



## DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Company**

PO Box 1019  
Hays, Kansas 67601

ATTN: Mark Downing

**33-16s-17w Rush,KS**

**Fiala Living Trust #1-33**

Start Date: 2015.03.06 @ 05:56:00

End Date: 2015.03.06 @ 12:26:00

Job Ticket #: 62047                      DST #: 1

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

Printed: 2015.03.18 @ 15:50:59



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Dow ning-Nelson Oil Company

**Fiala Living Trust #1-33**

PO Box 1019  
Hays, Kansas 67601

**33-16s-17w Rush,KS**

ATTN: Mark Dow ning

Job Ticket: 62047

**DST#: 1**

Test Start: 2015.03.06 @ 05:56:00

## GENERAL INFORMATION:

Formation: **Topeka**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:51:00

Time Test Ended: 12:26:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Sw inney

Unit No: 58

**Interval: 3050.00 ft (KB) To 3072.00 ft (KB) (TVD)**

Reference Elevations: 2041.00 ft (KB)

Total Depth: 3072.00 ft (KB) (TVD)

2033.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 6749 Outside**

Press@RunDepth: 24.78 psig @ 3069.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.03.06

End Date:

2015.03.06

Last Calib.:

2015.03.06

Start Time:

05:57:00

End Time:

12:26:00

Time On Btm:

2015.03.06 @ 07:50:40

Time Off Btm:

2015.03.06 @ 10:53:00

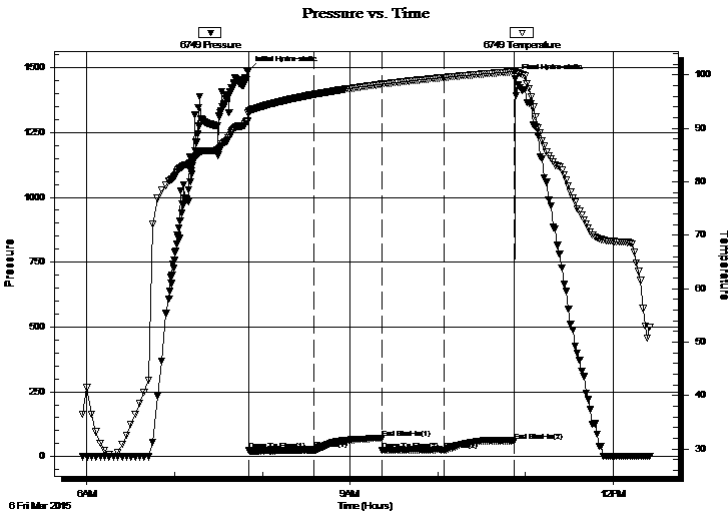
**TEST COMMENT:** IFP 45 Minutes Weak blow built to 6" in 31 minutes then weak surging throughout

ISI 45 Minutes No blow back

FFP 45 Minutes Weak blow built to 7"

FSI 45 Minutes Surface blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1489.65	93.33	Initial Hydro-static
1	23.47	93.10	Open To Flow (1)
45	27.19	96.34	Shut-In(1)
91	71.70	98.24	End Shut-In(1)
92	23.96	98.25	Open To Flow (2)
134	24.78	99.51	Shut-In(2)
182	60.04	100.60	End Shut-In(2)
183	1456.31	100.83	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	237 feet of gas in pipe	0.00
15.00	Mud w ith skim of oil/ Mud 100%	0.07

## Gas Rates

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



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TESTING, INC.**

# DRILL STEM TEST REPORT

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**Fiala Living Trust #1-33**

PO Box 1019  
Hays, Kansas 67601

**33-16s-17w Rush,KS**

Job Ticket: 62047

**DST#: 1**

ATTN: Mark Dow ning

Test Start: 2015.03.06 @ 05:56:00

## GENERAL INFORMATION:

Formation: **Topeka**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:51:00

Time Test Ended: 12:26:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Sw inney

Unit No: 58

**Interval: 3050.00 ft (KB) To 3072.00 ft (KB) (TVD)**

Reference Elevations: 2041.00 ft (KB)

Total Depth: 3072.00 ft (KB) (TVD)

2033.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 6838**

**Inside**

Press@RunDepth: 57.29 psig @ 3068.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.03.06

End Date:

2015.03.06

Last Calib.:

1899.12.30

Start Time:

05:57:00

End Time:

12:25:30

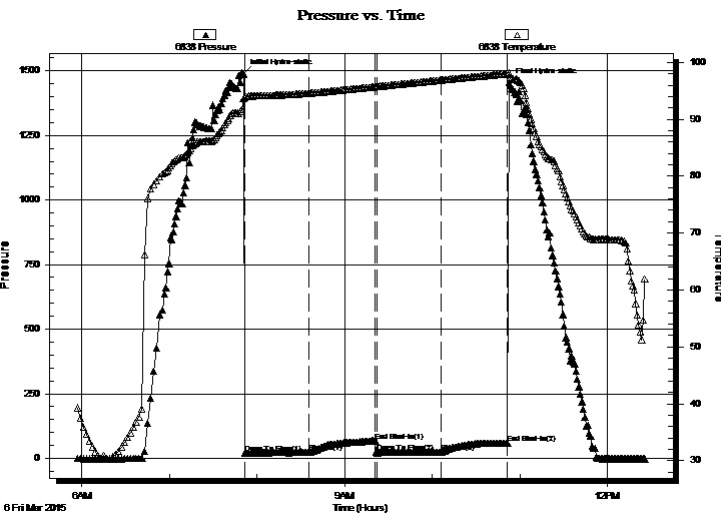
Time On Btm:

2015.03.06 @ 07:50:30

Time Off Btm:

2015.03.06 @ 10:52:30

**TEST COMMENT:** IFP 45 Minutes Weak blow built to 6" in 31 minutes then weak surging throughout  
ISI 45 Minutes No blow back  
FFP 45 Minutes Weak blow built to 7"  
FSI 45 Minutes Surface blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1487.81	93.67	Initial Hydro-static
1	20.66	93.86	Open To Flow (1)
45	22.96	94.58	Shut-In(1)
91	68.06	95.72	End Shut-In(1)
92	24.09	95.73	Open To Flow (2)
136	23.58	96.88	Shut-In(2)
181	57.29	97.98	End Shut-In(2)
182	1453.99	98.24	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	237 feet of gas in pipe	0.00
15.00	Mud w ith skim of oil/ Mud 100%	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 Company

**Fiala Living Trust #1-33**

PO Box 1019  
Hays, Kansas 67601

**33-16s-17w Rush,KS**

Job Ticket: 62047

**DST#: 1**

ATTN: Mark Dow ning

Test Start: 2015.03.06 @ 05:56:00

## Tool Information

Drill Pipe:	Length: 2724.00 ft	Diameter: 3.80 inches	Volume: 38.21 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 310.14 ft	Diameter: 2.25 inches	Volume: 1.53 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: 68000.00 lb
			<u>Total Volume: 39.74 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	4.14 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3050.00 ft			Final 47000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	22.00 ft			
Tool Length:	42.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3035.00	
Hydraulic tool	5.00			3040.00	
Top Packer	5.00			3045.00	
Packer	5.00			3050.00	20.00 Bottom Of Top Packer
Anchor	17.00			3067.00	
Recorder	1.00	6838	Inside	3068.00	
Recorder	1.00	6749	Outside	3069.00	
Bullnose	3.00			3072.00	22.00 Anchor Tool

**Total Tool Length: 42.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Dow ning-Nelson Oil Company

**Fiala Living Trust #1-33**

PO Box 1019  
Hays, Kansas 67601

**33-16s-17w Rush,KS**

Job Ticket: 62047

**DST#: 1**

ATTN: Mark Dow ning

Test Start: 2015.03.06 @ 05:56:00

## 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: 50.00 sec/qt

Cushion Volume: bbl

Water Loss: 8.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	237 feet of gas in pipe	0.000
15.00	Mud w ith skim of oil/ Mud 100%	0.074

Total Length: 15.00 ft      Total Volume: 0.074 bbl

Num Fluid Samples: 0

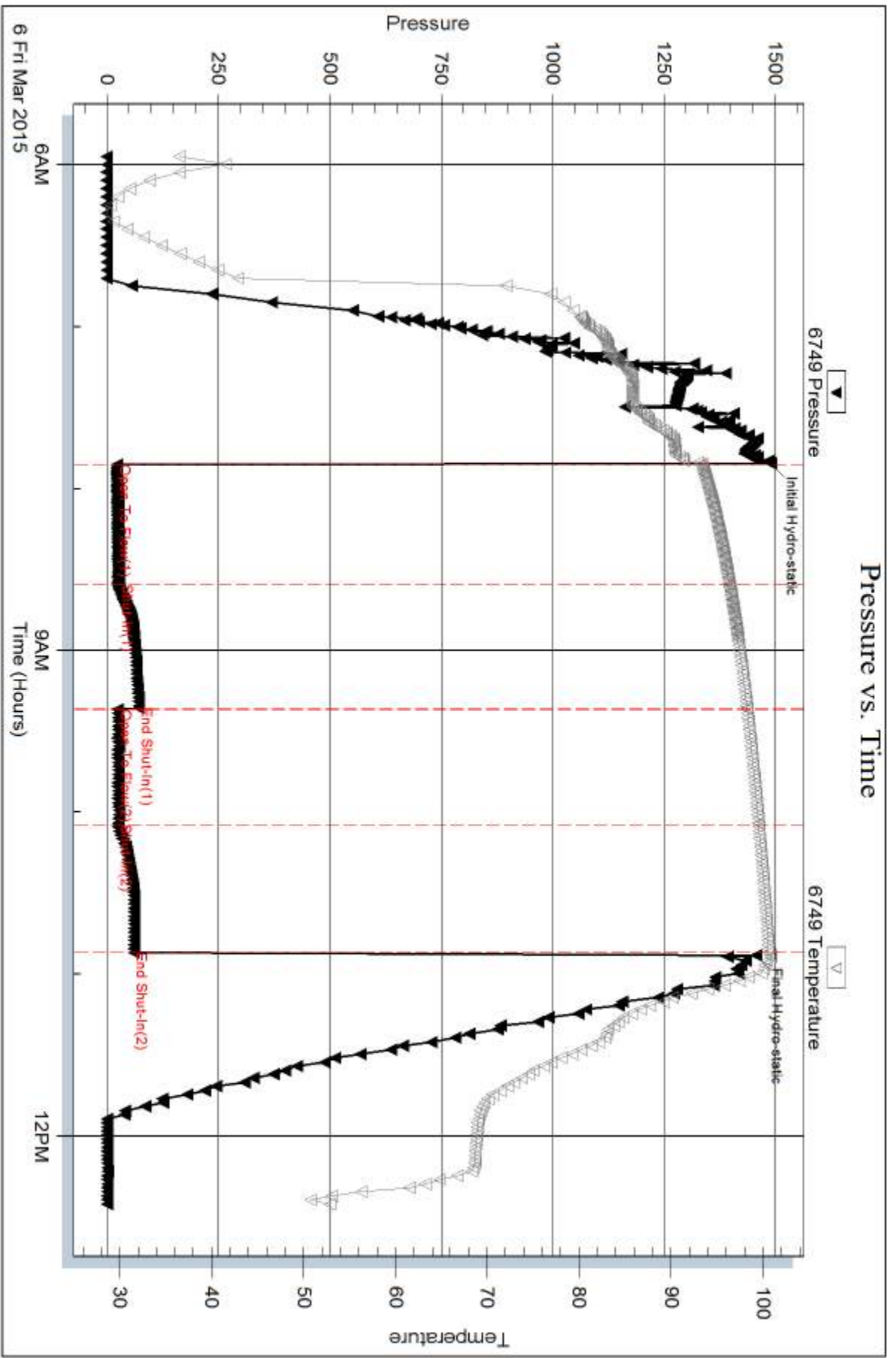
Num Gas Bombs: 0

Serial #:

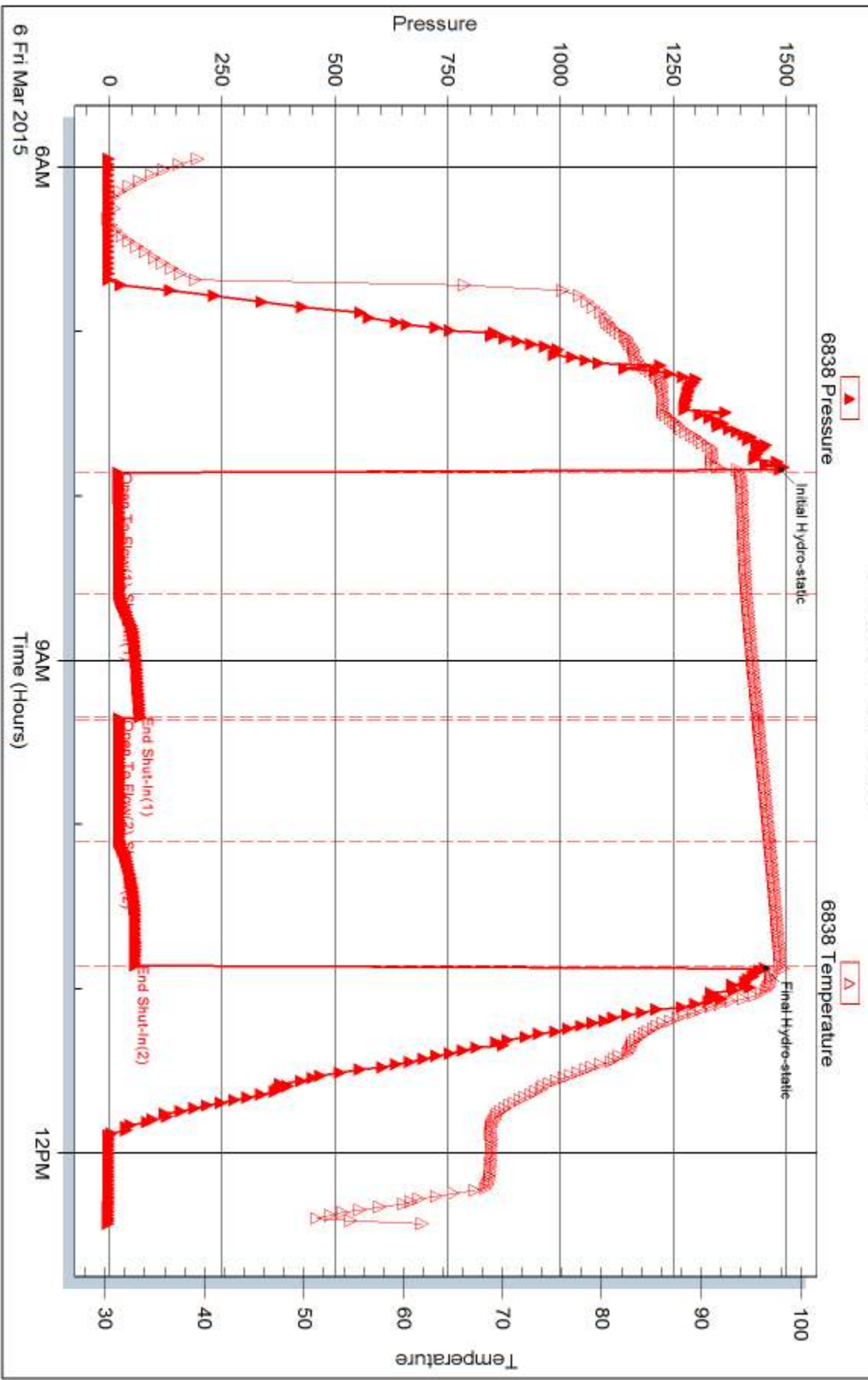
Laboratory Name:

Laboratory Location:

Recovery Comments:



### Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Company**

PO Box 1019  
Hays, Kansas 67601

ATTN: Mark Downing

**33-16s-17w Rush,KS**

**Fiala Living Trust #1-33**

Start Date: 2015.03.07 @ 22:26:00

End Date: 2015.03.08 @ 03:30:30

Job Ticket #: 62048                      DST #: 2

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

Printed: 2015.03.18 @ 15:50:38





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Dow ning-Nelson Oil Company

**Fiala Living Trust #1-33**

PO Box 1019  
Hays, Kansas 67601

**33-16s-17w Rush,KS**

Job Ticket: 62048

**DST#: 2**

ATTN: Mark Dow ning

Test Start: 2015.03.07 @ 22:26:00

## GENERAL INFORMATION:

Formation: **LKC H&I**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:01:30

Time Test Ended: 03:30:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Sw inney

Unit No: 58

**Interval: 3473.00 ft (KB) To 3520.00 ft (KB) (TVD)**

Reference Elevations: 2041.00 ft (KB)

Total Depth: 3520.00 ft (KB) (TVD)

2033.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 6838**

**Inside**

Press@RunDepth: 23.04 psig @ 3516.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.03.07

End Date:

2015.03.08

Last Calib.:

2015.03.07

Start Time:

22:27:00

End Time:

03:30:30

Time On Btm:

2015.03.08 @ 00:00:30

Time Off Btm:

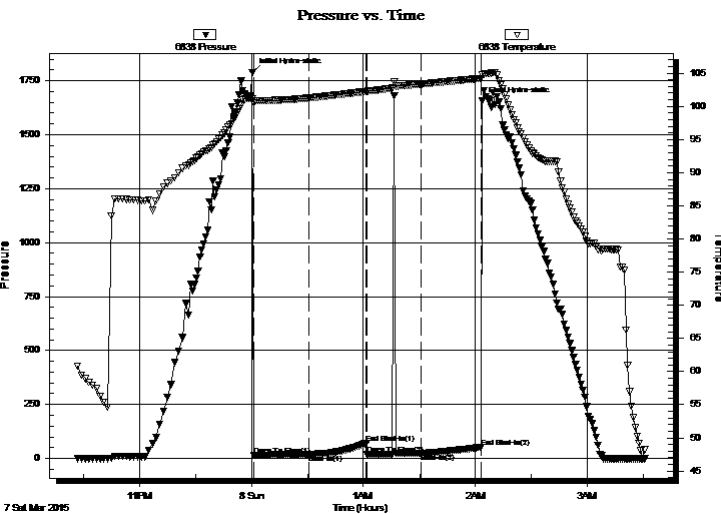
2015.03.08 @ 02:03:30

**TEST COMMENT:** IFP 30 Minutes Weak blow built to 3/4" then died back to surface

ISI 30 Minutes No blow back

FFP 30 Minutes Weak surface blow for 2 minute then dead - Flush tool - Good surge then dead

FSI 30 Minutes No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1788.93	101.18	Initial Hydro-static
1	14.36	100.55	Open To Flow (1)
31	16.82	101.27	Shut-In(1)
61	71.17	102.27	End Shut-In(1)
62	18.21	102.27	Open To Flow (2)
91	23.04	103.36	Shut-In(2)
123	52.20	104.23	End Shut-In(2)
123	1655.41	104.80	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud w ith show of oil/Mud 100%	0.05

## Gas Rates

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



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# DRILL STEM TEST REPORT

Dow ning-Nelson Oil Company

**Fiala Living Trust #1-33**

PO Box 1019  
Hays, Kansas 67601

**33-16s-17w Rush,KS**

ATTN: Mark Dow ning

Job Ticket: 62048

**DST#: 2**

Test Start: 2015.03.07 @ 22:26:00

## GENERAL INFORMATION:

Formation: **LKC H&I**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:01:30

Time Test Ended: 03:30:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Sw inney

Unit No: 58

**Interval: 3473.00 ft (KB) To 3520.00 ft (KB) (TVD)**

Reference Elevations: 2041.00 ft (KB)

Total Depth: 3520.00 ft (KB) (TVD)

2033.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 6749 Outside**

Press@RunDepth: 51.21 psig @ 3517.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.03.07

End Date:

2015.03.08

Last Calib.:

1899.12.30

Start Time: 22:27:00

End Time:

03:31:00

Time On Btm:

2015.03.08 @ 00:01:00

Time Off Btm:

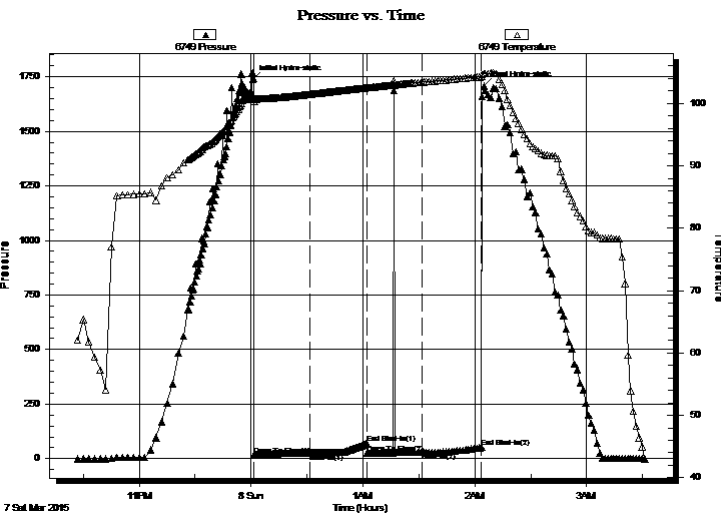
2015.03.08 @ 02:05:00

TEST COMMENT: IFP 30 Minutes Weak blow built to 3/4" then died back to surface

ISI 30 Minutes No blow back

FFP 30 Minutes Weak surface blow for 2 minute then dead - Flush tool - Good surge then dead

FSI 30 Minutes No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1738.16	100.89	Initial Hydro-static
1	16.94	100.36	Open To Flow (1)
31	26.48	101.48	Shut-In(1)
61	68.53	102.51	End Shut-In(1)
62	24.95	102.50	Open To Flow (2)
91	29.68	103.41	Shut-In(2)
123	51.21	104.28	End Shut-In(2)
124	1708.20	104.83	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud w with show of oil/Mud 100%	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 Company

**Fiala Living Trust #1-33**

PO Box 1019  
Hays, Kansas 67601

**33-16s-17w Rush,KS**

Job Ticket: 62048

**DST#: 2**

ATTN: Mark Dow ning

Test Start: 2015.03.07 @ 22:26:00

## Tool Information

Drill Pipe:	Length: 3158.00 ft	Diameter: 3.80 inches	Volume: 44.30 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 310.14 ft	Diameter: 2.25 inches	Volume: 1.53 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: 52000.00 lb
			<u>Total Volume: 45.83 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.14 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3473.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	47.00 ft			
Tool Length:	67.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3458.00	
Hydraulic tool	5.00			3463.00	
Top Packer	5.00			3468.00	
Packer	5.00			3473.00	20.00 Bottom Of Top Packer
Anchor	42.00			3515.00	
Recorder	1.00	6838	Inside	3516.00	
Recorder	1.00	6749	Outside	3517.00	
Bullnose	3.00			3520.00	47.00 Anchor Tool

**Total Tool Length: 67.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Dow ning-Nelson Oil Company

**Fiala Living Trust #1-33**

PO Box 1019  
Hays, Kansas 67601

**33-16s-17w Rush,KS**

Job Ticket: 62048      **DST#: 2**

ATTN: Mark Dow ning

Test Start: 2015.03.07 @ 22:26:00

## 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: 56.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.78 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3000.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud with show of oil/Mud 100%	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments:

Serial #: 6838

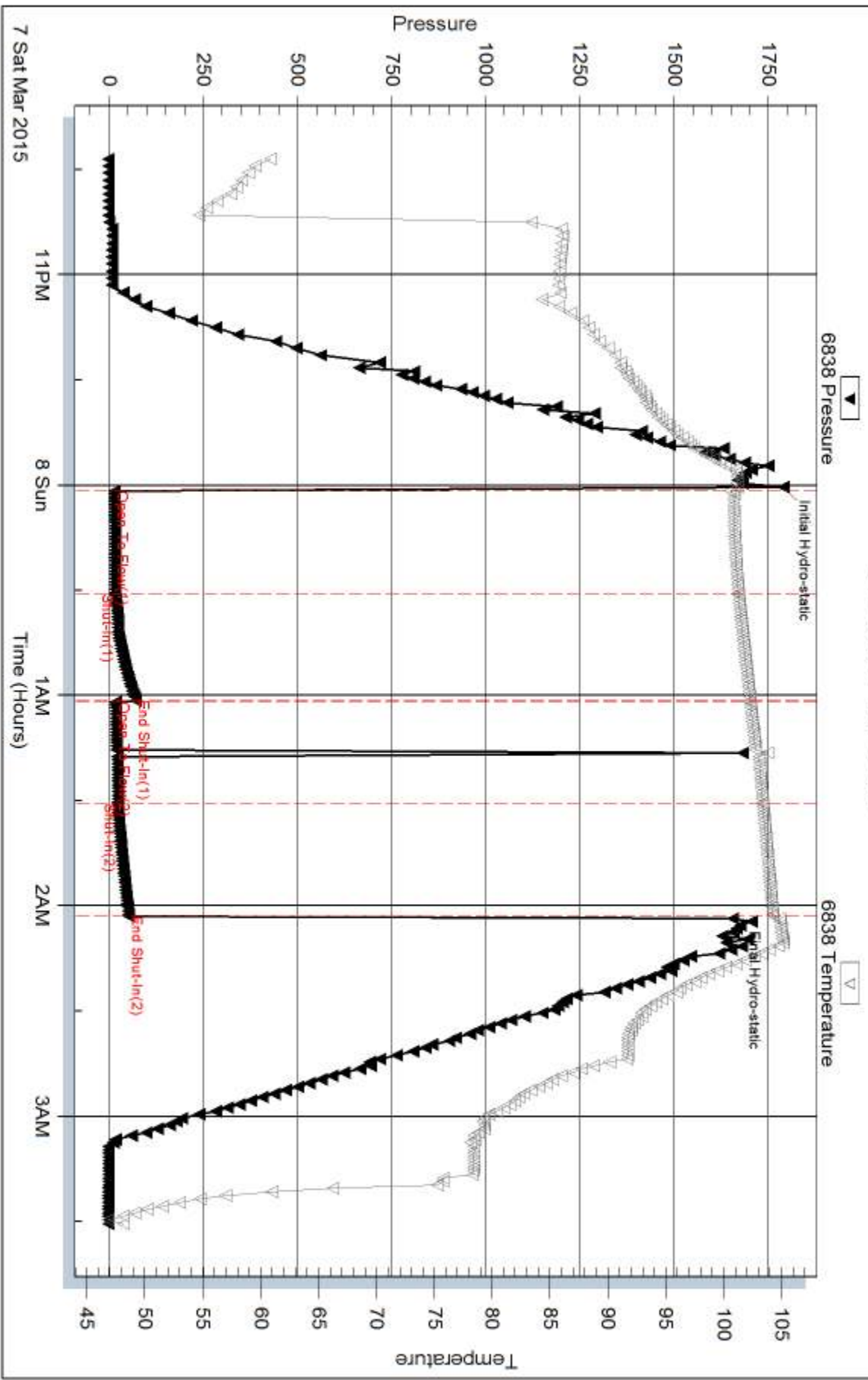
Inside

Dow n/g-Nelson Oil Company

33-16s-17w Rush, KS

DST Test Number: 2

### Pressure vs. Time

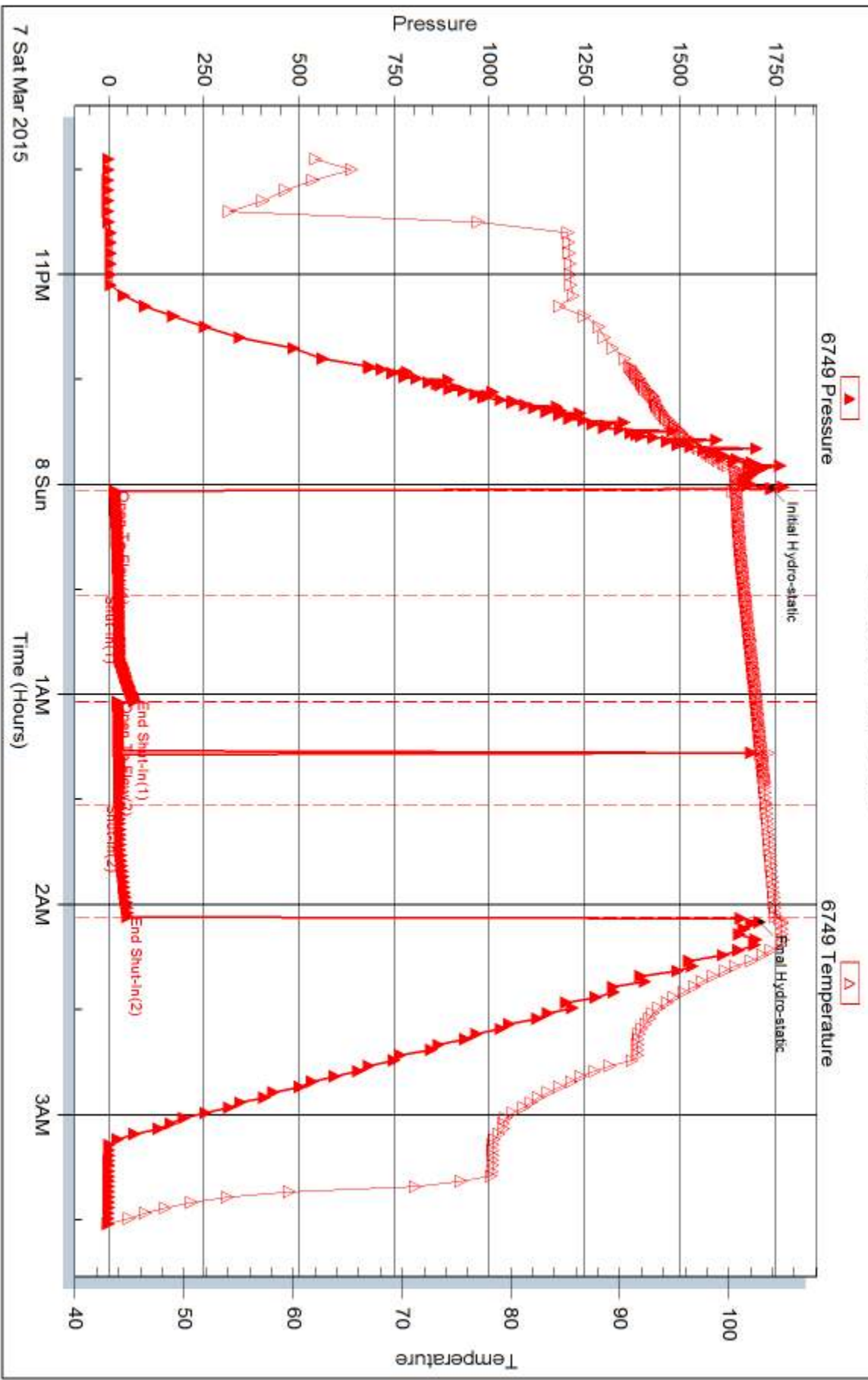


Trilobite Testing, Inc

Ref. No: 62048

Printed: 2015.03.18 @ 15:50:39

### Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Company**

PO Box 1019  
Hays, Kansas 67601

ATTN: Mark Downing

**33-16s-17w Rush,KS**

**Fiala Living Trust #1-33**

Start Date: 2015.03.09 @ 02:33:00

End Date: 2015.03.09 @ 08:15:00

Job Ticket #: 62049                      DST #: 3

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

Printed: 2015.03.18 @ 15:48:29



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Dow ning-Nelson Oil Company

**Fiala Living Trust #1-33**

PO Box 1019  
Hays, Kansas 67601

**33-16s-17w Rush,KS**

Job Ticket: 62049

**DST#: 3**

ATTN: Mark Dow ning

Test Start: 2015.03.09 @ 02:33:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:19:00

Time Test Ended: 08:15:00

Test Type: Conventional Straddle (Initial)

Tester: Ken Sw inney

Unit No: 58

**Interval: 3540.00 ft (KB) To 3657.00 ft (KB) (TVD)**

Reference Elevations: 2041.00 ft (KB)

Total Depth: 3720.00 ft (KB) (TVD)

2033.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 6838**

**Inside**

Press@RunDepth: 1128.12 psig @ 3651.43 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.03.09

End Date:

2015.03.09

Last Calib.:

1899.12.30

Start Time:

02:34:00

End Time:

08:15:00

Time On Btm:

2015.03.09 @ 04:18:30

Time Off Btm:

2015.03.09 @ 06:22:30

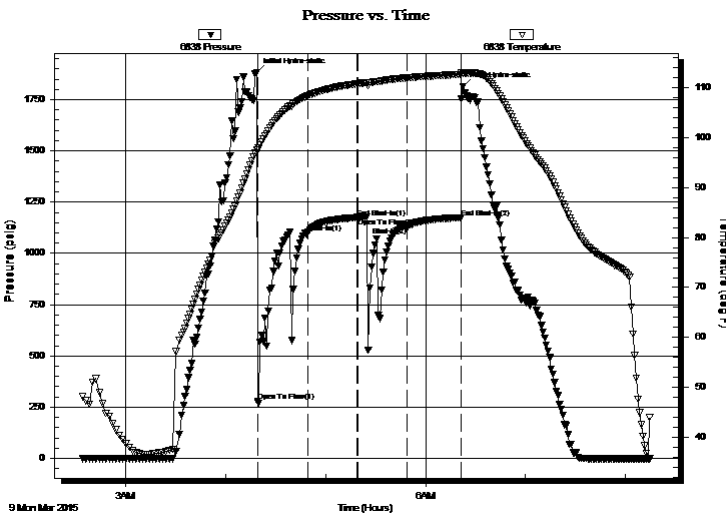
**TEST COMMENT:** IFP 30 Mintues Weak blow built to 1" then died in 25 minutes

ISI 30 Mintues No blow back

FFP 30 Mintues Dead no blow - Flush tool - Weak surface blow for 2 minutes then dead

FSI 30 Mintues No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1882.76	97.64	Initial Hydro-static
1	279.39	97.51	Open To Flow (1)
31	1099.30	108.35	Shut-In(1)
61	1175.19	110.81	End Shut-In(1)
61	1175.42	110.83	Open To Flow (2)
91	1128.12	111.99	Shut-In(2)
123	1174.74	112.66	End Shut-In(2)
124	1812.20	112.88	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud 100%	0.00

## Gas Rates

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





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Dow ning-Nelson Oil Company

**Fiala Living Trust #1-33**

PO Box 1019  
Hays, Kansas 67601

**33-16s-17w Rush,KS**

ATTN: Mark Dow ning

Job Ticket: 62049

**DST#: 3**

Test Start: 2015.03.09 @ 02:33:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:19:00

Time Test Ended: 08:15:00

Test Type: Conventional Straddle (Initial)

Tester: Ken Sw inney

Unit No: 58

**Interval: 3540.00 ft (KB) To 3657.00 ft (KB) (TVD)**

Reference Elevations: 2041.00 ft (KB)

Total Depth: 3720.00 ft (KB) (TVD)

2033.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 6663 Outside**

Press@RunDepth: 1176.48 psig @ 3651.43 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.03.09

End Date: 2015.03.09

Last Calib.: 1899.12.30

Start Time: 02:33:01

End Time: 08:15:33

Time On Btm: 2015.03.09 @ 04:18:19

Time Off Btm: 2015.03.09 @ 06:22:01

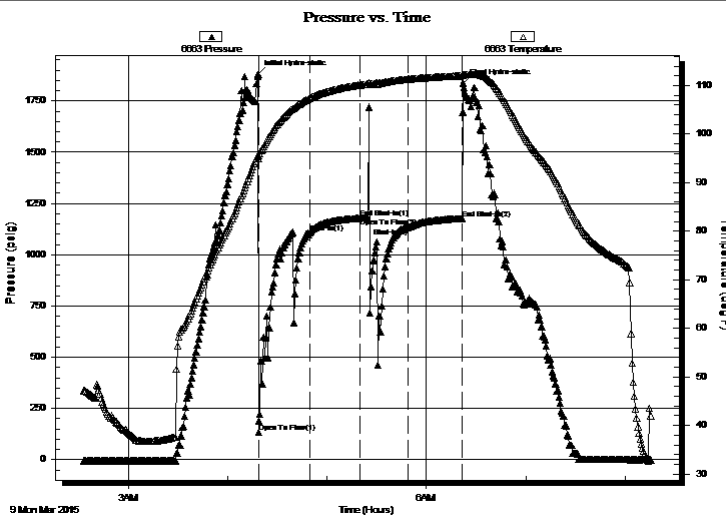
**TEST COMMENT:** IFP 30 Mintues Weak blow built to 1" then died in 25 minutes

ISI 30 Mintues No blow back

FFP 30 Mintues Dead no blow - Flush tool - Weak surface blow for 2 minutes then dead

FSI 30 Mintues No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1879.93	95.68	Initial Hydro-static
1	134.31	94.95	Open To Flow (1)
32	1107.09	107.40	Shut-In(1)
62	1178.33	110.11	End Shut-In(1)
62	1178.34	110.12	Open To Flow (2)
91	1129.87	111.32	Shut-In(2)
124	1176.48	112.03	End Shut-In(2)
124	1837.36	112.21	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud 100%	0.00

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Dow ning-Nelson Oil Company

**Fiala Living Trust #1-33**

PO Box 1019  
Hays, Kansas 67601

**33-16s-17w Rush,KS**

ATTN: Mark Dow ning

Job Ticket: 62049

**DST#: 3**

Test Start: 2015.03.09 @ 02:33:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:19:00

Time Test Ended: 08:15:00

Test Type: Conventional Straddle (Initial)

Tester: Ken Sw inney

Unit No: 58

**Interval: 3540.00 ft (KB) To 3657.00 ft (KB) (TVD)**

Reference Elevations: 2041.00 ft (KB)

Total Depth: 3720.00 ft (KB) (TVD)

2033.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 6749 Below (Straddle)**

Press@RunDepth: 1239.71 psig @ 3715.79 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.03.09

End Date:

2015.03.09

Last Calib.:

1899.12.30

Start Time:

02:34:00

End Time:

08:27:00

Time On Btm:

2015.03.09 @ 04:18:40

Time Off Btm:

2015.03.09 @ 06:23:00

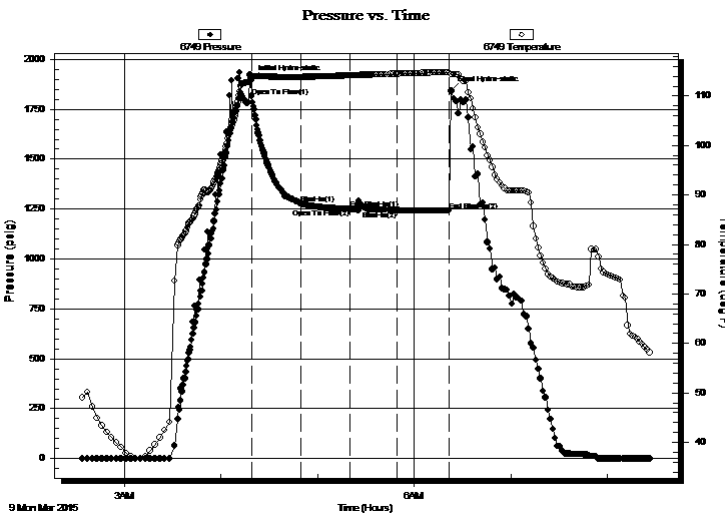
TEST COMMENT: IFP 30 Mintues Weak blow built to 1" then died in 25 minutes

ISI 30 Mintues No blow back

FFP 30 Mintues Dead no blow - Flush tool - Weak surface blow for 2 minutes then dead

FSI 30 Mintues No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1897.00	113.77	Initial Hydro-static
1	1816.11	113.88	Open To Flow (1)
31	1277.75	113.79	Shut-In(1)
62	1249.95	114.11	End Shut-In(1)
62	1249.84	114.11	Open To Flow (2)
91	1242.02	114.44	Shut-In(2)
123	1239.71	114.77	End Shut-In(2)
125	1841.66	114.39	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud 100%	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 Company

**Fiala Living Trust #1-33**

PO Box 1019  
Hays, Kansas 67601

**33-16s-17w Rush,KS**

Job Ticket: 62049

**DST#: 3**

ATTN: Mark Dow ning

Test Start: 2015.03.09 @ 02:33:00

## Tool Information

Drill Pipe:	Length: 3228.00 ft	Diameter: 3.80 inches	Volume: 45.28 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 310.14 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 45.28 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.99 ft			String Weight: Initial 53000.00 lb
Depth to Top Packer:	3540.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	3655.53 ft			
Interval between Packers:	115.53 ft			
Tool Length:	195.64 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			3528.15	
Hydraulic tool	5.00			3533.15	
Top Packer	5.00			3538.15	
Packer	1.85			3540.00	16.85 Bottom Of Top Packer
Perforations	6.00			3546.00	
Change Over Sub	0.64			3546.64	
Drill Pipe	94.13			3640.77	
Change Over Sub	0.66			3641.43	
Perforations	10.00			3651.43	
Recorder	0.00	6663	Outside	3651.43	
Recorder	0.00	6838	Inside	3651.43	
Blank Off Sub	0.67			3652.10	
Travel Collar	1.73			3653.83	
Packer (Anchor Side)	1.70			3655.53	115.53 Tool Interval
Packer	0.00			3655.53	
Packer (Tail Side)	1.55			3657.08	
Change Over Sub	0.67			3657.75	
Drill Pipe	31.25			3689.00	
Change Over Sub	0.79			3689.79	
Perforations	26.00			3715.79	
Recorder	0.00	6749	Below	3715.79	
Bullnose	3.00			3718.79	63.26 Bottom Packers & Anchor

**Total Tool Length: 195.64**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Dow ning-Nelson Oil Company

**Fiala Living Trust #1-33**

PO Box 1019  
Hays, Kansas 67601

**33-16s-17w Rush,KS**

Job Ticket: 62049

**DST#: 3**

ATTN: Mark Dow ning

Test Start: 2015.03.09 @ 02:33:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
15.00	Mud 100%	0.000

Total Length: 15.00 ft

Total Volume: bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

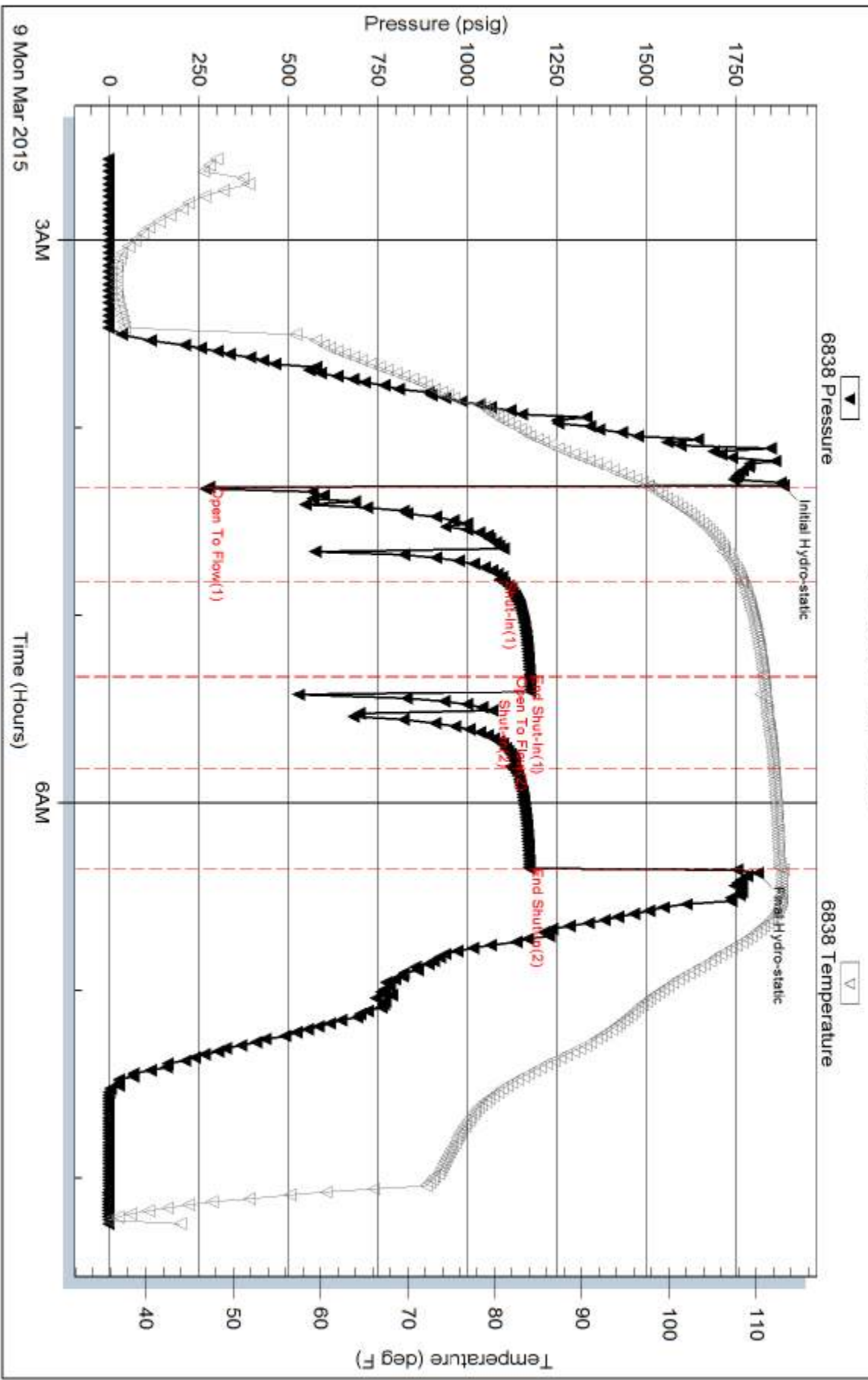
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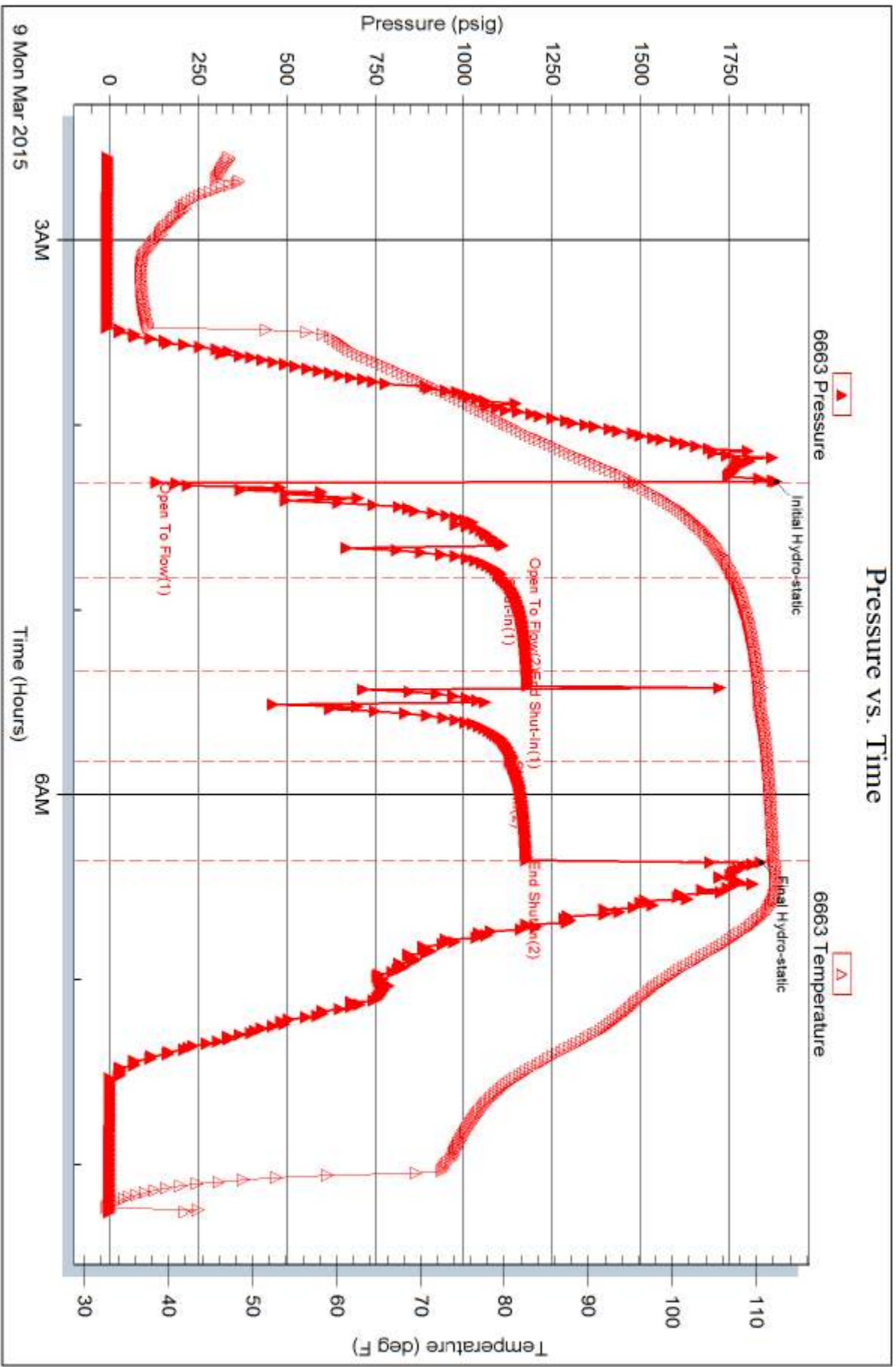
Laboratory Name:

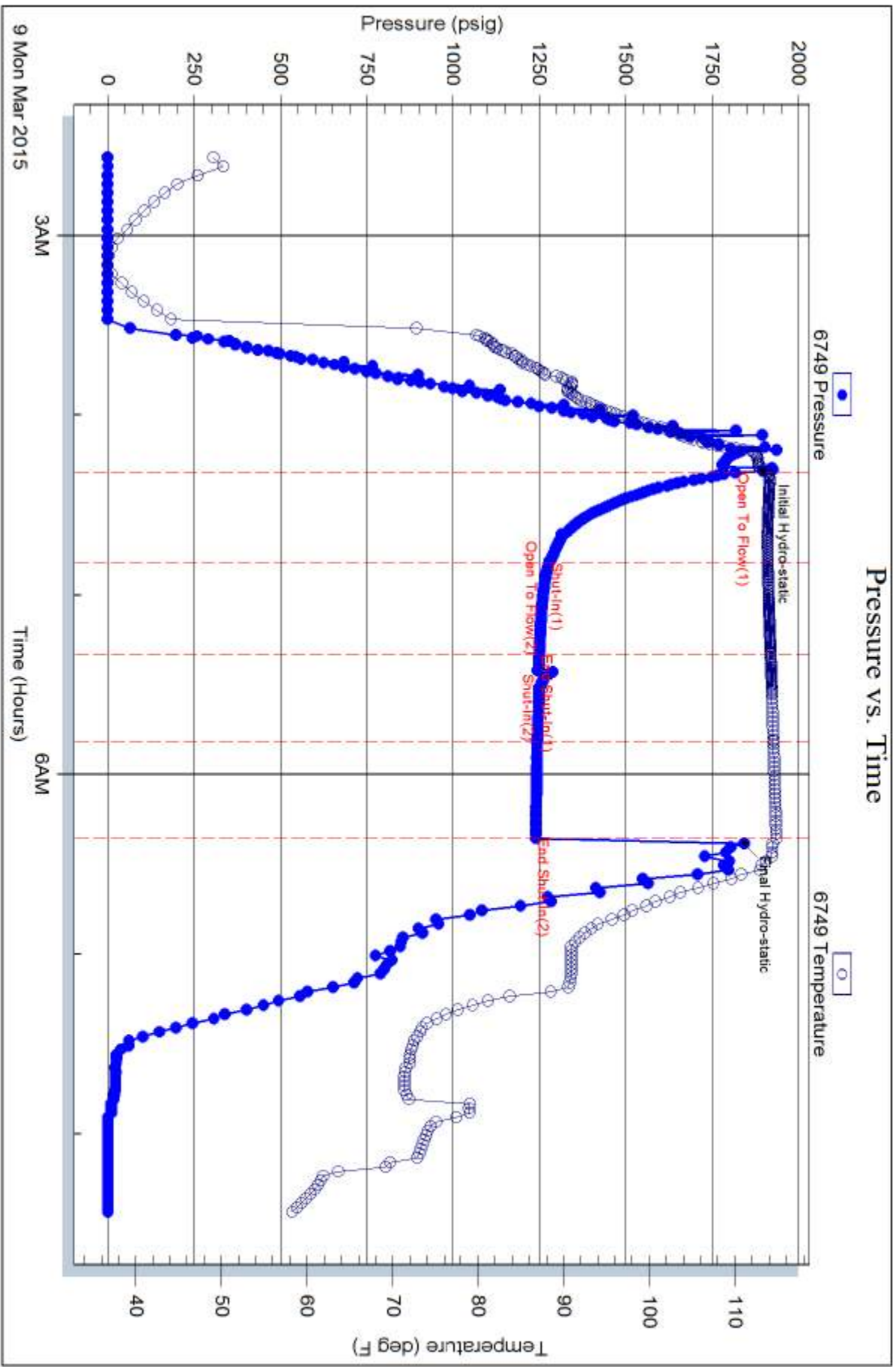
Laboratory Location:

Recovery Comments:

### Pressure vs. Time











# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62047

Well Name & No. Fiala Living Trust #1-33 Test No. 1 Date 6 MAR 15  
 Company Downing-Nelson Oil Company Elevation 2041 KB 2033 GL  
 Address PO Box 1019 Hays Kansas 67601  
 Co. Rep / Geo. Mark Downing Rig Discovery Rig #2  
 Location: Sec. 33 Twp. 16S Rge. 17W Co. Rush State KS

Interval Tested 3050-3072 Zone Tested Topeka  
 Anchor Length 22 Drill Pipe Run 2724 Mud Wt. 8.7  
 Top Packer Depth 3045 Drill Collars Run 0 Vis 50  
 Bottom Packer Depth 3050 Wt. Pipe Run 310.14 WL 8.4  
 Total Depth 3072 Chlorides 2000 ppm System LCM 2#

Blow Description Weak blow/ Blow built to 6 inches in 31 minutes then weak surging throughout  
No blow back  
Weak blow/ Blow built to 7 inches  
Weak surface blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>237</u>	<u>Gas in pipe</u>	<u>100</u>			
<u>15</u>	<u>Mud with skim of oil</u>				<u>100</u>

Rec Total 252 BHT 101 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1489  Test 1050 T-On Location 5:26 am  
 (B) First Initial Flow 23  Jars \_\_\_\_\_ T-Started 5:56 am  
 (C) First Final Flow 27  Safety Joint \_\_\_\_\_ T-Open 7:58 am  
 (D) Initial Shut-In 71  Circ Sub \_\_\_\_\_ T-Pulled 10:50 am  
 (E) Second Initial Flow 23  Hourly Standby \_\_\_\_\_ T-Out 12:25 pm  
 (F) Second Final Flow 24  Mileage 50 50 Comments \_\_\_\_\_  
 (G) Final Shut-In 60  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1456  Straddle \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Initial Open 45  Shale Packer \_\_\_\_\_  
 Initial Shut-In 45  Extra Packer \_\_\_\_\_  
 Final Flow 45  Extra Recorder \_\_\_\_\_  
 Final Shut-In 45  Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1100 Sub Total 1100  
 Total 1100 MP/DST Disc't \_\_\_\_\_

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

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62048

Well Name & No. Fiola Living Trust #1-33 Test No. 7 Date 7 MAR 15  
 Company Downing-Nelson Oil Company Elevation 2041 KB 2033 GL  
 Address PO Box 1019 Hays Kansas 67601  
 Co. Rep / Geo. Mark Downing Rig Discovery Rig #2  
 Location: Sec. 33 Twp. 16S Rge. 17W Co. Rush State KS

Interval Tested 3473-3520 Zone Tested Lansing/Kansas City zones H&I  
 Anchor Length 47 Drill Pipe Run 3158 Mud Wt. 9.2  
 Top Packer Depth 3488 Drill Collars Run 0 Vis 5-6  
 Bottom Packer Depth 3473 Wt. Pipe Run 310.14 WL 8.8  
 Total Depth 3520 Chlorides 3000 ppm System LCM 2#

Blow Description Weak blow/Blow built to 3/4 inch then died to surface blow  
No blow back  
Weak surface blow for 2 minutes then dead/Flush tool/Surge then dead  
No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Mud with show of oil</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 105 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1788  Test 1050 T-On Location 10:02 pm  
 (B) First Initial Flow 14  Jars \_\_\_\_\_ T-Started 10:26 pm  
 (C) First Final Flow 16  Safety Joint \_\_\_\_\_ T-Open 12:01 am  
 (D) Initial Shut-In 71  Circ Sub \_\_\_\_\_ T-Pulled 2:01 am  
 (E) Second Initial Flow 18  Hourly Standby \_\_\_\_\_ T-Out 3:30 am  
 (F) Second Final Flow 23  Mileage 50 50 Comments \_\_\_\_\_  
 (G) Final Shut-In 52  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1655  Straddle \_\_\_\_\_

Initial Open 30  Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Initial Shut-In 30  Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Final Flow 30  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Final Shut-In 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1100  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1100

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

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 62049

Well Name & No. Frida Living Trust #1-33 Test No. 3 Date 9 MAR 15  
 Company Downing-Nelson Oil Company Elevation 2041 KB 2033 GL  
 Address PO Box 1019 Hays Kansas 67601  
 Co. Rep / Geo. Al Downing Rig Discovery Rig #2  
 Location: Sec. 33 Twp. 16S Rge. 17W Co. Rush State KS

Interval Tested 3540-3657 Zone Tested Arbuckle  
 Anchor Length 117 Drill Pipe Run 3228 Mud Wt. 9.3  
 Top Packer Depth 3535 Drill Collars Run 0 Vis 57  
 Bottom Packer Depth 3540 Wt. Pipe Run 310.14 WL 8.4  
 Total Depth 3720 Chlorides 3500 ppm System LCM 1 1/2 #  
 Blow Description Weak blow/Blow built to 1 inch then died in 25 minutes  
No blow back  
Dead no blow/Flash tool/Weak surface bbw for 2 minutes  
No blow back

Rec	Feet of	%gas	%oil	%water	%mud
15	mud			100	

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

(A) Initial Hydrostatic 1882  Test 1050 T-On Location 2:03 am  
 (B) First Initial Flow 279  Jars \_\_\_\_\_ T-Started 2:33 am  
 (C) First Final Flow 1099  Safety Joint \_\_\_\_\_ T-Open 4:19 am  
 (D) Initial Shut-In 1175  Circ Sub \_\_\_\_\_ T-Pulled 6:19 am  
 (E) Second Initial Flow 1175  Hourly Standby \_\_\_\_\_ T-Out 8:15 am  
 (F) Second Final Flow 1128  Mileage 50 50 Comments \_\_\_\_\_  
 (G) Final Shut-In 1174  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1812  Straddle 600  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1700  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1700

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