



## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays KS 67601

ATTN: Marc Downing

### **DGJR #1-25**

### **25-18s-16w Rush,KS**

Start Date: 2015.03.16 @ 08:20:00

End Date: 2015.03.16 @ 14:48:00

Job Ticket #: 62122                      DST #: 1

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.03.19 @ 16:13:56



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co.

**25-18s-16w Rush,KS**

PO Box 1019  
Hays KS 67601

**DGJR #1-25**

Job Ticket: 62122

**DST#: 1**

ATTN: Marc Dow ning

Test Start: 2015.03.16 @ 08:20:00

## GENERAL INFORMATION:

Formation: **Reagan Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:50:30

Time Test Ended: 14:48:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Ellis

Unit No: 59

**Interval: 3480.00 ft (KB) To 3564.00 ft (KB) (TVD)**

Reference Elevations: 1955.00 ft (KB)

Total Depth: 3564.00 ft (KB) (TVD)

1947.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8525**

**Inside**

Press@RunDepth: 991.92 psig @ 3559.66 ft (KB)

Capacity: 5000.00 psig

Start Date: 2015.03.16

End Date:

2015.03.16

Last Calib.:

2015.03.17

Start Time: 08:21:00

End Time:

14:48:00

Time On Btm:

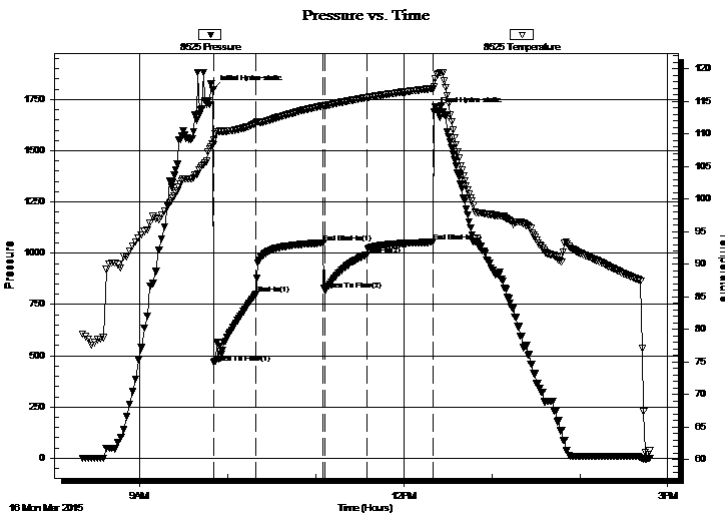
2015.03.16 @ 09:50:00

Time Off Btm:

2015.03.16 @ 12:20:30

**TEST COMMENT:** IFP 30 min BOB in 1 min  
ISI 45 min Yes blow back  
FFP 30 min BOB in 1 min.  
FSI 45 min Yes blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1796.78	108.36	Initial Hydro-static
1	466.11	109.02	Open To Flow (1)
29	799.33	111.70	Shut-In(1)
75	1050.52	114.33	End Shut-In(1)
76	819.19	114.32	Open To Flow (2)
105	991.92	115.56	Shut-In(2)
150	1053.65	116.96	End Shut-In(2)
151	1690.39	117.16	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1233.00	GM w / oil spots 10% G 90% M	17.30
1008.00	GMCW w / oil spots 10% G 85% W 5%	14.14
0.00	189' GIP	0.00

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning-Nelson Oil Co.

**25-18s-16w Rush,KS**

PO Box 1019  
Hays KS 67601

**DGJR #1-25**

Job Ticket: 62122

**DST#: 1**

ATTN: Marc Dow ning

Test Start: 2015.03.16 @ 08:20:00

## Tool Information

Drill Pipe:	Length: 3469.00 ft	Diameter: 3.80 inches	Volume: 48.66 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 88000.00 lb
			<u>Total Volume: 48.66 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3480.00 ft			Final 59000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	84.66 ft			
Tool Length:	112.66 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			3457.00	
Hydraulic tool	5.00			3462.00	
Jars	6.00			3468.00	
Safety Joint	2.00			3470.00	
Top Packer	5.00			3475.00	
Packer	5.00			3480.00	28.00 Bottom Of Top Packer
Anchor	6.00			3486.00	
Change Over Sub	0.75			3486.75	
Drill Pipe	62.16			3548.91	
Change Over Sub	0.75			3549.66	
Anchor	10.00			3559.66	
Recorder	0.00	8525	Inside	3559.66	
Recorder	0.00	6839	Outside	3559.66	
Bull Plug	5.00			3564.66	84.66 Anchor Tool

**Total Tool Length: 112.66**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Dow ning-Nelson Oil Co.

**25-18s-16w Rush,KS**

PO Box 1019  
Hays KS 67601

**DGJR #1-25**

Job Ticket: 62122

**DST#: 1**

ATTN: Marc Dow ning

Test Start: 2015.03.16 @ 08:20:00

### 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: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 83.66 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1233.00	GM w / oil spots 10% G 90% M	17.296
1008.00	GMCW w / oil spots 10% G 85% W 5% M	14.140
0.00	189 ' GIP	0.000

Total Length: 2241.00 ft      Total Volume: 31.436 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

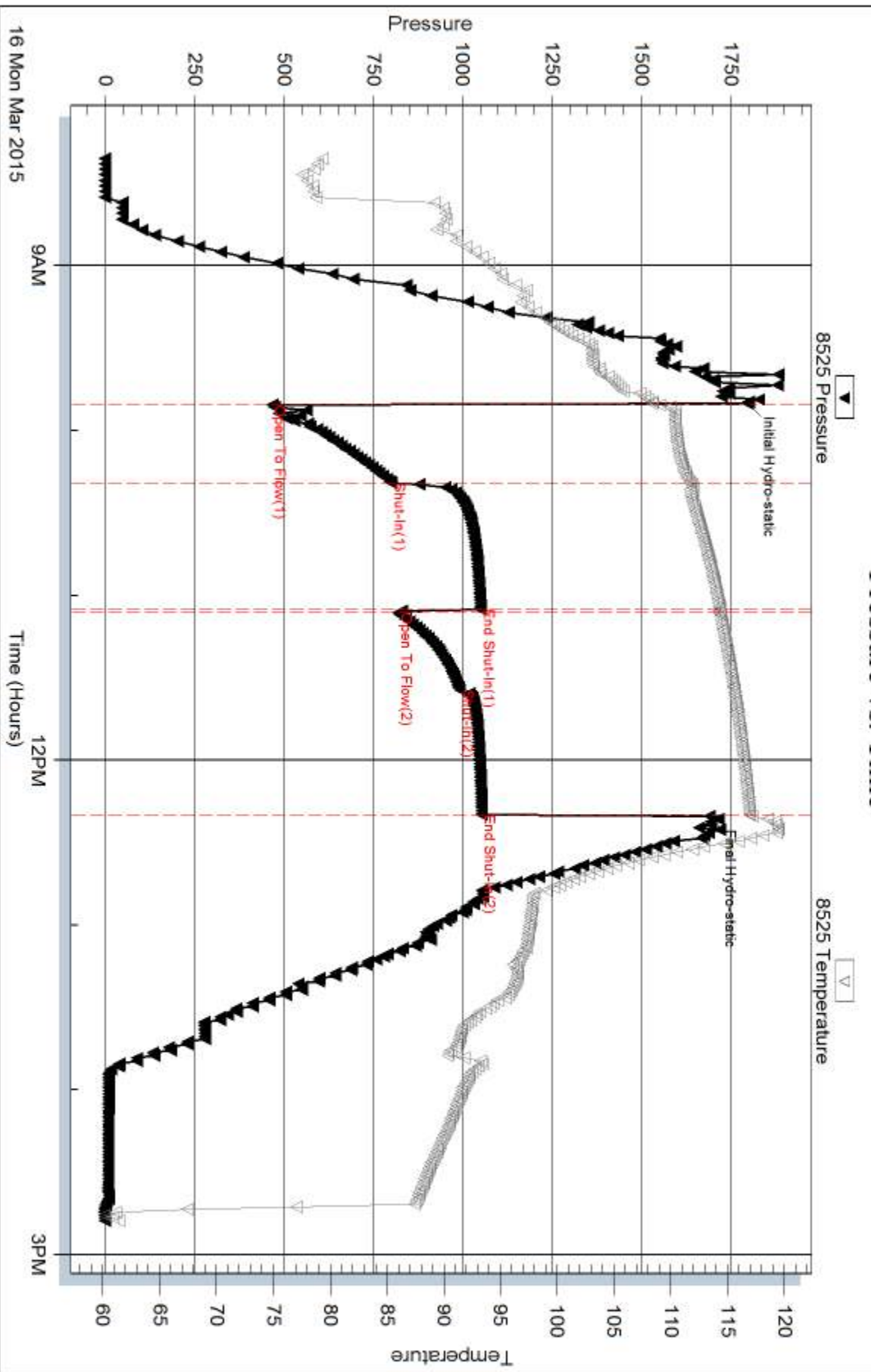
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

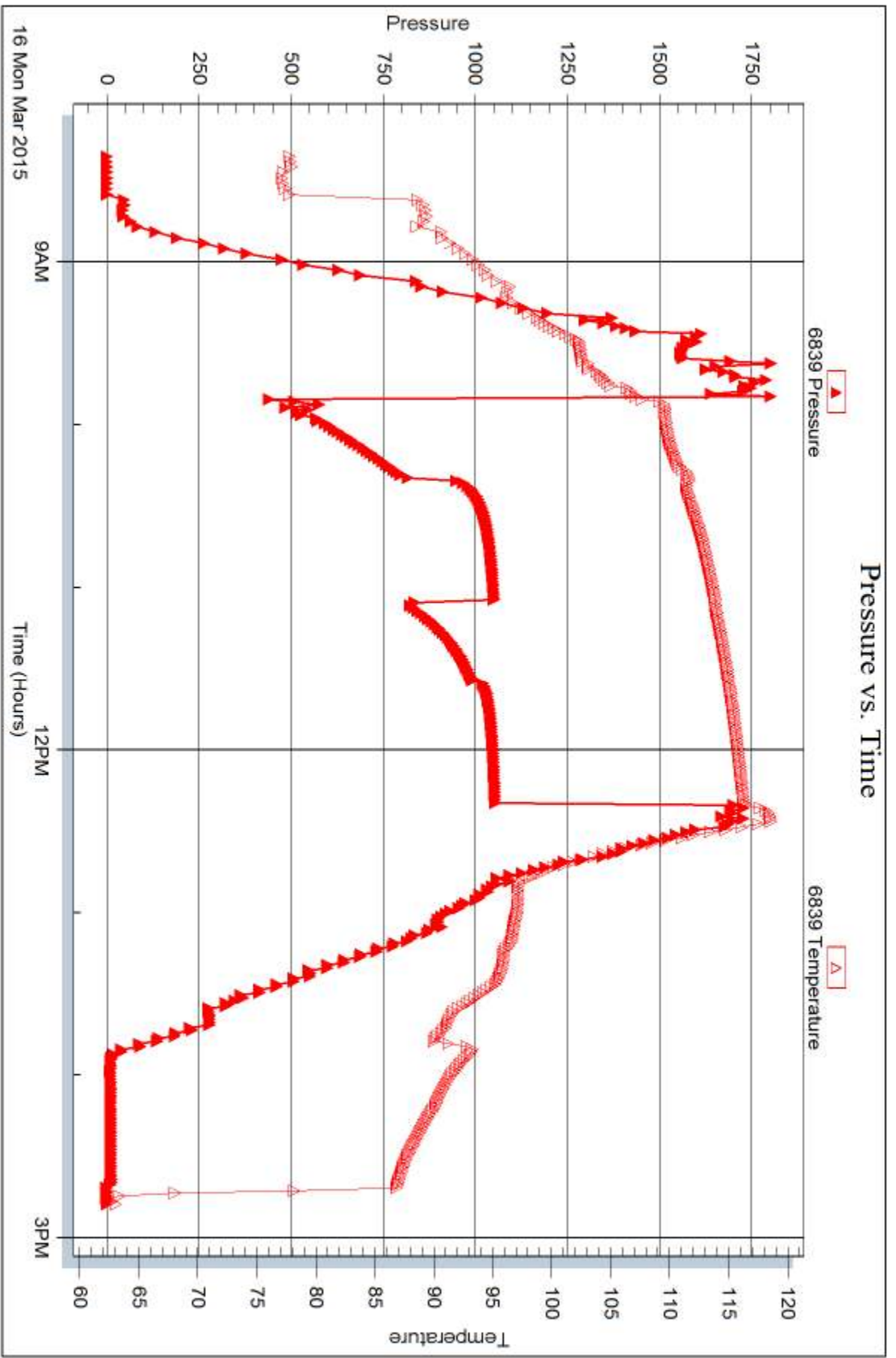


Serial #: 6839

Outside Dow nng-Nelson Oil Co.

DGJR #1-25

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 62122

Printed: 2015.03.19 @ 16:13:58



## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays KS 67601

ATTN: Marc Downing

**DGJR #1-25**

**25-18s-16w Rush,KS**

Start Date: 2015.03.17 @ 03:15:00

End Date: 2015.03.17 @ 09:55:30

Job Ticket #: 62123                      DST #: 2

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.03.19 @ 16:13:20





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co.

**25-18s-16w Rush,KS**

PO Box 1019  
Hays KS 67601

**DGJR #1-25**

Job Ticket: 62123

**DST#: 2**

ATTN: Marc Dow ning

Test Start: 2015.03.17 @ 03:15:00

## GENERAL INFORMATION:

Formation: **Reagan Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:16:00

Time Test Ended: 09:55:30

Test Type: Conventional Straddle (Initial)

Tester: Dustin Ellis

Unit No: 59

**Interval: 3555.00 ft (KB) To 3564.00 ft (KB) (TVD)**

Reference Elevations: 1955.00 ft (KB)

Total Depth: 3621.00 ft (KB) (TVD)

1947.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8525**

**Inside**

Press@RunDepth: 1008.10 psig @ 3626.78 ft (KB)

Capacity: 5000.00 psig

Start Date: 2015.03.17

End Date:

2015.03.17

Last Calib.:

2015.03.17

Start Time: 03:16:00

End Time:

09:55:30

Time On Btm:

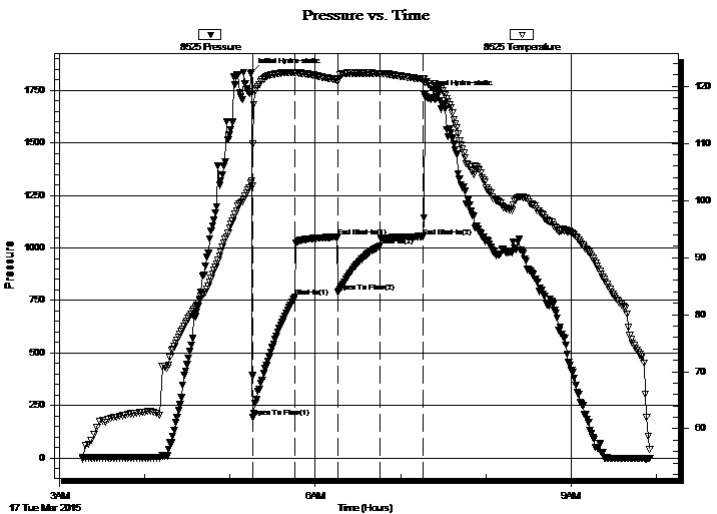
2015.03.17 @ 05:15:00

Time Off Btm:

2015.03.17 @ 07:17:00

**TEST COMMENT:** IFP 30 min BOB in 1 min.  
ISI 30 min. Yes blow back  
FFP 30 min. BOB in 1 min.  
FSI 30 min Yes blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1833.23	103.38	Initial Hydro-static
1	191.70	109.85	Open To Flow (1)
31	765.74	122.44	Shut-In(1)
61	1051.93	121.11	End Shut-In(1)
61	788.96	120.87	Open To Flow (2)
91	1008.10	122.25	Shut-In(2)
121	1054.68	121.25	End Shut-In(2)
122	1728.99	120.74	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2330.00	Water	32.68

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning-Nelson Oil Co.

**25-18s-16w Rush,KS**

PO Box 1019  
Hays KS 67601

**DGJR #1-25**

Job Ticket: 62123

**DST#: 2**

ATTN: Marc Dow ning

Test Start: 2015.03.17 @ 03:15:00

## Tool Information

Drill Pipe:	Length: 3555.00 ft	Diameter: 3.80 inches	Volume: 49.87 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	67000.00 lb
			<u>Total Volume: 49.87 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	3555.00 ft			Final	58000.00 lb
Depth to Bottom Packer:	3564.00 ft				
Interval betw een Packers:	9.00 ft				
Tool Length:	104.78 ft				
Number of Packers:	3	Diameter: 6.75 inches			
Tool Comments:					

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3532.00	
Hydraulic tool	5.00			3537.00	
Jars	6.00			3543.00	
Safety Joint	2.00			3545.00	
Top Packer	5.00			3550.00	
Packer	5.00			3555.00	28.00 Bottom Of Top Packer
Anchor	6.00			3561.00	
blank Off Sub	1.00			3562.00	
Travel Collar	2.00			3564.00	9.00 Tool Interval
Packer	5.00			3569.00	
Change Over Sub	0.75			3569.75	
Drill Pipe	31.28			3601.03	
Change Over Sub	0.75			3601.78	
Anchor	25.00			3626.78	
Recorder	0.00	8525	Inside	3626.78	
Recorder	0.00	6839	Outside	3626.78	
Bull Plug	5.00			3631.78	67.78 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>104.78</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Dow ning-Nelson Oil Co.

**25-18s-16w Rush,KS**

PO Box 1019  
Hays KS 67601

**DGJR #1-25**

Job Ticket: 62123

**DST#: 2**

ATTN: Marc Dow ning

Test Start: 2015.03.17 @ 03:15:00

### 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: 52.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

#### Recovery Table

Length ft	Description	Volume bbl
2330.00	Water	32.684

Total Length: 2330.00 ft      Total Volume: 32.684 bbl

Num Fluid Samples: 0

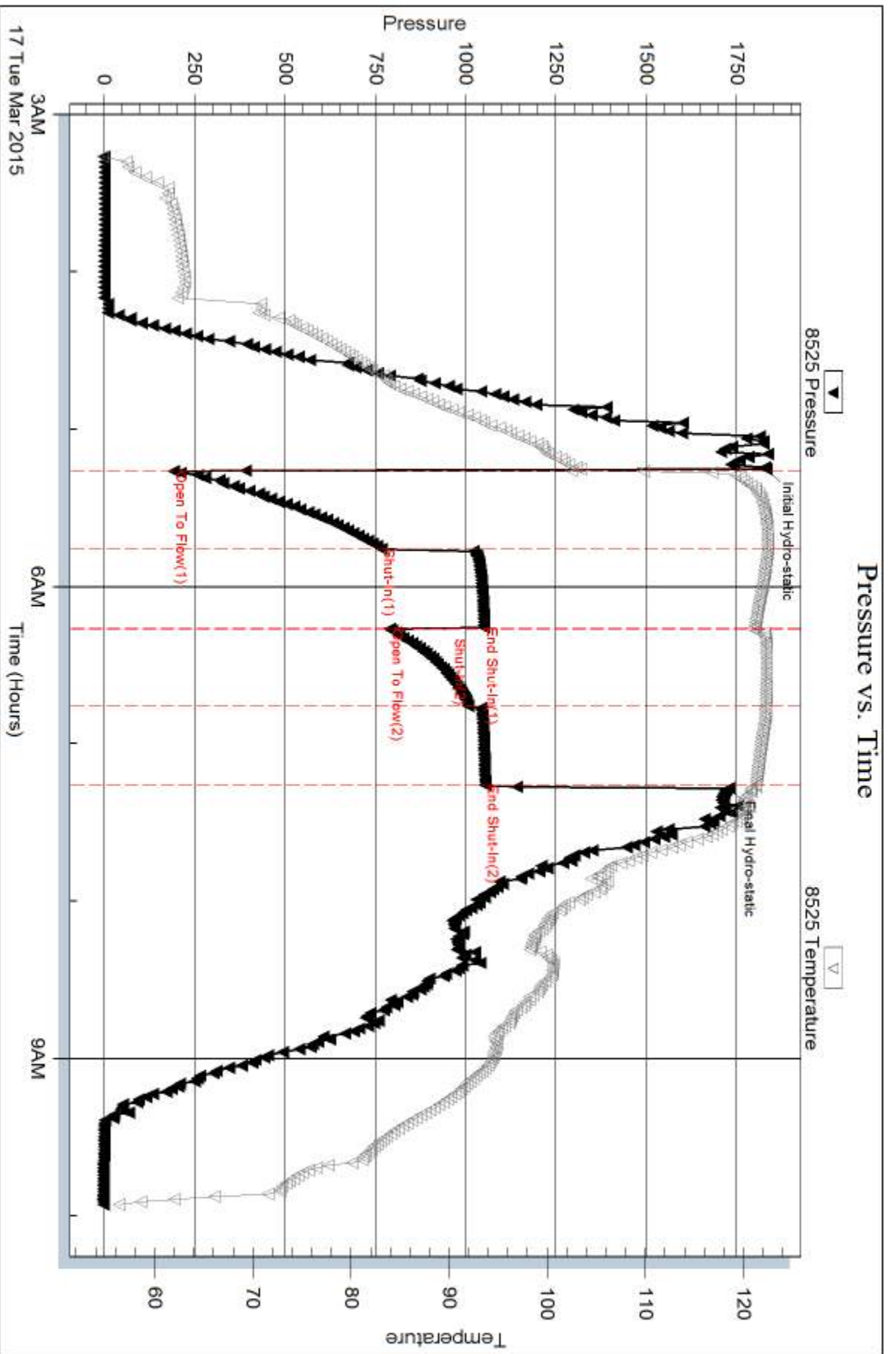
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

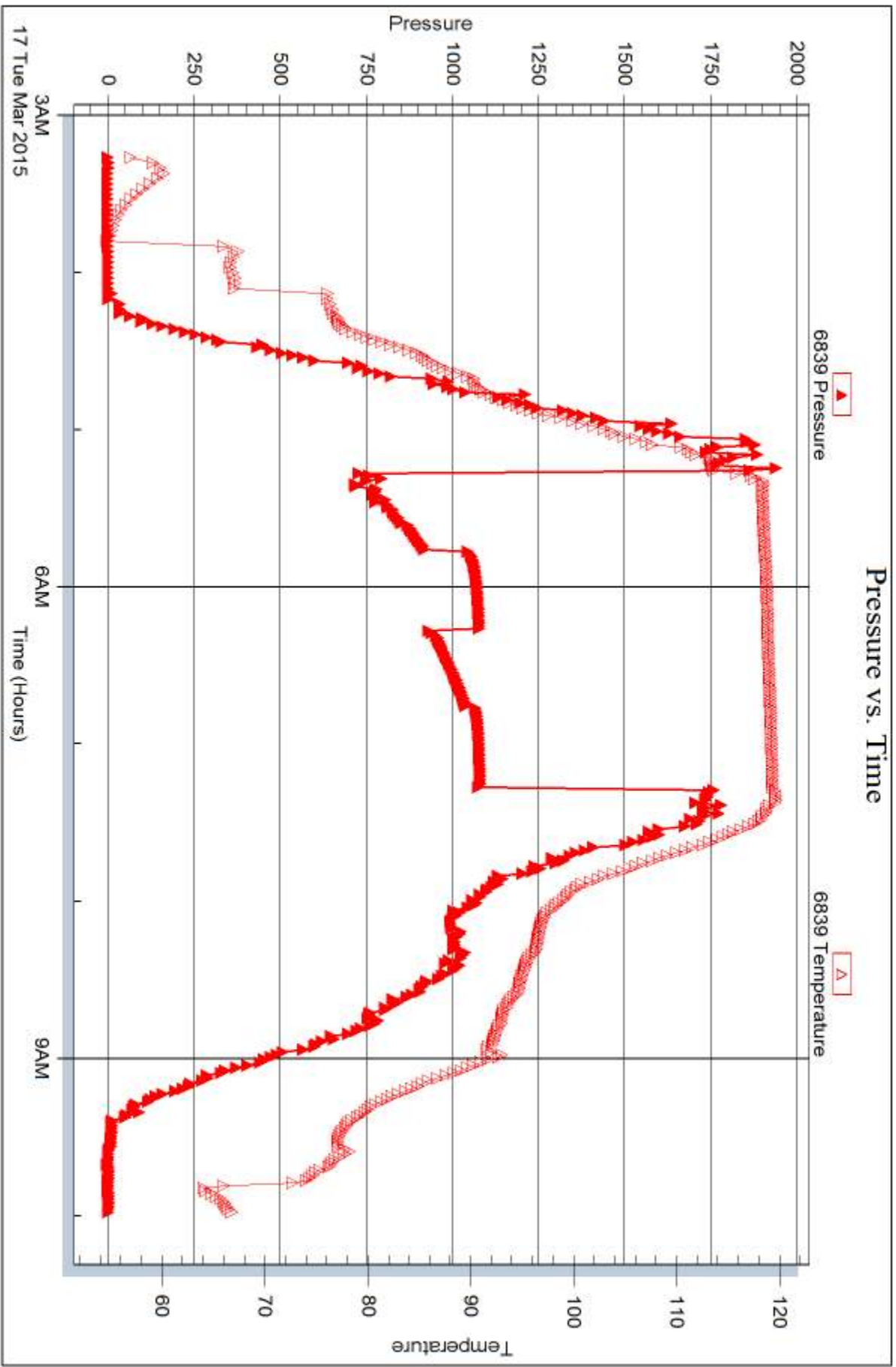


Serial #: 6839

Outside Dow nung-Nelson Oil Co.

DGJR #1-25

DST Test Number: 2





## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays KS 67601

ATTN: Marc Downing

**DGJR #1-25**

**25-18s-16w Rush,KS**

Start Date: 2015.03.17 @ 11:04:00

End Date: 2015.03.17 @ 17:24:30

Job Ticket #: 62124                      DST #: 3

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.03.19 @ 16:12:46



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co.

**25-18s-16w Rush,KS**

PO Box 1019  
Hays KS 67601

**DGJR #1-25**

Job Ticket: 62124

**DST#: 3**

ATTN: Marc Dow ning

Test Start: 2015.03.17 @ 11:04:00

## GENERAL INFORMATION:

Formation: **Top Reagan Sand**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 12:40:30  
 Time Test Ended: 17:24:30  
 Interval: **3477.00 ft (KB) To 3552.00 ft (KB) (TVD)**  
 Total Depth: 3621.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Dustin Ellis  
 Unit No: 59  
 Reference Elevations: 1955.00 ft (KB)  
 1947.00 ft (CF)  
 KB to GR/CF: 8.00 ft

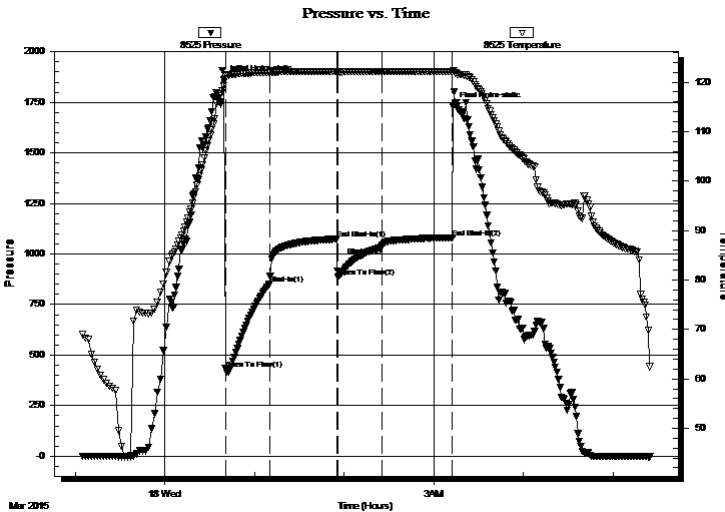
## Serial #: 8525

**Outside**

Press@RunDepth: 1033.98 psig @ 3545.80 ft (KB) Capacity: psig  
 Start Date: 2015.03.17 End Date: 2015.03.18 Last Calib.: 1899.12.30  
 Start Time: 23:05:00 End Time: 05:24:30 Time On Btm: 2015.03.18 @ 00:39:30  
 Time Off Btm: 2015.03.18 @ 03:13:00

TEST COMMENT: IFP 30 min BOB in 1 min  
 ISI 45 min Yes 1/2 inch blow back  
 FFP 30 min. BOB in 50 sec.  
 FSI 45 min Yes Blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1862.30	119.34	Initial Hydro-static
1	432.27	120.74	Open To Flow (1)
31	851.16	121.99	Shut-In(1)
76	1074.46	122.12	End Shut-In(1)
77	887.48	122.07	Open To Flow (2)
106	1033.98	122.13	Shut-In(2)
153	1081.11	122.19	End Shut-In(2)
154	1728.08	122.37	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2200.00	Water	30.86
0.00	GTS	0.00

## Gas Rates

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









**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning-Nelson Oil Co.

**25-18s-16w Rush,KS**

PO Box 1019  
Hays KS 67601

**DGJR #1-25**

Job Ticket: 62124

**DST#: 3**

ATTN: Marc Dow ning

Test Start: 2015.03.17 @ 11:04:00

## Tool Information

Drill Pipe:	Length: 3474.00 ft	Diameter: 3.80 inches	Volume: 48.73 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	82000.00 lb
			<u>Total Volume: 48.73 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial	48000.00 lb
Depth to Top Packer:	3477.00 ft			Final	56.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	144.57 ft				
Tool Length:	172.57 ft				
Number of Packers:	3	Diameter: 6.75 inches			
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			3454.00	
Hydraulic tool	5.00			3459.00	
Jars	6.00			3465.00	
Safety Joint	2.00			3467.00	
Top Packer	5.00			3472.00	
Packer	5.00			3477.00	28.00 Bottom Of Top Packer
change Over Sub	0.75			3477.75	
Drill Pipe	31.30			3509.05	
change Over Sub	0.75			3509.80	
Anchor	36.00			3545.80	
Recorder	0.00	6749	Inside	3545.80	
Recorder	0.00	8525	Outside	3545.80	
blank Off Sub	0.75			3546.55	
travel collar	1.00			3547.55	144.57 Tool Interval
Packer	5.00			3552.55	
Change Over Sub	0.75			3553.30	
drill Pipe	62.52		Inside	3615.82	
Change Over Sub	0.75		Outside	3616.57	
Recorder	0.00	6839	Below	3616.57	
Bull Plug	5.00			3621.57	1000171.57 Bottom Packers & Anchor

**Total Tool Length: 172.57**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Dow ning-Nelson Oil Co.

**25-18s-16w Rush,KS**

PO Box 1019  
Hays KS 67601

**DGJR #1-25**

Job Ticket: 62124

**DST#: 3**

ATTN: Marc Dow ning

Test Start: 2015.03.17 @ 11:04:00

### 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: 52.00 sec/qt

Cushion Volume: bbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 3500.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2200.00	Water	30.860
0.00	GTS	0.000

Total Length: 2200.00 ft      Total Volume: 30.860 bbl

Num Fluid Samples: 0

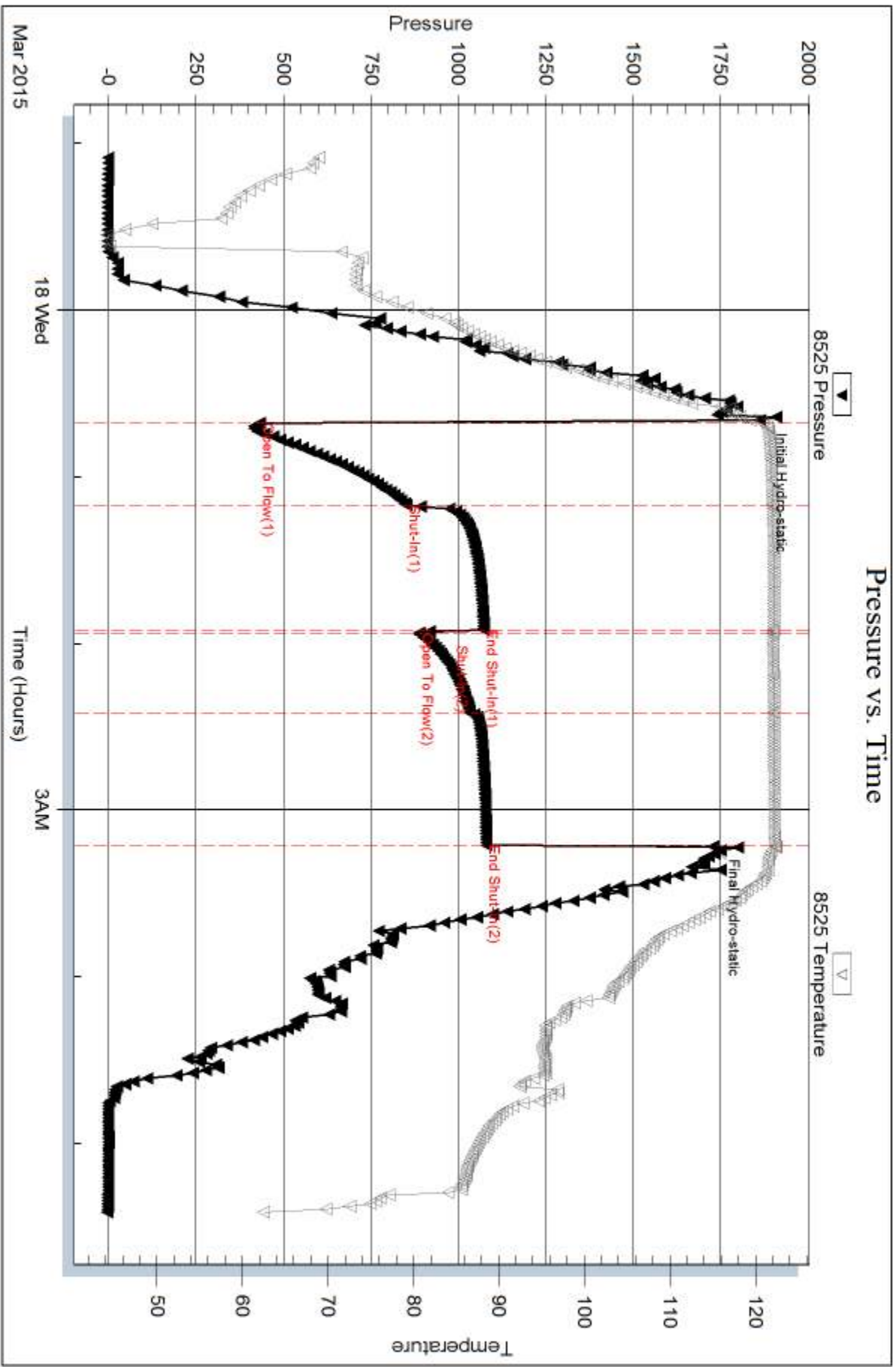
Num Gas Bombs: 0

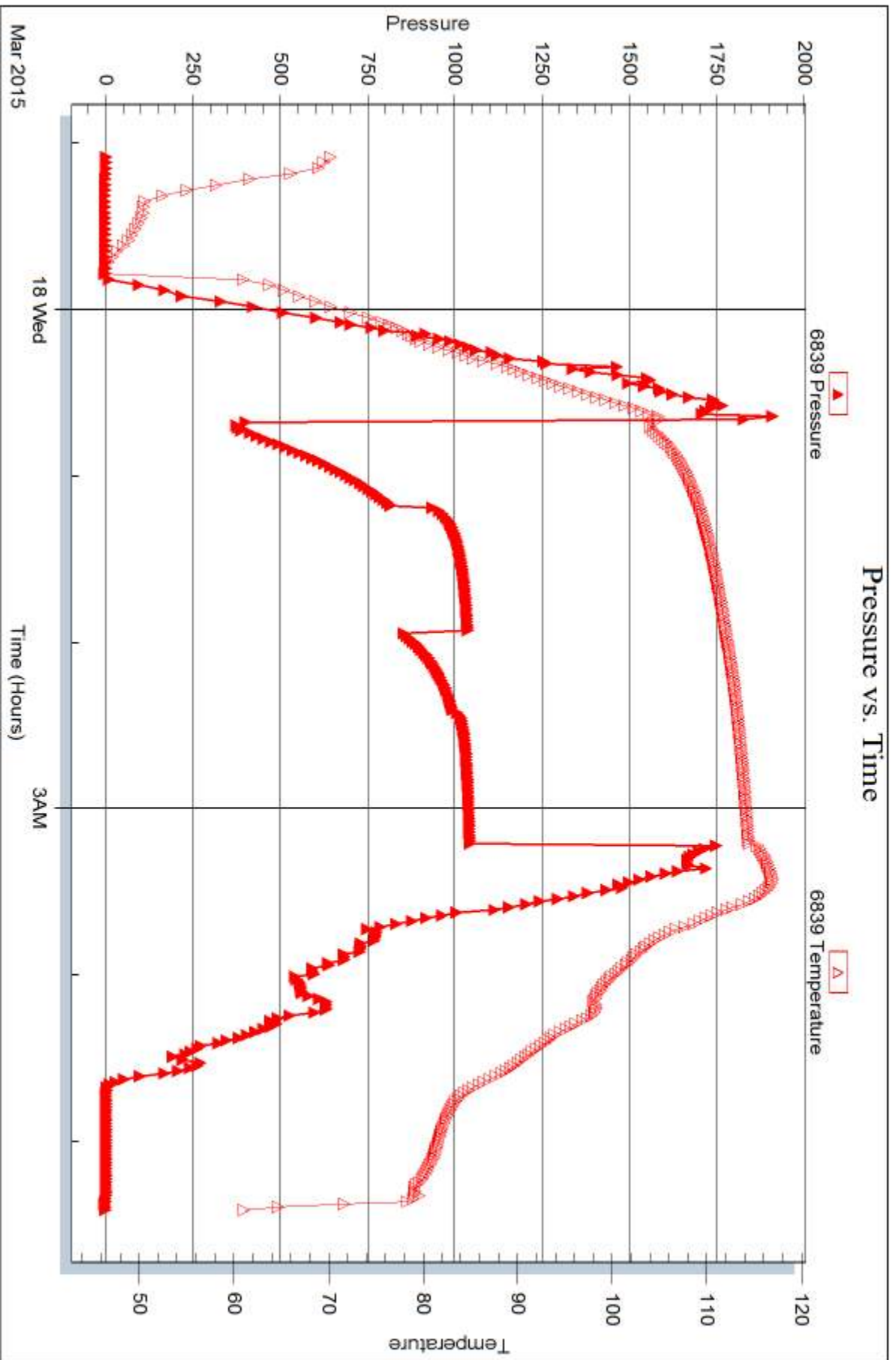
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





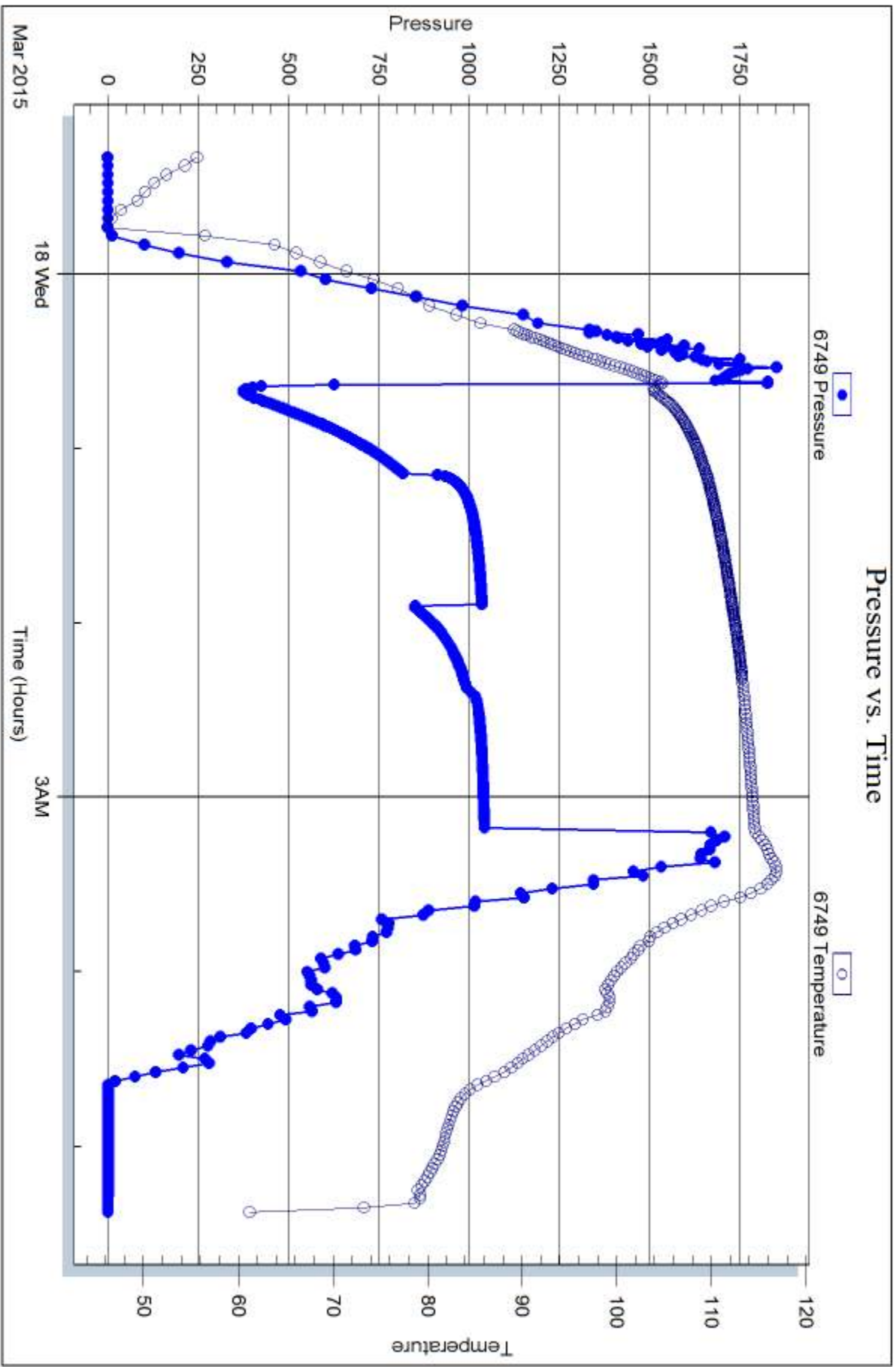
Serial #: 6749

Inside

Dow nung-Nelson Oil Co.

DGJR #1-25

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 62124

Printed: 2015.03.19 @ 16:12:48



## DRILL STEM TEST REPORT

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

PO Box 1019  
Hays KS 67601

ATTN: Marc Downing

### **DGJR #1-25**

### **25-18s-16w Rush,KS**

Start Date: 2015.03.18 @ 12:53:00

End Date: 2015.03.18 @ 19:33:30

Job Ticket #: 62125                      DST #: 4

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.03.19 @ 16:10:56





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co.

**25-18s-16w Rush,KS**

PO Box 1019  
Hays KS 67601

**DGJR #1-25**

Job Ticket: 62125

**DST#: 4**

ATTN: Marc Dow ning

Test Start: 2015.03.18 @ 12:53:00

## GENERAL INFORMATION:

Formation: **Reagan Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:21:30

Time Test Ended: 19:33:30

Test Type: Conventional Straddle (Initial)

Tester: Dustin Ellis

Unit No: 59

**Interval: 3478.00 ft (KB) To 3555.00 ft (KB) (TVD)**

Reference Elevations: 1955.00 ft (KB)

Total Depth: 3621.00 ft (KB) (TVD)

1947.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8525 Outside**

Press@RunDepth: 820.46 psig @ 3553.80 ft (KB)

Capacity: 5000.00 psig

Start Date: 2015.03.18

End Date:

2015.03.18

Last Calib.:

2015.03.18

Start Time: 12:54:00

End Time:

19:33:30

Time On Btm:

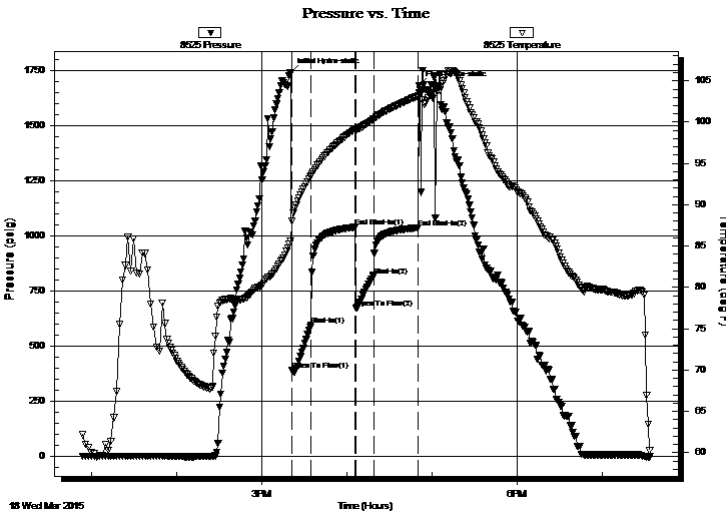
2015.03.18 @ 15:20:30

Time Off Btm:

2015.03.18 @ 16:51:00

TEST COMMENT: IFP 15 min BOB in 1 min  
ISI 30 Yes blow back  
FFP 15 min BOB in 45 sec  
FSI 30 min Yes 4 inch. blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1742.10	85.65	Initial Hydro-static
1	389.00	87.98	Open To Flow (1)
15	595.15	93.53	Shut-In(1)
45	1039.54	99.09	End Shut-In(1)
46	672.94	99.05	Open To Flow (2)
59	820.46	100.36	Shut-In(2)
90	1037.16	103.19	End Shut-In(2)
91	1682.40	103.54	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1910.00	Lightly oil spotted gassy w ater	26.79
0.00	345 GIP	0.00

## Gas Rates

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







**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning-Nelson Oil Co.

**25-18s-16w Rush,KS**

PO Box 1019  
Hays KS 67601

**DGJR #1-25**

Job Ticket: 62125

**DST#: 4**

ATTN: Marc Dow ning

Test Start: 2015.03.18 @ 12:53:00

## Tool Information

Drill Pipe:	Length: 3465.00 ft	Diameter: 3.80 inches	Volume: 48.60 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 48.60 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3478.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	3555.55 ft			
Interval betw een Packers:	77.55 ft			
Tool Length:	180.07 ft			
Number of Packers:	4	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
Shut In Tool	5.00			3455.00	
Hydraulic tool	5.00			3460.00	
Jars	6.00			3466.00	
Safety Joint	2.00			3468.00	
Top Packer	5.00			3473.00	
Packer	5.00			3478.00	28.00 Bottom Of Top Packer
change Over Sub	0.75			3478.75	
drill Pipe	31.30			3510.05	
change Over Sub	0.75			3510.80	
anchor	43.00			3553.80	
Recorder	0.00	6749	Inside	3553.80	
Recorder	0.00	8525	Outside	3553.80	
blank Off Sub	0.75			3554.55	
travel collar	1.00			3555.55	77.55 Tool Interval
Packer	5.00			3560.55	
Packer - Shale	7.00			3567.55	
Recorder	0.00	6839	Below	3567.55	
drill Pipe	62.52		Outside	3630.07	74.52 Bottom Packers & Anchor

**Total Tool Length: 180.07**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Dow ning-Nelson Oil Co.

**25-18s-16w Rush,KS**

PO Box 1019  
Hays KS 67601

**DGJR #1-25**

Job Ticket: 62125

**DST#: 4**

ATTN: Marc Dow ning

Test Start: 2015.03.18 @ 12:53:00

### 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: 52.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

#### Recovery Table

Length ft	Description	Volume bbl
1910.00	Lightly oil spotted gassy w ater	26.792
0.00	345 GIP	0.000

Total Length: 1910.00 ft      Total Volume: 26.792 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

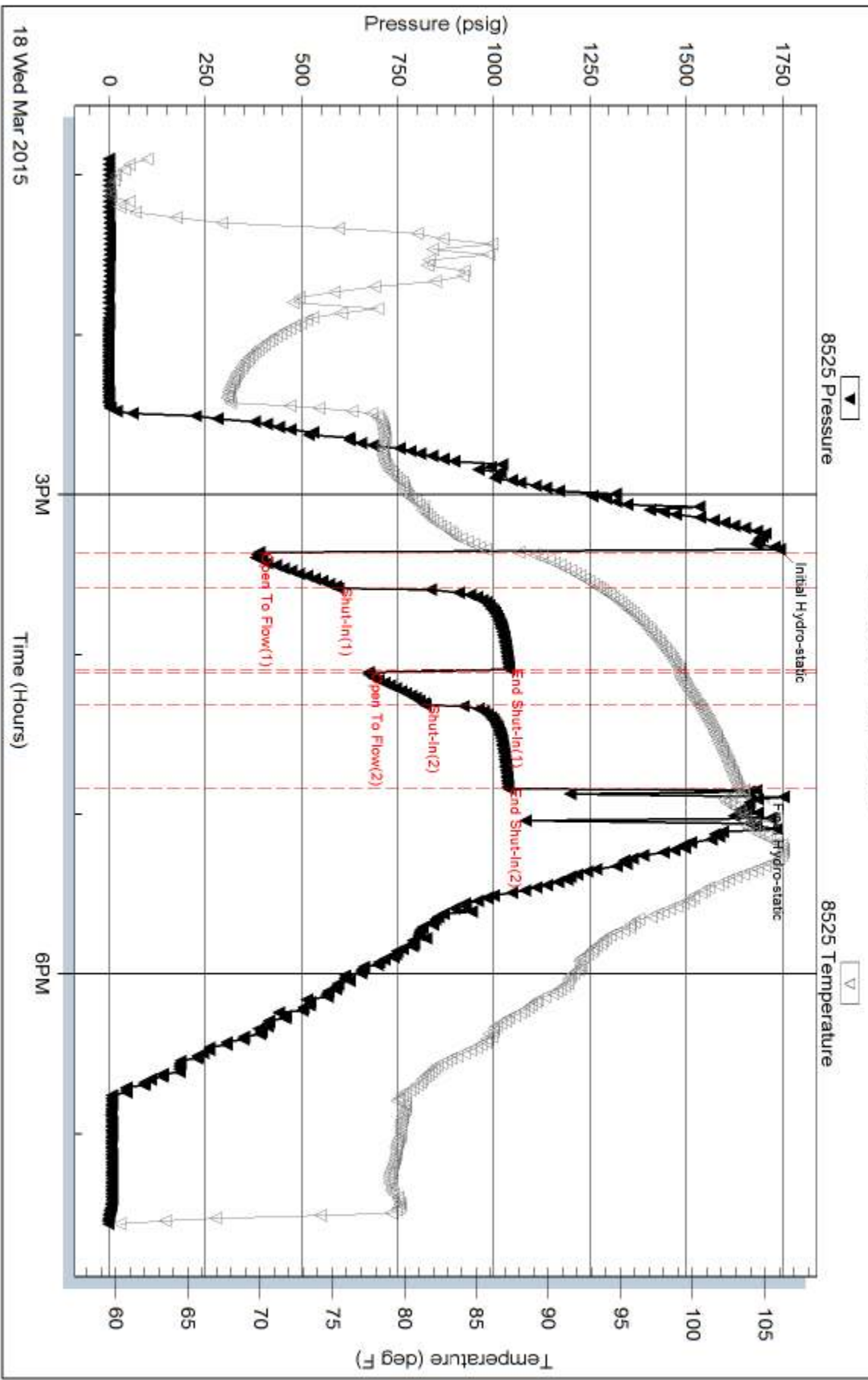
Serial #:

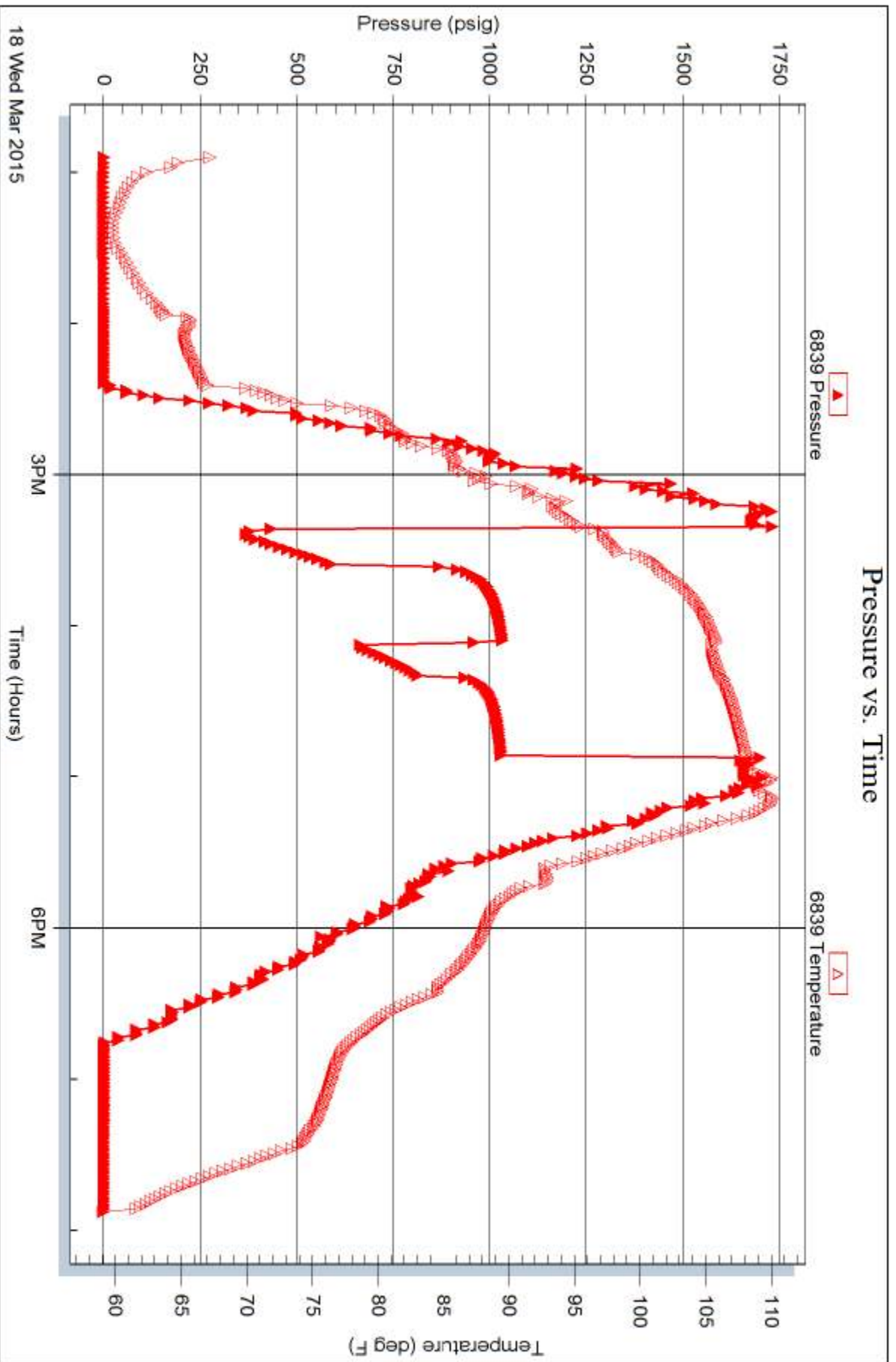
Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time





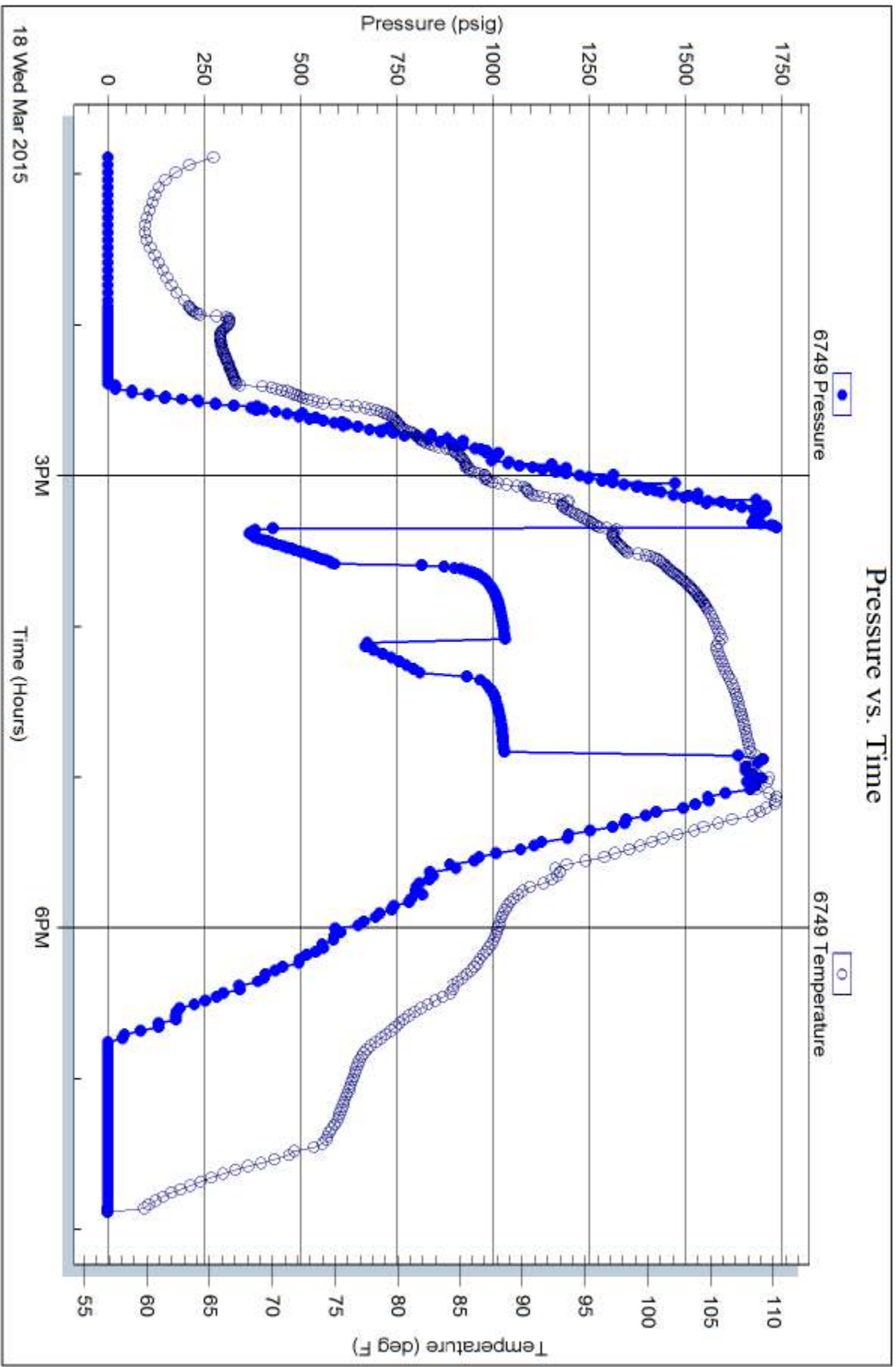
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Inside

Dow nng-Nelson Oil Co.

DGJR #1-25

DST Test Number: 4



Tribble Testing, Inc

Ref. No: 62125

Printed: 2015.03.19 @ 16:10:58





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62122

Well Name & No. DGJR #1-25 Test No. 1 Date 3-16-15  
 Company Downing-Nelson Oil Co Elevation 1947 KB 1955 GL  
 Address ~~1111~~ Po Box 1019 Hays KS 67601  
 Co. Rep / Geo. Maic Downing Rig Discovery Drilling #2  
 Location: Sec. 25 Twp. 18 Rge. 16 Co. Rush State \_\_\_\_\_

Interval Tested 3480 - 3564 Zone Tested Regan sand  
 Anchor Length 81 Drill Pipe Run 3469 Mud Wt. 9.2  
 Top Packer Depth 3475 Drill Collars Run 0 Vis 55  
 Bottom Packer Depth 3480 Wt. Pipe Run 50000 WL 8.4  
 Total Depth 3564 Chlorides 2000 ppm System LCM 2

Blow Description 1st open - 30 BOB in 1 min  
1st shut in - Yes blow back  
2nd open - BOB in 1 min  
2nd shut in - Yes blow back

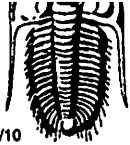
Rec	Feet of	%gas	%oil	%water	%mud
<u>1233</u>	<u>slightly oil spotted gassy mud</u>			<u>90</u>	
<u>1008</u>	<u>slightly oil spotted gassy mud</u>			<u>85</u>	<u>5</u>
____	____	____	____	____	____
____	____	____	____	____	____
____	____	____	____	____	____

Rec Total 2241 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides 60000 ppm

(A) Initial Hydrostatic 1796  Test 1050 T-On Location \_\_\_\_\_  
 (B) First Initial Flow 466  Jars 250 T-Started ~~5:44 pm~~ 8:20 pm  
 (C) First Final Flow 799  Safety Joint 75 T-Open ~~8:10 pm~~ 8:20 pm  
 (D) Initial Shut-In 1050  Circ Sub \_\_\_\_\_ T-Pulled 12:19 pm  
 (E) Second Initial Flow 819  Hourly Standby \_\_\_\_\_ T-Out \_\_\_\_\_  
 (F) Second Final Flow 991  Mileage 30 30 Comments 189 gas in  
 (G) Final Shut-In 1053  Sampler \_\_\_\_\_ pipe  
 (H) Final Hydrostatic 1690  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 45  Day Standby \_\_\_\_\_ Total 1405  
 Final Flow 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 45 Sub Total 1405

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.



# TRIBOLITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

TEST NO. 62123

Well Name & No. DGJR #1-25 Test No. 2 Date 3-17-15  
 Company Downing-Nelson O.I. Elevation 1947 KB 1955 GL  
 Address PO Box 1019 Hays KS 67601  
 Co. Rep / Geo. Marc Downing Rig Discovery Drilling Rig #2  
 Location: Sec. 25 Twp. 18 Rge. 16 Co. Rush State KS

Interval Tested 3555 - 3564 Zone Tested Osgan Sand  
 Anchor Length 9 Drill Pipe Run 3555 Mud Wt. 9.3  
 Top Packer Depth 3555 Drill Collars Run 0 Vis 5.8  
 Bottom Packer Depth 3564 Wt. Pipe Run 50000 WL 8.8  
 Total Depth 3621 Chlorides 3500 ppm System LCM 2

Blow Description 1st open - BOB in 1 min.  
1st shut in - Yes blow back.  
2nd open - BOB in 1 min.  
2nd shut in - Yes surface blowback.

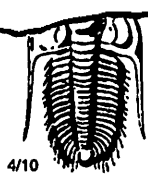
Rec	Feet of	%gas	%oil	%water	%mud
<u>2330</u>	<u>water</u>		<u>28</u>	<u>2</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 2330 BHT \_\_\_\_\_ Gravity 1 API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides 6100 ppm

(A) Initial Hydrostatic <u>1833</u>	<input type="checkbox"/> Test <u>850</u>	T-On Location <u>2:45pm</u>
(B) First Initial Flow <u>191</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>3:15pm</u>
(C) First Final Flow <u>765</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>5:13pm</u>
(D) Initial Shut-In <u>1051</u>	<input checked="" type="checkbox"/> Circ Sub _____	T-Pulled <u>7:13pm</u>
(E) Second Initial Flow <u>788</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>10:00pm</u>
(F) Second Final Flow <u>1008</u>	<input checked="" type="checkbox"/> Mileage <u>30</u> <sup>30</sup>	Comments _____
(G) Final Shut-In <u>1054</u>	<input type="checkbox"/> Sampler _____	<input type="checkbox"/> Ruined Shale Packer _____
(H) Final Hydrostatic <u>1728</u>	<input checked="" type="checkbox"/> Straddle <u>600</u>	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer _____	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Total <u>1805</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby _____	MP/DST Disc't _____
	<input type="checkbox"/> Accessibility _____	
	Sub Total <u>1805</u>	

Approved By \_\_\_\_\_ Our Representative Dustin Ellis

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62124

Well Name & No. DGJR #1-25 Test No. 3 Date 3-15-15  
 Company Downing-Nelson Oil Elevation 1947 KB 1955 GL  
 Address PO Box 1019 Hays 67601  
 Co. Rep / Geo. Marc Downing Rig Discovery Drilling Rig #2  
 Location: Sec. 25 Twp. 18 Rge. 16 Co. Rush State KS

Interval Tested 3477 - 3552 Zone Tested Top Reason Sand  
 Anchor Length 75 Drill Pipe Run 3474 Mud Wt. 9.3  
 Top Packer Depth 3477 Drill Collars Run 0 Vis 52  
 Bottom Packer Depth 3552 Wt. Pipe Run 50,000 WL 8.8  
 Total Depth 3621 Chlorides 3500 ppm System LCM 0

Blow Description 1st open - BoB in 1 min.  
1st shut in - yes blowback 1/2 inch.  
2nd open - BoB 50 sec.  
2nd shut in - yes blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>2200</u>	<u>Water</u>			<u>100</u>	<u>2</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 2200 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

- (A) Initial Hydrostatic 1862
- (B) First Initial Flow 432
- (C) First Final Flow 851
- (D) Initial Shut-In 1074
- (E) Second Initial Flow 997
- (F) Second Final Flow 1033
- (G) Final Shut-In 1081
- (H) Final Hydrostatic 1728

- Test 850
- Jars 250
- Safety Joint 75
- Circ Sub
- Hourly Standby
- Mileage 30
- Sampler
- Straddle 600
- Shale Packer
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility
- Sub Total 1775

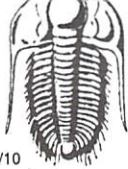
T-On Location \_\_\_\_\_  
 T-Started 11:04 am  
 T-Open 12:38 am  
 T-Pulled 3:09 am  
 T-Out 5:30 am

Comments 18 min. gas to surface on 2nd open  
 Ruined Shale Packer  
 Ruined Packer  
 Extra Copies  
 Sub Total 0  
 Total 1775  
 MP/DST Disc't \_\_\_\_\_

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

Approved By \_\_\_\_\_ Our Representative Dustin Ellis

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62125

Well Name & No. DGJR 1-25 Test No. 4 Date 3-18-15  
 Company Downing - Nelson O.I Elevation 1947 KB 1955 GL  
 Address PO Box 1019 Hays 67601  
 Co. Rep / Geo. Marc Downing Rig Discovery Drilling Rig #2  
 Location: Sec. 25 Twp. 10 Rge. 16 Co. Rush State KS

Interval Tested 3478 - 3555 Zone Tested Reggan Sand  
 Anchor Length 77 Drill Pipe Run 3465 Mud Wt. 9.3  
 Top Packer Depth 3478 Drill Collars Run 0 Vis 52  
 Bottom Packer Depth 3555 Wt. Pipe Run 50,000 WL 8.8  
 Total Depth 3621 Chlorides 3500 ppm System LCM 2

Blow Description 1st open BOB in 1 min.  
1st shut in - yes blow back 2 3/4 inch  
2nd open - BOB 45 sec.  
2nd shut in - yes blow back 4 inch.

Rec	Feet of	%gas	%oil	%water	%mud
<u>1910</u>	<u>very light oil spotted water</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 1910 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1742  Test 850 T-On Location 11:50 am  
 (B) First Initial Flow 389  Jars 250 T-Started 12:53 pm \*  
 (C) First Final Flow 595  Safety Joint 75 T-Open 3:20 pm  
 (D) Initial Shut-In 1039  Circ Sub \_\_\_\_\_ T-Pulled 450  
 (E) Second Initial Flow 672  Hourly Standby \_\_\_\_\_ T-Out 800  
 (F) Second Final Flow 920  Mileage 30 30 Comments 345 gas pip  
 (G) Final Shut-In 1037  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1602  Straddle 600  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer 250  Ruined Packer 320  
 Extra Packer 200  Extra Copies \_\_\_\_\_  
 Initial Open 15  Extra Recorder \_\_\_\_\_ Sub Total 320  
 Initial Shut-In 30  Day Standby \_\_\_\_\_ Total 2575  
 Final Flow 15  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 30 Sub Total 2255

Approved By \_\_\_\_\_ Our Representative Rustin Ellis

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