



## DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Co**

PO Box 1019  
Hays KS 67601

ATTN: Mark Downing

### **Rohr Trust Unit 1-19**

### **19-14s-18w Ellis,KS**

Start Date: 2014.10.14 @ 08:00:00

End Date: 2014.10.14 @ 16:32:00

Job Ticket #: 60542                      DST #: 1

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

Printed: 2014.10.16 @ 15:25:12

Downing Nelson Oil Co

19-14s-18w Ellis,KS

Rohr Trust Unit 1-19

DST # 1

Cong. Sand

2014.10.14



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Dow ning Nelson Oil Co

**19-14s-18w Ellis,KS**

PO Box 1019  
Hays KS 67601

**Rohr Trust Unit 1-19**

ATTN: Mark Dow ning

Job Ticket: 60542

**DST#: 1**

Test Start: 2014.10.14 @ 08:00:00

## GENERAL INFORMATION:

Formation: **Cong. Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:55:00

Time Test Ended: 16:32:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Bob Hamel

Unit No: 72

**Interval: 3701.00 ft (KB) To 3744.00 ft (KB) (TVD)**

Reference Elevations: 2108.00 ft (KB)

Total Depth: 3744.00 ft (KB) (TVD)

2100.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 6772 Outside**

Press@RunDepth: 206.95 psig @ 3705.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.10.14

End Date:

2014.10.14

Last Calib.:

2014.10.14

Start Time: 08:00:05

End Time:

16:31:59

Time On Btm:

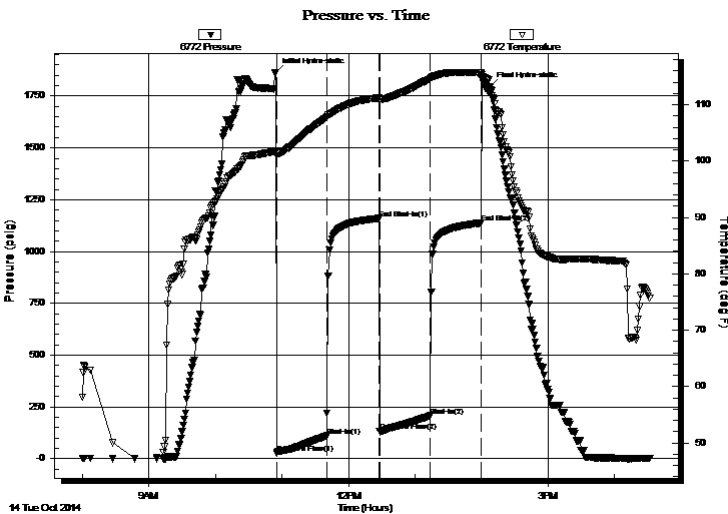
2014.10.14 @ 10:54:30

Time Off Btm:

2014.10.14 @ 14:07:45

**TEST COMMENT:** I.F. - 45 - BOB in 13 min  
I.S.I. - 45 - Weak surface blow back built to 3"  
F.F. - 45 - BOB in 12 min  
F.S.I. - 45 - Weak surface blow back built to 3"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1864.30	101.82	Initial Hydro-static
1	27.58	100.97	Open To Flow (1)
46	110.30	107.77	Shut-In(1)
93	1159.25	111.22	End Shut-In(1)
94	132.33	110.84	Open To Flow (2)
139	206.95	114.59	Shut-In(2)
185	1137.42	115.61	End Shut-In(2)
194	1797.09	113.16	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	M,C,O, 30%M70%O	0.56
460.00	C/O 100%	6.45

## Gas Rates

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



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PO Box 1019  
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**Rohr Trust Unit 1-19**

ATTN: Mark Dow ning

Job Ticket: 60542 **DST#: 1**

Test Start: 2014.10.14 @ 08:00:00

## GENERAL INFORMATION:

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Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:55:00

Time Test Ended: 16:32:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Bob Hamel

Unit No: 72

**Interval: 3701.00 ft (KB) To 3744.00 ft (KB) (TVD)**

Total Depth: 3744.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2108.00 ft (KB)

2100.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8167 Inside**

Press@RunDepth: psig @ 3705.00 ft (KB)

Start Date: 2014.10.14 End Date: 2014.10.14

Start Time: 08:00:05 End Time: 16:31:44

Capacity: 8000.00 psig

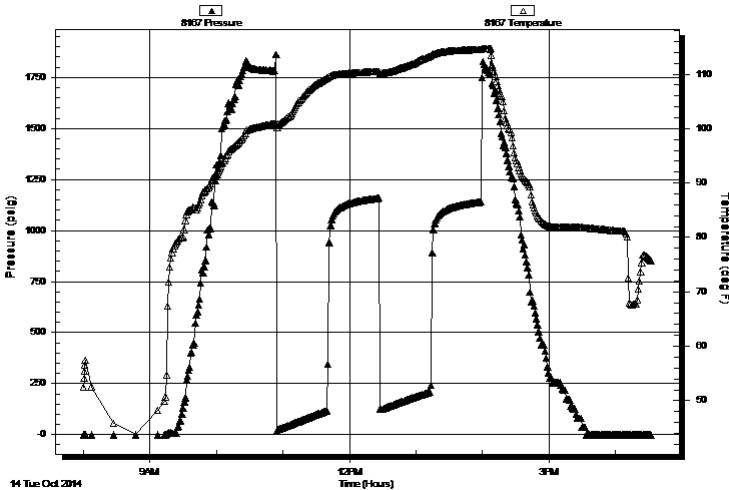
Last Calib.: 1899.12.30

Time On Btm:

Time Off Btm:

**TEST COMMENT:** I.F. - 45 - BOB in 13 min  
I.S.I. - 45 - Weak surface blow back built to 3"  
F.F. - 45 - BOB in 12 min  
F.S.I. - 45 - Weak surface blow back built to 3"

### Pressure vs. Time



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	M,C,O, 30%M70%O	0.56
460.00	C/O 100%	6.45

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Dow ning Nelson Oil Co

**19-14s-18w Ellis,KS**

PO Box 1019  
Hays KS 67601

**Rohr Trust Unit 1-19**

Job Ticket: 60542

**DST#: 1**

ATTN: Mark Dow ning

Test Start: 2014.10.14 @ 08:00:00

## Tool Information

Drill Pipe:	Length: 3676.00 ft	Diameter: 3.80 inches	Volume: 51.56 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: 30000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 56000.00 lb
			<u>Total Volume: 51.71 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	3701.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	43.00 ft			
Tool Length:	63.00 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			3682.00	
Shut In Tool	5.00			3687.00	
Hydraulic tool	5.00			3692.00	
Packer	5.00			3697.00	20.00 Bottom Of Top Packer
Packer	4.00			3701.00	
Stubb	1.00			3702.00	
Perforations	2.00			3704.00	
Change Over Sub	1.00			3705.00	
Recorder	0.00	6772	Outside	3705.00	
Recorder	0.00	8167	Inside	3705.00	
Drill Pipe	31.00			3736.00	
Change Over Sub	1.00			3737.00	
Perforations	4.00			3741.00	
Bullnose	3.00			3744.00	43.00 Bottom Packers & Anchor

**Total Tool Length: 63.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Dow ning Nelson Oil Co

**19-14s-18w Ellis,KS**

PO Box 1019  
Hays KS 67601

**Rohr Trust Unit 1-19**

Job Ticket: 60542

**DST#: 1**

ATTN: Mark Dow ning

Test Start: 2014.10.14 @ 08:00:00

## 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: bbl

Water Loss: 8.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure: psig

Salinity: 1800.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	M <sub>2</sub> C <sub>2</sub> O <sub>2</sub> 30%M 70%O	0.559
460.00	C/O 100%	6.453

Total Length: 520.00 ft      Total Volume: 7.012 bbl

Num Fluid Samples: 0

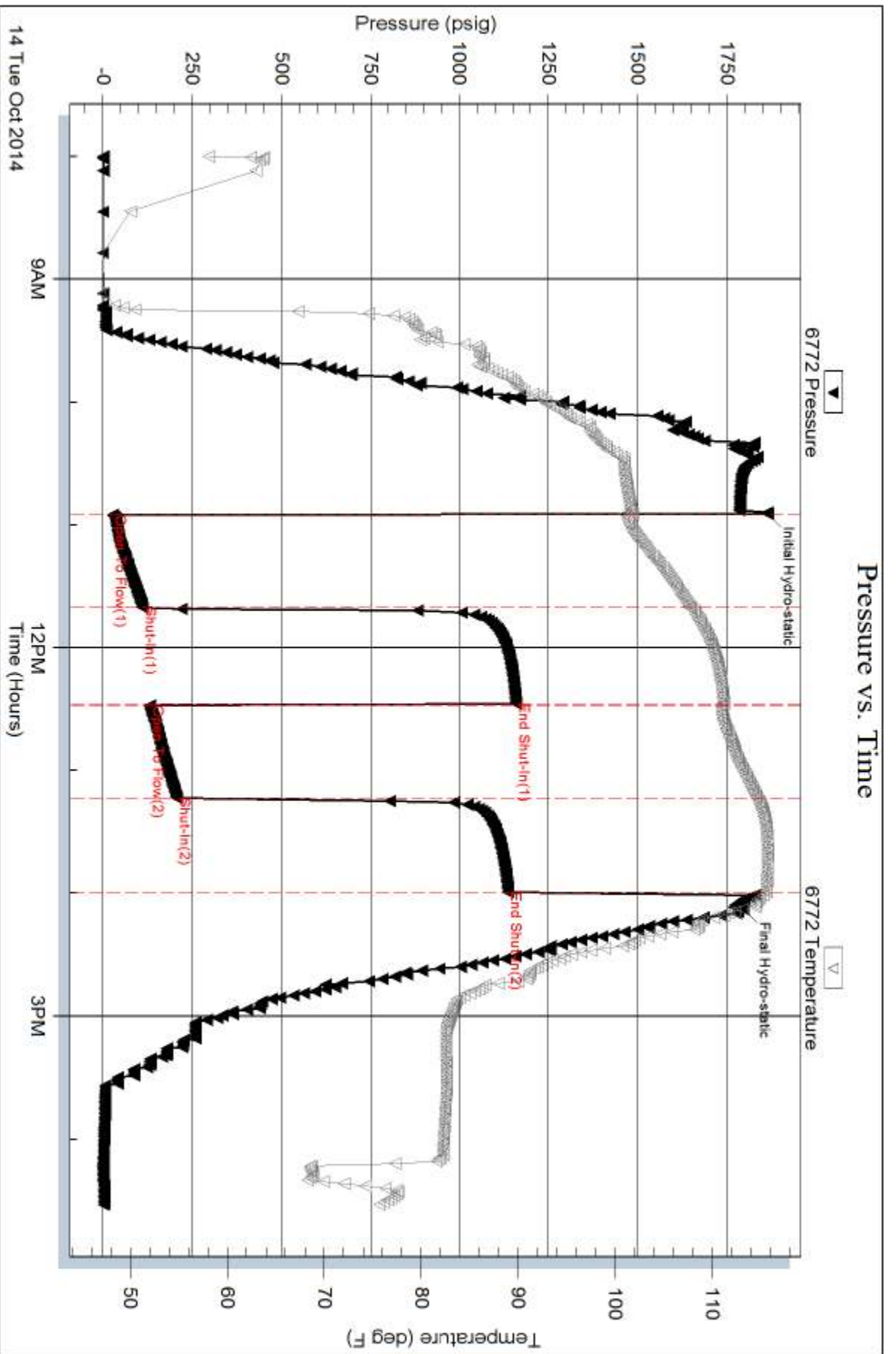
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



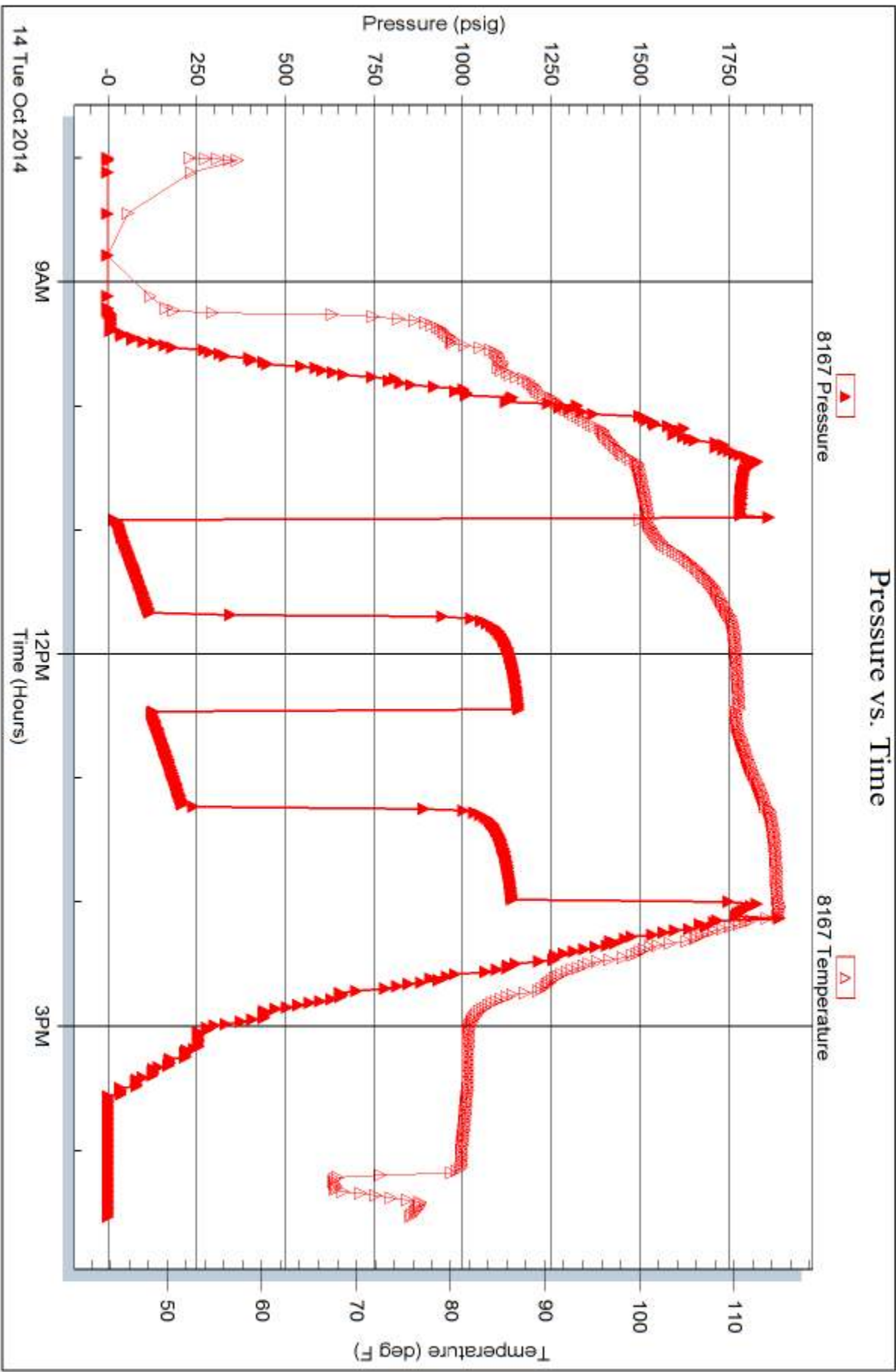
Serial #: 8167

Inside

Dow nIn Nelson Oil Co

Rohr Trust Unit 1-19

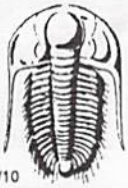
DST Test Number: 1



Tribble Testing, Inc

Ref. No: 60542

Printed: 2014.10.16 @ 15:25:13



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 60542

Well Name & No. Bahr trust unit # 1-19 Test No. 1 Date 10-14-14  
 Company Downing nelson Elevation 2108 KB 2100 GL  
 Address P.O. Box 1019 Hays, KS. 67601  
 Co. Rep / Geo. Mark Downing / Ron nelson Rig Discovery #3  
 Location: Sec. 19 Twp. 14 S. Rge. 18 W. Co. Ellis State KS.

Interval Tested 3701-3744 Zone Tested cong. sand  
 Anchor Length 43 Drill Pipe Run 3676 Mud Wt. 8.8  
 Top Packer Depth 3696 Drill Collars Run 31 Vis 5  
 Bottom Packer Depth 3701 Wt. Pipe Run — WL 8.4  
 Total Depth 3744 Chlorides 1,800 ppm System LCM 1 1/2

Blow Description I.F.-45-1/2" Int. Blow Built to (B.O.B. in 13 min.)  
I.S.I-45-W.S.B. @ 5 min. Built to 3" in 45 min.  
E.F.-45-3" int. Blow Built to (B.O.B. in 12 min.)  
E.S.I-45-W.S.B. Built to 3" in 45 min.

Rec	Feet of	%gas	%oil	%water	%mud
<u>460</u>	<u>C/O</u>				
<u>60</u>	<u>M.C.O</u>		<u>70</u>		<u>30</u>

Rec Total 540' BHT 113 Gravity 35 API RW — @ — °F Chlorides — ppm  
 Test 1150 T-On Location 07:58:00  
 Jars — T-Started 08:00:00  
 Safety Joint — T-Open 10:49:00  
 Circ Sub — T-Pulled 13:53:00  
 Hourly Standby — T-Out 16:32:00  
 Mileage 16/B.T. Comments "Thank-You"  
 Sampler —  
 Straddle —  Ruined Shale Packer —  
 Shale Packer —  Ruined Packer —  
 Extra Packer —  Extra Copies —  
 Extra Recorder — Sub Total —  
 Day Standby — Total —  
 Accessibility — MP/DST Disc't —  
 Sub Total —

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

Approved By \_\_\_\_\_ Our Representative Bul Hornel

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.