



DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Company**

PO Box 1019
Hays KS 67601

ATTN: Ron Nelson

Sunley #2-13

13-14s-19w Ellis,KS

Start Date: 2014.07.11 @ 07:39:30

End Date: 2014.07.11 @ 13:31:00

Job Ticket #: 58912 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.07.17 @ 10:01:59



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

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13-14s-19w Ellis,KS

PO Box 1019
Hays KS 67601

Sunley #2-13

Job Ticket: 58912

DST#: 1

ATTN: Ron Nelson

Test Start: 2014.07.11 @ 07:39:30

GENERAL INFORMATION:

Formation: **Lower Topeka**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:59:50

Time Test Ended: 13:31:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Tate Lang

Unit No: 77

Interval: 3376.00 ft (KB) To 3395.00 ft (KB) (TVD)

Reference Elevations: 2168.00 ft (KB)

Total Depth: 3395.00 ft (KB) (TVD)

2160.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8898 Outside

Press@RunDepth: 32.15 psig @ 3377.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.07.11

End Date:

2014.07.11

Last Calib.:

2014.07.11

Start Time: 07:39:31

End Time:

13:31:00

Time On Btm:

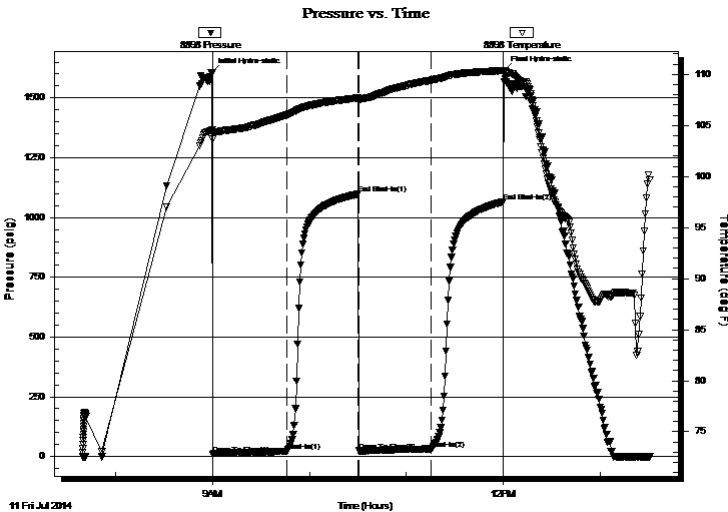
2014.07.11 @ 08:59:40

Time Off Btm:

2014.07.11 @ 12:00:39

TEST COMMENT: Weak surface blow built to 2 1/2"
Dead no blow back
Weak surface blow built to 1 1/2"
Dead no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1606.06	104.53	Initial Hydro-static
1	10.44	103.66	Open To Flow (1)
46	21.14	106.03	Shut-In(1)
91	1098.74	107.69	End Shut-In(1)
91	23.80	107.36	Open To Flow (2)
136	32.15	109.43	Shut-In(2)
181	1065.61	110.37	End Shut-In(2)
181	1615.24	110.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
50.00	MCW with skim of oil on top 70%W 30%N0.70	0.70

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Company

13-14s-19w Ellis,KS

PO Box 1019
Hays KS 67601

Sunley #2-13

Job Ticket: 58912

DST#: 1

ATTN: Ron Nelson

Test Start: 2014.07.11 @ 07:39:30

Tool Information

Drill Pipe:	Length: 3378.00 ft	Diameter: 3.80 inches	Volume: 47.38 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:	65000.00 lb
			<u>Total Volume: 47.38 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial	45000.00 lb
Depth to Top Packer:	3376.00 ft			Final	45000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	19.00 ft				
Tool Length:	39.00 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			3361.00	
Hydraulic tool	5.00			3366.00	
Packer	5.00			3371.00	20.00 Bottom Of Top Packer
Packer	5.00			3376.00	
Stubb	1.00			3377.00	
Recorder	0.00	8897	Inside	3377.00	
Recorder	0.00	8898	Outside	3377.00	
Perforations	15.00			3392.00	
Bullnose	3.00			3395.00	19.00 Bottom Packers & Anchor
Total Tool Length:	39.00				



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FLUID SUMMARY

Downing Nelson Oil Company

13-14s-19w Ellis,KS

PO Box 1019
Hays KS 67601

Sunley #2-13

Job Ticket: 58912

DST#: 1

ATTN: Ron Nelson

Test Start: 2014.07.11 @ 07:39:30

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:

40000 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
50.00	MCW w ith skim of oil on top 70%W 30%M	0.701

Total Length: 50.00 ft Total Volume: 0.701 bbl

Num Fluid Samples: 0

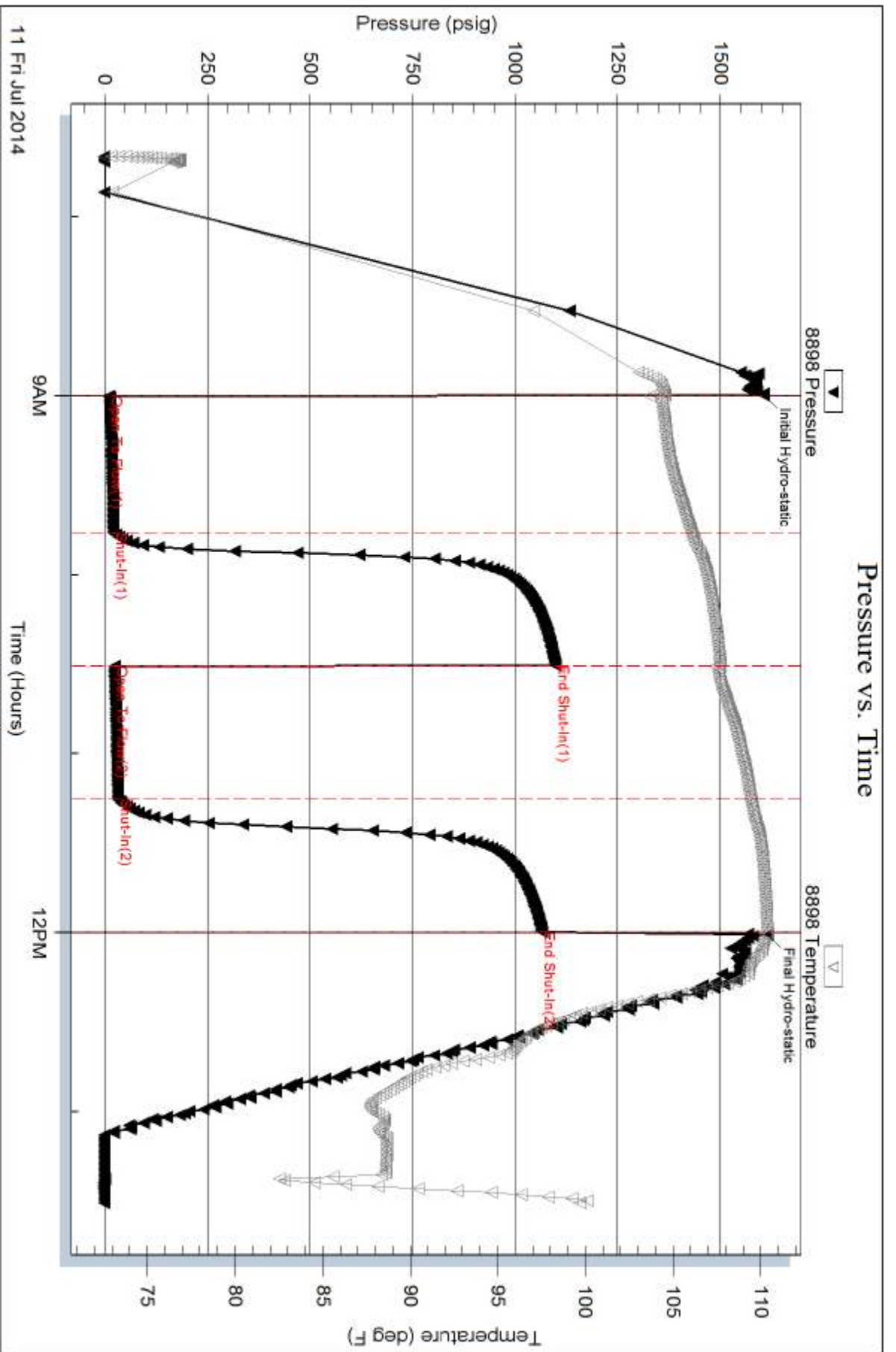
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



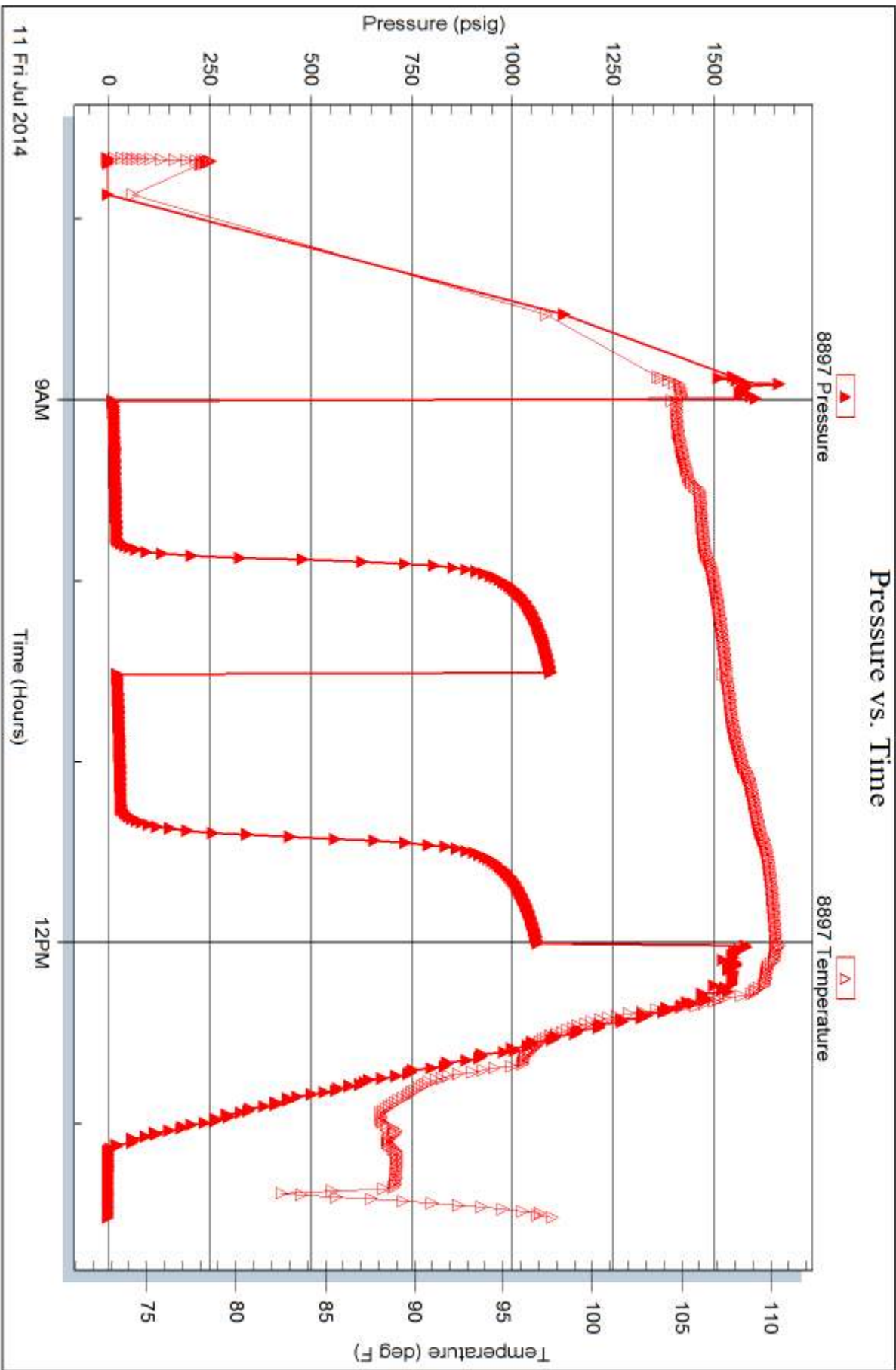
Serial #: 8897

Inside

Downing Nelson Oil Company

Sunley #2-13

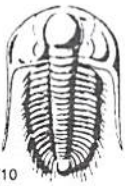
DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 58912

Printed: 2014.07.17 @ 10:02:01



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 58912

4/10

Well Name & No. Sunley # 2-13 Test No. 1 Date 7-11-14
 Company Downing Nelson Oil Company Elevation 2168 KB 2160 GL
 Address PO Box 1019 Hays KS 67601
 Co. Rep / Geo. Cantor Rig Discovery #2
 Location: Sec. 13 Twp. 14 Rge. 19 Co. Ellis State KS

Interval Tested 3375 3395 Zone Tested Lower Topeka
 Anchor Length 19 Drill Pipe Run 3378 Mud Wt. 8.7
 Top Packer Depth 3370 Drill Collars Run 0 Vis 57
 Bottom Packer Depth 3375 Wt. Pipe Run 0 WL 7.2
 Total Depth 3398 Chlorides 5200 ppm System LCM 2nd

Blow Description Weak surface blow built to 2 1/2 in
Dead No blow back
Weak surface blow built to 1 1/2 in
Dead No blow back

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>50</u>	Feet of <u>mcw With skin of oil</u>			<u>70</u>	<u>30</u>

Rec Total 50 BHT 110 Gravity 1150 API RW 181 @ 90 ° F Chlorides 40000 ppm
 (A) Initial Hydrostatic 1666 Test 1150 T-On Location 0545
 (B) First Initial Flow 10 Jars _____ T-Started 0739
 (C) First Final Flow 21 Safety Joint _____ T-Open 0900
 (D) Initial Shut-In 1099 Circ Sub _____ T-Pulled 1200
 (E) Second Initial Flow 24 Hourly Standby _____ T-Out 1331
 (F) Second Final Flow 32 Mileage 14 R/H 43.40 Comments Load 7-15
 (G) Final Shut-In 1066 Sampler _____ @ 0450
 (H) Final Hydrostatic 1415 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____

Initial Open 45
 Initial Shut-In 45
 Final Flow 45 Day Standby t20 1/2
 Final Shut-In 45 Accessibility _____
 Sub Total 1193.40 MP/DST Disc't _____

Approved By _____ Our Representative [Signature]

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