



## DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co**

PO Box 1019  
Hays, KS 67601

ATTN: Marc Downing

### **Schneller #2-25**

### **25-13s-21w Trego,KS**

Start Date: 2018.05.20 @ 15:44:00

End Date: 2018.05.20 @ 20:35:00

Job Ticket #: 64012                      DST #: 1

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

Printed: 2018.05.25 @ 08:29:03



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Downing Nelson Oil Co

**25-13s-21w Trego, KS**

PO Box 1019  
Hays, KS 67601

**Schneller #2-25**

Job Ticket: 64012

**DST#: 1**

ATTN: Marc Downing

Test Start: 2018.05.20 @ 15:44:00

## GENERAL INFORMATION:

Formation: **LKC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened:

Time Test Ended: 20:35:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Cade Gerhard

Unit No: 65

**Interval: 3630.00 ft (KB) To 3653.00 ft (KB) (TVD)**

Reference Elevations: 2330.00 ft (KB)

Total Depth: 3653.00 ft (KB) (TVD)

2322.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8653** Inside

Press@RunDepth: psig @ 3631.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.20 End Date: 2018.05.20

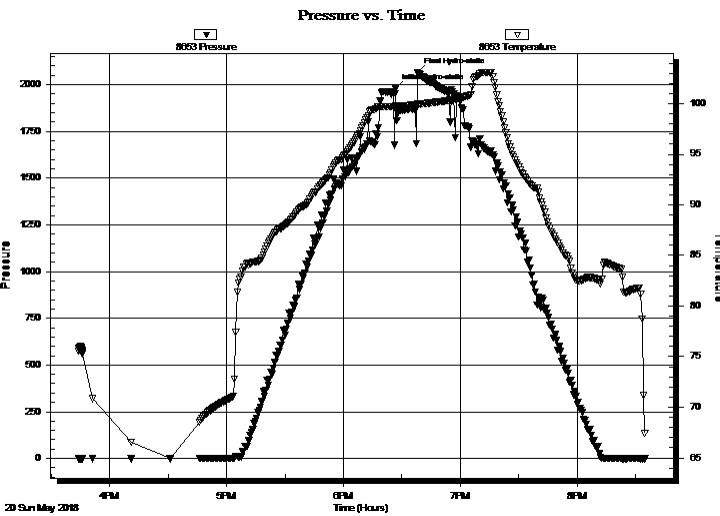
Last Calib.: 2018.05.20

Start Time: 15:44:01 End Time: 20:35:00

Time On Btm: 2018.05.20 @ 18:26:40

Time Off Btm: 2018.05.20 @ 18:38:00

**TEST COMMENT:** IF-15- Weak surface blow ; Flushed tool  
 IS-15- No blow back  
 FF-15- Weak surface blow ; Flushed tool; PULLED TEST



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1976.30	99.74	Initial Hydro-static
12	2065.31	99.95	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud 100%M	0.00

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Downing Nelson Oil Co

**25-13s-21w Trego, KS**

PO Box 1019  
Hays, KS 67601

**Schneller #2-25**

Job Ticket: 64012

**DST#: 1**

ATTN: Marc Downing

Test Start: 2018.05.20 @ 15:44:00

## Tool Information

Drill Pipe:	Length: 3583.00 ft	Diameter: 3.82 inches	Volume: 50.79 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 32.00 ft	Diameter: 2.25 inches	Volume: 0.16 bbl	Weight to Pull Loose: 58000.00 lb
			<u>Total Volume: 50.95 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3630.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 ft			
Tool Length:	47.00 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			3607.00	
Shut In Tool	5.00			3612.00	
Hydraulic tool	5.00			3617.00	
EM Tool	4.00			3621.00	
Packer	5.00			3626.00	24.00 Bottom Of Top Packer
Packer	4.00			3630.00	
Stubb	1.00			3631.00	
Recorder	0.00	8653	Inside	3631.00	
Recorder	0.00	8737	Outside	3631.00	
Perforations	19.00			3650.00	
Bullnose	3.00			3653.00	23.00 Bottom Packers & Anchor

**Total Tool Length: 47.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Downing Nelson Oil Co

**25-13s-21w Trego,KS**

PO Box 1019  
Hays, KS 67601

**Schneller #2-25**

Job Ticket: 64012

**DST#: 1**

ATTN: Marc Downing

Test Start: 2018.05.20 @ 15:44:00

## 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: 62.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.17 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4600.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	Mud 100%M	0.005

Total Length: 1.00 ft      Total Volume: 0.005 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: LCM- 2#

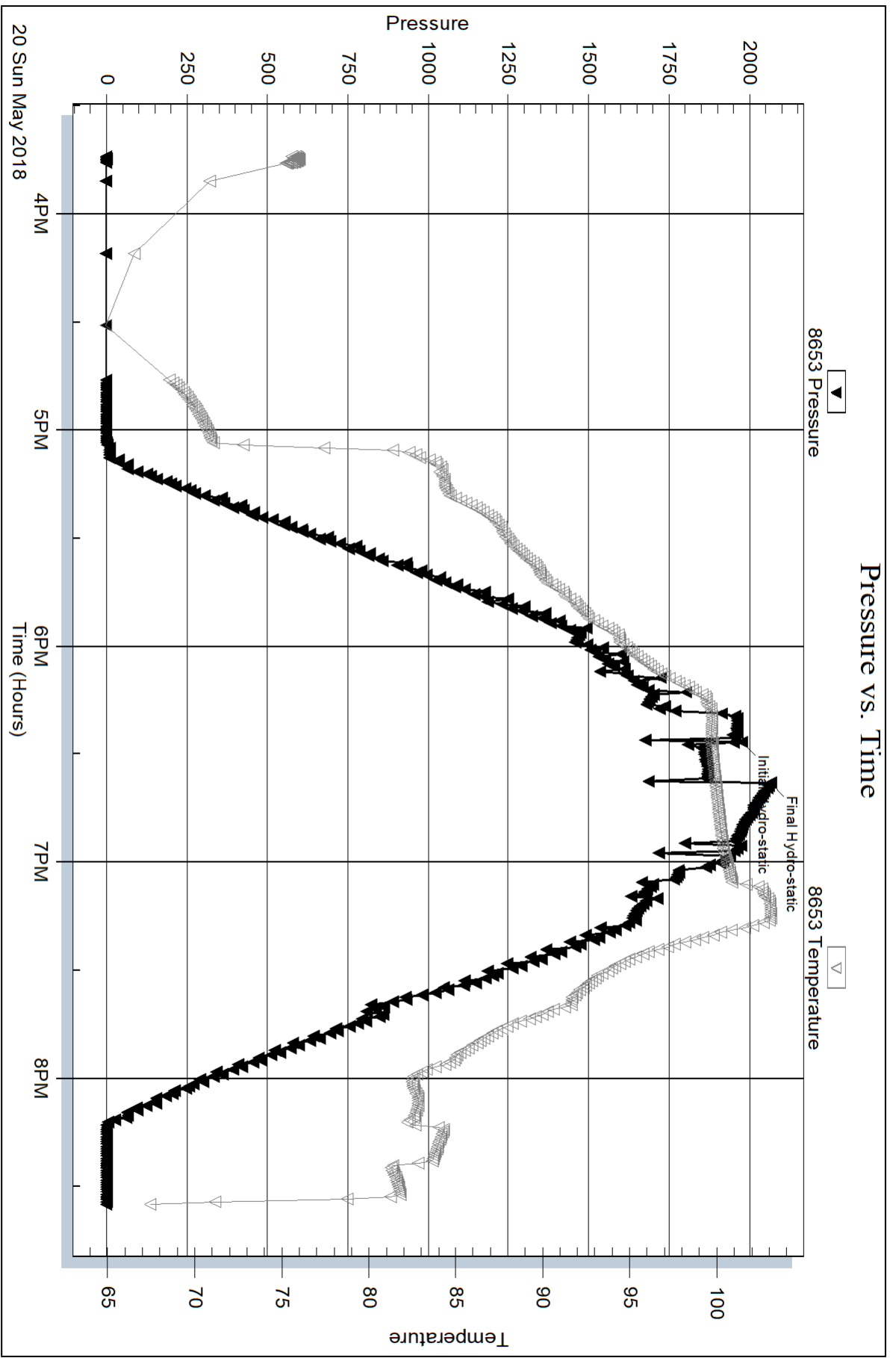
Serial #: 8653

Inside

Downing Nelson Oil Co

Schneller #2-25

DST Test Number: 1

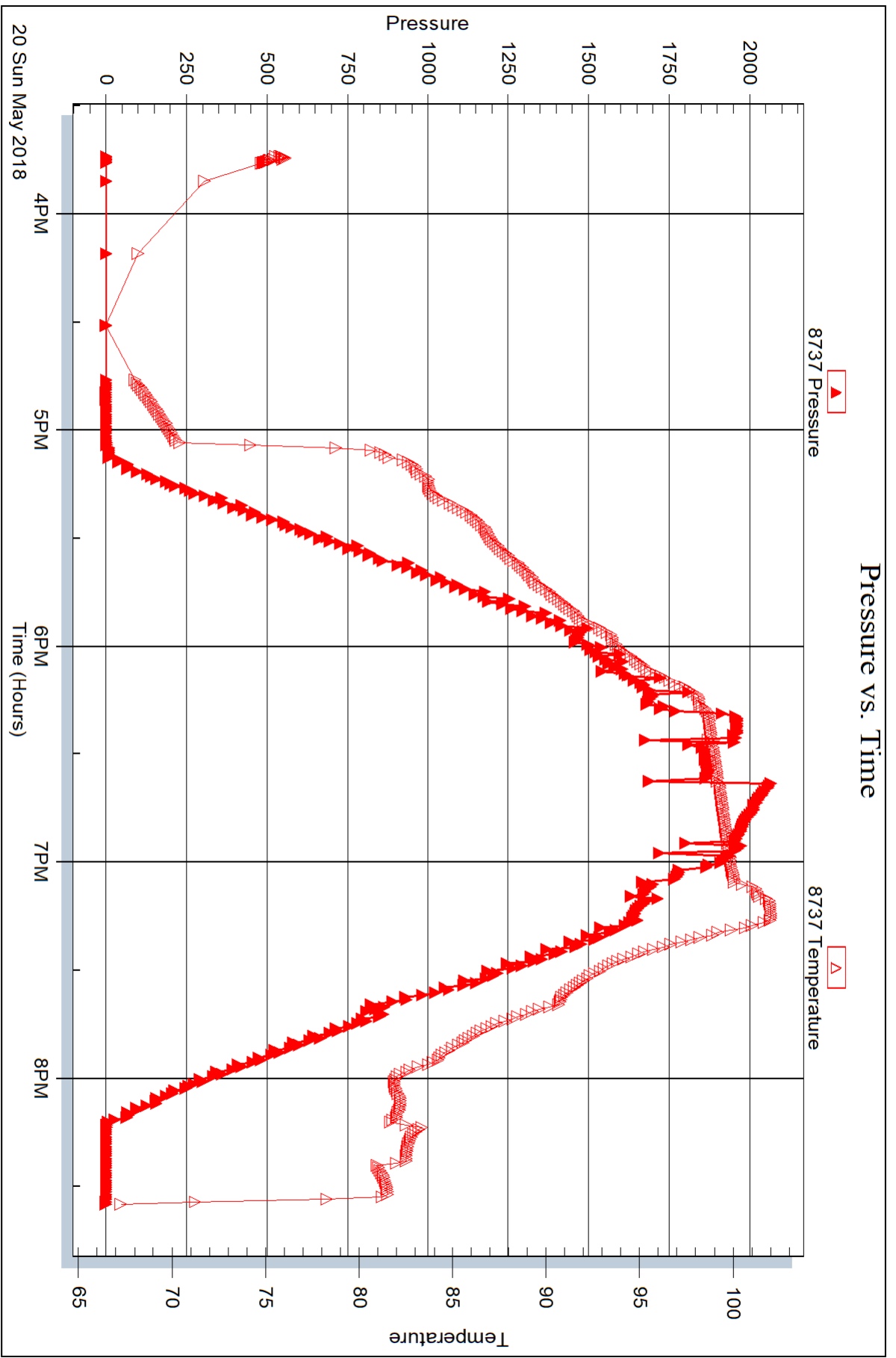


Serial #: 8737

Outside Downing Nelson Oil Co

Schneller #2-25

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co**

PO Box 1019  
Hays, KS 67601

ATTN: Marc Downing

### **Schneller #2-25**

### **25-13s-21w Trego,KS**

Start Date: 2018.05.20 @ 20:50:00

End Date: 2018.05.21 @ 03:01:09

Job Ticket #: 64013                      DST #: 2

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

Printed: 2018.05.25 @ 08:28:40





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Downing Nelson Oil Co

**25-13s-21w Trego, KS**

PO Box 1019  
Hays, KS 67601

**Schneller #2-25**

Job Ticket: 64013

**DST#: 2**

ATTN: Marc Downing

Test Start: 2018.05.20 @ 20:50:00

## GENERAL INFORMATION:

Formation: **LKC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:08:10

Time Test Ended: 03:01:09

Test Type: Conventional Bottom Hole (Initial)

Tester: Cade Gerhard

Unit No: 65

**Interval: 3630.00 ft (KB) To 3653.00 ft (KB) (TVD)**

Reference Elevations: 2330.00 ft (KB)

Total Depth: 3653.00 ft (KB) (TVD)

2322.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8653**

**Inside**

Press@RunDepth: 58.00 psig @ 3631.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.20

End Date:

2018.05.21

Last Calib.: 2018.05.21

Start Time: 20:50:01

End Time:

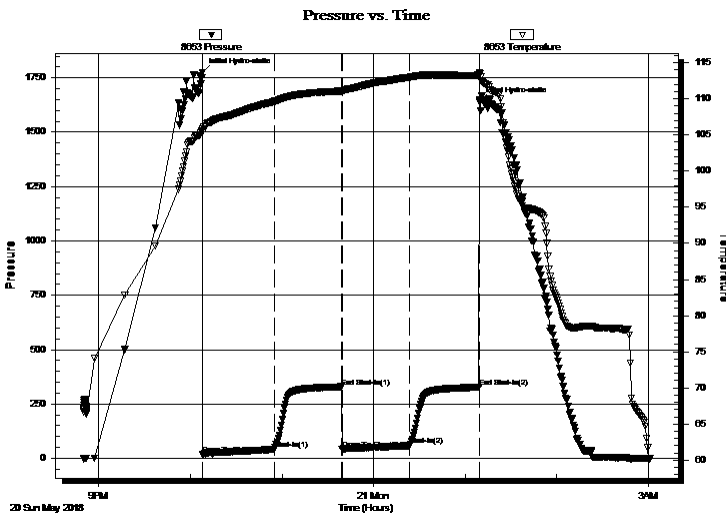
03:01:10

Time On Btm: 2018.05.20 @ 22:08:00

Time Off Btm: 2018.05.21 @ 01:09:20

**TEST COMMENT:** IF-45- Strong blow ; BOB in 31 min; built to 14"  
 IS-45- Slight blow back; built to 9/10"  
 FF-45- Strong blow ; BOB in 40 min; built to 11"  
 FS-45- Slight blow back; built to 4/10"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1774.81	105.86	Initial Hydro-static
1	18.49	105.48	Open To Flow (1)
47	43.05	109.65	Shut-In(1)
91	328.44	111.09	End Shut-In(1)
92	42.46	110.89	Open To Flow (2)
136	58.00	112.99	Shut-In(2)
181	326.10	113.26	End Shut-In(2)
182	1640.46	113.66	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
126.00	MW 20%W 80%M	1.49
32.00	SMCO 98%O 2%M	0.45
32.00	SOCM 2%O 98%M	0.45

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Dow ning Nelson Oil Co

PO Box 1019  
Hays, KS 67601

ATTN: Marc Dow ning

**25-13s-21w Trego,KS**

**Schneller #2-25**

Job Ticket: 64013

**DST#: 2**

Test Start: 2018.05.20 @ 20:50:00

### GENERAL INFORMATION:

Formation: **LKC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:08:10

Time Test Ended: 03:01:09

Test Type: Conventional Bottom Hole (Initial)

Tester: Cade Gerhard

Unit No: 65

**Interval: 3630.00 ft (KB) To 3653.00 ft (KB) (TVD)**

Total Depth: 3653.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2330.00 ft (KB)

2322.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8737 Outside**

Press@RunDepth: psig @ 3631.00 ft (KB)

Start Date: 2018.05.20

End Date: 2018.05.21

Start Time: 20:50:01

End Time: 03:01:10

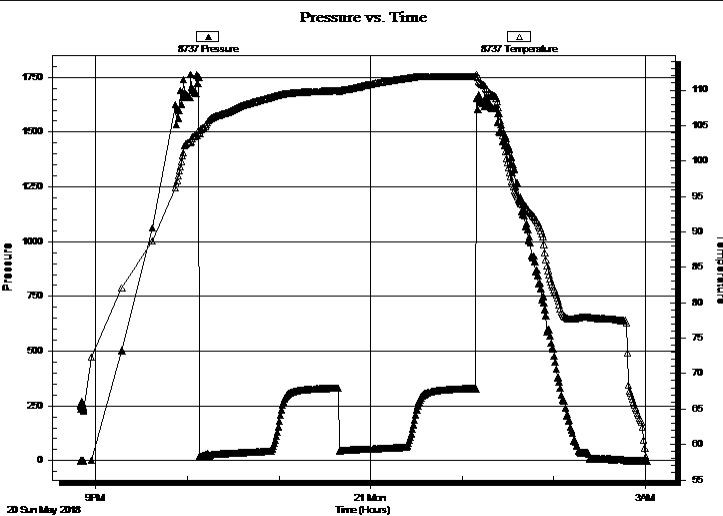
Capacity: 8000.00 psig

Last Calib.: 2018.05.21

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-45- Strong blow ; BOB in 31 min; built to 14"  
ISI-45- Slight blow back; built to 9/10"  
FF-45- Strong blow ; BOB in 40 min; built to 11"  
FSI-45- Slight blow back; built to 4/10"



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
126.00	MW 20%W 80%M	1.49
32.00	SMCO 98%O 2%M	0.45
32.00	SOCM 2%O 98%M	0.45

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Downing Nelson Oil Co

**25-13s-21w Trego, KS**

PO Box 1019  
Hays, KS 67601

**Schneller #2-25**

Job Ticket: 64013

**DST#: 2**

ATTN: Marc Downing

Test Start: 2018.05.20 @ 20:50:00

## Tool Information

Drill Pipe:	Length: 3583.00 ft	Diameter: 3.82 inches	Volume: 50.79 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 32.00 ft	Diameter: 2.25 inches	Volume: 0.16 bbl	Weight to Pull Loose: 58000.00 lb
			<u>Total Volume: 50.95 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3630.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 ft			
Tool Length:	43.00 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			3611.00	
Shut In Tool	5.00			3616.00	
Hydraulic tool	5.00			3621.00	
Packer	5.00			3626.00	20.00 Bottom Of Top Packer
Packer	4.00			3630.00	
Stubb	1.00			3631.00	
Recorder	0.00	8653	Inside	3631.00	
Recorder	0.00	8737	Outside	3631.00	
Perforations	19.00			3650.00	
Bullnose	3.00			3653.00	23.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>43.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Downing Nelson Oil Co

**25-13s-21w Trego,KS**

PO Box 1019  
Hays, KS 67601

**Schneller #2-25**

Job Ticket: 64013

**DST#: 2**

ATTN: Marc Downing

Test Start: 2018.05.20 @ 20:50:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

33 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

31000 ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.17 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4600.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
126.00	MW 20%W 80%M	1.490
32.00	SMCO 98%O 2%M	0.454
32.00	SOCM 2%O 98%M	0.454

Total Length: 190.00 ft

Total Volume: 2.398 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: LCM- 2#  
63' GIP

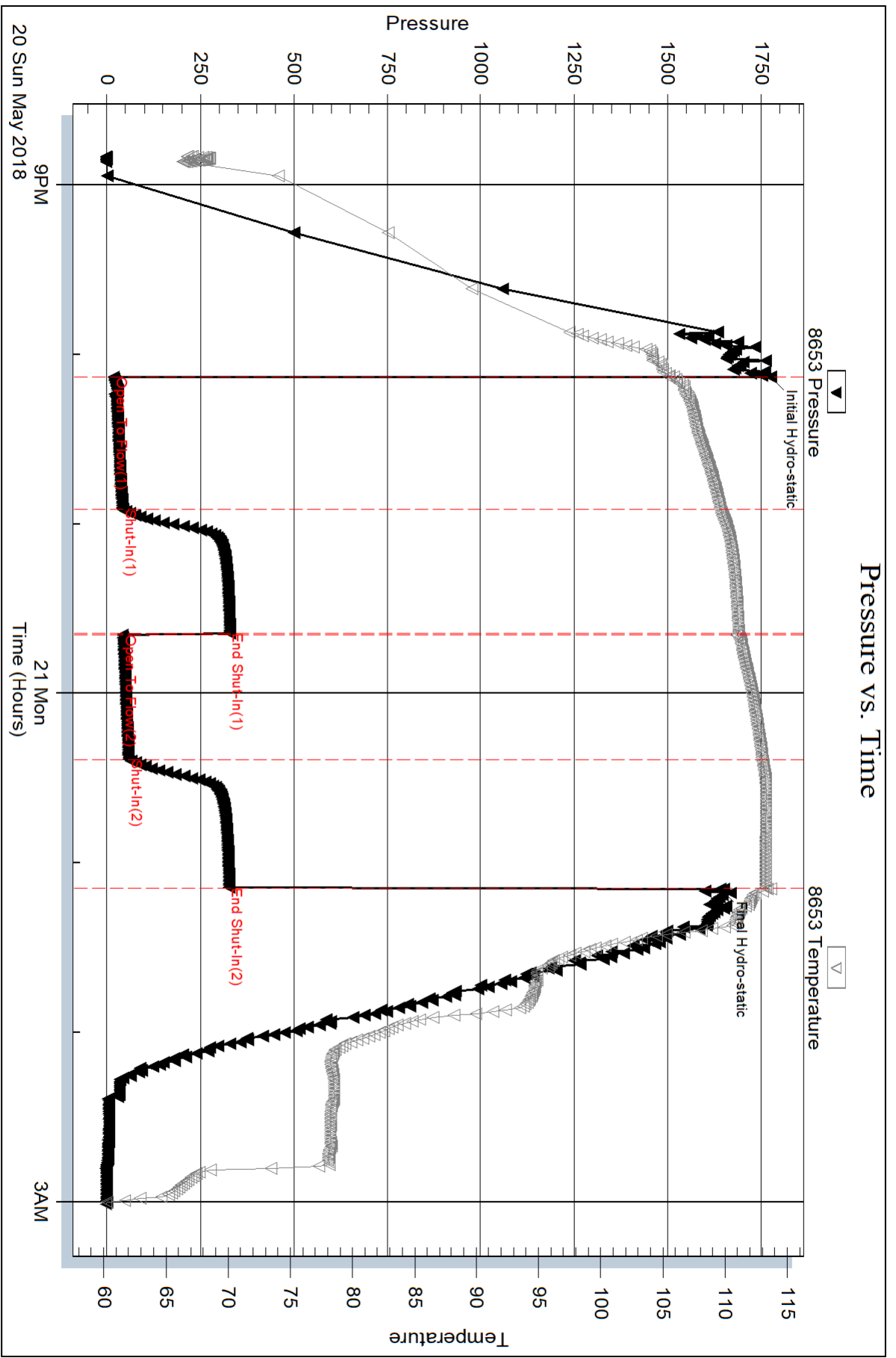
Serial #: 8653

Inside

Downing Nelson Oil Co

Schneller #2-25

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 64013

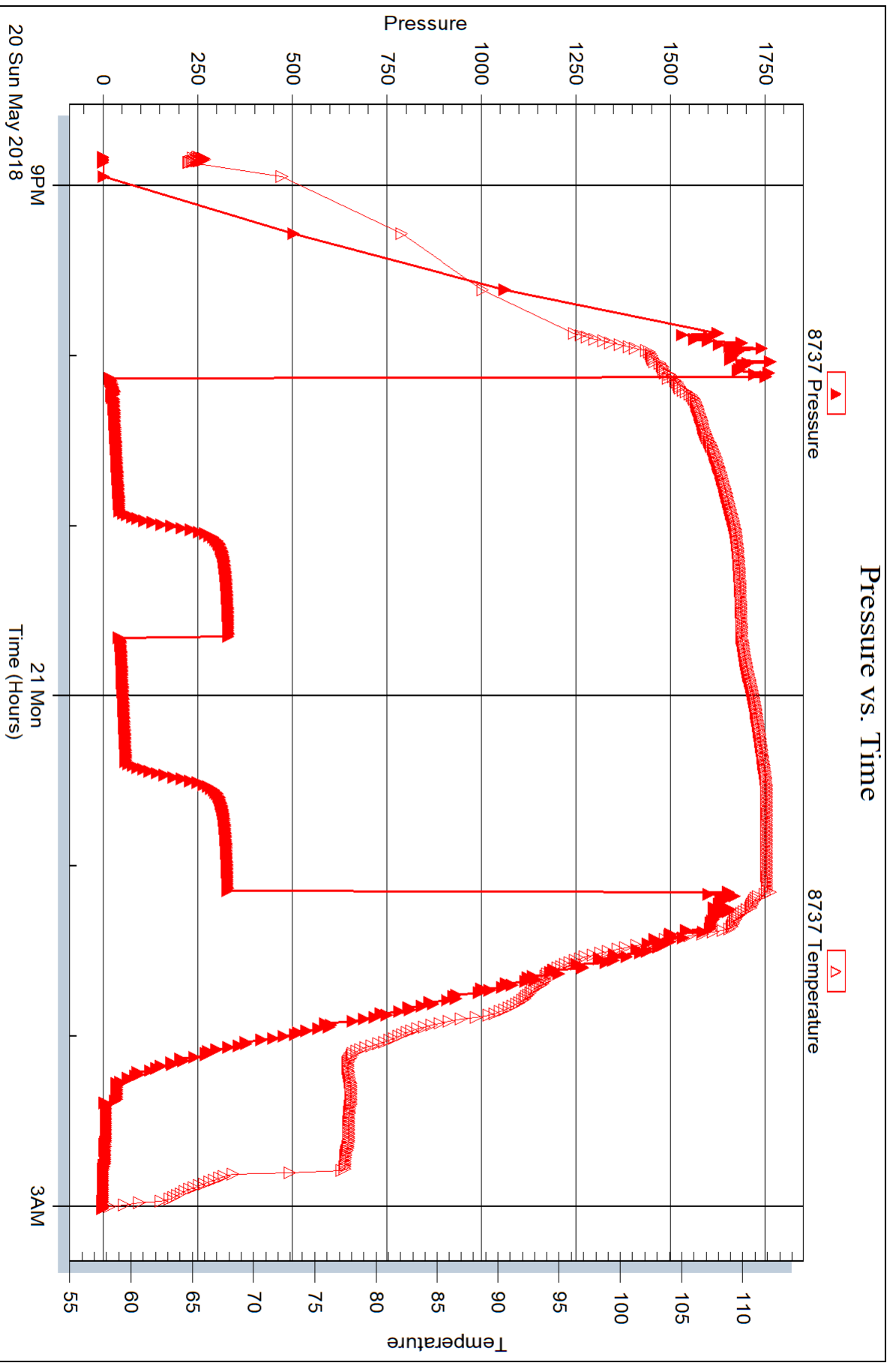
Printed: 2018.05.25 @ 08:28:41

Serial #: 8737

Outside Dow nting Nelson Oil Co

Schneller #2-25

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co**

PO Box 1019  
Hays, KS 67601

ATTN: Marc Downing

### **Schneller #2-25**

### **25-13s-21w Trego,KS**

Start Date: 2018.05.21 @ 09:57:00

End Date: 2018.05.21 @ 16:40:20

Job Ticket #: 64014                      DST #: 3

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

Printed: 2018.05.25 @ 08:28:16



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Downing Nelson Oil Co

**25-13s-21w Trego, KS**

PO Box 1019  
Hays, KS 67601

**Schneller #2-25**

Job Ticket: 64014

**DST#: 3**

ATTN: Marc Downing

Test Start: 2018.05.21 @ 09:57:00

## GENERAL INFORMATION:

Formation: **LKC "E"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:40:50

Time Test Ended: 16:40:20

Test Type: Conventional Bottom Hole (Initial)

Tester: Cade Gerhard

Unit No: 65

**Interval: 3670.00 ft (KB) To 3686.00 ft (KB) (TVD)**

Reference Elevations: 2330.00 ft (KB)

Total Depth: 3686.00 ft (KB) (TVD)

2322.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8653**

**Inside**

Press@RunDepth: 77.84 psig @ 3671.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.21 End Date: 2018.05.21

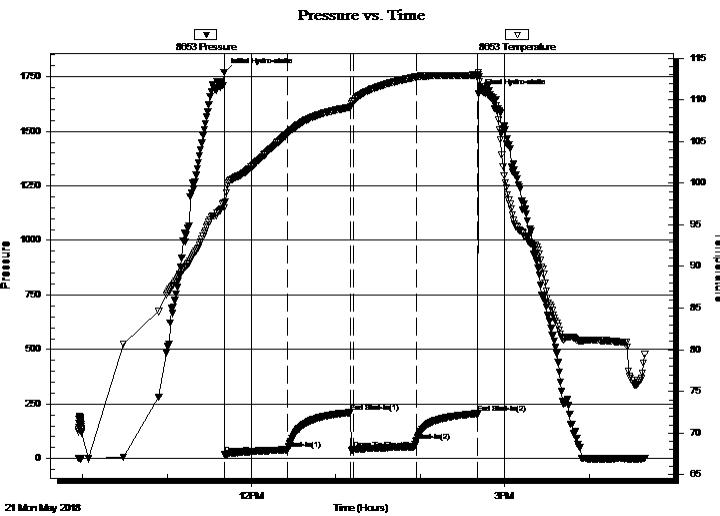
Last Calib.: 2018.05.21

Start Time: 09:57:01 End Time: 16:40:20

Time On Btm: 2018.05.21 @ 11:40:40

Time Off Btm: 2018.05.21 @ 14:41:20

**TEST COMMENT:** IF-45- Good blow ; Built to 6 1/2"  
 IS-45- Weak blow back; Built to 1/2"  
 FF-45- Strong blow ; BOB in 7 min; Built to 24"  
 FSI-45- Weak blow back; Built to 7/10"



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1770.14	97.64	Initial Hydro-static
1	19.33	97.02	Open To Flow (1)
46	44.04	105.94	Shut-In(1)
90	210.92	109.12	End Shut-In(1)
92	41.35	109.85	Open To Flow (2)
137	77.84	112.74	Shut-In(2)
181	206.05	112.96	End Shut-In(2)
181	1671.15	113.28	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
95.00	SGOCM 2%G 2%O 96%M	1.05
63.00	MW 70%W 30%M	0.89

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Downing Nelson Oil Co

**25-13s-21w Trego,KS**

PO Box 1019  
Hays, KS 67601

**Schneller #2-25**

Job Ticket: 64014

**DST#: 3**

ATTN: Marc Downing

Test Start: 2018.05.21 @ 09:57:00

## Tool Information

Drill Pipe:	Length: 3642.00 ft	Diameter: 3.82 inches	Volume: 51.63 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 32.00 ft	Diameter: 2.25 inches	Volume: 0.16 bbl	Weight to Pull Loose: 59000.00 lb
			<u>Total Volume: 51.79 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3670.00 ft			Final 59000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	16.00 ft			
Tool Length:	36.00 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			3651.00	
Shut In Tool	5.00			3656.00	
Hydraulic tool	5.00			3661.00	
Packer	5.00			3666.00	20.00 Bottom Of Top Packer
Packer	4.00			3670.00	
Stubb	1.00			3671.00	
Recorder	0.00	8653	Inside	3671.00	
Recorder	0.00	8737	Outside	3671.00	
Perforations	12.00			3683.00	
Bullnose	3.00			3686.00	16.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>36.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Downing Nelson Oil Co

**25-13s-21w Trego,KS**

PO Box 1019  
Hays, KS 67601

**Schneller #2-25**

Job Ticket: 64014

**DST#: 3**

ATTN: Marc Downing

Test Start: 2018.05.21 @ 09:57:00

## 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:

8000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.75 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
95.00	SGOCM 2%G 2%O 96%M	1.050
63.00	MW 70%W 30%M	0.893

Total Length: 158.00 ft

Total Volume: 1.943 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: LCM- 2#  
441' GIP

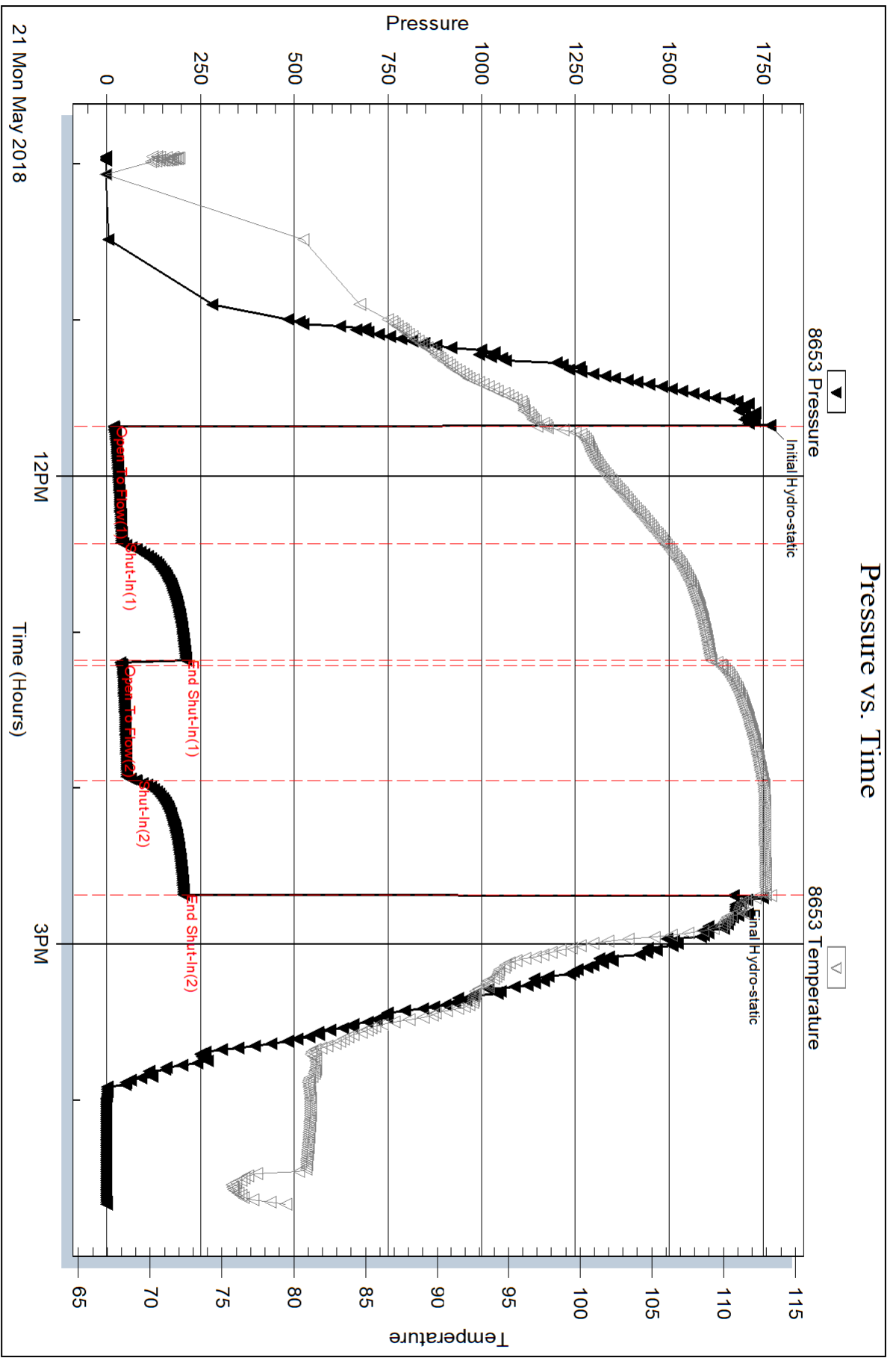
Serial #: 8653

Inside

Downing Nelson Oil Co

Schneller #2-25

DST Test Number: 3



21 Mon May 2018

Triobite Testing, Inc

Ref. No: 64014

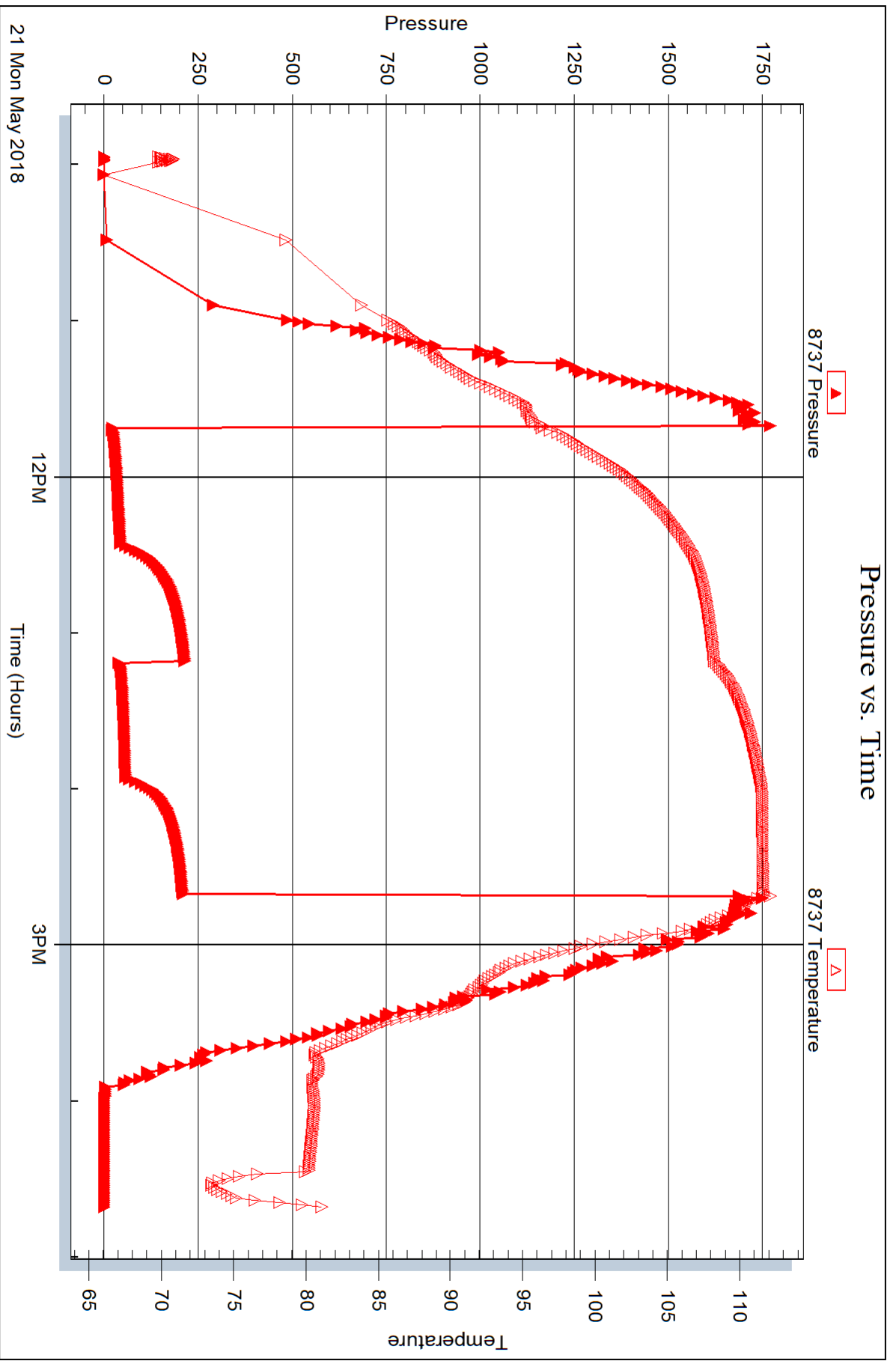
Printed: 2018.05.25 @ 08:28:17

Serial #: 8737

Outside Dow n/ing Nelson Oil Co

Schneller #2-25

DST Test Number: 3



21 Mon May 2018

Trilobite Testing, Inc

Ref. No: 64014

Printed: 2018.05.25 @ 08:28:18



## DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co**

PO Box 1019  
Hays, KS 67601

ATTN: Marc Downing

### **Schneller #2-25**

### **25-13s-21w Trego,KS**

Start Date: 2018.05.22 @ 06:30:00

End Date: 2018.05.22 @ 13:01:39

Job Ticket #: 64015                      DST #: 4

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

Printed: 2018.05.25 @ 08:27:51



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Downing Nelson Oil Co

**25-13s-21w Trego, KS**

PO Box 1019  
Hays, KS 67601

**Schneller #2-25**

Job Ticket: 64015

**DST#: 4**

ATTN: Marc Downing

Test Start: 2018.05.22 @ 06:30:00

## GENERAL INFORMATION:

Formation: **LKC "H - I"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:31:20

Time Test Ended: 13:01:39

Test Type: Conventional Bottom Hole (Initial)

Tester: Cade Gerhard

Unit No: 65

**Interval: 3729.00 ft (KB) To 3784.00 ft (KB) (TVD)**

Reference Elevations: 2330.00 ft (KB)

Total Depth: 3784.00 ft (KB) (TVD)

2322.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8653**

**Inside**

Press@RunDepth: 51.62 psig @ 3732.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.22

End Date:

2018.05.22

Last Calib.:

2018.05.22

Start Time: 06:30:01

End Time:

13:01:40

Time On Btm:

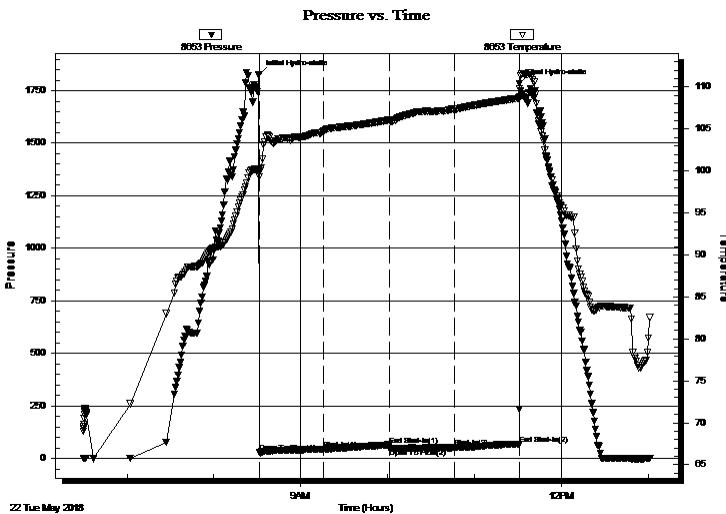
2018.05.22 @ 08:31:10

Time Off Btm:

2018.05.22 @ 11:31:09

**TEST COMMENT:** IF-45- Fair blow ; built to 4"  
IS-45- No blow back  
FF- Weak blow ; built to 2 1/2"  
FS- No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1827.29	100.30	Initial Hydro-static
1	29.38	99.29	Open To Flow (1)
45	43.65	104.73	Shut-In(1)
90	64.10	106.07	End Shut-In(1)
91	48.47	106.03	Open To Flow (2)
135	51.62	107.36	Shut-In(2)
180	68.93	108.69	End Shut-In(2)
180	1783.76	109.80	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
75.00	VSOCM 1%O 99%M	0.77

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Downing Nelson Oil Co

**25-13s-21w Trego,KS**

PO Box 1019  
Hays, KS 67601

**Schneller #2-25**

Job Ticket: 64015

**DST#: 4**

ATTN: Marc Downing

Test Start: 2018.05.22 @ 06:30:00

## Tool Information

Drill Pipe:	Length: 3705.00 ft	Diameter: 3.82 inches	Volume: 52.52 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 32.00 ft	Diameter: 2.25 inches	Volume: 0.16 bbl	Weight to Pull Loose: 61000.00 lb
			<u>Total Volume: 52.68 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3729.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	75.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Change Over Sub	1.00			3710.00	
Shut In Tool	5.00			3715.00	
Hydraulic tool	5.00			3720.00	
Packer	5.00			3725.00	20.00 Bottom Of Top Packer
Packer	4.00			3729.00	
Stubb	1.00			3730.00	
Change Over Sub	2.00			3732.00	
Recorder	0.00	8653	Inside	3732.00	
Recorder	0.00	8737	Outside	3732.00	
Drill Pipe	32.00			3764.00	
Change Over Sub	2.00			3766.00	
Perforations	15.00			3781.00	
Bullnose	3.00			3784.00	55.00 Bottom Packers & Anchor

**Total Tool Length: 75.00**



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Downing Nelson Oil Co

**25-13s-21w Trego,KS**

PO Box 1019  
Hays, KS 67601

**Schneller #2-25**

Job Ticket: 64015

**DST#: 4**

ATTN: Marc Downing

Test Start: 2018.05.22 @ 06:30:00

**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: 51.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
75.00	VSOCM 1%O 99%M	0.767

Total Length: 75.00 ft      Total Volume: 0.767 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: LCM- 2#

Serial #: 8653

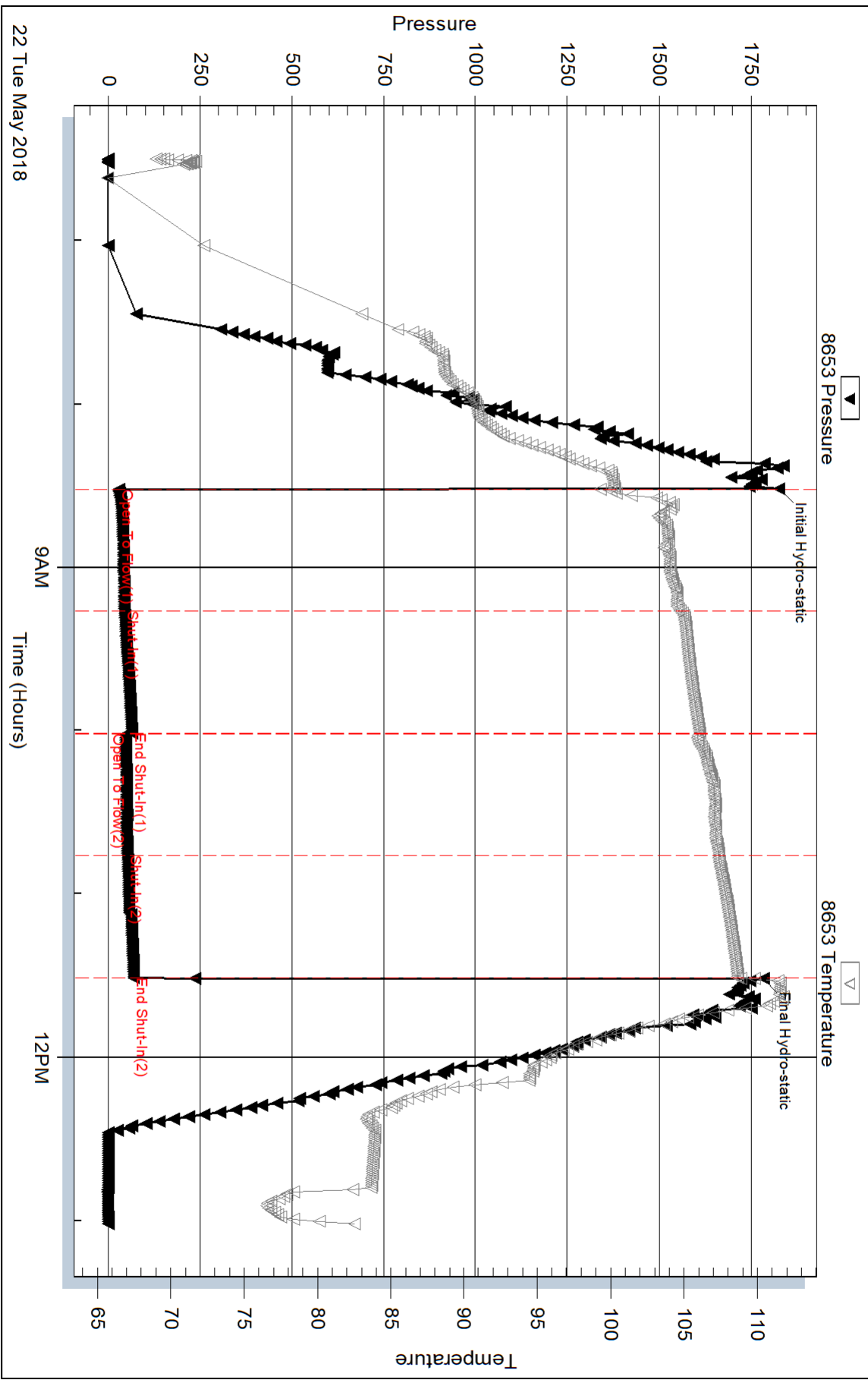
Inside

Downing Nelson Oil Co

Schneller #2-25

DST Test Number: 4

### Pressure vs. Time



Triobite Testing, Inc

Ref. No: 64015

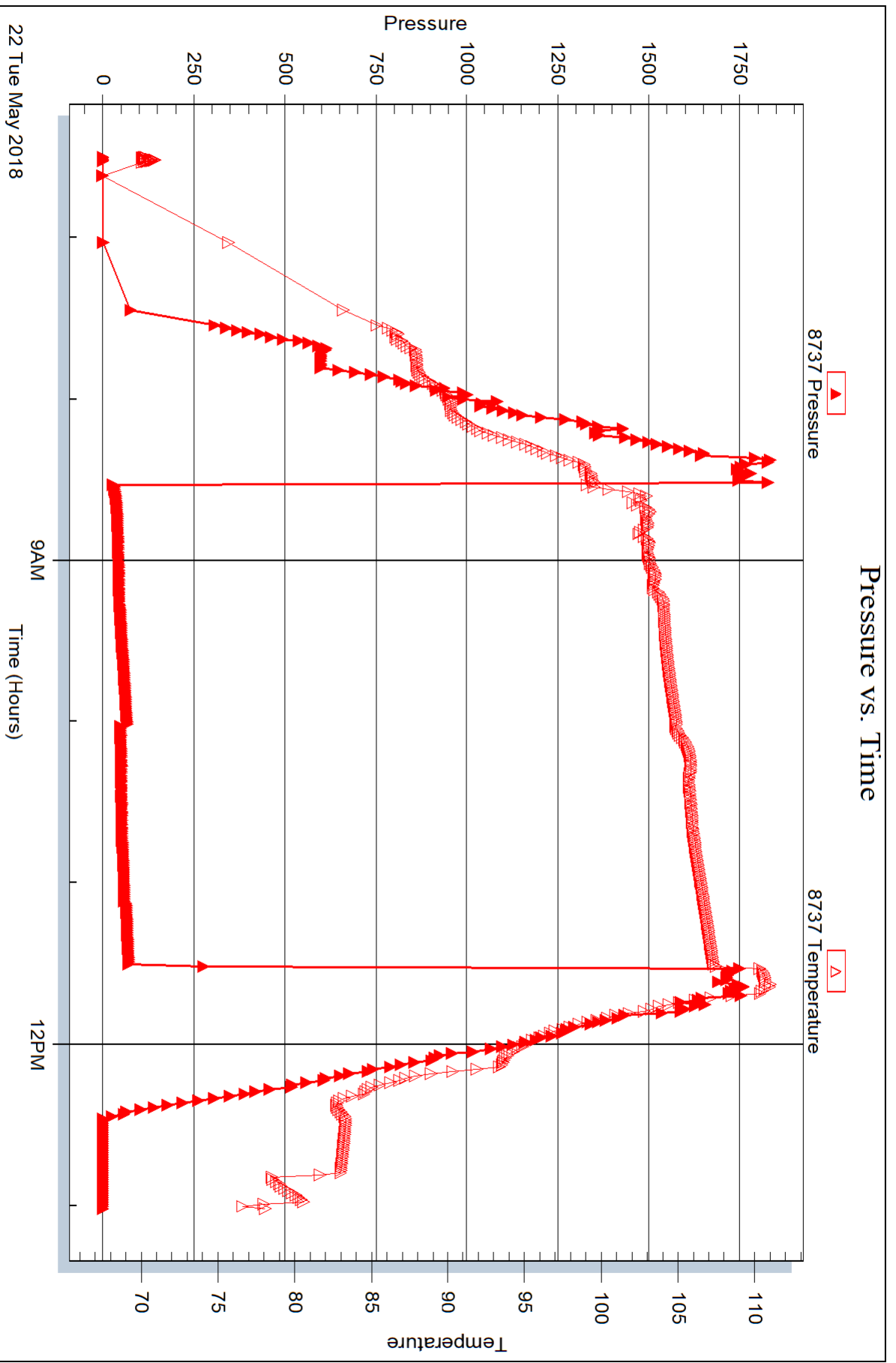
Printed: 2018.05.25 @ 08:27:52

Serial #: 8737

Outside Dow ning Nelson Oil Co

Schneller #2-25

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 64015

Printed: 2018.05.25 @ 08:27:52



## DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co**

PO Box 1019  
Hays, KS 67601

ATTN: Marc Downing

### **Schneller #2-25**

### **25-13s-21w Trego,KS**

Start Date: 2018.05.22 @ 19:21:00

End Date: 2018.05.23 @ 01:36:37

Job Ticket #: 64016                      DST #: 5

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

Printed: 2018.05.25 @ 08:27:24



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Downing Nelson Oil Co

**25-13s-21w Trego, KS**

PO Box 1019  
Hays, KS 67601

**Schneller #2-25**

Job Ticket: 64016

**DST#: 5**

ATTN: Marc Downing

Test Start: 2018.05.22 @ 19:21:00

## GENERAL INFORMATION:

Formation: **LKC "J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:01:47

Time Test Ended: 01:36:37

Test Type: Conventional Bottom Hole (Initial)

Tester: Cade Gerhard

Unit No: 65

**Interval: 3780.00 ft (KB) To 3805.00 ft (KB) (TVD)**

Reference Elevations: 2330.00 ft (KB)

Total Depth: 3805.00 ft (KB) (TVD)

2322.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8653**

**Inside**

Press@RunDepth: 39.15 psig @ 3781.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.22

End Date:

2018.05.23

Last Calib.:

2018.05.22

Start Time: 19:21:23

End Time:

01:36:37

Time On Btm:

2018.05.22 @ 21:01:37

Time Off Btm:

2018.05.23 @ 00:00:07

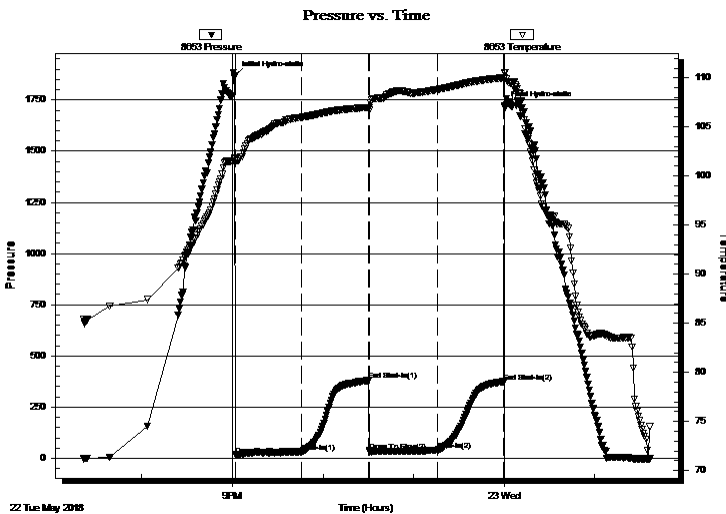
**TEST COMMENT:** IF-45- Weak Blow ; Built to 3"

ISI-45- No blow back

FF-45- Weak Blow ; Built to 2 1/4"

FSI-45- No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1869.78	101.85	Initial Hydro-static
1	16.96	101.38	Open To Flow (1)
45	30.57	105.99	Shut-In(1)
89	379.33	107.00	End Shut-In(1)
90	34.84	106.97	Open To Flow (2)
135	39.15	108.82	Shut-In(2)
179	374.19	110.01	End Shut-In(2)
179	1722.74	110.56	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
63.00	VSOCM 1%O 99%M	0.60

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Downing Nelson Oil Co

**25-13s-21w Trego, KS**

PO Box 1019  
Hays, KS 67601

**Schneller #2-25**

Job Ticket: 64016

**DST#: 5**

ATTN: Marc Downing

Test Start: 2018.05.22 @ 19:21:00

## Tool Information

Drill Pipe:	Length: 3770.00 ft	Diameter: 3.82 inches	Volume: 53.44 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 32.00 ft	Diameter: 2.25 inches	Volume: 0.16 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 53.60 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	42.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3780.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	45.00 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			3761.00	
Shut In Tool	5.00			3766.00	
Hydraulic tool	5.00			3771.00	
Packer	5.00			3776.00	20.00 Bottom Of Top Packer
Packer	4.00			3780.00	
Stubb	1.00			3781.00	
Recorder	0.00	8653	Inside	3781.00	
Recorder	0.00	8646	Outside	3781.00	
Perforations	21.00			3802.00	
Bullnose	3.00			3805.00	25.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>45.00</b>				





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Downing Nelson Oil Co

**25-13s-21w Trego,KS**

PO Box 1019  
Hays, KS 67601

**Schneller #2-25**

Job Ticket: 64016

**DST#: 5**

ATTN: Marc Downing

Test Start: 2018.05.22 @ 19:21:00

## 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: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.17 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	VSOCM 1%O 99%M	0.597

Total Length: 63.00 ft      Total Volume: 0.597 bbl

Num Fluid Samples: 0

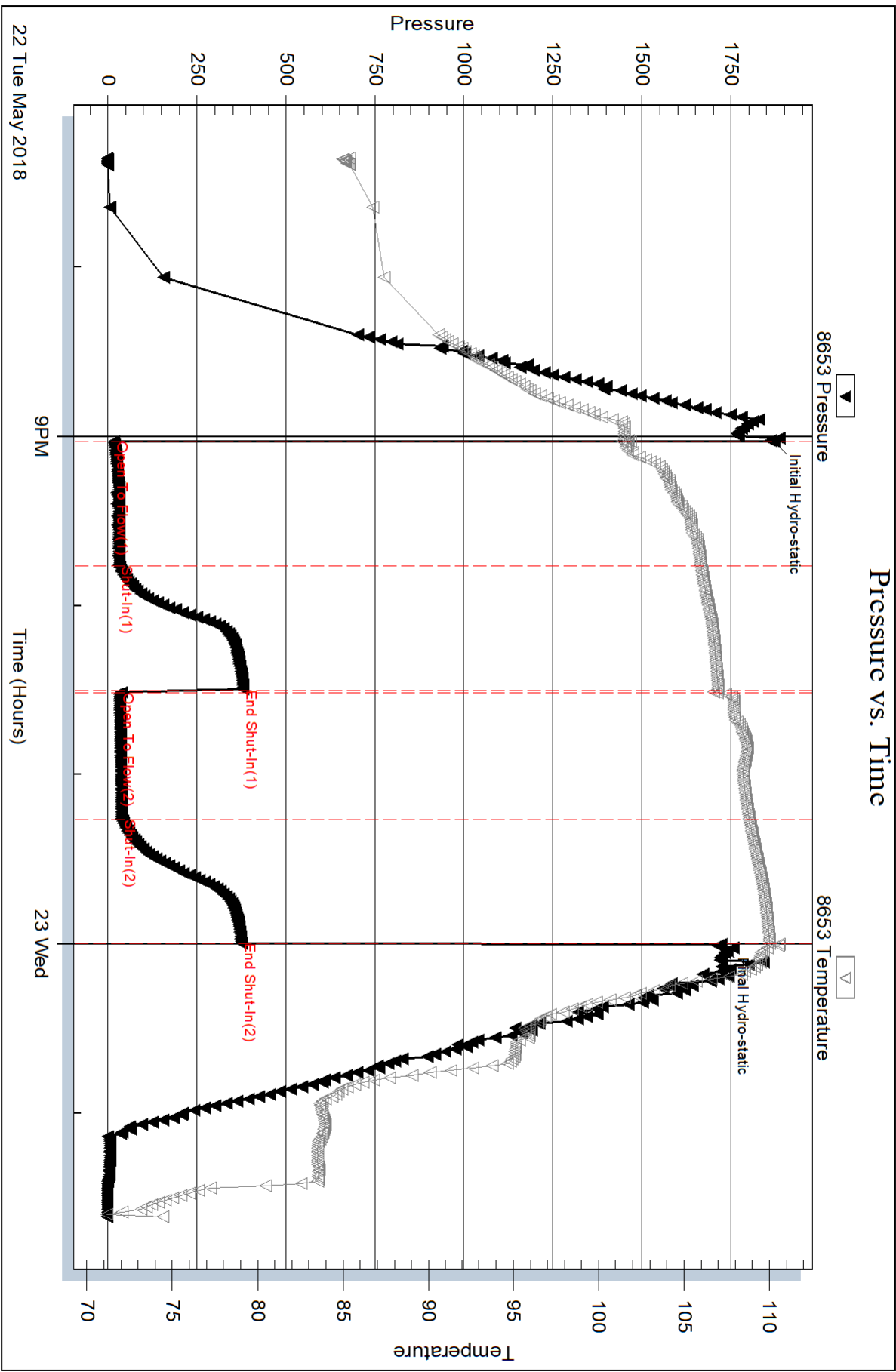
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: LCM- 2#

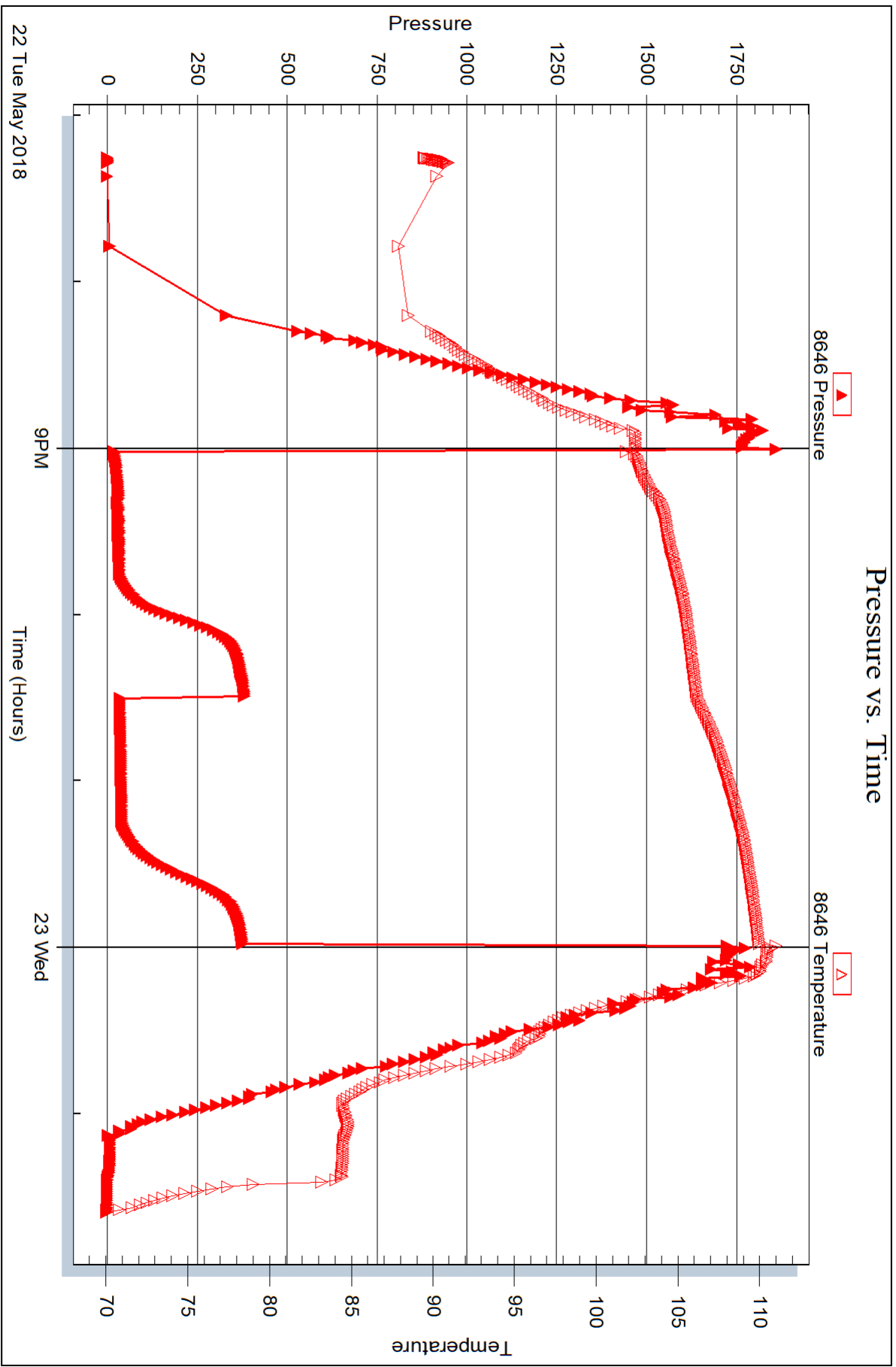


Serial #: 8646

Outside Downing Nelson Oil Co

Schneller #2-25

DST Test Number: 5





## DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co**

PO Box 1019  
Hays, KS 67601

ATTN: Marc Downing

### **Schneller #2-25**

#### **25-13s-21w Trego,KS**

Start Date: 2018.05.23 @ 18:40:00

End Date: 2018.05.24 @ 02:03:09

Job Ticket #: 64017                      DST #: 6

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

Printed: 2018.05.25 @ 08:26:17



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Downing Nelson Oil Co

**25-13s-21w Trego, KS**

PO Box 1019  
Hays, KS 67601

**Schneller #2-25**

Job Ticket: 64017

**DST#: 6**

ATTN: Marc Downing

Test Start: 2018.05.23 @ 18:40:00

## GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:42:10

Time Test Ended: 02:03:09

Test Type: Conventional Bottom Hole (Initial)

Tester: Cade Gerhard

Unit No: 65

**Interval: 3924.00 ft (KB) To 3958.00 ft (KB) (TVD)**

Reference Elevations: 2330.00 ft (KB)

Total Depth: 3958.00 ft (KB) (TVD)

2322.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8653**

**Inside**

Press@RunDepth: 74.45 psig @ 3925.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.23

End Date:

2018.05.24

Last Calib.: 2018.05.24

Start Time: 18:40:01

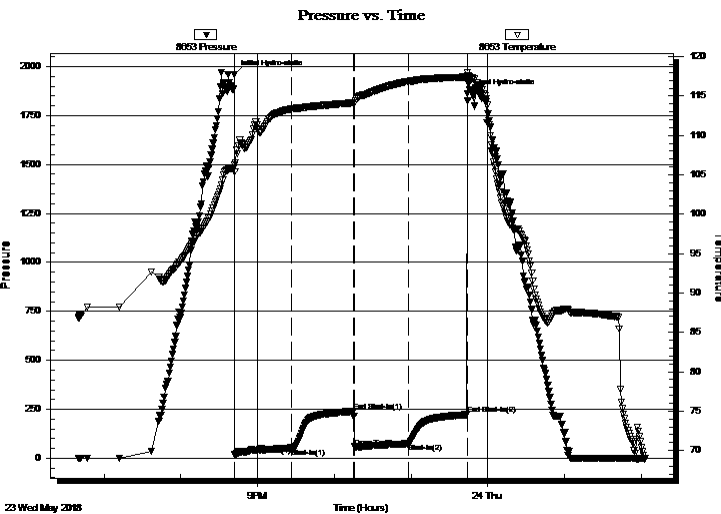
End Time:

02:03:10

Time On Btm: 2018.05.23 @ 20:42:00

Time Off Btm: 2018.05.23 @ 23:44:09

**TEST COMMENT:** IF-45- BOB in 40 min; built to 11"  
ISI-45- No blow back  
FF-45- BOB in 41 min; built to 10 1/2"  
FSI-45- No blow back



## PRESSURE SUMMARY

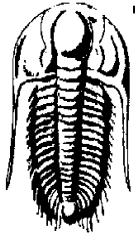
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1958.97	106.29	Initial Hydro-static
1	17.17	105.38	Open To Flow (1)
45	52.70	113.34	Shut-In(1)
93	238.78	114.14	End Shut-In(1)
94	58.13	114.11	Open To Flow (2)
137	74.45	116.87	Shut-In(2)
182	222.59	117.40	End Shut-In(2)
183	1862.75	118.00	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
63.00	OCM 10%O 90%M	0.60
63.00	CO 100%O	0.89
0.00	95' GIP	0.00

## Gas Rates

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



**TRILOBITE**  
TESTING, INC.

# DRILL STEM TEST REPORT

Dow ning Nelson Oil Co

**25-13s-21w Trego,KS**

PO Box 1019  
Hays, KS 67601

**Schneller #2-25**

Job Ticket: 64017

**DST#: 6**

ATTN: Marc Dow ning

Test Start: 2018.05.23 @ 18:40:00

## GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:42:10

Time Test Ended: 02:03:09

Test Type: Conventional Bottom Hole (Initial)

Tester: Cade Gerhard

Unit No: 65

**Interval: 3924.00 ft (KB) To 3958.00 ft (KB) (TVD)**

Reference Elevations: 2330.00 ft (KB)

Total Depth: 3958.00 ft (KB) (TVD)

2322.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8737 Outside**

Press@RunDepth: psig @ 3925.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.23

End Date:

2018.05.24

Last Calib.:

2018.05.24

Start Time: 18:40:01

End Time:

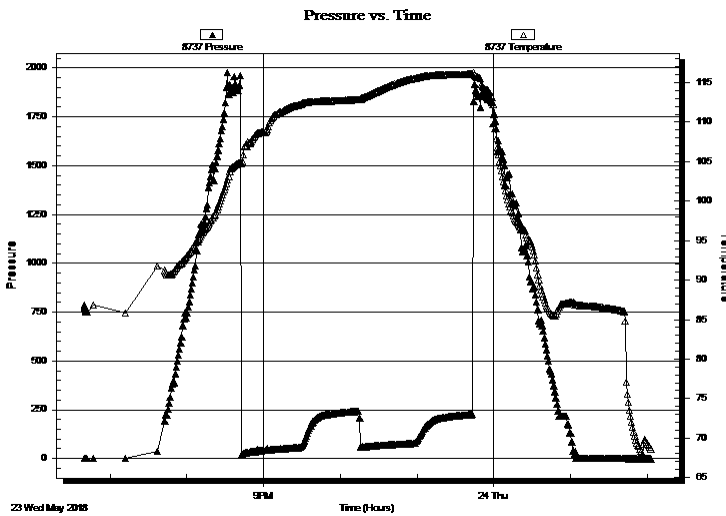
02:03:10

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF-45- BOB in 40 min; built to 11"  
IS-45- No blow back  
FF-45- BOB in 41 min; built to 10 1/2"  
FSI-45- No blow back

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
63.00	OCM 10%O 90%M	0.60
63.00	CO 100%O	0.89
0.00	95' GIP	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Downing Nelson Oil Co

**25-13s-21w Trego,KS**

PO Box 1019  
Hays, KS 67601

**Schneller #2-25**

Job Ticket: 64017

**DST#: 6**

ATTN: Marc Downing

Test Start: 2018.05.23 @ 18:40:00

## Tool Information

Drill Pipe:	Length: 3928.00 ft	Diameter: 3.82 inches	Volume: 55.68 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 32.00 ft	Diameter: 2.25 inches	Volume: 0.16 bbl	Weight to Pull Loose: 61000.00 lb
			<u>Total Volume: 55.84 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	56.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3924.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	34.00 ft			
Tool Length:	54.00 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			3905.00	
Shut In Tool	5.00			3910.00	
Hydraulic tool	5.00			3915.00	
Packer	5.00			3920.00	20.00 Bottom Of Top Packer
Packer	4.00			3924.00	
Stubb	1.00			3925.00	
Recorder	0.00	8653	Inside	3925.00	
Recorder	0.00	8737	Outside	3925.00	
Perforations	30.00			3955.00	
Bullnose	3.00			3958.00	34.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>54.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Downing Nelson Oil Co

**25-13s-21w Trego,KS**

PO Box 1019  
Hays, KS 67601

**Schneller #2-25**

Job Ticket: 64017

**DST#: 6**

ATTN: Marc Downing

Test Start: 2018.05.23 @ 18:40:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

40 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.18 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
63.00	OCM 10%O 90%M	0.597
63.00	CO 100%O	0.893
0.00	95' GIP	0.000

Total Length: 126.00 ft

Total Volume: 1.490 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: LCM- 2#



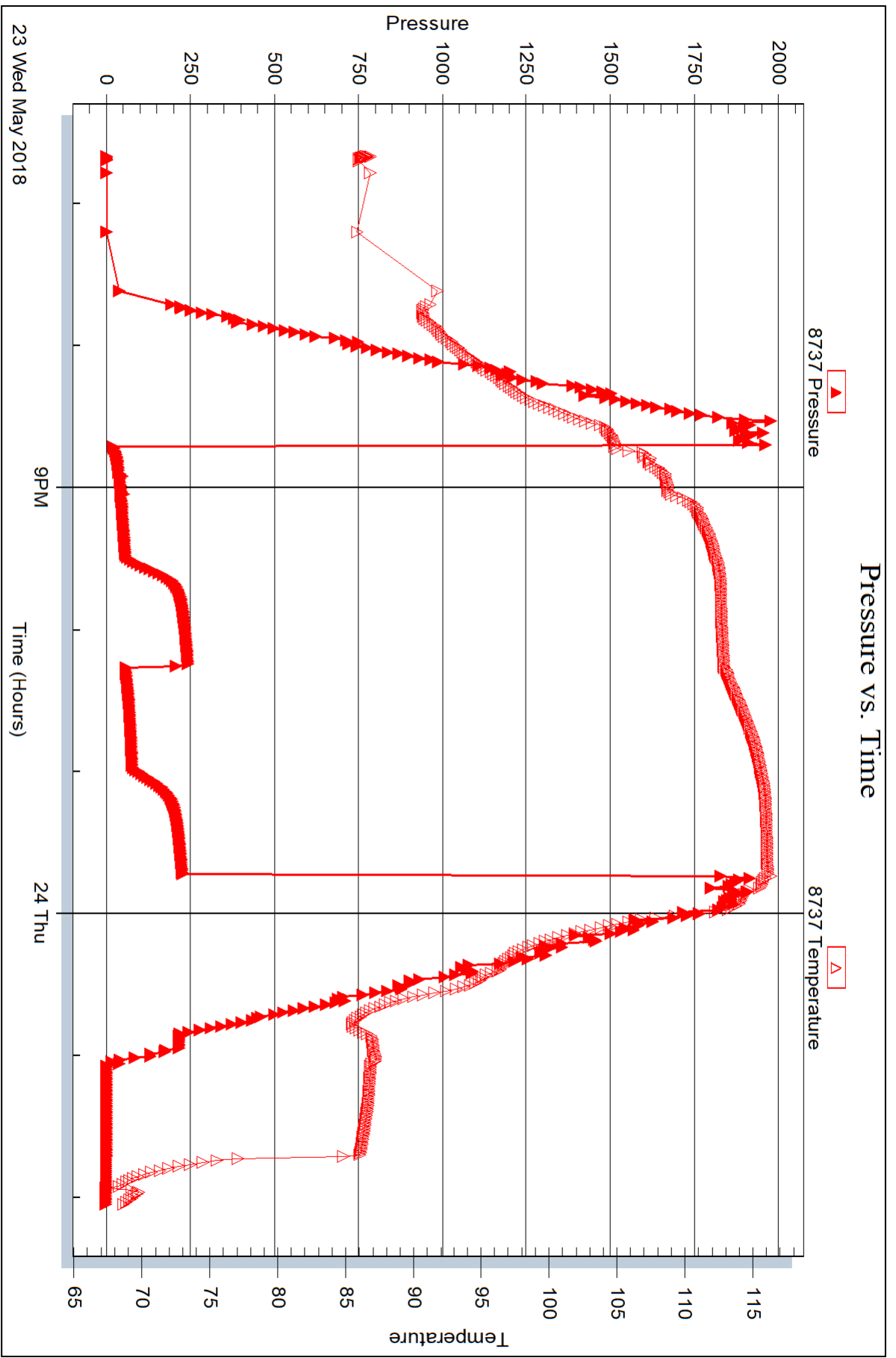


Serial #: 8737

Outside Dow ning Nelson Oil Co

Schneller #2-25

DST Test Number: 6





## DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co**

PO Box 1019  
Hays, KS 67601

ATTN: Marc Downing

### **Schneller #2-25**

### **25-13s-21w Trego,KS**

Start Date: 2018.05.24 @ 09:16:00

End Date: 2018.05.24 @ 16:24:30

Job Ticket #: 64018                      DST #: 7

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

Printed: 2018.05.25 @ 10:01:29



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Downing Nelson Oil Co

**25-13s-21w Trego, KS**

PO Box 1019  
Hays, KS 67601

**Schneller #2-25**

Job Ticket: 64018

**DST#: 7**

ATTN: Marc Downing

Test Start: 2018.05.24 @ 09:16:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:12:10

Time Test Ended: 16:24:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Cade Gerhard

Unit No: 65

**Interval: 3952.00 ft (KB) To 3996.00 ft (KB) (TVD)**

Reference Elevations: 2330.00 ft (KB)

Total Depth: 3996.00 ft (KB) (TVD)

2322.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8653**

**Inside**

Press@RunDepth: 184.04 psig @ 3958.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.05.24

End Date:

2018.05.24

Last Calib.:

2018.05.24

Start Time: 09:16:01

End Time:

16:24:30

Time On Btm:

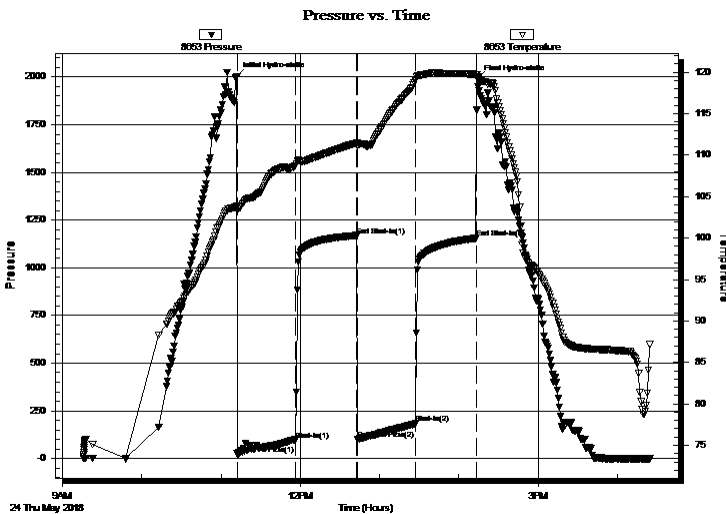
2018.05.24 @ 11:12:00

Time Off Btm:

2018.05.24 @ 14:14:20

**TEST COMMENT:** IF-45- Strong blow ; BOB in 29 min; Built to 14 1/2"  
IS-45- No blow back  
FF-45- Strong blow ; BOB in 20 min; Built to 23"  
FSI-45- No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2002.70	103.86	Initial Hydro-static
1	24.21	103.26	Open To Flow (1)
44	97.79	108.70	Shut-In(1)
91	1169.55	111.46	End Shut-In(1)
92	100.68	111.17	Open To Flow (2)
136	184.04	119.11	Shut-In(2)
181	1154.57	119.74	End Shut-In(2)
183	1989.26	119.45	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	GSOMCW 5%G 3%O 62%W 30%M	0.55
300.00	SWOCM 20%O 5%W 75%M	4.21
60.00	GO 20%G 80%O	0.84
0.00	60' GIP	0.00

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Downing Nelson Oil Co

**25-13s-21w Trego, KS**

PO Box 1019  
Hays, KS 67601

**Schneller #2-25**

Job Ticket: 64018

**DST#: 7**

ATTN: Marc Downing

Test Start: 2018.05.24 @ 09:16:00

## Tool Information

Drill Pipe:	Length: 3960.00 ft	Diameter: 3.80 inches	Volume: 55.55 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 32.00 ft	Diameter: 2.25 inches	Volume: 0.16 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 55.71 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	64.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3952.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	45.00 ft			
Tool Length:	69.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Change Over Sub	1.00			3929.00	
Shut In Tool	5.00			3934.00	
Hydraulic tool	5.00			3939.00	
EM Tool	4.00			3943.00	
Packer	5.00			3948.00	24.00 Bottom Of Top Packer
Packer	4.00			3952.00	
Stubb	1.00			3953.00	
Perforations	5.00			3958.00	
Recorder	0.00	8653	Inside	3958.00	
Recorder	0.00	8737	Outside	3958.00	
Change Over Sub	2.00			3960.00	
Drill Pipe	32.00			3992.00	
Change Over Sub	2.00			3994.00	
Bullnose	3.00			3997.00	45.00 Bottom Packers & Anchor

**Total Tool Length: 69.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Downing Nelson Oil Co

**25-13s-21w Trego, KS**

PO Box 1019  
Hays, KS 67601

**Schneller #2-25**

Job Ticket: 64018

**DST#: 7**

ATTN: Marc Downing

Test Start: 2018.05.24 @ 09:16:00

## 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: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	GSOMCW 5%G 3%O 62%W 30%M	0.550
300.00	SWOCM 20%O 5%W 75%M	4.208
60.00	GO 20%G 80%O	0.842
0.00	60' GIP	0.000

Total Length: 420.00 ft

Total Volume: 5.600 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: LCM- 2#

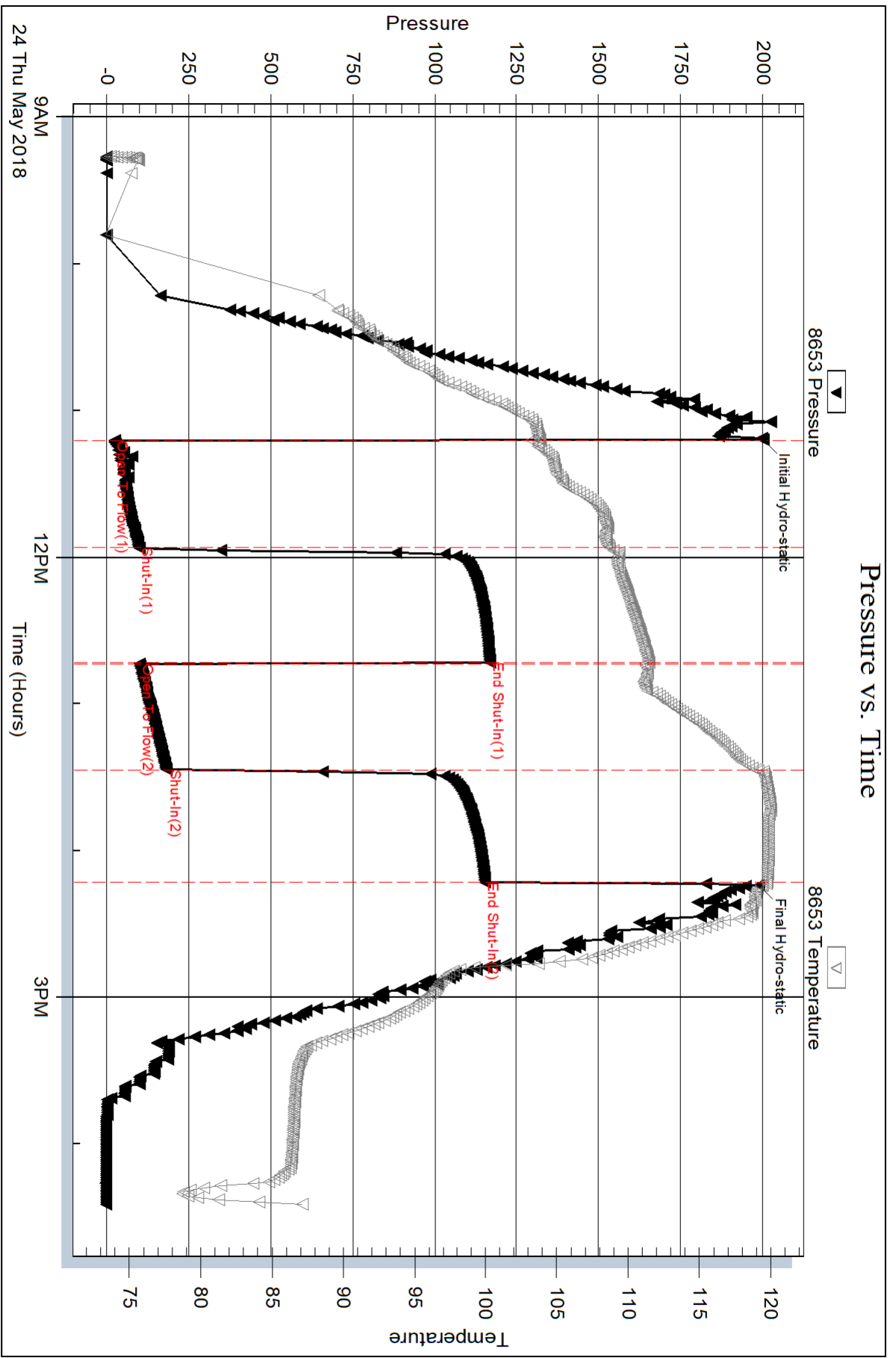
Serial #: 8653

Inside

Downing Nelson Oil Co

Schneller #2-25

DST Test Number: 7



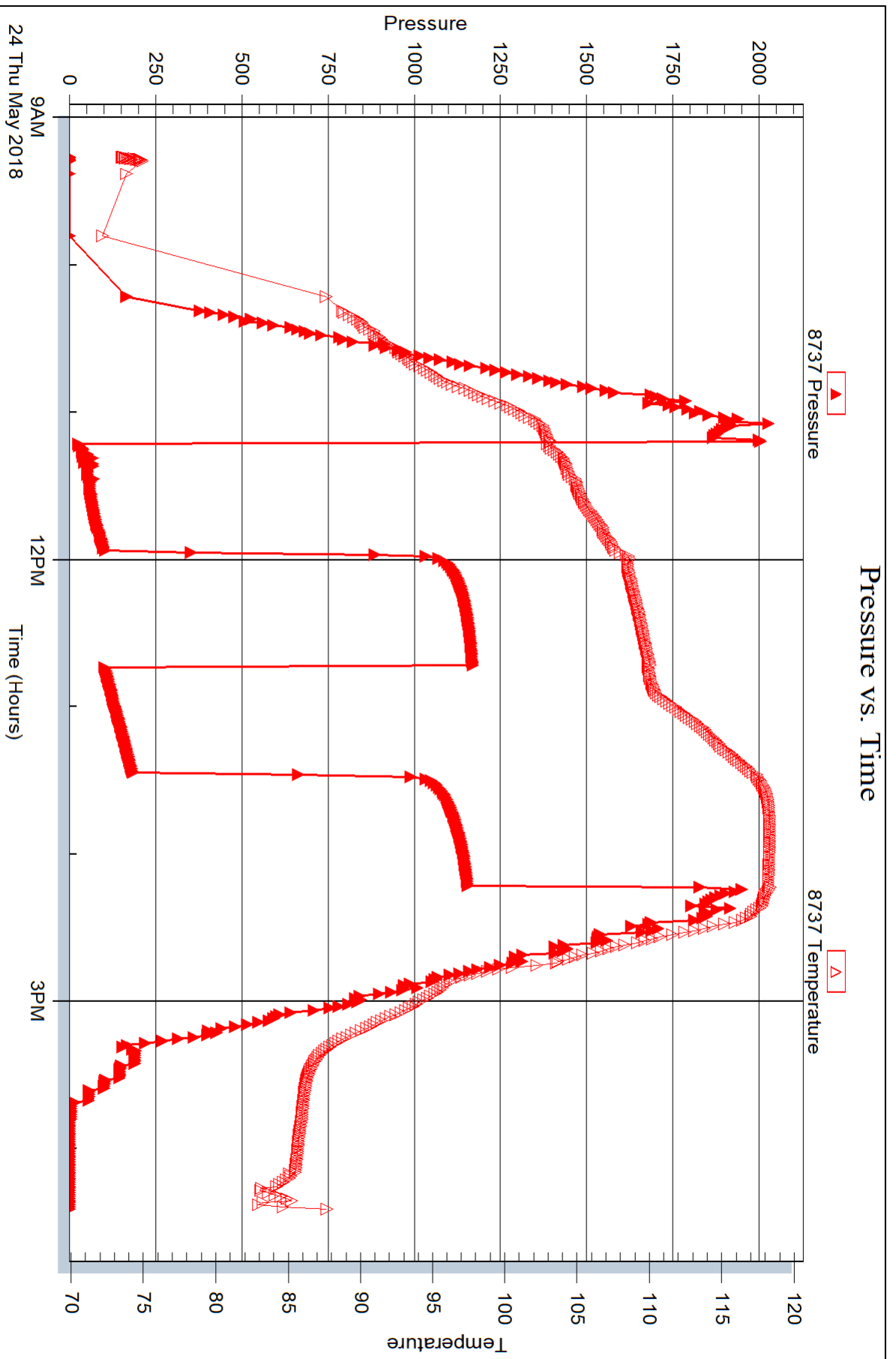


Serial #: 8737

Outside Downing Nelson Oil Co

Schneller #2-25

DST Test Number: 7





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 64012

Well Name & No. Schneller # 2-25 Test No. 1 Date 5-20-16  
 Company DNOCE Elevation 2330 KB 2322 GL  
 Address PO Box 1019 Hays, Ks 67601  
 Co. Rep / Geo. Mack Downing Rig Discovery #4  
 Location: Sec. 25 Twp 13<sup>N</sup> Rge. 21<sup>W</sup> Co. Trego State Ks

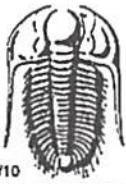
Interval Tested 3630 - 3653 Zone Tested LKC "C"  
 Anchor Length 23' Drill Pipe Run 3583 Mud Wt. 8.6  
 Top Packer Depth 3675 Drill Collars Run 32' Vis 62  
 Bottom Packer Depth 3630 Wt. Pipe Run — WL 7.2  
 Total Depth 3653 Chlorides 4600 ppm System LCM 2#  
 Blow Description IF - Weak surface blow - Flushed tool  
ISI - No blow  
IF - Weak surface - Flush tool - Pulled test  
FSI -

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

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

(A) Initial Hydrostatic 1976  Test 1050 T-On Location 14:40  
 (B) First Initial Flow \_\_\_\_\_  Jars \_\_\_\_\_ T-Started 15:44  
 (C) First Final Flow \_\_\_\_\_  Safety Joint \_\_\_\_\_ T-Open 18:19  
 (D) Initial Shut-In \_\_\_\_\_  Circ Sub \_\_\_\_\_ T-Pulled 19:10  
 (E) Second Initial Flow \_\_\_\_\_  Hourly Standby \_\_\_\_\_ T-Out 20:35  
 (F) Second Final Flow \_\_\_\_\_  Mileage 64 RT 64 Comments \_\_\_\_\_  
 (G) Final Shut-In \_\_\_\_\_  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2065  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Initial Open 15  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Shut-In 15  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Flow Pulled Test  Day Standby \_\_\_\_\_ Total 0  
 Final Shut-In \_\_\_\_\_  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 0

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. 64013

Well Name & No. Schneller # 2-25 Test No. 2 Date 5-20-18  
 Company DINOCT Elevation 2330 KB 2322 GL  
 Address PO Box 1019 Hays, KS 67601  
 Co. Rep / Geo. Marc Downing Rig Discovery #4  
 Location: Sec. 25 Twp 13<sup>N</sup> Rge. 21<sup>W</sup> Co. Trego State KS

Interval Tested 3630-3653 Zone Tested LKC "C"  
 Anchor Length 23' Drill Pipe Run 3583 Mud Wt. 8.6  
 Top Packer Depth 3625 Drill Collars Run 32' Vis 62  
 Bottom Packer Depth ~~3625~~ 3630 Wt. Pipe Run — WL 7.2  
 Total Depth 3653 Chlorides ~~2600~~ 4600 ppm System LCM 2#

Blow Description IF - Strong blow; BOB in 31 min; Built to 14"  
FST - Slight blow back; built to 9"  
FF - Strong blow; BOB in 40 min; Built to 11"  
FST - Slight blow back; built to 4 1/2"

Rec	Feet of	%gas	%oil	%water	%mud
<u>126</u>	<u>MDJ</u>			<u>20</u>	<u>80</u>
<u>32</u>	<u>SMCO</u>		<u>98</u>		<u>2</u>
<u>32</u>	<u>SOCM</u>	<u>2</u>			<u>98</u>
<u>63</u>	<u>GEP</u>				

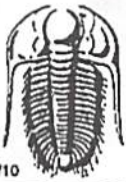
Rec Total 190 BHT 113° Gravity 33 API RW 312 @ 53° F Chlorides 31,000 ppm

(A) Initial Hydrostatic 1774  Test 1050 T-On Location 1440  
 (B) First Initial Flow 18  Jars \_\_\_\_\_ T-Started 20:50  
 (C) First Final Flow 43  Safety Joint \_\_\_\_\_ T-Open 22:09  
 (D) Initial Shut-In 328  Circ Sub \_\_\_\_\_ T-Pulled 01:09  
 (E) Second Initial Flow 42  Hourly Standby \_\_\_\_\_ T-Out 03:01  
 (F) Second Final Flow 58  Mileage 64 Comments \_\_\_\_\_  
 (G) Final Shut-In 326  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1640  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_

Initial Open 45  
 Initial Shut-In 45  
 Final Flow 45  
 Final Shut-In 45  
 Sub Total 1114  
 Total 1114  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Cade forward

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 64014

Well Name & No. Scheller # 2-25 Test No. 3 Date 5-21-18  
 Company DNOCI Elevation 2330 KB 2322 GL  
 Address PO Box 1019 Hays, KS 67601  
 Co. Rep / Geo. Marc Pumping Rig Discovery #4  
 Location: Sec. 25 Twp 13<sup>s</sup> Rge. 21<sup>w</sup> Co. Trego State KS

Interval Tested 3670-3686 Zone Tested LKC - "E"  
 Anchor Length 16' Drill Pipe Run 3642 Mud Wt. 8.9  
 Top Packer Depth 3665 Drill Collars Run 32' Vis 51  
 Bottom Packer Depth 3670 Wt. Pipe Run - WL 8.8  
 Total Depth 3686 Chlorides 6000 ppm System LCM 2#

Blow Description IF - Good blow - Built to 6 1/2 in  
ISI - Weak blow back; Built to 1/2 in  
FF - ~~Strong blow~~ Strong blow - BOB in 7 min; Built to 2 1/4 in  
FSI - Weak blow back; built to 7 1/2 in

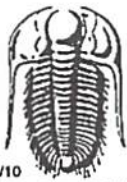
Rec	Feet of	%gas	%oil	%water	%mud
95	560' M	2	2	96	
63	MW		70	30	
	441' GTP	100			

Rec Total 158 BHT 113° Gravity API RW - 620@ 90° F Chlorides 8000 ppm

(A) Initial Hydrostatic <u>1770</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>09:35</u>
(B) First Initial Flow <u>19</u>	<input type="checkbox"/> Jars	T-Started <u>09:57</u>
(C) First Final Flow <u>44</u>	<input type="checkbox"/> Safety Joint	T-Open <u>11:41</u>
(D) Initial Shut-In <u>210</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u><del>14:41</del></u>
(E) Second Initial Flow <u>41</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>16:40</u>
(F) Second Final Flow <u>77</u>	<input checked="" type="checkbox"/> Mileage <u>64 RT</u> 64	Comments
(G) Final Shut-In <u>206</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1671</u>	<input type="checkbox"/> Straddle	
Initial Open <u>45</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>45</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Shut-In <u>45</u>	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility	Total <u>1114</u>
	Sub Total <u>1114</u>	MP/DST Disc't

Approved By \_\_\_\_\_ Our Representative \_\_\_\_\_

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 64015

Well Name & No. Schneller #2-25 Test No. 4 Date 5-22-18  
 Company DNOCI Elevation 2330 KB 2322 GL  
 Address PO Box 1019 Hays, Ks 67601  
 Co. Rep / Geo. Marc Downing Rig Discovery #4  
 Location: Sec. 25 Twp 13<sup>SW</sup> Rge. 21<sup>W</sup> Co. Trego State Ks

Interval Tested 3729-3784 Zone Tested LKC-"H+T"  
 Anchor Length 55 Drill Pipe Run 3705 Mud Wt. 8.9  
 Top Packer Depth 3724 Drill Collars Run 32' Vis 51  
 Bottom Packer Depth 3729 Wt. Pipe Run — WL 8.4  
 Total Depth 3784 Chlorides 6000 ppm System LCM 2#  
 Blow Description IF-Fail ~~blow~~ blow; Built to 4"  
ISI-No blow back  
FF-Weak ~~blow~~ blow; built to 2 1/2"  
FSI-No blow back

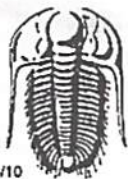
Rec	Feet of	%gas	%oil	%water	%mud
<u>75</u>	<u>VSOCM</u>		<u>1</u>	<u>99</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 75' BHT 108° Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1827  Test 1050 T-On Location 05:53  
 (B) First Initial Flow 29  Jars \_\_\_\_\_ T-Started 06:30  
 (C) First Final Flow 43  Safety Joint \_\_\_\_\_ T-Open 08:31  
 (D) Initial Shut-In 64  Circ Sub \_\_\_\_\_ T-Pulled 11:31  
 (E) Second Initial Flow 48  Hourly Standby \_\_\_\_\_ T-Out 13:01  
 (F) Second Final Flow 51  Mileage 64RT 64 Comments \_\_\_\_\_  
 (G) Final Shut-In 68  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1783  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 45  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 45  Day Standby \_\_\_\_\_ Total 1114  
 Final Flow 45  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 45 Sub Total 1114

Approved By \_\_\_\_\_ Our Representative Cade Richard

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 64016

Well Name & No. Schneller #2-25 Test No. 5 Date 5-22-18  
 Company DNOCL Elevation 2330 KB 2332 GL  
 Address PO Box 1019 Hays Ks 67601  
 Co. Rep / Geo. Mark Downing Rig Discovery #4  
 Location: Sec. 25 Twp 13<sup>s</sup> Rge. 21<sup>w</sup> Co. Trego State Ks

Interval Tested 3780-3805 Zone Tested LKC"J"  
 Anchor Length 25' Drill Pipe Run 3770 Mud Wt. 9  
 Top Packer Depth 3775 Drill Collars Run 32' Vls 53  
 Bottom Packer Depth 3780 Wt. Pipe Run - WL 9.2  
 Total Depth 3805 Chlorides 7000 ppm System LCM 2#

Blow Description IF - Weak blow; Built to 3"  
ISI - NO blowback  
FP - Weak blow; Built to 2'14"  
FST - NO blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>63</u>	<u>V50CM</u>		<u>1</u>	<u>99</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

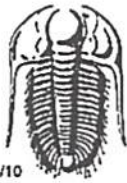
Rec Total 63 BHT \_\_\_\_\_ Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 18109  Test 1050 T-On Location ~~18:50~~ 18:50  
 (B) First Initial Flow 16  Jars \_\_\_\_\_ T-Started 19:21  
 (C) First Final Flow 30  Safety Joint \_\_\_\_\_ T-Open 21:00  
 (D) Initial Shut-In 379  Circ Sub \_\_\_\_\_ T-Pulled 00:00  
 (E) Second Initial Flow 34  Hourly Standby \_\_\_\_\_ T-Out ~~01:36~~ 01:36  
 (F) Second Final Flow 39  Mileage 64 RT 64  
 (G) Final Shut-In 374  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1722  Straddle \_\_\_\_\_

Initial Open 45  Ruined Shale Packer \_\_\_\_\_  
 Initial Shut-In 45  Ruined Packer \_\_\_\_\_  
 Final Flow 45  Extra Packer \_\_\_\_\_  
 Final Shut-In 45  Extra Recorder \_\_\_\_\_  
 Sub Total 0  
 Total 1114  
 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1114

Approved By \_\_\_\_\_ Our Representative \_\_\_\_\_

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **64017**

Well Name & No. Schneller #2-25 Test No. 6 Date 5-23-19  
 Company DNOCT Elevation 2330 KB 2372 GL  
 Address PO Box 1019 Hays Ks 67601  
 Co. Rep / Geo. Marc Downing Rig Discovery #4  
 Location: Sec. 25 Twp 13S Rge. 21W Co. Trego State Ks

Interval Tested 3924-3958 Zone Tested Marmaton  
 Anchor Length 34 Drill Pipe Run 3928 Mud Wt. 9  
 Top Packer Depth 3919 Drill Collars Run 32' Vis 50  
 Bottom Packer Depth 3924 Wt. Pipe Run — WL 9.2  
 Total Depth 3958 Chlorides 8000 ppm System LCM 2#

Blow Description IF - Strong blow; BOB in 40 min; built to 11"  
ISI - No blow back  
FF - Strong blow - BOB in 41 min; built to 10 1/2"  
FSI - No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>63</u>	<u>OCM</u>	<u>10</u>		<u>90</u>	
<u>63</u>	<u>CO</u>	<u>100</u>			
	<u>95' GEP</u>				

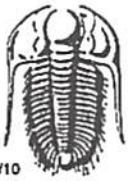
Rec Total 176' BHT 117° Gravity 40 API RW @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1958  Test 1050 T-On Location 16:00  
 (B) First Initial Flow 17  Jars \_\_\_\_\_ T-Started 16:37  
 (C) First Final Flow 52  Safety Joint \_\_\_\_\_ T-Open 18:40  
 (D) Initial Shut-In 238  Circ Sub \_\_\_\_\_ T-Pulled 21:40  
 (E) Second Initial Flow 58  Hourly Standby \_\_\_\_\_ T-Out \_\_\_\_\_  
 (F) Second Final Flow 74  Mileage 64 RT 64 Comments \_\_\_\_\_  
 (G) Final Shut-In 272  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1862  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open 45  
 Initial Shut-In 45  
 Final Flow 45  
 Final Shut-In 45  
 Sub Total 1114  
 Total 1114  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative \_\_\_\_\_

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 64018

Well Name & No. Schpeller # 2-25 Test No. 7 Date 5-24-18  
 Company DNOCE Elevation 2330 KB 2322 GL  
 Address PO Box 1019 Hays Ks 67601  
 Co. Rep / Geo. Mark Downing Rig Discovery #4  
 Location: Sec. 25 Twp 13N Rge. 21W Co. Trego State Ks

Interval Tested 3952-3996 Zone Tested Arbuckle  
 Anchor Length 44 Drill Pipe Run 3960 Mud Wt. 9.2  
 Top Packer Depth 3947 Drill Collars Run 32' Vis 53  
 Bottom Packer Depth 3952 Wt. Pipe Run — WL 10  
 Total Depth 3996 Chlorides 8000 ppm System LCM 2#

Blow Description IF - Strong blow; BOB in 29 min; Built to 14 1/2"  
TST - No Blow back  
FF - Strong blow; BOB in 20 min; Built to 23"  
FST - No Blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>grey oil</u>	<u>20</u>	<u>80</u>		
<u>300</u>	<u>SP w/OCM</u>	<u>20</u>	<u>5</u>	<u>75</u>	
<u>60</u>	<u>grey slo + MCW</u>	<u>5</u>	<u>3</u>	<u>62</u>	<u>30</u>
<u>60</u>	<u>C-IP</u>				

Rec Total 420 BHT 119° Gravity 39 API RW 21 @ 94 °F Chlorides 25,000 ppm

(A) Initial Hydrostatic 2002  Test 1050 T-On Location 08:45  
 (B) First Initial Flow 24  Jars \_\_\_\_\_ T-Started 09:16  
 (C) First Final Flow 1075  Safety Joint \_\_\_\_\_ T-Open 11:14  
 (D) Initial Shut-In 1169  Circ Sub \_\_\_\_\_ T-Pulled 14:14  
 (E) Second Initial Flow 100  Hourly Standby \_\_\_\_\_ T-Out 110:24  
 (F) Second Final Flow 1049  Mileage 64 RT 64  
 (G) Final Shut-In 1154  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1989  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Sub Total 1114

Comments \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Sub Total 0  
 Total 1114  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Code Cochard

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