



## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays, KS 67601

ATTN: Marc Downing

### **CMSS Unit #1-20**

#### **20-20s-20w Pawnee,KS**

Start Date: 2011.11.17 @ 20:34:00

End Date: 2011.11.18 @ 03:40:00

Job Ticket #: 44672                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.11.22 @ 09:55:14



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Downing Nelson Oil Co. Inc

**20-20s-20w Pawnee, KS**

PO Box 1019  
Hays, KS 67601

**CMSS Unit #1-20**

Job Ticket: 44672

**DST#: 1**

ATTN: Marc Downing

Test Start: 2011.11.17 @ 20:34:00

## GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:46:30

Time Test Ended: 03:40:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Cody Bloedorn

Unit No: 54

**Interval: 4273.00 ft (KB) To 4313.00 ft (KB) (TVD)**

Reference Elevations: 2161.00 ft (KB)

Total Depth: 4313.00 ft (KB) (TVD)

2153.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8736 Outside**

Press @ Run Depth: 54.45 psig @ 4310.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.11.17

End Date:

2011.11.18

Last Calib.:

2011.11.18

Start Time: 20:34:05

End Time:

03:39:59

Time On Btm:

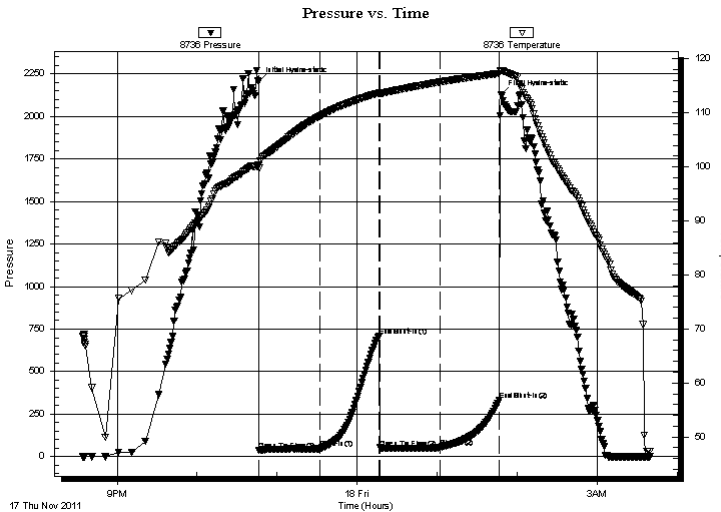
2011.11.17 @ 22:46:00

Time Off Btm:

2011.11.18 @ 01:48:00

**TEST COMMENT:** 45 - IF- 2" blow  
45 - IS- No blow back  
45 - FF- 1 1/2" blow  
45 - FS- No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2204.06	100.32	Initial Hydro-static
1	37.52	99.76	Open To Flow (1)
46	47.76	109.41	Shut-In(1)
91	706.24	113.68	End Shut-In(1)
91	51.28	113.57	Open To Flow (2)
136	54.45	115.69	Shut-In(2)
181	330.89	117.31	End Shut-In(2)
182	2130.52	117.86	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
40.00	VSOCM, 5%O, 95%M	0.28

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Downing Nelson Oil Co. Inc

**20-20s-20w Pawnee,KS**

PO Box 1019  
Hays, KS 67601

**CMSS Unit #1-20**

Job Ticket: 44672

**DST#: 1**

ATTN: Marc Downing

Test Start: 2011.11.17 @ 20:34:00

## Tool Information

Drill Pipe:	Length: 4226.00 ft	Diameter: 3.80 inches	Volume: 59.28 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: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 59.43 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4273.00 ft			Final 59000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	68.00 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			4246.00	
Shut In Tool	5.00			4251.00	
Hydraulic tool	5.00			4256.00	
Jars	5.00			4261.00	
Safety Joint	2.00			4263.00	
Packer	5.00			4268.00	28.00 Bottom Of Top Packer
Packer	5.00			4273.00	
Stubb	1.00			4274.00	
Perforations	2.00			4276.00	
Change Over Sub	1.00			4277.00	
Drill Pipe	31.00			4308.00	
Change Over Sub	1.00			4309.00	
Perforations	1.00			4310.00	
Recorder	0.00	8673	Inside	4310.00	
Recorder	0.00	8736	Outside	4310.00	
Bullnose	3.00			4313.00	40.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>68.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Downing Nelson Oil Co. Inc

**20-20s-20w Pawnee,KS**

PO Box 1019  
Hays, KS 67601

**CMSS Unit #1-20**

Job Ticket: 44672

**DST#: 1**

ATTN: Marc Downing

Test Start: 2011.11.17 @ 20:34:00

## 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: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.76 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4500.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
40.00	VSOCM, 5%O, 95%M	0.279

Total Length: 40.00 ft      Total Volume: 0.279 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

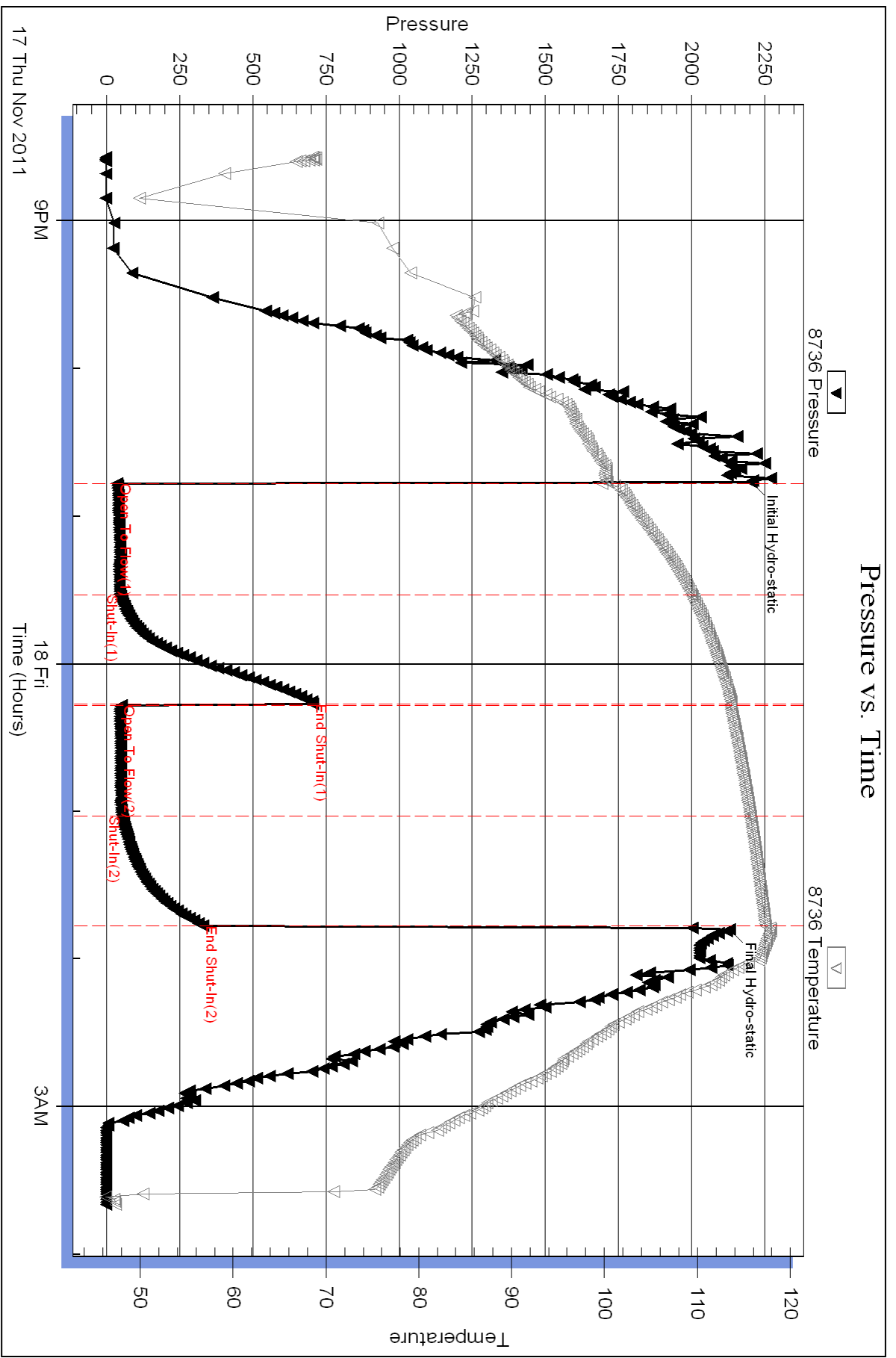
Recovery Comments:

Serial #: 8736

Outside Downing Nelson Oil Co. Inc

CMSS Unit #1-20

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 44672

Printed: 2011.11.22 @ 09:55:16

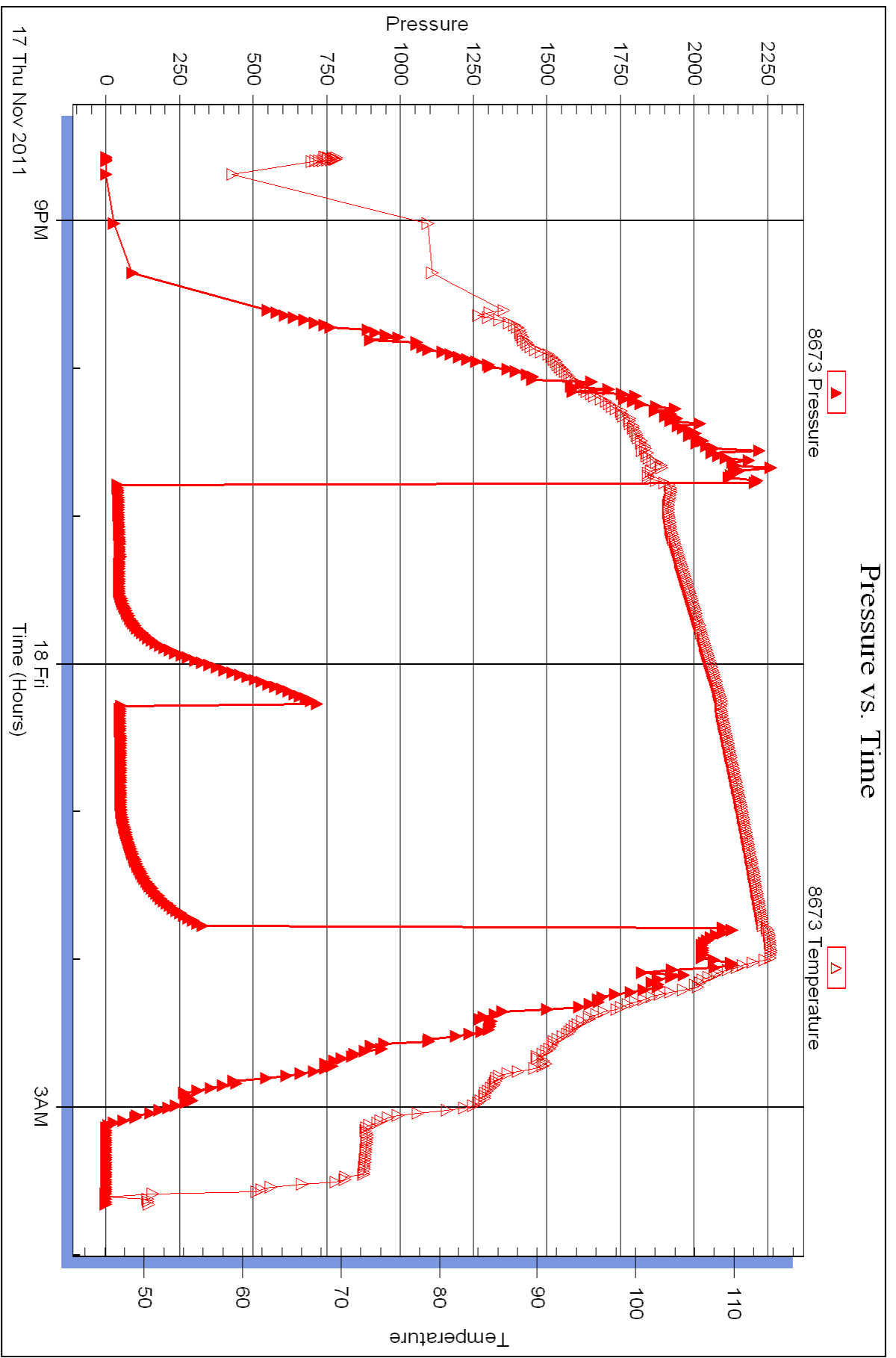
Serial #: 8673

Inside

Downing Nelson Oil Co. Inc

OWSS Unit #1-20

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 44672

Printed: 2011.11.22 @ 09:55:16



## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays, KS 67601

ATTN: Marc Downing

### **CMSS Unit #1-20**

### **20-20s-20w Pawnee,KS**

Start Date: 2011.11.18 @ 09:28:00

End Date: 2011.11.18 @ 14:54:00

Job Ticket #: 44673                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.11.22 @ 09:54:31





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Downing Nelson Oil Co. Inc

**20-20s-20w Pawnee, KS**

PO Box 1019  
Hays, KS 67601

**CMSS Unit #1-20**

ATTN: Marc Downing

Job Ticket: 44673

**DST#: 2**

Test Start: 2011.11.18 @ 09:28:00

## GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:16:00

Time Test Ended: 14:54:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 54

**Interval: 4312.00 ft (KB) To 4319.00 ft (KB) (TVD)**

Reference Elevations: 2161.00 ft (KB)

Total Depth: 4319.00 ft (KB) (TVD)

2153.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8736 Outside**

Press @ Run Depth: 28.98 psig @ 4316.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.11.18

End Date:

2011.11.18

Last Calib.:

2011.11.18

Start Time: 09:28:05

End Time:

14:53:59

Time On Btm:

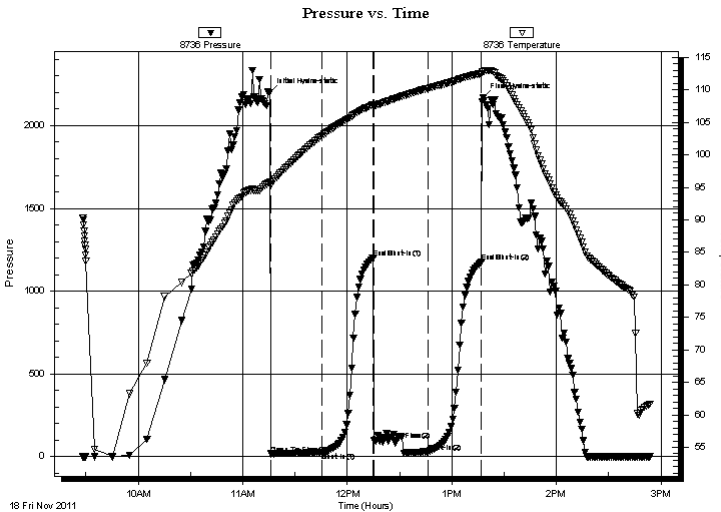
2011.11.18 @ 11:15:30

Time Off Btm:

2011.11.18 @ 13:18:00

**TEST COMMENT:** 30 - IF- 1/4" blow  
30 - IS- No blow back  
30 - FF- 1/8" blow  
30 - FS- No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2198.93	95.81	Initial Hydro-static
1	16.37	95.23	Open To Flow (1)
30	25.10	102.97	Shut-In(1)
60	1202.79	107.74	End Shut-In(1)
60	97.91	107.52	Open To Flow (2)
91	28.98	110.21	Shut-In(2)
122	1175.94	112.54	End Shut-In(2)
123	2167.21	112.85	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
35.00	VSOCM, 5%O, 95%M	0.21

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Downing Nelson Oil Co. Inc

**20-20s-20w Pawnee,KS**

PO Box 1019  
Hays, KS 67601

**CMSS Unit #1-20**

Job Ticket: 44673

**DST#: 2**

ATTN: Marc Downing

Test Start: 2011.11.18 @ 09:28:00

## Tool Information

Drill Pipe:	Length: 4258.00 ft	Diameter: 3.80 inches	Volume: 59.73 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: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 59.88 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4312.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	7.00 ft			
Tool Length:	35.00 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			4285.00	
Shut In Tool	5.00			4290.00	
Hydraulic tool	5.00			4295.00	
Jars	5.00			4300.00	
Safety Joint	2.00			4302.00	
Packer	5.00			4307.00	28.00 Bottom Of Top Packer
Packer	5.00			4312.00	
Stubb	1.00			4313.00	
Perforations	3.00			4316.00	
Recorder	0.00	8673	Inside	4316.00	
Recorder	0.00	8736	Outside	4316.00	
Bullnose	3.00			4319.00	7.00 Bottom Packers & Anchor

**Total Tool Length: 35.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Downing Nelson Oil Co. Inc

**20-20s-20w Pawnee,KS**

PO Box 1019  
Hays, KS 67601

**CMSS Unit #1-20**

Job Ticket: 44673

**DST#: 2**

ATTN: Marc Downing

Test Start: 2011.11.18 @ 09:28:00

## 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: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.76 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4500.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
35.00	VSOCM, 5%O, 95%M	0.209

Total Length: 35.00 ft      Total Volume: 0.209 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

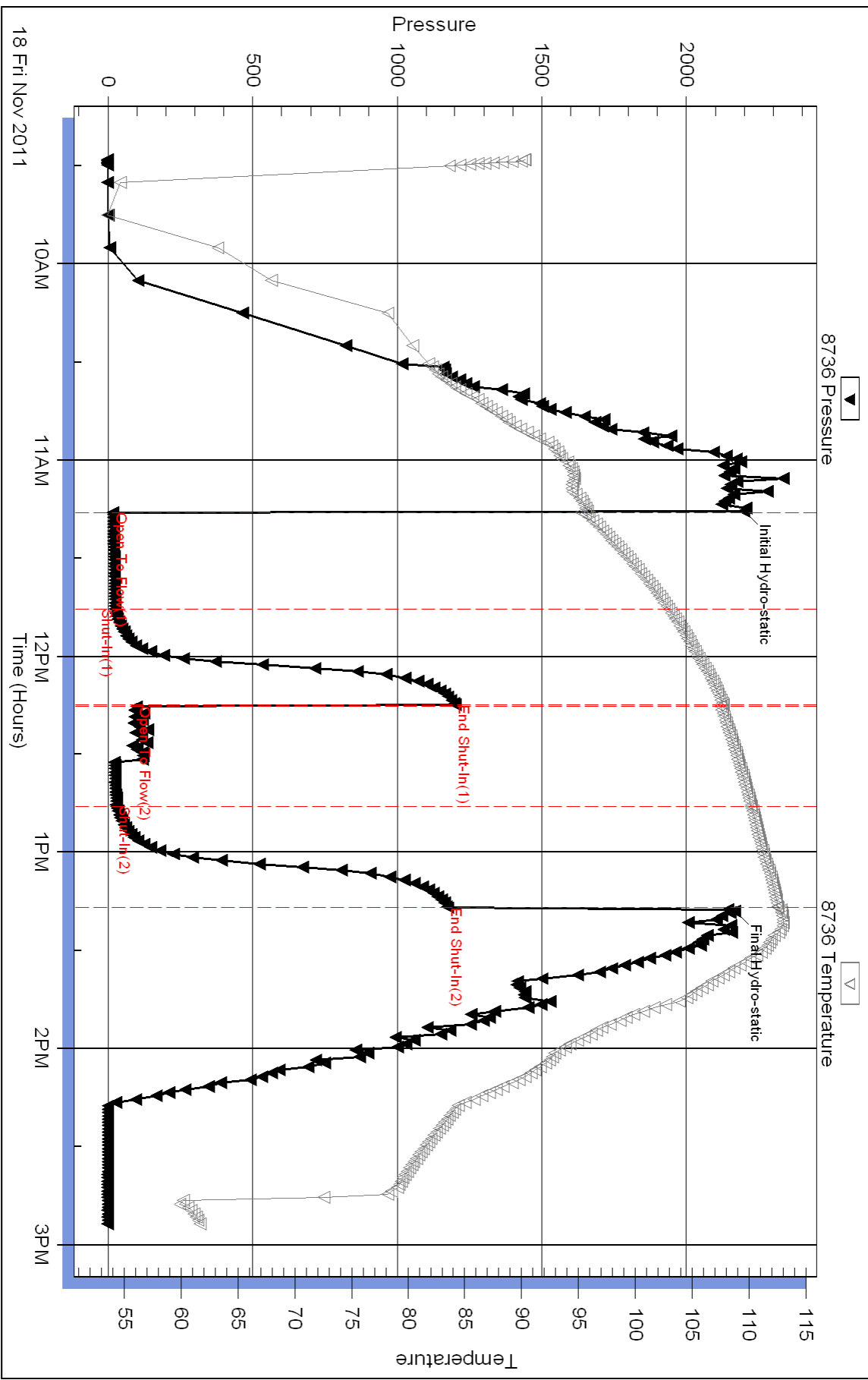
Serial #: 8736

Outside Downing Nelson Oil Co. Inc

CMSS Unit #1-20

DST Test Number: 2

### Pressure vs. Time



Serial #: 8673

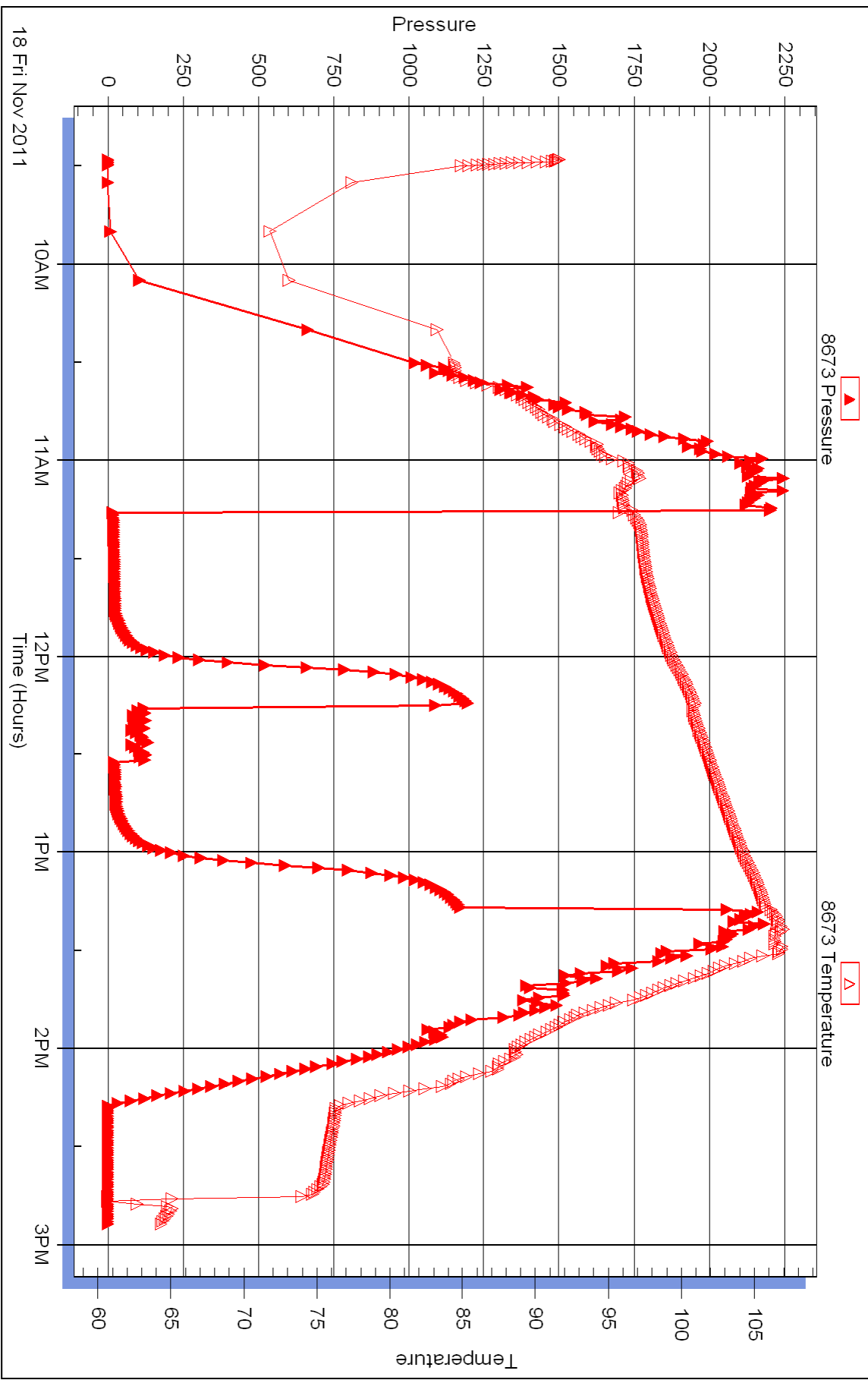
Inside

Downing Nelson Oil Co. Inc

CMSS Unit #1-20

DST Test Number: 2

### Pressure vs. Time



Triobite Testing, Inc

Ref. No: 44673

Printed: 2011.11.22 @ 09:54:34



## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays, KS 67601

ATTN: Marc Downing

### **CMSS Unit #1-20**

### **20-20s-20w Pawnee,KS**

Start Date: 2011.11.18 @ 22:11:00

End Date: 2011.11.19 @ 05:19:30

Job Ticket #: 44674                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.11.22 @ 09:53:54



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Downing Nelson Oil Co. Inc

**20-20s-20w Pawnee, KS**

PO Box 1019  
Hays, KS 67601

**CMSS Unit #1-20**

Job Ticket: 44674

**DST#: 3**

ATTN: Marc Downing

Test Start: 2011.11.18 @ 22:11:00

## GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:17:00

Time Test Ended: 05:19:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 54

**Interval: 4312.00 ft (KB) To 4326.00 ft (KB) (TVD)**

Reference Elevations: 2161.00 ft (KB)

Total Depth: 4326.00 ft (KB) (TVD)

2153.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8736 Outside**

Press @ Run Depth: 1605.56 psig @ 4323.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.11.18

End Date:

2011.11.19

Last Calib.:

2011.11.19

Start Time: 22:11:05

End Time:

05:19:29

Time On Btm:

2011.11.19 @ 00:16:00

Time Off Btm:

2011.11.19 @ 02:48:30

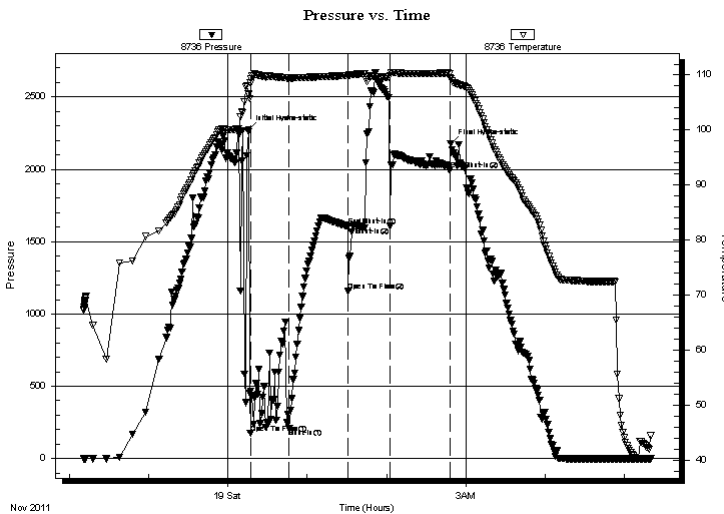
**TEST COMMENT:** 30 - IF- Slid 15' to btm, 6" blow, tool opened early 2 x's.

45 - IS- No blow back

30 - FF- Surge and died, w aited 15 Min, Flushed tool, surged and died

45 - FS- No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2274.04	106.46	Initial Hydro-static
1	176.23	108.51	Open To Flow (1)
31	211.37	109.42	Shut-In(1)
75	1606.42	109.94	End Shut-In(1)
75	1160.32	109.81	Open To Flow (2)
107	1605.56	109.96	Shut-In(2)
152	1994.78	109.58	End Shut-In(2)
153	2176.80	109.31	Final Hydro-static

## Recovery

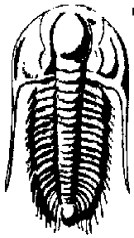
Length (ft)	Description	Volume (bbl)
293.00	Mud, 100%M	3.83

\* Recovery from multiple tests

## Gas Rates

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





# TRILOBITE TESTING, INC.

## DRILL STEM TEST REPORT

Downing Nelson Oil Co. Inc

**20-20s-20w Pawnee,KS**

PO Box 1019  
Hays, KS 67601

**CMSS Unit #1-20**

Job Ticket: 44674

**DST#: 3**

ATTN: Marc Downing

Test Start: 2011.11.18 @ 22:11:00

### GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:17:00

Time Test Ended: 05:19:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn

Unit No: 54

**Interval: 4312.00 ft (KB) To 4326.00 ft (KB) (TVD)**

Total Depth: 4326.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2161.00 ft (KB)

2153.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8673** Inside

Press@RunDepth: psig @ 4323.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.11.18

End Date: 2011.11.19

Last Calib.: 2011.11.19

Start Time: 22:11:02

End Time: 05:19:30

Time On Btm

Time Off Btm

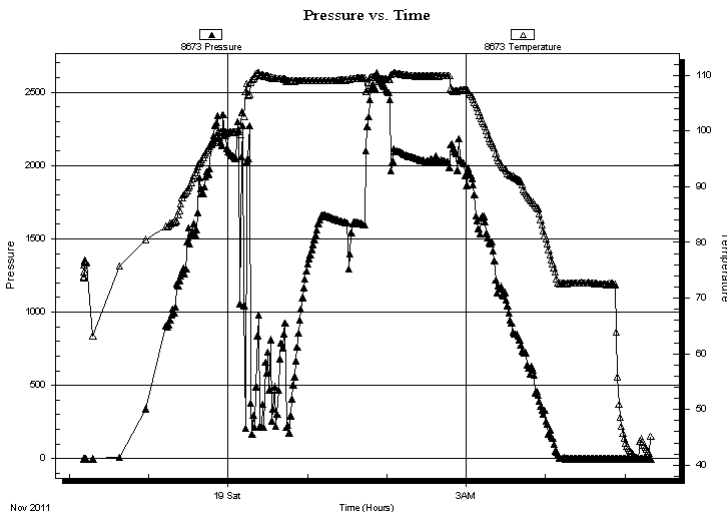
**TEST COMMENT:** 30 - IF- Slid 15' to btm, 6" blow, tool opened early 2 x's.

45 - IS- No blow back

30 - FF- Surge and died, w aited 15 Min, Flushed tool, surged and died

45 - FS- No blow back

### PRESSURE SUMMARY



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

### Recovery

Length (ft)	Description	Volume (bbl)
293.00	Mud, 100%M	3.83

### 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

**20-20s-20w Pawnee,KS**

PO Box 1019  
Hays, KS 67601

**CMSS Unit #1-20**

Job Ticket: 44674

**DST#: 3**

ATTN: Marc Downing

Test Start: 2011.11.18 @ 22:11:00

## Tool Information

Drill Pipe:	Length: 4258.00 ft	Diameter: 3.80 inches	Volume: 59.73 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: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 64000.00 lb
			<u>Total Volume: 59.88 bbl</u>	Tool Chased 15.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4312.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	14.00 ft			
Tool Length:	42.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Tool opened early and slid 15' to bottom, had to work tool up and down to get to bottom. Flushed tool and second open.

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4285.00	
Shut In Tool	5.00			4290.00	
Hydraulic tool	5.00			4295.00	
Jars	5.00			4300.00	
Safety Joint	2.00			4302.00	
Packer	5.00			4307.00	28.00 Bottom Of Top Packer
Packer	5.00			4312.00	
Stubb	1.00			4313.00	
Perforations	10.00			4323.00	
Recorder	0.00	8673	Inside	4323.00	
Recorder	0.00	8736	Outside	4323.00	
Bullnose	3.00			4326.00	14.00 Bottom Packers & Anchor

**Total Tool Length: 42.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Downing Nelson Oil Co. Inc

**20-20s-20w Pawnee,KS**

PO Box 1019  
Hays, KS 67601

**CMSS Unit #1-20**

Job Ticket: 44674

**DST#: 3**

ATTN: Marc Downing

Test Start: 2011.11.18 @ 22:11:00

## 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: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.76 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4500.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
293.00	Mud, 100%M	3.828

Total Length: 293.00 ft      Total Volume: 3.828 bbl

Num Fluid Samples: 0

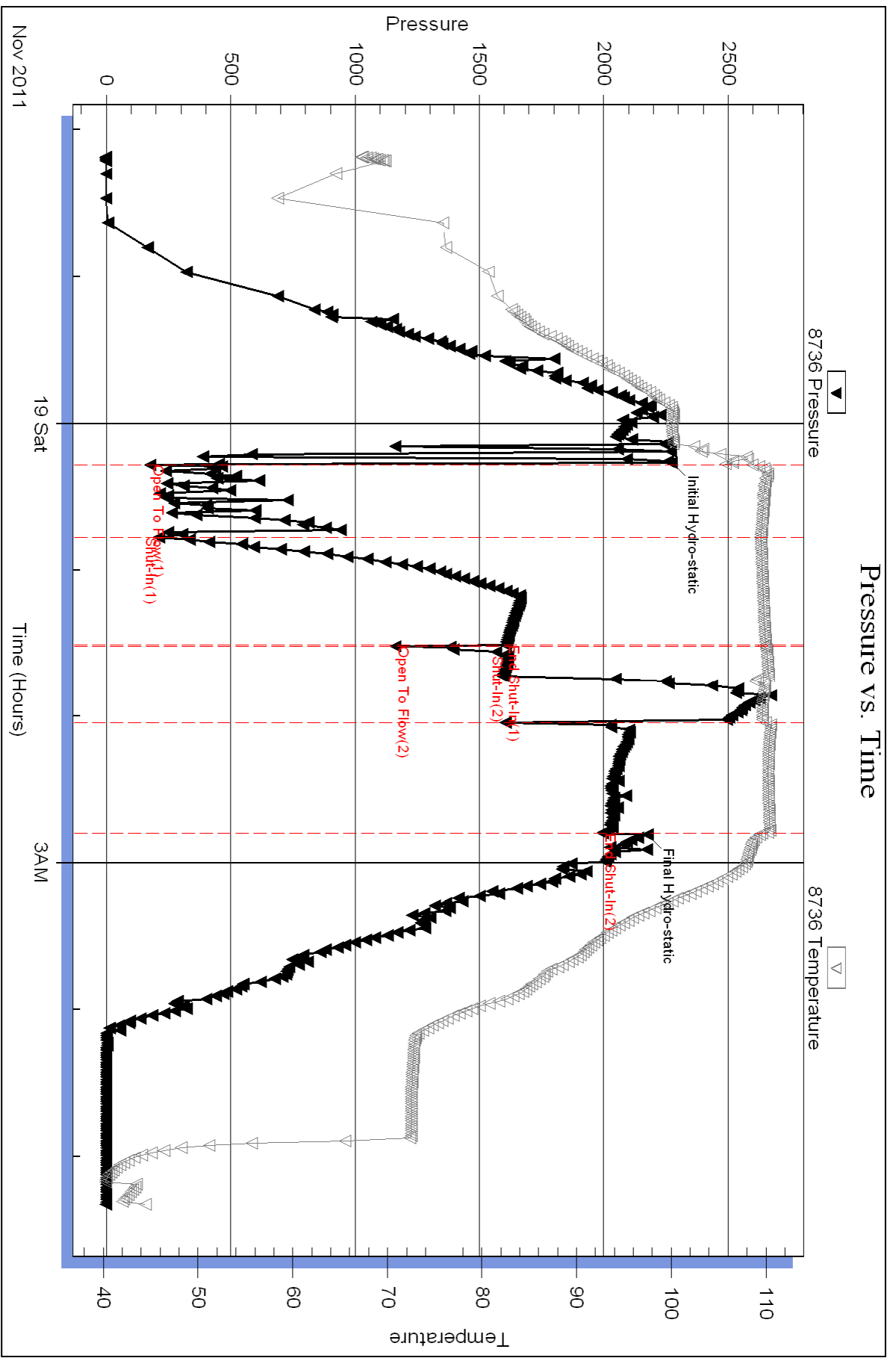
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



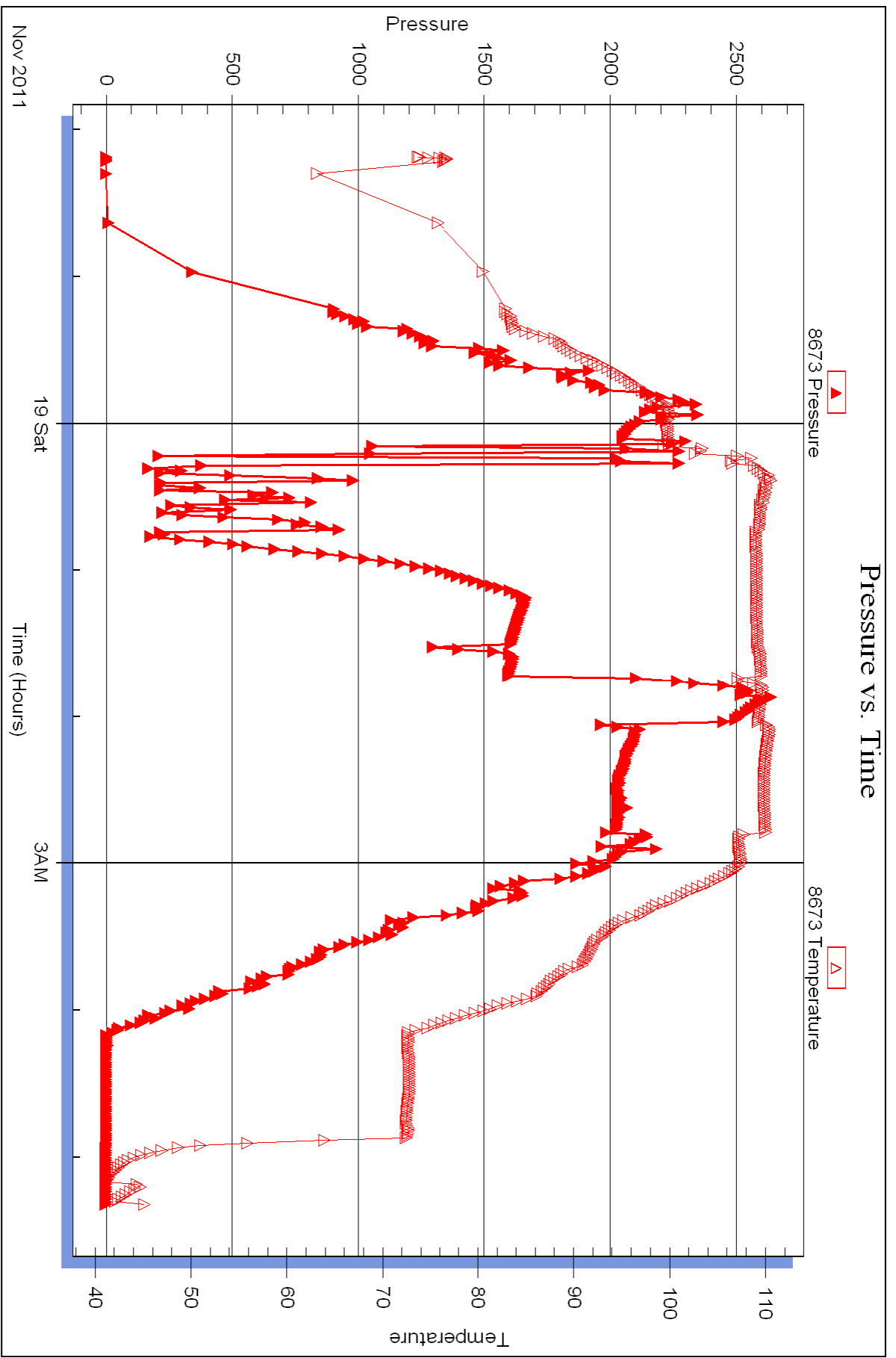
Serial #: 8673

Inside

Downing Nelson Oil Co. Inc

OWSS Unit #1-20

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 44674

Printed: 2011.11.22 @ 09:53:56



## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays, KS 67601

ATTN: Marc Downing

### **CMSS Unit #1-20**

### **20-20s-20w Pawnee,KS**

Start Date: 2011.11.19 @ 10:37:05

End Date: 2011.11.19 @ 16:49:35

Job Ticket #: 44690                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.11.22 @ 09:53:10



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Downing Nelson Oil Co. Inc

**20-20s-20w Pawnee, KS**

PO Box 1019  
Hays, KS 67601

**CMSS Unit #1-20**

Job Ticket: 44690

**DST#: 4**

ATTN: Marc Downing

Test Start: 2011.11.19 @ 10:37:05

## GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:57:20

Time Test Ended: 16:49:35

Test Type: Conventional Bottom Hole (Reset)

Tester: Jason McLemore

Unit No: 54

**Interval: 4313.00 ft (KB) To 4326.00 ft (KB) (TVD)**

Reference Elevations: 2161.00 ft (KB)

Total Depth: 4326.00 ft (KB) (TVD)

2153.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 8673**

**Inside**

Press @ Run Depth: 118.74 psig @ 4314.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.11.19 End Date: 2011.11.19

Last Calib.: 2011.11.22

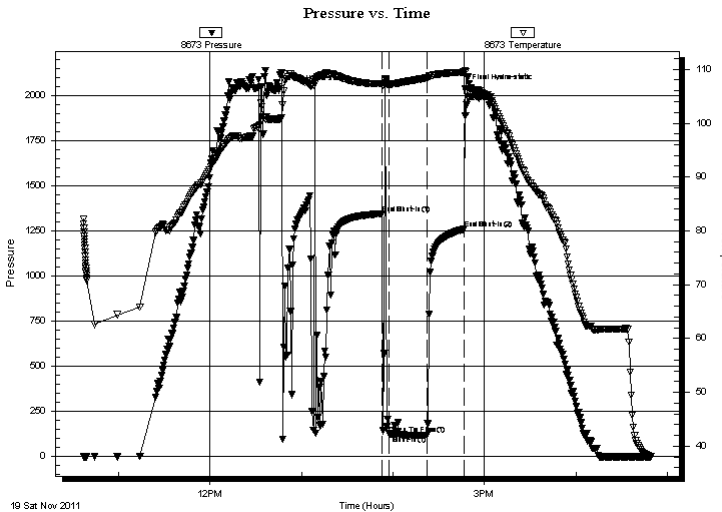
Start Time: 10:37:07 End Time: 16:49:35

Time On Btm: 2011.11.19 @ 12:45:05

Time Off Btm: 2011.11.19 @ 14:47:20

**TEST COMMENT:** IFP-20' Fill in Hble, Slid Tool, Plugging Action, Flush Tool  
ISI-Dead  
FFP-Dead, Flush Tool, Surface Blow, Lasted Throughout  
FSI-Dead

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2031.52	100.71	Initial Hydro-static
68	1344.97	107.27	End Shut-In(1)
73	126.91	107.21	Open To Flow (1)
98	118.74	108.41	Shut-In(1)
122	1259.97	109.47	End Shut-In(2)
123	2040.20	109.79	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	VSOCM-3%O-97%M	1.40
70.00	Drilling Mud	0.98

\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Downing Nelson Oil Co. Inc

**20-20s-20w Pawnee, KS**

PO Box 1019  
Hays, KS 67601

**CMSS Unit #1-20**

Job Ticket: 44690

**DST#: 4**

ATTN: Marc Downing

Test Start: 2011.11.19 @ 10:37:05

## Tool Information

Drill Pipe:	Length: 4258.00 ft	Diameter: 3.80 inches	Volume: 59.73 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: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 59.88 bbl</u>	Tool Chased 20.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4313.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	13.00 ft			
Tool Length:	41.00 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			4286.00	
Shut In Tool	5.00			4291.00	
Hydraulic tool	5.00			4296.00	
Jars	5.00			4301.00	
Safety Joint	2.00			4303.00	
Packer	5.00			4308.00	28.00 Bottom Of Top Packer
Packer	5.00			4313.00	
Stubb	1.00			4314.00	
Recorder	0.00	8673	Inside	4314.00	
Recorder	0.00	8736	Outside	4314.00	
Perforations	9.00			4323.00	
Bullnose	3.00			4326.00	13.00 Bottom Packers & Anchor

**Total Tool Length: 41.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Downing Nelson Oil Co. Inc

**20-20s-20w Pawnee,KS**

PO Box 1019  
Hays, KS 67601

**CMSS Unit #1-20**

Job Ticket: 44690

**DST#: 4**

ATTN: Marc Downing

Test Start: 2011.11.19 @ 10:37:05

## 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: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.57 in<sup>3</sup>

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 bbl
120.00	VSOCM-3%O-97%M	1.401
70.00	Drilling Mud	0.982

Total Length: 190.00 ft      Total Volume: 2.383 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

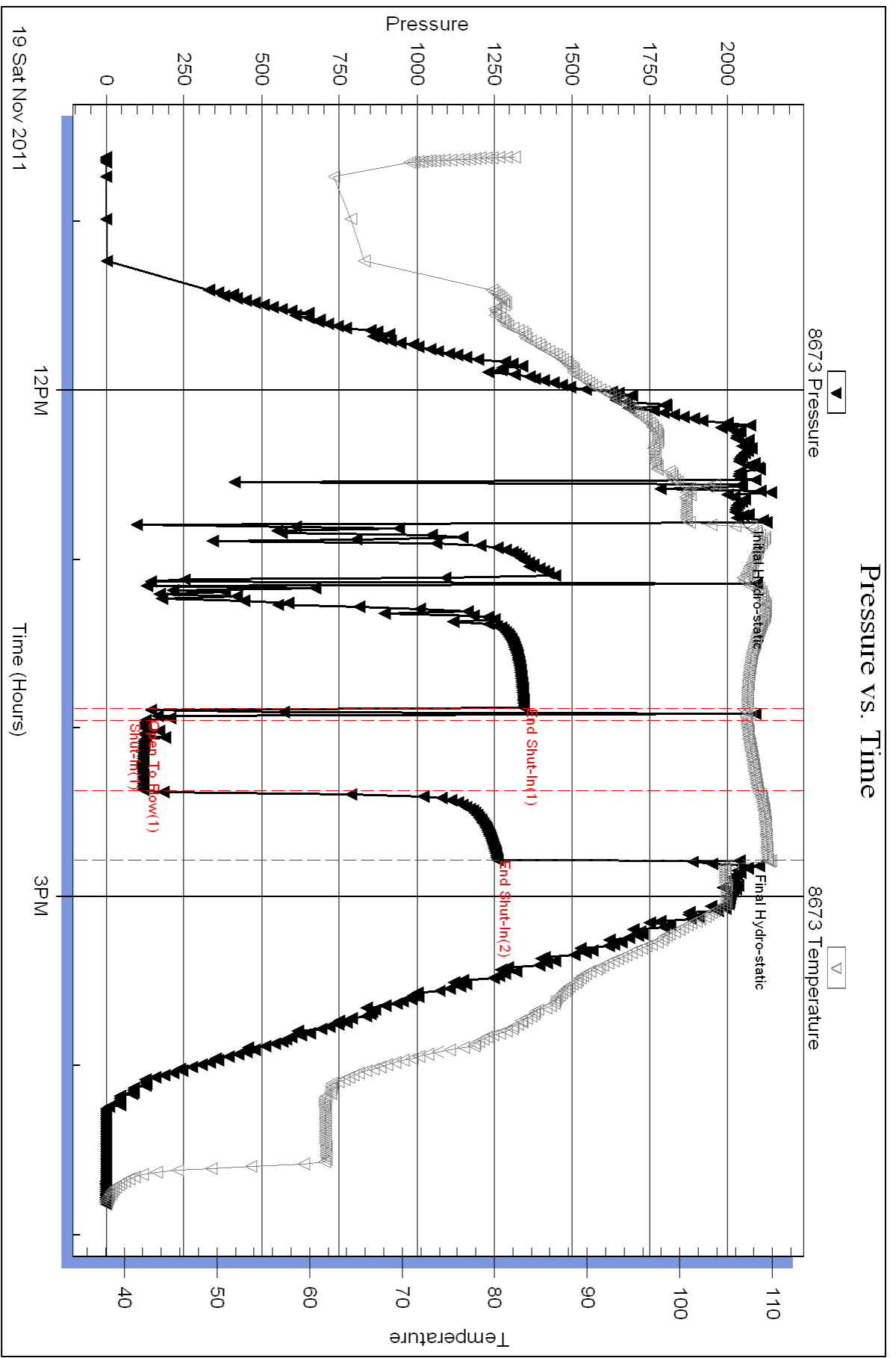
Serial #: 8673

Inside

Downing Nelson Oil Co. Inc

OWSS Unit #1-20

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 44690

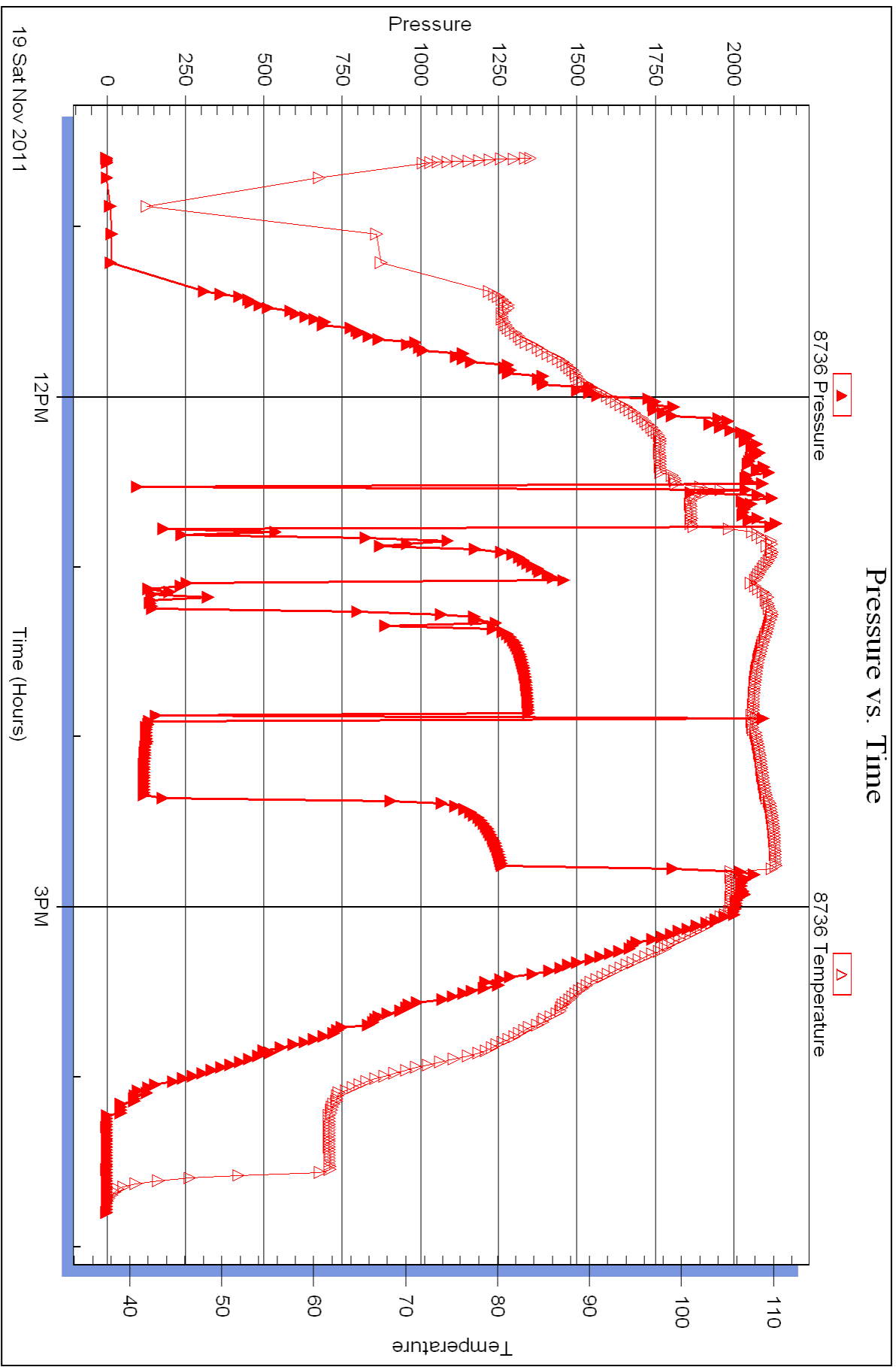
Printed: 2011.11.22 @ 09:53:12

Serial #: 8736

Outside Downing Nelson Oil Co. Inc

OWSS Unit #1-20

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 44690

Printed: 2011.11.22 @ 09:53:12



## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays, KS 67601

ATTN: Marc Downing

### **CMSS Unit #1-20**

### **20-20s-20w Pawnee,KS**

Start Date: 2011.11.20 @ 03:04:52

End Date: 2011.11.20 @ 10:37:52

Job Ticket #: 44691                      DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.11.22 @ 09:52:35



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Downing Nelson Oil Co. Inc

**20-20s-20w Pawnee, KS**

PO Box 1019  
Hays, KS 67601

**CMSS Unit #1-20**

Job Ticket: 44691

**DST#: 5**

ATTN: Marc Downing

Test Start: 2011.11.20 @ 03:04:52

## GENERAL INFORMATION:

Formation: **Mississippi-Osage**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:35:52

Time Test Ended: 10:37:52

Test Type: Conventional Bottom Hole (Reset)

Tester: Jason McLemore

Unit No: 54

**Interval: 4254.00 ft (KB) To 4331.00 ft (KB) (TVD)**

Reference Elevations: 2161.00 ft (KB)

Total Depth: 4331.00 ft (KB) (TVD)

2153.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 8673**

**Inside**

Press @ Run Depth: 152.89 psig @ 4323.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.11.20

End Date:

2011.11.20

Last Calib.: 2011.11.20

Start Time: 03:04:54

End Time:

10:37:52

Time On Btm: 2011.11.20 @ 05:17:22

Time Off Btm: 2011.11.20 @ 08:23:22

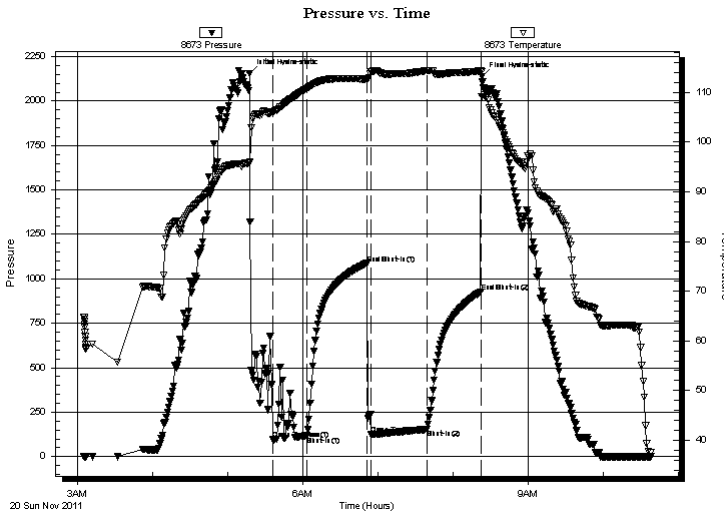
**TEST COMMENT:** IFP-Fair, Built to 9-1/2" With Plugging Action

ISI-Dead

FFP-Fair, Built to 9-1/2"

FSI-Dead

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2156.25	95.87	Initial Hydro-static
19	94.92	106.14	Open To Flow (1)
46	116.05	110.73	Shut-In(1)
94	1087.08	112.69	End Shut-In(1)
97	125.43	114.14	Open To Flow (2)
142	152.89	114.41	Shut-In(2)
185	927.91	114.34	End Shut-In(2)
186	2138.93	112.27	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
230.00	SOCM-10%O-90%M	2.94
0.00	60' Gas In Pipe	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**

Downing Nelson Oil Co. Inc

**20-20s-20w Pawnee,KS**

PO Box 1019  
Hays, KS 67601

**CMSS Unit #1-20**

Job Ticket: 44691

**DST#: 5**

ATTN: Marc Downing

Test Start: 2011.11.20 @ 03:04:52

## Tool Information

Drill Pipe:	Length: 4224.00 ft	Diameter: 3.80 inches	Volume: 59.25 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: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 59.40 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4254.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	77.00 ft			
Tool Length:	105.00 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			4227.00	
Shut In Tool	5.00			4232.00	
Hydraulic tool	5.00			4237.00	
Jars	5.00			4242.00	
Safety Joint	2.00			4244.00	
Packer	5.00			4249.00	28.00 Bottom Of Top Packer
Packer	5.00			4254.00	
Stubb	1.00			4255.00	
Perforations	3.00			4258.00	
Change Over Sub	1.00			4259.00	
Drill Pipe	63.00			4322.00	
Change Over Sub	1.00			4323.00	
Recorder	0.00	8673	Inside	4323.00	
Recorder	0.00	8736	Outside	4323.00	
Perforations	5.00			4328.00	
Bullnose	3.00			4331.00	77.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>105.00</b>				





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Downing Nelson Oil Co. Inc

**20-20s-20w Pawnee,KS**

PO Box 1019  
Hays, KS 67601

**CMSS Unit #1-20**

Job Ticket: 44691

**DST#: 5**

ATTN: Marc Downing

Test Start: 2011.11.20 @ 03:04:52

## 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: 92.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 11.97 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 12000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
230.00	SOCM-10%O-90%M	2.944
0.00	60' Gas In Pipe	0.000

Total Length: 230.00 ft      Total Volume: 2.944 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

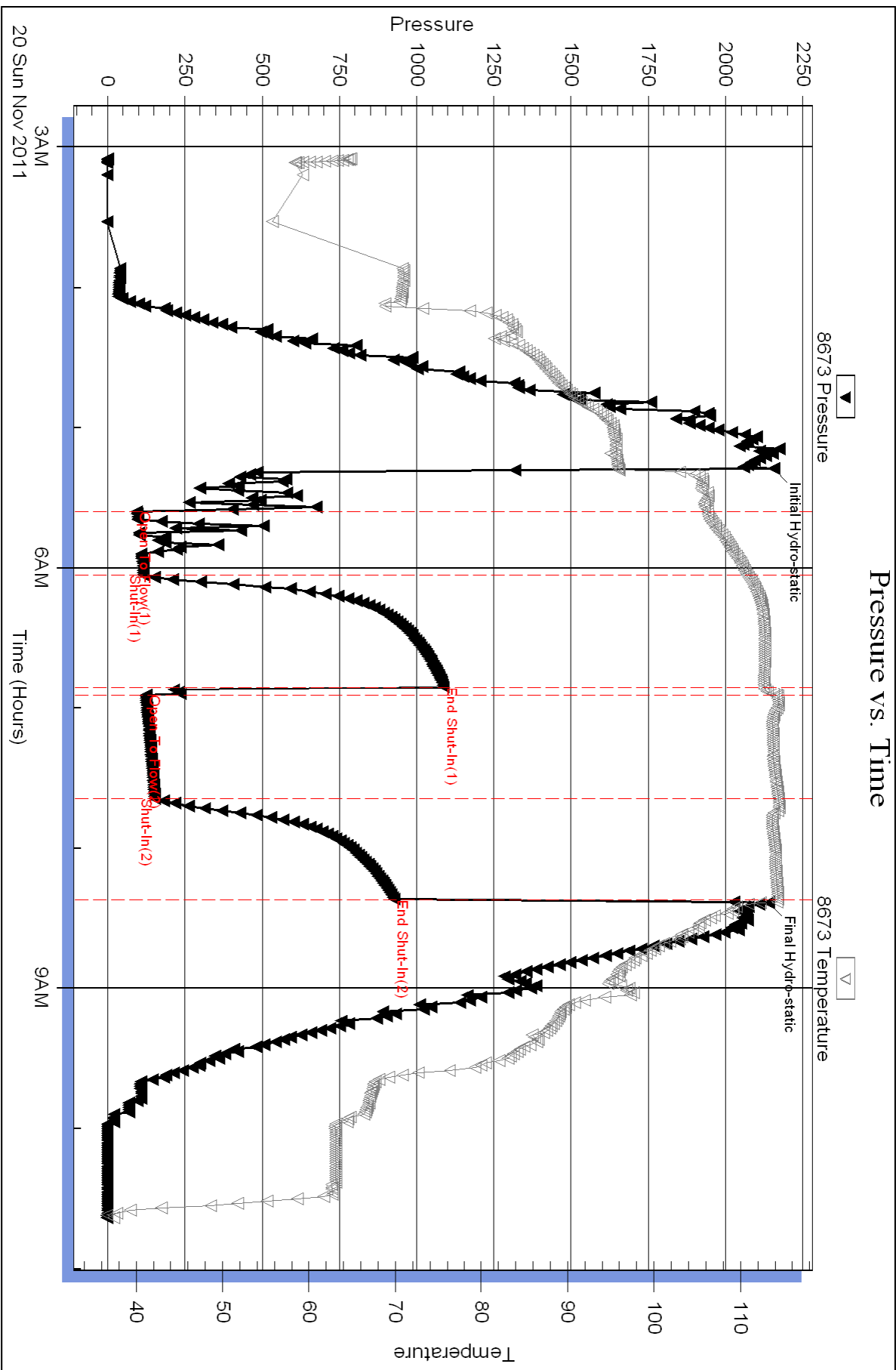
Serial #: 8673

Inside

Downing Nelson Oil Co. Inc

OWSS Unit #1-20

DST Test Number: 5

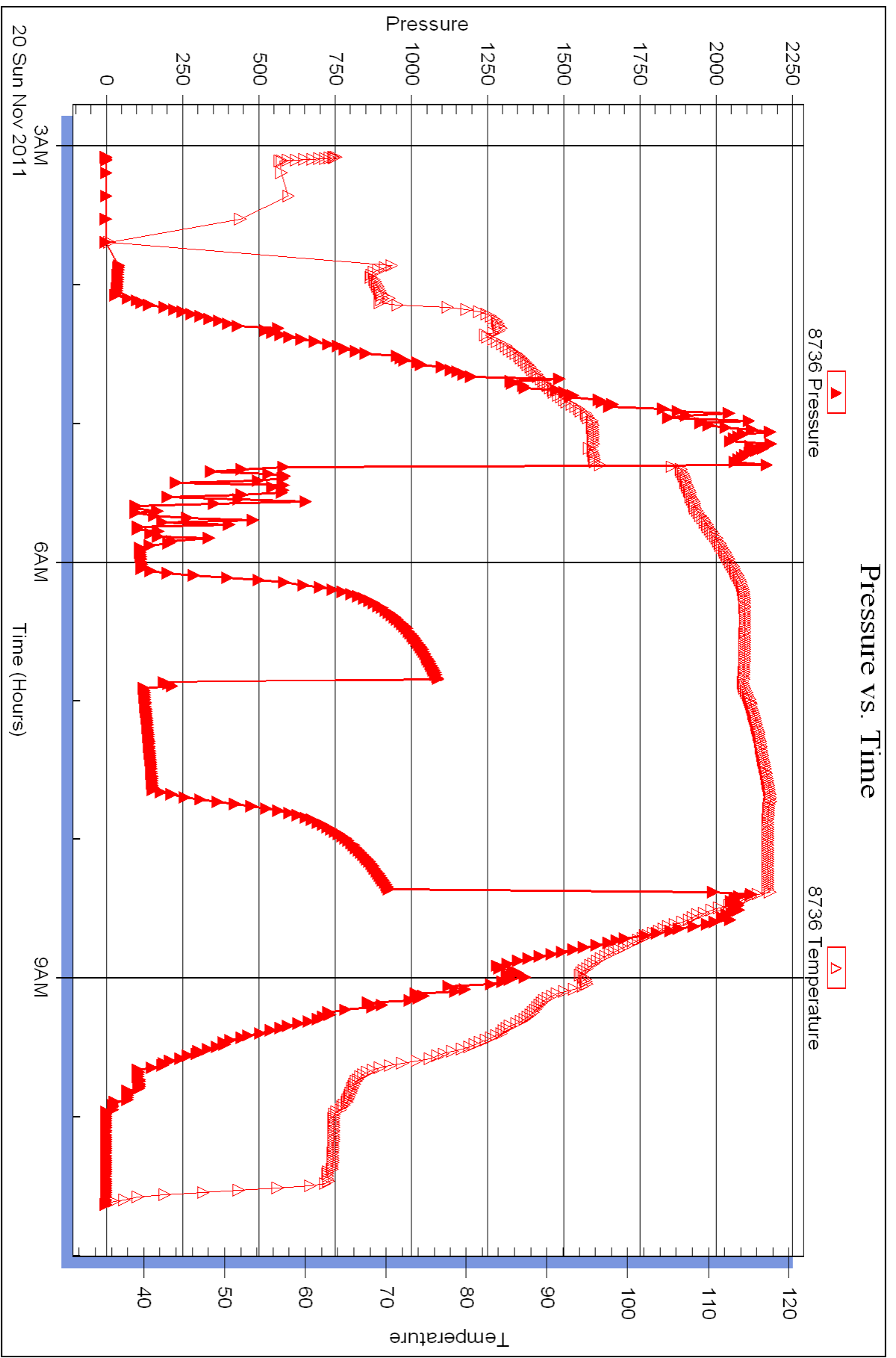


Serial #: 8736

Outside Downing Nelson Oil Co. Inc

CMSS Unit #1-20

DST Test Number: 5





## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays, KS 67601

ATTN: Marc Downing

### **CMSS Unit #1-20**

#### **20-20s-20w Pawnee,KS**

Start Date: 2011.11.20 @ 17:12:33

End Date: 2011.11.21 @ 02:08:48

Job Ticket #: 44692                      DST #: 6

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.11.22 @ 09:51:49



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Downing Nelson Oil Co. Inc

**20-20s-20w Pawnee, KS**

PO Box 1019  
Hays, KS 67601

**CMSS Unit #1-20**

Job Ticket: 44692

**DST#: 6**

ATTN: Marc Downing

Test Start: 2011.11.20 @ 17:12:33

## GENERAL INFORMATION:

Formation: **Mississippi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:16:03

Time Test Ended: 02:08:48

Test Type: Conventional Bottom Hole (Reset)

Tester: Jason McLemore

Unit No: 54

**Interval: 4328.00 ft (KB) To 4338.00 ft (KB) (TVD)**

Reference Elevations: 2161.00 ft (KB)

Total Depth: 4338.00 ft (KB) (TVD)

2153.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 8673**

**Inside**

Press @ Run Depth: 267.94 psig @ 4330.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.11.20

End Date:

2011.11.21

Last Calib.:

2011.11.21

Start Time: 17:12:35

End Time:

02:08:48

Time On Btm:

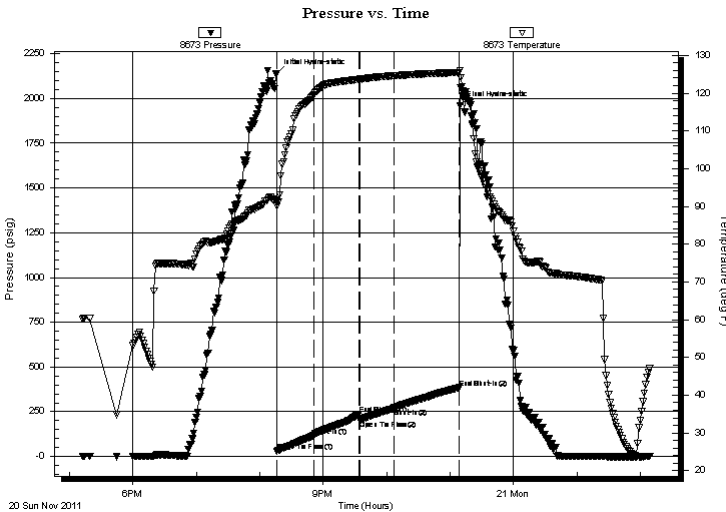
2011.11.20 @ 20:15:48

Time Off Btm:

2011.11.20 @ 23:09:18

**TEST COMMENT:** IFP-Good Blow, BOB in 6-1/2 Mn.  
ISI-Blow back BOB in 9 Mn.  
FFP-Good Blow, BOB in 8-1/2 Mn.  
FSI-Blow back BOB in 12 Mn.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2137.89	91.44	Initial Hydro-static
1	27.80	90.00	Open To Flow (1)
35	115.37	119.27	Shut-In(1)
79	236.46	123.67	End Shut-In(1)
79	204.86	123.64	Open To Flow (2)
111	267.94	124.60	Shut-In(2)
173	384.12	125.44	End Shut-In(2)
174	1958.55	126.01	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
90.00	Muddy Oil-75%O-25%M	0.98
840.00	Gassy Oil-20%G-80%O	11.78
0.00	870' Gas In Pipe	0.00

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Downing Nelson Oil Co. Inc

**20-20s-20w Pawnee, KS**

PO Box 1019  
Hays, KS 67601

**CMSS Unit #1-20**

Job Ticket: 44692

**DST#: 6**

ATTN: Marc Downing

Test Start: 2011.11.20 @ 17:12:33

## GENERAL INFORMATION:

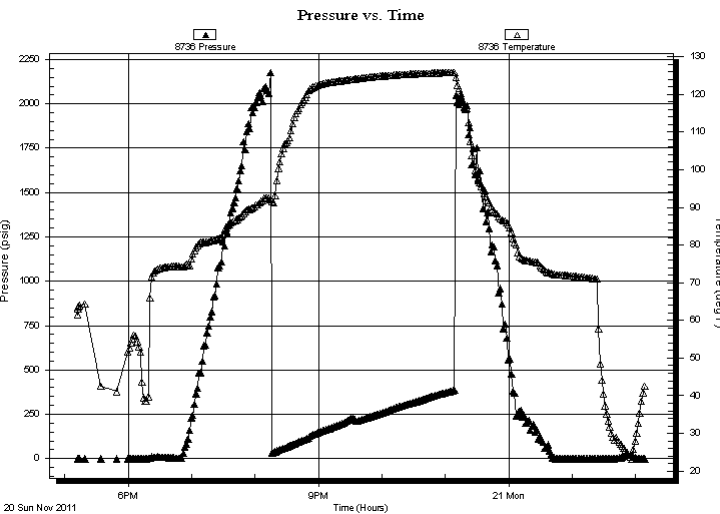
Formation: **Mississippi**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 20:16:03  
 Time Test Ended: 02:08:48  
 Interval: **4328.00 ft (KB) To 4338.00 ft (KB) (TVD)**  
 Total Depth: 4338.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Jason McLemore  
 Unit No: 54  
 Reference Elevations: 2161.00 ft (KB)  
 2153.00 ft (CF)  
 KB to GR/CF: 8.00 ft

## Serial #: 8736

**Outside**

Press @ Run Depth: psig @ 4330.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2011.11.20 End Date: 2011.11.21 Last Calib.: 2011.11.21  
 Start Time: 17:12:08 End Time: 02:08:33 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IFP-Good Blow, BOB in 6-1/2 Mn.  
 ISI-Blow back BOB in 9 Mn.  
 FFP-Good Blow, BOB in 8-1/2 Mn.  
 FSI-Blow back BOB in 12 Mn.



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
90.00	Muddy Oil-75%O-25%M	0.98
840.00	Gassy Oil-20%G-80%O	11.78
0.00	870' Gas In Pipe	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**

Downing Nelson Oil Co. Inc

**20-20s-20w Pawnee,KS**

PO Box 1019  
Hays, KS 67601

**CMSS Unit #1-20**

Job Ticket: 44692

**DST#: 6**

ATTN: Marc Downing

Test Start: 2011.11.20 @ 17:12:33

## Tool Information

Drill Pipe:	Length: 4287.00 ft	Diameter: 3.80 inches	Volume: 60.14 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: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 60.29 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4328.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	10.00 ft			
Tool Length:	38.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4301.00	
Shut In Tool	5.00			4306.00	
Hydraulic tool	5.00			4311.00	
Jars	5.00			4316.00	
Safety Joint	2.00			4318.00	
Packer	5.00			4323.00	28.00 Bottom Of Top Packer
Packer	5.00			4328.00	
Stubb	1.00			4329.00	
Perforations	1.00			4330.00	
Recorder	0.00	8673	Inside	4330.00	
Recorder	0.00	8736	Outside	4330.00	
Perforations	5.00			4335.00	
Bullnose	3.00			4338.00	10.00 Bottom Packers & Anchor

**Total Tool Length: 38.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Downing Nelson Oil Co. Inc

**20-20s-20w Pawnee,KS**

PO Box 1019  
Hays, KS 67601

**CMSS Unit #1-20**

Job Ticket: 44692

**DST#: 6**

ATTN: Marc Downing

Test Start: 2011.11.20 @ 17:12:33

## 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: 92.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 11.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 12000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
90.00	Muddy Oil-75%O-25%M	0.980
840.00	Gassy Oil-20%G-80%O	11.783
0.00	870' Gas In Pipe	0.000

Total Length: 930.00 ft

Total Volume: bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



Serial #: 8673

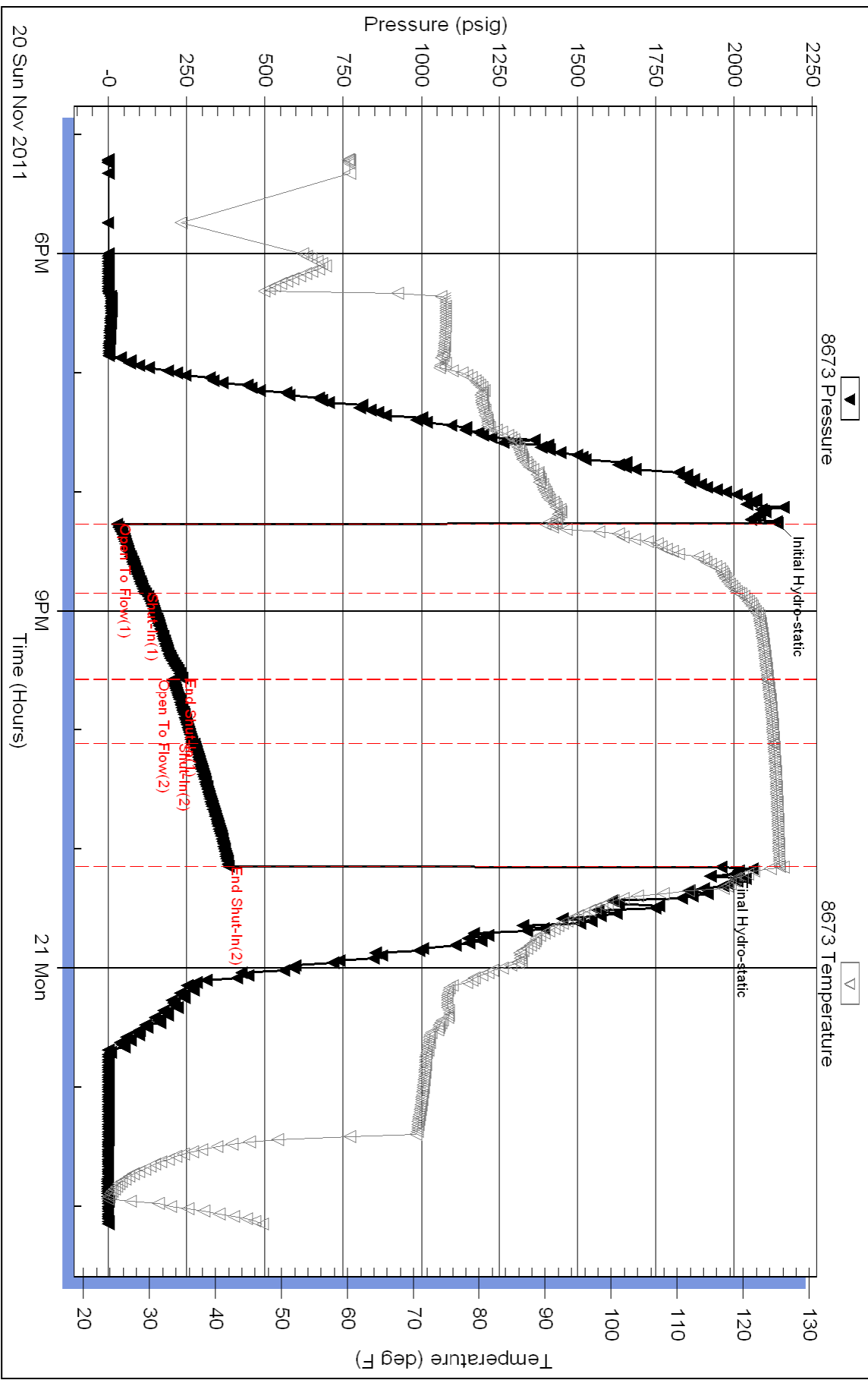
Inside

Downing Nelson Oil Co. Inc

OWSS Unit #1-20

DST Test Number: 6

### Pressure vs. Time



Triobite Testing, Inc

Ref. No: 44692

Printed: 2011.11.22 @ 09:51:51





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
NOV 21 2011  
BY: \_\_\_\_\_

## Test Ticket

NO. 44672

Well Name & No. CMSS Unit 1-20 Test No. 1 Date 11-17-11  
 Company Downing Nelson Oil Co INC, Elevation 2161 KB 2153 GL  
 Address Po Box 1019, Hays KS, 67601  
 Co. Rep / Geo. Mark Downing Rig Discovery #4  
 Location: Sec. 20 Twp. 20s Rge. 20w Co. Pawnee State KS

Interval Tested 4273-4313 Zone Tested Mississippi  
 Anchor Length 40' Drill Pipe Run 4226 Mud Wt. 9.2  
 Top Packer Depth 4308 Drill Collars Run 31 Vis 57  
 Bottom Packer Depth 4273 Wt. Pipe Run — WL 8.8  
 Total Depth 4313 Chlorides 4500 ppm System LCM —

Blow Description IF- 2" blow  
ISI- No blow back  
FF- 1 1/2" blow  
FSI- No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>VSOCM</u>	<u>5</u>	<u>—</u>	<u>95</u>	<u>—</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 40 BHT 117° Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2204</u>	<input checked="" type="checkbox"/> Test <u>1225'</u>	T-On Location <u>5:10 pm</u>
(B) First Initial Flow <u>37</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>8:34 pm</u>
(C) First Final Flow <u>47</u>	<input checked="" type="checkbox"/> Safety Joint <u>75'</u>	T-Open <u>10:46 pm</u>
(D) Initial Shut-In <u>706</u>	<input type="checkbox"/> Circ Sub <u>—</u>	T-Pulled <u>1:46 am</u>
(E) Second Initial Flow <u>51</u>	<input type="checkbox"/> Hourly Standby <u>2 hr 50'</u>	T-Out <u>3:40 am</u>
(F) Second Final Flow <u>54</u>	<input checked="" type="checkbox"/> Mileage <u>62X2 124RT 173.60</u>	Comments <u>—</u>
(G) Final Shut-In <u>330</u>	<input type="checkbox"/> Sampler <u>—</u>	<input type="checkbox"/> Ruined Shale Packer <u>—</u>
(H) Final Hydrostatic <u>2130</u>	<input type="checkbox"/> Straddle <u>—</u>	<input type="checkbox"/> Ruined Packer <u>—</u>

Initial Open 45  
 Initial Shut-In 45  
 Final Flow 45  
 Final Shut-In 45

Sub Total 1773.60  
 Total 1773.60  
 MP/DST Disc't —

Approved By \_\_\_\_\_ Our Representative Cody Bloodorn

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.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
NOV 21 2011

## Test Ticket

NO. 44673

Well Name & No. CMSS Unit 1-20 Test No. 2 Date 11-18-11  
 Company Downing Nelson Oil Co Inc, Elevation 2166 KB 2153 GL  
 Address Po Box 1019, Hays KS, 67601  
 Co. Rep / Geo. Mark Downing Rig Discovery #4  
 Location: Sec. 20 Twp. 20S Rge. 20W Co. Pawnee State KS

Interval Tested 4312-4319 Zone Tested Miss  
 Anchor Length 7' Drill Pipe Run 4258 Mud Wt. 9.2  
 Top Packer Depth 4307 Drill Collars Run 31 Vis 57  
 Bottom Packer Depth 4312 Wt. Pipe Run — WL 8.8  
 Total Depth 4319 Chlorides 4500 ppm System LCM —

Blow Description IF - 1/4" blow  
ISI - No blow back  
FF - 1/8" blow  
FSI - No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>35'</u>	<u>V SOCM</u>	<u>5</u>	<u>—</u>	<u>95</u>	<u>—</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 1120 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2198</u>	<input checked="" type="checkbox"/> Test <u>1225'</u>	T-On Location <u>8:05am</u>
(B) First Initial Flow <u>16</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>9:28am</u>
(C) First Final Flow <u>25</u>	<input checked="" type="checkbox"/> Safety Joint <u>75'</u>	T-Open <u>11:16am</u>
(D) Initial Shut-In <u>1202</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u><del>2:16pm</del> 1:16pm</u>
(E) Second Initial Flow <u>97</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>2:54pm</u>
(F) Second Final Flow <u>28</u>	<input type="checkbox"/> Mileage <u>124 RT 173.60</u>	Comments
(G) Final Shut-In <u>1175</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2167</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer

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

Shale Packer  
 Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility

Sub Total 1723.50

Sub Total 1723.60  
 MP/DST Disc't

Approved By \_\_\_\_\_ Our Representative Cody D. Boedorn

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.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
NOV 21 2011

## Test Ticket

NO. 44674

4/10

Well Name & No. CMSS unit 1-20 Test No. 3 Date 11-18-11  
 Company Downing Nelson Oil Co. INC. Elevation 2161 KB 2153 GL  
 Address Po Box 1019, Hays KS 67601  
 Co. Rep / Geo. Mark Downing Rig Discovery #4  
 Location: Sec. 20 Twp. 20s Rge. 20W Co. Pawnee State KS

Interval Tested 4312 - 4326 Zone Tested MISS  
 Anchor Length 14' Drill Pipe Run 4258 Mud Wt. 9.2  
 Top Packer Depth 4307 Drill Collars Run 31' Vis 57  
 Bottom Packer Depth 4312 Wt. Pipe Run — WL 8.8  
 Total Depth 4326 Chlorides 4500 ppm System LCM —

Blow Description IF - slid 15' to btm, 6" blow, Tool opened early 2xs  
IST - No blow back  
FF - surged & died, flushed tool, surged & died  
FSI - No blow back.

Rec	Feet of	%gas	%oil	%water	%mud
<u>293'</u>	<u>Mud</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 Total 293' BHT 1090 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2274</u>	<input checked="" type="checkbox"/> Test <u>1225</u>	T-On Location <u>8:20 pm</u>
(B) First Initial Flow <u>148</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>10:11 pm</u>
(C) First Final Flow <u>211</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>12:16 am</u>
(D) Initial Shut-In <u>1606</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>2:46 am</u>
(E) Second Initial Flow <u>1160</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>5:20 am</u>
(F) Second Final Flow <u>1605</u>	<input checked="" type="checkbox"/> Mileage <u>62X2 173.60</u>	Comments
(G) Final Shut-In <u>1994</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2176</u>	<input type="checkbox"/> Straddle	

Initial Open 30  
 Initial Shut-In 45  
 Final Flow 30  
 Final Shut-In 45

Shale Packer  
 Ruined Shale Packer  
 Ruined Packer  
 Extra Packer  
 Extra Copies  
 Extra Recorder  
 Day Standby  
 Accessibility  
 Sub Total 1723.60

Sub Total 1723.60

Approved By \_\_\_\_\_ Our Representative Cody B Holcomb

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.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 44690

RECEIVED  
NOV 21 2011

Well Name & No. CMSS Unit #1-20 BY: \_\_\_\_\_ Test No. 4 Date 11-19-11  
 Company Downing Nelson Oil Inc. Elevation 2176 KB 2168 GL \_\_\_\_\_  
 Address PO Box 1019, Hays, KS. 67601  
 Co. Rep / Geo. Marc Downing Rig Discovery #4  
 Location: Sec. 20 Twp. 20s Rge. 20w Co. Pawnee State KS

Interval Tested 4313-4326 Zone Tested Mississippi  
 Anchor Length 13' Drill Pipe Run \_\_\_\_\_ Mud Wt. 9.2  
 Top Packer Depth 4308 Drill Collars Run 30 Vis 49  
 Bottom Packer Depth 4313 Wt. Pipe Run 0 WL 9.6  
 Total Depth 4326 Chlorides 3,000 ppm System \_\_\_\_\_ LCM 1 1/2 #  
 Blow Description FIP-20' Fill, Plugging Action, Flush Tool  
ISI-Dead

FIP-Dead, Flush Tool, Surface Blow, lasted throughout  
FSI-Dead

Rec	Feet of	%gas	%oil	%water	%mud
<u>70</u>	<u>Drilling Mud</u>				
<u>120</u>	<u>VSOCM</u>		<u>3</u>		<u>97</u>
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____

Rec Total 190 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

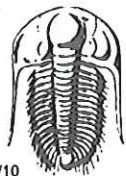
(A) Initial Hydrostatic 2032  Test 1225 T-On Location 10:11  
 (B) First Initial Flow \_\_\_\_\_  Jars 250 T-Started 10:35  
 (C) First Final Flow \_\_\_\_\_  Safety Joint 75 T-Open 12:42  
 (D) Initial Shut-In 1345  Circ Sub \_\_\_\_\_ T-Pulled 14:42  
 (E) Second Initial Flow \_\_\_\_\_  Hourly Standby \_\_\_\_\_ T-Out 16:50  
 (F) Second Final Flow 119  Mileage 124 rt 173 LpD Comments \_\_\_\_\_  
 (G) Final Shut-In 1260  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic \_\_\_\_\_  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 8  
 Day Standby \_\_\_\_\_ Total 1723.60  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1723.60

Approved By \_\_\_\_\_ Our Representative Jason Mc Lemore

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.

Thank You





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
NOV 21 2011  
BY: \_\_\_\_\_

## Test Ticket

NO. 44691

Well Name & No. CMSS unit #1-20 Test No. 5 Date 11-20-11  
 Company Downing Nelson Oil Company, Inc. Elevation 2176 KB 2168 GL  
 Address PO Box 1019, Hays, KS. 67601  
 Co. Rep / Geo. Marc Downing Rig Discovery #4  
 Location: Sec. 20 Twp. 20s Rge. 20w Co. Pawnee State Ks

Interval Tested 4254-4331 Zone Tested Mississippi  
 Anchor Length 77 Drill Pipe Run 4224 Mud Wt. 9.2  
 Top Packer Depth 4249 Drill Collars Run 31 Vis 92  
 Bottom Packer Depth 4254 Wt. Pipe Run 0 WL 12.0  
 Total Depth 4331 Chlorides 12,000 ppm System LCM  
 Blow Description I FP - Fair Blow, Built to 9 1/2"  
ISI - Dead  
FIP - Fair Blow, Built to 9 1/2"  
FSI - Dead

Rec	Feet of	%gas	%oil	%water	%mud
<u>230</u>	<u>SOCM</u>	<u>10</u>		<u>90</u>	
Rec	Feet of <u>60' GIP</u>	%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 230 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2156  Test 1225' T-On Location 2:28  
 (B) First Initial Flow 95  Jars 250' T-Started 3:02  
 (C) First Final Flow 116  Safety Joint 75' T-Open 5:12  
 (D) Initial Shut-In 1087  Circ Sub \_\_\_\_\_ T-Pulled 8:12  
 (E) Second Initial Flow 125  Hourly Standby \_\_\_\_\_ T-Out 10:36  
 (F) Second Final Flow 153  Mileage 124 RP 173.60 Comments \_\_\_\_\_  
 (G) Final Shut-In 928  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2139  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1723.60  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1723.60

Approved By \_\_\_\_\_ Our Representative Garon Proctor Thank you

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.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 44692

Well Name & No. CMSS Unit #1-20 Test No. 6 Date 11-21-11  
 Company Downing Nelson Oil Company, Inc. Elevation 2176 KB 2168 GL  
 Address PO Box 1019, Hays, KS. 67601  
 Co. Rep / Geo. Marc Downing Rig Discovery #4  
 Location: Sec. 20 Twp. 20s Rge. 20w Co. Pawnee State KS

Interval Tested 4328-4338 Zone Tested Mississippi - Osage  
 Anchor Length 10' Drill Pipe Run 4288 Mud Wt. 9.2  
 Top Packer Depth 4323 Drill Collars Run 31 Vis 92  
 Bottom Packer Depth 4328 Wt. Pipe Run 0 WL 12.0  
 Total Depth 4338 Chlorides 12,000 ppm System LCM

Blow Description IFP - Good Blow, BOB in 6 1/2 min.  
ISI - Blowback BOB in 9 min.  
FFP - Good Blow, BOB in 8 1/2 min.  
FSI - Blowback BOB in 12 min.

Rec	Feet of	%gas	%oil	%water	%mud
<u>840</u>	<u>Gassy oil</u>	<u>20</u>	<u>80</u>		
<u>90</u>	<u>Muddy oil</u>		<u>75</u>		<u>25</u>
	<u>890' GIP</u>				

Rec Total 930 BHT 125° Gravity 35 API RW @ °F Chlorides ppm

(A) Initial Hydrostatic	<u>2138</u>	<input checked="" type="checkbox"/> Test	<u>1225'</u>	T-On Location	<u>17:02</u>
(B) First Initial Flow	<u>28</u>	<input checked="" type="checkbox"/> Jars	<u>250'</u>	T-Started	<u>17:10</u>
(C) First Final Flow	<u>115</u>	<input checked="" type="checkbox"/> Safety Joint	<u>75'</u>	T-Open	<u>20:10</u>
(D) Initial Shut-In	<u>236</u>	<input type="checkbox"/> Circ Sub		T-Pulled	<u>22:55</u>
(E) Second Initial Flow	<u>205</u>	<input type="checkbox"/> Hourly Standby		T-Out	<u>2:06</u>
(F) Second Final Flow	<u>268</u>	<input checked="" type="checkbox"/> Mileage	<u>124 RT 173.60</u>	Comments	
(G) Final Shut-In	<u>384</u>	<input type="checkbox"/> Sampler			
(H) Final Hydrostatic	<u>1959</u>	<input type="checkbox"/> Straddle		<input type="checkbox"/> Ruined Shale Packer	

Initial Open	<u>30</u>	<input type="checkbox"/> Extra Packer		<input type="checkbox"/> Extra Copies	
Initial Shut-In	<u>45</u>	<input type="checkbox"/> Extra Recorder		Sub Total	<u>0</u>
Final Flow	<u>30</u>	<input type="checkbox"/> Day Standby		Total	<u>1723.60</u>
Final Shut-In	<u>45 60</u>	<input type="checkbox"/> Accessibility		MP/DST Disc't	
		Sub Total	<u>1723.60</u>		

Approved By \_\_\_\_\_ Our Representative Jason Mc Lamon

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.

Thank you!