



## DRILL STEM TEST REPORT

Prepared For: **Eternity Exploration LLC**

338 Spyllass Dr  
Coppell TX 75019

ATTN: Scott Alberg

### **Werth Family #1**

#### **9-10s-26w Sheridan,KS**

Start Date: 2014.05.22 @ 11:21:02

End Date: 2014.05.22 @ 16:29:52

Job Ticket #: 58938                      DST #: 1

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

Printed: 2014.05.23 @ 09:41:43



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Eternity Exploration LLC

**9-10s-26w Sheridan,KS**

338 Spylas Dr  
Coppell TX 75019

**Werth Family #1**

Job Ticket: 58938

**DST#: 1**

ATTN: Scott Alberg

Test Start: 2014.05.22 @ 11:21:02

## GENERAL INFORMATION:

Formation: **LKC K-L**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:01:02

Time Test Ended: 16:29:52

Test Type: Conventional Bottom Hole (Initial)

Tester: Tate Lang

Unit No: 49

**Interval: 4081.00 ft (KB) To 4160.00 ft (KB) (TVD)**

Reference Elevations: 2629.00 ft (KB)

Total Depth: 4160.00 ft (KB) (TVD)

2624.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8898 Outside**

Press@RunDepth: 32.58 psig @ 4092.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.22

End Date: 2014.05.22

Last Calib.: 2014.05.22

Start Time: 11:21:03

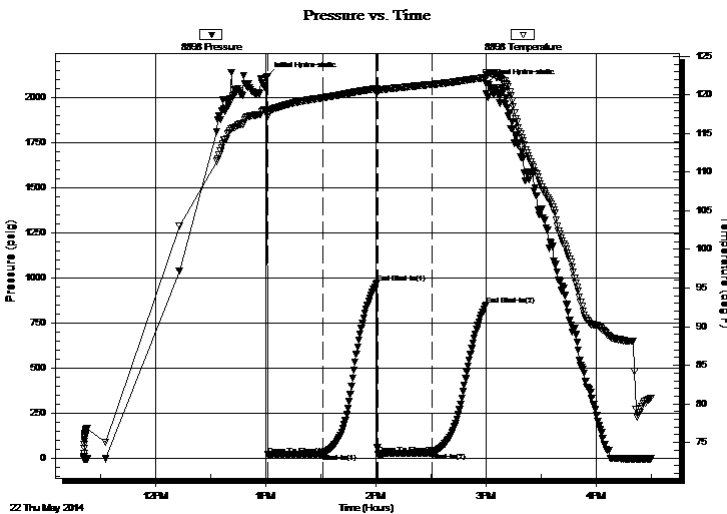
End Time: 16:29:52

Time On Btm: 2014.05.22 @ 13:00:52

Time Off Btm: 2014.05.22 @ 15:00:12

**TEST COMMENT:** Fair blow built to 4"  
Dead no blow back  
Fair Blow built to 5"  
Dead no blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2118.68	118.09	Initial Hydro-static
1	21.14	117.18	Open To Flow (1)
31	26.83	119.63	Shut-In(1)
60	975.12	120.81	End Shut-In(1)
61	25.80	120.57	Open To Flow (2)
90	32.58	121.36	Shut-In(2)
119	853.39	122.24	End Shut-In(2)
120	2078.59	122.59	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
25.00	OCM 30%O 70%M	0.35
15.00	Oil 100%O	0.21
0.00	20 GIP	0.00

## Gas Rates

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



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**9-10s-26w Sheridan, KS**

338 Spylass Dr  
Coppell TX 75019

**Werth Family #1**

Job Ticket: 58938

**DST#: 1**

ATTN: Scott Alberg

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Time Test Ended: 16:29:52

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Tester: Tate Lang

Unit No: 49

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Total Depth: 4160.00 ft (KB) (TVD)

2624.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8897 Inside**

Press@RunDepth: psig @ 4092.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.22

End Date:

2014.05.22

Last Calib.:

2014.05.22

Start Time: 11:21:15

End Time:

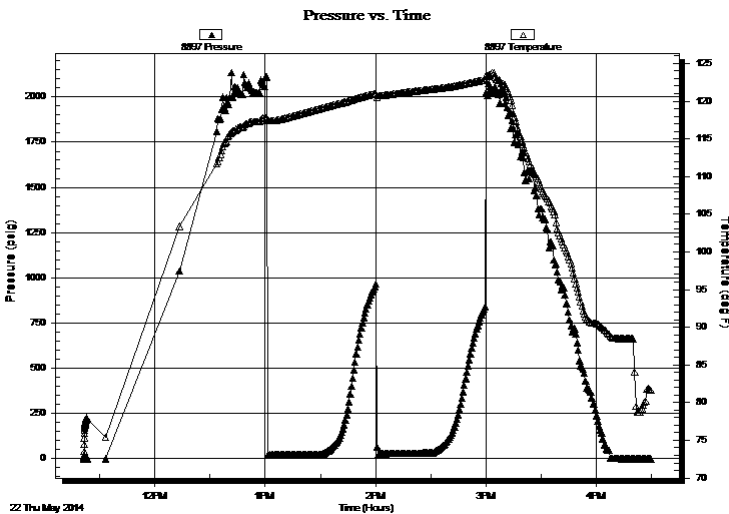
16:30:04

Time On Btm:

Time Off Btm:

**TEST COMMENT:** Fair blow built to 4"  
Dead no blow back  
Fair Blow built to 5"  
Dead no blow back

### PRESSURE SUMMARY



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

### Recovery

### Gas Rates

Length (ft)	Description	Volume (bbl)
25.00	OCM 30%O 70%M	0.35
15.00	Oil 100%O	0.21
0.00	20 GIP	0.00

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Eternity Exploration LLC

**9-10s-26w Sheridan,KS**

338 Spylas Dr  
Coppell TX 75019

**Werth Family #1**

Job Ticket: 58938

**DST#: 1**

ATTN: Scott Alberg

Test Start: 2014.05.22 @ 11:21:02

## Tool Information

Drill Pipe:	Length: 4078.00 ft	Diameter: 3.80 inches	Volume: 57.20 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:	0.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 57.20 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial	46000.00 lb
Depth to Top Packer:	4081.00 ft			Final	47000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	79.00 ft				
Tool Length:	99.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4066.00	
Hydraulic tool	5.00			4071.00	
Packer	5.00			4076.00	20.00 Bottom Of Top Packer
Packer	5.00			4081.00	
Stubb	1.00			4082.00	
Perforations	10.00			4092.00	
Recorder	0.00	8897	Inside	4092.00	
Recorder	0.00	8898	Outside	4092.00	
Change Over Sub	1.00			4093.00	
Drill Pipe	63.00			4156.00	
Change Over Sub	1.00			4157.00	
Bullnose	3.00			4160.00	79.00 Bottom Packers & Anchor

**Total Tool Length: 99.00**



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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Eternity Exploration LLC

**9-10s-26w Sheridan,KS**

338 Spylass Dr  
Coppell TX 75019

**Werth Family #1**

Job Ticket: 58938

**DST#: 1**

ATTN: Scott Alberg

Test Start: 2014.05.22 @ 11:21:02

## 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:

bbbl

Water Loss: 9.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 4300.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
25.00	OCM 30%O 70%M	0.351
15.00	Oil 100%O	0.210
0.00	20 GIP	0.000

Total Length: 40.00 ft      Total Volume: 0.561 bbl

Num Fluid Samples: 0

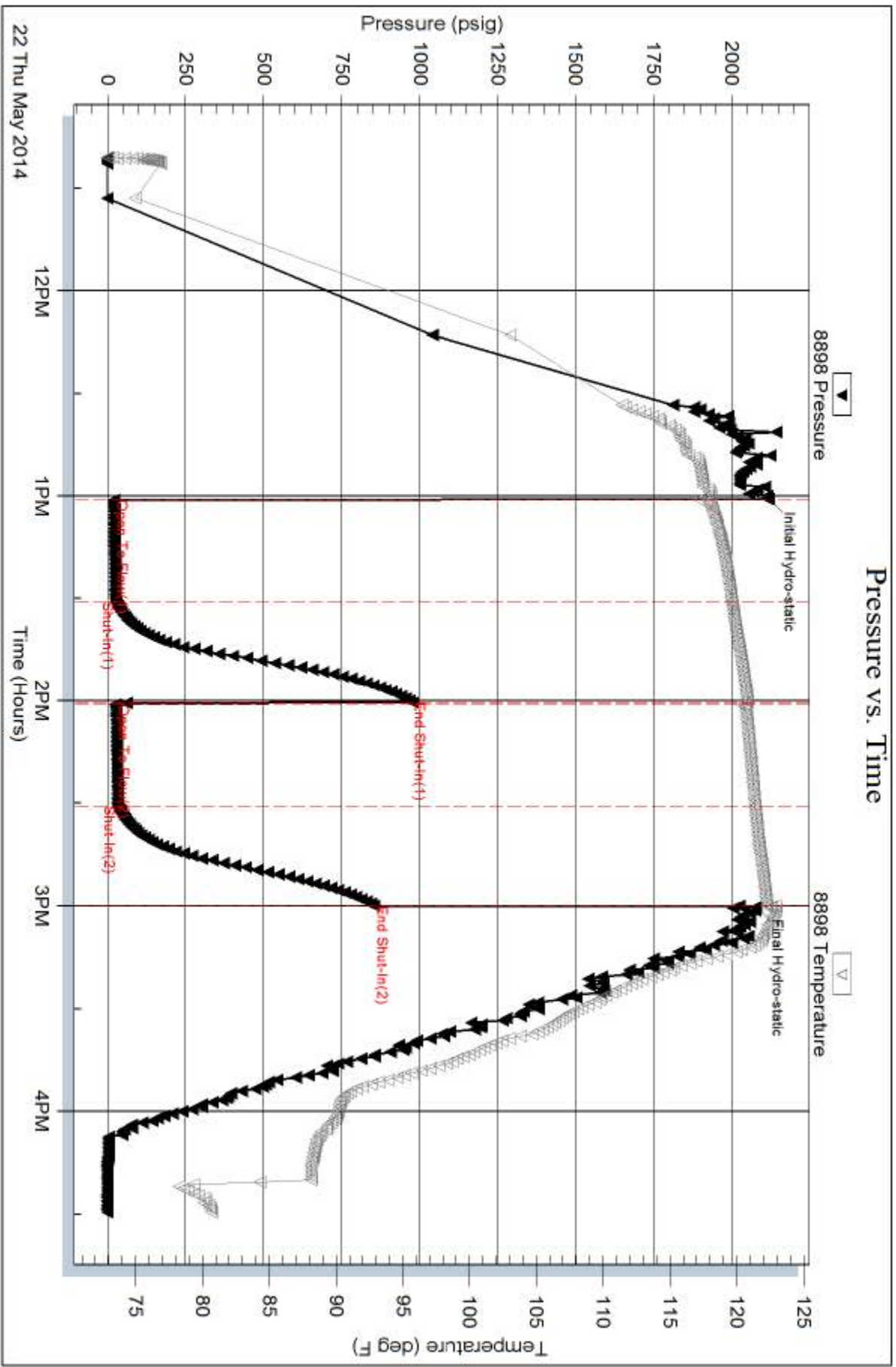
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



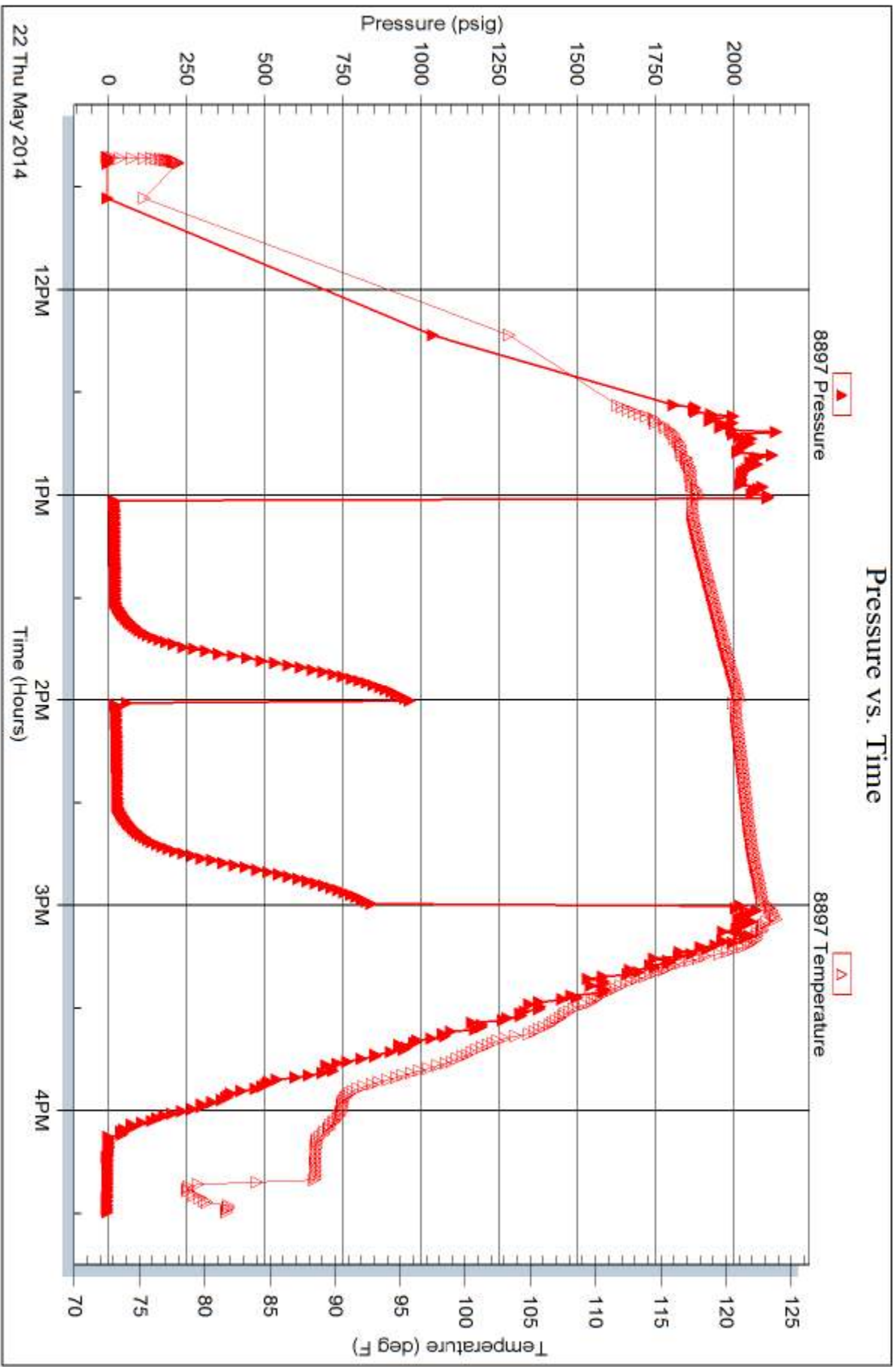
Serial #: 8897

Inside

Eternity Exploration LLC

Werth Family #1

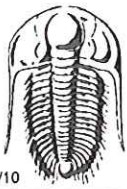
DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 58938

Printed: 2014.05.23 @ 09:41:44



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 58938

4/10

Well Name & No. Westh Family #1 Test No. 1 Date 5-22-14  
 Company Eternity Exploration LLC Elevation 2629 KB 2624 GL  
 Address 338 Spyglass Dr. Coppell Texas 75019  
 Co. Rep / Geo. Scott Alberg Rig White Knight #1  
 Location: Sec. 9 Twp. 10S Rge. 26W Co. Sheridan State KS

Interval Tested 4081 4160 Zone Tested KH Zone  
 Anchor Length 79' Drill Pipe Run 1078 Mud Wt. 9.3  
 Top Packer Depth 4076 Drill Collars Run 0 Vis 51  
 Bottom Packer Depth 4081 Wt. Pipe Run 0 WL 10.0  
 Total Depth 4160 LTD Chlorides 4300 ppm System LCM 1#

Blow Description Fair blow built to 4 in  
Dead no blow back  
Fair blow built to 5 in  
Dead no blow back

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>25</u>	Feet of <u>OCM</u>	%gas	<u>30%</u> oil	%water	<u>70%</u> mud
Rec <u>15</u>	Feet of <u>Oil</u>	%gas	<u>100%</u> oil	%water	%mud
Rec <u>0</u>	Feet of <u>20GIP</u>	<u>100%</u> gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 40 BHT 122 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 219  Test 1250 T-On Location 10:50  
 (B) First Initial Flow 21  Jars 250 T-Started 11:21  
 (C) First Final Flow 27  Safety Joint 75 T-Open 13:01  
 (D) Initial Shut-In 975  Circ Sub \_\_\_\_\_ T-Pulled 15:01  
 (E) Second Initial Flow 26  Hourly Standby \_\_\_\_\_ T-Out 16:29  
 (F) Second Final Flow 3  Mileage 136 R/H Comments \_\_\_\_\_  
 (G) Final Shut-In 33  Sampler 120rt 186 \_\_\_\_\_  
 (H) Final Hydrostatic 2079  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1761  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_

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

Sub Total 1761

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