



## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays, KS 67601

ATTN: Al Downing

### **K-M Unit #1-20**

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

Start Date: 2014.04.29 @ 21:55:43

End Date: 2014.04.30 @ 04:10:43

Job Ticket #: 56341                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.05.03 @ 10:22:18



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Dow ning Nelson Oil Co.

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

PO Box 1019  
Hays, KS 67601

**K-M Unit #1-20**

Job Ticket: 56341

**DST#: 1**

ATTN: Al Dow ning

Test Start: 2014.04.29 @ 21:55:43

## GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:58:13

Time Test Ended: 04:10:43

Test Type: Conventional Bottom Hole (Initial)

Tester: Shane McBride

Unit No: 55

**Interval: 4278.00 ft (KB) To 4348.00 ft (KB) (TVD)**

Reference Elevations: 2204.00 ft (KB)

Total Depth: 4348.00 ft (KB) (TVD)

2196.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 6771 Inside**

Press@RunDepth: 34.36 psig @ 4279.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.29

End Date:

2014.04.30

Last Calib.: 2014.04.30

Start Time: 21:55:43

End Time:

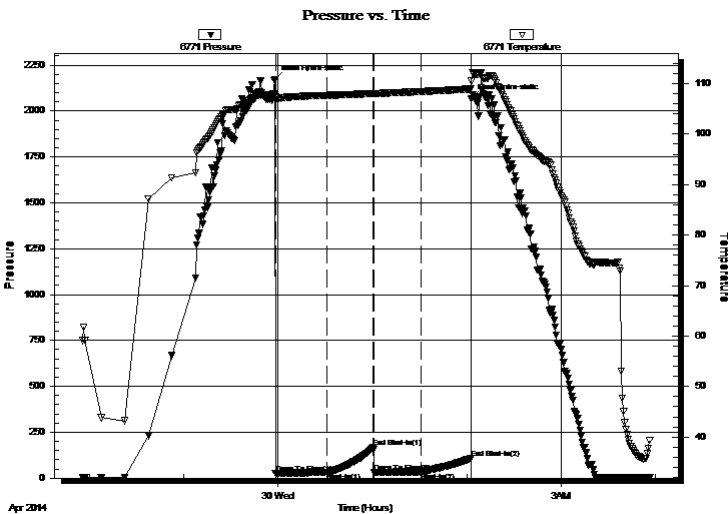
03:56:43

Time On Btm: 2014.04.29 @ 23:57:58

Time Off Btm: 2014.04.30 @ 02:02:58

TEST COMMENT: 1" blow  
No return  
Bubble to open tool , no blow  
No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2170.89	108.00	Initial Hydro-static
1	24.88	107.28	Open To Flow (1)
34	30.43	107.67	Shut-In(1)
63	166.67	108.05	End Shut-In(1)
63	32.42	108.02	Open To Flow (2)
93	34.36	108.42	Shut-In(2)
125	108.52	108.95	End Shut-In(2)
125	2067.09	110.52	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	mud 100% m	0.07

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning Nelson Oil Co.

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

PO Box 1019  
Hays, KS 67601

**K-M Unit #1-20**

Job Ticket: 56341

**DST#: 1**

ATTN: Al Dow ning

Test Start: 2014.04.29 @ 21:55:43

## Tool Information

Drill Pipe:	Length: 4250.00 ft	Diameter: 3.80 inches	Volume: 59.62 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	65000.00 lb
			<u>Total Volume: 59.77 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	61000.00 lb
Depth to Top Packer:	4278.00 ft			Final	61000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	70.00 ft				
Tool Length:	98.00 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			4251.00	
Shut In Tool	5.00			4256.00	
Hydraulic tool	5.00			4261.00	
Jars	5.00			4266.00	
Safety Joint	3.00			4269.00	
Packer	5.00			4274.00	28.00 Bottom Of Top Packer
Packer	4.00			4278.00	
Stubb	1.00			4279.00	
Recorder	0.00	6771	Inside	4279.00	
Recorder	0.00	8844	Outside	4279.00	
Perforations	31.00			4310.00	
Change Over Sub	1.00			4311.00	
Drill Pipe	31.00			4342.00	
Change Over Sub	1.00			4343.00	
Bullnose	5.00			4348.00	70.00 Bottom Packers & Anchor

**Total Tool Length: 98.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Dow ning Nelson Oil Co.

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

PO Box 1019  
Hays, KS 67601

**K-M Unit #1-20**

Job Ticket: 56341

**DST#: 1**

ATTN: Al Dow ning

Test Start: 2014.04.29 @ 21:55:43

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.12 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3600.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	mud 100%m	0.074

Total Length: 15.00 ft      Total Volume: 0.074 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

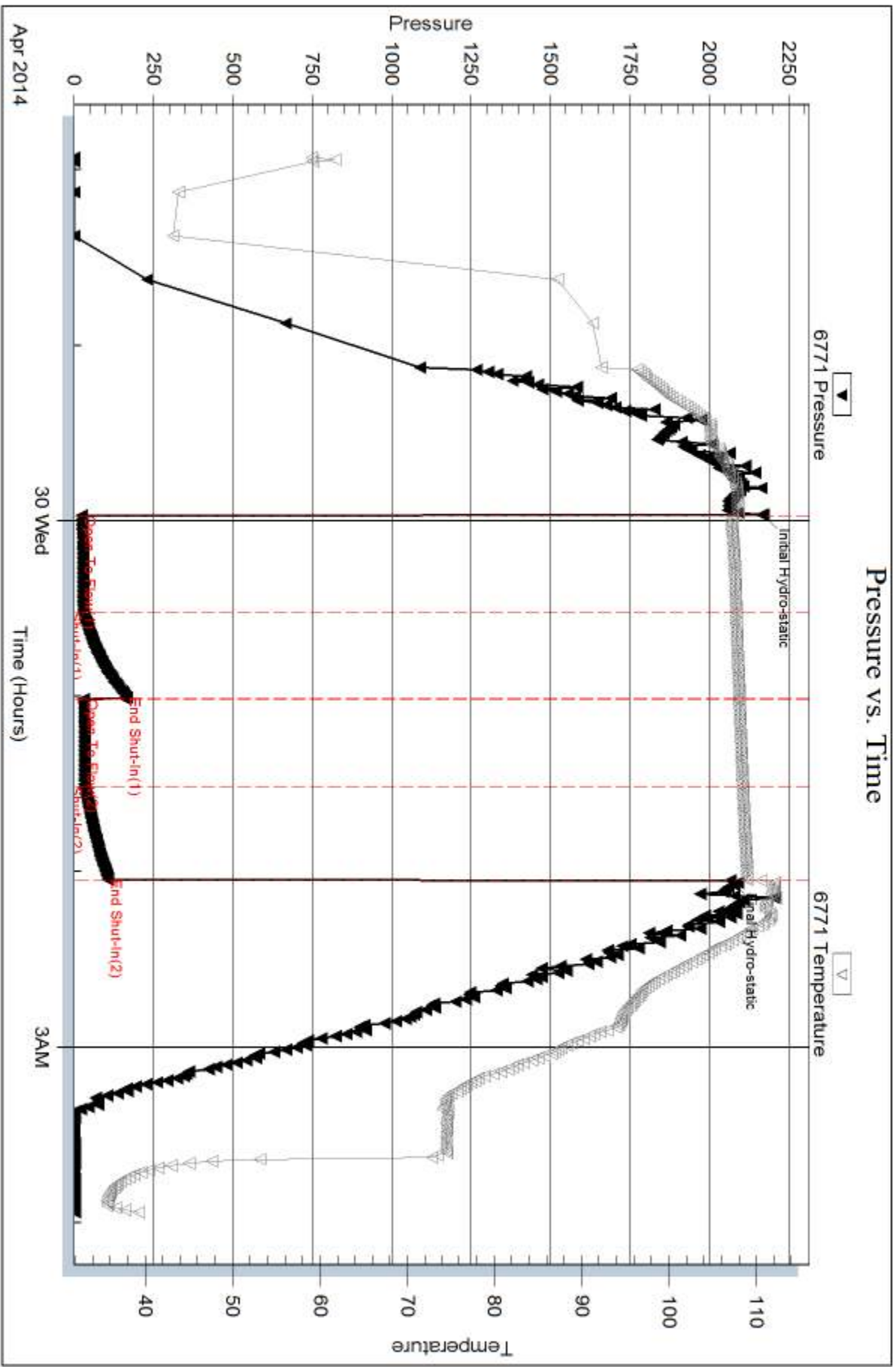
Serial #: 6771

Inside

Downing Nelson Oil Co.

K-M Unit #1-20

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 56341

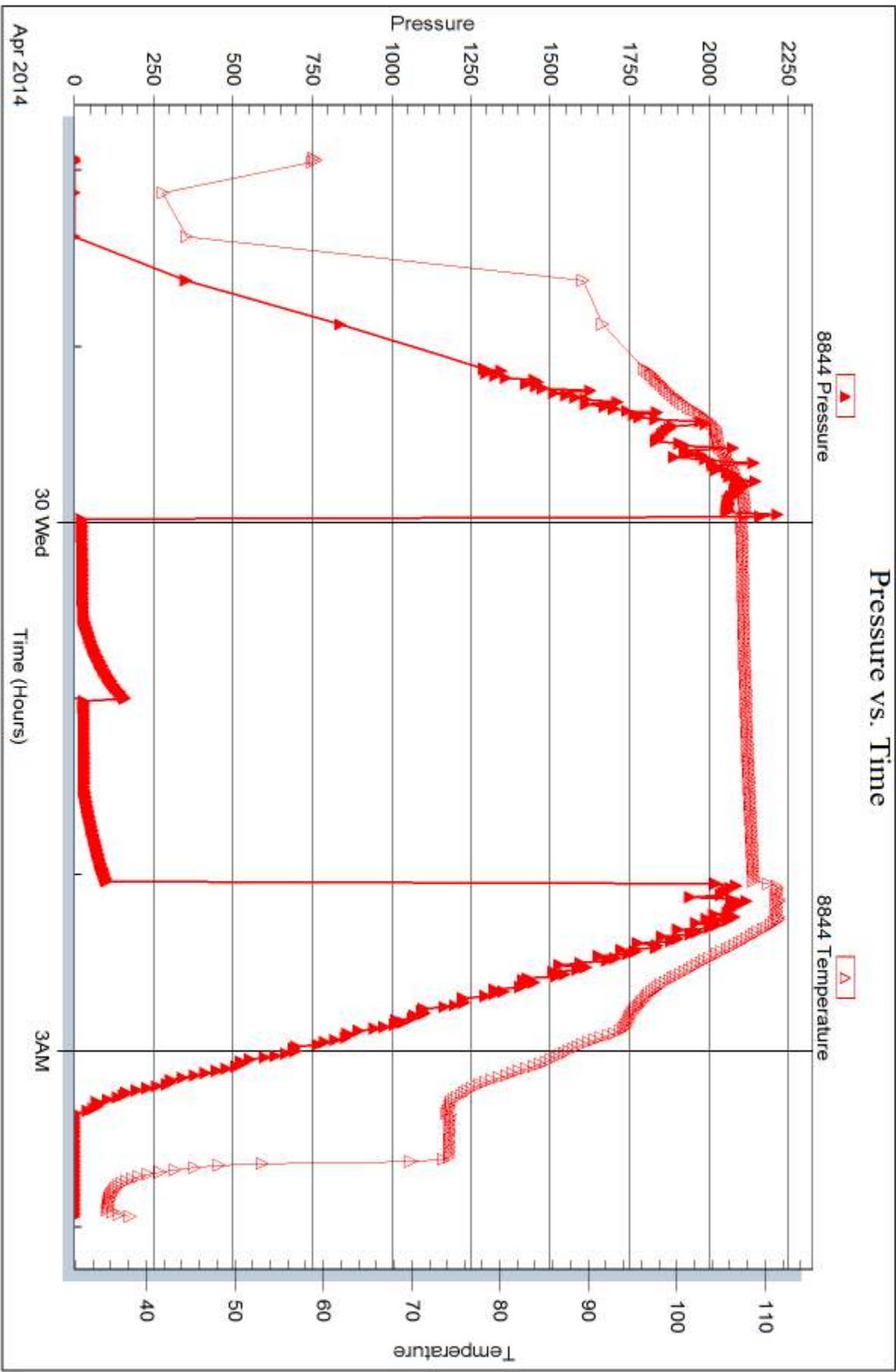
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Serial #: 8844

Outside Dow ning Nelson Oil Co.

K-M Unit #1-20

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 56341

Printed: 2014.05.03 @ 10:22:19



## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays, KS 67601

ATTN: Al Downing

### **K-M Unit #1-20**

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

Start Date: 2014.04.30 @ 10:21:09

End Date: 2014.04.30 @ 16:45:39

Job Ticket #: 56342                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.05.03 @ 10:21:57





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Dow ning Nelson Oil Co.

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

PO Box 1019  
Hays, KS 67601

**K-M Unit #1-20**

Job Ticket: 56342

**DST#: 2**

ATTN: Al Dow ning

Test Start: 2014.04.30 @ 10:21:09

## GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:21:54

Time Test Ended: 16:45:39

Test Type: Conventional Bottom Hole (Reset)

Tester: Shane McBride

Unit No: 55

**Interval: 4346.00 ft (KB) To 4359.00 ft (KB) (TVD)**

Reference Elevations: 2204.00 ft (KB)

Total Depth: 4359.00 ft (KB) (TVD)

2196.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 6771**

**Inside**

Press@RunDepth: 24.04 psig @ 4347.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.30

End Date:

2014.04.30

Last Calib.:

2014.04.30

Start Time:

10:21:09

End Time:

16:27:39

Time On Btm:

2014.04.30 @ 12:21:24

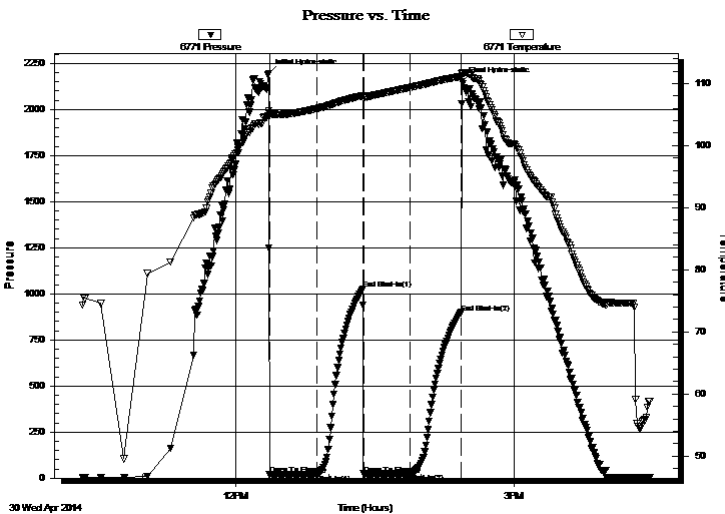
Time Off Btm:

2014.04.30 @ 14:26:24

## TEST COMMENT:

1/2" blow  
No return  
Bubble to open tool, no blow  
No return

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2196.48	105.58	Initial Hydro-static
1	18.75	105.11	Open To Flow (1)
31	21.55	105.94	Shut-In(1)
61	1025.04	108.06	End Shut-In(1)
62	22.48	107.76	Open To Flow (2)
92	24.04	109.37	Shut-In(2)
125	897.97	111.13	End Shut-In(2)
125	2151.37	111.59	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
3.00	mud w /trace of w ater 3%w 97%m	0.01

## 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.

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

PO Box 1019  
Hays, KS 67601

**K-M Unit #1-20**

Job Ticket: 56342

**DST#: 2**

ATTN: Al Dow ning

Test Start: 2014.04.30 @ 10:21:09

## Tool Information

Drill Pipe:	Length: 4313.00 ft	Diameter: 3.80 inches	Volume: 60.50 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 60.65 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 61000.00 lb
Depth to Top Packer:	4346.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een 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			4319.00	
Shut In Tool	5.00			4324.00	
Hydraulic tool	5.00			4329.00	
Jars	5.00			4334.00	
Safety Joint	3.00			4337.00	
Packer	5.00			4342.00	28.00 Bottom Of Top Packer
Packer	4.00			4346.00	
Stubb	1.00			4347.00	
Recorder	0.00	6771	Inside	4347.00	
Recorder	0.00	8844	Outside	4347.00	
Perforations	7.00			4354.00	
Bullnose	5.00			4359.00	13.00 Bottom Packers & Anchor

**Total Tool Length: 41.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Downing Nelson Oil Co.

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

PO Box 1019  
Hays, KS 67601

**K-M Unit #1-20**

Job Ticket: 56342

**DST#: 2**

ATTN: Al Downing

Test Start: 2014.04.30 @ 10:21:09

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.10 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3600.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	mud w /trace of water 3%w 97%m	0.015

Total Length: 3.00 ft      Total Volume: 0.015 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

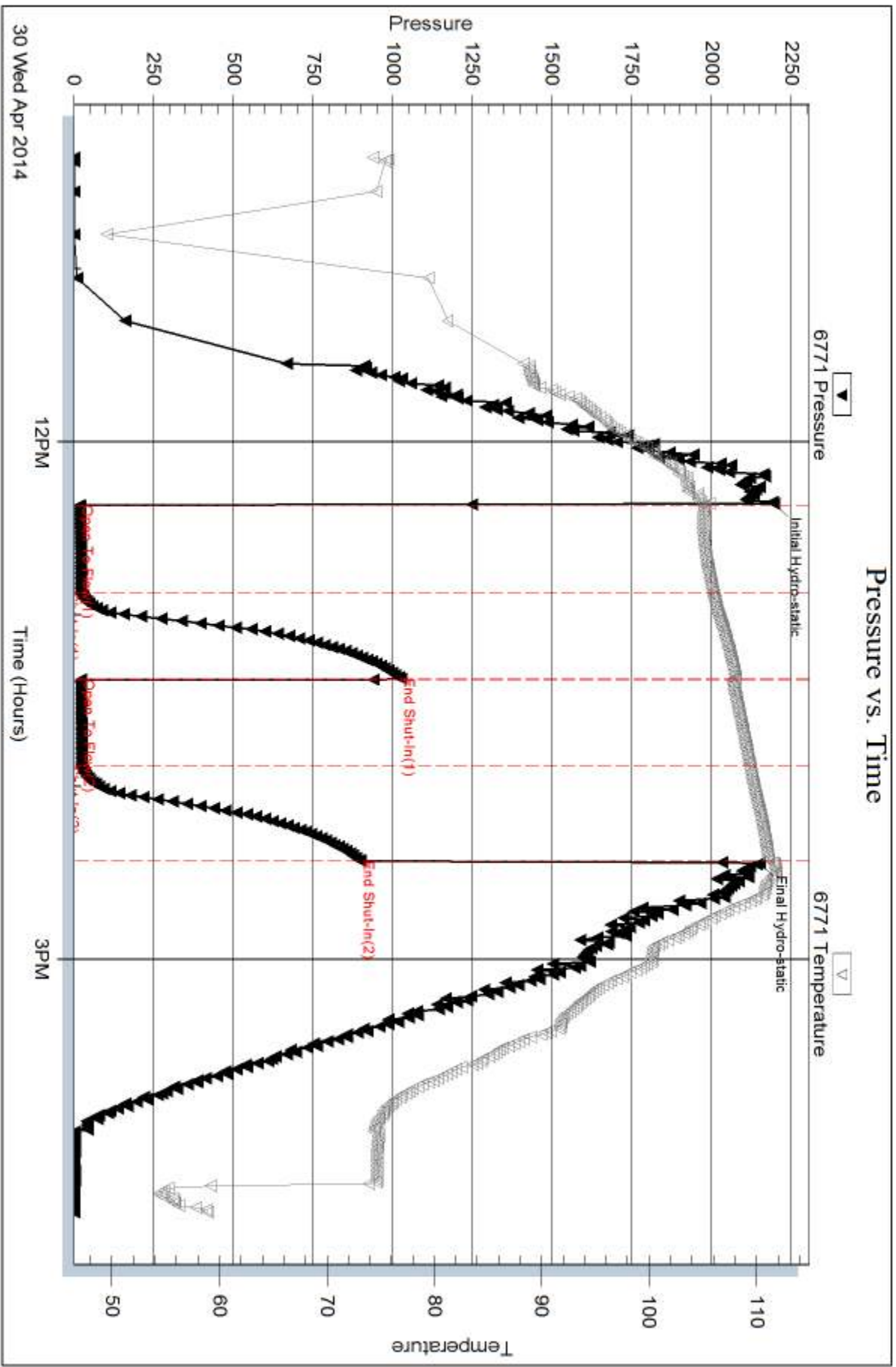
Serial #: 6771

Inside

Downing Nelson Oil Co.

K-M Unit #1-20

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 56342

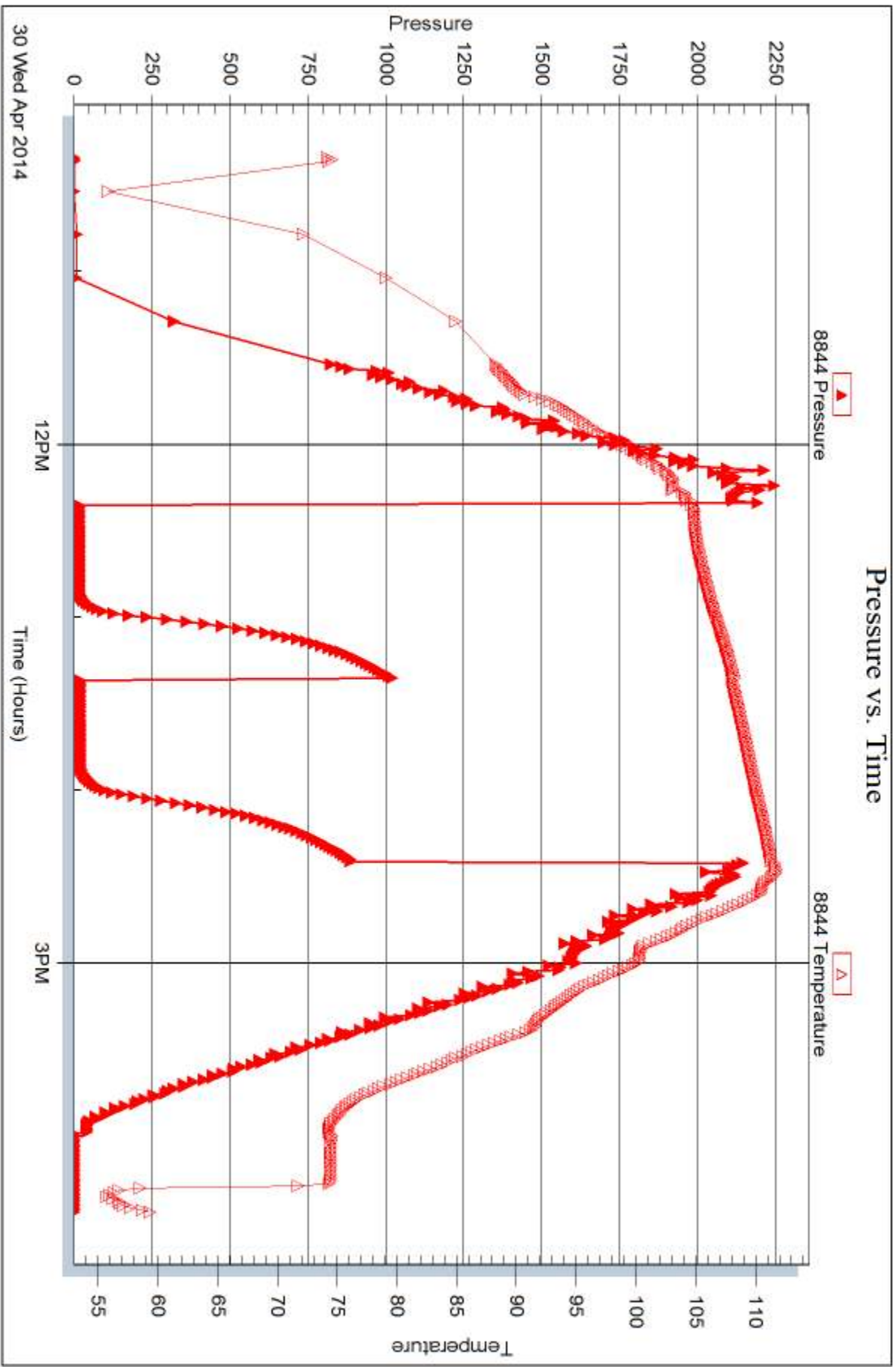
Printed: 2014.05.03 @ 10:21:58

Serial #: 8844

Outside Downing Nelson Oil Co.

K-M Unit #1-20

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 56342

Printed: 2014.05.03 @ 10:21:59



## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays, KS 67601

ATTN: Al Downing

### **K-M Unit #1-20**

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

Start Date: 2014.04.30 @ 22:38:24

End Date: 2014.05.01 @ 04:35:09

Job Ticket #: 56343                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.05.03 @ 10:21:35



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Dow ning Nelson Oil Co.

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

PO Box 1019  
Hays, KS 67601

**K-M Unit #1-20**

Job Ticket: 56343

**DST#: 3**

ATTN: Al Dow ning

Test Start: 2014.04.30 @ 22:38:24

## GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:17:24

Time Test Ended: 04:35:09

Test Type: Conventional Bottom Hole (Reset)

Tester: Shane McBride

Unit No: 55

**Interval: 4356.00 ft (KB) To 4369.00 ft (KB) (TVD)**

Reference Elevations: 2204.00 ft (KB)

Total Depth: 4369.00 ft (KB) (TVD)

2196.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 6771 Inside**

Press@RunDepth: 28.55 psig @ 4357.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.30

End Date:

2014.05.01

Last Calib.:

2014.05.01

Start Time: 22:38:24

End Time:

04:19:09

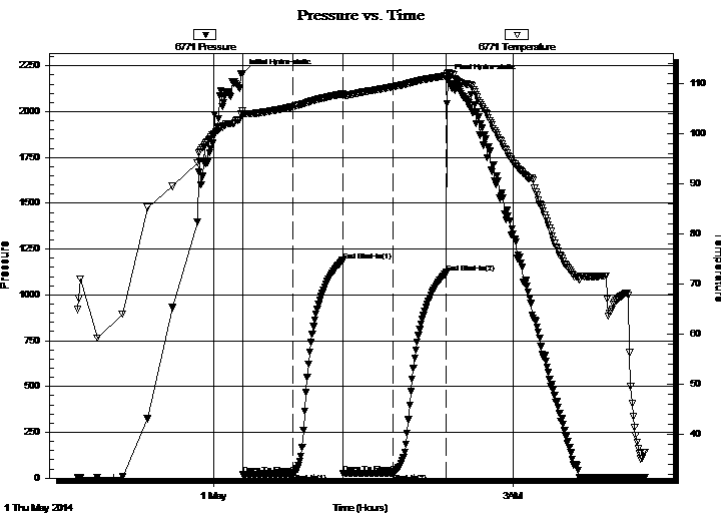
Time On Btm:

2014.05.01 @ 00:17:09

Time Off Btm:

2014.05.01 @ 02:20:39

TEST COMMENT: 1/2" blow  
No return  
Bubble to open tool , no blow  
No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2209.43	104.67	Initial Hydro-static
1	19.40	104.00	Open To Flow (1)
31	24.56	105.45	Shut-In(1)
61	1188.13	107.98	End Shut-In(1)
61	25.50	107.57	Open To Flow (2)
91	28.55	109.40	Shut-In(2)
123	1122.68	111.58	End Shut-In(2)
124	2178.81	112.28	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
3.00	mud w/oil spots on top 100%m	0.01

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Dow ning Nelson Oil Co.

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

PO Box 1019  
Hays, KS 67601

**K-M Unit #1-20**

ATTN: Al Dow ning

Job Ticket: 56343

**DST#: 3**

Test Start: 2014.04.30 @ 22:38:24

## GENERAL INFORMATION:

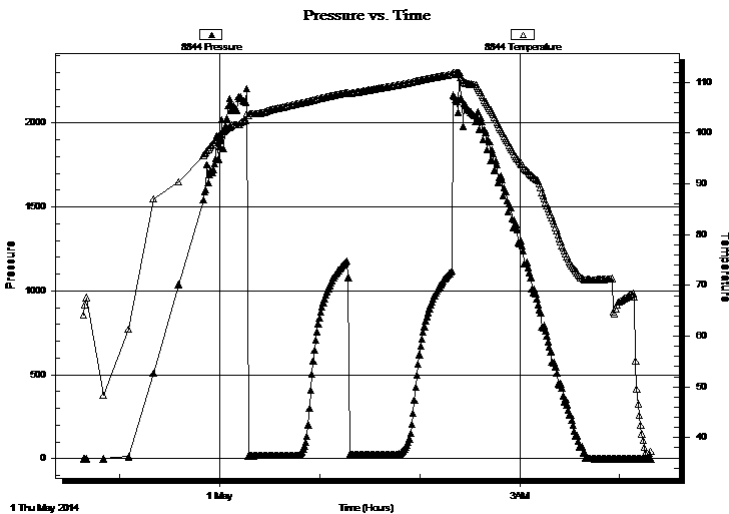
Formation: **Miss**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 00:17:24  
 Time Test Ended: 04:35:09  
 Interval: **4356.00 ft (KB) To 4369.00 ft (KB) (TVD)**  
 Total Depth: 4369.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Shane McBride  
 Unit No: 55  
 Reference Elevations: 2204.00 ft (KB)  
 2196.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8844**

**Outside**

Press@RunDepth: psig @ 4357.00 ft (KB)  
 Start Date: 2014.04.30 End Date: 2014.05.01  
 Start Time: 22:38:16 End Time: 04:18:46  
 Capacity: 8000.00 psig  
 Last Calib.: 2014.05.01  
 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** 1/2" blow  
 No return  
 Bubble to open tool , no blow  
 No return



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
3.00	mud w/oil spots on top 100%m	0.01

## 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.

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

PO Box 1019  
Hays, KS 67601

**K-M Unit #1-20**

Job Ticket: 56343

**DST#: 3**

ATTN: Al Dow ning

Test Start: 2014.04.30 @ 22:38:24

## Tool Information

Drill Pipe:	Length: 4313.00 ft	Diameter: 3.80 inches	Volume: 60.50 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 60.65 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4356.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een 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			4329.00	
Shut In Tool	5.00			4334.00	
Hydraulic tool	5.00			4339.00	
Jars	5.00			4344.00	
Safety Joint	3.00			4347.00	
Packer	5.00			4352.00	28.00 Bottom Of Top Packer
Packer	4.00			4356.00	
Stubb	1.00			4357.00	
Recorder	0.00	6771	Inside	4357.00	
Recorder	0.00	8844	Outside	4357.00	
Perforations	7.00			4364.00	
Bullnose	5.00			4369.00	13.00 Bottom Packers & Anchor

**Total Tool Length: 41.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Dow ning Nelson Oil Co.

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

PO Box 1019  
Hays, KS 67601

**K-M Unit #1-20**

Job Ticket: 56343

**DST#: 3**

ATTN: Al Dow ning

Test Start: 2014.04.30 @ 22:38:24

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	mud w /oil spots on top 100%m	0.015

Total Length: 3.00 ft      Total Volume: 0.015 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

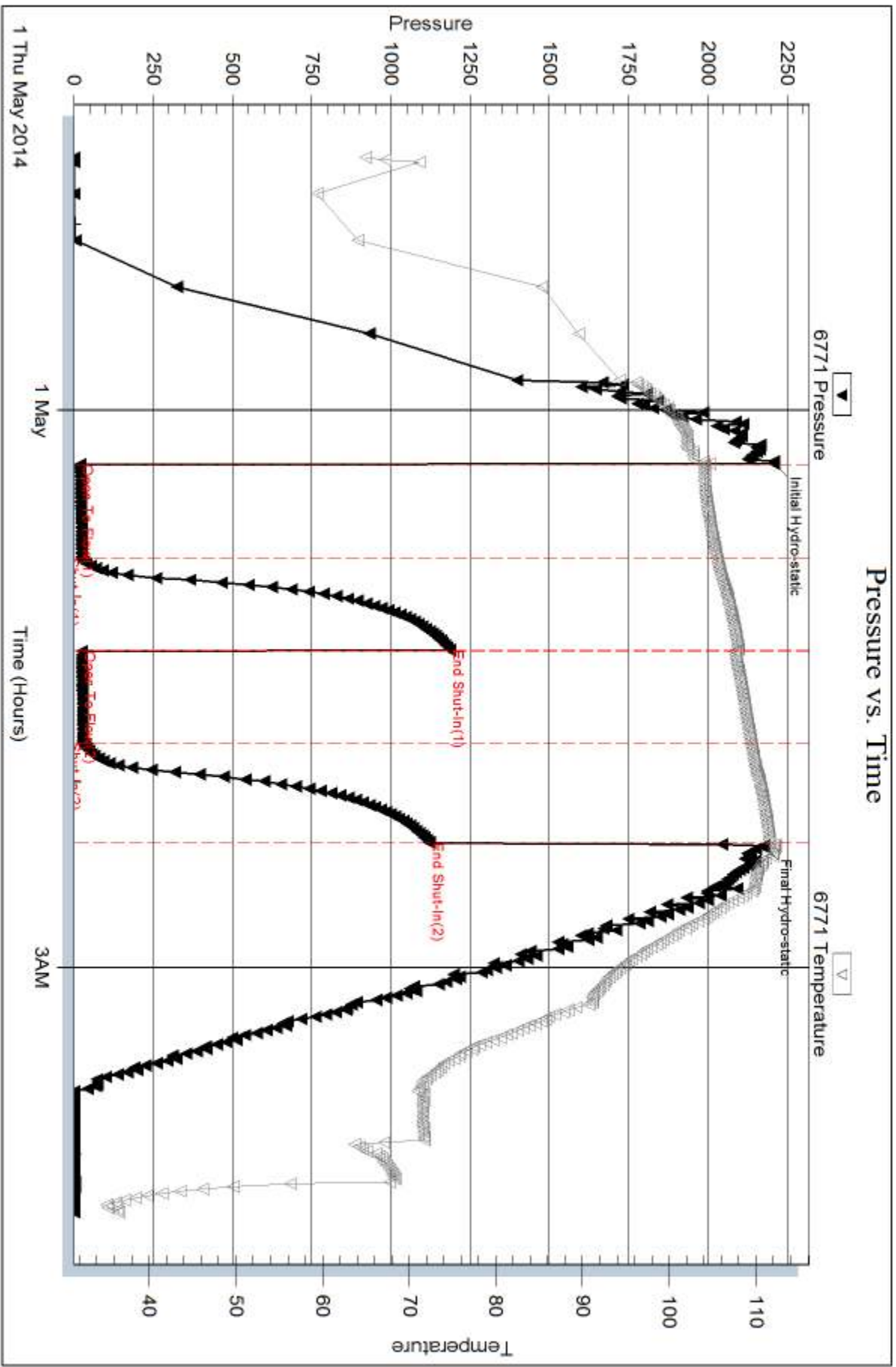
Serial #: 6771

Inside

Dow n ing Nelson Oil Co.

K-M Unit #1-20

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 56343

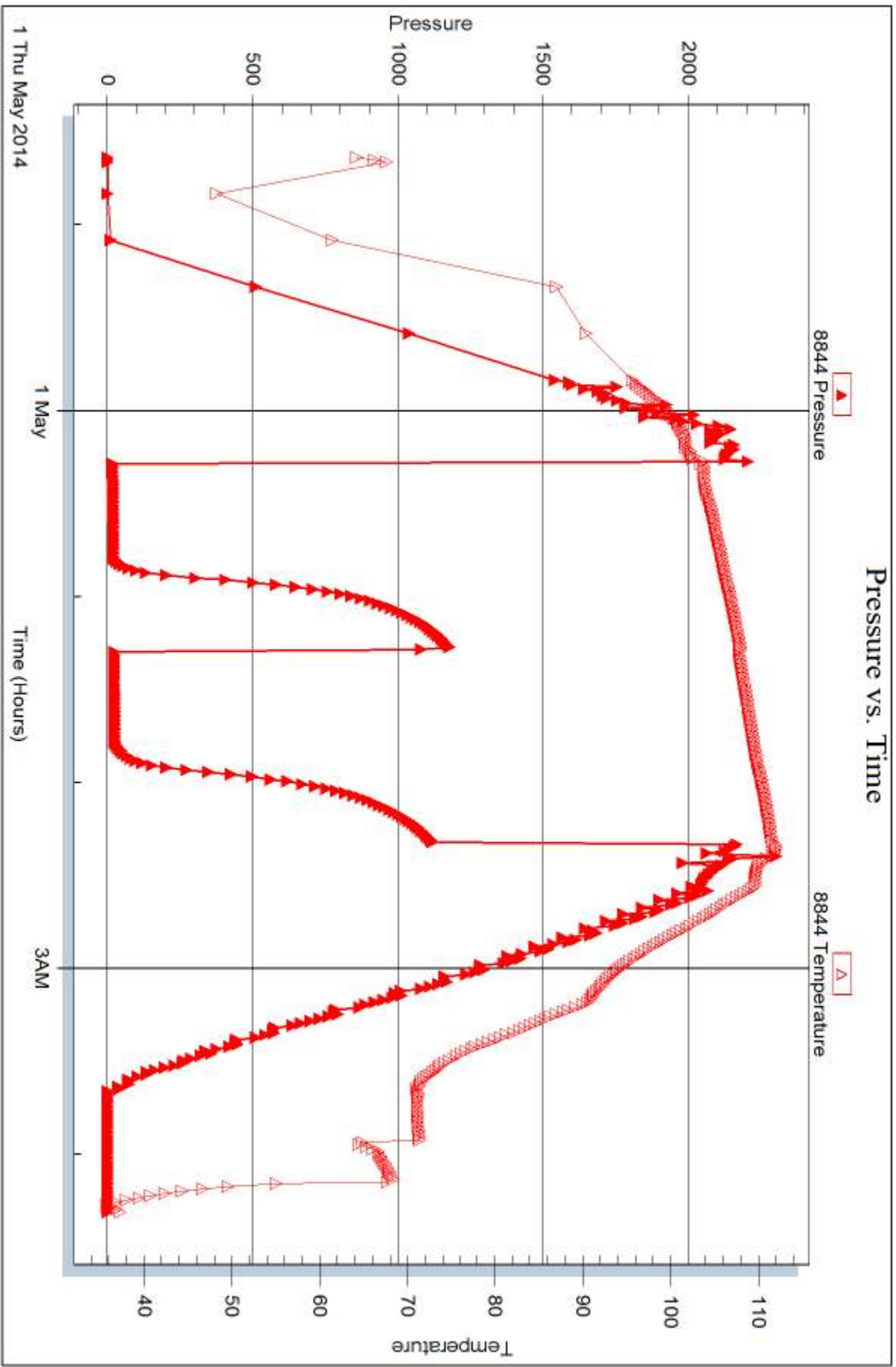
Printed: 2014.05.03 @ 10:21:36

Serial #: 8844

Outside Dow n ing Nelson Oil Co.

K-M Unit #1-20

DST Test Number: 3



Tribble Testing, Inc

Ref. No: 56343

Printed: 2014.05.03 @ 10:21:36



## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays, KS 67601

ATTN: Al Downing

### **K-M Unit #1-20**

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

Start Date: 2014.05.01 @ 19:22:05

End Date: 2014.05.02 @ 03:28:35

Job Ticket #: 58770                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.05.03 @ 10:21:07



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Dow ning Nelson Oil Co.

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

PO Box 1019  
Hays, KS 67601

**K-M Unit #1-20**

Job Ticket: 58770

**DST#: 4**

ATTN: Al Dow ning

Test Start: 2014.05.01 @ 19:22:05

## GENERAL INFORMATION:

Formation: **Osage**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:49:05

Time Test Ended: 03:28:35

Test Type: Conventional Straddle (Initial)

Tester: Brannan L

Unit No: 48

**Interval: 4365.00 ft (KB) To 4380.00 ft (KB) (TVD)**

Reference Elevations: 2204.00 ft (KB)

Total Depth: 4437.00 ft (KB) (TVD)

2196.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8647 Below (Straddle)**

Press@RunDepth: 1376.68 psig @ 4401.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.01

End Date:

2014.05.02

Last Calib.:

2014.05.02

Start Time: 19:22:06

End Time:

03:28:35

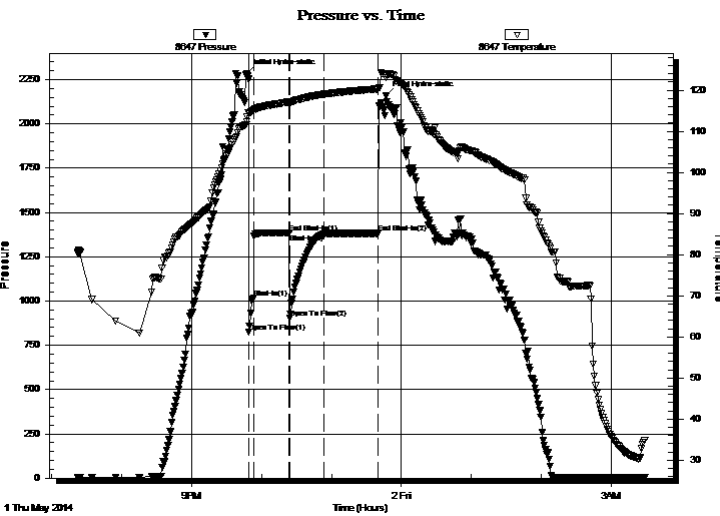
Time On Btm:

2014.05.01 @ 21:47:05

Time Off Btm:

2014.05.01 @ 23:46:35

**TEST COMMENT:** 05- IF- BOB 15 secs  
30- IS- Weak surface blow died in 14 mins  
30- FF- BOB 15 secs  
45- FS- No blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2285.56	112.35	Initial Hydro-static
2	824.15	114.34	Open To Flow (1)
6	1018.63	115.09	Shut-In(1)
37	1385.24	117.15	End Shut-In(1)
37	904.70	116.94	Open To Flow (2)
66	1376.68	119.03	Shut-In(2)
113	1383.00	120.33	End Shut-In(2)
120	2157.84	123.03	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
300.00	M	3.83
2730.00	MW, 30%M 70%W	37.29

## Gas Rates

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



**TRILOBITE TESTING, INC.**

## DRILL STEM TEST REPORT

Dow ning Nelson Oil Co.

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

PO Box 1019  
Hays, KS 67601

**K-M Unit #1-20**

Job Ticket: 58770

**DST#: 4**

ATTN: Al Dow ning

Test Start: 2014.05.01 @ 19:22:05

### GENERAL INFORMATION:

Formation: **Osage**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:49:05

Time Test Ended: 03:28:35

Test Type: Conventional Straddle (Initial)

Tester: Brannan L

Unit No: 48

**Interval: 4365.00 ft (KB) To 4380.00 ft (KB) (TVD)**

Total Depth: 4437.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2204.00 ft (KB)

2196.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8372** **Outside**

Press@RunDepth: psig @ 4376.00 ft (KB)

Start Date: 2014.05.01

End Date:

2014.05.02

Start Time: 19:22:16

End Time:

03:30:15

Capacity: 8000.00 psig

Last Calib.:

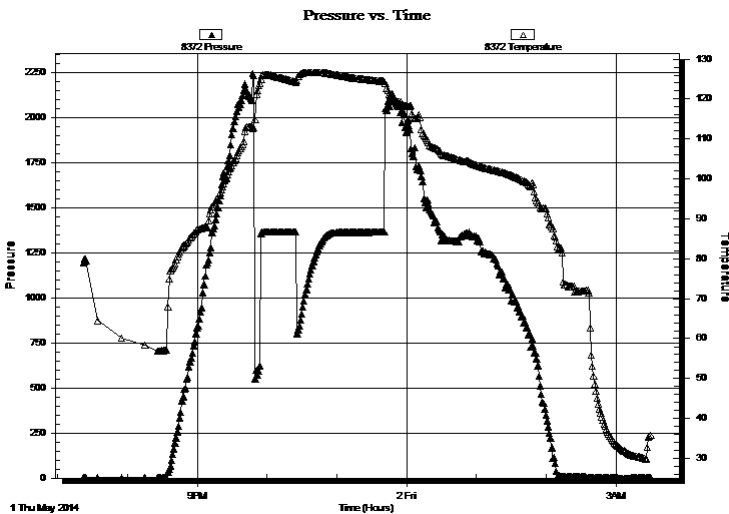
2014.05.02

Time On Btm:

Time Off Btm:

**TEST COMMENT:** 05- IF- BOB 15 secs  
30- IS- Weak surface blow died in 14 mins  
30- FF- BOB 15 secs  
45- FS- No blow

### PRESSURE SUMMARY



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

### Recovery

Length (ft)	Description	Volume (bbl)
300.00	M	3.83
2730.00	MW, 30%M 70%W	37.29

### Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Dow ning Nelson Oil Co.  
PO Box 1019  
Hays, KS 67601  
ATTN: Al Dow ning

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

**K-M Unit #1-20**

Job Ticket: 58770

**DST#: 4**

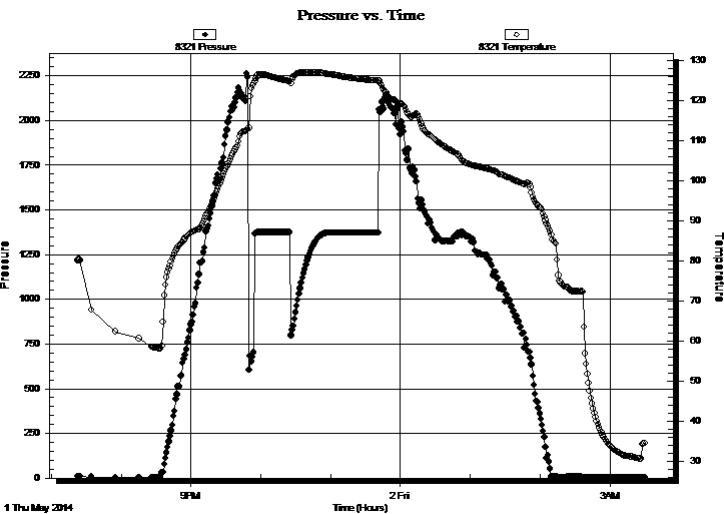
Test Start: 2014.05.01 @ 19:22:05

## GENERAL INFORMATION:

Formation: **Osage**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 21:49:05  
 Time Test Ended: 03:28:35  
 Interval: **4365.00 ft (KB) To 4380.00 ft (KB) (TVD)**  
 Total Depth: 4437.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Straddle (Initial)  
 Tester: Brannan L  
 Unit No: 48  
 Reference Elevations: 2204.00 ft (KB)  
 2196.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8321** **Inside**  
 Press@RunDepth: psig @ 4376.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.05.01 End Date: 2014.05.02 Last Calib.: 2014.05.02  
 Start Time: 19:22:24 End Time: 03:30:23 Time On Btm:  
 Time Off Btm:

TEST COMMENT: 05- IF- BOB 15 secs  
 30- IS- Weak surface blow died in 14 mins  
 30- FF- BOB 15 secs  
 45- FS- No blow



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
300.00	M	3.83
2730.00	MW, 30%M 70%W	37.29

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning Nelson Oil Co.

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

PO Box 1019  
Hays, KS 67601

**K-M Unit #1-20**

Job Ticket: 58770

**DST#: 4**

ATTN: Al Dow ning

Test Start: 2014.05.01 @ 19:22:05

## Tool Information

Drill Pipe:	Length: 4312.00 ft	Diameter: 3.75 inches	Volume: 58.90 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - 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: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 63000.00 lb
Depth to Top Packer:	4365.00 ft			Final 75000.00 lb
Depth to Bottom Packer:	4380.00 ft			
Interval betw een Packers:	15.00 ft			
Tool Length:	99.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Straddle Packer Failure

## Tool Description

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

Change Over Sub	1.00			4339.00	
Shut In Tool	5.00			4344.00	
Hydraulic tool	5.00			4349.00	
Jars	5.00			4354.00	
Safety Joint	2.00			4356.00	
Packer	5.00			4361.00	27.00 Bottom Of Top Packer
Packer	4.00			4365.00	
Stubb	1.00			4366.00	
Perforations	10.00			4376.00	
Recorder	0.00	8321	Inside	4376.00	
Recorder	0.00	8372	Outside	4376.00	
Blank Off Sub	1.00			4377.00	
Blank Spacing	3.00			4380.00	15.00 Tool Interval
Packer	1.00			4381.00	
Stubb	1.00			4382.00	
Perforations	18.00			4400.00	
Change Over Sub	1.00			4401.00	
Recorder	0.00	8647	Below	4401.00	
Blank Spacing	32.00			4433.00	
Change Over Sub	1.00			4434.00	
Bullnose	3.00			4437.00	57.00 Bottom Packers & Anchor

**Total Tool Length: 99.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Dow ning Nelson Oil Co.

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

PO Box 1019  
Hays, KS 67601

**K-M Unit #1-20**

Job Ticket: 58770

**DST#: 4**

ATTN: Al Dow ning

Test Start: 2014.05.01 @ 19:22:05

## 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:

13000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
300.00	M	3.827
2730.00	MW, 30%M 70%W	37.294

Total Length: 3030.00 ft

Total Volume: 41.121 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

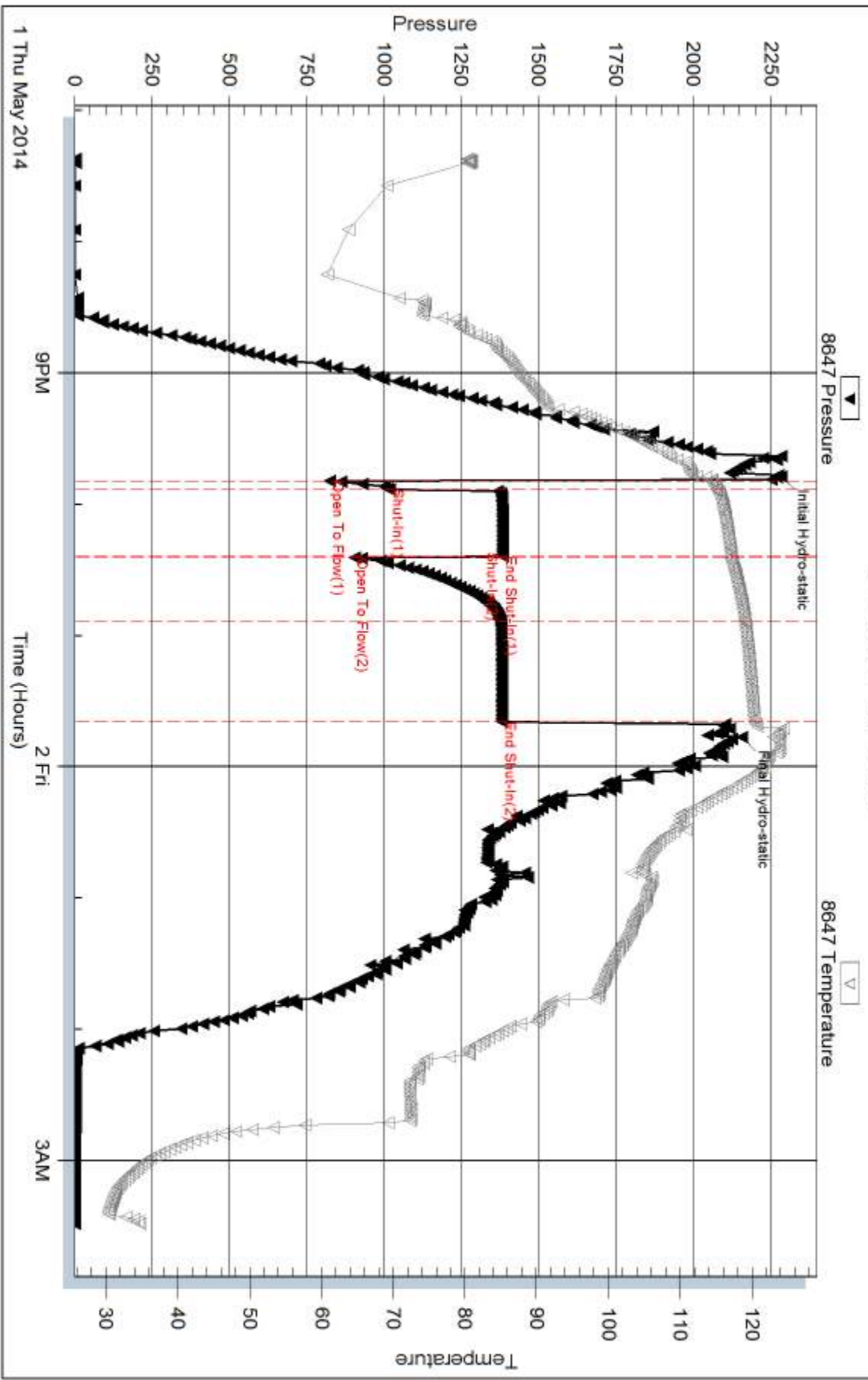
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

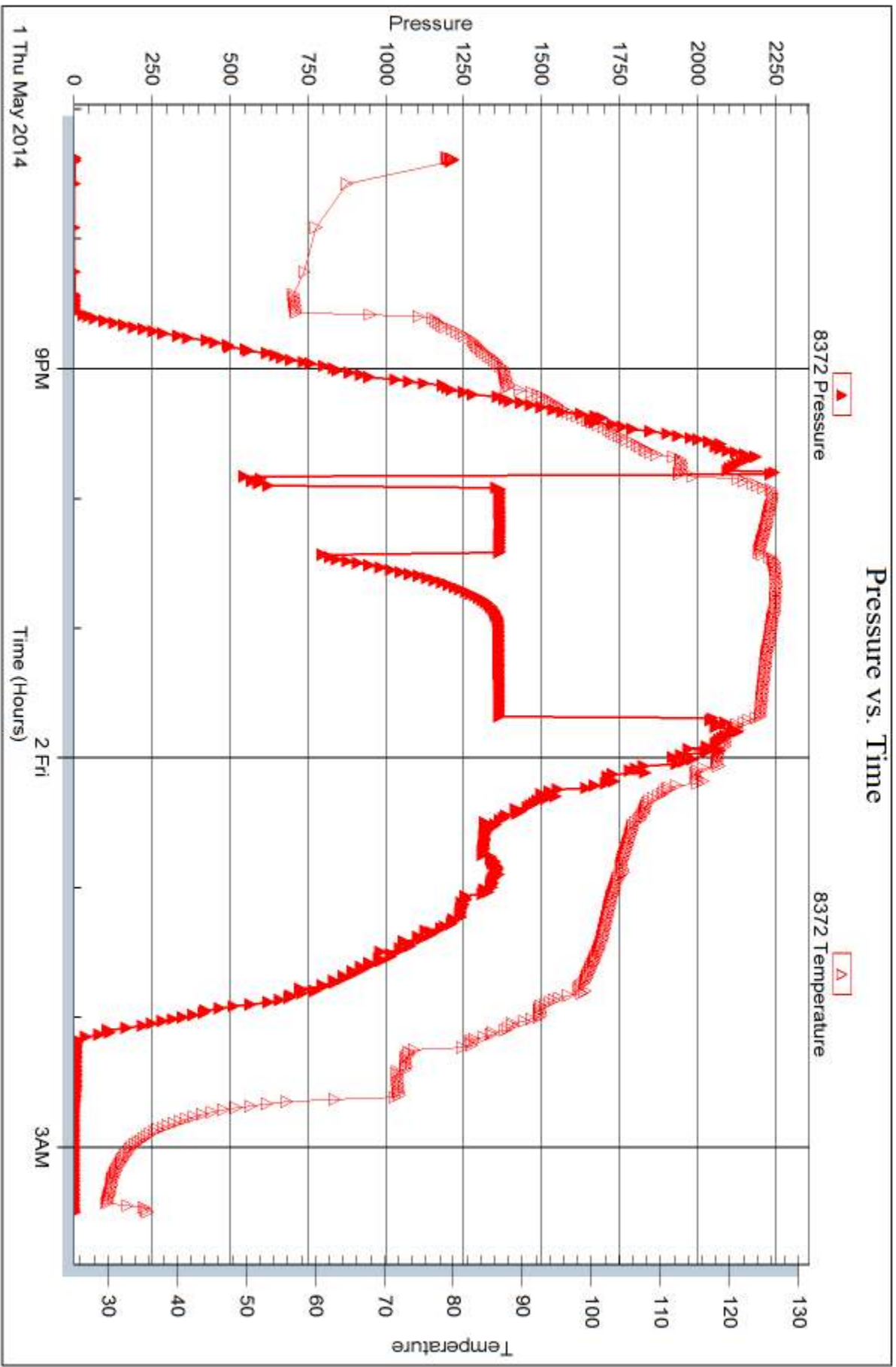


Serial #: 8372

Outside Downing Nelson Oil Co.

K-M Unit #1-20

DST Test Number: 4



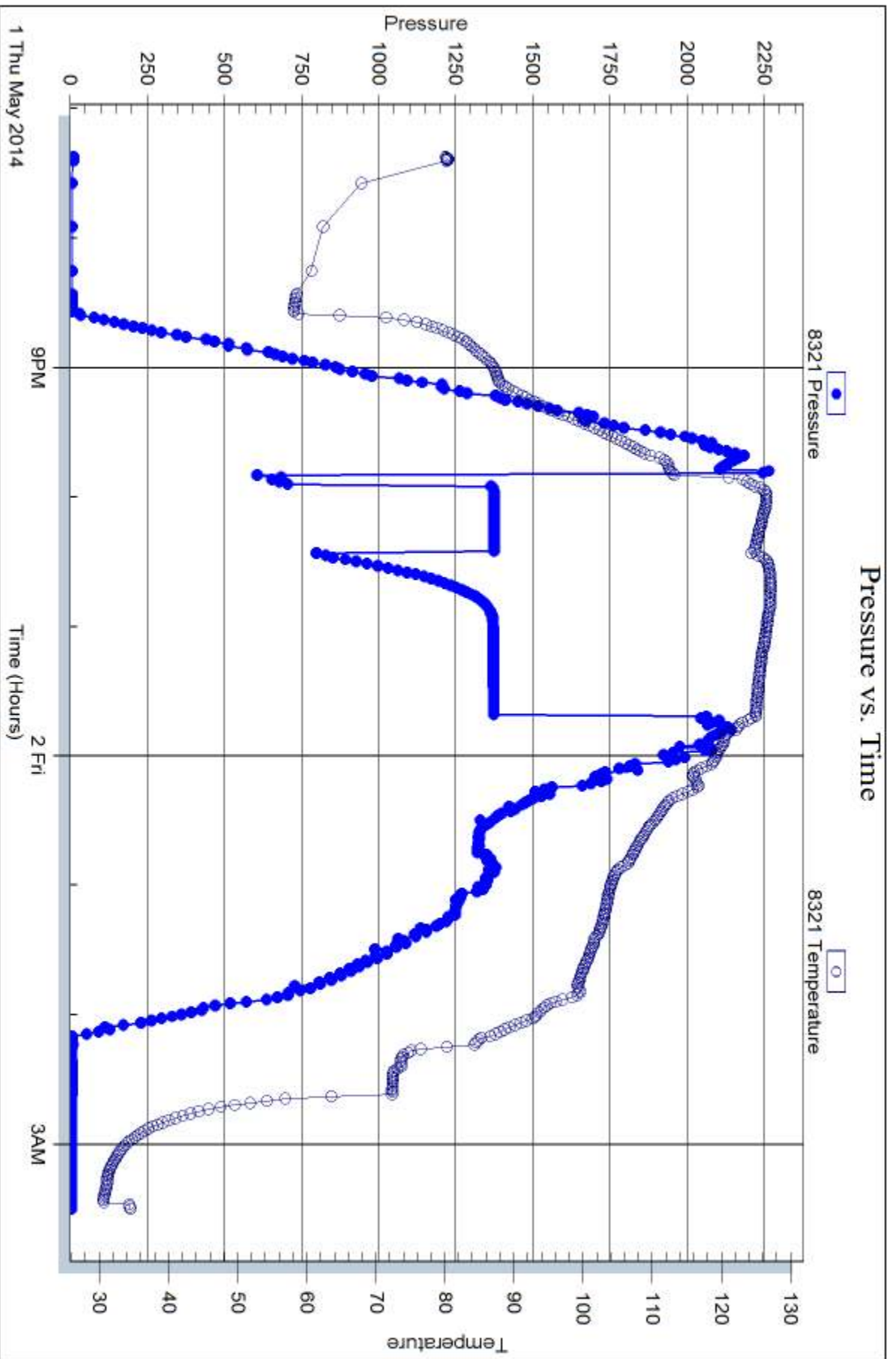
Serial #: 8321

Inside

Dowling Nelson Oil Co.

K-M Unit #1-20

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 58770

Printed: 2014.05.03 @ 10:21:09



## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays, KS 67601

ATTN: Al Downing

### **K-M Unit #1-20**

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

Start Date: 2014.05.02 @ 06:58:41

End Date: 2014.05.02 @ 15:36:40

Job Ticket #: 58771                      DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.05.03 @ 10:20:29



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Dow ning Nelson Oil Co.

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

PO Box 1019  
Hays, KS 67601

**K-M Unit #1-20**

Job Ticket: 58771

**DST#: 5**

ATTN: Al Dow ning

Test Start: 2014.05.02 @ 06:58:41

## GENERAL INFORMATION:

Formation: **Osage**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:56:10

Time Test Ended: 15:36:40

Test Type: Conventional Straddle (Reset)

Tester: Brannan L

Unit No: 48

**Interval: 4365.00 ft (KB) To 4378.00 ft (KB) (TVD)**

Reference Elevations: 2204.00 ft (KB)

Total Depth: 4437.00 ft (KB) (TVD)

2196.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 8.00 ft

**Serial #: 8372 Outside**

Press@RunDepth: 786.42 psig @ 4374.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.02

End Date: 2014.05.02

Last Calib.: 2014.05.02

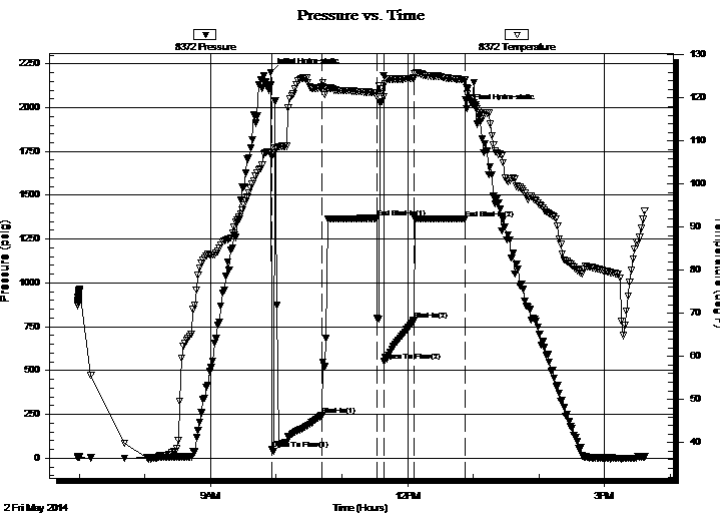
Start Time: 06:58:41

End Time: 15:36:40

Time On Btm: 2014.05.02 @ 09:55:10

Time Off Btm: 2014.05.02 @ 12:54:10

**TEST COMMENT:** 30- IF- BOB 12 mins  
45- IS- No blow  
30- FF- BOB 6 mins  
45- FS- No blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2200.88	107.34	Initial Hydro-static
1	49.90	106.33	Open To Flow (1)
47	246.46	122.63	Shut-In(1)
97	1369.67	121.25	End Shut-In(1)
104	551.39	120.30	Open To Flow (2)
131	786.42	124.65	Shut-In(2)
178	1366.26	124.12	End Shut-In(2)
179	1994.84	122.33	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1650.00	MW, 30%M 70%W	22.27

\* 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.

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

PO Box 1019  
Hays, KS 67601

**K-M Unit #1-20**

Job Ticket: 58771

**DST#: 5**

ATTN: Al Dow ning

Test Start: 2014.05.02 @ 06:58:41

## Tool Information

Drill Pipe:	Length: 4312.00 ft	Diameter: 3.75 inches	Volume: 58.90 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - 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: 88000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 7.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4365.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	4378.00 ft			
Interval betw een Packers:	13.00 ft			
Tool Length:	99.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

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

Change Over Sub	1.00			4339.00	
Shut In Tool	5.00			4344.00	
Hydraulic tool	5.00			4349.00	
Jars	5.00			4354.00	
Safety Joint	2.00			4356.00	
Packer	5.00			4361.00	27.00 Bottom Of Top Packer
Packer	4.00			4365.00	
Stubb	1.00			4366.00	
Perforations	8.00			4374.00	
Recorder	0.00	8321	Inside	4374.00	
Recorder	0.00	8372	Outside	4374.00	
Blank Off Sub	1.00			4375.00	
Blank Spacing	3.00			4378.00	13.00 Tool Interval
Packer	1.00			4379.00	
Packer - Shale	0.00			4379.00	
Stubb	1.00			4380.00	
Perforations	20.00			4400.00	
Change Over Sub	1.00			4401.00	
Recorder	0.00	8647	Below	4401.00	
Blank Spacing	32.00			4433.00	
Change Over Sub	1.00			4434.00	
Bullnose	3.00			4437.00	59.00 Bottom Packers & Anchor

**Total Tool Length: 99.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Dow ning Nelson Oil Co.

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

PO Box 1019  
Hays, KS 67601

**K-M Unit #1-20**

Job Ticket: 58771

**DST#: 5**

ATTN: Al Dow ning

Test Start: 2014.05.02 @ 06:58:41

## 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: 50.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.75 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 bbl
1650.00	MW, 30%M 70%W	22.269

Total Length: 1650.00 ft      Total Volume: 22.269 bbl

Num Fluid Samples: 0

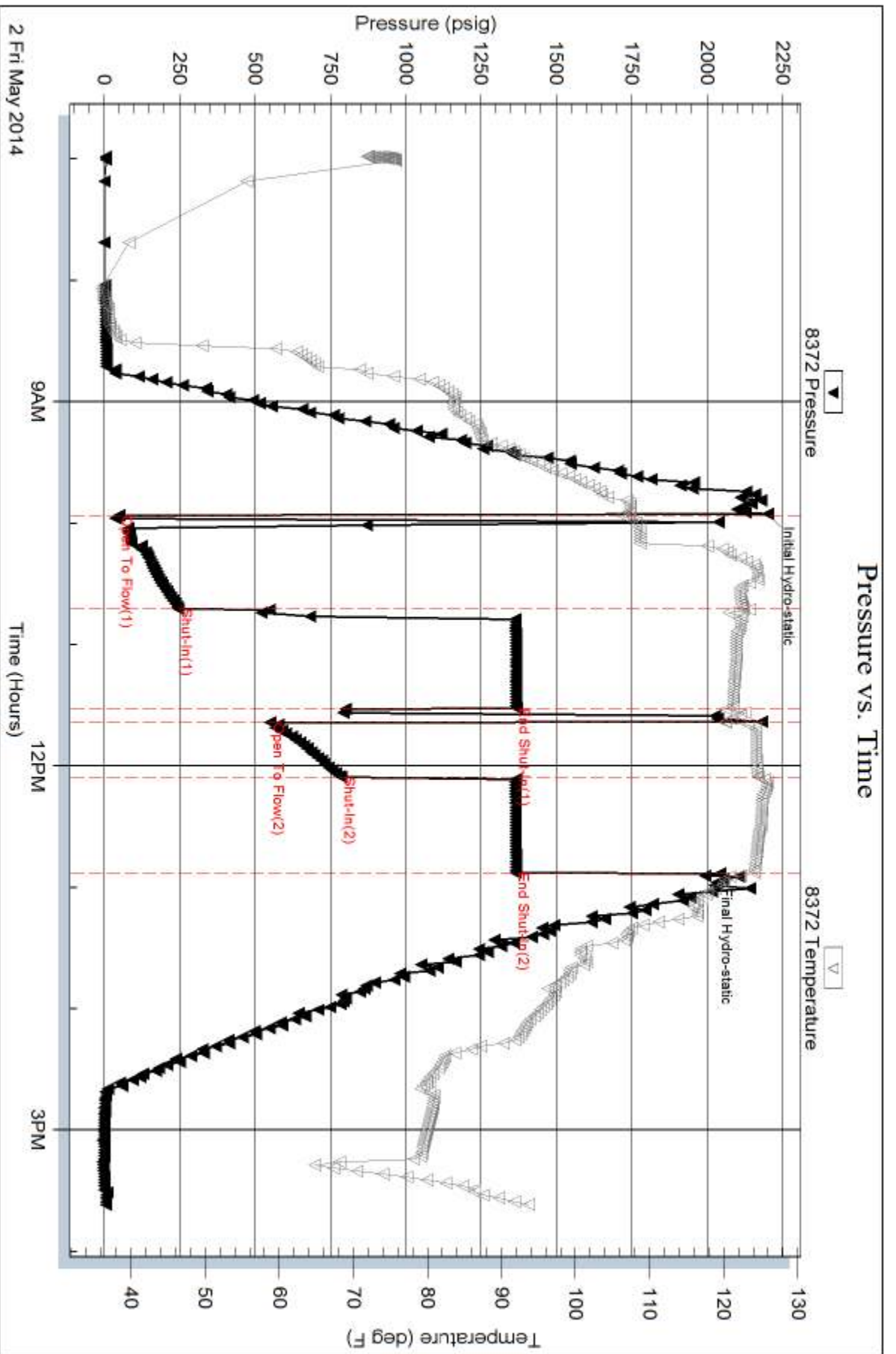
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

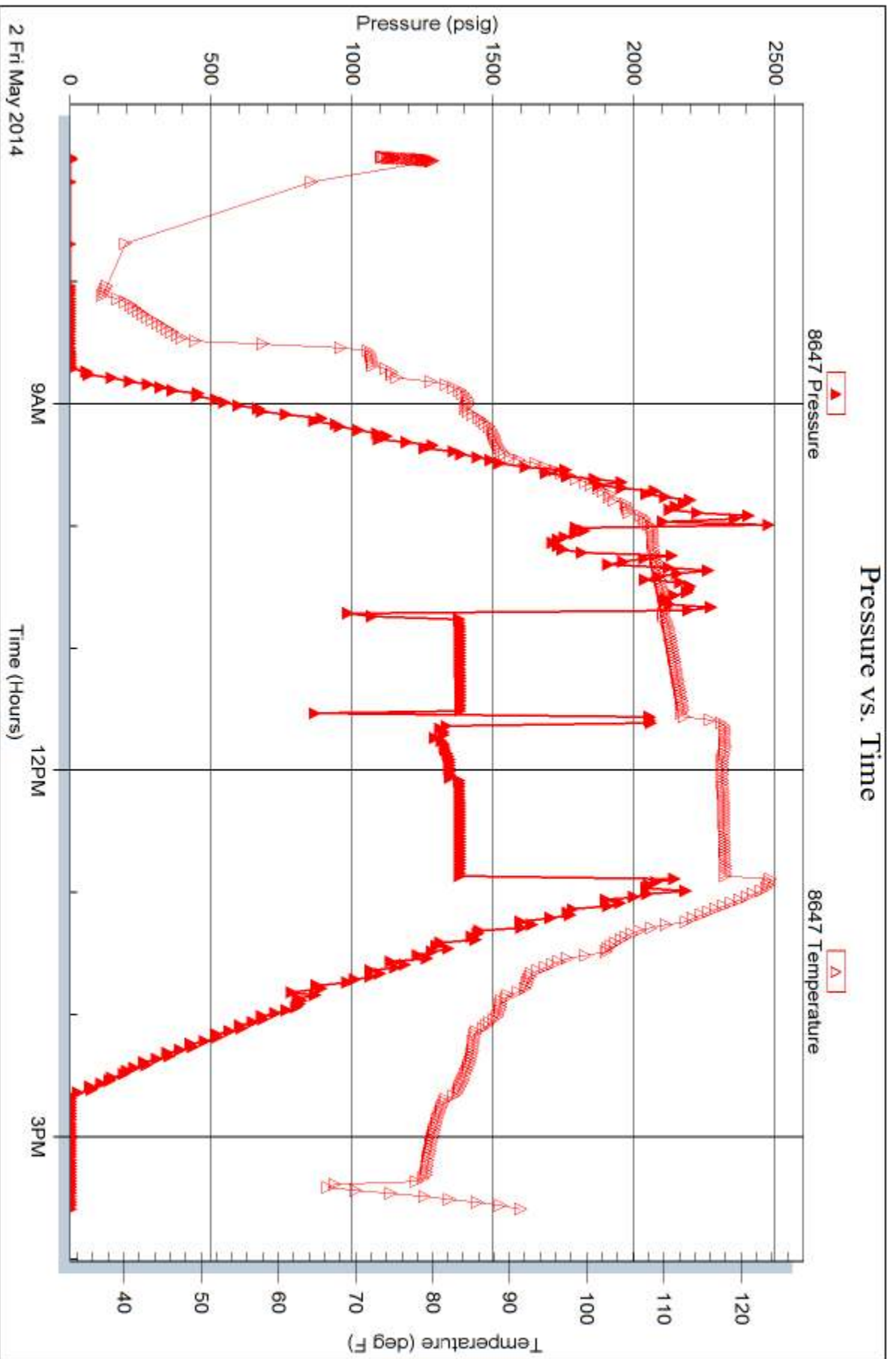


Serial #: 8647

Below (Stratton)ng Nelson Oil Co.

K-M Unit #1-20

DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 58771

Printed: 2014.05.03 @ 10:20:30

Serial #: 8321

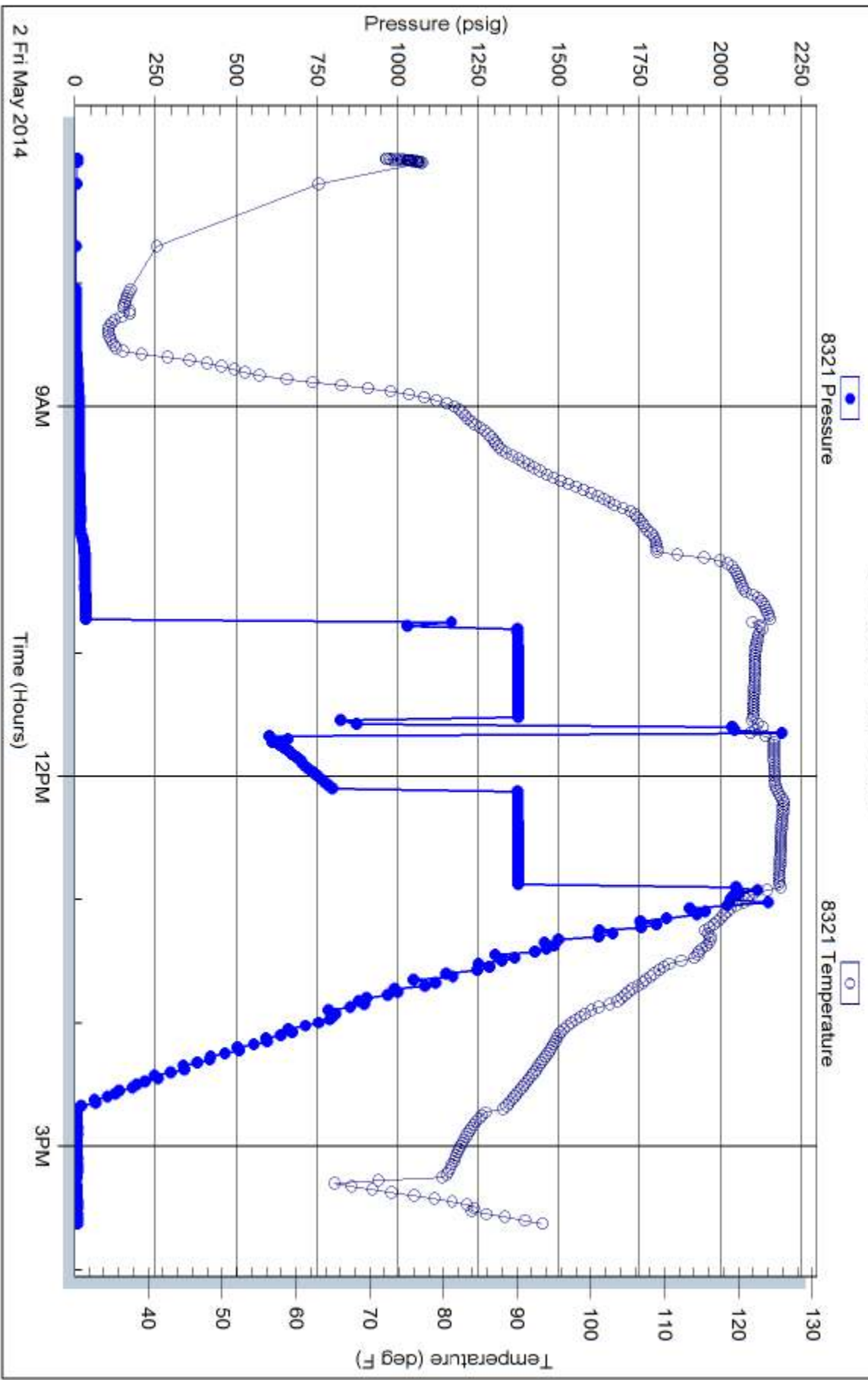
Inside

Downing Nelson Oil Co.

K-M Unit #1-20

DST Test Number: 5

### Pressure vs. Time

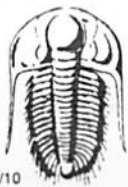


Trilobite Testing, Inc

Ref. No: 58771

Printed: 2014.05.03 @ 10:20:30





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **56341**

4/10

Well Name & No. K-M-Unit # 1-20 Test No. #1 Date 4/30/13  
 Company Downing Nelson Co Elevation 2204 KB 2196 GL  
 Address P.O. Box 1019 Hays, KS 67601  
 Co. Rep / Geo. Ah Downing Rig Discovery #3  
 Location: Sec. 20 Twp. 20 Rge. 20W Co. Pawnee State KS

Interval Tested 4278 4348 Zone Tested Miss  
 Anchor Length 70 Drill Pipe Run 4250' Mud Wt. 9.4  
 Top Packer Depth 4273 Drill Collars Run 30' Vis 51  
 Bottom Packer Depth 4278 Wt. Pipe Run --- WL 8.2  
 Total Depth 4348 Chlorides 3600 ppm System LCM #2

Blow Description 1" w blow  
No return  
Bubble to open tool No blow  
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>mud</u>			<u>100</u>	<u>mud</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 15' BHT 111° Gravity --- API RW --- @ --- °F Chlorides --- ppm

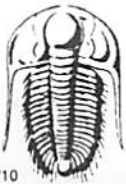
(A) Initial Hydrostatic 2170  Test 1250 T-On Location 21:20  
 (B) First Initial Flow 24  Jars 250 T-Started 21:55  
 (C) First Final Flow 30  Safety Joint 75 T-Open 23:58  
 (D) Initial Shut-In 166  Circ Sub N/C T-Pulled 01:58  
 (E) Second Initial Flow 32  Hourly Standby --- T-Out 04:10  
 (F) Second Final Flow 34  Mileage 176 RT 182.90 Comments ---  
 (G) Final Shut-In 108  Sampler ---  
 (H) Final Hydrostatic 2067  Straddle ---  Ruined Shale Packer ---  
 Shale Packer ---  Ruined Packer ---  
 Extra Packer ---  Extra Copies ---  
 Extra Recorder --- Sub Total 0  
 Day Standby --- Total 1757.90  
 Accessibility --- MP/DST Disc't ---

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 30  
 Final Shut-In 30  
 Sub Total 1757.90

Approved By \_\_\_\_\_ Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 56342

4/10

Well Name & No. K-m-unit #1-20 Test No. #2 Date 4/30/14  
 Company Downing Nelson Co Elevation 2204 KB 2196 GL  
 Address P.O. Box 1019 Hays, KS 67601  
 Co. Rep / Geo. AL Downing Rig Discovery #3  
 Location: Sec. 20 Twp. 20 Rge. 20w Co. Jawnee State Ks

Interval Tested 4346 4359 Zone Tested M.S.S  
 Anchor Length 13 Drill Pipe Run 4313' Mud Wt. 9.4  
 Top Packer Depth 4341 Drill Collars Run 30' Vis 51  
 Bottom Packer Depth 4346 Wt. Pipe Run \_\_\_\_\_ WL 8.0  
 Total Depth 4359 Chlorides 3000 ppm System LCM #2

Blow Description 1/2" in blow  
No return  
Bubble to open tool, No blow  
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>3'</u>	<u>Mud Trace of Water</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

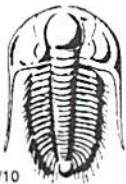
Rec Total 3' BHT 112° Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2196  Test 1250 T-On Location Stayed on loc  
 (B) First Initial Flow 18  Jars 250 T-Started 10:20  
 (C) First Final Flow 21  Safety Joint 75 T-Open 12:22  
 (D) Initial Shut-In 1025  Circ Sub N/C T-Pulled 14:22  
 (E) Second Initial Flow 22  Hourly Standby \_\_\_\_\_ T-Out 16:45  
 (F) Second Final Flow 24  Mileage 182.90 Comments \_\_\_\_\_  
 (G) Final Shut-In 897  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2151  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_

Initial Open 30  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Shut-In 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Flow 30  Day Standby \_\_\_\_\_ Total 1757.90  
 Final Shut-In 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1757.90

Approved By \_\_\_\_\_ Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **56343**

4/10

Well Name & No. K-M Unit # 1-20 Test No. # 3 Date 5/1/14  
 Company Downing Nelson Co Elevation 2204 KB 2196 GL  
 Address P.O. Box 1019 Hays, KS 67601  
 Co. Rep / Geo. Al Downing Rig Discovery #3  
 Location: Sec. 20 Twp. 20 Rge. 20w Co. Pawnee State Ks

Interval Tested 4356 4369 Zone Tested M55  
 Anchor Length 13 Drill Pipe Run 4313 Mud Wt. 9.7  
 Top Packer Depth 4351 Drill Collars Run 30' Vis 51  
 Bottom Packer Depth 4356 Wt. Pipe Run --- WL 8.8  
 Total Depth 4369 Chlorides 3000 ppm System LCM #1

Blow Description 1/2" in blow  
No return  
Bubble to open tool, No blow  
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>3</u>	<u>Mud w/oil spots on top</u>	<u>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 3' BHT 112° Gravity --- API RW --- @ ---° F Chlorides --- ppm

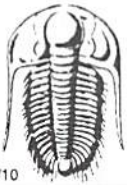
(A) Initial Hydrostatic <u>2209</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>22:30</u>
(B) First Initial Flow <u>19</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>22:38</u>
(C) First Final Flow <u>24</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>00:15</u>
(D) Initial Shut-In <u>1188</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>02:15</u>
(E) Second Initial Flow <u>25</u>	<input type="checkbox"/> Hourly Standby <u>---</u>	T-Out <u>04:35</u>
(F) Second Final Flow <u>28</u>	<input checked="" type="checkbox"/> Mileage <u>182.90</u>	Comments <u>Drilled up tools</u>
(G) Final Shut-In <u>1122</u>	<input type="checkbox"/> Sampler <u>---</u>	<u>@ 10:00 am 5/1/14</u>
(H) Final Hydrostatic <u>2178</u>	<input type="checkbox"/> Straddle <u>---</u>	<u>turned well over to Hays</u>

Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer <u>---</u>	<input type="checkbox"/> Ruined Shale Packer <u>---</u>
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer <u>---</u>	<input type="checkbox"/> Ruined Packer <u>---</u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder <u>---</u>	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby <u>---</u>	Total <u>1757.90</u>
	<input type="checkbox"/> Accessibility <u>---</u>	MP/DST Disc't <u>---</u>
	Sub Total <u>1757.90</u>	

Approved By \_\_\_\_\_ Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 58770

Well Name & No. K-M Unit #1-20 Test No. 4 Date 5/1/14  
 Company Downing-Nelson Oil Co. Elevation 2204 KB 2196 GL  
 Address PO Box 1019 Hays, KS 67601  
 Co. Rep / Geo. Al Downing Rig Discovery #3  
 Location: Sec. 20 Twp. 20S Rge. 20W Co. Pawnee State KS

Interval Tested 4365 - 4380 Zone Tested Osage  
 Anchor Length 15' Teal: 57 Drill Pipe Run 4312 Mud Wt. 9.4  
 Top Packer Depth 4360 - 4365 Drill Collars Run 31 Vis 50  
 Bottom Packer Depth 4380 Wt. Pipe Run                      WL 8.8  
 Total Depth 4437 Chlorides 5,000 ppm System LCM 1#  
 Blow Description IF-BOB 15 secs  
ISI-Weak surface blow died in 14 mins  
FF-BOB 15 secs  
FSI-No flow

Rec	Feet of	%gas	%oil	%water	%mud
<u>300</u>	<u>M</u>				
<u>2730</u>	<u>MW</u>			<u>20</u>	<u>30</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 3030' BHT 120° Gravity                      API RW 1.0 @ 37° F Chlorides 13,000 ppm  
 (A) Initial Hydrostatic 2286  Test 1050 T-On Location 1755  
 (B) First Initial Flow 824  Jars 250 T-Started 1922  
 (C) First Final Flow 1019  Safety Joint 75 T-Open 2149  
 (D) Initial Shut-In 1385  Circ Sub 50 T-Pulled 2339  
 (E) Second Initial Flow 905  Hourly Standby                      T-Out 0330 5/2  
 (F) Second Final Flow 1377  Mileage 118 RT 182.90 Comments Straddle Packer  
 (G) Final Shut-In 1383  Sampler                      Failure  
 (H) Final Hydrostatic 2158  Straddle 600  Ruined Shale Packer                       
 Shale Packer                       Ruined Packer                       
 Extra Packer                       Extra Copies                       
 Extra Recorder                      Sub Total 0  
 Day Standby                      Total 2207.90  
 Accessibility                      MP/DST Disc't                       
 Sub Total 2207.90

Approved By                      Our Representative Brannan L

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 58771

4/10

Well Name & No. K-M Unit #1-20 Test No. 5 Date 5/2/14  
 Company Downing - Nelson Oil Co Elevation 2204 KB 2196 GL  
 Address PO Box 1019 Hays, KS 67601  
 Co. Rep / Geo. Al Downing Rig Discovery #3  
 Location: Sec. 20 Twp. 20S Rge. 20W Co. Pawnee State KS

Interval Tested 4365 - 4378 Zone Tested Osage  
 Anchor Length 13' Drill Pipe Run 4312 Mud Wt. 9.4  
 Top Packer Depth 4360 - 4365 Drill Collars Run 31 Vis 50  
 Bottom Packer Depth 4378 Wt. Pipe Run \_\_\_\_\_ WL 8.8  
 Total Depth 4437 Chlorides 5,000 ppm System LCM 1#

Blow Description IF - BOB 12 mins  
ISI - No Blow  
FF - BOB 6 mins  
FSI - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>1656</u>	<u>MW</u>			<u>70</u>	<u>30</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 1650 BHT \_\_\_\_\_ Gravity 1.81 API RW 79 ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>2201</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>0655</u>
(B) First Initial Flow <u>50</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>0659</u>
(C) First Final Flow <u>247</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>1017</u>
(D) Initial Shut-In <u>1370</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>1252</u>
(E) Second Initial Flow <u>551</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>1537</u>
(F) Second Final Flow <u>786</u>	<input checked="" type="checkbox"/> Mileage <u>118 RT</u> 182.90	Comments <u>Straddle</u>
(G) Final Shut-In <u>1366</u>	<input type="checkbox"/> Sampler _____	<u>Packer Failure</u>
(H) Final Hydrostatic <u>1994</u>	<input checked="" type="checkbox"/> Straddle <u>600</u>	<input checked="" type="checkbox"/> Ruined Shale Packer <u>350</u>
	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Packer _____
	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____

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

Sub Total 2407.90

Sub Total 0  
 Total 2757.90  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Brogan L

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