



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1192058
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: _____

1192058

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
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:				

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Commingled <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Mull Drilling Company, Inc.
Well Name	Henning-McDonald Unit 1-21
Doc ID	1192058

All Electric Logs Run

CDL/CNL/PE
DIL
Micro
Sonic

Form	ACO1 - Well Completion
Operator	Mull Drilling Company, Inc.
Well Name	Henning-McDonald Unit 1-21
Doc ID	1192058

Tops

Name	Top	Datum
Anhydrite	1744	+ 608
B/Anhydrite	1783	+ 569
Heebner Shale	3722	- 1370
Lansing	3758	- 1406
B/KC	4032	- 1680
Pawnee	4136	- 1784
Ft. Scott	4233	- 1881
Cherokee Shale	4254	- 1902
Conglomerate	4318	- 1966
Mississippian	4323	- 1971

ALLIED OIL & GAS SERVICES, LLC 061371

Federal Tax I.D. # 20-8651475

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

SERVICE POINT: Carroll, TX

DATE	SEC.	TWP	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
11/5/12	21	15	23		8:30	8:00 AM	9:25 AM
LEASE	WELL #	LOCATION		PROPERTY	PARALLEL	COUNTY	STATE
	1-21	1540051500		5100	1100	KS	

OLD OR NEW (Circle one)

CONTRACTOR Unit 61/C
 TYPE OF JOB SAFEC
 HOLE SIZE 12 1/4 T.D. 275
 CASING SIZE 8 5/8 DEPTH 205
 TUBING SIZE DEPTH
 DRILL PIPE DEPTH
 TOOL DEPTH
 PRES. MAX MINIMUM
 MEAS. LINE SHOE JOINT
 CEMENT LEFT IN CSG. 1.5
 PERFS.
 DISPLACEMENT 2.601

EQUIPMENT

PUMP TRUCK CEMENTER ILG
 # 21521 HELPER AGRY
 BULK TRUCK
 # 21522 DRIVER MICK
 BULK TRUCK DRIVER

REMARKS:

Spud up and 11.5 hrs run
205 depth completed
2100 lbs cement
Completed 11/5/12

CHARGE TO: MIC
 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 JDH of 1/12
 SIGNATURE _____

OWNER same

CEMENT AMOUNT ORDERED 115 sacks cement
30 bags

COMMON @ 1790 209550
 POZMIX @
 GEL @ 20.25
 CHLORIDE @ 1.75 2060
 ASC @

HANDLING @ 2.78 1298
 MILEAGE 7.2 2701
 TOTAL 418.14

SERVICE

DEPTH OF JOB
 PUMP TRUCK CHARGE @ 205
 EXTRA FOOTAGE @
 MILEAGE MHV 210 @ 270 578.5
 MANIFOLD MFLV 40 @ 1190 1760
 TOTAL 1506.50

PLUG & FLOAT EQUIPMENT

① _____
 ② _____
 ③ _____
 ④ _____
 TOTAL _____

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



CHARGE TO: **Mull Drilling**
 ADDRESS
 CITY, STATE, ZIP CODE

TICKET 25697

LEASE: **Henry McDonald Unit**
 COUNTY/PARISH: **Trego**
 STATE: **KS**
 CITY: **Wakeney**
 DATE: **16 May 13**

PAGE 1 OF 2

1. SERVICE LOCATIONS: **North KS** WEL/PROJECT NO.: **1-21** LEASE: **Henry McDonald Unit** COUNTY/PARISH: **Trego** STATE: **KS** CITY: **Wakeney** DATE: **16 May 13**

2. TICKET TYPE: SERVICE SALES CONTRACTOR: **W.W.** RIG NAME/NO.: **W.W.** SHIPPED VIA: **W.W.** DELIVERED TO: **location** ORDER NO.: **21-15-23**

3. WEL TYPE: **o-i** WEL CATEGORY: **Development** JOB PURPOSE: **Development cement long string** WEL PERMIT NO.: **21-15-23**

4. REFERRAL LOCATION: **Wakeney** INVOICE INSTRUCTIONS: **Development cement long string**

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING		DESCRIPTION	MILEAGE	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT								
575				TRK 114	20 mi	1 ea				6.00	120.00
578				Pump Charge		1 ea				1500.00	1500.00
406				Guide Shoe		5 1/2 in	1 ea			200.00	200.00
402				Centralizer		5 1/2 in	8 ea			72.00	560.00
403				Cement Basket		5 1/2 in	1 ea			300.00	300.00
404				Post Collar		5 1/2 in	1 ea			2900.00	2900.00
410				Top plug		5 1/2 in	1 ea			100.00	100.00
413				Rate well seeder		5 1/2 in	15 ea			48.00	600.00
415				Insert float collar w/ 4 1/2 in		5 1/2 in	1 ea			400.00	400.00
419				Rotating head rental		5 1/2 in	1 ea			200.00	200.00
104				Plug container rental		5 1/2 in	1 ea			250.00	250.00

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY** provisions.

REMIT PAYMENT TO:
 SWIFT SERVICES, INC.
 P.O. BOX 466
 NESS CITY, KS 67560
 785-798-2300

DATE SIGNED: **16 May 13** TIME SIGNED: **1:30 PM**

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES: The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR: **[Signature]** APPROVAL: **[Signature]**

TOTAL: **14,799.75**

Thank You!



PO Box 466
Ness City, KS 67560
Off: 785-798-2300

TICKET CONTINUATION

TICKET No. 25697

CUSTOMER *Mill Drilling*

WELL *Herming McDavid unit*

DATE *12/13* PAGE *2* OF *2*

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING		TIME	DESCRIPTION	WELL		UNIT PRICE	AMOUNT
		LOC	ACCT			QTY.	UM		
287		1			50/50 Pozumx (20/40/1)	180	sk	10.50	1890.00
283		1			SALT	900	lb	0.20	180.00
286		1			WALNUT-1	100	lb	8.50	850.00
276		1			Fibrolite	25	lb	2.50	62.50
280		1			Fibrolite 21	1000	gal	3.00	3000.00
281		1			KCL Liquid	4	gal	25.00	100.00
290		1			D-AIR	2	gal	42.00	84.00
582		1			Drayage (win)	1	ea	250.00	250.00
581		1			SERVICE CHARGE			2.00	360.00
					MILEAGE CHARGE	TOTAL WEIGHT	LOADED MILES		
						1857	70		

CONTINUATION TOTAL 6776.50

JOB LOG

SWIFT Services, Inc.

DATE 16 NOV 13 PAGE NO.

CUSTOMER *MWhh* WELL NO. *1-21* LEASE *Henning McDonald Unit* JOB TYPE *commit feet collar* TICKET NO. *25697*

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								180 gal 50/50 Poz 2% gel 10% salt w/ Floccle 1000 gal Floccle 5 1/2" x 14" casing 109 ft - 4420' TD = 4430 Floccle @ 4381 39' sheet Basket #89 Cent 1, 2, 3, 4, 5, 7, 8, 69 Part like #69 - 1754' 75' scribbles
	1830							on loc TRK 114
	1900							start 5 1/2" x 14" casing in well
	2100							Drop ball - circulate - ROTATE
	2230	4 3/4	15				200	Pump 15 bbl H ₂ O w/ KCL
		1 1/2	24				200	Pump 1000 gal Floccle #1
		4 3/4	5				200	Pump 5 bbl H ₂ O w/ KCL
	2245		7					Plug RH 30 sks
	2258	3 1/2	35				200	mix 50/50 Poz 150 sk @ 14.4 ppw
	2305							Release water plug wash out pump & line
	2315	6 1/2					200	Displace plug (KCL in first 24 bbl)
		6 1/2	100				500	
	2330	6 1/2	107				1520	Land plug
	2335							Release pressure to truck - dried up
	2340							wash truck
								Rack up
NOV 17	0020							job complete Thanks Blaine, Flint & ISAAC



Services, Inc.

CHARGE TO: Mull Drlg. Co. Inc
 ADDRESS
 CITY, STATE, ZIP CODE

TICKET 25636

PAGE 1 OF 1

SERVICE LOCATIONS

1. Ness City, Ks WELL/PROJECT NO. 1-21 LEASE # HEAVEN- McBRID USR COUNTY/PARISH Trego STATE Ks CITY LOCATON DATE 11-22-13 OWNER same

2. TICKET TYPE CONTRACTOR RIG NAME NO. FRIDLER TRACKING SHIPPED VIA TR DELIVERED TO LOCATON ORDER NO.

3. WELL TYPE Oil WELL CATEGORY Development JOB PURPOSE cement Port Curve WELL PERMIT NO.

4. REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	UM	QTY.	UM	UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575					MILEAGE # 110	25	MI			6.00	150.00
576D					PUMP CHARGE	1	NOB	1754	FT	1500.00	1500.00
330					SWIFT MULTI DESERT STANDARDS	160	SYS			18.50	2960.00
276					FLUCCILE	50	US			2.50	125.00
290					D-ARR	2	BL			42.00	84.00
581					SEDUZE CHARGE CEMENT	200	SYS			2.00	400.00
582					DRUDGE - MINIMUM	19970	US	249.63	TM	250.00	250.00

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS.

DATE SIGNED 11-22-13 TIME SIGNED 1030 A.M. P.M.

SWIFT OPERATOR Dave Johnson APPROVAL

REMIT PAYMENT TO:
 SWIFT SERVICES, INC.
 P.O. BOX 466
 NESS CITY, KS 67560
 785-798-2300

SURVEY

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN? YES NO

WE UNDERSTOOD AND MET YOUR NEEDS? YES NO

OUR SERVICE WAS PERFORMED WITHOUT DELAY? YES NO

WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY? YES NO

ARE YOU SATISFIED WITH OUR SERVICE? YES NO

CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL 5469.00

TOTAL 5711.43

15.90 TAX 7.65%

Thank You!

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES: The customer hereby acknowledges receipt of the materials and services listed on this ticket.

JOB LOG

SWIFT Services, Inc.

DATE 11-22-13 PAGE NO. 7

CUSTOMER: MULL DRUG. Co. Inc. WELL NO.: 1-21 LEASE: HEWINS - MCDONALD WJST JOB TYPE: CEMENT PORT COLLAR TICKET NO.: 25636

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL/GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1030							ON LOCATION
								TUBING - 2 7/8
								CASING - 5 1/2
								PORT COLLAR - 1754'
	1105				✓		1000	PSE TEST CASING - HEWS
	1110	3	3	✓		300		OPEN PORT COLLAR - INT RATE
	1115	3	89	✓		250		MIX CEMENT 160 SKS SMD
	1145	3	9	✓		500		DISPLACE CEMENT
	1155				✓		1000	CLOSE PORT COLLAR - PSE TEST - HEWS
								CIRCULATE 15 SKS CEMENT TO PRT
	1210	4	25		✓		450	RUN S-SIS - CIRCULATE CLEAN
								WASH TRUCK
	1300							JOB COMPLETE
								THANK YOU WAYNE, DON, CRAIG

DIAMOND TESTING

General Information Report

General Information

Company Name MULL DRILLING COMPANY, INC.
Contact MARK SHREVE
Well Name HENNING-MCDONALD UNIT #1-21
Unique Well ID DST #1, FT. SCOTT, 4200-4260
Surface Location SEC 21-15S-23W, TREGO CO. KS.
Field WILDCAT
Well Type Vertical
Test Type CONVENTIONAL
Formation DST #1, FT. SCOTT, 4200-4260
Well Fluid Type 01 Oil

Representative TIM VENTERS
Well Operator MULL DRILLING COMPANY, INC.
Report Date 2013/11/14
Prepared By TIM VENTERS
Qualified By KEVIN KESSLER

Start Test Date 2013/11/14
Final Test Date 2013/11/14

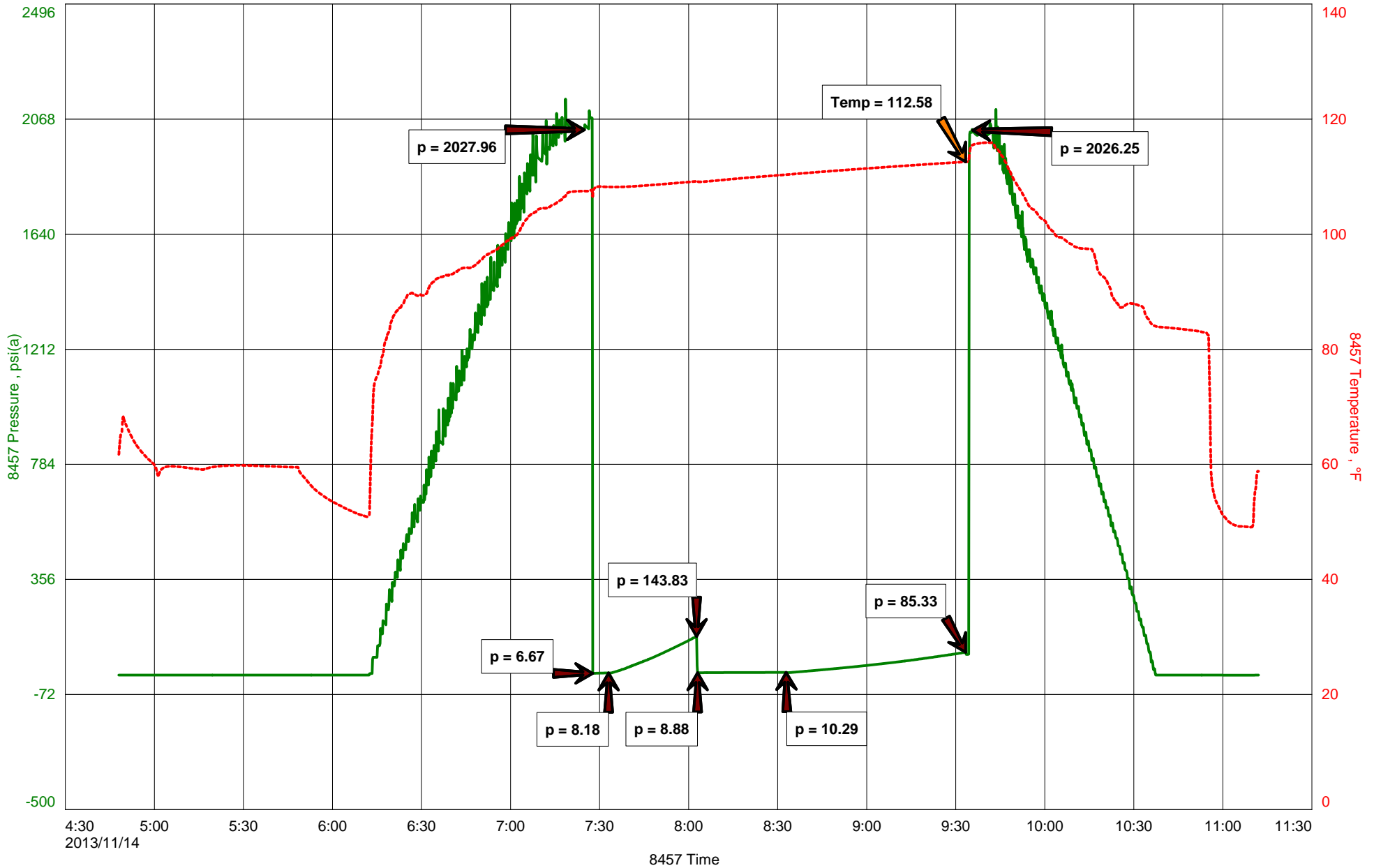
Start Test Time 04:48:00
Final Test Time 11:13:00

Test Recovery:

RECOVERED: 5' MW/SP O, SPOTTY OIL, 100% MUD

TOOL SAMPLE: SPOTTY OIL, 100% MUD

HENNING-MCDONALD UNIT #1-21





DIAMOND TESTING
 P.O. Box 157
 HOISINGTON, KANSAS 67544
 (800) 542-7313

TIME ON: 04:48
 TIME OFF: 11:13

DRILL-STEM TEST TICKET

FILE: HENNING-MCDONALDUNIT1-21DST1

Company MULL DRILLING COMPANY, INC. Lease & Well No. HENNING-MCDONALD UNIT #1-21
 Contractor WW DRILLING, LLC RIG #10 Charge to MULL DRILLING COMPANY, INC.
 Elevation 2352 KB Formation FT. SCOTT Effective Pay _____ Ft. Ticket No. T280
 Date 11-14-13 Sec. 21 Twp. 15 S Range 23 W County TREGO State KANSAS
 Test Approved By KEVIN KESSLER Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 1 Interval Tested from 4200 ft. to 4260 ft. Total Depth 4260 ft.

Packer Depth 4195 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Packer Depth 4200 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 4181 ft. Recorder Number 8457 Cap. 10,000 P.S.I.

Bottom Recorder Depth (Outside) 4257 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 124 ft. I.D. 2 1/4 in.

Weight 9.2 Water Loss 6.8 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.

Chlorides 4,800 P.P.M. Drill Pipe Length 4043 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 29 ft. Size 4 1/2-FH in.

Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. ^{31' DP IN ANCHOR} Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: WEAK SURFACE BLOW, BUILDING TO 1/4 INCH. (NO BB)

2nd Open: VERY WEAK SURFACE BLOW, LASTING 15-20 MIN. (NO BB)

Recovered 5 ft. of MW/SP O, SPOTTY OIL, 100% MUD

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Remarks: _____

TOOL SAMPLE: SPOTTY OIL, 100% MUD

Time Set Packer(s) 7:27 AM ^{A.M.} P.M. Time Started Off Bottom 9:32 AM ^{A.M.} P.M. Maximum Temperature 113 deg.

Initial Hydrostatic Pressure..... (A) 2028 P.S.I.

Initial Flow Period..... Minutes 5 (B) 7 P.S.I. to (C) 8 P.S.I.

Initial Closed In Period..... Minutes 30 (D) 144 P.S.I.

Final Flow Period..... Minutes 30 (E) 9 P.S.I. to (F) 10 P.S.I.

Final Closed In Period..... Minutes 60 (G) 85 P.S.I.

Final Hydrostatic Pressure..... (H) 2065 P.S.I.

Price Job
Other Charges
Insurance
Total

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 MULL DRILLING COMPANY, INC.
Contact MARK SHREVE
Well Name HENNING-MCDONALD UNIT #1-21
Unique Well ID DST #2, CHEROKEE SD., 4245-4325
Surface Location SEC 21-15S-23W, TREGO CO. KS.
Field WILDCAT
Well Type Vertical
Test Type CONVENTIONAL
Formation DST #2, CHEROKEE SD., 4245-4325
Well Fluid Type 01 Oil

Representative TIM VENTERS
Well Operator MULL DRILLING COMPANY, INC.
Report Date 2013/11/15
Prepared By TIM VENTERS
Qualified By KEVIN KESSLER

Start Test Date 2013/11/14
Final Test Date 2013/11/15

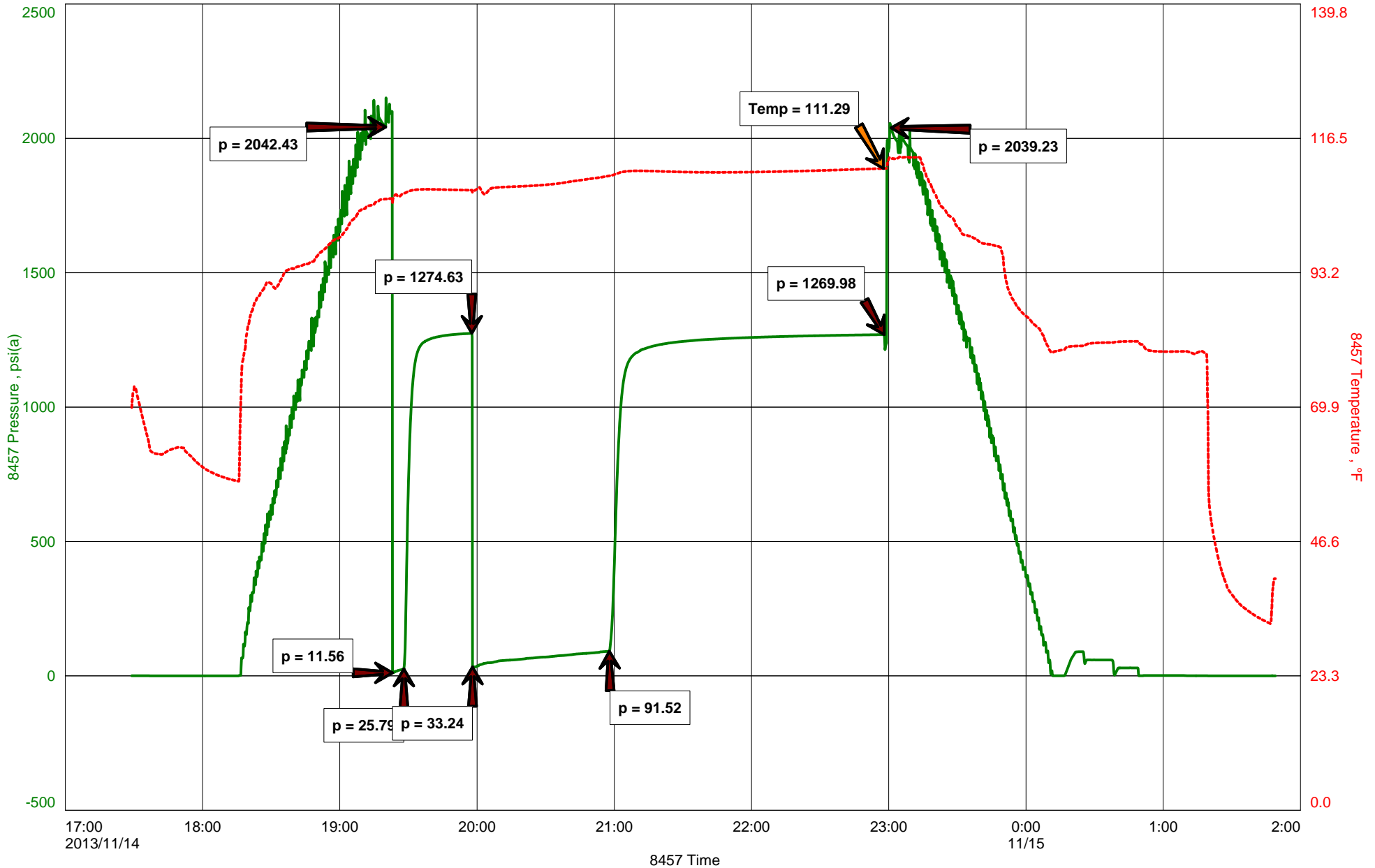
Start Test Time 17:29:00
Final Test Time 03:50:00

Test Recovery:

RECOVERED: 90' CO, 100% OIL, GRAVITY: 32
125' HOCM, 42% OIL, 58% MUD
215' TOTAL FLUID

TOOL SAMPLE: 9% GAS, 23% OIL, 68% MUD

HENNING-MCDONALD UNIT #1-21





DIAMOND TESTING
 P.O. Box 157
HOISINGTON, KANSAS 67544
 (800) 542-7313

TIME ON: 17:29 11-14-13
 TIME OFF: 03:50 11-15-13

DRILL-STEM TEST TICKET

FILE: HENNING-MCDONALDUNIT1-21DST2

Company MULL DRILLING COMPANY, INC. Lease & Well No. HENNING-MCDONALD UNIT #1-21
 Contractor WW DRILLING, LLC RIG #10 Charge to MULL DRILLING COMPANY, INC.
 Elevation 2352 KB Formation CHEROKEE SD. Effective Pay _____ Ft. Ticket No. T281
 Date 11-14-13 Sec. 21 Twp. _____ 15 S Range _____ 23 W County TREGO State KANSAS
 Test Approved By KEVIN KESSLER Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 2 Interval Tested from 4245 ft. to 4325 ft. Total Depth 4325 ft.
 Packer Depth 4240 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
 Packer Depth 4245 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set _____
 Top Recorder Depth (Inside) 4226 ft. Recorder Number 8457 Cap. 10,000 P.S.I.
 Bottom Recorder Depth (Outside) 4322 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 124 ft. I.D. 2 1/4 in.
 Weight 9.5 Water Loss 8.0 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.
 Chlorides 5,800 P.P.M. Drill Pipe Length 4088 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 17 ft. Size 4 1/2-FH in.
 Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. ^{63' DP IN ANCHOR} Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: WEAK 1/4 INCH BLOW, BUILDING TO 1 1/2 INCHES. (NO BB)
 2nd Open: WEAK SURFACE BLOW, BUILDING, REACHING BOB 51 1/2 MIN. (NO BB)

Recovered 90 ft. of CO, 100% OIL, GRAVITY: 32
 Recovered 125 ft. of HOCM, 42% OIL, 58% MUD
 Recovered 215 ft. of TOTAL FLUID

Recovered _____ ft. of _____	Price Job
Recovered _____ ft. of _____	Other Charges
Recovered _____ ft. of _____	Insurance
Remarks: _____	
TOOL SAMPLE: <u>9% GAS, 23% OIL, 68% MUD</u>	Total

Time Set Packer(s) 9:22 PM A.M. P.M. Time Started Off Bottom 12:57 AM A.M. P.M. Maximum Temperature 111 deg.

Initial Hydrostatic Pressure..... (A) 2042 P.S.I.
 Initial Flow Period..... Minutes 5 (B) 12 P.S.I. to (C) 26 P.S.I.
 Initial Closed In Period..... Minutes 30 (D) 1275 P.S.I.
 Final Flow Period..... Minutes 60 (E) 33 P.S.I. to (F) 92 P.S.I.
 Final Closed In Period..... Minutes 120 (G) 1270 P.S.I.
 Final Hydrostatic Pressure..... (H) 2039 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 MULL DRILLING COMPANY, INC.
Contact MARK SHREVE
Well Name HENNING-MCDONALD UNIT #1-21
Unique Well ID DST #3, MISSISSIPPIAN, 4250-4330
Surface Location SEC 21-15S-23W, TREGO CO. KS.
Field WILDCAT
Well Type Vertical
Test Type CONVENTIONAL
Formation DST #3, MISSISSIPPIAN, 4250-4330
Well Fluid Type 01 Oil

Representative TIM VENTERS
Well Operator MULL DRILLING COMPANY, INC.
Report Date 2013/11/15
Prepared By TIM VENTERS
Qualified By KEVIN KESSLER

Start Test Date 2013/11/15
Final Test Date 2013/11/15

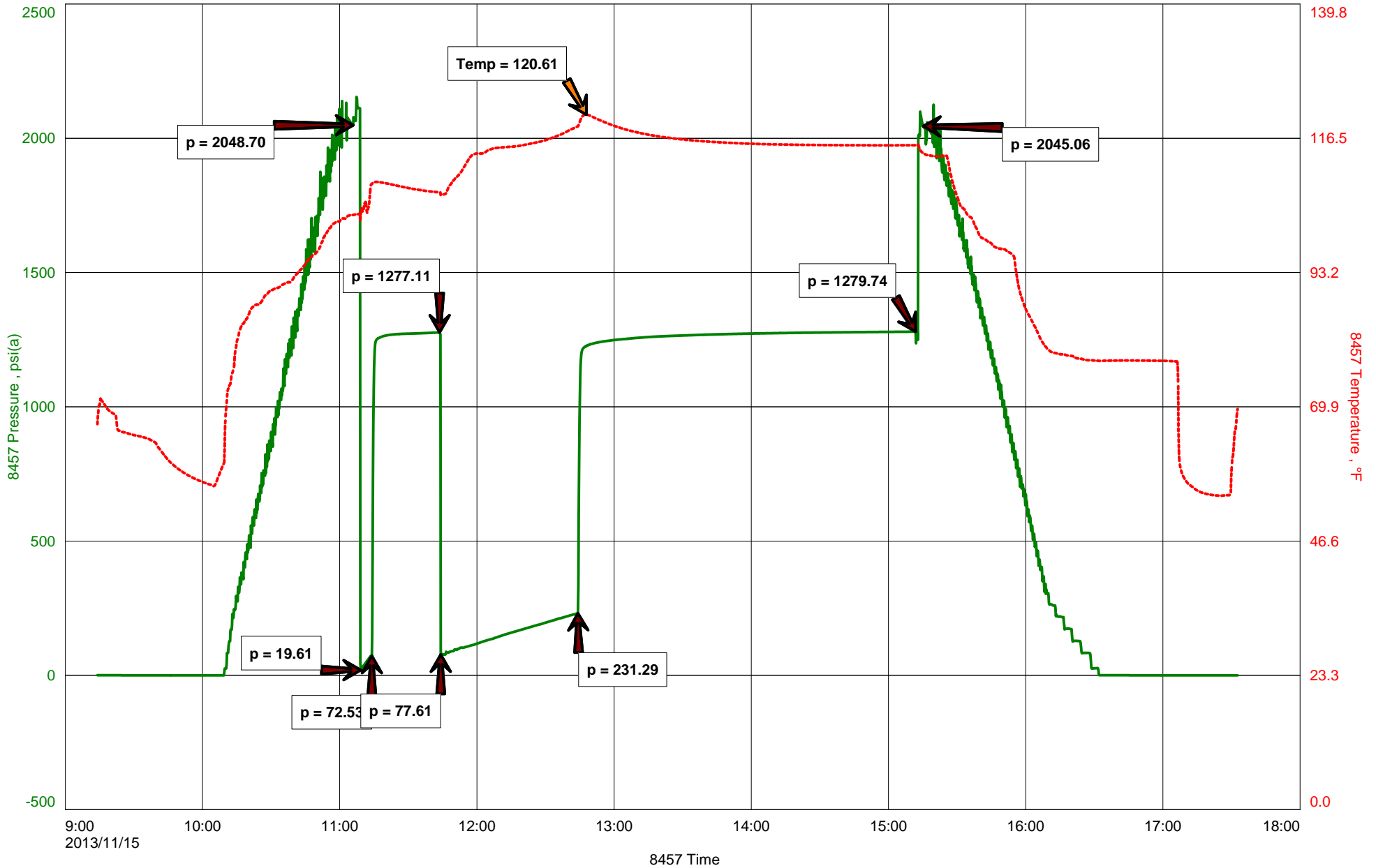
Start Test Time 09:14:00
Final Test Time 17:33:00

Test Recovery:

RECOVERED: 125' GAS IN PIPE
60' CO, 100% OIL, GRAVITY: 31
190' SOCM, 11% OIL, 89% MUD
65' G,HOCM, 7% GAS, 34% OIL, 54% MUD
250' G,SMCO, 2% GAS, 81% OIL, 17% MUD
560' TOTAL FLUID

TOOL SAMPLE: 43% OIL, 57% MUD

HENNING-MCDONALD UNIT #1-21





DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313

TIME ON: 09:14
TIME OFF: 17:33

DRILL-STEM TEST TICKET

FILE: HENNING-MCDONALDUNIT1-21DST3

Company MULL DRILLING COMPANY, INC. Lease & Well No. HENNING-MCDONALD UNIT #1-21
Contractor WW DRILLING, LLC RIG #10 Charge to MULL DRILLING COMPANY, INC.
Elevation 2352 KB Formation MISSISSIPPIAN Effective Pay _____ Ft. Ticket No. T282
Date 11-15-13 Sec. 21 Twp. _____ 15 S Range _____ 23 W County TREGO State KANSAS
Test Approved By KEVIN KESSLER Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 3 Interval Tested from 4250 ft. to 4330 ft. Total Depth 4330 ft.
Packer Depth 4245 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Packer Depth 4250 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 4231 ft. Recorder Number 8457 Cap. 10,000 P.S.I.
Bottom Recorder Depth (Outside) 4327 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 49 Drill Collar Length 124 ft. I.D. 2 1/4 in.
Weight 9.4 Water Loss 8.8 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.
Chlorides 8,300 P.P.M. Drill Pipe Length 4093 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 17 ft. Size 4 1/2-FH in.
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. ^{63' DP IN ANCHOR} Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: WEAK 1/2 INCH BLOW, BUILDING TO 4 INCHES. (WS BB)
2nd Open: WEAK 1/2 INCH BLOW, BUILDING, REACHING BOB 14 MIN. (1/2" BB)

Recovered 125 ft. of GAS IN PIPE
Recovered 60 ft. of CO, 100% OIL, GRAVITY: 31
Recovered 190 ft. of SOCM, 11% OIL, 89% MUD
Recovered 65 ft. of G,HOCM, 7% GAS, 34% OIL, 54% MUD
Recovered 250 ft. of G,SMCO, 2% GAS, 81% OIL, 17% MUD
Recovered 560 ft. of TOTAL FLUID

Remarks: _____
TOOL SAMPLE: 43% OIL, 57% MUD

Price Job
Other Charges
Insurance
Total

Time Set Packer(s) 11:08 AM A.M. P.M. Time Started Off Bottom 3:11 PM A.M. P.M. Maximum Temperature 121 deg.
Initial Hydrostatic Pressure..... (A) 2049 P.S.I.
Initial Flow Period..... Minutes 5 (B) 20 P.S.I. to (C) 73 P.S.I.
Initial Closed In Period..... Minutes 30 (D) 1277 P.S.I.
Final Flow Period..... Minutes 60 (E) 78 P.S.I. to (F) 231 P.S.I.
Final Closed In Period..... Minutes 148 (G) 1280 P.S.I.
Final Hydrostatic Pressure..... (H) 2045 P.S.I.

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KEVIN L. KESSLER
CONSULTING PETROLEUM GEOLOGIST
(316) 522-7338

OPERATOR : MULL DRILLING COMPANY INC.
LEASE : HENNING - MCDONALD WELL # : 1 - 21
LOCATION : 1360' FNL & 2515' FEL
SEC: 21 TWP : 15 S RGE : 23 W
COUNTY : TREGO STATE : KANSAS

ELEVATION
KB : 2352
GL : 2347
 MEASUREMENTS FROM
KB

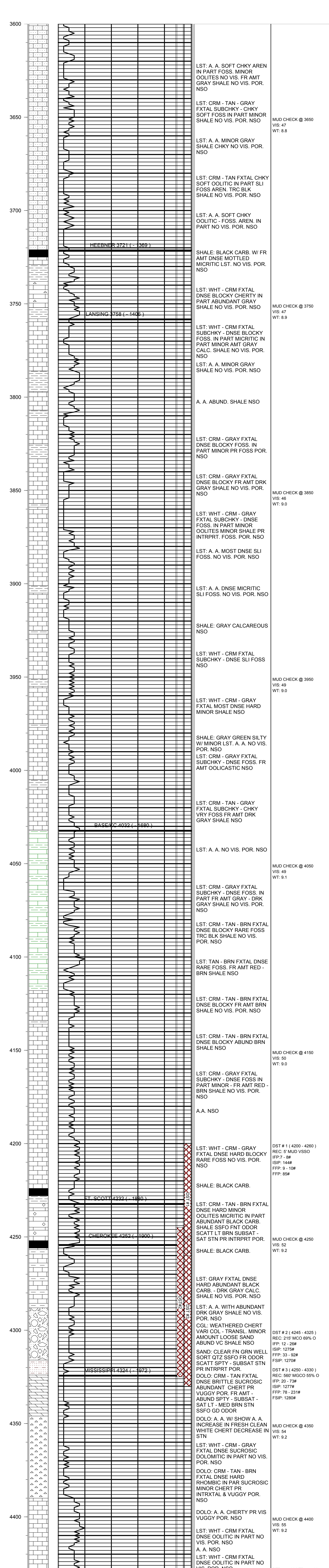
CONTRACTOR : W. W. DRILLING COMPANY RIG # 10
COMM : 11 / 09 / 2013 COMP : 11 / 16 / 2013
RTD : 4430 LOG TD : 4433
SAMPLES SAVED FROM : 3600 TO : RTD
GEOLOGICAL SUPERVISION FROM : 3600 TO : RTD
MUD UP : 3500 TYPE MUD : CHEMICAL

CASING RECORD
SURFACE :
8 5/8" @ 205'
PRODUCTION :
5 1/2" @ 4430'

FORMATION	TOP	SAMPLE	DATUM	TOP	LOG	DATUM	STRUCT. COMP.
HEEBNER	3721	- 1369	3721	- 1369			FLAT
LANSING	3758	- 1406	3758	- 1406			+ 01
STARK
BASE / KC	4032	- 1680	4032	- 1680			+ 03
FORT SCOTT	4232	- 1880	4232	- 1880			- 03
CHEROKEE	4252	- 1900	4252	- 1900			FLAT
MISSISSIPPI	4324	- 1972	4324	- 1972			- 07

ELECTRICAL SURVEYS:
 CDL/CNL
 DIL
 MICRO
 SONIC

REFERENCE WELL FOR STRUCTURAL COMPARISON :
MULL # 1 - 21 MCDONALD - SCHWIEN UNIT SEC 21 - T 15 S - R 23 W TREGO COUNTY KANSAS



COMMENTS:
 5 1/2" PRODUCTION CASING WAS SET
 TO FURTHER EVALUATE THE
 PRODUCTIVITY OF THIS WELL

KEVIN L. KESSLER