



## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays KS 67601

ATTN: Marc Downing

**20-12s-22wTrego,KS**

**Tyler Fabrizius #1-20**

Start Date: 2013.08.12 @ 20:10:00

End Date: 2013.08.13 @ 02:45:30

Job Ticket #: 54755                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.08.16 @ 08:21:12

Downing Nelson Oil Co.

Tyler Fabrizius #1-20

20-12s-22wTrego,KS

DST # 1

KC "C-D"

2013.08.12



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Dow ning Nelson Oil Co.

**Tyler Fabrizius #1-20**

PO Box 1019  
Hays KS 67601

**20-12s-22w Trego, KS**

ATTN: Marc Dow ning

Job Ticket: 54755

**DST#: 1**

Test Start: 2013.08.12 @ 20:10:00

## GENERAL INFORMATION:

Formation: **KC "C-D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:07:30

Time Test Ended: 02:45:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Brett Dickinson

Unit No: 59

**Interval: 3698.00 ft (KB) To 3744.00 ft (KB) (TVD)**

Reference Elevations: 2417.00 ft (KB)

Total Depth: 3744.00 ft (KB) (TVD)

2409.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 6753**

**Inside**

Press @ Run Depth: 74.89 psig @ 3708.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.08.12

End Date:

2013.08.13

Last Calib.: 2013.08.13

Start Time: 20:10:05

End Time:

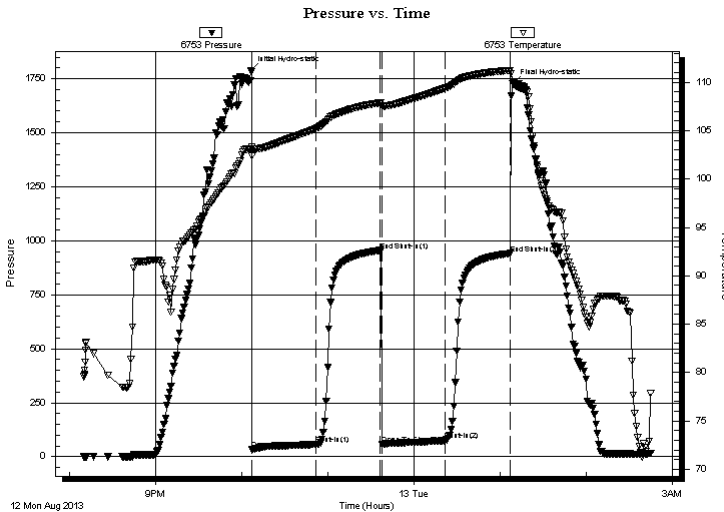
02:45:29

Time On Btm: 2013.08.12 @ 22:06:30

Time Off Btm: 2013.08.13 @ 01:09:30

**TEST COMMENT:** IF-4" blow  
ISI-No blow  
FF-4" blow  
FSI-No blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1788.64	103.03	Initial Hydro-static
1	33.41	102.40	Open To Flow (1)
46	56.84	105.21	Shut-In(1)
90	955.22	107.88	End Shut-In(1)
92	58.32	107.56	Open To Flow (2)
136	74.89	109.38	Shut-In(2)
181	941.29	111.22	End Shut-In(2)
183	1727.46	109.79	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
89.00	Oil spotted MCW 20%M 80%W	0.98
1.00	Free Oil	0.01

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning Nelson Oil Co.

**Tyler Fabrzius #1-20**

PO Box 1019  
Hays KS 67601

**20-12s-22w Trego, KS**

ATTN: Marc Dow ning

Job Ticket: 54755

**DST#: 1**

Test Start: 2013.08.12 @ 20:10:00

## Tool Information

Drill Pipe:	Length: 3666.00 ft	Diameter: 3.80 inches	Volume: 51.42 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:	55000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial	51000.00 lb
Depth to Top Packer:	3698.00 ft			Final	51000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	46.00 ft				
Tool Length:	67.00 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			3678.00	
Shut In Tool	5.00			3683.00	
Hydraulic tool	5.00			3688.00	
Packer	5.00			3693.00	21.00 Bottom Of Top Packer
Packer	5.00			3698.00	
Stubb	1.00			3699.00	
Perforations	9.00			3708.00	
Recorder	0.00	6753	Inside	3708.00	
Recorder	0.00	8319	Outside	3708.00	
Change Over Sub	1.00			3709.00	
Drill Pipe	31.00			3740.00	
Change Over Sub	1.00			3741.00	
Bullnose	3.00			3744.00	46.00 Bottom Packers & Anchor

**Total Tool Length: 67.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Dow ning Nelson Oil Co.

**Tyler Fabrizius #1-20**

PO Box 1019  
Hays KS 67601

**20-12s-22wTrego,KS**

Job Ticket: 54755

**DST#: 1**

ATTN: Marc Dow ning

Test Start: 2013.08.12 @ 20:10:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 8.00 lb/gal

Cushion Length:

ft

Water Salinity:

46000 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
89.00	Oil spotted MCW 20%M 80%W	0.975
1.00	Free Oil	0.014

Total Length: 90.00 ft      Total Volume: 0.989 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

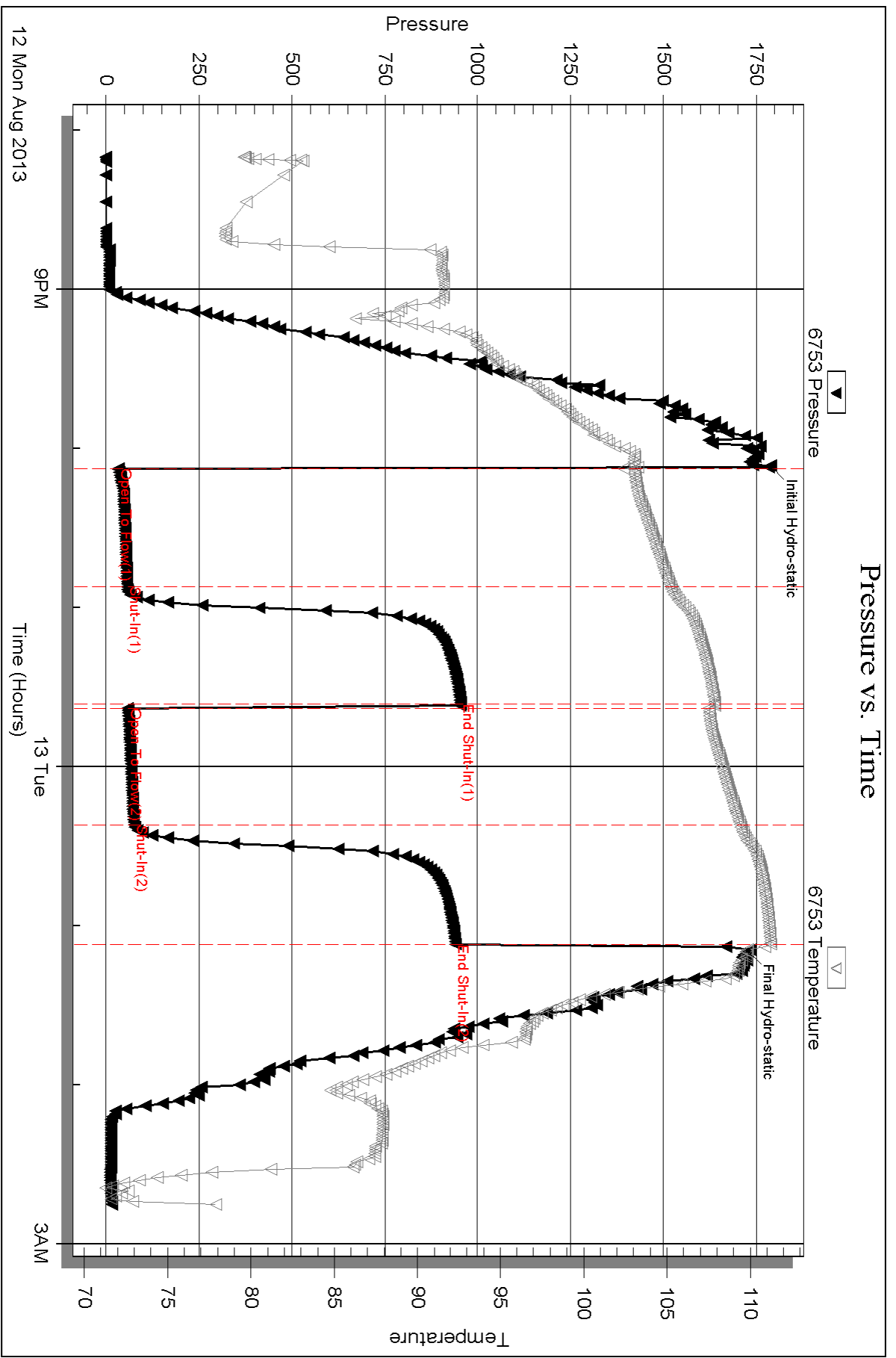
Serial #: 6753

Inside

Downing Nelson Oil Co.

20-12s-22w Trego, KS

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 54755

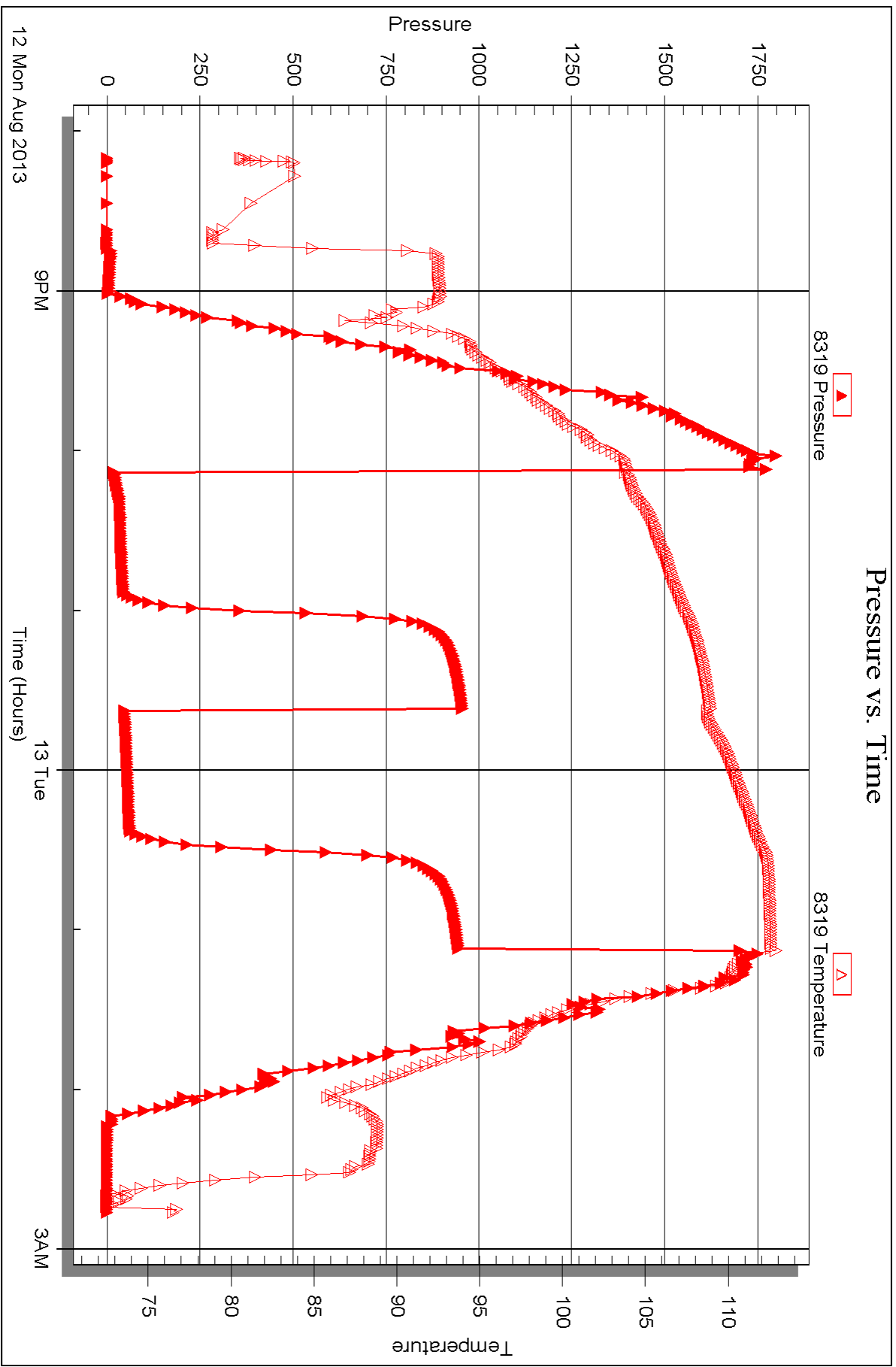
Printed: 2013.08.16 @ 08:21:15

Serial #: 8319

Outside Downing Nelson Oil Co.

20-12s-22w Trego, KS

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 54755

Printed: 2013.08.16 @ 08:21:16



## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays KS 67601

ATTN: Marc Downing

**20-12s-22wTrego,KS**

**Tyler Fabrizio #1-20**

Start Date: 2013.08.13 @ 08:35:00

End Date: 2013.08.13 @ 14:37:00

Job Ticket #: 54756                      DST #: 2

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.  
 PO Box 1019  
 Hays KS 67601  
 ATTN: Marc Dow ning

**Tyler Fabrizius #1-20**  
**20-12s-22wTrego,KS**  
 Job Ticket: 54756 **DST#: 2**  
 Test Start: 2013.08.13 @ 08:35:00

## GENERAL INFORMATION:

Formation: **KC"E"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 10:27:30  
 Time Test Ended: 14:37:00  
 Interval: **3737.00 ft (KB) To 3755.00 ft (KB) (TVD)**  
 Total Depth: 3755.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Brett Dickinson  
 Unit No: 59  
 Reference Elevations: 2417.00 ft (KB)  
 2409.00 ft (CF)  
 KB to GR/CF: 8.00 ft

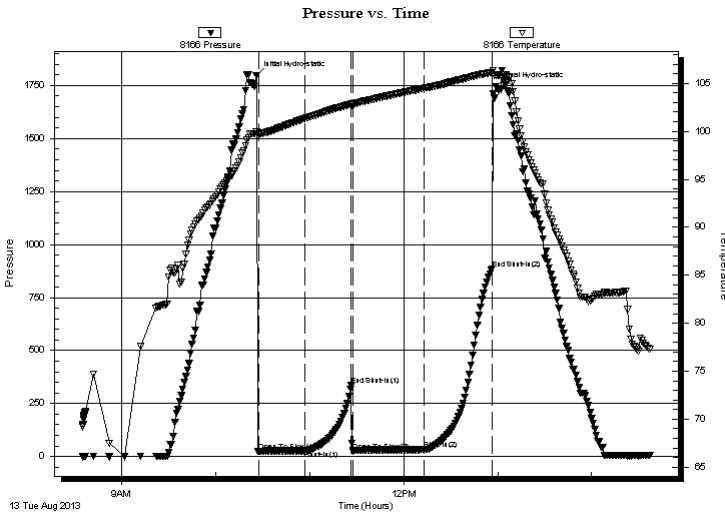
## Serial #: 8166

**Outside**

Press @RunDepth: 32.42 psig @ 3752.00 ft (KB)  
 Start Date: 2013.08.13 End Date: 2013.08.13  
 Start Time: 08:35:05 End Time: 14:36:59  
 Capacity: 8000.00 psig  
 Last Calib.: 2013.08.13  
 Time On Btm: 2013.08.13 @ 10:26:00  
 Time Off Btm: 2013.08.13 @ 12:59:00

TEST COMMENT: IF-2 1/2" blow  
 IS-No blow  
 FF- 2 1/2" blow built to 5 1/2"  
 FSI-No blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1796.28	100.00	Initial Hydro-static
2	25.33	99.76	Open To Flow (1)
31	27.84	101.34	Shut-In(1)
61	336.65	102.84	End Shut-In(1)
62	24.77	102.81	Open To Flow (2)
107	32.42	104.49	Shut-In(2)
151	883.82	106.14	End Shut-In(2)
153	1745.90	105.80	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	SOCM 15%O 85%M	0.10
20.00	SGO 10%G 90%O	0.19
0.00	80ft GIP	0.00

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning Nelson Oil Co.

**Tyler Fabrizius #1-20**

PO Box 1019  
Hays KS 67601

**20-12s-22w Trego, KS**

ATTN: Marc Dow ning

Job Ticket: 54756

**DST#: 2**

Test Start: 2013.08.13 @ 08:35:00

## Tool Information

Drill Pipe:	Length: 3696.00 ft	Diameter: 3.80 inches	Volume: 51.85 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:	60000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	51000.00 lb
Depth to Top Packer:	3737.00 ft			Final	52000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	18.00 ft				
Tool Length:	39.00 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			3717.00	
Shut In Tool	5.00			3722.00	
Hydraulic tool	5.00			3727.00	
Packer	5.00			3732.00	21.00 Bottom Of Top Packer
Packer	5.00			3737.00	
Stubb	1.00			3738.00	
Perforations	14.00			3752.00	
Recorder	0.00	6753	Inside	3752.00	
Recorder	0.00	8166	Outside	3752.00	
Bullnose	3.00			3755.00	18.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>39.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Dow ning Nelson Oil Co.

**Tyler Fabrizius #1-20**

PO Box 1019  
Hays KS 67601

**20-12s-22w Trego, KS**

Job Ticket: 54756

**DST#: 2**

ATTN: Marc Dow ning

Test Start: 2013.08.13 @ 08:35:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

37 deg API

Mud Weight: 8.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
20.00	SOCM 15%O 85%M	0.098
20.00	SGO 10%G 90%O	0.189
0.00	80ft GIP	0.000

Total Length: 40.00 ft      Total Volume: 0.287 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

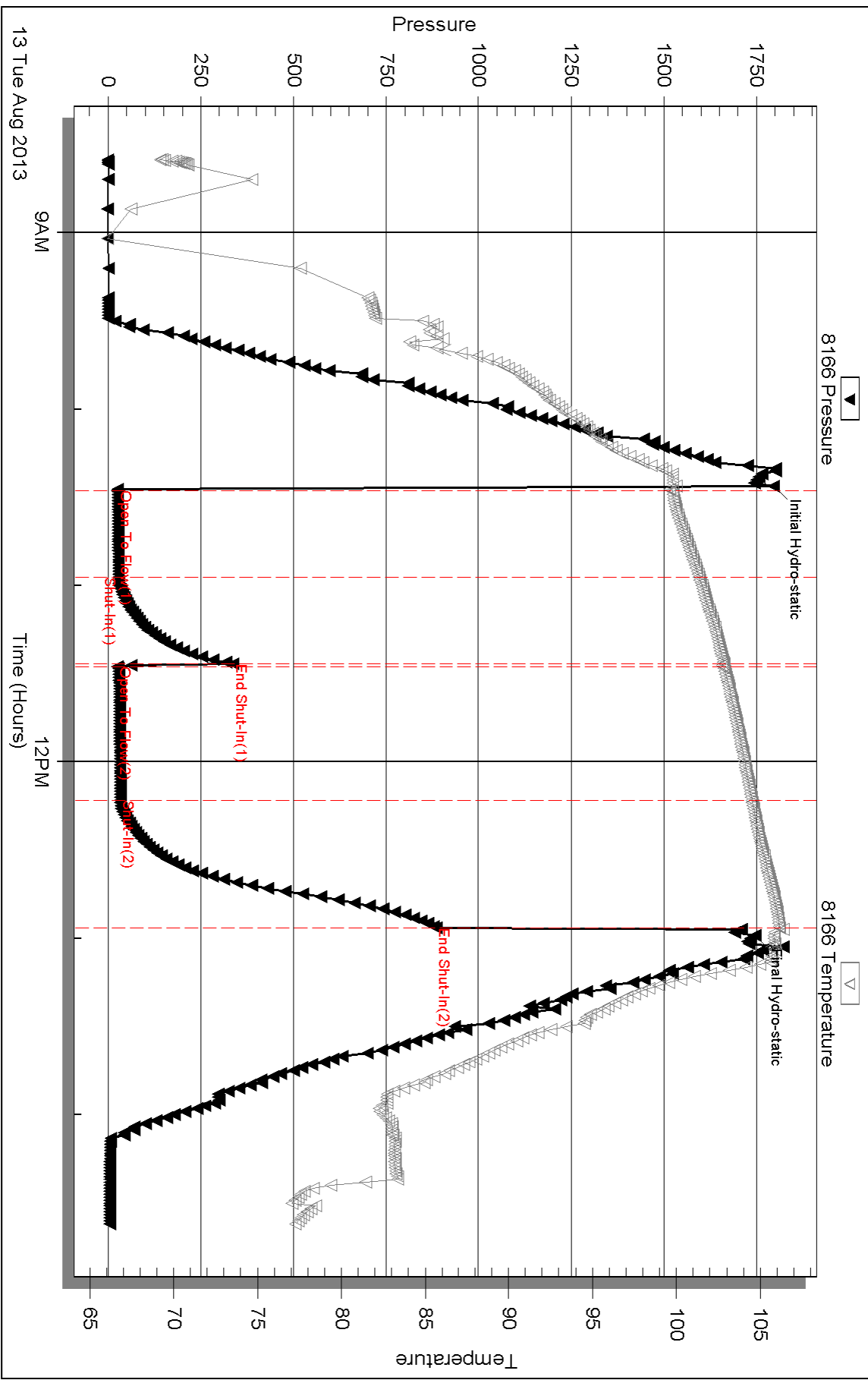
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time



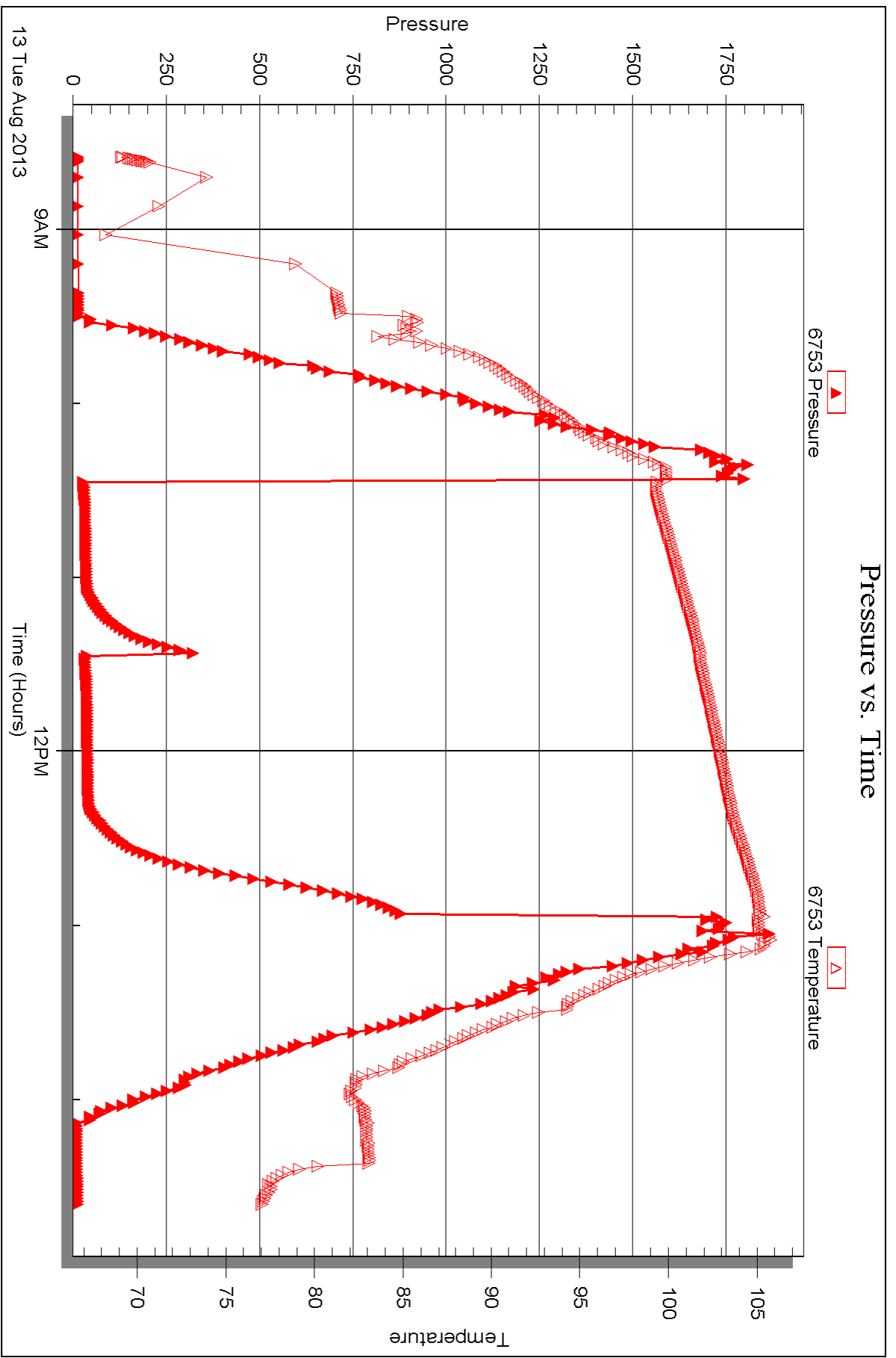
Serial #: 6753

Inside

Downing Nelson Oil Co.

20-12s-22w Trego, KS

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 54756

Printed: 2013.08.16 @ 08:20:39



## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays KS 67601

ATTN: Marc Downing

**20-12s-22wTrego,KS**

**Tyler Fabrizio #1-20**

Start Date: 2013.08.14 @ 11:57:00

End Date: 2013.08.14 @ 17:21:30

Job Ticket #: 54757                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.08.16 @ 08:19:56

Downing Nelson Oil Co.

Tyler Fabrizio #1-20

20-12s-22wTrego,KS

DST # 3

Marmaton

2013.08.14



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Dow ning Nelson Oil Co.

**Tyler Fabrizius #1-20**

PO Box 1019  
Hays KS 67601

**20-12s-22wTrego,KS**

ATTN: Marc Dow ning

Job Ticket: 54757

**DST#: 3**

Test Start: 2013.08.14 @ 11:57:00

## GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:54:30

Time Test Ended: 17:21:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Brett Dickinson

Unit No: 59

**Interval: 4010.00 ft (KB) To 4055.00 ft (KB) (TVD)**

Reference Elevations: 2417.00 ft (KB)

Total Depth: 4055.00 ft (KB) (TVD)

2409.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8166 Outside**

Press @ Run Depth: 29.01 psig @ 4019.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.08.14

End Date:

2013.08.14

Last Calib.: 2013.08.14

Start Time: 11:57:05

End Time:

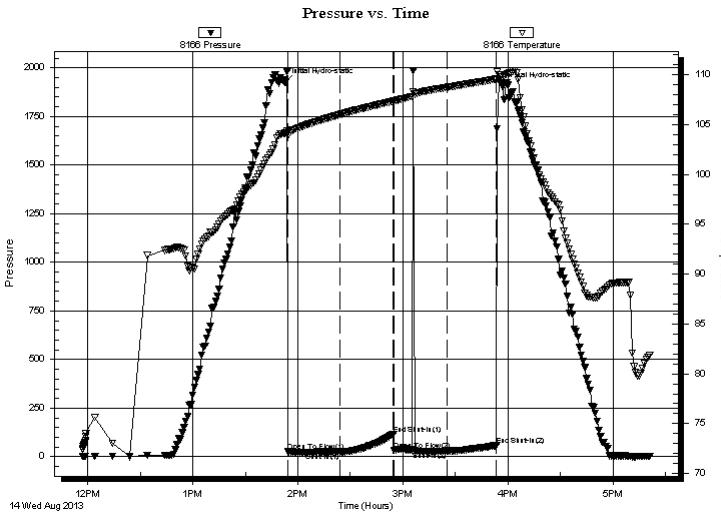
17:21:29

Time On Btm: 2013.08.14 @ 13:52:30

Time Off Btm: 2013.08.14 @ 15:57:00

**TEST COMMENT:** IF-3/4" blow  
ISI-No blow  
FF-No blow Flush tool No blow  
FSI-No blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1925.33	104.13	Initial Hydro-static
2	25.52	103.87	Open To Flow (1)
32	25.07	106.01	Shut-In(1)
62	117.15	107.36	End Shut-In(1)
63	33.46	107.37	Open To Flow (2)
93	29.01	108.74	Shut-In(2)
121	58.21	109.57	End Shut-In(2)
125	1904.92	109.84	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	VSOCM 2%O 98%M	0.02

## 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.

**Tyler Fabrizius #1-20**

PO Box 1019  
Hays KS 67601

**20-12s-22w Trego, KS**

ATTN: Marc Dow ning

Job Ticket: 54757

**DST#: 3**

Test Start: 2013.08.14 @ 11:57:00

## Tool Information

Drill Pipe:	Length: 3976.00 ft	Diameter: 3.80 inches	Volume: 55.77 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:	60000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial	53000.00 lb
Depth to Top Packer:	4010.00 ft			Final	53000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	45.00 ft				
Tool Length:	66.00 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			3990.00	
Shut In Tool	5.00			3995.00	
Hydraulic tool	5.00			4000.00	
Packer	5.00			4005.00	21.00 Bottom Of Top Packer
Packer	5.00			4010.00	
Stubb	1.00			4011.00	
Perforations	8.00			4019.00	
Recorder	0.00	6753	Inside	4019.00	
Recorder	0.00	8166	Outside	4019.00	
Change Over Sub	1.00			4020.00	
Drill Pipe	31.00			4051.00	
Change Over Sub	1.00			4052.00	
Bullnose	3.00			4055.00	45.00 Bottom Packers & Anchor

**Total Tool Length: 66.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Downing Nelson Oil Co.

**Tyler Fabrizius #1-20**

PO Box 1019  
Hays KS 67601

**20-12s-22w Trego, KS**

Job Ticket: 54757

**DST#: 3**

ATTN: Marc Downing

Test Start: 2013.08.14 @ 11:57:00

## 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: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in<sup>3</sup>

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
5.00	VSOCM 2%O 98%M	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

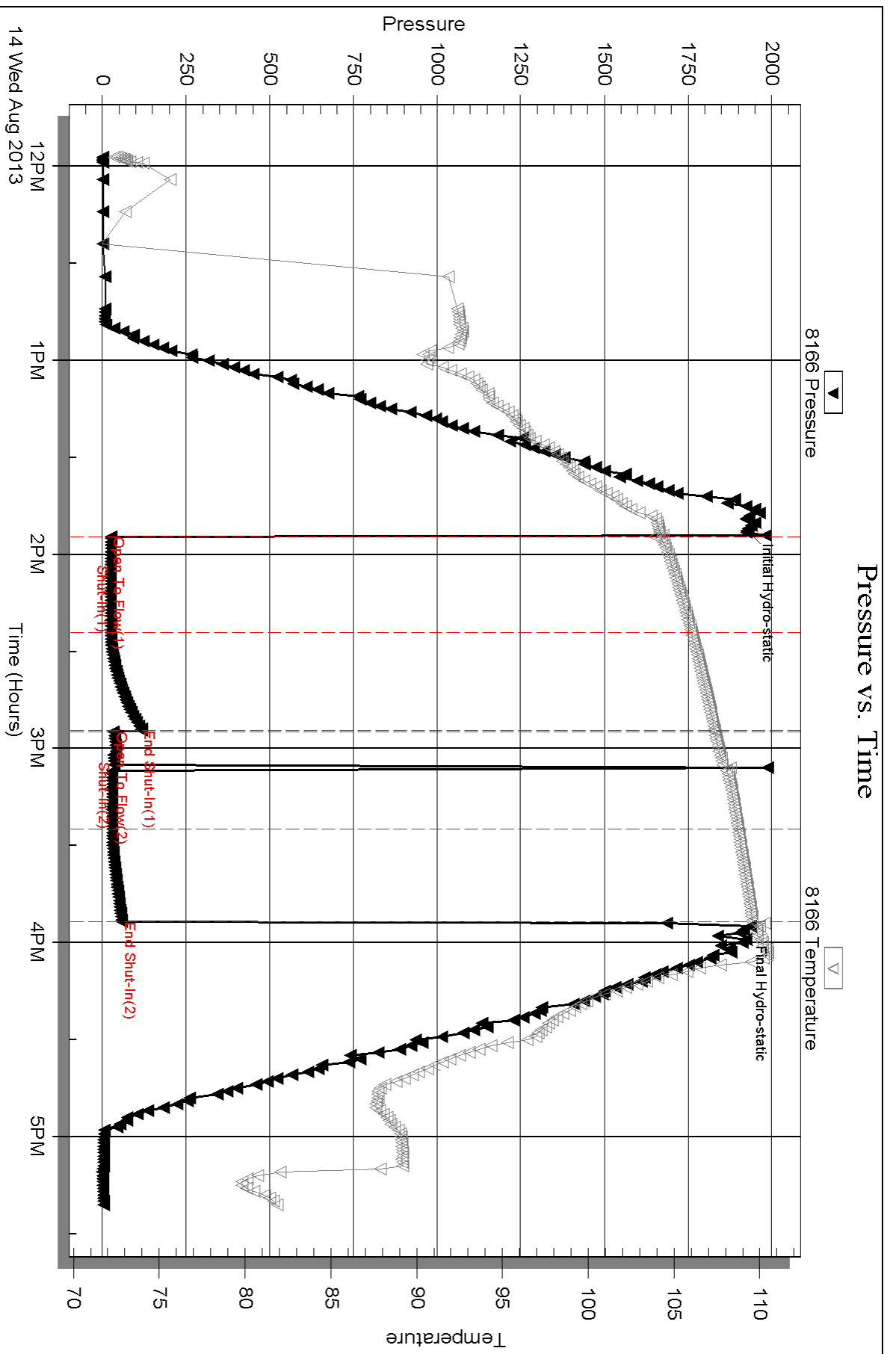
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



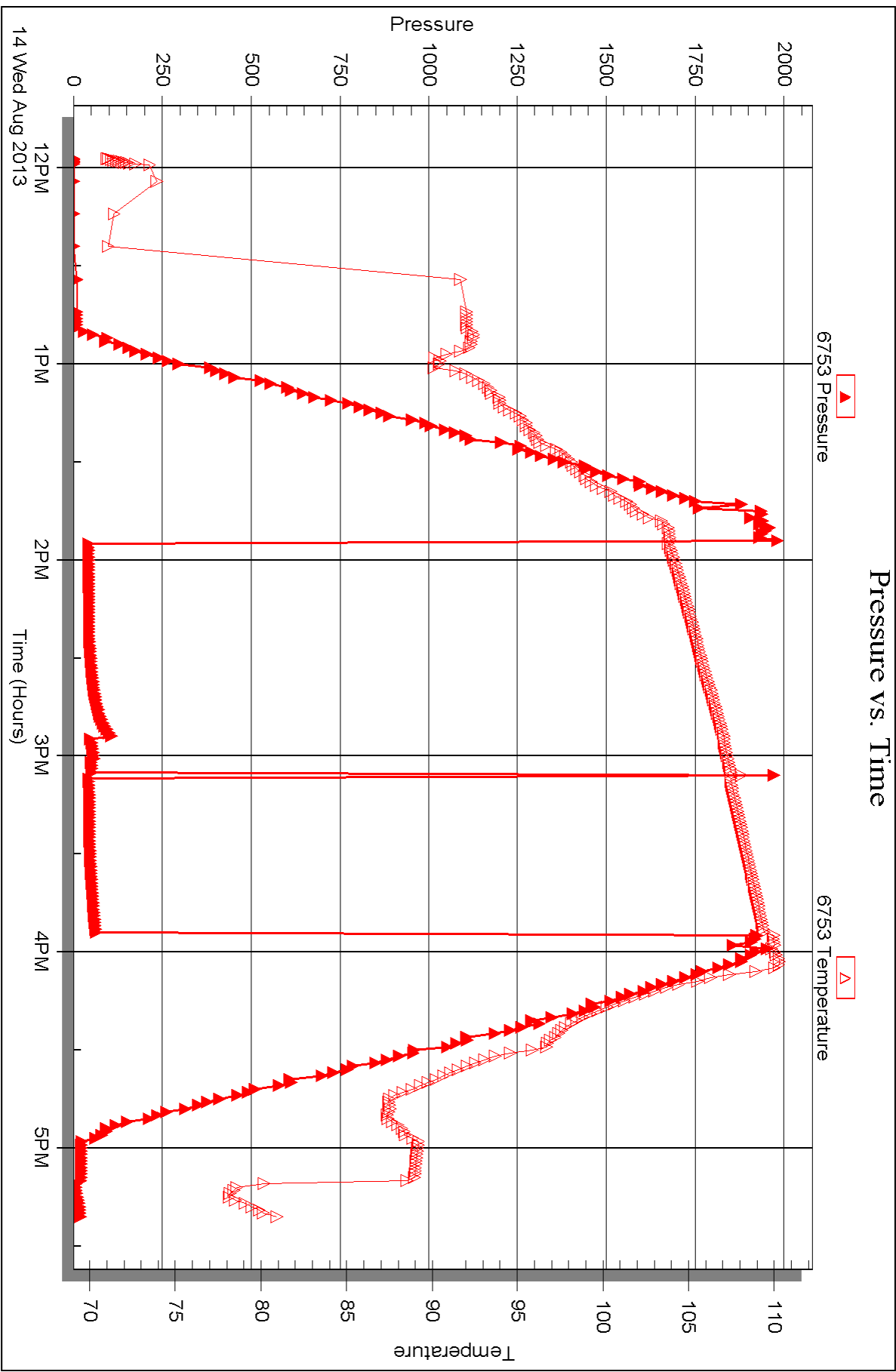
Serial #: 6753

Inside

Downing Nelson Oil Co.

20-12s-22w Trego, KS

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 54757

Printed: 2013.08.16 @ 08:20:00



## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays KS 67601

ATTN: Marc Downing

**20-12s-22wTrego,KS**

**Tyler Fabrizio #1-20**

Start Date: 2013.08.15 @ 07:25:00

End Date: 2013.08.15 @ 14:04:00

Job Ticket #: 54758                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.08.16 @ 08:11:19

Downing Nelson Oil Co.

Tyler Fabrizio #1-20

20-12s-22wTrego,KS

DST # 4

Arbuckle

2013.08.15



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Dow ning Nelson Oil Co.

**Tyler Fabrizius #1-20**

PO Box 1019  
Hays KS 67601

**20-12s-22w Trego, KS**

ATTN: Marc Dow ning

Job Ticket: 54758

**DST#: 4**

Test Start: 2013.08.15 @ 07:25:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:27:00

Time Test Ended: 14:04:00

Test Type: Conventional Straddle (Reset)

Tester: Brett Dickinson

Unit No: 59

**Interval: 4122.00 ft (KB) To 4132.00 ft (KB) (TVD)**

Reference Elevations: 2417.00 ft (KB)

Total Depth: 4180.00 ft (KB) (TVD)

2409.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 6753 Outside**

Press @ Run Depth: 452.95 psig @ 4128.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.08.15

End Date:

2013.08.15

Last Calib.: 2013.08.15

Start Time: 07:25:05

End Time:

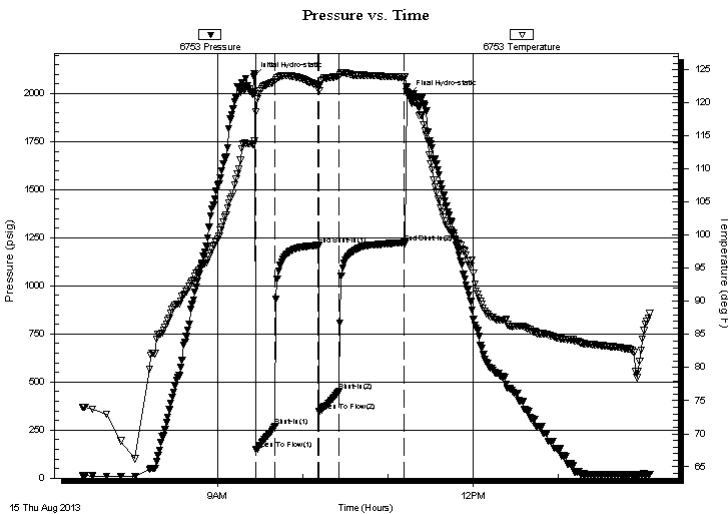
14:03:59

Time On Btm: 2013.08.15 @ 09:25:30

Time Off Btm: 2013.08.15 @ 11:14:30

**TEST COMMENT:** IF-BOB in 1 1/2 min  
ISI-1" blow  
FF-BOB in 2 min  
FSI-Weak Surface blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2085.80	113.78	Initial Hydro-static
2	148.73	118.59	Open To Flow (1)
15	271.10	123.22	Shut-In(1)
45	1211.86	122.74	End Shut-In(1)
46	346.93	121.87	Open To Flow (2)
60	452.95	124.01	Shut-In(2)
106	1225.31	123.91	End Shut-In(2)
109	1994.92	120.99	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	SGMCO 10%G 15%M 75%O	0.15
1145.00	GO 20%G 80%O	16.06
0.00	60ft GIP	0.00

\* Recovery from multiple tests

## Gas Rates

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









**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning Nelson Oil Co.

**Tyler Fabrizius #1-20**

PO Box 1019  
Hays KS 67601

**20-12s-22w Trego, KS**

ATTN: Marc Dow ning

Job Ticket: 54758

**DST#: 4**

Test Start: 2013.08.15 @ 07:25:00

## Tool Information

Drill Pipe:	Length: 4100.00 ft	Diameter: 3.80 inches	Volume: 57.51 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
				String Weight: Initial	55000.00 lb
Drill Pipe Above KB:	28.00 ft			Final	59000.00 lb
Depth to Top Packer:	4122.00 ft				
Depth to Bottom Packer:	4132.00 ft				
Interval betw een Packers:	10.00 ft				
Tool Length:	81.00 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			4103.00	
Shut In Tool	5.00			4108.00	
Hydraulic tool	5.00			4113.00	
Packer	4.00			4117.00	20.00 Bottom Of Top Packer
Packer	5.00			4122.00	
Stubb	1.00			4123.00	
Perforations	5.00			4128.00	
Recorder	0.00	8166	Inside	4128.00	
Recorder	0.00	6753	Outside	4128.00	
Blank Off Sub	4.00			4132.00	10.00 Tool Interval
Packer	4.00			4136.00	
Stubb	1.00			4137.00	
Recorder	0.00	8319	Below	4137.00	
perforations	10.00			4147.00	
Change Over Sub	1.00			4148.00	
Blank Spacing	31.00			4179.00	
Change Over Sub	1.00			4180.00	
Bullnose	3.00			4183.00	51.00 Bottom Packers & Anchor

**Total Tool Length: 81.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Dow ning Nelson Oil Co.

**Tyler Fabrizius #1-20**

PO Box 1019  
Hays KS 67601

**20-12s-22w Trego, KS**

Job Ticket: 54758

**DST#: 4**

ATTN: Marc Dow ning

Test Start: 2013.08.15 @ 07:25:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

28 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in<sup>3</sup>

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
30.00	SGMCO 10%G 15%M 75%O	0.148
1145.00	GO 20%G 80%O	16.061
0.00	60ft GIP	0.000

Total Length: 1175.00 ft      Total Volume: 16.209 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

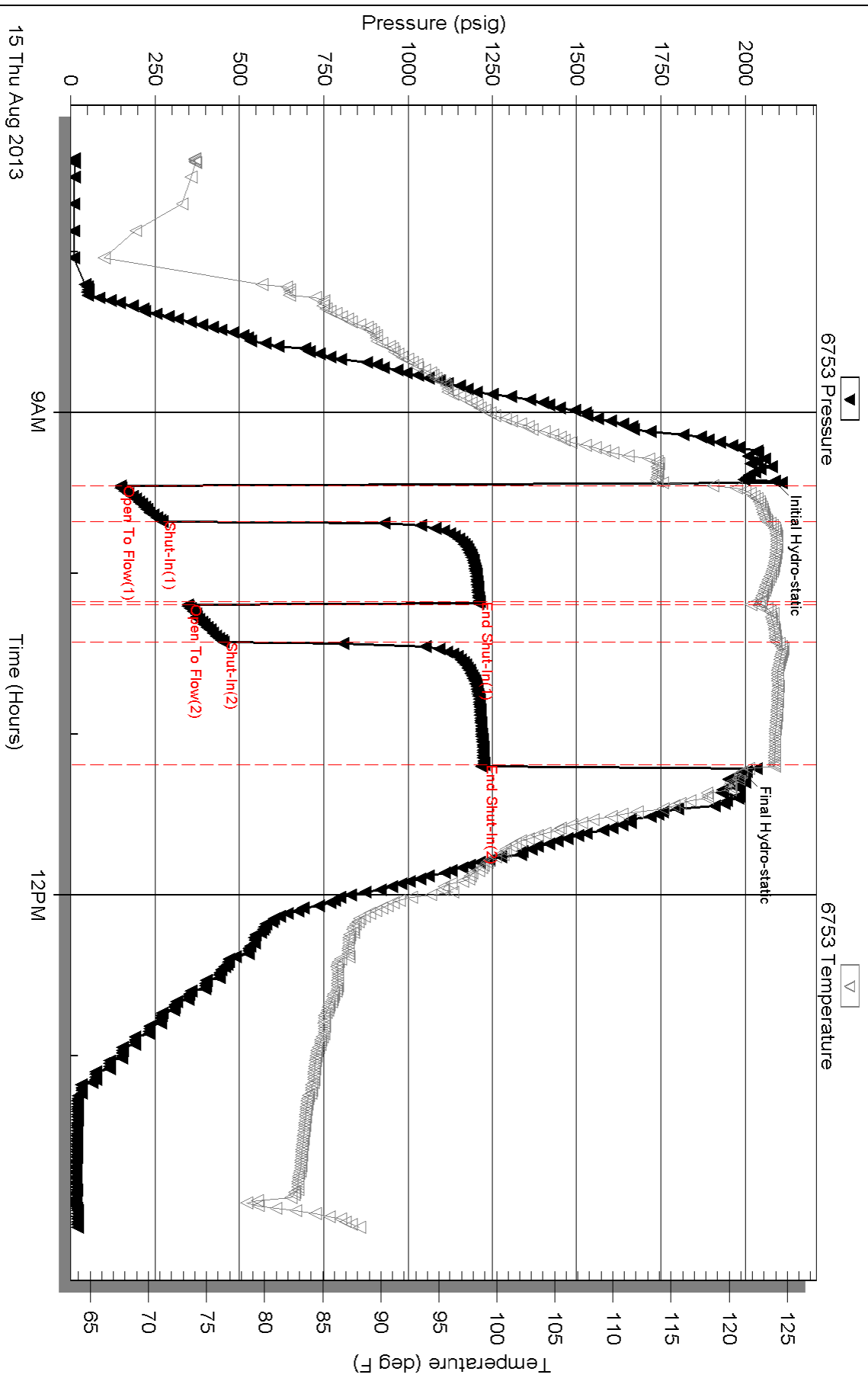
Serial #:

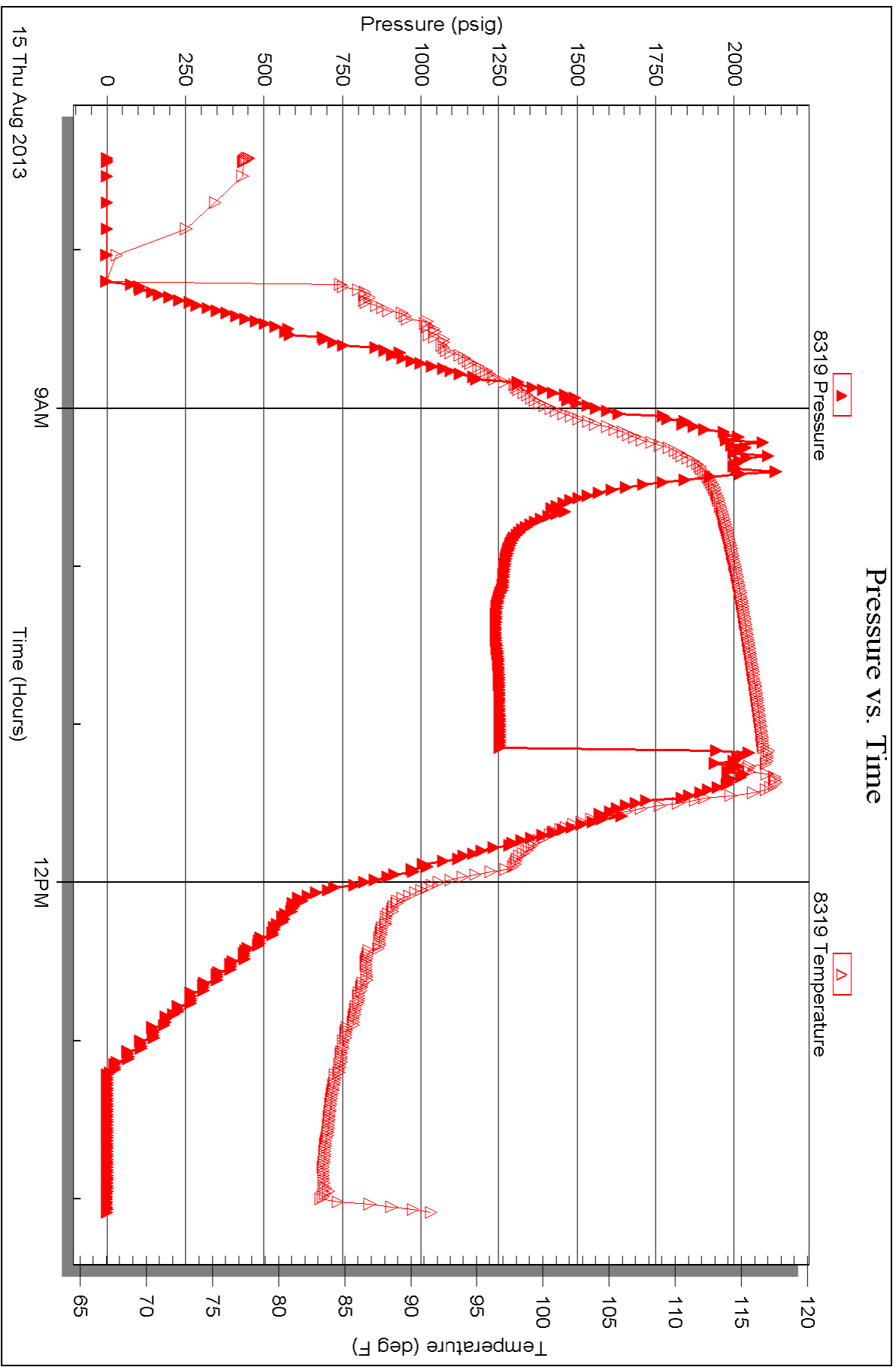
Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time





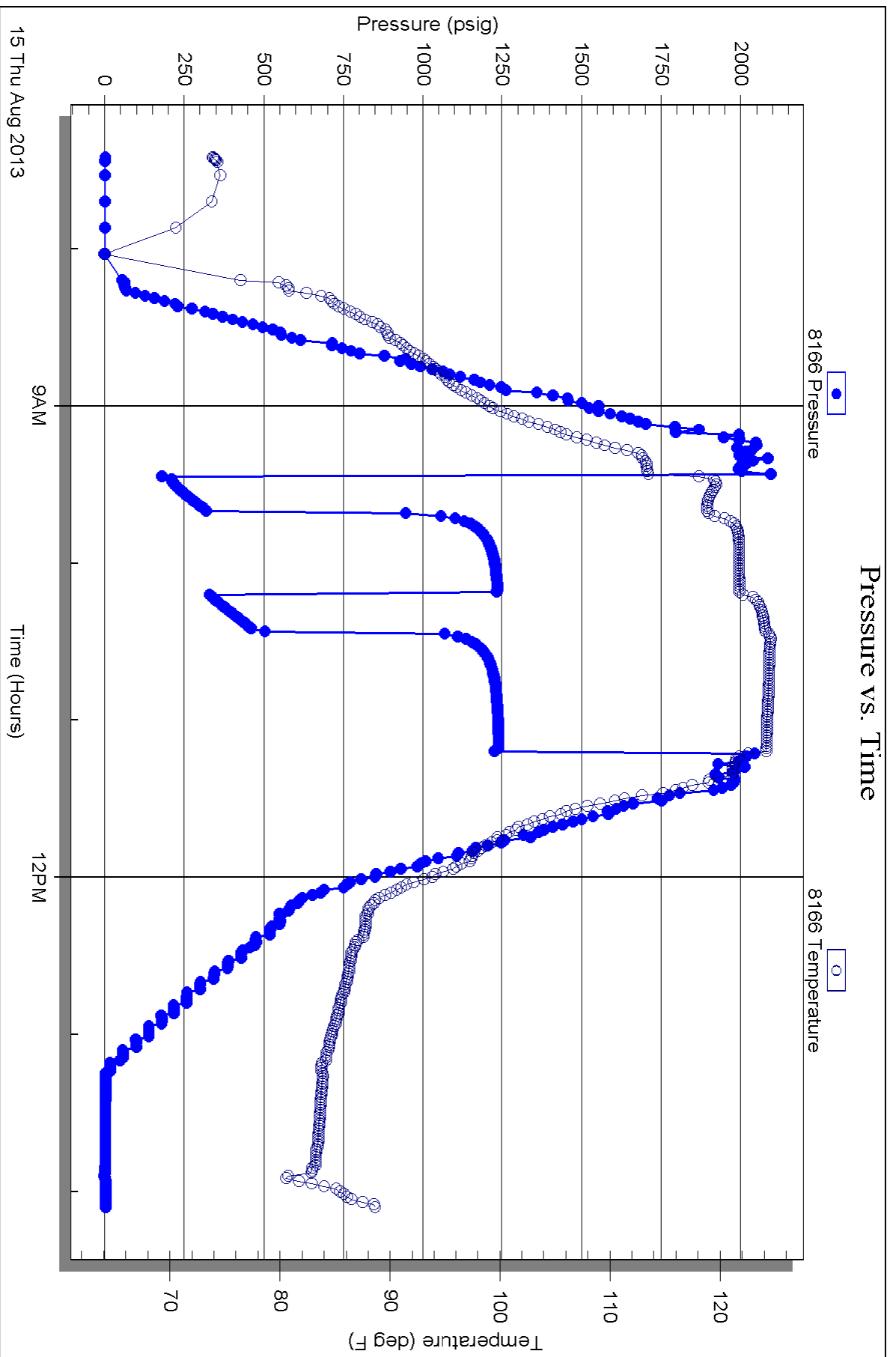
Serial #: 8166

Inside

Downing Nelson Oil Co.

20-12s-22w Trego, KS

DST Test Number: 4





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 54755

Well Name & No. Tyler Fabrizzius #1-20 Test No. 1 Date 8/13/03  
 Company Downing-Nelson Oil Co. Elevation 2417 KB 2409 GL  
 Address PO Box 1019 Hays KS 67601  
 Co. Rep / Geo. Marc Downing Rig Discovery #4  
 Location: Sec. 20 Twp. 12 Rge. 22 Co. Trego State KS

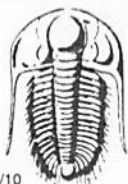
Interval Tested 3698-3744 Zone Tested KC<sup>1</sup> C+D<sup>11</sup>  
 Anchor Length 46 Drill Pipe Run 3666 Mud Wt. 8.1  
 Top Packer Depth 3693 Drill Collars Run 30 Vis 57  
 Bottom Packer Depth 3698 Wt. Pipe Run — WL 8.8  
 Total Depth 3744 Chlorides 1,500 ppm System LCM 2  
 Blow Description IF - 4in blow  
ISI - No blow  
FF - 4in blow  
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Free Oil</u>				
<u>89</u>	<u>oil spotted MCDW</u>		<u>80</u>	<u>20</u>	

Rec Total 90 BHT 111 Gravity — API RW .19 @ 60 °F Chlorides 46000 ppm  
 (A) Initial Hydrostatic 1,789  Test 1150 T-On Location 18:45  
 (B) First Initial Flow 33  Jars — T-Started 20:10  
 (C) First Final Flow 57  Safety Joint — T-Open 22:07  
 (D) Initial Shut-In 955  Circ Sub — T-Pulled 1:07  
 (E) Second Initial Flow 58  Hourly Standby — T-Out 2:45  
 (F) Second Final Flow 75  Mileage 6501 100.75 Comments —  
 (G) Final Shut-In 941  Sampler —  
 (H) Final Hydrostatic 1,727  Straddle —  Ruined Shale Packer —  
 Shale Packer —  Ruined Packer —  
 Extra Packer —  Extra Copies —  
 Initial Open 45  Extra Recorder — Sub Total 0  
 Initial Shut-In 45  Day Standby — Total 1250.75  
 Final Flow 45  Accessibility — MP/DST Disc't —  
 Final Shut-In 45 Sub Total 1250.75

Approved By \_\_\_\_\_ Our Representative Burd

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. 54756

Well Name & No. Tyler Fabrizius #1-20 Test No. 2 Date 8/13/13  
 Company Downing-Nelson Oil Co. Elevation 2417 KB 2409 GL  
 Address PO Box 1019 Hays KS 67601  
 Co. Rep / Geo. AI Downing Rig Discovery #4  
 Location: Sec. 20 Twp. 12 Rge. 22 Co. Trego State KS

Interval Tested 3737 - 3755 Zone Tested KC"E"  
 Anchor Length 18 Drill Pipe Run 3696 Mud Wt. 8.1  
 Top Packer Depth 3732 Drill Collars Run 30 Vis 57  
 Bottom Packer Depth 3737 Wt. Pipe Run - WL 8.8  
 Total Depth 3755 Chlorides 1,500 ppm System LCM 2

Blow Description IF - 2 1/2 in blow  
ISF - No blow  
FF - 2 1/2 in blow built to 5 1/2 in  
FSF - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>560</u>	<u>10</u>	<u>90</u>		
<u>20</u>	<u>50CM</u>		<u>15</u>		<u>85</u>

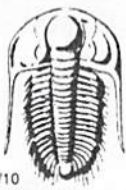
Rec Total 40 BHT 106 Gravity 37 API RW @ ° F Chlorides ppm  
 (A) Initial Hydrostatic 1,796  Test 1150 T-On Location 7:55  
 (B) First Initial Flow 25  Jars T-Started 8:35  
 (C) First Final Flow 28  Safety Joint T-Open 10:27  
 (D) Initial Shut-In 337  Circ Sub T-Pulled 12:57  
 (E) Second Initial Flow 25  Hourly Standby T-Out 14:35  
 (F) Second Final Flow 32  Mileage 6.5 rt 100.75 Comments  
 (G) Final Shut-In 884  Sampler  
 (H) Final Hydrostatic 1,746  Straddle  Ruined Shale Packer  
 Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 45  
 Final Shut-In 45  
 Sub Total 1250.75  
 Total 1250.75  
 MP/DST Disc't

Approved By \_\_\_\_\_ Our Representative Bett Dickson

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **54757**

Well Name & No. Tyler Fabricius #1-20 Test No. 3 Date 8/14/13  
 Company Downing-Nelson Oil Co Elevation 2417 KB 2409 GL  
 Address PO Box 1019 Hays KS 67601  
 Co. Rep / Geo. AI Downing Rig Discovery #4  
 Location: Sec. 20 Twp. 12 Rge. 22 Co. Trego State KS

Interval Tested 4010-4055 Zone Tested Marmaton  
 Anchor Length 45 Drill Pipe Run 3976 Mud Wt. 8.7  
 Top Packer Depth 4005 Drill Collars Run 30 Vis 59  
 Bottom Packer Depth 4010 Wt. Pipe Run — WL 8.8  
 Total Depth 4055 Chlorides 5,000 ppm System LCM 1 1/2 #  
 Blow Description FF - 3/4" blow  
ISF - No blow  
FF - No blow flush tool No blow  
FSI - No blow

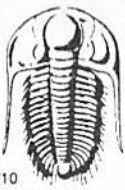
Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>vsocm</u>	<u>2</u>		<u>98</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 110 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1,925  Test 1250 T-On Location 11:40  
 (B) First Initial Flow 26  Jars T-Started 11:57  
 (C) First Final Flow 25  Safety Joint T-Open 13:55  
 (D) Initial Shut-In 117  Circ Sub T-Pulled 15:55  
 (E) Second Initial Flow 33  Hourly Standby T-Out 17:20  
 (F) Second Final Flow 29  Mileage 65 RT 100.75 Comments \_\_\_\_\_  
 (G) Final Shut-In 58  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1,905  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 1350.75  
 Final Flow 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 30 Sub Total 1350.75

Approved By \_\_\_\_\_ Our Representative Beth Dyer

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 54758

Well Name & No. Tyler Fabrizius #1-20 Test No. 4 Date 8/15/13  
 Company Downing-Nelson Oil Co Elevation 2417 KB 2409 GL  
 Address PO Box 1019 Hays KS 67601  
 Co. Rep / Geo. Marc Downing Rig Discovery #4  
 Location: Sec. 20 Twp. 12 Rge. 22 Co. Trego State KS

Interval Tested 4122 - 4132 Zone Tested Arb.  
 Anchor Length 10 Drill Pipe Run \_\_\_\_\_ Mud Wt. 8.7  
 Top Packer Depth 4117, 4122 Drill Collars Run 30 Vis 59  
 Bottom Packer Depth 4132 Wt. Pipe Run \_\_\_\_\_ WL 8.8  
 Total Depth 4180 Chlorides 5,000 ppm System LCM 1 1/2 #

Blow Description IF - BOB in 1 1/2 min  
ISE - 1 in blow  
FF - BOB in 2 min  
ESI - weak surface blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>SGMCO</u>	<u>10</u>	<u>75</u>	<u>15</u>	
<u>1145</u>	<u>60</u>	<u>20</u>	<u>80</u>		
	<u>6000 GIP</u>				

Rec Total 1175 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2,086  Test 1250 T-On Location 7:05  
 (B) First Initial Flow 149  Jars \_\_\_\_\_ T-Started 7:25  
 (C) First Final Flow 271  Safety Joint \_\_\_\_\_ T-Open 9:21  
 (D) Initial Shut-In 1,212  Circ Sub \_\_\_\_\_ T-Pulled 11:07  
 (E) Second Initial Flow 347  Hourly Standby \_\_\_\_\_ T-Out 14:00  
 (F) Second Final Flow 453  Mileage 65 RT 100.75  
 (G) Final Shut-In 1,225  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1,995  Straddle 600  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1950.75  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1950.75

Initial Open 15  
 Initial Shut-In 30  
 Final Flow 15  
 Final Shut-In 45  
 Approved By \_\_\_\_\_ Our Representative Burt

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