



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1210516
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: _____

1210516

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
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:				

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: 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: <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> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd
Hays KS 67601-9696

ATTN: Herb Deines

Dolores #1

15 15s 19w Ellis,KS

Start Date: 2014.06.08 @ 15:00:00

End Date: 2014.06.08 @ 22:37:00

Job Ticket #: 59254 DST #: 1

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

Printed: 2014.06.11 @ 14:35:09

TDI Inc. 15 15s 19w Ellis,KS Dolores #1 DST # 1 LKC " A - C " 2014.06.08



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI Inc.
1310 Bison Rd
Hays KS 67601-9696
ATTN: Herb Deines

15 15s 19w Ellis,KS
Dolores #1
Job Ticket: 59254 **DST#: 1**
Test Start: 2014.06.08 @ 15:00:00

Tool Information

Drill Pipe:	Length: 3303.00 ft	Diameter: 3.80 inches	Volume: 46.33 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 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:	47000.00 lb
			<u>Total Volume: 46.33 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial	44000.00 lb
Depth to Top Packer:	3293.00 ft			Final	44000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	57.00 ft				
Tool Length:	78.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3273.00	
Shut In Tool	5.00			3278.00	
Hydraulic tool	5.00			3283.00	
Packer	5.00			3288.00	21.00 Bottom Of Top Packer
Packer	5.00			3293.00	
Stubb	1.00			3294.00	
Perforations	1.00			3295.00	
Change Over Sub	1.00			3296.00	
Recorder	0.00	8789	Inside	3296.00	
Recorder	0.00	8289	Outside	3296.00	
Blank Spacing	32.00			3328.00	
Change Over Sub	1.00			3329.00	
Perforations	18.00			3347.00	
Bullnose	3.00			3350.00	57.00 Bottom Packers & Anchor

Total Tool Length: 78.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc. **15 15s 19w Ellis,KS**
 1310 Bison Rd **Dolores #1**
 Hays KS 67601-9696 Job Ticket: 59254 **DST#: 1**
 ATTN: Herb Deines Test Start: 2014.06.08 @ 15:00:00

Mud and Cushion Information

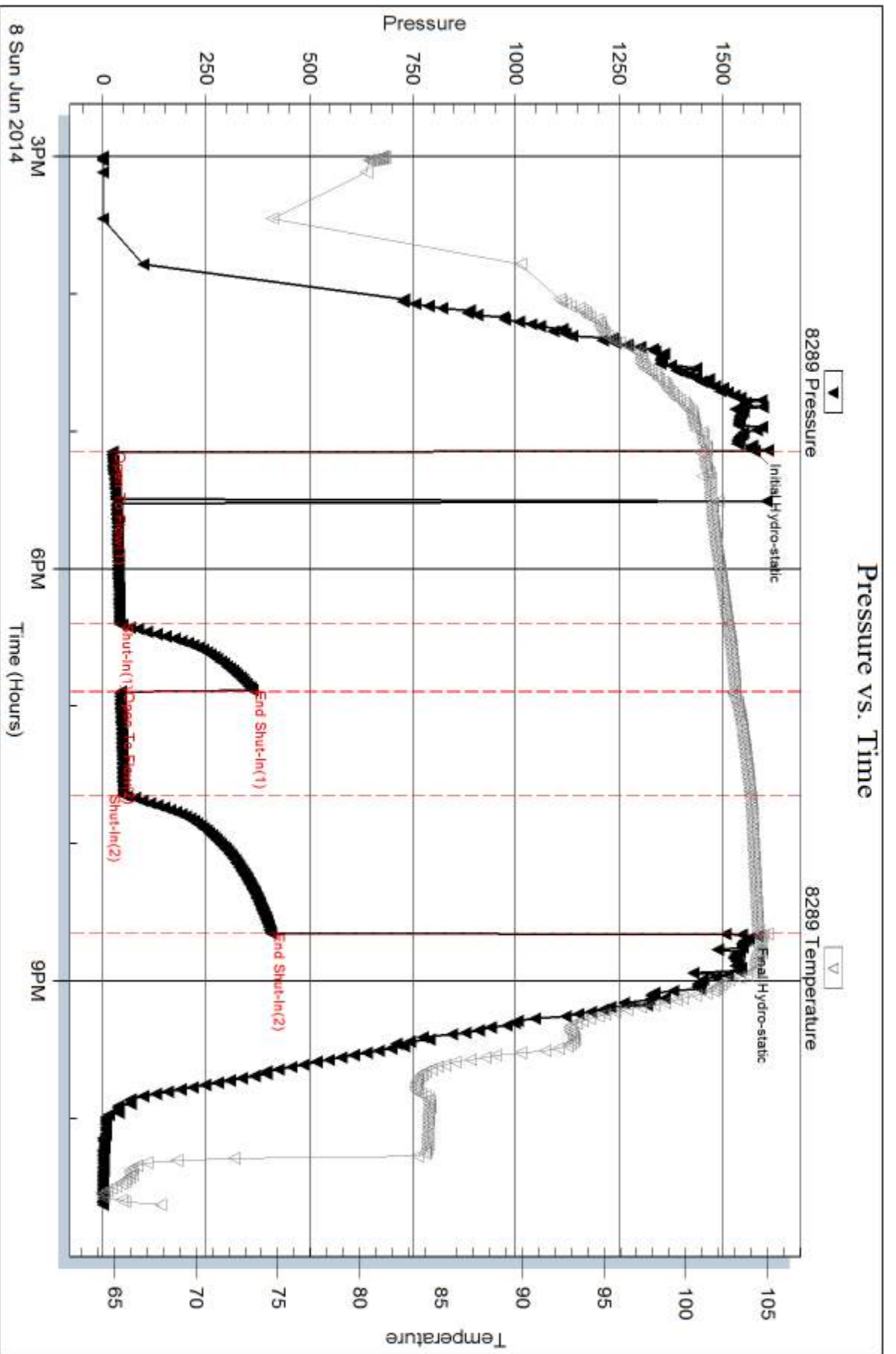
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 45.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.56 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3000.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
75.00	OCM 5%o 95%m	1.052
1.00	CO 100%	0.014

Total Length: 76.00 ft Total Volume: 1.066 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:



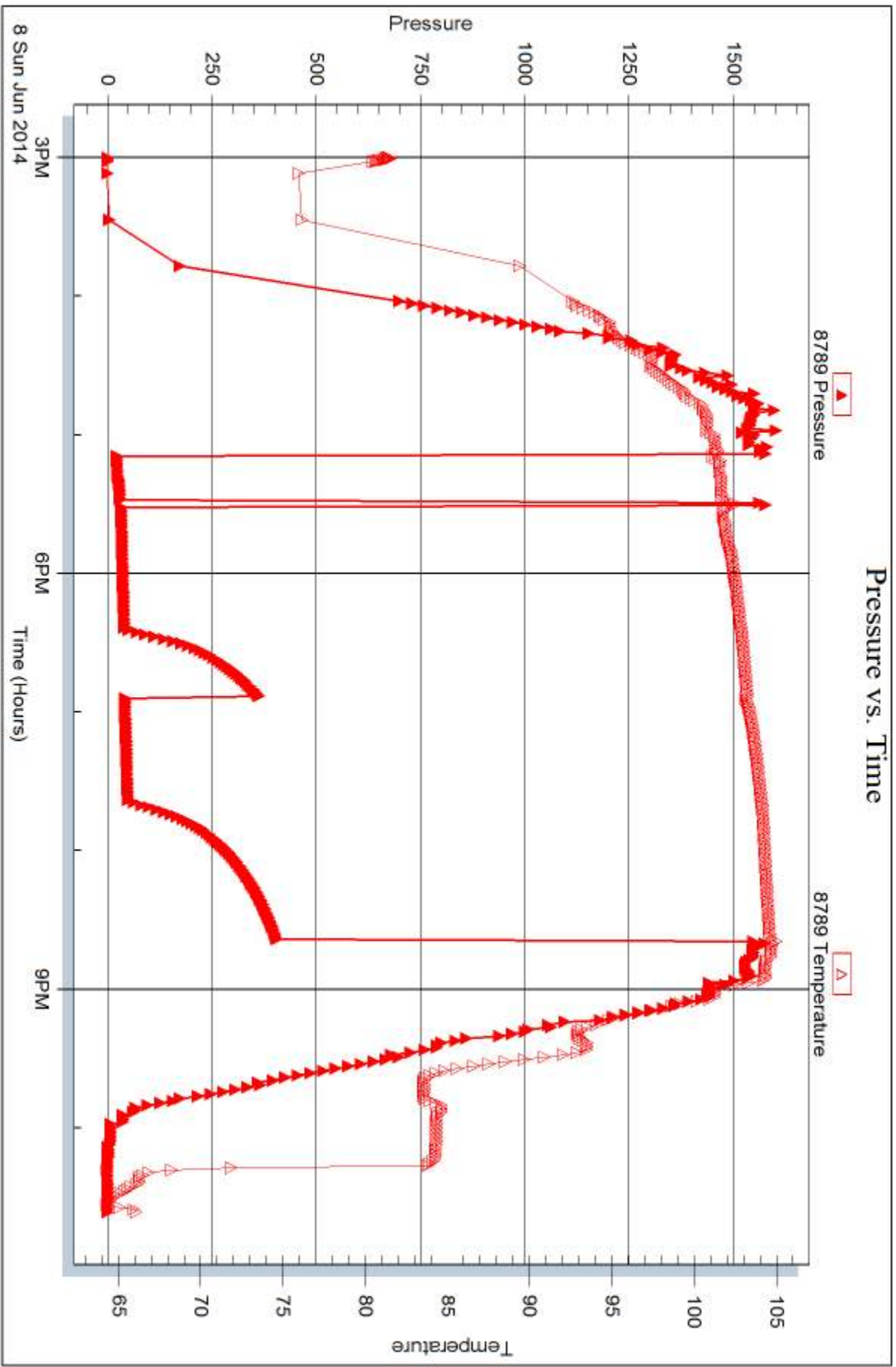
Serial #: 8789

Inside

TDI Inc.

Dolores #1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 59254

Printed: 2014.06.11 @ 14:35:10



DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd
Hays KS 67601-9696

ATTN: Herb Deines

Dolores #1

15 15s 19w Ellis,KS

Start Date: 2014.06.09 @ 12:32:00

End Date: 2014.06.09 @ 19:04:00

Job Ticket #: 59255 DST #: 2

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

Printed: 2014.06.11 @ 14:34:49

TDI Inc. 15 15s 19w Ellis,KS Dolores #1 DST # 2 LKC " H - J " 2014.06.09



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI Inc.
1310 Bison Rd
Hays KS 67601-9696
ATTN: Herb Deines

15 15s 19w Ellis,KS
Dolores #1
Job Ticket: 59255 **DST#: 2**
Test Start: 2014.06.09 @ 12:32:00

Tool Information

Drill Pipe:	Length: 3431.00 ft	Diameter: 3.80 inches	Volume: 48.13 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 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:	60000.00 lb
			<u>Total Volume: 48.13 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	45000.00 lb
Depth to Top Packer:	3422.00 ft			Final	45000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	88.00 ft				
Tool Length:	109.00 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			3402.00	
Shut In Tool	5.00			3407.00	
Hydraulic tool	5.00			3412.00	
Packer	5.00			3417.00	21.00 Bottom Of Top Packer
Packer	5.00			3422.00	
Stubb	1.00			3423.00	
Perforations	1.00			3424.00	
Change Over Sub	1.00			3425.00	
Recorder	0.00	8789	Inside	3425.00	
Recorder	0.00	8289	Outside	3425.00	
Blank Spacing	63.00			3488.00	
Change Over Sub	1.00			3489.00	
Perforations	18.00			3507.00	
Bullnose	3.00			3510.00	88.00 Bottom Packers & Anchor

Total Tool Length: 109.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc. **15 15s 19w Ellis,KS**
 1310 Bison Rd **Dolores #1**
 Hays KS 67601-9696 Job Ticket: 59255 **DST#: 2**
 ATTN: Herb Deines Test Start: 2014.06.09 @ 12:32:00

Mud and Cushion Information

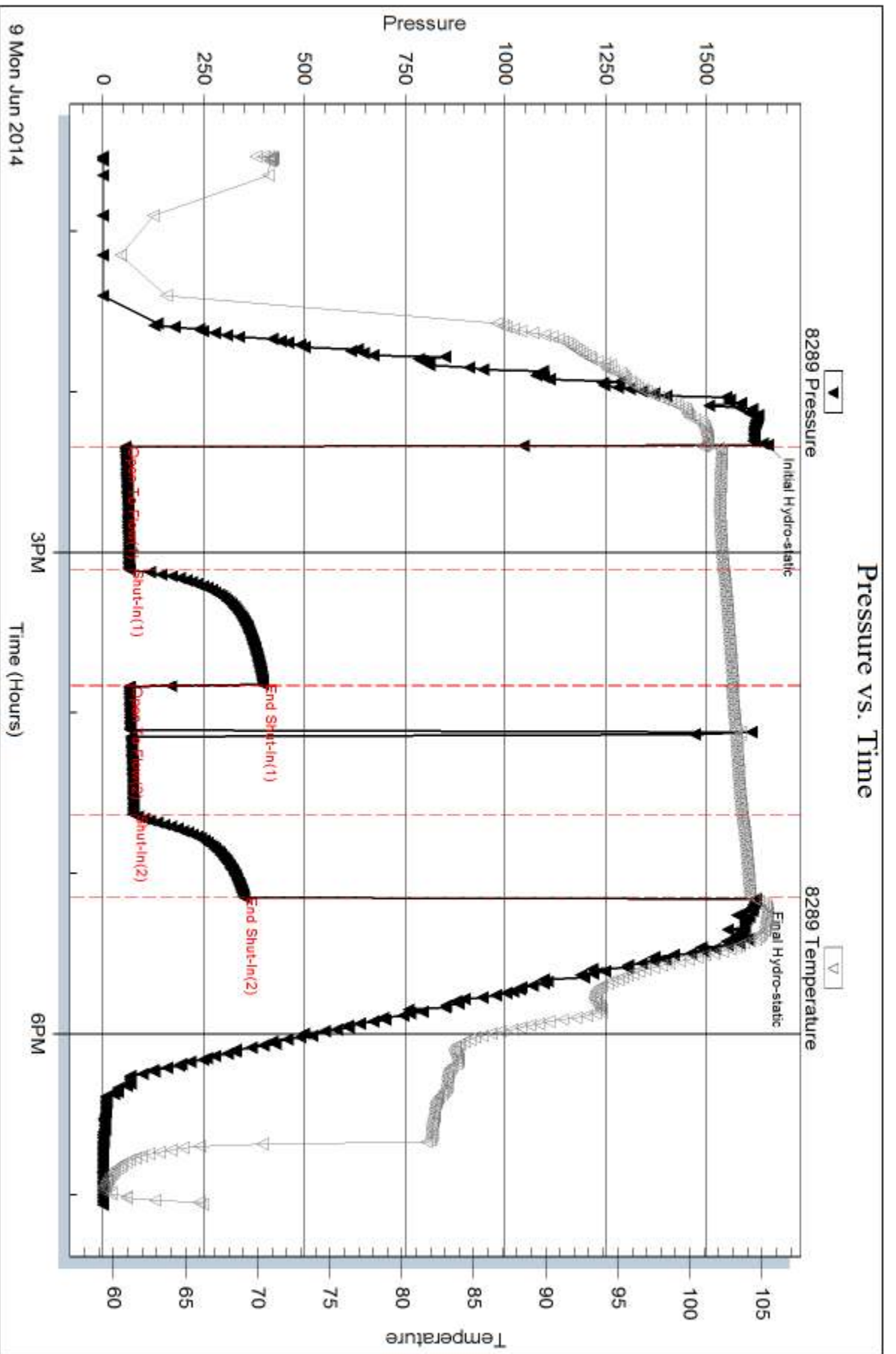
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 45.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.95 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3100.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
125.00	OSM 100%	1.753

Total Length: 125.00 ft Total Volume: 1.753 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:



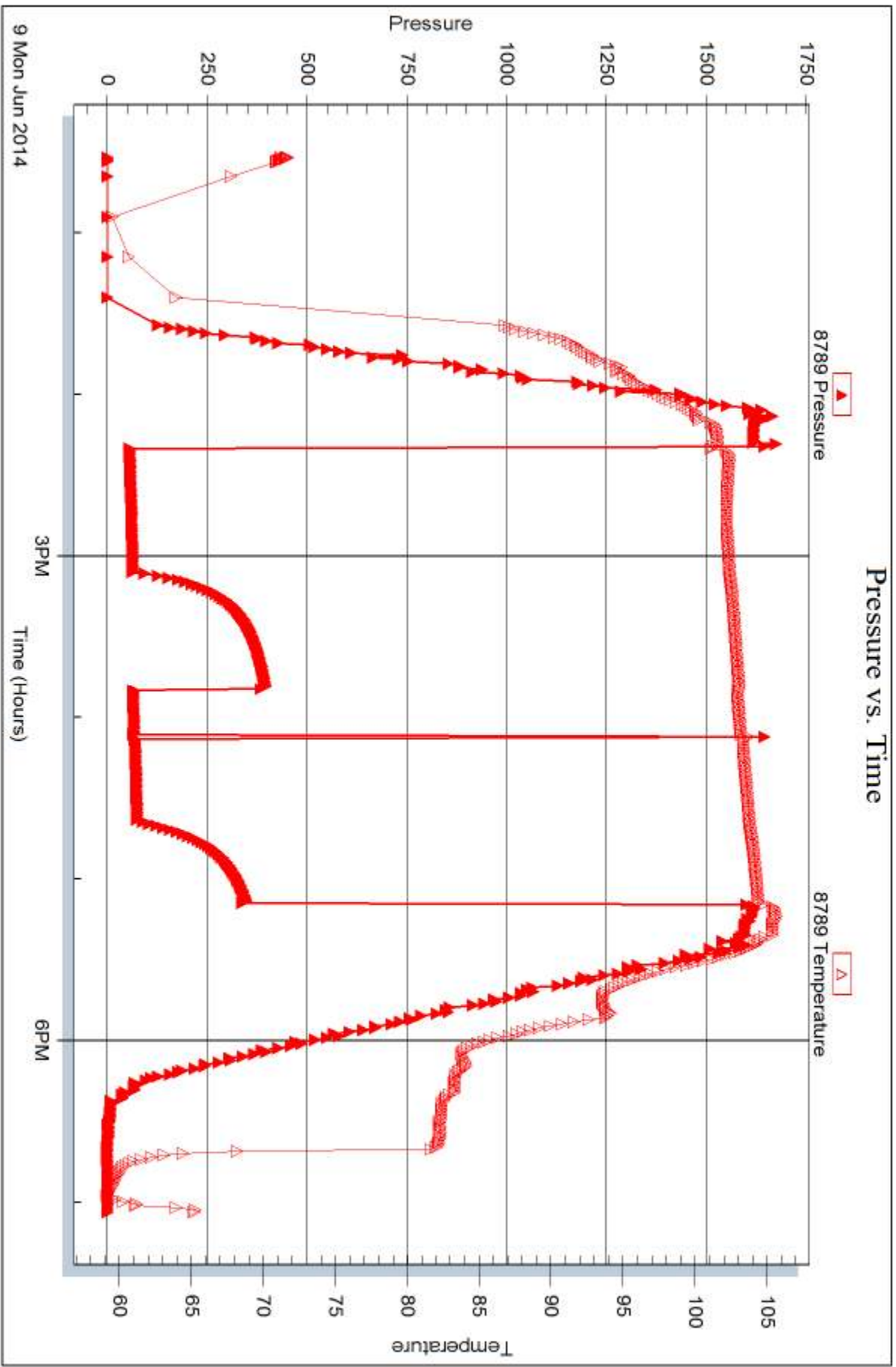
Serial #: 8789

Inside

TDI Inc.

Dolores #1

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 59255

Printed: 2014.06.11 @ 14:34:50



DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd
Hays KS 67601-9696

ATTN: Herb Deines

Dolores #1

15 15s 19w Ellis,KS

Start Date: 2014.06.10 @ 19:04:00

End Date: 2014.06.11 @ 00:00:00

Job Ticket #: 59256 DST #: 3

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

Printed: 2014.06.11 @ 14:34:26

TDI Inc.
15 15s 19w Ellis,KS
Dolores #1
DST # 3
Cong Sand
2014.06.10



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI Inc.
1310 Bison Rd
Hays KS 67601-9696
ATTN: Herb Deines

15 15s 19w Ellis,KS
Dolores #1
Job Ticket: 59256 **DST#: 3**
Test Start: 2014.06.10 @ 19:04:00

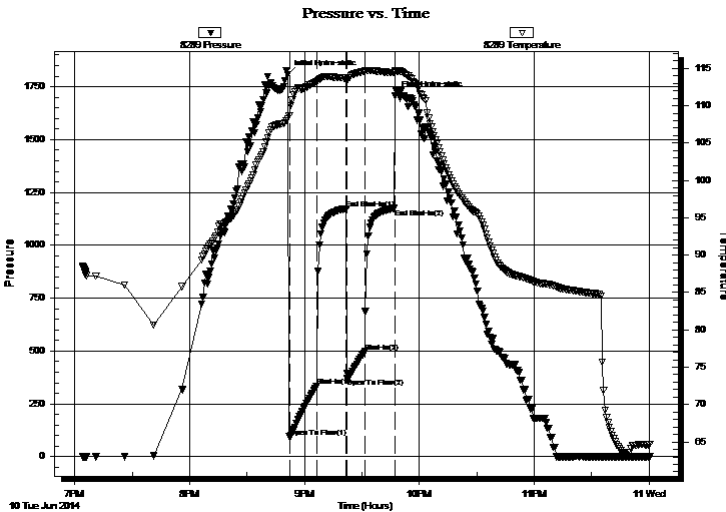
GENERAL INFORMATION:

Formation: **Cong Sand**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:52:00
Time Test Ended: 00:00:00
Interval: **3608.00 ft (KB) To 3652.00 ft (KB) (TVD)**
Total Depth: 3750.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Straddle (Reset)
Tester: Jim Svaty
Unit No: 76
Reference Elevations: 2019.00 ft (KB)
2011.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8289 Outside
Press@RunDepth: 496.89 psig @ 3612.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2014.06.10 End Date: 2014.06.11 Last Calib.: 2014.06.11
Start Time: 19:04:02 End Time: 00:00:15 Time On Btm: 2014.06.10 @ 20:51:15
Time Off Btm: 2014.06.10 @ 21:47:15

TEST COMMENT: 15-IFP- BOB in 1 min.
15-ISIP- Very Weak Surface Blow
10-FFP- BOB in 1 min 15 sec.
15-FSIP- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1808.18	108.26	Initial Hydro-static
1	94.30	108.63	Open To Flow (1)
15	335.33	113.18	Shut-In(1)
31	1172.93	113.68	End Shut-In(1)
31	370.24	113.44	Open To Flow (2)
41	496.89	114.59	Shut-In(2)
56	1174.20	114.39	End Shut-In(2)
56	1706.25	114.65	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
567.00	OMCW 3%o 5% m 92%w	7.95
252.00	OWCM 4%o 46%w 50% m	3.53
239.00	WCM 20%w 80% m Show of Oil	3.35

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI Inc.
1310 Bison Rd
Hays KS 67601-9696
ATTN: Herb Deines

15 15s 19w Ellis,KS
Dolores #1
Job Ticket: 59256 **DST#: 3**
Test Start: 2014.06.10 @ 19:04:00

Tool Information

Drill Pipe:	Length: 3590.00 ft	Diameter: 3.80 inches	Volume: 50.36 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 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:	55000.00 lb
			<u>Total Volume: 50.36 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial	48000.00 lb
Depth to Top Packer:	3608.00 ft			Final	52000.00 lb
Depth to Bottom Packer:	3652.00 ft				
Interval between Packers:	44.00 ft				
Tool Length:	163.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3588.00	
Shut In Tool	5.00			3593.00	
Hydraulic tool	5.00			3598.00	
Packer	5.00			3603.00	21.00 Bottom Of Top Packer
Packer	5.00			3608.00	
Stubb	1.00			3609.00	
Perforations	2.00			3611.00	
Change Over Sub	1.00			3612.00	
Recorder	0.00	8789	Inside	3612.00	
Recorder	0.00	8289	Outside	3612.00	
Perforations	30.00			3642.00	
Change Over Sub	1.00			3643.00	
Perforations	5.00			3648.00	
Blank Off Sub	1.00			3649.00	
Blank Spacing	3.00			3652.00	44.00 Tool Interval
Packer	1.00			3653.00	
Perforations	4.00			3657.00	
Change Over Sub	1.00			3658.00	
Recorder	0.00	6668	Below	3658.00	
Blank Spacing	92.00			3750.00	98.00 Bottom Packers & Anchor

Total Tool Length: 163.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc. **15 15s 19w Ellis,KS**
 1310 Bison Rd **Dolores #1**
 Hays KS 67601-9696 Job Ticket: 59256 **DST#: 3**
 ATTN: Herb Deines Test Start: 2014.06.10 @ 19:04:00

Mud and Cushion Information

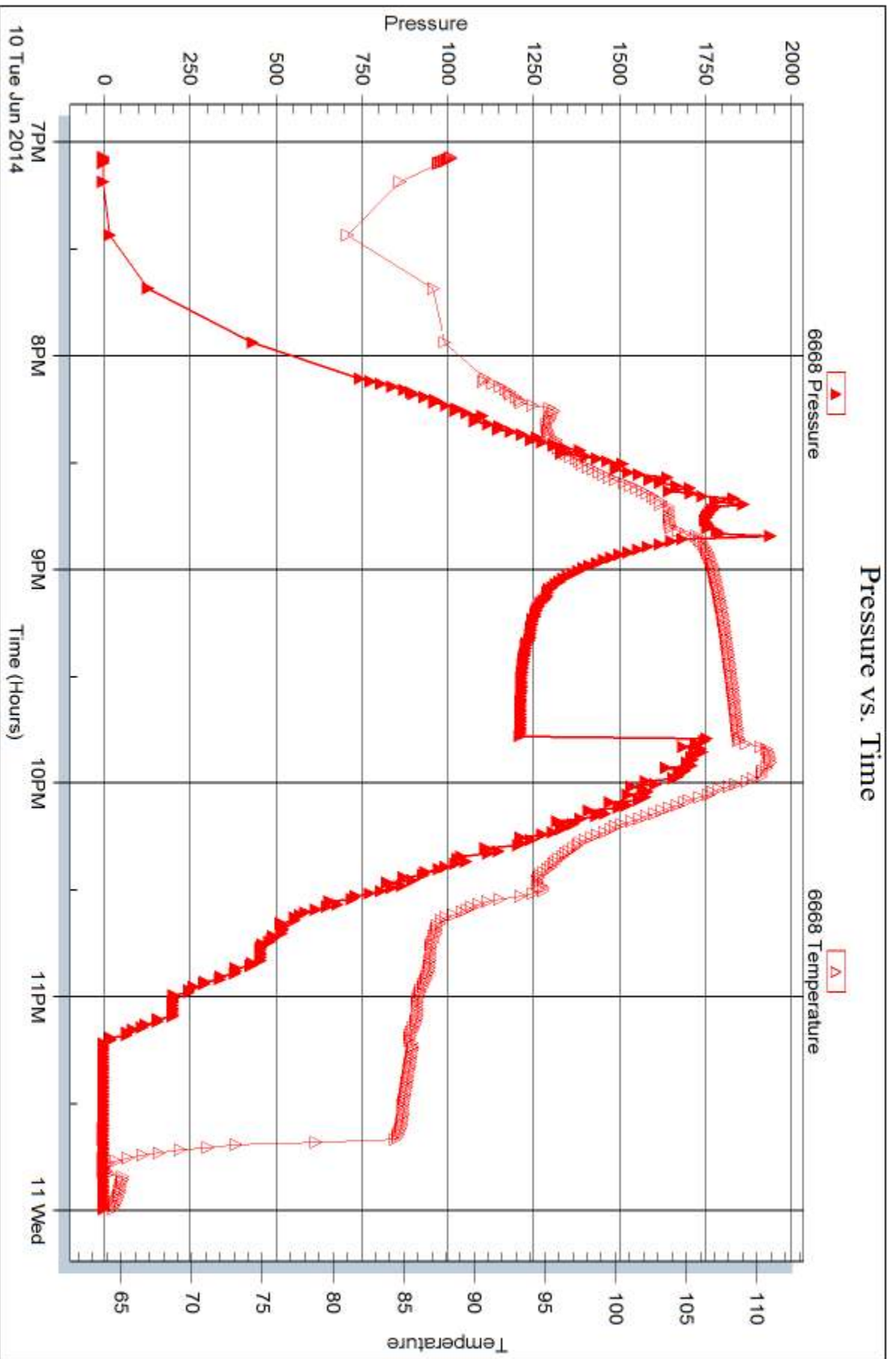
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	19500 ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.17 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4300.00 ppm			
Filter Cake: 2.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
567.00	OMCW 3%o 5%m 92%w	7.954
252.00	OWCM 4%o 46%w 50%m	3.535
239.00	WCM 20%w 80%m Show of Oil	3.353

Total Length: 1058.00 ft Total Volume: 14.842 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: .365 @ 66



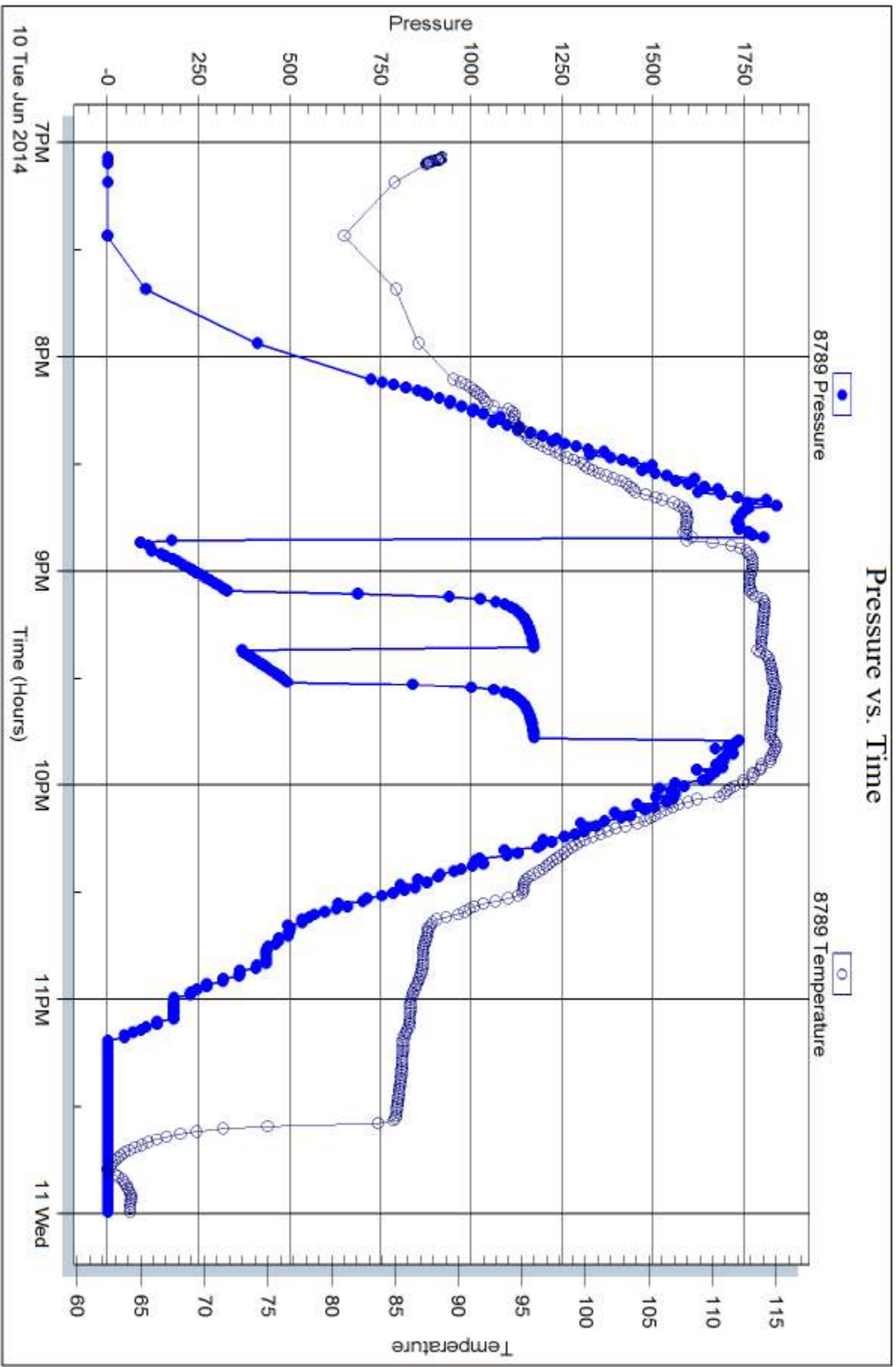
Serial #: 8789

Inside

TDI Inc.

Dolores #1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 59256

Printed: 2014.06.11 @ 14:34:27



DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd
Hays KS 67601-9696

ATTN: Herb Deines

Dolores #1

15 15s 19w Ellis,KS

Start Date: 2014.06.11 @ 00:32:00

End Date: 2014.06.11 @ 05:51:00

Job Ticket #: 59257 DST #: 4

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

Printed: 2014.06.11 @ 14:33:50

TDI Inc. 15 15s 19w Ellis,KS Dolores #1 DST # 4 LKC " K " 2014.06.11



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI Inc.
1310 Bison Rd
Hays KS 67601-9696
ATTN: Herb Deines

15 15s 19w Ellis,KS
Dolores #1
Job Ticket: 59257 **DST#: 4**
Test Start: 2014.06.11 @ 00:32:00

Tool Information

Drill Pipe:	Length: 3496.00 ft	Diameter: 3.80 inches	Volume: 49.04 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 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: 50000.00 lb
			<u>Total Volume: 49.04 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3502.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	3548.00 ft			
Interval between Packers:	46.00 ft			
Tool Length:	269.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3482.00	
Shut In Tool	5.00			3487.00	
Hydraulic tool	5.00			3492.00	
Packer	5.00			3497.00	21.00 Bottom Of Top Packer
Packer	5.00			3502.00	
Stubb	1.00			3503.00	
Perforations	4.00			3507.00	
Change Over Sub	1.00			3508.00	
Recorder	0.00	8789	Inside	3508.00	
Recorder	0.00	8289	Outside	3508.00	
Blank Spacing	30.00			3538.00	
Change Over Sub	1.00			3539.00	
Perforations	5.00			3544.00	
Blank Off Sub	1.00			3545.00	
Blank Spacing	3.00			3548.00	46.00 Tool Interval
Packer	1.00			3549.00	
Perforations	14.00			3563.00	
Change Over Sub	1.00			3564.00	
Recorder	0.00	6668	Below	3564.00	
Blank Spacing	186.00			3750.00	202.00 Bottom Packers & Anchor

Total Tool Length: 269.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc. **15 15s 19w Ellis,KS**
 1310 Bison Rd **Dolores #1**
 Hays KS 67601-9696 Job Ticket: 59257 **DST#: 4**
 ATTN: Herb Deines Test Start: 2014.06.11 @ 00:32:00

Mud and Cushion Information

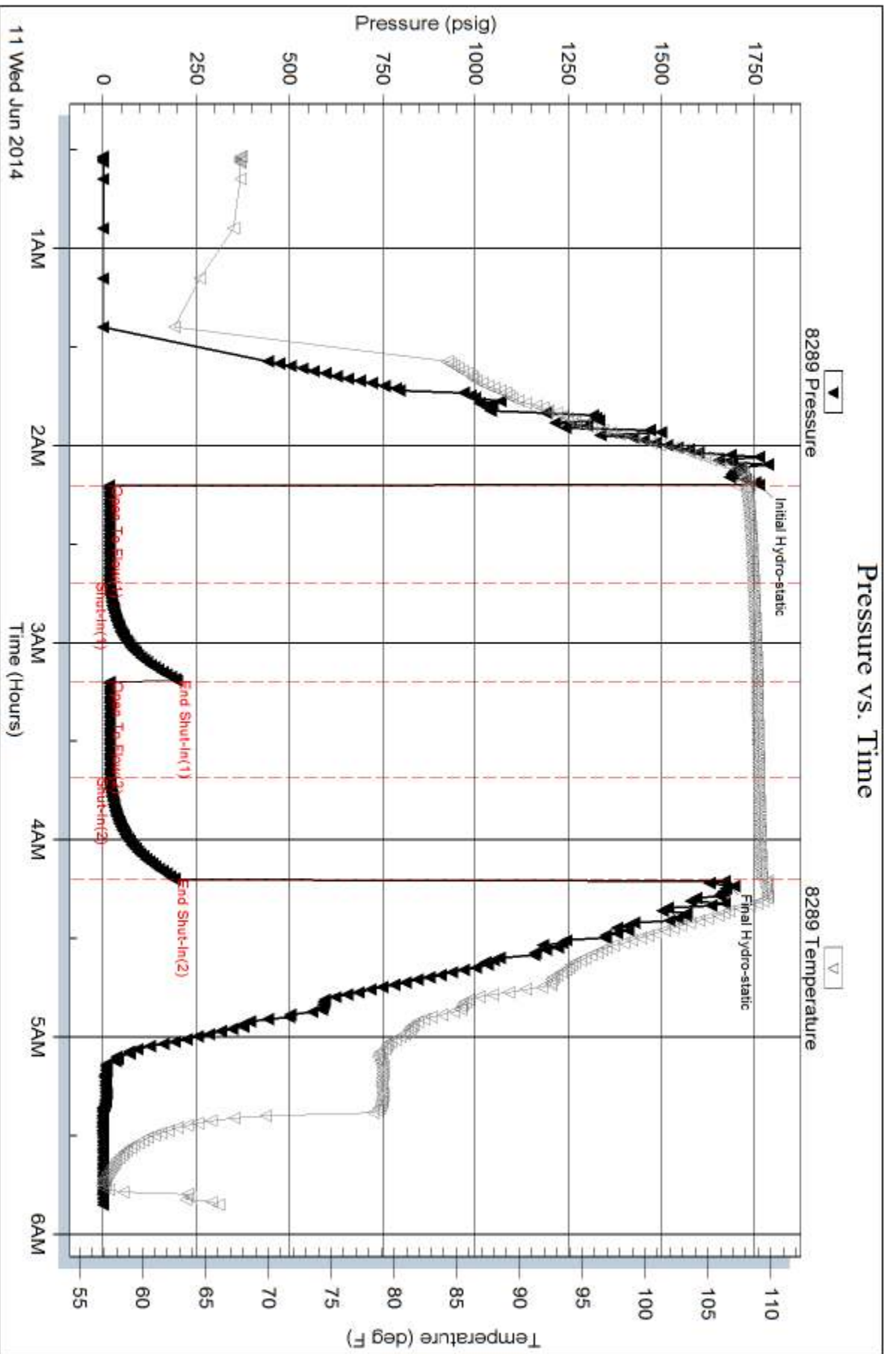
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.16 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4300.00 ppm			
Filter Cake: 2.00 inches			

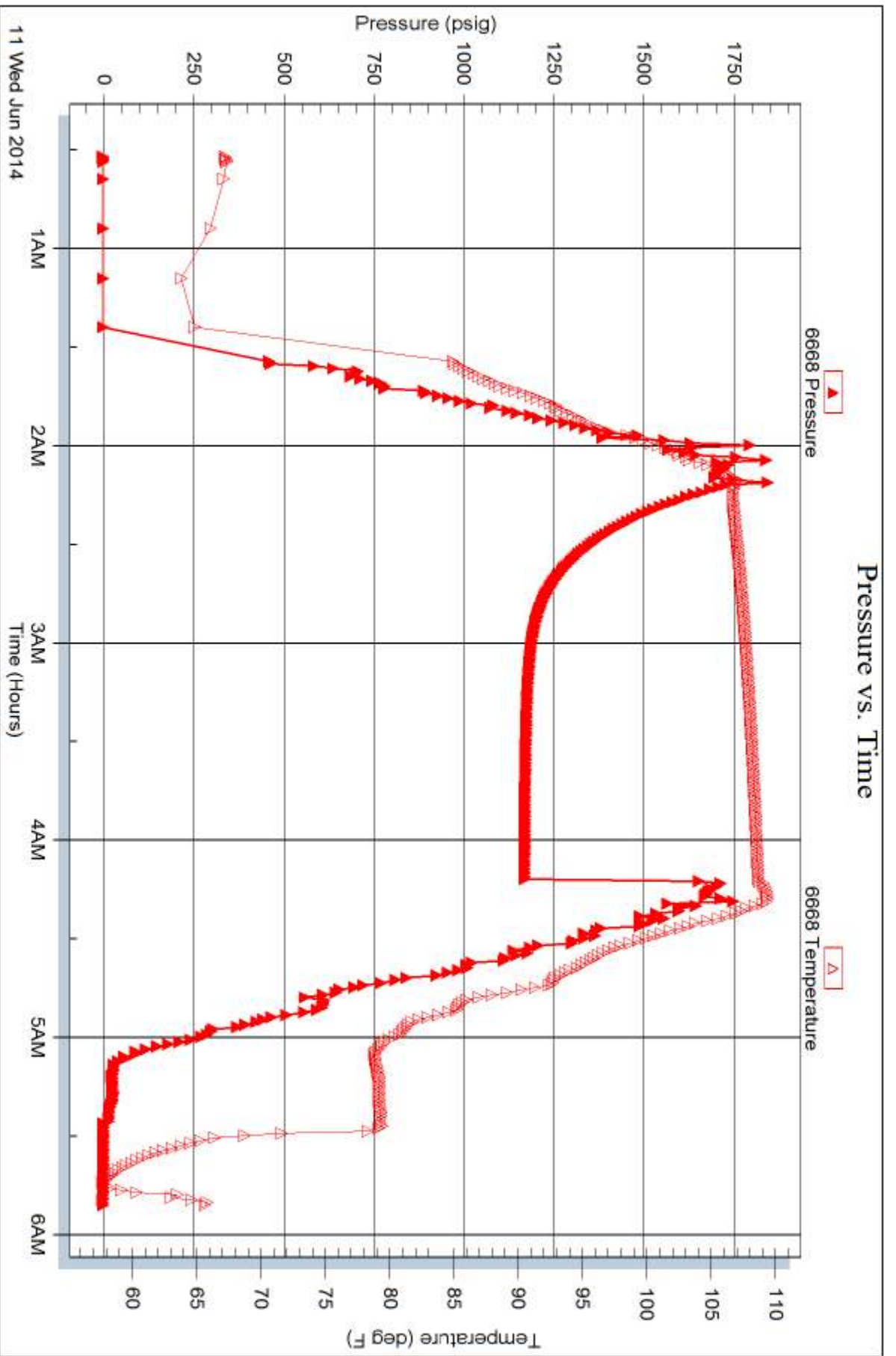
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	Mud 100%	0.014

Total Length: 1.00 ft Total Volume: 0.014 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:





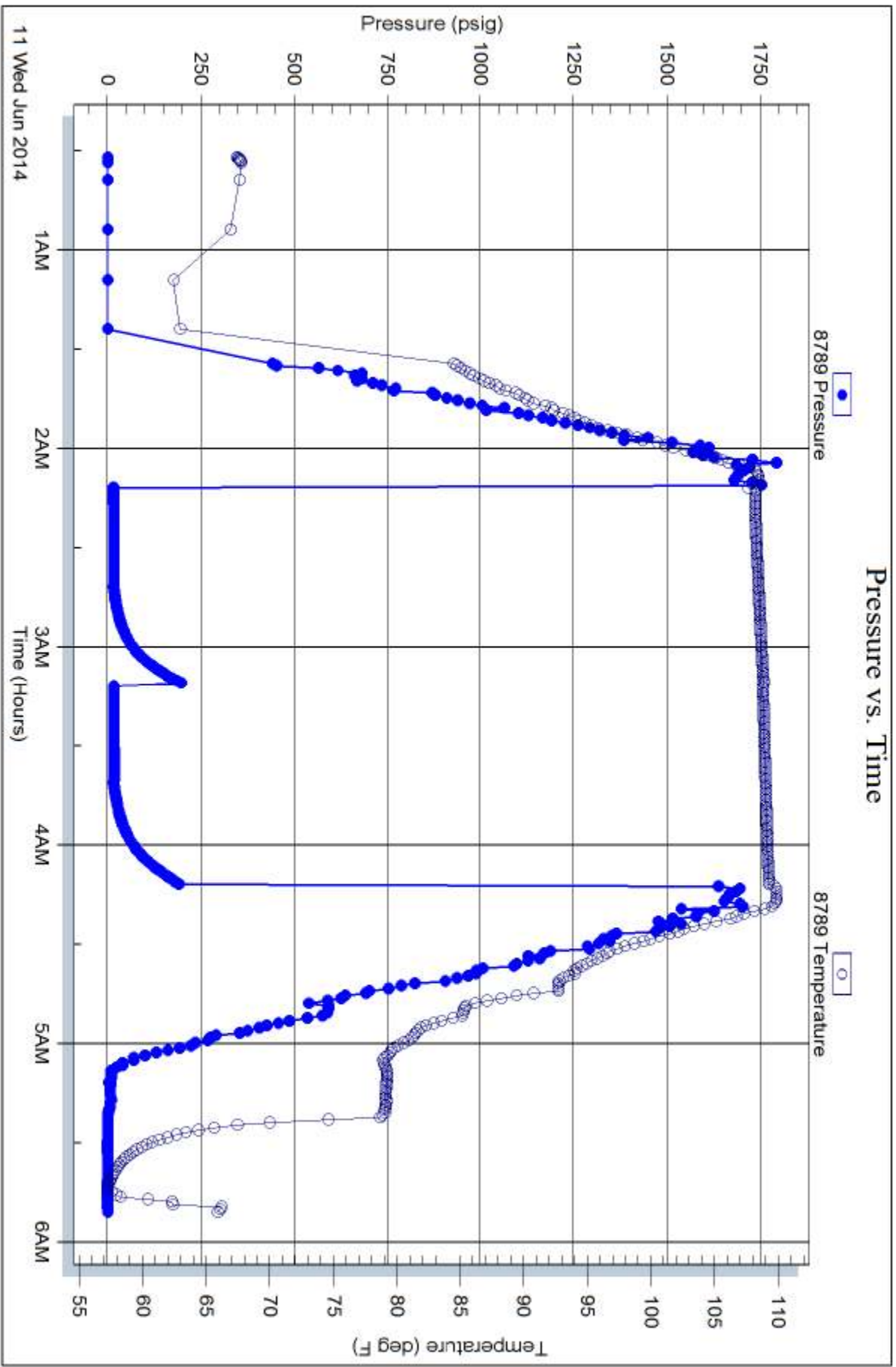
Serial #: 8789

Inside

TDI Inc.

Dolores #1

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 59257

Printed: 2014.06.11 @ 14:33:51



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59254

Well Name & No. Dolores #1 Test No. 1 Date 6-8-14
 Company T.P.I., Inc. Elevation 2019 KB 2011 GL
 Address 1310 Bison Rd Hays KS 67601
 Co. Rep / Geo. Herb Deines Rig Southwind #1
 Location: Sec. 15 Twp. 15^s Rge. 19^s Co. Ellis State KS

Interval Tested 3293 - 3350 Zone Tested LKC "A-C"
 Anchor Length 57 Drill Pipe Run 3303 Mud Wt. 8.8
 Top Packer Depth 3287 Drill Collars Run 0 Vis 45
 Bottom Packer Depth 3293 Wt. Pipe Run 0 WL 7.6
 Total Depth 3350 Chlorides 3000 ppm System LCM 1

Blow Description IFP - Flushed x2 10min + 20min Surface Blow to 4in.
ISIP - No Blow
FFP - Surface Blow Building to 4in.
FSIP - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>75</u>	<u>0cm</u>	<u>5</u>		<u>95</u>	
<u>1</u>	<u>0</u>	<u>100</u>			

Rec Total 76 BHT 105 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1578 Test 1150 T-On Location 14:09
 (B) First Initial Flow 22 Jars _____ T-Started 15:00
 (C) First Final Flow 40 Safety Joint _____ T-Open 17:09
 (D) Initial Shut-In 362 Circ Sub _____ T-Pulled 20:39
 (E) Second Initial Flow 43 Hourly Standby _____ T-Out 22:37
 (F) Second Final Flow 49 Mileage 32 RT 49.60 Comments _____
 (G) Final Shut-In 406 Sampler _____
 (H) Final Hydrostatic 1546 Straddle _____ Ruined Shale Packer _____

Initial Open 75 Shale Packer _____ Ruined Packer _____
 Initial Shut-In 30 Extra Packer _____ Extra Copies _____
 Final Flow 45 Extra Recorder _____ Sub Total 0
 Final Shut-In 60 Day Standby _____ Total 1199.60
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1199.60

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.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59255

Well Name & No. Dolores #1 Test No. 2 Date 6-9-14
 Company TDI, Inc. Elevation 2019 KB 2011 GL
 Address 1310 Bison Rd Hays KS 67601-67601
 Co. Rep / Geo. Herb Deines Rig Southwind #1
 Location: Sec. 15 Twp. 15^s Rge. 19^w Co. Ellis State KS

Interval Tested 3422 - 3510 Zone Tested LKC 'H-J'
 Anchor Length 88 Drill Pipe Run 3431 Mud Wt. 9.0
 Top Packer Depth 3417 Drill Collars Run 0 Vis 45
 Bottom Packer Depth 3422 Wt. Pipe Run 0 WL 8.0
 Total Depth 3510 Chlorides 3100 ppm System LCM 1

Blow Description IFP - Surface Blow To 5in.
ISIP - No Blow
FFP - No Blow Flashed 15min Surface Blow
FSTIP - No Blow

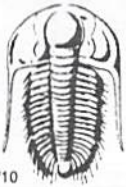
Rec	Feet of	%gas	%oil	%water	%mud
<u>125</u>	<u>05m</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 125 BHT 104 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1651</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>12:00</u>
(B) First Initial Flow <u>55</u>	<input type="checkbox"/> Jars _____	T-Started <u>12:32</u>
(C) First Final Flow <u>65</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>14:20</u>
(D) Initial Shut-In <u>396</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>17:09</u>
(E) Second Initial Flow <u>65</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>19:04</u>
(F) Second Final Flow <u>75</u>	<input checked="" type="checkbox"/> Mileage <u>49.60</u>	Comments _____
(G) Final Shut-In <u>349</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1623</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____

Initial Open 45 Shale Packer _____ Ruined Packer _____
 Initial Shut-In 45 Extra Packer _____ Extra Copies _____
 Final Flow 48 Extra Recorder _____ Sub Total 0
 Final Shut-In 30 Day Standby _____ Total 1199.60
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1199.60

Approved By _____ Our Representative [Signature]
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59256

4/10

Well Name & No. Dolores #1 Test No. 3 Date 6-10-14
 Company TDI, Inc. Elevation 2019 KB 2011 GL
 Address 1310 Bison Rd Hays KS 67601
 Co. Rep / Geo. Herb Deines Rig Southwind #1
 Location: Sec. 15 Twp. 15S Rge. 19W Co. Ellis State KS

Interval Tested 3608-3652 Zone Tested Cong. Sand
 Anchor Length 44 (99TP) Drill Pipe Run 3590 Mud Wt. 9.1
 Top Packer Depth 3603 Drill Collars Run 0 Vis 50
 Bottom Packer Depth 3608 Wt. Pipe Run 0 WL 9.2
 Total Depth 3652 Chlorides 4300 ppm System LCM 2

Blow Description TD-3751 IFF- BOB in 1min
ISIP- Very Weak Surface Blow
FFP- BOB in 1min + 15sec.
FSIP- No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>567</u>	<u>OMCW</u>	<u>3</u>	<u>92</u>	<u>5</u>	
<u>252</u>	<u>OWCM</u>	<u>4</u>	<u>46</u>	<u>50</u>	
<u>239</u>	<u>WCM Show of Oil</u>		<u>20</u>	<u>80</u>	

Rec Total 1058 BHT 114 Gravity API RW 36.5 @ 66 °F Chlorides 19,500 ppm
 Test 1150 T-On Location 17:36
 Jars T-Started 19:04
 Safety Joint T-Open 20:52
 Circ Sub T-Pulled 21:47
 Hourly Standby T-Out 00:00
 Mileage 49.60 Comments _____
 Sampler _____
 Straddle 600 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 15 Extra Recorder _____ Sub Total 0
 Initial Shut-In 15 Day Standby _____ Total 1799.60
 Final Flow 10 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 15 Sub Total 1799.60

Approved By _____ Our Representative [Signature]
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59257

4/10

Well Name & No. Dolores #1 Test No. 4 Date 6-11-14
 Company TPT, Inc. Elevation 2019 KB 2011 GL
 Address 1310 Bison Rd Hays KS 67601
 Co. Rep / Geo. Herb Deines Rig Southwind 1
 Location: Sec. 15 Twp. 15^s Rge. 19^w Co. Ellis State KS

Interval Tested 3502-3548 Zone Tested LKC "K"
 Anchor Length 46 Drill Pipe Run 3496 Mud Wt. 9.1
 Top Packer Depth 3502 Drill Collars Run 0 Vis 50
 Bottom Packer Depth 3548 Wt. Pipe Run 0 WL 9.2
 Total Depth 3751 Chlorides 4300 ppm System LCM 2
 Blow Description IFP - 1/4" Blow Dried in 22min.
ISIP - No Blow
FFP - No Blow
FSIP - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>MUD</u>			<u>100</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 1 BHT 109 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1762 Test 1150 T-On Location 17:36-6-10
 (B) First Initial Flow 16 Jars _____ T-Started 00:32
 (C) First Final Flow 17 Safety Joint _____ T-Open 02:12
 (D) Initial Shut-In 198 Circ Sub _____ T-Pulled 04:12
 (E) Second Initial Flow 17 Hourly Standby _____ T-Out 05:51
 (F) Second Final Flow 18 Mileage _____ Comments _____
 (G) Final Shut-In 192 Sampler _____
 (H) Final Hydrostatic 1670 Straddle 600 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 30 Day Standby _____ Total 1750
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 30 Sub Total 1750

Approved By _____

Our Representative

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OPERATOR

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

Contact Geologist: TOM DENNING
 Contact Phone Nbr: 785-628-2593
 Well Name: DOLORES # 1
 Location: SW NE NW NW Sec.15-15s-19w
 API: 15-051-26,689-00-00
 Pool:
 State: KANSAS

Field: MARTINA NORTH
 Country: USA



Scale 1:240 Imperial

Well Name: DOLORES # 1
 Surface Location: SW NE NW NW Sec.15-15s-19w
 Bottom Location:
 API: 15-051-26,689-00-00
 License Number: 4787
 Spud Date: 6/4/2014 Time: 8:28 PM
 Region: ELLIS COUNTY
 Drilling Completed: 6/10/2014 Time: 9:23 AM
 Surface Coordinates: 375' FNL & 725' FWL
 Bottom Hole Coordinates:
 Ground Elevation: 2009.00ft
 K.B. Elevation: 2019.00ft
 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: -99.4275765
 Latitude: 38.7537857
 N/S Co-ord: 375' FNL
 E/W Co-ord: 725' FWL

LOGGED BY

Company: SOLUTIONS CONSULTING, INC.
 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: 6/4/2014 Time: 8:28 PM
 TD Date: 6/10/2014 Time: 9:23 AM

ELEVATIONS

K.B. Elevation: 2019.00ft
 K.B. to Ground: 10.00ft

Ground Elevation: 2009.00ft

NOTES

RECOMMENDATION TO PLUG AND ABANDON WELL BASED ON NEGATIVE RESULTS OF FOUR DSTS

OPEN HOLE LOGGING BY PIONEER ENERGY SERVICES: DUAL INDUCTION LOG, DUAL COMPENSATED POROSITY LOG, MICRORESISTIVITY LOG

DRILL STEM TESTING BY TRILOBITE TESTING INC: TWO (2) CONVENTIONAL TESTS AND TWO (2) STRADDLE TESTS


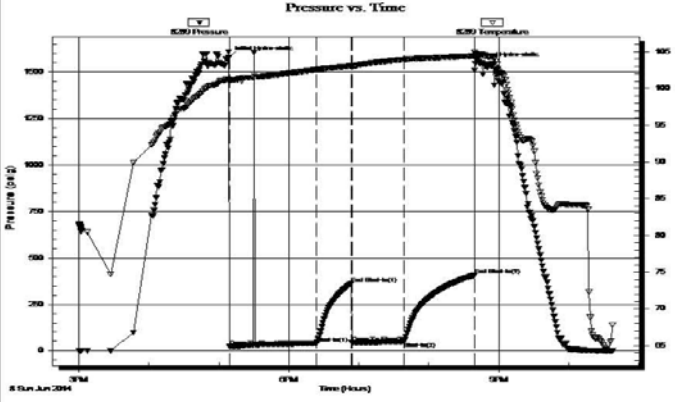
TOPS COMPARISON

	DOLORUS # 1	WILLIE # 1	WERTH # 1
	SW NE NW NW	NW SE SE SE	NW NW NW
	SEC.15-15S-19W	SEC.9-15-19W	SEC.15-15-19W
	2009'GL 2019'KB	KB 2143'	KB 2024'
<u>FORMATION</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>	<u>LOG TOPS</u>
Anhydrite	1236 +783	+ 785	+787
B-Anhydrite	1268 +751	+ 749	+755
Topeka	2997- 978	- 969	
Heebner Sh.	3264-1245	-1246	-1252
Toronto	3287-1268	-1268	-1274
LKC	3310-1291	-1293	-1299
BKC	3556-1537	-1540	-1535
Marmaton Mkr	3602-1583		-1564
Congl Sand	3625-1606		-1614
Arbuckle	3676-1657	-1625	-1624
RTD	3750-1731		

SUMMARY OF DAILY ACTIVITY

6-04-14 RU, Spud 1:45 PM
 6-05-14 1236', short trip, set 8 5/8" surface casing to 1237' w/ 375 sxs SMD, slope 1 degree, plug down 2:00 PM
 6-06-14 1371', drilling
 6-07-14 2565', displaced 2879' to 2898'
 6-08-14 3275', CFS 3000', short trip, CFS 3350' DST # 1 3293'-3350' "A"- "C"
 6-09-14 3460', drilling, CFS 3510', TOWB, DST # 2 3422'-3510' "H" to "J"
 6-10-14 3690', RTD 3750' @9:23AM, CCH, TOWB, logs, straddle test 3608' to 3652' Conglomerate sand

DST # 1 TEST SUMMARY

 <p>TRILOBITE TESTING, INC.</p>	DRILL STEM TEST REPORT				
	TDI Inc. 1310 Bison Rd Hays KS 67601-9696 ATTN: Herb Deines	15 15s 19w Ellis Dolores #1 Job Ticket: 59254 DST#: 1 Test Start: 2014.06.08 @ 15:00:00			
GENERAL INFORMATION:					
Formation: LKC "A - C" Deviated: No Whipstock: 2019.00 ft (KB) Time Tool Opened: 17:09:00 Time Test Ended: 22:37:00		Test Type: Conventional Bottom Hole (Initial) Tester: Jim Svaty Unit No: 76			
Interval: 3293.00 ft (KB) To 3350.00 ft (KB) (TVD) Total Depth: 3350.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Fair		Reference Elevations: 2019.00 ft (KB) 2011.00 ft (CF) KB to GR/CF: 8.00 ft			
Serial #: 8289 Outside					
Press@RunDepth: 49.31 psig @ 3296.00 ft (KB) Start Date: 2014.06.08 End Date: 2014.06.08 Start Time: 15:00:02 End Time: 22:37:15		Capacity: 8000.00 psig Last Calib.: 2014.06.08 Time On Btm: 2014.06.08 @ 17:08:30 Time Off Btm: 2014.06.08 @ 20:39:30			
TEST COMMENT: 75-IFP- Flushed x 2 10min. & 20min. Surface Blow Building to 4 in. 30-ISIP- No Blow 45-FFP- Surface Blow Building to 4 in. 60-FSP- No Blow					
	PRESSURE SUMMARY				
	Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation	
	0	1578.29	101.23	Initial Hydro-static	
	1	22.93	100.86	Open To Flow (1)	
	76	40.75	102.57	Shut-In(1)	
	105	362.49	103.04	End Shut-In(1)	
	106	43.51	102.86	Open To Flow (2)	
	151	49.31	103.96	Shut-In(2)	
	211	406.89	104.43	End Shut-In(2)	
	211	1546.92	104.74	Final Hydro-static	
Recovery		Gas Rates			
Length (ft)	Description	Volume (bbl)	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
75.00	OCM 5% @ 95% m	1.05			
1.00	CO 100%	0.01			



Hays KS 67601-9696
ATTN: Herb Deines

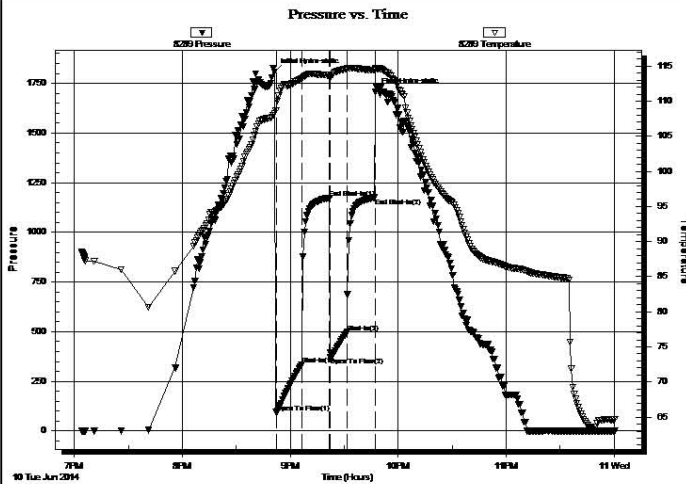
Job Ticket: 59256 **DST#: 3**
Test Start: 2014.06.10 @ 19:04:00

GENERAL INFORMATION:

Formation: **Cong Sand**
 Deviated: No Whipstock: 2019.00 ft (KB)
 Time Tool Opened: 20:52:00
 Time Test Ended: 00:00:00
 Interval: **3608.00 ft (KB) To 3652.00 ft (KB) (TVD)**
 Total Depth: 3750.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Straddle (Reset)
 Tester: Jim Svaty
 Unit No: 76
 Reference Elevations: 2019.00 ft (KB)
 2011.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8289 Outside
 Press@RunDepth: 496.89 psig @ 3612.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.06.10 End Date: 2014.06.11 Last Calib.: 2014.06.11
 Start Time: 19:04:02 End Time: 00:00:15 Time On Btm: 2014.06.10 @ 20:51:15
 Time Off Btm: 2014.06.10 @ 21:47:15

TEST COMMENT: 15-IFP- BOB in 1min.
 15-ISIP- Very Weak Surface Blow
 10-FFP- BOB in 1min 15sec.
 15-FSIP- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1808.18	108.26	Initial Hydro-static
1	94.30	108.63	Open To Flow (1)
15	335.33	113.18	Shut-In(1)
31	1172.93	113.68	End Shut-In(1)
31	370.24	113.44	Open To Flow (2)
41	496.89	114.59	Shut-In(2)
56	1174.20	114.39	End Shut-In(2)
56	1706.25	114.65	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
567.00	OMCW 3%o 5%m 92%w	7.95
252.00	OWCM 4%o 46%w 50%m	3.53
239.00	WCM 20%w 80%m Show of Oil	3.35

* Recovery from multiple tests

Gas Rates

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

Trilobite Testing, Inc

Ref. No: 59256

Printed: 2014.06.11 @ 08:27:39

DST # 4 TEST SUMMARY



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

TDI Inc.
1310 Bison Rd
Hays KS 67601-9696

15 15s 19w Ellis

Dolores #1

Job Ticket: 59257

DST#: 4

GENERAL INFORMATION:

Formation: **LKC " K "**

Deviated: No Whipstock: 2019.00 ft (KB)

Time Tool Opened: 02:12:00

Time Test Ended: 05:51:00

Test Type: Conventional Straddle (Reset)

Tester: Jim Svaty

Unit No: 76

Interval: **3502.00 ft (KB) To 3548.00 ft (KB) (TVD)**

Total Depth: 3751.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2019.00 ft (KB)

2011.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8289 Outside

Press@RunDepth: 18.11 psig @ 3508.00 ft (KB)

Start Date: 2014.06.11

End Date: 2014.06.11

Start Time: 00:32:02

End Time: 05:51:00

Capacity: 8000.00 psig

Last Calib.: 2014.06.11

Time On Btm: 2014.06.11 @ 02:11:45

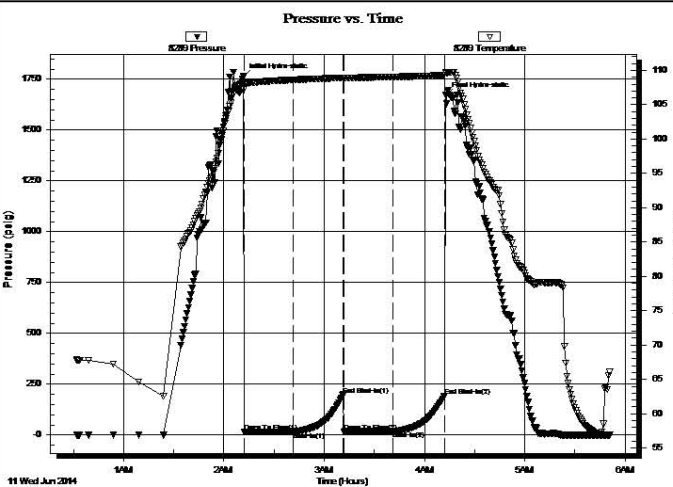
Time Off Btm: 2014.06.11 @ 04:12:30

TEST COMMENT: 30-IFP- 1/4in. Blow Died in 22min.

30-ISIP- No Blow

30-FFP- No Blow

30-FSIP- No Blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1762.96	108.34	Initial Hydro-static
1	16.02	107.25	Open To Flow (1)
30	17.20	108.61	Shut-In(1)
60	198.02	108.93	End Shut-In(1)
60	17.26	108.85	Open To Flow (2)
90	18.11	109.05	Shut-In(2)
121	192.86	109.26	End Shut-In(2)
121	1670.30	109.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud 100%	0.01

* Recovery from multiple tests

Gas Rates

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

ROCK TYPES

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

ACCESSORIES

MINERAL

- ▲ Chert, dark
- P Pyrite
- * Sandy
- ◆ Varicolored chert

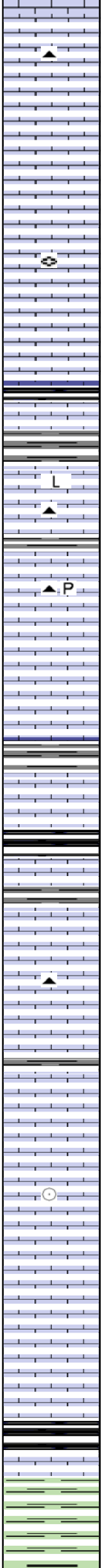
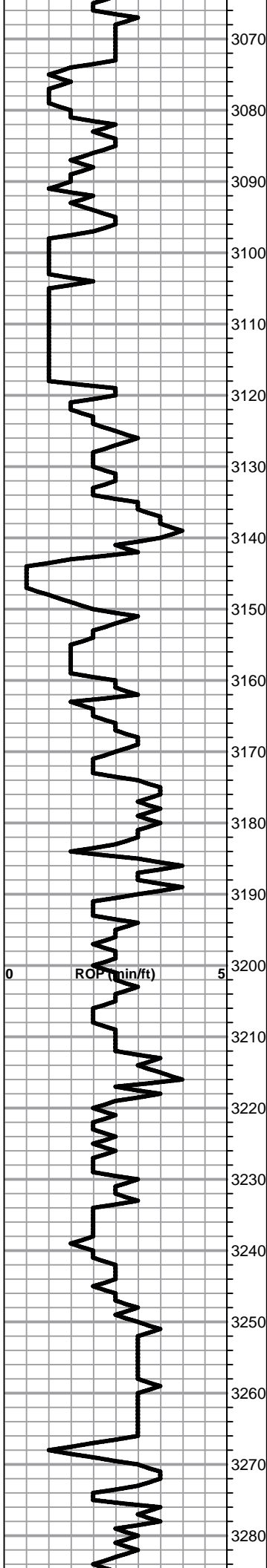
FOSSIL

- Crinoids
- Oolite
- ◆ Oomoldic
- ◆ Fossilinid

TEXTURE

- L Lithogr

Curve Track #1 ROP (min/ft)	Depth Intervals Cored Interval DST Interval	DST	Lithology	Oil Show	Geological Descriptions	Curve Track #3
<p>1:240 Imperial ROP (min/ft)</p>	<p>2900 2910 2920 2930 2940 2950 2960 2970 2980 2990 3000 3010 3020 3030 3040 3050 3060</p>				<p>BEGIN 1' DRILL TIME FROM 2900' TO RTD BEGIN 10' WET AND DRY SAMPLES FROM 2950' TO RTD</p> <p>ANHYDRITE TOP 1236+783 ANHYDRITE BASE 1268+751</p> <p>Lime, lt-med brn, fnxln, fossiliferous</p> <p>Shale, lt gray, soft forming sticky clumps</p> <p>Lime, med brn-med grayish brn, fnxln, gray mottling near shale boundary, fossiliferous</p> <p>Shale, lt-med gray forming soft mud</p> <p>Lime, lt-med brn, fnxln, slightly fossiliferous Shale, med gray, soft blocky</p> <p>Shale, dove gray, forming soft mud</p> <p>Shale, lt-med gray, soft blocky</p> <p>Lime, dark brn, fnxln, fossiliferous</p> <p><u>TOPEKA ELog 2997-978</u></p> <p>Lime, tan-lt brn, fnxln-granular in part, slight bedded chalk</p> <p>Lime, lt-med brn-med gray, fnxln, slightly fossiliferous</p> <p>Lime, tan-lt brn, fnxln-granular in part, bedded chalk with sticky chalk clumps in part</p> <p>Lime, lt brn, granular, NS</p> <p>Lime, lt brn-lt grayish brn, fnxln, slightly fossiliferous</p> <p>Lime, lt-med grayish brn, fnxln</p>	<p>1:240 Imperial</p> <p>8 5/8" SURFACE CASING SET TO 1237' W/ 375 SXS SMD</p> <p>SLOPE 1 DEGREE @1237'</p>



3070
Lime, lt-med brn-med grayish brn, fnxln-granular
Chert, lt gray, fossiliferous

3080
Lime, lt-med brn, fnxln

3090
Lime,lt-med brn, fnxln

3100
Lime, lt-med brn, granular, slightly fossiliferous, fusulinids,
slight bedded chalk

3110
Lime, lt-med brn, granular, slightly fossiliferous, slight
bedded chalk

3120
Shale, black carbonaceous, fissile, blocky

3130
Shale, lt gray, firm, calcareous in part

L
3135
Lime, crm, fnxln, lithographic

3140
Lime, crm-off white, fnxln-granular, NS

P
3145
Lime, tan-lt brn, granular, NS, no wet cut

3150
Lime, lt-med brn, fnxln-granular, slightly fossiliferous
Chert, lt gray, fossiliferous

3160
Lime, lt brn-lt gray, fnxln-granular

3170
Lime, lt brn-lt gray, fn-vfxln

3180
Shale, black carbonaceous, blocky
Lime, med brn, fn-vfxln, slightly fossiliferous

3190
Lime, lt brn, fnxln-granular, NS

3200
Lime, lt-med brn, fnxln-granular

*
3210
Lime, tan-lt brn, fnxln-granular, lt odor, NFO, No Stain

3220
Lime, tan-lt brn, fnxln-granular, slight bedded chalk

3230
Lime, crm-tan, fnxln-granular, slight bedded chalk, crinoids

3240
Lime, crm-lt brn, granular-fnxln

3250
Lime, lt brn, fnxln

HEEBNER SHALE ELog 3264-1245

3260
Shale, black carbonaceous, fissile, blocky
Lime, med brn, vfxln

3270
Shale, dove gray-lime green, soft blocky

TORONTO ELog 3287-1268

Lime, crm, fnxln, lot of bedded chalk, NS

Lime, crm-lt brn, fn-vfxln, NS

Shale, red-dark brn, soft mud-soft blocky

LKC ELog 3310-1291

Lime, tan-lt brn, fn-vfxln

Lime, lt-med brn, fn-vfxln, NS

Lime, lt-med brn, fnxln, gray mottling near shale boundary

○ Lime, crm-tan, fnxln-oolitic/oomoldic with fine vugs, lt odor, lt staining in small chips

Lime, crm-tan, fnxln with increasing bedded chalk

Lime, lt-med brn, fnxln

Shale, lt-med gray, soft-firm blocky

○ Lime, tan-lt brn, fnxln, spotty staining in fine interxln porosity, NFO, No Odor

Lime, tan-lt brn, fnxln, slight bedded chalk

Shale, black carbonaceous, fissile, blocky
Lime, pale gray, fn-vfxln

Lime, crm, fnxln, slight bedded chalk, cemented fossil beds, NS, No Odor

Lime, tan-lt brn, fnxln, slight bedded chalk

○ Lime, tan-lt brn, fnxln-oolitic/oomoldic, scattered spotty staining, NFO, No Odor, logs show zone to be wet

Lime, tan-lt brn, fn-vfxln

Lime, tan-lt brn, fn-micro xln, slight bedded chalk

Lime, lt brn, fnxln

Lime, lt brn, fnxln

Shale, med-dark gray, firm forming slivers

Lime, crm-tan, fnxln, slight bedded chalk
Chert, white-milky white, fresh, sharp, fossiliferous

Lime, tan-crm, fnxln, bedded chalk

Lime, crm, fnxln, slight bedded chalk, no shows noted

Lime, crm-tan, fnxln, bedded chalk

Shale, med gray, soft-firm blocky

Lime, crm-tan, fnxln

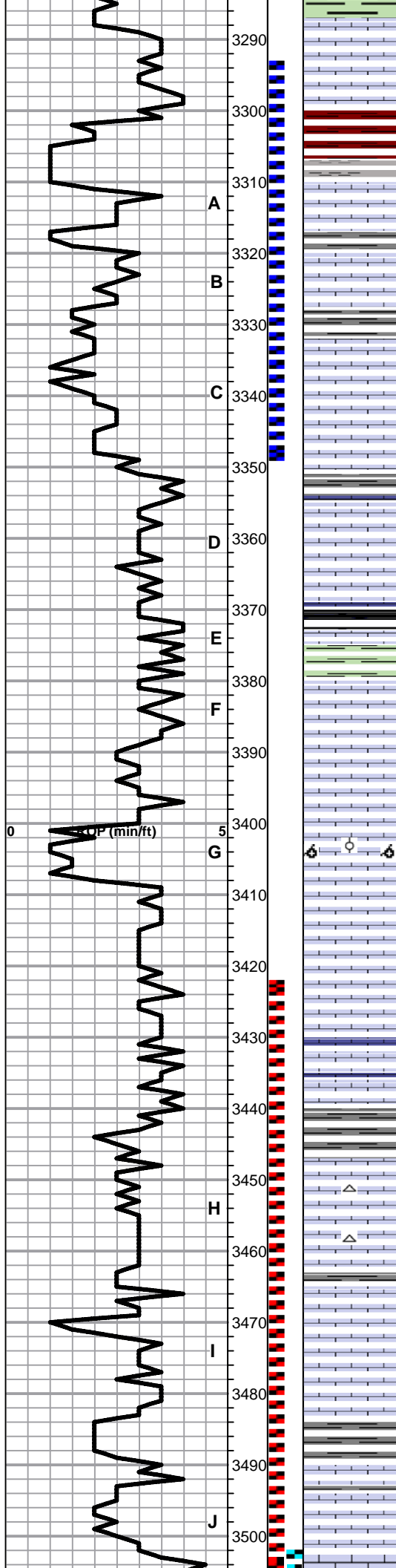
○ Lime, crm-tan, oolitic/oomoldic, NFO, No Odor, scattered chips with lt staining

Lime, crm, fnxln, bedded chalk

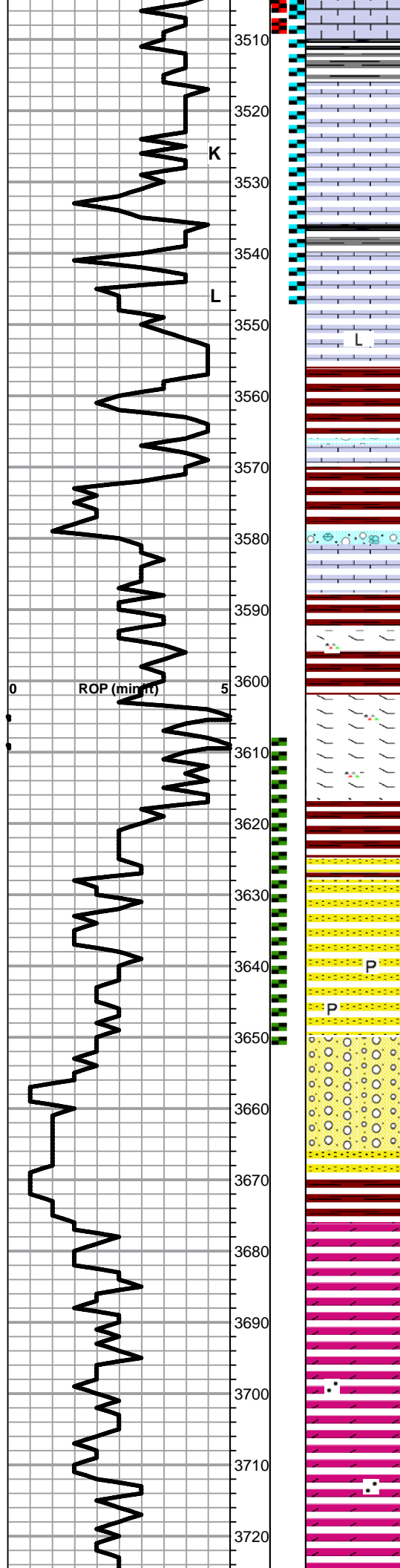
DST # 1 3293' TO 3350' SEE
HEADER FOR TEST
SUMMARY

SLOPE 1 DEGREE @3350'

DST #2 3422' TO 3510' SEE
HEADER FOR TEST
SUMMARY



A
B
C
D
E
F
G
H
I
J



Lime, crm, fn-vfxln, bedded chalk

Shale, grayish green, soft blocky

Lime, crm-tan, fnxln, some brittle chips in part, slight-moderate bedded chalk, NS

DST # 4 STRADDLE TEST
3502' TO 3548' SEE HEADER
FOR TEST SUMMARY

Lime, crm-offwhite, mostly fn-vfxln with scattered brittle chips, NS. Tested to confirm presence of fracturing.

Lime, crm-lt brn, fn-vfxln

Lime, crm, fn-micro xln, lithographic

BKC 3556-1537

Shale, red-dark brn, soft blocky, slightly sandy in part, NS

Lime, crm-lt brn, fn-micro xln

Shale, red, soft blocky, cherty

Lime, clastic mix with red shale staining, fn-vfxln

Shale, red-brn, soft blocky mixed with clastic lime

Lime, crm, fnxln with orange chert fragments

MARMATON ELog 3602-1583

Lime, tan-lt brn, fn-micro xln, dolomitic, NS

Lime, crm-lt brn, fn-micro xln, hard on crush, orange chert

Shale, dark brn, soft-firm blocky

CONGLOMERATE SAND 3625-1606

Sandstone, quartz, fn grained, poorly sorted, partially cemented with clay and lime, spotty-saturated staining, SFO on crush, no detectable odor

DST # 3 STRADDLE TEST
3608' TO 3652' SEE HEADER
FOR TEST SUMMARY

Mix of sandstone clusters, individual grains and chert, NS

Mix of sandstone, chert and pyrite clusters with quartz inclusions

Clastic mix of sandstone, chert and reworked dolomite

Clastic mix of sandstone, chert and reworked dolomite

ARBUCKLE ELog 3676-1657

Dolomite, crm, fnxln-granular, fine inter xln porosity, NS

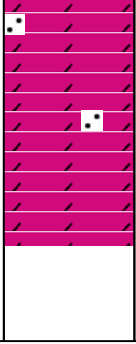
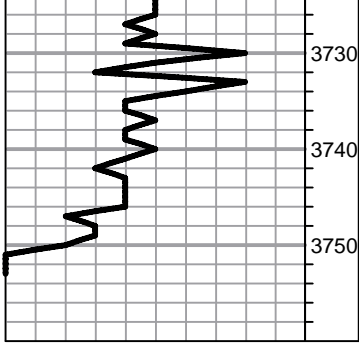
1ST PLUG @3656' W/50 SXS
2ND PLUG @1250'W/50 SXS
3RD PLUG @397'W/90 SXS
4TH PLUG @40'W/10 SXS
RATHOLE W/30 SXS
MOUSEHOLE W/15 SXS

Dolomite, crm, granular

Dolomite, crm, fnxln-granular, quartz grain inclusions

Dolomite, crm, fnxln-granular, quartz grain inclusions

Dolomite, crm, granular, fused quartz and hard clusters, NS



Dolomite, crm, frxn-granular, quartz inclusions, fused and clusters

Sandstone, quartz, fine grained, lt green glauconitic stain, NS

RTD 3750-1731 LTD 3752-1733

SLOPE 1 DEGREE @3750'

JOB LOG

SWIFT Services, Inc.

DATE: 6-5-14 PAGE NO. 1

CUSTOMER: TDI WELL NO. #1 LEASE: Delores JOB TYPE: Deep Surface TICKET NO. 26636

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	0700							on loc w/FE
								TD 1237
								8 5/8" x 1234' x 43'
								Cent 1, 4, 15
	0900							Start Csg
	1130							Break Circ
	1245	5	0				50	Start Mud/Flush 500gal
	1250	5	12/0				50	Start 20 bbl KCL Flush
	1255	4	20/0				50	Start 150 sks SMD @ 11 2/4"
	1315	4	83/0				0	" " " " @ 12 5/8"
	1330	4	57/0				100	" 75 sks SMD @ 14"
	1335		21					End Cement
								Drop Top Plug
	1346	5	0				100	Start Displacement
	1353	4	70				300	Circ Cement
	1355		76				450 750	Land Plug
							750	Shut In.

Thank you
Nick, Jon H. & Jared

GLOBAL CEMENTING, L.L.C.

1354

REMIT TO 18048 170RD
RUSSELL, KS 67665

SERVICE POINT: Russell, KS

DATE <u>6-11-14</u>	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START <u>11:00am</u>	JOB FINISH <u>12:00pm</u>
LEASE <u>Dobros</u>	WELL #. <u>1</u>	LOCATION			COUNTY <u>F113</u>	STATE <u>KS</u>	
OLD OR <input checked="" type="radio"/> NEW (CIRCLE ONE)							

CONTRACTOR Southward #1

TYPE OF JOB Rotary Plug

HOLE SIZE _____ T.D. _____

CASING SIZE _____ DEPTH _____

TUBING SIZE _____ DEPTH _____

DRILL PIPE _____ DEPTH _____

TOOL _____ DEPTH _____

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. _____

PERFS _____

DISPLACEMENT _____

EQUIPMENT _____

PUMP TRUCK # P1 CEMENTER Heath

BULK TRUCK # B3 HELPER Cody

BULK TRUCK # _____ DRIVER _____

BULK TRUCK # _____ DRIVER _____

OWNER _____

CEMENT AMOUNT ORDERED 2455Y 60/140 4%gel

1 1/4" F10

COMMON _____ @ _____

POZMIX _____ @ _____

GEL _____ @ _____

CHLORIDE _____ @ _____

ASC _____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

HANDLING _____ @ _____

MILEAGE _____ @ _____

TOTAL _____

REMARKS:

1st Plug @ 3656' = 50 SY

2nd Plug @ 650' = 50 SY

3rd Plug @ 397' = 90 SY - come out of hole and top of 578 with 105Y

RH=50 MH=155Y

CHARGE TO: TDI

STREET _____

CITY _____ STATE _____ ZIP _____

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

PRINTED NAME LARRY BROWN

SIGNATURE Larry Brown

SERVICE

DEPTH OF JOB _____

PUMP TRUCK CHARGE _____

EXTRA FOOTAGE _____ @ _____

MILEAGE _____ @ _____

MANIFOLD _____ @ _____

_____ @ _____

_____ @ _____

TOTAL _____

PLUG & FLOAT EQUIPMENT

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

TOTAL _____

SALES TAX (If Any) _____

TOTAL CHARGES _____

DISCOUNT _____ IF PAID IN 30 DAYS