



DRILL STEM TEST REPORT

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

P.O. Box 1019
Hays, KS 67601

ATTN: Ron Nelson

Terry Leiker #1-36

36-17s-18w Rush,KS

Start Date: 2014.01.29 @ 23:34:00

End Date: 2014.01.30 @ 06:46:30

Job Ticket #: 56180 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.01.30 @ 15:18:55



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc.

36-17s-18w Rush,KS

P.O. Box 1019
Hays, KS 67601

Terry Leiker #1-36

Job Ticket: 56180

DST#: 1

ATTN: Ron Nelson

Test Start: 2014.01.29 @ 23:34:00

GENERAL INFORMATION:

Formation: **Reagan Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:49:30

Time Test Ended: 06:46:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Tim Phillips

Unit No: 73

Interval: 3700.00 ft (KB) To 3772.00 ft (KB) (TVD)

Reference Elevations: 2053.00 ft (KB)

Total Depth: 3772.00 ft (KB) (TVD)

2045.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8655 Outside

Press@RunDepth: 20.08 psig @ 3773.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.01.29

End Date:

2014.01.30

Last Calib.:

2014.01.30

Start Time: 23:34:05

End Time:

06:46:29

Time On Btm:

2014.01.30 @ 01:49:00

Time Off Btm:

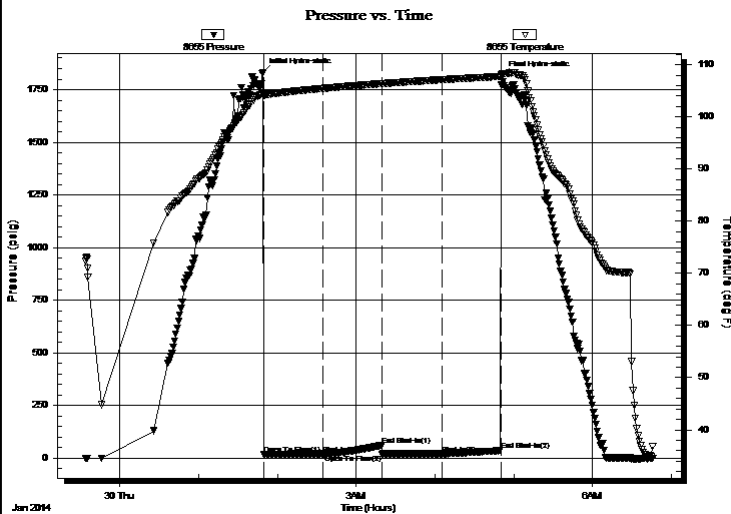
2014.01.30 @ 04:51:00

TEST COMMENT: IFP-45- Built to 1 1/4"

ISI-45-Dead No Blow Back

FF-45-Blow built to 1/4" died back

FSI-45-Dead No Blow Back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1831.91	104.38	Initial Hydro-static
1	18.48	104.06	Open To Flow (1)
46	19.99	105.45	Shut-In(1)
91	60.20	106.36	End Shut-In(1)
91	19.34	106.34	Open To Flow (2)
136	20.08	107.11	Shut-In(2)
181	36.08	107.74	End Shut-In(2)
182	1818.22	108.19	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	100% Mud	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc.

36-17s-18w Rush,KS

P.O. Box 1019
Hays, KS 67601

Terry Leiker #1-36

Job Ticket: 56180 **DST#: 1**

ATTN: Ron Nelson

Test Start: 2014.01.29 @ 23:34:00

GENERAL INFORMATION:

Formation: **Reagan Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:49:30

Time Test Ended: 06:46:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Tim Phillips

Unit No: 73

Interval: 3700.00 ft (KB) To 3772.00 ft (KB) (TVD)

Reference Elevations: 2053.00 ft (KB)

Total Depth: 3772.00 ft (KB) (TVD)

2045.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 6799 **Inside**

Press@RunDepth: psig @ 3773.00 ft (KB)

Start Date: 2014.01.29

End Date: 2014.01.30

Capacity: 8000.00 psig

Last Calib.: 2014.01.30

Start Time: 23:34:05

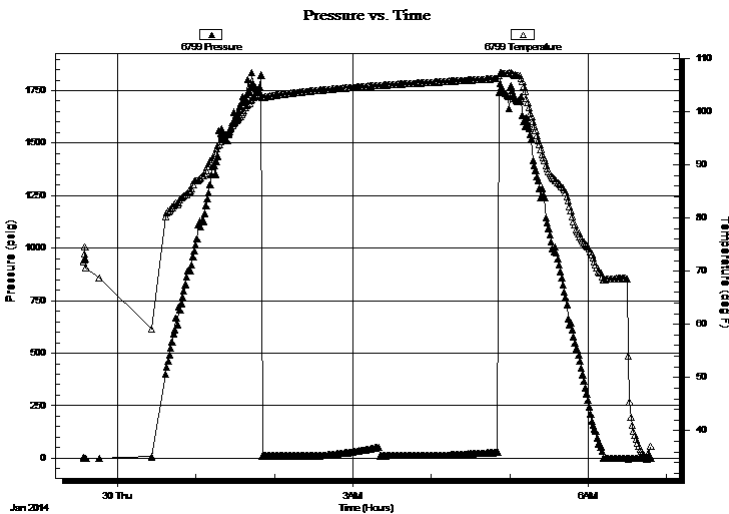
End Time: 06:48:14

Time On Btm:

Time Off Btm:

TEST COMMENT: IFP-45- Built to 1 1/4"
ISI-45-Dead No Blow Back
FF-45-Blow built to 1/4" died back
FSI-45-Dead No Blow Back

PRESSURE SUMMARY



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

Recovery

Gas Rates

Length (ft)	Description	Volume (bbl)
5.00	100% Mud	0.02

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co Inc.

36-17s-18w Rush,KS

P.O. Box 1019
Hays, KS 67601

Terry Leiker #1-36

Job Ticket: 56180

DST#: 1

ATTN: Ron Nelson

Test Start: 2014.01.29 @ 23:34:00

Tool Information

Drill Pipe:	Length: 3747.00 ft	Diameter: 3.80 inches	Volume: 52.56 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 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: 52.72 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	3772.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	72.00 ft			
Tool Length:	93.00 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			3752.00	
Shut In Tool	5.00			3757.00	
Hydraulic tool	5.00			3762.00	
Packer	5.00			3767.00	21.00 Bottom Of Top Packer
Packer	5.00			3772.00	
Stubb	1.00			3773.00	
Recorder	0.00	6799	Inside	3773.00	
Recorder	0.00	8655	Outside	3773.00	
Perforations	3.00			3776.00	
Change Over Sub	1.00			3777.00	
Drill Pipe	63.00			3840.00	
Change Over Sub	1.00			3841.00	
Bullnose	3.00			3844.00	72.00 Bottom Packers & Anchor

Total Tool Length: 93.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc.

36-17s-18w Rush,KS

P.O. Box 1019
Hays, KS 67601

Terry Leiker #1-36

Job Ticket: 56180

DST#: 1

ATTN: Ron Nelson

Test Start: 2014.01.29 @ 23:34:00

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: 65.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.98 in³

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 bbf
5.00	100% Mud	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

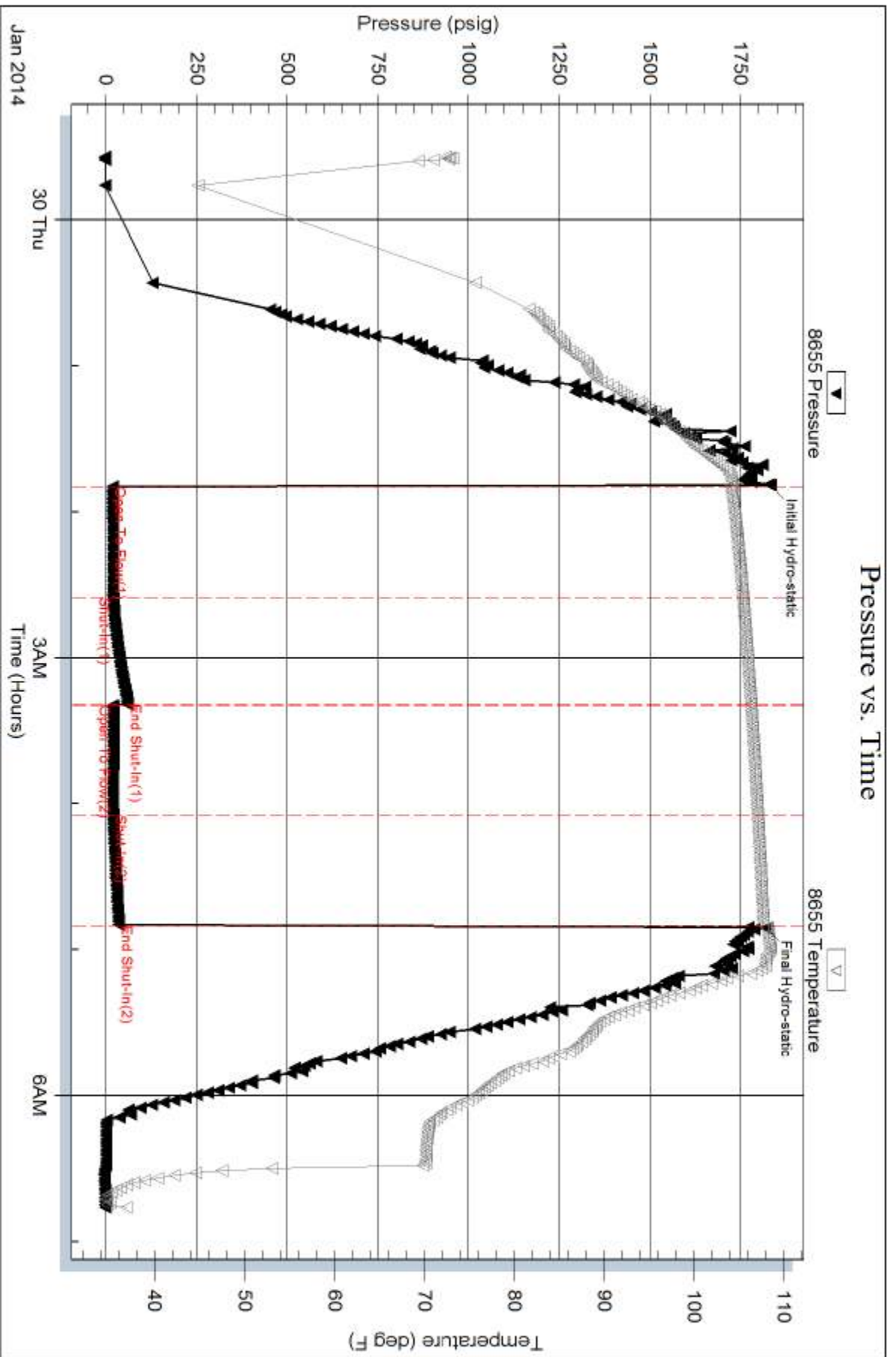
Recovery Comments:

Serial #: 8655

Outside Dow nting-Nelson Oil Co Inc.

Terry Leiker #1-36

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 56180

Printed: 2014.01.30 @ 15:18:57

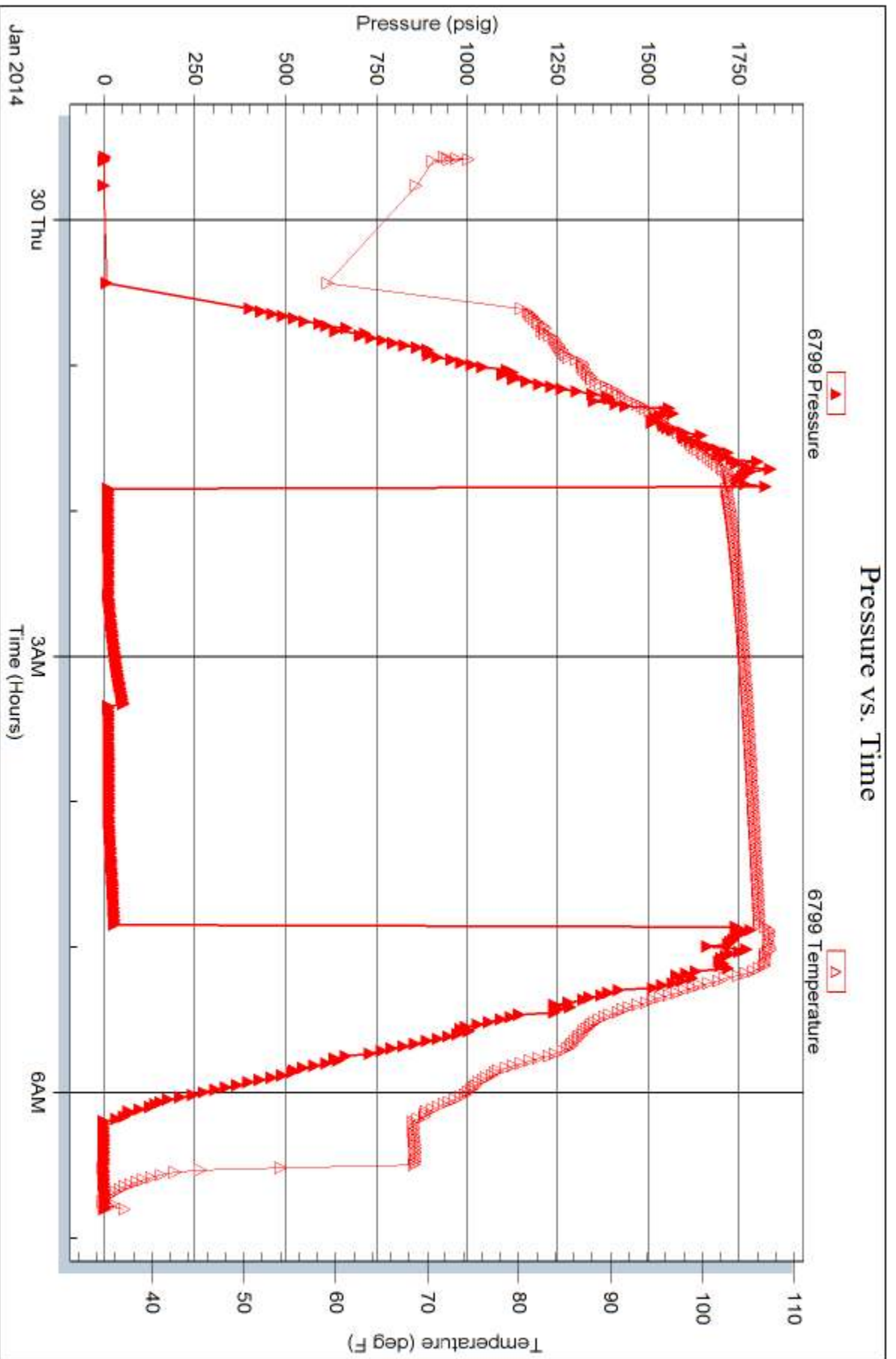
Serial #: 6799

Inside

Dow nng-Nelson Oil Co Inc.

Terry Leiker #1-36

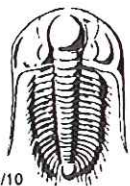
DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 56180

Printed: 2014.01.30 @ 15:18:57



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **56180**

4/10

Well Name & No. Terry Leiker #1-36 Test No. 1 Date 01/29/2014
 Company Downing-Nelson Oil Co INC Elevation 2053 KB 2045 GL
 Address P.O. Box 1019 Hays, KS 67601
 Co. Rep / Geo. Ron Nelson Rig Discovery Rig # 3
 Location: Sec. 36 Twp. 17S Rge. 18W Co. Rush State KS

Interval Tested 3700 - 3772 Zone Tested RACGAN SANDS
 Anchor Length 72' Drill Pipe Run 3747 Mud Wt. 9
 Top Packer Depth 3696 Drill Collars Run 32 Vis 65
 Bottom Packer Depth 3700 Wt. Pipe Run 0 WL 8.0
 Total Depth 3772 Chlorides 2000 ppm System LCM 1

Blow Description IFP - Blow built to 1/4 IN
ISI - DEAD NO blow back
FF - Blow built 1/4 IN DIED BACK
FSI - DEAD NO blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</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	Feet of	%gas	%oil	%water	%mud

Rec Total 5ft BHT 108 Gravity — API RW — @ — ° F Chlorides — ppm

(A) Initial Hydrostatic 1831 Test 1150 T-On Location 2224
 (B) First Initial Flow 18 Jars _____ T-Started 2334
 (C) First Final Flow 19 Safety Joint _____ T-Open 0150
 (D) Initial Shut-In 60 Circ Sub _____ T-Pulled 0450
 (E) Second Initial Flow 19 Hourly Standby _____ T-Out 0648
 (F) Second Final Flow 20 Mileage 64 R/T x 2 99.20 Comments LOADED TOOLS
 (G) Final Shut-In 36 Sampler _____
 (H) Final Hydrostatic 1818 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 45 Extra Packer _____ Extra Copies _____
 Initial Shut-In 45 Extra Recorder _____ Sub Total 0
 Final Flow 45 Day Standby _____ Total 1249.20
 Final Shut-In 45 Accessibility _____ MP/DST Disc't _____
 Sub Total 1249.20

Approved By _____ Our Representative Jim Phillips

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.