



DRILL STEM TEST REPORT

Prepared For: **Downing- Nelson Oil Co., Inc.**

PO Box 1019
Hays, KS 67601

ATTN: Al Downing

DeWald #1-13

13-17s-19w Rush,KS

Start Date: 2013.11.04 @ 03:27:16

End Date: 2013.11.04 @ 11:37:46

Job Ticket #: 55769 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.11.06 @ 15:44:39

Downing- Nelson Oil Co., Inc.
13-17s-19w Rush,KS
DeWald #1-13
DST # 1
Reagan
2013.11.04



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning- Nelson Oil Co., Inc.

13-17s-19w Rush,KS

PO Box 1019
Hays, KS 67601

DeWald #1-13

Job Ticket: 55769

DST#: 1

ATTN: Al Dow ning

Test Start: 2013.11.04 @ 03:27:16

GENERAL INFORMATION:

Formation: **Reagan**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:50:46

Time Test Ended: 11:37:46

Test Type: Conventional Straddle (Initial)

Tester: Brannan L

Unit No: 70

Interval: 3870.00 ft (KB) To 3915.00 ft (KB) (TVD)

Reference Elevations: 2163.00 ft (KB)

Total Depth: 4003.00 ft (KB) (TVD)

2155.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8700 Outside

Press @RunDepth: 634.99 psig @ 3906.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.04

End Date:

2013.11.04

Last Calib.:

2013.11.04

Start Time: 03:27:21

End Time:

11:37:45

Time On Btm:

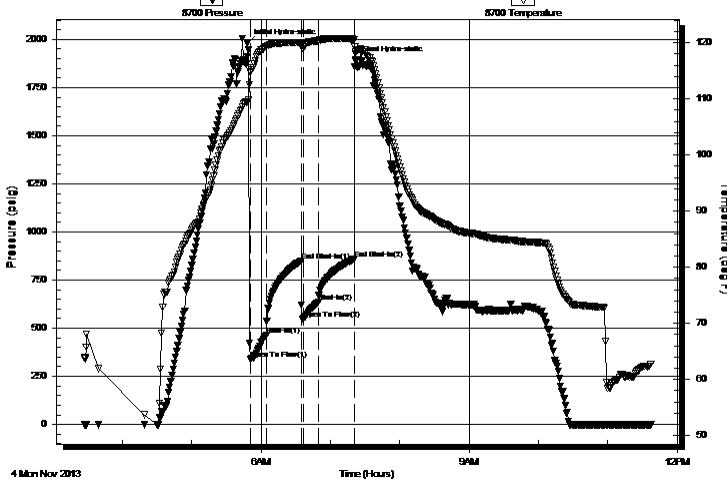
2013.11.04 @ 05:48:16

Time Off Btm:

2013.11.04 @ 07:21:31

TEST COMMENT: 15- IF- BOB 5 secs
30- IS- Surface Blow
15- FF- BOB 15 secs
30- FSI- Surface blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1979.34	109.59	Initial Hydro-static
3	339.34	114.72	Open To Flow (1)
17	463.75	119.33	Shut-In(1)
47	850.85	119.97	End Shut-In(1)
48	548.17	118.96	Open To Flow (2)
62	634.99	120.34	Shut-In(2)
93	858.38	120.62	End Shut-In(2)
94	1892.56	118.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1615.00	GWMCO, 5%W 10%G 10%M 75%O	21.80
0.00	35' GIP	0.00

Gas Rates

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



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TESTING, INC.**

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TOOL DIAGRAM

Dow ning- Nelson Oil Co., Inc.

13-17s-19w Rush,KS

PO Box 1019
Hays, KS 67601

DeWald #1-13

Job Ticket: 55769

DST#: 1

ATTN: Al Dow ning

Test Start: 2013.11.04 @ 03:27:16

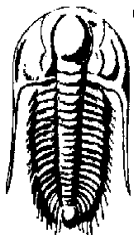
Tool Information

Drill Pipe:	Length: 3835.00 ft	Diameter: 3.75 inches	Volume: 52.39 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 65000.00 lb
			Total Volume: - bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3870.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	3915.00 ft			
Interval betw een Packers:	45.00 ft			
Tool Length:	153.00 ft			
Number of Packers:	3	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			3851.00	
Shut In Tool	5.00			3856.00	
Hydraulic tool	5.00			3861.00	
Packer	5.00			3866.00	20.00 Bottom Of Top Packer
Packer	4.00			3870.00	
Stubb	1.00			3871.00	
Perforations	1.00			3872.00	
Change Over Sub	1.00			3873.00	
Drill Pipe	32.00			3905.00	
Change Over Sub	1.00			3906.00	
Recorder	0.00	8369	Inside	3906.00	
Recorder	0.00	8700	Outside	3906.00	
Perforations	5.00			3911.00	
Blank Off Sub	1.00			3912.00	
Blank Spacing	3.00			3915.00	45.00 Tool Interval
Packer	1.00			3916.00	
Stubb	1.00			3917.00	
Recorder	0.00	8374	Below	3917.00	
Perforations	17.00			3934.00	
Change Over Sub	1.00			3935.00	
Drill Pipe	64.00			3999.00	
Change Over Sub	1.00			4000.00	
Bullnose	3.00			4003.00	88.00 Bottom Packers & Anchor
Total Tool Length:	153.00				



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FLUID SUMMARY

Dow ning- Nelson Oil Co., Inc.

13-17s-19w Rush,KS

PO Box 1019
Hays, KS 67601

DeWald #1-13

Job Ticket: 55769

DST#: 1

ATTN: Al Dow ning

Test Start: 2013.11.04 @ 03:27:16

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

40 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
1615.00	GWMCO, 5%W 10%G 10%M 75%O	21.800
0.00	35' GIP	0.000

Total Length: 1615.00 ft Total Volume: 21.800 bbl

Num Fluid Samples: 0

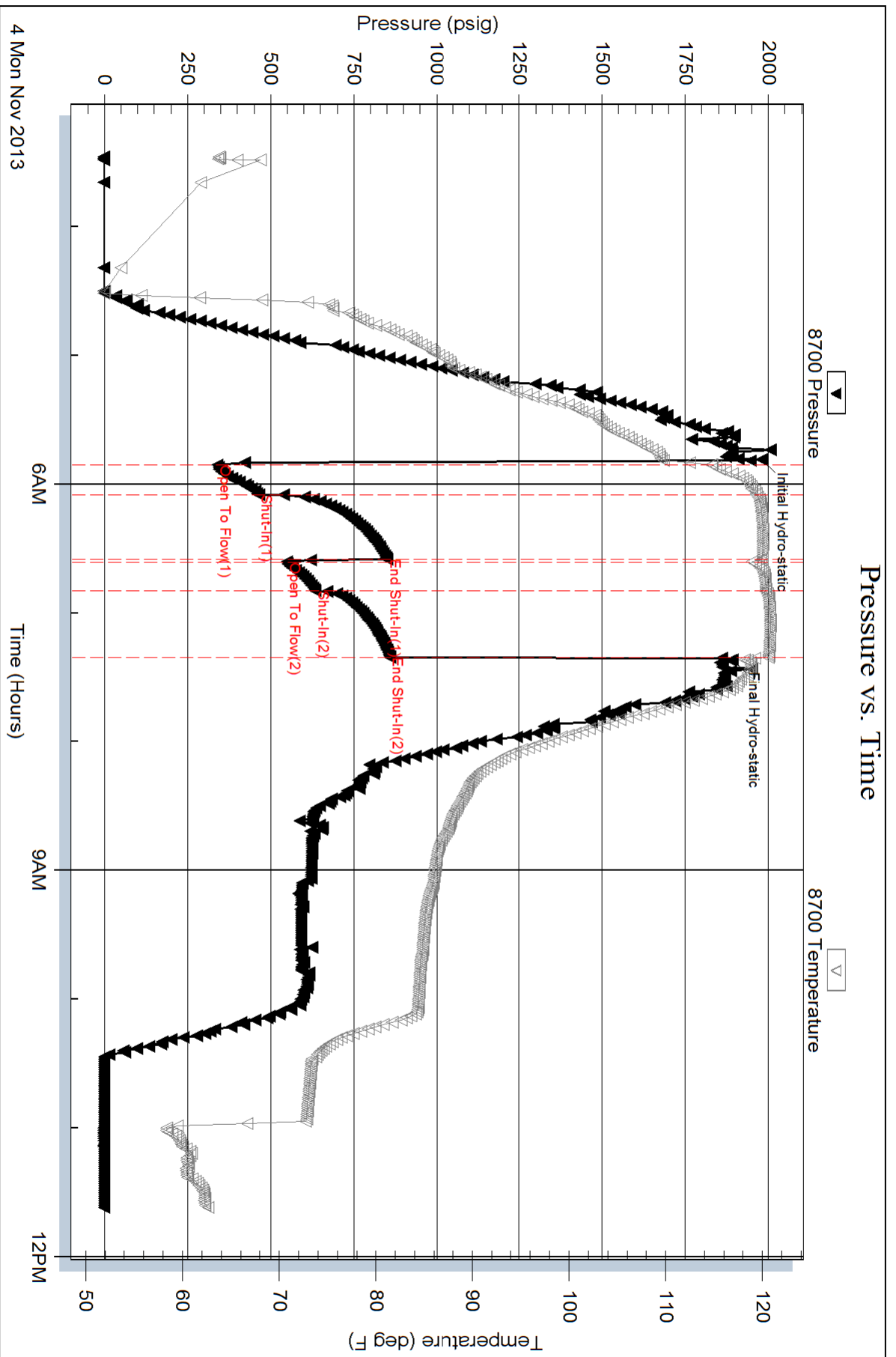
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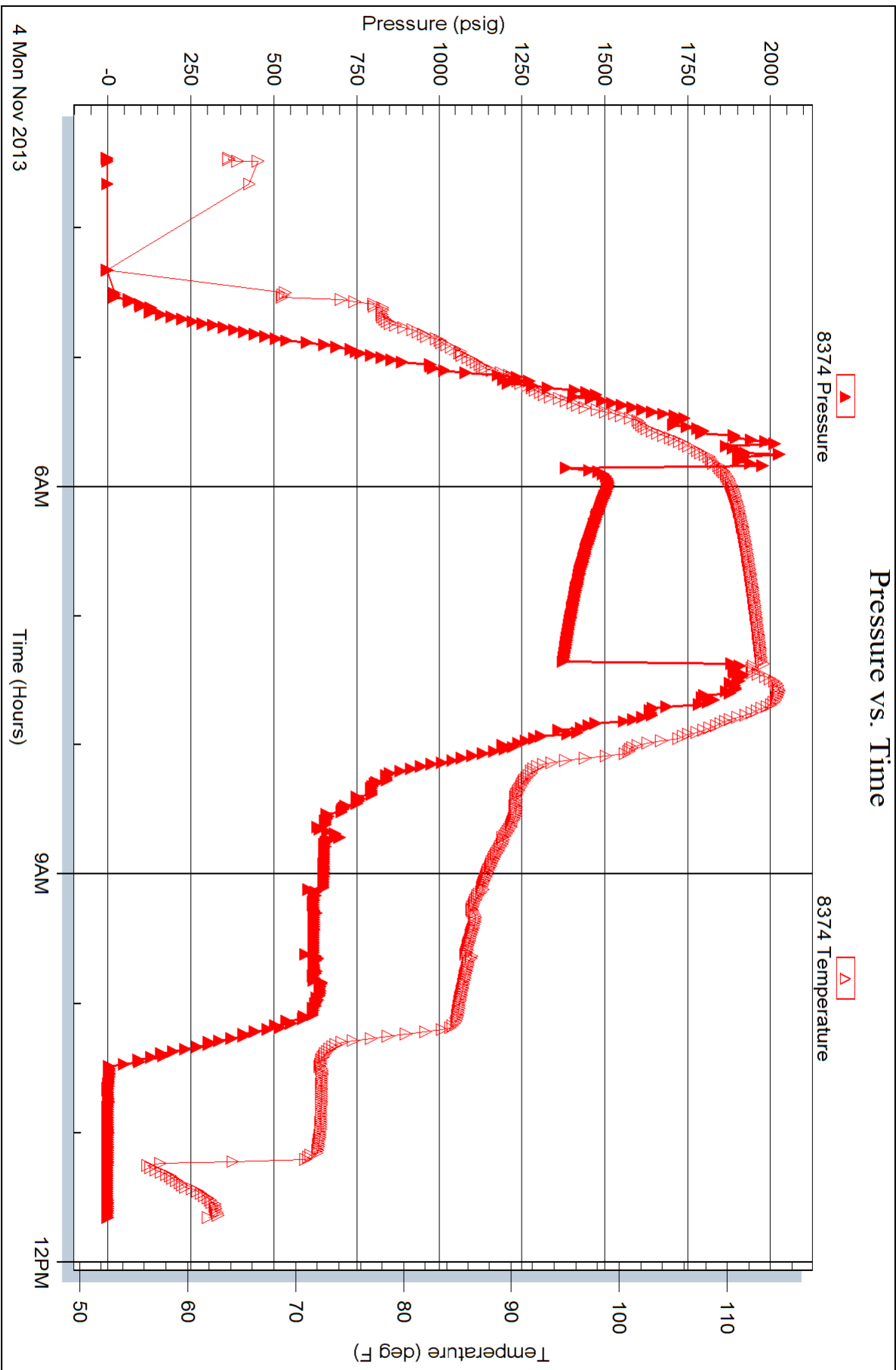
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





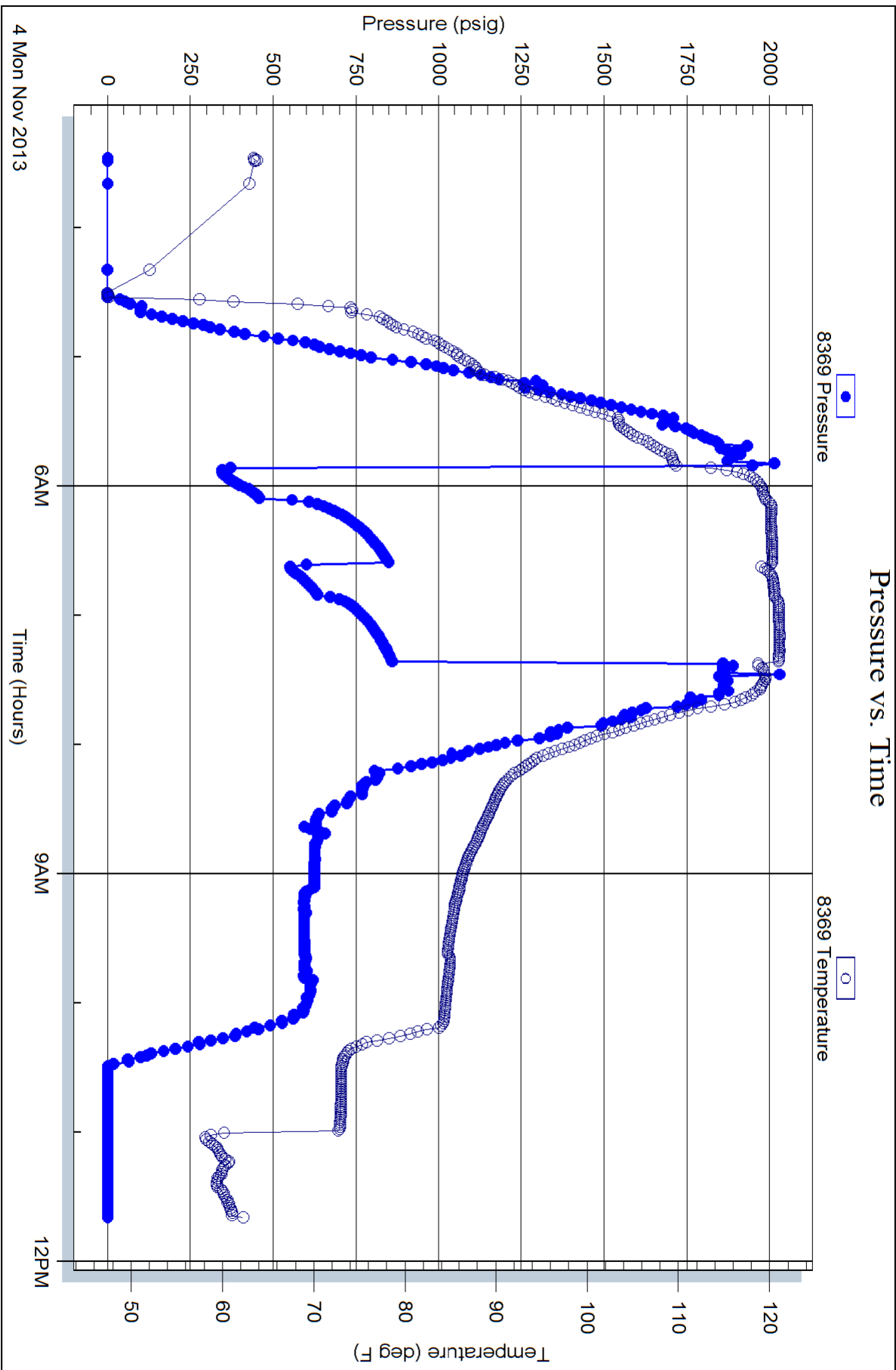
Serial #: 8369

Inside

Dow nting- Nelson Oil Co., Inc.

DeWald #1-13

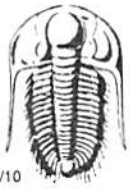
DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 55769

Printed: 2013.11.06 @ 15:44:41



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55769

Well Name & No. DeWald #1-13 Test No. 1 Date 11/4/13
 Company Powning-Nelson Oil Co. Inc Elevation 2163 KB 2155 GL
 Address PO Box 1019 111 W. 10th St. Hays, KS 67601
 Co. Rep / Geo. AI Downing Rig Discovery #3
 Location: Sec. 13 Twp. 17S Rge. 19W Co. Rush State KS

Interval Tested 3870-3915 Zone Tested ~~3835~~ Reagan
 Anchor Length 45' 88' Tail Drill Pipe Run 3835 Mud Wt. 9.2
 Top Packer Depth 3865-3870 Drill Collars Run 30 Vis 56
 Bottom Packer Depth 3915 Wt. Pipe Run --- WL 10.4
 Total Depth 4003 Chlorides 5000 ppm System LCM 1.5#

Blow Description IF-BOB 5secs.
ISI-Weak surface blow
FF-BOB 15secs
FSI-Surface blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>1615</u>	<u>GWMCO</u>	<u>10</u>	<u>75</u>	<u>5</u>	<u>10</u>
	<u>35' GIP</u>	<u>100</u>			

Rec Total 1615 BHT 121° Gravity 40 API RW --- @ --- ° F Chlorides --- ppm

(A) Initial Hydrostatic <u>1979</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>0249</u>
(B) First Initial Flow <u>339</u>	<input type="checkbox"/> Jars <u>---</u>	T-Started <u>0327</u>
(C) First Final Flow <u>464</u>	<input type="checkbox"/> Safety Joint <u>---</u>	T-Open <u>0550</u>
(D) Initial Shut-In <u>851</u>	<input checked="" type="checkbox"/> Circ Sub <u>50</u>	T-Pulled <u>0720</u>
(E) Second Initial Flow <u>548</u>	<input type="checkbox"/> Hourly Standby <u>---</u>	T-Out <u>1139</u>
(F) Second Final Flow <u>635</u>	<input checked="" type="checkbox"/> Mileage <u>54 RT</u> 83.70	Comments <u>---</u>
(G) Final Shut-In <u>858</u>	<input type="checkbox"/> Sampler <u>---</u>	
(H) Final Hydrostatic <u>1893</u>	<input checked="" type="checkbox"/> Straddle <u>600</u>	
	<input type="checkbox"/> Shale Packer <u>---</u>	<input type="checkbox"/> Ruined Shale Packer <u>---</u>
	<input type="checkbox"/> Extra Packer <u>---</u>	<input type="checkbox"/> Ruined Packer <u>---</u>
	<input type="checkbox"/> Extra Recorder <u>---</u>	<input type="checkbox"/> Extra Copies <u>---</u>
	<input type="checkbox"/> Day Standby <u>---</u>	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility <u>---</u>	Total <u>1983.70</u>
	Sub Total <u>1983.70</u>	MP/DST Disc't <u>---</u>

Approved By --- Our Representative Branhan L

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