



DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67661

ATTN: Marc Downing

FH Trust #1-11

11-1s-33w Rawlins,KS

Start Date: 2016.01.24 @ 13:20:00

End Date: 2016.01.24 @ 19:16:00

Job Ticket #: 64978 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2016.01.28 @ 08:04:40

Downing Nelson Oil Co., Inc.
11-1s-33w Rawlins,KS
FH Trust #1-11
DST # 1
LKC "B"
2016.01.24



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dow ning Nelson Oil Co., Inc.

11-1s-33w Rawlins,KS

PO Box 1019
Hays, KS 67661

FH Trust #1-11

Job Ticket: 64978

DST#: 1

ATTN: Marc Dow ning

Test Start: 2016.01.24 @ 13:20:00

GENERAL INFORMATION:

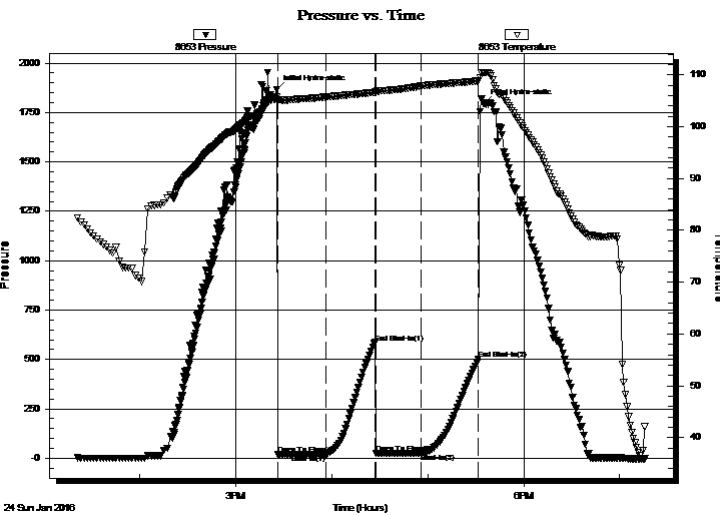
Formation: **LKC "B"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 15:26:00
 Time Test Ended: 19:16:00
 Interval: **3800.00 ft (KB) To 3856.00 ft (KB) (TVD)**
 Total Depth: 3856.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Kevin Mack
 Unit No: 82
 Reference Elevations: 2858.00 ft (KB)
 2853.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8653

Outside

Press@RunDepth: 23.99 psig @ 3801.00 ft (KB)
 Start Date: 2016.01.24 End Date: 2016.01.24
 Start Time: 13:21:00 End Time: 19:16:00
 Capacity: 8000.00 psig
 Last Calib.: 2016.01.24
 Time On Btm: 2016.01.24 @ 15:25:30
 Time Off Btm: 2016.01.24 @ 17:35:00

TEST COMMENT: 30 - IF- 1/8" Blow built to 1/2"
 30 - IS- No Return
 30 - FF- No Blow
 30 - FS- No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1866.82	105.74	Initial Hydro-static
1	20.77	105.11	Open To Flow (1)
31	20.41	105.73	Shut-In(1)
62	585.21	106.64	End Shut-In(1)
62	23.63	106.71	Open To Flow (2)
90	23.99	107.81	Shut-In(2)
126	499.61	108.81	End Shut-In(2)
130	1794.20	110.46	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	OSM 100M (oil spots)	0.10

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning Nelson Oil Co., Inc.

11-1s-33w Rawlins,KS

PO Box 1019
Hays, KS 67661

FH Trust #1-11

Job Ticket: 64978

DST#: 1

ATTN: Marc Dow ning

Test Start: 2016.01.24 @ 13:20:00

Tool Information

Drill Pipe:	Length: 3468.00 ft	Diameter: 3.80 inches	Volume: 48.65 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 311.00 ft	Diameter: 3.25 inches	Volume: 3.19 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	54000.00 lb
			<u>Total Volume: 51.84 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial	52000.00 lb
Depth to Top Packer:	3800.00 ft			Final	52000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	56.00 ft				
Tool Length:	84.00 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			3773.00	
Shut In Tool	5.00			3778.00	
Hydraulic tool	5.00			3783.00	
Jars	5.00			3788.00	
Safety Joint	3.00			3791.00	
Packer	5.00			3796.00	28.00 Bottom Of Top Packer
Packer	4.00			3800.00	
Stubb	1.00			3801.00	
Recorder	0.00	8653	Outside	3801.00	
Recorder	0.00	8520	Inside	3801.00	
Perforations	16.00			3817.00	
Change Over Sub	1.00			3818.00	
Drill Pipe	32.00			3850.00	
Change Over Sub	1.00			3851.00	
Bullnose	5.00			3856.00	56.00 Bottom Packers & Anchor

Total Tool Length: 84.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co., Inc.

11-1s-33w Rawlins,KS

PO Box 1019
Hays, KS 67661

FH Trust #1-11

Job Ticket: 64978

DST#: 1

ATTN: Marc Downing

Test Start: 2016.01.24 @ 13:20:00

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: 54.00 sec/qt

Cushion Volume: bbl

Water Loss: 7.58 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure: psig

Salinity: 1000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	OSM 100M (oil spots)	0.103

Total Length: 10.00 ft Total Volume: 0.103 bbl

Num Fluid Samples: 0

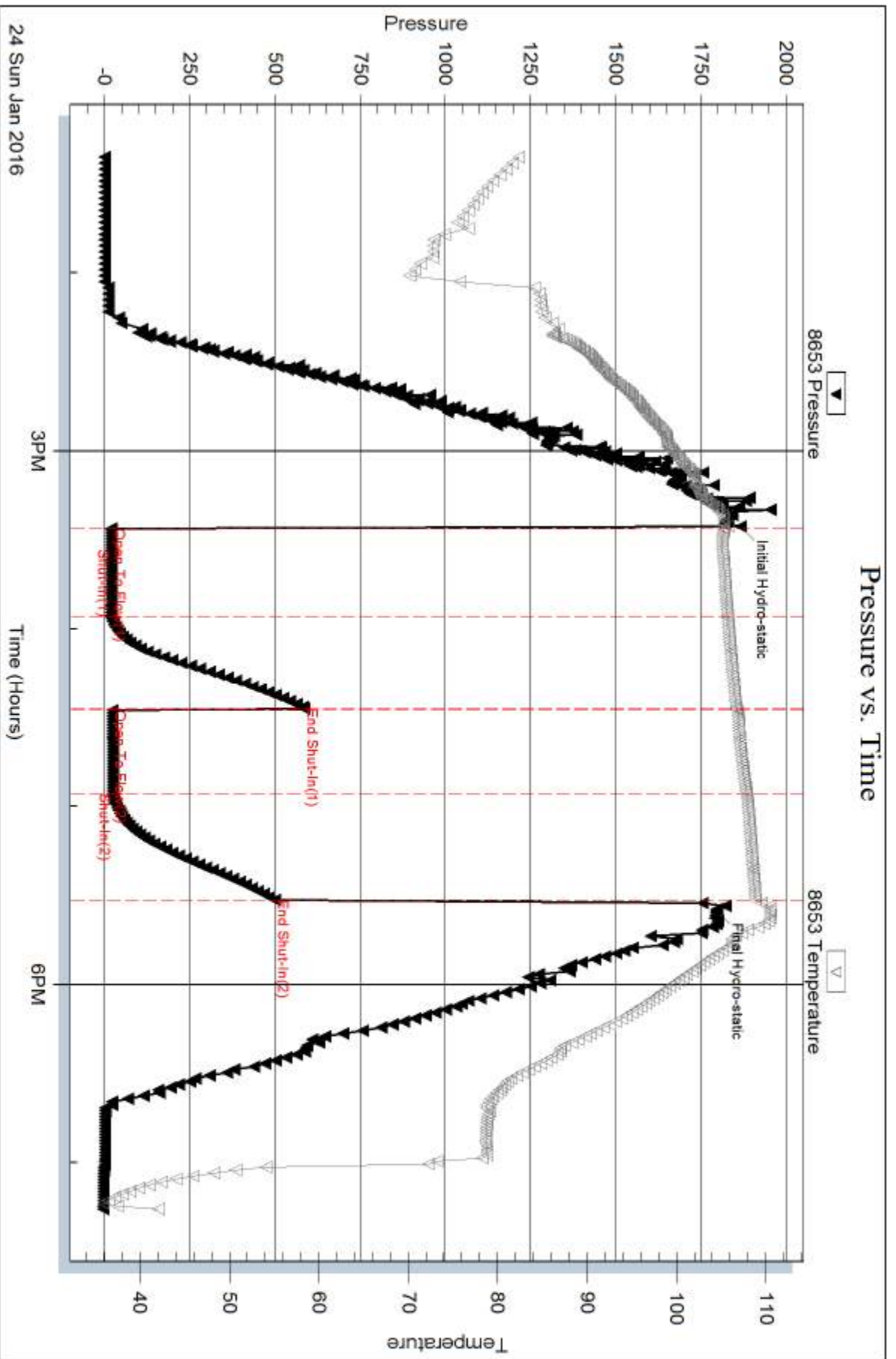
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



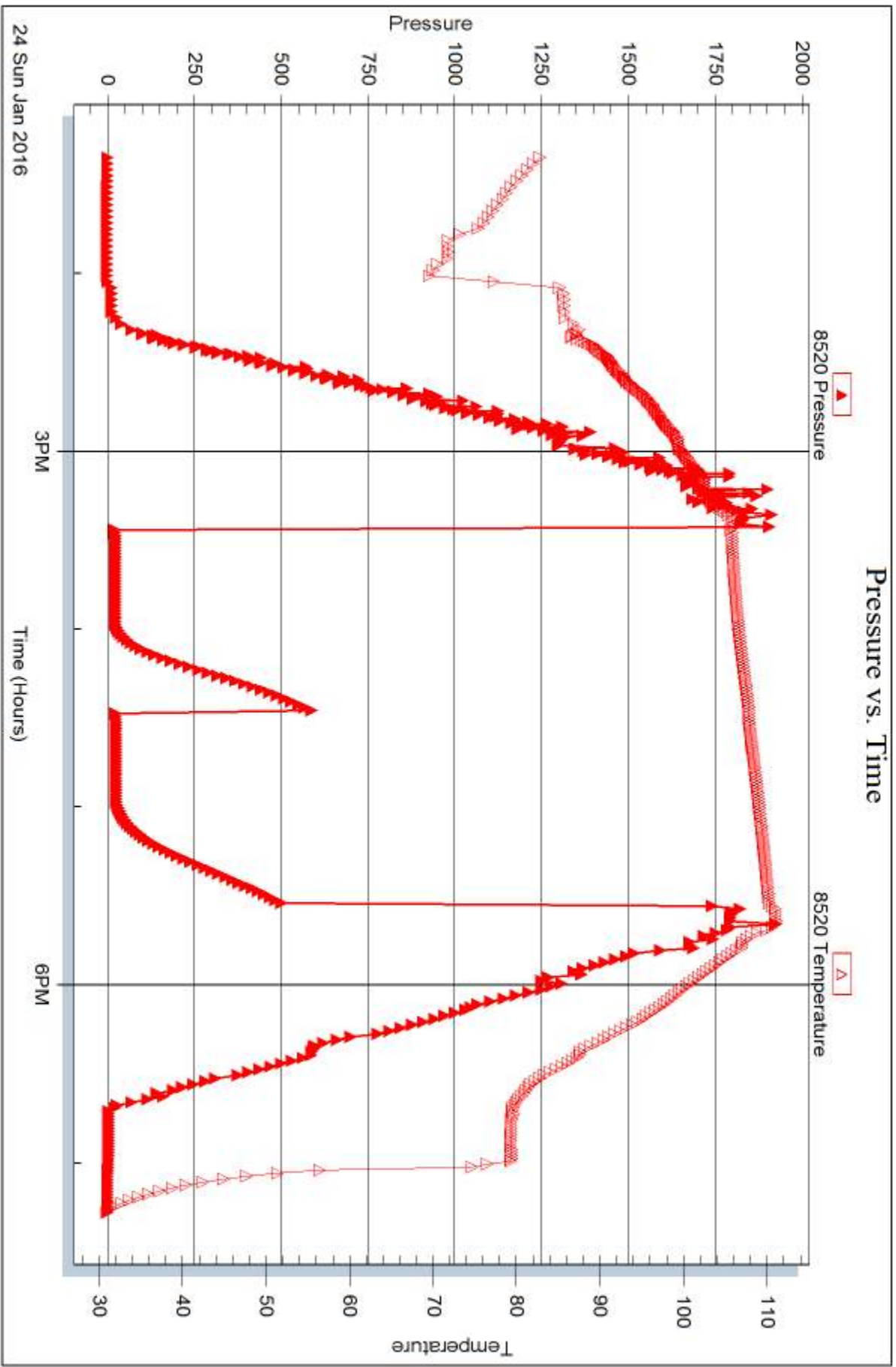
Serial #: 8520

Inside

Dow n ing Nelson Oil Co., Inc.

FH Trust #1-11

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 64978

Printed: 2016.01.28 @ 08:04:42



DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67661

ATTN: Marc Downing

FH Trust #1-11

11-1s-33w Rawlins,KS

Start Date: 2016.01.25 @ 06:40:00

End Date: 2016.01.25 @ 12:39:00

Job Ticket #: 64979 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2016.01.28 @ 08:04:14



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Dow ning Nelson Oil Co., Inc.

11-1s-33w Rawlins,KS

PO Box 1019
Hays, KS 67661

FH Trust #1-11

Job Ticket: 64979

DST#: 2

ATTN: Marc Dow ning

Test Start: 2016.01.25 @ 06:40:00

GENERAL INFORMATION:

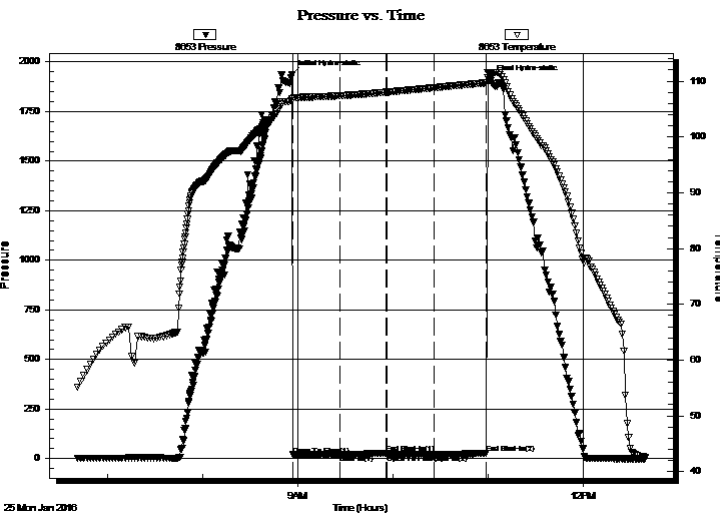
Formation: **LKC "D"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:56:30
 Time Test Ended: 12:39:00
 Interval: **3894.00 ft (KB) To 3950.00 ft (KB) (TVD)**
 Total Depth: 3950.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Kevin Mack
 Unit No: 82
 Reference Elevations: 2858.00 ft (KB)
 2853.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8653

Outside

Press@RunDepth: 20.39 psig @ 3895.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2016.01.25 End Date: 2016.01.25 Last Calib.: 2016.01.25
 Start Time: 06:41:00 End Time: 12:39:00 Time On Btm: 2016.01.25 @ 08:56:00
 Time Off Btm: 2016.01.25 @ 11:01:00

TEST COMMENT: 30 - IF- 1/4" Blow built to 1/2", then died back to 1/4"
 30 - IS- No Return
 30 - FF- No Blow
 30 - FS- No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1935.08	106.86	Initial Hydro-static
1	18.65	106.80	Open To Flow (1)
31	19.12	107.39	Shut-In(1)
60	28.08	108.02	End Shut-In(1)
60	20.04	108.03	Open To Flow (2)
90	20.39	108.82	Shut-In(2)
123	27.20	109.71	End Shut-In(2)
125	1913.49	111.48	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM 100M (oil spots)	0.05

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning Nelson Oil Co., Inc.

11-1s-33w Rawlins,KS

PO Box 1019
Hays, KS 67661

FH Trust #1-11

Job Ticket: 64979

DST#: 2

ATTN: Marc Dow ning

Test Start: 2016.01.25 @ 06:40:00

Tool Information

Drill Pipe:	Length: 3567.00 ft	Diameter: 3.80 inches	Volume: 50.04 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 311.00 ft	Diameter: 3.25 inches	Volume: 3.19 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	58000.00 lb
			<u>Total Volume:</u> 53.23 bbl	Tool Chased	ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial	55000.00 lb
Depth to Top Packer:	3894.00 ft			Final	55000.00 lb
Depth to Bottom Packer:	ft				
Interval betw een Packers:	56.00 ft				
Tool Length:	84.00 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			3867.00	
Shut In Tool	5.00			3872.00	
Hydraulic tool	5.00			3877.00	
Jars	5.00			3882.00	
Safety Joint	3.00			3885.00	
Packer	5.00			3890.00	28.00 Bottom Of Top Packer
Packer	4.00			3894.00	
Stubb	1.00			3895.00	
Recorder	0.00	8653	Outside	3895.00	
Recorder	0.00	8520	Inside	3895.00	
Perforations	16.00			3911.00	
Change Over Sub	1.00			3912.00	
Drill Pipe	32.00			3944.00	
Change Over Sub	1.00			3945.00	
Bullnose	5.00			3950.00	56.00 Bottom Packers & Anchor

Total Tool Length: 84.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co., Inc.

11-1s-33w Rawlins,KS

PO Box 1019
Hays, KS 67661

FH Trust #1-11

Job Ticket: 64979

DST#: 2

ATTN: Marc Downing

Test Start: 2016.01.25 @ 06:40:00

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: 54.00 sec/qt

Cushion Volume: bbl

Water Loss: 7.58 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure: psig

Salinity: 1000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	OSM 100M (oil spots)	0.051

Total Length: 5.00 ft Total Volume: 0.051 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

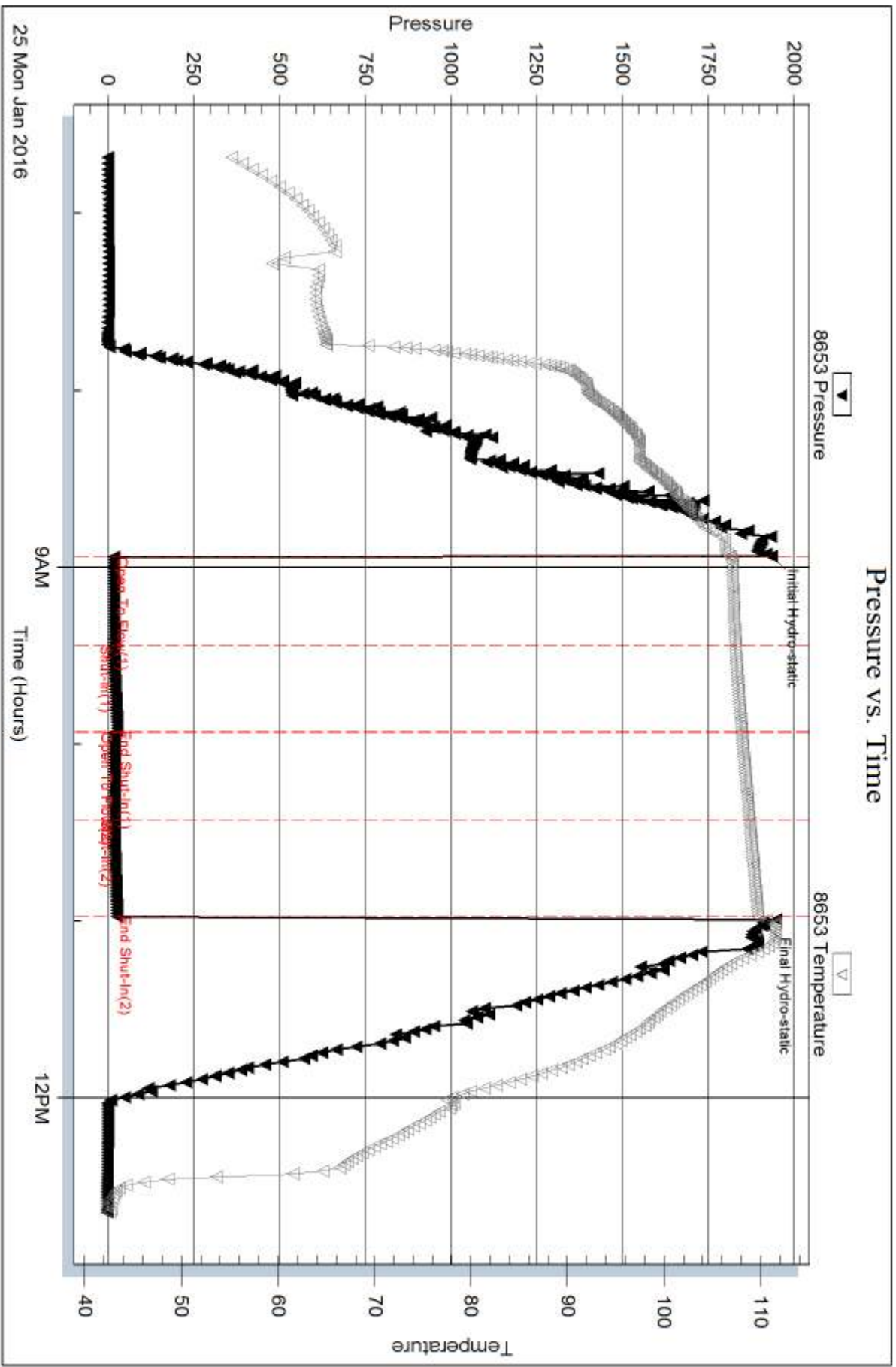
Recovery Comments:

Serial #: 8653

Outside Dow n ing Nelson Oil Co., Inc.

FH Trust #1-11

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 64979

Printed: 2016.01.28 @ 08:04:15

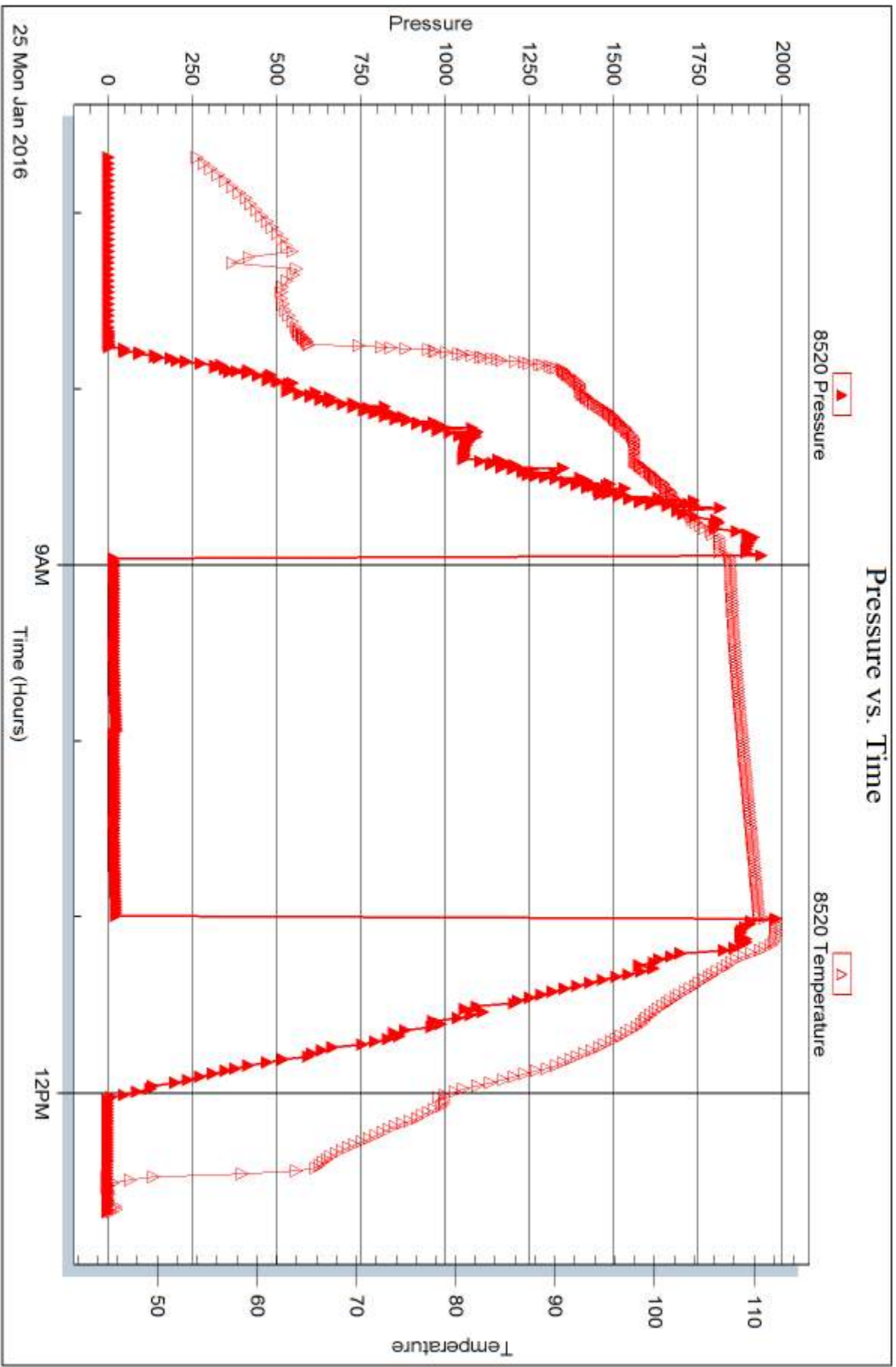
Serial #: 8520

Inside

Downing Nelson Oil Co., Inc.

FH Trust #1-11

DST Test Number: 2





DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67661

ATTN: Marc Downing

FH Trust #1-11

11-1s-33w Rawlins,KS

Start Date: 2016.01.26 @ 08:57:00

End Date: 2016.01.26 @ 14:57:30

Job Ticket #: 64980 DST #: 3

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2016.01.28 @ 08:02:24



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Downing Nelson Oil Co., Inc.

11-1s-33w Rawlins, KS

PO Box 1019
Hays, KS 67661

FH Trust #1-11

Job Ticket: 64980

DST#: 3

ATTN: Marc Downing

Test Start: 2016.01.26 @ 08:57:00

GENERAL INFORMATION:

Formation: **LKC "E"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:02:00

Time Test Ended: 14:57:30

Test Type: Conventional Straddle (Initial)

Tester: Kevin Mack

Unit No: 82

Interval: 3943.00 ft (KB) To 4029.00 ft (KB) (TVD)

Reference Elevations: 2858.00 ft (KB)

Total Depth: 4100.00 ft (KB) (TVD)

2853.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8653 Outside

Press@RunDepth: 34.11 psig @ 3944.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.01.26

End Date:

2016.01.26

Last Calib.:

2016.01.26

Start Time: 08:58:00

End Time:

14:57:30

Time On Btm:

2016.01.26 @ 11:01:30

Time Off Btm:

2016.01.26 @ 13:15:30

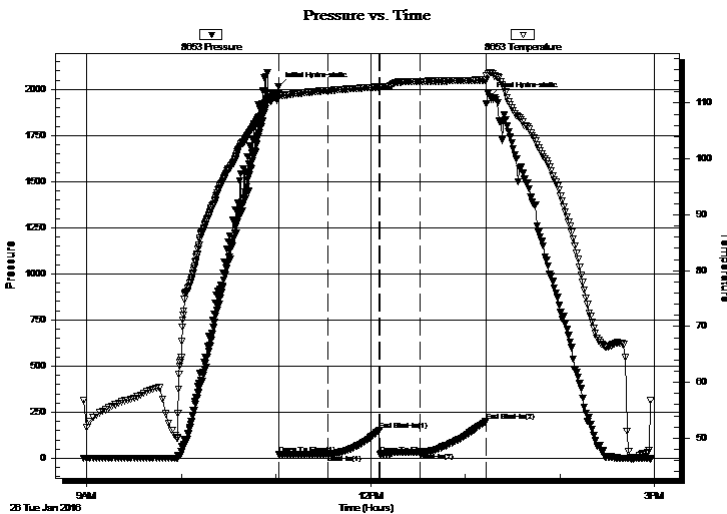
TEST COMMENT: 30 - IF- 1/4" Blow built to 1"

30 - IS- No Return

30 - FF- No Blow - Flushed tool at 5 min. - 1/2" Blow ired in 10 min.

30 - FS- No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2015.70	111.69	Initial Hydro-static
1	22.47	111.27	Open To Flow (1)
32	24.52	112.25	Shut-In(1)
64	153.97	112.92	End Shut-In(1)
65	24.25	112.87	Open To Flow (2)
90	34.11	113.88	Shut-In(2)
132	200.96	114.15	End Shut-In(2)
134	1960.95	115.45	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud 100M	0.10

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Co., Inc.

11-1s-33w Rawlins,KS

PO Box 1019
Hays, KS 67661

FH Trust #1-11

Job Ticket: 64980

DST#: 3

ATTN: Marc Downing

Test Start: 2016.01.26 @ 08:57:00

Tool Information

Drill Pipe:	Length: 3630.00 ft	Diameter: 3.80 inches	Volume: 50.92 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 311.00 ft	Diameter: 3.25 inches	Volume: 3.19 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 64000.00 lb
			<u>Total Volume: 54.11 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3943.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	4026.00 ft			
Interval between Packers:	83.00 ft			
Tool Length:	186.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description

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

Change Over Sub	1.00			3916.00	
Shut In Tool	5.00			3921.00	
Hydraulic tool	5.00			3926.00	
Jars	5.00			3931.00	
Safety Joint	3.00			3934.00	
Packer	5.00			3939.00	28.00 Bottom Of Top Packer
Packer	4.00			3943.00	
Stubb	1.00			3944.00	
Recorder	0.00	8653	Outside	3944.00	
Recorder	0.00	8520	Inside	3944.00	
Stubb	1.00			3945.00	
Perforations	1.00			3946.00	
Change Over Sub	1.00			3947.00	
Drill Pipe	64.00			4011.00	
Change Over Sub	1.00			4012.00	
Perforations	13.00			4025.00	
Blank Off Sub	1.00			4026.00	83.00 Tool Interval
Packer	4.00			4030.00	
Packer - Shale	0.00			4030.00	
Stubb	1.00			4031.00	
Perforations	1.00			4032.00	
Change Over Sub	1.00			4033.00	
Recorder	0.00	8017	Below	4033.00	
Drill Pipe	64.00			4097.00	
Change Over Sub	1.00			4098.00	
Bullnose	3.00			4101.00	75.00 Bottom Packers & Anchor

Total Tool Length: 186.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co., Inc.

11-1s-33w Rawlins,KS

PO Box 1019
Hays, KS 67661

FH Trust #1-11

Job Ticket: 64980

DST#: 3

ATTN: Marc Downing

Test Start: 2016.01.26 @ 08:57:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 46.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.49 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud 100M	0.103

Total Length: 10.00 ft Total Volume: 0.103 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

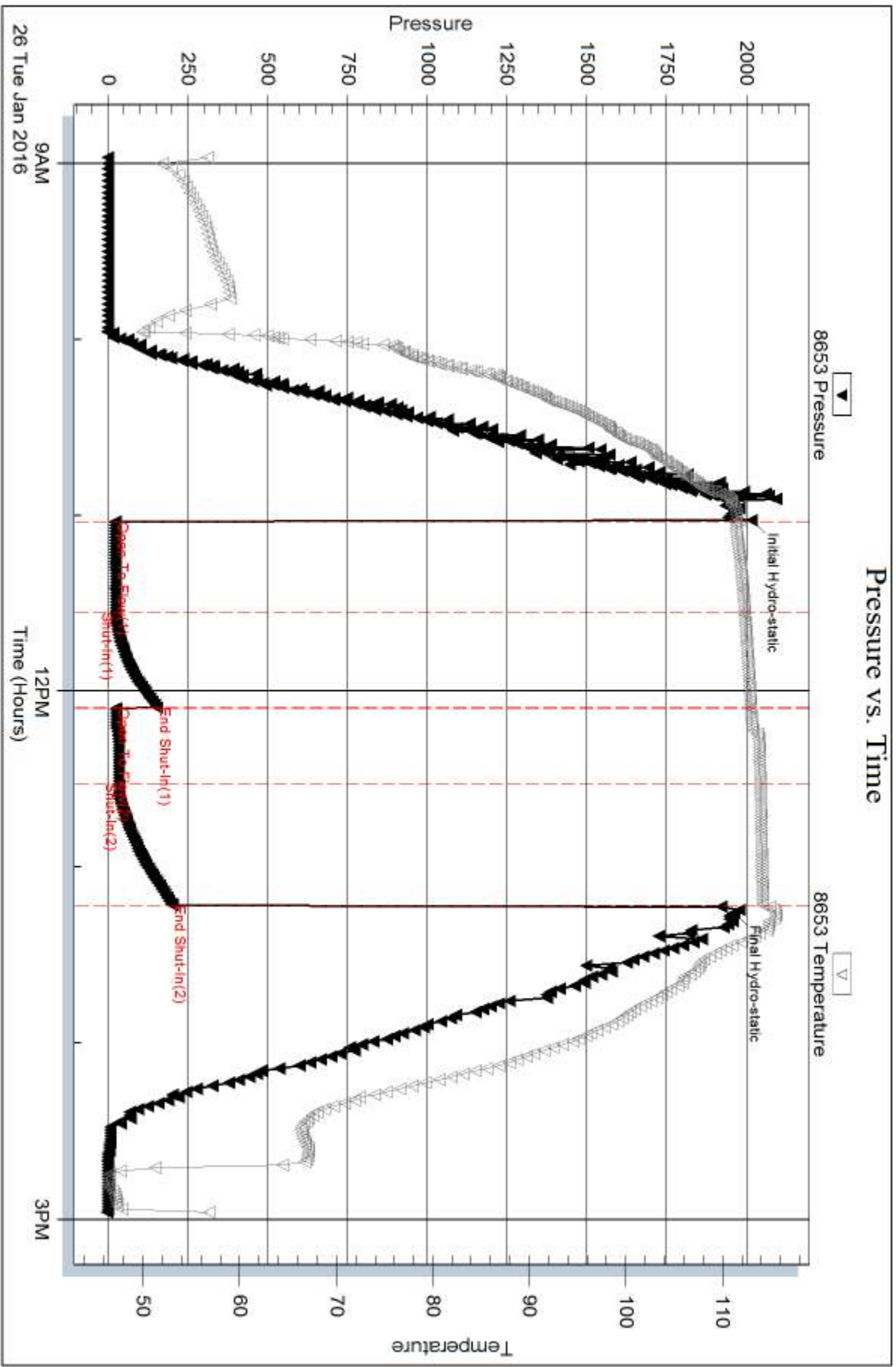
Recovery Comments:

Serial #: 8653

Outside Dow n ing Nelson Oil Co., Inc.

FH Trust #1-11

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 64980

Printed: 2016.01.28 @ 08:02:26

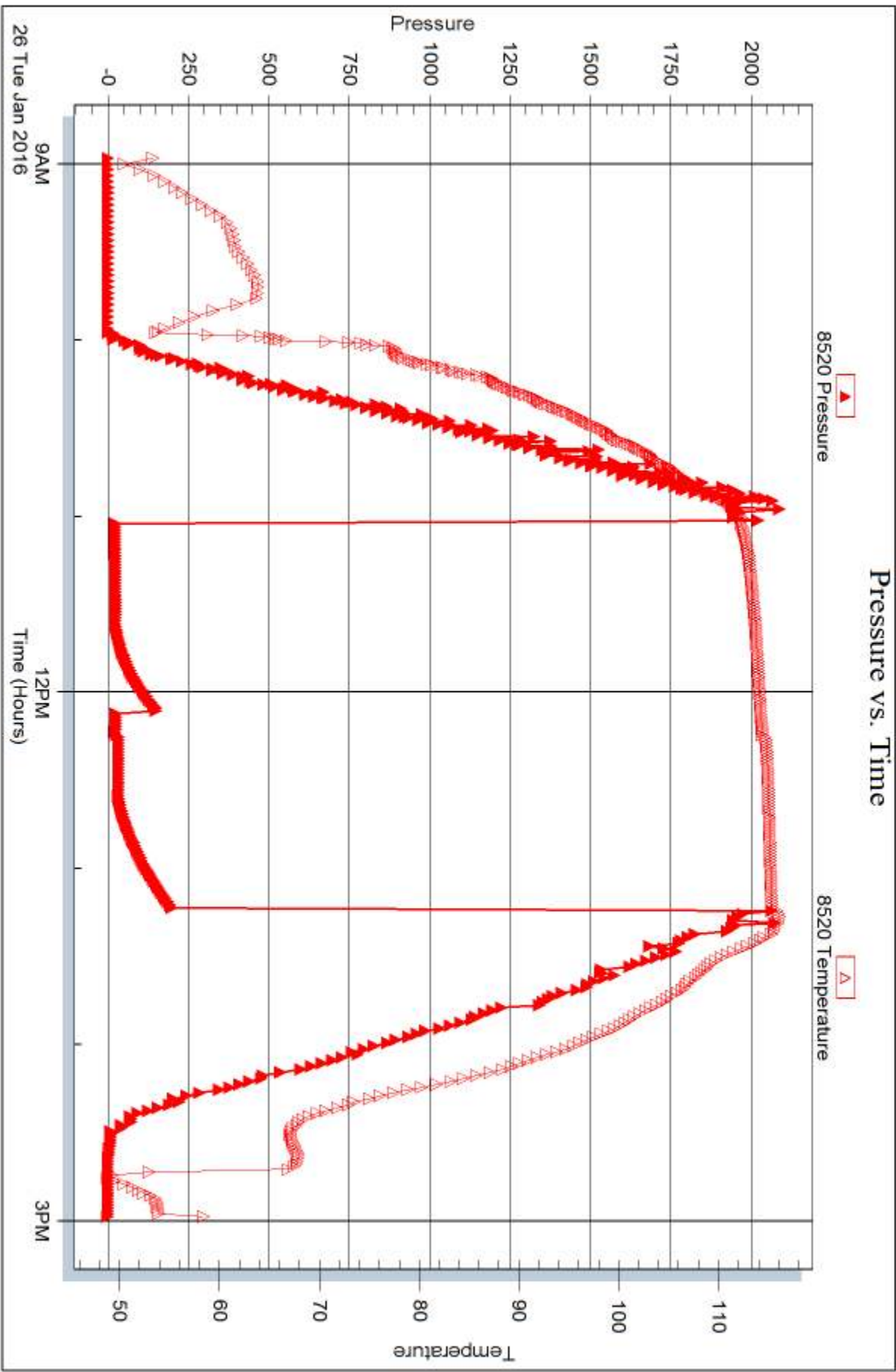
Serial #: 8520

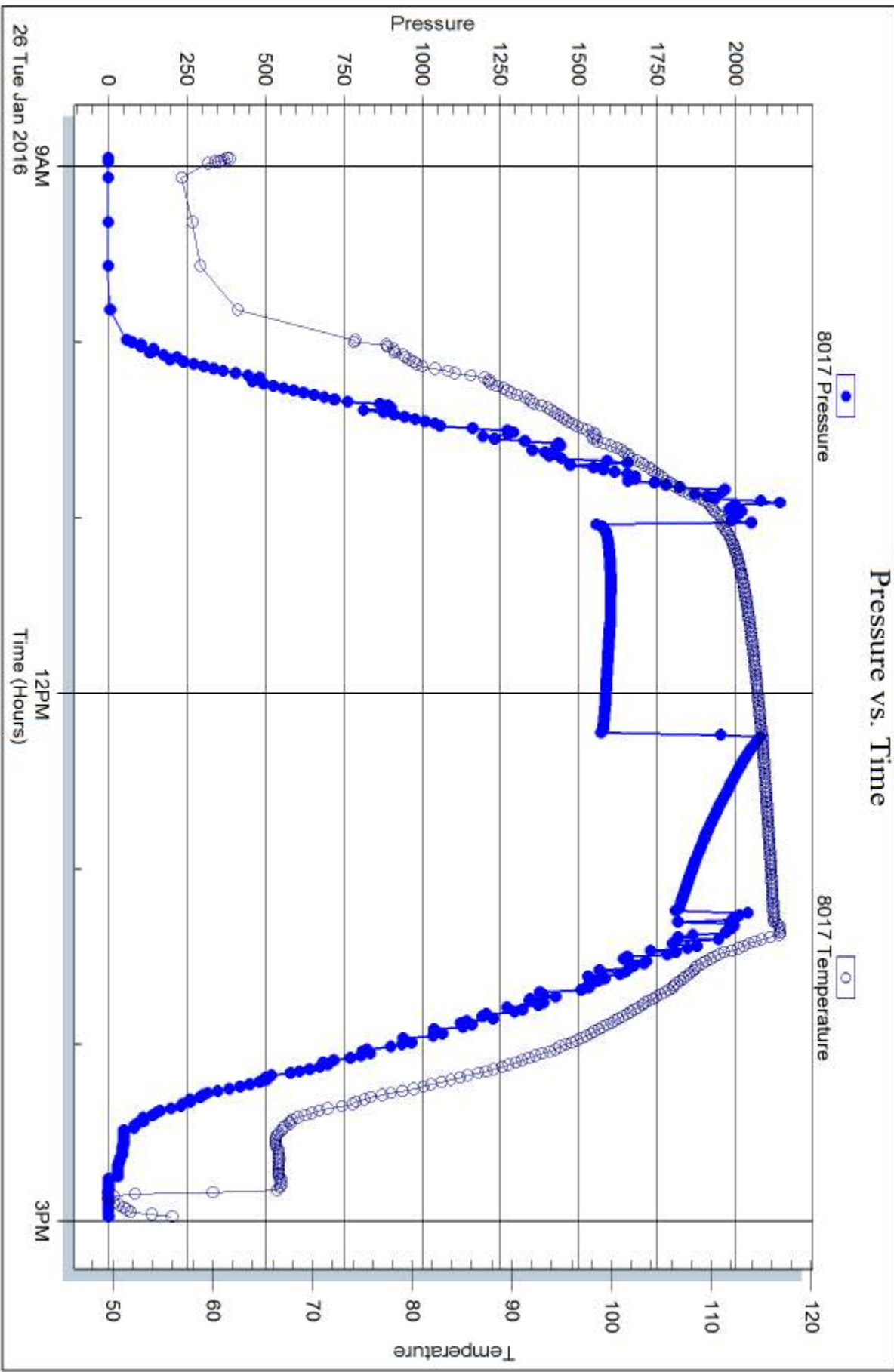
Inside

Dow n ing Nelson Oil Co., Inc.

FH Trust #1-11

DST Test Number: 3







DRILL STEM TEST REPORT

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

PO Box 1019
Hays, KS 67661

ATTN: Marc Downing

FH Trust #1-11

11-1s-33w Rawlins,KS

Start Date: 2016.01.26 @ 15:32:00

End Date: 2016.01.26 @ 20:48:00

Job Ticket #: 64981 DST #: 4

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2016.01.28 @ 08:02:06



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Downing Nelson Oil Co., Inc.

11-1s-33w Rawlins, KS

PO Box 1019
Hays, KS 67661

FH Trust #1-11

Job Ticket: 64981

DST#: 4

ATTN: Marc Downing

Test Start: 2016.01.26 @ 15:32:00

GENERAL INFORMATION:

Formation: **LKC "F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:13:20

Time Test Ended: 20:48:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 82

Interval: 3990.00 ft (KB) To 4100.00 ft (KB) (TVD)

Reference Elevations: 2858.00 ft (KB)

Total Depth: 4100.00 ft (KB) (TVD)

2853.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8653 Outside

Press@RunDepth: 26.36 psig @ 3991.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.01.26

End Date: 2016.01.26

Last Calib.: 2016.01.26

Start Time: 15:33:00

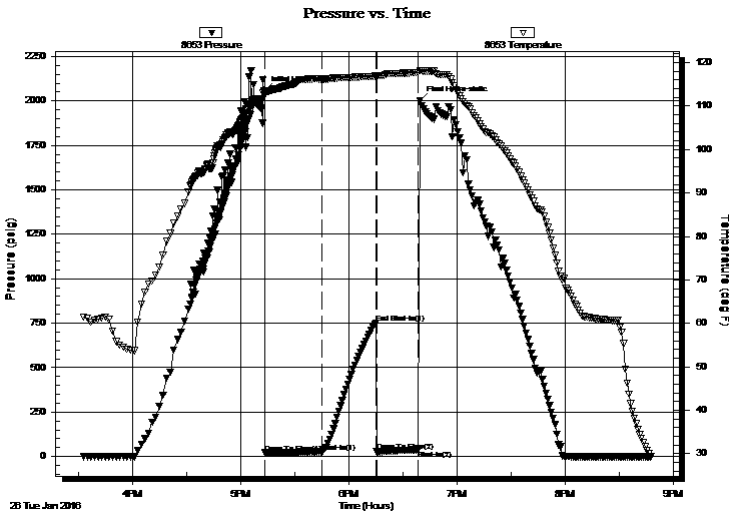
End Time: 20:48:00

Time On Btm: 2016.01.26 @ 17:13:10

Time Off Btm: 2016.01.26 @ 18:39:30

TEST COMMENT: 30 - IF- 1/2" Blow built to 1" then died back to Weak Surface Blow
30 - ISI- No Return
25 - FF- No Blow - Flushed toll at 5 min. - 1/4" Died in 6 min.
Pulled tools during FF

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2054.90	113.46	Initial Hydro-static
1	21.50	112.57	Open To Flow (1)
32	26.36	116.18	Shut-In(1)
62	752.47	116.91	End Shut-In(1)
63	27.88	116.78	Open To Flow (2)
86	33.84	117.68	Shut-In(2)
87	2000.59	118.22	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud 100M	0.15

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Co., Inc.

11-1s-33w Rawlins,KS

PO Box 1019
Hays, KS 67661

FH Trust #1-11

Job Ticket: 64981

DST#: 4

ATTN: Marc Downing

Test Start: 2016.01.26 @ 15:32:00

Tool Information

Drill Pipe:	Length: 3661.00 ft	Diameter: 3.80 inches	Volume: 51.35 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 311.00 ft	Diameter: 3.25 inches	Volume: 3.19 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 54.54 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3990.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	110.00 ft			
Tool Length:	138.00 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			3963.00	
Shut In Tool	5.00			3968.00	
Hydraulic tool	5.00			3973.00	
Jars	5.00			3978.00	
Safety Joint	3.00			3981.00	
Packer	5.00			3986.00	28.00 Bottom Of Top Packer
Packer	4.00			3990.00	
Stubb	1.00			3991.00	
Recorder	0.00	8653	Outside	3991.00	
Recorder	0.00	8520	Inside	3991.00	
Perforations	10.00			4001.00	
Change Over Sub	1.00			4002.00	
Drill Pipe	94.00			4096.00	
Change Over Sub	1.00			4097.00	
Bullnose	3.00			4100.00	110.00 Bottom Packers & Anchor

Total Tool Length: 138.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co., Inc.

11-1s-33w Rawlins,KS

PO Box 1019
Hays, KS 67661

FH Trust #1-11

Job Ticket: 64981

DST#: 4

ATTN: Marc Downing

Test Start: 2016.01.26 @ 15:32:00

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: 46.00 sec/qt

Cushion Volume: bbl

Water Loss: 7.49 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure: psig

Salinity: 1000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	Mud 100M	0.154

Total Length: 15.00 ft Total Volume: 0.154 bbl

Num Fluid Samples: 0

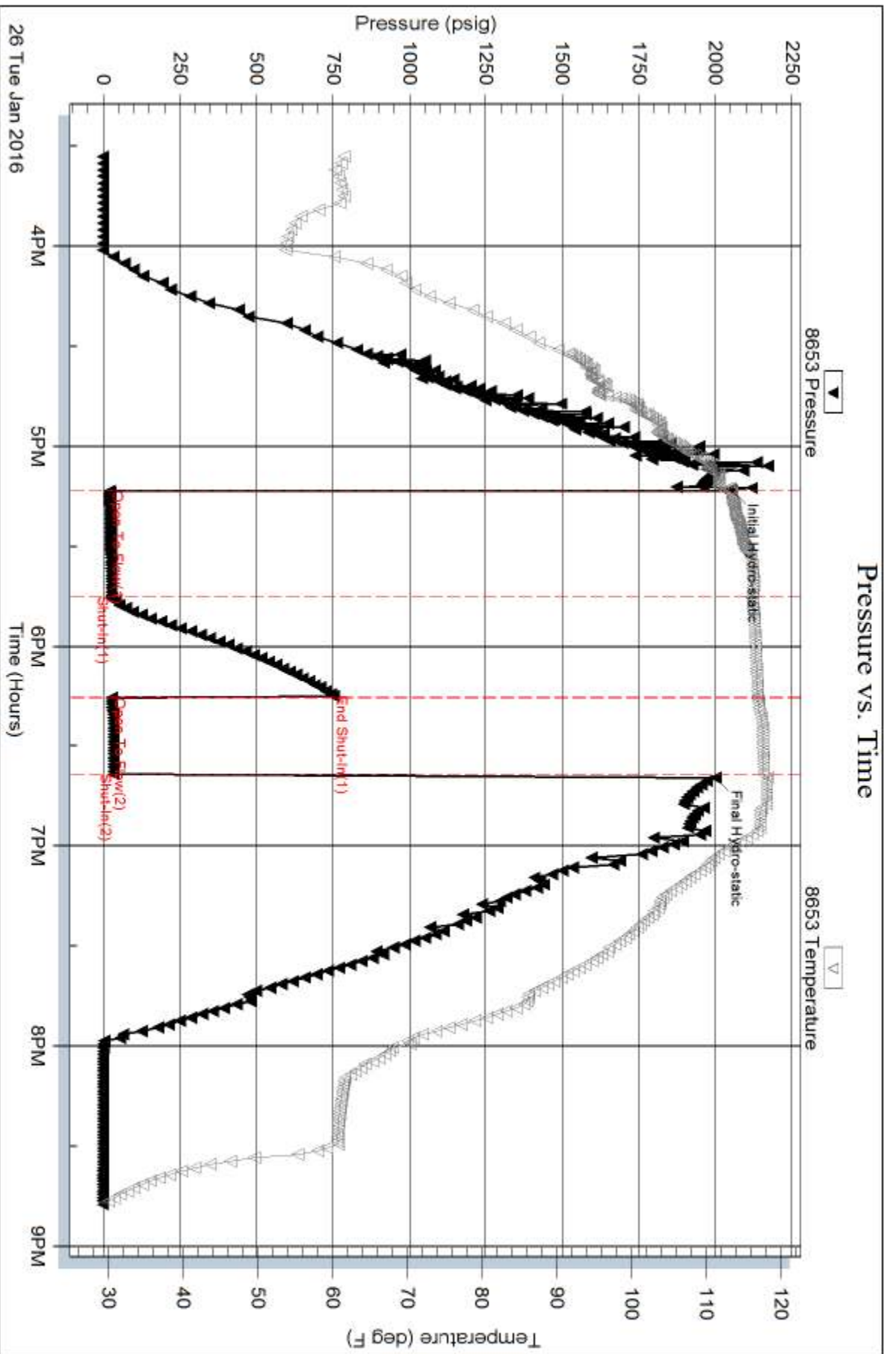
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



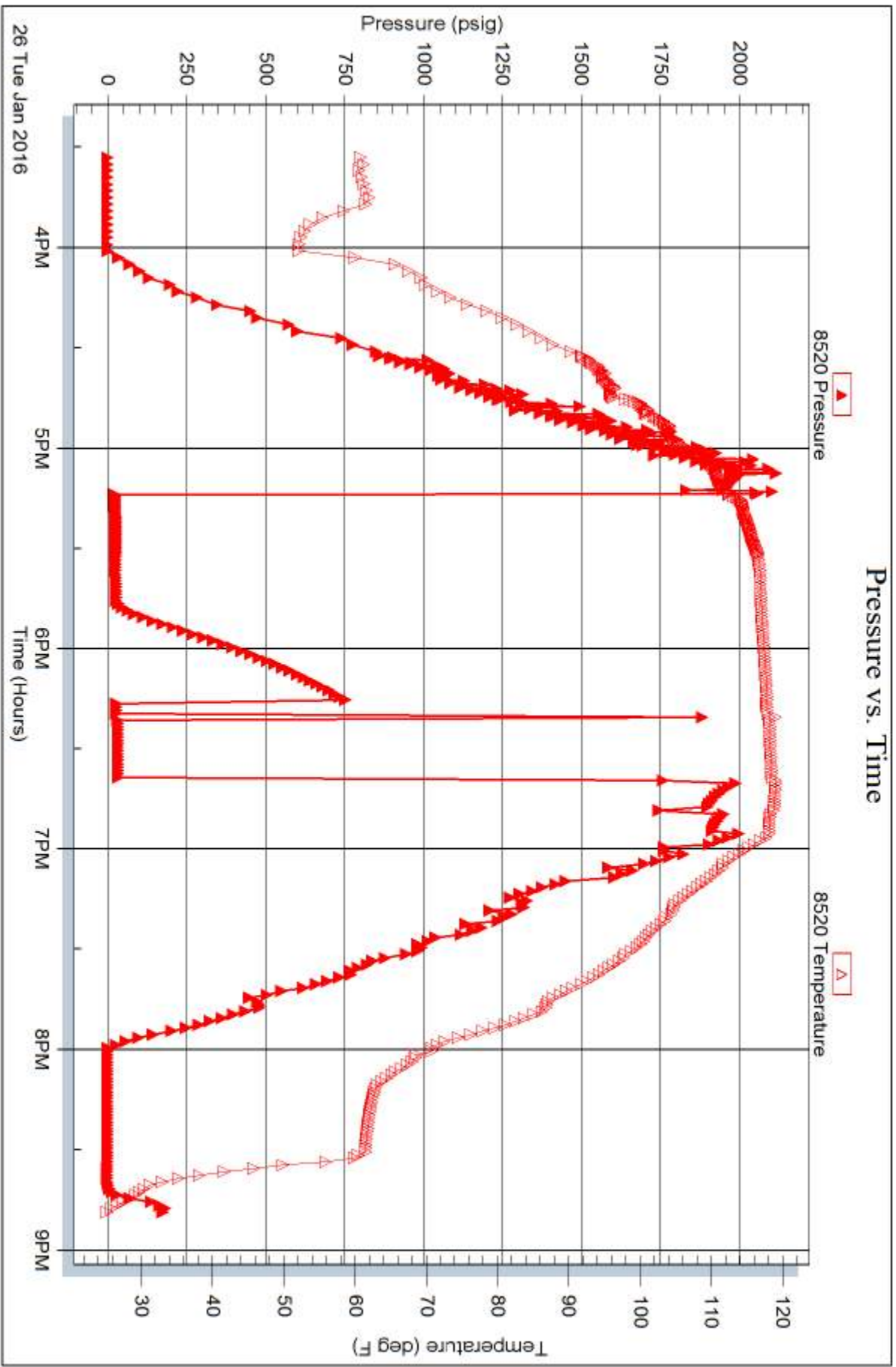
Serial #: 8520

Inside

Downing Nelson Oil Co., Inc.

FH Trust #1-11

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 64981

Printed: 2016.01.28 @ 08:02:08



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **64978**

Well Name & No. FATrust #1-11 Test No. 1 Date 1-24-16
 Company Downing Nelson Oil Co., Inc Elevation 2858 KB 2853 GL
 Address PO Box 1019 Hays, KS 67661
 Co. Rep / Geo. Marc Downing Rig Discover #1
 Location: Sec. 11 Twp. 1S Rge. 33W Co. Rawlins State KS

Interval Tested 3800-3856 Zone Tested LKC "B"
 Anchor Length 56' Drill Pipe Run 3468 Mud Wt. 9.1
 Top Packer Depth 3796 Drill Collars Run 0 Vis 54
 Bottom Packer Depth 3800 Wt. Pipe Run 311' WL 7.6
 Total Depth 3856 Chlorides 1,000 ppm System LCM 2.5#
 Blow Description IF-1/8" Blow built to 1/2"
ISI- No Return
FF- No Blow
FSE- No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>OSM</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 10 BHT 109° Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic 1866 Test 1050 T-On Location 12:20 PM
 (B) First Initial Flow 200 Jars 250 T-Started 1:20 PM
 (C) First Final Flow 200 Safety Joint 75 T-Open 3:27 PM
 (D) Initial Shut-In 585 Circ Sub _____ T-Pulled 5:27 PM
 (E) Second Initial Flow 23 Hourly Standby _____ T-Out 7:18 PM
 (F) Second Final Flow 23 Mileage 91 RT Comments _____
 (G) Final Shut-In 499 Sampler _____
 (H) Final Hydrostatic 1794 Straddle _____
 Shale Packer _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1466

Initial Open 300
 Initial Shut-In 300
 Final Flow 300
 Final Shut-In 300

Sub Total 0
 Total 1466
 MP/DST Disc't _____

Approved By _____ Our Representative _____

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. **64979**

Well Name & No. FH Trust #1-11 Test No. 2 Date 1-25-16
 Company Downing Nelson Oil Co., Inc Elevation 2858 KB 2853 GL
 Address PO Box 1019 Hays, KS 67661
 Co. Rep / Geo. Marc Downing Rig Discovery #1
 Location: Sec. 11 Twp. 15 Rge. 33 W Co. Rawlins State KS

Interval Tested 3894-3950 Zone Tested LKC "D"
 Anchor Length 56' Drill Pipe Run 3567' Mud Wt. 9.1
 Top Packer Depth 3894 Drill Collars Run 0 Vis 54
 Bottom Packer Depth 3894 Wt. Pipe Run 311' WL 7.6
 Total Depth 3950 Chlorides 10000 ppm System LCM 2.5#
 Blow Description IF-1/4" Blow built to 1/2" then died back to 1/4"
ISI- No Return
FF- No Blow
FSI- No Return

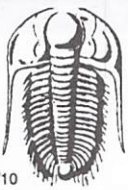
Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>OSM</u>			<u>1000</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

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

(A) Initial Hydrostatic <u>1935</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>6:30 AM</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>6:40 AM</u>
(C) First Final Flow <u>19</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>8:57 AM</u>
(D) Initial Shut-In <u>28</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>10:57 AM</u>
(E) Second Initial Flow <u>20</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>12:40 PM</u>
(F) Second Final Flow <u>20</u>	<input checked="" type="checkbox"/> Mileage <u>91RT</u>	Comments
(G) Final Shut-In <u>27</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1913</u>	<input type="checkbox"/> Straddle	
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
	<input type="checkbox"/> Day Standby	Sub Total
	<input type="checkbox"/> Accessibility	Total <u>1466</u>
	Sub Total <u>1466</u>	MP/DST Disc't

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. **64980**

Well Name & No. FK Trust #1-11 Test No. 3 Date 1-26-16
 Company Downing Nelson Oil Co., Inc. Elevation 2858 KB 2853 GL
 Address PO Box 1019 Hays, KS 67661
 Co. Rep / Geo. Marc Downing Rig Discovery #1
 Location: Sec. 11 Twp. 13 Rge. 33W Co. Rawlins State KS

Interval Tested 3943-4029 Zone Tested LKL "E"
 Anchor Length 86' Drill Pipe Run 3630 Mud Wt. 9.2
 Top Packer Depth 3939 Drill Collars Run 0 Vis 46
 Bottom Packer Depth 3943-4029 straddle packer Wt. Pipe Run 311 WL 7.5
 Total Depth 4108 Chlorides 4000 ppm System LCM 2#
 Blow Description IF-1/4" Blow built to 1"
ISI- No Return

FF- No Blow - Flushed tool cut 5 min. - 1/2" Blow dial in 10 min.
FST- No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Mud 100</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 10 BHT 114° Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 2015 Test 1150 T-On Location 8:10 AM
 (B) First Initial Flow 22 Jars 250 T-Started 8:57 AM
 (C) First Final Flow 24 Safety Joint 75 T-Open 11:03 AM
 (D) Initial Shut-In 153 Circ Sub _____ T-Pulled 1:03 PM
 (E) Second Initial Flow 24 Hourly Standby _____ T-Out 2:52 PM
 (F) Second Final Flow 34 Mileage 91 RT Comments _____
 (G) Final Shut-In 200 Sampler _____
 (H) Final Hydrostatic 1960 Straddle 600 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 2166
 Accessibility _____ MP/DST Disc't _____
 Sub Total 2166

Approved By _____ Our Representative

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. **64981**

Well Name & No. FH Trust #1-11 Test No. 4 Date 1-26-76
 Company Downing Nelson Oil Co., Inc. Elevation 2858 KB 2853 GL
 Address Po Box 1019 Hays, KS 67661
 Co. Rep / Geo. Marc Downing Rig Discovery #1
 Location: Sec. 11 Twp. 1S Rge. 33W Co. Rawlins State KS

Interval Tested 3990-4100 Zone Tested LKC "F"
 Anchor Length 110' Drill Pipe Run 3661' Mud Wt. 9.2
 Top Packer Depth 3986 Drill Collars Run 0 Vis 46
 Bottom Packer Depth 3990 Wt. Pipe Run 311' WL 7.5
 Total Depth 41000 Chlorides 10000 ppm System LCM 2#

Blow Description IF-1/2" Blow built to 1" Then died back to weak surface blow
ISI-NO Return
FF-NO Blow - Flushed tool at 5 min. - 1/4" Blow died in 6 min
FSI-NO Return

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

Rec Total 15' BHT 118 Gravity — API RW —@ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2054</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>8:10 Am</u>
(B) First Initial Flow <u>21</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>3:32 PM</u>
(C) First Final Flow <u>26</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>5:15 PM</u>
(D) Initial Shut-In <u>752</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>6:40 PM</u>
(E) Second Initial Flow <u>27</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>8:50 PM</u>
(F) Second Final Flow <u>33</u>	<input type="checkbox"/> Mileage	Comments <u>Did not run a</u>
(G) Final Shut-In <u>—</u>	<input type="checkbox"/> Sampler	<u>Final shut in</u>
(H) Final Hydrostatic <u>2000</u>	<input type="checkbox"/> Straddle	<u>loaded tools at end of test.</u>
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>25</u> <u>Flushed tool - Pulled tool</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility	Total <u>1475</u>
	Sub Total <u>1475</u>	MP/DST Disc't

Approved By _____ Our Representative

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.