

DRILL STEM TEST REPORT

Prepared For: **Hertel Oil Company**

704 E 12th St
Hays KS 67601

ATTN: Mike Hertel

22 14S16W Ellis KS

Dreiling #1

Start Date: 2006.11.19 @ 18:26:21

End Date: 2006.11.19 @ 22:43:45

Job Ticket #: 25917 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Hertel Oil Company

704 E 12th St
Hays KS 67601

ATTN: Mike Hertel

Dreiling #1

22 14S16W Ellis KS

Job Ticket: 25917

DST#: 1

Test Start: 2006.11.19 @ 18:26:21

GENERAL INFORMATION:

Formation: **Topeka**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:03:46

Time Test Ended: 22:43:45

Test Type: Conventional Straddle

Tester: Ray Schwager

Unit No: 28

Interval: **2847.00 ft (KB) To 2894.00 ft (KB) (TVD)**

Total Depth: 3035.00 ft (KB) (TVD)

Hole Diameter: 7.85 inches Hole Condition: Poor

Reference Elevations: 1901.00 ft (KB)

1896.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6753

Inside

Press@RunDepth: 27.00 psig @ 2848.01 ft (KB)

Start Date: 2006.11.19

End Date:

2006.11.19

Start Time: 18:26:21

End Time:

22:43:45

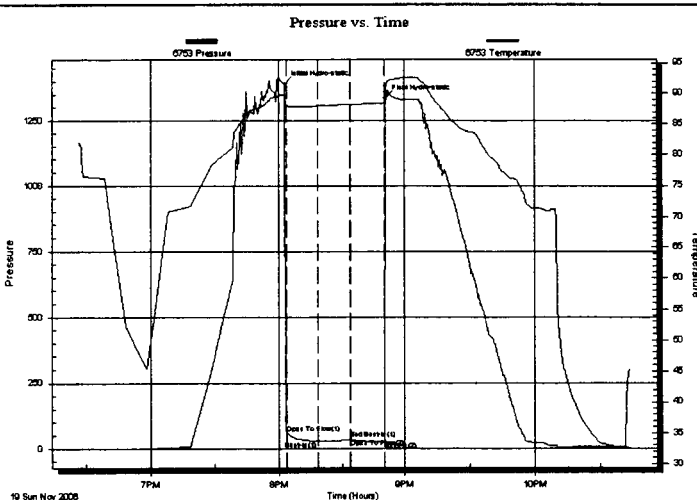
Capacity: 7000.00 psig

Last Calib.: 2006.11.19

Time On Btm: 2006.11.19 @ 20:02:46

Time Off Btm: 2006.11.19 @ 20:50:46

TEST COMMENT: IFP Wk bl died in 15 min
FFP Surface bl died in 5 min
Times 15 15 15 out



PRESSURE SUMMARY

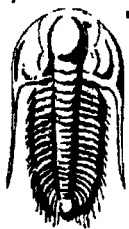
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1390.37	89.78	Initial Hydro-static
1	58.95	87.98	Open To Flow (1)
16	27.00	87.96	Shut-In (1)
31	33.17	88.20	End Shut-In (1)
32	33.70	88.21	Open To Flow (2)
48	23.49	88.42	Shut-In (2)
48	1335.38	90.52	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud w/show of Oil	0.07

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hertel Oil Company

704 E 12th St
Hays KS 67601

ATTN: Mike Hertel

Dreilling #1

22 14S16W Ellis KS

Job Ticket: 25917

DST#: 1

Test Start: 2006.11.19 @ 18:26:21

Tool Information

Drill Pipe:	Length:	2833.00 ft	Diameter:	3.80 inches	Volume:	39.74 bbl	Tool Weight:	25000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:	2200.00 lb
Drill Collar:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight to Pull Loose:	40000.00 lb
					Total Volume:	39.74 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		7.00 ft					String Weight: Initial	28000.00 lb
Depth to Top Packer:		2847.00 ft					Final	28000.00 lb
Depth to Bottom Packer:		2894.02 ft						
Interval between Packers:		47.02 ft						
Tool Length:		208.03 ft						
Number of Packers:		3	Diameter:	6.75 inches				
Tool Comments:								

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			2827.00	
Shut In Tool	5.00			2832.00	
Hydraulic tool	5.00			2837.00	
Packer	5.00			2842.00	21.00 Bottom Of Top Packer
Packer	5.00			2847.00	
Stubb	1.00			2848.00	
Recorder	0.01	6753	Inside	2848.01	
Perforations	4.00			2852.01	
Recorder	0.01	13534	Outside	2852.02	
Blank Spacing	33.00			2885.02	
Perforations	5.00			2890.02	
Blank Off Sub	1.00			2891.02	
Blank Spacing	3.00			2894.02	47.02 Tool Interval
Packer	5.00			2899.02	
Stubb	1.00			2900.02	
Perforations	7.00			2907.02	
Recorder	0.01	13547	Below	2907.03	
Blank Spacing	124.00			3031.03	
Bullnose	3.00			3034.03	140.01 Bottom Packers & Anchor
Total Tool Length:		208.03			



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Hertel Oil Company

704 E 12th St
Hays KS 67601

ATTN: Mike Hertel

Dreiling #1

22 14S16W Ellis KS

Job Ticket: 25917

DST#: 1

Test Start: 2006.11.19 @ 18:26:21

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 49.00 sec/qt

Water Loss: 12.75 in³

Resistivity: ohm.m

Salinity: 13000.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud w/show of Oil	0.070

Total Length: 5.00 ft Total Volume: 0.070 bbl

Num Fluid Samples: 0

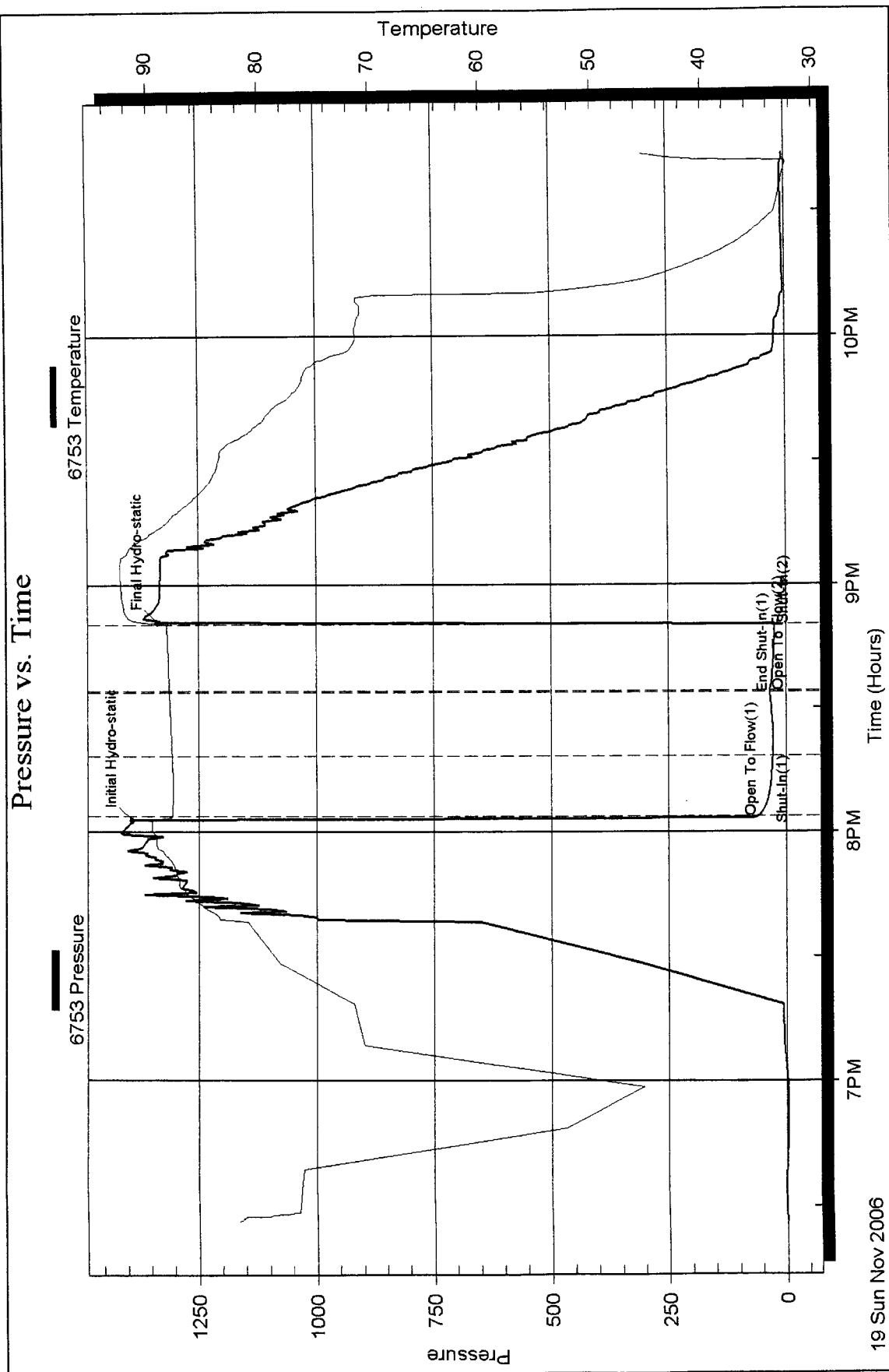
Num Gas Bombs: 0

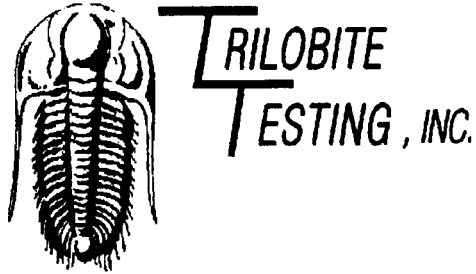
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **Hertel Oil Company**

704 E 12th St
Hays KS 67601

ATTN: Mike Hertel

22 14S16W Ellis KS

Dreiling #1

Start Date: 2006.11.21 @ 04:19:00

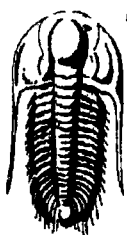
End Date: 2006.11.21 @ 10:00:24

Job Ticket #: 25918 DST #: 2

Trilobite Testing, Inc

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DRILL STEM TEST REPORT

Hertel Oil Company

704 E 12th St
Hays KS 67601

ATTN: Mike Hertel

Dreiling #1

22 14S16W Ellis KS

Job Ticket: 25918

DST#: 2

Test Start: 2006.11.21 @ 04:19:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:40:55

Time Test Ended: 10:00:24

Test Type: Conventional Straddle

Tester: Ray Schwager

Unit No: 28

Interval: **3412.00 ft (KB) To 3438.00 ft (KB) (TVD)**

Total Depth: 3485.00 ft (KB) (TVD)

Hole Diameter: 7.85 inches Hole Condition: Fair

Reference Elevations: 1901.00 ft (KB)

1896.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6753

Inside

Press@RunDepth: 164.98 psig @ 3425.01 ft (KB)

Start Date: 2006.11.21

End Date:

2006.11.21

Capacity: 7000.00 psig

Last Calib.: 2006.11.21

Start Time: 04:19:00

End Time:

10:00:24

Time On Btm: 2006.11.21 @ 05:40:25

Time Off Btm: 2006.11.21 @ 07:44:25

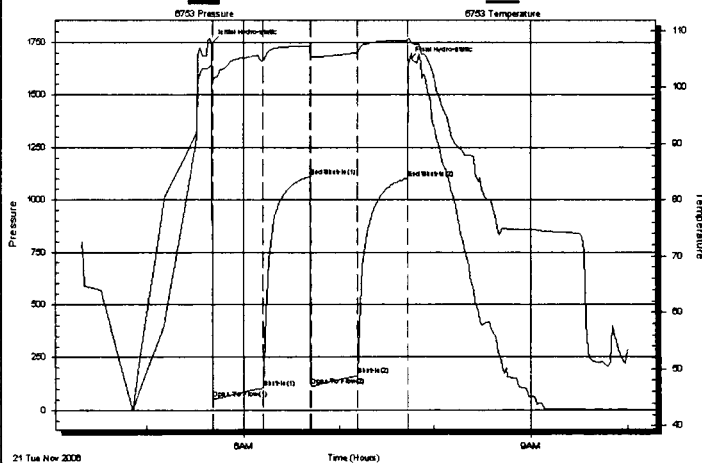
TEST COMMENT: IFP Wk to strg in 11 min

FFP Wk to strg in 21 min Times 30 30 30 30

ISIP Surface bl bk

FSIP Surface bl bk

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1743.00	103.79	Initial Hydro-static
1	52.76	101.22	Open To Flow (1)
32	104.47	104.62	Shut-In(1)
61	1112.09	107.29	End Shut-In(1)
62	112.55	105.44	Open To Flow (2)
92	164.98	106.14	Shut-In(2)
123	1103.30	108.31	End Shut-In(2)
124	1661.47	108.64	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
113.00	CO	1.59
93.00	MGO 10%G 30%M 60%O	1.30
62.00	O&GCMW 10%G10%O40%W40%M	0.87
62.00	OCMW 5%O 5%M 90%W	0.87
0.00	165' GIP	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hertel Oil Company

704 E 12th St
Hays KS 67601

ATTN: Mike Hertel

Dreiling #1

22 14S16W Ellis KS

Job Ticket: 25918

DST#: 2

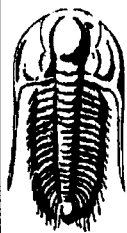
Test Start: 2006.11.21 @ 04:19:00

Tool Information

Drill Pipe:	Length:	3399.00 ft	Diameter:	3.80 inches	Volume:	47.68 bbl	Tool Weight:	25000.00 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:	40000.00 lb
					Total Volume:	47.68 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		8.00 ft					String Weight: Initial	28000.00 lb
Depth to Top Packer:		3412.00 ft					Final	31000.00 lb
Depth to Bottom Packer:		3438.02 ft						
Interval between Packers:		26.02 ft						
Tool Length:		98.03 ft						
Number of Packers:		3	Diameter:	6.75 inches				
Tool Comments:								

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3392.00	
Shut In Tool	5.00			3397.00	
Hydraulic tool	5.00			3402.00	
Packer	5.00			3407.00	21.00 Bottom Of Top Packer
Packer	5.00			3412.00	
Stubb	1.00			3413.00	
Perforations	12.00			3425.00	
Recorder	0.01	6753	Inside	3425.01	
Perforations	4.00			3429.01	
Recorder	0.01	13534	Outside	3429.02	
Perforations	5.00			3434.02	
Blank Off Sub	1.00			3435.02	
Blank Spacing	3.00			3438.02	26.02 Tool Interval
Packer	5.00			3443.02	
Stubb	1.00			3444.02	
Perforations	10.00			3454.02	
Recorder	0.01	13547	Below	3454.03	
Blank Spacing	32.00			3486.03	
Bullnose	3.00			3489.03	51.01 Bottom Packers & Anchor

Total Tool Length: 98.03



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hertel Oil Company

Dreiling #1

704 E 12th St
Hays KS 67601

22 14S16W Ellis KS

Job Ticket: 25918

DST#: 2

ATTN: Mike Hertel

Test Start: 2006.11.21 @ 04:19:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API: 30 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity: 26000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbl

Water Loss: 11.96 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 14000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
113.00	CO	1.585
93.00	MGO 10%G 30%M 60%O	1.305
62.00	O&GCMV 10%G10%O40%W40%M	0.870
62.00	OCMV 5%O 5%M 90%W	0.870
0.00	165' GIP	0.000

Total Length: 330.00 ft Total Volume: 4.630 bbl

Num Fluid Samples: 0

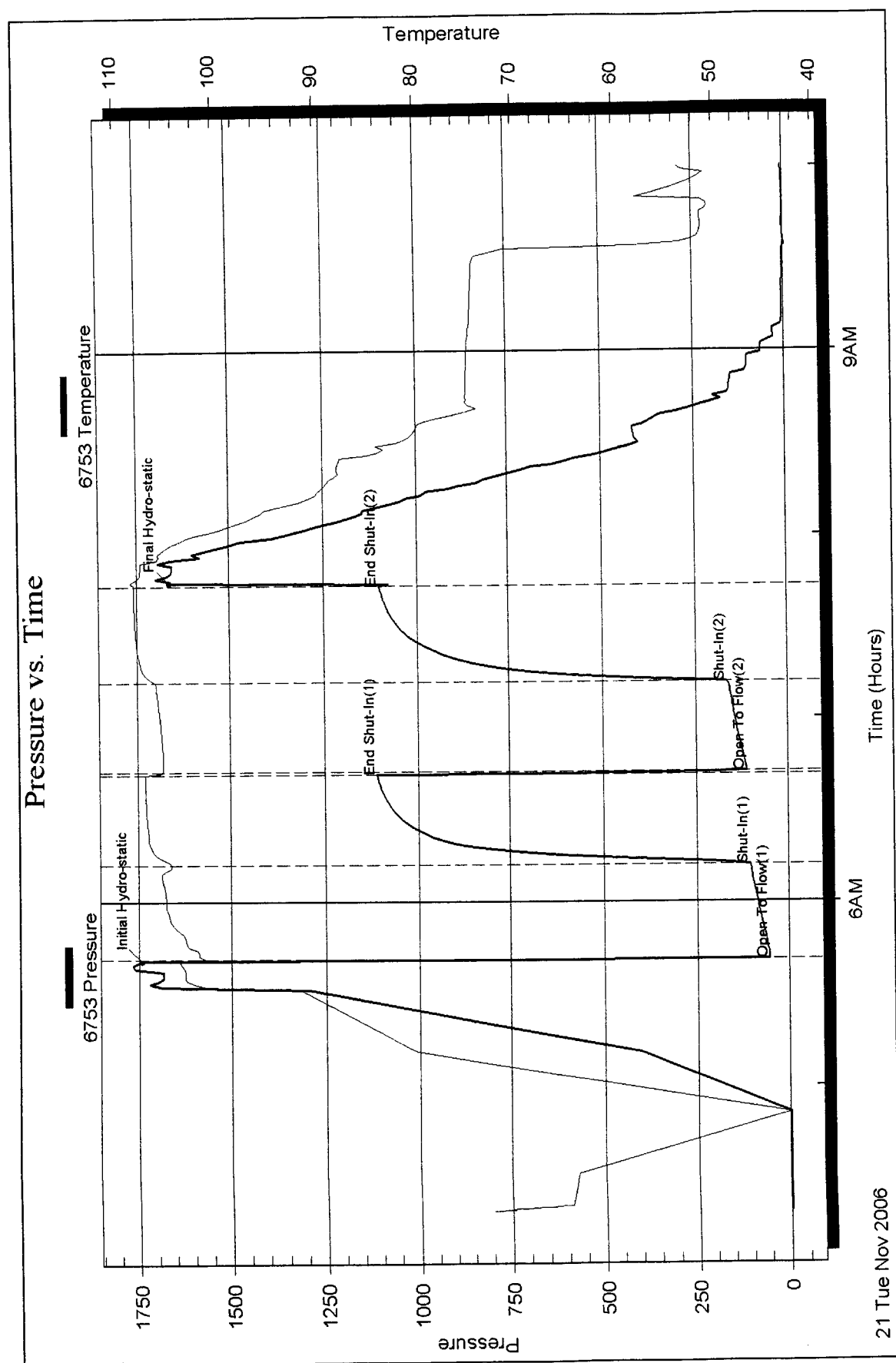
Num Gas Bombs: 0

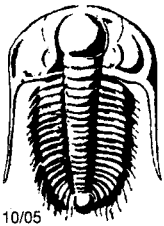
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .24@70F





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

25917

9542

Test Ticket

Well Name & No. Dreiling #1 Test No. 1 Date 11-19-06
 Company Hertal Oil Company Zone Tested Topeka
 Address 704 E 12th Street Hays, Ko 67601 Elevation 1901 KB 1896 GL
 Co. Rep / Geo. Jerry Green Rig A & A rig 1
 Location: Sec. 22 Twp. 14S Rge. 16W Co. ELLIS State Ko
 Comment: _____ Release date / time: _____

Interval Tested 2847-2894 Initial Str Wt./Lbs. 28000 Unseated Str Wt./Lbs. 28000
 Anchor Length 47 Wt. Set Lbs. 25000 Wt. Pulled Loose/Lbs. 40000
 Top Packer Depth 2847-2842 Tool Weight 2200
 Bottom Packer Depth 2894 Hole Size 7 7/8" Rubber Size 6 3/4"
 Total Depth 3035 Wt. Pipe Run _____ Drill Collar Run _____
 Mud Wt. 9 LCM 1/2# Vis. 49 WL 12.8 Drill Pipe Size 4 1/2 XH Ft. Run 2833
 Blow Description IFP - WEAK Blow died in 15 min
FFP - surface Blow died in 5 min

Recovery - Total Feet 5 GIP _____ Ft. in DC _____ Ft. in DP 5
 Rec. 5 Feet of Mud %gas _____ %oil _____ %water _____ %mud _____
 Rec. _____ Feet of w/show of oil %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 88 °F Gravity _____ °API D @ _____ °F Corrected Gravity _____ °API
 RW _____ @ _____ °F Chlorides _____ ppm Recovery _____ Chlorides 13000 ppm System

(A) Initial Hydrostatic Mud	AK-1	Alpine	1357 PSI	Recorder No.	<u>6753</u>	Test	<u>1100</u>
(B) First Initial Flow Pressure			<u>58</u> PSI	(depth)	<u>2848</u>	Jars	
(C) First Final Flow Pressure			<u>27</u> PSI	Recorder No.	<u>13534</u>	Safety Jt.	
(D) Initial Shut-In Pressure			<u>33</u> PSI	(depth)	<u>2852</u>	Circ Sub	
(E) Second Initial Flow Pressure			<u>33</u> PSI	Recorder No.	<u>13547</u>	Sampler	
(F) Second Final Flow Pressure			<u>23</u> PSI	(depth)	<u>2902</u>	Straddle	<u>600</u>
(G) Final Shut-In Pressure			_____ PSI	Initial Opening	<u>15</u>	Ext. Packer	<u>M/C</u>
(Q) Final Hydrostatic Mud			<u>1393</u> PSI	Initial Shut-In	<u>15</u>	Shale Packer	
				Final Flow	<u>15</u>	Ruined Packer	
				Final Shut-In	_____	Mileage	<u>30 RT 37.50</u>
				T-On Location	<u>1730</u>	Sub Total:	
				T-Started	<u>1826</u>	Std. By	
				T-Open	<u>2000</u>	Acc. Chg:	<u>\$1737.50</u>
				T-Pulled	<u>2045</u>	Other:	
				T-Out	<u>2243</u>	Total:	

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 _____
 Our Representative Ray Schwager Thank you

CHART PAGE

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

13534
OST#1
Helta

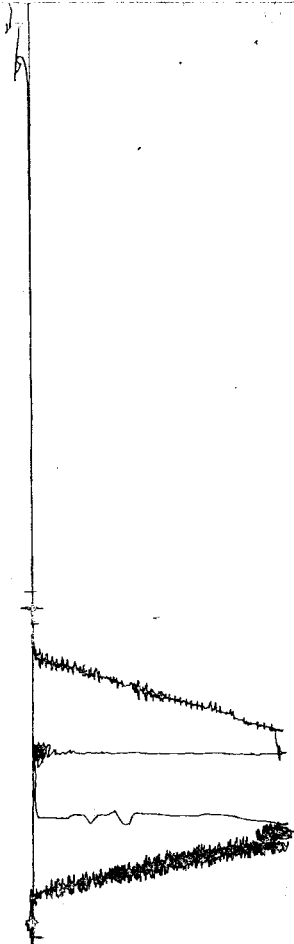
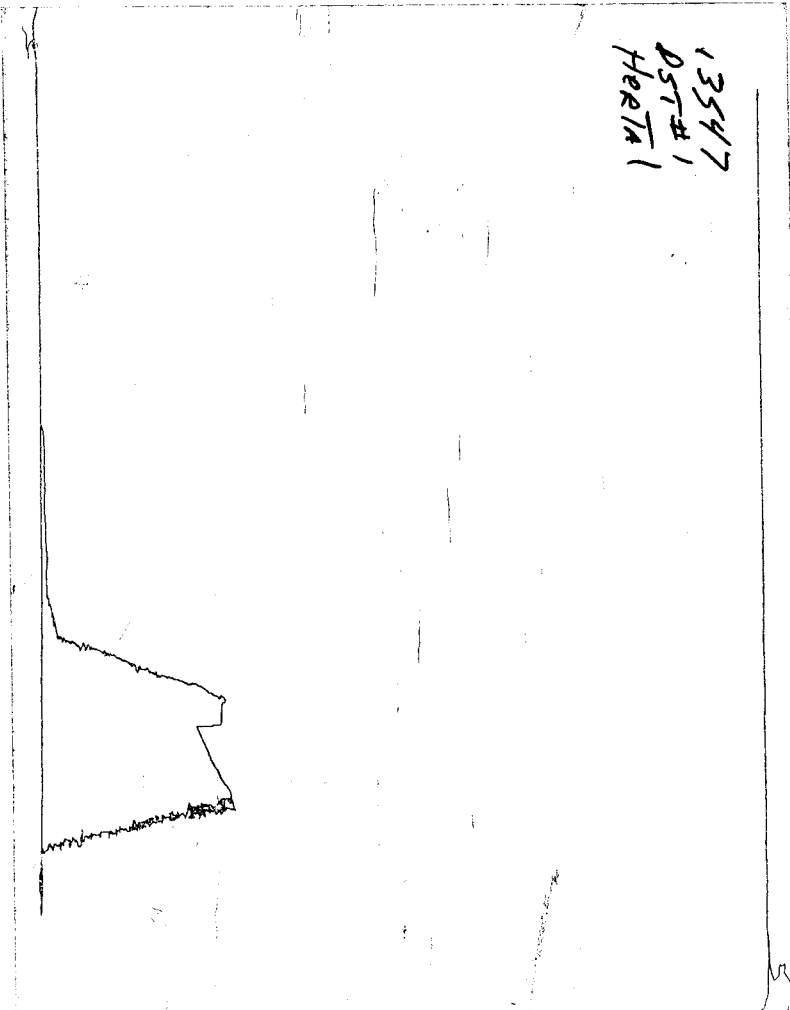
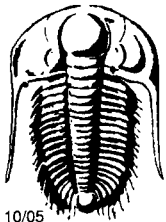


CHART PAGE

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

13547
DST#1
Herla1





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

25918

Test Ticket

Well Name & No.	Drilling #1		Test No.	2	Date	11-21-06
Company	Heetal Oil Company		Zone Tested	ARBUCKLE		
Address	704 E. 12 TH STREET HAYS, KS 67601		Elevation	1901	KB	1896 GL
Co. Rep / Geo.	Jerry Green		Rig	AA rig		
Location: Sec.	22	Twp.	14 ^S	Rge.	16 ^W	Co. Ellis State KS
Comment:						Release date / time:

Interval Tested	3412-3438		Initial Str Wt./Lbs.	28000	Unseated Str Wt./Lbs.	31000
Anchor Length	26		Wt. Set Lbs.	25000	Wt. Pulled Loose/Lbs.	40000
Top Packer Depth	3412-3407		Tool Weight	2200		
Bottom Packer Depth	3438		Hole Size 7 7/8"		Rubber Size 6 3/4"	
Total Depth	3485		Wt. Pipe Run		Drill Collar Run	
Mud Wt.	9.4	LCM 1#	Vis. 54	WL 12	Drill Pipe Size	4 1/2 XH
Blow Description	IFP - WEAK TO STRONG IN 11 min					
	FFP - WEAK TO STRONG IN 21 min					
	ISIP - SURFACE BLOW BACK					
	FSIP - SURFACE BLOW BACK					

Recovery - Total Feet	330	GIP	165	Ft. in DC		Ft. in DP	330
Rec.	113	Feet of	CO	%gas	%oil	%water	%mud
Rec.	93	Feet of	GMO	10 %gas	60 %oil	%water	30 %mud
Rec.	62	Feet of	0+6CMW	10 %gas	10 %oil	40 %water	40 %mud
Rec.	62	Feet of	0CMW	%gas	5 %oil	90 %water	5 %mud
Rec.		Feet of		%gas	%oil	%water	%mud
BHT	108	*F Gravity	30	*API D @	60	*F Corrected Gravity	30
RW	.24	@	70	*F Chlorides	26000 ppm	Recovery	Chlorides ppm System

(A) Initial Hydrostatic Mud	AK-1	Alpine	1682 PSI	Recorder No.	6753	Test	✓	1100
(B) First Initial Flow Pressure			52 PSI	(depth)	3425	Jars		
(C) First Final Flow Pressure			104 PSI	Recorder No.	13534	Safety Jt.		
(D) Initial Shut-In Pressure			1112 PSI	(depth)	3429	Circ Sub		
(E) Second Initial Flow Pressure			112 PSI	Recorder No.	13547	Sampler		
(F) Second Final Flow Pressure			164 PSI	(depth)	3449	Straddle	✓	600
(G) Final Shut-In Pressure			1103 PSI	Initial Opening	30	Ext. Packer	✓	MC
(Q) Final Hydrostatic Mud			1654 PSI	Initial Shut-In	30	Shale Packer		

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Approved By _____

Our Representative RAY SCHWAGER Thank you

Final Flow 30
Final Shut-In 30
T-On Location 0330
T-Started 0418
T-Open 0540
T-Pulled 0740
T-Out 1000

Ruined Packer _____
Mileage ✓ 30 RT 37.50
Sub Total: _____
Std. By _____
Acc. Chg: \$1737.50
Other: _____
Total: _____

CHART PAGE

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

13534
057#2
Herald

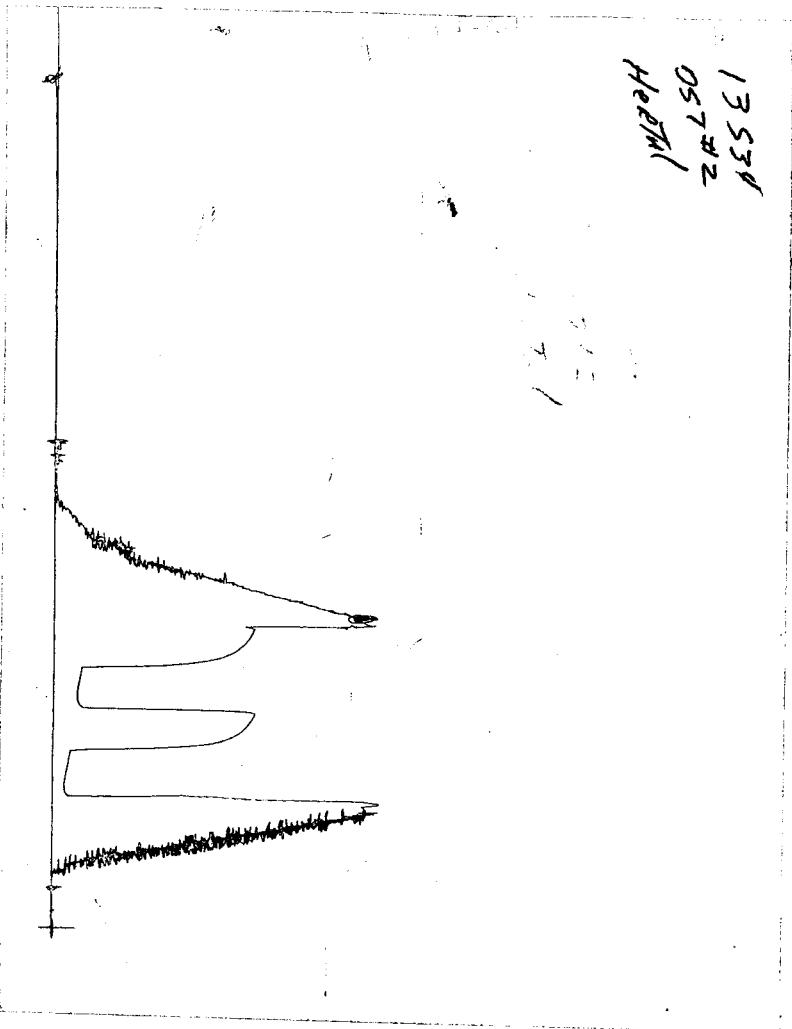


CHART PAGE

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

13547
OST#2
HEETA

