



WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

Confidentiality Requested:

Yes  No

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: \_\_\_\_\_

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:  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

<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> _____ <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	GRIFFITH 2-23
Doc ID	1191226

All Electric Logs Run

CPDCN Micro Log
AI Shallow Focused Elect Log
Miroresistivity Log
Cement Bond Log

Form	ACO1 - Well Completion
Operator	Grand Mesa Operating Company
Well Name	GRIFFITH 2-23
Doc ID	1191226

Tops

Name	Top	Datum
Stone Corral	2327	+651
Bs/Stone Corral	2345	+633
Heebner	3890	-912
Lansing	3931	-953
Muncie Creek	4106	-1128
Stark	4200	-1222
Marmation	4320	-1342
Excello	4459	-1481
Morrow Shale	4586	-1608
Mississippian	4617	-1639
LTD	4814	



# ALLIED OIL & GAS SERVICES, LLC 062569 <sup>15182</sup>

Federal Tax I.D. # 20-8651475

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

SERVICE POINT: Oakley, KS

DATE <u>7/24/11</u>	SEC <u>23</u>	TWP. <u>16</u>	RANGE <u>33</u>	CALLED OUT	ON LOCATION	JOB START <u>4:00</u>	JOB FINISH <u>4:30</u>
LEASE <u>Carroll</u>		WELL # <u>223</u>		LOCATION <u>Hwy 95 - Pence Rd 1 1/2 W S - Winto</u>		COUNTY <u>Scott</u>	STATE <u>KS</u>

CONTRACTOR Professional Logging Serv. #4  
 TYPE OF JOB PTA  
 HOLE SIZE \_\_\_\_\_ T.D. \_\_\_\_\_  
 CASING SIZE 5 1/2 DEPTH \_\_\_\_\_  
 TUBING SIZE 2 7/8 DEPTH 2340'  
 DRILL PIPE \_\_\_\_\_ DEPTH \_\_\_\_\_  
 TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_  
 PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_  
 MEAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_  
 CEMENT LEFT IN CSG. \_\_\_\_\_  
 PERFS. \_\_\_\_\_  
 DISPLACEMENT \_\_\_\_\_

OWNER Scane  
 CEMENT USED ONLY 100SX5  
 AMOUNT ORDERED 250 60/40 40mgal  
200lb Hacks  
 COMMON 60 @ \_\_\_\_\_  
 POZMIX 40 @ \_\_\_\_\_  
 GEL 3 @ \_\_\_\_\_  
 CHLORIDE \_\_\_\_\_ @ \_\_\_\_\_  
 ASC \_\_\_\_\_ @ \_\_\_\_\_  
 HANDLING \_\_\_\_\_ @ \_\_\_\_\_  
 MILEAGE 200 ton/mile 11.25 per

**EQUIPMENT**

PUMP TRUCK CEMENTER Alan Ryan  
 # 423 281 HELPER Kevin Ryan  
 BULK TRUCK \_\_\_\_\_  
 # 366 DRIVER James M (TWS)  
 BULK TRUCK \_\_\_\_\_  
 # \_\_\_\_\_ DRIVER \_\_\_\_\_

**REMARKS:**

Leak Hole - Take Note - MIX 50SX w/ 50lb Hacks in low 25SX  
 Discharge w/ 52. Add H<sub>2</sub>O - 1400 PSI. Port Csg - 8.5/3 Port  
 MIX 50SKC 1430' Displace 200 H<sub>2</sub>O - 500 PSI.

Thank you  
 Alan, Kevin, James

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

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 John A. Johnson  
 SIGNATURE John A. Johnson

TOTAL \_\_\_\_\_

**SERVICE**

DEPTH OF JOB 2340  
 PUMP TRUCK CHARGE \_\_\_\_\_  
 EXTRA FOOTAGE @ \_\_\_\_\_  
 MILEAGE 40 @ \_\_\_\_\_  
 MANIFOLD \_\_\_\_\_ @ \_\_\_\_\_  
Concrete 40 @ \_\_\_\_\_

TOTAL \_\_\_\_\_

**PLUG & FLOAT EQUIPMENT**

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

TOTAL \_\_\_\_\_

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

# ALLIED OIL & GAS SERVICES, LLC 062570

Federal Tax I.D. # 20-8651475

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

SERVICE POINT: Dallas, TX

DATE <u>2/05/14</u>	SEC. <u>23</u>	TWP. <u>18</u>	RANGE <u>35</u>	CALLED OUT	ON LOCATION	JOB START <u>9:00A</u>	JOB FINISH <u>9:30P</u>
LEASE <u>Griffith</u>		WELL # <u>2-23</u>		LOCATION		COUNTY <u>Siatt</u>	STATE <u>Ky</u>
OLD OR NEW (Circle one)							

CONTRACTOR Acc Pulling #4

TYPE OF JOB PTA

HOLE SIZE \_\_\_\_\_ T.D. \_\_\_\_\_

CASING SIZE 5 1/2 DEPTH \_\_\_\_\_

TUBING SIZE 2 7/8 DEPTH 1050'

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

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

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

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

CEMENT LEFT IN CSG. \_\_\_\_\_

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

DISPLACEMENT \_\_\_\_\_

OWNER Sumal

CEMENT AMOUNT ORDERED 300 60/40 40/20

**EQUIPMENT**

PUMP TRUCK CEMENTER Alan Ryan

# 423-281 HELPER Kevin Ryan

BULK TRUCK

# 306-306 DRIVER Adam Flipse

BULK TRUCK

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

COMMON 180 @ \_\_\_\_\_

POZMIX 120 @ \_\_\_\_\_

GEL 10 @ \_\_\_\_\_

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

ASC \_\_\_\_\_ @ \_\_\_\_\_

150lb Hella 35K

150 # 062569

HANDLING MILEAGE \_\_\_\_\_ @ \_\_\_\_\_

**REMARKS:**

used 75g - 75lb bags 3340 6000s MAX

50 5lb (20) and 100 5lb and 100 lb Hella

to 200 lb - Shut in May 150 5lb Hella

@ 5lb to 300 lb - Shut in

Adam Ryan  
Alan Ryan

CHARGE TO Grand Mesa

STREET \_\_\_\_\_

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

TOTAL \_\_\_\_\_

**SERVICE**

DEPTH OF JOB 1050'

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

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

MILEAGE \_\_\_\_\_ @ \_\_\_\_\_

MANIFOLD \_\_\_\_\_ @ \_\_\_\_\_

TOTAL \_\_\_\_\_

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 John A. Johnson

SIGNATURE John A. Johnson

**PLUG & FLOAT EQUIPMENT**

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

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

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

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

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

TOTAL \_\_\_\_\_

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

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

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

## Summary of Changes

Lease Name and Number: GRIFFITH 2-23

API/Permit #: 15-171-20988-00-00

Doc ID: 1191226

Correction Number: 1

Approved By: NAOMI JAMES

Field Name	Previous Value	New Value
Additional Type And Percent Additive		4% Gel
Approved Date	01/17/2014	02/28/2014
Cementing Purpose Plug Back TD	No	Yes
CementingDepth2_PDF	-	0-4150
CementingDepthBase2		4150
CementingDepthTop2		0
Number Of Sacks Used for Cementing / Squeezing- Line 2		400
Perf_Depth_2		4150
Perf_Material_2		Cast Iron Bridge Plug
Perf_Record_2		2340



Summary of changes for correction 1 continued

Field Name	Previous Value	New Value
Perf_Shots_2		2
Save Link	../../kcc/detail/operatorEditDetail.cfm?docID=1166281	../../kcc/detail/operatorEditDetail.cfm?docID=1191226
Type Of Cement Used for Cementing / Squeezing - Line 2		60/40 Pozmix

## Summary of Attachments

Lease Name and Number: GRIFFITH 2-23

API: 15-171-20988-00-00

Doc ID: 1191226

Correction Number: 1

Attachment Name

Cement Plugging Tickets (Final)



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 Geologist Report / Mud Logs <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				

1. Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/Injection:	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

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) (Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Grand Mesa Operating Company
Well Name	GRIFFITH 2-23
Doc ID	1166281

All Electric Logs Run

CPDCN Micro Log
AI Shallow Focused Elect Log
Miroresistivity Log
Cement Bond Log

Form	ACO1 - Well Completion
Operator	Grand Mesa Operating Company
Well Name	GRIFFITH 2-23
Doc ID	1166281

Tops

Name	Top	Datum
Stone Corral	2327	+651
Bs/Stone Corral	2345	+633
Heebner	3890	-912
Lansing	3931	-953
Muncie Creek	4106	-1128
Stark	4200	-1222
Marmation	4320	-1342
Excello	4459	-1481
Morrow Shale	4586	-1608
Mississippian	4617	-1639
LTD	4814	

Form	ACO1 - Well Completion
Operator	Grand Mesa Operating Company
Well Name	GRIFFITH 2-23
Doc ID	1166281

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
4	4207-4210	250gals 15% RWR-1 & 1gal AR-630	4207-4210



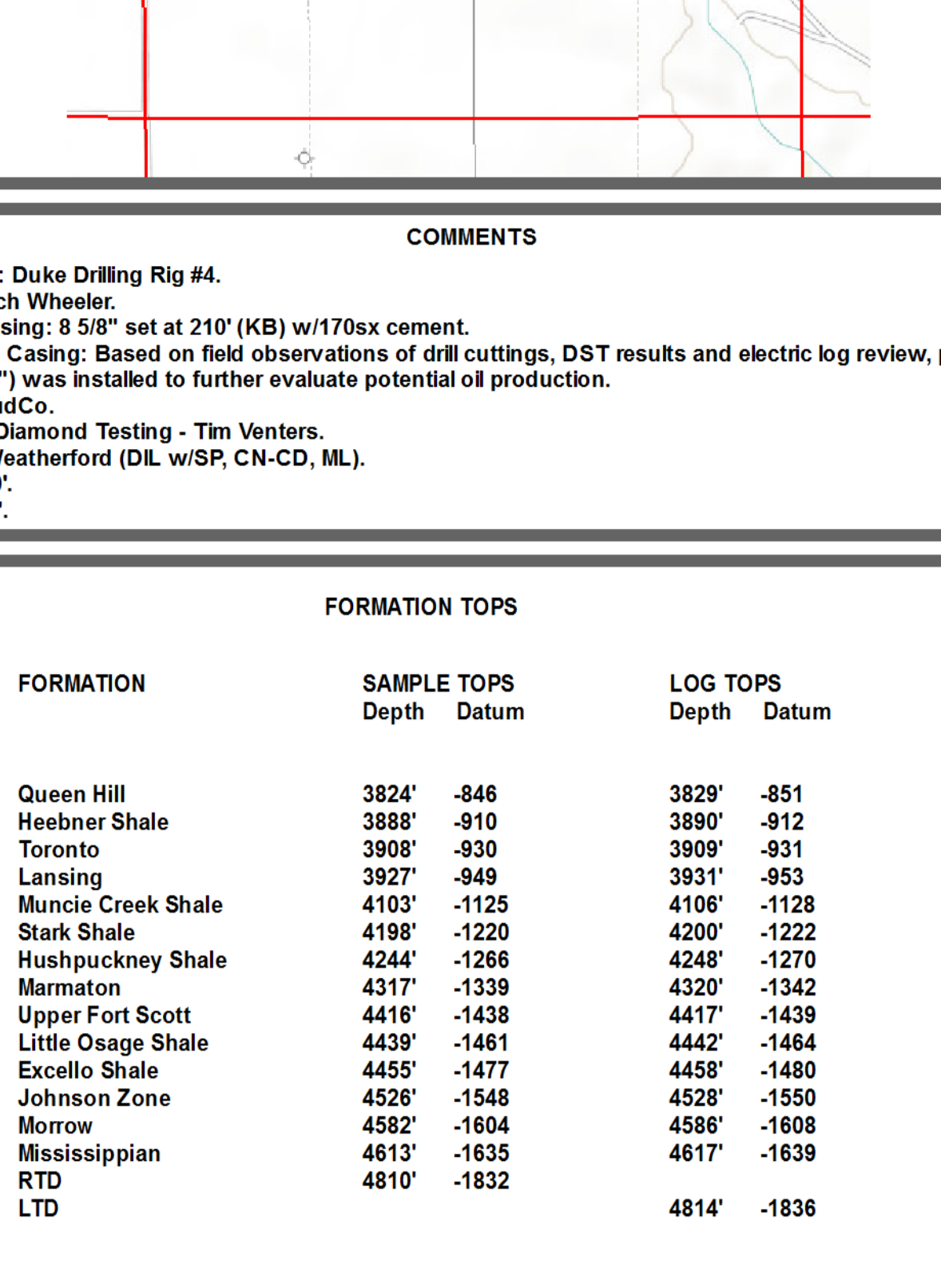


Well Name: Griffith #2-23  
Location: 1429' FSL, 775' FEL, 23-16S-33W, Scott County, Kansas  
License Number: API: 15-171-20988  
Spud Date: 10/04/2013  
Surface Coordinates: Lat: 38.6454293 Long: -100.9283027  
Drilling Completed: 10/17/2013

Bottom Hole Coordinates: Vertical hole  
Ground Elevation (ft): 2969' K.B. Elevation (ft): 2978'  
Logged Interval (ft): 3700' To: RTD Total Depth (ft): 4810'  
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: Kent R. Matson  
Company: Matson Geological Services, LLC  
Address: 33300 W. 15th Street S  
Garden Plain, Kansas 67050  
316-644-1975

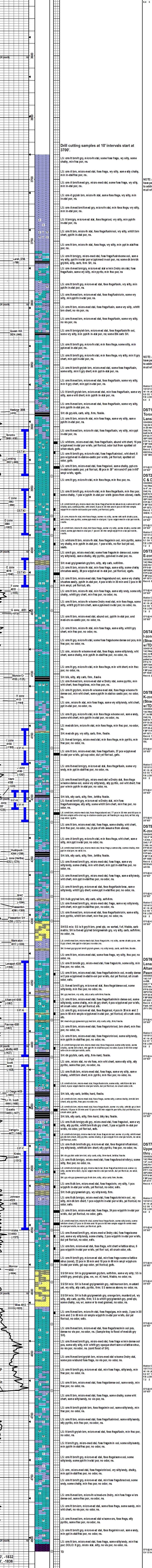


**COMMENTS**

Contractor: Duke Drilling Rig #4.  
Pusher: Rich Wheeler.  
Surface Casing: 8 5/8" set at 210' (KB) w/170sx cement.  
Production Casing: Based on field observations of drill cuttings, DST results and electric log review, production casing (5.5") was installed to further evaluate potential oil production.  
Mud by: MudCo.  
DST's by: Diamond Testing - Tim Venters.  
RTD= 4810'.  
LTD= 4814'.

**FORMATION TOPS**

FORMATION	SAMPLE TOPS Depth Datum	LOG TOPS Depth Datum
Queen Hill	3824' -846	3829' -851
Heebner Shale	3888' -910	3890' -912
Toronto	3908' -930	3909' -931
Lansing	3927' -949	3931' -953
Muncie Creek Shale	4103' -1125	4106' -1122
Stark Shale	4198' -1220	4200' -1228
Hushpuckney Shale	4244' -1266	4248' -1270
Marmaton	4317' -1339	4320' -1342
Upper Fort Scott	4416' -1438	4417' -1439
Little Osage Shale	4439' -1461	4442' -1464
Excello Shale	4455' -1477	4458' -1480
Johnson Zone	4526' -1548	4528' -1550
Mississippian	4582' -1604	4586' -1608
RTD	4613' -1635	4617' -1639
	4810' -1832	4814' -1836



RTD 4810', -1832  
LTD 4814', -1836



# DIAMOND TESTING

## General Information Report

### General Information

**Company Name** GRAND MESA OPERATING CO.  
**Contact** MICHAEL REILLY  
**Well Name** GRIFFITH #2-23  
**Unique Well ID** DST #1, TOR./LANS., 3902-3940  
**Surface Location** SEC 23-16S-33W, SCOTT CO. KS.  
**Field** WILDCAT  
**Well Type** Vertical  
**Test Type** CONVENTIONAL  
**Formation** DST #1, TOR./LANS., 3902-3940  
**Well Fluid Type** 01 Oil

**Representative** TIM VENTERS  
**Well Operator** GRAND MESA OPERATING CO.  
**Report Date** 2013/10/10  
**Prepared By** TIM VENTERS  
**Qualified By** KENT MATSON

**Start Test Date** 2013/10/10  
**Final Test Date** 2013/10/10

**Start Test Time** 10:59:00  
**Final Test Time** 19:08:00

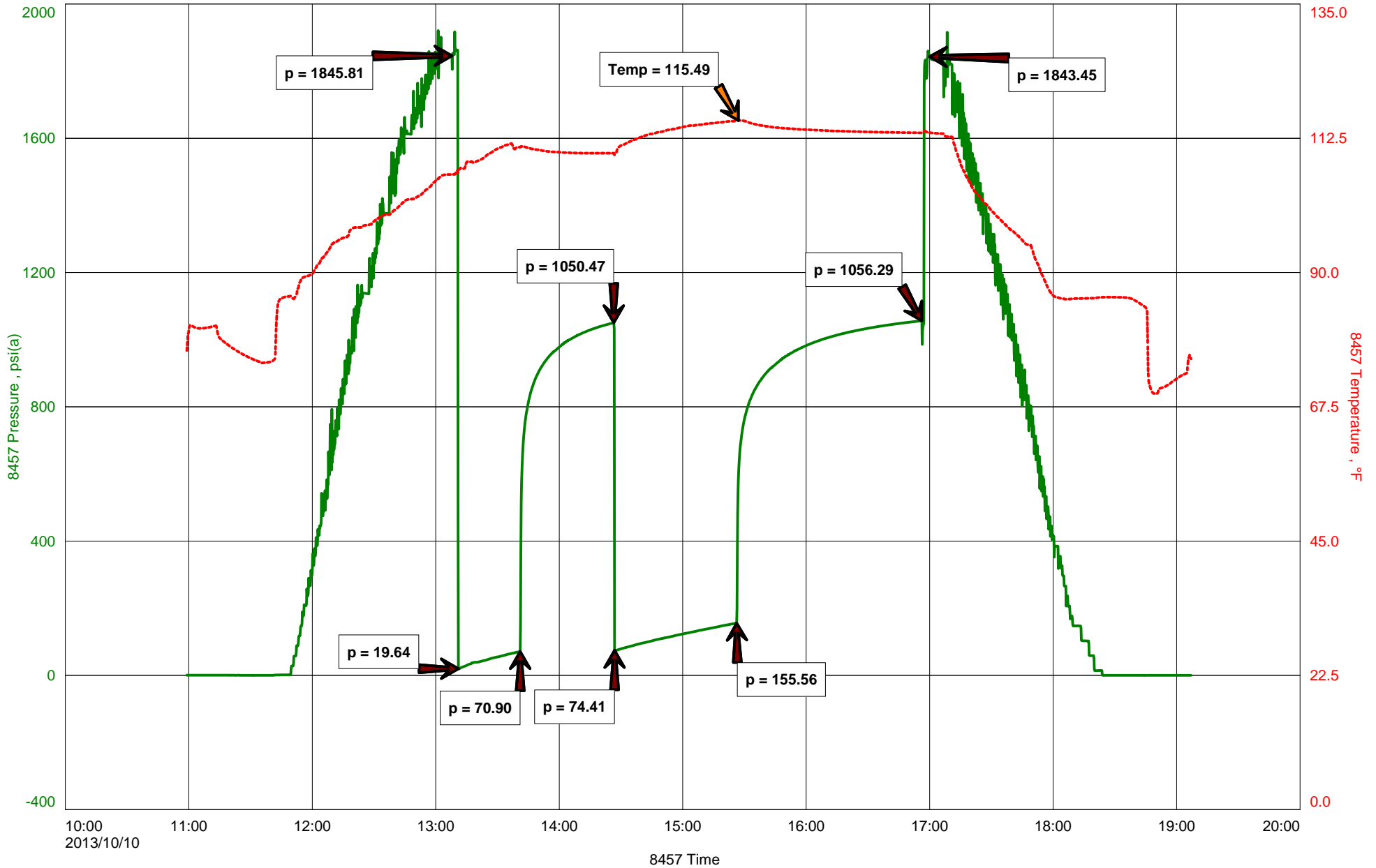
### Test Recovery:

RECOVERED: 80' HMCW W/TR. O, TRACE OIL, 56% WATER, 44% MUD  
125' MCW, 70% WATER, 30% MUD  
120' SMCW, 92% WATER, 8% MUD  
325' TOTAL FLUID

TOOL SAMPLE: 100% WATER

CHLORIDES: 60,000 ppm  
PH: 6.5  
RW: .20 @ 81 deg.

# GRIFFITH @2-23





**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: GRIFFITH2-23DST1

TIME ON: 10:59  
TIME OFF: 19:08

Company GRAND MESA OPERATING CO. Lease & Well No. GRIFFITH #2-23  
Contractor DUKE DRILLING CO., INC. RIG #4 Charge to GRAND MESA OPERATING CO.  
Elevation 2978 KB Formation TORONTO/LANSING Effective Pay \_\_\_\_\_ Ft. Ticket No. T264  
Date 10-10-13 Sec. 23 Twp. \_\_\_\_\_ 16 S Range \_\_\_\_\_ 33 W County SCOTT State KANSAS  
Test Approved By KENT MATSON Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 1 Interval Tested from 3902 ft. to 3940 ft. Total Depth 3940 ft.  
Packer Depth 3897 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.  
Packer Depth 3902 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.

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

Top Recorder Depth (Inside) 3883 ft. Recorder Number 8457 Cap. 10,000 P.S.I.  
Bottom Recorder Depth (Outside) 3937 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 53 Drill Collar Length 0 ft. I.D. 2 1/4 in.  
Weight 9.0 Water Loss 6.4 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.  
Chlorides 3,400 P.P.M. Drill Pipe Length 3869 ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.  
Did Well Flow? NO Reversed Out NO Anchor Length 38 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 2 INCH BLOW, BUILDING, REACHING BOB 28 MIN. (NO BB)  
2nd Open: VERY WEAK SURFACE BLOW, BUILDING, REACHING BOB 45 MIN. (NO BB)

Recovered 80 ft. of HMCW W/TR. O, TRACE OIL, 56% WATER, 44% MUD  
Recovered 125 ft. of MCW, 70% WATER, 30% MUD  
Recovered 120 ft. of SMCW, 92% WATER, 8% MUD  
Recovered 325 ft. of TOTAL FLUID

Recovered _____ ft. of _____	CHLORIDES: 60,000 ppm	Price Job
Recovered _____ ft. of _____	PH: 6.5	Other Charges
Remarks: _____	RW: .20 @ 81 deg.	Insurance
WE SLID TOOL ABOUT 7'-8' WHEN SETTING TOOL.		
TOOL SAMPLE: TRACE OIL, 100% WATER		Total

Time Set Packer(s) 1:10 PM A.M. P.M. Time Started Off Bottom 4:55 PM A.M. P.M. Maximum Temperature 115 deg.

Initial Hydrostatic Pressure..... (A) 1846 P.S.I.  
Initial Flow Period..... Minutes 30 (B) 20 P.S.I. to (C) 71 P.S.I.  
Initial Closed In Period..... Minutes 45 (D) 1050 P.S.I.  
Final Flow Period..... Minutes 60 (E) 74 P.S.I. to (F) 156 P.S.I.  
Final Closed In Period..... Minutes 90 (G) 1056 P.S.I.  
Final Hydrostatic Pressure..... (H) 1843 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 CO.  
**Contact** MICHAEL REILLY  
**Well Name** GRIFFITH #2-23  
**Unique Well ID** DST #2, LKC "C&D", 3950-3988  
**Surface Location** SEC 23-16S-33W, SCOTT CO. KS.  
**Field** WILDCAT  
**Well Type** Vertical  
**Test Type** CONVENTIONAL  
**Formation** DST #2, LKC "C&D", 3950-3988  
**Well Fluid Type** 01 Oil

**Representative** TIM VENTERS  
**Well Operator** GRAND MESA OPERATING CO.  
**Report Date** 2013/10/11  
**Prepared By** TIM VENTERS  
**Qualified By** KENT MATSON

**Start Test Date** 2013/10/11  
**Final Test Date** 2013/10/11

**Start Test Time** 05:12:00  
**Final Test Time** 14:29:00

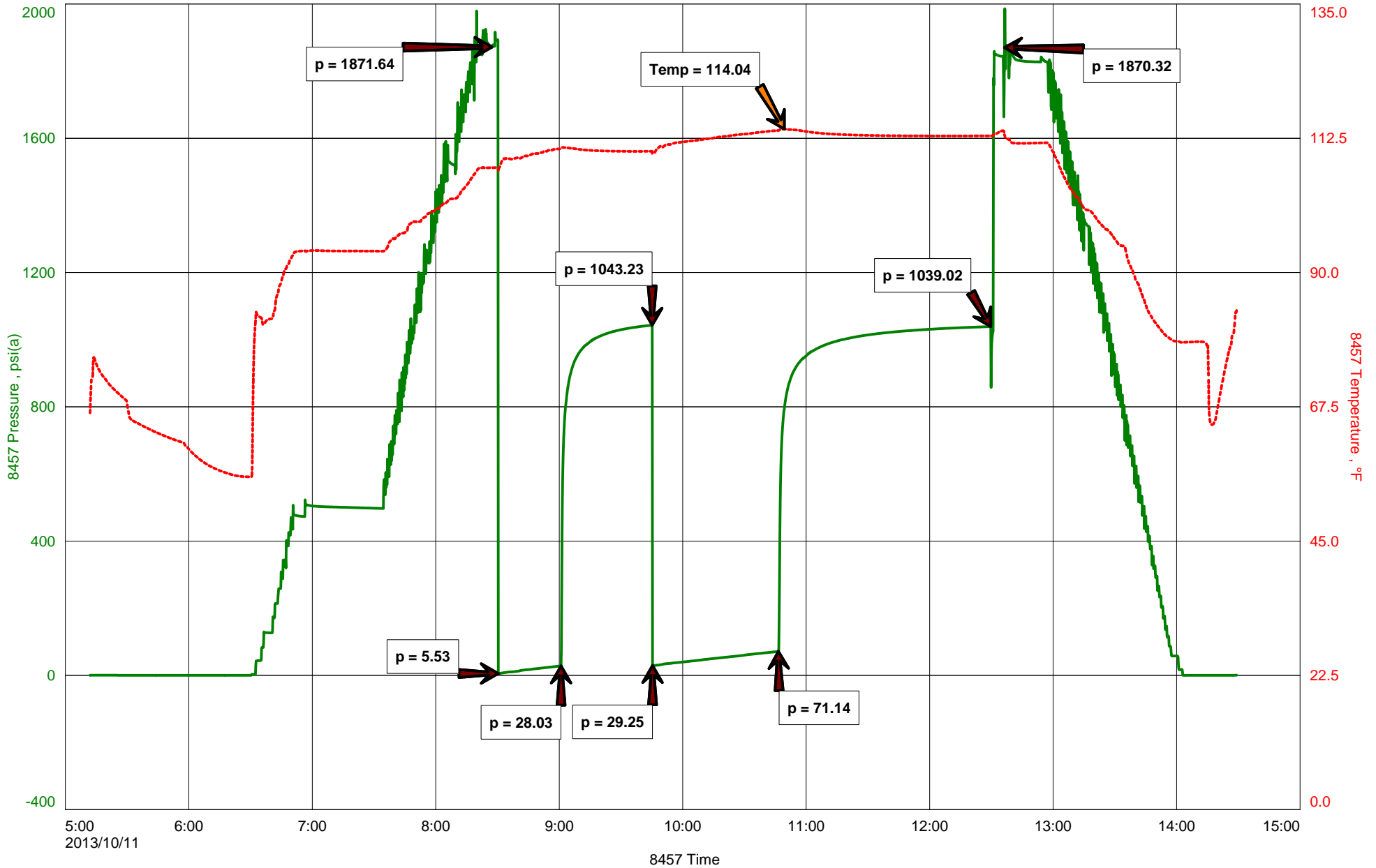
### Test Recovery:

RECOVERED: 25' SWCM, 8% WATER, 92% MUD  
125' HMCW, 57% WATER, 43% MUD  
150' TOTAL FLUID

TOOL SAMPLE: 60% WATER, 40% MUD

CHLORIDES: 22,000 ppm  
PH: 8.0  
RW: .42 @ 76 deg.

# GRIFFITH #2-23





**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: GRIFFITH2-23DST2

TIME ON: 05:12  
TIME OFF: 14:29

Company GRAND MESA OPERATING CO. Lease & Well No. GRIFFITH #2-23  
Contractor DUKE DRILLING CO., INC. RIG #4 Charge to GRAND MESA OPERATING CO.  
Elevation 2978 KB Formation LKC "C&D" Effective Pay \_\_\_\_\_ Ft. Ticket No. T265  
Date 10-11-13 Sec. 23 Twp. 16 S Range 33 W County SCOTT State KANSAS  
Test Approved By KENT MATSON Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 2 Interval Tested from 3950 ft. to 3988 ft. Total Depth 3988 ft.  
Packer Depth 3945 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.  
Packer Depth 3950 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.

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

Top Recorder Depth (Inside) 3931 ft. Recorder Number 8457 Cap. 10,000 P.S.I.  
Bottom Recorder Depth (Outside) 3985 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 54 Drill Collar Length 0 ft. I.D. 2 1/4 in.  
Weight 9.1 Water Loss 7.2 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.  
Chlorides 4,000 P.P.M. Drill Pipe Length 3917 ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.  
Did Well Flow? NO Reversed Out NO Anchor Length 38 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 SURFACE BLOW, BUILDING TO 4 INCHES. (NO BB)  
2nd Open: VERY WEAK SURFACE BLOW, BUILDING TO 6 1/2 INCHES. (NO BB)

Recovered 25 ft. of SWCM, 8% WATER, 92% MUD  
Recovered 125 ft. of HMCW, 57% WATER, 43% MUD  
Recovered 150 ft. of TOTAL FLUID

Recovered _____ ft. of _____	CHLORIDES: 22,000 ppm	Price Job
Recovered _____ ft. of _____	PH: 8.0	Other Charges
Remarks: _____	RW: .42 @ 76 deg.	Insurance
TOOL SAMPLE: 60% WATER, 40% MUD		Total

Time Set Packer(s) 8:30 AM A.M. P.M. Time Started Off Bottom 12:29 PM A.M. P.M. Maximum Temperature 114 deg.  
Initial Hydrostatic Pressure..... (A) 1872 P.S.I.  
Initial Flow Period..... Minutes 30 (B) 6 P.S.I. to (C) 28 P.S.I.  
Initial Closed In Period..... Minutes 45 (D) 1043 P.S.I.  
Final Flow Period..... Minutes 60 (E) 29 P.S.I. to (F) 71 P.S.I.  
Final Closed In Period..... Minutes 104 (G) 1039 P.S.I.  
Final Hydrostatic Pressure..... (H) 1870 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 CO.  
**Contact** MICHAEL REILLY  
**Well Name** GRIFFITH #2-23  
**Unique Well ID** DST #3, LKC "E", 4006-4029  
**Surface Location** SEC 23-16S-33W, SCOTT CO. KS.  
**Field** WILDCAT  
**Well Type** Vertical  
**Test Type** CONVENTIONAL  
**Formation** DST #3, LKC "E", 4006-4029  
**Well Fluid Type** 01 Oil

**Representative** TIM VENTERS  
**Well Operator** GRAND MESA OPERATING CO.  
**Report Date** 2013/10/12  
**Prepared By** TIM VENTERS  
**Qualified By** KENT MATSON

**Start Test Date** 2013/10/11  
**Final Test Date** 2013/10/12

**Start Test Time** 10:03:00  
**Final Test Time** 04:25:00

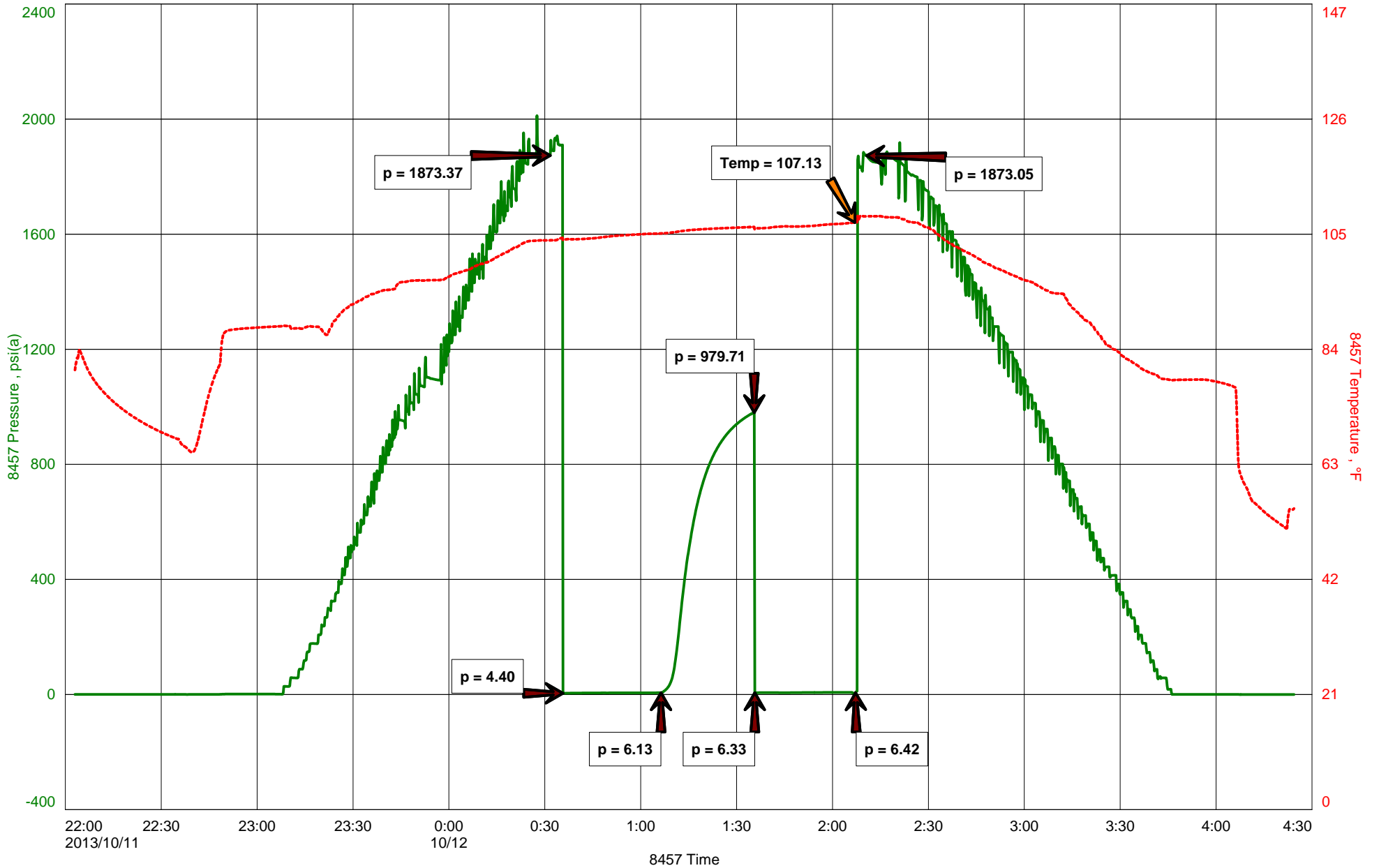
### Test Recovery:

RECOVERED: 5' MUD

TOOL SAMPLE: 100% MUD



# GRIFFITH #2-23





**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: GRIFFITH2-23DST3

TIME ON: 22:03 10-11-13  
TIME OFF: 04:25 10-12-13

Company GRAND MESA OPERATING CO. Lease & Well No. GRIFFITH #2-23  
Contractor DUKE DRILLING CO., INC. RIG #4 Charge to GRAND MESA OPERATING CO.  
Elevation 2978 KB Formation LKC "E" Effective Pay \_\_\_\_\_ Ft. Ticket No. T266  
Date 10-12-13 Sec. 23 Twp. \_\_\_\_\_ 16 S Range \_\_\_\_\_ 33 W County SCOTT State KANSAS  
Test Approved By KENT MATSON Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 3 Interval Tested from 4006 ft. to 4029 ft. Total Depth 4029 ft.  
Packer Depth 4001 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.  
Packer Depth 4006 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.

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

Top Recorder Depth (Inside) 3987 ft. Recorder Number 8457 Cap. 10,000 P.S.I.  
Bottom Recorder Depth (Outside) 4026 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 54 Drill Collar Length \_\_\_\_\_ ft. I.D. 2 1/4 in.  
Weight 9.1 Water Loss 7.2 cc. Weight Pipe Length \_\_\_\_\_ ft. I.D. 2 7/8 in.  
Chlorides 4,000 P.P.M. Drill Pipe Length 3973 ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.  
Did Well Flow? NO Reversed Out NO Anchor Length 23 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 SURFACE BLOW THROUGHOUT PERIOD. (NO BB)  
2nd Open: NO BLOW THROUGHOUT PERIOD. (NO BB)

Recovered 5 ft. of MUD  
Recovered \_\_\_\_\_ ft. of \_\_\_\_\_  
Recovered \_\_\_\_\_ ft. of \_\_\_\_\_  
Recovered \_\_\_\_\_ ft. of \_\_\_\_\_  
Recovered \_\_\_\_\_ ft. of \_\_\_\_\_

Recovered _____ ft. of _____	Price Job
Remarks: _____	Other Charges
TOOL SAMPLE: 100% MUD	Insurance
	Total

Time Set Packer(s) 12:35 AM A.M. P.M. Time Started Off Bottom 2:05 AM A.M. P.M. Maximum Temperature 107 deg.

Initial Hydrostatic Pressure..... (A) 1873 P.S.I.  
Initial Flow Period..... Minutes 30 (B) 4 P.S.I. to (C) 6 P.S.I.  
Initial Closed In Period..... Minutes 30 (D) 980 P.S.I.  
Final Flow Period..... Minutes 30 (E) 6 P.S.I. to (F) 6 P.S.I.  
Final Closed In Period..... Minutes 0 (G) N/A P.S.I.  
Final Hydrostatic Pressure..... (H) 1873 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 CO.  
**Contact** MICHAEL REILLY  
**Well Name** GRIFFITH #2-23  
**Unique Well ID** DST #4, LKC "I", 4144-4174  
**Surface Location** SEC 23-16S-33W, SCOTT CO. KS.  
**Field** WILDCAT  
**Well Type** Vertical  
**Test Type** STRADDLE  
**Formation** DST #4, LKC "I", 4144-4174  
**Well Fluid Type** 01 Oil

**Representative** TIM VENTERS  
**Well Operator** GRAND MESA OPERATING CO.  
**Report Date** 2013/10/13  
**Prepared By** TIM VENTERS  
**Qualified By** KENT MATSON

**Start Test Date** 2013/10/12  
**Final Test Date** 2013/10/13

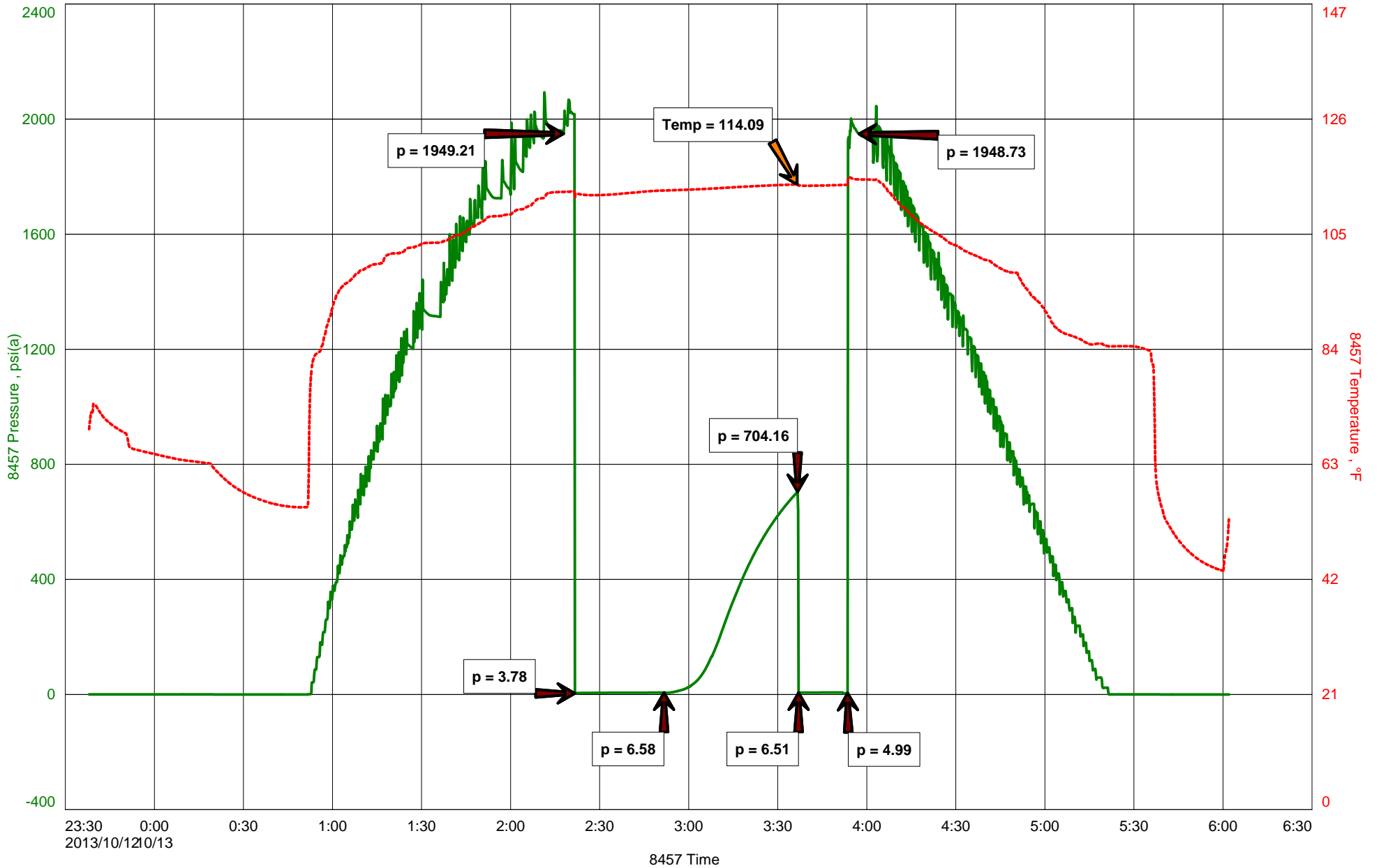
**Start Test Time** 23:38:00  
**Final Test Time** 06:03:00

### Test Recovery:

RECOVERED: 2' MUD

TOOL SAMPLE: 100% MUD

# GRIFFITH #2-23





**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: GRIFFITH2-23DST4

TIME ON: 23:38 10-12-13  
TIME OFF: 06:03 10-13-13

Company GRAND MESA OPERATING CO. Lease & Well No. GRIFFITH #2-23  
Contractor DUKE DRILLING CO., INC. RIG #4 Charge to GRAND MESA OPERATING CO.  
Elevation 2978 KB Formation LKC "I" Effective Pay \_\_\_\_\_ Ft. Ticket No. T267  
Date 10-13-13 Sec. 23 Twp. \_\_\_\_\_ 16 S Range \_\_\_\_\_ 33 W County SCOTT State KANSAS  
Test Approved By KENT MATSON Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 4 Interval Tested from 4144 ft. to 4174 ft. Total Depth 4195 ft.  
Packer Depth 4139 ft. Size 6 3/4 in. Packer depth 4174 ft. Size 6 3/4 in.  
Packer Depth 4144 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.

Depth of Selective Zone Set \_\_\_\_\_  
Top Recorder Depth (Inside) 4125 ft. Recorder Number 8457 Cap. 10,000 P.S.I.  
Bottom Recorder Depth (Outside) 4171 ft. Recorder Number 11029 Cap. 5,025 P.S.I.  
Below Straddle Recorder Depth 4192 ft. Recorder Number 11030 Cap. 5,025 P.S.I.

Mud Type CHEMICAL Viscosity 55 Drill Collar Length 0 ft. I.D. 2 1/4 in.  
Weight 9.0 Water Loss 7.6 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.  
Chlorides 5,600 P.P.M. Drill Pipe Length 4111 ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.  
Did Well Flow? NO Reversed Out NO Anchor Length 30 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 SURFACE BLOW LASTING 26 1/2 MIN. (NO BB)  
2nd Open: NO BLOW THROUGHOUT PERIOD. (NO BB)

Recovered <u>2</u> ft. of <u>MUD</u>	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	Price Job
Recovered _____ ft. of _____	Other Charges
Remarks: _____	Insurance
TOOL SAMPLE: <u>100% MUD</u>	Total

Time Set Packer(s) 2:21 AM A.M. P.M. Time Started Off Bottom 3:51 AM A.M. P.M. Maximum Temperature 114 deg.  
Initial Hydrostatic Pressure..... (A) 1949 P.S.I.  
Initial Flow Period..... Minutes 30 (B) 4 P.S.I. to (C) 7 P.S.I.  
Initial Closed In Period..... Minutes 45 (D) 704 P.S.I.  
Final Flow Period..... Minutes 15 (E) 7 P.S.I. to (F) 5 P.S.I.  
Final Closed In Period..... Minutes 0 (G) N/A P.S.I.  
Final Hydrostatic Pressure..... (H) 1949 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 CO.  
**Contact** MICHAEL RIELLY  
**Well Name** GRIFFITH #2-23  
**Unique Well ID** DST #5, LKC "K", 4194-4220  
**Surface Location** SEC 23-16S-33W, SCOTT CO. KS.  
**Field** WILDCAT  
**Well Type** Vertical  
**Test Type** CONVENTIONAL  
**Formation** DST #5, LKC "K", 4194-4220  
**Well Fluid Type** 01 Oil

**Representative** TIM VENTERS  
**Well Operator** GRAND MESA OPERATING CO.  
**Report Date** 2013/10/13  
**Prepared By** TIM VENTERS  
**Qualified By** KENT MATSON

**Start Test Date** 2013/10/13  
**Final Test Date** 2013/10/13

**Start Test Time** 13:35:00  
**Final Test Time** 21:19:00

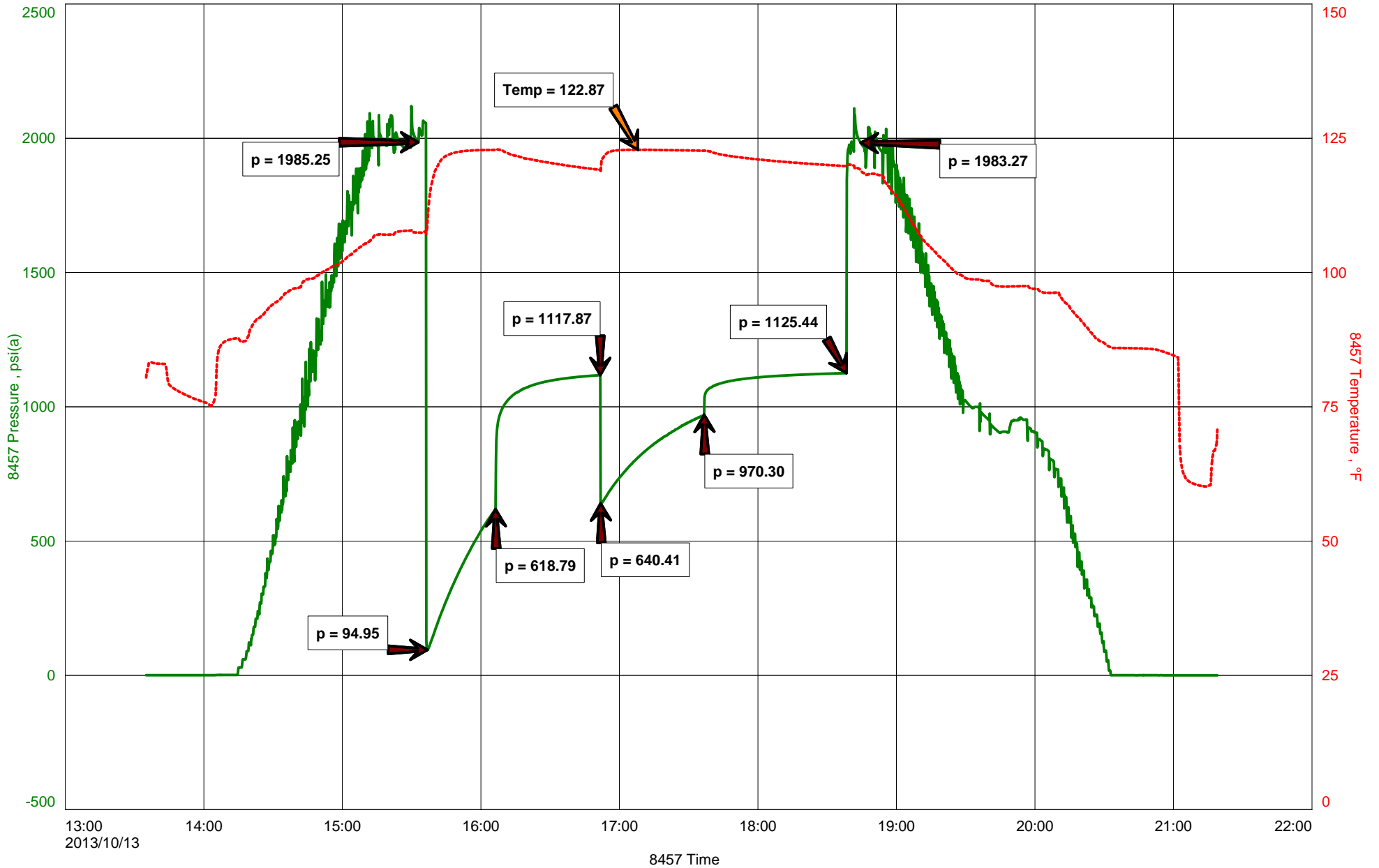
### Test Recovery:

RECOVERED; 140' MCW W/TR. O, TRACE OIL, 71% WATER, 29% MUD  
1985' VSMCW W/TR. O, TRACE OIL, 96% WATER, 4% MUD  
2125' TOTAL FLUID

TOOL SAMPLE: SPOTTY OIL, 97% WATER, 3% MUD

CHLORIDES: 39,000 ppm  
PH: 7.5  
RW: .32 @ 70 deg.

# GRIFFITH #2-23







**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: GRIFFITH2-23DST5

TIME ON: 13:35  
TIME OFF: 21:19

Company GRAND MESA OPERATING CO. Lease & Well No. GRIFFITH #2-23  
Contractor DUKE DRILLING CO., INC. RIG #4 Charge to GRAND MESA OPERATING CO.  
Elevation 2978 KB Formation LKC "K" Effective Pay \_\_\_\_\_ Ft. Ticket No. T268  
Date 10-13-13 Sec. 23 Twp. \_\_\_\_\_ 16 S Range \_\_\_\_\_ 33 W County SCOTT State KANSAS  
Test Approved By KENT MATSON Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 5 Interval Tested from 4194 ft. to 4220 ft. Total Depth 4220 ft.  
Packer Depth 4189 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.  
Packer Depth 4194 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.

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

Top Recorder Depth (Inside) 4175 ft. Recorder Number 8457 Cap. 10,000 P.S.I.  
Bottom Recorder Depth (Outside) 4217 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 53 Drill Collar Length 0 ft. I.D. 2 1/4 in.  
Weight 9.0 Water Loss 8.0 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.  
Chlorides 3,000 P.P.M. Drill Pipe Length 4161 ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.  
Did Well Flow? NO Reversed Out YES Anchor Length 26 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 2 INCH BLOW, BUILDING, REACHING BOB 1 1/2 MIN. (NO BB)  
2nd Open: GOOD 1 1/2 INCH BLOW, BUILDING, REACHING BOB 3 MIN. (NO BB)

Recovered 140 ft. of MCW W/TR. O, TRACE OIL, 71% WATER, 29% MUD  
Recovered 1985 ft. of VSMCW W/TR. O, TRACE OIL, 96% WATER, 4% MUD  
Recovered 2125 ft. of TOTAL FLUID

Recovered _____ ft. of _____	CHLORIDES: 39,000 ppm	Price Job
Recovered _____ ft. of _____	PH: 7.5	Other Charges
Remarks: _____	RW: .32 @ 70 deg.	Insurance
TOOL SAMPLE: SPOTTY OIL, 97% WATER, 3% MUD		Total

Time Set Packer(s) 3:36 PM A.M. P.M. Time Started Off Bottom 6:36 PM A.M. P.M. Maximum Temperature 123 deg.

Initial Hydrostatic Pressure..... (A) 1985 P.S.I.  
Initial Flow Period..... Minutes 30 (B) 95 P.S.I. to (C) 619 P.S.I.  
Initial Closed In Period..... Minutes 45 (D) 1118 P.S.I.  
Final Flow Period..... Minutes 45 (E) 640 P.S.I. to (F) 970 P.S.I.  
Final Closed In Period..... Minutes 60 (G) 1125 P.S.I.  
Final Hydrostatic Pressure..... (H) 1983 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 CO.  
**Contact** MICHAEL REILLY  
**Well Name** GRIFFITH #2-23  
**Unique Well ID** DST #6, LEN./ALT./PAWN., 4332-4410  
**Surface Location** SEC 23-16S-33W, SCOTT CO. KS.  
**Field** WILDCAT  
**Well Type** Vertical  
**Test Type** CONVENTIONAL  
**Formation** DST #6, LEN./ALT./PAWN., 4332-4410  
**Well Fluid Type** 01 Oil

**Representative** TIM VENTERS  
**Well Operator** GRAND MESA OPERATING CO.  
**Report Date** 2013/10/15  
**Prepared By** TIM VENTERS  
**Qualified By** KENT MATSON

**Start Test Date** 2013/10/14  
**Final Test Date** 2013/10/15

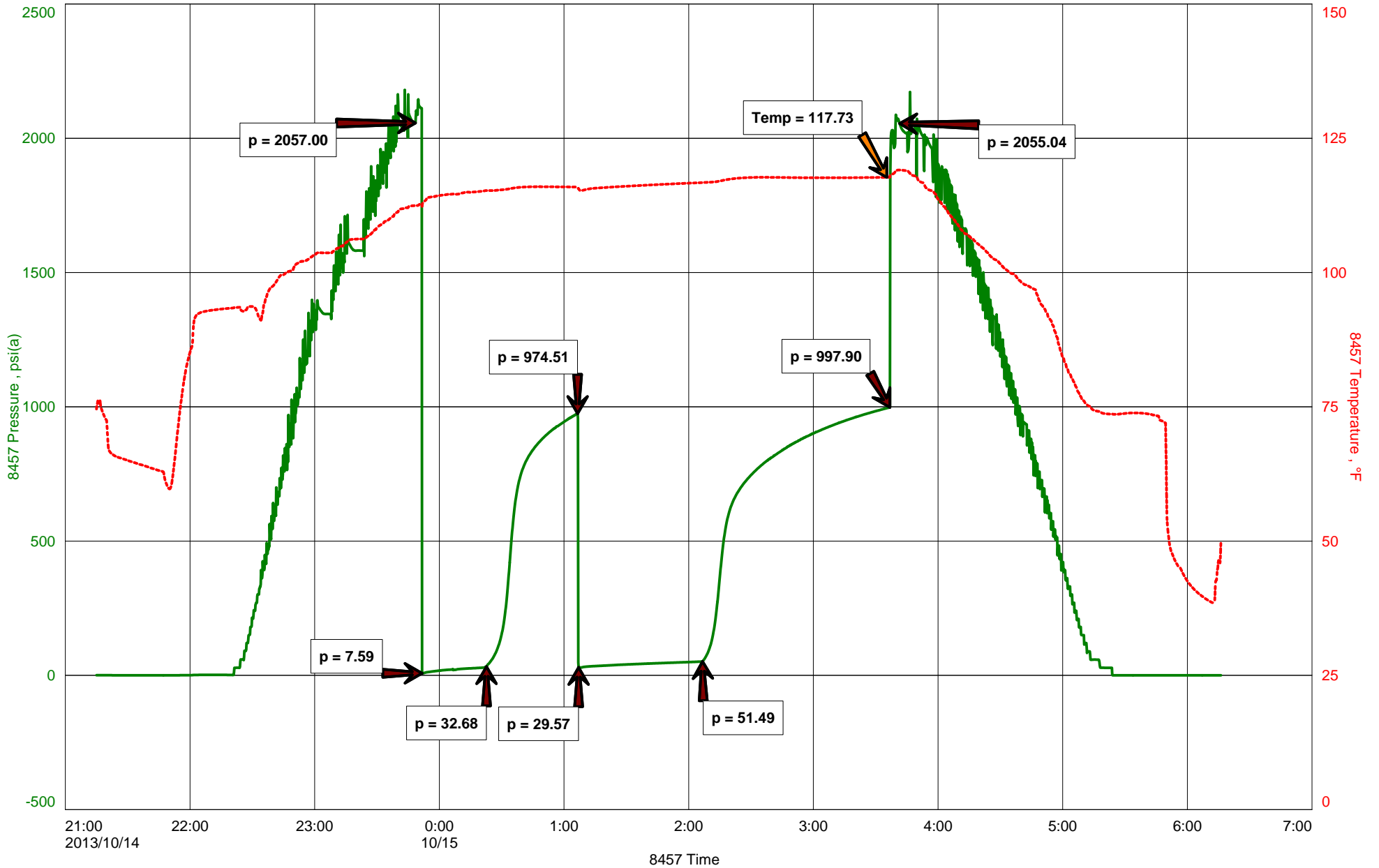
**Start Test Time** 21:15:00  
**Final Test Time** 06:17:00

### Test Recovery:

**RECOVERED: 380' GAS IN PIPE**  
40' CLEAN OIL, 100% OIL, GRAVITY: 37  
80' VHMCO, 51% OIL, 49% MUD  
120' TOTAL FLUID

**TOOL SAMPLE: 96% OIL, 4% MUD**

# GRIFFITH #2-23





**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: GRIFFITH2-23DST6

TIME ON: 21:15 10-14-13  
TIME OFF: 06:17 10-15-13

Company GRAND MESA OPERATING CO. Lease & Well No. GRIFFITH #2-23  
Contractor DUKE DRILLING CO., INC. RIG #4 Charge to GRAND MESA OPERATING CO.  
Elevation 2978 KB Formation LEN./ALT./PAWN. Effective Pay \_\_\_\_\_ Ft. Ticket No. T269  
Date 10-14-13 Sec. 23 Twp. \_\_\_\_\_ 16 S Range \_\_\_\_\_ 33 W County SCOTT State KANSAS  
Test Approved By KENT MATSON Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 6 Interval Tested from 4332 ft. to 4410 ft. Total Depth 4410 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) 4407 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 55 Drill Collar Length \_\_\_\_\_ 0 ft. I.D. 2 1/4 in.  
Weight 9.2 Water Loss 8.8 cc. Weight Pipe Length \_\_\_\_\_ 0 ft. I.D. 2 7/8 in.  
Chlorides 4,400 P.P.M. Drill Pipe Length 4299 ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.  
Did Well Flow? NO Reversed Out NO Anchor Length 15 ft. Size 4 1/2-FH in.  
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. <sup>63' DP IN ANCHOR</sup> Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: WEAK SURFACE BLOW, BUILDING TO 11 1/2 INCHES. (NO BB)  
2nd Open: GOOD 1 INCH BLOW, BUILDING, REACHING BOB 23 1/2 MIN. (NO BB)

Recovered 380 ft. of GAS IN PIPE  
Recovered 40 ft. of CLEAN OIL, 100% OIL, GRAVITY: 37  
Recovered 80 ft. of VHMCO, 51% OIL, 49% MUD  
Recovered 120 ft. of TOTAL FLUID

Recovered _____ ft. of _____	Price Job
Recovered _____ ft. of _____	Other Charges
Remarks: _____	Insurance
TOOL SAMPLE: 96% OIL, 4% MUD	Total

Time Set Packer(s) 11:51 PM A.M. P.M. Time Started Off Bottom 3:36 AM A.M. P.M. Maximum Temperature 118 deg.

Initial Hydrostatic Pressure..... (A) 2057 P.S.I.  
Initial Flow Period..... Minutes 30 (B) 8 P.S.I. to (C) 33 P.S.I.  
Initial Closed In Period..... Minutes 45 (D) 975 P.S.I.  
Final Flow Period..... Minutes 60 (E) 30 P.S.I. to (F) 51 P.S.I.  
Final Closed In Period..... Minutes 90 (G) 998 P.S.I.  
Final Hydrostatic Pressure..... (H) 2055 P.S.I.

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# DIAMOND TESTING

## General Information Report

### General Information

**Company Name** GRAND MESA OPERATING CO.  
**Contact** MICHAEL REILLY  
**Well Name** GRIFFITH #2-23  
**Unique Well ID** DST #7, FT. SC.-JOHN., 4416-4550  
**Surface Location** SEC 23-16S-33W, SCOTT CO. KS.  
**Field** WILDCAT  
**Well Type** Vertical  
**Test Type** CONVENTIONAL  
**Formation** DST #7, FT. SC.-JOHN., 4416-4550  
**Well Fluid Type** 01 Oil

**Representative** TIM VENTERS  
**Well Operator** GRAND MESA OPERATING CO.  
**Report Date** 2013/10/16  
**Prepared By** TIM VENTERS  
**Qualified By** KENT MATSON

**Start Test Date** 2013/10/16  
**Final Test Date** 2013/10/16

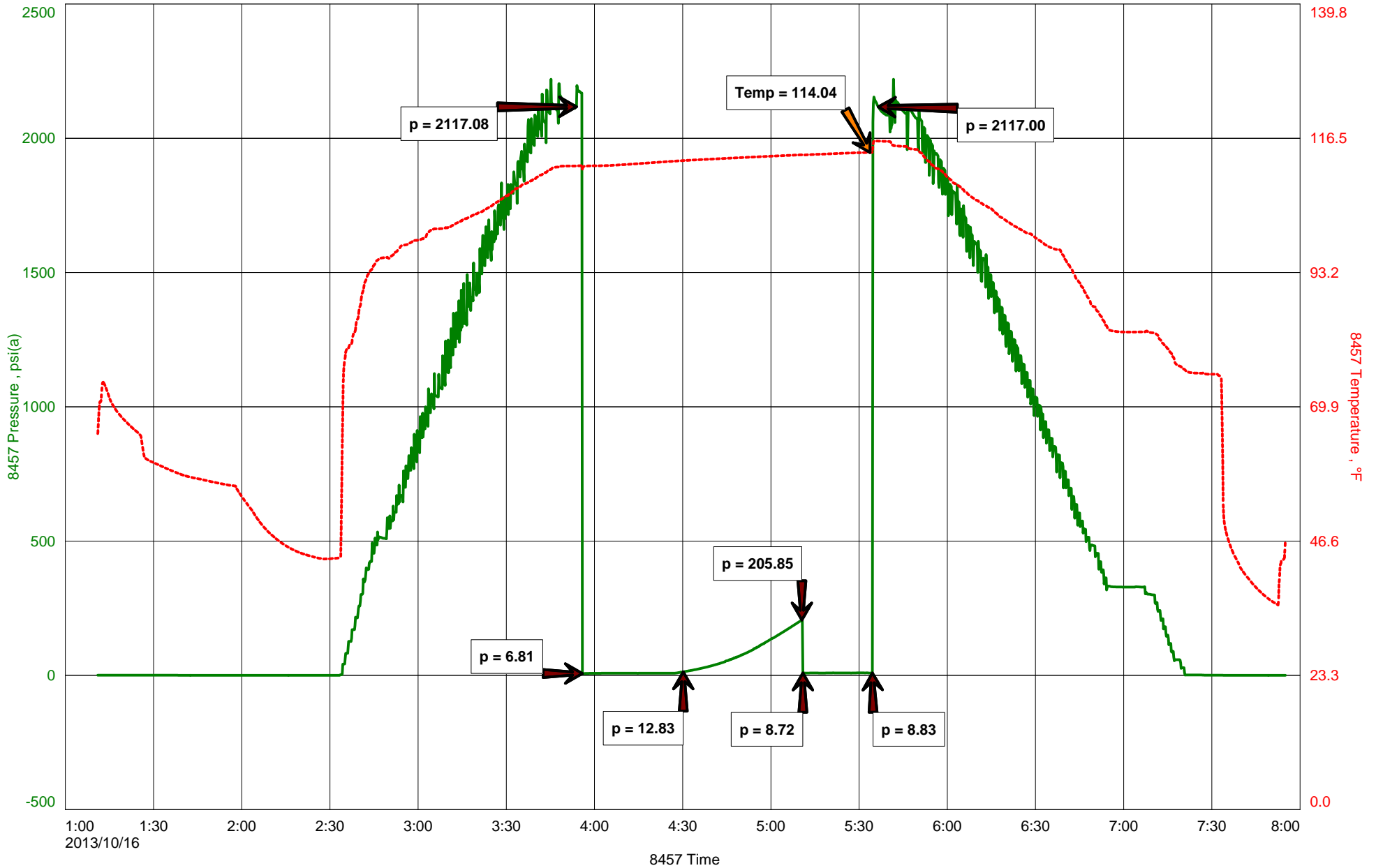
**Start Test Time** 01:11:00  
**Final Test Time** 07:55:00

### Test Recovery:

RECOVERED: 10' M W/TR. O, TRACE OIL, 100% MUD

TOOL SAMPLE: TRACE OIL, 100% MUD

# GRIFFITH #2-23





**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: GRIFFITH2-23DST7

TIME ON: 01:11  
TIME OFF: 07:05

Company GRAND MESA OPERATING CO. Lease & Well No. GRIFFITH #2-23  
Contractor DUKE DRILLING CO., INC. RIG #4 Charge to GRAND MESA OPERATING CO.  
Elevation 2978 KB Formation FT. SCOTT-JOHNSON Effective Pay \_\_\_\_\_ Ft. Ticket No. T270  
Date 10-16-13 Sec. 23 Twp. \_\_\_\_\_ 16 S Range \_\_\_\_\_ 33 W County SCOTT State KANSAS  
Test Approved By KENT MATSON Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 7 Interval Tested from 4416 ft. to 4550 ft. Total Depth 4550 ft.  
Packer Depth 4411 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.  
Packer Depth 4416 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.

Depth of Selective Zone Set \_\_\_\_\_  
Top Recorder Depth (Inside) 4397 ft. Recorder Number 8457 Cap. 10,000 P.S.I.  
Bottom Recorder Depth (Outside) 4547 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 57 Drill Collar Length \_\_\_\_\_ ft. I.D. 2 1/4 in.  
Weight 9.2 Water Loss 9.6 cc. Weight Pipe Length \_\_\_\_\_ ft. I.D. 2 7/8 in.  
Chlorides 5,000 P.P.M. Drill Pipe Length 4383 ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.  
Did Well Flow? NO Reversed Out NO Anchor Length 40 ft. Size 4 1/2-FH in.  
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. <sup>94' DP IN ANCHOR</sup> Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: WEAK 1/4 INCH BLOW, BUILDING TO 1/2 INCH. (NO BB)  
2nd Open: NO BLOW THROUGHOUT PERIOD. (NO BB)

Recovered <u>10</u> ft. of <u>M W/TR. O, TRACE OIL, 100% MUD</u>	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	Price Job
Recovered _____ ft. of _____	Other Charges
Remarks: _____	Insurance
TOOL SAMPLE: <u>TRACE OIL, 100% MUD</u>	Total

Time Set Packer(s) 3:55 AM <sup>A.M.</sup> P.M. Time Started Off Bottom 5:30 AM <sup>A.M.</sup> P.M. Maximum Temperature 114 deg.  
Initial Hydrostatic Pressure..... (A) 2117 P.S.I.  
Initial Flow Period..... Minutes 30 (B) 7 P.S.I. to (C) 13 P.S.I.  
Initial Closed In Period..... Minutes 45 (D) 206 P.S.I.  
Final Flow Period..... Minutes 20 (E) 9 P.S.I. to (F) 9 P.S.I.  
Final Closed In Period..... Minutes 0 (G) N/A P.S.I.  
Final Hydrostatic Pressure..... (H) 2117 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 CO.  
**Contact** MICHAEL REILLY  
**Well Name** GRIFFITH #2-23  
**Unique Well ID** DST #8, LKC "K", 4194-4209  
**Surface Location** SEC 23-16S-33W, SCOTT CO. KS.  
**Field** WILDCAT  
**Well Type** Vertical  
**Test Type** CONVENTIONAL  
**Formation** DST #8, LKC "K", 4194-4209  
**Well Fluid Type** 01 Oil

**Representative** TIM VENTERS  
**Well Operator** GRAND MESA OPERATING CO.  
**Report Date** 2013/10/18  
**Prepared By** TIM VENTERS  
**Qualified By** KENT MATSON

**Start Test Date** 2013/10/18  
**Final Test Date** 2013/10/18

**Start Test Time** 10:19:00  
**Final Test Time** 18:41:00

### Test Recovery:

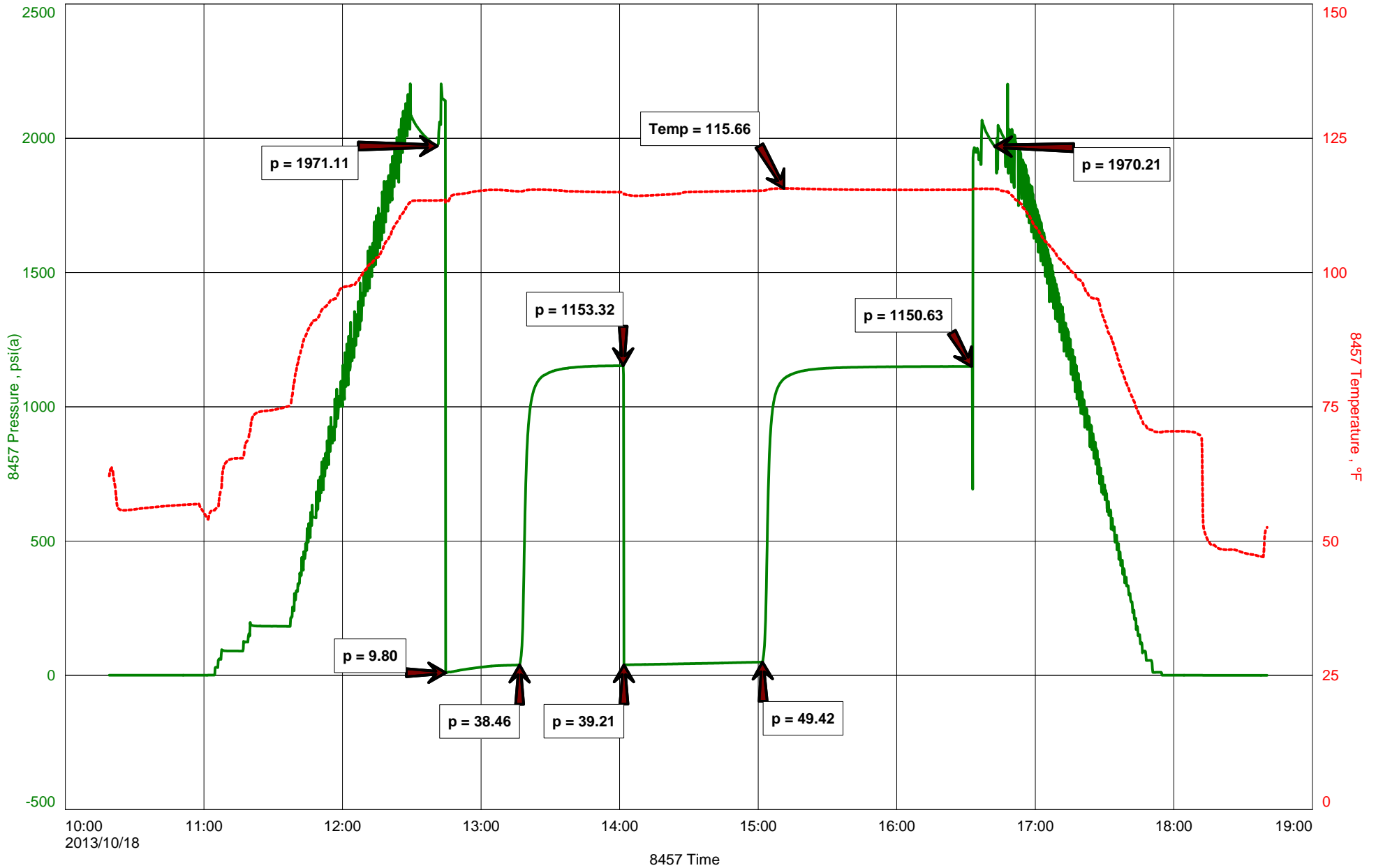
RECOVERED: 1' CO, 100% OIL  
70' SO&WCM, 12% OIL, 6% WATER, 82% MUD  
71' TOTAL FLUID

TOOL SAMPLE: 42% OIL, 16% WATER, 42% MUD

CHLORIDES: 17,000 ppm  
PH: 8.0  
RW: .70 @ 62 deg.



# GRIFFITH #2-23







**DIAMOND TESTING**  
P.O. Box 157  
**HOISINGTON, KANSAS 67544**  
(800) 542-7313  
**DRILL-STEM TEST TICKET**  
FILE: GRIFFITH2-23DST8

TIME ON: 10:19  
TIME OFF: 18:41

Company GRAND MESA OPERATING CO. Lease & Well No. GRIFFITH #2-23  
Contractor DUKE DRILLING CO., INC. RIG #4 Charge to GRAND MESA OPERATING CO.  
Elevation 2978 KB Formation LKC "K" Effective Pay \_\_\_\_\_ Ft. Ticket No. T271  
Date 10-18-13 Sec. 23 Twp. \_\_\_\_\_ 16 S Range \_\_\_\_\_ 33 W County SCOTT State KANSAS  
Test Approved By KENT MATSON Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 8 Interval Tested from 4194 ft. to 4209 ft. Total Depth 4810 RTD ft.  
Packer Depth 4189 ft. Size 6 3/4 in. Packer depth 4209 ft. Size 6 3/4 in.  
Packer Depth 4194 ft. Size 6 3/4 in. Packer depth \_\_\_\_\_ ft. Size 6 3/4 in.

Depth of Selective Zone Set \_\_\_\_\_  
Top Recorder Depth (Inside) 4175 ft. Recorder Number 8457 Cap. 10,000 P.S.I.  
Bottom Recorder Depth (Outside) 4206 ft. Recorder Number 11029 Cap. 5,025 P.S.I.  
Below Straddle Recorder Depth 4807 ft. Recorder Number 11030 Cap. 5,025 P.S.I.

Mud Type CHEMICAL Viscosity 67 Drill Collar Length 0 ft. I.D. 2 1/4 in.  
Weight 9.2 Water Loss 7.2 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.  
Chlorides 3,000 P.P.M. Drill Pipe Length 4161 ft. I.D. 3 1/2 in.  
Jars: Make STERLING Serial Number 4 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.  
Did Well Flow? NO Reversed Out NO Anchor Length 15 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 TO 6 INCHES. (NO BB)  
2nd Open: VERY WEAK SURFACE BLOW, BUILDING TO 1 INCH. (NO BB)

Recovered 1 ft. of CO 100% OIL  
Recovered 70 ft. of SO&WCM, 12% OIL, 6% WATER, 82% MUD  
Recovered 71 ft. of TOTAL FLUID

Recovered _____ ft. of _____	CHLORIDES: 17,000 ppm	Price Job
Recovered _____ ft. of _____	PH: 8.0	Other Charges
Remarks: _____	RW: .70 @ 62 deg.	Insurance
TOOL SAMPLE: 42% OIL, 16% WATER, 42% MUD		Total

Time Set Packer(s) 12:44 PM A.M. P.M. Time Started Off Bottom 4:31 PM A.M. P.M. Maximum Temperature 116 deg.

Initial Hydrostatic Pressure..... (A) 1971 P.S.I.  
Initial Flow Period..... Minutes 32 (B) 10 P.S.I. to (C) 38 P.S.I.  
Initial Closed In Period..... Minutes 45 (D) 1153 P.S.I.  
Final Flow Period..... Minutes 60 (E) 39 P.S.I. to (F) 49 P.S.I.  
Final Closed In Period..... Minutes 90 (G) 1151 P.S.I.  
Final Hydrostatic Pressure..... (H) 1970 P.S.I.

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# ALLIED OIL & GAS SERVICES, LLC 061167

Federal Tax I.D. # 20-8651476

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

SERVICE POINT:

*Dallas, TX*

DATE <i>10/4/17</i>	SEC. <i>23</i>	TWP. <i>16</i>	RANGE <i>33</i>	CALLED OUT	ON LOCATION	JOB START <i>7:30am</i>	JOB FINISH <i>8:00pm</i>
LEASE# <i>Griffith</i>	WELL# <i>2-23</i>		LOCATION <i>11/95-Rowell 11/2 W S-E 1/4</i>		COUNTY <i>SOUTH</i>	STATE <i>KY</i>	
OLD OR NEW (Circle one)							

CONTRACTOR *John Y*

TYPE OF JOB *Surfing*

HOLE SIZE *12 1/4* TD. *222*

CASINO SIZE *8 3/8* DEPTH *221 1/2*

TUBING SIZE DEPTH

DRILL PIPE *4 1/2* DEPTH

TOOL DEPTH

PRESS. MAX MINIMUM

MEAS. LINE SHOUL JOINT

CEMENT LEFT IN CSQ. *15'*

PERFS.

DISPLACEMENT *13.16*

OWNER *Same*

CEMENT AMOUNT ORDERED *170 cum 390cc*

EQUIPMENT

PUMP TRUCK CEMENTER *Alan Ryan*

# *422* HELPER *Andrew Bostlund*

BULK TRUCK

# *386* DRIVER *Andrew Jones*

BULK TRUCK DRIVER *Wilkinson (TWS)*

COMMON *170*

POZMIX

OBL *3*

CHLORIDE *6*

ASC

REMARKS:

*Run 13.16 cu ft cement displacement (shut in)*

*Cement Div for Miller*

*Field by Alan, Andrew, Brandon, Jason*

HANDLING *183.83cc*

MILBAGE *239.2m*

TOTAL

CHARGE TO *Grand Mesa*

STREET

CITY STATE ZIP

SERVICE

DEPTH OF JOB

PUMP TRUCK CHARGE

EXTRA FOOTAGE

MILEAGE *40*

MANIFOLD *40*

TOTAL

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.

PLUG & FLOAT EQUIPMENT

*2518 H2O2. 100g*

TOTAL

PRINTED NAME *Rob Wheeler*

SIGNATURE *Rob Wheeler*

SALES TAX (if Any)

TOTAL CHARGES *7,204.55*

DISCOUNT *1,512.95* IF PAID IN 30 DAYS

*5,691.59 Net*



JOB LOG

SWIFT Services, Inc.

DATE 12 NOV 13 PAGE NO.

CUSTOMER Grand Mesa WELL NO. 2-23 LEASE Cr. Fifth JOB TYPE perf squeeze TICKET NO. 25694

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								755ks STD cement w/ balad first 305ks packer 404' perf 4207-4210 2 7/8 x 5 1/2
	1400							on loc TRK 114
	1410		29				500	LOAD packside - shut in
	1430	1	10			1750		inj rate 16bpm @ 1750psi
		1	16			1000		mix 755ks STD (mixed in lead cement) shot in tubing - falls to Ø
	1450					Ø		wash out Pump & line
	1455	1 1/4				1200		Displace w/ fresh water
		1 1/4	16			1500		
		1 1/4	23 1/2			1600		packer clear
		1 1/4	26			1650		Kickout
	1515							falls to 1000
						1000		shut in tubing
	1520							wash truck
	1550					800		open up tubing
						1000		pump up to 1000
	1610					1500		pump up to 1500
	1615					2000		holding 2000
								Release pressure to truck - coming back
	1625					2200		Pump up to 2200 - holding
								Release pressure to truck - derrick up
								Release packer
			30					Reverse hole clean
								- no cement plugs -
								Back up
								job complete
								Flubs
								Rob, Blake & Flint

