



DRILL STEM TEST REPORT

Prepared For: **D K Operating**

24583 NW 208 Rd
Jetmore, KS 67854-5311

ATTN: Jason Alm

Querbach #4-10

10-23s-22w Hodgeman,KS

Start Date: 2012.12.12 @ 00:40:26

End Date: 2012.12.12 @ 08:15:11

Job Ticket #: 49894 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.12.12 @ 14:32:27



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

D K Operating
 24583 NW 208 Rd
 Jetmore, KS 67854-5311
 ATTN: Jason Alm

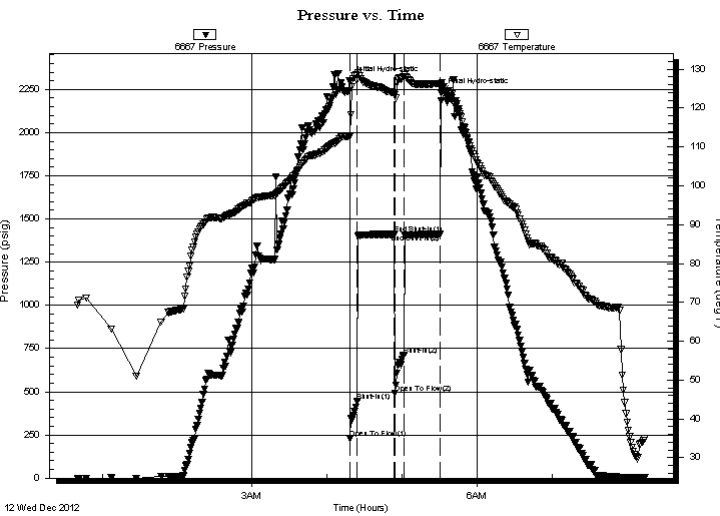
10-23s-22w Hodgeman, KS
Querbach #4-10
 Job Ticket: 49894 **DST#: 1**
 Test Start: 2012.12.12 @ 00:40:26

GENERAL INFORMATION:

Formation: **Miss**
 Deviated: No Whipstock: 0.00 ft (KB)
 Time Tool Opened: 04:18:11
 Time Test Ended: 08:15:11
 Interval: **4403.00 ft (KB) To 4453.00 ft (KB) (TVD)**
 Total Depth: 4453.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Shane McBride
 Unit No: 55
 Reference Elevations: 2208.00 ft (KB)
 2198.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 6667 Inside
 Press @ Run Depth: 710.80 psig @ 4404.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.12.12 End Date: 2012.12.12 Last Calib.: 2012.12.12
 Start Time: 00:40:26 End Time: 08:14:11 Time On Btm: 2012.12.12 @ 04:17:56
 Time Off Btm: 2012.12.12 @ 05:31:11

TEST COMMENT: B.O.B. in 1 min
 No return
 B.O.B. in 1 1/2 min
 No return



PRESSURE SUMMARY

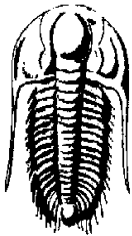
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2299.11	112.93	Initial Hydro-static
1	228.37	112.69	Open To Flow (1)
7	445.48	127.10	Shut-In(1)
36	1411.79	123.92	End Shut-In(1)
37	490.07	123.41	Open To Flow (2)
44	710.80	128.22	Shut-In(2)
73	1411.05	126.24	End Shut-In(2)
74	2229.35	125.21	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
375.00	o & m c w 10o 15m 75w	5.26
660.00	s o & m c w 5 o 10m 85w	9.26

Gas Rates

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



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TESTING, INC.**

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D K Operating
24583 NW 208 Rd
Jetmore, KS 67854-5311
ATTN: Jason Alm

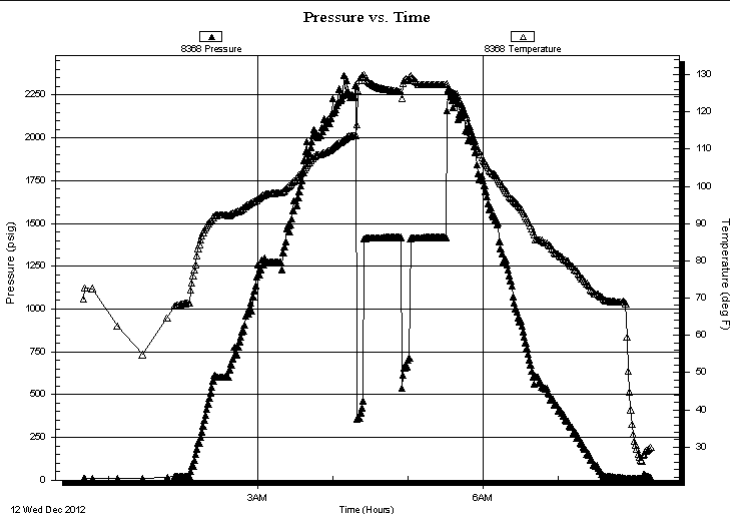
10-23s-22w Hodgeman,KS
Querbach #4-10
Job Ticket: 49894 **DST#: 1**
Test Start: 2012.12.12 @ 00:40:26

GENERAL INFORMATION:

Formation: **Miss**
Deviated: No Whipstock: 0.00 ft (KB) Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened: 04:18:11 Tester: Shane McBride
Time Test Ended: 08:15:11 Unit No: 55
Interval: **4403.00 ft (KB) To 4453.00 ft (KB) (TVD)** Reference Elevations: 2208.00 ft (KB)
Total Depth: 4453.00 ft (KB) (TVD) 2198.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

Serial #: 8368 Outside
Press @ Run Depth: psig @ 4404.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.12.12 End Date: 2012.12.12 Last Calib.: 2012.12.12
Start Time: 00:40:26 End Time: 08:14:11 Time On Btm:
Time Off Btm:

TEST COMMENT: B.O.B. in 1 min
No return
B.O.B. in 1 1/2 min
No return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
375.00	o & m c w 10o 15m 75w	5.26
660.00	s o & m c w 5 o 10m 85w	9.26

Gas Rates

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



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DRILL STEM TEST REPORT

TOOL DIAGRAM

D K Operating
24583 NW 208 Rd
Jetmore, KS 67854-5311
ATTN: Jason Alm

10-23s-22w Hodgeman, KS
Querbach #4-10
Job Ticket: 49894 **DST#: 1**
Test Start: 2012.12.12 @ 00:40:26

Tool Information

Drill Pipe:	Length: 4409.00 ft	Diameter: 3.80 inches	Volume: 61.85 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 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: 90000.00 lb
			<u>Total Volume: 61.85 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4403.00 ft			Final 71000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	77.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			4377.00	
Shut In Tool	5.00			4382.00	
Hydraulic tool	5.00			4387.00	
Jars	5.00			4392.00	
Safety Joint	2.00			4394.00	
Packer	5.00			4399.00	27.00 Bottom Of Top Packer
Packer	4.00			4403.00	
Stubb	1.00			4404.00	
Recorder	0.00	6667	Inside	4404.00	
Recorder	0.00	8368	Outside	4404.00	
Perforations	10.00			4414.00	
Change Over Sub	1.00			4415.00	
Drill Pipe	32.00			4447.00	
Change Over Sub	1.00			4448.00	
Bullnose	5.00			4453.00	50.00 Bottom Packers & Anchor

Total Tool Length: 77.00



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FLUID SUMMARY

DK Operating
24583 NW 208 Rd
Jetmore, KS 67854-5311
ATTN: Jason Alm

10-23s-22w Hodgeman,KS
Querbach #4-10
Job Ticket: 49894 **DST#: 1**
Test Start: 2012.12.12 @ 00:40:26

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 0 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 27500 ppm
Viscosity: 48.00 sec/qt	Cushion Volume: bbl	
Water Loss: 13.53 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 68000.00 ppm		
Filter Cake: 2.00 inches		

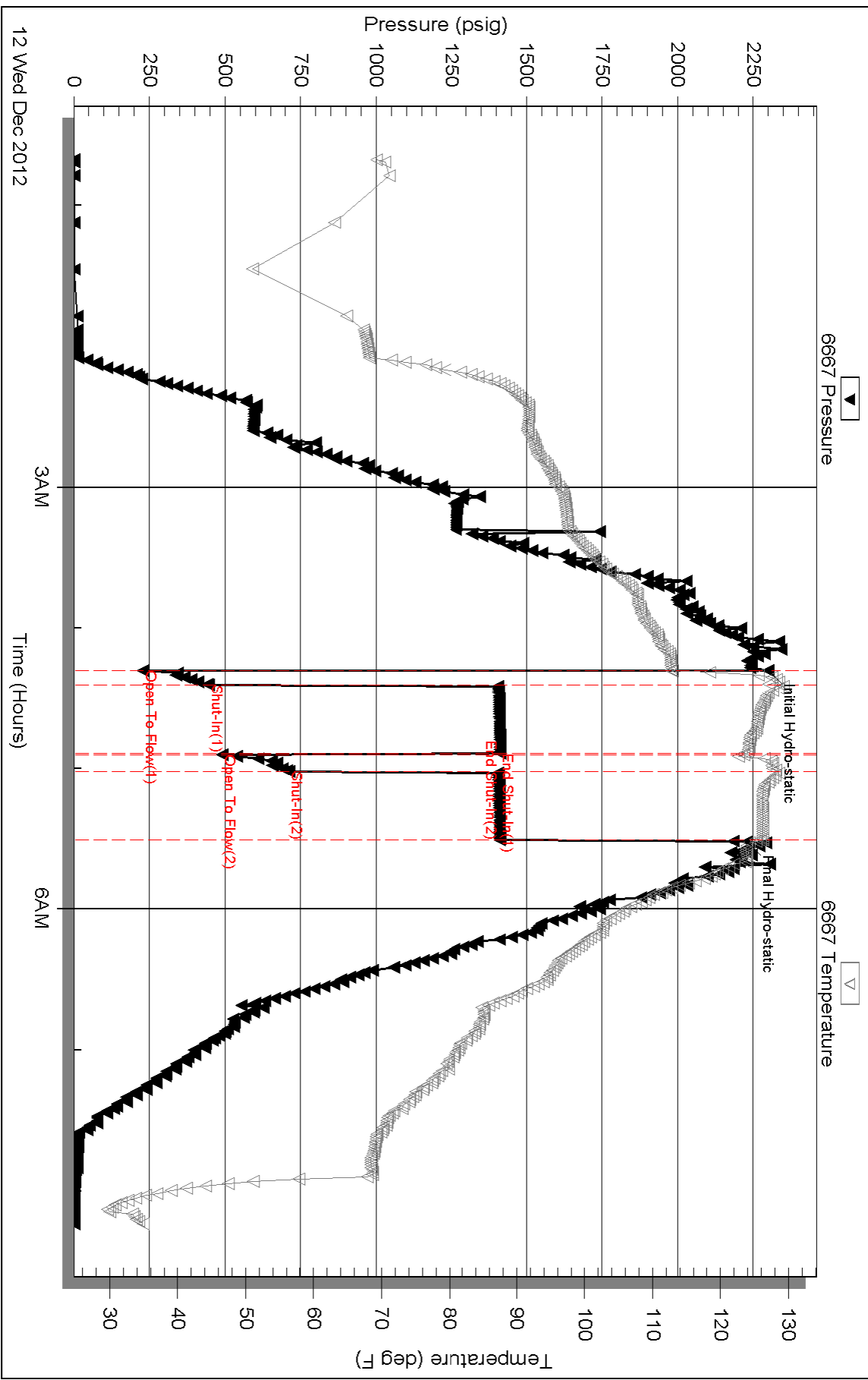
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
375.00	o & m c w 10o 15m 75w	5.260
660.00	s o & m c w 5 o 10m 85w	9.258

Total Length: 1035.00 ft Total Volume: 14.518 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: rw . 409 @ 40*f = 27,500 chlor

Pressure vs. Time

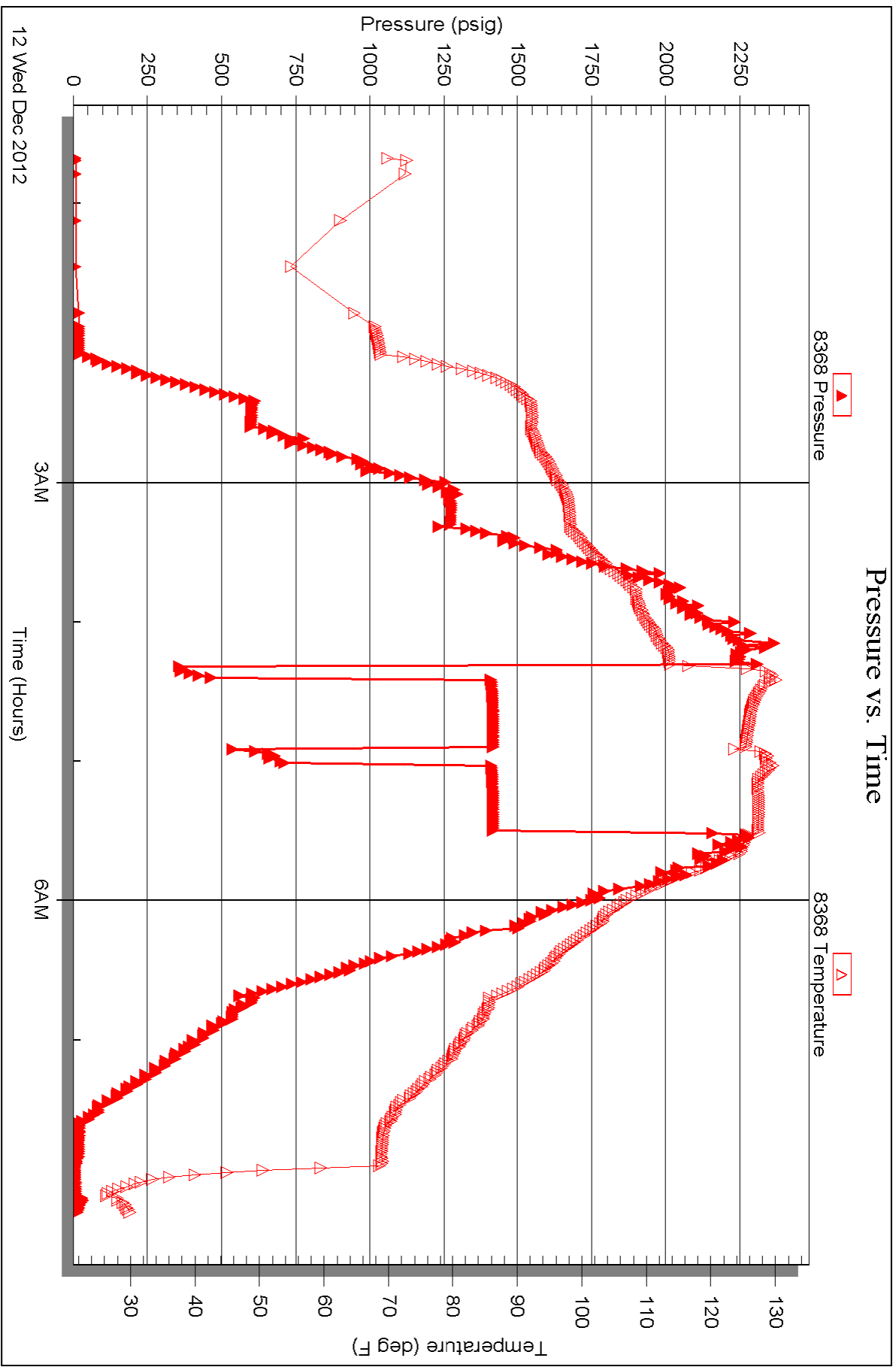


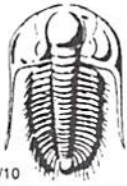
Serial #: 8368

Outside DK Operating

Querbach #4-10

DST Test Number: 1





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **49894**

Well Name & No. Querbaeh #4-10 Test No. #1 Date 12-12-12
 Company DK Operating Inc Elevation 2208 KB 2198 GL
 Address 24583 NW 208 RD, Jetmore, KS 67854-5311
 Co. Rep / Geo. Jason Alm Rig Vaf #1
 Location: Sec. 10 Twp. 23S Rge. 22W Co. Hodgeman State KS

Interval Tested 4403 4453 Zone Tested Mi. 55
 Anchor Length 50 Drill Pipe Run 4409 Mud Wt. 9.4
 Top Packer Depth 4398 Drill Collars Run — Vis 48
 Bottom Packer Depth 4403 Wt. Pipe Run — WL 13.6
 Total Depth 4453 Chlorides 6800 ppm System LCM #2

Blow Description B.O.B. in 1 min.
No return
B.O.B. in 1 1/2 min
No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>375</u>	<u>0 3/4 m cw</u>	<u>10</u>	<u>75</u>	<u>15</u>	
<u>660</u>	<u>0 1/2 m cw</u>	<u>5</u>	<u>85</u>	<u>10</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1035' BHT 128° Gravity — API RW .409 @ 40° F Chlorides 27500 ppm

(A) Initial Hydrostatic <u>2299</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>22:45</u>
(B) First Initial Flow <u>228</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>00:40</u>
(C) First Final Flow <u>445</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>04:18</u>
(D) Initial Shut-In <u>1411</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>05:28</u>
(E) Second Initial Flow <u>490</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>08:30</u>
(F) Second Final Flow <u>710</u>	<input checked="" type="checkbox"/> Mileage <u>190 RT</u> <u>294.50</u>	Comments
(G) Final Shut-In <u>1411</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2229</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer

Initial Open 5
 Initial Shut-In 30
 Final Flow 5
 Final Shut-In 30

Shale Packer
 Extra Packer
 Extra Recorder
 Day Standby
 Accessibility

Sub Total 1869.50

MP/DST Disc't

Approved By _____ Our Representative [Signature]

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