

**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

DNOC

IFS Unit 1-19

P.O. Box 372
Hays, Ks 67601

19/20S/20W-Pawnee

Job Ticket: 41843

DST#: 1

ATTN: Marc Downing

Test Start: 2011.02.24 @ 21:34:10

GENERAL INFORMATION:

Formation: **Mississippian**

Deviated: No Whipstock: ft (KB)

Time Tool Opened:

Time Test Ended: 02:11:40

Test Type: Conventional Bottom Hole

Tester: Dustin Rash

Unit No: 47

Interval: **4326.00 ft (KB) To 4368.00 ft (KB) (TVD)**

Reference Elevations: 2219.00 ft (KB)

Total Depth: 4368.00 ft (KB) (TVD)

2213.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 6.00 ft

Serial #: 6719

Press@RunDepth: psig @ ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.02.24

End Date: 2011.02.25

Last Calib.: 2011.02.25

Start Time: 21:34:15

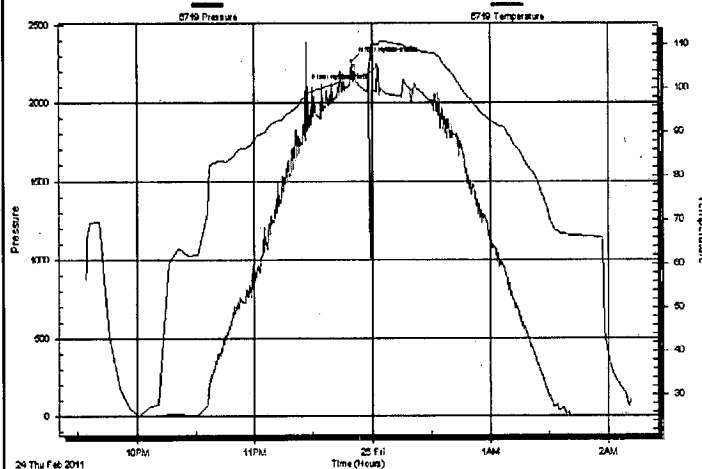
End Time: 02:11:39

Time On Btm: 2011.02.24 @ 23:49:40

Time Off Btm: 2011.02.25 @ 00:02:40

TEST COMMENT: IF-Msrun.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2264.16	102.21	Initial Hydro-static
13	2238.00	109.83	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

DNOO
P.O. Box 372
Hays, Ks 67601

IFS Unit 1-19
19/20S/20W-Pawnee
Job Ticket: 41843 **DST#: 1**
Test Start: 2011.02.24 @ 21:34:10

ATTN: Marc Downing

Mud and Cushion Information

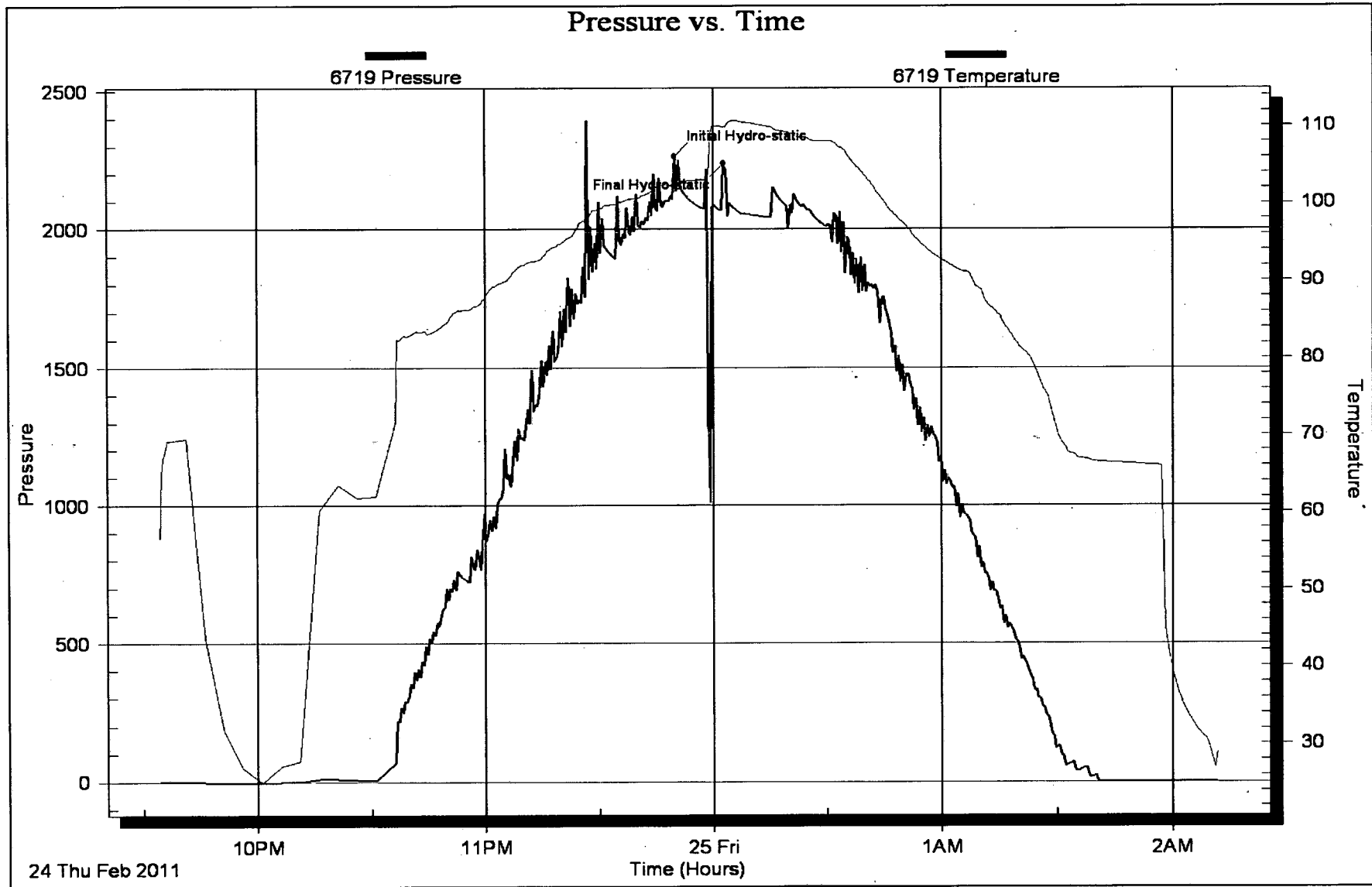
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 61.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.18 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3800.00 ppm			
Filter Cake: inches			

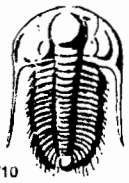
Recovery Information

Recovery Table

Length ft	Description	Volume bbl

Total Length: ft Total Volume: bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 041843 ¹⁵⁴⁴⁵

4/10

Well Name & No. IFS Unit 1-19 Test No. 1 Date 2-24-11
 Company DNOC Elevation 2219 KB 2213 GL
 Address P.O. Box 372 Hays, KS 67601
 Co. Rep / Geo. Marc Downing Rig Discovery #4
 Location: Sec. 19 Twp. 20S Rge. 20W Co. Pawnee State KS

Interval Tested 4326-4368 Zone Tested M.58
 Anchor Length 42' Drill Pipe Run _____ Mud Wt. 9.2
 Top Packer Depth 4321 Drill Collars Run 31 Vis 61
 Bottom Packer Depth 4326 Wt. Pipe Run 0 WL 9.2
 Total Depth 4368 Chlorides 3800 ppm System LCM 1.5#
 Blow Description IF - Missun

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	Feet of	%gas	%oil	%water	%mud

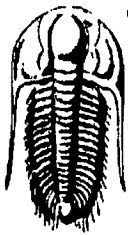
Rec Total _____ BHT _____ Gravity 1025 API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic _____ Test 1025 T-On Location 2015
 (B) First Initial Flow _____ Jars 250 T-Started 2145
 (C) First Final Flow _____ Safety Joint 75 T-Open _____
 (D) Initial Shut-In _____ Circ Sub _____ T-Pulled _____
 (E) Second Initial Flow _____ Hourly Standby _____ T-Out _____
 (F) Second Final Flow _____ Mileage 58 XZ 116 RT 145 Comments BOT-2134
 (G) Final Shut-In _____ Sampler _____ Ruined Shale Packer _____
 (H) Final Hydrostatic _____ Straddle _____ Ruined Packer _____
 Shale Packer _____ Extra Copies _____
 Extra Packer _____ Sub Total 0
 Extra Recorder _____ Total 1495
 Day Standby _____ MP/DST Disc't _____
 Accessibility _____
 Sub Total 1495

Initial Open Packer Failure
 Initial Shut-In _____
 Final Flow _____
 Final Shut-In _____

Approved By _____ Our Representative D. Rash

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**

DRILL STEM TEST REPORT

DNOG

IFS Unit 1-19

P.O. Box 372
Hays, Ks 67601

19/20S/20W-Pawnee

Job Ticket: 41844

DST#: 2

ATTN: Marc Downing

Test Start: 2011.02.25 @ 02:34:10

GENERAL INFORMATION:

Formation: **Mississippian**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:20:10

Time Test Ended: 09:52:40

Test Type: Conventional Bottom Hole

Tester: Dustin Rash

Unit No: 47

Interval: **4294.00 ft (KB) To 4368.00 ft (KB) (TVD)**

Reference Elevations: 2219.00 ft (KB)

Total Depth: 4368.00 ft (KB) (TVD)

2213.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 6.00 ft

Serial #: **6719**

Inside

Press@RunDepth: 373.06 psig @ 4296.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.02.25

End Date: 2011.02.25

Last Calib.: 2011.02.25

Start Time: 02:34:15

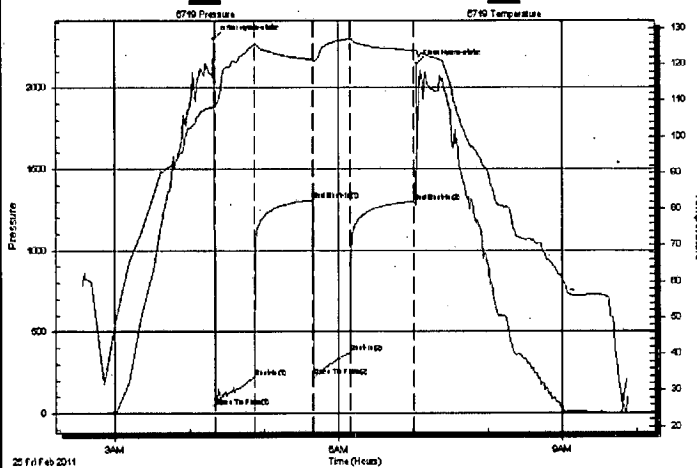
End Time: 09:52:39

Time On Btm: 2011.02.25 @ 04:19:10

Time Off Btm: 2011.02.25 @ 07:03:10

TEST COMMENT: IF-Strong building blow . BOB in 8 minutes 20 seconds.
IS-No Return.
FF-Strong building blow . BOB in 9 minutes.
FS-No Return.

Pressure vs. Time



PRESSURE SUMMARY

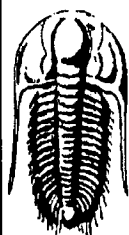
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2302.40	108.21	Initial Hydro-static
1	42.50	108.13	Open To Flow (1)
33	221.32	125.38	Shut-In(1)
80	1307.31	121.31	End Shut-In(1)
81	227.15	121.00	Open To Flow (2)
110	373.06	127.00	Shut-In(2)
162	1300.16	123.75	End Shut-In(2)
164	2146.83	123.90	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
496.00	70%Water/12.5%Gas/12.5%Oil/5%Mud	6.68
248.00	40%Water/40%Mud/10%Oil/10%Gas	3.48
33.00	50%Mud/20%Water/15%Oil/15%Gas	0.46
2.00	90%Oil/10%Gas	0.03

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

DNOC

IFS Unit 1-19

P.O. Box 372
Hays, Ks 67601

19/20S/20W-Pawnee

Job Ticket: 41844

DST#: 2

ATTN: Marc Downing

Test Start: 2011.02.25 @ 02:34:10

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 61.00 sec/qt

Water Loss: 9.18 in³

Resistivity: 0.44 ohm.m

Salinity: 3800.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API: deg API

Water Salinity: 42000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
496.00	70%Water/12.5%Gas/12.5%Oil/5%Mud	6.675
248.00	40%Water/40%Mud/10%Oil/10%Gas	3.479
33.00	50%Mud/20%Water/15%Oil/15%Gas	0.463
2.00	90%Oil/10%Gas	0.028

Total Length: 779.00 ft Total Volume: 10.645 bbl

Num Fluid Samples: 0

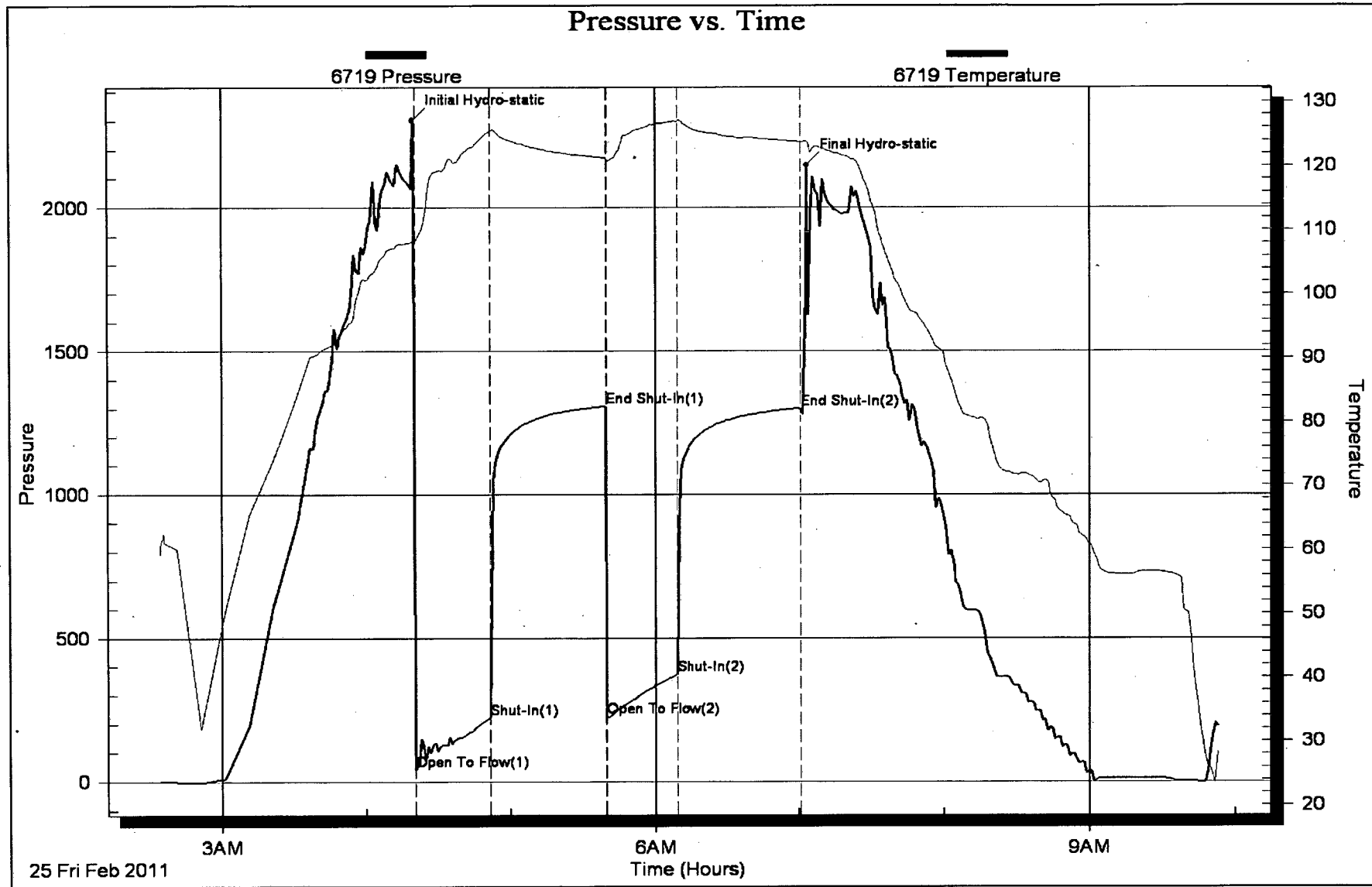
Num Gas Bombs: 0

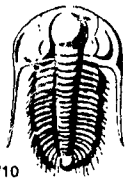
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 041844

4/10

Well Name & No. IFS Unit 1-19 Test No. 2 Date 2-25-11
 Company DNOC Elevation 2219 KB 2213 GL
 Address P.O. Box 372 Hays, KS 67601
 Co. Rep / Geo. Marc Downing Rig Discovery 4
 Location: Sec. 19 Twp. 208 Rge. 20W Co. Pawnee State KS

Interval Tested 4294-4368 Zone Tested MISS
 Anchor Length 74' Drill Pipe Run _____ Mud Wt. 9.2
 Top Packer Depth 4289 Drill Collars Run 31 Vis 61
 Bottom Packer Depth 4294 Wt. Pipe Run 0 WL 9.2
 Total Depth 4368 Chlorides 3800 ppm System LCM 1.5#

Blow Description IF - Strong building blow, BOB in 8 minutes 20 seconds
ISF - No Return
FF - Strong building blow, BOB in 9 minutes
FBI - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>OH</u>	<u>10</u>	<u>90</u>		
<u>33</u>	<u>M/W/O/G</u>	<u>15</u>	<u>15</u>	<u>20</u>	<u>50</u>
<u>248</u>	<u>M/W/O/G</u>	<u>10</u>	<u>10</u>	<u>40</u>	<u>40</u>
<u>496</u>	<u>W/O/G/M</u>	<u>12.5</u>	<u>12.5</u>	<u>70</u>	<u>5</u>
Rec Total	<u>779</u>	BHT <u>124</u>	Gravity _____	API RW <u>.436 @ 19</u>	F Chlorides <u>42000</u> ppm

(A) Initial Hydrostatic 2302 Test 1225' T-On Location 0200
 (B) First Initial Flow 43 Jars 250' T-Started 0245
 (C) First Final Flow 221 Safety Joint 75' T-Open 0424
 (D) Initial Shut-In 1307 Circ Sub _____ T-Pulled 0655
 (E) Second Initial Flow 227 Hourly Standby _____ T-Out 0945
 (F) Second Final Flow 373 Mileage 58X2 116RT Comments BERT-0234
 (G) Final Shut-In 1300 Sampler 145'
 (H) Final Hydrostatic 2147 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer 260
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 260
 Day Standby _____ Total 1955
 Accessibility _____ MP/DST Disc _____

Initial Open 30
 Initial Shut-In 45
 Final Flow 30
 Final Shut-In 45
 Sub Total 1195

Approved By _____ Our Representative D. Rash

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.