

DRILL STEM TEST REPORT

Prepared For: **Howell Oil Company**

9 Lois Lane
Bella Vista, Ark 72715

ATTN: Arden Ratzlaff

18-23s-3w Harvey

Pizinger #4

Start Date: 2004.03.09 @ 10:47:02

End Date: 2004.03.09 @ 23:15:02

Job Ticket #: 18953 DST #: 1

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

Howell Oil Company

Pizinger #4

18-23s-3w Harvey

DST # 1

re

2004.03.09



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Howell Oil Company
 9 Lois Lane
 Bella Vista, Ark 72715
 ATTN: Arden Ratzlaff

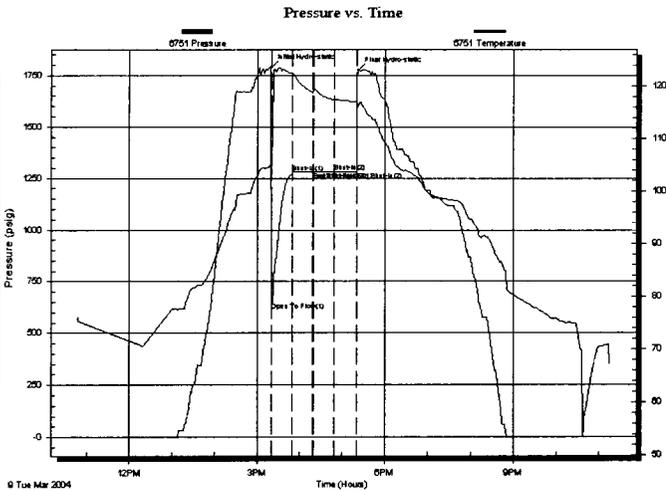
Pizinger #4
18-23s-3w Harvey
 Job Ticket: 18953 **DST#: 1**
 Test Start: 2004.03.09 @ 10:47:02

GENERAL INFORMATION:

Formation: **re**
 Deviated: **No Whipstock:** **ft (KB)**
 Time Tool Opened: 15:20:22
 Time Test Ended: 23:15:02
 Interval: **3547.00 ft (KB) To 3652.00 ft (KB) (TVD)**
 Total Depth: **3652.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**
 Test Type: **Conventional Bottom Hole**
 Tester: **Nathan**
 Unit No: **16**
 Reference Elevations: **1474.00 ft (KB)**
1469.00 ft (CF)
 KB to GR/CF: **5.00 ft**

Serial #: 6751 **Inside**
 Press@RunDepth: **1282.32 psig @ 3617.00 ft (KB)** Capacity: **7000.00 psig**
 Start Date: **2004.03.09** End Date: **2004.03.09** Last Calib.: **1899.12.30**
 Start Time: **10:47:07** End Time: **23:15:02** Time On Btm: **2004.03.09 @ 15:19:32**
 Time Off Btm: **2004.03.09 @ 17:22:22**

TEST COMMENT: IF- Strong blow building O.B.B. in 35 seconds
 IS- No blow
 FF- Fair blow building to 6 1/2 inches; dead in 21 minutes
 FS- No blow



PRESSURE SUMMARY

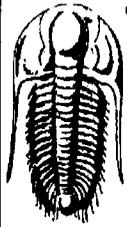
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1787.40	105.03	Initial Hydro-static
1	607.02	104.45	Open To Flow (1)
31	1273.93	122.43	Shut-in(1)
60	1282.25	118.84	End Shut-in(1)
60	1278.67	119.08	Open To Flow (2)
90	1282.32	117.48	Shut-in(2)
122	1282.34	117.10	End Shut-in(2)
123	1773.19	116.00	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2790.00	GMCSW 76%w ater 22%mud 2%gas	38.01
0.00	372 feet of gas in pipe	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Howell Oil Company
9 Lois Lane
Bella Vista, Ark 72715
ATTN: Arden Ratzlaff

Pizinger #4
18-23s-3w Harvey
Job Ticket: 18953 **DST#: 1**
Test Start: 2004.03.09 @ 10:47:02

Tool Information

Drill Pipe:	Length: 3421.00 ft	Diameter: 3.80 inches	Volume: 47.99 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 64000.00 lb
			<u>Total Volume: 48.60 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 47000.00 lb
Depth to Top Packer:	3547.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	105.00 ft			
Tool Length:	127.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3526.00	
Shut In Tool	5.00			3531.00	
Hydraulic tool	5.00			3536.00	
Safety Joint	2.00			3538.00	
Packer	4.00			3542.00	22.00 Bottom Of Top Packer
Packer	5.00			3547.00	
Stubb	1.00			3548.00	
Perforations	5.00			3553.00	
Change Over Sub	1.00			3554.00	
Blank Spacing	62.00			3616.00	
Change Over Sub	1.00			3617.00	
Recorder	0.00	6751	Inside	3617.00	
Perforations	32.00			3649.00	
Recorder	0.00	13630	Outside	3649.00	
Bullnose	3.00			3652.00	105.00 Bottom Packers & Anchor

Total Tool Length: 127.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Howell Oil Company
9 Lois Lane
Bella Vista, Ark 72715
ATTN: Arden Ratzlaff

Pizinger #4
18-23s-3w Harvey
Job Ticket: 18953 **DST#: 1**
Test Start: 2004.03.09 @ 10:47:02

Mud and Cushion Information

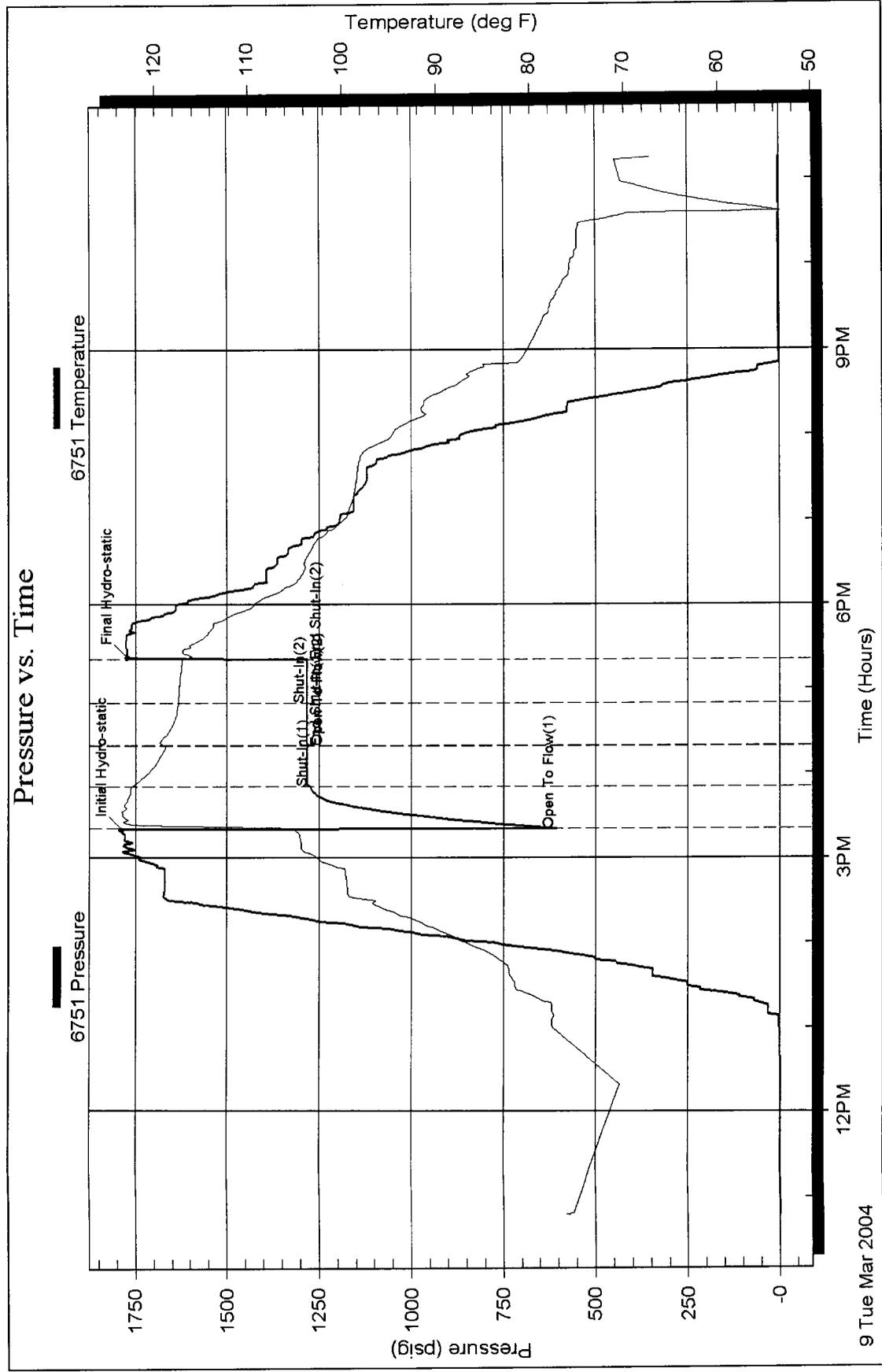
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	52000 ppm
Viscosity: 44.00 sec/qt	Cushion Volume: bbl		
Water Loss: 12.34 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 2000.00 ppm			
Filter Cake: 0.02 inches			

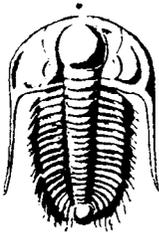
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2790.00	GMCSW 76%water 22%mud 2%gas	38.007
0.00	372 feet of gas in pipe	0.000

Total Length: 2790.00 ft Total Volume: 38.007 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

INV 6268

No 18953

05/03

Test Ticket

Well Name & No. Pizinger #4 Test No. 1 Date 3/9/04
 Company Howell Oil Company Zone Tested Hunter
 Address 9 Lois Lane Bella Vista, Ark 72715 Elevation 1474 KB 1469 GL
 Co. Rep / Geo. Arden Ratzloff Cont. Barentz Drtg Est. Ft. of Pay _____ Por. _____ %
 Location: Sec. 18 Twp. 23S Rge. 3W Co. Harvey State KS
 No. of Copies _____ Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 3547 - 3652 Initial Str Wt./Lbs. 47,000 Unseated Str Wt/Lbs. 60,000
 Anchor Length _____ Wt. Set Lbs. 22,000 Wt. Pulled Loose/Lbs. 64,000
 Top Packer Depth _____ Tool Weight 2200
 Bottom Packer Depth _____ Hole Size 7 7/8" ✓ Rubber Size 6 3/4" ✓
 Total Depth _____ Wt. Pipe Run _____ Drill Collar Run 124
 Mud Wt. 9.4 LCM -0- Vis. 44 WL 12.4 Drill Pipe Size 4 1/2 Ft. Run 3721
 Blow Description IF - Strong blow building O.B.B in 35 seconds
EST - No blow
FF - Fair blow building to 6 1/2 inches; dead in 2 minutes
FSI - No blow

Recovery - Total Feet 2790 GIP 372 Ft. in DC 124 Ft. in DP 2666
 Rec. 2790 Feet of GMCSW %gas 2% %oil _____ %water 76% %mud 22%
 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 _____
 BHT 117 °F Gravity _____ °API D @ _____ °F Corrected Gravity _____ °API
 RW .254 @ 41.2 °F Chlorides 52,000 ppm Recovery _____ Chlorides 2,000 ppm System

AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud	<u>11787</u> PSI	<u>6751</u>	<u>bottom hole</u>
(B) First Initial Flow Pressure	<u>607</u> PSI	(depth) <u>3617</u>	Elec. Rec. <input checked="" type="checkbox"/>
(C) First Final Flow Pressure	<u>1274</u> PSI	Recorder No. <u>13630</u>	Jars _____
(D) Initial Shut-In Pressure	<u>1282</u> PSI	(depth) <u>3649</u>	Safety Jt. <input checked="" type="checkbox"/>
(E) Second Initial Flow Pressure	<u>1278</u> PSI	Recorder No. _____	Circ Sub _____
(F) Second Final Flow Pressure	<u>1282</u> PSI	(depth) _____	Sampler _____
(G) Final Shut-In Pressure	<u>1282</u> PSI	Initial Opening <u>30</u>	Straddle _____
(Q) Final Hydrostatic Mud	<u>1773</u> PSI	Initial Shut-In <u>30</u>	Ext. Packer _____
		Final Flow <u>30</u>	Shale Packer _____
		Final Shut-In <u>30</u>	Mileage <u>65</u>
		T-On Location <u>7:00</u>	Sub Total: <u>1010.50</u>
		T-Started <u>10:47</u>	Std. By <u>8 hrs 120</u>
		T-Open <u>15:19</u>	Other <u>240</u>
		T-Pulled <u>17:19</u>	Total: _____
		T-Out <u>23:13</u>	

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.

Approved By Arden Ratzloff
 Our Representative John Burdick

CHART PAGE

This is a photocopy of the actual AK-1 recorder chart

