



DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Leta Faye #1-20

20-23s-18w Pawnee,KS

Start Date: 2014.05.25 @ 00:14:00

End Date: 2014.05.25 @ 10:38:45

Job Ticket #: 54047 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.05.28 @ 13:44:35



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Downing Nelson Oil Co Inc

20-23s-18w Pawnee, KS

PO Box 1019
Hays KS 67601

Leta Faye #1-20

Job Ticket: 54047

DST#: 1

ATTN: Marc Downing

Test Start: 2014.05.25 @ 00:14:00

GENERAL INFORMATION:

Formation: **Cong. Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:14:30

Time Test Ended: 10:38:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Cody Bloedorn

Unit No: 73

Interval: 4362.00 ft (KB) To 4396.00 ft (KB) (TVD)

Reference Elevations: 2137.00 ft (KB)

Total Depth: 4396.00 ft (KB) (TVD)

2125.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 12.00 ft

Serial #: 8648

Inside

Press@RunDepth: 1058.81 psig @ 4363.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.25

End Date:

2014.05.25

Last Calib.:

2014.05.25

Start Time: 00:14:05

End Time:

10:38:45

Time On Btm:

2014.05.25 @ 06:12:30

Time Off Btm:

2014.05.25 @ 08:32:00

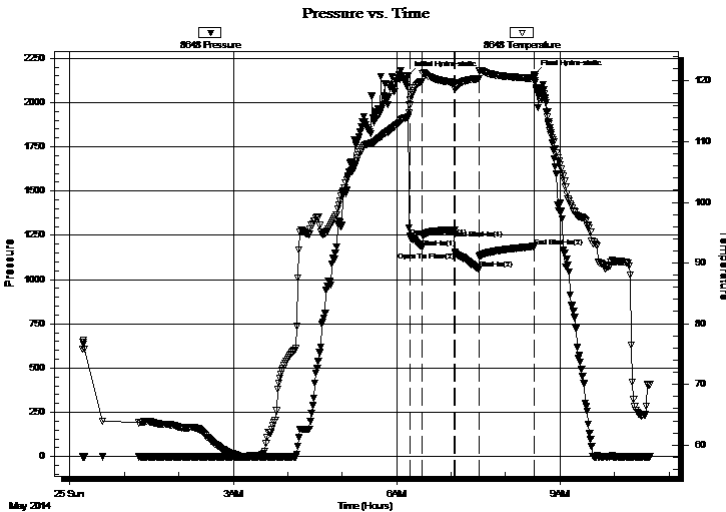
TEST COMMENT: 15 - IF- B.O.B. instantly, G.T.S. @ 5 minutes - Gauging gas

30 - IS- Never died off completely

30 - FF- B.O.B. instantly - Gauging gas

FS- bled off in 28 minutes, weak surface blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2149.19	114.07	Initial Hydro-static
2	1242.78	116.06	Open To Flow (1)
16	1181.48	119.98	Shut-In(1)
52	1281.75	119.76	End Shut-In(1)
52	1153.52	118.64	Open To Flow (2)
78	1058.81	120.44	Shut-In(2)
139	1186.94	120.42	End Shut-In(2)
140	2158.79	120.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GO, 30%G, 70%O	0.84
0.00	GTS	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	1.00	150.00	4726.31
Last Gas Rate	1.00	160.00	5013.79
Max. Gas Rate	1.00	185.00	5732.51



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Downing Nelson Oil Co Inc

20-23s-18w Pawnee, KS

PO Box 1019
Hays KS 67601

Leta Faye #1-20

Job Ticket: 54047 **DST#: 1**

ATTN: Marc Downing

Test Start: 2014.05.25 @ 00:14:00

GENERAL INFORMATION:

Formation: **Cong. Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:14:30

Time Test Ended: 10:38:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Cody Bloedorn

Unit No: 73

Interval: 4362.00 ft (KB) To 4396.00 ft (KB) (TVD)

Total Depth: 4396.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2137.00 ft (KB)

2125.00 ft (CF)

KB to GR/CF: 12.00 ft

Serial #: 8940 **Outside**

Press@RunDepth: psig @ 4363.00 ft (KB)

Start Date: 2014.05.25

End Date:

2014.05.25

Start Time: 00:14:05

End Time:

10:38:45

Capacity: 8000.00 psig

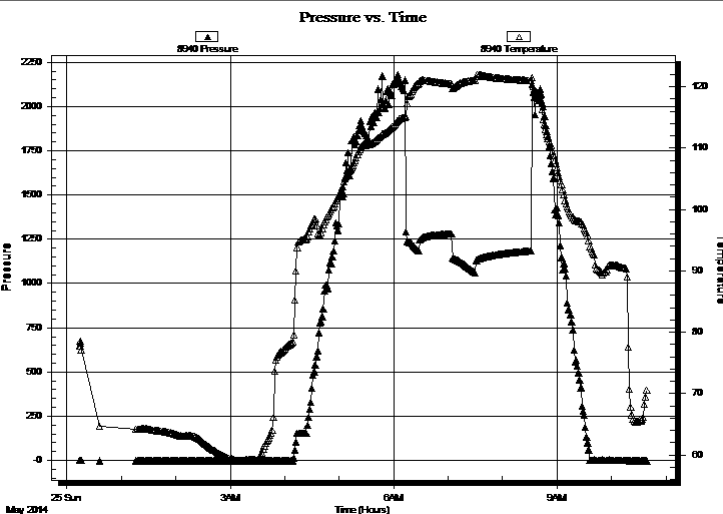
Last Calib.:

2014.05.25

Time On Btm:

Time Off Btm:

TEST COMMENT: 15 - IF- B.O.B. instantly, G.T.S. @ 5 minutes - Gauging gas
30 - IS- Never died off completely
30 - FF- B.O.B. instantly - Gauging gas
FS- bled off in 28 minutes, weak surface blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GO, 30%G, 70%O	0.84
0.00	GTS	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	1.00	150.00	4726.31
Last Gas Rate	1.00	160.00	5013.79
Max. Gas Rate	1.00	185.00	5732.51



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Co Inc

20-23s-18w Pawnee,KS

PO Box 1019
Hays KS 67601

Leta Faye #1-20

Job Ticket: 54047

DST#: 1

ATTN: Marc Downing

Test Start: 2014.05.25 @ 00:14:00

Tool Information

Drill Pipe:	Length: 4352.00 ft	Diameter: 3.80 inches	Volume: 61.05 bbl	Tool Weight: 2500.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 63000.00 lb
			<u>Total Volume: 61.05 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	4362.00 ft			Final 57000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	34.00 ft			
Tool Length:	63.00 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			4334.00	
Shut In Tool	5.00			4339.00	
Hydraulic tool	5.00			4344.00	
Jars	5.00			4349.00	
Safety Joint	3.00			4352.00	
Packer	5.00			4357.00	29.00 Bottom Of Top Packer
Packer	5.00			4362.00	
Stubb	1.00			4363.00	
Recorder	0.00	8648	Inside	4363.00	
Recorder	0.00	8940	Outside	4363.00	
Perforations	30.00			4393.00	
Bullnose	3.00			4396.00	34.00 Bottom Packers & Anchor

Total Tool Length: 63.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co Inc

20-23s-18w Pawnee,KS

PO Box 1019
Hays KS 67601

Leta Faye #1-20

Job Ticket: 54047

DST#: 1

ATTN: Marc Downing

Test Start: 2014.05.25 @ 00:14:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

31 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.99 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
60.00	GO, 30%G, 70%O	0.842
0.00	GTS	0.000

Total Length: 60.00 ft Total Volume: 0.842 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity: 31 @ 60 Degrees = 31



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

GAS RATES

Dow ning Nelson Oil Co Inc

20-23s-18w Pawnee,KS

PO Box 1019
Hays KS 67601

Leta Faye #1-20

Job Ticket: 54047

DST#: 1

ATTN: Marc Dow ning

Test Start: 2014.05.25 @ 00:14:00

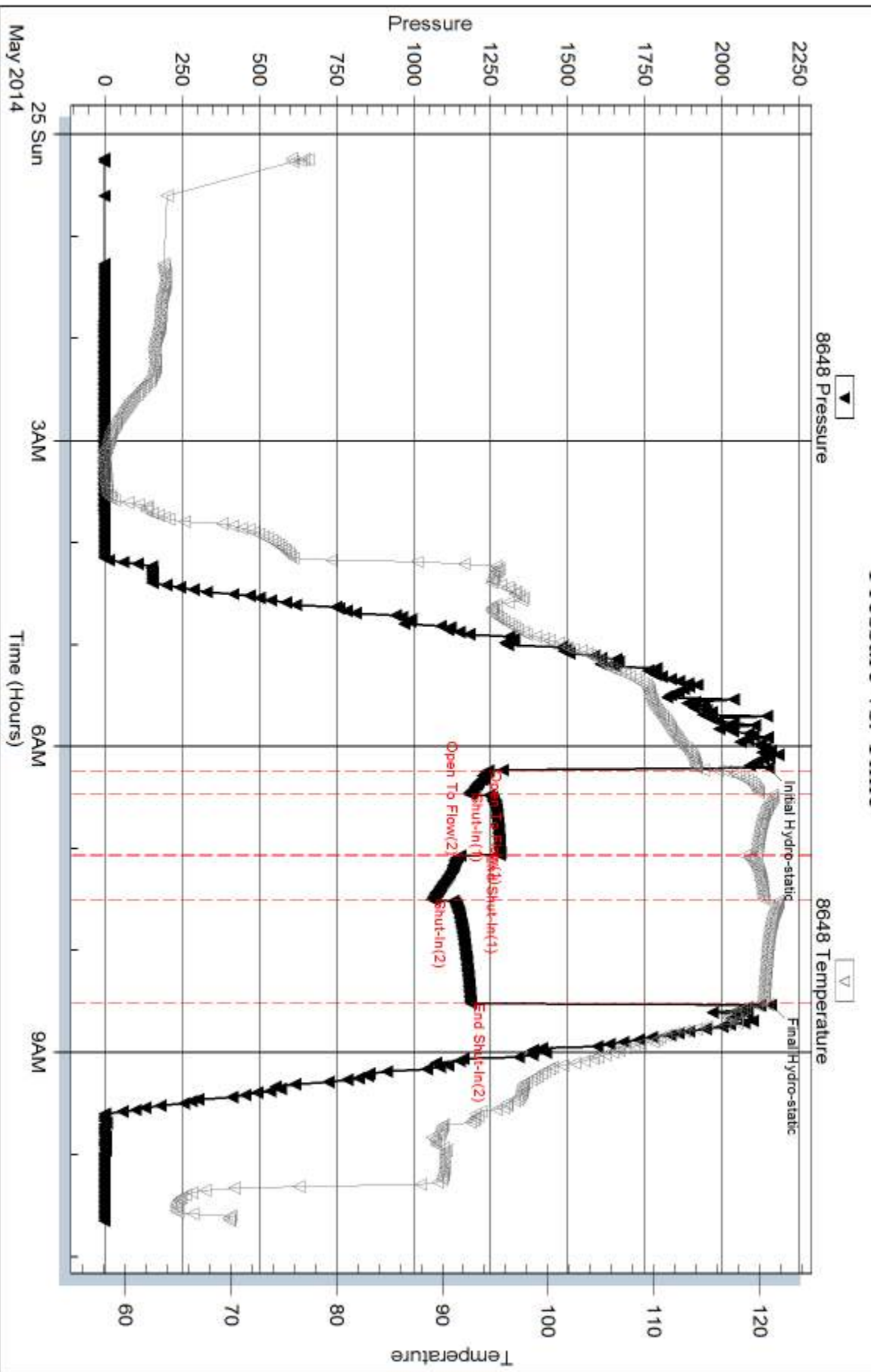
Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
1	5	1.00	150.00	4726.31
1	10	1.00	166.00	5186.29
1	15	1.00	175.00	5445.02
2	5	1.00	90.00	3001.38
2	10	1.00	105.00	3432.61
2	15	1.00	140.00	4438.82
2	20	1.00	185.00	5732.51
2	25	1.00	180.00	5588.77
2	30	1.00	160.00	5013.79

Pressure vs. Time

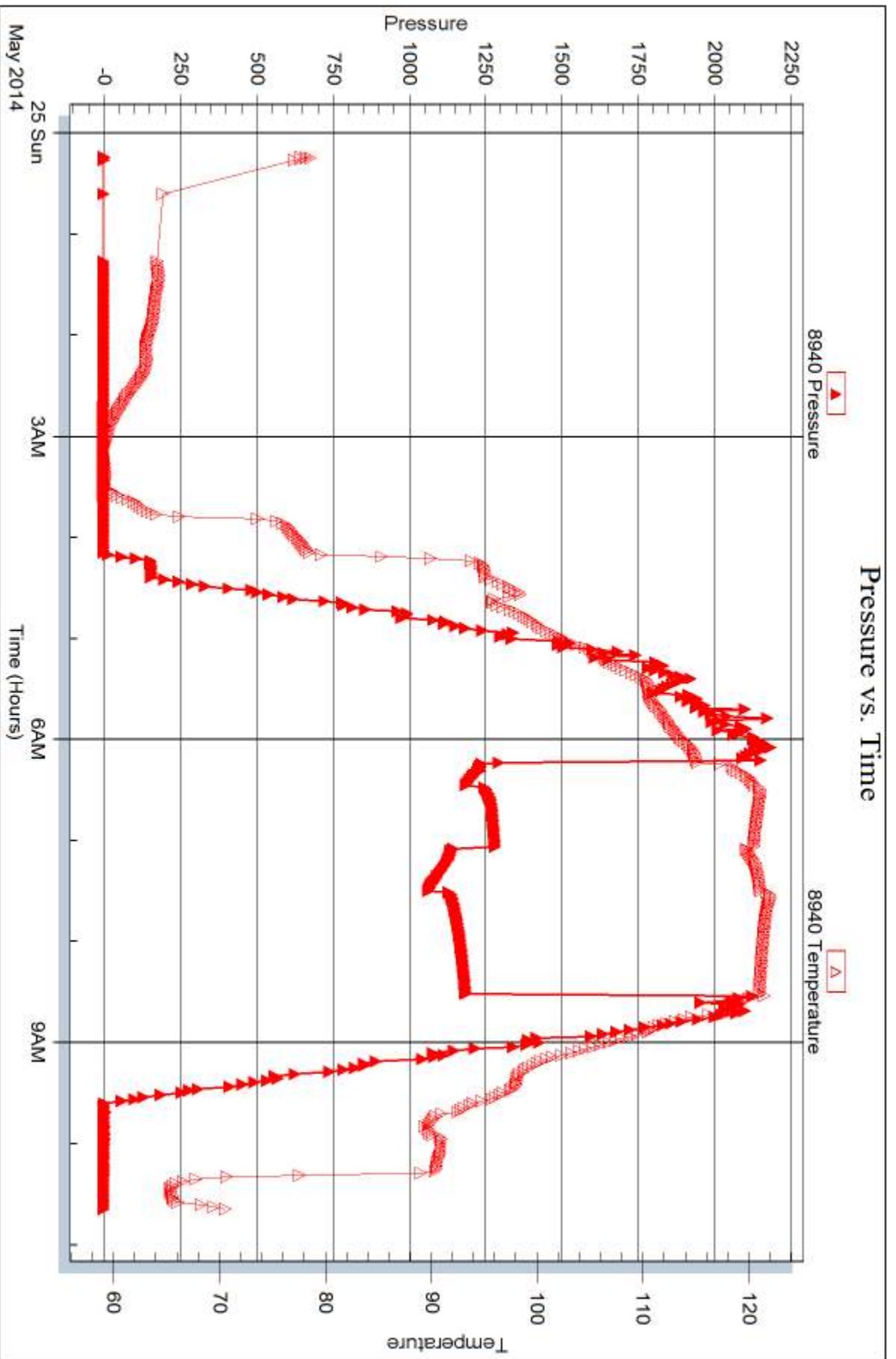


Serial #: 8940

Outside Downing Nelson Oil Co Inc

Leta Faye #1-20

DST Test Number: 1



Tribble Testing, Inc

Ref. No: 54047

Printed: 2014.05.28 @ 13:44:37



DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Leta Faye #1-20

20-23s-18w Pawnee,KS

Start Date: 2014.05.25 @ 20:25:00

End Date: 2014.05.26 @ 02:35:15

Job Ticket #: 54048 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.05.28 @ 13:45:55



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Downing Nelson Oil Co Inc

20-23s-18w Pawnee, KS

PO Box 1019
Hays KS 67601

Leta Faye #1-20

Job Ticket: 54048

DST#: 2

ATTN: Marc Downing

Test Start: 2014.05.25 @ 20:25:00

GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:18:00

Time Test Ended: 02:35:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 73

Interval: 4419.00 ft (KB) To 4428.00 ft (KB) (TVD)

Reference Elevations: 2137.00 ft (KB)

Total Depth: 4428.00 ft (KB) (TVD)

2125.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 12.00 ft

Serial #: 8648

Inside

Press@RunDepth: 37.33 psig @ 4420.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.25

End Date:

2014.05.26

Last Calib.:

2014.05.26

Start Time: 20:25:05

End Time:

02:35:14

Time On Btm:

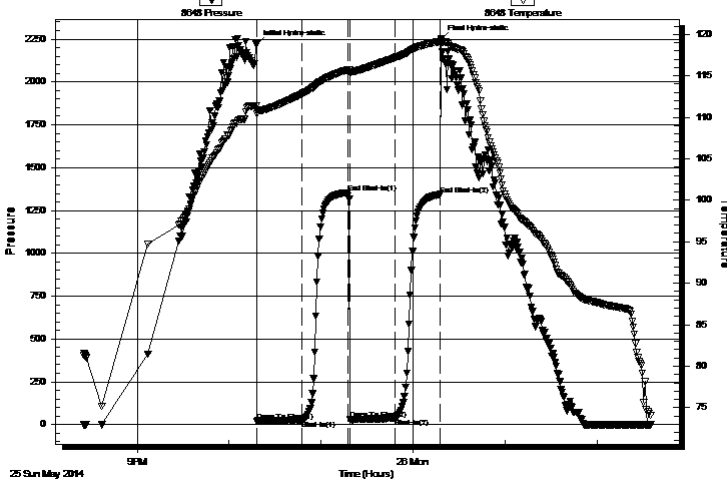
2014.05.25 @ 22:17:45

Time Off Btm:

2014.05.26 @ 00:18:00

TEST COMMENT: 30 - IF- 3/4" blow
30 - IS- No return
30 - FF-Surface blow
30 - FS- No return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2218.07	111.41	Initial Hydro-static
1	20.95	110.36	Open To Flow (1)
30	27.33	112.84	Shut-In(1)
60	1354.15	115.73	End Shut-In(1)
61	29.08	115.38	Open To Flow (2)
90	37.33	117.16	Shut-In(2)
120	1343.45	119.15	End Shut-In(2)
121	2247.40	119.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
35.00	Mud, - show of oil, 100%M	0.49

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Co Inc

20-23s-18w Pawnee, KS

PO Box 1019
Hays KS 67601

Leta Faye #1-20

Job Ticket: 54048

DST#: 2

ATTN: Marc Downing

Test Start: 2014.05.25 @ 20:25:00

Tool Information

Drill Pipe:	Length: 4415.00 ft	Diameter: 3.80 inches	Volume: 61.93 bbl	Tool Weight: 2500.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 61.93 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 57000.00 lb
Depth to Top Packer:	4419.00 ft			Final 57000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	9.00 ft			
Tool Length:	38.00 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			4391.00	
Shut In Tool	5.00			4396.00	
Hydraulic tool	5.00			4401.00	
Jars	5.00			4406.00	
Safety Joint	3.00			4409.00	
Packer	5.00			4414.00	29.00 Bottom Of Top Packer
Packer	5.00			4419.00	
Stubb	1.00			4420.00	
Recorder	0.00	8648	Inside	4420.00	
Recorder	0.00	8940	Outside	4420.00	
Perforations	5.00			4425.00	
Bullnose	3.00			4428.00	9.00 Bottom Packers & Anchor

Total Tool Length: 38.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co Inc

20-23s-18w Pawnee,KS

PO Box 1019
Hays KS 67601

Leta Faye #1-20

Job Ticket: 54048

DST#: 2

ATTN: Marc Downing

Test Start: 2014.05.25 @ 20:25:00

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: 9.98 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 bbl
35.00	Mud, - show of oil, 100%M	0.491

Total Length: 35.00 ft Total Volume: 0.491 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

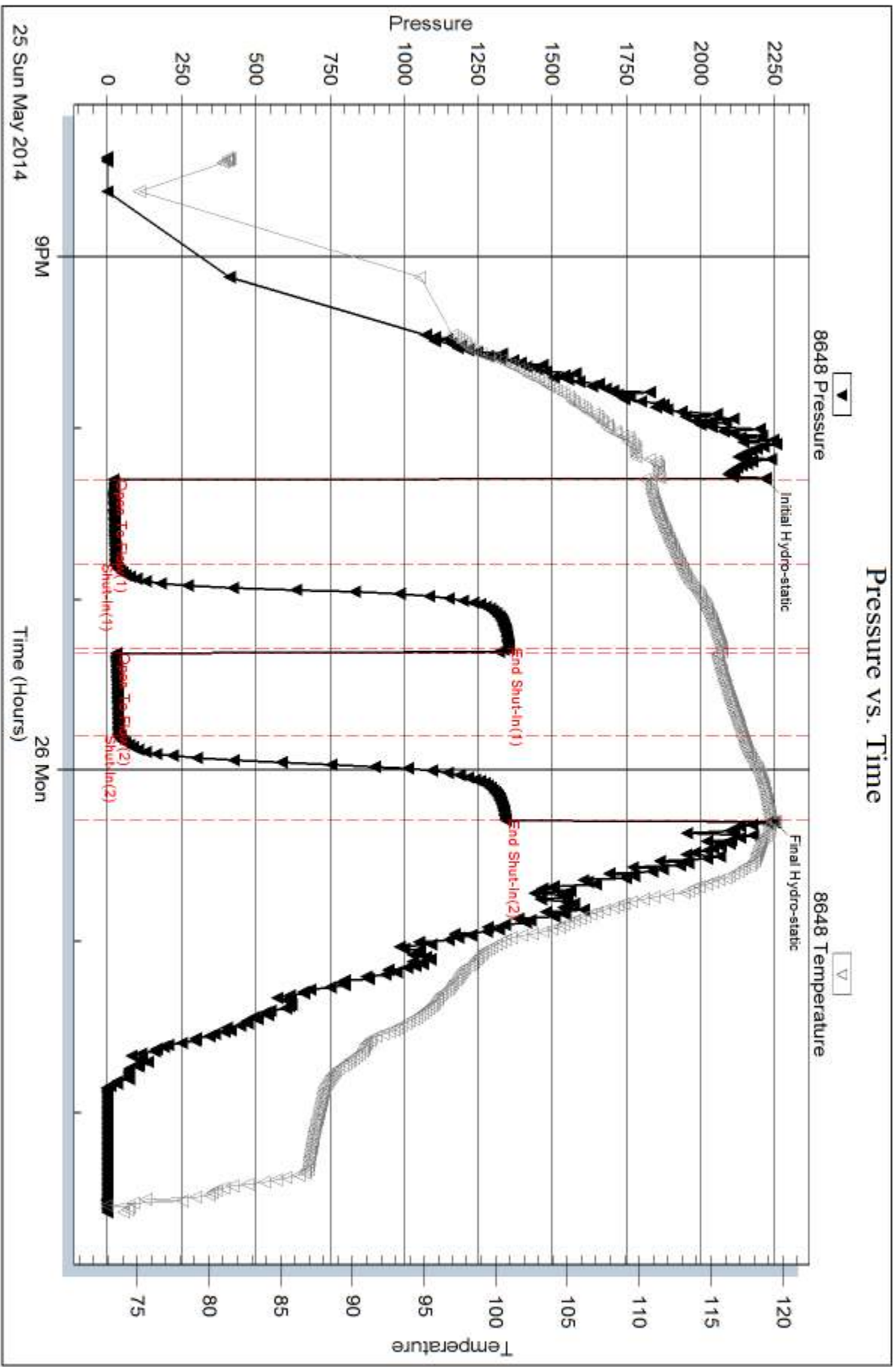
Serial #: 8648

Inside

Downing Nelson Oil Co Inc

Leta Faye #1-20

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 54048

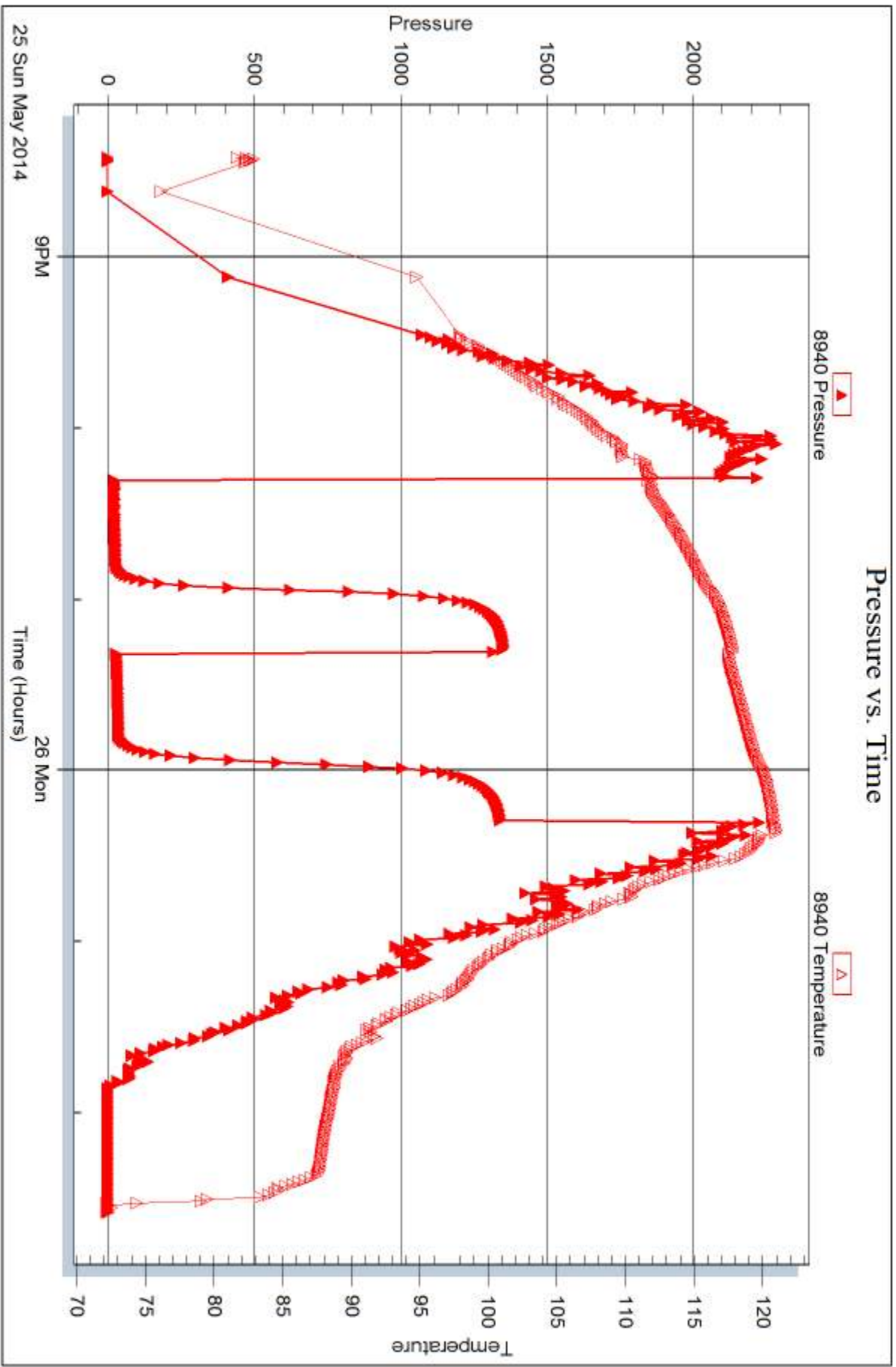
Printed: 2014.05.28 @ 13:45:56

Serial #: 8940

Outside Dow nting Nelson Oil Co Inc

Leta Faye #1-20

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 54048

Printed: 2014.05.28 @ 13:45:56



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54047

Well Name & No. Leta Faye 1-20 Test No. 1 Date 5-24-14
 Company Downing Nelson Oil Co Inc Elevation 2137 KB 2125 GL
 Address PO Box 1019, Hays KS, 67601
 Co. Rep / Geo. Marc Downing Rig Ninnescah Drilling
 Location: Sec. 20 Twp. 23S Rge. 18W Co. Pawnee State KS

Interval Tested 4362 - 4396 Zone Tested Cong. Sand
 Anchor Length 34' Drill Pipe Run 4352' Mud Wt. 9.2
 Top Packer Depth 4357 Drill Collars Run — Vis 51
 Bottom Packer Depth 4362 Wt. Pipe Run — WL 10
 Total Depth 4396 Chlorides 5,000 ppm System LCM —

Blow Description IF- B.O.B. instantly, G.T. 5@5 minutes - Gauging gas
ISI- Never died off completely
FF- B.O.B. instantly - Gauging gas
FSI- bled off in 28 minutes, weak surface blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>60</u>	<u>30</u>	<u>70</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 60' BHT 2149 Gravity 31 API RW — @ — °F Chlorides — ppm
 (A) Initial Hydrostatic 2149 Test 1250 T-On Location 2353
 (B) First Initial Flow 1242 Jars 250 T-Started 0014
 (C) First Final Flow 1181 Safety Joint 75 T-Open 0614
 (D) Initial Shut-In 1281 Circ Sub — T-Pulled 0830
 (E) Second Initial Flow 1153 Hourly Standby — T-Out 10:40
 (F) Second Final Flow 1058 Mileage 128RT 198.40 Comments 31@60°
 (G) Final Shut-In 1186 Sampler —
 (H) Final Hydrostatic 2158 Straddle — Ruined Shale Packer —
 Shale Packer — Ruined Packer —
 Extra Packer — Extra Copies —
 Extra Recorder — Sub Total 0
 Day Standby — Total 1773.40
 Accessibility — MP/DST Disc't —

Initial Open 15
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 60

Sub Total 1773.40
 Approved By _____ Our Representative Gody [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

Gas Volume Report

DNOCI

Operator

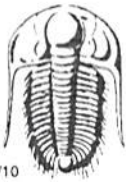
Leta Faye #1-20

Well Name and No.

1
DST No.

Min.	Ins. of Water PSIG	Orifice Size	CF/D	Min.	Ins. of Water PSIG	Orifice Size	CF/D
5	150	1"	4,726.305, 000				
10	166		5,186,286				
15	175		5,445,025				
<hr/>							
5	90	1"	3001.376				
10	105		3432.608				
15	140		4438.817				
20	185		5732.513				
25	180		5588.769				
30	160	↓	5013.793				

Remarks:



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **54048**

Well Name & No. Leta Faye # 1-20 Test No. 2 Date 5-25-14
 Company Downing Nelson oil Co Inc Elevation 2137 KB 2125 GL
 Address Po Box 1019, Hays KS, 67601
 Co. Rep / Geo. Marc Downing Rig Ninnescah
 Location: Sec. 20 Twp. 23s Rge. 18w Co. Pawnee State KS

Interval Tested 4419 - 4428 Zone Tested Mississippi
 Anchor Length 9' Drill Pipe Run 4415' Mud Wt. 9.2
 Top Packer Depth 4414 Drill Collars Run — Vis 51
 Bottom Packer Depth 4419 Wt. Pipe Run — WL 10
 Total Depth 4428 Chlorides 5,000 ppm System LCM —

Blow Description IF - 3/4" blow
ISI - No return
FF - No blow
FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>35</u>	<u>Mud - oil spots</u>			<u>100</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 35' BHT _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2218 Test 1250 T-On Location 2014
 (B) First Initial Flow 20 Jars 250 T-Started 2025
 (C) First Final Flow 27 Safety Joint 75 T-Open 2218
 (D) Initial Shut-In 1354 Circ Sub _____ T-Pulled 1218
 (E) Second Initial Flow 29 Hourly Standby _____ T-Out 0236
 (F) Second Final Flow 37 Mileage 128RTx2 396.80 Comments Loaded tools 5-27-14
 (G) Final Shut-In 1343 Sampler _____ @ 7:08am
 (H) Final Hydrostatic 2247 Straddle _____ Ruined Shale Packer _____

Initial Open 30 Shale Packer 250 Ruined Packer _____
 Initial Shut-In 30 Extra Packer _____ Extra Copies _____
 Final Flow 30 Extra Recorder _____ Sub Total 800
 Final Shut-In 30 Day Standby over 24 1d 4.75h Total 3021.80
 Accessibility _____ MP/DST Disc't _____
 Sub Total 2221.80

Approved By _____ Our Representative Cody Blal

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.