

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1246033  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

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
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

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

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx)      (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

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

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

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

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

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

Total Vertical 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

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

1246033

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

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

**INSTRUCTIONS:** Show important tops 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.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

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  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
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

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: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____					
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity	

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <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> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Grand Mesa Operating Company
Well Name	BSB 1-22
Doc ID	1246033

All Electric Logs Run

CPDCN Micro Log
AI Shallow Focused Elect Log
Comp Sonic w/Int Transit time
Micro Log
Dual Receiver Cmt Bnd Log

Form	ACO1 - Well Completion
Operator	Grand Mesa Operating Company
Well Name	BSB 1-22
Doc ID	1246033

Tops

Name	Top	Datum
Stone Corral	1539	+739
Heebner	3725	-1447
Lansing	3771	-1493
Muncie Crk	3930	-1652
Stark	4051	-1773
Marmaton	4135	-1857
Excello	4305	-2027
Mississippian	4405	-2127
LTD	4558	-2280



# ALLIED OIL & GAS SERVICES, LLC 063924

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999  
SOUTHLAKE, TEXAS 76092

SERVICE POINT:  
Great Bend KS

DATE <u>11-28-14</u>	SEC <u>22</u>	TWP <u>19</u>	RANGE <u>23</u>	CALLED OUT	ON LOCATION <u>11:00 am</u>	JOB START <u>1:30 pm</u>	JOB FINISH <u>2:00 pm</u>
LEASE <u>B5B</u>	WELL # <u>1-22</u>	LOCATION <u>Ness city 5 south to 80 rd</u>			COUNTY <u>DeSoto</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one)			<u>East To V Rd North into</u>				

CONTRACTOR Duke OWNER \_\_\_\_\_

TYPE OF JOB Surface

HOLE SIZE 12 1/4 TD 222 CEMENT \_\_\_\_\_

CASING SIZE 8 5/8 DEPTH 221.04 AMOUNT ORDERED 150 sk class A 3% cc + 2% gel

TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

DRILL PIPE \_\_\_\_\_ DEPTH \_\_\_\_\_

TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_

PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_

MEAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_

CEMENT LEFT IN CSG. 15 ft cement

PERFS. \_\_\_\_\_

DISPLACEMENT 13.12 BBIS Fresh H2O

**EQUIPMENT**

PUMP TRUCK CEMENTER Kevin Eddy

# 597 HELPER Toliana Allen

BULK TRUCK \_\_\_\_\_

# 859 DRIVER Kevin Weighaus

BULK TRUCK \_\_\_\_\_

# \_\_\_\_\_ DRIVER \_\_\_\_\_

COMMON 150 @ \_\_\_\_\_

POZMIX \_\_\_\_\_ @ \_\_\_\_\_

GEL 282 @ \_\_\_\_\_

CHLORIDE 423 @ \_\_\_\_\_

ASC Materials

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

HANDLING 162.20

MILEAGE 7.46 x 18 x

**REMARKS:**

on location / Held safety meeting / Rig up  
Rig ran 221.04 ft of 8 5/8 casing. Broke  
circ w/ Rig mud. Pump 5 Ahead. mix  
150 sks class A 3% cc. 2% gel. Shut  
Down Release Plug. Displace 13.12  
BBIS Fresh H2O - Shut in  
Cement did circ  
Rig Down

DEPTH OF JOI \_\_\_\_\_

PUMP TRUCK CHARGE \_\_\_\_\_

EXTRA FOOTAGE \_\_\_\_\_ @ \_\_\_\_\_

MILEAGE Hum 18

MANIFOLD Hum 18

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

CHARGE TO: GRAND mesa

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

TOTAL

**PLUG & FLOAT EQUIPMENT**

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

TOTAL \_\_\_\_\_

SALES TAX (If Any) \_\_\_\_\_

TOTAL CHARGES \_\_\_\_\_

DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS

PRINTED NAME Rich Wheeler

SIGNATURE Rich Wheeler

To: Allied Oil & Gas Services, 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.

# ALLIED OIL & GAS SERVICES, LLC

Federal Tax I.D. #20-5975804

087356

REMIT TO P.O. BOX 93999  
SOUTHLAKE, TEXAS 76092

SERVICE POINT: Grand Bend

DATE <u>12-6-14</u>	SEC. <u>22</u>	TWP. <u>19</u>	RANGE <u>23</u>	CALLED OUT	ON LOCATION	JOB START <u>9 AM</u>	JOB FINISH <u>9:30 AM</u>
LEASE <u>B5B</u>	WELL # <u>1-22</u>	LOCATION <u>Nesscity 5 to 80 rd - E to rd</u>				COUNTY <u>NESS</u>	STATE <u>KS</u>
OLD OR NEW (Circle one)			<u>None</u>				

CONTRACTOR Duke of  
TYPE OF JOB Production  
HOLE SIZE 7 1/8 TD  
CASING SIZE 5 1/2 DEPTH 4556  
TUBING SIZE DEPTH  
DRILL PIPE DEPTH  
TOOL DEPTH 1558  
PRES. MAX MINIMUM  
MEAS. LINE SHOE JOINT 108  
CEMENT LEFT IN CSG. 10 FT  
PERFS.  
DISPLACEMENT 108.43 661 H2O

**EQUIPMENT**

PUMP TRUCK CEMENTER Josh Isaac  
# 366 HELPER Patrick Walker  
BULK TRUCK  
# 871-112 DRIVER Wayne Davis  
BULK TRUCK  
# DRIVER Toriano Allen

**REMARKS:**

On location - Rig up - had safety meeting  
Run 5 in casing - Break connection  
Pump 1000 l/min - pump seal H2O  
plug RH  
pump 170.5x ASC  
Drop plug  
Displace 108.43 661 H2O  
load plug 1400 psi - Rig down  
9:15 AM

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

OWNER \_\_\_\_\_  
CEMENT  
AMOUNT ORDERED 170.5x ASC 2x gal  
6% eye 10% salt 5% KCl 2F  
30.5x 60/40 4% gal 14% K  
COMMON \_\_\_\_\_ @ \_\_\_\_\_  
POZMIX \_\_\_\_\_ @ \_\_\_\_\_  
GEL \_\_\_\_\_ @ \_\_\_\_\_  
CHLORIDE \_\_\_\_\_ @ \_\_\_\_\_  
ASC 170.5x ASC @ \_\_\_\_\_  
Kalocel 850 @ \_\_\_\_\_  
DF 24 @ \_\_\_\_\_  
30.5x 60/40 + 4% @ \_\_\_\_\_  
7.410 7 @ \_\_\_\_\_  
\_\_\_\_\_ @ \_\_\_\_\_  
\_\_\_\_\_ @ \_\_\_\_\_  
\_\_\_\_\_ @ \_\_\_\_\_  
\_\_\_\_\_ @ \_\_\_\_\_

TOTAL

DISCOUN

**SERVICE**

HANDLING 253.11 @ \_\_\_\_\_  
MILEAGE 10.88 x 18 x @ \_\_\_\_\_  
DEPTH OF JOB 4556 @ \_\_\_\_\_  
PUMP TRUCK CHARGE \_\_\_\_\_ @ \_\_\_\_\_  
EXTRA FOOTAGE \_\_\_\_\_ @ \_\_\_\_\_  
HV MILEAGE 18 @ \_\_\_\_\_  
LV MILEAGE 18 @ \_\_\_\_\_  
\_\_\_\_\_ @ \_\_\_\_\_  
\_\_\_\_\_ @ \_\_\_\_\_

TOTAL

DISCOUN

**PLUG & FLOAT EQUIPMENT**

AFU float shoe @ \_\_\_\_\_  
latch down @ \_\_\_\_\_  
8-centalines @ \_\_\_\_\_  
2-Baskets @ \_\_\_\_\_  
port valve @ \_\_\_\_\_

TOTAL

DISCOUN

To: Allied Oil & Gas Services, 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 X John A. Johnson  
SIGNATURE X John A. Johnson

SALES TAX (If Any) \_\_\_\_\_  
TOTAL CHARGE \_\_\_\_\_  
DISCOUNT \_\_\_\_\_ IN 30 DAYS  
NET TOTAL \_\_\_\_\_ D IN 30 DAYS

JOB LOG

SWIFT Services, Inc.

DATE 1-22-15 PAGE NO. 1

CUSTOMER GRAND MESA OPERATING WELL NO. 1-22 LEASE BSB JOB TYPE TOOLS - CEMENT PORT COLLAR TICKET NO. 28111-28112

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL)(GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
1/22/15	1300							ON LOCATION
								2 7/8 x 5 1/2
								RRP = 3000'
								PORT COLLAR = 1558'
	1330							START 5 1/2" TSU-RRP & OPERATING TOOL
	1430							SET RRP = 3000' - PULL 1 JT
	1500							DONE FOR TODAY
1/23/15	0830							ON LOCATION
	0840	4	75	✓		450		CIRCULATE WELL CLEAN - FRESH WATER
	0900		14	✓	✓		1000	TEST RRP - HEAD - SPOT 1 SK SAND
	1000				✓		1000	TEST - HEAD
	1005	3	2	✓		300		OPEN PORT COLLAR - ZWT RATE
	1015	4	83	✓		350		MAX CEMENT 150 SKS SAND = 11.2 PPG
	1040	4	8	✓		550		DISPLACE CEMENT
	1055			✓		1000		CLOSE PORT COLLAR - PSE TEST HEAD
								CIRCULATED 20 SKS CEMENT TO PSE
	1115	4	25		✓		400	RUN 6 JTS - CIRCULATE CLEAN
								WASH TRUCK
	1200	4	75		✓		500	WASH SAND OFF RRP / FILL WELL w/ KCL/H2O
								LEAVE RRP SET - PULL 1 JT - SWAB DOWN
								RELEASE RRP - PULL OUT WELL
	1300							JOB COMPLETE
								THANK YOU
								WAVE, JOHN J., ISAAC



# DIAMOND TESTING

## General Information Report

### General Information

**Company Name** GRAND MESA OPERATING COMPANY  
**Contact** MICHAEL REILLY  
**Well Name** BSB #1-22  
**Unique Well ID** DST #1, CHEROKEE, 4331-4370  
**Surface Location** SEC 22-19S-23W, NESS CO. KS.  
**Field** WILDCAT  
**Well Type** Vertical  
**Test Type** CONVENTIONAL  
**Formation** DST #1, CHEROKEE, 4331-4370  
**Well Fluid Type** 01 Oil

**Representative** TIM VENTERS  
**Well Operator** GRAND MESA OPERATING CO.  
**Report Date** 2014/12/03  
**Prepared By** TIM VENTERS  
**Qualified By** STEVE CARL

**Start Test Date** 2014/12/03  
**Final Test Date** 2014/12/03

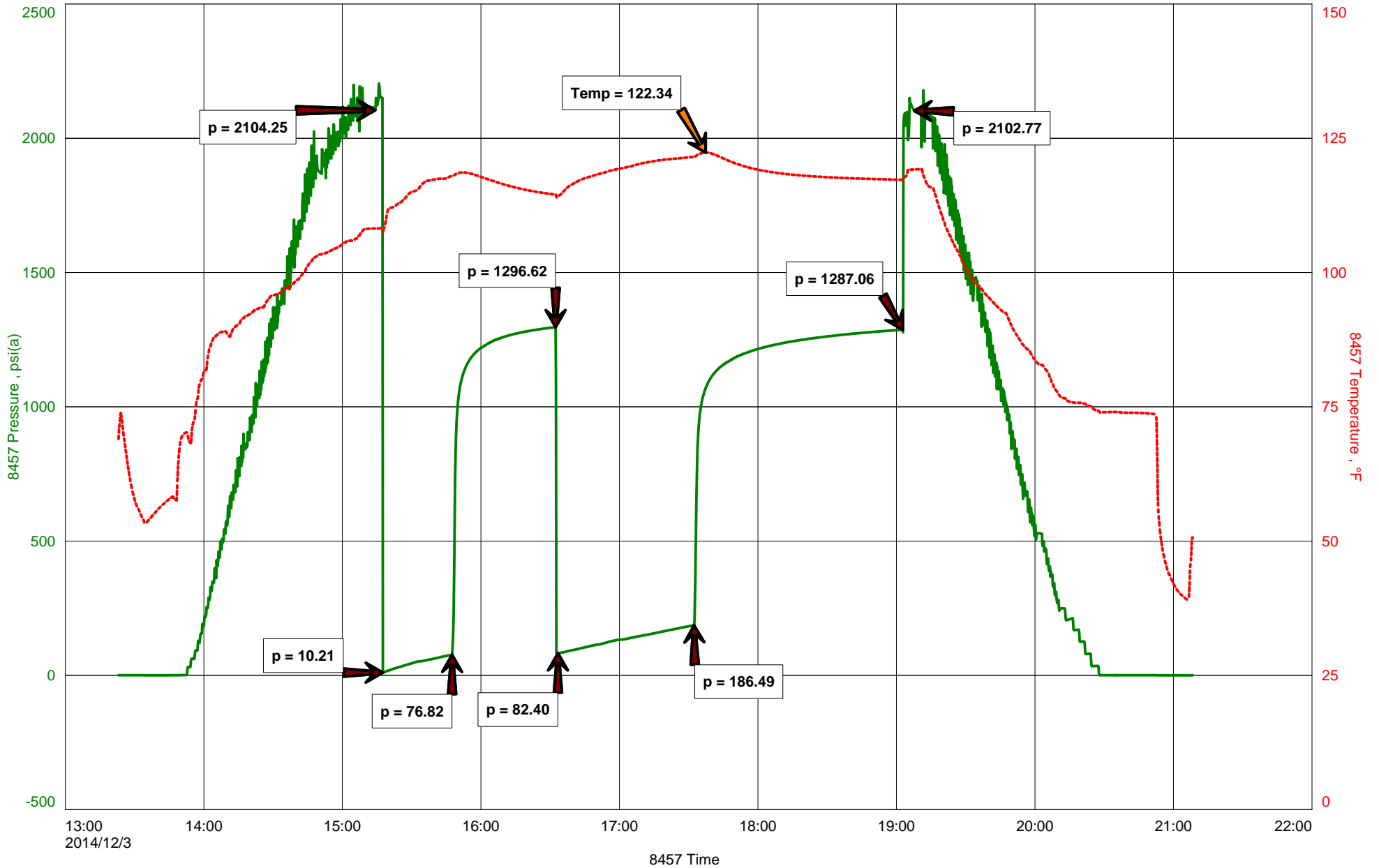
**Start Test Time** 13:23:00  
**Final Test Time** 21:09:00

### Test Recovery:

**RECOVERED: 270' GAS IN PIPE**  
175' GO, 3% GAS, 97% OIL, GRAVITY: 35  
315' G,SMCO, 6% GAS, 78% OIL, 16% MUD  
490' TOTAL FLUID

**TOOL SAMPLE: 2% GAS, 94% OIL, 4% MUD**

# BSB #1-22





**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: BSB1-22DST1

TIME ON: 13:23  
TIME OFF: 21:09

Company GRAND MESA OPERATING COMPANY Lease & Well No. BSB #1-22  
Contractor DUKE DRILLING CO., INC. RIG #4 Charge to GRAND MESA OPERATING COMPANY  
Elevation 2278 KB Formation CHEROKEE Effective Pay \_\_\_\_\_ Ft. Ticket No. T422  
Date 12-3-14 Sec. 22 Twp. \_\_\_\_\_ 19 S Range \_\_\_\_\_ 23 W County NESS State KANSAS  
Test Approved By STEVE CARL Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 1 Interval Tested from 4331 ft. to 4370 ft. Total Depth 4370 ft.  
Packer Depth 4326 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.  
Packer Depth 4331 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.

Depth of Selective Zone Set \_\_\_\_\_

Top Recorder Depth (Inside) 4312 ft. Recorder Number 8457 Cap. 10,000 P.S.I.  
Bottom Recorder Depth (Outside) 4367 ft. Recorder Number 11030 Cap. 5,025 P.S.I.  
Below Straddle Recorder Depth \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.

Mud Type CHEMICAL Viscosity 60 Drill Collar Length 0 ft. I.D. 2 1/4 in.  
Weight 9.3 Water Loss 7.2 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.  
Chlorides 3,800 P.P.M. Drill Pipe Length 4298 ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number 2 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.  
Did Well Flow? NO Reversed Out NO Anchor Length 39 ft. Size 4 1/2-FH in.  
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: WEAK 1/4 INCH BLOW, BUILDING, REACHING BOB 15 MIN. (NO BB)  
2nd Open: WEAK 1/4 INCH BLOW, BUILDING, REACHING BOB 14 MIN. (NO BB)

Recovered 270 ft. of GAS IN PIPE  
Recovered 175 ft. of GO, 3% GAS, 97% OIL, GRAVITY: 35  
Recovered 315 ft. of G,SMCO, 6% GAS, 78% OIL, 16% MUD  
Recovered 490 ft. of TOTAL FLUID

Recovered _____ ft. of _____	Price Job
Recovered _____ ft. of _____	Other Charges
Remarks: _____	Insurance
TOOL SAMPLE: <u>2% GAS, 94% OIL, 4% MUD</u>	Total

Time Set Packer(s) 3:17 PM A.M. P.M. Time Started Off Bottom 7:02 PM A.M. P.M. Maximum Temperature 122 deg.

Initial Hydrostatic Pressure..... (A) 2104 P.S.I.  
Initial Flow Period..... Minutes 30 (B) 10 P.S.I. to (C) 77 P.S.I.  
Initial Closed In Period..... Minutes 45 (D) 1297 P.S.I.  
Final Flow Period..... Minutes 60 (E) 82 P.S.I. to (F) 186 P.S.I.  
Final Closed In Period..... Minutes 90 (G) 1287 P.S.I.  
Final Hydrostatic Pressure..... (H) 2103 P.S.I.

Diamond Testing shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

# DIAMOND TESTING

## General Information Report

### General Information

**Company Name** GRAND MESA OPERATING COMPANY  
**Contact** MICHAEL REILLY  
**Well Name** BSB #1-22  
**Unique Well ID** DST #2, CHEROKEE, 4332-4390  
**Surface Location** SEC 22-19S-23W, NESS CO. KS.  
**Field** WILDCAT  
**Well Type** Vertical  
**Test Type** CONVENTIONAL  
**Formation** DST #2, CHEROKEE, 4332-4390  
**Well Fluid Type** 01 Oil

**Representative** TIM VENTERS  
**Well Operator** GRAND MESA OPERATING CO.  
**Report Date** 2014/12/04  
**Prepared By** TIM VENTERS  
**Qualified By** STEVE CARL

**Start Test Date** 2014/12/04  
**Final Test Date** 2014/12/04

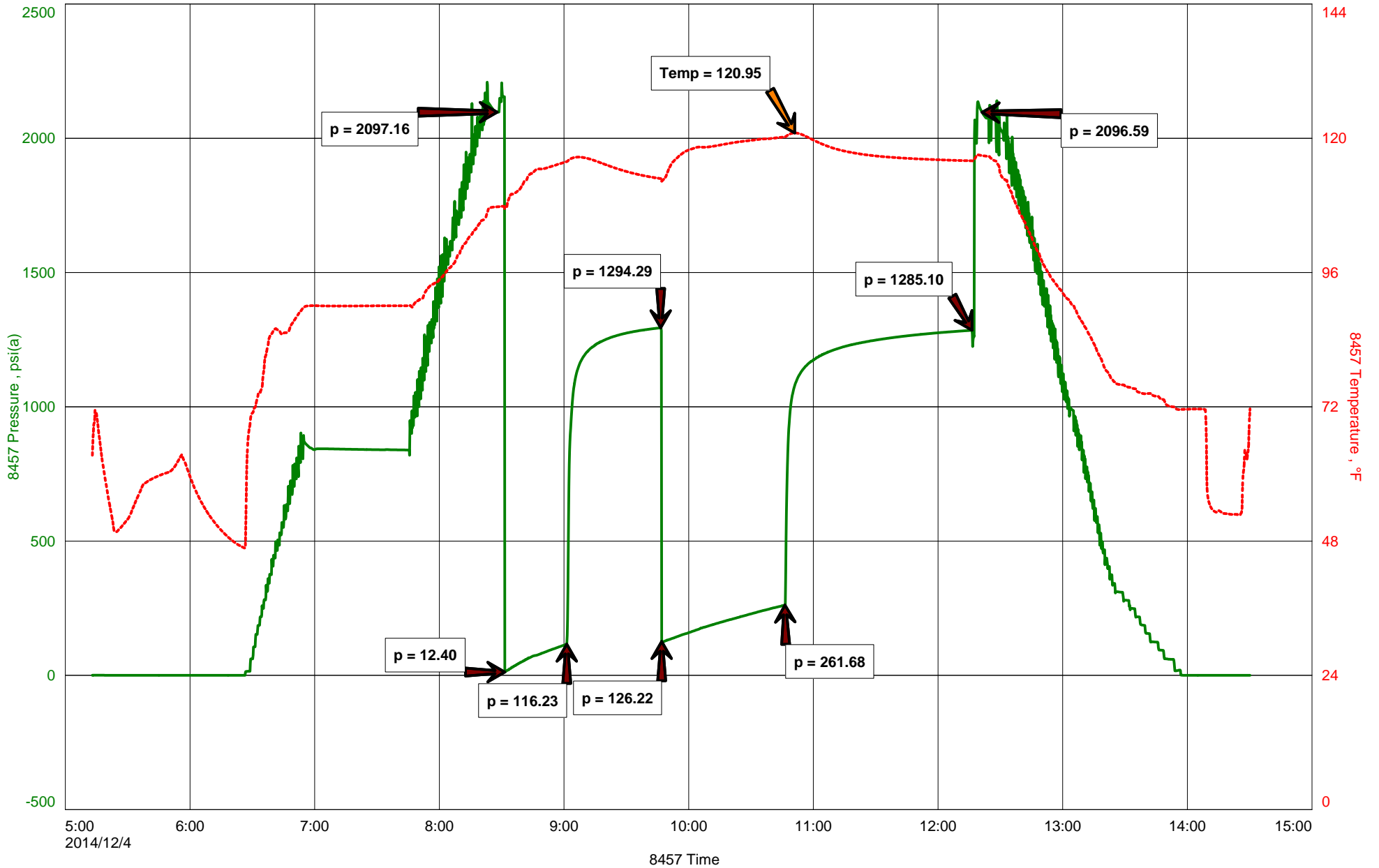
**Start Test Time** 05:13:00  
**Final Test Time** 14:30:00

### Test Recovery:

RECOVERED: 440' GAS IN PIPE  
315' GO, 8% GAS, 92% OIL, GRAVITY: 37  
255' G,SMCO, 3% GAS, 93% OIL, 4% MUD  
125' G,HMCO, 18% GAS, 48% OIL, 34% MUD  
695' TOTAL FLUID

TOOL SAMPLE: 4% GAS, 88% OIL, 8% MUD

# BSB #1-22





**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: BSB1-22DST2

TIME ON: 05:13  
TIME OFF: 14:30

Company GRAND MESA OPERATING COMPANY Lease & Well No. BSB #1-22  
Contractor DUKE DRILLING CO., INC. RIG #4 Charge to GRAND MESA OPERATING COMPANY  
Elevation 2278 KB Formation CHEROKEE Effective Pay \_\_\_\_\_ Ft. Ticket No. T423  
Date 12-4-14 Sec. 22 Twp. \_\_\_\_\_ 19 S Range \_\_\_\_\_ 23 W County NESS State KANSAS  
Test Approved By STEVE CARL Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 2 Interval Tested from 4332 ft. to 4390 ft. Total Depth 4390 ft.  
Packer Depth 4327 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.  
Packer Depth 4332 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.

Depth of Selective Zone Set \_\_\_\_\_

Top Recorder Depth (Inside) 4313 ft. Recorder Number 8457 Cap. 10,000 P.S.I.  
Bottom Recorder Depth (Outside) 4387 ft. Recorder Number 11030 Cap. 5,025 P.S.I.  
Below Straddle Recorder Depth \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.

Mud Type CHEMICAL Viscosity 56 Drill Collar Length \_\_\_\_\_ ft. I.D. 2 1/4 in.  
Weight 9.45 Water Loss 8.8 cc. Weight Pipe Length \_\_\_\_\_ ft. I.D. 2 7/8 in.  
Chlorides 4,600 P.P.M. Drill Pipe Length 4299 ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number 2 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.  
Did Well Flow? NO Reversed Out NO Anchor Length 26 ft. Size 4 1/2-FH in.  
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. <sup>32' DP IN ANCHOR</sup> Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: WEAK 1/2 INCH BLOW, BUILDING, REACHING BOB 9 1/2 MIN. (1/4" BB)  
2nd Open: GOOD 1 INCH BLOW, BUILDING, REACHING BOB 11 MIN. (NO BB)

Recovered 440 ft. of GAS IN PIPE  
Recovered 315 ft. of GO, 8% GAS, 92% OIL, GRAVITY: 37  
Recovered 255 ft. of G, SMCO, 3% GAS, 93% OIL, 4% MUD  
Recovered 125 ft. of G, HMCO, 18% GAS, 48% OIL, 34% MUD

Recovered <u>695</u> ft. of <u>TOTAL FLUID</u>	Price Job
Recovered _____ ft. of _____	Other Charges
Remarks: _____	Insurance
<u>TOOL SAMPLE: 4% GAS, 88% OIL, 8% MUD</u>	Total

Time Set Packer(s) 8:31 AM <sup>A.M.</sup> P.M. Time Started Off Bottom 12:16 PM <sup>A.M.</sup> P.M. Maximum Temperature 121 deg.

Initial Hydrostatic Pressure..... (A) 2097 P.S.I.  
Initial Flow Period..... Minutes 30 (B) 12 P.S.I. to (C) 116 P.S.I.  
Initial Closed In Period..... Minutes 45 (D) 1294 P.S.I.  
Final Flow Period..... Minutes 60 (E) 126 P.S.I. to (F) 262 P.S.I.  
Final Closed In Period..... Minutes 90 (G) 1285 P.S.I.  
Final Hydrostatic Pressure..... (H) 2097 P.S.I.

Diamond Testing shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

# DIAMOND TESTING

## General Information Report

### General Information

**Company Name** GRAND MESA OPERATING COMPANY  
**Contact** MICHAEL REILLY  
**Well Name** BSB #1-22  
**Unique Well ID** DST #3, CHEROKEE, 4388-4415  
**Surface Location** SEC 22-19S-23W, NESS CO. KS.  
**Field** WILDCAT  
**Well Type** Vertical  
**Test Type** CONVENTIONAL  
**Formation** DST #3, CHEROKEE, 4388-4415  
**Well Fluid Type** 01 Oil

**Representative** TIM VENTERS  
**Well Operator** GRAND MESA OPERATING CO.  
**Report Date** 2014/12/05  
**Prepared By** TIM VENTERS  
**Qualified By** STEVE CARL

**Start Test Date** 2014/12/04  
**Final Test Date** 2014/12/05

**Start Test Time** 22:00:00  
**Final Test Time** 07:05:00

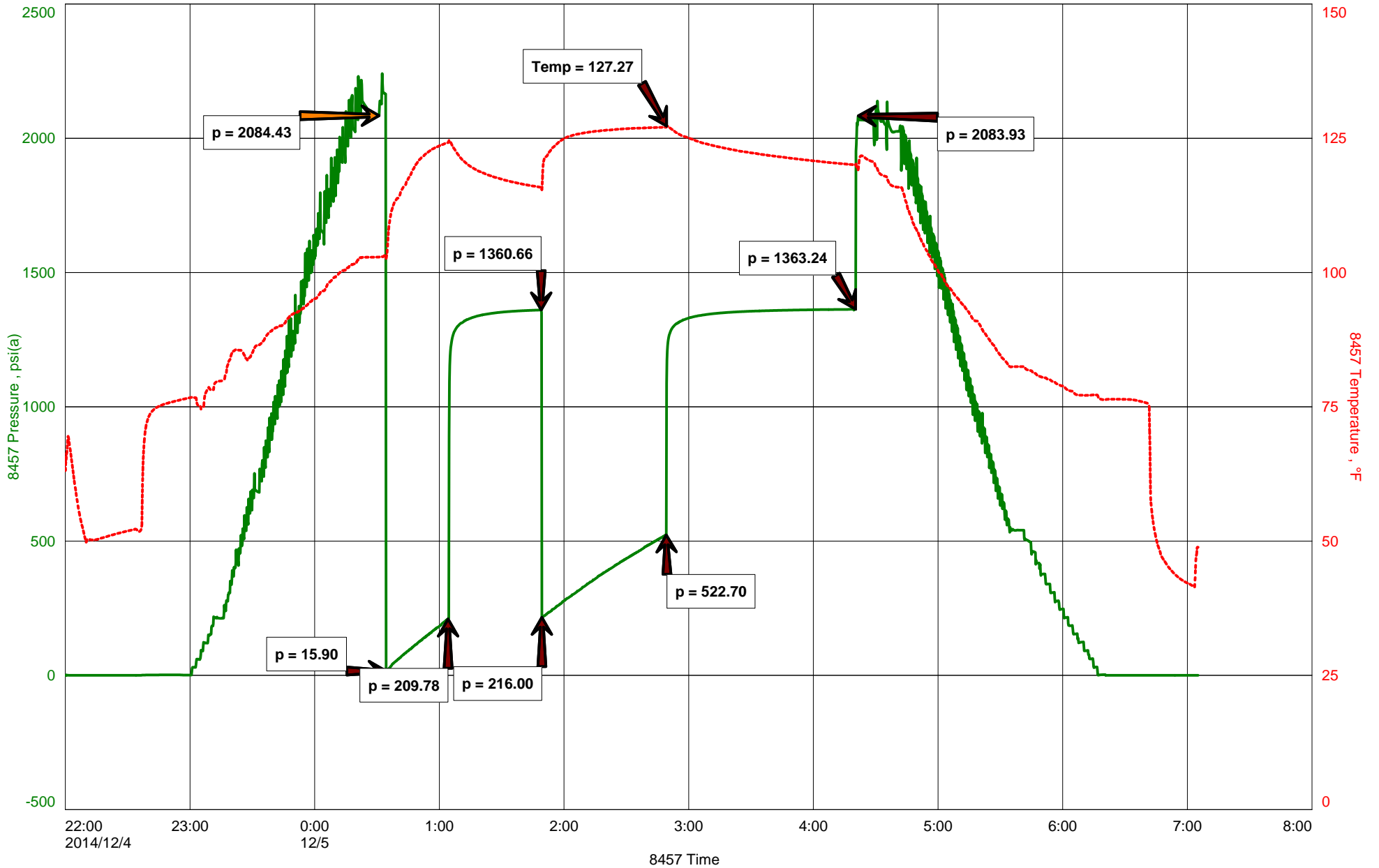
### Test Recovery:

RECOVERED: 2' CLEAN OIL  
250' SO,HMCW, 4% OIL, 51% WATER, 45% MUD  
760' SO&MCW, 4% OIL, 93% WATER, 3% MUD  
65' WATER  
65' SMCW, 91% WATER, 9% MUD  
1142' TOTAL FLUID

TOOL SAMPLE: TRACE OIL, 98% WATER, 2% MUD

CHLORIDES: 23,000 ppm  
PH: 6.5  
RW: .25 @ 74 deg.

# BSB #1-22





**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: BSB1-22DST3

TIME ON: 22:00 12-4-14  
TIME OFF: 07:05 12-5-14

Company GRAND MESA OPERATING COMPANY Lease & Well No. BSB #1-22  
Contractor DUKE DRILLING CO., INC. RIG #4 Charge to GRAND MESA OPERATING COMPANY  
Elevation 2278 KB Formation CHEROKEE Effective Pay \_\_\_\_\_ Ft. Ticket No. T424  
Date 12-5-14 Sec. 22 Twp. \_\_\_\_\_ 19 S Range \_\_\_\_\_ 23 W County NESS State KANSAS  
Test Approved By STEVE CARL Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 3 Interval Tested from 4388 ft. to 4415 ft. Total Depth 4415 ft.  
Packer Depth 4383 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.  
Packer Depth 4388 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.

Depth of Selective Zone Set \_\_\_\_\_  
Top Recorder Depth (Inside) 4369 ft. Recorder Number 8457 Cap. 10,000 P.S.I.  
Bottom Recorder Depth (Outside) 4412 ft. Recorder Number 11030 Cap. 5,025 P.S.I.  
Below Straddle Recorder Depth \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.

Mud Type CHEMICAL Viscosity 56 Drill Collar Length \_\_\_\_\_ ft. I.D. 2 1/4 in.  
Weight 9.45 Water Loss 8.8 cc. Weight Pipe Length \_\_\_\_\_ ft. I.D. 2 7/8 in.  
Chlorides 4,600 P.P.M. Drill Pipe Length 4355 ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number 2 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.  
Did Well Flow? NO Reversed Out NO Anchor Length 27 ft. Size 4 1/2-FH in.  
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: GOOD 1 INCH BLOW, BUILDING, REACHING BOB 8 MIN. (NO BB)  
2nd Open: WEAK 1/4 INCH BLOW, BUILDING, REACHING BOB 9 MIN. (NO BB)

Recovered <u>2</u> ft. of <u>CLEAN OIL</u>	
Recovered <u>250</u> ft. of <u>SOCHMCW, 4% OIL, 51% WATER, 45% MUD</u>	
Recovered <u>760</u> ft. of <u>SO&amp;MCW, 4% OIL, 93% WATER, 3% MUD</u>	
Recovered <u>65</u> ft. of <u>WATER</u>	
Recovered <u>65</u> ft. of <u>SMCW, 912% WATER, 9% MUD</u>	Price Job
Recovered <u>1142</u> ft. of <u>TOTAL FLUID</u>	Other Charges
Remarks: _____	Insurance
_____	Total

TOOL SAMPLE: TRACE OIL, 98% WATER, 2% MUD  
Time Set Packer(s) 12:33 AM A.M. P.M. Time Started Off Bottom 4:18 AM A.M. P.M. Maximum Temperature 127 deg.

Initial Hydrostatic Pressure..... (A) 2084 P.S.I.  
Initial Flow Period..... Minutes 30 (B) 16 P.S.I. to (C) 210 P.S.I.  
Initial Closed In Period..... Minutes 45 (D) 1361 P.S.I.  
Final Flow Period..... Minutes 60 (E) 216 P.S.I. to (F) 523 P.S.I.  
Final Closed In Period..... Minutes 90 (G) 1363 P.S.I.  
Final Hydrostatic Pressure..... (H) 2084 P.S.I.

Diamond Testing shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

# GRAND MESA

# OPERATING COMPANY

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

1700 N. WATERFRONT PARKWAY  
BLDG. 600  
WICHITA, KANSAS 67206-5514

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

Well Name: 1-22 BSB Unit  
Location: 1140' FSL 110' FEL Sec 22-19s-23w  
License Number: 15-135-25820  
Spud Date: 11/28/2014  
Surface Coordinates: 38.381261 -99.843138  
Region: NESS County, KS  
Drilling Completed: 12/5/2014

Bottom Hole Vertical  
Coordinates:  
Ground Elevation (ft): 2269  
Logged Interval (ft): 3460 To: 4561  
Formation: Mississippian  
Type of Drilling Fluid: Mud-Co Chemical  
K.B. Elevation (ft): 2278  
Total Depth (ft): 4561

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

## OPERATOR

Company: Grand Mesa Operating Company  
Address: 1700 N. Waterfront Pkwy, Bldg 600  
Wichita Kansas, 67206

## Comments

Contractor: DUKE RIG #4

Mud: Mud-Co  
Testing: Diamond testing  
Logging: Weatherford

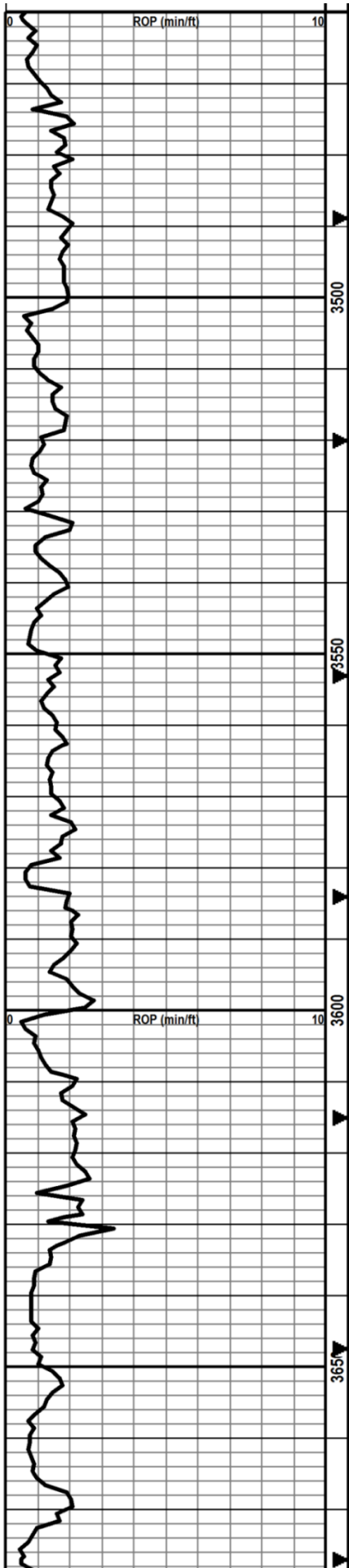
LTD - 4558ft  
RTD - 4561ft

Operator ran 5 1/2 inch casing to further test the Ft. Scott, Krebs, and Cherokee sand.

## Geologist

Steve Carl  
Grand Mesa Op. Co.

Curve Track 1 ROP (min/ft)	Depth	DST Interval	Lithology	Oil/Gas Show	Geological Descriptions	Other info.
—						



20 ft Samples start at 3500

Mostly LS-lt gry, grainy in part, chalky, soft, ns.

MUDSTN-lt gry, calc, grainy, v soft, no cup odr, ns.

LS-lt gry, chalky, grainy, soft, muddy, SH-med gry, silty, soft, ns.

LS-med gry/tan, fn xln, grainy in part, some hard/brittle, foss-various, sm soft, chalky, sm int xln por, no odr, ns.

LS-tan/gry, crs xln, profus foss-spic/fus, mealy, chalky in part, dense, hard, brittle, nvp, some CHERT-gry, foss, no cup odr, ns.

LS-much as above, influx of LS-wht, v chalky, soft, decr CHERT, no cup odr, ns.

LS-med tan, crs xln, foss-crin/various, dense/hard, LS-lt gry, fn xln, uniform to foss-crin, dense/hard, brittle, decr chalk, nvp, no cup odr, ns.

LS-tan, med-crs xln, foss-crin/various, dense, brittle, hard, some LS-gry, micro xln, uniform, dense, brittle, some chalk, nvp, no cup odr, ns.

LS-lt tan, med-crs xln, v foss-crin/fus/brach, mostly dense/hard, some chalky, med crush, some chalk as above, scat fr int foss por, few LS-crm, micro xln, dense, brittle, uniform, nvp, no cup odr, ns.

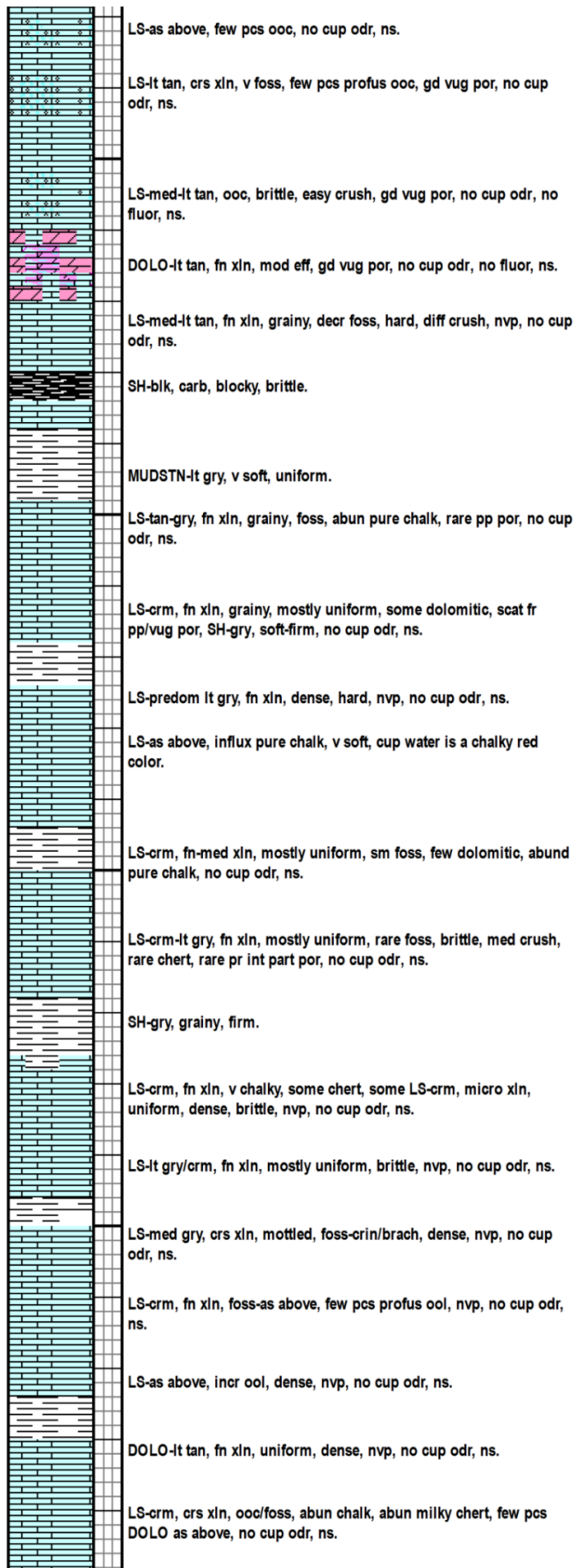
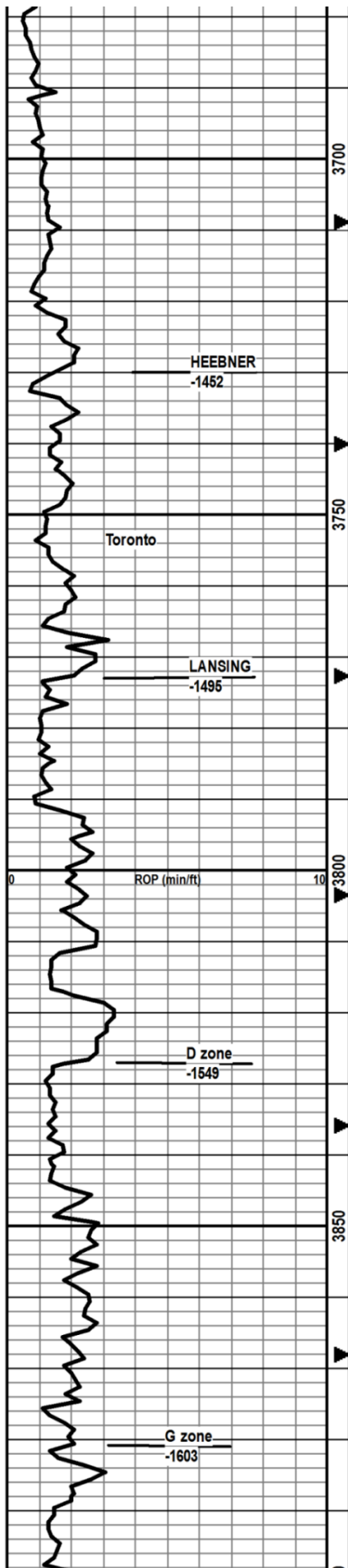
several LS's-predom lt tan, crs xln, v foss-various, grainy, mealy, easy crush, scat int part por, sm LS-crm, fn-med xln, foss, med crush, scat int part por, sm LS-crm, fn xln, dense, hard, diff crush, foss, nvp, no cup odr, ns.

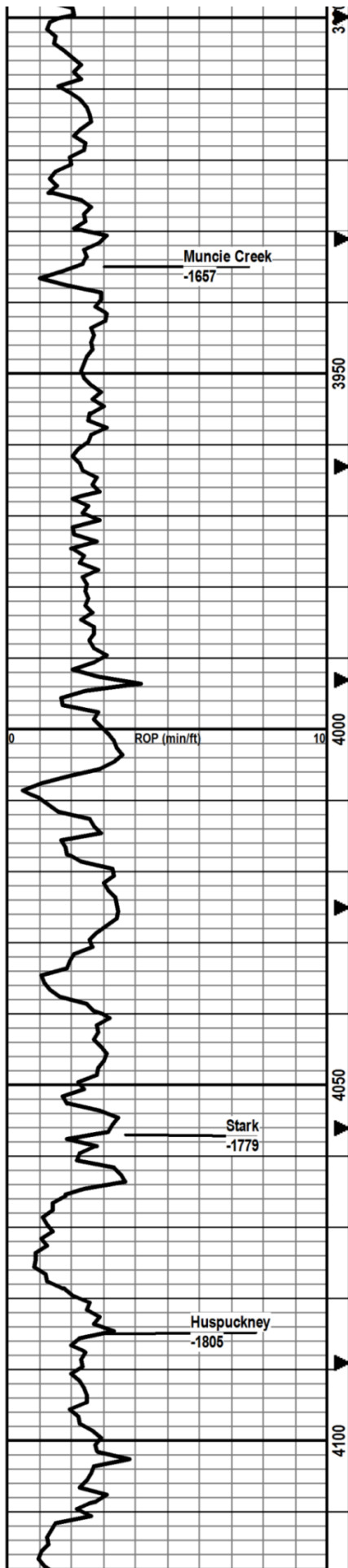
LS-mostly med tan, crs xln, foss, mealy, easy crush, scat in part por, no cup odr, ns.

LS-crm-med tan, crs xln, v foss-fus/brach, mealy in part, brittle, easy crush, scat fr int part por, no cup odr, ns.

LS-mostly lt gry, crs xln, foss as above, brittle, easy crush, decr mealy, some chalk, few pcs chert, scat fr int part por, no cup odr, ns.

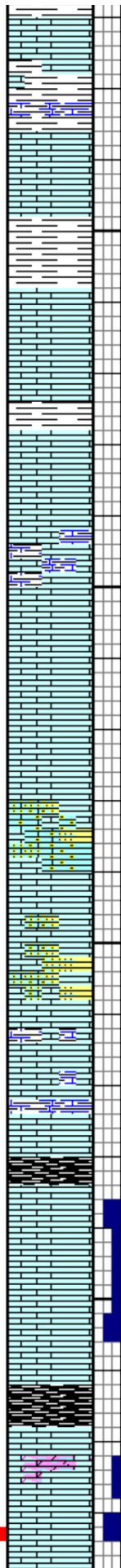
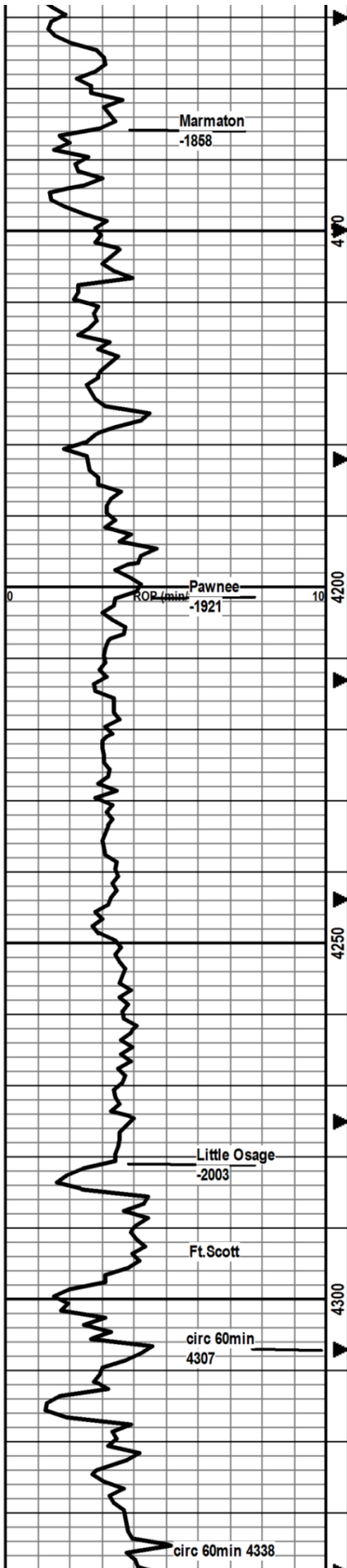
LS-mostly as above, mottled, incr chalk, influx of LS-drk gry, v dense, hard, nvp, no cup odr, ns.





	LS-as above, influx, DOLO-It tan, fn xln, dense, nvp, no cup odr, ns.
	LS- predeom It tan/gry, vfn xln, uniform, dense, hard, rare foss-various, rare pp/vug por, no cup odr, ns.
	LS-It tan, fn xln, mostly uniform, dense, hard, sm chalk, sm chert, SH-drk gry, silty, no cup odr, ns.
	SH-gry/grn, soft/muddy to firm/brittle, silty, few pcs SH-blk, carb, LS-as above, no cup odr, ns.
	LS-It tan/crm, fn xln, mostly uniform, some foss, abund milky sharp chert, some chalk, no cup odr, ns.
	LS-no change. abund sharp chert.
	LS-med-It tan, fn xln, mostly uniform, dense, hard, sm foss/ool, sm sharp milky foss chert, few pcs chalk, nvp, no cup odr, ns.
	LS-no change, SH-gry.
	LS-crm, fn-med xln, dense, brittle, nvp, sm LS-crm, ool, sparry, dense, brittle, nvp, abund chalk, decr chert, no cup odr, ns.
	LS-as above, SH-med gry, silty, no cup odr, ns.
	LS-gry/crm, fn xln, densly pkd ool, w/calcite filled int ool por, sm profus ooc, w vgd vug por, no cup odr, even yel mineral fluor, ns.
	SH-gray/red/brn/maroon, silty, blocky, waxy.
	LS-It gry, fn-med xln, foss, ool, chalky, sm ooc, w gd vug por, sm LS-brn, micro xln, hard, brittle, sparry, foss, nvp, no cup odr, ns.
	LS-crm, vfn xln, sm uniform, sm ool/foss, sparry, calcite filled int foss por, dense, brittle, nvp, no cup odr, ns.
	SH-blk carb, few pcs in 4070smpl.
	LS-brn, fn xln, dense, hard, uniform, nvp, no cup odr, no fluor, ns.
	LS-crm/gry, med xln, foss in part, v chalky, easy crush, nvp, abund chert-gry, transl, foss, sm DOLO-It tan, fn xln, dense, nvp, no cup odr, ns.
	SH-blk, carb, present in 4100smpl. blocky.
	LS-brn, micro xln, v dense, hard, brittle, rare foss, nvp, ns. SH-gry, waxy to silty.
	LS-mostly crm, vfn xln, dense, sparry, foss-various, nvp, sm DOLO-It tan/crm, fn xln, dense, nvp, no cup odr, ns.
	MUDSTN-blu/gry, muddy, v soft, sm SH-gry, silty, fiss, no cup odr, ns.

Mud-Co  
4031'  
12/02/2014  
wt: 8.9  
vis: 51  
Chlor: 3800  
LCM: 1



LS-lt tan, crs xln, foss, mealy, med crush, scat int part por, no cup odr, ns.

SH-gry, silty, some red, blocky, no cup odr, ns.

LS-lt tan, vfn xln, mostly uniform, sm ool/foss, sparry, dense, hard, nvp, no cup odr, ns.

SH-med-drk gry, silty, some sandy, no cup odr, ns.

LS-crm, micro xln, sparry, ool/foss-crin/fus, dense, brittle, nvp, no cup odr, ns.

LS-crm, fn-med xln, mostly uniform, sm chalk, few pcs chert-milky, ool, nvp, no cup odr, ns.

LS-crm as above, no change, decr chalk, decr chert, SH-gry/red, silty/sandy in part. no cup odr, ns.

LS-med gry, fn-med xln, grainy in part, mostly uniform, dense, hard, tough, nvp, LS-crm as above, mostly uniform, sm foss-small brach/fus, rare chalk, nvp, no cup odr, ns.

LS-drk-med tan, fn xln, grainy, uniform, shaley, nvp, no cup odr, ns.

LS-crm, vfn xln, mostly uniform, dense, sm chalk, few DOLO, nvp, no cup odr, ns.

LS-crm, fn xln, sm grainy, mostly uniform, sparry, dense, brittle, sm chalky, rare foss, nvp, no cup odr, ns.

No change

LS-mostly as above, influx of LS-med tan, fn xln, sandy, dense, hard, nvp, no cup odr, ns.

LS-crm, vfn xln, sparry in part, sm sandy, dense, hard, nvp, no cup odr, ns.

LS-as above, darker tan, incr sandy, nvp, no cup odr, ns.

LS-drk gry/blk, fn xln, vig eff in acid, silty, grainy, shaley, med crush, nvp, SH-various, gry/brn/red, silty, sandy in part, mostly brittle and blocky, no cup odr, ns.

SH-blk, carb, flood in 4290 sample, no cup odr, ns.

LS-tan, predom fn xln, sparry, dense, brittle, patchy pr int xln por, drk oil locked in por, sm LS-crm, crs xln, w abund fr int xln/pp por, fr sho v lt brn free oil in all por, bleed o&g on break, brt yel fluor, pale blu streaming cut, patchy lt brn stn in drys, fr cup odr.

30 min: much as above, decr sho, influx of chalk, sm milky chert, fr cup odr.  
60min: as above, incr sho, many pcs per tray, brt yel fluor, good cup odr.

SH-blk, carb. LS-lt tan/crm, mostly fn xln, dense, brittle, few pcs/tray LS-crm, crs xln, fr in xln por, fr sfo, faint cup odr.

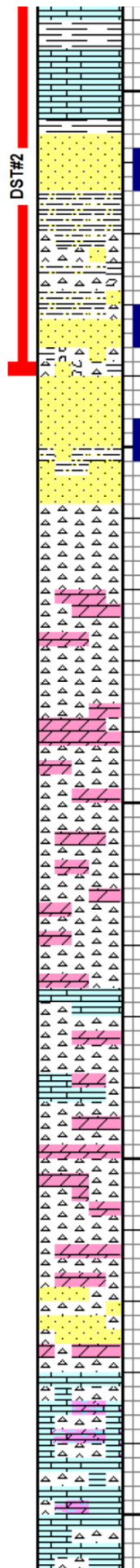
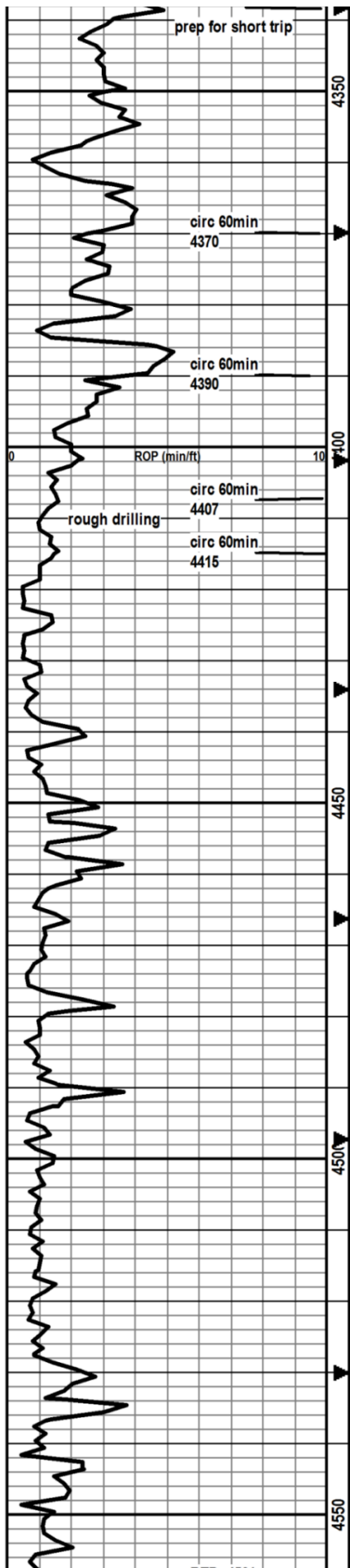
LS-lt tan, vfn xln, mosity uniform, few pcs foss, scat pr int foss/int part por w/ssfo. ques cup odr.

LS-mostly as above, ~10pcs/tray LS-micro xln, vdense, vhard, fr vug por, fsfo, oil is darker brown than the show above. brt yel fluor, good cup odr.

Mud-Co  
4390'  
12/4/2014  
wt: 9.45  
vis: 56  
Chlor: 4600  
LCM: 1

DST#1  
4331'-4370'  
Cher SS  
30-45-60-80  
Rec:  
TF: 490'  
270' GIP  
175' GO  
API: 35deg  
315' GSMCO  
IFP: 10-77#  
BOB 15mins  
ISIP: 1297#  
FFP: 82-186#  
BOB 14mins  
FSIP: 1287#  
BHT: 122deg

Short trin at



SH's-mostly gry, sm red/maroon, blocky, sm silty/sandy, faint cup odr, ssfo in LS-as above.

LS-med tan/brn, micro xln, dense, brittle, hard, nvp, vnt cup odr, ns.

SS-med tan, fn grn, w srted, sub round, abund clust, mod well cemented, fr int grn por, good sat med brn free oil in por, influx brt orange chert, fnt cup odr.

SS-fn grn in above, clusters well cemented, hard, brittle, fr in grn por, gsfo on break, fnt cup odr.

SH-mostly gry, fissile in part, silty, sandy, firm, waxy, no cup odr, ns.

CHERT-wht, weathered, foss, mealy, no eff in acid, gd vug por, sfo in all por, abund ss clusters as above, gd cup odr, vwv gold fluor.

4400 sample mostly shale - trip trash

4407 stop smpl is mostly SH's, many w/rndd edges, few clus ss w/show aa, few weath chert w/vug por and show aa. 30min-flood of ss clusters, fn grn, well srted, well cem, hard, brittle, abund glauc, sat w fo, gd cup odr, immed pale blu wking cut.

30min smpl: influx CHERT-predom wht, 30%milky, mostly sharp/fresh, rare trip with fr por, blk stn in por, trace fo, still carrying ss clusters, gd cup odr.

CHERT-mostly wht-opaque, 20% milky, mostly sharp/fresh, few pcs weathered, no cup odr, ns.

CHERT as above, influx DOLO-wht, fn xln, suc, vwv eff, gd int xln por, no cup odr, no fluor, ns.

CHERT/DOLO as above, no cup odr, no fluor, ns.

CHERT as above, increase in weathered chert, wht, opaque, no cup odr, ns.

CHERT wht/milky, as above, mostly opaque, about 50% weathered chert 50% fresh/sharp, abund DOLO-ft tan, fn xln, suc, no cup odr, ns.

Same, no change.

CHERT and DOLO as above, no change, no cup odr, no fluor, ns.

No change.

CHERT and DOLO, about 50-50 mix, as above, few ss clusters, fn grn, well srted, no cup odr, ns

Influx, LS-wht/grn tint, present in 4550 smpl, fn xln, uniform, med crush, nvp, no cup odr, no fluor, ns.

4560smpl mostly CHERT and DOLO as above, incr in LS as above, no cup odr, no fluor, ns.

30min sample, as above, influx pure chalk, no cup odr, ns.

60min sample. no change.

4338'

DST#2

4332'-4390'

Cher SS/Chert

30-45-60-90

Rec:

TF: 695'

440' GIP

315' GO

API: 37deg

255' GSMCO

125'GHMCO

IFP: 12-116#

BOB 9 1/2mins

ISIP: 1294#

FFP: 126-262#

BOB 11mins

FSIP: 1285#

BHT: 121

DST#3

4388'-4415'

Cher SS

30-45-60-90

Rec:

TF: 1142'

2' CO

250' SOHMCW 4% Oil

760' SOMCW 4% Oil

65' Water

60' SMCW

IFP: 16-210#

BOB 8mins

ISIP: 1361#

FFP: 216-523#

BOB 9mins

FSIP: 1363#

CHLOR: 23kppm

Mud-Co

4463

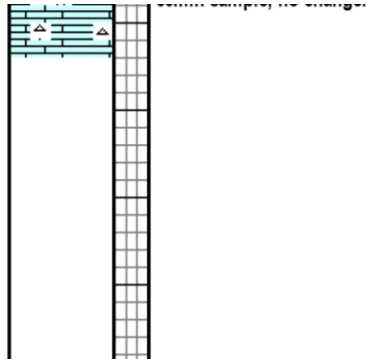
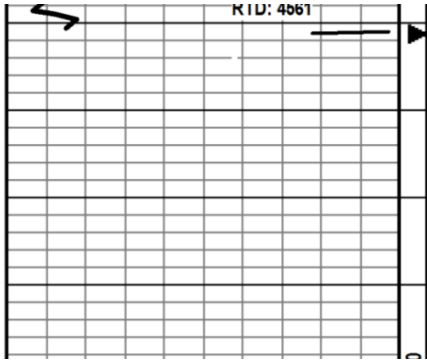
12/05/2014

wt: 9.2

vis: 51

Chlor: 7300

LCM: 1



TD reached at 12:50pm  
Dec 5 2014