Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1090411

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 # 4787
Name: TDI, Inc.
Address 1: 1310 BISON RD
Address 2:
City: HAYS State: KS Zip: 67601 + 9696
Contact Person: Tom Denning
Phone: (785) 628-2593
CONTRACTOR: License # 33350
Name: Southwind Drilling, Inc.
Wellsite Geologist: Herb Deines
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 #:

8/2/2012	8/8/2012	8/8/2012
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-051-26314-00-00
Spot Description:
NW SW SE SE Sec. 14 Twp. 15 S. R. 19 ☐ East ☑ West
595 Feet from ☐ North / ☑ South Line of Section
1040 Feet from ☑ East / ☐ West Line of Section

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

GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Ellis
Lease Name: Linus Well #: 1
Field Name: Unnamed
Producing Formation: Dry hole
Elevation: Ground: 1987 Kelly Bushing: 1997
Total Vertical Depth: 3700 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 1196 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: 30000 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

☑ **Confidentiality Requested**
Date: 09/06/2012
☑ **Confidential Release Date:** 09/06/2014
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 09/06/2012

[redacted] 1090411

Operator Name: TDI, Inc. Lease Name: Linus Well #: 1

Sec. 14 Twp. 15 S. R. 19 ☐ East ☑ West County: Ellis

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 ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

Dual Induction Log
Dual Compensated Porosity Log

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Anhydrite	1190'	+812'
Topeka	2974'	-977'
Heebner	3257'	-1260'
Lansing/Kansas City	3303'	-1306'
Base Kansas City	3547'	-1550'
Arbuckle	3626'	-1629'

CASING RECORD ☑ New ☐ 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	12.25	8.625	23	1196	SMD	375	1/4# flo-seal

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	-			
	-			

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 *(Amount and Kind of Material Used)*	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)* _____

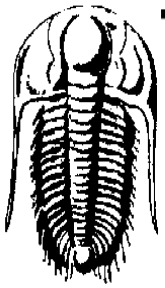
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:
☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)* _____

PRODUCTION INTERVAL:
_____
_____

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Road
Hays, KS 67601

ATTN: Herb Deines

Linus #1

14-15s-19w Ellis,KS

Start Date: 2012.08.07 @ 05:09:43

End Date: 2012.08.07 @ 11:17:13

Job Ticket #: 47843 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.08.13 @ 10:49:55

DRILL STEM TEST REPORT

TDI Inc.

1310 Bison Road
Hays, KS 67601

ATTN: Herb Deines

14-15s-19w Ellis,KS

Linus #1

Job Ticket: 47843 **DST#: 1**

Test Start: 2012.08.07 @ 05:09:43

GENERAL INFORMATION:

Formation: **I-J**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 07:58:13
Time Test Ended: 11:17:13

Test Type: Conventional Bottom Hole (Initial)
Tester: Jason McLemore
Unit No: 54

Interval: 3446.00 ft (KB) To 3500.00 ft (KB) (TVD)
Total Depth: 3500.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

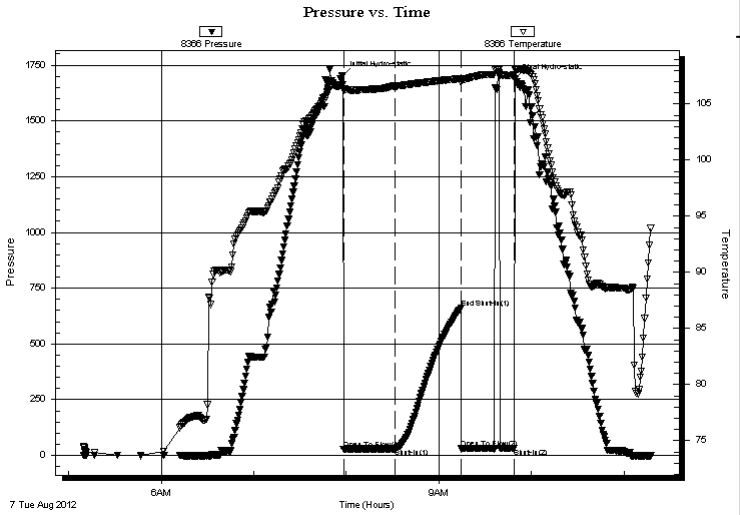
Reference Elevations: 1991.00 ft (KB)
1981.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8366 **Inside**

Press@RunDepth: 30.29 psig @ 3482.00 ft (KB)
Start Date: 2012.08.07 End Date: 2012.08.07
Start Time: 05:09:45 End Time: 11:17:13

Capacity: 8000.00 psig
Last Calib.: 2012.08.07
Time On Btm: 2012.08.07 @ 07:57:43
Time Off Btm: 2012.08.07 @ 09:49:28

TEST COMMENT: IFP-Surge on open, Then dead
ISI-Dead
FFP-Dead, Flush tool, Surge, Then dead
FSI-Dead



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1702.19	106.75	Initial Hydro-static
1	28.15	106.24	Open To Flow (1)
34	30.29	106.59	Shut-In(1)
77	660.47	107.27	End Shut-In(1)
77	30.34	106.90	Open To Flow (2)
111	32.09	107.57	Shut-In(2)
112	1687.64	108.07	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Drilling Mud	0.07

Gas Rates

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

DRILL STEM TEST REPORT

TDI Inc.

1310 Bison Road
Hays, KS 67601

ATTN: Herb Deines

14-15s-19w Ellis,KS

Linus #1

Job Ticket: 47843 **DST#: 1**

Test Start: 2012.08.07 @ 05:09:43

GENERAL INFORMATION:

Formation: **I-J**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 07:58:13
Time Test Ended: 11:17:13

Test Type: Conventional Bottom Hole (Initial)
Tester: Jason McLemore
Unit No: 54

Interval: 3446.00 ft (KB) To 3500.00 ft (KB) (TVD)
Total Depth: 3500.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

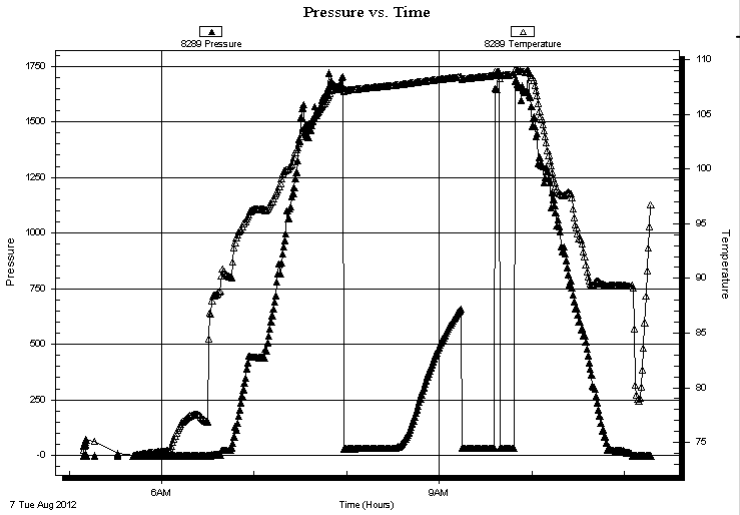
Reference Elevations: 1991.00 ft (KB)
1981.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8289 **Outside**

Press@RunDepth: psig @ 3482.00 ft (KB)
Start Date: 2012.08.07 End Date: 2012.08.07
Start Time: 05:09:30 End Time: 11:17:13

Capacity: 8000.00 psig
Last Calib.: 2012.08.07
Time On Btm:
Time Off Btm:

TEST COMMENT: IFP-Surge on open, Then dead
ISI-Dead
FFP-Dead, Flush tool, Surge, Then dead
FSI-Dead



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Drilling Mud	0.07

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI Inc.

1310 Bison Road
Hays, KS 67601

ATTN: Herb Deines

14-15s-19w Ellis,KS

Linus #1

Job Ticket: 47843 **DST#: 1**

Test Start: 2012.08.07 @ 05:09:43

Tool Information

Drill Pipe:	Length:	3454.00 ft	Diameter:	3.80 inches	Volume:	48.45 bbl	Tool Weight:		2000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.70 inches	Volume:	0.00 bbl	Weight set on Packer:		25000.00 lb
Drill Collar:	Length:	0.00 ft	Diameter:	2.25 inches	Volume:	0.00 bbl	Weight to Pull Loose:		34000.00 lb
					Total Volume:	48.45 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		29.00 ft					String Weight:	Initial	30000.00 lb
Depth to Top Packer:		3446.00 ft						Final	30000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		54.00 ft							
Tool Length:		75.00 ft							
Number of Packers:		2	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3426.00		
Shut In Tool	5.00			3431.00		
Hydraulic tool	5.00			3436.00		
Packer	5.00			3441.00	21.00	Bottom Of Top Packer
Packer	5.00			3446.00		
Stubb	1.00			3447.00		
Perforations	2.00			3449.00		
Change Over Sub	1.00			3450.00		
Blank Spacing	31.00			3481.00		
Change Over Sub	1.00			3482.00		
Recorder	0.00	8366	Inside	3482.00		
Recorder	0.00	8289	Outside	3482.00		
Perforations	15.00			3497.00		
Bullnose	3.00			3500.00	54.00	Bottom Packers & Anchor
Total Tool Length:	**75.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc.

1310 Bison Road
Hays, KS 67601

ATTN: Herb Deines

14-15s-19w Ellis,KS

Linus #1

Job Ticket: 47843 **DST#: 1**

Test Start: 2012.08.07 @ 05:09:43

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:	49.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.79 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1300.00 ppm				
Filter Cake:	inches				

Recovery Information

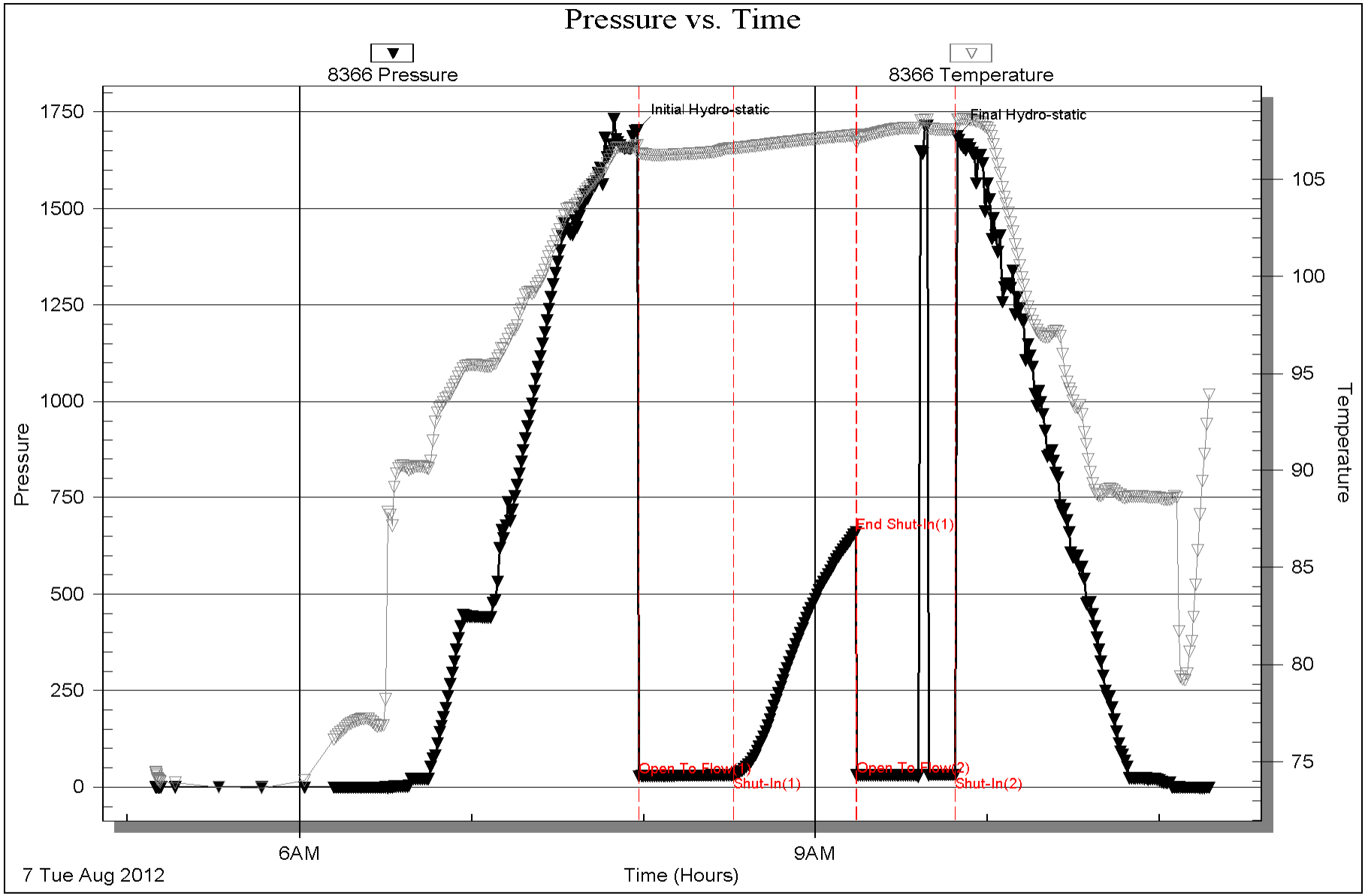
Recovery Table

Length ft	Description	Volume bbl
5.00	Drilling Mud	0.070

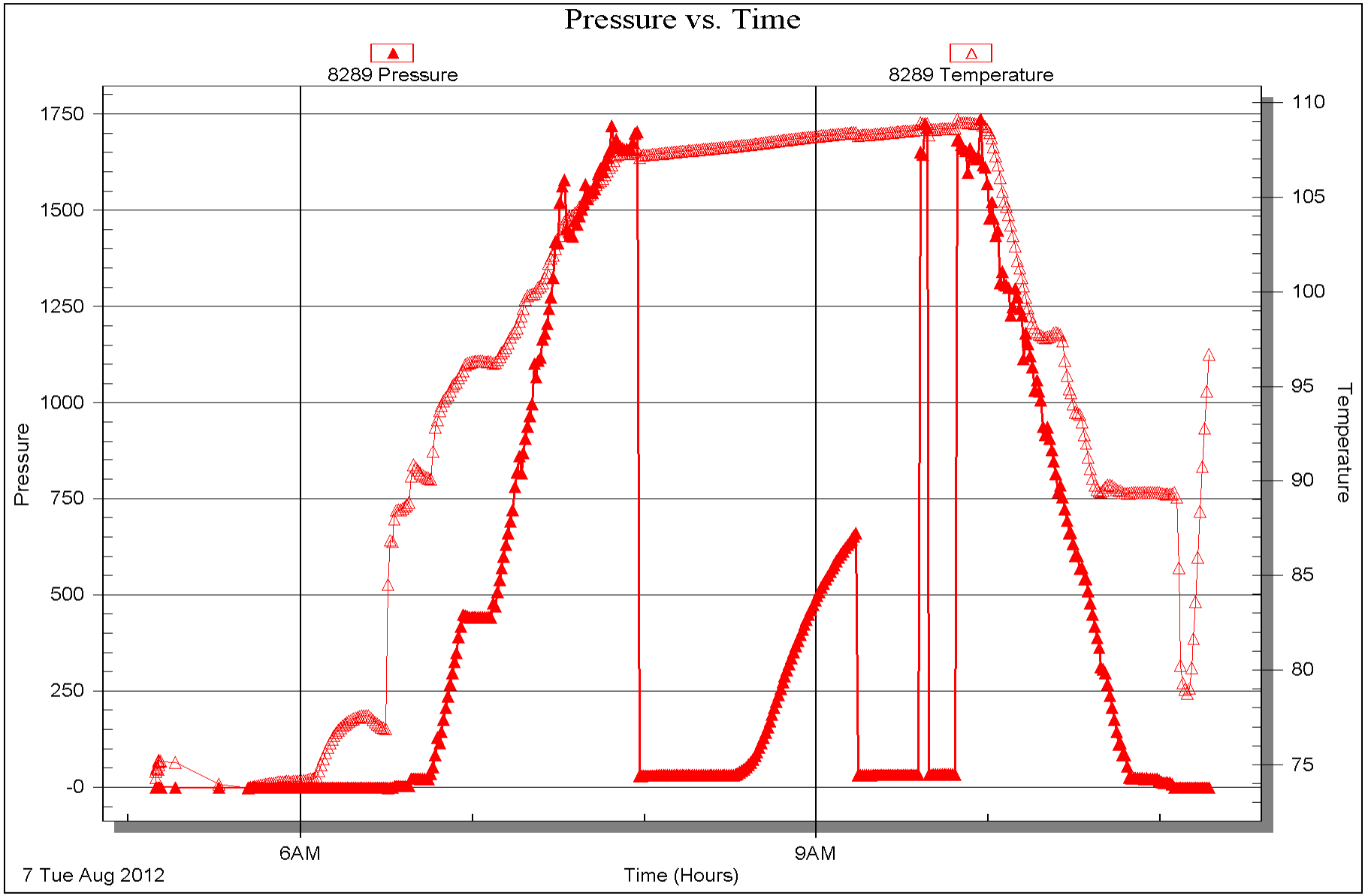
Total Length: 5.00 ft Total Volume: 0.070 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8366 **Inside** TDI Inc. Linus #1 DST Test Number: 1



Serial #: 8289 **Outside** TDI Inc. Linus #1 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 47843 Printed: 2012.08.13 @ 10:49:59

DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Road
Hays, KS 67601

ATTN: Herb Deines

Linus #1

14-15s-19w Ellis,KS

Start Date: 2012.08.07 @ 23:38:00
End Date: 2012.08.08 @ 05:20:00
Job Ticket #: 49455 DST #: 2

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

Printed: 2012.08.13 @ 10:44:27

DRILL STEM TEST REPORT

TDI Inc.

1310 Bison Road
Hays, KS 67601

ATTN: Herb Deines

14-15s-19w Ellis,KS

Linus #1

Job Ticket: 49455 **DST#: 2**

Test Start: 2012.08.07 @ 23:38:00

GENERAL INFORMATION:

Formation:
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 01:51:15
Time Test Ended: 05:20:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Cody Bloedorn
Unit No: 54

Interval: 3540.00 ft (KB) To 3620.00 ft (KB) (TVD)
Total Depth: 3620.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

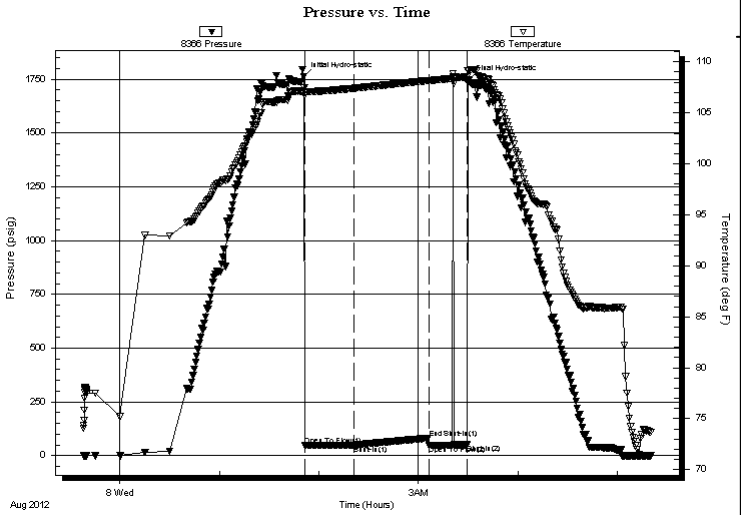
Reference Elevations: 1991.00 ft (KB)
1981.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8366 **Inside**

Press@RunDepth: 48.53 psig @ 3607.00 ft (KB)
Start Date: 2012.08.07 End Date: 2012.08.08
Start Time: 23:38:02 End Time: 05:20:00

Capacity: 8000.00 psig
Last Calib.: 2012.08.08
Time On Btm: 2012.08.08 @ 01:51:00
Time Off Btm: 2012.08.08 @ 03:30:15

TEST COMMENT: 30 - IF- 1/4" blow , died in 5 min.
45 - ISI- No blow back
FF- No blow , w aited 15 min. Flushed tool, Surged & died. Waited 10 min and pulled.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1763.20	107.49	Initial Hydro-static
1	46.88	106.71	Open To Flow (1)
30	48.53	107.40	Shut-In(1)
75	80.98	108.15	End Shut-In(1)
76	48.97	108.14	Open To Flow (2)
99	50.89	108.51	Shut-In(2)
100	1746.98	109.17	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud	0.14

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TDI Inc.

1310 Bison Road
Hays, KS 67601

ATTN: Herb Deines

14-15s-19w Ellis,KS

Linus #1

Job Ticket: 49455 **DST#: 2**

Test Start: 2012.08.07 @ 23:38:00

GENERAL INFORMATION:

Formation:
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 01:51:15
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Total Depth: 3620.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

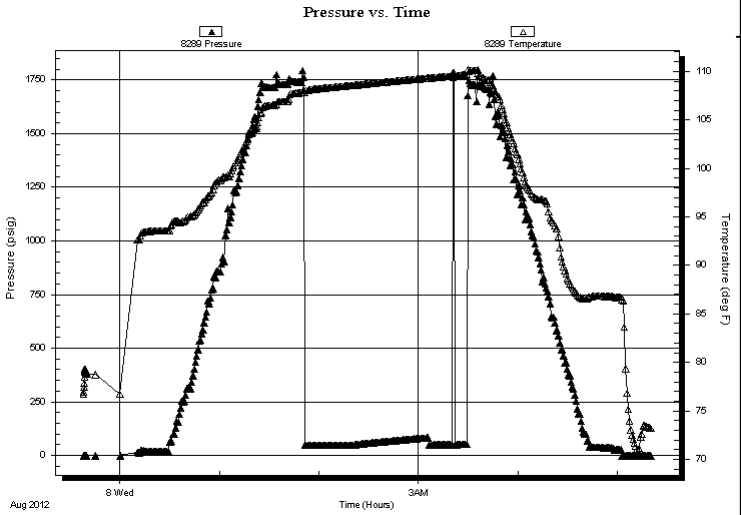
Reference Elevations: 1991.00 ft (KB)
1981.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8289 **Outside**

Press@RunDepth: psig @ 3607.00 ft (KB)
Start Date: 2012.08.07 End Date: 2012.08.08
Start Time: 23:38:02 End Time: 05:20:00

Capacity: 8000.00 psig
Last Calib.: 2012.08.08
Time On Btm:
Time Off Btm:

TEST COMMENT: 30 - IF- 1/4" blow , died in 5 min.
45 - ISI- No blow back
FF- No blow , w aited 15 min. Flushed tool, Surged & died. Waited 10 min and pulled.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud	0.14

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI Inc.

1310 Bison Road
Hays, KS 67601

ATTN: Herb Deines

14-15s-19w Ellis,KS

Linus #1

Job Ticket: 49455 **DST#: 2**

Test Start: 2012.08.07 @ 23:38:00

Tool Information

Drill Pipe:	Length:	3548.00 ft	Diameter:	3.80 inches	Volume:	49.77 bbl	Tool Weight:		2000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.70 inches	Volume:	0.00 bbl	Weight set on Packer:		25000.00 lb
Drill Collar:	Length:	0.00 ft	Diameter:	2.25 inches	Volume:	0.00 bbl	Weight to Pull Loose:		38000.00 lb
					Total Volume:	49.77 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		29.00 ft					String Weight:	Initial	32000.00 lb
Depth to Top Packer:		3540.00 ft						Final	32000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		80.00 ft							
Tool Length:		101.00 ft							
Number of Packers:		2	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3520.00		
Shut In Tool	5.00			3525.00		
Hydraulic tool	5.00			3530.00		
Packer	5.00			3535.00	21.00	Bottom Of Top Packer
Packer	5.00			3540.00		
Stubb	1.00			3541.00		
Perforations	2.00			3543.00		
Change Over Sub	1.00			3544.00		
Blank Spacing	62.00			3606.00		
Change Over Sub	1.00			3607.00		
Recorder	0.00	8366	Inside	3607.00		
Recorder	0.00	8289	Outside	3607.00		
Perforations	10.00			3617.00		
Bullnose	3.00			3620.00	80.00	Bottom Packers & Anchor
Total Tool Length:	**101.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc.

1310 Bison Road
Hays, KS 67601

ATTN: Herb Deines

14-15s-19w Ellis,KS

Linus #1

Job Ticket: 49455 **DST#: 2**

Test Start: 2012.08.07 @ 23:38:00

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:	49.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.78 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1300.00 ppm				
Filter Cake:	inches				

Recovery Information

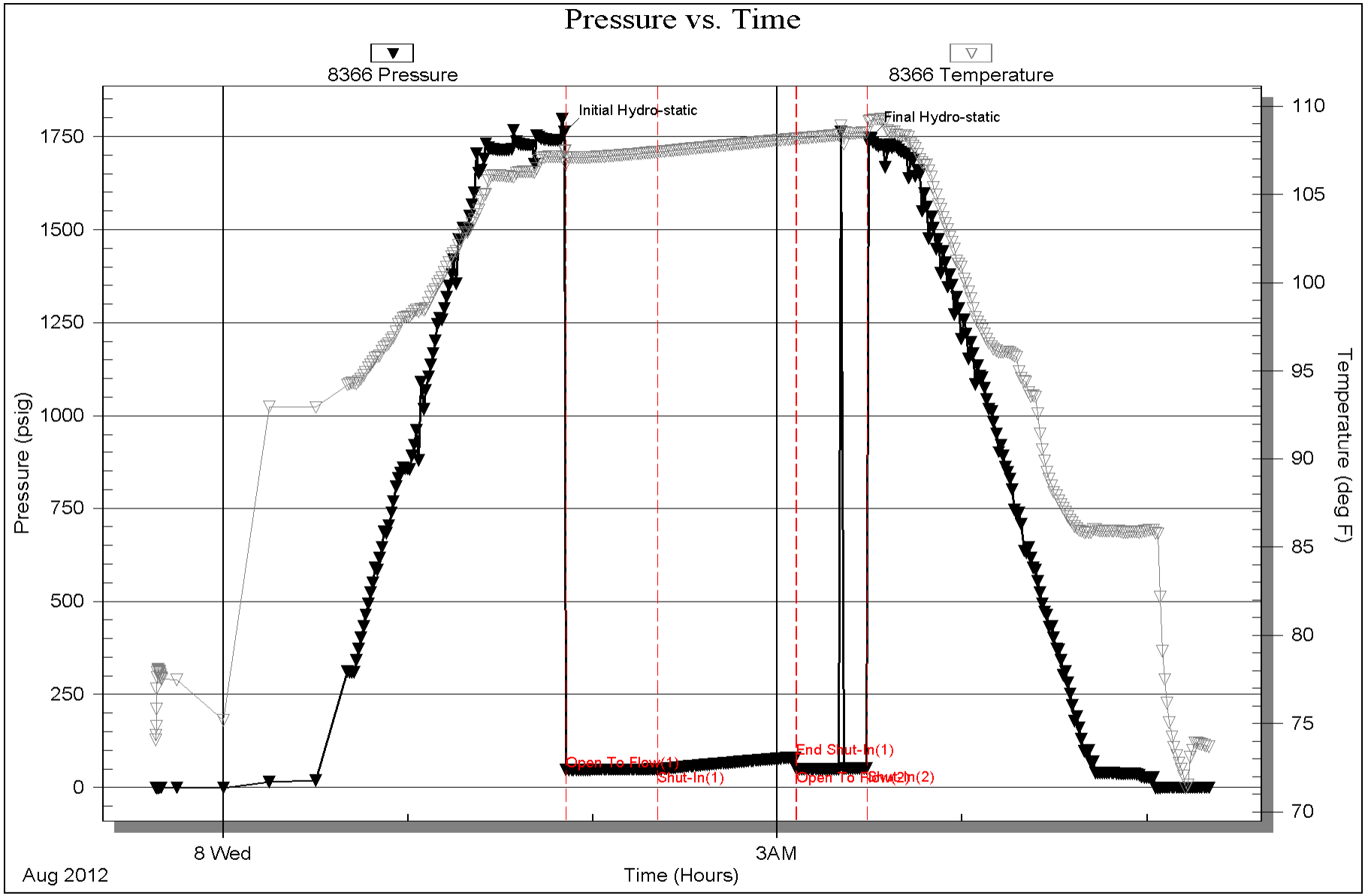
Recovery Table

Length ft	Description	Volume bbl
10.00	Mud	0.140

Total Length: 10.00 ft Total Volume: 0.140 bbl

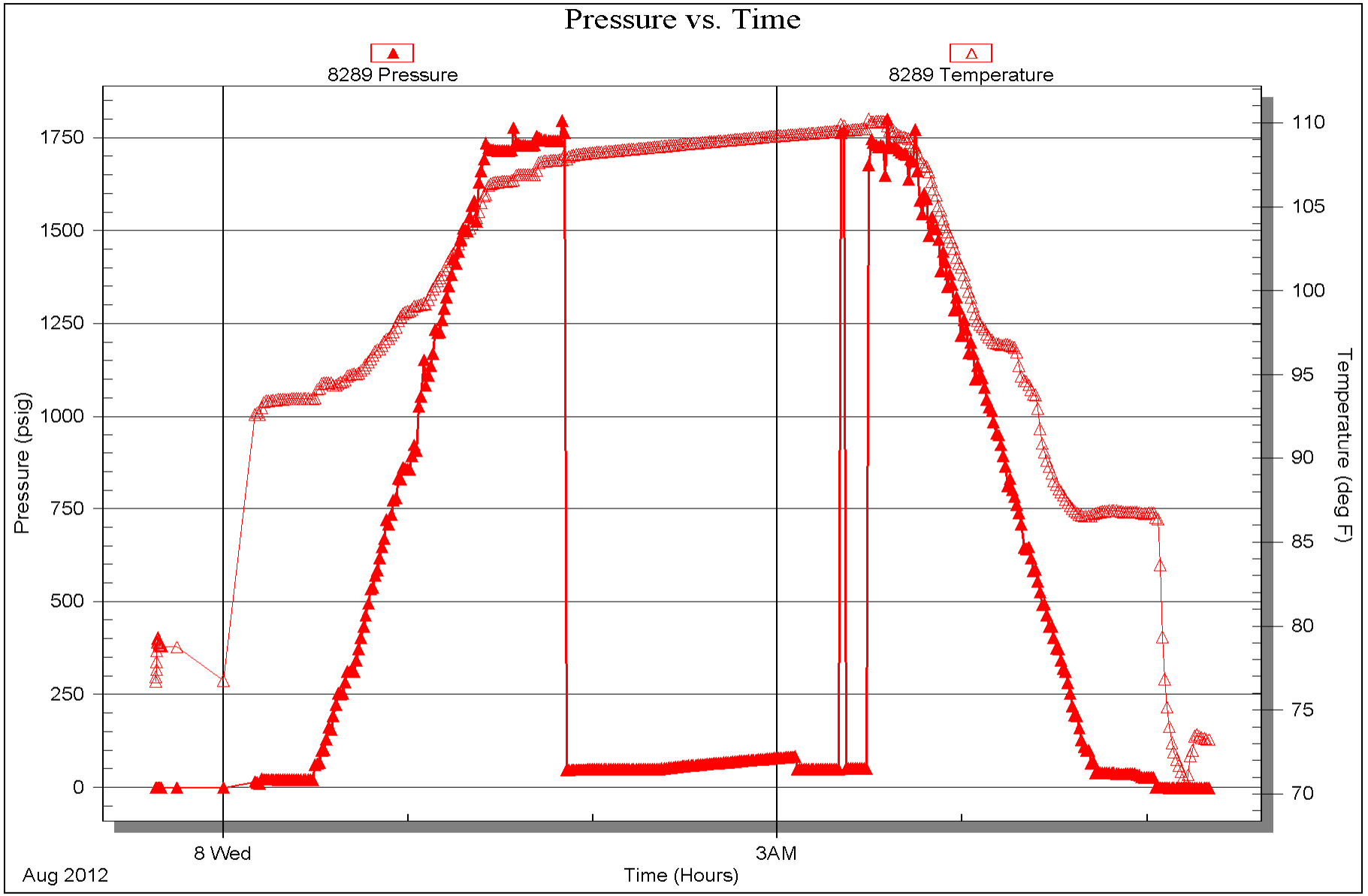
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8366 **Inside** TDI Inc. Linus #1 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 49455 Printed: 2012.08.13 @ 10:44:30

Serial #: 8289 **Outside** TDI Inc. Linus #1 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 49455 Printed: 2012.08.13 @ 10:44:31

TRILOBITE TESTING INC.
P.O. Box 1733 • Hays, Kansas 67601

4/10

Test Ticket

NO. 47843

Well Name & No. Linus #1 Test No. 1 Date 8-7-12

Company TDI, Inc. Elevation 1995 KB 1981 GL

Address 1310 Bison Road, Hays, KS. 67601

Co. Rep / Geo. Herb Deines Rig Southwind #1

Location: Sec. 14 Twp. 15s Rge. 19w Co. Ellis State KS

Interval Tested 3446-3500 Zone Tested I-J

Anchor Length 54' Drill Pipe Run 3454 Mud Wt. 8.9

Top Packer Depth 3441 Drill Collars Run 0 Vis 49

Bottom Packer Depth 3446 Wt. Pipe Run 0 WL 6.8

Total Depth 3500 Chlorides 1300 ppm System LCM 1#

Blow Description IFP- Dead

ISI- Dead

FFP- Dead, Flush after 15 min, Surge, Then Dead

FSI- Dead

Rec 5	Feet of Drilling Mud	%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	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 108° Gravity ____ API RW ____ @ ____ °F Chlorides ____ ppm

(A) Initial Hydrostatic 1702	☑ Test 1150	T-On Location 3:58	
(B) First Initial Flow 28	☐ Jars	T-Started 5:07	
(C) First Final Flow 30	☐ Safety Joint	T-Open 7:57	
(D) Initial Shut-In 660	☐ Circ Sub	T-Pulled 9:37	
(E) Second Initial Flow 30	☐ Hourly Standby	T-Out 11:15	
(F) Second Final Flow 32	☑ Mileage 3(rt 48.05	Comments	
(G) Final Shut-In /	☐ Sampler		
(H) Final Hydrostatic 1688	☐ Straddle	☐ Ruined Shale Packer	
	☐ Shale Packer	☐ Ruined Packer	
Initial Open 30	☐ Extra Packer	☐ Extra Copies	
Initial Shut-In 45	☐ Extra Recorder	Sub Total 0	
Final Flow 15	☐ Day Standby	Total 1198.05	
Final Shut-In 10	☐ Accessibility	MP/DST Disc't	
	Sub Total 1198.05		

Approved By ____ Our Representative Jason McLarson Thank You

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

4/10

Test Ticket

NO. 49455

Well Name & No. Linus #1 Test No. 2 Date 8-7-12

Company TDI, Inc. Elevation 1991 KB 1981 GL

Address 1310 Bison RD, Hays KS, 67601

Co. Rep / Geo. Herb Deines Rig SW #1

Location: Sec. 14 Twp. 15S Rge. 19W Co. Ellis State KS

Interval Tested 3540-3620 Zone Tested

Anchor Length 80' Drill Pipe Run 3548 Mud Wt. 8.9

Top Packer Depth 3535 Drill Collars Run — Vis 49

Bottom Packer Depth 3540 Wt. Pipe Run — WL 6.8

Total Depth 3620 Chlorides 1300 ppm System LCM 1#

Blow Description IF- 1/4" blow, died in 5 Min.

ISI- No blow

FF- No blow waited 15, flushed, surged & died. waited

FSI- 10 Min. & Pulled.

Rec 10	Feet of Mud	%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	Feet of	%gas	%oil	%water	%mud

Rec Total 10' BHT 108° Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1763	☒ Test 1150	T-On Location 11:20pm
(B) First Initial Flow 46	☐ Jars	T-Started 11:38pm
(C) First Final Flow 48	☐ Safety Joint	T-Open 1:51am
(D) Initial Shut-In 80	☐ Circ Sub	T-Pulled 3:31am
(E) Second Initial Flow 48	☐ Hourly Standby	T-Out 5:20am
(F) Second Final Flow	☒ Mileage 31 RT 48.05	Comments
(G) Final Shut-In 50	☐ Sampler	
(H) Final Hydrostatic 1746	☐ Straddle	☐ Ruined Shale Packer
	☐ Shale Packer	☐ Ruined Packer
Initial Open 30	☐ Extra Packer	☐ Extra Copies
Initial Shut-In 45	☐ Extra Recorder	Sub Total 0
Final Flow 15, Flush, 10 Min.	☐ Day Standby	Total 1198.05
Final Shut-In Pull	☐ Accessibility	MP/DST Disc't
	Sub Total 1198.05	

Approved By Our Representative Cody Blake

OPERATOR

Company:	TDI, INC.		
Address:	1310 BISON ROAD HAYS, KANSAS 67601		
Contact Geologist:	TOM DENNING		
Contact Phone Nbr:	785-259-3141		
Well Name:	LINUS # 1		
Location:	NW SW SE SE Sec.14-15s-19w	API:	15-051-26,314-00-00
Pool:	WILDCAT	Field:	UNNAMED
State:	KANSAS	Country:	USA

TDI, Inc. ©
1310 BISON ROAD
HAYS, KANSAS 67601
(785) 628-2593

Scale 1:240 Imperial

Well Name:	LINUS # 1		
Surface Location:	NW SW SE SE Sec.14-15s-19w		
Bottom Location:			
API:	15-051-26,314-00-00		
License Number:	4787		
Spud Date:	8/2/2012	Time:	8:30 AM
Region:	ELLIS COUNTY		
Drilling Completed:	8/8/2012	Time:	10:22 AM
Surface Coordinates:	595' FSL & 1040' FEL		
Bottom Hole Coordinates:			
Ground Elevation:	1987.00ft		
K.B. Elevation:	1997.00ft		
Logged Interval:	2800.00ft	To:	3700.00ft
Total Depth:	3700.00ft		
Formation:	CONGLOMERATE SAND		
Drilling Fluid Type:	FRESH WATER GEL/CHEMICAL		

SURFACE CO-ORDINATES

Well Type:	Vertical		
Longitude:		Latitude:	
N/S Co-ord:	595' FSL		
E/W Co-ord:	1040' FEL		

LOGGED BY

SOLUTIONS CONSULTING

Company:	SOLUTIONS CONSULTING		
Address:	108 W 35TH HAYS, KS 67601		
Phone Nbr:	(785) 639-1337		
Logged By:	GEOLOGIST	Name:	HERB DEINES

CONTRACTOR

Contractor:	SOUTHWIND DRILLING, INC.		
Rig #:	1		
Rig Type:	MUD ROTARY		
Spud Date:	8/2/2012	Time:	8:30 AM
TD Date:	8/8/2012	Time:	10:22 AM
Rig Release:	8/8/2012	Time:	11:45 PM

ELEVATIONS

K.B. Elevation:	1997.00ft	Ground Elevation:	1987.00ft
K.B. to Ground:	10.00ft		

NOTES

RECOMMENDATION TO PLUG AND ABANDON WELL BASED ON NEGATIVE RESULTS OF TWO DSTS AND LOW STRUCTURAL POSITION.

FORMATION TOPS SUMMARY AND DAILY ACTIVITY AND CHRONOLOGY

LINUS # 1
595’ FSL & 1040’ FEL, SE/4
Sec.14-15s-19w
1987’ GL 1997’ KB

FORMATION	SAMPLE TOPS	LOG TOPS
Anhydrite	1187+ 810	**1190+ 812**
B-Anhydrite	1223+ 774	**1224+ 773**
Topeka	2974- 977	**2974- 977**
Heebner Shale	3257-1260	**3257-1260**
Toronto	3278-1281	**3279-1282**
LKC	3301-1304	**3303-1306**
BKC	3546-1549	**3547-1550**
Arbuckle	3626-1629	**3626-1629**
RTD	3700-1703	
LTD		**3696-1699**

8-02-12 RU, Spud

8-03-12 1193', set surface casing to 1196' w/375 sxs. SMD, Slope survey 0 degree, WOC 12 hrs. Plug down 4:15PM, Swift Cementing

8-04-12 1235', drilling

8-05-12 2370', drilling

8-06-12 3125', drilling,

8-07-12 3500', drilling, DST # 1, DST # 2

8-08-12 3620', drilling, RTD 3700', Logs, Plug and Abandon well.

DST # 1 TEST SUMMARY

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI, Inc.

1310 Bison Road
Hays, KS. 67601

ATTN: Herb Deines

14-15s-19w-Ellis

Linus #1

Job Ticket: 47843 **DST#: 1**

Test Start: 2012.08.07 @ 05:09:43

GENERAL INFORMATION:

Formation: **I-J**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 07:58:13
Time Test Ended: 11:17:13

Test Type: Conventional Bottom Hole (Initial)
Tester: Jason McLemore
Unit No: 54

Interval: 3446.00 ft (KB) To 3500.00 ft (KB) (TVD)
Total Depth: 3500.00 ft (KB) (TVD)
Hole Diameter: 7.80 inches Hole Condition: Good

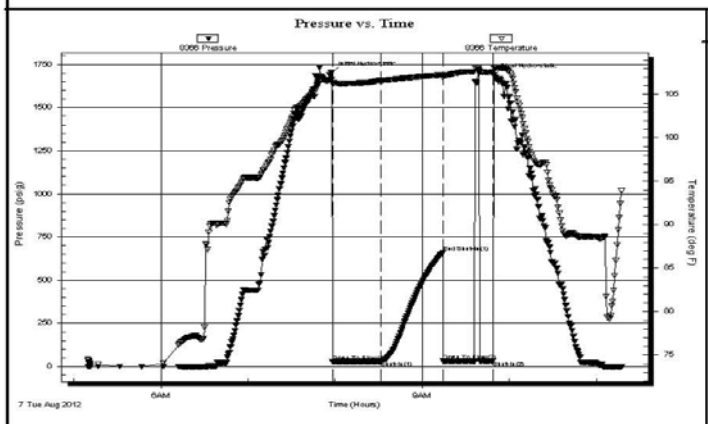
Reference Elevations: 1991.00 ft (KB)
1981.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8366 **Inside**

Press@RunDepth: 30.29 psig @ 3482.00 ft (KB)
Start Date: 2012.08.07 End Date: 2012.08.07
Start Time: 05:09:45 End Time: 11:17:13

Capacity: 8000.00 psig
Last Calib.: 2012.08.07
Time On Btm: 2012.08.07 @ 07:57:43
Time Off Btm: 2012.08.07 @ 09:49:28

TEST COMMENT: IFP-Surge On Open, Then Dead
ISI-Dead
FFP-Dead,Flush Tool, Surge, Then Dead
FSI-Dead



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1702.19	106.75	Initial Hydro-static
1	28.15	106.24	Open To Flow (1)
34	30.29	106.59	Shut-In(1)
77	660.47	107.27	End Shut-In(1)
77	30.34	106.90	Open To Flow (2)
111	32.09	107.57	Shut-In(2)
112	1687.64	108.07	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Drilling Mud	0.07

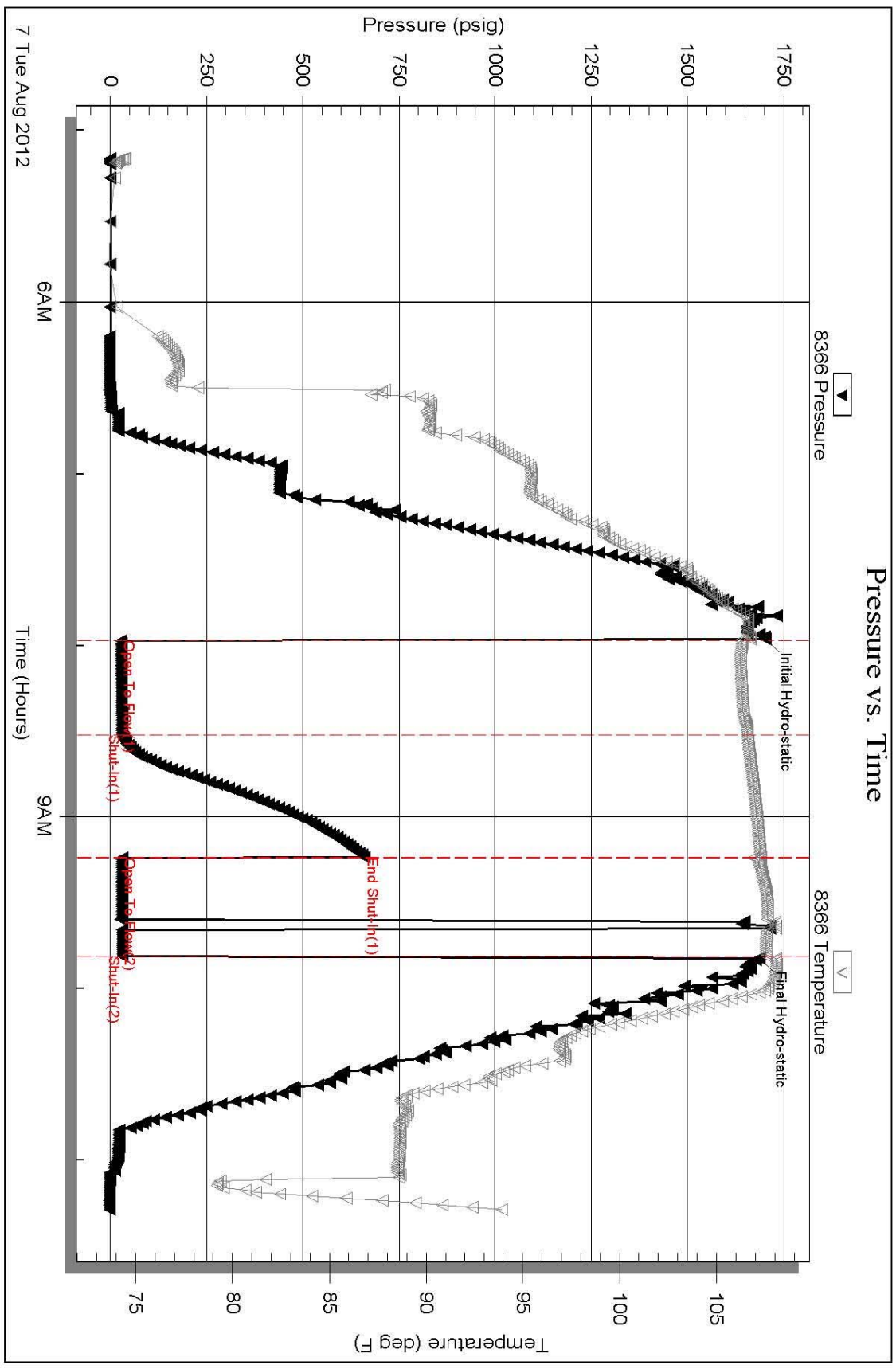
Gas Rates

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

Trilobite Testing, Inc Ref. No: 47843 Printed: 2012.08.07 @ 12:09:20

DST # 1 EXPANDED CHART

Serial #: 8366 **Inside** TDI, Inc. Linus #1



DST Test Number: 1

Trilobite Testing, Inc Ref. No: 47843 Printed: 2012.08.07 @ 12:09:22

DST # 2 TEST SUMMARY

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI, Inc.
1310 Bison Road
Hays, KS. 67601

ATTN: Herb Deines

14-15s-19w-Ellis

Linus #1

Job Ticket: 49455 **DST#: 2**

Test Start: 2012.08.07 @ 23:38:00

GENERAL INFORMATION:

Formation:
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 01:51:15
Time Test Ended: 05:20:00

Test Type: Conventional Bottom Hole (Reset)
Tester: Cody Bloedorn
Unit No: 54

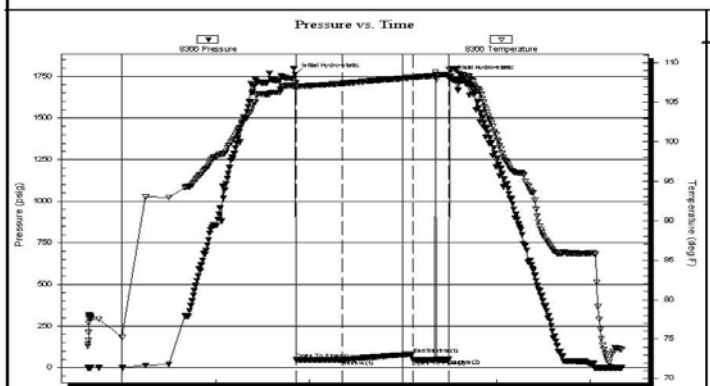
Interval: 3540.00 ft (KB) To 3620.00 ft (KB) (TVD)
Total Depth: 3620.00 ft (KB) (TVD)
Hole Diameter: 7.80 inches Hole Condition: Fair

Reference Elevations: 1991.00 ft (KB)
1981.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8366 **Inside**
Press@RunDepth: 48.53 psig @ 3607.00 ft (KB)
Start Date: 2012.08.07 End Date: 2012.08.08
Start Time: 23:38:02 End Time: 05:20:00

Capacity: 8000.00 psig
Last Calib.: 2012.08.08
Time On Btm: 2012.08.08 @ 01:51:00
Time Off Btm: 2012.08.08 @ 03:30:15

TEST COMMENT: 30 - IF- 1/4" blow , died in 5 Min.
45 - ISI- No blow back
FF- No blow , w aited 15 Min. Flushed tool, Surged & died. Waited 10 Min and pulled.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1763.20	107.49	Initial Hydro-static
1	46.88	106.71	Open To Flow (1)
30	48.53	107.40	Shut-In(1)
75	80.98	108.15	End Shut-In(1)
76	48.97	108.14	Open To Flow (2)
99	50.89	108.51	Shut-In(2)
100	1746.98	109.17	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud	0.14

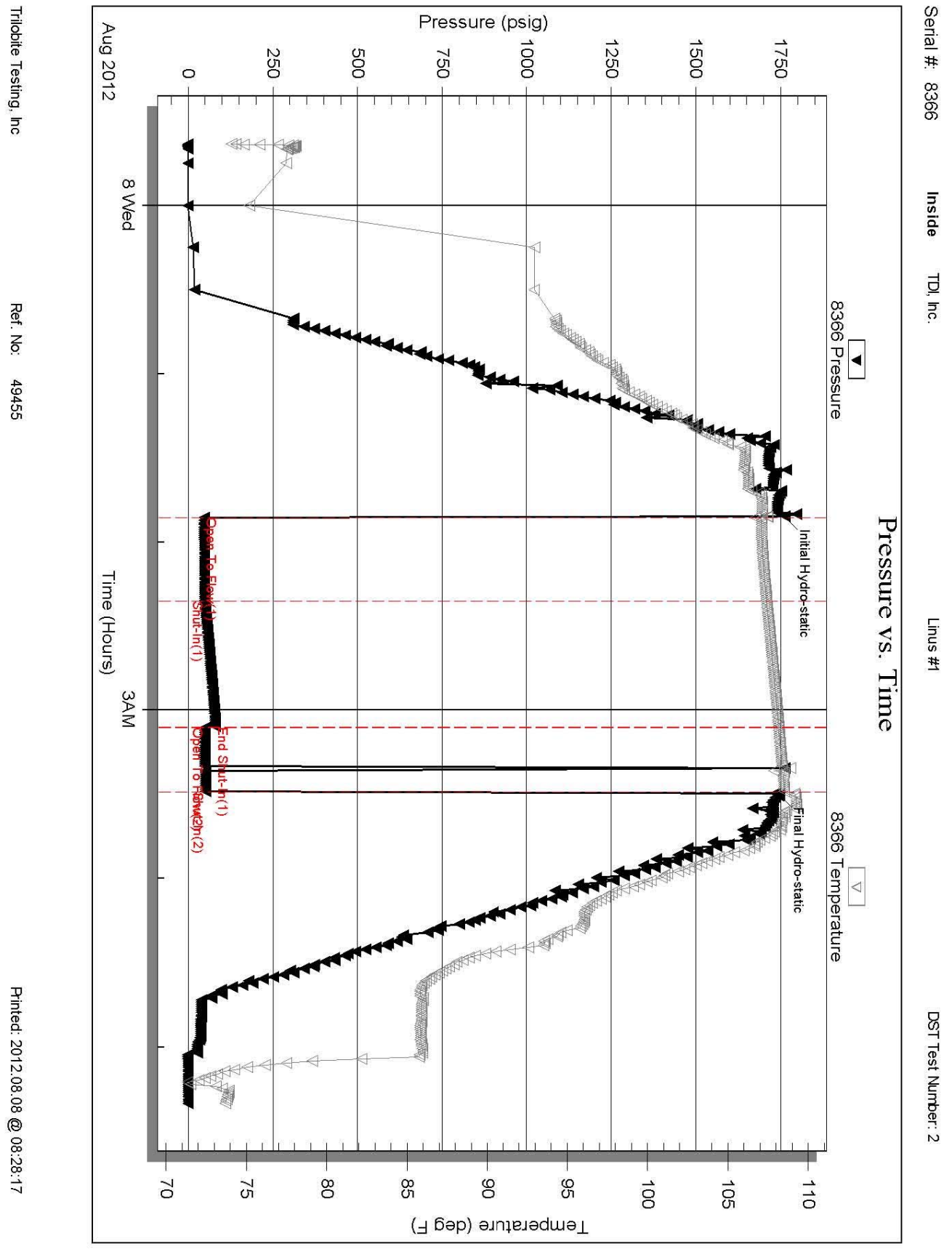
* Recovery from multiple tests

Gas Rates

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

Trilobite Testing, Inc Ref. No: 49455 Printed: 2012.08.08 @ 08:28:15

DST # 2 EXPANDED CHART



ROCK TYPES

Dolprim, Dol Lime, Lmst fw<7, Lmst fw7>, Lscongl, shale, grn, shale, gry, Carbon Sh, shale, red, Ss

ACCESSORIES

MINERAL
- Pyrite
- Sandy
- Chert White

FOSSIL
- Oolite
- Oomoldic

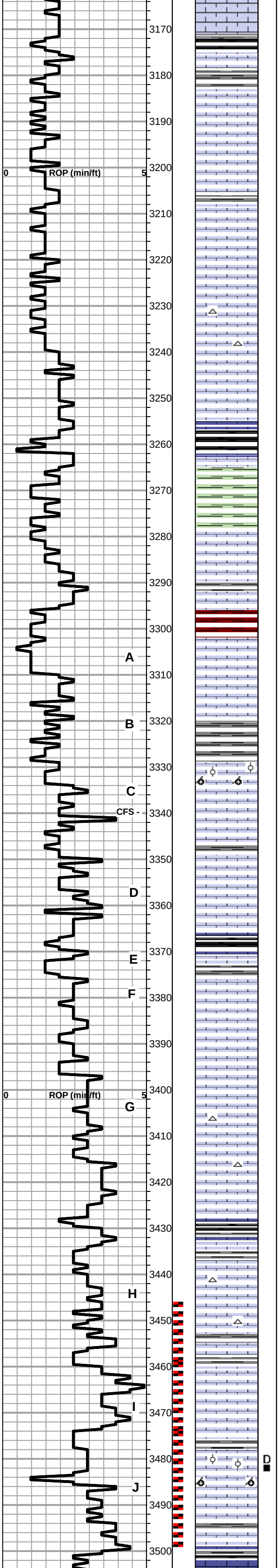
OTHER SYMBOLS

DST
- DST Int
- DST alt

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)

Curve Track #1
ROP (min/ft)
Intervals
Curve Track #3

1:240 Imperial	Depth | Cored Interval / DST Interval	DST	Lithology	Oil Show	Geological Descriptions	1:240 Imperial
0 ROP (min/ft) 5	2850				Begin 1' drill time from 2850' to RTD Begin 10' wet and dry samples from 2900' to RTD	8 5/8" surface casing set to 1196' with 375 sacks SMD
	2860				**ANHYDRITE TOP SPL 1187+810 ELog 1190+807** **ANHYDRITE BASE SPL 1223+774 ELog 1224+773**	Slope 0 degrees @1197'
	2870					
	2880					
	2890				Lime, grayish brn, fnxln, slightly fossiliferous	
	2900				Lime, grayish brn, fnxln	
	2910				Lime, med brn-gray, fnxln	
	2920				Lime, offwhite-brnish gray, fnxln	
	2930				Lime, grayish brn-gray, fnxln-granular, slightly fossiliferous	
	2940				Shale, lt-med gray, soft blocky	
	2950					
	2960				Shale, lt-med gray, soft grading into pyritic, calcareous shale near base of shale unit	
	2970		P		**<u>TOPEKA SPL 2974-977 ELog 2974-977</u>**	
	2980				Lime, crm-lt brn, fnxln, slightly fossiliferous	
	2990				Lime, crm-lt brn, fnxln, slightly chalky	
	3000				Lime, med brn-grayish brn, fnxln, slightly fossiliferous, fusulinids	
0 ROP (min/ft) 5	3010				Lime, offwhite-grayish brn-gray, fnxln	
	3020				Lime, lt brn-grayish brn, fnxln, fossiliferous in part	
	3030			◑	Lime, med brn, granular, mostly barren with one piece with show of light gassy oil on break. Fine-medium intercrystalline porosity	
	3040				Lime, med brn-grayish brn, granular-fnxln	
	3050				Lime, med brn-gray, fnxln-granular Shale, gray, calcareous with scattered fossil fragments	
	3060				Lime, lt-med brn, fnxln-granular	
	3070				Lime, lt-med brn, fnxln-granular	
	3080				Lime, lt brn-lt grayish brn, fnxln-granular	
	3090				Lime, lt brn-grayish brn, fnxln	
	3100				Lime, med brn-grayish brn, fnxln, fossiliferous in part	
	3110				Lime, lt-med brn-grayish brn, granular, fossiliferous Shale, black carbonaceous	
	3120				Lime, brn, fnxln	
	3130				Lime, crm-lt brn, fnxln-granular, chalk in part	
	3140				Lime, crm-lt brn, fnxln-granular, chalk in part	
	3150				Lime, crm-lt brn, fnxln-granular, chalk in part	
	3160				Lime, crm-lt brn, fnxln-granular	



Lime, crm-lt brn, fnxln-granular

Shale, black carbonaceous

Lime, med brn, granular, slightly fossiliferous

Lime, lt brn, fnxln-granular

Lime, crm-lt brn, fnxln-granular, slightly chalky

Lime, crm-lt brn, fnxln-granular

Lime, lt brn, fnxln

Lime, crm-lt brn, fnxln-granular
Chert, white-lt gray, fresh, sharp

Lime, lt brn, fnxln-granular, chalk in part

HEEBNER SHALE SPL 3257-1260 ELog 3257-1260

Shale, black carbonaceous, fissile
Lime,med brn, fnxln, slightly fossiliferous

Shale, lt green-grayish green, soft, sticky in part

TORONTO SPL 3278-1281 ELog 3279-1282

Lime, crm-lt brn, fnxln, slightly chalky NS

Lime, white-crm, fnxln, soft on break, NS

LKC SPL 3301-1304 ELog 3303-1306

Lime, lt brn, mostly fnxln, NS

Lime, lt brn-lt grayish brn, fnxln, slightly chalky, NS

Lime, crm-lt brn, fnxln with oolitic/oolmoldic in part, barren, NS

Lime, offwhite-crm, fnxln

Lime, offwhite-crm, fnxln

Lime, crm-lt-med brn, fnxln, fossiliferous in part

Shale, black carbonaceous
Lime, offwhite, fnxln

Lime, crm-lt brn, fnxln, chalk in part, NS

Lime, crm, fnxln, soft on break, chalk in part

Lime, white-crm, fnxln, very clean , chalk in part

Lime, crm, fnxln-cryptoxln, slight chalk in part

Lime, crm-tan, fnxln-cryptoxln

Lime, med brn, fnxln

Lime, offwhite-crm, fnxln with bedded chalk, NS

Lime, offwhite-crm, fnxln

Shale, gray-green, soft blocky

Lime, crm-lt brn, fnxln, chalky, NS

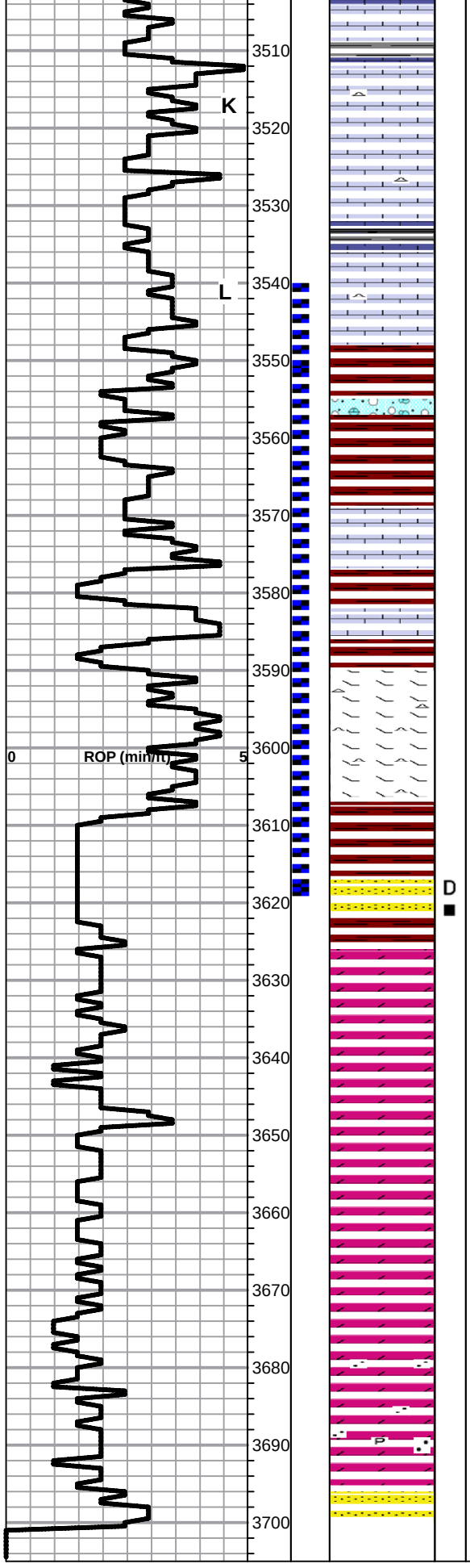
D

Lime, white-crm, mostly fnxln, scattered micro oolitic chips with scattered hvy dark oil. Few chips with brn fresh oil stain on flat surfaces, No Odor, good streaming wet cut

Lime, crm, fn-vfxln, chalk in part

Lime, crm-lt brn, fn-vfxln, slight bedded chalk in part

DST # 1 3446'-3500'
SEE HEADER FOR TEST SUMMARY



Lime, crm-tan, fn-vfxln, slight chalk

Lime, crm-tan, fn-vfxln

Lime, crm-tan, fn-vfxln, slight chalk

Lime, tan-lt brn, fn-vfxln

BKC SPL 3546-1549 ELog 3547-1550

Shale, reddish brn, soft blocky

Shale, reddish brn with scattered clastic mix of limes with red shales

Shale, reddish brn

DST # 2 3540'-3620'
SEE HEADER FOR TEST SUMMARY

Lime, crm-lt brn, fnxln, soft

Shale, reddish brn-brn, soft blocky

Lime,dolomitic, fnxln with abundant varicolor cherts

Shale, reddish brns-grays

Sandstone, quartz, med to large grain, clear polished, fused in part, show dead oil and gilsonite, very good streaming wet cut.

Slope 1 degree

ARBUCKLE SPL 3626-1629 ELog 3626-1629

Dolomite, crm, fn-mdxln, granular

Dolomite, crm, fn-med xln, granular
Shale, lt green, soft, waxy

Dolomite, crm, fn-med xln, granular, section very clean in appearance

Dolomite, crm, fn-med xln, with scattered cxln, sucrosic in part

Dolomite, crm, fn-cxln. granular and sucrosic

Dolomite, crm, md-cxln granular, quartz grain inclusions

Dolomite, crm, md-cxln, scattered crystalline pyrite clusters

Sandstone, lt pink tint, med-coarse grained, polished, fused, NS

JOB LOG

SWIFT Services, Inc.

DATE 8-3-12 | PAGE NO. 1

CUSTOMER	WELL NO.	LEASE	JOB TYPE	TICKET NO.
TDI	#1	Linus	Cement Surface	21852

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	TD-1197' DESCRIPTION OF OPERATION AND MATERIALS
	10:30					23#/Ft.	8 5/8	On location w/ F.E. Rig Start trip in
								Start 8 5/8" 23#/Ft casing to 1186'
	12:45							Cent 1-3-14 Bottle Plate SJ-36'
								@ 1160 = 738 BBl
	1300							Fin run casing
	1315							Rig cir casing / Plug Down
	1345							Fin circ. - Hook up Swift
		6	12				250	Start 500 GAL Mud Flush
		6	20				250	Start 20 BBl KCl Flush
		5					200	Start 325 SKS 50/50 POZ cmt.
		5					200	100 SKS @ 11.8 : 2.66 = 47
		5	47				200	100 SKS @ 12.5 : 2.15 = 38.55
		5	85				200	100 SKS @ 13.5 : 1.74 = 31
		5	116				200	75 SKS @ 14.5 : 1.46 = 20
		4	136				200/Vac	Fin cmt - Release Plug
		6 1/2					250	Start Displ
		6	40				350	@ 40 - slow rate
		5	60				350/300	@ 60 - slow rate
	1645		74				400/700	Plug Down - Bleed Psi to 500
							500	Close in -
								Circulated 100 SKS to Pit
								Wash up & Rack up
								Job Complete
	1730							Thanks
								Dan, Brian & Jeremy

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025 Home Office P.O. Box 32 Russell, KS 67665 No. 934

Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
8-8-12	14	15	19	Ellis	Ks		10:45 PM

Lease Linus Well No. #1 Location Antonino, Ks - 2 3/4 S, W/S

Contractor Southwind #1 Owner

Type Job Plug 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 7 7/8" T.D. 3700'

Csg. Depth Charge To TDI Inc.

Tbg. Size 4 1/2" D.P. Depth 3606' Street

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 H20/mud Cement Amount Ordered 205 sx 60/40 4% Gel 1/4# Flo-seal

EQUIPMENT

Pumptrk 16 No. Cementer Helper Travis

Bulktrk 14 No. Driver Driver Cody

~~Bulktrk~~ p.u. No. Driver Driver Rick

JOB SERVICES & REMARKS

Remarks:

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

3606' - 25 sx
1250' - 25 sx
490' - 100 sx
40' - 10 sx
Rathole - 30 sx
Mousehole - 15 sx

Cement did Circulate.

Common	123
Poz. Mix	82
Gel.	7
Calcium	
Hulls	
Salt	
Flowseal	50#
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	212
Mileage	

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

1 - Dry hole plug

Pumptrk Charge Plug

Mileage 12

Tax

Discount

Total Charge

X Signature

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

Kansas
Corporation Commission

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

September 05, 2012

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

Re: ACO1
API 15-051-26314-00-00
Linus 1
SE/4 Sec.14-15S-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