



DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd.
Hays KS 67601

ATTN: Herb Deines

Frieda #1

28-15 s-18w Ellis,KS

Start Date: 2013.09.09 @ 17:21:06

End Date: 2013.09.09 @ 23:02:56

Job Ticket #: 54397 DST #: 1

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

Printed: 2013.09.16 @ 14:44:15

TDI Inc.
28-15 s-18w Ellis,KS
Frieda #1
DST # 1
LKC D
2013.09.09



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

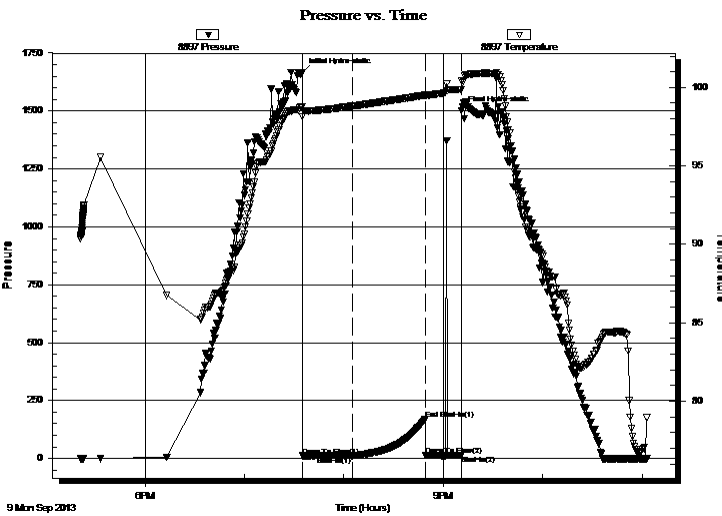
28-15 s-18w Ellis,KS
Frieda #1
Job Ticket: 54397 **DST#: 1**
Test Start: 2013.09.09 @ 17:21:06

GENERAL INFORMATION:

Formation: **LKC D**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:34:56
 Time Test Ended: 23:02:56
 Interval: **3264.00 ft (KB) To 3298.00 ft (KB) (TVD)**
 Total Depth: 3298.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Tate Lang/Tim Philli
 Unit No: 49
 Reference Elevations: 1956.00 ft (KB)
 1947.00 ft (CF)
 KB to GR/CF: 9.00 ft

Serial #: 8897 Inside
 Press @ Run Depth: 11.16 psig @ 3265.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.09.09 End Date: 2013.09.09 Last Calib.: 2013.09.09
 Start Time: 17:21:07 End Time: 23:02:56 Time On Btm: 2013.09.09 @ 19:34:46
 Time Off Btm: 2013.09.09 @ 21:11:06

TEST COMMENT: weak surface blow died in 9 minutes
 dead no blow back
 dead no blow, flush tool, dead no blow
 pulled tool



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1666.57	98.78	Initial Hydro-static
1	11.27	98.16	Open To Flow (1)
31	11.16	98.81	Shut-In(1)
75	170.41	99.51	End Shut-In(1)
75	12.07	99.47	Open To Flow (2)
96	14.23	99.88	Shut-In(2)
97	1501.94	100.40	Final Hydro-static

Recovery

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

Gas Rates

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



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

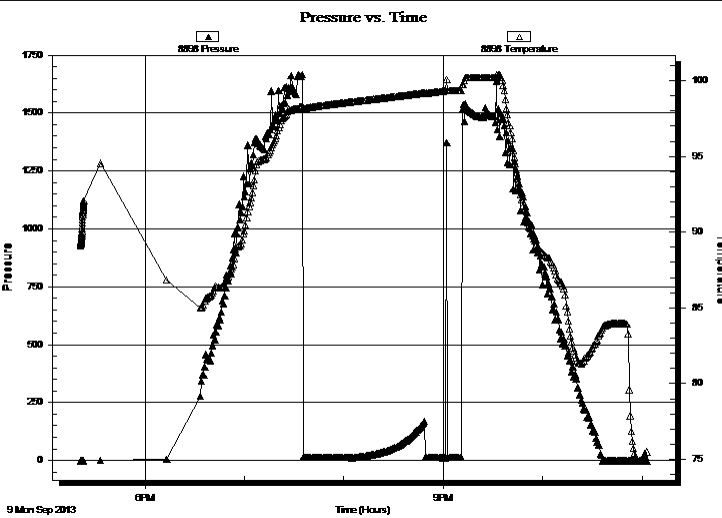
28-15 s-18w Ellis, KS
Frieda #1
Job Ticket: 54397 **DST#: 1**
Test Start: 2013.09.09 @ 17:21:06

GENERAL INFORMATION:

Formation: **LKC D**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened: 19:34:56 Tester: Tate Lang/Tim Philli
Time Test Ended: 23:02:56 Unit No: 49
Interval: 3264.00 ft (KB) To 3298.00 ft (KB) (TVD) Reference Elevations: 1956.00 ft (KB)
Total Depth: 3298.00 ft (KB) (TVD) 1947.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 9.00 ft

Serial #: 8898 Outside
Press @ Run Depth: psig @ 3265.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.09.09 End Date: 2013.09.09 Last Calib.: 2013.09.09
Start Time: 17:21:03 End Time: 23:02:52 Time On Btm:
Time Off Btm:

TEST COMMENT: weak surface blow died in 9 minutes
dead no blow back
dead no blow, flush tool, dead no blow
pulled tool



PRESSURE SUMMARY

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

Recovery

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

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

28-15 s-18w Ellis,KS
Frieda #1
Job Ticket: 54397 **DST#: 1**
Test Start: 2013.09.09 @ 17:21:06

Tool Information

Drill Pipe:	Length: 3249.00 ft	Diameter: 3.80 inches	Volume: 45.57 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:	20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	74000.00 lb
			<u>Total Volume: 45.57 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial	44000.00 lb
Depth to Top Packer:	3264.00 ft			Final	44000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	34.00 ft				
Tool Length:	54.00 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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Shut In Tool	5.00			3249.00	
Hydraulic tool	5.00			3254.00	
Packer	5.00			3259.00	20.00 Bottom Of Top Packer
Packer	5.00			3264.00	
Stubb	1.00			3265.00	
Recorder	0.00	8897	Inside	3265.00	
Recorder	0.00	8898	Outside	3265.00	
Perforations	30.00			3295.00	
Bullnose	3.00			3298.00	34.00 Bottom Packers & Anchor
Total Tool Length:	54.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc.

28-15 s-18w Ellis,KS

1310 Bison Rd.
Hays KS 67601

Frieda #1

Job Ticket: 54397

DST#: 1

ATTN: Herb Deines

Test Start: 2013.09.09 @ 17:21:06

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:

bbbl

Water Loss: 7.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	100%M	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:

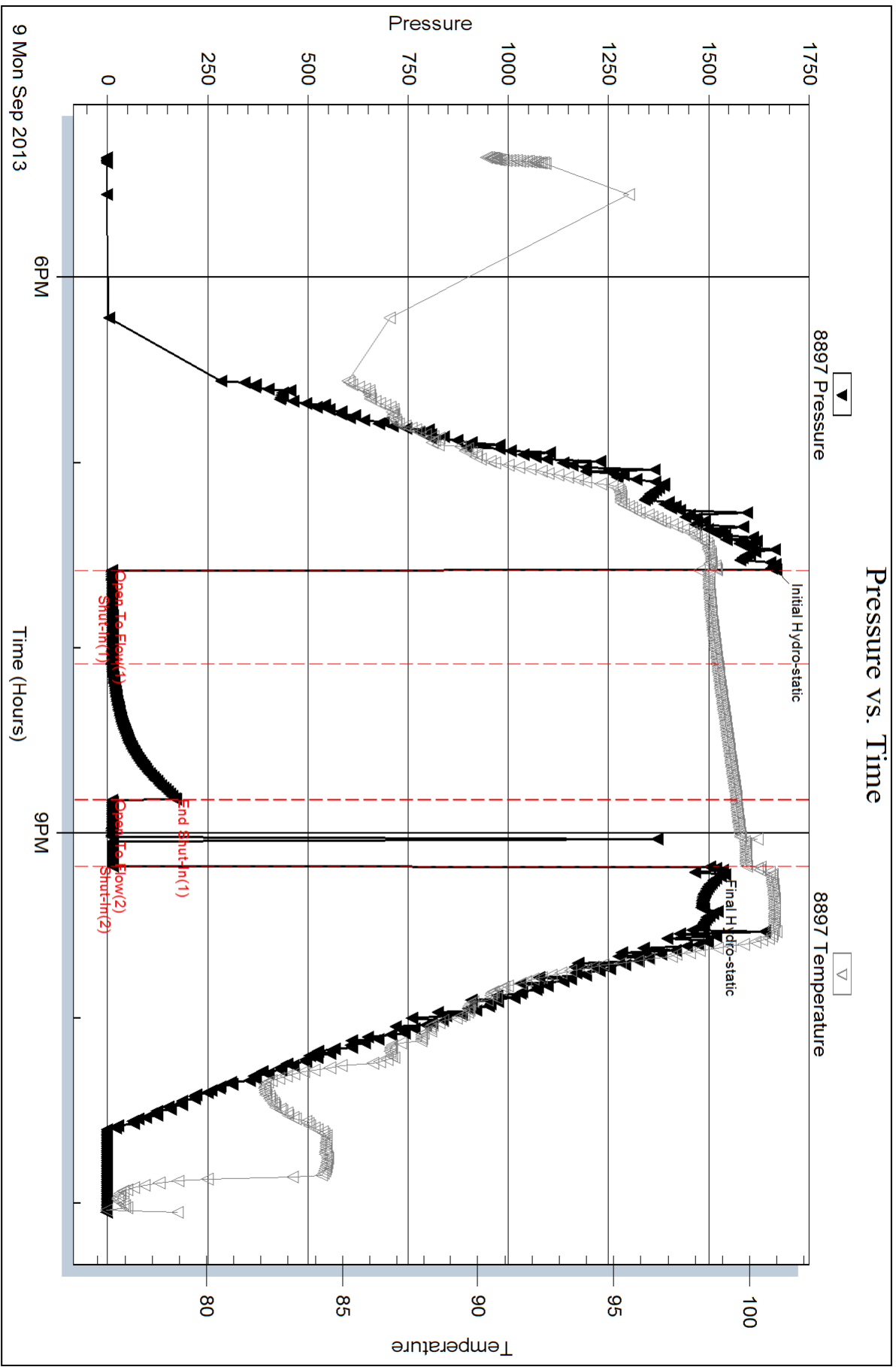
Serial #: 8897

Inside

TDI Inc.

Frieda #1

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 54397

Printed: 2013.09.16 @ 14:44:17

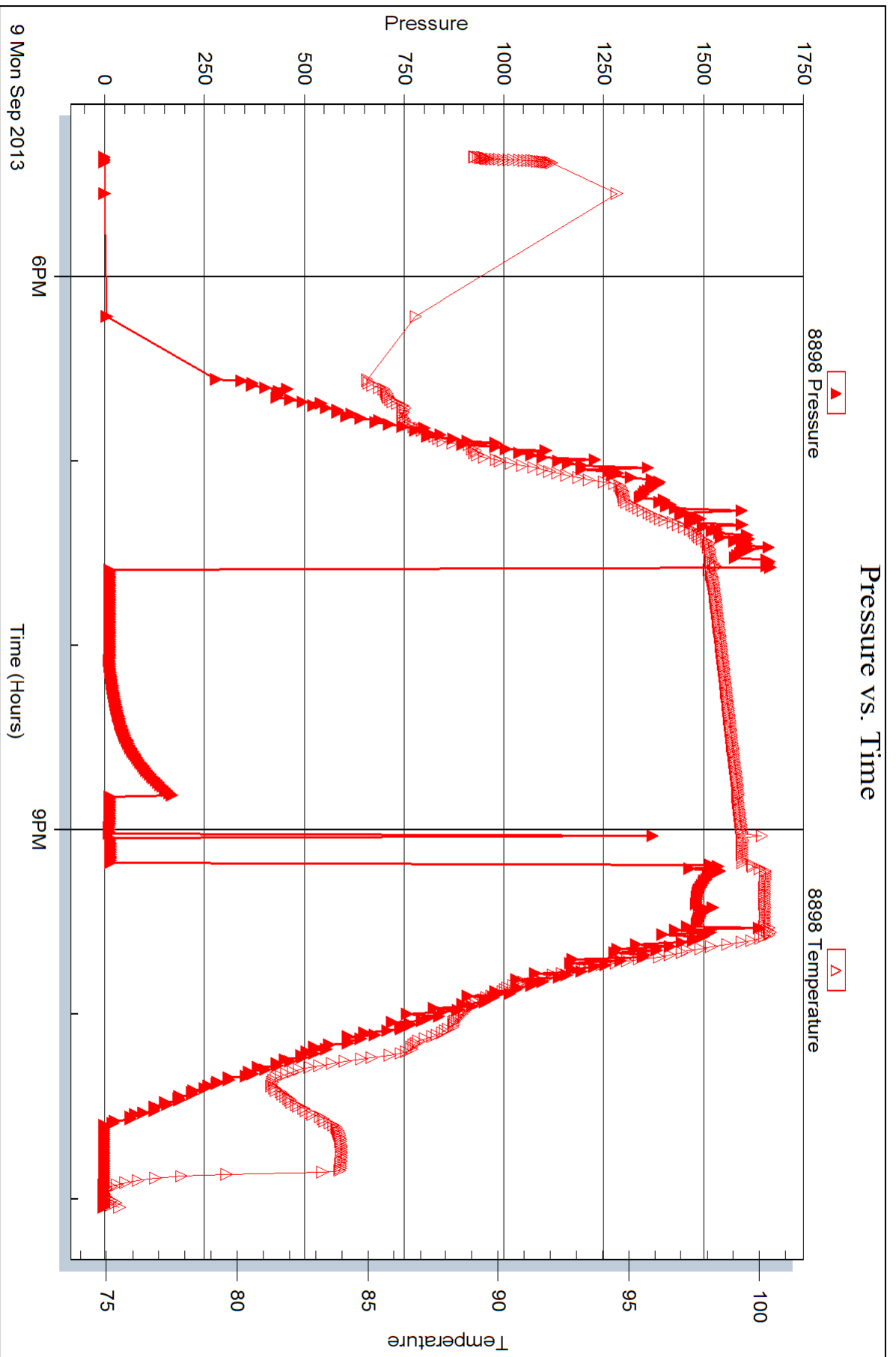
Serial #: 8898

Outside

TDI Inc.

Frieda #1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 54397

Printed: 2013.09.16 @ 14:44:17



DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd.
Hays KS 67601

ATTN: Herb Deines

Frieda #1

28-15 s-18w Ellis,KS

Start Date: 2013.09.10 @ 11:10:46

End Date: 2013.09.10 @ 16:31:06

Job Ticket #: 54389 DST #: 2

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

Printed: 2013.09.16 @ 14:43:51

TDI Inc.
28-15 s-18w Ellis,KS
Frieda #1
DST # 2
LKC H-J
2013.09.10



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

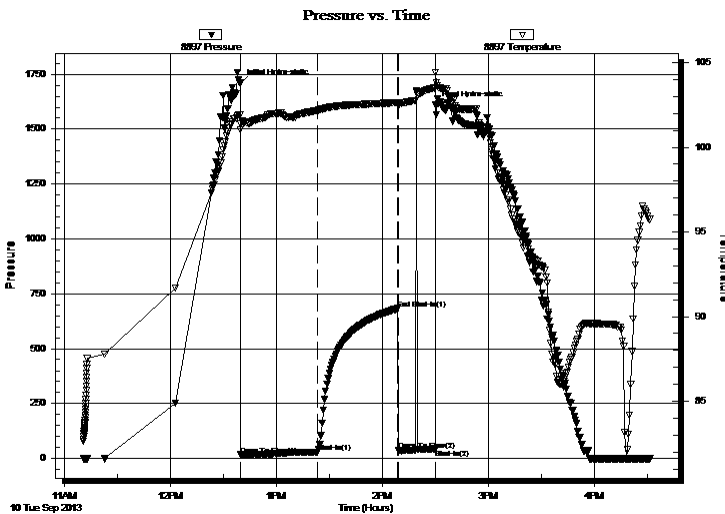
28-15 s-18w Ellis,KS
Frieda #1
Job Ticket: 54389 **DST#: 2**
Test Start: 2013.09.10 @ 11:10:46

GENERAL INFORMATION:

Formation: **LKC H-J**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 12:39:36
Time Test Ended: 16:31:06
Interval: **3350.00 ft (KB) To 3420.00 ft (KB) (TVD)**
Total Depth: 3420.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Reset)
Tester: Tate Lang/Tim Philli
Unit No: 49
Reference Elevations: 1956.00 ft (KB)
1947.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 8897 Inside
Press @ Run Depth: 28.72 psig @ 3351.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.09.10 End Date: 2013.09.10 Last Calib.: 2013.09.10
Start Time: 11:10:47 End Time: 16:31:06 Time On Btm: 2013.09.10 @ 12:39:26
Time Off Btm: 2013.09.10 @ 14:29:46

TEST COMMENT: weak surface blow, built to 2 1/4" dead no blow back
dead no blow, flush tool, surge blow then died right after pulled tool



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1707.78	101.91	Initial Hydro-static
1	16.17	101.03	Open To Flow (1)
44	28.72	102.17	Shut-In(1)
90	682.51	102.64	End Shut-In(1)
90	36.46	102.42	Open To Flow (2)
111	42.22	103.51	Shut-In(2)
111	1608.78	104.42	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	100%M	0.88

* 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
ATTN: Herb Deines

28-15 s-18w Ellis,KS
Frieda #1
Job Ticket: 54389 **DST#: 2**
Test Start: 2013.09.10 @ 11:10:46

Tool Information

Drill Pipe:	Length: 3344.00 ft	Diameter: 3.80 inches	Volume: 46.91 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: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 74000.00 lb
			<u>Total Volume: 46.91 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3350.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	70.00 ft			
Tool Length:	90.00 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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Shut In Tool	5.00			3335.00	
Hydraulic tool	5.00			3340.00	
Packer	5.00			3345.00	20.00 Bottom Of Top Packer
Packer	5.00			3350.00	
Stubb	1.00			3351.00	
Recorder	0.00	8897	Inside	3351.00	
Recorder	0.00	8898	Outside	3351.00	
Perforations	33.00			3384.00	
Change Over Sub	1.00			3385.00	
Drill Pipe	31.00			3416.00	
Change Over Sub	1.00			3417.00	
Bullnose	3.00			3420.00	70.00 Bottom Packers & Anchor

Total Tool Length: 90.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc. **28-15 s-18w Ellis,KS**
 1310 Bison Rd. **Frieda #1**
 Hays KS 67601 Job Ticket: 54389 **DST#: 2**
 ATTN: Herb Deines Test Start: 2013.09.10 @ 11:10:46

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: 69.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.97 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4800.00 ppm			
Filter Cake: 1.00 inches			

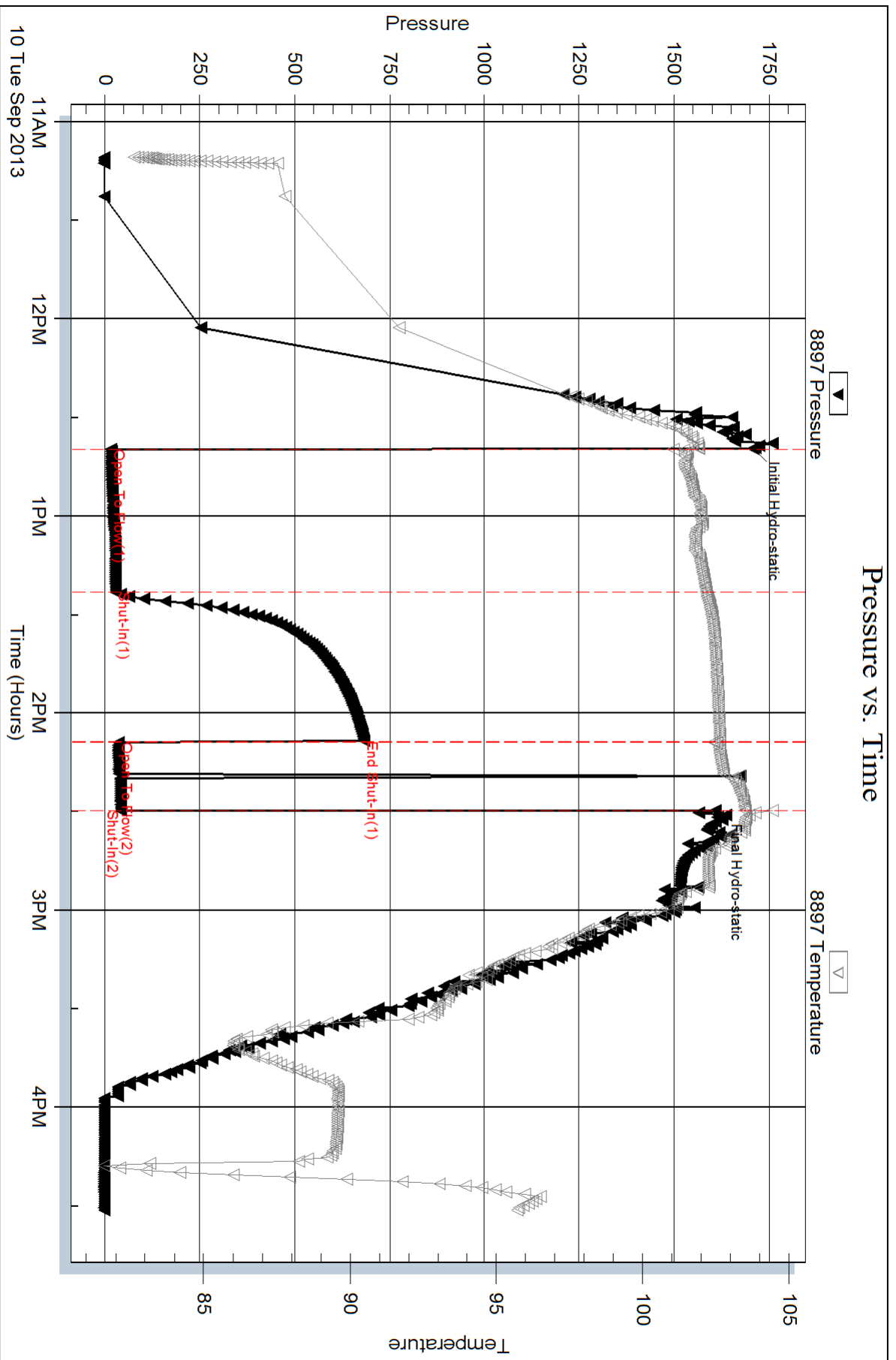
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	100%M	0.884

Total Length: 63.00 ft Total Volume: 0.884 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Pressure vs. Time

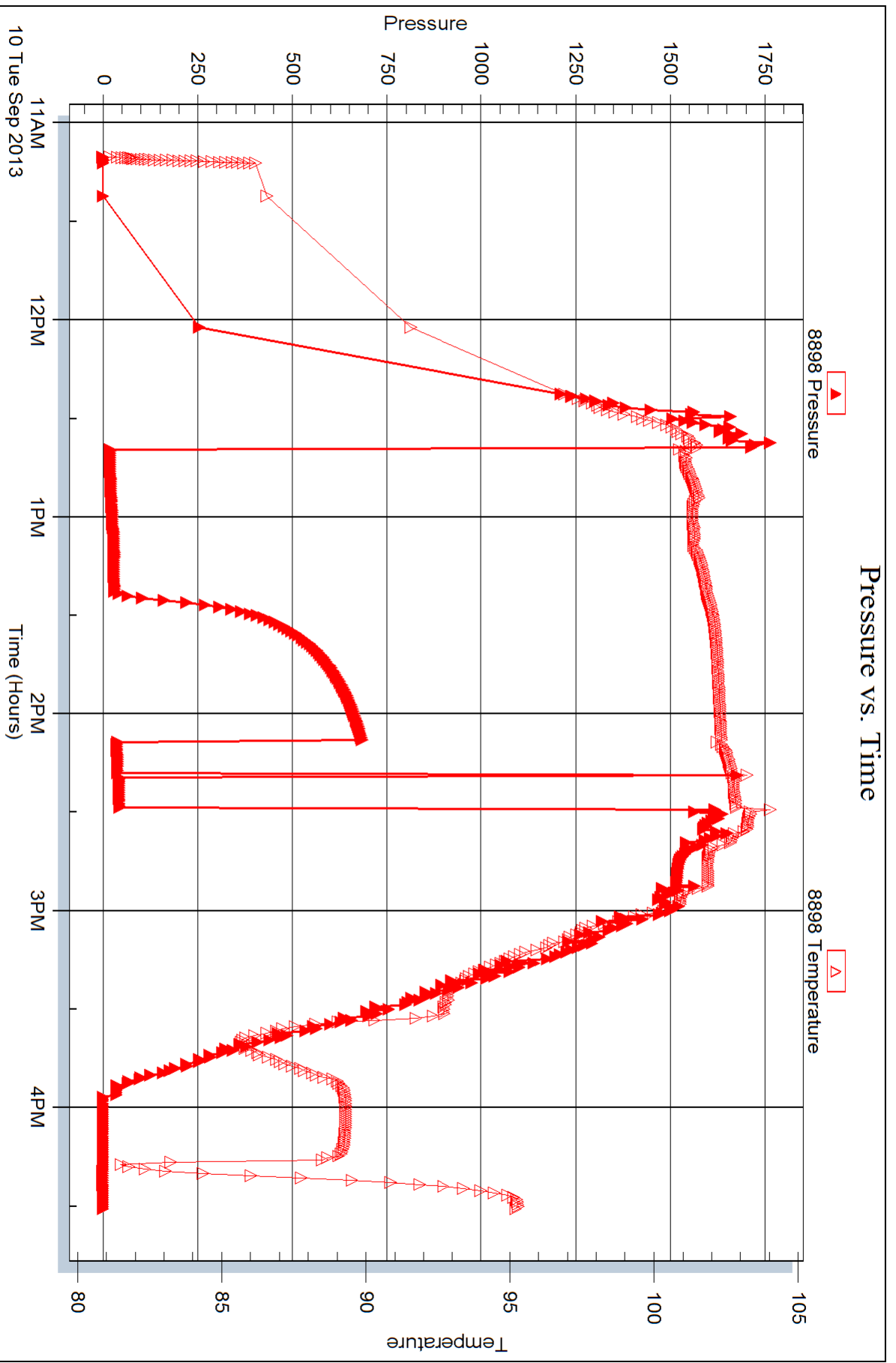


Serial #: 8898

Outside TDI Inc.

Frieda #1

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 54389

Printed: 2013.09.16 @ 14:43:53



DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd.
Hays KS 67601

ATTN: Herb Deines

Frieda #1

28-15 s-18w Ellis,KS

Start Date: 2013.09.11 @ 04:14:57

End Date: 2013.09.11 @ 10:02:36

Job Ticket #: 54399 DST #: 3

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

Printed: 2013.09.16 @ 14:43:26



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

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

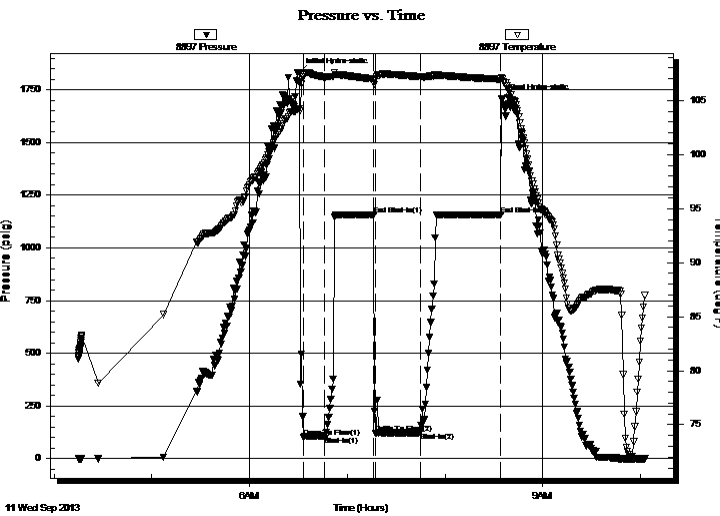
28-15 s-18w Ellis,KS
Frieda #1
Job Ticket: 54399 **DST#: 3**
Test Start: 2013.09.11 @ 04:14:57

GENERAL INFORMATION:

Formation: **Conglomerate Sand**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 06:32:57
 Time Test Ended: 10:02:36
 Interval: **3462.00 ft (KB) To 3535.00 ft (KB) (TVD)**
 Total Depth: 3535.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Tate Lang/Tim Philli
 Unit No: 49
 Reference Elevations: 1956.00 ft (KB)
 1947.00 ft (CF)
 KB to GR/CF: 9.00 ft

Serial #: 8897 Inside
 Press @ RunDepth: 125.70 psig @ 3463.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.09.11 End Date: 2013.09.11 Last Calib.: 2013.09.11
 Start Time: 04:14:58 End Time: 10:02:37 Time On Btm: 2013.09.11 @ 06:30:47
 Time Off Btm: 2013.09.11 @ 08:34:36

TEST COMMENT: BOB in 30 secs
 dead no blow back
 weak surface blow built to 1" died back to weak surface blow
 dead no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1832.94	104.26	Initial Hydro-static
3	101.81	107.21	Open To Flow (1)
16	106.84	107.16	Shut-In(1)
46	1158.55	106.98	End Shut-In(1)
47	118.91	106.91	Open To Flow (2)
74	125.70	107.18	Shut-In(2)
124	1158.51	106.98	End Shut-In(2)
124	1710.07	107.13	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
190.00	100%M	2.67

* 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

28-15 s-18w Ellis, KS
Frieda #1
 Job Ticket: 54399 **DST#: 3**
 Test Start: 2013.09.11 @ 04:14:57

GENERAL INFORMATION:

Formation: **Conglomerate Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:32:57

Time Test Ended: 10:02:36

Interval: 3462.00 ft (KB) To 3535.00 ft (KB) (TVD)

Total Depth: 3535.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole (Reset)

Tester: Tate Lang/Tim Philli

Unit No: 49

Reference Elevations: 1956.00 ft (KB)

1947.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 8898

Outside

Press @ Run Depth: psig @ 3463.00 ft (KB)

Start Date: 2013.09.11 End Date: 2013.09.11

Start Time: 04:14:33 End Time: 10:02:12

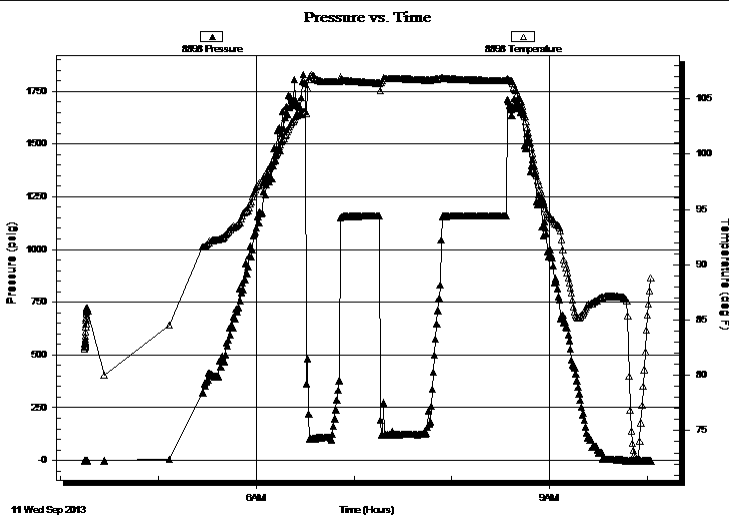
Capacity: 8000.00 psig

Last Calib.: 2013.09.11

Time On Btm:

Time Off Btm:

TEST COMMENT: BOB in 30 secs
 dead no blow back
 weak surface blow built to 1" died back to weak surface blow
 dead no blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
190.00	100%M	2.67

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

28-15 s-18w Ellis,KS
Frieda #1
Job Ticket: 54399 **DST#: 3**
Test Start: 2013.09.11 @ 04:14:57

Tool Information

Drill Pipe:	Length: 3472.00 ft	Diameter: 3.80 inches	Volume: 48.70 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: 20000.00 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: 48.70 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3462.00 ft			Final 44000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	73.00 ft			
Tool Length:	93.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3447.00	
Hydraulic tool	5.00			3452.00	
Packer	5.00			3457.00	20.00 Bottom Of Top Packer
Packer	5.00			3462.00	
Stubb	1.00			3463.00	
Recorder	0.00	8897	Inside	3463.00	
Recorder	0.00	8898	Outside	3463.00	
Perforations	36.00			3499.00	
Change Over Sub	1.00			3500.00	
Drill Pipe	31.00			3531.00	
Change Over Sub	1.00			3532.00	
Bullnose	3.00			3535.00	73.00 Bottom Packers & Anchor

Total Tool Length: 93.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc. **28-15 s-18w Ellis,KS**
 1310 Bison Rd. **Frieda #1**
 Hays KS 67601 Job Ticket: 54399 **DST#: 3**
 ATTN: Herb Deines Test Start: 2013.09.11 @ 04:14:57

Mud and Cushion Information

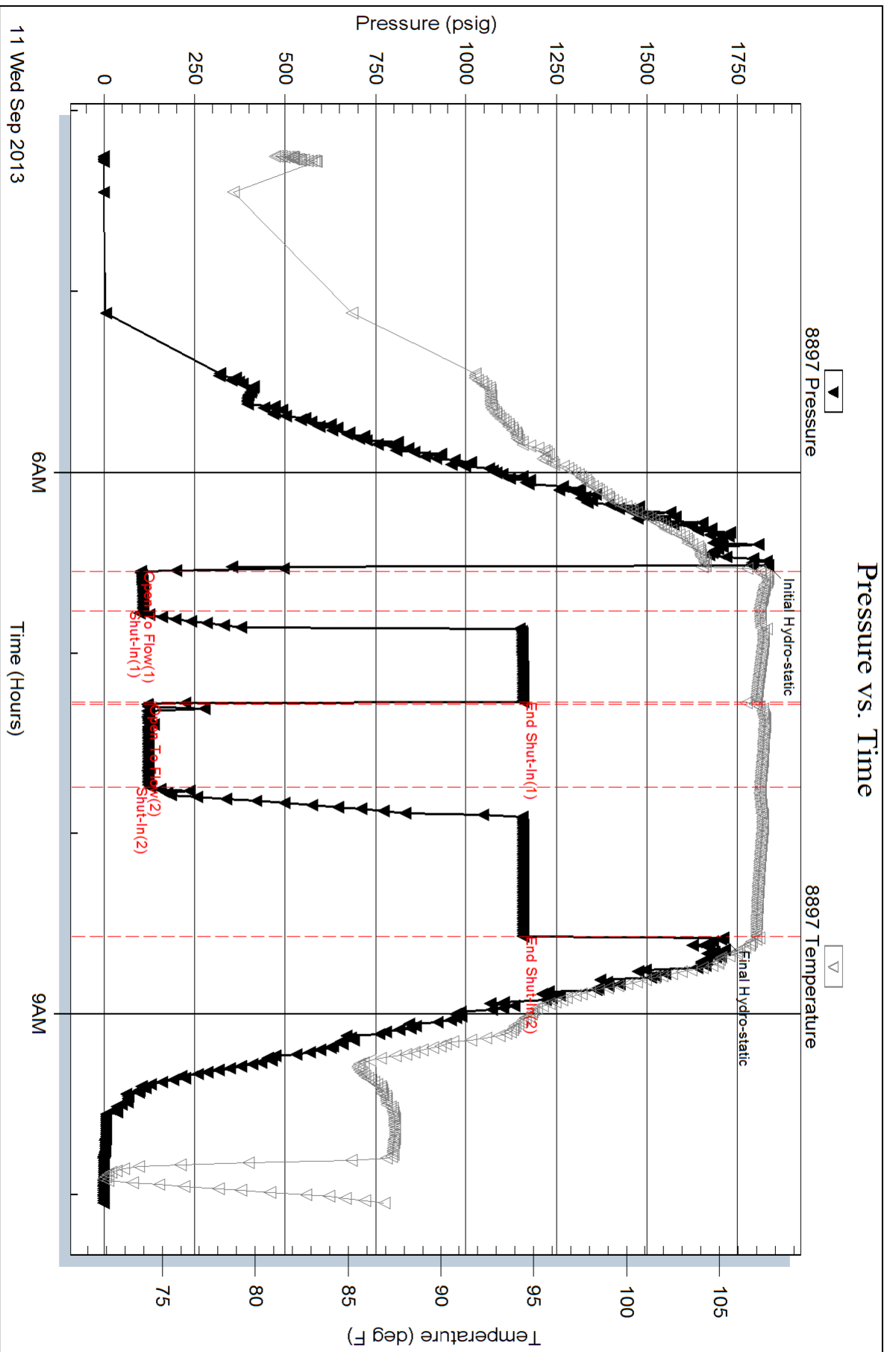
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.39 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4800.00 ppm			
Filter Cake: 1.00 inches			

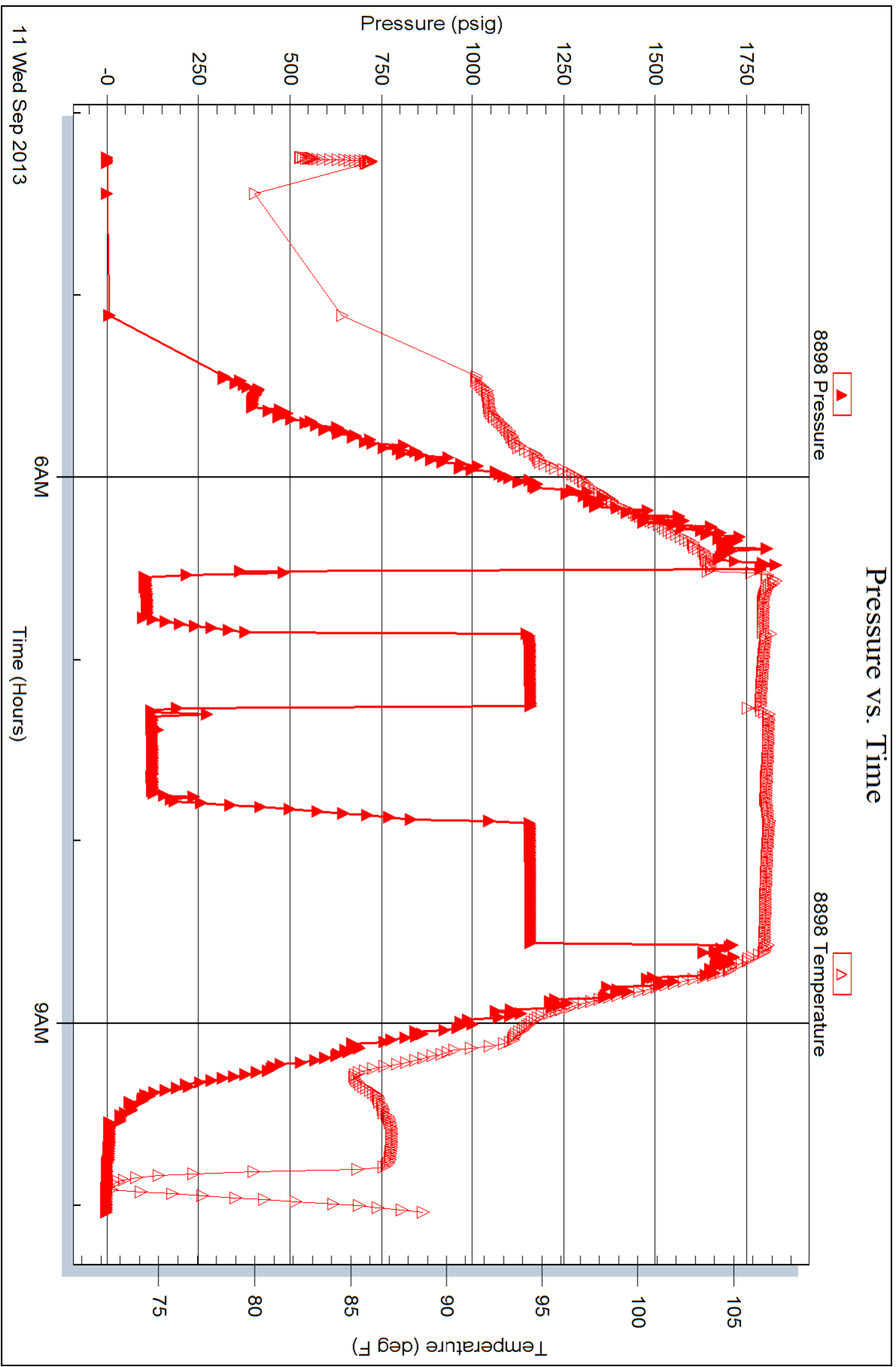
Recovery Information

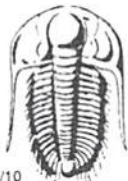
Recovery Table

Length ft	Description	Volume bbl
190.00	100%M	2.665

Total Length: 190.00 ft Total Volume: 2.665 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54397

Well Name & No. Frieda #1 Test No. 54397 Date 9-9-13
 Company TDI INC. Elevation 1986 KB 1947 GL
 Address 1310 Bison Rd Hays KS 67601
 Co. Rep / Geo. Herb Deines Rig Southwind Rig #1
 Location: Sec. 29 Twp. 15S Rge. 18W Co. Ellis State KS

Interval Tested 3264 3298 Zone Tested "D" zone
 Anchor Length 34 Drill Pipe Run 3249 Mud Wt. 9.0
 Top Packer Depth 3260 Drill Collars Run 0 Vis 55
 Bottom Packer Depth 3264 Wt. Pipe Run 0 WL 7.8
 Total Depth 3298 Chlorides 4700 ppm System LCM 2#

Blow Description Weak surface blow died in 9 mins
Dead no blow back
Dead no blow Flushed tool dead no blow
pulled tool

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>1</u>	Feet of <u>mud</u>				

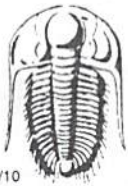
Rec Total 1 BHT 100 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1667 Test 1150 T-On Location 16:00
 (B) First Initial Flow 11 Jars _____ T-Started 17:21
 (C) First Final Flow 11 Safety Joint _____ T-Open 19:35
 (D) Initial Shut-In 170 Circ Sub _____ T-Pulled 21:10
 (E) Second Initial Flow 12 Hourly Standby _____ T-Out 23:01
 (F) Second Final Flow 14 Mileage 28 R/T 43.40 Comments _____
 (G) Final Shut-In N/A Sampler _____
 (H) Final Hydrostatic 1562 Straddle _____

Initial Open 30 Ruined Shale Packer _____
 Initial Shut-In 45 Ruined Packer _____
 Final Flow 10 Flush 10 Extra Copies _____
 Final Shut-In N/A Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1193.40
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1193.40

Approved By [Signature] 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. 54398

Well Name & No. Frieda #1 Test No. 2 Date 09/10/2013
 Company TDI INC. Elevation 1956 KB 1947 GL
 Address 1310 Bison Rd Hays, KS 67601
 Co. Rep / Geo. Heeb Deines Rig Southwind Rig #1
 Location: Sec. 28 Twp. 155 Rge. 18W Co. Ellis State KS

Interval Tested 3550 - 3420 Zone Tested H, I, J
 Anchor Length 70 Drill Pipe Run _____ Mud Wt. 9.3
 Top Packer Depth 3946 Drill Collars Run 0 Vis 6.9
 Bottom Packer Depth 3350 Wt. Pipe Run 0 WL 8.0
 Total Depth 3420 Chlorides 4800 ppm System LCM 21bs

Blow Description weak surface blow, built to 2.25"
Dead no blow back
Dead no blow, flush tool surge blow, died right after
Pulled tool

Rec	Feet of	%gas	%oil	%water	%mud
<u>63</u>	<u>mud</u>			<u>100</u>	
____	____	____	____	____	____
____	____	____	____	____	____
____	____	____	____	____	____
____	____	____	____	____	____

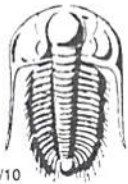
Rec Total 63 BHT 104 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1708 Test 1150 T-On Location 10:55
 (B) First Initial Flow 16 Jars _____ T-Started 11:10
 (C) First Final Flow 29 Safety Joint _____ T-Open 12:38
 (D) Initial Shut-In 683 Circ Sub _____ T-Pulled 1428
 (E) Second Initial Flow 36 Hourly Standby _____ T-Out 1630
 (F) Second Final Flow 42 Mileage 28 RT 43.40 Comments _____
 (G) Final Shut-In N/A Sampler _____
 (H) Final Hydrostatic 1609 Straddle _____

Initial Open 45 Shale Packer _____ Ruined Shale Packer _____
 Initial Shut-In 45 Extra Packer _____ Ruined Packer _____
 Final Flow 10, flush, 10 Extra Recorder _____ Extra Copies _____
 Final Shut-In _____ Day Standby _____ Sub Total 0
 Accessibility _____ Total 1193.40
 Sub Total 1193.40 MP/DST Disc't _____

Approved By [Signature] Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **54399**

Well Name & No. Fricda #1 Test No. 3 Date 09/11/2013
 Company TDI INC Elevation 1956 KB 1947 GL
 Address 1310 BISON Rd Hays, KS 67601
 Co. Rep / Geo. Herb DEINGS Rig Southwind Rig #1
 Location: Sec. 28 Twp. 15S Rge. 18W Co. Ellis State KS

Interval Tested 3462 - 3535 Zone Tested Conglomerate SAND
 Anchor Length 73 Drill Pipe Run 3472 Mud Wt. 9.4
 Top Packer Depth 3458 Drill Collars Run 0 Vis 53
 Bottom Packer Depth 3462 Wt. Pipe Run 0 WL 8.4
 Total Depth 3535 Chlorides 4800 ppm System LCM 2

Blow Description Bottom of bucket 30 sec,
Dead no blow back
weak surface blow built to 1" died back to weak surface blow
Dead no blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>190</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 190 BHT 108 Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1833</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>03:35</u>
(B) First Initial Flow <u>102</u>	<input type="checkbox"/> Jars _____	T-Started <u>04:14</u>
(C) First Final Flow <u>107</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>0631</u>
(D) Initial Shut-In <u>1159</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>0831</u>
(E) Second Initial Flow <u>119</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>1000</u>
(F) Second Final Flow <u>126</u>	<input checked="" type="checkbox"/> Mileage <u>28 R/T</u> Loaded	Comments <u>Mud droped</u>
(G) Final Shut-In <u>1158</u>	<input type="checkbox"/> Sampler <u>86.80</u>	<u>like a packer failure set</u>
(H) Final Hydrostatic <u>1710</u>	<input type="checkbox"/> Straddle _____	<u>5ft more on tool then staged</u>

Initial Open 15
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 45

Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1236.80
 MP/DST Disc't _____
 Sub Total 1236.80

Approved By _____ Our Representative [Signature]

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