



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1070699  
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: \_\_\_\_\_

1070699

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
--	---

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

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

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

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

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

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
---	--

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	TDI, Inc.
Well Name	Wolf 1
Doc ID	1070699

All Electric Logs Run

Dual Induction Log
Dual Compensated Porosity Log
Microresistivity Log
Sonic Log

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

January 09, 2012

Tom Denning  
TDI, Inc.  
1310 BISON RD  
HAYS, KS 67601-9696

Re: ACO1  
API 15-051-26225-00-00  
Wolf 1  
NW/4 Sec.13-15S-19W  
Ellis 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,  
Tom Denning



**HERB DENNES**  
CONSULTING GEOLOGIST

108 W. 35th ST.  
PH: 786-625-3380  
HAYS, KS 67601

COMPANY: IDI, Inc.  
WELL: Wolf #1  
FIELD: DeSmet South

COUNTY: Ellis STATE: Kansas

LOCATION: 930' SW of 1775' E. of N. 1/4 KB: 2038  
SEC: 12 TWP: 15S RGE: 19W DL: 2028

Logging by: Herb Dennes

1. Open-Ended Log  
2. Compassionate Log  
3. Stratigraphic Log  
4. Stratigraphic Log  
5. Stratigraphic Log  
6. Stratigraphic Log

Contractor: Smith and Daley Inc. Log # 21  
Contracted: 11-28-2011 Completed: 12-04-2011  
Circulation: 28940 Gallons  
Surficial Coring: 8 3/4" SPT: 1224 w/ 1500 lbs hammer 29601-33600

Production Coring: 8 3/4" SPT: 1224 w/ 1500 lbs hammer 29601-33600

Drilling Time: 2900' - RTD Samples: 2100' - RTD

Daily Penetration Rate

Date	Depth	Spud	AST	Depth	Activity
11-24	430'				
11-24	470'				
11-24	510'				
12-01	320'				
12-01	320'				
12-01	320'				
12-04	3625'				
12-04	3625'				
12-05	3827'				

REMARKS: Well plugged and abandoned due to negative results from three DST's of primary producing horizons.

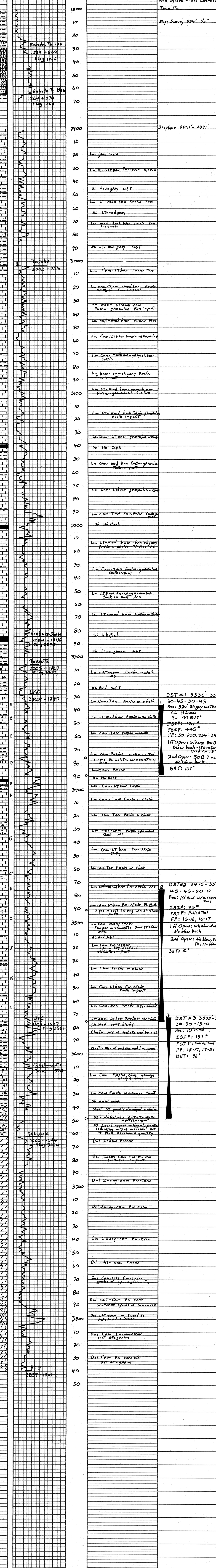
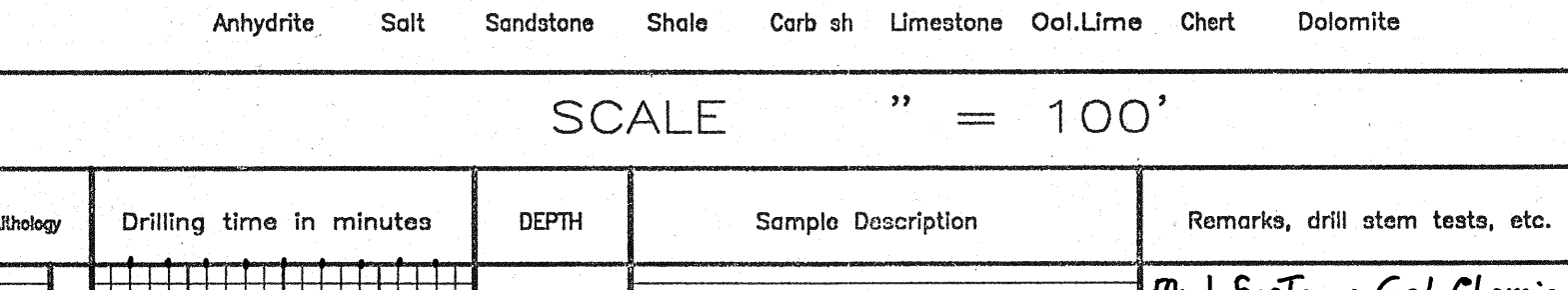
Bit Record

Make	Type	Serial No.	Nozzles	Depth In	Depth Out	Hours

Formation Sample Log Datum \* Formation Sample Log Datum \*

Anhydrite Top		1224	+ 812				
Anhydrite Base		1262	+ 776				
Topokta		3003	- 765				
Hebbron shale		3282	- 1244				
Toronto		3302	- 1244				
LKC		3328	- 1270				
BKC		3561	- 1523				
Conglomerate		3610	- 1572				
Flint shale		3660	- 1629				
ATD	3827						
LTD	3840		- 1802				

\* Structural Position to:





# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025

Home Office P.O. Box 32 Russell, KS 67665

No. 088

Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
12-5-11	13	15	19	Ellis	KS		10:00 a.m.
Lease <i>Wolf</i>	Well No. <i>1</i>		Location <i>Hwy 3 &amp; Antenna Rd 3/4 25 1/2 W Suite</i>				
Contractor <i>Southwick #1</i>				Owner			
Type Job <i>Rotary Plug</i>				To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.			
Hole Size <i>7 7/8</i>		T.D. <i>38.39</i>		Charge To <i>T/D I</i>			
Csg.		Depth		Street			
Tbg. Size		Depth		City State			
Tool		Depth		City State			
Cement Left in Csg.		Shoe Joint		The above was done to satisfaction and supervision of owner agent or contractor.			
Meas Line		Displace		Cement Amount Ordered <i>2005 6 1/4 Hlibel 1/4 Hlibel</i>			
<b>EQUIPMENT</b>							
Pumptrk <i>5</i> No.	Cementer <i>Coig</i>			Common <i>123</i>			
	Helper			Poz. Mix <i>82</i>			
Bulktrk No.	Driver <i>Steve</i>			Gel. <i>7</i>			
	Driver			Calcium			
Bulktrk <i>8</i> No.	Driver <i>Coig</i>			Hulls			
	Driver			Salt			
<b>JOB SERVICES &amp; REMARKS</b>							
Remarks:				Flowseal <i>50#</i>			
Rat Hole <i>30 SK</i>				Kol-Seal			
Mouse Hole <i>15 SK</i>				Mud CLR 48			
Centralizers				CFL-117 or CD110 CAF 38			
Baskets				Sand			
D/V or Port Collar				Handling <i>212</i>			
<i>1st 3632 25 SK</i>				Mileage			
<i>2nd 1244 25 SK</i>				<b>FLOAT EQUIPMENT</b>			
<i>3rd 530 100 SK</i>				Guide Shoe			
<i>4th 40' 10 SK</i>				Centralizer <i>8 5/8 Western Plug</i>			
				Baskets			
				AFU Inserts			
				Float Shoe			
				Latch Down			
				Pumptrk Charge <i>Plug</i>			
				Mileage <i>10</i>			
				Tax			
				Discount			
				Total Charge			
Signature <i>Partz R</i>							

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025

Home Office P.O. Box 32 Russell, KS 67665

No. 128

Cell 785-324-1041

Date	11-28-11	Sec.	13	Twp.	15	Range	19	County	Ellis	State	Kansas	On Location		Finish	William	
Lease	Wolf	Well No.	1			Location						Antonio 25 1/2 E				
Contractor	Southwind Drilling Rig 1						Owner									
Type Job	Surface						To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.									
Hole Size	12 1/4			T.D.	226			Charge To							TDI	
Csg.	88 23/6			Depth	224			Street								
Tbg. Size				Depth				City							State	
Tool				Depth				City							State	
Cement Left in Csg.	10-15'			Shoe Joint				The above was done to satisfaction and supervision of owner agent or contractor.								
Meas Line				Displace	13 1/4 Bbl			Cement Amount Ordered							150 Common	

**EQUIPMENT**

Pumptrk	5	No.	Cementer		3800	2 1/2
			Helper	Steve	Common	150
Bulktrk	3	No.	Driver	Steve	Poz. Mix	
			Driver	Steve	Gel.	3
Bulktrk		No.	Driver	Dave	Calcium	5
			Driver	Dave		

**JOB SERVICES & REMARKS**

Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
	Sand
	Handling 158
	Mileage

Cement did Circulate

**FLOAT EQUIPMENT**

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
	SHADE
Pumptrk Charge	Surface
Mileage	10

Handwritten signature/initials

X Signature *Paul R*

Tax  
Discount  
Total Charge



## DRILL STEM TEST REPORT

Prepared For: **TDI Inc**

1310 Bison Rd  
Hays, KS 67601+9696

ATTN: Herb Deines

**Wolf #1**

**13-15s-19w Ellis,KS**

Start Date: 2011.12.02 @ 04:25:05

End Date: 2011.12.02 @ 11:13:09

Job Ticket #: 44580                      DST #: 1

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2011.12.05 @ 16:47:39

TDI Inc  
13-15s-19w Ellis,KS  
Wolf #1  
DST # 1  
LKC "A-D"  
2011.12.02





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

TDI Inc  
 1310 Bison Rd  
 Hays, KS 67601+9696  
 ATTN: Herb Deines

**13-15s-19w Ellis, KS**  
**Wolf #1**  
 Job Ticket: 44580 **DST#: 1**  
 Test Start: 2011.12.02 @ 04:25:05

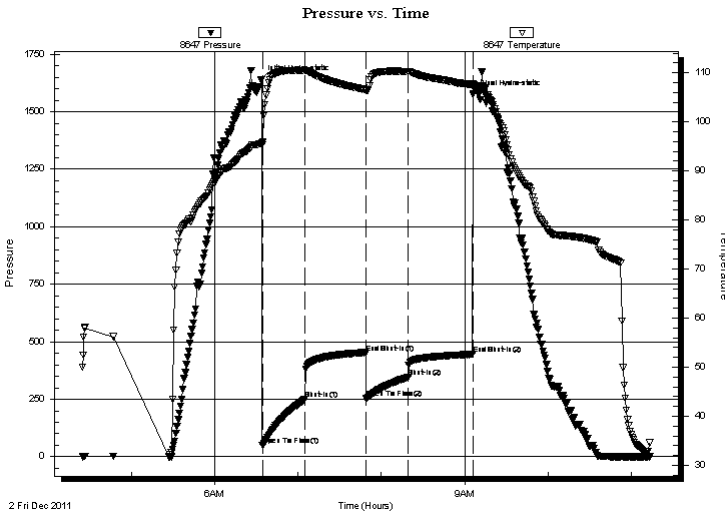
## GENERAL INFORMATION:

Formation: **LKC"A-D"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 06:34:20  
 Time Test Ended: 11:13:09  
 Interval: **3336.00 ft (KB) To 3389.00 ft (KB) (TVD)**  
 Total Depth: 3389.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Andy Carreira  
 Unit No: 39  
 Reference Elevations: 2038.00 ft (KB)  
 2029.00 ft (CF)  
 KB to GR/CF: 9.00 ft

**Serial #: 8647 Outside**  
 Press@RunDepth: 345.37 psig @ 3339.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2011.12.02 End Date: 2011.12.02 Last Calib.: 2011.12.02  
 Start Time: 04:25:05 End Time: 11:13:10 Time On Btm: 2011.12.02 @ 06:33:00  
 Time Off Btm: 2011.12.02 @ 09:05:59

**TEST COMMENT:** IF:(30min) BOB, 3 min.  
 IS:(45min) Return Surface blow died in 15 min  
 FF:(30min) BOB, 7 min.  
 FS:(45min) No Return

## PRESSURE SUMMARY



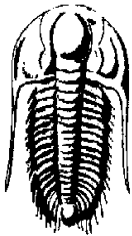
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1638.55	95.58	Initial Hydro-static
2	50.31	95.28	Open To Flow (1)
32	250.31	110.45	Shut-In(1)
76	451.89	106.58	End Shut-In(1)
76	254.55	106.48	Open To Flow (2)
107	345.37	110.26	Shut-In(2)
153	445.32	107.51	End Shut-In(2)
153	1575.32	107.85	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
570.00	Slightly Gassy Water	7.58

## Gas Rates

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



# TRILOBITE TESTING, INC.

## DRILL STEM TEST REPORT

TDI Inc  
1310 Bison Rd  
Hays, KS 67601+9696  
ATTN: Herb Deines

**13-15s-19w Ellis,KS**  
**Wolf #1**  
Job Ticket: 44580     **DST#: 1**  
Test Start: 2011.12.02 @ 04:25:05

### GENERAL INFORMATION:

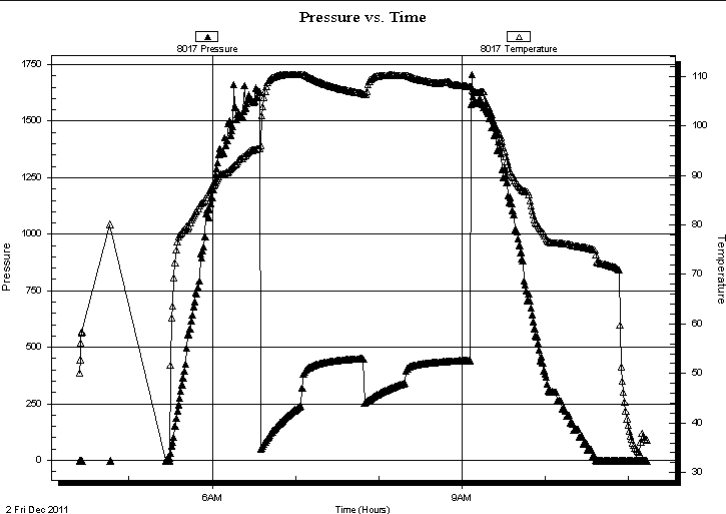
Formation: <b>LKC"A-D"</b>		Test Type: Conventional Bottom Hole (Initial)
Deviated: No Whipstock: ft (KB)		Tester: Andy Carreira
Time Tool Opened: 06:34:20		Unit No: 39
Time Test Ended: 11:13:09		
<b>Interval: 3336.00 ft (KB) To 3389.00 ft (KB) (TVD)</b>		Reference Elevations: 2038.00 ft (KB)
Total Depth: 3389.00 ft (KB) (TVD)		2029.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair		KB to GR/CF: 9.00 ft

**Serial #: 8017**

**Inside**

Press@RunDepth:     psi @     3339.00 ft (KB)	Capacity:     8000.00 psig
Start Date:     2011.12.02     End Date:     2011.12.02	Last Calib.:     2011.12.02
Start Time:     04:24:25     End Time:     11:13:49	Time On Btm:
	Time Off Btm:

**TEST COMMENT:** IF:(30min) BOB, 3 min.  
IS:(45min) Return Surface blow died in 15 min  
FF:(30min) BOB, 7 min.  
FS:(45min) No Return



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

### Recovery

Length (ft)	Description	Volume (bbl)
570.00	Slightly Gassy Water	7.58

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

TDI Inc  
1310 Bison Rd  
Hays, KS 67601+9696  
ATTN: Herb Deines

**13-15s-19w Ellis,KS**  
**Wolf #1**  
Job Ticket: 44580      **DST#: 1**  
Test Start: 2011.12.02 @ 04:25:05

**Tool Information**

Drill Pipe:	Length: 3329.00 ft	Diameter: 3.70 inches	Volume: 44.27 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	44000.00 lb
			<u>Total Volume: 44.27 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial	36000.00 lb
Depth to Top Packer:	3336.00 ft			Final	40000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	53.00 ft				
Tool Length:	73.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Change Over Sub	1.00			3317.00	
Shut In Tool	5.00			3322.00	
Hydraulic tool	5.00			3327.00	
Packer	5.00			3332.00	20.00      Bottom Of Top Packer
Packer	4.00			3336.00	
Stubb	1.00			3337.00	
Perforations	1.00			3338.00	
Change Over Sub	1.00			3339.00	
Recorder	0.00	8017	Inside	3339.00	
Recorder	0.00	8647	Outside	3339.00	
Drill Pipe	31.00			3370.00	
Change Over Sub	1.00			3371.00	
Perforations	15.00			3386.00	
Bullnose	3.00			3389.00	53.00      Bottom Packers & Anchor

**Total Tool Length: 73.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

TDI Inc	<b>13-15s-19w Ellis,KS</b>
1310 Bison Rd Hays, KS 67601+9696	<b>Wolf #1</b>
ATTN: Herb Deines	Job Ticket: 44580 <b>DST#: 1</b>
	Test Start: 2011.12.02 @ 04:25:05

## 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:	42000 ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.38 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2500.00 ppm			
Filter Cake: inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
570.00	Slightly Gassy Water	7.580

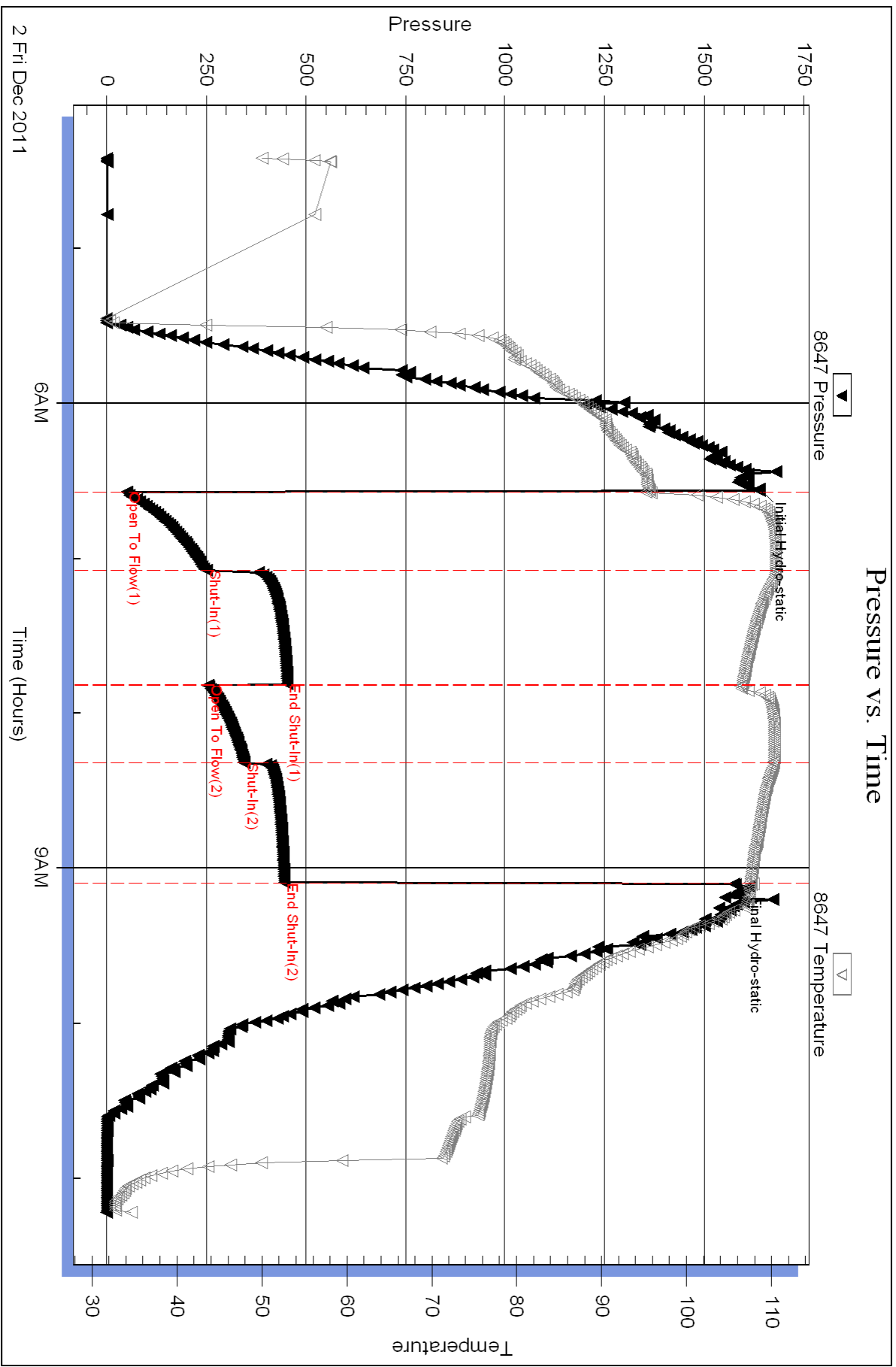
Total Length: 570.00 ft      Total Volume: 7.580 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: Resistivity- .37 @ 29 deg = 42000





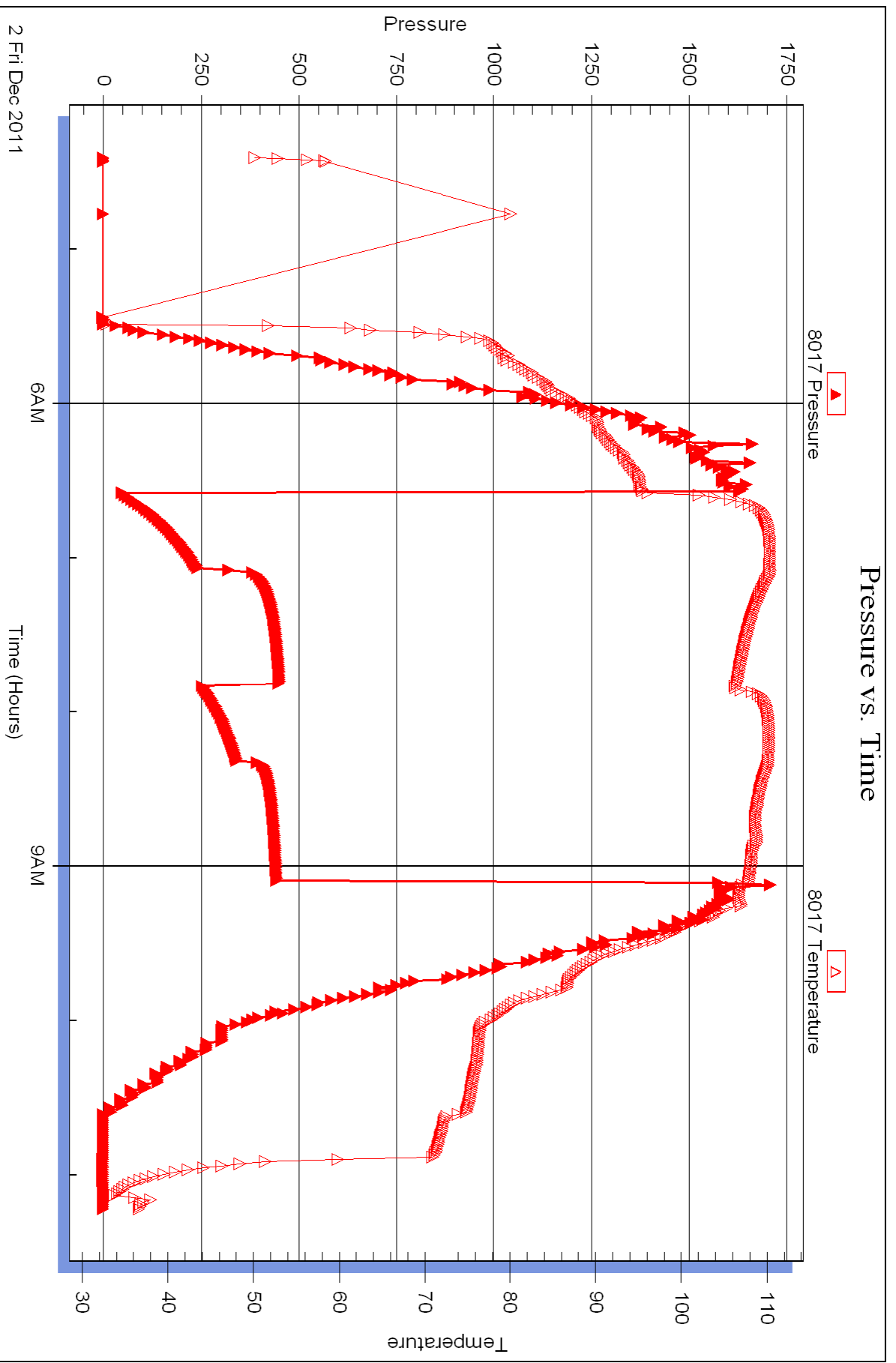
Serial #: 8017

Inside

TDI Inc

Wolf #1

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **TDI Inc**

1310 Bison Rd  
Hays, KS 67601+9696

ATTN: Herb Deines

**Wolf #1**

**13-15s-19w Ellis,KS**

Start Date: 2011.12.03 @ 04:55:05

End Date: 2011.12.03 @ 10:44:20

Job Ticket #: 44581                      DST #: 2

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2011.12.05 @ 16:47:03

TDI Inc  
13-15s-19w Ellis,KS  
Wolf #1  
DST # 2  
LKC-"I-L"  
2011.12.03









**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

TDI Inc  
1310 Bison Rd  
Hays, KS 67601+9696  
ATTN: Herb Deines

**13-15s-19w Ellis,KS**  
**Wolf #1**  
Job Ticket: 44581      **DST#: 2**  
Test Start: 2011.12.03 @ 04:55:05

**Tool Information**

Drill Pipe:	Length: 3485.00 ft	Diameter: 3.70 inches	Volume: 46.35 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	46000.00 lb
			<u>Total Volume: 46.35 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	39000.00 lb
Depth to Top Packer:	3475.00 ft			Final	39000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	100.00 ft				
Tool Length:	120.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Change Over Sub	1.00			3456.00	
Shut In Tool	5.00			3461.00	
Hydraulic tool	5.00			3466.00	
Packer	5.00			3471.00	20.00      Bottom Of Top Packer
Packer	4.00			3475.00	
Stubb	1.00			3476.00	
Perforations	1.00			3477.00	
Change Over Sub	1.00			3478.00	
Recorder	0.00	8017	Inside	3478.00	
Recorder	0.00	8352	Outside	3478.00	
Drill Pipe	63.00			3541.00	
Change Over Sub	1.00			3542.00	
Perforations	30.00			3572.00	
Bullnose	3.00			3575.00	100.00      Bottom Packers & Anchor

**Total Tool Length: 120.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

TDI Inc  
1310 Bison Rd  
Hays, KS 67601+9696  
ATTN: Herb Deines

**13-15s-19w Ellis,KS**  
**Wolf #1**  
Job Ticket: 44581  
Test Start: 2011.12.03 @ 04:55:05

**DST#: 2**

## 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: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.38 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2500.00 ppm			
Filter Cake: inches			

## Recovery Information

Recovery Table

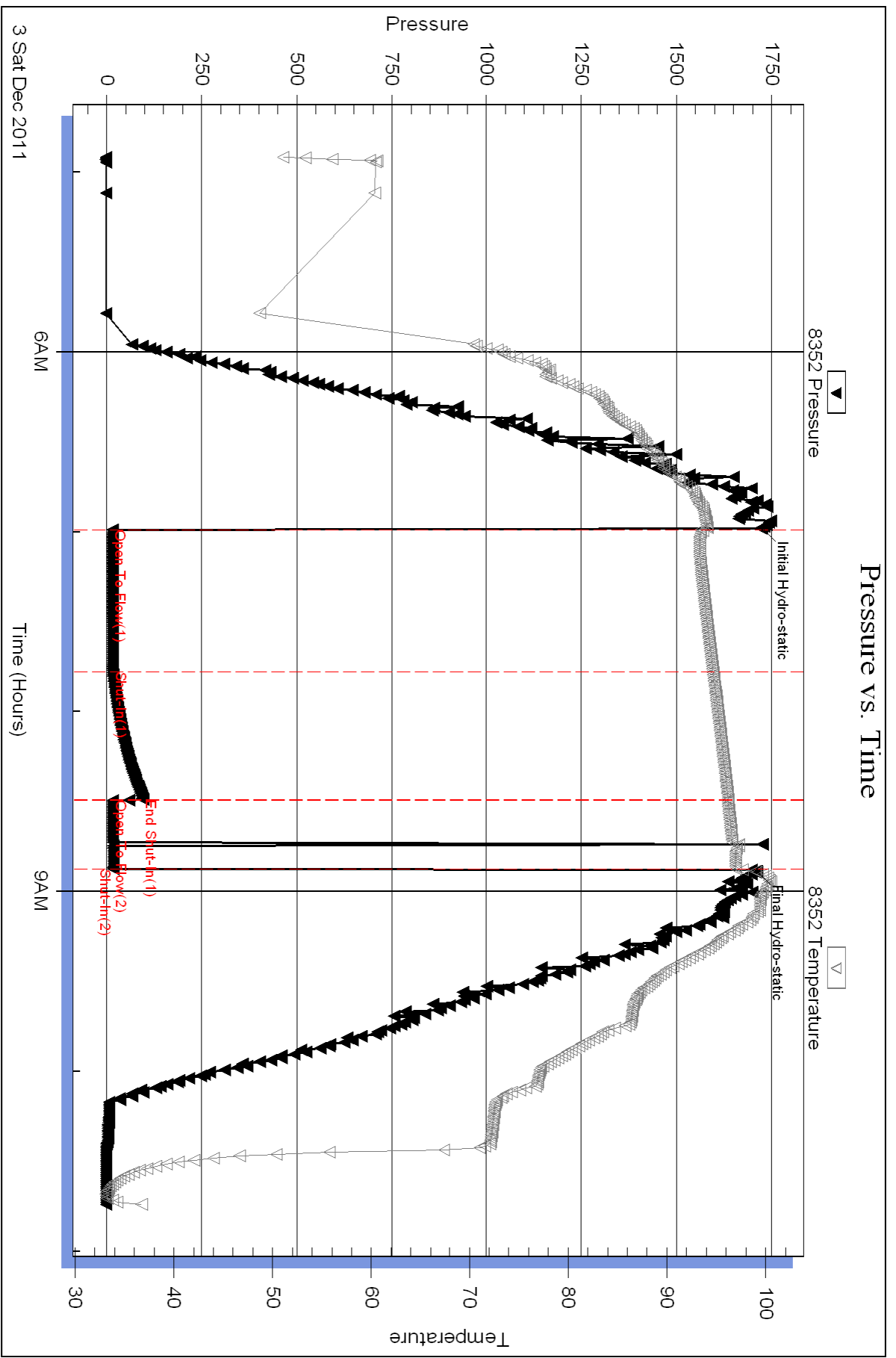
Length ft	Description	Volume bbl
10.00	Mud w/ slight oil spks in tool	0.133

Total Length: 10.00 ft      Total Volume: 0.133 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments:





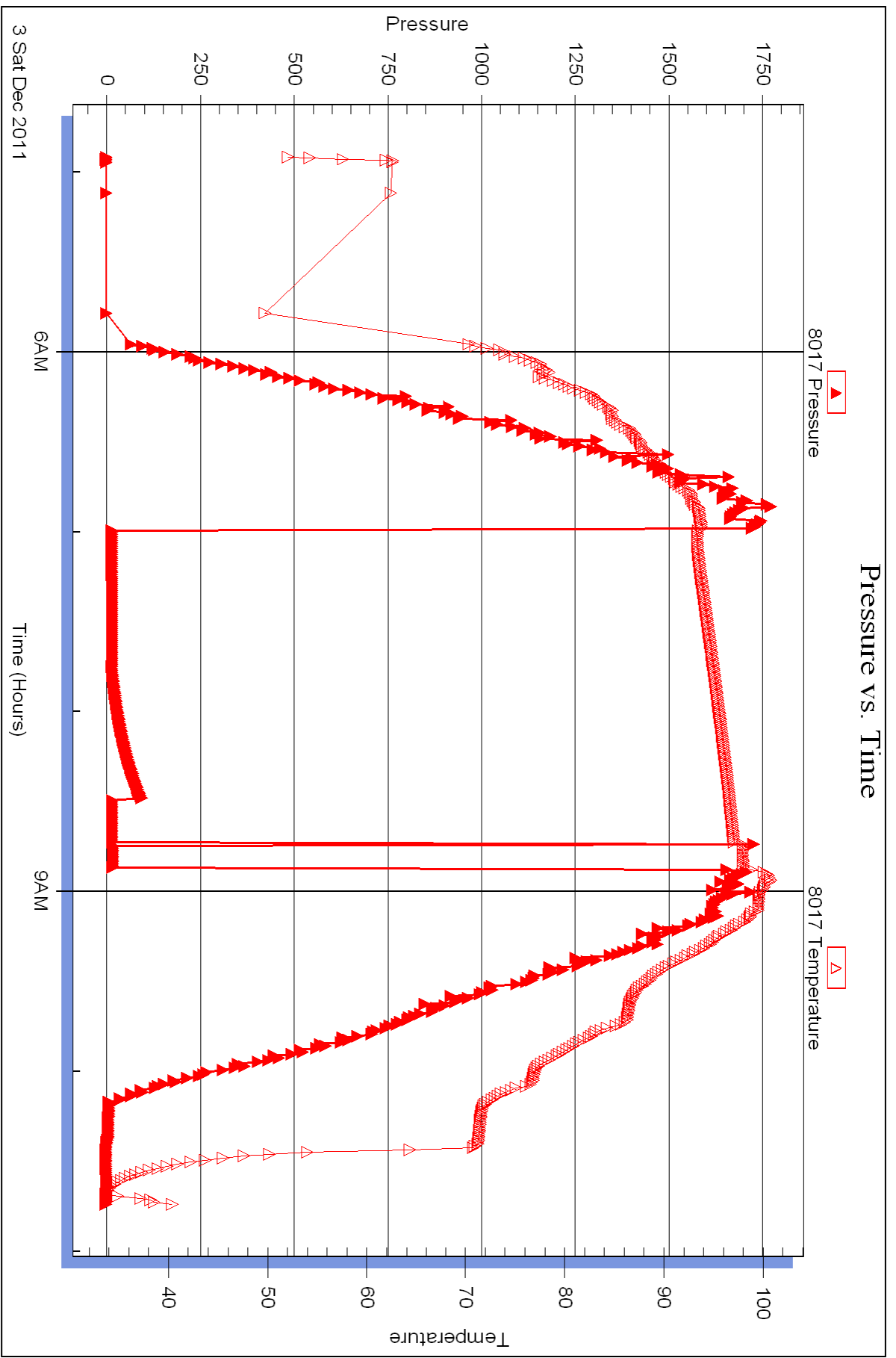
Serial #: 8017

Inside

TDI Inc

Wolf #1

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 44581

Printed: 2011.12.05 @ 16:47:06



## DRILL STEM TEST REPORT

Prepared For: **TDI Inc**

1310 Bison Rd  
Hays, KS 67601+9696

ATTN: Herb Deines

**Wolf #1**

**13-15s-19w Ellis,KS**

Start Date: 2011.12.03 @ 21:37:05

End Date: 2011.12.04 @ 02:54:50

Job Ticket #: 44582                      DST #: 3

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2011.12.05 @ 16:46:25

TDI Inc  
13-15s-19w Ellis,KS  
Wolf #1  
DST # 3  
Conglomerate  
2011.12.03



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

TDI Inc  
 1310 Bison Rd  
 Hays, KS 67601+9696  
 ATTN: Herb Deines

**13-15s-19w Ellis, KS**  
**Wolf #1**  
 Job Ticket: 44582 **DST#: 3**  
 Test Start: 2011.12.03 @ 21:37:05

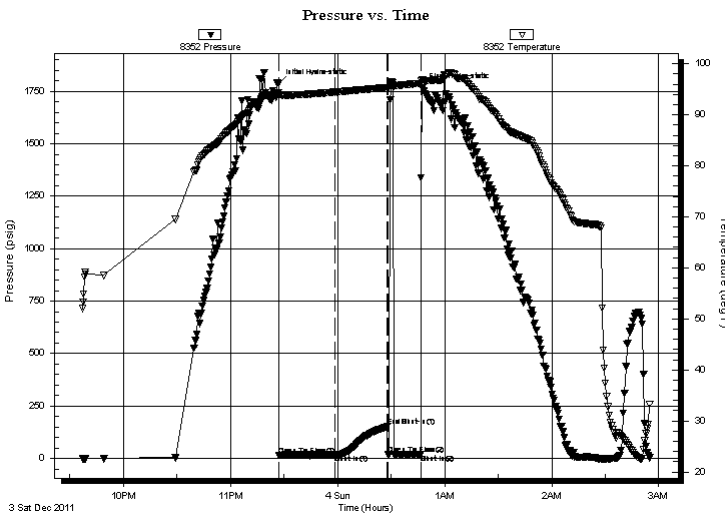
## GENERAL INFORMATION:

Formation: **Conglomerate**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 23:27:10  
 Time Test Ended: 02:54:50  
 Interval: **3572.00 ft (KB) To 3648.00 ft (KB) (TVD)**  
 Total Depth: 3648.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Andy Carreira  
 Unit No: 39  
 Reference Elevations: 2038.00 ft (KB)  
 2029.00 ft (CF)  
 KB to GR/CF: 9.00 ft

**Serial #: 8352 Outside**  
 Press @ Run Depth: 17.47 psig @ 3576.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2011.12.03 End Date: 2011.12.04 Last Calib.: 2011.12.04  
 Start Time: 21:37:05 End Time: 02:54:50 Time On Btm: 2011.12.03 @ 23:26:50  
 Time Off Btm: 2011.12.04 @ 00:47:30

**TEST COMMENT:** IF:(30min) Blow Died in 15 min.  
 IS:(30min) No Return  
 FF:(15min) No Blow, Flushed, Surge, No Blow  
 FS: Pulled Tool

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1787.60	94.38	Initial Hydro-static
1	15.93	93.77	Open To Flow (1)
32	17.47	94.46	Shut-In(1)
61	151.23	95.33	End Shut-In(1)
62	17.73	95.30	Open To Flow (2)
80	21.05	96.15	Shut-In(2)
81	1766.15	96.78	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud	0.13

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE**  
TESTING, INC.

**DRILL STEM TEST REPORT**

TDI Inc  
1310 Bison Rd  
Hays, KS 67601+9696  
ATTN: Herb Deines

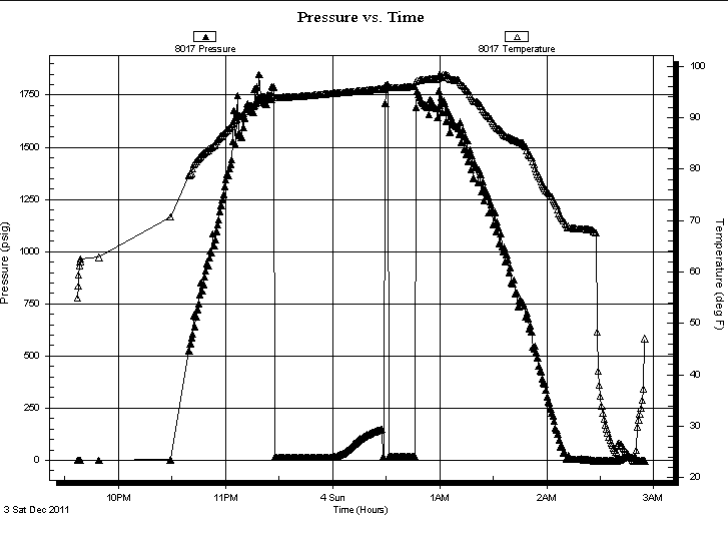
**13-15s-19w Ellis, KS**  
**Wolf #1**  
Job Ticket: 44582      **DST#: 3**  
Test Start: 2011.12.03 @ 21:37:05

**GENERAL INFORMATION:**

Formation: **Conglomerate**  
 Deviated: No Whipstock:      ft (KB)  
 Time Tool Opened: 23:27:10      Test Type: Conventional Bottom Hole (Reset)  
 Time Test Ended: 02:54:50      Tester: Andy Carreira  
    Unit No: 39  
**Interval: 3572.00 ft (KB) To 3648.00 ft (KB) (TVD)**      Reference Elevations: 2038.00 ft (KB)  
 Total Depth: 3648.00 ft (KB) (TVD)      2029.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair      KB to GR/CF: 9.00 ft

**Serial #: 8017      Inside**  
 Press @RunDepth:      psig @ 3576.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2011.12.03      End Date: 2011.12.04      Last Calib.: 2011.12.04  
 Start Time: 21:37:05      End Time: 02:54:50      Time On Btm:  
    Time Off Btm:

**TEST COMMENT:** IF:(30min) Blow Died in 15 min.  
 IS:(30min) No Return  
 FF:(15min) No Blow, Flushed, Surge, No Blow  
 FS: Pulled Tool



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

**Recovery**

Length (ft)	Description	Volume (bbl)
10.00	Mud	0.13

\* Recovery from multiple tests

**Gas Rates**

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

TDI Inc  
1310 Bison Rd  
Hays, KS 67601+9696  
ATTN: Herb Deines

**13-15s-19w Ellis,KS**  
**Wolf #1**  
Job Ticket: 44582      **DST#: 3**  
Test Start: 2011.12.03 @ 21:37:05

**Tool Information**

Drill Pipe:	Length: 3580.00 ft	Diameter: 3.70 inches	Volume: 47.61 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	50000.00 lb
			<u>Total Volume: 47.61 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial	40000.00 lb
Depth to Top Packer:	3572.00 ft			Final	40000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	76.00 ft				
Tool Length:	96.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Change Over Sub	1.00			3553.00	
Shut In Tool	5.00			3558.00	
Hydraulic tool	5.00			3563.00	
Packer	5.00			3568.00	20.00      Bottom Of Top Packer
Packer	4.00			3572.00	
Stubb	1.00			3573.00	
Perforations	2.00			3575.00	
Change Over Sub	1.00			3576.00	
Recorder	0.00	8017	Inside	3576.00	
Recorder	0.00	8352	Outside	3576.00	
Drill Pipe	63.00			3639.00	
Change Over Sub	1.00			3640.00	
Perforations	5.00			3645.00	
Bullnose	3.00			3648.00	76.00      Bottom Packers & Anchor

**Total Tool Length: 96.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

TDI Inc **13-15s-19w Ellis, KS**  
 1310 Bison Rd **Wolf #1**  
 Hays, KS 67601+9696 Job Ticket: 44582 **DST#: 3**  
 ATTN: Herb Deines Test Start: 2011.12.03 @ 21:37:05

## 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: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.37 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2500.00 ppm			
Filter Cake: inches			

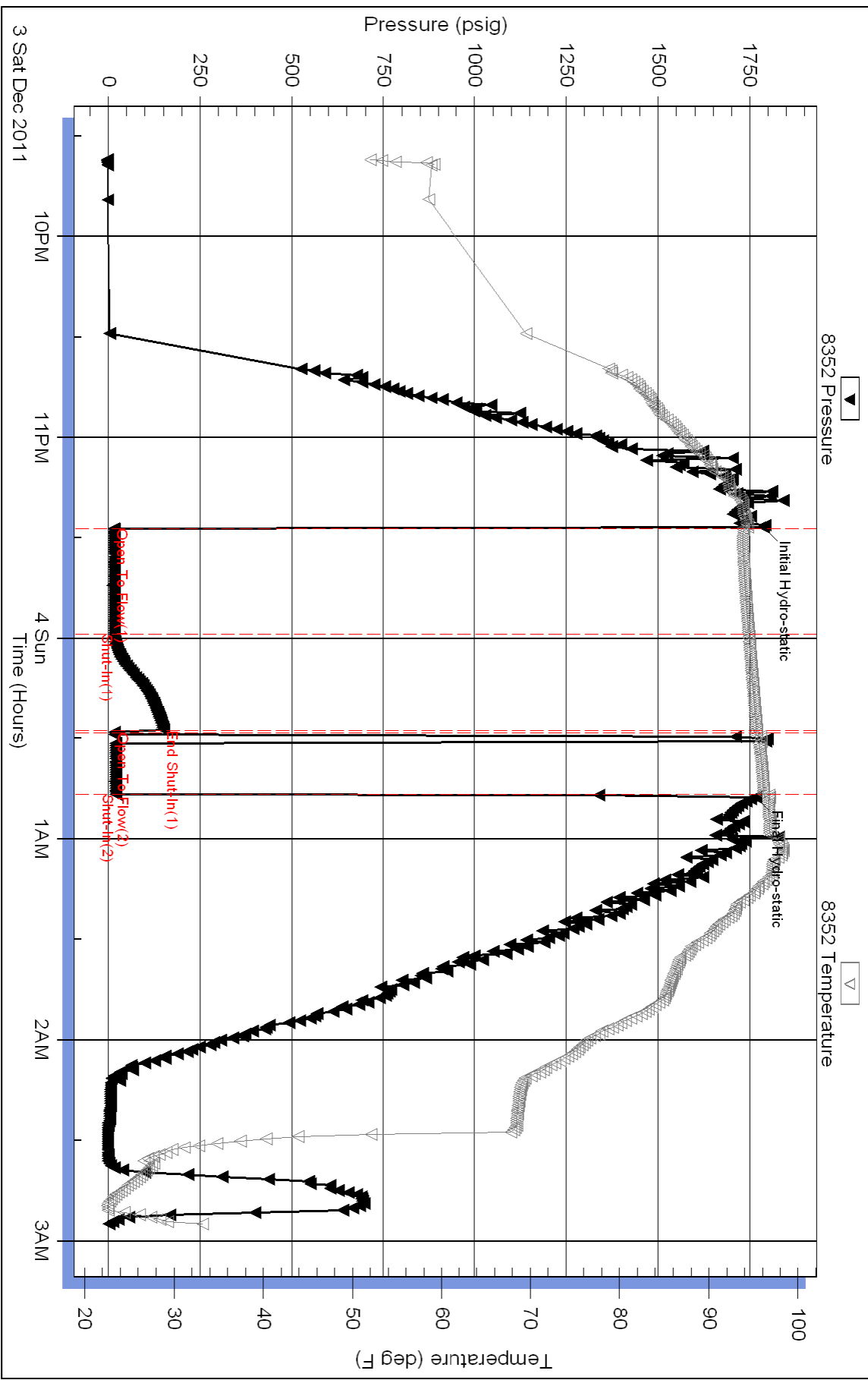
## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud	0.133

Total Length: 10.00 ft Total Volume: 0.133 bbl  
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:  
 Laboratory Name: Laboratory Location:  
 Recovery Comments:

# Pressure vs. Time



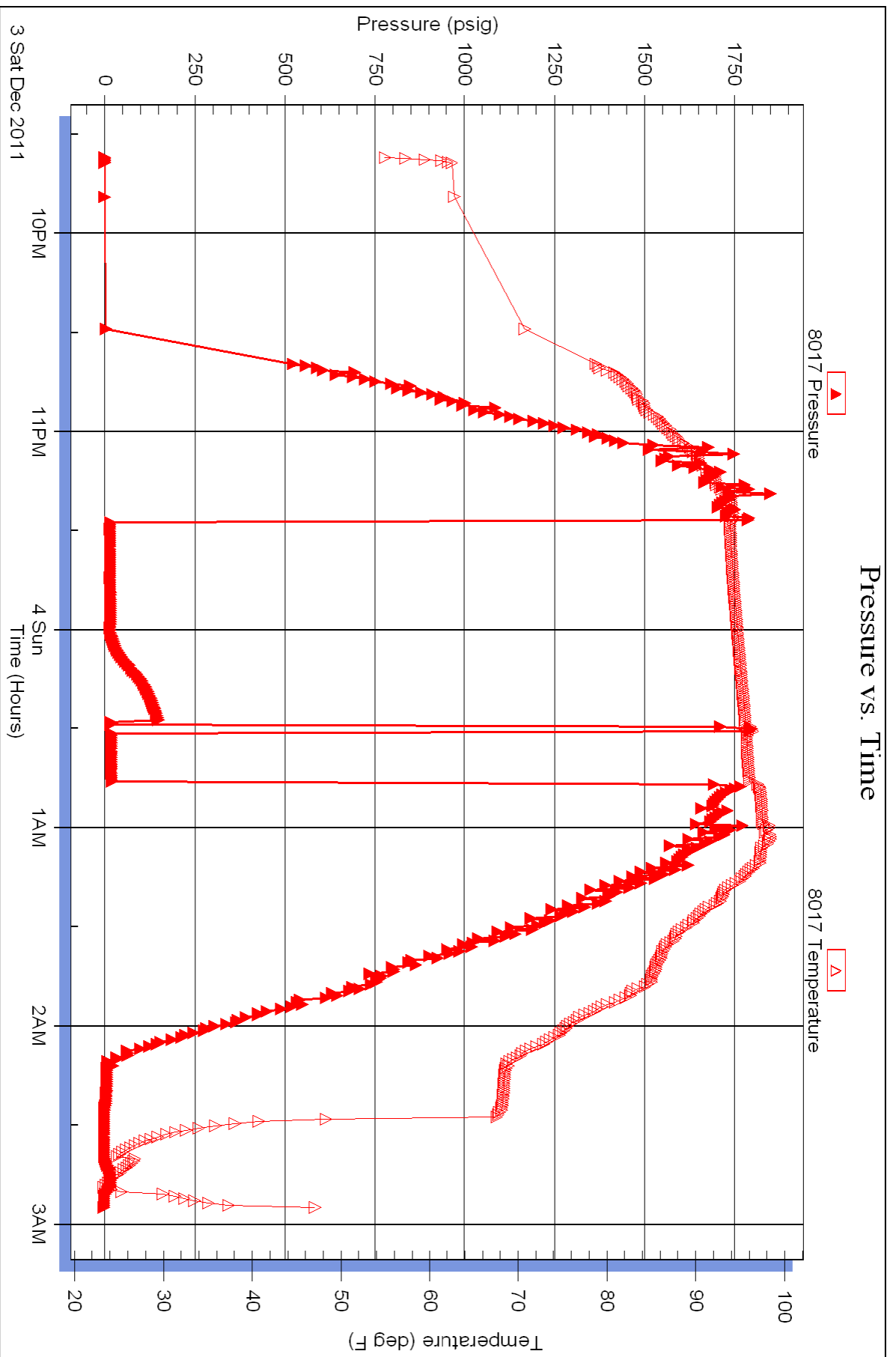
Serial #: 8017

Inside

TDI Inc

Wolf #1

DST Test Number: 3





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
DEC 05 2011  
BY:

## Test Ticket

NO. 44580

Well Name & No. WOLF #1 Test No. 1 Date 12-2-11  
 Company TDI Elevation 2038 KB 2029 GL  
 Address 1310 BISON RD Hays, Ks 67601  
 Co. Rep / Geo. Herb Deines Rig Southwind 1  
 Location: Sec. 13 Twp. 13S Rge. 19W Co. Ellis State Ks

Interval Tested 3336-3389 Zone Tested LKC "A,C,D"  
 Anchor Length 53 Drill Pipe Run 3329 Mud Wt. 9.0  
 Top Packer Depth 3331 Drill Collars Run 0 Vis 53  
 Bottom Packer Depth 3336 Wt. Pipe Run 0 WL 6.4  
 Total Depth 3389 Chlorides 2500 ppm System LCM TR

Blow Description FP: BOB, 3min  
1st: Return surface blow died in 15 min.  
FP: BOB 7min  
2nd: No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>570</u>	<u>Water, slightly gassy</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 570 BHT 107° Gravity API RW, 37 @ 29° F Chlorides 42000 ppm

(A) Initial Hydrostatic <u>1638</u>	<input checked="" type="checkbox"/> Test <u>1125"</u>	T-On Location <u>03:05</u>
(B) First Initial Flow <u>50</u>	<input type="checkbox"/> Jars	T-Started <u>04:25</u>
(C) First Final Flow <u>250</u>	<input type="checkbox"/> Safety Joint	T-Open <u>06:35</u>
(D) Initial Shut-In <u>451</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>09:05</u>
(E) Second Initial Flow <u>254</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>11:25</u>
(F) Second Final Flow <u>345</u>	<input checked="" type="checkbox"/> Mileage <u>28 RT 39.20</u>	Comments
(G) Final Shut-In <u>445</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1575</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>45</u>	<input type="checkbox"/> Day Standby	Total <u>1164.20</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1164.20</u>	

Approved By \_\_\_\_\_ Our Representative [Signature]  
 Trilobite Testing Inc. shall not be liable for damaged of any kind of 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 statements or opinion concerning the results 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.





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
DEC 05 2011

## Test Ticket

NO. 44581

4/10

BY: \_\_\_\_\_

Well Name & No. WOLF #1 Test No. 2 Date 12-3-11  
 Company TDI Elevation 2038 KB 2029 GL  
 Address 1310 BISON RD Hays, Ks. 67601  
 Co. Rep / Geo. HERB DEINES Rig Southwind 1  
 Location: Sec. 13 Twp. 15S Rge. 19W Co. Ellis State Ks

Interval Tested 3475-3575 Zone Tested LKC "I, J, K, L"  
 Anchor Length 100' Drill Pipe Run 3485 Mud Wt. 9.0  
 Top Packer Depth 3470 Drill Collars Run 0 Vis 53  
 Bottom Packer Depth 3475 Wt. Pipe Run 0 WL 6.4  
 Total Depth 3575 Chlorides 1500 ppm System LCM ~~2500~~ TR  
 Blow Description IF: Weak blow, died in 40 min.  
ISI: NO RETURN  
FF: No blow, Flushed, surge, NO blow.  
FSD: —

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Mud w/ slight oil spks in Tool</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 10' BHT 96° Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

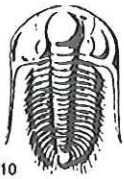
(A) Initial Hydrostatic 1724  Test 1125 T-On Location 02:45  
 (B) First Initial Flow 15  Jars \_\_\_\_\_ T-Started 04:55  
 (C) First Final Flow 16  Safety Joint \_\_\_\_\_ T-Open 07:00  
 (D) Initial Shut-In 95  Circ Sub \_\_\_\_\_ T-Pulled 08:50  
 (E) Second Initial Flow 16  Hourly Standby \_\_\_\_\_ T-Out 10:45  
 (F) Second Final Flow 17  Mileage 28 RT 39.20 Comments Pulled tool after  
 (G) Final Shut-In Pulled Tool  Sampler \_\_\_\_\_ Final Flow period.  
 (H) Final Hydrostatic 1711  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 45  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 45  Day Standby \_\_\_\_\_ Total 1164.20  
 Final Flow 20  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In \_\_\_\_\_  
 Sub Total 1164.20

Approved By \_\_\_\_\_

Our Representative [Signature]

TriLOBite Testing Inc. shall not be liable for damaged of any kind of 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 statements or opinion concerning the results 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.





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
DEC 05 2011

## Test Ticket

NO. 44582

Well Name & No. WOLF #1 Test No. 3 Date 12-3-11  
 Company TDI Elevation 2038 KB 2029 GL  
 Address 1310 BISON RD HAYS, KS 67601  
 Co. Rep / Geo. Herb Dzines Rig Southwind 1  
 Location: Sec. 13 Twp. 15S Rge. 19W Co. Ellis State Ks.

Interval Tested 3572 - 3648 Zone Tested Conglomerate  
 Anchor Length 76' Drill Pipe Run 3580 Mud Wt. 9.0  
 Top Packer Depth 3567 Drill Collars Run 0 Vis 53  
 Bottom Packer Depth 3572 Wt. Pipe Run 0 WL 6.38  
 Total Depth 3648 Chlorides 2500 ppm System LCM TR

Blow Description 1st Blow sized in 15 min.  
ISI: No Return  
FF: No Blow, Flushed, surge, No Hold  
FSI: Pulled Tool

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Mud</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 10' BHT 96° Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1787  Test 1125' T-On Location 21:16  
 (B) First Initial Flow 15  Jars \_\_\_\_\_ T-Started 21:37  
 (C) First Final Flow 17  Safety Joint \_\_\_\_\_ T-Open 23:28  
 (D) Initial Shut-In 151  Circ Sub \_\_\_\_\_ T-Pulled 00:43  
 (E) Second Initial Flow 17  Hourly Standby \_\_\_\_\_ T-Out 02:55  
 (F) Second Final Flow 21  Mileage 28 RT 39.20 Comments Pulled tool after final flow period  
 (G) Final Shut-In \_\_\_\_\_  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1766  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 30  Day Standby \_\_\_\_\_ Total 1164.20  
 Final Flow 15  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In Pulled Tool Sub Total 1164.20

Approved By \_\_\_\_\_ Our Representative Andy Co

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