



DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Dorzweiler #2-35

35-13s-21w Trego,KS

Start Date: 2013.03.12 @ 07:55:00

End Date: 2013.03.12 @ 15:25:00

Job Ticket #: 52037 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.03.18 @ 16:10:11

Downing-Nelson Oil Co Inc. 35-13s-21w Trego,KS Dorzweiler #2-35 DST # 1 KC "H,I" 2013.03.12



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc.

35-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Dorzweiler #2-35

Job Ticket: 52037

DST#: 1

ATTN: Marc Dow ning

Test Start: 2013.03.12 @ 07:55:00

GENERAL INFORMATION:

Formation: **KC "H,I"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:02:00

Time Test Ended: 15:25:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Brett Dickinson

Unit No: 59

Interval: 3717.00 ft (KB) To 3773.00 ft (KB) (TVD)

Reference Elevations: 2291.00 ft (KB)

Total Depth: 3773.00 ft (KB) (TVD)

2283.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6753

Inside

Press @ RunDepth: 27.64 psig @ 3718.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.03.12

End Date:

2013.03.12

Last Calib.: 2013.03.12

Start Time: 07:55:05

End Time:

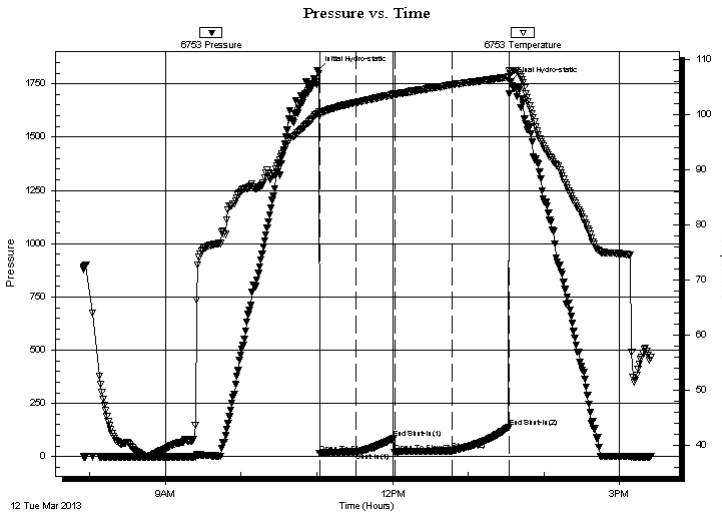
15:24:59

Time On Btm: 2013.03.12 @ 11:00:30

Time Off Btm: 2013.03.12 @ 13:33:30

TEST COMMENT: IF-1 1/4" blow
IS- No blow
FF-1 3/4" blow
FS- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1813.02	100.12	Initial Hydro-static
2	16.15	99.79	Open To Flow (1)
31	22.42	102.14	Shut-In(1)
60	86.42	103.64	End Shut-In(1)
61	21.62	103.57	Open To Flow (2)
107	27.64	105.41	Shut-In(2)
152	139.72	106.73	End Shut-In(2)
153	1758.69	107.35	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	VSWOCM 5%W 15%O 80%M	0.07

Gas Rates

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



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DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc.

35-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Dorzweiler #2-35

Job Ticket: 52037

DST#: 1

ATTN: Marc Dow ning

Test Start: 2013.03.12 @ 07:55:00

GENERAL INFORMATION:

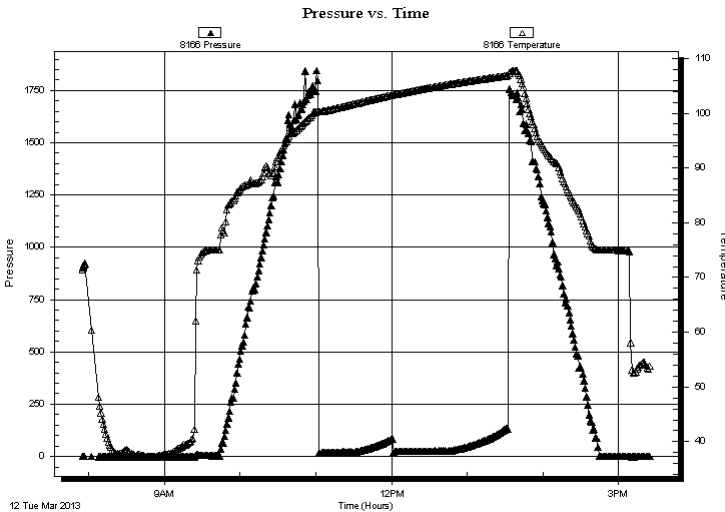
Formation: **KC "H,I"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:02:00
 Time Test Ended: 15:25:00
 Interval: **3717.00 ft (KB) To 3773.00 ft (KB) (TVD)**
 Total Depth: 3773.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Brett Dickinson
 Unit No: 59
 Reference Elevations: 2291.00 ft (KB)
 2283.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8166 Outside

Press @ RunDepth: psig @ 3718.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.03.12 End Date: 2013.03.12 Last Calib.: 2013.03.12
 Start Time: 07:55:05 End Time: 15:24:59 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF-1 1/4" blow
 IS- No blow
 FF-1 3/4" blow
 FS- No blow

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
15.00	VSWOCM 5%W 15%O 80%M	0.07

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co Inc.

35-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Dorzweiler #2-35

Job Ticket: 52037

DST#: 1

ATTN: Marc Dow ning

Test Start: 2013.03.12 @ 07:55:00

Tool Information

Drill Pipe:	Length: 3677.00 ft	Diameter: 3.80 inches	Volume: 51.58 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 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:	70000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
				String Weight: Initial	62000.00 lb
Drill Pipe Above KB:	11.00 ft			Final	62000.00 lb
Depth to Top Packer:	3717.00 ft				
Depth to Bottom Packer:	ft				
Interval betw een Packers:	56.00 ft				
Tool Length:	77.00 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			3697.00	
Shut In Tool	5.00			3702.00	
Hydraulic tool	5.00			3707.00	
Packer	5.00			3712.00	21.00 Bottom Of Top Packer
Packer	5.00			3717.00	
Stubb	1.00			3718.00	
Recorder	0.00	6753	Inside	3718.00	
Recorder	0.00	8166	Outside	3718.00	
Perforations	3.00			3721.00	
Change Over Sub	1.00			3722.00	
Drill Pipe	32.00			3754.00	
Change Over Sub	1.00			3755.00	
Perforations	15.00			3770.00	
Bullnose	3.00			3773.00	56.00 Bottom Packers & Anchor

Total Tool Length: 77.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc.

35-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Dorzweiler #2-35

Job Ticket: 52037

DST#: 1

ATTN: Marc Dow ning

Test Start: 2013.03.12 @ 07:55:00

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: 8.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
15.00	VSWOCM 5%W 15%O 80%M	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6753

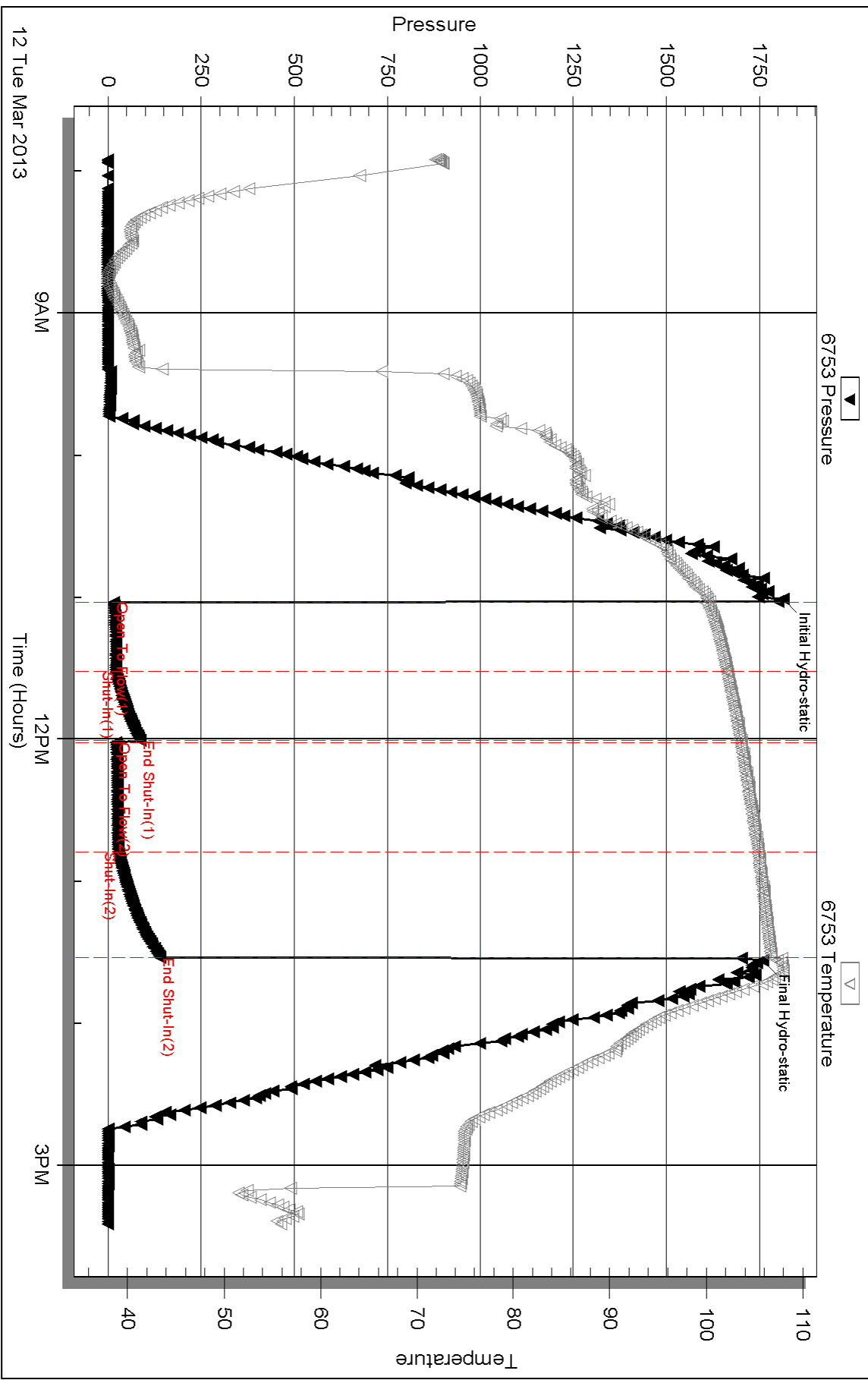
Inside

Dorning-Nelson Oil Co Inc.

Dorzweller #2-35

DST Test Number: 1

Pressure vs. Time

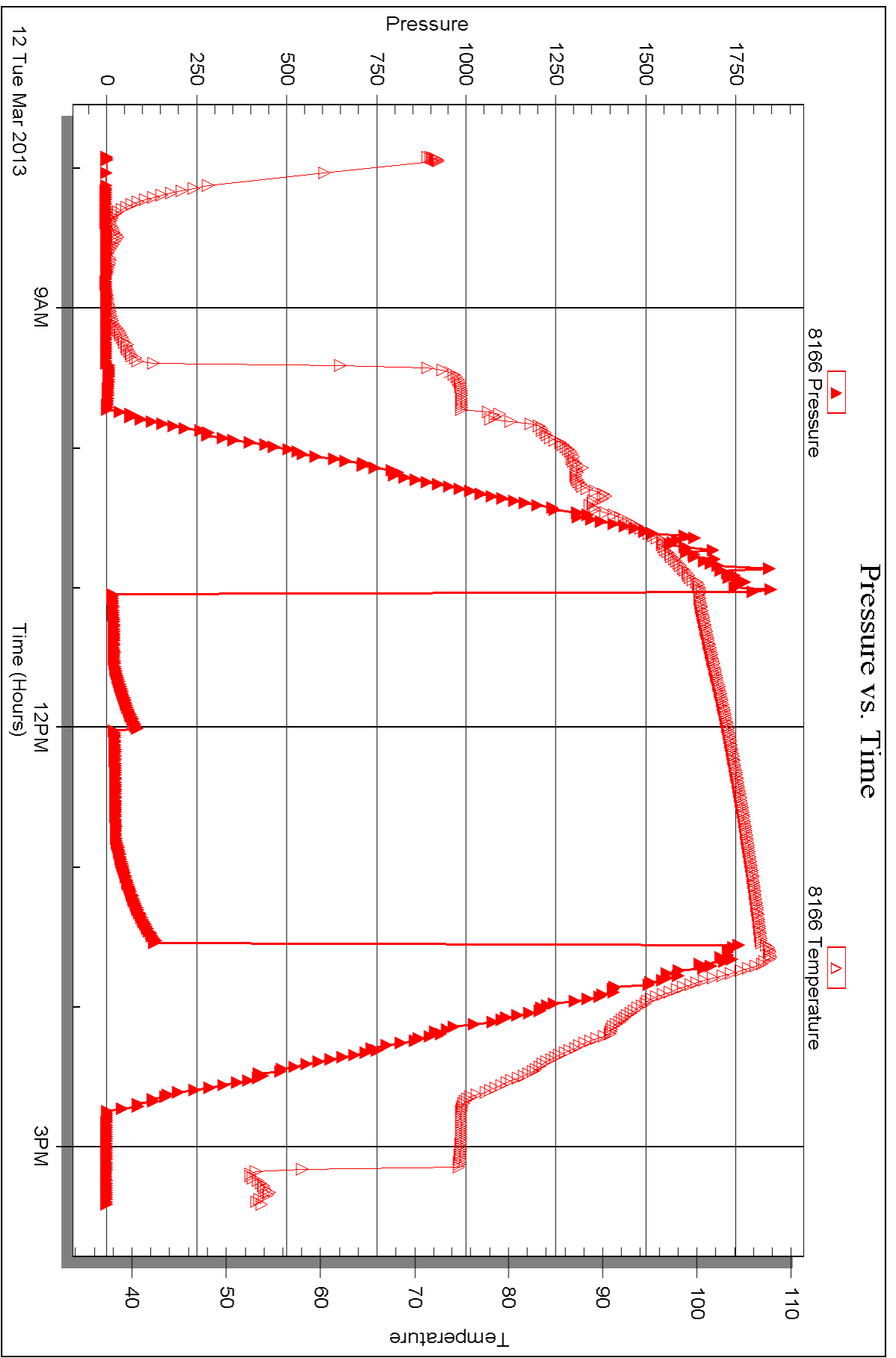


Serial #: 8166

Outside Dow nung-Nelson Oil Co Inc.

Dorzw eiler #2-35

DST Test Number: 1





DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Dorzweiler #2-35

35-13s-21w Trego,KS

Start Date: 2013.03.13 @ 06:05:00

End Date: 2013.03.13 @ 13:58:00

Job Ticket #: 52038 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.03.18 @ 16:07:55



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc.

35-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Dorzweiler #2-35

Job Ticket: 52038

DST#: 2

ATTN: Marc Dow ning

Test Start: 2013.03.13 @ 06:05:00

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:32:30

Time Test Ended: 13:58:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Brett Dickinson

Unit No: 59

Interval: 3918.00 ft (KB) To 3955.00 ft (KB) (TVD)

Reference Elevations: 2291.00 ft (KB)

Total Depth: 3955.00 ft (KB) (TVD)

2283.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6753

Inside

Press @ Run Depth: 100.01 psig @ 3919.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.03.13

End Date:

2013.03.13

Last Calib.: 2013.03.13

Start Time: 06:05:05

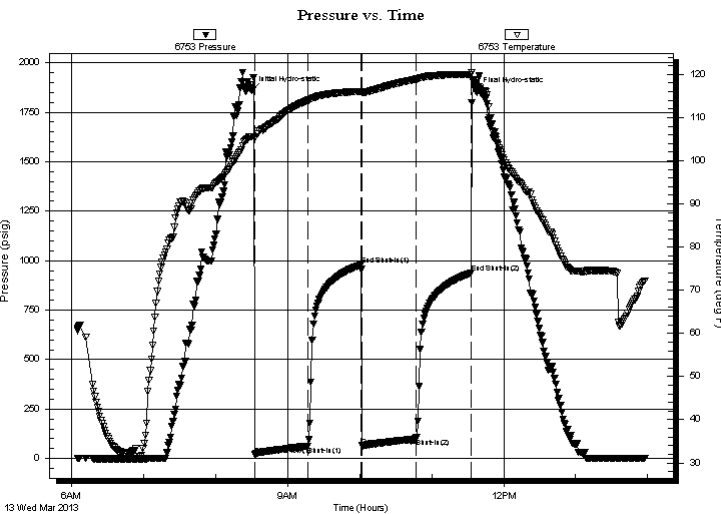
End Time:

13:57:59

Time On Btm: 2013.03.13 @ 08:30:00

Time Off Btm: 2013.03.13 @ 11:37:00

TEST COMMENT: IF-BOB in 26 min
ISI-Weak surface blow
FF-BOB in 38 min
FSI-1/4" blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1861.12	105.60	Initial Hydro-static
3	18.79	105.20	Open To Flow (1)
47	63.07	113.94	Shut-In(1)
91	978.30	116.09	End Shut-In(1)
92	64.54	115.86	Open To Flow (2)
137	100.01	118.85	Shut-In(2)
183	936.97	120.03	End Shut-In(2)
187	1855.16	118.68	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	V SOMCW 2%O 68%W 30%M	0.57
30.00	SOWCM 10%O 30%W 60%M	0.42
120.00	SGO 5%G 95%O	1.68
0.00	150ft GIP	0.00

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc.

35-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Dorzweiler #2-35

Job Ticket: 52038

DST#: 2

ATTN: Marc Dow ning

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GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:32:30

Time Test Ended: 13:58:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Brett Dickinson

Unit No: 59

Interval: 3918.00 ft (KB) To 3955.00 ft (KB) (TVD)

Reference Elevations: 2291.00 ft (KB)

Total Depth: 3955.00 ft (KB) (TVD)

2283.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8166 Outside

Press @RunDepth: psig @ 3919.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.03.13

End Date: 2013.03.13

Last Calib.: 2013.03.13

Start Time: 06:05:05

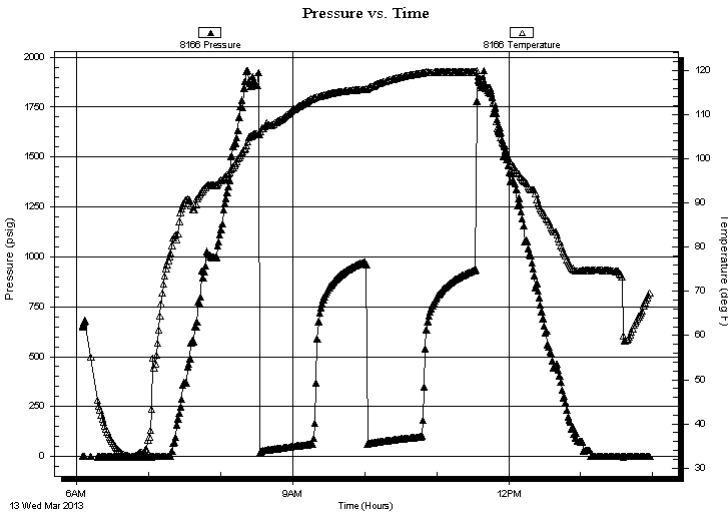
End Time: 13:57:59

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-BOB in 26 min
ISI-Weak surface blow
FF-BOB in 38 min
FSI-1/4" blow

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	V SOMCW 2%O 68%W 30%M	0.57
30.00	SOWCM 10%O 30%W 60%M	0.42
120.00	SGO 5%G 95%O	1.68
0.00	150ft GIP	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co Inc.

35-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Dorzweiler #2-35

Job Ticket: 52038

DST#: 2

ATTN: Marc Dow ning

Test Start: 2013.03.13 @ 06:05:00

Tool Information

Drill Pipe:	Length: 3897.00 ft	Diameter: 3.80 inches	Volume: 54.66 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 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
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	64000.00 lb
Depth to Top Packer:	3918.00 ft			Final	65000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	37.00 ft				
Tool Length:	58.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3898.00	
Shut In Tool	5.00			3903.00	
Hydraulic tool	5.00			3908.00	
Packer	5.00			3913.00	21.00 Bottom Of Top Packer
Packer	5.00			3918.00	
Stubb	1.00			3919.00	
Recorder	0.00	6753	Inside	3919.00	
Recorder	0.00	8166	Outside	3919.00	
Perforations	3.00			3922.00	
Perforations	30.00			3952.00	
Bullnose	3.00			3955.00	37.00 Bottom Packers & Anchor

Total Tool Length: 58.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc.

35-13s-21w Trego,KS

PO Box 1019
Hays KS 67601

Dorzweiler #2-35

Job Ticket: 52038

DST#: 2

ATTN: Marc Dow ning

Test Start: 2013.03.13 @ 06:05:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

32 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

55000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbf

Water Loss: 8.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
60.00	VSOMCW 2%O 68%W 30%M	0.568
30.00	SOWCM 10%O 30%W 60%M	0.421
120.00	SGO 5%G 95%O	1.683
0.00	150ft GIP	0.000

Total Length: 210.00 ft

Total Volume: 2.672 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6753

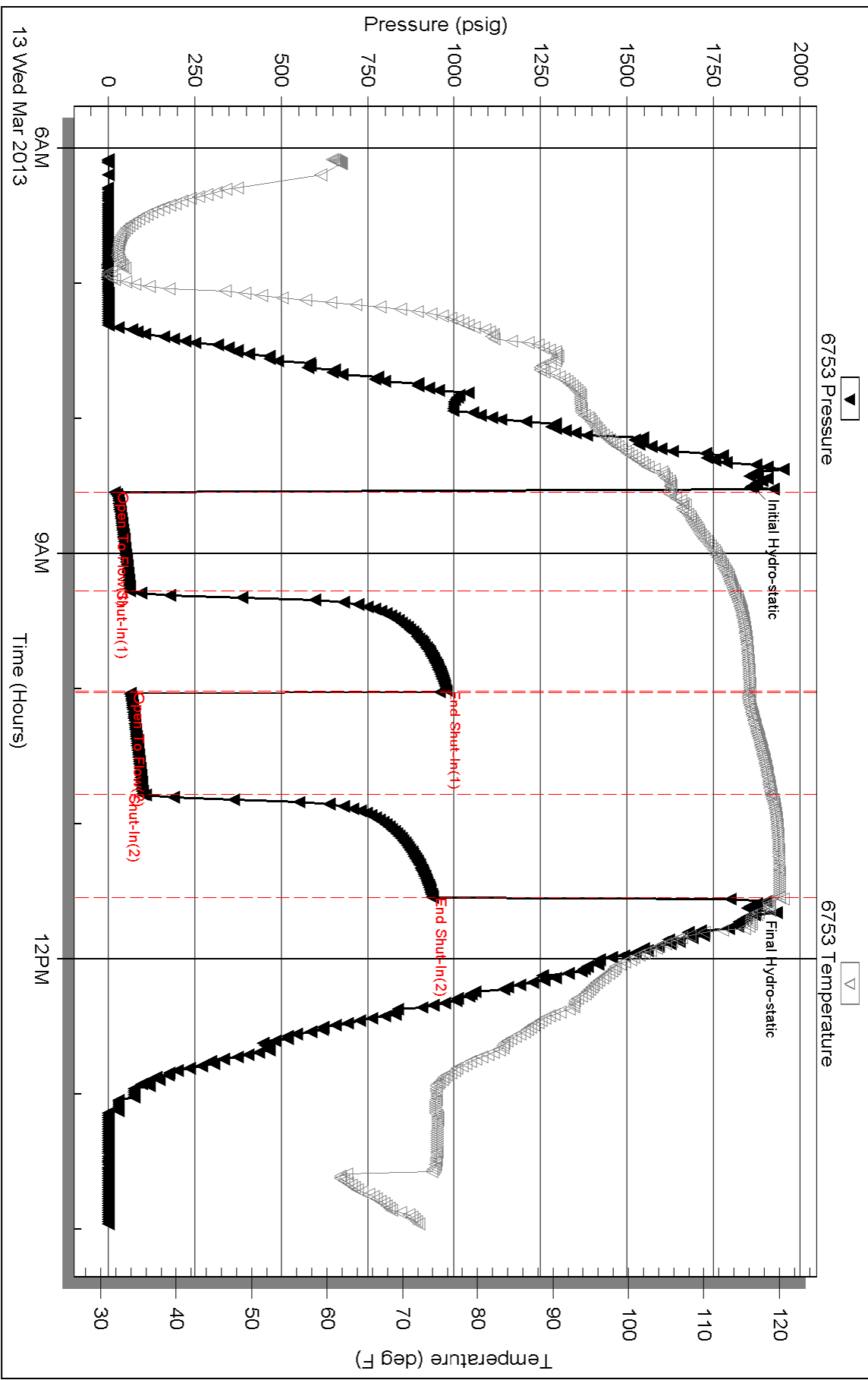
Inside

Dow nung-Nelson Oil Co Inc.

Dorzw eiler #2-35

DST Test Number: 2

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 52038

Printed: 2013.03.18 @ 16:07:57

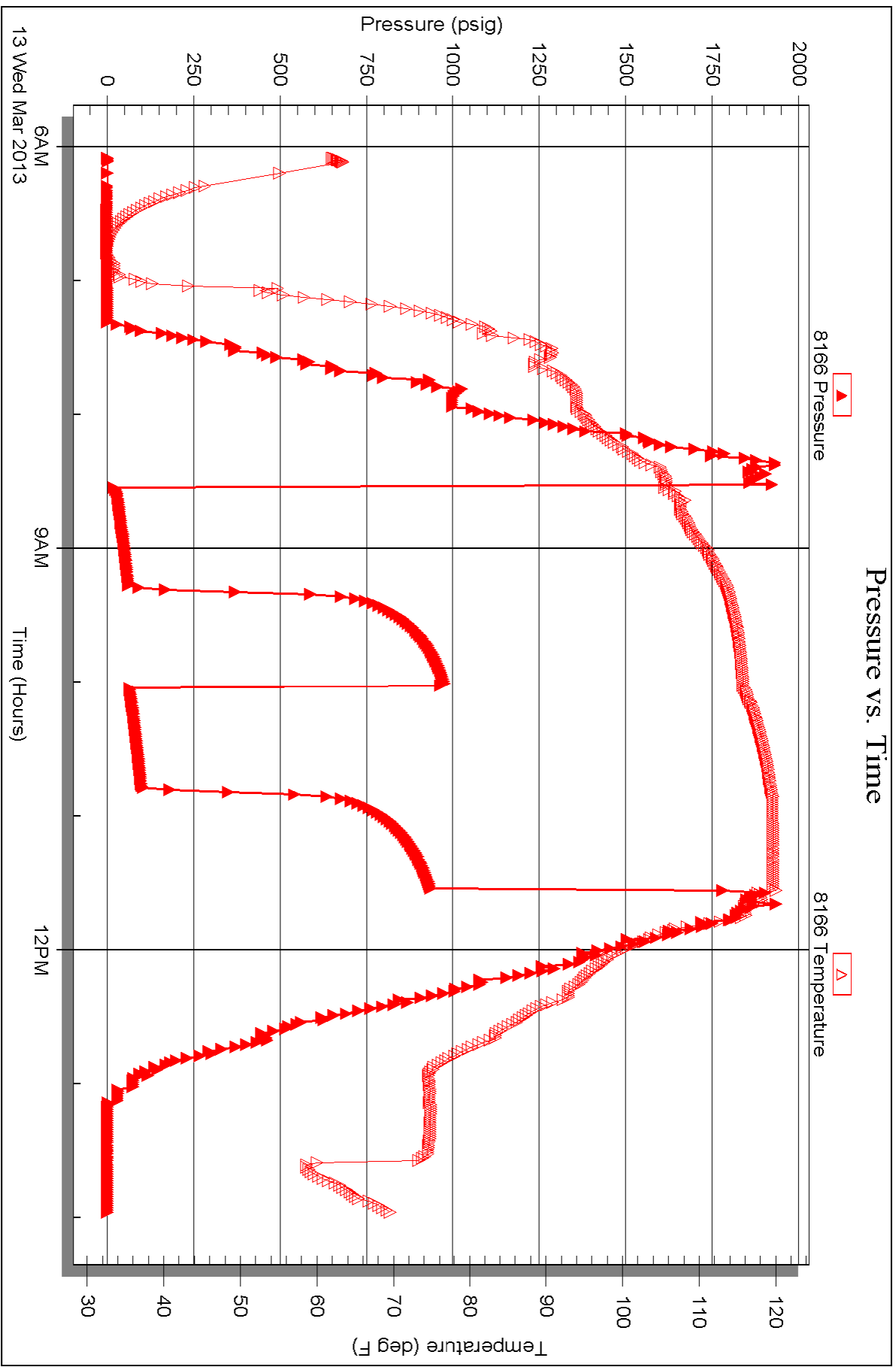
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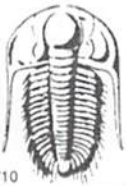
Outside

Dow nting-Nelson Oil Co Inc.

Dorzw eiler #2-35

DST Test Number: 2





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 52037

Well Name & No. Dorzweiler #2-35 Test No. 1 Date 3/12/13
 Company Downing-Nelson Oil Co Inc Elevation 2291 KB 2283 GL
 Address PO Box 1019 Hays KS 67601
 Co. Rep / Geo. Marc Downing Rig Discovery #3
 Location: Sec. 35 Twp. 13 Rge. 21 Co. Trego State KS

Interval Tested 3717-3773 Zone Tested KC "H, J"
 Anchor Length 56 Drill Pipe Run 3677 Mud Wt. 8.8
 Top Packer Depth 3712 Drill Collars Run 30 Vis 51
 Bottom Packer Depth 3717 Wt. Pipe Run - WL 8.4
 Total Depth 3773 Chlorides 2,500 ppm System LCM 2
 Blow Description FF - 1 1/4 in blow
FSI - No blow
FF - 1 3/4 in blow
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>45 w/cm</u>	<u>15</u>	<u>5</u>	<u>80</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 15 BHT 107 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1813 Test 1150 T-On Location 6:25
 (B) First Initial Flow 16 Jars _____ T-Started 7:55
 (C) First Final Flow 22 Safety Joint _____ T-Open 11:00
 (D) Initial Shut-In 86 Circ Sub _____ T-Pulled 13:30
 (E) Second Initial Flow 22 Hourly Standby _____ T-Out 15:25
 (F) Second Final Flow 28 Mileage 52 RT 80.60 Comments _____
 (G) Final Shut-In 140 Sampler _____
 (H) Final Hydrostatic 1,759 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 30 Day Standby _____ Total 1230.60
 Final Flow 45 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 45 Sub Total 1230.60

Approved By _____ 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. 52038

Well Name & No. Porzweiler #2-35 Test No. 2 Date 3/13/13
 Company Downing - Nelson Oil Co Inc. Elevation 2291 KB 2283 GL
 Address PO Box 1019 Hays KS 67601
 Co. Rep / Geo. Marc Downing Rig Discovery #3
 Location: Sec. 35 Twp. 13 Rge. 21 Co. Trego State KS

Interval Tested 3918 - 3955 Zone Tested Marmaton
 Anchor Length 37 Drill Pipe Run 3897 Mud Wt. _____
 Top Packer Depth 3913 Drill Collars Run 30 Vis _____
 Bottom Packer Depth 3918 Wt. Pipe Run _____ WL _____
 Total Depth 3955 Chlorides _____ ppm System LCM _____

Blow Description FF - BOB in 26min
FSI - weak surface blow
FF - BOB in 38min
FSI - 4in blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>vsomew</u>	<u>2</u>	<u>68</u>	<u>30</u>	
<u>30</u>	<u>somew</u>	<u>10</u>	<u>30</u>	<u>60</u>	
<u>120</u>	<u>seo</u>	<u>5</u>	<u>95</u>		
	<u>150 FT GIP</u>				

Rec Total 210 BHT _____ Gravity 32 API RW .2 @ 50 ° F Chlorides 55,000 ppm
 (A) Initial Hydrostatic 1,861 Test 1150 T-On Location 5:50
 (B) First Initial Flow 19 Jars _____ T-Started 6:05
 (C) First Final Flow 63 Safety Joint _____ T-Open 8:33
 (D) Initial Shut-In 978 Circ Sub _____ T-Pulled 11:33
 (E) Second Initial Flow 65 Hourly Standby _____ T-Out 14:00
 (F) Second Final Flow 160 Mileage 52 RT 161.20 Comments _____
 (G) Final Shut-In 937 Sampler _____
 (H) Final Hydrostatic 1,855 Straddle _____ Ruined Shale Packer _____

Initial Open 45 Shale Packer _____ Ruined Packer _____
 Initial Shut-In 45 Extra Packer _____ Extra Copies _____
 Final Flow 45 Extra Recorder _____ Sub Total 0
 Final Shut-In 45 Day Standby _____ Total 1311.20
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1311.20

Approved By _____ Our Representative Beth D...

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.