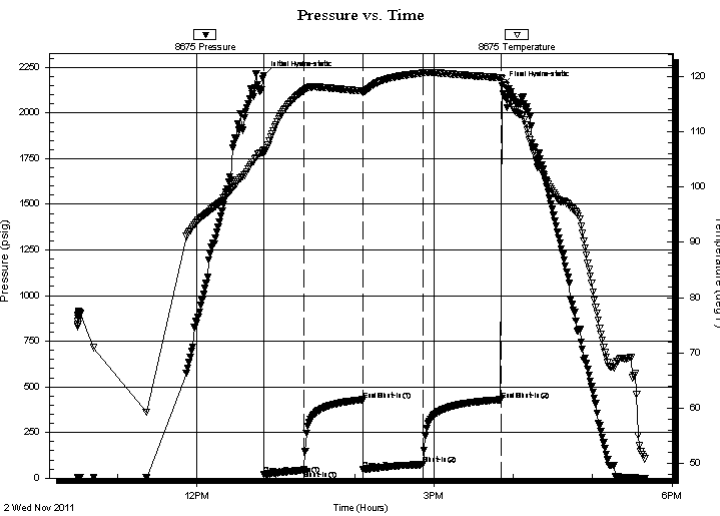
16-16s-33w
DBY 3-16
Job Ticket: 44341 **DST#: 2**
Test Start: 2011.11.02 @ 10:30:00

GENERAL INFORMATION:

Formation: **Pleasanton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 12:51:00
Time Test Ended: 17:40:00
Interval: 4336.00 ft (KB) To 4354.00 ft (KB) (TVD)
Total Depth: 4354.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 46
Reference Elevations: 3046.00 ft (KB)
3041.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8675 Inside
Press @ Run Depth: 74.08 psig @ 4337.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.11.02 End Date: 2011.11.02 Last Calib.: 2011.11.02
Start Time: 10:30:01 End Time: 17:40:00 Time On Btm: 2011.11.02 @ 12:50:45
Time Off Btm: 2011.11.02 @ 15:51:15

TEST COMMENT: Built to 2 1/2" blow
No return blow
Built to 1 1/2" blow
No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2203.87	106.65	Initial Hydro-static
1	20.03	105.99	Open To Flow (1)
31	43.69	117.38	Shut-In(1)
76	427.76	117.35	End Shut-In(1)
76	48.98	117.15	Open To Flow (2)
121	74.08	120.59	Shut-In(2)
180	429.23	119.77	End Shut-In(2)
181	2151.09	119.58	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
117.00	100% W w ith little oil scum	0.58

* Recovery from multiple tests

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Grand Mesa

16-16s-33w

1700 N Waterfront PKWY
BLDG 600 Wichita KS
67202-5514
ATTN: John Goldsmith

DBY 3-16

Job Ticket: 44341

DST#: 2

Test Start: 2011.11.02 @ 10:30:00

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:

40000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
117.00	100% W w ithlittle oil scum	0.575

Total Length: 117.00 ft Total Volume: 0.575 bbl

Num Fluid Samples: 0

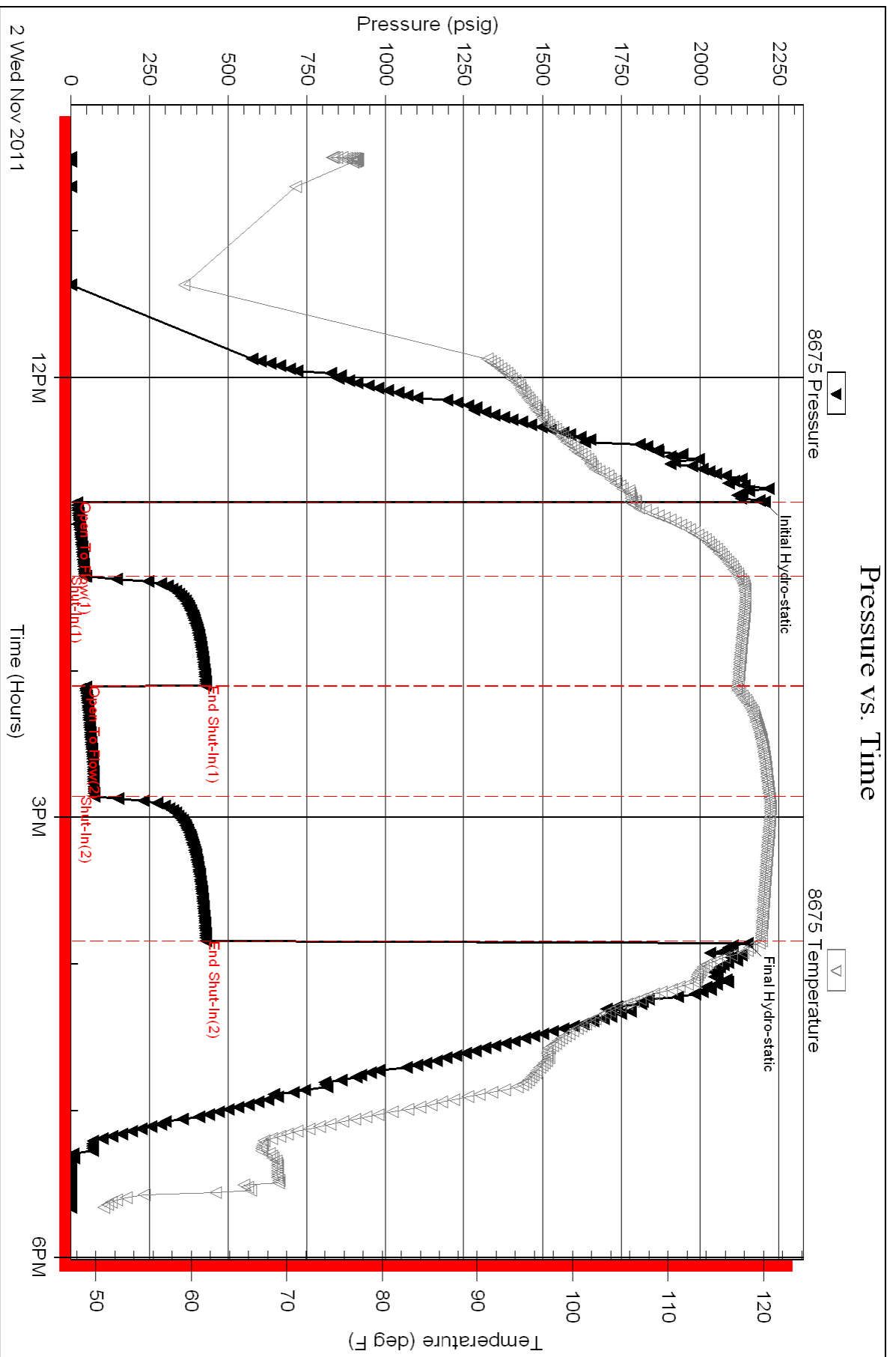
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .35 @ 40 F = 40,000





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Grand Mesa
 1700 N Waterfront PKWY
 BLDG 600 Wichita KS
 67202-5514
 ATTN: John Goldsmith

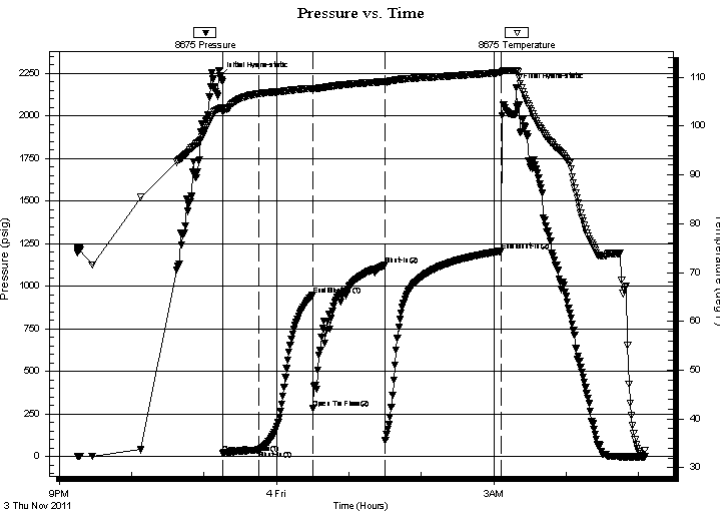
16-16s-33w
DBY 3-16
 Job Ticket: 44342 **DST#: 3**
 Test Start: 2011.11.03 @ 21:15:00

GENERAL INFORMATION:

Formation: **Marmaton/Lenapah**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 23:15:30
 Time Test Ended: 05:05:15
 Interval: **4350.00 ft (KB) To 4415.00 ft (KB) (TVD)**
 Total Depth: 4415.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Jace McKinney
 Unit No: 46
 Reference Elevations: 3046.00 ft (KB)
 3041.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8675 Inside
 Press @ Run Depth: 1124.54 psig @ 4351.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.11.03 End Date: 2011.11.04 Last Calib.: 2011.11.04
 Start Time: 21:15:01 End Time: 05:05:15 Time On Btm: 2011.11.03 @ 23:12:45
 Time Off Btm: 2011.11.04 @ 03:19:00

TEST COMMENT: Built to 6" blow
 Built to 1/2" return blow
 Built to 1" blow
 Built to 1/4" return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2232.72	103.58	Initial Hydro-static
3	21.00	102.92	Open To Flow (1)
33	38.15	106.61	Shut-In(1)
78	950.56	107.73	End Shut-In(1)
78	282.07	107.35	Open To Flow (2)
137	1124.54	109.10	Shut-In(2)
234	1206.39	110.92	End Shut-In(2)
247	2166.54	111.40	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	ocm 20%O 80%M	0.10
60.00	gcom 10%G 20%O 70%M	0.30

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Grand Mesa

16-16s-33w

1700 N Waterfront PKWY
BLDG 600 Wichita KS
67202-5514
ATTN: John Goldsmith

DBY 3-16

Job Ticket: 44342

DST#: 3

Test Start: 2011.11.03 @ 21:15:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 63.00 sec/qt

Water Loss: 8.79 in³

Resistivity: 0.00 ohm.m

Salinity: 7000.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

Water Salinity: deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	ocm 20%O 80%M	0.098
60.00	gcom 10%G 20%O 70%M	0.295

Total Length: 80.00 ft Total Volume: 0.393 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8675

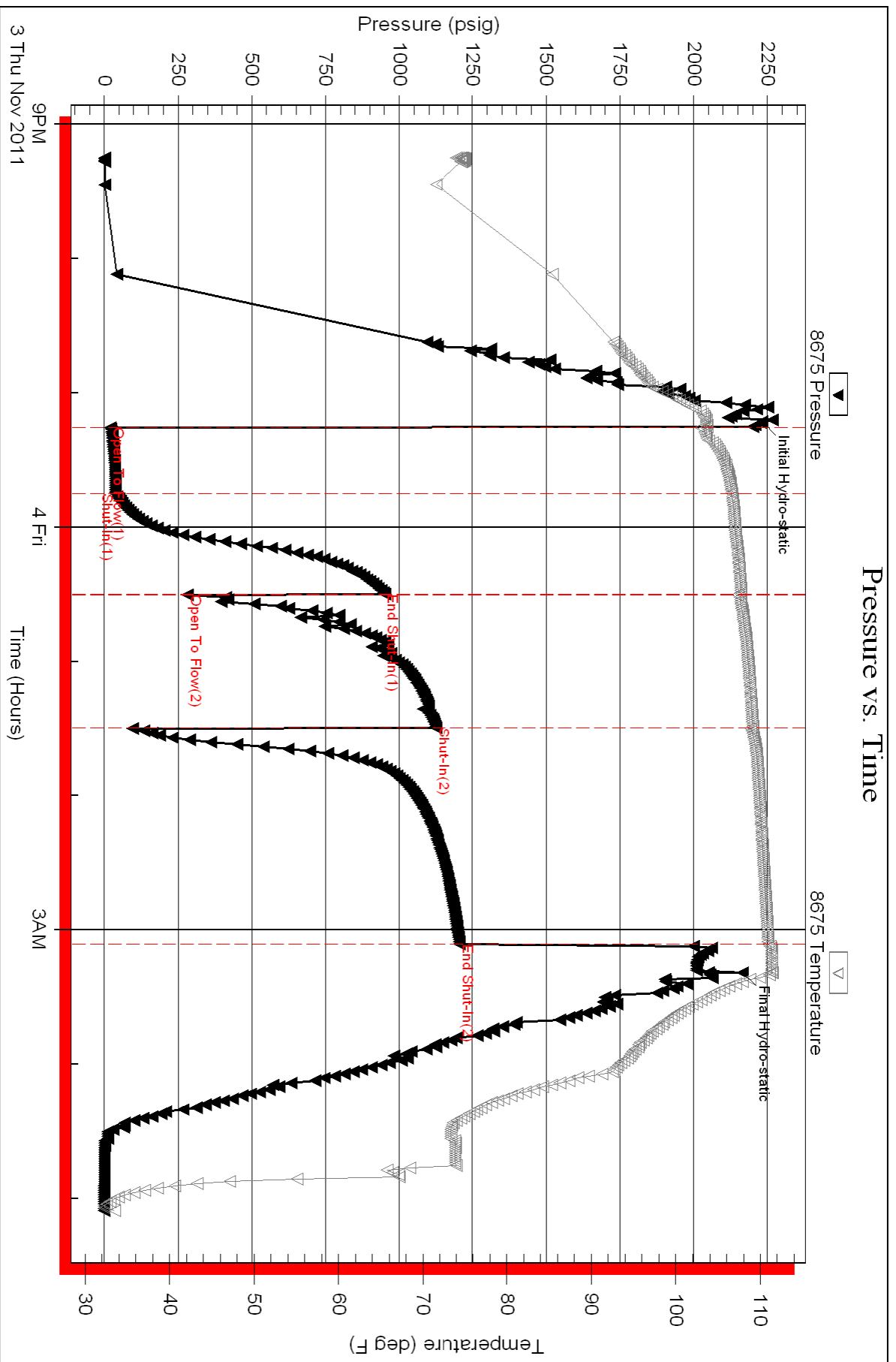
Inside

Grand Mesa

DBY 3-16

DST Test Number: 3

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 44342

Printed: 2011.11.04 @ 09:47:25



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Grand Mesa
1700 N Waterfront PKWY
BLDG 600 Wichita KS
67202-5514
ATTN: John Goldsmith

16-16s-33w
DBY 3-16
Job Ticket: 44343 **DST#: 4**
Test Start: 2011.11.04 @ 14:50:00

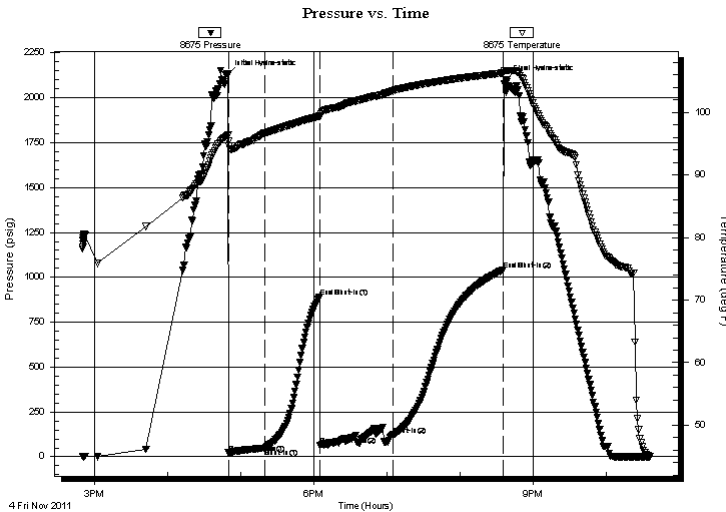
GENERAL INFORMATION:

Formation: **Altamont/Lenapah**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:49:30
Time Test Ended: 22:35:30
Interval: **4350.00 ft (KB) To 4438.00 ft (KB) (TVD)**
Total Depth: 4438.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 46
Reference Elevations: 3046.00 ft (KB)
3041.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8675 Inside
Press @ Run Depth: 122.35 psig @ 4351.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.11.04 End Date: 2011.11.04 Last Calib.: 2011.11.04
Start Time: 14:50:01 End Time: 22:35:30 Time On Btm: 2011.11.04 @ 16:49:15
Time Off Btm: 2011.11.04 @ 20:37:45

TEST COMMENT: Built to 3" blow
Built to weak surface return blow
Built to 2" blow
No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2132.40	96.36	Initial Hydro-static
1	22.05	95.38	Open To Flow (1)
30	49.19	96.71	Shut-In(1)
76	890.30	99.43	End Shut-In(1)
76	62.92	99.43	Open To Flow (2)
136	122.35	103.46	Shut-In(2)
226	1042.91	106.30	End Shut-In(2)
229	2099.49	106.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	ocm 5%O 95%M	0.61

* Recovery from multiple tests

Gas Rates

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



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Grand Mesa
1700 N Waterfront PKWY
BLDG 600 Wichita KS
67202-5514
ATTN: John Goldsmith

16-16s-33w
DBY 3-16
Job Ticket: 44343 **DST#: 4**
Test Start: 2011.11.04 @ 14:50:00

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: 74.00 sec/qt	Cushion Volume: bbl		
Water Loss: 11.19 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 8800.00 ppm			
Filter Cake: 1.00 inches			

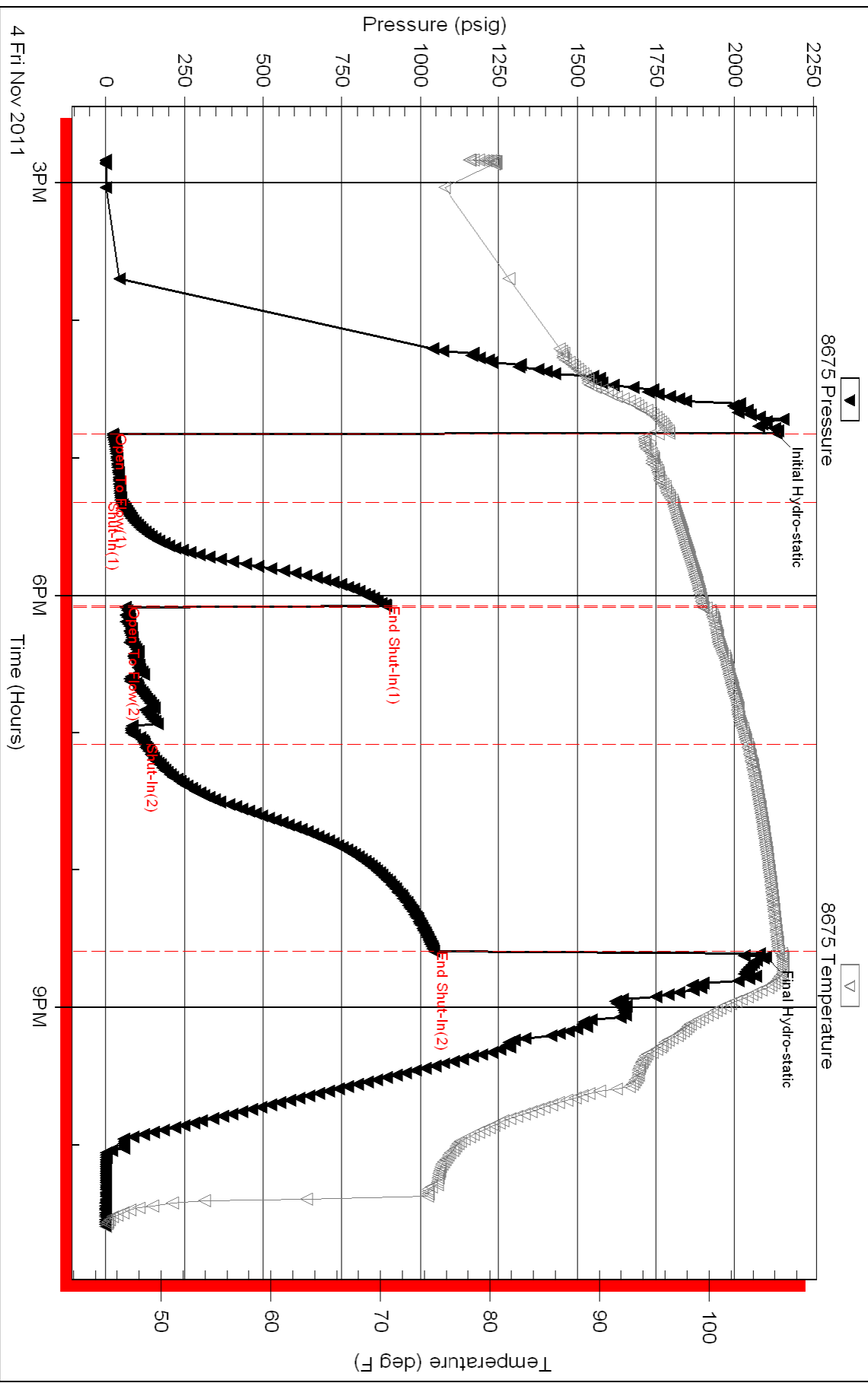
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	ocm 5%O 95%M	0.611

Total Length: 120.00 ft Total Volume: 0.611 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Pressure vs. Time



4 Fri Nov 2011



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Grand Mesa
1700 N Waterfront PKWY
BLDG 600 Wichita KS
67202-5514
ATTN: John Goldsmith

16-16s-33w
DBY 3-16
Job Ticket: 44344 **DST#: 5**
Test Start: 2011.11.06 @ 02:00:00

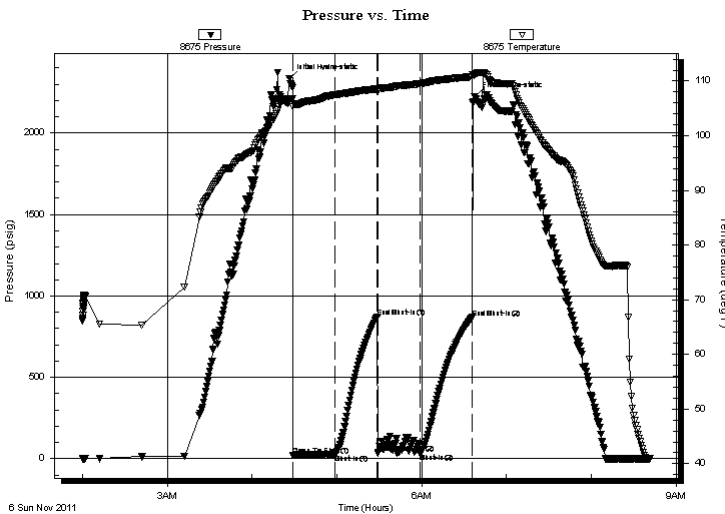
GENERAL INFORMATION:

Formation: **Johnson/Atoka**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:28:45
Time Test Ended: 08:41:45
Interval: **4554.00 ft (KB) To 4674.00 ft (KB) (TVD)**
Total Depth: 4674.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Jace McKinney
Unit No: 46
Reference Elevations: 3046.00 ft (KB)
3041.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8675 Inside
Press @ RunDepth: 34.28 psig @ 4555.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2011.11.06 End Date: 2011.11.06 Last Calib.: 2011.11.06
Start Time: 02:00:01 End Time: 08:41:45 Time On Btm: 2011.11.06 @ 04:26:15
Time Off Btm: 2011.11.06 @ 06:37:45

TEST COMMENT: Built to 1" blow
No return blow
No blow
No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2333.08	106.79	Initial Hydro-static
3	23.16	105.29	Open To Flow (1)
33	27.79	107.48	Shut-In(1)
63	872.57	108.58	End Shut-In(1)
63	32.48	108.16	Open To Flow (2)
93	34.28	109.49	Shut-In(2)
130	867.07	110.79	End Shut-In(2)
132	2223.61	111.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	100% Mud	0.02

* Recovery from multiple tests

Gas Rates

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



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Grand Mesa

16-16s-33w

1700 N Waterfront PKWY
BLDG 600 Wichita KS
67202-5514
ATTN: John Goldsmith

DBY 3-16

Job Ticket: 44344

DST#: 5

Test Start: 2011.11.06 @ 02:00:00

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: 7.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 7700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	100% Mud	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

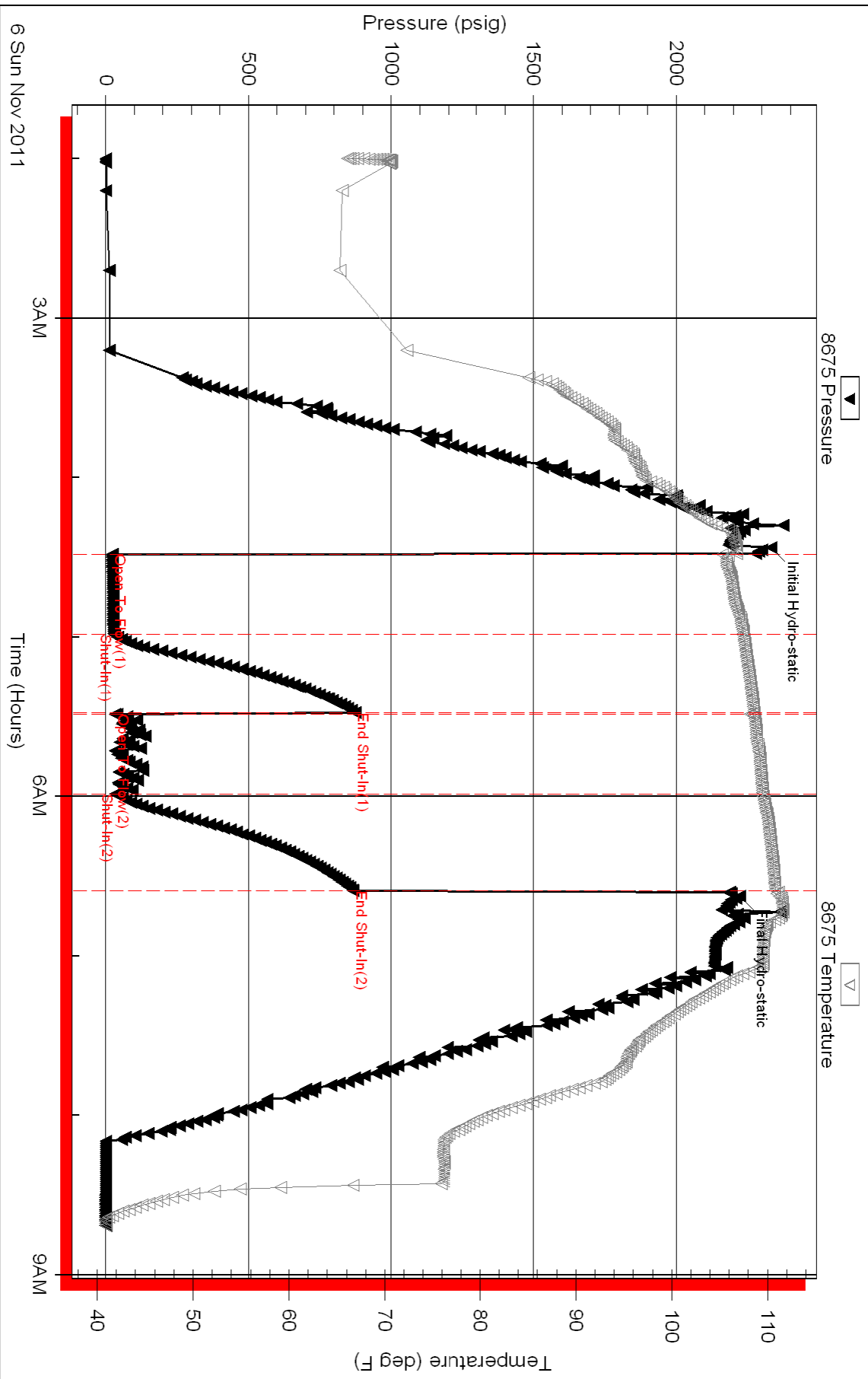
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



GRAND MESA

OPERATING COMPANY

(316) 265-3000
FAX: (316) 265-3455

1700 N. WATERFRONT PARKWAY
BLDG. 600
WICHITA, KANSAS 67208-5514

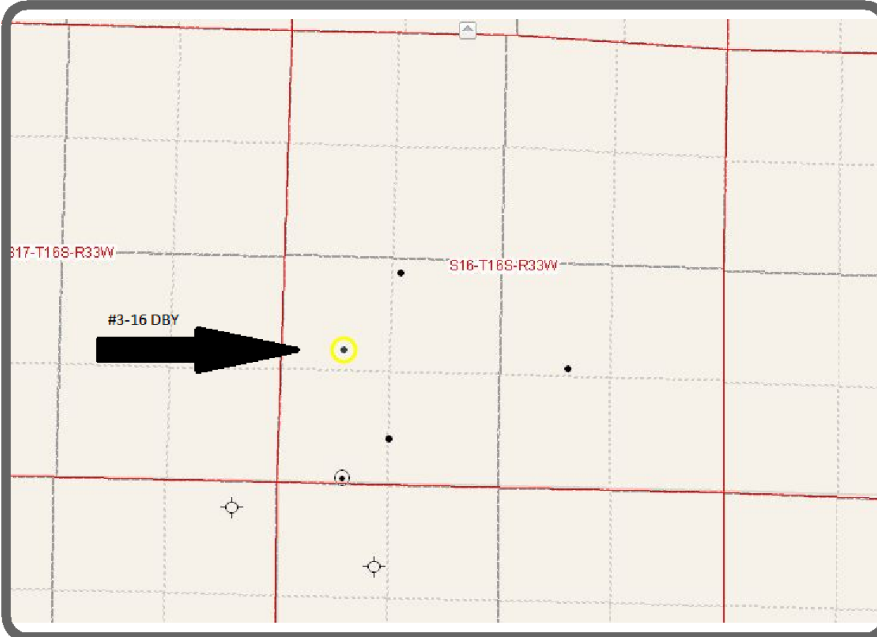
Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: #3-16 DBY
Location: 1548' FSL, 751' FWL, 16-16s-33w, Scott County, Kansas
License Number: API: 15-171-20851 Region: Scott County
Spud Date: 10/27/2011 Drilling Completed: 11/07/2011
Surface Coordinates: Lat: 38.6603741
Long: -100.9781931
Bottom Hole Vertical hole
Coordinates:
Ground Elevation (ft): 3041' K.B. Elevation (ft): 3046'
Logged Interval (ft): 3600' To: RTD Total Depth (ft): 4852'
Formation: Mississippian at RTD
Type of Drilling Fluid: Chemical

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

GEOLOGIST

Name: John Goldsmith
Company: John Goldsmith Wellsite Service
Address: 322 Greenwood Ct.
Cheney, KS 67025
316-640-0236

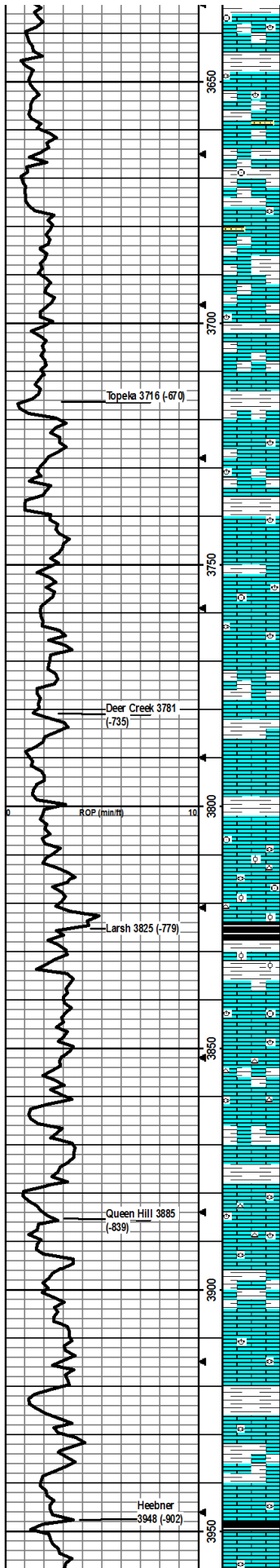


COMMENTS

Contractor: Murfin Drilling Company Rig #24
Pusher: Tony Martin
Surface Casing: 8 5/8" set at 205'
Production Casing: No production casing installed, well was plugged.
Mud by: MudCo
DST's by: Tribolite Testing
Logs by: Weatherford (DIL, CN-CD, ML)
RTD=4850'
LTD=4852'

FORMATION TOPS

FORMATION	SAMPLE TOPS		LOG TOPS	
	Depth	Datum	Depth	Datum
Queen Hill	3885'	-839	3884'	-838
Heebner Shale	3948'	-902	3947'	-901



LS: gry/lt tan, fn xln, foss var/frags, sm chky, tr-nvp, fw SH gry/red, silty, easy med crush, no cup odr, ns.

LS: lt tan/gry, fn xln, foss crin/var/frags, sm chky, tr-nvp, fw SH: gry/grn, fissile, med crush, no cup odr, ns.

LS: crm/lt tan/fw gry, micro-fn xln, foss crin/fuss/var, dense, fw chky, tr-nvp, fw SS: gry/grn, fn-fn grn, arg, tr-nvp, no cup odr, ns.

LS: lt tan/sm gry/sm crm, fw mott, fn-crs xln, foss var, hard, tr-nvp, sm SH: gry-grn/brn, silty, soft, fw fissile, no cup odr, ns.

LS: lt tan/gry, fw mott, fn xln, sm var foss, hard, tr-nvp, sm SH: gry-grn, silty, fissile, med crush, fw SS: brn, fn-med grn, sub rnd, fr sorting, sil cem, tr intgrn por, no cup odr, ns.

LS: gry/lt tan, fw mott, fn xln, dense, hard, tr-nvp, fw SH: gry-grn, silty, med crush.

LS: gry/lt tan, micro-fn xln, fw foss var, dense, hard, tr-nvp, no cup odr, ns.

LS: gry, fn xln, dense, hard, tr-nvp, sm SH: gry, silty, soft, no cup odr, ns.

Much of the same as above, sm LS: lt tan, micro-fn xln, foss frags/var, sm chalky, dense, tr-nvp, no cup odr, ns.

LS: lt tan, micro-fn xln, dense, hard, tr-nvp, sm LS: gry, mott, med xln, dense, hard, tr-nvp, no cup odr, ns.

LS: lt tan/gry, fn xln, fw foss, dense, hard, fw chky, tr-nvp, sm SH: gry, silty, med crush, no cup odr, ns.

LS: lt tan/gry, micro-fn xln, fw foss brach/frags, fw ool, dense, hard, fw chky pcs, tr-nvp, fw SH: gry, silty, fissile, med crush, no cup odr, ns.

LS: lt tan, micro-fn xln, foss crin/brach/fuss, dense, hard, fw chky pcs, tr-nvp, sm SH: brn/drk gry/blk, silty, fissile, sm carb, med crush, no cup odr, ns.

LS: crm/lt tan, micro-fn xln, sm chky, dense, tr-nvp, sm SH: gry/blk, silty, fissile, sm carb, med crush, no cup odr, ns.

LS: crm/lt tan, fw gry mott, micro-fn xln, sm chky, dense, tr-nvp, fw SH: gry, silty, soft, no cup odr, ns.

LS: lt tan/gry, sm mott, fn-med xln, fw chky, dense, hard, tr-nvp, fw SH: gry/grn, fissile, silty, med crush, no cup odr, ns.

LS: lt tan, fn xln, fw foss, sm chky, dense, tr-nvp, sm SH: gry/drk gry/grn, sm fissile, med crush, no cup odr, ns.

LS: lt tan/gry, fn-med xln, sm foss fuss/crin/frags, fw chky, dense, hard, tr-nvp, fw SH: gry/grn, fissile, silty, med crush, no cup odr, ns.

LS: lt tan/gry, fn xln, fw var foss, dense, hard, tr-nvp, fw Chert gry, sm SH: gry, silty, med crush, no cup odr, ns.

LS: crm/lt tan/sm gry, fn-med xln, foss brach/frags, fw ool, dense, brittle, tr-nvp, sm SH: gry/grn/blk, silty, fissile, fw carb, med crush, no cup odr, ns.

LS: lt tan/gry, fn xln, foss/ brach/crin/var, dense, brittle, fw chky, tr-nvp, fw drk min stains, does not fluor, does not out, sm SH: gry/grn, fissile, silty, no cup odr, nsfo.

LS: crm/lt tan, fn-med xln, foss brach/var/frags, silty, tr infoss por, fw chky, sm SH: gry, silty, no cup odr, ns.

LS: crm/lt tan, fn-med xln, foss brach/frags, dense, brittle, tr infoss por, fw chky, fw Chert: gry, fw SH: gry/red, silty, easy-med crush, no cup odr, ns.

LS: crm/lt tan/fw gry, fw mott, fn-med xln, sm foss, dense, hard, tr-nvp, abund SH: gry/grn/red, silty, sm fissile, easy-med crush, no cup odr, ns.

LS: lt tan, fn-med xln, foss brach/crin/var, dense brittle, sm silty/grainy, tr intxn por, sm SH: gry/grn, silty, soft, no cup odr, ns.

LS: lt grn/tan, fn-med xln, foss brach/fuss/frags, hard, tr-nvp, fw Chert: gry, foss, no cup odr, ns.

LS: crm/lt tan, fn-med xln, foss brach/frags, hard, sm brittle, tr-nvp, sm SH: gry, silty, med crush, no cup odr, ns.

LS: lt tan/gry, fn xln, fw foss frags, dense, hard, tr-nvp, no cup odr, ns.

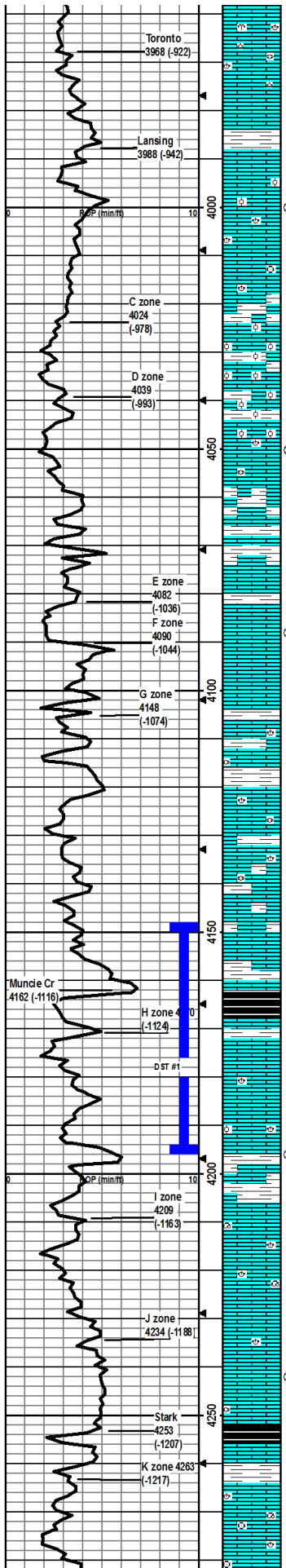
LS: lt tan/gry, fn xln, fw foss frags, dense, sm hard, tr-nvp, abund SH: gry/grn, silty, fissile, med crush, no cup odr, ns.

LS: gry/lt tan, fn-med xln, fw foss frags, hard, tr-nvp, abund SH: gry/grn, silty, fissile, med crush, no cup odr, ns.

LS: crm/lt tan, micro-fn xln, foss frags, sm hard, tr-nvp, sm SH: gry/grn, silty, fissile, no cup odr, ns.

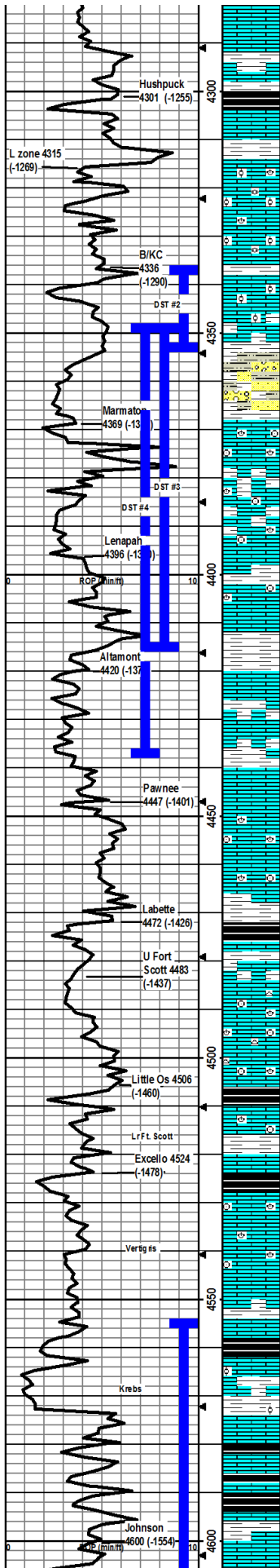
LS: crm/lt tan, fn xln, fw foss frags, tr-nvp, sm SH: gry/grn, silty, fissile, no cup odr, ns.

LS: crm/lt tan, fn xln, silty, foss fuss/frags, tr infoss por, abund SH: gry/blk/red-brn, fw carb, silty, fissile, med crush, no cup odr, ns.



LS: crm/lt tan, fn xin, foss, tr infoss por, abund SH gry/red-brn, silty, fissile, med crush, no cup odr, ns.
 LS: crm/lt tan, micro-fn xin, foss brach/frags, dense, sm chky, fr ppt-inbln/rare infoss/fw vug por, fw pcs dul yel fluor, stream cut pal blu, slight cup odr, ssfo, fw Chert: wht, opaque
 LS: crm/lt tan, micro-fn xin, fw foss brach/frags, sm ool, dense, sm chky, fr ppt-inbln/rare inbol/rare vug por, dul yel fluor, stream cut pal blu, slight cup odr, ssfo.
 LS: lt tan, micro-fn xin, fw foss, sm ool, sm 2nd rxin, dense, fr ppt-inbln por in 2nd rxin, fr inbol por, rare vug por, dul yel fluor, stream cut pal blu, slight cup odr, frsfo.
 LS: lt tan, fn xin, foss brach/gas/frags, dense, med crush, tr inbln por, sm Chert: wht, opaque, foss, sm SH: gry, silty, soft, no cup odr, ns.
 LS: crm/lt tan, micro-fn xin, fw foss frags, dense, 2-3 pcs w/ rare vug por, scat dul yel fluor, cut pal blu, sm Chert: wht, opaque, fw SH: gry, silty, soft, no cup odr, vssfo.
 LS: crm/lt tan, micro-fn xin, fw foss frags, dense, sm SH: gry/grn/brn, silty, fssile, soft, no cup odr ns.
 LS: crm/lt tan, micro-fn xin, profus foss/ool, dense, brittle, ppt inbln/fr inool por, dul yel/gold fluor, stream cut pal blu, fr-gd cup odr, gd sfo in svl pcs/try.
 30" smpl much of the same as above, sm chky, only 3-4 pcs/try, sm SH: gry, silty, fissile, soft, 60" smpl only 2-3 pcs/try, abund of SH: gry, silty, fssile, soft.
 LS: crm/lt tan, micro-fn xin, fw foss frags, dense, hard, tr-nvp, abund SH: gry/grn/brn, silty, sm fssile easy-med crush, no cup odr, ns.
 LS: lt tan, fn xin, fw foss frags, dense, scat fr inbln por in 2nd rxin facies, dul yel fluor, stream cut pal blu, ssfo, fnt cup odr, sm SH: gry/grn/red-brn, silty, med crush.
 LS: fw pcs much of the same as above, probably from uphole, mostly SH: gry/grn/red-brn, silty, fissile, med crush, 1-2 LS: crm/lt tan, dense, sm 2nd rxin, fr inbln por in 2nd rxin facies, scat dul yel fluor, stream cut pal blu, v slight cup odr, ssfo.
 LS: lt tan, micro-fn xin, dense, sm 2nd rxin in vugs, pr-fr vug por, dul yel fluor, stream cut pal blue, v slight cup odr, ssfo.
 LS: lt tan, micro xin, dense, fr inbln por, dul yel fluor, stream cut pal blu, v slight cup odr, fr sfo, abund SH: gry/grn, silty, fissile, med crush.
 LS: lt tan, micro-fn xin, foss brach/var, dense brittle, fw dhly, tr inbln por, fw Chert: gry, foss, abund SH: gry/red-brn, silty, med crush, no cup odr, ns.
 SH: gry/grn/red-brn, silty, mostly soft, fw med crush.
 LS: lt tan/gry, micro-fn xin, fw foss frags, fw ool, dense hard, tr-nvp, abund SH: gry/red-brn, silty, fssile med crush, no cup odr, ns.
 LS: lt tan, micro-fn xin, fw foss, dense, tr inbln por, v slight cup odr, scat dul yel fluor, cut pal blu, vssfo, abund SH: gry/red-brn, silty, soft, no cup odr, ns.
 LS: crm/lt tan, fn xin, dense, brittle, tr ppt-inbln por, sm grainy, sm chky, abund SH: gry/grn/red-brn, silty, soft, no cup odr, ns.
 LS: crm/lt tan, micro xin, dense, brittle, tr-nvp, fw LS: lt tan, fn xin, dense, foss, tr inbln por, med crush, sm Chert gry, abund SH: gry/red-brn/grn, silty, soft, no cup odr, ns.
 SH: gry/red-brn/fw blk, silty, soft, sm carb w/ med crush, LS: lt tan, fn xin, fr inbln/rare small vug por, slight cup odr, scat dul yel fluor, stream cut pal blu, ssfo 2-3 pcs/try, most likely from the top of "H" zone.
 LS: lt tan/gry, fn xin, gd intxln/scat vug por, v slight cup odr, dul yel fluor, stream cut pal blu, fr sfo, 6-8 pcs/try, abund SH: gry/grn/red-brn, silty, soft fw pcs med crush.
 LS: lt tan, gry, fn xin, fw foss, sm chky, gd inbln/scat vug por, fr cup odr, dul yel fluor, stream cut pal blu, fr-gd sfo, svl pcs/try, sm SH: gry/red-brn, silty, soft fw med crush, 60" sm pl had less show, 6-8 pcs/try, slight cup odr.
 LS: lt tan/gry, fn-med xin, sm chky, dense, sm hard, tr-nvp, abund SH: gry/grn/red-brn, silty, easy-med crush, no cup odr, ns.
 LS: lt tan/gry, fn-med xin, fw foss frags, fw chky, sm grainy, dense, tr-nvp, abund SH: gry/red, silty, med crush, no cup odr, ns.
 LS: crm/lt tan, micro-fn xin, foss gast/brach/frags, dense, brittle, gd inbln/intfoss por, gd sfo 8-10 pcs/try, dul yel fluor, stream cut pal blu, fr cup odr, fw SH: gry/red, silty, med crush.
 30" smpl, LS: crm/lt tan, micro-fn xin, foss brach/var, dense brittle, gd-inbln/spotty vug por, gd sfo, dul yel fluor, stream cut pal blu, slight cup odr, fw SH: gry/red, silty.
 60" smpl, LS: crm/lt tan, micro-fn xin, fw foss, dense, brittle, tr-nvp, fw pcs 2-3/try, of LS: w/ gd intxln/spotty vug por, w/ gd sfo.
 LS: lt tan/gry, fn xin, sm foss frags, dense, brittle fr inbln/intfoss por, v slight cup odr, dul yel fluor, cut pal blu, ssfo, maybe be from up hole, fw SH: gry/red, silty, soft, no cup odr, ns.
 LS: lt tan, fn-med xin, fw micro xin, sm chky, brittle, mostly hard, fr inbln por, slight cup odr, dul yel fluor, cut pal blu, ssfo, sm SH: gry/red-brn, silty, sm carb, med crush.
 LS: lt tan, micro-fn xin, foss brach/crin/gast, fw ool, sm chky, brittle, sm hard, fr inbln/vug por, faint cup odr, scat dul yel fluor, cut pal blu, ssfo, 5-6 pcs/try, sm SH: gry/grn/red-brn, silty, med crush, fw easy crush, sm fissile.

CFS @ 4000' 30"60"
 Mudco Check #4 @ 4009' 1031/118:45am wt vis pH chl 9.0 62 10.5 4600 Filt LCM 6.8 2
 CFS @ 4050' 30"
 CFS @ 4088' 30"60"
DST1) 4148-4195
 30454500
 1st) BOB in 1"
 2nd) BOB in 1.5"
 IFP 333-935#
 ISIP 1091#
 FFP 973-1092#
 F SP 11 25#
 HP 2078-1954#
 Recvd: 2248' WCM, 117' Water
 Mudco Check #5 @ 4195' 11/11/11 11:20am wt vis pH chl 9.4 55 9.5 5200 Filt LCM 8.0 2
 CFS @ 4195' 30"60"
 CFS @ 4241' 30"60"



LS: lt tan/gry, fn-med xln, dense hard, fw chly, tr intxn por, fw Chert gry, opaque, sm SH gry/grn/red, silty, soft, no cup odr, ns.

SH: gry/grn/red/blk, silty, soft, fw carb, fssile med crush, LS: crm/gry, micro xln, foss brach/fuss/var, dense, brittle, sm hard, fw chly, tr-nvp, no cup odr, ns.

LS: lt tan, micro xln, fw foss crin/brach/frags, dense, mostly uniform, tr-fr intxn por/rare gd intfoss por, scat dul yel fluor, cut pal blu, fr-gd cup odr, vsfo, SH: blk/brn/gry, silty, fissile, med crush.

LS: crm/lt tan, micro-fn xln, foss brach/arin/var, sm ool, sm dense, sm chly, brittle, mostly uniform, tr-nvp, gd-strg cup odr, sm LS: lt tan, micro-fn xln, foss brach/arin/var, sm ool, dense, brittle pr intxn por/rare gd intfoss-ool por, dul yel fluor, stream cut pal blu, fr sfo.

LS: gry/lt brn, micro-fn xln, fw foss, fw ool, mostly dense, mostly hard, sm chly, sm brittle, tr-nvp, fw pcs 3-4/try, gd intfoss-ool por w/ gd sfo, most likely from above, slight cup odr.

LS: crm/lt tan, fn xln, dense, fw foss/ool, sm LS: fn-med xln, fr intxn por/fw fr intfoss/ool por, drk stns in oolcasts, fr sfo on break dul yel fluor, stream cut pal blu, fr cup odr, svrl pcs/try w/ sho in stop & 30" smpl, less in 60" w/ fr sfo.

SHStn: blu/gray/brn, vry fn grn, soft, sm waxy, abund SH gry/red, waxy, silty, soft, sm SS: blu/gry, vry fn grn, arg, cal cem, tr-nvp, no cup odr, ns.

Much as the same as above, abund blu/gry SS, sm LS: crm/lt tan, fn xln, foss crin/brach/frags, sm dense, sm brittle, sm fr intxn por, dul yel fluor, stream cut pal blu, sfo, 4-6 pcs/try, fr cup odr (got stuck at 4354' odr in part due to oil being pumped down hole).

LS: crm/lt tan, fn-med xln, foss brach/arin/frags, dense, hard, fw chly, tr intxn por, 1-2 pos/try w/ vsfo, scat dul yel fluor, cut pal blu, fw SH: gry/red, silty, med crush.

LS: lt crm/lt tan, fn xln, foss crin/frags, dense, hard, fw chly, tr-pr intxn, scat dul yel fluor, slow cut pal blu, vsfo, 3-4 pos/try, slight cup odr, sm SH: gry, silty, sm waxy, med crush.

LS: lt tan, fn-med fw crs xln, foss brach/fuss/frags, fw ool, fr intxn/fw intfoss/ool por, sm dense dul yel fluor, cut pal blu, sm gas bub on brk, sm drk dead oil does not brk out of por, vsfo, sm SH: gry/brn/red, silty, med crush, fw pcs of f sfo in 30" smpl, fw more intfoss/ool por pcs, fw pcs 3-4 in 60" smpl, mostly LS: gry, fn xln, dense, hard, tr-nvp.

SH: gry/grn/brn/org, silty, fssile med crush.

LS: lt tan, fn-med fw crs xln, foss crin/frags, mostly dense, fw chly, sm flakey, mostly hard, scat fr intxn por, dul yel fluor, cut pal blu, vsfo, sm drk dead oil does not brk out of por well, slight cup odr.

LS: crm/lt tan, micro-fn xln, dense, brittle, easy-med crush, fr ppt intxn por, dul yel fluor, cut pal blu, vry slight cup odr, vsfo.

LS: crm/lt tan, micro-fn xln, dense, fw foss frags, mostly hard, tr-pr scat intxn por, scat dul yel fluor, cut pal blu, v slight cup odr, vsfo, 1-2 pcs/try sm SH: gry/brn, silty, fissile, med crush.

LS: crm/gry, fn xln, v fw foss, dense, hard, sm flakey, sm chly, tr-nvp, fw chert, gry, opaque no cup odr, ns.

LS: crm/gry, micro-fn xln, fw foss crin/brach/frags, dense, tr-pr ppt-intxn por, scat dul yel fluor, slw cut pal blu, does not break out of por well, v slight cup odr, vsfo.

SH: gry/grn/blk, silty, fissile, med crush, sm carb, LS: crm/gry, micro-fn xln, sm crs xln, foss brach/fuss/frags, fw chly, tr-pr ppt-intxn por, scat dul yel fluor, slw cut pal blu, vsight cup odr, vsfo, 1-2 pcs/try, most likely from above.

LS: lt tan, fn xln, foss crin/fuss/frags, vry chly, sm pure chlk, pr-fr ppt-intxn por, dul yel fluor, fw pcs of drk stns, does not brk out of por, slw cut pal blu, vs cup odr, sm SH: gry/drk gry, silty, fissile, med crush.

LS: lt tan/gry, fn xln, foss brach/arin/frags, sm chly, hard, tr-nvp, fw SH: gry/brn, silty, med crush, no cup odr, ns.

LS: gry/lt tan, fn-med xln, foss brach/frags, hard, brittle, fw chly, rare pr intxn por, abund SH gry/grn/brn/blk, silty, fissile, med crush, sm carb, fw Chert: wht, opaque, sharp no cup odr, ns.

LS: lt tan/gry, fn xln, foss brach/arin/frags, dense, fw chly, rare pr intxn por, spty dul yel fluor, vsfo, no cup odr, abund SH: gry/brn/red/blk, silty, sm fssile, easy-med crush, sm carb.

SH: gry/drk gry/blk, silty, easy-med crush, sm fissile, sm carb, fw SHStn: gry-brn, muddy, med crush, sm LS: lt tan/gry, fn xln/sm med-crs xln, dense, hard, tr-nvp, no cup odr, ns.

LS: lt tan, micro-fn xln, foss crin/brach/frags, sm ool, scat ppt-intxn por, scat dul yel fluor, slow cut pal blu, vsfo, 1-2 pcs/try, sm SH: gry/grn/brn, silty, med crush, fssile, v slight cup odr.

LS: lt tan, fn xln, foss brach/arin/frags, fw grainy, rare ppt-intxn por, dul yel fluor, slow cut pal blu, vsfo, 1-2 pcs/try, possibly from above, abund of SH: gry/brn, silty, med crush, v slight cup odr.

LS: crm/lt tan, fn xln, foss brach/var/frags, tr intxn por, abund SH: gry/grn/brn/drck gry, silty, sm fissile, med crush, sm carb, no cup odr, ns.

LS: lt tan/gry, micro-fn xln, fw foss, dense, hard, sm chly, tr of ppt-intxn por, little drk staining in ppt por, does not fluor, does not cut, abund SH: gry/brn, silty, fssile med crush, no cup odr, ns.

SH: gry/grn/brn/blk, silty, sm fissile, easy-med crush, sm carb, sm LS: gry, fn-med xln, foss fw ool, hard, sm flakey, tr-nvp, fw 2-3 pcs/try LS: crm/lt tan, micro-fn xln, dense, brittle, rare ppt-intxn por, scat dul yel fluor, slight cut pal blu, no cup odr, vsfo.

LS: lt tan/gry, fn-med xln, foss frags/arin/brachis, tr intxn por, sm SH: gry/grn/brn/blk, silty, fssile med crush, no cup odr, ns.

LS: crm/lt tan, micro-fn xln, dense, brittle, rare vug por/w v fw ppt-intxn por, dul yel fluor, cut stream pal blu, svrl pcs w/ loht staining on svrl

CF 5 @ 4310'

30"60"

Mudco Check #6 @ 4337'

11/2/11 5:45am

wt vis pH chl

9.2 55 10.0 6000

FR LCM

8.8 1

DST2) 4336-4354

30454560

1st) Wk surface built to 2.25"

2nd) Wk surface built to 1.5"

IF P 20-44#

ISP 429#

FFP 49-74#

F SP 429#

HP 2204-2151#

Recvd: 117' wa te rw/ little oil

scum

CF 5 @ 4354'

30"60"

Mudco Check #7 @ 4354'

11/3/11 06:30am

wt vis pH chl

9.3 67 9.5 7000

FR LCM

8.8 1

CF 5 @ 4384'

30"

DST3) 4350-4415

30456090

1st) Wk surface built to 6"

2nd) Wk surface built to 1"

IF P 21-38#

ISP 951#

FFP 282-1125#

F SP 1206#

HP 2233-2167#

Recvd: 20' OCM, 60' GCOM

CF 5 @ 4415'

30"60"

Mudco Check #8 @ 4415'

11/10/11 05:45am

wt vis pH chl

9.0 74 9.0 8800

FR LCM

11.2 1

CF 5 @ 4438'

30"60"

DST4) 4350-4438

30456090

1st) Built to 3"

2nd) Built to 2"

IF P 22-49#

ISP 930#

FFP 63-122#

F SP 1043#

HP 2132-2099#

Recvd: 120' OCM

Mudco Check #9 @ 4479'

11/10/11 07:50am

wt vis pH chl

9.0 59 10.5 7700

FR LCM

7.2 1

DST5) 4554-4674

30303030

1st) Built to 11"

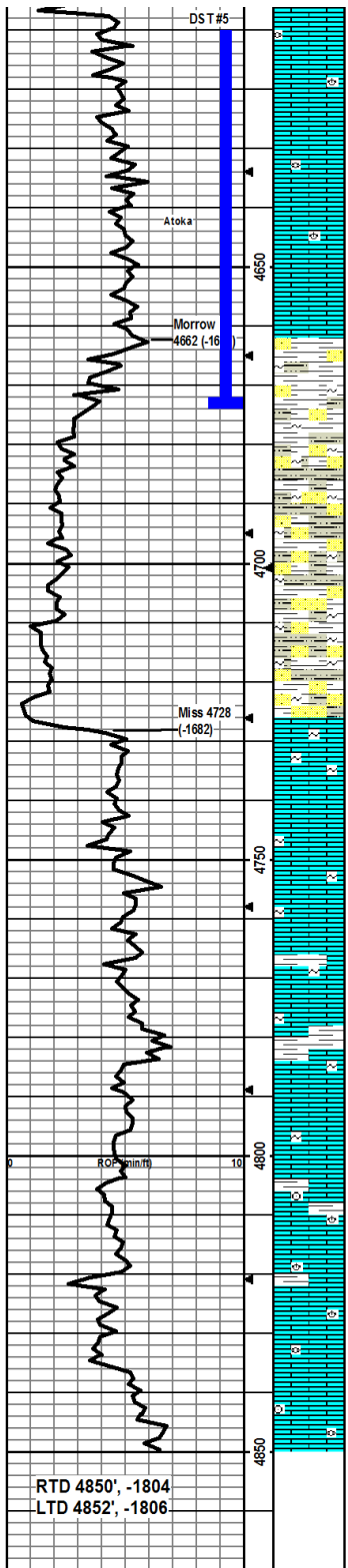
2nd) No Blow

IF P 23-28#

ISP 873#

FFP 32-34#

F SP



pcs, v slight cup odr, ssfo.

LS: lt tan, fn xin, dense, fw foss frags, pr ppt-intbn por, dul yel fluor, cut pal blu, svrl pos/try, fr odr, ssfo, stns on many pcs, fw pcs Chert: tan, trans, sm SH: gry/brn/sm blk, silty, sm fissile, med crush.

LS: lt tan/gry, fn xin, dense, tr ppt-intbn por, dul yel fluor, slw cut, sm SH: gry/brn, silty, easy-med crush, v slight cup odr.

LS: lt tan, fn xin, dense, sm foss frags, tr ppt-intbn por, dul yel fluor, cut pal blu, fw SH: gry/brn/drk gry, silty, med crush, no cup odr, vsso, only 1-2 pcs/try, maybe from above.

LS: crm/lt tan, micro-fn xin, dense, brittle, tr-nvp, v slight cup odr, fw pcs LS: lt tan, fn xin, tr-ppt-intbn por, w/ vsso, m uch like above, sm SH: gry/brn, silty, easy-med crush.

LS: crm/lt tan, micro-fn xin, dense, fw chlky, tr-nvp, no cup odr, nsfo, sm SH: gry/grn/brn, silty, fissile, med crush.

SH: gry, silty, soft, SS: gry/blu, vfn grn, well srted, arg, glauc, calc cem, fw loose grns, fn grn, well srted, no cup odr, ns.

Mostly SH: gry, silty, soft, sm SS: gry/blu, vfn grn, well srted, sm glauc, calc cem, sm loose grns, fn grn, well rnd, no cup odr, ns.

SH: gry/grn/brn, silty, soft, sm SH: gry/grn, soft, glauc, fw SS: gry, fn grn, well srted, easy crush, no cup odr, ns.

SH: gry/grn/brn, silty, soft, sm glauc, SS: gry, fn grn, well srted, silca cem, easy crush, no cup odr, ns.

SH: gry, v soft, sm SH: gry/grn, silty, soft, glauc, fw SS: gry, fn grn, rnd, well srted, sil cem, arg, v fw loose grns, fn grn rnd, no cup odr, ns.

SH: gry/grn, silty, soft, glauc, sm SH: gry/grn, v soft, muddy, fw SS: gry, fn grn, well srted, rnd, sil cem, sm glauc, v fw loose grns, fn grn, well rnd, no cup odr, no fluor, ns.

SH: gry/grn, silty, soft, glauc, sm SS: blu/grn, fn grn, well srted, rnd, glauc, sil cem, med-hard crush, v fw loose grn, well rnd, well srted, no cup odr, ns.

SS: blu/grn, fn grn, rnd, well srted, glauc, sil cem, med crush, v fw loose grns, fn grns, well rnd, well srted, sm LS: crm/grn, fn xin, gritty, sandy, glauc, tr intbn por, sm SH: gry/grn, silty, soft, no cup odr, ns.

LS: wht/grn, fn xin, gritty, sandy, glauc, tr intbn por, sm SH: gry/grn, silty, glauc, med crush, no cup odr, ns.

LS: wht, fn xin, gritty, sandy, sm glauc, tr intbn por, sm drk min stns, does not fluor, does not cut, no cup odr, nsfo.

LS: wht, fn xin, gritty, sandy, fw glauc, tr-nvp, sm SH: gry/brn, silty, med crush, no cup odr, ns.

LS: wht, fn xin, gritty, sandy, fw glauc, tr-nvp, sm SH: gry/grn, silty, sm glauc, easy-med crush, no cup odr, ns.

LS: wht, fn xin, gritty, sandy, tr-nvp, sm drk m in stns, does not fluor, does not cut, fw SH: gry/grn, silty, sm glauc, med crush, no cup odr, nsfo.

LS: wht, fn xin, gritty, sandy, tr-nvp, abund SH: gry/grn, silty, slightly glauc, med crush, no cup odr, ns.

LS: crm, fn xin, sm sandy, tr-nvp, abund SH: gry/grn, silty, slightly glauc, med crush, no cup odr, ns.

LS: crm/lt tan, fn xin, dense, hard, tr-nvp, abund SH: gry/grn, silty, sm fissile, med crush, no cup odr, ns.

LS: crm/lt tan, fn xin, foss brach/frags, dense, hard, tr-nvp, sm lght brn stns, does cut, does not brk out of por, nsfo, sm SH: gry/grn, silty, fissile, med crush, no cup odr.

LS: crm/lt tan, fn xin, sm foss brach/var, dense, hard, tr-nvp, sm LS wht, fn xin, sandy, brittle, tr-nvp, fw SH: gry/grn, silty, fissile, med crush, no cup odr, ns.

LS: lt tan, fn xin, sm foss, dense, hard, tr-nvp, sm SH: gry, silty, fissile, easy-med crush, no cup odr, ns.

LS: lt tan, fn xin, sm foss brach/fuss, dense, tr-nvp, med-hard crush, sm SH: gry/brn, sm fissile, silty, easy-med crush, no cup odr, ns.

867#
 HP 2333-2224#
 Recvd: 5" Mud

Mudco Check #10 4674'
 11/06/11 11:00am
 wt vis pH chf
 9.1 51 10.5 8500
 Filr LCM
 11.2 2

CF 5 @ 4674'
 30°/60°

RTD 4850', -1804
 LTD 4852', -1806