



## DRILL STEM TEST REPORT

Prepared For: **TDI**

1310 Bison Rd  
Hays KS 67601

ATTN: Herb Deines

### **Marcotte #1**

### **29-8s-19w Rooks,KS**

Start Date: 2015.07.09 @ 09:53:00

End Date: 2015.07.09 @ 17:00:15

Job Ticket #: 62719                      DST #: 1

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.07.13 @ 13:37:37

TDI  
29-8s-19w Rooks,KS  
Marcotte #1  
DST # 1  
LKC "I-J"  
2015.07.09



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

TDI  
1310 Bison Rd  
Hays KS 67601  
ATTN: Herb Deines

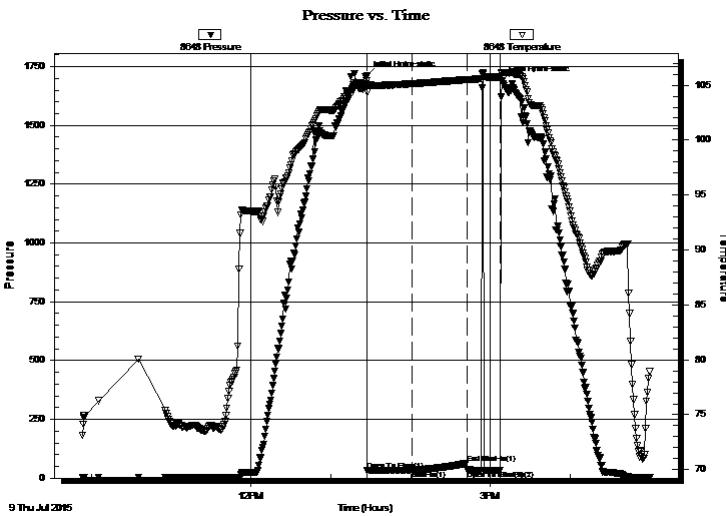
**29-8s-19w Rooks, KS**  
**Marcotte #1**  
Job Ticket: 62719 **DST#: 1**  
Test Start: 2015.07.09 @ 09:53:00

## GENERAL INFORMATION:

Formation: **LKC "I-J"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 13:27:15  
 Time Test Ended: 17:00:15  
 Interval: **3395.00 ft (KB) To 3445.00 ft (KB) (TVD)**  
 Total Depth: 3445.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Cody Bloedorn  
 Unit No: 73  
 Reference Elevations: 2044.00 ft (KB)  
 2039.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8648** **Inside**  
 Press@RunDepth: 32.83 psig @ 3400.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.07.09 End Date: 2015.07.09 Last Calib.: 2015.07.09  
 Start Time: 09:53:05 End Time: 17:00:14 Time On Btm: 2015.07.09 @ 13:27:00  
 Time Off Btm: 2015.07.09 @ 15:08:30

TEST COMMENT: 30 - IF- Surged and died  
 45 - IS- No return  
 20 - FF- Surged and died, flushed tool after 10 minutes, surged and died, pulled tool after 10 minutes



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1710.60	105.44	Initial Hydro-static
1	32.64	104.38	Open To Flow (1)
34	32.83	105.13	Shut-In(1)
75	62.66	105.50	End Shut-In(1)
76	35.17	105.50	Open To Flow (2)
101	34.10	105.76	Shut-In(2)
102	1689.47	106.14	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
3.00	Mud, 100%M	0.04

## Gas Rates

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



TRILOBITE  
TESTING, INC

## DRILL STEM TEST REPORT

TDI

**29-8s-19w Rooks, KS**

1310 Bison Rd  
Hays KS 67601

**Marcotte #1**

Job Ticket: 62719

**DST#: 1**

ATTN: Herb Deines

Test Start: 2015.07.09 @ 09:53:00

### GENERAL INFORMATION:

Formation: **LKC "I-J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:27:15

Time Test Ended: 17:00:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Cody Bloedorn

Unit No: 73

Interval: **3395.00 ft (KB) To 3445.00 ft (KB) (TVD)**

Reference Elevations: 2044.00 ft (KB)

Total Depth: 3445.00 ft (KB) (TVD)

2039.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8940**

**Outside**

Press@RunDepth: psig @ 3400.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.07.09

End Date:

2015.07.09

Last Calib.:

2015.07.09

Start Time: 09:53:05

End Time:

17:00:29

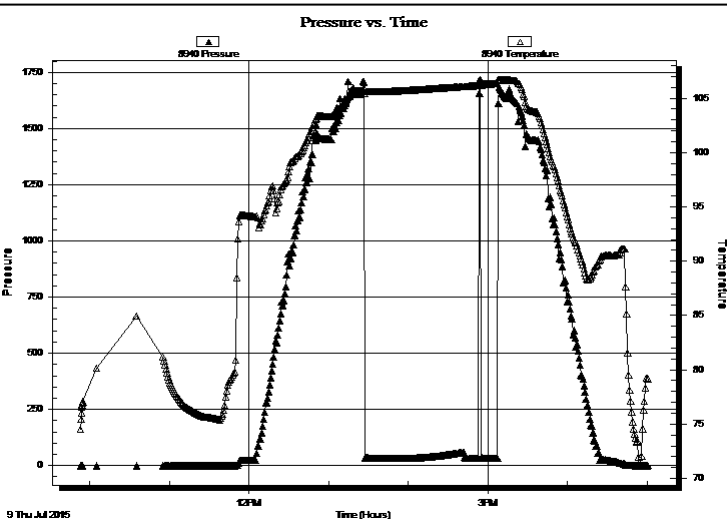
Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF- Surged and died

45 - ISI- No return

20 - FF- Surged and died, flushed tool after 10 minutes, surged and died, pulled tool after 10 minutes



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
3.00	Mud, 100%M	0.04

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

TDI  
1310 Bison Rd  
Hays KS 67601  
ATTN: Herb Deines

**29-8s-19w Rooks,KS**  
**Marcotte #1**  
Job Ticket: 62719      **DST#: 1**  
Test Start: 2015.07.09 @ 09:53:00

**Tool Information**

Drill Pipe:	Length: 3395.00 ft	Diameter: 3.80 inches	Volume: 47.62 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 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:	46000.00 lb
			<u>Total Volume: 47.62 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	42000.00 lb
Depth to Top Packer:	3395.00 ft			Final	42000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	50.00 ft				
Tool Length:	70.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Change Over Sub	1.00			3376.00	
Shut In Tool	5.00			3381.00	
Hydraulic tool	5.00			3386.00	
Packer	5.00			3391.00	20.00      Bottom Of Top Packer
Packer	4.00			3395.00	
Stubb	1.00			3396.00	
Anchor	3.00			3399.00	
Change Over Sub	1.00			3400.00	
Recorder	0.00	8648	Inside	3400.00	
Recorder	0.00	8940	Outside	3400.00	
Drill Pipe	31.00			3431.00	
Change Over Sub	1.00			3432.00	
Anchor	10.00			3442.00	
Bullnose	3.00			3445.00	50.00      Bottom Packers & Anchor

**Total Tool Length: 70.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

TDI **29-8s-19w Rooks,KS**  
 1310 Bison Rd **Marcotte #1**  
 Hays KS 67601 Job Ticket: 62719 **DST#: 1**  
 ATTN: Herb Deines Test Start: 2015.07.09 @ 09:53:00

### Mud and Cushion Information

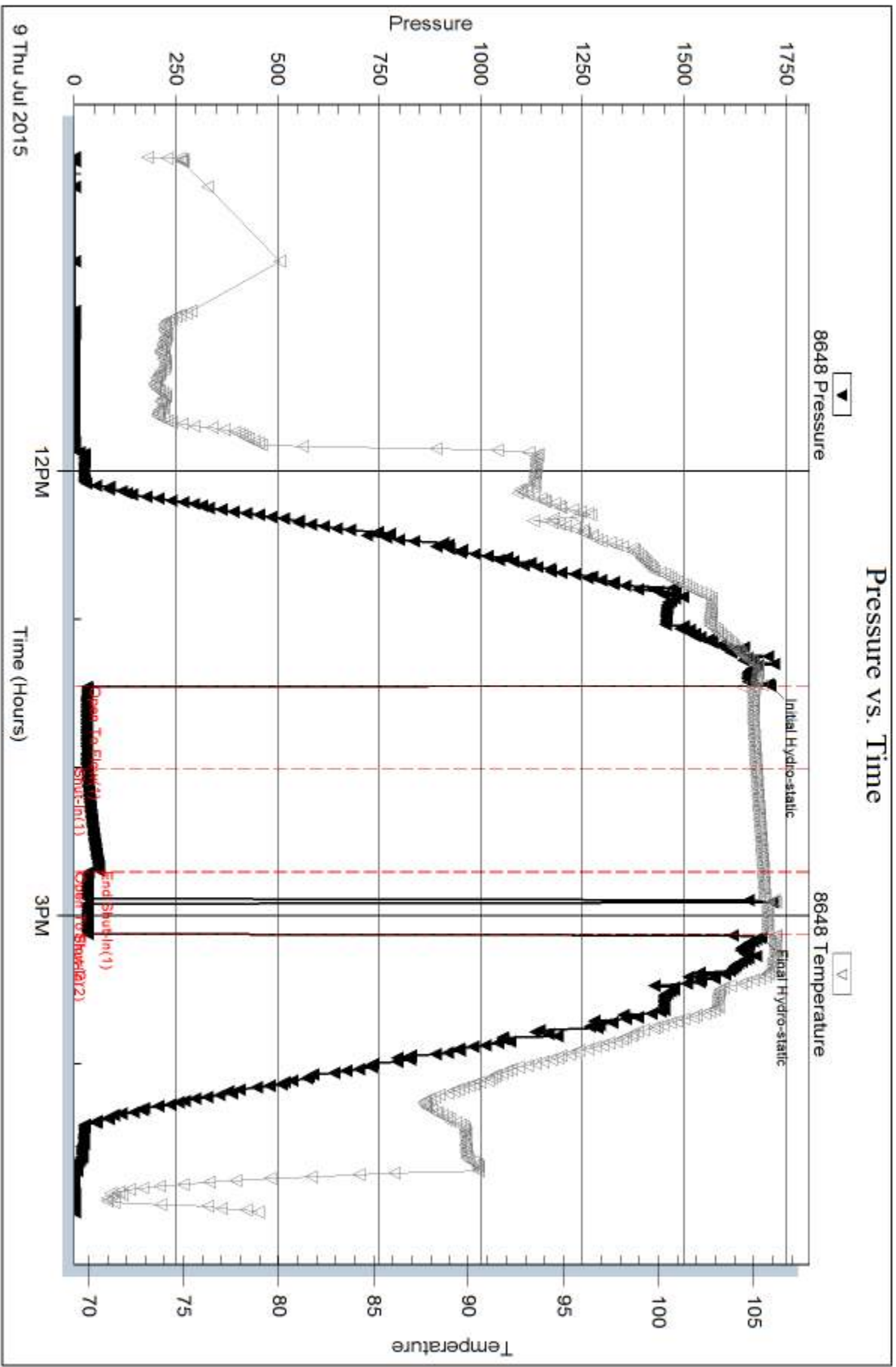
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.19 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1200.00 ppm			
Filter Cake: 1.00 inches			

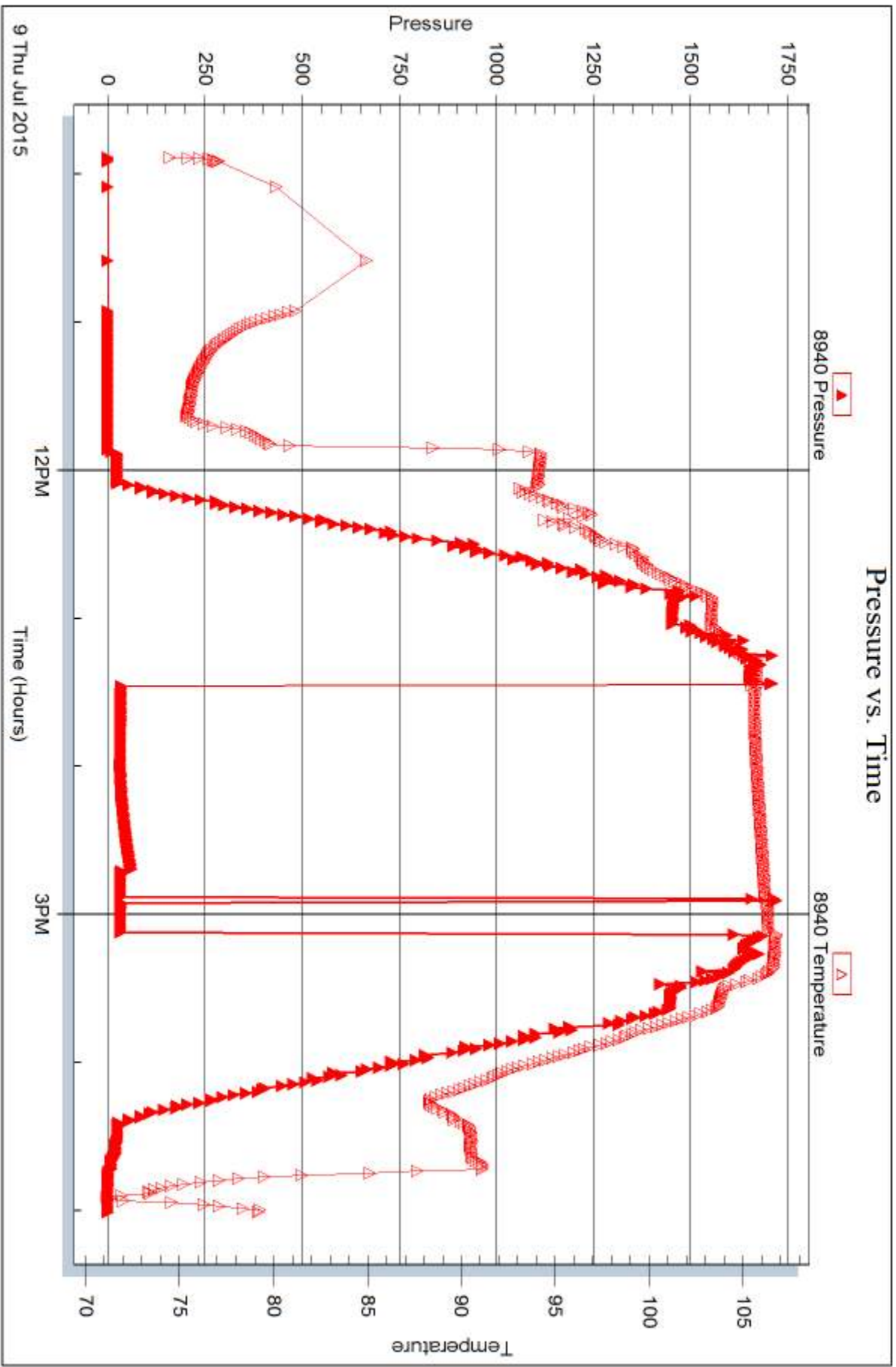
### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	Mud, 100%M	0.042

Total Length: 3.00 ft      Total Volume: 0.042 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **TDI**

1310 Bison Rd  
Hays KS 67601

ATTN: Herb Deines

### **Marcotte #1**

### **29-8s-19w Rooks,KS**

Start Date: 2015.07.10 @ 11:00:00

End Date: 2015.07.10 @ 18:33:00

Job Ticket #: 62720                      DST #: 2

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.07.13 @ 13:37:10

TDI  
29-8s-19w Rooks,KS  
Marcotte #1  
DST # 2  
Arbuckle  
2015.07.10





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

TDI  
1310 Bison Rd  
Hays KS 67601  
ATTN: Herb Deines

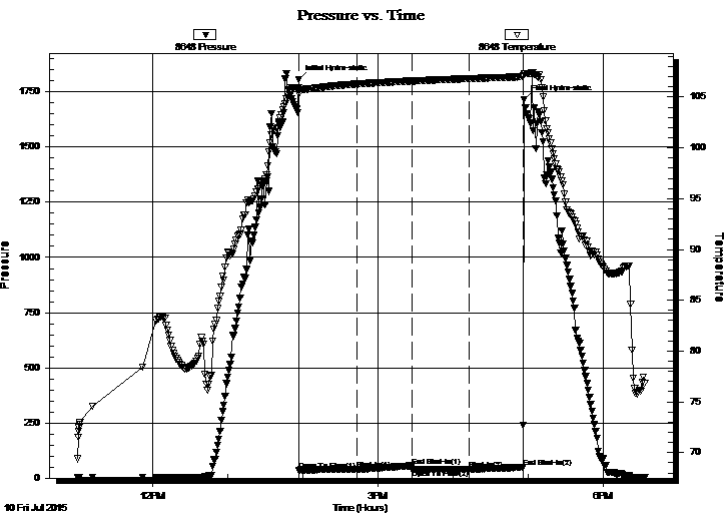
**29-8s-19w Rooks,KS**  
**Marcotte #1**  
Job Ticket: 62720 **DST#: 2**  
Test Start: 2015.07.10 @ 11:00:00

## GENERAL INFORMATION:

Formation: **Arbuckle**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 13:57:00  
Time Test Ended: 18:33:00  
Interval: **3454.00 ft (KB) To 3508.00 ft (KB) (TVD)**  
Total Depth: 3581.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Reference Elevations: 2044.00 ft (KB)  
2039.00 ft (CF)  
KB to GR/CF: 5.00 ft  
Test Type: Conventional Straddle (Reset)  
Tester: Cody Bloedorn  
Unit No: 73

**Serial #: 8648 Inside**  
Press@RunDepth: 40.66 psig @ 3491.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2015.07.10 End Date: 2015.07.10 Last Calib.: 2015.07.10  
Start Time: 11:00:05 End Time: 18:32:59 Time On Btm: 2015.07.10 @ 13:56:45  
Time Off Btm: 2015.07.10 @ 16:56:45

TEST COMMENT: 45 - IF- 1/4" blow , died in 24 minutes  
45 - IS- No return  
45 - FF- Surged and died  
45 - FS- No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1805.81	105.92	Initial Hydro-static
1	35.96	105.33	Open To Flow (1)
46	39.37	106.28	Shut-In(1)
90	55.17	106.59	End Shut-In(1)
91	39.08	106.58	Open To Flow (2)
136	40.66	106.82	Shut-In(2)
179	48.46	107.01	End Shut-In(2)
180	1714.80	107.33	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud, 100%M	0.07

\* Recovery from multiple tests

## Gas Rates

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



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# DRILL STEM TEST REPORT

TDI  
1310 Bison Rd  
Hays KS 67601  
ATTN: Herb Deines

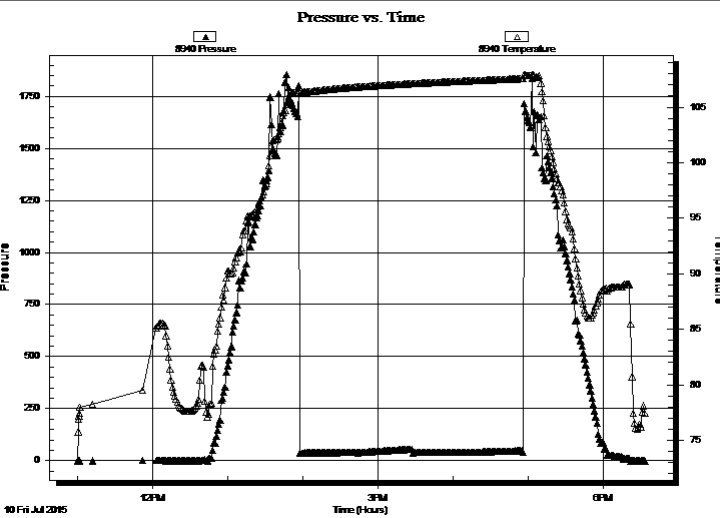
**29-8s-19w Rooks, KS**  
**Marcotte #1**  
Job Ticket: 62720      **DST#: 2**  
Test Start: 2015.07.10 @ 11:00:00

## GENERAL INFORMATION:

Formation: <b>Arbuckle</b>			
Deviated: No Whipstock:		ft (KB)	Test Type: Conventional Straddle (Reset)
Time Tool Opened: 13:57:00			Tester: Cody Bloedorn
Time Test Ended: 18:33:00			Unit No: 73
<b>Interval: 3454.00 ft (KB) To 3508.00 ft (KB) (TVD)</b>			Reference Elevations: 2044.00 ft (KB)
Total Depth: 3581.00 ft (KB) (TVD)			2039.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Fair		KB to GR/CF: 5.00 ft

<b>Serial #: 8940</b>	<b>Outside</b>				
Press@RunDepth:	psig @	3491.00 ft (KB)	Capacity:	8000.00 psig	
Start Date:	2015.07.10	End Date:	2015.07.10	Last Calib.:	2015.07.10
Start Time:	11:00:05	End Time:	18:32:59	Time On Btm:	
				Time Off Btm:	

TEST COMMENT: 45 - IF- 1/4" blow , died in 24 minutes  
45 - IS- No return  
45 - FF- Surged and died  
45 - FS- No return



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

Recovery		
Length (ft)	Description	Volume (bbl)
5.00	Mud, 100%M	0.07

\* Recovery from multiple tests

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



**TRILOBITE**  
TESTING, INC

# DRILL STEM TEST REPORT

TDI  
1310 Bison Rd  
Hays KS 67601

ATTN: Herb Deines

**29-8s-19w Rooks, KS**

**Marcotte #1**

Job Ticket: 62720

**DST#: 2**

Test Start: 2015.07.10 @ 11:00:00

## GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 13:57:00  
 Time Test Ended: 18:33:00  
**Interval: 3454.00 ft (KB) To 3508.00 ft (KB) (TVD)**  
 Total Depth: 3581.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Straddle (Reset)  
 Tester: Cody Bloedorn  
 Unit No: 73  
 Reference Elevations: 2044.00 ft (KB)  
 2039.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8958**

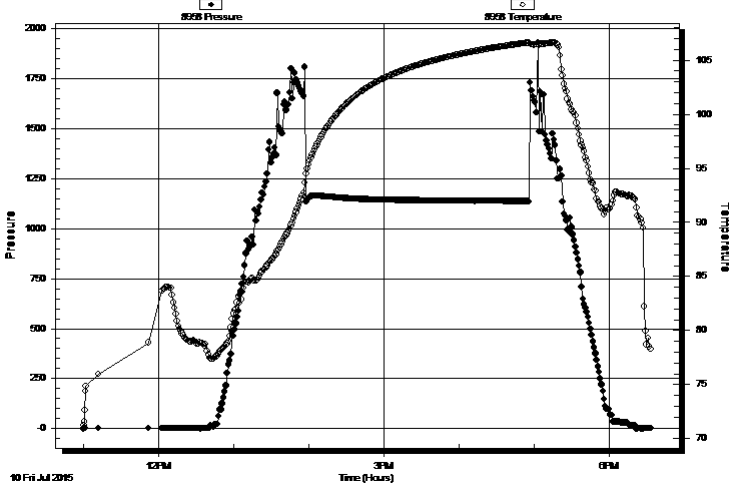
**Below (Straddle)**

Press@RunDepth: psig @ 3572.00 ft (KB)  
 Start Date: 2015.07.10 End Date: 2015.07.10  
 Start Time: 11:00:05 End Time: 18:32:59

Capacity: 8000.00 psig  
 Last Calib.: 2015.07.10  
 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** 45 - IF- 1/4" blow , died in 24 minutes  
 45 - IS- No return  
 45 - FF- Surged and died  
 45 - FS- No return

Pressure vs. Time



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud, 100%M	0.07

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

TDI  
1310 Bison Rd  
Hays KS 67601  
ATTN: Herb Deines

**29-8s-19w Rooks,KS**  
**Marcotte #1**  
Job Ticket: 62720 **DST#: 2**  
Test Start: 2015.07.10 @ 11:00:00

**Tool Information**

Drill Pipe:	Length: 3460.00 ft	Diameter: 3.80 inches	Volume: 48.53 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 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:	50000.00 lb
			<u>Total Volume: 48.53 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial	46000.00 lb
Depth to Top Packer:	3454.00 ft			Final	46000.00 lb
Depth to Bottom Packer:	3504.00 ft				
Interval between Packers:	50.00 ft				
Tool Length:	148.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
Change Over Sub	1.00			3434.00	
Shut In Tool	5.00			3439.00	
Hydraulic tool	5.00			3444.00	
Packer	5.00			3449.00	21.00 Bottom Of Top Packer
Packer	5.00			3454.00	
Stubb	1.00			3455.00	
Perforations	3.00			3458.00	
Change Over Sub	1.00			3459.00	
Drill Pipe	31.00			3490.00	
Change Over Sub	1.00			3491.00	
Recorder	0.00	8648	Inside	3491.00	
Recorder	0.00	8940	Outside	3491.00	
Perforations	12.00			3503.00	
Blank Off Sub	1.00			3504.00	50.00 Tool Interval
Packer	5.00			3509.00	
Change Over Sub	1.00			3510.00	
Drill Pipe	62.00			3572.00	
Recorder	0.00	8958	Below	3572.00	
Perforations	6.00			3578.00	
Bullnose	3.00			3581.00	77.00 Bottom Packers & Anchor

**Total Tool Length: 148.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

TDI **29-8s-19w Rooks,KS**  
 1310 Bison Rd **Marcotte #1**  
 Hays KS 67601 Job Ticket: 62720 **DST#: 2**  
 ATTN: Herb Deines Test Start: 2015.07.10 @ 11:00:00

### Mud and Cushion Information

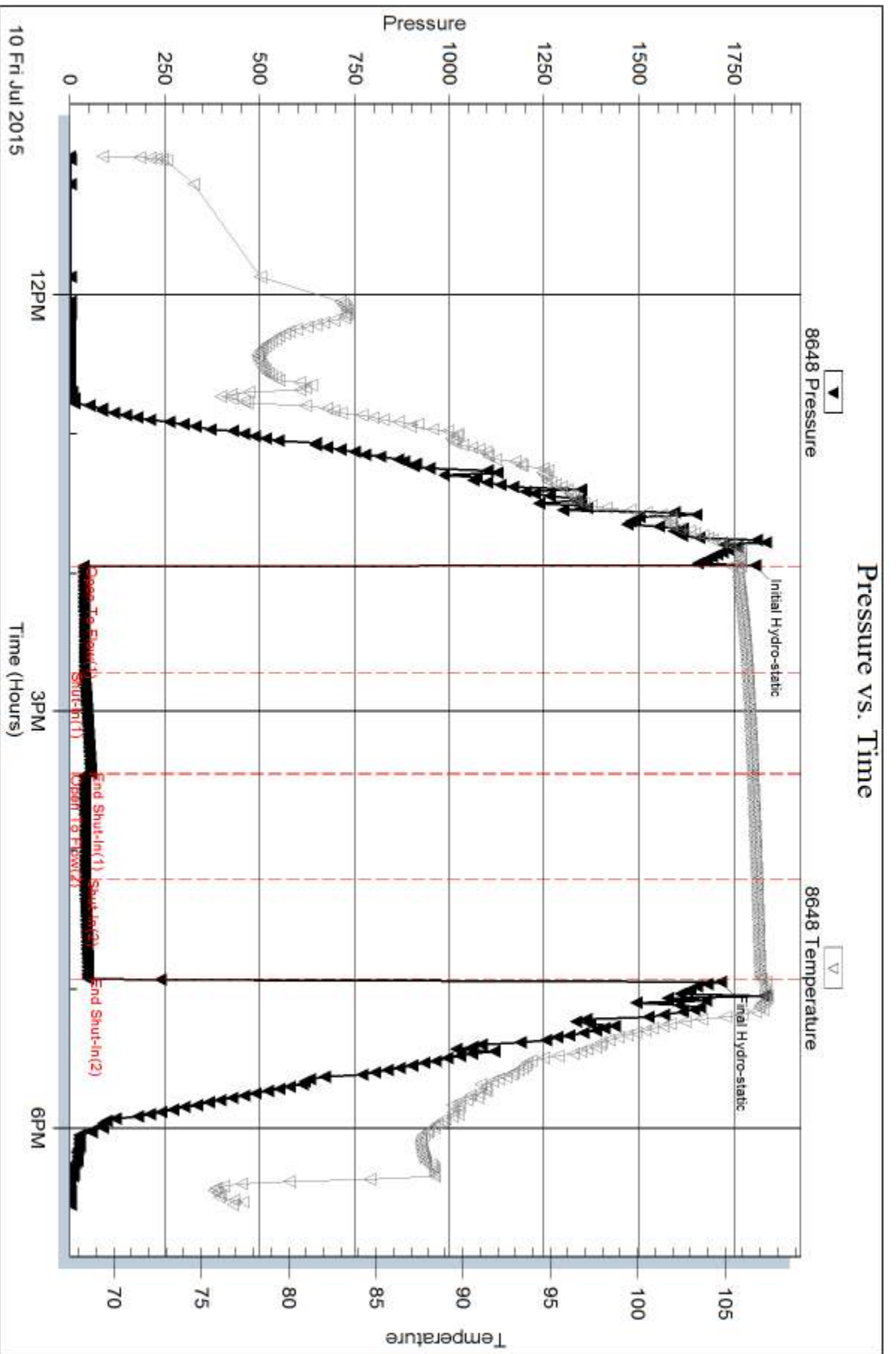
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.98 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1500.00 ppm			
Filter Cake: 1.00 inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud, 100%M	0.070

Total Length: 5.00 ft      Total Volume: 0.070 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

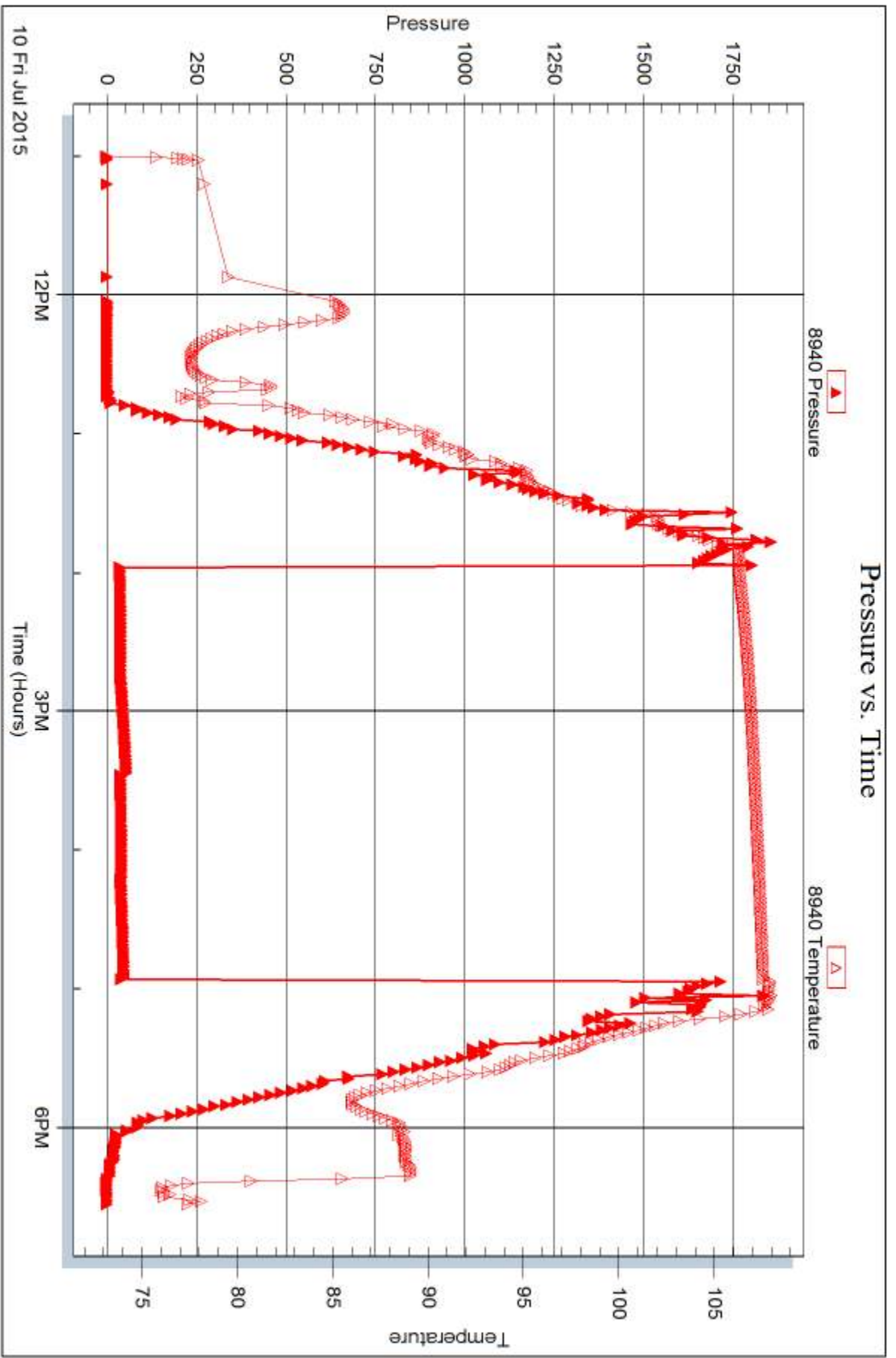


Serial #: 8940

Outside TDI

Marcotte #1

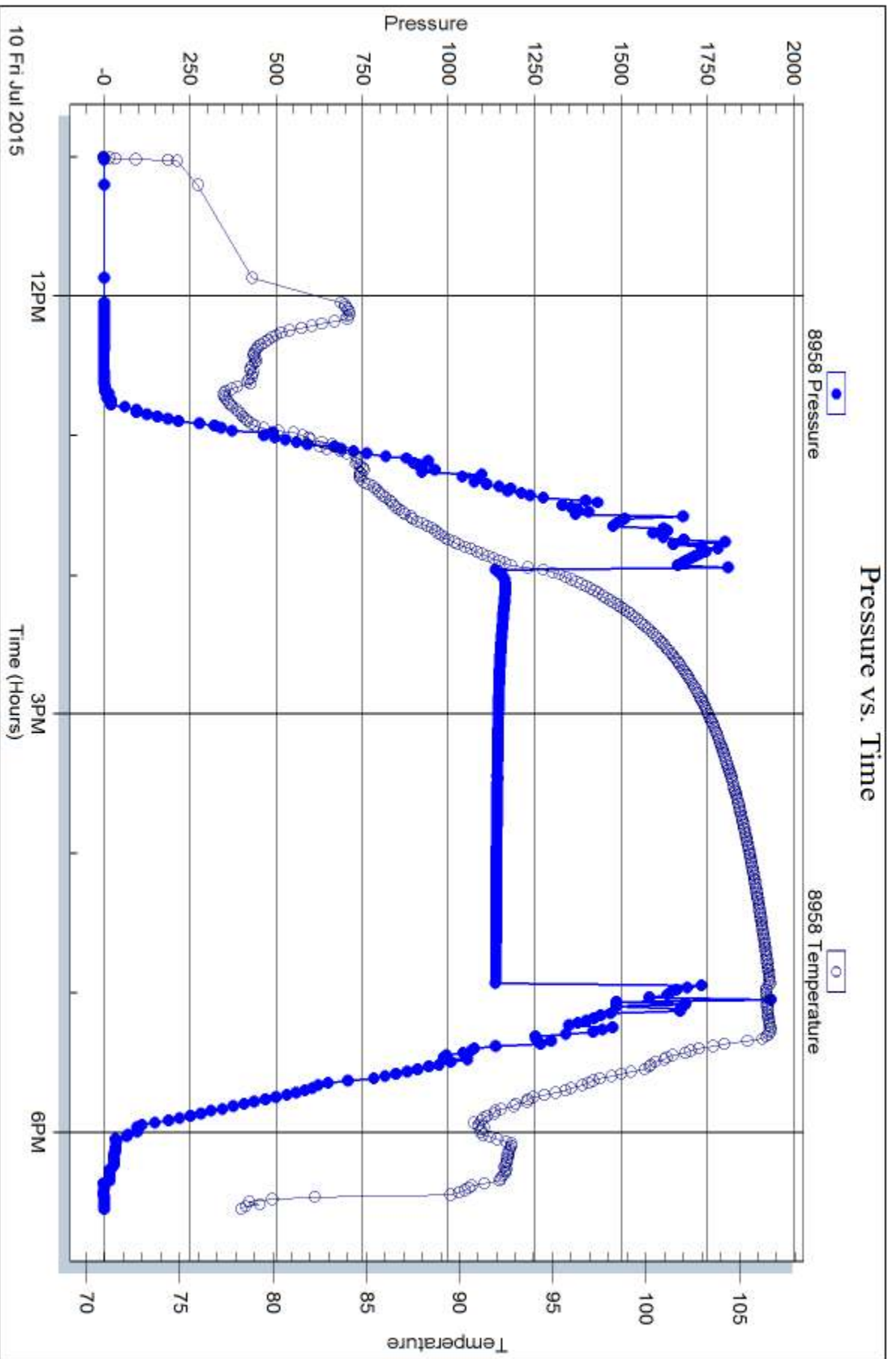
DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 62720

Printed: 2015.07.13 @ 13:37:12







## DRILL STEM TEST REPORT

Prepared For: **TDI**

1310 Bison Rd  
Hays KS 67601

ATTN: Herb Deines

### **Marcotte #1**

### **29-8s-19w Rooks,KS**

Start Date: 2015.07.10 @ 19:00:00

End Date: 2015.07.11 @ 01:17:30

Job Ticket #: 62721                      DST #: 3

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.07.13 @ 13:36:35

TDI 29-8s-19w Rooks,KS Marcotte #1 DST # 3 LKC "D" 2015.07.10



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

TDI  
1310 Bison Rd  
Hays KS 67601  
ATTN: Herb Deines

**29-8s-19w Rooks, KS**  
**Marcotte #1**  
Job Ticket: 62721 **DST#: 3**  
Test Start: 2015.07.10 @ 19:00:00

## GENERAL INFORMATION:

Formation: **LKC "D"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 20:32:45  
Time Test Ended: 01:17:30  
Interval: **3296.00 ft (KB) To 3320.00 ft (KB) (TVD)**  
Total Depth: 3581.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Reference Elevations: 2044.00 ft (KB)  
2039.00 ft (CF)  
KB to GR/CF: 5.00 ft

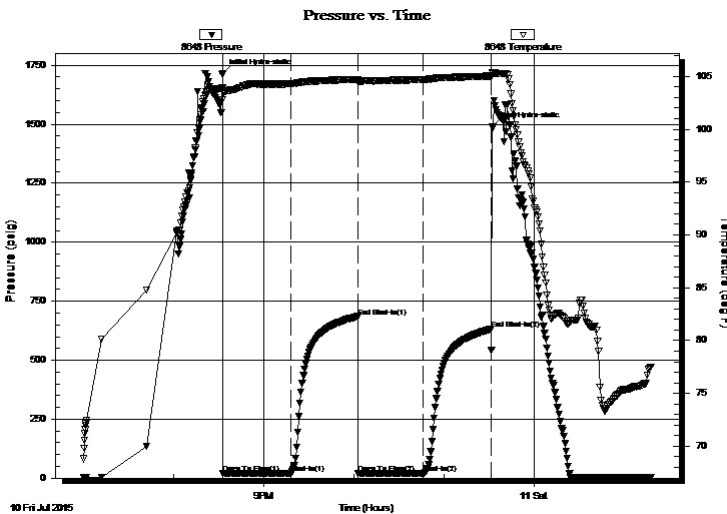
## Serial #: 8648

Inside

Press@RunDepth: 21.27 psig @ 3300.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2015.07.10 End Date: 2015.07.11 Last Calib.: 2015.07.11  
Start Time: 19:00:05 End Time: 01:17:29 Time On Btm: 2015.07.10 @ 20:32:30  
Time Off Btm: 2015.07.10 @ 23:31:45

TEST COMMENT: 45 - IF- 1/2" blow , surging in and out throughout blow  
45 - IS- No return  
45 - FF- Surged and died  
45 - FS- No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1713.36	103.90	Initial Hydro-static
1	20.10	102.79	Open To Flow (1)
46	20.36	104.30	Shut-In(1)
90	684.57	104.73	End Shut-In(1)
91	21.51	104.50	Open To Flow (2)
134	21.27	104.70	Shut-In(2)
179	631.61	105.04	End Shut-In(2)
180	1489.22	105.38	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud - Oil spots, 100%M	0.21

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE TESTING, INC**

**DRILL STEM TEST REPORT**

TDI  
1310 Bison Rd  
Hays KS 67601  
ATTN: Herb Deines

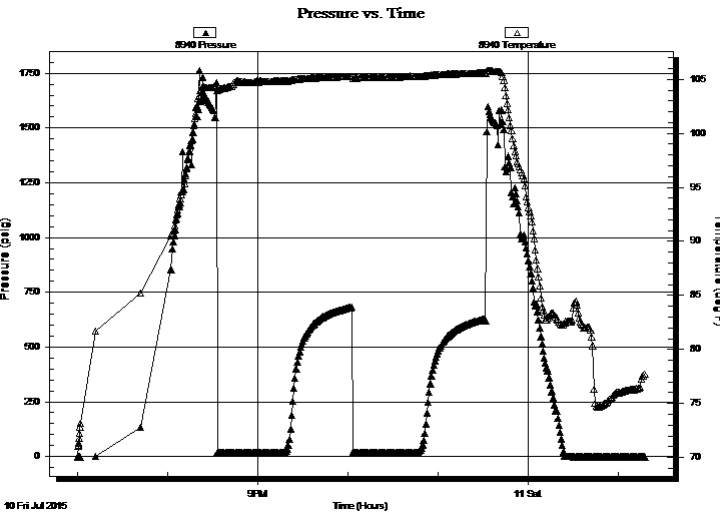
**29-8s-19w Rooks, KS**  
**Marcotte #1**  
Job Ticket: 62721 **DST#: 3**  
Test Start: 2015.07.10 @ 19:00:00

**GENERAL INFORMATION:**

Formation: **LKC "D"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 20:32:45  
Time Test Ended: 01:17:30  
Interval: **3296.00 ft (KB) To 3320.00 ft (KB) (TVD)**  
Total Depth: 3581.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Reference Elevations: 2044.00 ft (KB)  
2039.00 ft (CF)  
KB to GR/CF: 5.00 ft

**Serial #: 8940 Outside**  
Press@RunDepth: psig @ 3300.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2015.07.10 End Date: 2015.07.11 Last Calib.: 2015.07.11  
Start Time: 19:00:05 End Time: 01:17:29 Time On Btm:  
Time Off Btm:

**TEST COMMENT:** 45 - IF- 1/2" blow , surging in and out throughout blow  
45 - IS- No return  
45 - FF- Surged and died  
45 - FS- No return



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
15.00	Mud - Oil spots, 100%M	0.21

\* Recovery from multiple tests

**Gas Rates**

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

TDI  
1310 Bison Rd  
Hays KS 67601  
ATTN: Herb Deines

**29-8s-19w Rooks, KS**  
**Marcotte #1**  
Job Ticket: 62721 **DST#: 3**  
Test Start: 2015.07.10 @ 19:00:00

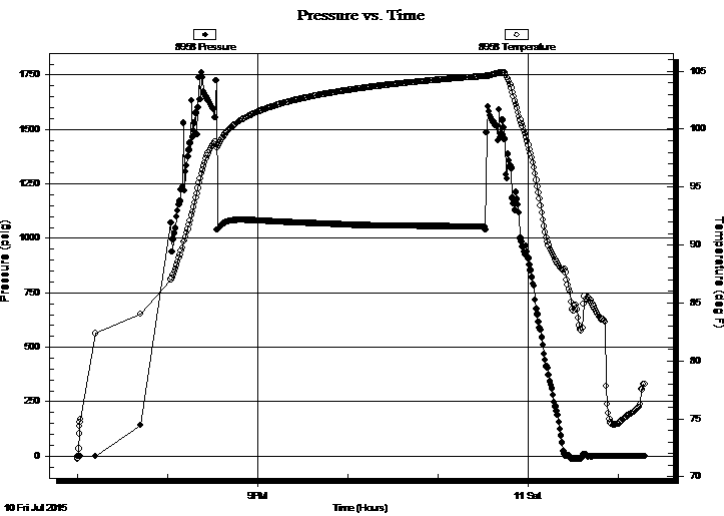
## GENERAL INFORMATION:

Formation: **LKC "D"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 20:32:45  
Time Test Ended: 01:17:30  
Interval: **3296.00 ft (KB) To 3320.00 ft (KB) (TVD)**  
Total Depth: 3581.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Straddle (Reset)  
Tester: Cody Bloedorn  
Unit No: 73  
Reference Elevations: 2044.00 ft (KB)  
2039.00 ft (CF)  
KB to GR/CF: 5.00 ft

## Serial #: 8958 Below (Straddle)

Press@RunDepth: psig @ 3577.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2015.07.10 End Date: 2015.07.11 Last Calib.: 2015.07.11  
Start Time: 19:00:05 End Time: 01:17:29 Time On Btm:  
Time Off Btm:

TEST COMMENT: 45 - IF- 1/2" blow , surging in and out throughout blow  
45 - IS- No return  
45 - FF- Surged and died  
45 - FS- No return



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud - Oil spots, 100%M	0.21

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

TDI  
1310 Bison Rd  
Hays KS 67601  
ATTN: Herb Deines

**29-8s-19w Rooks,KS**  
**Marcotte #1**  
Job Ticket: 62721      **DST#: 3**  
Test Start: 2015.07.10 @ 19:00:00

**Tool Information**

Drill Pipe:	Length: 3303.00 ft	Diameter: 3.80 inches	Volume: 46.33 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 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:	50000.00 lb
			<u>Total Volume: 46.33 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial	46000.00 lb
Depth to Top Packer:	3296.00 ft			Final	46000.00 lb
Depth to Bottom Packer:	3320.00 ft				
Interval between Packers:	24.00 ft				
Tool Length:	311.00 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			3276.00	
Shut In Tool	5.00			3281.00	
Hydraulic tool	5.00			3286.00	
Packer	5.00			3291.00	21.00 Bottom Of Top Packer
Packer	5.00			3296.00	
Stubb	1.00			3297.00	
Perforations	3.00			3300.00	
Recorder	0.00	8648	Inside	3300.00	
Recorder	0.00	8940	Outside	3300.00	
Perforations	19.00			3319.00	
Blank Off Sub	1.00			3320.00	24.00 Tool Interval
Packer	5.00			3325.00	
Change Over Sub	1.00			3326.00	
Drill Pipe	250.00			3576.00	
Change Over Sub	1.00			3577.00	
Recorder	0.00	8958	Below	3577.00	
Perforations	6.00			3583.00	
Bullnose	3.00			3586.00	266.00 Bottom Packers & Anchor

**Total Tool Length: 311.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

TDI **29-8s-19w Rooks,KS**  
 1310 Bison Rd **Marcotte #1**  
 Hays KS 67601 Job Ticket: 62721 **DST#: 3**  
 ATTN: Herb Deines Test Start: 2015.07.10 @ 19:00:00

### Mud and Cushion Information

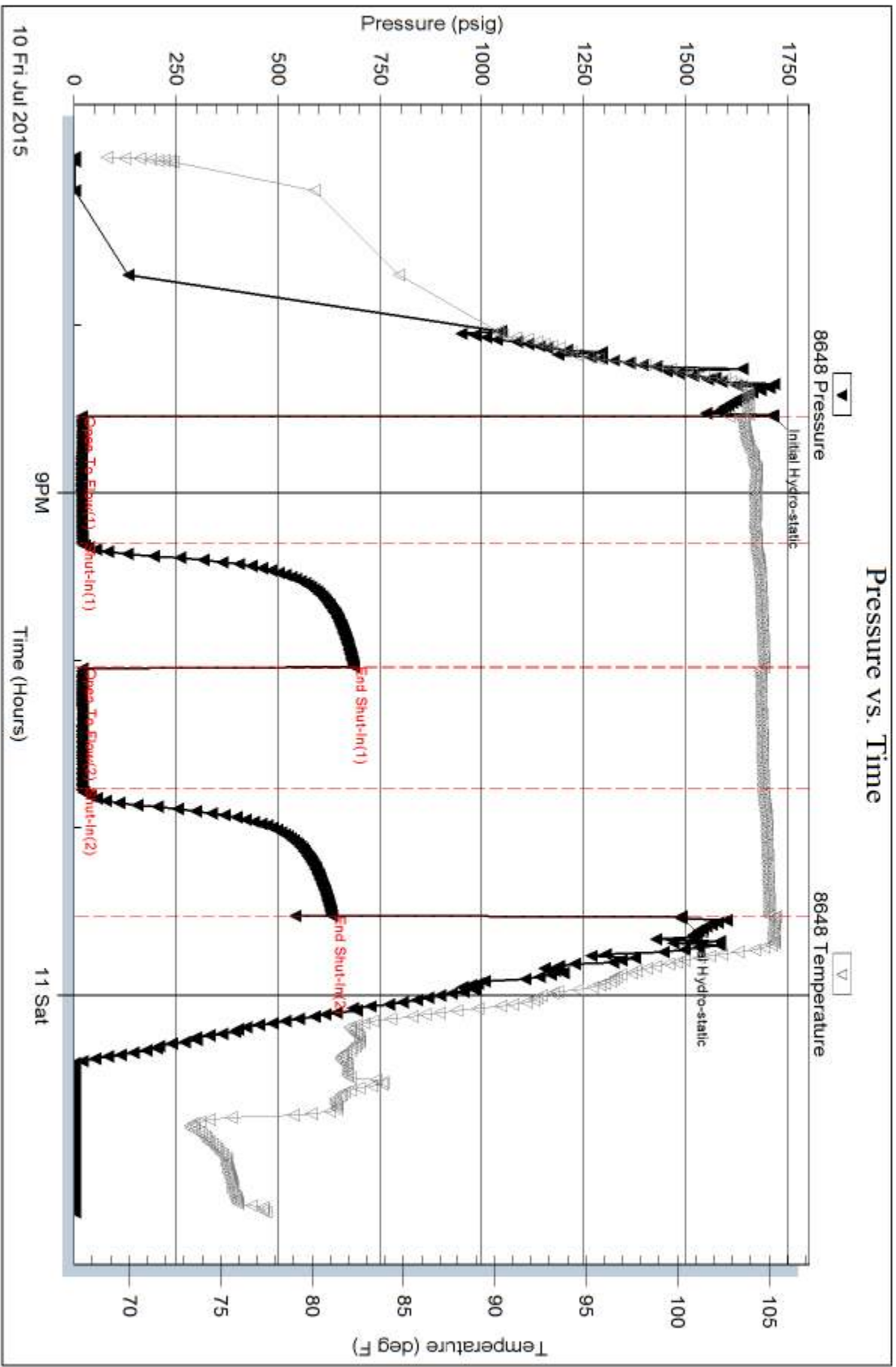
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.99 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1500.00 ppm			
Filter Cake: 1.00 inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	Mud - Oil spots, 100%M	0.210

Total Length: 15.00 ft      Total Volume: 0.210 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

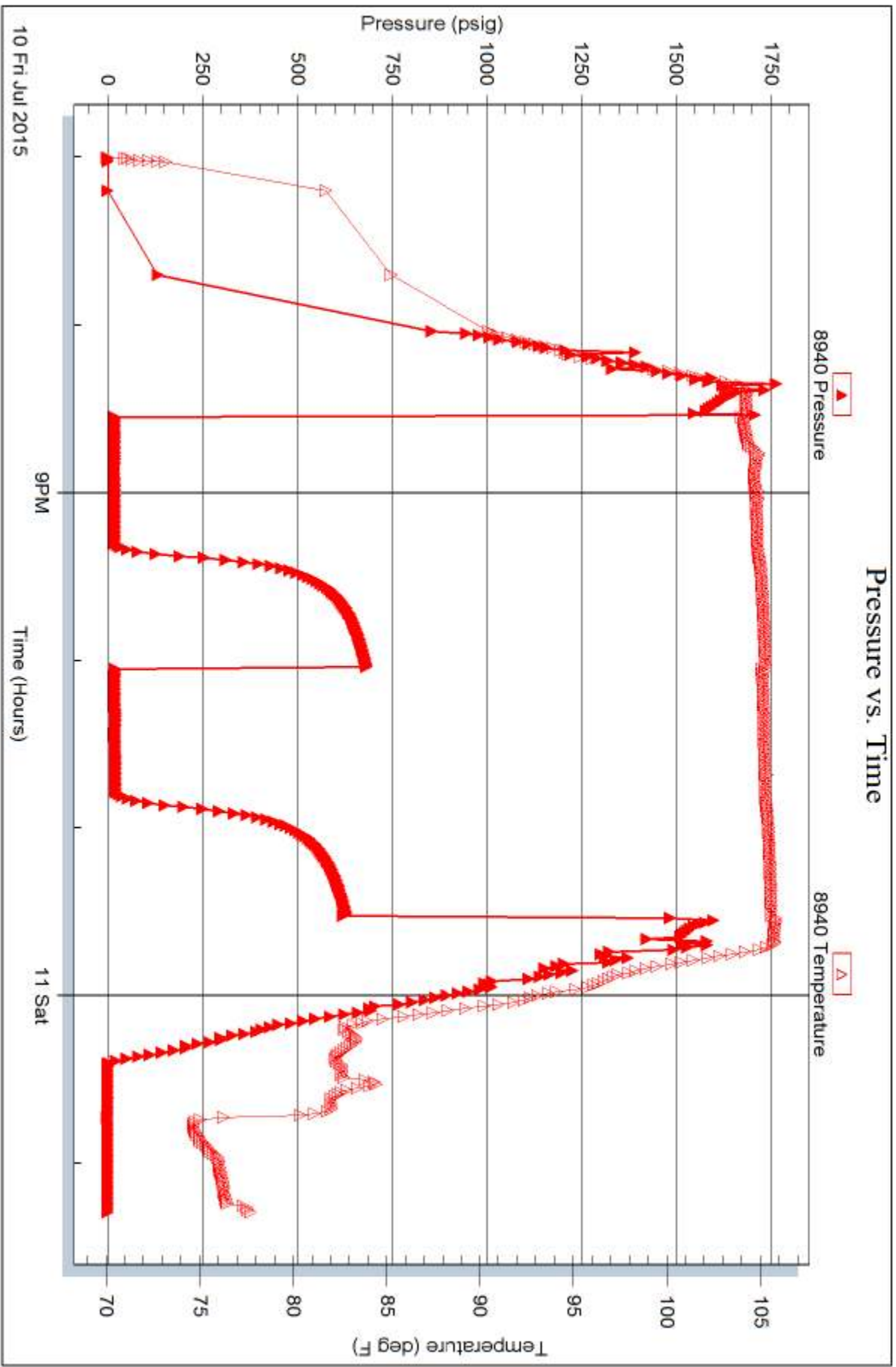


Serial #: 8940

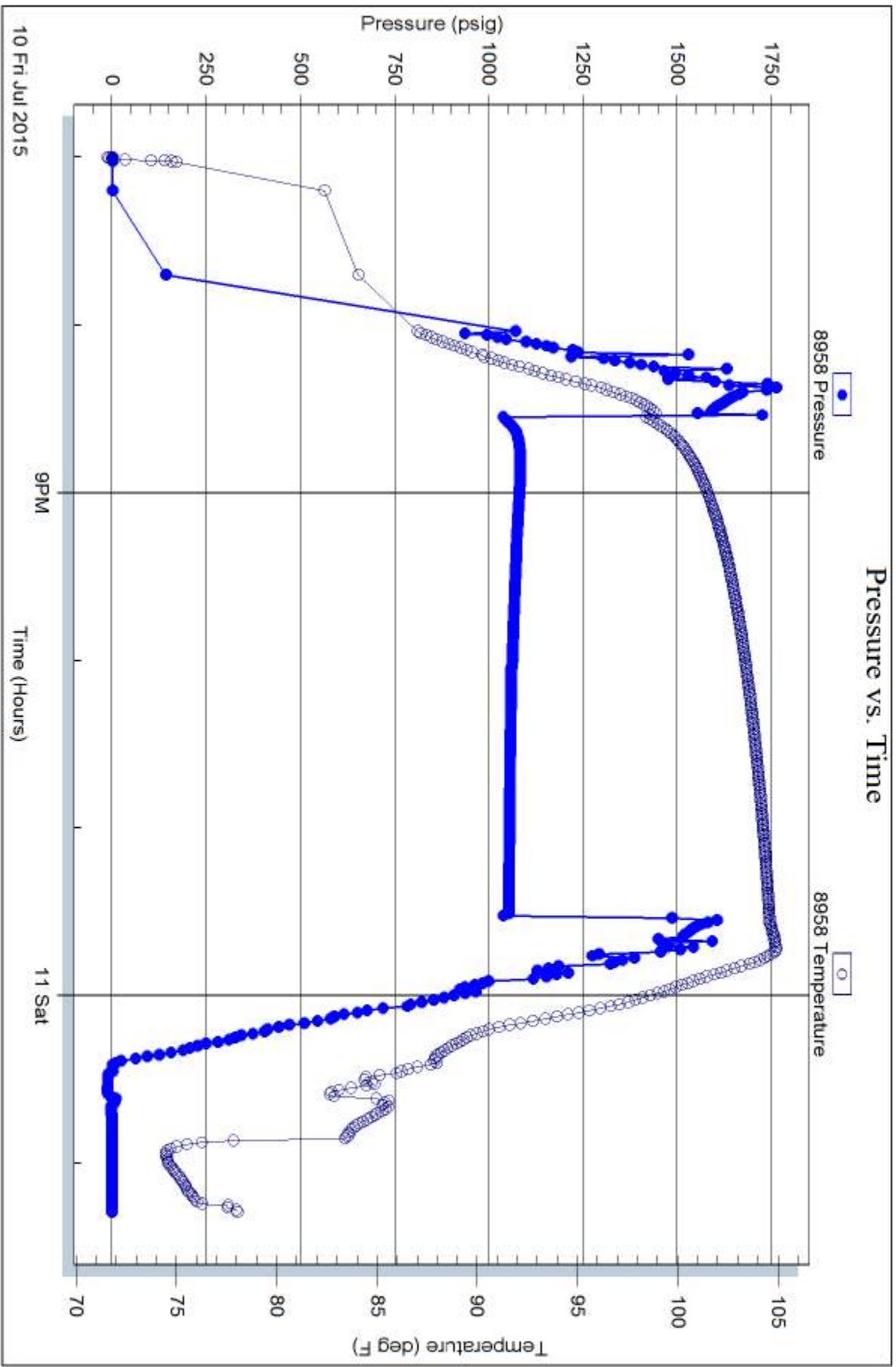
Outside TDI

Marcotte #1

DST Test Number: 3









# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62719

Well Name & No. Marcotte #1 Test No. 1 Date 07-09-15  
 Company T D I Elevation 2039 KB 2044 GL  
 Address 1310 Bison Rd, Hays KS, 67601  
 Co. Rep / Geo. Herb Deines Rig Southwind Rig 1  
 Location: Sec. 29 Twp. 8s Rge. 19w Co. Rooks State KS

Interval Tested 3395-3445 Zone Tested LKC I-J  
 Anchor Length 50' Drill Pipe Run 3395' Mud Wt. 9.4  
 Top Packer Depth 3390 Drill Collars Run — Vis 55  
 Bottom Packer Depth 3395 Wt. Pipe Run — WL 7.2  
 Total Depth 3445 Chlorides 1200 ppm System LCM 1

Blow Description IF - Surged & died  
ISI - No return  
FF - surged & died flushed tool @ 10 minutes. surged & died. Pulled tool @ 20 minutes  
F&I -

Rec	Feet of	%gas	%oil	%water	%mud
<u>3</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 3' BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1710  Test 1050 T-On Location 0932  
 (B) First Initial Flow 32  Jars \_\_\_\_\_ T-Started 0953  
 (C) First Final Flow 32  Safety Joint \_\_\_\_\_ T-Open 1333  
 (D) Initial Shut-In 62  Circ Sub \_\_\_\_\_ T-Pulled 1520  
 (E) Second Initial Flow 35  Hourly Standby \_\_\_\_\_ T-Out 1706  
 (F) Second Final Flow 34  Mileage 91 RT 84 Comments Suppose to be on  
 (G) Final Shut-In —  Sampler \_\_\_\_\_ bank @ 10:30am on bank  
 (H) Final Hydrostatic 1689  Straddle \_\_\_\_\_ @ 11:45  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Packer \_\_\_\_\_  
 Initial Shut-In 45  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Flow 20  Day Standby \_\_\_\_\_ Total 1134  
 Final Shut-In \_\_\_\_\_  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1134

Approved By \_\_\_\_\_ Our Representative Cody B...

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. 62720

Well Name & No. Marcotte #1 Test No. 2 Date 7-10-15  
 Company TDI Elevation 2039 KB 2044 GL  
 Address 1310 Bison Rd. Hays KS. 67601  
 Co. Rep / Geo. Arb Deines Rig Southwind Rig 1  
 Location: Sec. 29 Twp. 8s Rge. 9w Co. Rooks State KS

Interval Tested 3454-3508 3581TD Zone Tested Arbuckle  
 Anchor Length 54' anchor 73' tail Drill Pipe Run 3460' Mud Wt. 9.4  
 Top Packer Depth 3449 Drill Collars Run — Vis 51  
 Bottom Packer Depth 3454 Wt. Pipe Run — WL 8.0  
 Total Depth 3508 Chlorides 1500 ppm System LCM 1  
 Blow Description IF - 1/4" blow. died in 24 minutes  
ISI - No return  
FF - surged & died  
FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
5	Mud			100	

Rec Total 5' BHT 107° Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>1805</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>1033</u>
(B) First Initial Flow <u>35</u>	<input type="checkbox"/> Jars	T-Started <u>1100</u>
(C) First Final Flow <u>39</u>	<input type="checkbox"/> Safety Joint	T-Open <u>1358</u>
(D) Initial Shut-In <u>55</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>1658</u>
(E) Second Initial Flow <u>39</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>1833</u>
(F) Second Final Flow <u>40</u>	<input checked="" type="checkbox"/> Mileage <u>91RT</u> 84	Comments
(G) Final Shut-In <u>48</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1714</u>	<input checked="" type="checkbox"/> Straddle <u>600</u>	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>45</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>45</u>	<input type="checkbox"/> Day Standby	Total <u>1734</u>
Final Shut-In <u>45</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1734</u>	

Approved By \_\_\_\_\_ Our Representative Cody [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62721

Well Name & No. MarCotte #1 Test No. 3 Date 7-10-15  
 Company TDI Elevation 2039 KB 2044 GL  
 Address 1310 Bison Rd, Hays ks, 67601  
 Co. Rep / Geo. Herb Deines Rig Southwind I  
 Location: Sec. 29 Twp. 8s Rge. 19w Co. Rooks State KS

Interval Tested 3296-3320 261' fail Zone Tested LKC "D"  
 Anchor Length 24' TD 3581 Drill Pipe Run 3303' Mud Wt. 9.4  
 Top Packer Depth 3291 Drill Collars Run — Vis 51  
 Bottom Packer Depth 3296 Wt. Pipe Run — WL 8.0  
 Total Depth 3320 Chlorides 1500 ppm System LCM 1

Blow Description IF - 1/2" blow, surging in & out throughout blow  
ISI - No return  
FF - Surged & died  
FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>Mud-oil spots</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 15' BHT 1050 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1713  Test 1050 T-On Location 18:45  
 (B) First Initial Flow 20  Jars — T-Started 19:00  
 (C) First Final Flow 20  Safety Joint — T-Open 20:33  
 (D) Initial Shut-In 684  Circ Sub — T-Pulled 23:33  
 (E) Second Initial Flow 21  Hourly Standby — T-Out 01:18  
 (F) Second Final Flow 21  Mileage 91RT 84 Comments —  
 (G) Final Shut-In 631  Sampler —  
 (H) Final Hydrostatic 1489  Straddle 600  
 Shale Packer —  
 Shale Packer —  
 Extra Packer —  
 Extra Recorder —  
 Day Standby —  
 Accessibility —

Initial Open 45  
 Initial Shut-In 45  
 Final Flow 45  
 Final Shut-In 45

Sub Total 1734  
 Total 1734  
 MP/DST Disc't —

Approved By \_\_\_\_\_ Our Representative Cody [Signature] Thank You!

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