



## DRILL STEM TEST REPORT

Prepared For: **Brungardt Oil and Leasing Inc**

PO Box 871  
Russell KS 67665+1731

ATTN: Roger Fisher

### **Reich "B" #2**

#### **22-11s-15w Russell,KS**

Start Date: 2018.11.19 @ 08:58:00

End Date: 2018.11.19 @ 14:21:30

Job Ticket #: 53770                      DST #: 1

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

Printed: 2018.11.21 @ 10:29:31



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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**Reich "B" #2**

Job Ticket: 53770

**DST#: 1**

ATTN: Roger Fisher

Test Start: 2018.11.19 @ 08:58:00

## GENERAL INFORMATION:

Formation: **Topeka**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:20:00

Time Test Ended: 14:21:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Benny Mulligan

Unit No: 66

**Interval: 2670.00 ft (KB) To 2690.00 ft (KB) (TVD)**

Reference Elevations: 1816.00 ft (KB)

Total Depth: 2690.00 ft (KB) (TVD)

1811.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 6772 Inside**

Press@RunDepth: 49.34 psig @ 2671.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.11.19

End Date: 2018.11.19

Last Calib.: 2018.11.19

Start Time: 08:58:01

End Time: 14:21:30

Time On Btm: 2018.11.19 @ 10:00:00

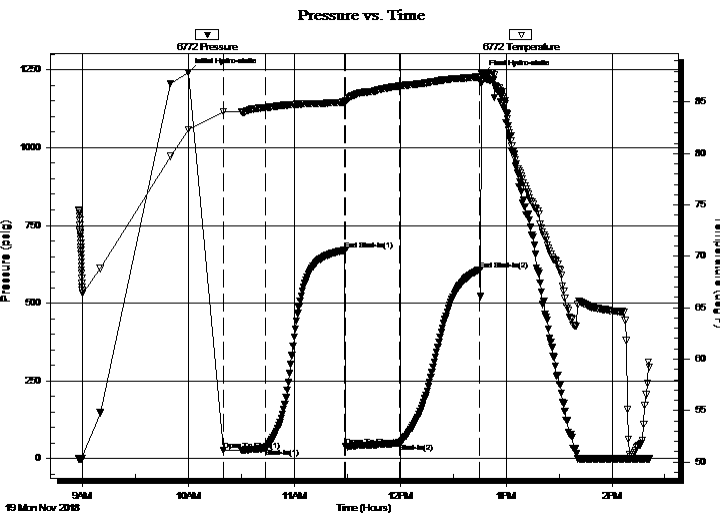
Time Off Btm: 2018.11.19 @ 12:46:30

TEST COMMENT: I.F.-30- Built to 10 "

I.S.I.-45- weak blow back

F.F.-30-BOB 29 mins total build 12"

F.S.I.-45- 1" blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1242.01	82.30	Initial Hydro-static
20	26.50	84.05	Open To Flow (1)
44	32.74	84.46	Shut-In(1)
89	670.00	84.99	End Shut-In(1)
90	38.59	85.08	Open To Flow (2)
120	49.34	86.57	Shut-In(2)
166	606.77	87.46	End Shut-In(2)
167	1236.03	87.86	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
62.00	GOCM 5%G 15%O 80%M	0.44
62.00	GOCWM 50%M 20%w 15%o 15%g	0.44
0.00	GIP 180'	0.00

## Gas Rates

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



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**Reich "B" #2**

Job Ticket: 53770

**DST#: 1**

ATTN: Roger Fisher

Test Start: 2018.11.19 @ 08:58:00

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Time Test Ended: 14:21:30 Unit No: 66

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Total Depth: 2690.00 ft (KB) (TVD) 1811.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 5.00 ft

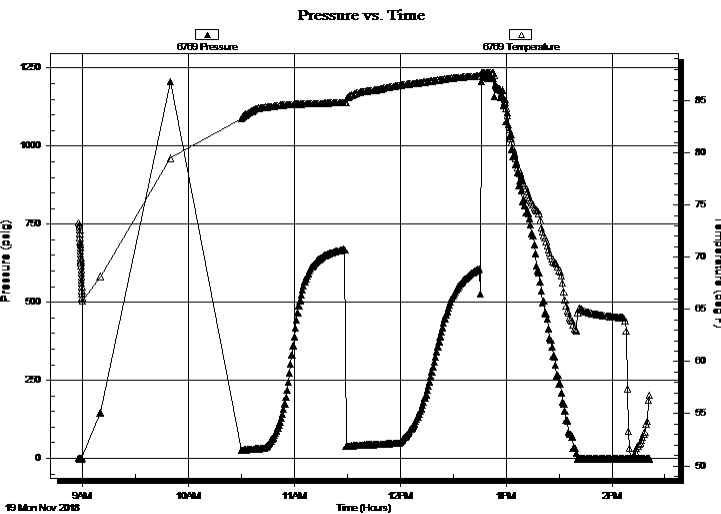
**Serial #: 6769 Outside**

Press@RunDepth: psig @ 2671.00 ft (KB) Capacity: 8000.00 psig

Start Date: 2018.11.19 End Date: 2018.11.19 Last Calib.: 2018.11.19

Start Time: 08:58:01 End Time: 14:21:30 Time On Btm:  
Time Off Btm:

TEST COMMENT: I.F.-30- Built to 10 "  
I.S.I.-45- weak blow back  
F.F.-30-BOB 29 mins total build 12"  
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### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
62.00	GOCM 5%G 15%O 80%M	0.44
62.00	GOCWM 50%M 20%w 15%o 15%g	0.44
0.00	GIP 180'	0.00

### Gas Rates

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



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TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Brungardt Oil and Leasing Inc

**22-11s-15w Russell,KS**

PO Box 871  
Russell KS 67665+1731

**Reich "B" #2**

Job Ticket: 53770

**DST#: 1**

ATTN: Roger Fisher

Test Start: 2018.11.19 @ 08:58:00

## Tool Information

Drill Pipe:	Length: 2440.00 ft	Diameter: 3.80 inches	Volume: 34.23 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 218.00 ft	Diameter: 2.70 inches	Volume: 1.54 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 35.77 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	2670.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.00 ft			
Tool Length:	40.00 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			2651.00	
Shut In Tool	5.00			2656.00	
Hydraulic tool	5.00			2661.00	
Packer	5.00			2666.00	20.00 Bottom Of Top Packer
Packer	4.00			2670.00	
Stubb	1.00			2671.00	
Recorder	0.00	6772	Inside	2671.00	
Recorder	0.00	6769	Outside	2671.00	
Perforations	16.00			2687.00	
Bullnose	3.00			2690.00	20.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>40.00</b>				



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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Brungardt Oil and Leasing Inc

**22-11s-15w Russell,KS**

PO Box 871  
Russell KS 67665+1731

**Reich "B" #2**

Job Ticket: 53770

**DST#: 1**

ATTN: Roger Fisher

Test Start: 2018.11.19 @ 08:58:00

## 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:

28000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 52000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
62.00	GOCM 5%G 15%O 80%M	0.439
62.00	GOCWM 50%M 20%w 15%o 15%g	0.439
0.00	GIP 180'	0.000

Total Length: 124.00 ft      Total Volume: 0.878 bbl

Num Fluid Samples: 0

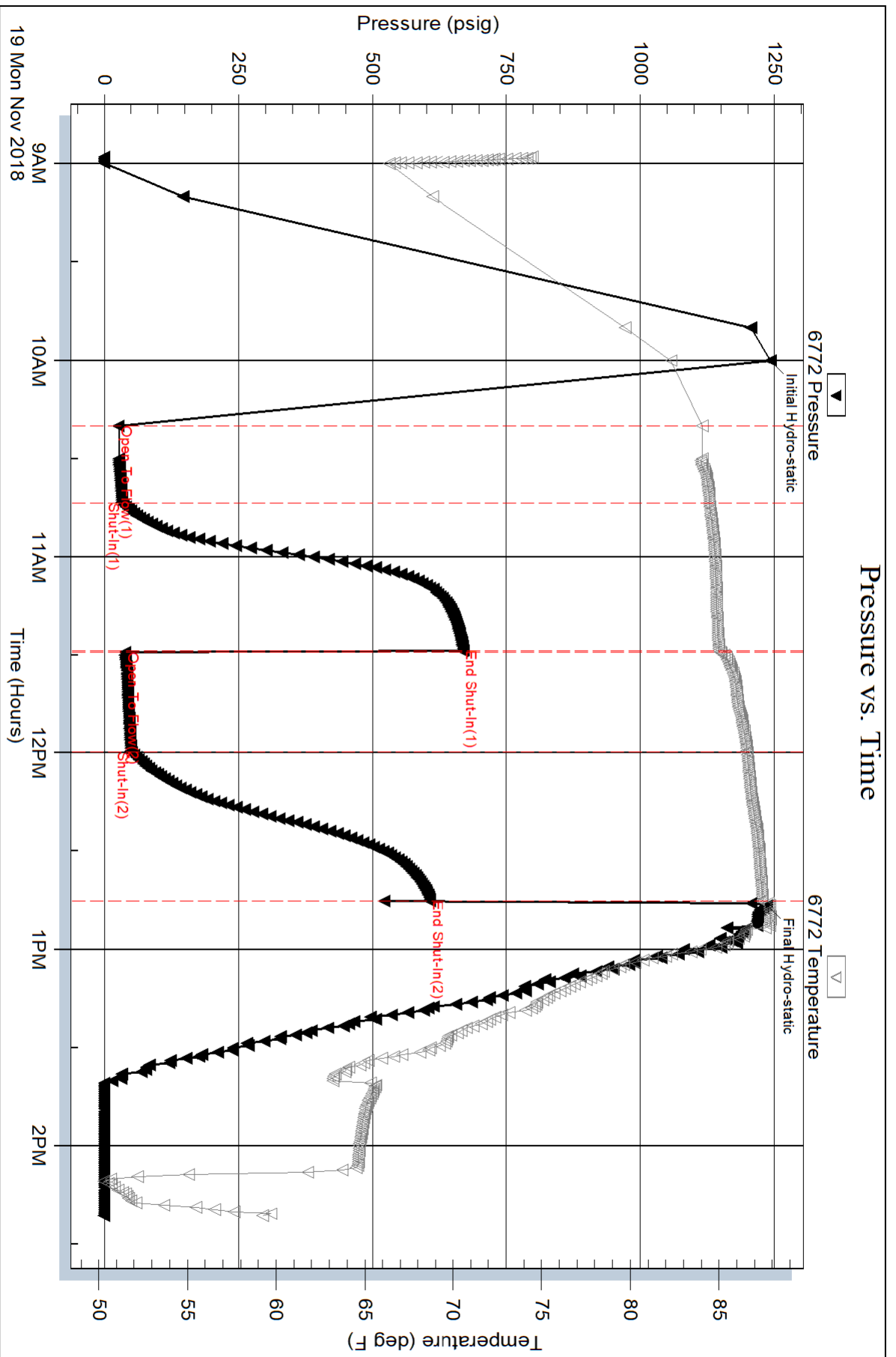
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 0.31@56.5

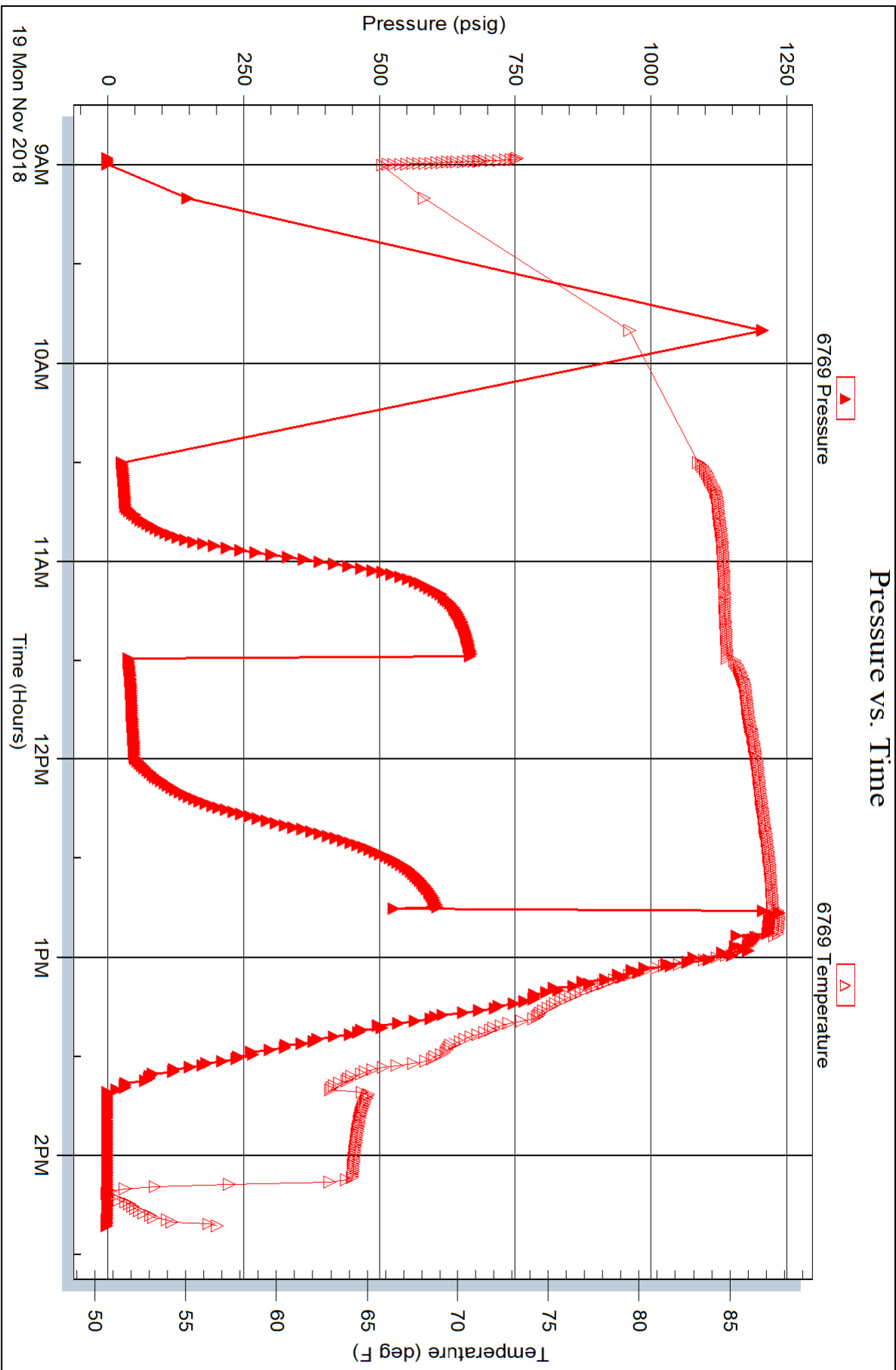


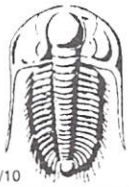
Serial #: 6769

Outside Brungardt Oil and Leasing Inc

Reich "B" #2

DST Test Number: 1





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53770

4/10

Well Name & No. Reich "B" #2 Test No. 1 Date 11-19-2018  
 Company Brungardt Oil and Leasing Inc Elevation 1816 KB 1812 GL  
 Address 213w 7th st PO Box 871 Russell KS 67665+1731  
 Co. Rep / Geo. Roger Fisher Rig DISCO #2  
 Location: Sec. 22 Twp. 11s Rge. 15w Co. Russell State KS

Interval Tested 2670-2690 Zone Tested Topeka  
 Anchor Length 20' Drill Pipe Run 2440' Mud Wt. 8.7  
 Top Packer Depth 2665 Drill Collars Run — Vis 60  
 Bottom Packer Depth 2670 Wt. Pipe Run 218' WL 6.8  
 Total Depth 2690 Chlorides 5200 ppm System LCM 2#  
 Blow Description I.F. - built to 10"  
I.S.I. - ~~weak~~ blow  
F.F. - BOB. 29 mins built to 12"  
F.S.I. - ~~12~~" blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>62</u>	<u>G.O.M</u>	<u>5</u>	<u>15</u>	<u>80</u>	<u>0</u>
<u>62</u>	<u>G.O.W.M.</u>	<u>15</u>	<u>15</u>	<u>20</u>	<u>50</u>
<u>0</u>	<u>G.I.P. 180'</u>				

Rec Total 124' BHT 87.9 Gravity — API RW 0.31 @ 56.5° F Chlorides 28,000 ppm  
 (A) Initial Hydrostatic 1242  Test 1050 T-On Location 8:20  
 (B) First Initial Flow 26  Jars — T-Started 8:58  
 (C) First Final Flow 32  Safety Joint — T-Open 10:15  
 (D) Initial Shut-In 670  Circ Sub — T-Pulled 12:45  
 (E) Second Initial Flow 38  Hourly Standby — T-Out 2:22  
 (F) Second Final Flow 49  Mileage 13266 RT x 2 Comments Loaded tool  
 (G) Final Shut-In 606  Sampler — 11-21-2018  
 (H) Final Hydrostatic 1236  Straddle —  
 Ruined Shale Packer —  
 Ruined Packer —  
 Extra Copies —  
 Initial Open 30  Shale Packer —  
 Initial Shut-In 45  Extra Packer —  
 Final Flow 30  Extra Recorder —  
 Final Shut-In 45  Day Standby —  
 Accessibility —  
 Sub Total 1182 Sub Total 0  
 Total — MP/DST Disc't —

Approved By [Signature] Our Representative Benny Mulligan  
 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.