



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1094655
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: _____

1094655

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
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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
<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)*

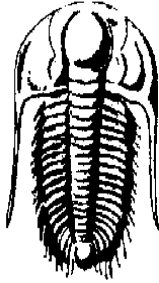
Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd
Hays KS 67601

ATTN: Herb Deines

Kathy #1

2-15s-19w Ellis,KS

Start Date: 2012.09.09 @ 17:58:05

End Date: 2012.09.09 @ 23:58:29

Job Ticket #: 49305 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.09.17 @ 16:31:07

TDI Inc.
2-15s-19w Ellis,KS
Kathy #1
DST # 1
LKC "C"
2012.09.09



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI Inc.
1310 Bison Rd
Hays KS 67601
ATTN: Herb Deines

2-15s-19w Ellis,KS
Kathy #1
Job Ticket: 49305 **DST#: 1**
Test Start: 2012.09.09 @ 17:58:05

GENERAL INFORMATION:

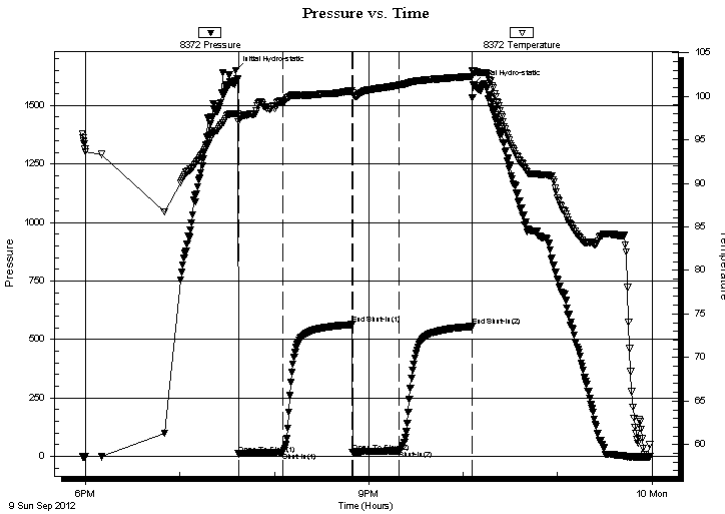
Formation: **LKC"C"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:37:10
Time Test Ended: 23:58:29
Interval: **3342.00 ft (KB) To 3370.00 ft (KB) (TVD)**
Total Depth: 3370.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor
Test Type: Conventional Bottom Hole (Initial)
Tester: Andy Carreira
Unit No: 39
Reference Elevations: 2057.00 ft (KB)
2051.00 ft (CF)
KB to GR/CF: 6.00 ft

Serial #: 8372 Outside

Press @ Run Depth: 24.58 psig @ 3343.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.09.09 End Date: 2012.09.09 Last Calib.: 2012.09.10
Start Time: 17:58:05 End Time: 23:58:29 Time On Btm: 2012.09.09 @ 19:35:30
Time Off Btm: 2012.09.09 @ 22:06:30

TEST COMMENT: IF:(30min) Surface blow died in 25 min.
IS:(45min) No Return
FF:(30min) Surface blow
FS:(45min) No Return

PRESSURE SUMMARY



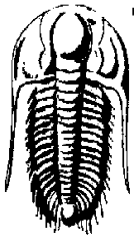
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1649.91	97.98	Initial Hydro-static
2	11.39	97.11	Open To Flow (1)
30	18.29	99.47	Shut-In(1)
74	563.89	100.63	End Shut-In(1)
75	19.42	100.38	Open To Flow (2)
104	24.58	101.29	Shut-In(2)
151	555.56	102.30	End Shut-In(2)
151	1590.91	102.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	WM w =25% m=75%	0.42

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
ATTN: Herb Deines

2-15s-19w Ellis, KS
Kathy #1
Job Ticket: 49305 **DST#: 1**
Test Start: 2012.09.09 @ 17:58:05

GENERAL INFORMATION:

Formation: **LKC"C"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:37:10
 Time Test Ended: 23:58:29
Interval: 3342.00 ft (KB) To 3370.00 ft (KB) (TVD)
 Total Depth: 3370.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor

Test Type: Conventional Bottom Hole (Initial)
 Tester: Andy Carreira
 Unit No: 39
 Reference Elevations: 2057.00 ft (KB)
 2051.00 ft (CF)
 KB to GR/CF: 6.00 ft

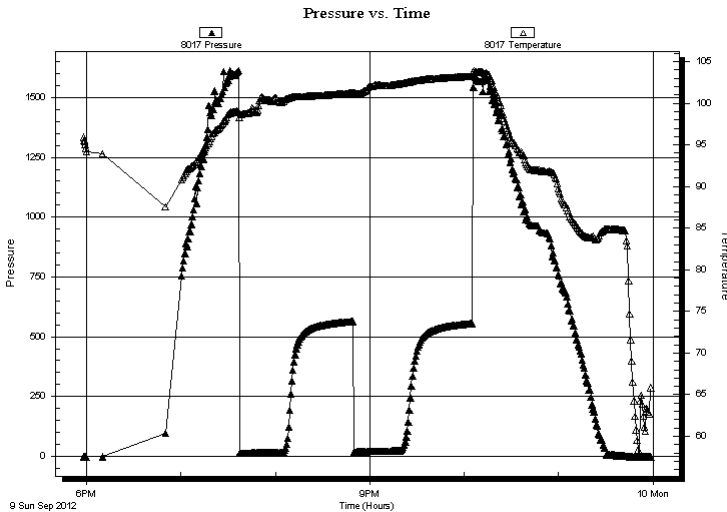
Serial #: 8017

Inside

Press @ Run Depth: psig @ 3343.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.09.09 End Date: 2012.09.09 Last Calib.: 2012.09.10
 Start Time: 17:58:05 End Time: 23:58:29 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF:(30min) Surface blow died in 25 min.
 IS:(45min) No Return
 FF:(30min) Surface blow
 FS:(45min) No Return

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
30.00	WM w =25% m=75%	0.42

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
ATTN: Herb Deines

2-15s-19w Ellis,KS
Kathy #1
Job Ticket: 49305 **DST#: 1**
Test Start: 2012.09.09 @ 17:58:05

Tool Information

Drill Pipe:	Length: 3340.00 ft	Diameter: 3.80 inches	Volume: 46.85 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:	22000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	42000.00 lb
			<u>Total Volume: 46.85 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial	30000.00 lb
Depth to Top Packer:	3342.00 ft			Final	30000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	28.00 ft				
Tool Length:	48.00 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			3323.00	
Shut In Tool	5.00			3328.00	
Hydraulic tool	5.00			3333.00	
Packer	5.00			3338.00	20.00 Bottom Of Top Packer
Packer	4.00			3342.00	
Stubb	1.00			3343.00	
Recorder	0.00	8017	Inside	3343.00	
Recorder	0.00	8372	Outside	3343.00	
Perforations	24.00			3367.00	
Bullnose	3.00			3370.00	28.00 Bottom Packers & Anchor
Total Tool Length:	48.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc. **2-15s-19w Ellis,KS**
 1310 Bison Rd **Kathy #1**
 Hays KS 67601 Job Ticket: 49305 **DST#: 1**
 ATTN: Herb Deines Test Start: 2012.09.09 @ 17:58:05

Mud and Cushion Information

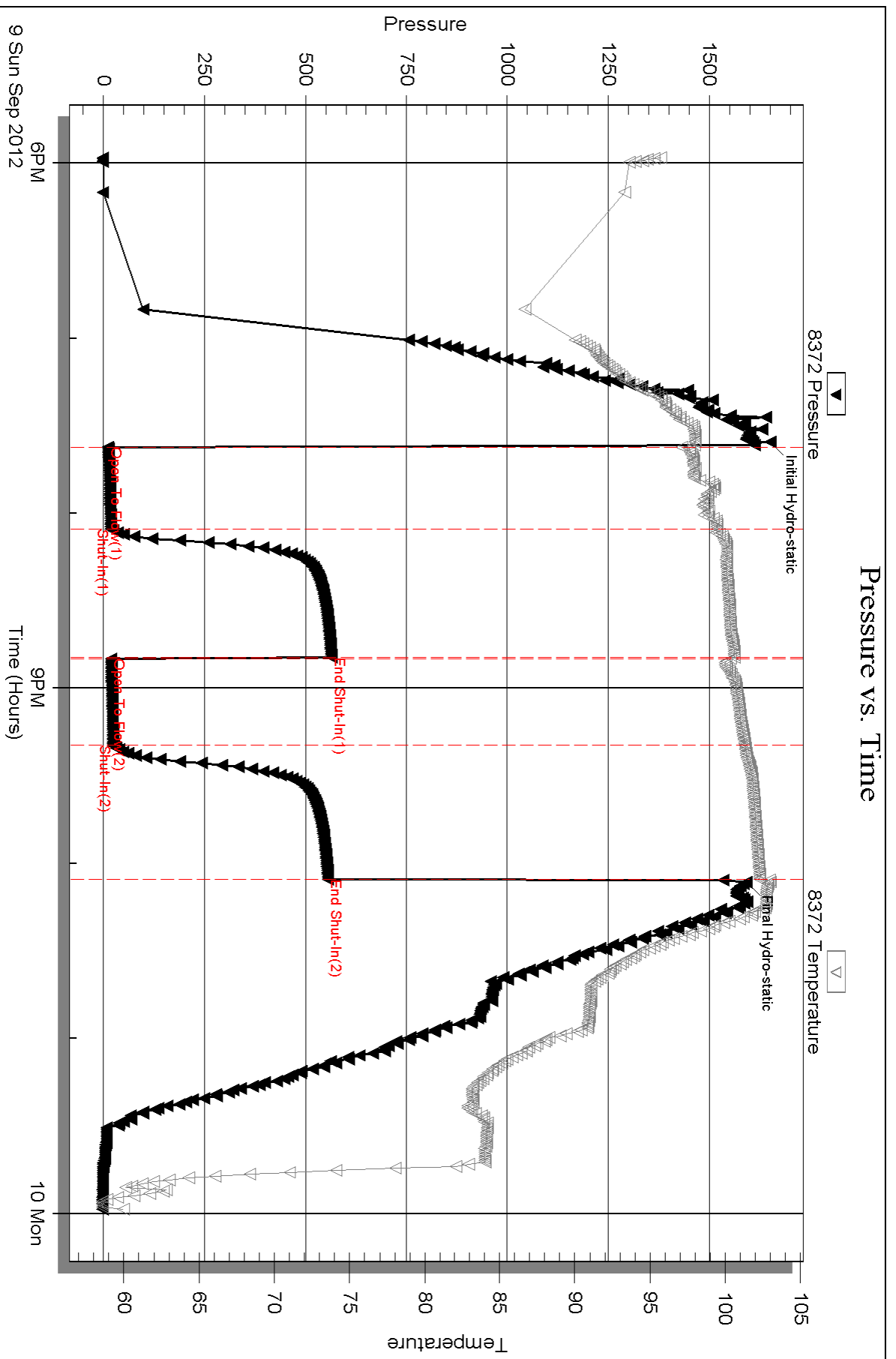
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.57 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4500.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	WM w =25% m=75%	0.421

Total Length: 30.00 ft Total Volume: 0.421 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:



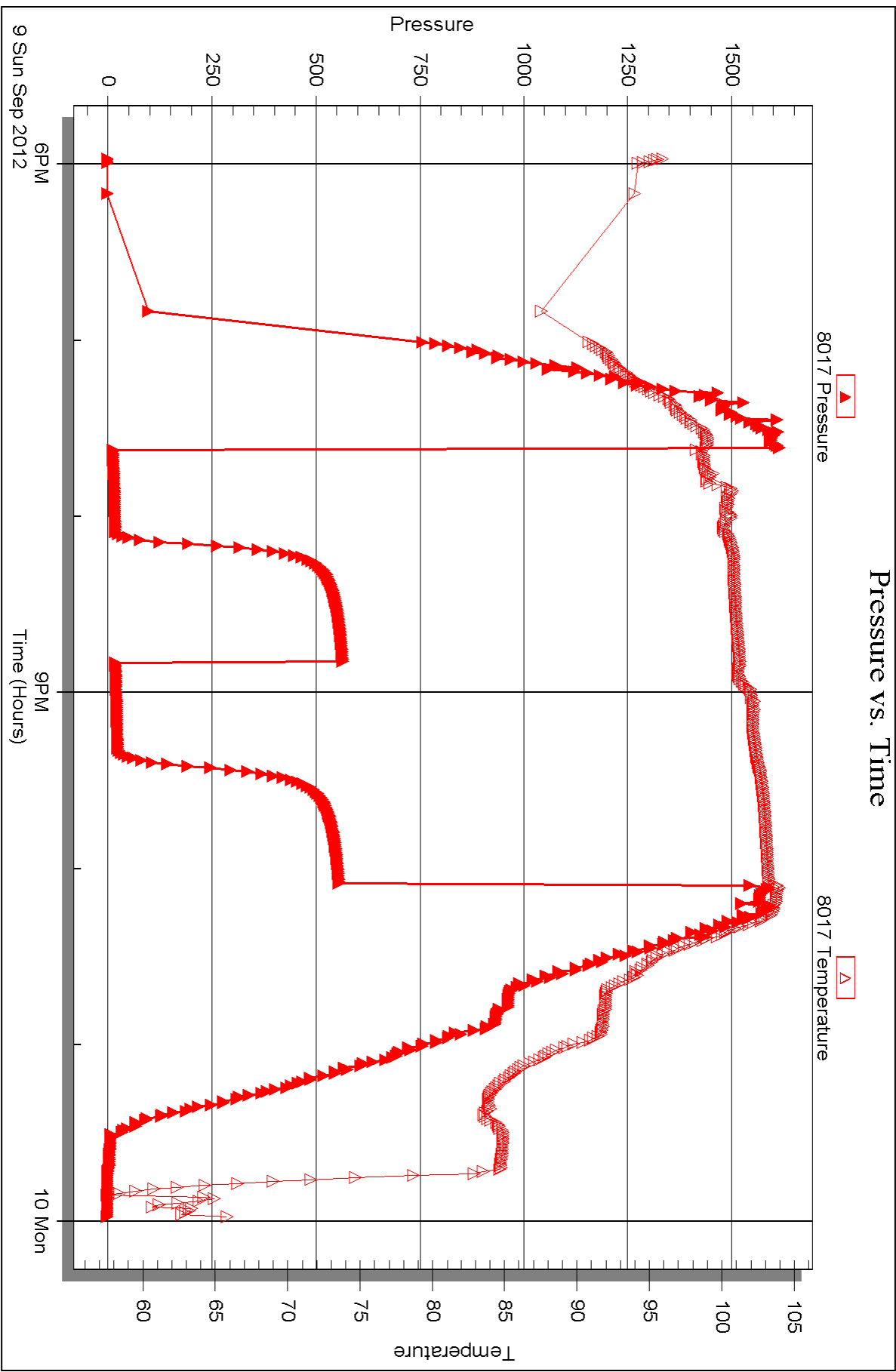
Serial #: 8017

Inside

TDI Inc.

Kathy #1

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd
Hays KS 67601

ATTN: Herb Deines

Kathy #1

2-15s-19w Ellis,KS

Start Date: 2012.09.11 @ 19:05:05

End Date: 2012.09.11 @ 23:34:59

Job Ticket #: 49305 DST #: 2

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

Printed: 2012.09.17 @ 16:30:07

TDI Inc. 2-15s-19w Ellis,KS Kathy #1 DST # 2 LKC"G,H,I,J" 2012.09.11



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI Inc.
1310 Bison Rd
Hays KS 67601
ATTN: Herb Deines

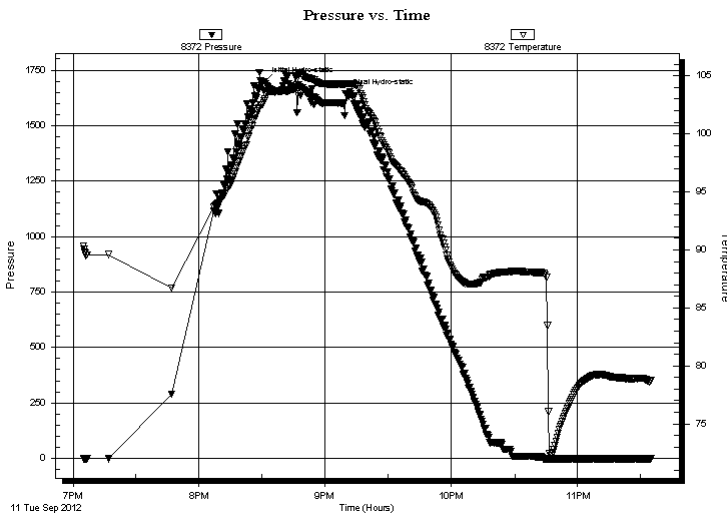
2-15s-19w Ellis, KS
Kathy #1
Job Ticket: 49305 **DST#: 2**
Test Start: 2012.09.11 @ 19:05:05

GENERAL INFORMATION:

Formation: **LKC "G,H,I,J"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened:
 Time Test Ended: 23:34:59
 Interval: **3418.00 ft (KB) To 3530.00 ft (KB) (TVD)**
 Total Depth: 3539.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor
 Test Type: Conventional Straddle (Reset)
 Tester: Andy Carreira
 Unit No: 39
 Reference Elevations: 2057.00 ft (KB)
 2051.00 ft (CF)
 KB to GR/CF: 6.00 ft

Serial #: 8372 Outside
 Press @ Run Depth: psig @ 3425.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.09.11 End Date: 2012.09.11 Last Calib.: 2012.09.11
 Start Time: 19:05:05 End Time: 23:34:59 Time On Btm: 2012.09.11 @ 20:31:00
 Time Off Btm: 2012.09.11 @ 21:09:40

TEST COMMENT: Misrun- Packer Failure



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1697.45	102.84	Initial Hydro-static
39	1643.13	104.36	Final Hydro-static

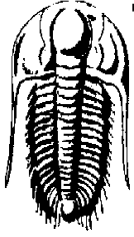
Recovery

Length (ft)	Description	Volume (bbl)
200.00	Mud	2.81

* 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
ATTN: Herb Deines

2-15s-19w Ellis,KS
Kathy #1
Job Ticket: 49305 **DST#: 2**
Test Start: 2012.09.11 @ 19:05:05

GENERAL INFORMATION:

Formation: **LKC"G,H,I,J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened:

Time Test Ended: 23:34:59

Interval: 3418.00 ft (KB) To 3530.00 ft (KB) (TVD)

Total Depth: 3539.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Test Type: Conventional Straddle (Reset)

Tester: Andy Carreira

Unit No: 39

Reference Elevations: 2057.00 ft (KB)

2051.00 ft (CF)

KB to GR/CF: 6.00 ft

Serial #: 8017 Inside

Press @ RunDepth: psig @ 3425.00 ft (KB)

Start Date: 2012.09.11 End Date: 2012.09.11

Start Time: 19:05:05 End Time: 23:34:59

Capacity: 8000.00 psig

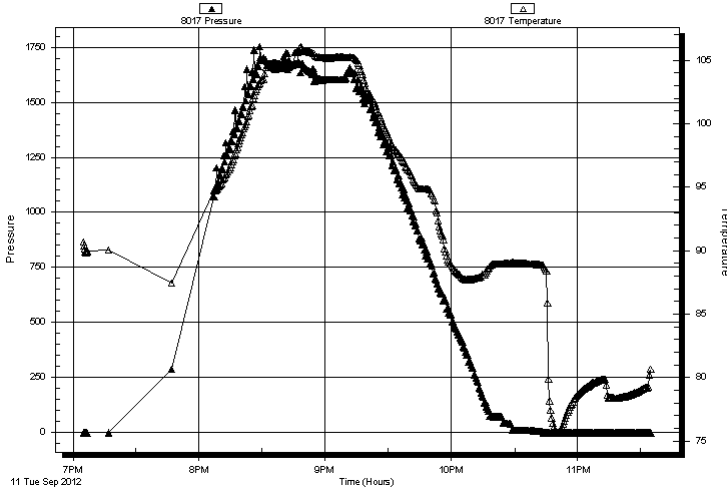
Last Calib.: 2012.09.11

Time On Btm:

Time Off Btm:

TEST COMMENT: Misrun- Packer Failure

Pressure vs. Time



PRESSURE SUMMARY

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

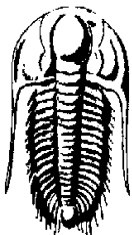
Recovery

Length (ft)	Description	Volume (bbl)
200.00	Mud	2.81

* 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
 ATTN: Herb Deines

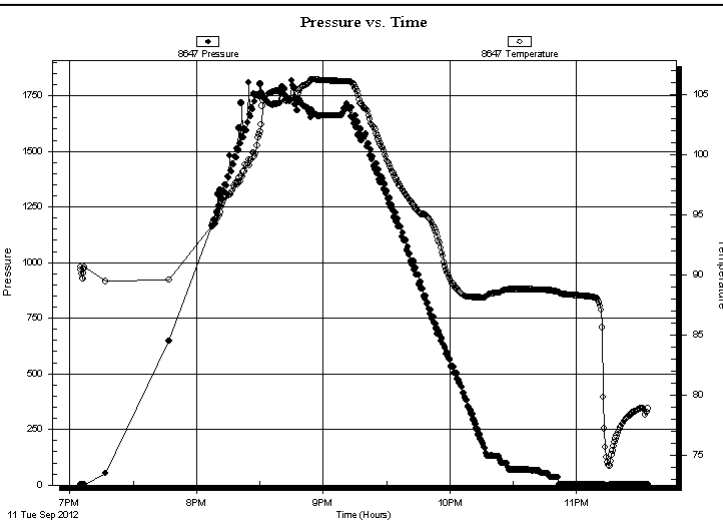
2-15s-19w Ellis,KS
Kathy #1
 Job Ticket: 49305 **DST#: 2**
 Test Start: 2012.09.11 @ 19:05:05

GENERAL INFORMATION:

Formation: **LKC"G,H,I,J"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened:
 Time Test Ended: 23:34:59
Interval: 3418.00 ft (KB) To 3530.00 ft (KB) (TVD)
 Total Depth: 3539.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor
 Test Type: Conventional Straddle (Reset)
 Tester: Andy Carreira
 Unit No: 39
 Reference Elevations: 2057.00 ft (KB)
 2051.00 ft (CF)
 KB to GR/CF: 6.00 ft

Serial #: 8647 Below (Straddle)
 Press @ Run Depth: psig @ 3543.00 ft (KB)
 Start Date: 2012.09.11 End Date: 2012.09.11
 Start Time: 19:05:05 End Time: 23:33:59
 Capacity: 8000.00 psig
 Last Calib.: 2012.09.11
 Time On Btm:
 Time Off Btm:

TEST COMMENT: Misrun- Packer Failure



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

Recovery		
Length (ft)	Description	Volume (bbl)
200.00	Mud	2.81

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI Inc.
1310 Bison Rd
Hays KS 67601
ATTN: Herb Deines

2-15s-19w Ellis, KS
Kathy #1
Job Ticket: 49305 **DST#: 2**
Test Start: 2012.09.11 @ 19:05:05

Tool Information

Drill Pipe:	Length: 3413.00 ft	Diameter: 3.80 inches	Volume: 47.88 bbl	Tool Weight:	3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	26000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	38000.00 lb
		Total Volume: 47.88 bbl		Tool Chased	0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial	36000.00 lb
Depth to Top Packer:	3418.00 ft			Final	37000.00 lb
Depth to Bottom Packer:	3530.00 ft				
Interval between Packers:	112.00 ft				
Tool Length:	365.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		

Tool Comments: Misrun- Packer Failure.

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3399.00	
Shut In Tool	5.00			3404.00	
Hydraulic tool	5.00			3409.00	
Packer	5.00			3414.00	20.00 Bottom Of Top Packer
Packer	4.00			3418.00	
Stubb	1.00			3419.00	
Perforations	5.00			3424.00	
Change Over Sub	1.00			3425.00	
Recorder	0.00	8017	Inside	3425.00	
Recorder	0.00	8372	Outside	3425.00	
Drill Pipe	95.00			3520.00	
Change Over Sub	1.00			3521.00	
Perforations	5.00			3526.00	
Blank Off Sub	1.00			3527.00	
Blank Spacing	3.00			3530.00	112.00 Tool Interval
Packer	4.00			3534.00	
Stubb	1.00			3535.00	
Perforations	7.00			3542.00	
Change Over Sub	1.00			3543.00	
Recorder	0.00	8647	Below	3543.00	
Drill Pipe	220.00			3763.00	233.00 Bottom Packers & Anchor
Total Tool Length:		365.00			



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc. **2-15s-19w Ellis,KS**
 1310 Bison Rd **Kathy #1**
 Hays KS 67601 Job Ticket: 49305 **DST#: 2**
 ATTN: Herb Deines Test Start: 2012.09.11 @ 19:05:05

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: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.78 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4700.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
200.00	Mud	2.805

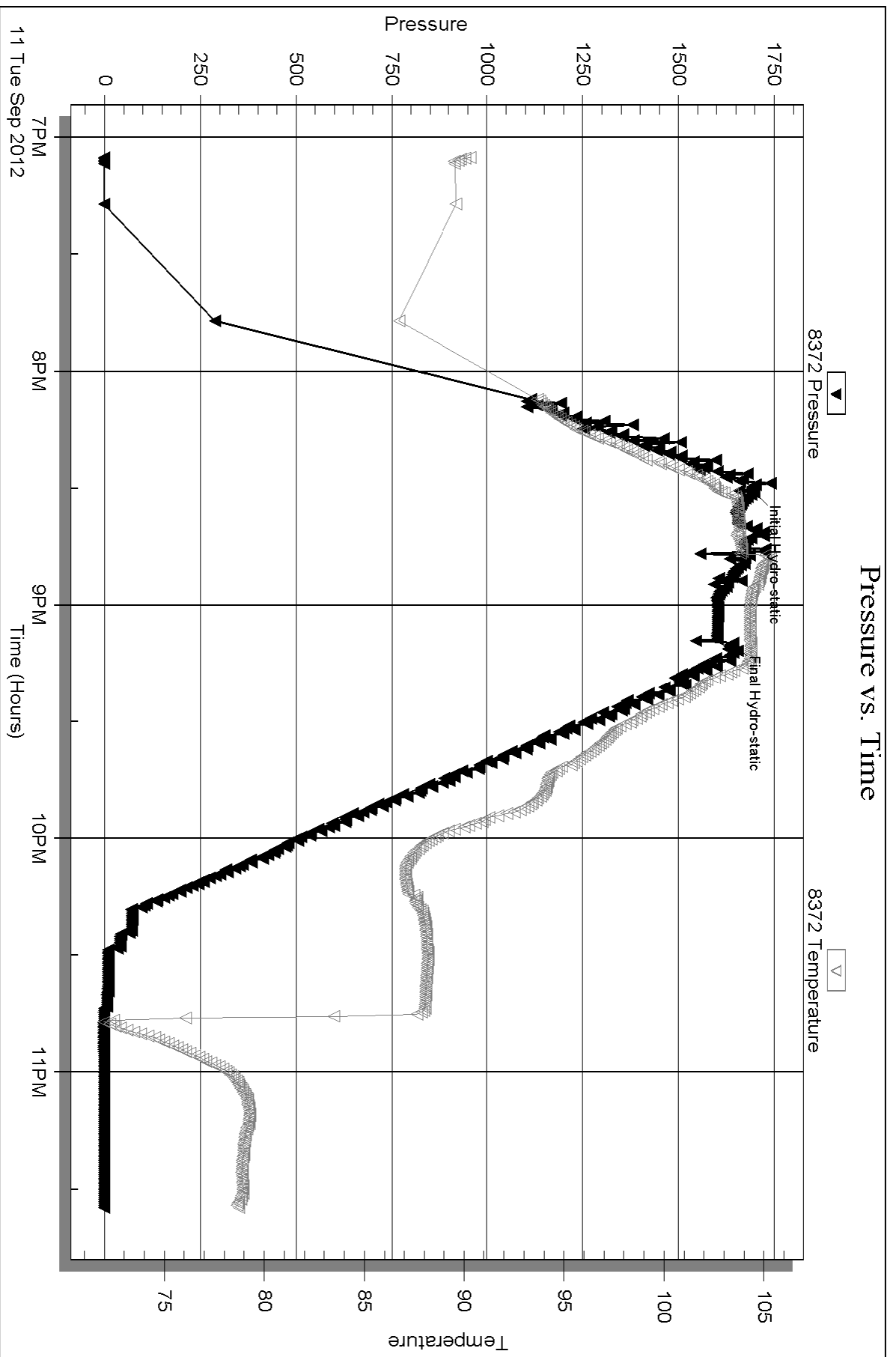
Total Length: 200.00 ft Total Volume: 2.805 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Serial #: 8372

Outside TDI Inc.

Kathy #1

DST Test Number: 2



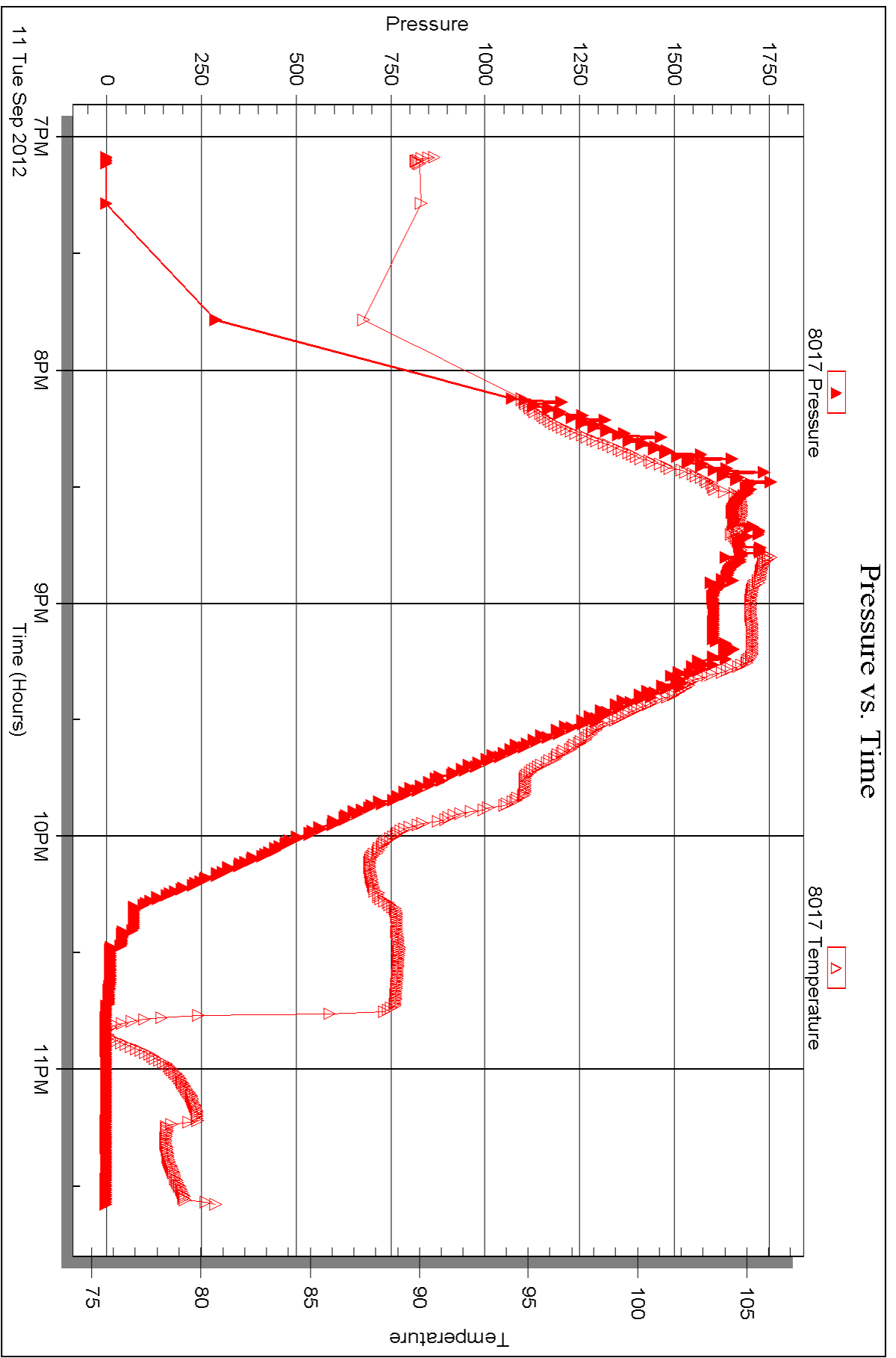
Serial #: 8017

Inside

TDI Inc.

Kathy #1

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 49305

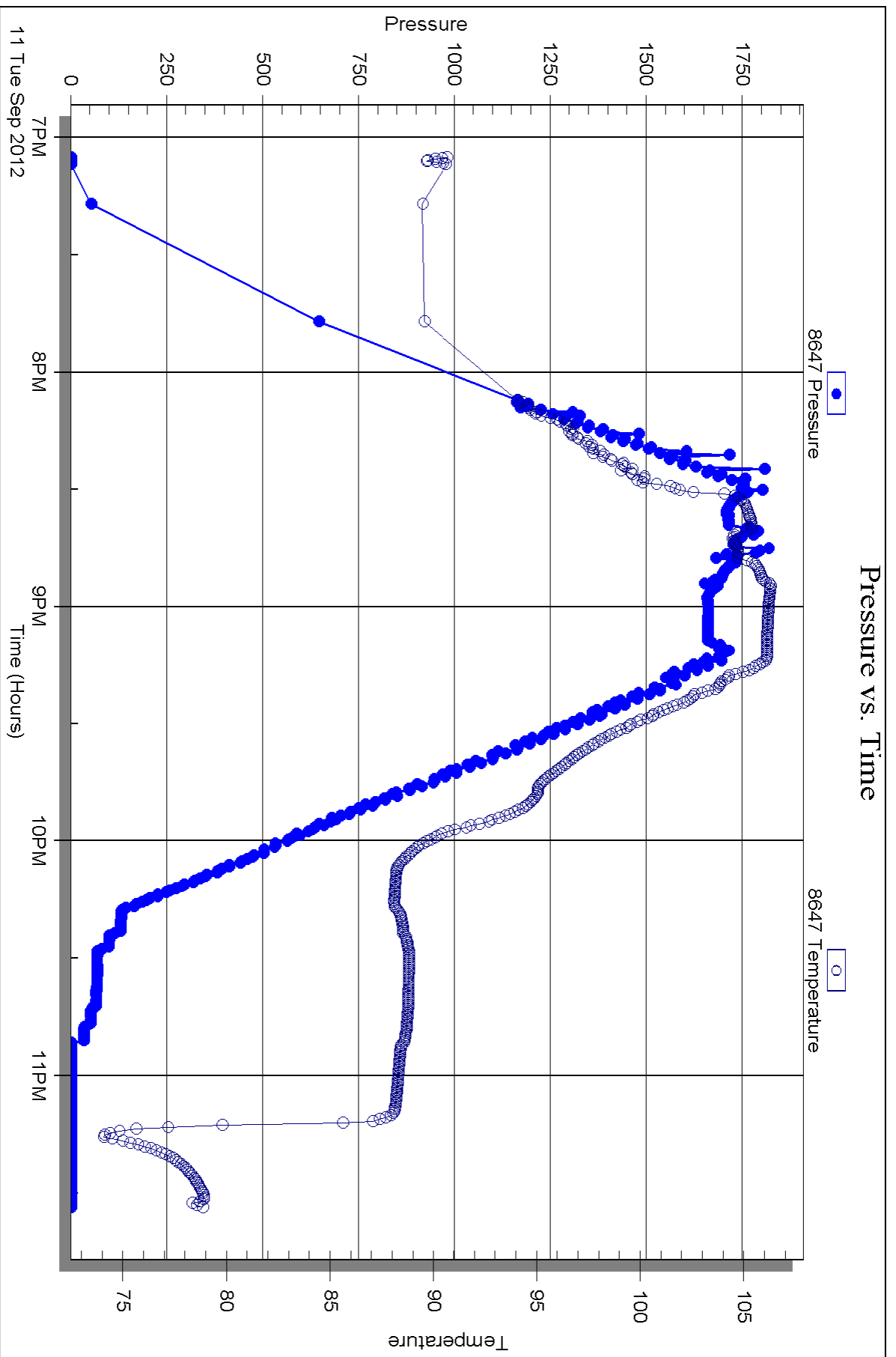
Printed: 2012.09.17 @ 16:30:13

Serial #: 8647

Below (Straddling)

Kathy #1

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd
Hays KS 67601

ATTN: Herb Deines

Kathy #1

2-15s-19w Ellis,KS

Start Date: 2012.09.12 @ 00:15:05

End Date: 2012.09.12 @ 06:37:29

Job Ticket #: 49307 DST #: 3

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

Printed: 2012.09.17 @ 16:28:58

TDI Inc. 2-15s-19w Ellis,KS Kathy #1 DST # 3 LKC "D-J" 2012.09.12



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TDI Inc.
1310 Bison Rd
Hays KS 67601
ATTN: Herb Deines

2-15s-19w Ellis,KS
Kathy #1
Job Ticket: 49307 **DST#: 3**
Test Start: 2012.09.12 @ 00:15:05

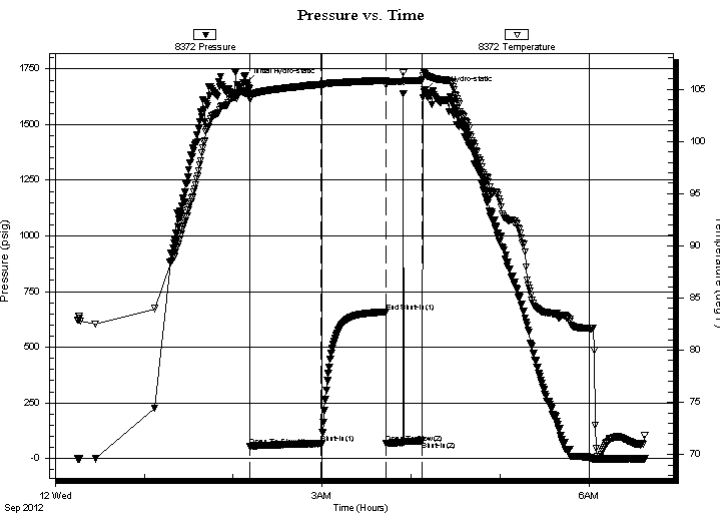
GENERAL INFORMATION:

Formation: **LKC "D-J"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:11:20
 Time Test Ended: 06:37:29
 Interval: **3386.00 ft (KB) To 3530.00 ft (KB) (TVD)**
 Total Depth: 3758.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Poor
 Test Type: Conventional Straddle (Reset)
 Tester: Andy Carreira
 Unit No: 39
 Reference Elevations: 2057.00 ft (KB)
 2051.00 ft (CF)
 KB to GR/CF: 6.00 ft

Serial #: 8372 Outside

Press @ Run Depth: 67.82 psig @ 3392.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.09.12 End Date: 2012.09.12 Last Calib.: 2012.09.12
 Start Time: 00:15:05 End Time: 06:37:29 Time On Btm: 2012.09.12 @ 02:08:50
 Time Off Btm: 2012.09.12 @ 04:09:10

TEST COMMENT: IF:(45min) 1" Blow . Decreased & Died in 10 min.
 IS:(45min) No Return
 FF:(15min) No Blow . Flushed, Surged, Surface Blow Died in 5 min.
 Pulled Tool



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1690.26	104.68	Initial Hydro-static
3	54.41	104.05	Open To Flow (1)
51	67.82	105.44	Shut-In(1)
94	658.88	105.84	End Shut-In(1)
95	67.82	105.46	Open To Flow (2)
119	78.88	105.85	Shut-In(2)
121	1654.39	106.50	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	Mud	1.68

* 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
ATTN: Herb Deines

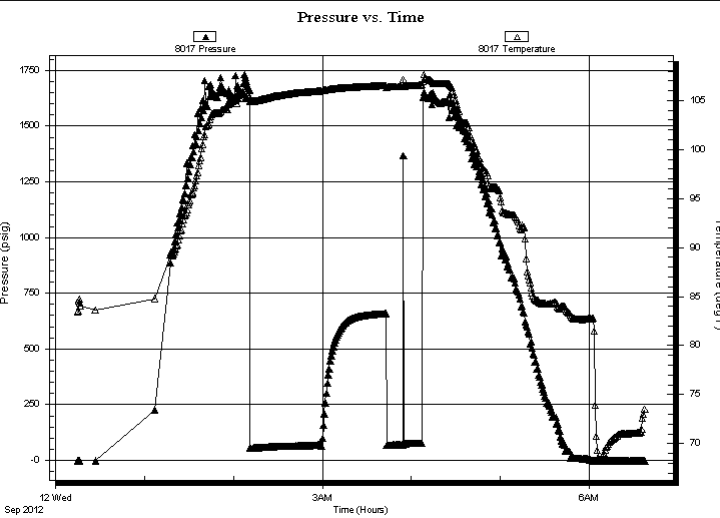
2-15s-19w Ellis, KS
Kathy #1
Job Ticket: 49307 **DST#: 3**
Test Start: 2012.09.12 @ 00:15:05

GENERAL INFORMATION:

Formation: **LKC "D-J"**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Straddle (Reset)
Time Tool Opened: 02:11:20 Tester: Andy Carreira
Time Test Ended: 06:37:29 Unit No: 39
Interval: 3386.00 ft (KB) To 3530.00 ft (KB) (TVD) Reference Elevations: 2057.00 ft (KB)
Total Depth: 3758.00 ft (KB) (TVD) 2051.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Poor KB to GR/CF: 6.00 ft

Serial #: 8017 Inside
Press @ Run Depth: psig @ 3392.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.09.12 End Date: 2012.09.12 Last Calib.: 2012.09.12
Start Time: 00:14:55 End Time: 06:37:19 Time On Btm:
Time Off Btm:

TEST COMMENT: IF:(45min) 1" Blow . Decreased & Died in 10 min.
IS:(45min) No Return
FF:(15min) No Blow . Flushed, Surged, Surface Blow Died in 5 min.
Pulled Tool

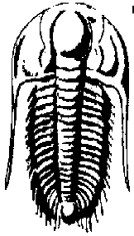


PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery		
Length (ft)	Description	Volume (bbl)
120.00	Mud	1.68

* 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
ATTN: Herb Deines

2-15s-19w Ellis,KS
Kathy #1
Job Ticket: 49307 **DST#: 3**
Test Start: 2012.09.12 @ 00:15:05

GENERAL INFORMATION:

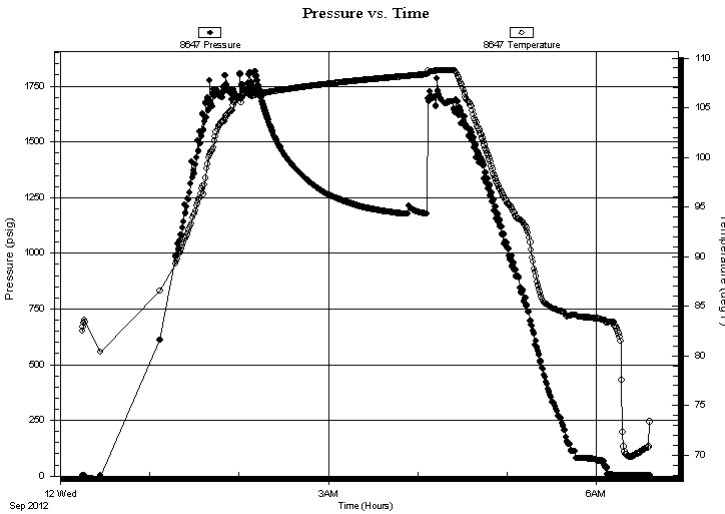
Formation: **LKC "D-J"**
Deviated: **No Whipstock:** ft (KB) Test Type: Conventional Straddle (Reset)
Time Tool Opened: 02:11:20 Tester: Andy Carreira
Time Test Ended: 06:37:29 Unit No: 39
Interval: 3386.00 ft (KB) To 3530.00 ft (KB) (TVD) Reference Elevations: 2057.00 ft (KB)
Total Depth: 3758.00 ft (KB) (TVD) 2051.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Poor KB to GR/CF: 6.00 ft

Serial #: 8647 Below (Straddle)

Press @ Run Depth: psig @ 3538.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.09.12 End Date: 2012.09.12 Last Calib.: 2012.09.12
Start Time: 00:15:05 End Time: 06:35:59 Time On Btm:
Time Off Btm:

TEST COMMENT: IF:(45min) 1" Blow . Decreased & Died in 10 min.
IS:(45min) No Return
FF:(15min) No Blow . Flushed, Surged, Surface Blow Died in 5 min.
Pulled Tool

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
120.00	Mud	1.68

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI Inc.
1310 Bison Rd
Hays KS 67601
ATTN: Herb Deines

2-15s-19w Ellis, KS
Kathy #1
Job Ticket: 49307 **DST#: 3**
Test Start: 2012.09.12 @ 00:15:05

Tool Information

Drill Pipe:	Length: 3378.00 ft	Diameter: 3.80 inches	Volume: 47.38 bbl	Tool Weight:	5000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	40000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
				String Weight: Initial	36000.00 lb
				Final	37000.00 lb
Drill Pipe Above KB:	12.00 ft				
Depth to Top Packer:	3386.00 ft				
Depth to Bottom Packer:	3530.00 ft				
Interval between Packers:	144.00 ft				
Tool Length:	396.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		

Tool Comments: Packers Failed on 1st attempt. Held on 2nd attempt.

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3367.00	
Shut In Tool	5.00			3372.00	
Hydraulic tool	5.00			3377.00	
Packer	5.00			3382.00	20.00 Bottom Of Top Packer
Packer	4.00			3386.00	
Stubb	1.00			3387.00	
Perforations	4.00			3391.00	
Change Over Sub	1.00			3392.00	
Recorder	0.00	8017	Inside	3392.00	
Recorder	0.00	8372	Outside	3392.00	
Drill Pipe	127.00			3519.00	
Change Over Sub	1.00			3520.00	
Perforations	5.00			3525.00	
Change Over Sub	1.00			3526.00	
Blank Spacing	4.00			3530.00	144.00 Tool Interval
Packer	4.00			3534.00	
Stubb	1.00			3535.00	
Perforations	2.00			3537.00	
Change Over Sub	1.00			3538.00	
Recorder	0.00	8647	Below	3538.00	
Drill Pipe	220.00			3758.00	
Change Over Sub	1.00			3759.00	
Bullnose	3.00			3762.00	232.00 Bottom Packers & Anchor
Total Tool Length:	396.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc. **2-15s-19w Ellis,KS**
 1310 Bison Rd **Kathy #1**
 Hays KS 67601 Job Ticket: 49307 **DST#: 3**
 ATTN: Herb Deines Test Start: 2012.09.12 @ 00:15:05

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: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4700.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	Mud	1.683

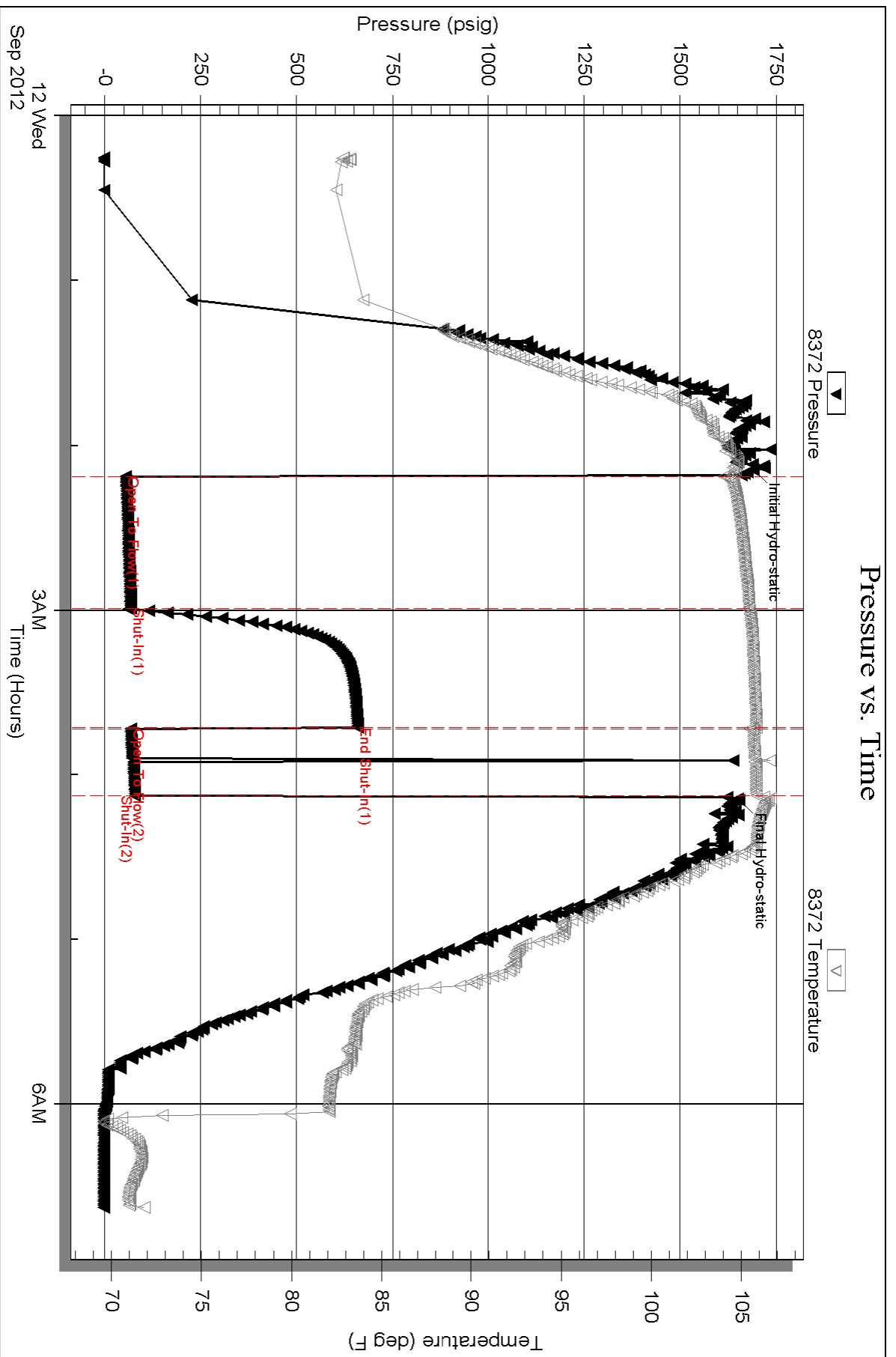
Total Length: 120.00 ft Total Volume: 1.683 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Serial #: 8372

Outside TDI Inc.

Kathy #1

DST Test Number: 3



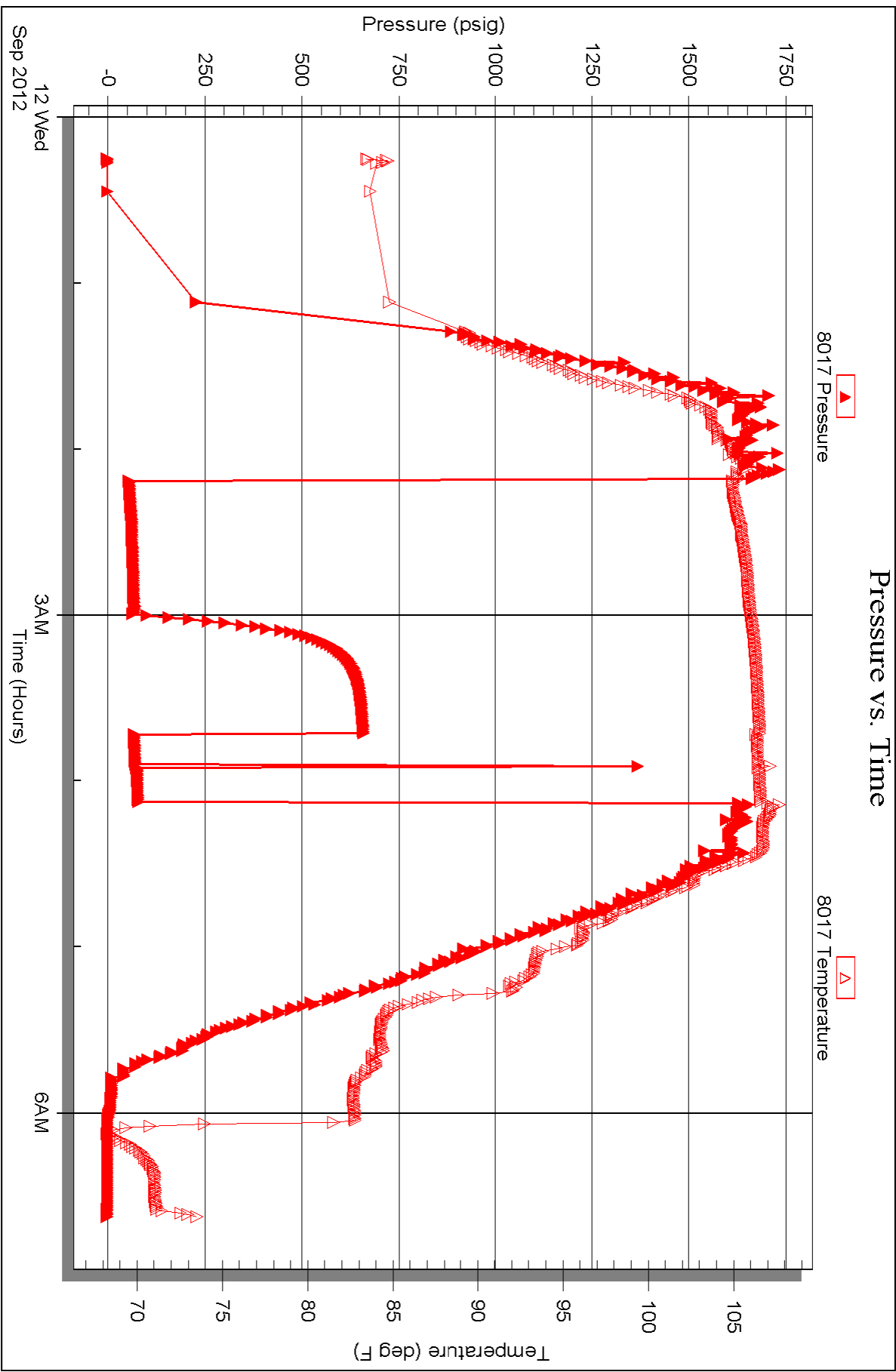
Serial #: 8017

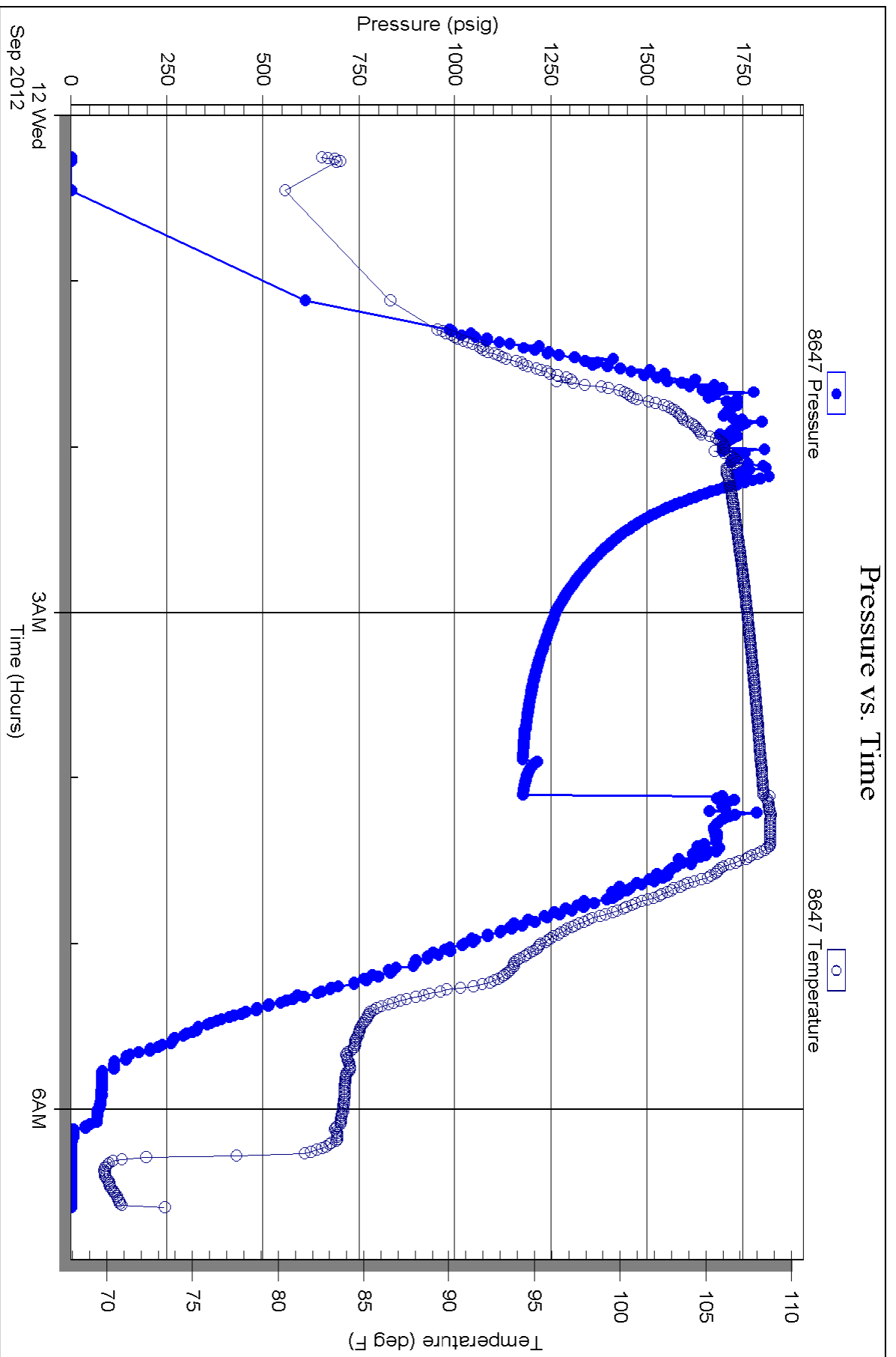
Inside

TDI Inc.

Kathy #1

DST Test Number: 3







TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 49305

Well Name & No. Kathy #1 Test No. 1 Date 9-9-12
 Company IDI inc. Elevation 2057 KB 2051 GL
 Address 1310 BISON RD HAYS KS 67601
 Co. Rep / Geo. X/erb DEINES Rig Southwind 4
 Location: Sec. 2 Twp. 15 S Rge. 19 W Co. Ellis State Ks

Interval Tested 3342-3370 Zone Tested LKC "C"
 Anchor Length 28' Drill Pipe Run 3340 Mud Wt. 9.1
 Top Packer Depth 3337 Drill Collars Run 0 Vis 50
 Bottom Packer Depth 3342 Wt. Pipe Run 0 WL 7.6
 Total Depth 3370 Chlorides 4500 ppm System LCM 1

Blow Description IF: SURFACE Blow Sied in 25 min
ISI: NO RETURN
FF: SURFACE blow
FSL: NO RETURN

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>WM</u>			<u>25%</u>	<u>75%</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 30 BHT 102° Gravity _____ API RW .63 @ 65° F Chlorides 10,000 ppm
 (A) Initial Hydrostatic 1649 Test 1150 T-On Location 17:25
 (B) First Initial Flow 11 Jars _____ T-Started 17:58
 (C) First Final Flow 18 Safety Joint _____ T-Open 19:35
 (D) Initial Shut-In 563 Circ Sub _____ T-Pulled 22:05
 (E) Second Initial Flow 19 Hourly Standby _____ T-Out 23:59
 (F) Second Final Flow 24 Mileage 30 RT 46.50 Comments _____
 (G) Final Shut-In 555 Sampler _____
 (H) Final Hydrostatic 1590 Straddle _____
 Ruined Shale Packer _____
 Ruined Packer _____

Initial Open 30
 Initial Shut-In 45
 Final Flow 30
 Final Shut-In 45
 Sub Total 0
 Total 1196.50
 Sub Total 1196.50
 MP/DST Disc't _____

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

Test Ticket

NO. 49306

Well Name & No. Kathy #1 Test No. 2 Date 9-11-12
 Company TDI INC Elevation 2057 KB 2051 GL
 Address 1310 BISON RD Hays, Ks. 67601
 Co. Rep / Geo. Herb Deines Rig Southwind #4
 Location: Sec. 2 Twp. 15S Rge. 19W Co. Ellis State Ks

Interval Tested 34-18-3530 Zone Tested LKC" B,H,I,J"
 Anchor Length 112' Drill Pipe Run _____ Mud Wt. 9.3
 Top Packer Depth 3418 Drill Collars Run 0 Vis 56
 Bottom Packer Depth 3530 Wt. Pipe Run 0 WL 7.8
 Total Depth 3758 Chlorides 4700 ppm System LCM #1

Blow Description IF MISRUN PACKER FAILURE
IST
FP
FST

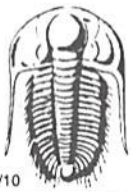
Rec	Feet of	%gas	%oil	%water	%mud
<u>200</u>	<u>Mud</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 200' BHT 104° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1697 Test ← 950 T-On Location 18:16
 (B) First Initial Flow _____ Jars _____ T-Started 19:05
 (C) First Final Flow _____ Safety Joint _____ T-Open _____
 (D) Initial Shut-In _____ Circ Sub _____ T-Pulled _____
 (E) Second Initial Flow _____ Hourly Standby _____ T-Out 23:34
 (F) Second Final Flow _____ Mileage ← 30RT 46.50 Comments Misrun Packer Failure
 (G) Final Shut-In _____ Sampler _____
 (H) Final Hydrostatic 1643 Straddle ← 600 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 608.33
 Day Standby ← 1d 18.5hrs Total 2204.83
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1596.50

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

Test Ticket

NO. 49307

Well Name & No. Kathy #1 Test No. 3 Date 9-11-12
 Company TDI INC Elevation 2057 KB 2051 GL
 Address 1310 BISON RD HAYS, KS 67601
 Co. Rep / Geo. HERB DEINES Rig Southwind #4
 Location: Sec. 2 Twp. 15s Rge. 19W Co. Ellis State Ks

Interval Tested 3386-3530 Zone Tested LKC "B, H, J" D then J
 Anchor Length 144 Drill Pipe Run 3378 Mud Wt. 9.3
 Top Packer Depth 3386 Drill Collars Run — Vis 50
 Bottom Packer Depth 3530 Wt. Pipe Run — WL 7.8
 Total Depth 3758 Chlorides 4700 ppm System LCM 1
 Blow Description IF: 1" blow, increased & died in 10 min
BSI: NO RETURN
FF: NO Blow, Flushed, surged, surface blow, died in 5 min
FSD: — Pulled Tool

Rec	Feet of	%gas	%oil	%water	%mud
<u>120</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 120' BHT 106° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1690 Test ← 1150 T-On Location _____
 (B) First Initial Flow 54 Jars _____ T-Started 00:15
 (C) First Final Flow 67 Safety Joint _____ T-Open 02:10
 (D) Initial Shut-In 658 Circ Sub _____ T-Pulled 03:55
 (E) Second Initial Flow 67 Hourly Standby _____ T-Out 06:35
 (F) Second Final Flow 78 Mileage ← NET Comments PACKERS FAILED on 1st attempt. HELD on 2nd attempt
 (G) Final Shut-In _____ Sampler _____ Ruined Shale Packer _____
 (H) Final Hydrostatic 1654 Straddle ← 600 Ruined Packer _____

Initial Open 45 Shale Packer _____ Extra Copies _____
 Initial Shut-In 45 Extra Packer _____ Sub Total 0
 Final Flow 15 Extra Recorder _____ Total 1750
 Final Shut-In _____ Day Standby _____ MP/DST Disc't _____
 Sub Total 1750 Accessibility _____

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.

OPERATOR

Company: TDI, INC.
 Address: 1310 BISON ROAD
 HAYS, KANSAS 67601

Contact Geologist: TOM DENNING
 Contact Phone Nbr: 785-259-3141
 Well Name: KATHY # 1
 Location: NW NE SW SW Sec.2-15s-19w
 Pool: WILDCAT
 State: KANSAS

API: 15-051-26,344-00-00
 Field: UNNAMED
 Country: USA



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

Scale 1:240 Imperial

Well Name: KATHY # 1
 Surface Location: NW NE SW SW Sec.2-15s-19w
 Bottom Location:
 API: 15-051-26,344-00-00
 License Number: 4787
 Spud Date: 9/1/2012 Time: 3:00 PM
 Region: ELLIS COUNTY
 Drilling Completed: 9/11/2012 Time: 9:35 AM
 Surface Coordinates: 1150' FSL & 840' FWL
 Bottom Hole Coordinates:
 Ground Elevation: 2050.00ft
 K.B. Elevation: 2057.00ft
 Logged Interval: 2900.00ft To: 3750.00ft
 Total Depth: 3750.00ft
 Formation: LANSING-KANSAS CITY
 Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: Latitude:
 N/S Co-ord: 1150' FSL
 E/W Co-ord: 840' FWL

LOGGED BY

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 #: 4
 Rig Type: MUD ROTARY

Rig Type: MUD ROTARY
Spud Date: 9/1/2012
TD Date: 9/11/2012
Rig Release: 9/12/2012

Time: 3:00 PM
Time: 9:35 AM
Time: 2:00 PM

ELEVATIONS

K.B. Elevation: 2057.00ft
K.B. to Ground: 7.00ft

Ground Elevation: 2050.00ft

NOTES

RECOMMENDATION TO PLUG AND ABANDON WELL DUE TO NEGATIVE RESULTS OF DSTS.

WELL LOGS BY PIONEER ENERGY SERVICES: DUAL INDUCTION LOG, DUAL COMPENSATED POROSITY LOG, MICRORESISTIVITY.

DRILL STEM TESTING COMPANY: TRILOBITE TESTING INC. 3 TESTS

FORMATION TOPS SUMMARY AND CHRONOLOGY OF DAILY ACTIVITY

KATHY # 1

1150' FSL & 840' FWL, SW/4

Sec. 2-15s-19w

2050' GL 2057' KB

<u>FORMATION</u>	<u>SAMPLE TOPS</u>	<u>LOG TOPS</u>
Anhydrite	1270+787	1273+ 784
B-Anhydrite	1309+ 748	1311+ 746
Topeka	3021- 964	3027- 970
Heebner Shale	3286-1229	3293-1236
Toronto	3304-1247	3312-1255
LKC	3332-1275	3340-1283
BKC	3580-1523	3585-1528
Conglomerate Sand		3653-1596
Arbuckle	3659-1602	3663-1606
RTD	3750-1693	
LTD		3758-1701

SUMMARY OF DAILY ACTIVITY

9-01-12 RU, Spud, set 8 5/8" surface casing to 413' w/ 200 sxs Common, 2%Gel, 3%CC, plug down 11:00PM, slope 1 degree

9-02-12 413', shut down for holiday


9-03-12 413', shut down for holiday

9-04-12 413', drilling plug

9-05-12 1425', drilling

9-06-12 2166', drilling
 9-07-12 2541', fishing for drill collars, displaced 2889'
 9-08-12 3100', drilling
 9-09-12 3370', drilling, DST #1 3342'-3370' "C"
 9-10-12 3458, drilling
 9-11-12 3690' drilling, RTD 3750', logging, DST # 2 straddle test 3418'-3530'
 mis-run, DST # 3 straddle test 3386'-3530', P&A well
 9-12-12 3750', finish DST#3, P&A Plugging complete at 2:00PM

DST # 1 TEST SUMMARY

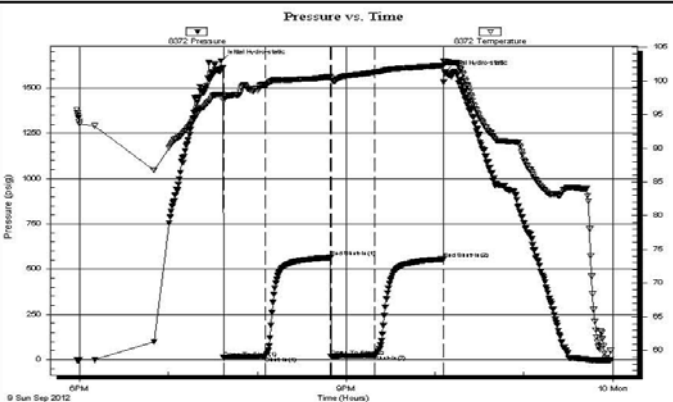
	DRILL STEM TEST REPORT		
	TDI inc. 1310 Bison Rd Hays Ks. 67601 ATTN: Herb Deines	2-15s-19w Ellis Kathy #1 Job Ticket: 49305 Test Start: 2012.09.09 @ 17:58:05	DST#: 1

GENERAL INFORMATION:

Formation: LKC"C"	Test Type: Conventional Bottom Hole (Initial)
Deviated: No Whipstock: ft (KB)	Tester: Andy Carreira
Time Tool Opened: 19:37:10	Unit No: 39
Time Test Ended: 23:58:29	Reference Elevations: 2057.00 ft (KB)
Interval: 3342.00 ft (KB) To 3370.00 ft (KB) (TVD)	2051.00 ft (CF)
Total Depth: 3370.00 ft (KB) (TVD)	KB to GR/CF: 6.00 ft
Hole Diameter: 7.88 inches	Hole Condition: Poor

Serial #: 8372	Outside	Capacity: 8000.00 psig
Press@RunDepth: 24.58 psig @ 3343.00 ft (KB)	End Date: 2012.09.09	Last Calib.: 2012.09.10
Start Date: 2012.09.09	End Time: 23:58:29	Time On Btm: 2012.09.09 @ 19:35:30
Start Time: 17:58:05		Time Off Btm: 2012.09.09 @ 22:06:30

TEST COMMENT: IF:(30min) Surface blow died in 25 min.
 ISl:(45min) No Return
 FF:(30min) Surface blow
 FSl:(45min) No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1649.91	97.98	Initial Hydro-static
2	11.39	97.11	Open To Flow (1)
30	18.29	99.47	Shut-In(1)
74	563.89	100.63	End Shut-In(1)
75	19.42	100.38	Open To Flow (2)
104	24.58	101.29	Shut-In(2)
151	555.56	102.30	End Shut-In(2)
151	1590.91	102.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	WMw =25% m=75%	0.42

Gas Rates

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

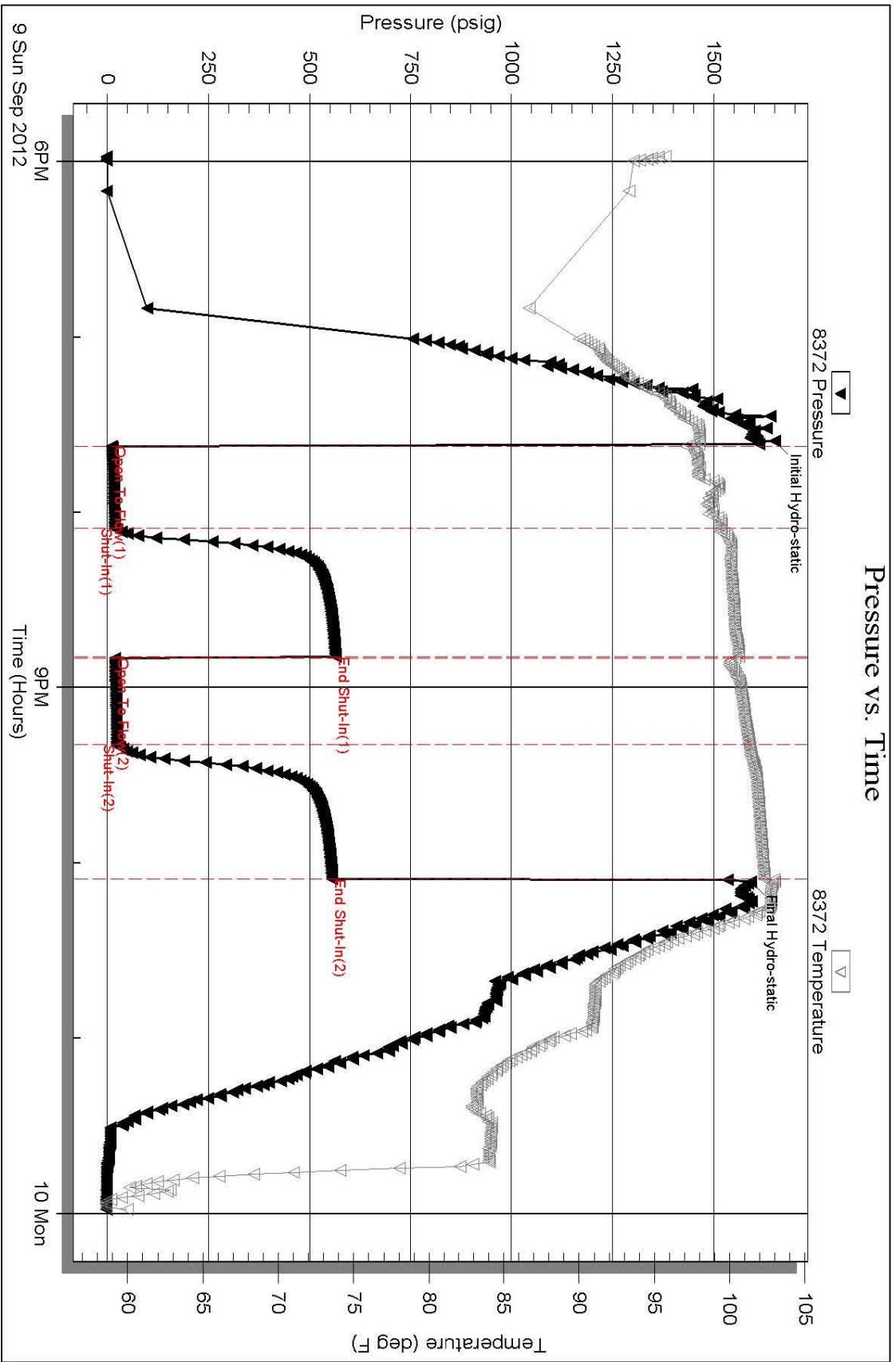
DST # 1 EXPANDED CHART

Serial #: 8372

Outside TDI Inc.

Kathy #1

DST Test Number: 1


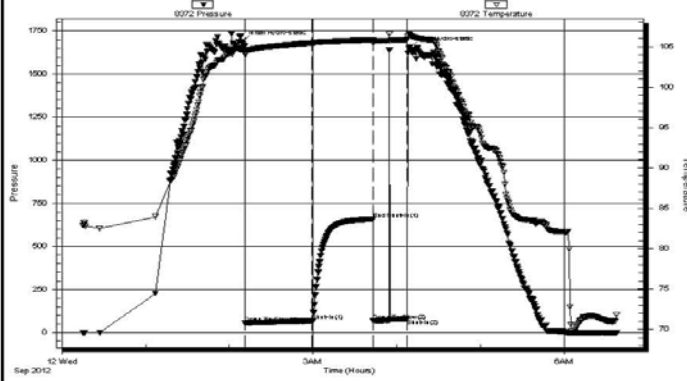


Trilobite Testing, Inc

Ref. No: 49305

Printed: 2012.09.10 @ 02:51:25

DST # 3 STRADDLE TEST SUMMARY

	<h2 style="margin: 0;">DRILL STEM TEST REPORT</h2>																																		
TDI inc. 1310 Bison Rd Hays Ks. 67601 ATTN: Herb Deines	2-15s-19w Ellis Kathy #1 Job Ticket: 49307 DST#: 3 Test Start: 2012.09.12 @ 00:15:05																																		
GENERAL INFORMATION:																																			
Formation: LKC"D thru J" Deviated: No Whipstock: ft (KB) Time Tool Opened: 02:11:20 Time Test Ended: 06:37:29		Test Type: Conventional Straddle (Reset) Tester: Andy Carreira Unit No: 39																																	
Interval: 3386.00 ft (KB) To 3530.00 ft (KB) (TVD) Total Depth: 3758.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Poor		Reference Elevations: 2057.00 ft (KB) 2051.00 ft (CF) KB to GR/CF: 6.00 ft																																	
Serial #: 8372 Outside																																			
Press@RunDepth: 67.82 psig @ 3392.00 ft (KB) Start Date: 2012.09.12 End Date: 2012.09.12 Start Time: 00:15:05 End Time: 06:37:29		Capacity: 8000.00 psig Last Calib.: 2012.09.12 Time On Btm: 2012.09.12 @ 02:08:50 Time Off Btm: 2012.09.12 @ 04:09:10																																	
TEST COMMENT: IF:(45min) 1" Blow . Decreased & Died in 10 min. ISl:(45min) No Return FF:(15min) No Blow . Flushed, Surged, Surface Blow Died in 5 min. Pulled Tool																																			
Pressure vs. Time		PRESSURE SUMMARY																																	
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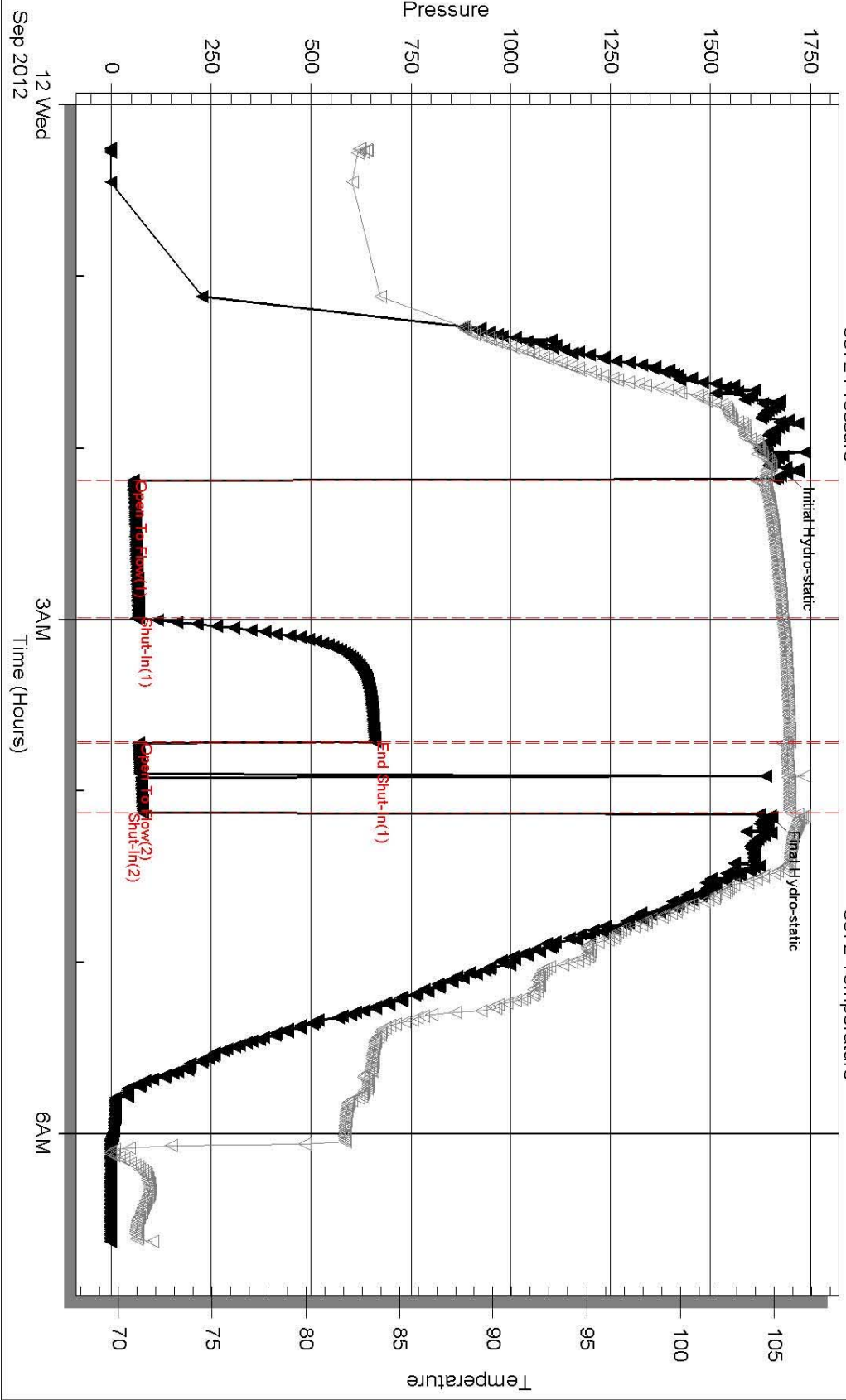
Trilobite Testing, Inc

Ref. No: 49307

Printed: 2012.09.12 @ 08:37:56

DST # 3 STRADDLE TEST EXPANDED CHART

Pressure vs. Time



ROCK TYPES

- | | | | | | | | | | |
|--|----------|--|-----------|--|------------|--|------------|--|----------|
| | Cht vari | | Dolsec | | shale, grn | | shale, red | | Lscong1 |
| | Clystgy | | Lmst fw<7 | | shale, gry | | Ss | | Dol Lime |
| | Dolprim | | Lmst fw>7 | | Carbon Sh | | | | |

ACCESSORIES

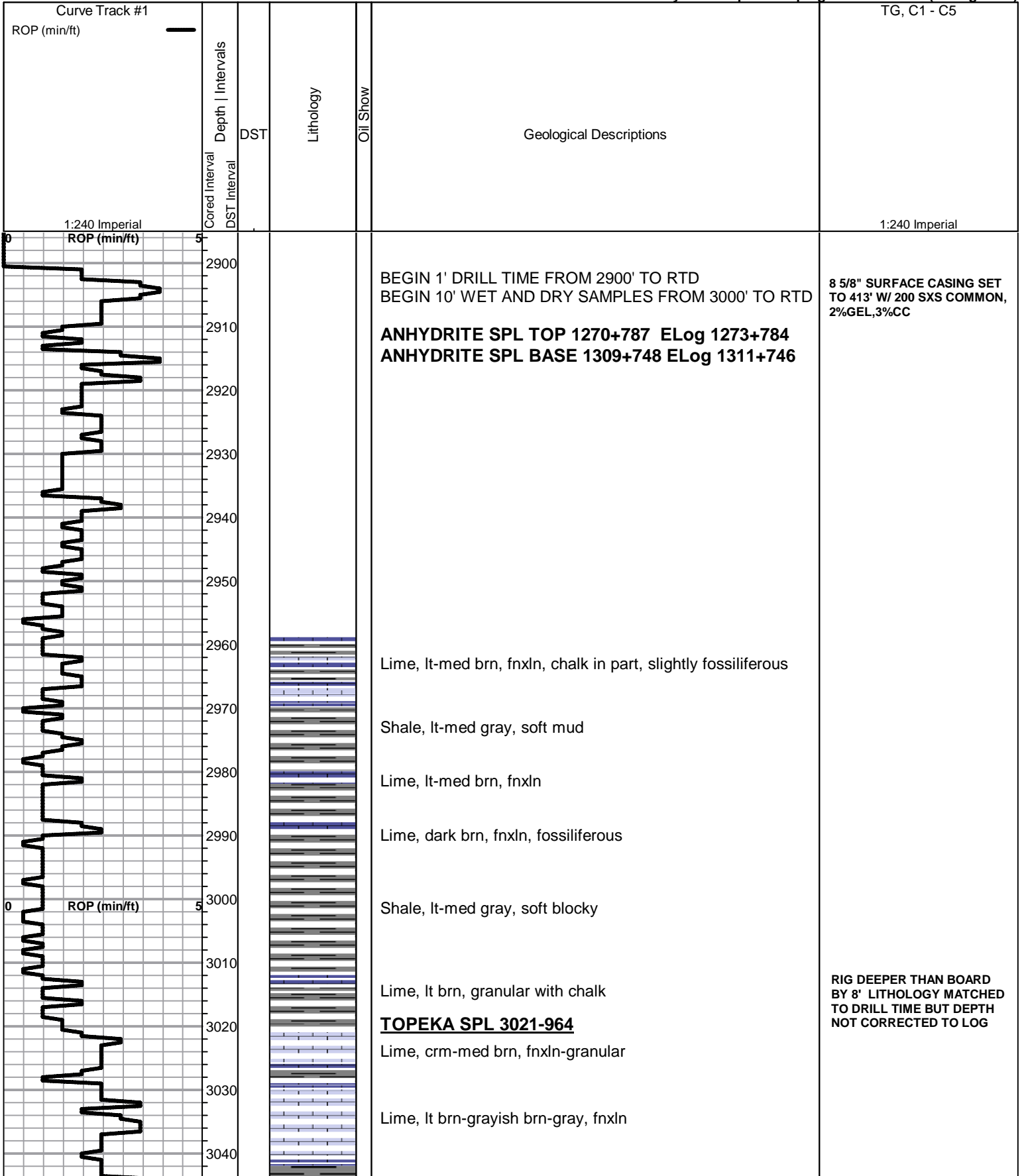
- MINERAL**
- ▨ Nodules
 - ◊ Varicolored chert
 - △ Chert White

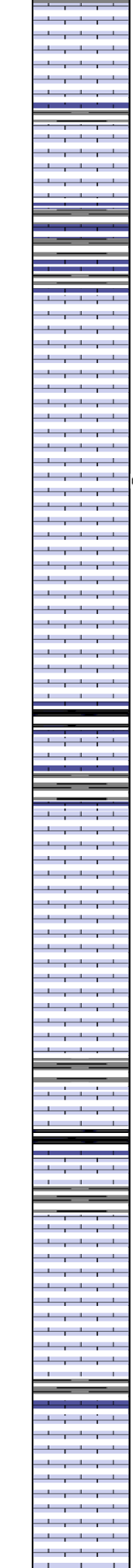
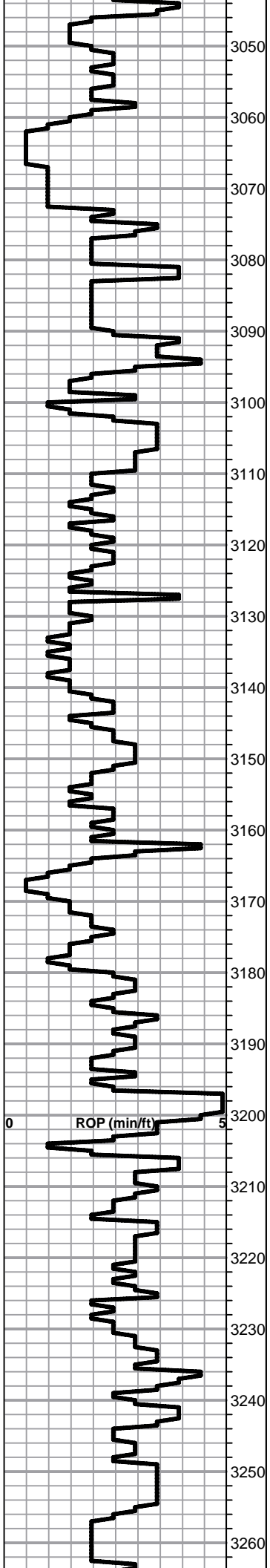
- FOSSIL**
- Oolite
 - ⊗ Oomoldic

OTHER SYMBOLS

- DST**
- DST Int
 - DST alt
 - Core

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





Lime, med brn-gray, fnxln, fossil fragments-fusulinids

Lime, tan-lt brn, fnxln grading into granular

Lime, tan-lt brn, granular, slight chalk in part, NS

Lime, med-dark brn, fnxln-granular, slightly fossiliferous

Lime, crm-med brn, fnxln, slight chalk in part, granular in part

Lime, lt-med brn, fnxln

Lime, lt-med brn, granular, few chips with scattered oil specks, No Odor

Lime, tan-lt brn, fnxln-granular, scattered chalk

Lime, lt-med brn, granular, chalky with sticky chalk clumps

Shale, gray-black carbonaceous

Lime, lt-med brn, fnxln

Shale, med gray, soft blocky

Lime, lt-med brn, fnxln

Lime, crm. fnxln with chalk

Lime, crm-tan, fnxln-granular, chalky

Lime, crm-tan, fnxln-granular, chalky white wash

Shale, black carbonaceous, fissile, blocky

Lime, crm-lt brn, fnxln

Lime, lt-med brn, fnxln-granular, slight chalk

Lime, lt-med brn, fnxln-granular

Shale, med gray, soft blocky

Lime, crm-lt brn, fnxln-granular, light chalk, slightly fossiliferous

Lime, crm-lt brn, fnxln, slight chalk

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

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

Lime, crm-lt brn, fnxln, slightly chalky

HEEBNER SHALE SPL 3286-1229

Shale, black carbonaceous, fissile, blocky
Lime, lt-med brn, fnxln
Shale, lime green, soft mud grading to lt grey mud

TORONTO SPL 3304-1247

Lime, white-crm, fnxln-lithographic with chalk in part, NS

Lime, white-crm, fnxln

LKC SPL 3332-1275

Lime, grayish brn, fnxln, hard on crush, NS

Lime, med brn-grayish brn, fnxln, hard

Lime, tan-lt brn, oolitic/oolmoldic with scattered to saturated staining, V Lt Odor, SFO on break

Lime, lt brn, fnxln, chalk in part

Lime, crm-lt gray, fnxln, bedded chalk in part, scattered specks of oil stain, no visible porosity

Lime, crm, fnxln-granular, NS

Shale, gray-black carbonaceous
Lime, lt gray, fnxln

Lime, crm-tan, fnxln, NS noted in interval

Shale, gray-grayish green, soft blocky
Lime, crm-tan, soft on crush, bedded chalk, NS

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

Lime, crm-tan, oolitic-oolmoldic, barren, NS No Odor

Lime, crm-tan, fnxln, bedded chalk, NS

Lime, crm-tan, fnxln, bedded chalk NS

Lime, crm-tan, fnxln, chalk in part

Lime, crm-tan, fnxln

Lime, crm-tan, fn-vfxln, NS

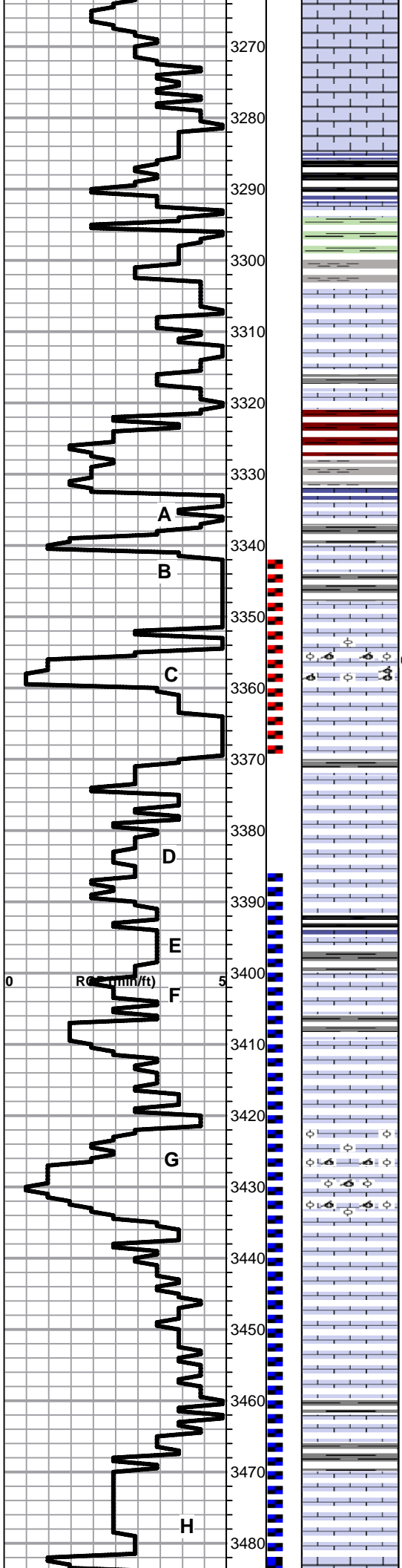
Lime, crm-tan, fnxln

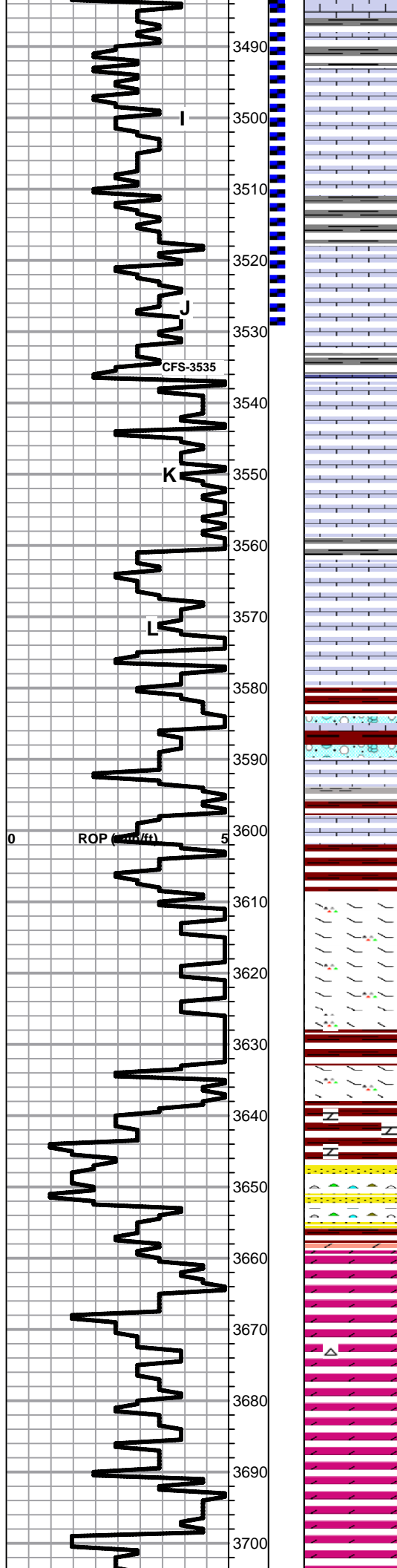
DST # 1 3342'-3370' SEE
HEADER FOR TEST
SUMMARY

Slope @3370' 3/4 degree

DST # 2 STRADDLE TEST
3418' TO 3530' PACKER
FAILED-MIS-RUN

DST # 3 STRADDLE TEST
3386' TO 3530' SEE HEADER
FOR TEST SUMMARY





Lime, crm-tan, fnxln

Lime, crm-tan, fnxln, bedded chalk, NS

Shale, lt gray-lt green, soft

Lime, crm-tan, fnxln, chalk in part NS

Lime, crm-tan, fn-vfxln

Lime, crm-tan-lt brn, fnxln, bedded chalk, NS

Lime, crm-tan, fnxln

Lime, crm-tan, fnxln, slight bedded chalk in part

BKC 3580-1523

Shale, reddish brn, blocky

Lime, clastic lime mix with shale

Shale, gray, red sticky clumps

Lime, tan, fnxln, bedded chalk

Shale, red wash

Lime, tan-med brn, dolomitic, hard on break
Cherts vari light color

Lime, as above

Shale, red wash with lime as above

Shale, red wash with chert nodules in part

Mix of poorly sorted sandstones, cherts and shales

ARBUCKLE SPL 3659-

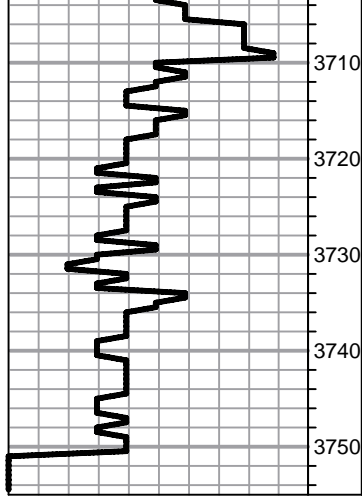
Dolomite, crm, fnxln, NS

Dolomite, crm, fnxln, NS

Dolomite, crm-lt brn, fnxln

Dolomite, crm-lt brn, fn-cxln, sucrosic in part

Dolomite, crm-tan, fn-cxln, hard



Dolomite, crm, fnxln

Dolomite, crm, fn-cxln, sucrosic

Dolomite, crm, fn-md xln

Dolomite, crm, fn-md xln, soft sticky white chalk

1st plug @3643' w/ 25 sxs
2nd plug @ 1300' w/ 25 sxs
3rd plug @ 560' w/ 100 sxs
4th plug @ 40' w/ 10 sxs
RH w/ 30 sxs

Slope @3750' 3/4 degree

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

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

No. 219

Date	9-1-12	Sec.	12	Twp.	15	Range	19	County	ELLIS	State	KANSAS	On Location		Finish	11:00 pm
Lease	KATHY		Well No.	#1		Location	ANTONINO LW-1S								
Contractor	SOUTHWIND #4				Owner	T.D.I									
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.	413'		Charge To	T.D.I								
Csg.	8 5/8"		Depth	413'		Street									
Tbg. Size			Depth			City	State								
Tool			Depth			The above was done to satisfaction and supervision of owner agent or contractor.									
Cement Left in Csg.			Shoe Joint	15'		Cement Amount Ordered	200com 3cc-2gel								
Meas Line			Displace	25 Bbls											

EQUIPMENT

Pumptrk #5	No.	Cementor	Helper	BRETT	Common	200
Bulktrk #14	No.	Driver	Driver	LONNIE	Poz. Mix	
Bulktrk PLU	No.	Driver	Driver	CISCO	Gel.	47

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
Cement	Sand
CIRCULATED	Handling
	Mileage
	211

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

Pumptrk Charge		Tax	
Mileage	Surface	Discount	
	12	Total Charge	
X Signature	[Signature]		

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

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

No. 740

Date	9-12-12	Sec.	2	Twp.	15	Range	19	County	ELLIS	State	KS	On Location		Finish	2.00pm
------	---------	------	---	------	----	-------	----	--------	-------	-------	----	-------------	--	--------	--------

Lease	Kathy	Well No.	#1	Location	Antino 15 1W
-------	-------	----------	----	----------	--------------

Contractor	Southwind Rig 4	Owner	To Quality Oilwell Cementing, Inc.
------------	-----------------	-------	------------------------------------

Type Job	plug	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		T.D.	3707	Charge To	T D I
-----------	--	------	------	-----------	-------

Csg.		Depth	3643	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	245 $\frac{60}{40}$ 490 gal
-----------	--	----------	--	-----------------------	-----------------------------

EQUIPMENT

Pumptrk	16	No.		Cementer	Matt	Common	147
Bulktrk	4	No.		Driver	FRANIS	Poz. Mix	98
Bulktrk	pu	No.		Driver	LANNIE	Gel.	9

JOB SERVICES & REMARKS

Remarks:		Calcium	
Rat Hole	30 545	Hulls	
Mouse Hole	15 545	Salt	
Centralizers		Flowseal	60A
Baskets		Kol-Seal	
D/V or Port Collar		Mud CLR 48	
		CFL-117 or CD110 CAF 38	

1st 3643ft 25 545
2nd 1300ft 25 545
3rd 1560ft 100 545
4th 40ft 10 945

Sand	
Handling	234
Mileage	

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
Wood Plug	
Pumptrk Charge	plug
Mileage	12

X Signature

Tax	
Discount	
Total Charge	

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
Thomas E. Wright, Commissioner
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

September 25, 2012

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

Re: ACO1
API 15-051-26344-00-00
Kathy 1
SW/4 Sec.02-15S-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