



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

OPERATOR: License # \_\_\_\_\_

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

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

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

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

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

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

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

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD
- Conv. to GSW
- Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

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

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

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

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

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

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

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

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

**Drilling Fluid Management Plan**

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

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

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

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

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

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

**AFFIDAVIT**

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

Submitted Electronically

**KCC Office Use ONLY**

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



1068684

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

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

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

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

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

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

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR. \_\_\_\_\_ Producing Method:  Flowing  Pumping  Gas Lift  Other (Explain) \_\_\_\_\_

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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<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 (Specify) _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Mull Drilling Company, Inc.
Well Name	Bernbeck 1-20
Doc ID	1068684

All Electric Logs Run

CDL/CNL/PE
DIL
Micro
Sonic

Form	ACO1 - Well Completion
Operator	Mull Drilling Company, Inc.
Well Name	Bernbeck 1-20
Doc ID	1068684

Tops

Name	Top	Datum
Anhydrite	1794	+ 590
B/Anhydrite	1831	+ 553
Heebner Shale	3742	- 1358
Lansing	3780	- 1396
Marmaton	4075	- 1691
Pawnee	4168	- 1784
Ft. Scott	4261	- 1887
Cherokee Shale	4285	- 1901
Mississippian	4344	- 1960

Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



Phone: 316-337-6200  
Fax: 316-337-6211  
<http://kcc.ks.gov/>

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

Sam Brownback, Governor

November 22, 2011

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

Re: ACO1  
API 15-195-22723-00-00  
Bernbeck 1-20  
SW/4 Sec.20-15S-23W  
Trego 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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Mull Drilling Company

**Bernbeck 1-20**

1700 N Waterfront Pkwy  
Wichita, KS 67206

**20-15-23 Trego**

Job Ticket: 43682

**DST#: 1**

ATTN: Larry Friend

Test Start: 2011.08.20 @ 01:06:35

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	0 ppm
Viscosity: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.80 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 2900.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud 100%m	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

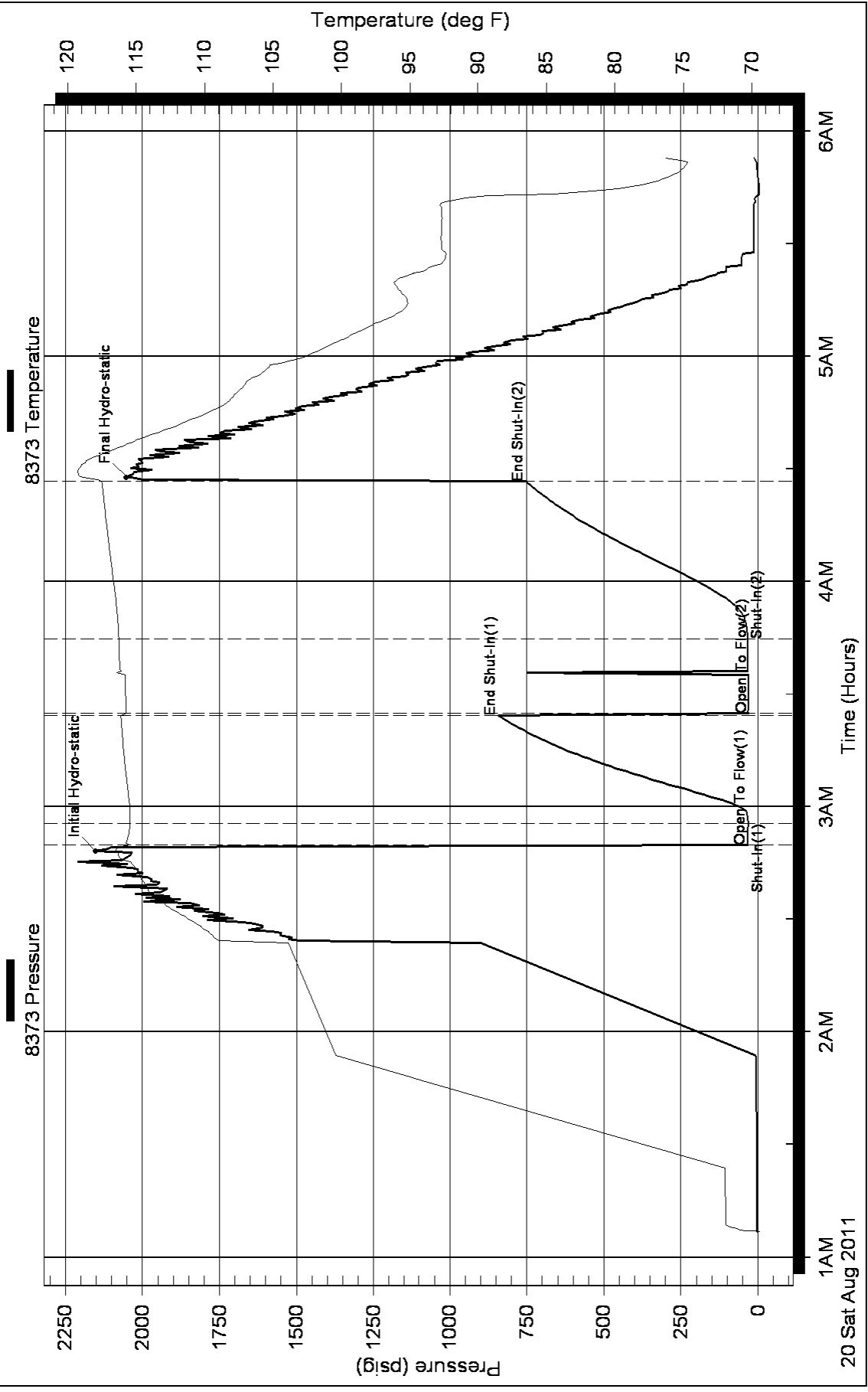
Laboratory Name:

Laboratory Location:

Recovery Comments:



### Pressure vs. Time





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Mull Drilling Company  
1700 N Waterfront Pkw y  
Wichita, KS 67206  
ATTN: Larry Friend

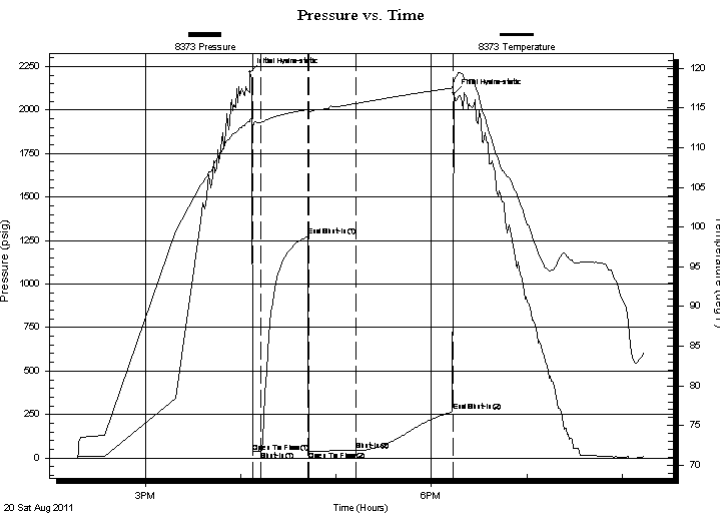
**Bernbeck 1-20**  
**20-15-23 Trego**  
Job Ticket: 43683 **DST#: 2**  
Test Start: 2011.08.20 @ 14:17:32

## GENERAL INFORMATION:

Formation: **Miss**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 16:07:42  
Time Test Ended: 20:13:56  
Test Type: Conventional Bottom Hole  
Tester: Brandon Turley  
Unit No: 35  
Interval: **4313.00 ft (KB) To 4355.00 ft (KB) (TVD)**  
Reference Elevations: 2384.00 ft (KB)  
Total Depth: 4355.00 ft (KB) (TVD) 2379.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 5.00 ft

**Serial #: 8373 Inside**  
Press @ Run Depth: 43.62 psig @ 4314.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2011.08.20 End Date: 2011.08.20 Last Calib.: 2011.08.20  
Start Time: 14:17:32 End Time: 20:13:56 Time On Btm: 2011.08.20 @ 16:05:57  
Time Off Btm: 2011.08.20 @ 18:13:57

**TEST COMMENT:** IF: Surface blow .  
IS: No return.  
FF: No blow . Flushed tool no blow .  
FS: No return.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2215.70	113.38	Initial Hydro-static
2	36.13	112.39	Open To Flow (1)
7	37.69	113.18	Shut-In(1)
37	1274.62	114.85	End Shut-In(1)
37	40.02	114.45	Open To Flow (2)
67	43.62	115.56	Shut-In(2)
128	267.23	117.52	End Shut-In(2)
128	2094.82	118.41	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
9.00	ocm 5%o 95% m	0.04
1.00	free oil 100% o	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Mull Drilling Company  
1700 N Waterfront Pkwy  
Wichita, KS 67206  
ATTN: Larry Friend

**Bernbeck 1-20**  
**20-15-23 Trego**  
Job Ticket: 43683      **DST#: 2**  
Test Start: 2011.08.20 @ 14:17:32

**Mud and Cushion Information**

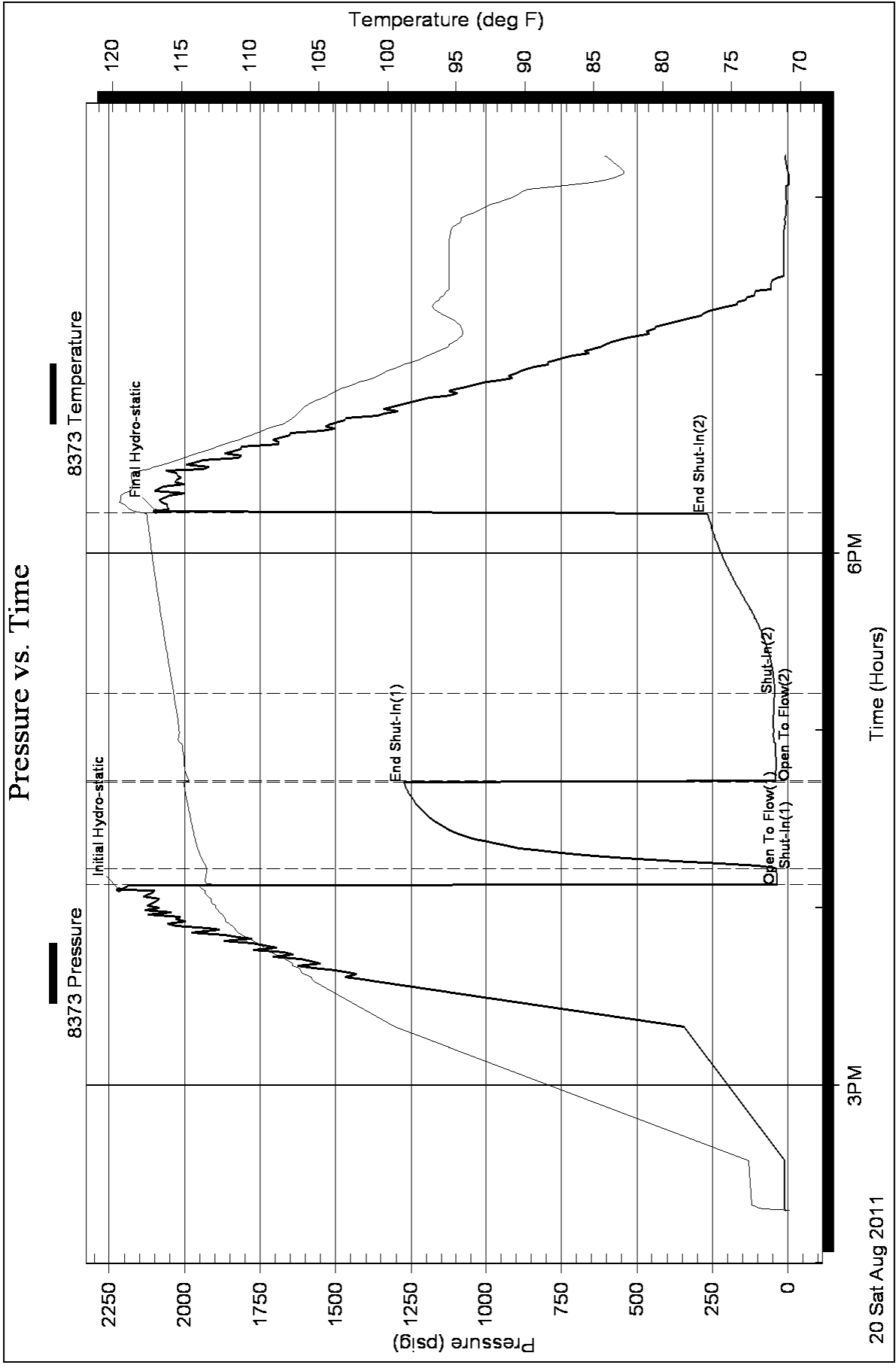
Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	0 ppm
Viscosity: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.20 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 2700.00 ppm			
Filter Cake: 1.00 inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
9.00	ocm 5%o 95%m	0.044
1.00	free oil 100%o	0.005

Total Length: 10.00 ft      Total Volume: 0.049 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:





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Mull Drilling Company  
 1700 N Waterfront Pkwy  
 Wichita, KS 67206  
 ATTN: Larry Friend

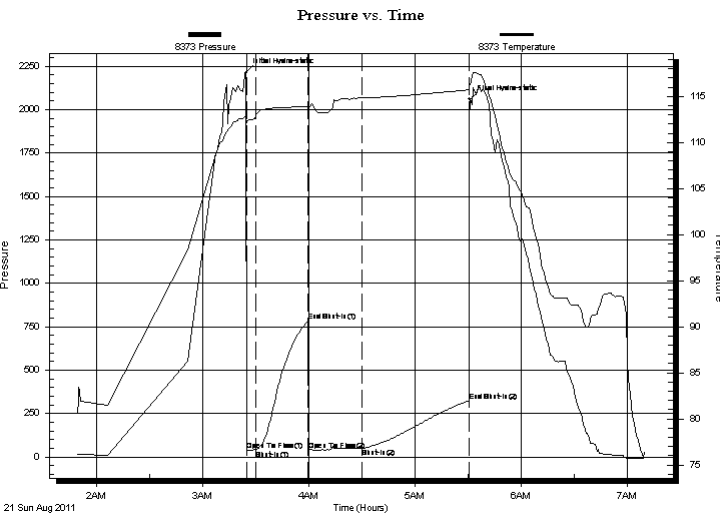
**Bernbeck 1-20**  
**20-15-23 Trego**  
 Job Ticket: 43877      **DST#: 3**  
 Test Start: 2011.08.21 @ 01:49:05

## GENERAL INFORMATION:

Formation: **Mississippi**  
 Deviated: No      Whipstock:      ft (KB)  
 Time Tool Opened: 03:24:30  
 Time Test Ended: 07:09:44  
**Interval: 4313.00 ft (KB) To 4363.00 ft (KB) (TVD)**  
 Total Depth: 4363.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches      Hole Condition: Good  
 Test Type: Conventional Bottom Hole  
 Tester: Will MacLean  
 Unit No: 35  
 Reference Elevations: 2384.00 ft (KB)  
 2379.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8373      Inside**  
 Press @ Run Depth: 50.91 psig @ 4314.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2011.08.21      End Date: 2011.08.21      Last Calib.: 2011.08.21  
 Start Time: 01:49:05      End Time: 07:09:44      Time On Btm: 2011.08.21 @ 03:24:15  
 Time Off Btm: 2011.08.21 @ 05:30:45

**TEST COMMENT:** IF-Surface Blow Built to 1/4"  
 IS- No Blow  
 FF-No Blow Flushed Tool Weak Surface Blow Died in 2min  
 FS- No Blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2211.84	112.79	Initial Hydro-static
1	37.39	112.17	Open To Flow (1)
6	40.84	112.92	Shut-In(1)
35	782.02	113.86	End Shut-In(1)
36	41.95	113.33	Open To Flow (2)
66	50.91	114.84	Shut-In(2)
126	324.60	115.70	End Shut-In(2)
127	2059.35	116.32	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	OCM 98%ocm 2%0	0.10
0.00	Show of Oil in the Tool	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Mull Drilling Company  
1700 N Waterfront Pkwy  
Wichita, KS 67206  
ATTN: Larry Friend

**Bernbeck 1-20**  
**20-15-23 Trego**  
Job Ticket: 43877      **DST#: 3**  
Test Start: 2011.08.21 @ 01:49:05

**Mud and Cushion Information**

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.20 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 2700.00 ppm			
Filter Cake: 1.00 inches			

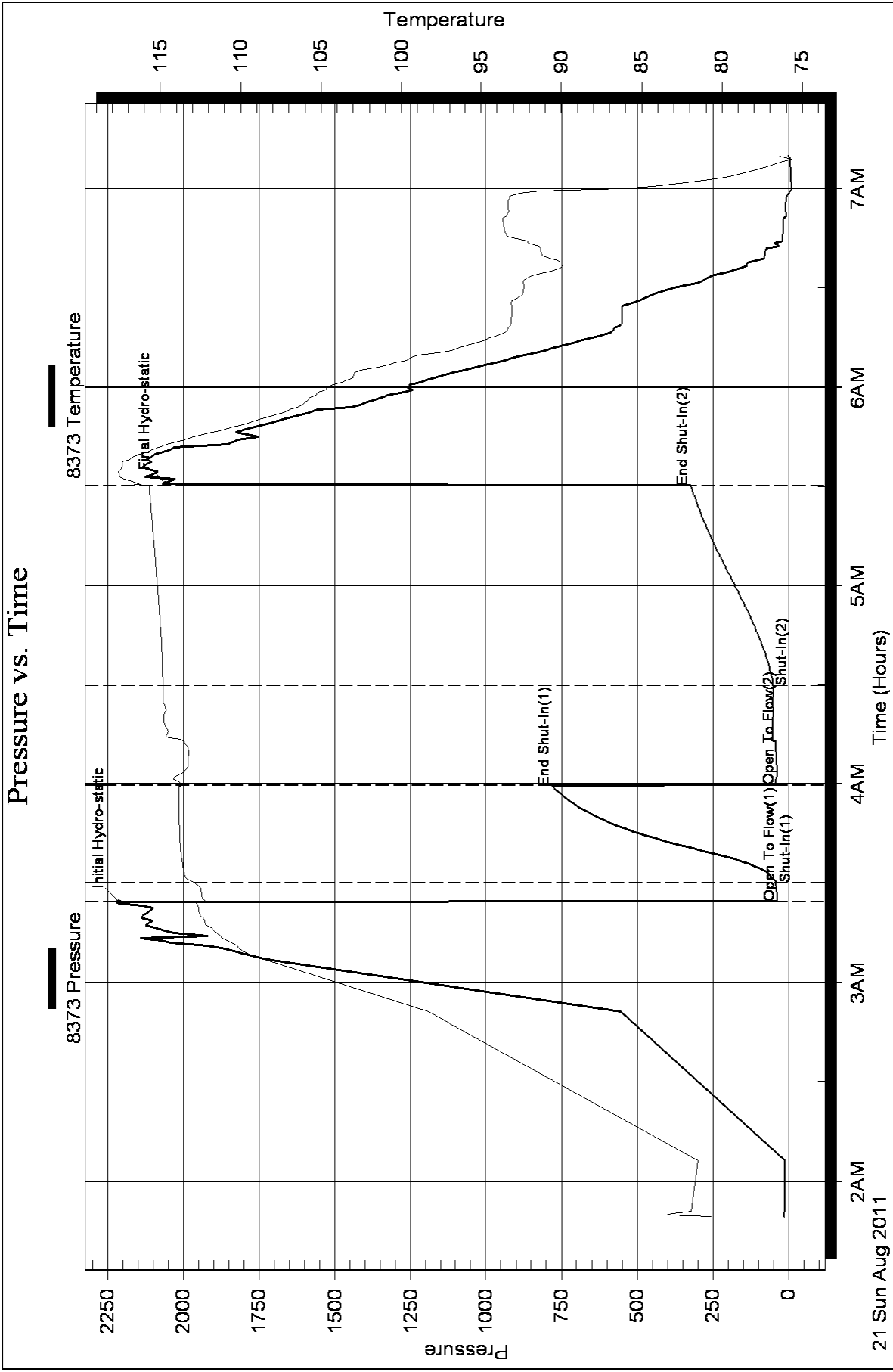
**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
20.00	OCM 98%ocm 2%0	0.098
0.00	Show of Oil in the Tool	0.000

Total Length: 20.00 ft      Total Volume: 0.098 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

### Pressure vs. Time





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Mull Drilling Company  
 1700 N Waterfront Pkw y  
 Wichita, KS 67206  
 ATTN: Larry Friend

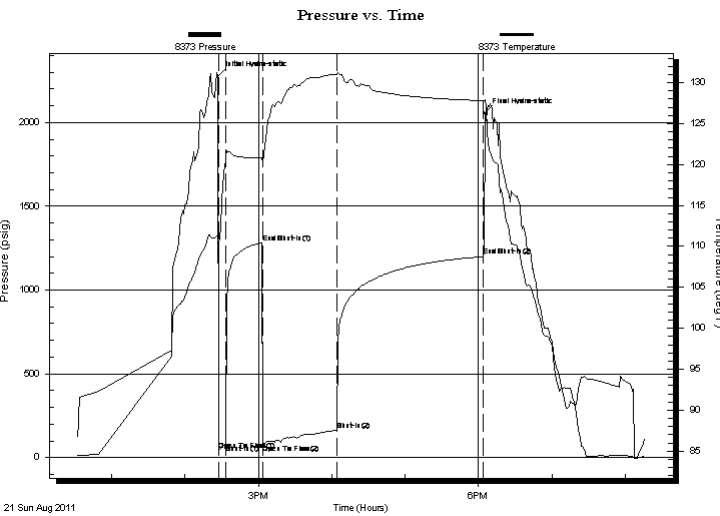
**Bernbeck 1-20**  
**20-15-23 Trego**  
 Job Ticket: 43878 **DST#: 4**  
 Test Start: 2011.08.21 @ 12:32:05

## GENERAL INFORMATION:

Formation: **Mississippi**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 14:27:30  
 Time Test Ended: 20:15:59  
 Interval: **4363.00 ft (KB) To 4378.00 ft (KB) (TVD)**  
 Total Depth: 4378.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole  
 Tester: Will MacLean  
 Unit No: 35  
 Reference Elevations: 2384.00 ft (KB)  
 2379.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8373 Inside**  
 Press @ Run Depth: 163.47 psig @ 4364.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2011.08.21 End Date: 2011.08.21 Last Calib.: 2011.08.21  
 Start Time: 12:32:05 End Time: 20:15:59 Time On Btm: 2011.08.21 @ 14:27:15  
 Time Off Btm: 2011.08.21 @ 18:05:14

**TEST COMMENT:** IF- Surface Blow Built to 2"  
 IS- No Blow  
 FF- Surface Blow Built to 7 1/2"  
 FS- No Blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2277.96	111.17	Initial Hydro-static
1	43.32	109.96	Open To Flow (1)
6	80.21	120.99	Shut-In(1)
36	1283.10	120.82	End Shut-In(1)
37	78.97	120.33	Open To Flow (2)
97	163.47	131.04	Shut-In(2)
217	1201.28	127.79	End Shut-In(2)
218	2057.14	127.89	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
135.00	MCW 40% m 60% w	0.76
123.00	MCW 10% m 90% w	1.73
62.00	MCW 15% m 85% w	0.87

## Gas Rates

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





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TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Mull Drilling Company

**Bernbeck 1-20**

1700 N Waterfront Pkwy  
Wichita, KS 67206

**20-15-23 Trego**

Job Ticket: 43878

**DST#: 4**

ATTN: Larry Friend

Test Start: 2011.08.21 @ 12:32:05

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

12800 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2900.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
135.00	MCW 40%m 60%w	0.764
123.00	MCW 10%m 90%w	1.725
62.00	MCW 15%m 85%w	0.870

Total Length: 320.00 ft      Total Volume: 3.359 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

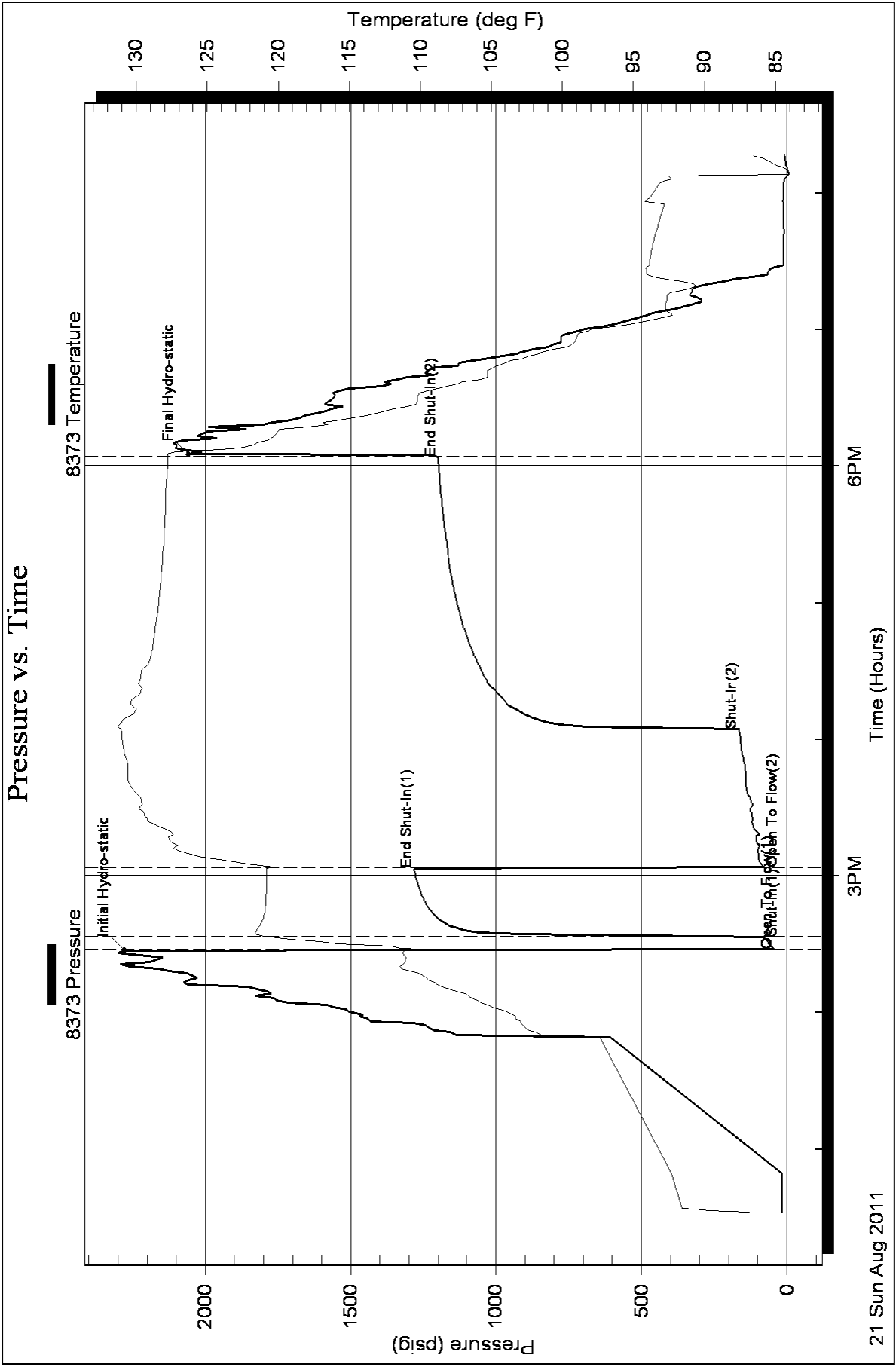
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW is .428@82f =12800

### Pressure vs. Time



# GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY **MULL DRILG. CO, INC.** ELEVATIONS **2384**

LEASE **BERNBECK #1-20**

FIELD **1350, FSL & DSTS, FAWL**

LOCATION **20 TWP 15.50, R02 23W**

SEC **20** TWP **15.50** R02 **23W**

COUNTY **TREGO** STATE **KS**

CONTRACTOR **W.W. DRIG. RIG #6**

SPUD **8/15/11** COUP **9/22/11**

RID **4473** LTD **4474**

MUD UP **5900** TYPE MUD **CHEMICAL**

DRILLING TIME KEPT FROM **3600** TO **770**

SAMPLES EXAMINED FROM **3600** TO **770**

GEOLOGICAL SUPERVISION FROM **3790** TO **770**

GEOLOGIST ON WELL **LARRY P. FRIEND**

FORMATION TOPS LOG SAMPLES

STONE CORRAL	1797 (+587)	1797 (+587)
HEEBNER SH.	3743 (-1359)	3743 (-1359)
LANSING	3779 (-1395)	3779 (-1395)
"C"		
"D"		
"E"		
"F"		
"G"		
"H"		
"I"		
"J"		
"K"		
"L"		
BKC	4057 (-1673)	4057 (-1673)
MARKATON	4067 (-1683)	4067 (-1683)
"PALMNEE"	4166 (-1782)	4166 (-1782)
ET. SCOTT	4260 (-1876)	4260 (-1876)
MISSISSIPPIAN	4344 (-1960)	4344 (-1960)
GILMORE CITY	4419 (-2035)	4419 (-2035)

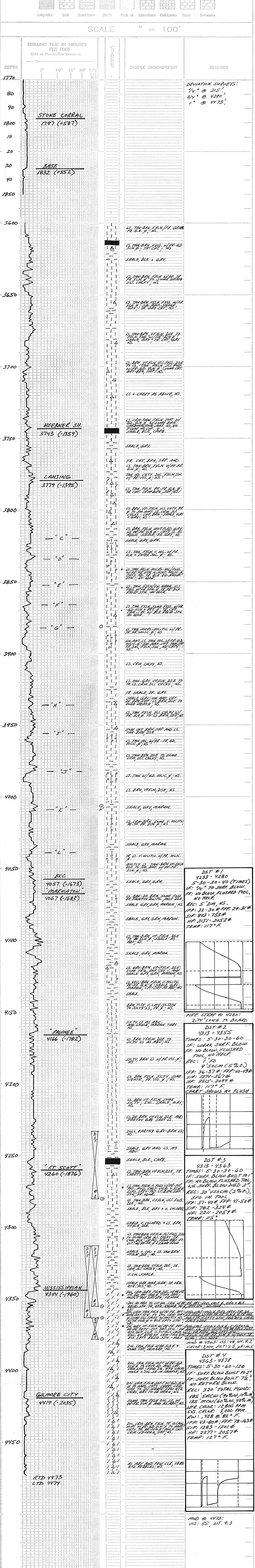
REMARKS **DUE TO NEGATIVE DSTS, IT WAS DECIDED TO PLUG AND ABANDON THIS WELL.**

*Larry P. Friend*

## LEGEND



SCALE 1" = 100'



COMPANY **MULL DRILG. CO, INC.** ELEVATION: **2384 KB**

LEASE **BERNBECK 1-20**

LOCATION **SW-SE-NW-SW SEC. 20 TWP 15.5, R02 23W.**

COUNTY **TREGO** STATE **KS.**

DEPTH **5" 10" 15" 20" 25"**

DRILLING TIME Minutes/Foot

LITHOLOGY

SAMPLE DESCRIPTIONS

REMARKS