



DRILL STEM TEST REPORT

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

P.O. Box 1019
Hays KS 67601

ATTN: Al Downing

Ward #1-31

31-18s-17w Rush,KS

Start Date: 2012.09.21 @ 07:30:00

End Date: 2012.09.21 @ 13:52:30

Job Ticket #: 51001 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

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TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning Nelson Oil Co. Inc

31-18s-17w Rush,KS

P.O. Box 1019
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Ward #1-31

Job Ticket: 51001

DST#: 1

ATTN: Al Dow ning

Test Start: 2012.09.21 @ 07:30:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:10:30

Time Test Ended: 13:52:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Cody Bloedorn

Unit No: 59

Interval: 3702.00 ft (KB) To 3771.00 ft (KB) (TVD)

Reference Elevations: 2002.00 ft (KB)

Total Depth: 3771.00 ft (KB) (TVD)

1997.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8319

Inside

Press @ Run Depth: 478.12 psig @ 3768.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.21

End Date:

2012.09.21

Last Calib.:

2012.09.21

Start Time: 07:30:05

End Time:

13:52:29

Time On Btm:

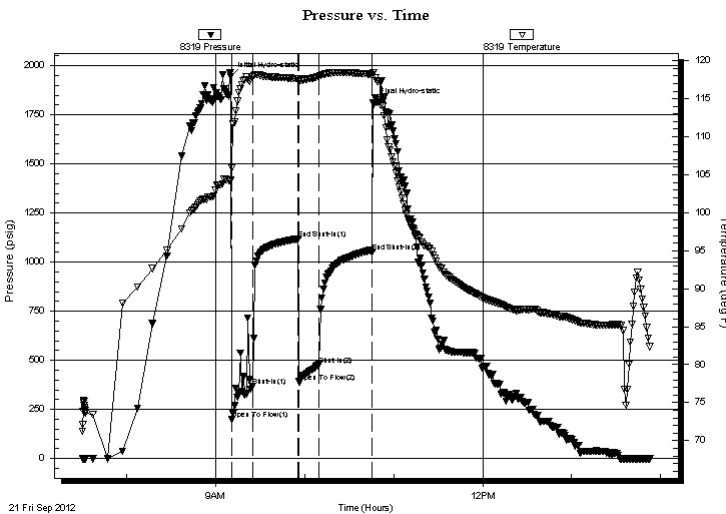
2012.09.21 @ 09:10:00

Time Off Btm:

2012.09.21 @ 10:46:00

TEST COMMENT: 15 - IF- B.O.B. in 1 Min.
30 - IS- No blow back.
15 - FF- B.O.B. in 1 Minute.
30 - FS- No blow back.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1942.89	104.23	Initial Hydro-static
1	198.47	105.82	Open To Flow (1)
15	367.80	117.90	Shut-In(1)
46	1119.17	117.62	End Shut-In(1)
46	391.18	117.42	Open To Flow (2)
60	478.12	117.93	Shut-In(2)
96	1051.81	118.20	End Shut-In(2)
96	1809.86	118.39	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	V SOCMW, 10%O, 10%M, 80%W	0.59
248.00	GMCOW, 10%G, 10%M, 20%W, 60%O	3.48
372.00	GO, 40%G, 60%O	5.22
310.00	GV SOCM, 10%G, 10%O, 80%M	4.35
372.00	HOCM30%O, 70%M,	5.22

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

31-18s-17w Rush,KS

P.O. Box 1019
Hays KS 67601

Ward #1-31

Job Ticket: 51001

DST#: 1

ATTN: Al Dow ning

Test Start: 2012.09.21 @ 07:30:00

Tool Information

Drill Pipe:	Length: 3672.00 ft	Diameter: 3.80 inches	Volume: 51.51 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: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 51.66 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3702.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	69.00 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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Change Over Sub	1.00			3682.00	
Shut In Tool	5.00			3687.00	
Hydraulic tool	5.00			3692.00	
Packer	5.00			3697.00	21.00 Bottom Of Top Packer
Packer	5.00			3702.00	
Stubb	1.00			3703.00	
Perforations	1.00			3704.00	
Change Over Sub	1.00			3705.00	
Drill Pipe	62.00			3767.00	
Change Over Sub	1.00			3768.00	
Recorder	0.00	8319	Inside	3768.00	
Recorder	0.00	8166	Outside	3768.00	
Bullnose	3.00			3771.00	69.00 Bottom Packers & Anchor

Total Tool Length: 90.00



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FLUID SUMMARY

Downing Nelson Oil Co. Inc

31-18s-17w Rush,KS

P.O. Box 1019
Hays KS 67601

Ward #1-31

Job Ticket: 51001

DST#: 1

ATTN: Al Downing

Test Start: 2012.09.21 @ 07:30:00

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:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
62.00	VSOCMW, 10%O, 10%M, 80%W	0.587
248.00	GMCOW, 10%G, 10%M, 20%W, 60%O	3.479
372.00	GO, 40%G, 60%O	5.218
310.00	GVSOCM, 10%G, 10%O, 80%M	4.348
372.00	HOCM30%O, 70%M,	5.218

Total Length: 1364.00 ft

Total Volume: 18.850 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

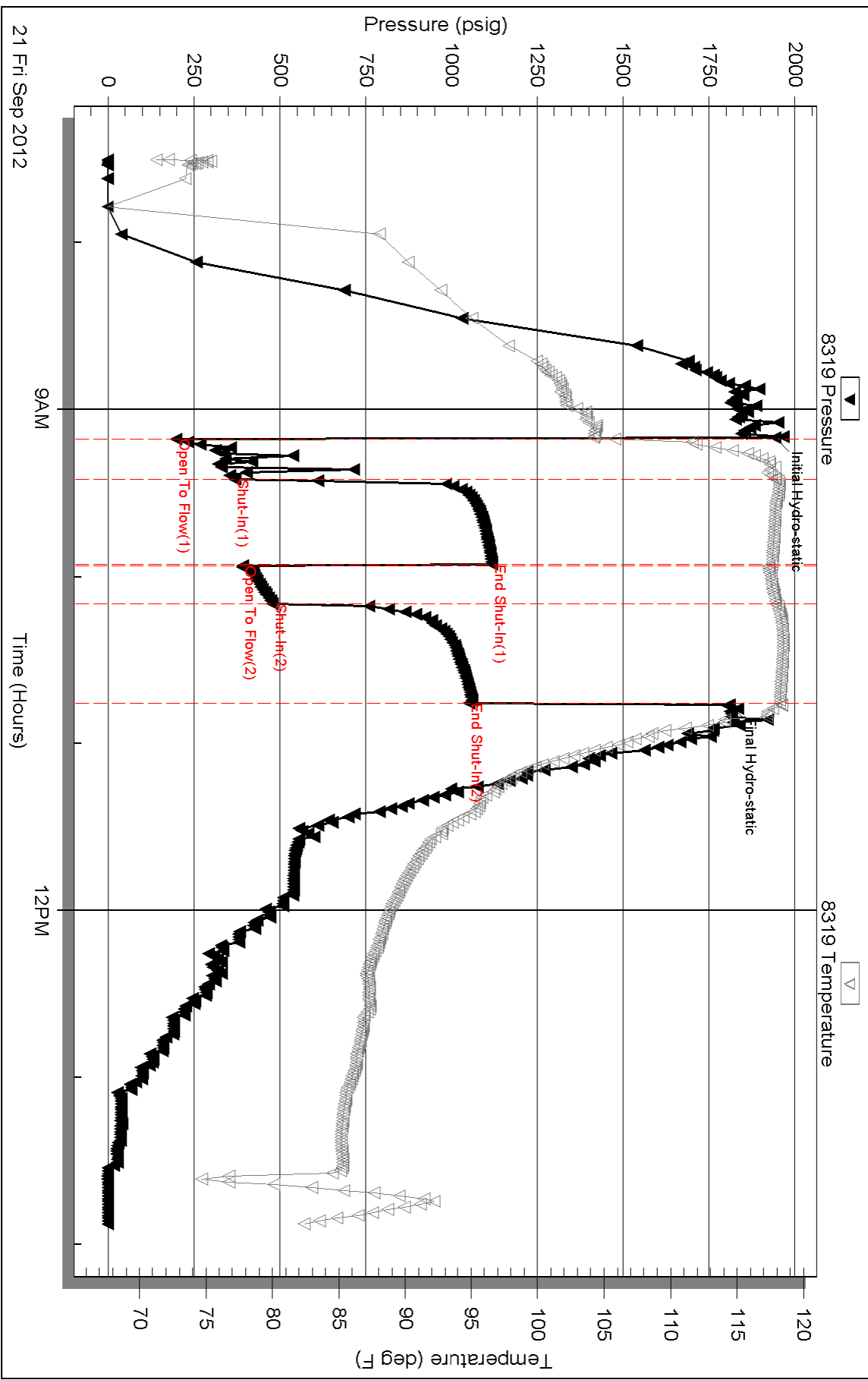
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

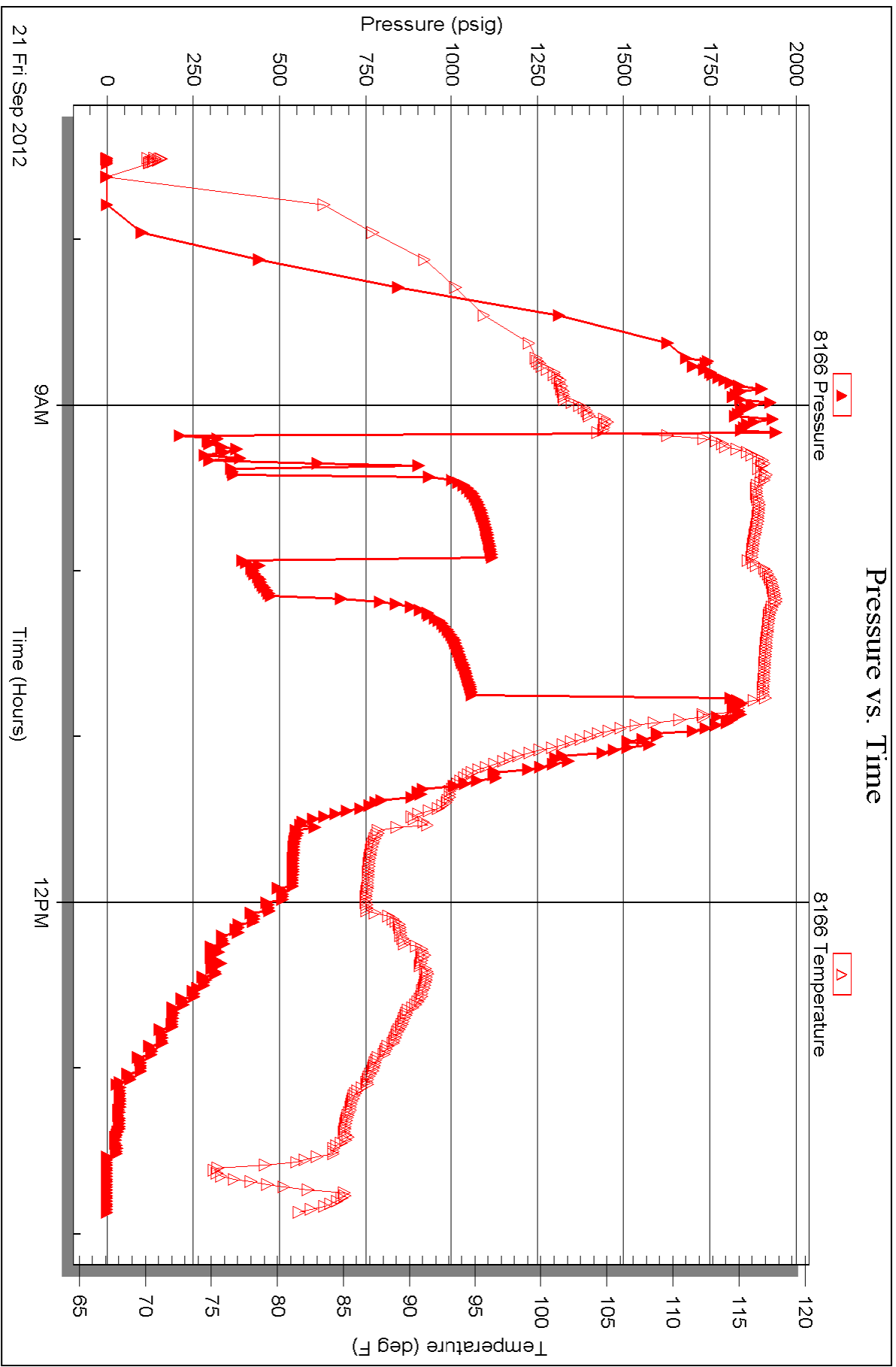


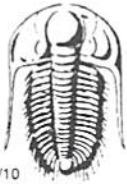
Serial #: 8166

Outside Downing Nelson Oil Co. Inc

Ward #1-31

DST Test Number: 1





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 51001

Well Name & No. Ward 1-31 Test No. 1 Date 9-21-12
 Company Downing Nelson oil Co. Inc Elevation 2002 KB 1997 GL
 Address Po Box 1019, Hays KS, 67601
 Co. Rep / Geo. Allen Downing Rig Discovery 4
 Location: Sec. 31 Twp. 18s Rge. 17w Co. Rush State ks

Interval Tested 3702-3771 Zone Tested Arbuckle
 Anchor Length 69' Drill Pipe Run 3672 Mud Wt. 8.8
 Top Packer Depth 3697 Drill Collars Run - Vis 51
 Bottom Packer Depth 3702 Wt. Pipe Run - WL 8.8
 Total Depth 3771 Chlorides 3,000 ppm System LCM -
 Blow Description IF- B.O.B. in 1 Minute
ISF- No blow back
FF- B.O.B. in 1 Minute
FSI- No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>62'</u>	<u>V50CMW</u>	<u>10</u>	<u>80</u>	<u>10</u>	
<u>248</u>	<u>6MCOW</u>	<u>10</u>	<u>60</u>	<u>20</u>	<u>10</u>
<u>372</u>	<u>60</u>	<u>40</u>	<u>60</u>		
<u>310</u>	<u>6V50CM</u>	<u>10</u>	<u>10</u>		<u>80</u>
<u>372</u>	<u>HOCM</u>	<u>30</u>		<u>70</u>	

Rec Total 1364' BHT _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1942 Test 1150 T-On Location 6:35 am
 (B) First Initial Flow 198 Jars _____ T-Started 7:30 am
 (C) First Final Flow 367 Safety Joint _____ T-Open 9:05 am
 (D) Initial Shut-In 1119 Circ Sub _____ T-Pulled 10:35 am
 (E) Second Initial Flow 391 Hourly Standby _____ T-Out 1:47 pm
 (F) Second Final Flow 478 Mileage 70 RT 108.50 Comments _____
 (G) Final Shut-In 1051 Sampler _____
 (H) Final Hydrostatic 1809 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1258.50
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1258.50

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

Approved By _____ Our Representative Cody B...

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