

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

OPERATOR: License # 5144  
 Name: Mull Drilling Company, Inc.  
 Address 1: 1700 N WATERFRONT PKWY  
 Address 2: BLDG 1200  
 City: WICHITA State: KS Zip: 67206 +  
 Contact Person: Mark Shreve  
 Phone: (316) 264-6366  
 CONTRACTOR: License # 5929  
 Name: Duke Drilling Co., Inc.  
 Wellsite Geologist: Kevin Kessler  
 Purchaser: N/A

Designate Type of Completion:

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

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

Operator: \_\_\_\_\_  
 Well Name: \_\_\_\_\_  
 Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD

Conv. to GSW

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

Commingled      Permit #: \_\_\_\_\_

Dual Completion      Permit #: \_\_\_\_\_

SWD      Permit #: \_\_\_\_\_

ENHR      Permit #: \_\_\_\_\_

GSW      Permit #: \_\_\_\_\_

<u>09/30/2010</u>	<u>10/08/2010</u>	<u>10/09/2010</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-101-22256-00-00

Spot Description: \_\_\_\_\_  
S2\_N2\_N2\_NE Sec. 17 Twp. 17 S. R. 27  East  West

486 Feet from  North /  South Line of Section

1320 Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:  
 NE       NW       SE       SW

County: Lane

Lease Name: Waterson 'A' Well #: 1-17

Field Name: Wildcat

Producing Formation: N/A

Elevation: Ground: 2709 Kelly Bushing: 2718

Total Depth: 4680 Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: 230 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: 13800 ppm Fluid volume: 800 bbls

Dewatering method used: Evaporated

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

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

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

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

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

**AFFIDAVIT**

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

Submitted Electronically

**KCC Office Use ONLY**

- Letter of Confidentiality Received  
 Date: 01/04/2011
- Confidential Release Date: 01/03/2013
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: NAOMI JAMES Date: 01/05/2011

Operator Name: Mull Drilling Company, Inc. Lease Name: Waterson 'A' Well #: 1-17  
 Sec. 17 Twp. 17 S. R. 27  East  West County: Lane

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

Drill Stem Tests Taken <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run:  DCL/CNL; DIL; Micro & Sonic	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  <table style="width:100%; border: none;"> <tr> <td style="width:50%; border: none;">Name Attached</td> <td style="width:25%; border: none;">Top Attached</td> <td style="width:25%; border: none;">Datum Attached</td> </tr> </table>	Name Attached	Top Attached	Datum Attached
Name Attached	Top Attached	Datum Attached		

CASING RECORD <input checked="" 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
Surface	12.2500	8.6250	20	230	Common	165	3% cc, 2% gel

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

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

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____		Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No	
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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Mull Drilling Company, Inc.
Well Name	Waterson 'A' 1-17
Doc ID	1048911

Tops

Anhydrite	2135	+ 583
B/Anhydrite	2168	+ 550
Heebner Shale	3972	-1254
Lansing	4010	-1292
B/KC	4338	-1620
Marmaton	4342	-1624
Ft. Scott	4512	-1794
Cherokee Shale	4539	-1821
Mississippian	4621	-1903



*Mark Parkinson, Governor  
Thomas E. Wright, Chairman  
Joseph F. Harkins, Commissioner  
Ward Loyd, Commissioner*

January 04, 2011

Mark Shreve  
Mull Drilling Company, Inc.  
1700 N WATERFRONT PKWY  
BLDG 1200  
WICHITA, KS 67206

Re: ACO1  
API 15-101-22256-00-00  
Waterson 'A' 1-17  
NE/4 Sec.17-17S-27W  
Lane County, Kansas

Dear Production Department:

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

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

Respectfully,  
Mark Shreve

CONSERVATION DIVISION

Finney State Office Building, 130 S. Market, Room 2078, Wichita, KS 67202-3802  
(316) 337-6200 • Fax: (316) 337-6211 • <http://kcc.ks.gov/>

PUMP TRUCK CEMENTER wayne-D  
 # 191 HELPER Bob-R  
 BULK TRUCK  
 # 344 DRIVER Bill  
 BULK TRUCK  
 # \_\_\_\_\_ DRIVER \_\_\_\_\_

_____	@	_____
_____	@	_____
_____	@	_____
_____	@	_____
_____	@	_____
HANDLING <u>165</u>	@	<u>3.25</u>
MILEAGE <u>165 X 38 X .10</u>		<u>627.00</u>

TOTAL 3595.50

REMARKS:

Pipe on Bottom B-44 circulation  
with Rig mud  
Mix 165SX class A 3%cc 2%gel  
Shut Down Release Plug  
Displace 13.50 BBHs fresh water  
wash up on top of plug  
Cement did circulate  
Rig Down

SERVICE

DEPTH OF JOB <u>230</u>		
PUMP TRUCK CHARGE		<u>991.00</u>
EXTRA FOOTAGE	@	_____
MILEAGE <u>38</u>	@	<u>7.00</u>
MANIFOLD	@	_____
_____	@	_____
_____	@	_____

TOTAL 1257.00

CHARGE TO: Mull Drilling  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

PLUG & FLOAT EQUIPMENT

_____	@	_____
_____	@	_____
_____	@	_____
_____	@	_____
_____	@	_____

TOTAL \_\_\_\_\_

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

SALES TAX (If Any) \_\_\_\_\_  
 TOTAL CHARGES ~~1257.00~~  
 DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS

PRINTED NAME Rich Wheeler  
 SIGNATURE Rich Wheeler

PUMP TRUCK CEMENTER Fuzzy  
 # 431 HELPER Kelly  
 BULK TRUCK  
 # 396 DRIVER Darwin  
 BULK TRUCK  
 # DRIVER

REMARKS:

50 SKS @ 2190'  
80 SKS @ 1290'  
50 SKS @ 630'  
40 SKS @ 240'  
20 SKS @ 60'  
30 SKS in BH  
Job completed @ 12:15 PM  
THANKS TURNER CREW

CHARGE TO: MUN Dals  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

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

PRINTED NAME Rich Wheeler  
 SIGNATURE Rich Wheeler

\_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 HANDLING 282 @ 210 592.30  
 MILEAGE .10 x 56 x mi @ 10 1128.00  
 TOTAL 5102.30

SERVICE

DEPTH OF JOB 2190'  
 PUMP TRUCK CHARGE 1000.00  
 EXTRA FOOTAGE @ \_\_\_\_\_  
 MILEAGE 40 @ 7.00 280.00  
 MANIFOLD @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 TOTAL 1280.00

PLUG & FLOAT EQUIPMENT

\_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 @ \_\_\_\_\_  
 TOTAL \_\_\_\_\_

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

# KEVIN L. KESSLER

## CONSULTING PETROLEUM GEOLOGIST

( 316 ) 522-7338

**OPERATOR : MULL DRILLING CO. INC.**

**LEASE : WATERSON 'A'                      WELL # : 1 - 17**

**LOCATION : 486' FNL & 1320' FEL**

**SEC: 17                                      TWP : 17 S                                      RGE : 27 W**

**COUNTY : LANE                                      STATE : KANSAS**

**CONTRACTOR : DUKE DRILLING RIG # 4**

**COMM: 09 / 30 / 2010**

**COMP : 10 / 09 / 2010**

**RTD : 4680**

**LOG TD : 4686**

**SAMPLES SAVED FROM : 3850**

**TO: RTD**

**GEOLOGICAL SUPERVISION FROM : 3850**

**TO : RTD**

**MUD UP : 3700**

**TYPE MUD : CHEMICAL**

FORMATION	TOP	LOG	DATUM	TOP	SAMPLE	DATUM	STRUCT. COMP.
HEEBNER	3972		- 1254	3972		- 1254	- 04
LANSING	4010		- 1292	4010		- 1292	- 04
STARK	4266		- 1548	4266		- 1548	- 02
BASE / KC	4336		- 1618	4336		- 1618	- 02
FT SCOTT	4514		- 1796	4514		- 1796	- 01
CHEROKEE	4539		- 1821	4539		- 1821	- 02
MISSISSIPPI	4621		- 1903	4621		- 1903	+ 09

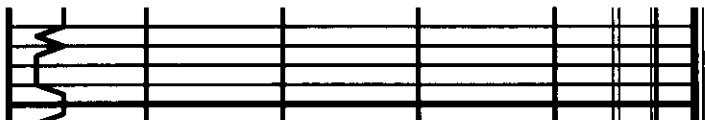
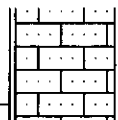
**REFERENCE WELL FOR STRUCTURAL COMPARISON :**

**THUNDERBIRD DRLG. # 1 WATERSON**

**SEC. 17 - T 17 S - R 27 W**

**LANE COUNTY KANSAS**

3800



# Diamond Testing

## General information Report

### General Information

Company Name MULL DRILLING COMPANY, INC.

Contact	ERNIE MORRISON	Job Number	
Well Name	WATERSON 'A' #1-17	Representative	ROGER D. FRIEDLY
Unique Well ID	DST #1 LANS 'I-J' 4,190 - 4,255'	Well Operator	MULL DRILLING COMPANY, INC.
Surface Location	SEC 17-17S-27W LANE COUNTY, KS	Report Date	2010/10/05
Well License Number		Prepared By	ROGER D. FRIEDLY
Field	WILDCAT		
Well Type	Vertical		

Test Type	CONVENTIONAL		
Formation	DST #1 LANS 'I-J' 4,190' - 4,255'		
Well Fluid Type	01 Oil	Start Test Time	12:30:00
		Final Test Time	20:17:00
Start Test Date	2010/10/05		
Final Test Date	2010/10/05		
Gauge Name	1150		
Gauge Serial Number			

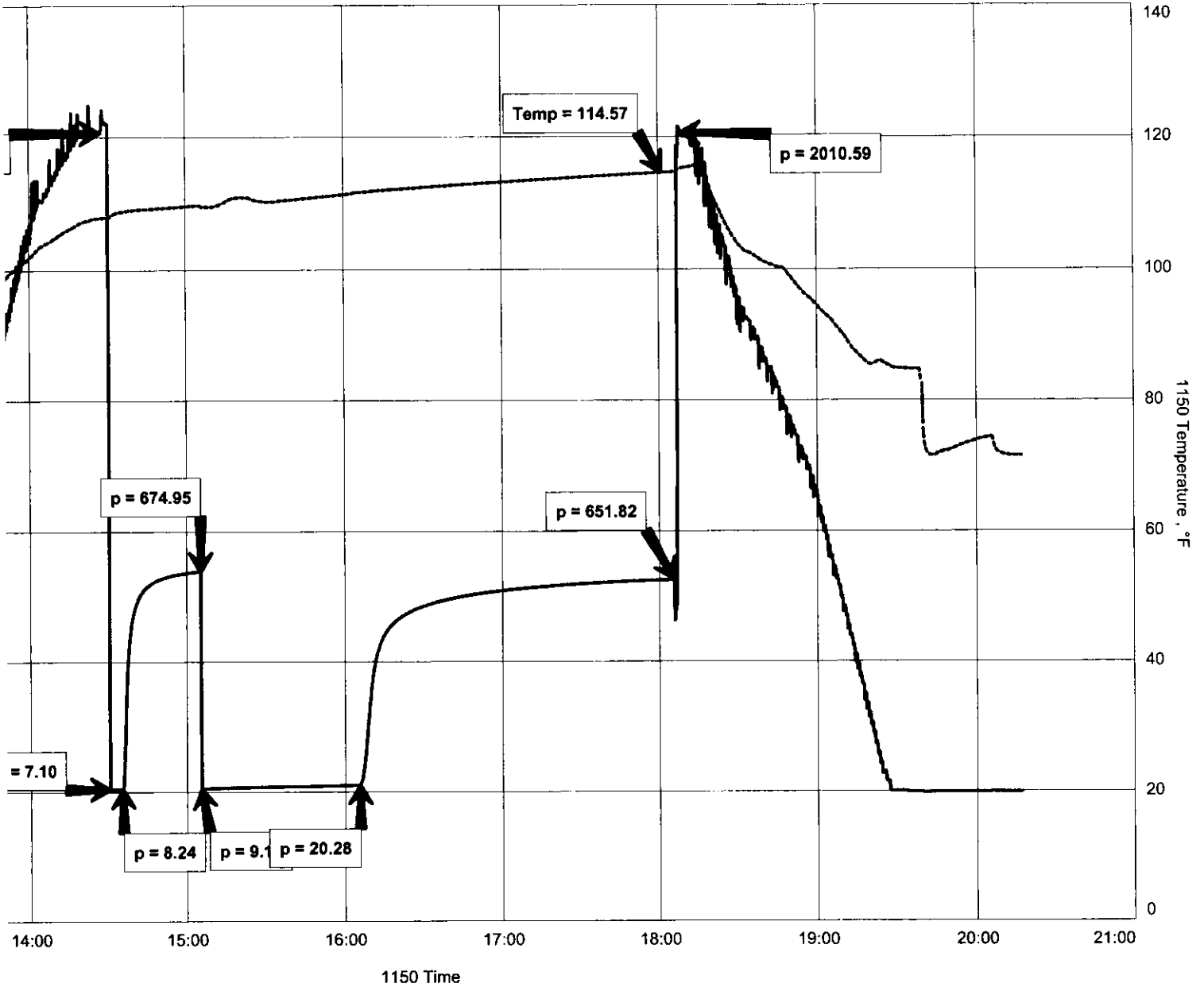
### Test Results

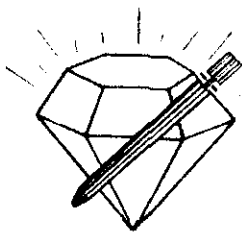
RECOVERED: 31' DM 100% MUD - GOOD SCUM OF OIL

TOOL SAMPLE: 2% OIL, 98% MUD



# WATERSON 'A' #1-17





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

CLOCK ON: 12:30

CLOCK OFF: 20:17

**DRILL-STEM TEST TICKET**

Company MULL DRILLING COMPANY, INC. Lease & Well No. WATERSON 'A' #1-17  
 Contractor DUKE RIG #4 Charge to MULL DRILLING COMPANY, INC.  
 Elevation \_\_\_\_\_ Formation LANS 'I-J' Effective Pay \_\_\_\_\_ Ft. Ticket No. \_\_\_\_\_  
 Date 10-5-10 Sec. 17 Twp. 17 S Range 27 W County LANE State KANSAS  
 Test Approved By KEVIN KESSLER Diamond Representative ROGER D. FRIEDLY

Formation Test No. 1 Interval Tested from 4,190 ft. to 4,255 ft. Total Depth 4,255 ft.  
 Packer Depth 4,185 ft. Size 6 3/4 in. Packer Depth \_\_\_\_\_ ft. Size \_\_\_\_\_ in.  
 Packer Depth 4,190 ft. Size 6 3/4 in. Packer Depth \_\_\_\_\_ ft. Size \_\_\_\_\_ in.

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

Top Recorder Depth (Inside) 4,178 ft. Recorder Number 1150 Cap. 5,000 P.S.I.  
 Bottom Recorder Depth (Outside) 4,252 ft. Recorder Number 3851 Cap. 5,700 P.S.I.  
 Below Straddle Recorder Depth \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.

Mud Type CHEMICAL Viscosity 51 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 3,800 P.P.M. Drill Pipe Length 4,164 ft. I.D. 3 1/2 in.  
 Jars: Make BOWEN Serial Number N/A Test Tool Length 26 ft. Tool Size 3 1/2-IF in.  
 Did Well Flow? NO Reversed Out NO Anchor Length 65 ft. Size 4 1/2-FH in.  
 Main Hole Size 7 7/8 Tool Joint Size 4 1/2 XH in. 32" DP IN ANCHOR Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: WEAK SURFACE BLOW INCREASING 1/2" (NObb)  
 2nd Open: WEAK SURFACE BLOW INCREASING TO 1 1/4" (NObb)

Recovered 31 ft. of DM 100% MUD - WITH GOOD SCUM OF OIL

Recovered \_\_\_\_\_ ft. of \_\_\_\_\_

Recovered \_\_\_\_\_ ft. of \_\_\_\_\_

Recovered \_\_\_\_\_ ft. of \_\_\_\_\_

Recovered \_\_\_\_\_ ft. of \_\_\_\_\_

Remarks: \_\_\_\_\_

Price Job

Other Charges

Insurance

TOOL SAMPLE: 2% OIL, 98% MUD

Total

Time Set Packer(s) 2:31 P.M. A.M. P.M. Time Started Off Bottom 6:06 P.M. A.M. P.M. Maximum Temperature 115

Initial Hydrostatic Pressure (A) 2,011 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) 675 P.S.I.  
 Final Flow Period \_\_\_\_\_ Minutes 60 (E) 9 P.S.I. to (F) 20 P.S.I.  
 Final Closed In Period \_\_\_\_\_ Minutes 120 (G) 652 P.S.I.  
 Final Hydrostatic Pressure (H) 2,011 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	ERNIE MORRISON	Job Number	
Well Name	WATERSON 'A' #1-17	Representative	ROGER D. FRIEDLY
Unique Well ID	DST #2 LANS 'K' 4,250' - 4,290'	Well Operator	MULL DRILLING COMPANY, INC.
Surface Location	SEC 17-17S-27W LANE CUNTY, KS	Report Date	2010/10/06
Well License Number		Prepared By	ROGER D. FRIEDLY
Field	WILDCAT		
Well Type	Vertical		

Test Type	CONVENTIONAL	Start Test Time	05:15:00
Formation	DST #2 LANS 'K' 4,250' - 4,290'	Final Test Time	
Well Fluid Type	01 Oil		
Start Test Date	2010/10/06		
Final Test Date	2010/10/06		
Gauge Name	1150		
Gauge Serial Number			

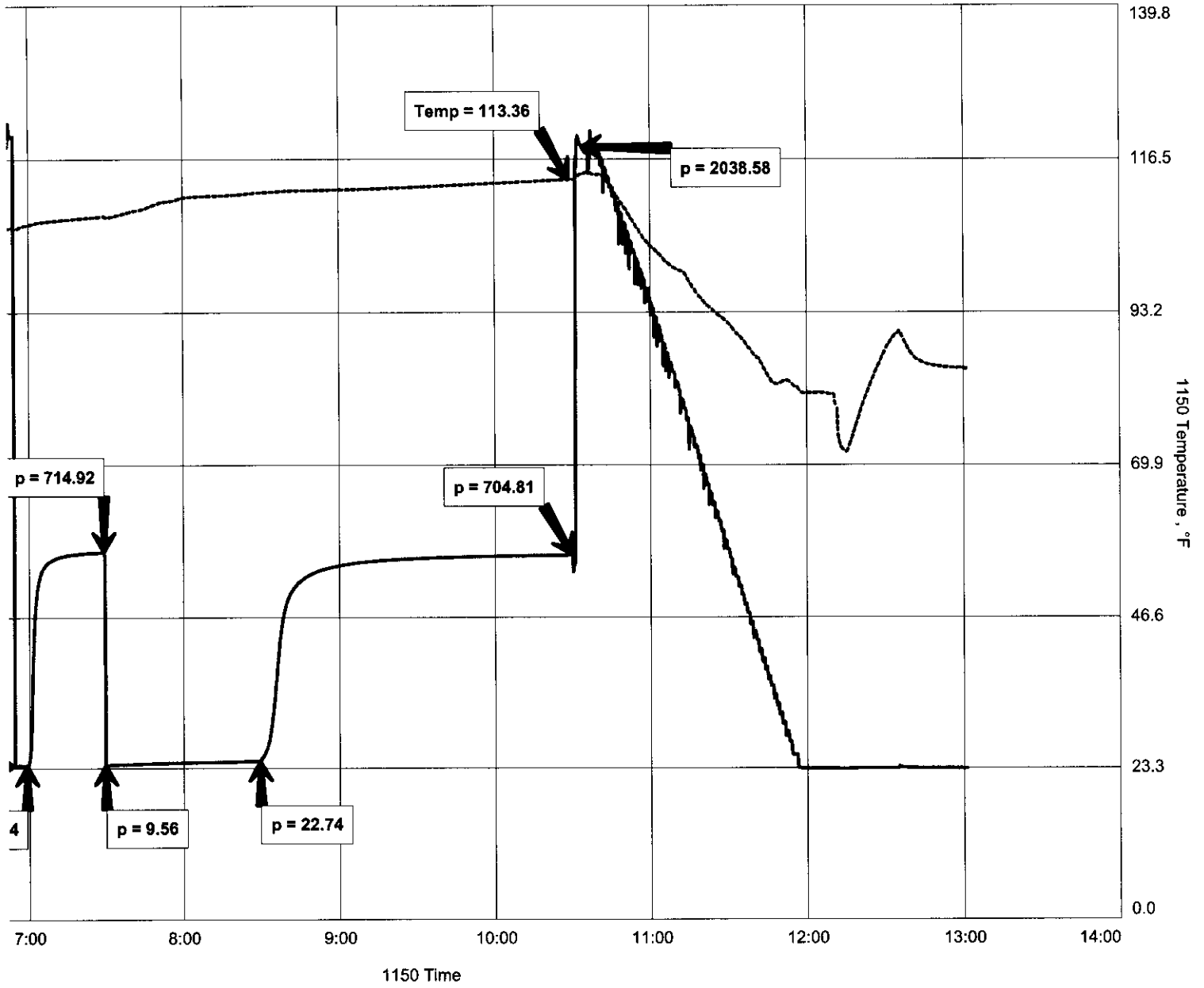
### Test Results

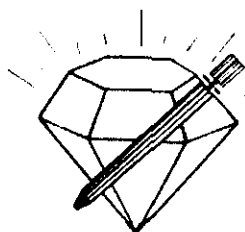
RECOVERED: 33' OCWM 2% OIL, 4% WTR, 94% MUD

TOOL SAMPLE: 2% OIL, 19% WTR, 79% MUD

CHLORIDES 12,000 Ppm  
PH: 7.5  
RW: .43 @ 74 deg

# WATERSON 'A' #1-17





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

CLOCK ON:05:15

CLOCK OFF: 13:01

**DRILL-STEM TEST TICKET**

Company MULL DRILLING COMPANY, INC. Lease & Well No. WATERSON 'A' #1-17  
Contractor DUKE RIG #4 Charge to MULL DRILLING COMPANY, INC.  
Elevation 2,718 KB Formation LANS 'K' Effective Pay \_\_\_\_\_ Ft. Ticket No. \_\_\_\_\_  
Date 10-6-10 Sec. 17 Twp. 17 S Range 27 W County LANE State KANSAS  
Test Approved By KEVIN KESSLER Diamond Representative ROGER D. FRIEDLY

Formation Test No. 2 Interval Tested from 4,250 ft. to 4,290 ft. Total Depth 4,290 ft.  
Packer Depth 4,245 ft. Size 6 3/4 in. Packer Depth \_\_\_\_\_ ft. Size \_\_\_\_\_ in.  
Packer Depth 4,250 ft. Size 6 3/4 in. Packer Depth \_\_\_\_\_ ft. Size \_\_\_\_\_ in.

Depth of Selective Zone Set \_\_\_\_\_  
Top Recorder Depth (Inside) \_\_\_\_\_ ft. Recorder Number 1150 Cap. 5,000 P.S.I.  
Bottom Recorder Depth (Outside) \_\_\_\_\_ ft. Recorder Number 3851 Cap. 5,700 P.S.I.  
Below Straddle Recorder Depth \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.

Mud Type CHEMICAL Viscosity 51 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 3,800 P.P.M. Drill Pipe Length 4,224 ft. I.D. 3 1/2 in.  
Jars: Make BOWEN Serial Number N/A Test Tool Length 26 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<sup>XH</sup> in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: WEAK SURFACE BLOW INCREASING 1/2" (NObb)  
2nd Open: WEAK SURFACE BLOW INCREASING TO 1 1/2" (NObb)

Recovered 33 ft. of OCWM 2% OIL, 4% WTR, 94% MUD  
Recovered \_\_\_\_\_ ft. of \_\_\_\_\_  
Recovered \_\_\_\_\_ ft. of \_\_\_\_\_

Recovered _____ ft. of _____	<u>CHLORIDES 12,000 Ppm</u>	Price Job
Recovered _____ ft. of _____	<u>PH: 7.5</u>	Other Charges
Remarks: _____	<u>RW: .43 @ 74 deg</u>	Insurance
<u>TOOL SAMPLE:2% OIL, 19% WTR, 79% MUD</u>		Total

Time Set Packer(s) 6:55 A.M. A.M. P.M. Time Started Off Bottom 10:30 A.M. A.M. P.M. Maximum Temperature 113  
Initial Hydrostatic Pressure \_\_\_\_\_ (A) 2,039 P.S.I.  
Initial Flow Period \_\_\_\_\_ Minutes 5 (B) 6 P.S.I. to (C) 9 P.S.I.  
Initial Closed In Period \_\_\_\_\_ Minutes 30 (D) 715 P.S.I.  
Final Flow Period \_\_\_\_\_ Minutes 60 (E) 10 P.S.I. to (F) 23 P.S.I.  
Final Closed In Period \_\_\_\_\_ Minutes 120 (G) 705 P.S.I.  
Final Hydrostatic Pressure \_\_\_\_\_ (H) 2,039 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	ERNIE MORRISON	Job Number	
Well Name	WATERSON 'A' #1-17	Representative	ROGER D. FRIEDLY
Unique Well ID	DST #3 LANS 'L' 4,290' - 4,340'	Well Operator	MULL DRILLING COMPANY, INC.
Surface Location	SEC 17-17S-27W LANE COUNTY, KS	Report Date	
Well License Number		Prepared By	ROGER D. FRIEDLY
Field	WILDCAT		
Well Type	Vertical		

Test Type	CONVENTIONAL		
Formation	DST #3 LANS 'L' 4,290' - 4,340'		
Well Fluid Type	01 Oil	Start Test Time	21:15:00
		Final Test Time	05:18:00
Start Test Date	2010/10/06		
Final Test Date	2010/10/07		
Gauge Name	1150		
Gauge Serial Number			

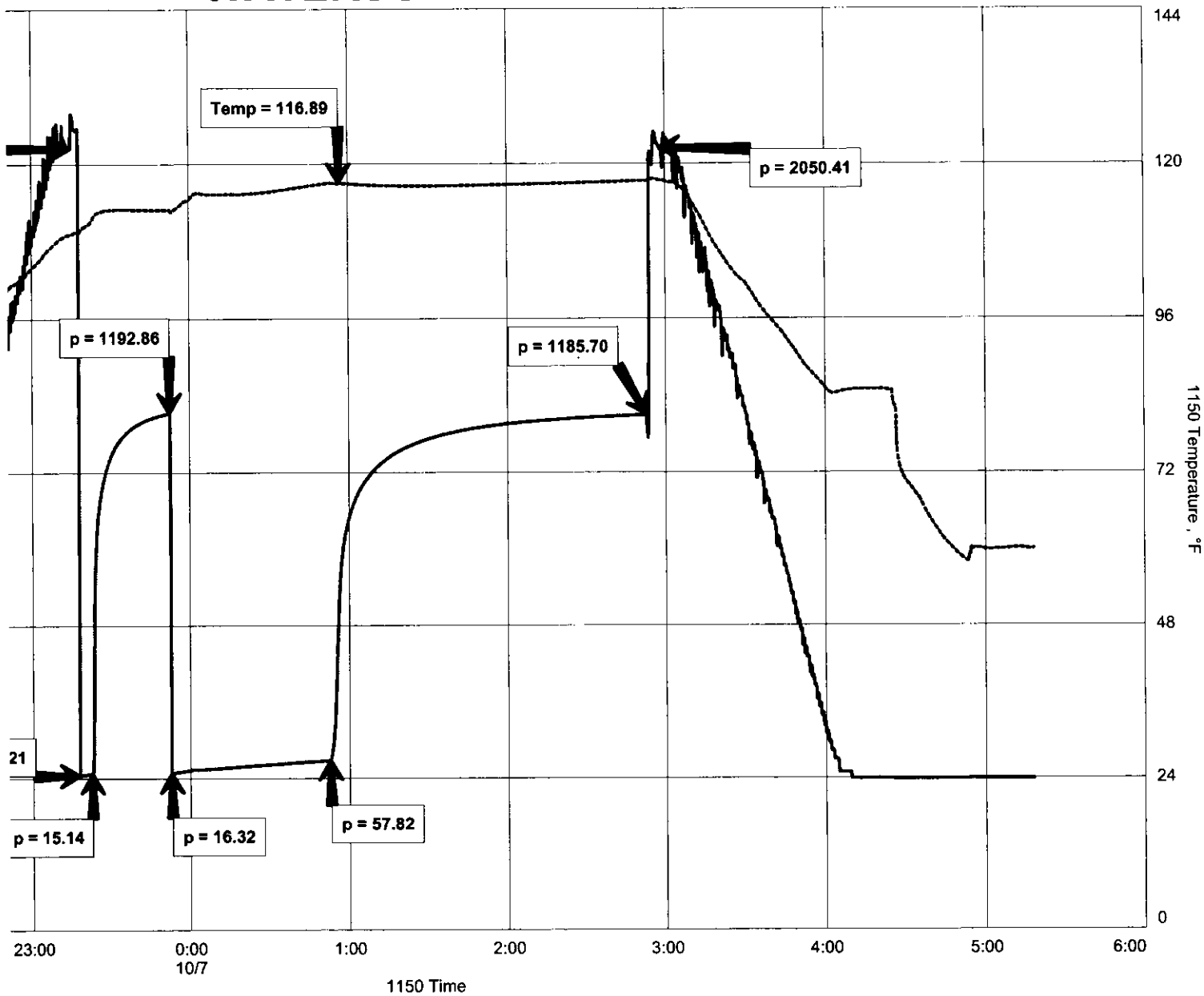
### Test Results

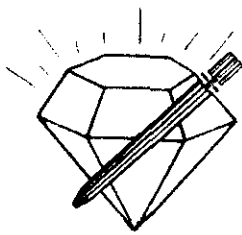
RECOVERED: 45' OCWM 2% OIL, 28% WTR, 70% MUD  
62' MW 57% WTR, 43% MUD  
107' TOTAL FLUID

TOOL SAMPLE: 2% OIL, 26% WTR, 72% MUD

CHLORIDES: 42,500 Ppm  
PH: 7.0  
RW: .17 @ 67 deg

# WATERSON 'A' #1-17





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

CLOCK ON: 21:16  
CLOCK OFF: 05:18(10.7)

**DRILL -STEM TEST TICKET**

Company MULL DRILLING COMPANY, INC. Lease & Well No. WATERSON 'A' #1-17  
Contractor DUKE RIG #4 Charge to MULL DRILLING COMPANY, INC.  
Elevation 2,718 KB Formation LANS 'L' Effective Pay \_\_\_\_\_ Ft. Ticket No. \_\_\_\_\_  
Date 10-6-10 Sec. 17 Twp. 17 S Range 27 W County LANE State KANSAS  
Test Approved By KEVIN KESSLER Diamond Representative ROGER D. FRIEDLY

Formation Test No. 3 Interval Tested from 4,290 ft. to 4,340 ft. Total Depth 4,340 ft.  
Packer Depth 4,285 ft. Size 6 3/4 in. Packer Depth \_\_\_\_\_ ft. Size \_\_\_\_\_ in.  
Packer Depth 4,290 ft. Size 6 3/4 in. Packer Depth \_\_\_\_\_ ft. Size \_\_\_\_\_ in.

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

Top Recorder Depth (Inside) 4,278 ft. Recorder Number 1150 Cap. 5,000 P.S.I.  
Bottom Recorder Depth (Outside) 4,337 ft. Recorder Number 3851 Cap. 5,700 P.S.I.  
Below Straddle Recorder Depth \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.

Mud Type CHEMICAL Viscosity 50 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 5,000 P.P.M. Drill Pipe Length 4,264 ft. I.D. 3 1/2 in.  
Jars: Make BOWEN Serial Number N/A Test Tool Length 26 ft. Tool Size 3 1/2-1F in.  
Did Well Flow? NO Reversed Out NO Anchor Length 50 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 INCREASING 1 1/4" (NObb)  
2nd Open: WEAK SURFACE BLOW INCREASING TO 7" (NObb)

Recovered 45 ft. of OCWM 2% OIL, 28% WTR, 70% MUD  
Recovered 62 ft. of MW 57% WTR, 43% MUD  
Recovered 107 ft. of TOTAL FLUID CHLORIDES 42,500 Ppm

Recovered _____ ft. of _____	PH: 7.0	Price Job
Recovered _____ ft. of _____	RW .17 @ 67 deg.	Other Charges
Remarks: _____		Insurance
TOOL SAMPLE: 2% OIL, 26% WTR, 72% MUD		Total

Time Set Packer(s) 11:18 P.M. A.M. P.M. Time Started Off Bottom 2:53 A.M. A.M. P.M. Maximum Temperature 117  
Initial Hydrostatic Pressure \_\_\_\_\_ (A) 2,051 P.S.I.  
Initial Flow Period \_\_\_\_\_ Minutes 5 (B) 8 P.S.I. to (C) 15 P.S.I.  
Initial Closed In Period \_\_\_\_\_ Minutes 30 (D) 1,193 P.S.I.  
Final Flow Period \_\_\_\_\_ Minutes 60 (E) 16 P.S.I. to (F) 58 P.S.I.  
Final Closed In Period \_\_\_\_\_ Minutes 120 (G) 1,186 P.S.I.  
Final Hydrostatic Pressure \_\_\_\_\_ (H) 2,050 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	ERNE MORRISON	Job Number	
Well Name	WATERSON 'A' #1-17	Representative	ROGER D. FRIEDLY
Unique Well ID	DST #4 MARMATON 4,330' - 4,440'	Well Operator	MULL DRILLING COMPANY, INC.
Surface Location	SEC 17-17S-27W LANE COUNTY, KS	Report Date	2010/10/07
Well License Number		Prepared By	ROGER D. FRIEDLY
Field	WILDCAT		
Well Type	Vertical		

Test Type	CONVENTIONAL		
Formation	DST #4 MARMATON 4,330' - 4,440'		
Well Fluid Type	01 Oil	Start Test Time	17:00:00
		Final Test Time	01:02:00
Start Test Date	2010/10/07		
Final Test Date	2010/10/08		
Gauge Name	1150		
Gauge Serial Number			

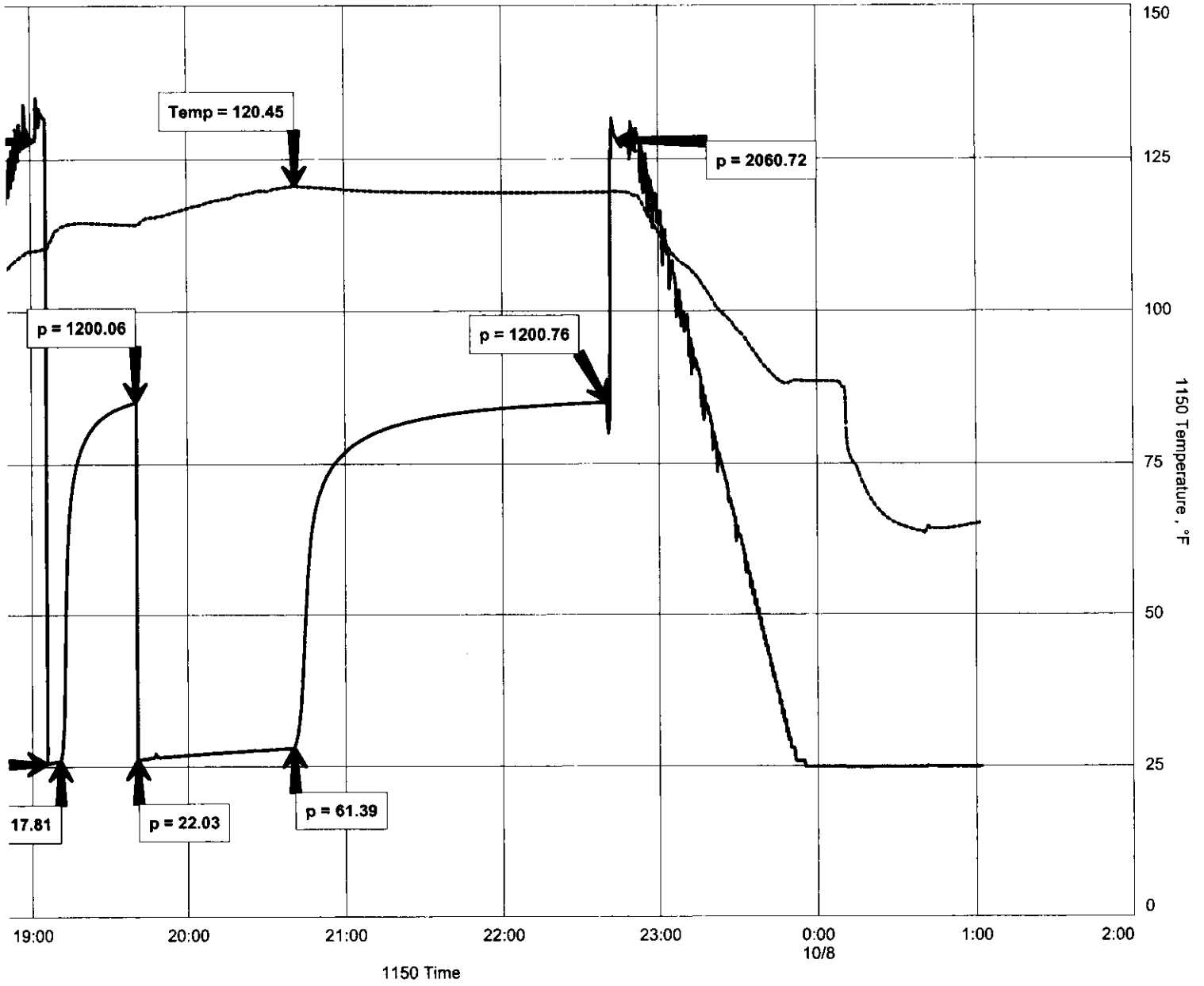
### Test Results

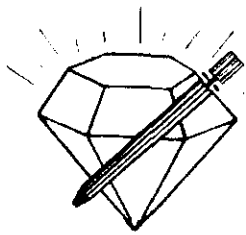
RECOVERED: 30' GAS IN PIPE  
50' OCWM 1% OIL, 19% WTR, 80% MUD  
62' MW 71% WTR, 29% MUD - SCUM OF OIL  
112' TOTAL FLUID

TOOL SAMPLE: 1% OIL, 38% MUD, 61% WTR

CHLORIDES: 54,000 Ppm  
PH: 7.0  
RW: .10 @ 68 deg.

# WATERSON 'A' #1-17





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

CLOCK ON: 17:00

CLOCK OFF: 01:02

**DRILL -STEM TEST TICKET**

Company MULL DRILLING COMPANY, INC. Lease & Well No. WATERSON 'A' #1-17  
Contractor DUKE RIG #4 Charge to MULL DRILLING COMPANY, INC.  
Elevation 2,718 KB Formation MARMATON Effective Pay \_\_\_\_\_ Ft. Ticket No. \_\_\_\_\_  
Date 10-7-10 Sec. 17 Twp. 17 S Range 27 W County LANE State KANSAS  
Test Approved By KEVIN KESSLER Diamond Representative ROGER D. FRIEDLY

Formation Test No. 4 Interval Tested from 4,330 ft. to 4,440 ft. Total Depth 4,440 ft.  
Packer Depth 4,325 ft. Size 6 3/4 in. Packer Depth \_\_\_\_\_ ft. Size \_\_\_\_\_ in.  
Packer Depth 4,330 ft. Size 6 3/4 in. Packer Depth \_\_\_\_\_ ft. Size \_\_\_\_\_ in.

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

Top Recorder Depth (Inside) 4,318 ft. Recorder Number 1150 Cap. 5,000 P.S.I.  
Bottom Recorder Depth (Outside) 4,437 ft. Recorder Number 3851 Cap. 5,700 P.S.I.  
Below Straddle Recorder Depth \_\_\_\_\_ ft. Recorder Number \_\_\_\_\_ Cap. \_\_\_\_\_ P.S.I.

Mud Type CHEMICAL Viscosity 50 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 5,300 P.P.M. Drill Pipe Length 4,304 ft. I.D. 3 1/2 in.  
Jars: Make BOWEN Serial Number N/A Test Tool Length 26 ft. Tool Size 3 1/2-IF in.  
Did Well Flow? NO Reversed Out NO Anchor Length 110 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 SURFACE BLOW INCREASING 1 1/2" (NObb)  
2nd Open: WEAK SURFACE BLOW INCREASING TO 8" (NObb)

Recovered 30 ft. of GAS IN PIPE  
Recovered 50 ft. of OCWM 1% OIL, 19% WTR, 80% MUD  
Recovered 62 ft. of MW 72% WTR, 29% MUD - SCUM OF OIL

Recovered <u>112</u> ft. of <u>TOTAL FLUID</u>	<u>CHLORIDES 54,000 Ppm</u>	Price Job
Recovered _____ ft. of _____	<u>PH 7.0</u>	Other Charges
Remarks: _____	<u>RW .10 @ 68 deg</u>	Insurance
<u>TOOL SAMPLE: 1% OIL, 38% MUD, 61% WTR</u>		Total

Time Set Packer(s) 7:06 P.M. A.M. P.M. Time Started Off Bottom 10:41 P.M. A.M. P.M. Maximum Temperature 120  
Initial Hydrostatic Pressure \_\_\_\_\_ (A) 2,062 P.S.I.  
Initial Flow Period \_\_\_\_\_ Minutes 5 (B) 9 P.S.I. to (C) 18 P.S.I.  
Initial Closed In Period \_\_\_\_\_ Minutes 30 (D) 1,200 P.S.I.  
Final Flow Period \_\_\_\_\_ Minutes 60 (E) 22 P.S.I. to (F) 61 P.S.I.  
Final Closed In Period \_\_\_\_\_ Minutes 120 (G) 1,201 P.S.I.  
Final Hydrostatic Pressure \_\_\_\_\_ (H) 2,061 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.