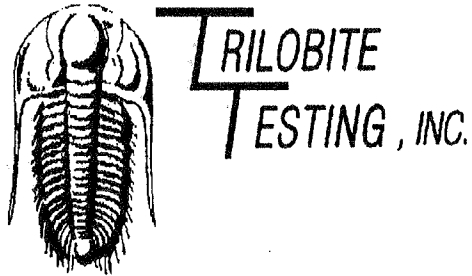


9-14s-16w

MS
NW
SW
09-14s-16w



DRILL STEM TEST REPORT

Prepared For: **Hertel Oil Co LLC**

704 East 12th Sreet
Hays KS 67601

ATTN: Mike Hertel

9 14S 16W Ellis KS

Kuhn #1

Start Date: 2007.04.13 @ 20:09:53

End Date: 2007.04.14 @ 02:43:47

Job Ticket #: 28160 DST #: 1

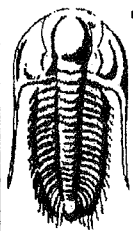
15-051-25636

1940 FSL 750 FWL

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 Co LLC

704 East 12th Street
Hays KS 67601

ATTN: Mike Hertel

Kuhn #1

9 14S 16W Ellis KS

Job Ticket: 28160

DST#: 1

Test Start: 2007.04.13 @ 20:09:53

GENERAL INFORMATION:

Formation: **Tor- "D" zone**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 22:05:48

Time Test Ended: 02:43:47

Test Type: **Conventional Bottom Hole**

Tester: **Ray Schwager**

Unit No: **28**

Interval: 3098.00 ft (KB) To 3198.00 ft (KB) (TVD)

Total Depth: **3198.00 ft (KB) (TVD)**

Hole Diameter: **7.85 inches** Hole Condition: **Fair**

Reference Elevations: **1891.00 ft (KB)**

1883.00 ft (CF)

KB to GRVCF: 8.00 ft

Serial #: 6753

Inside

Press@RunDepth: **158.21 psig @ 3106.01 ft (KB)**

Start Date: **2007.04.13**

End Date:

2007.04.14

Start Time: **20:09:53**

End Time:

02:43:47

Capacity: **7000.00 psig**

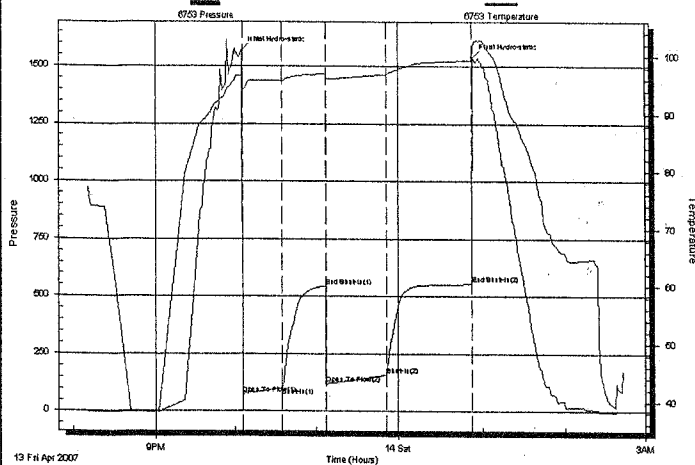
Last Calib.: **2007.04.14**

Time On Btm: **2007.04.13 @ 22:05:18**

Time Off Btm: **2007.04.14 @ 00:53:17**

TEST COMMENT: IFP Wk to strg in 8 min
FF P Wk bl thru-out 1 " to 3 " bl
ISIP Surface bl bk
FSIP Surface bl bk Time 30 30 45 60

Pressure vs. Time



PRESSURE SUMMARY

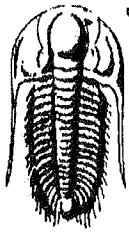
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1565.14	96.51	Initial Hydro-static
1	75.46	94.07	Open To Flow (1)
30	101.42	95.79	Shut-In (1)
62	544.45	97.00	End Shut-In (1)
63	119.71	96.07	Open To Flow (2)
106	158.21	96.89	Shut-In (2)
167	554.05	99.38	End Shut-In (2)
168	1537.42	101.65	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	O&GCM 7%O 5%G 88%M	1.26
60.00	OCMW 5%O 40%M 55%W	0.84
60.00	Water w/show of Oil	0.84
0.00	270' 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 Co LLC

Kuhn #1

704 East 12th Sreet
Hays KS 67601

9 14S 16W Ellis KS

Job Ticket: 28160

DST#: 1

ATTN: Mike Hertel

Test Start: 2007.04.13 @ 20:09:53

Tool Information

Drill Pipe:	Length: 3104.00 ft	Diameter: 3.80 inches	Volume: 43.54 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:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	45000.00 lb
			<u>Total Volume: 43.54 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial	36000.00 lb
Depth to Top Packer:	3098.00 ft			Final	36000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	101.02 ft				
Tool Length:	122.02 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			3078.00	
Shut In Tool	5.00			3083.00	
Hydraulic tool	5.00			3088.00	
Packer	5.00			3093.00	21.00 Bottom Of Top Packer
Packer	5.00			3098.00	
Stubb	1.00			3099.00	
Perforations	7.00			3106.00	
Recorder	0.01	6753	Inside	3106.01	
Blank Spacing	65.00			3171.01	
Recorder	0.01	13534	Outside	3171.02	
Perforations	25.00			3196.02	
Bullnose	3.00			3199.02	101.02 Bottom Packers & Anchor
Total Tool Length:		122.02			



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Hertel Oil Co LLC
704 East 12th Street
Hays KS 67601

ATTN: Mike Hertel

Kuhn #1
9 14S 16W Ellis KS
Job Ticket: 28160 **DST#: 1**
Test Start: 2007.04.13 @ 20:09:53

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 60.00 sec/qt
Water Loss: 9.35 in³
Resistivity: ohm.m
Salinity: 4000.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: deg API
Water Salinity: 60000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	O&GCM 7%O 5%G 88%M	1.262
60.00	OCMW 5%O 40%M 55%W	0.842
60.00	Water w/show of Oil	0.842
0.00	270' GIP	0.000

Total Length: 210.00 ft Total Volume: 2.946 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: RW .17 @ 52F

DST Test Number: 1

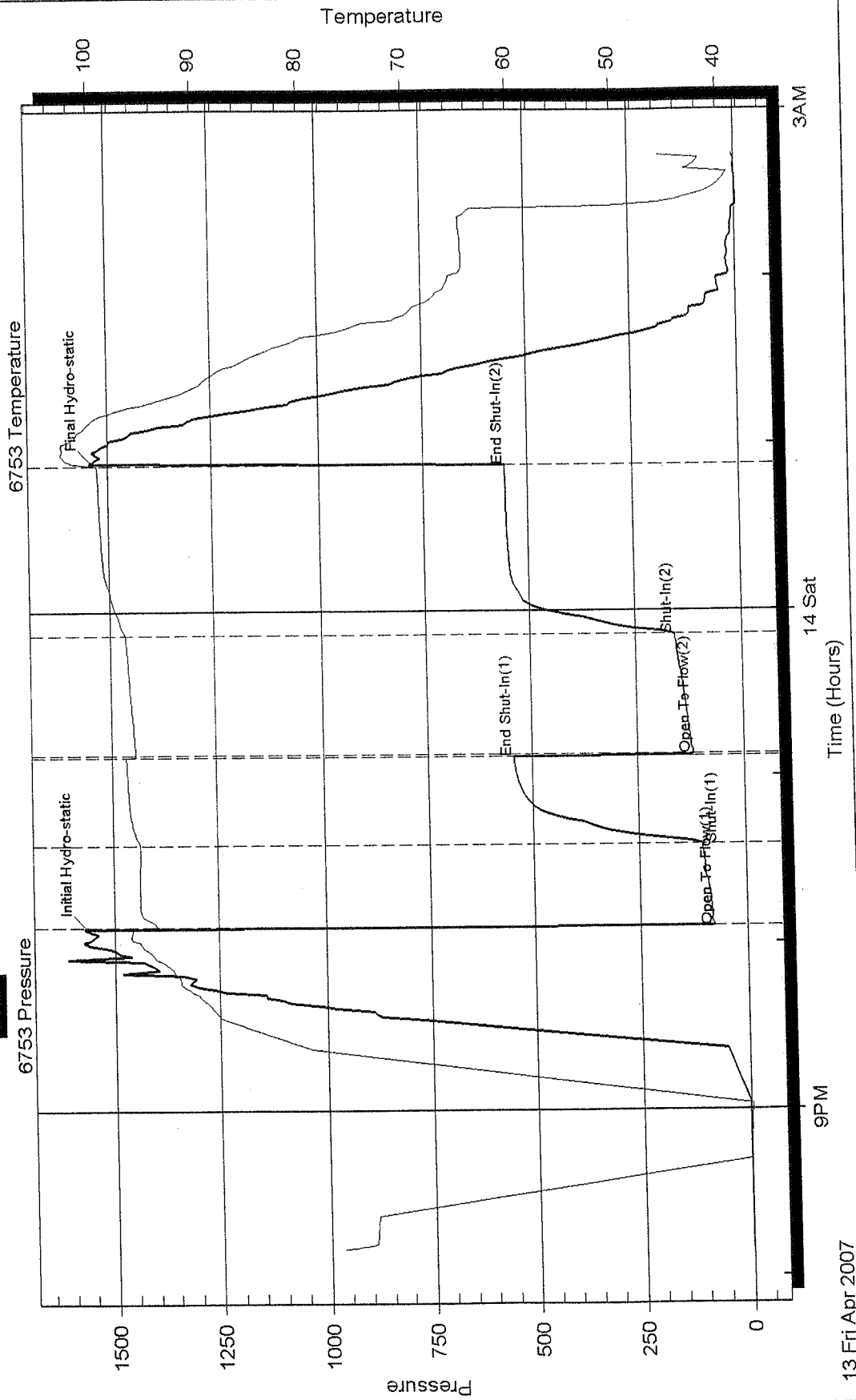
9 14S 16W Ellis KS

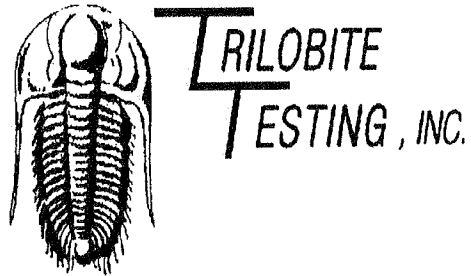
Hertel Oil Co LLC

Inside

Serial #: 6753

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Hertel Oil Co LLC**

704 East 12th Sreet
Hays KS 67601

ATTN: Mike Hertel

9 14S 16W Ellis KS

Kuhn #1

Start Date: 2007.04.15 @ 01:55:31

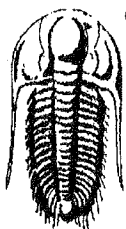
End Date: 2007.04.15 @ 06:40:25

Job Ticket #: 28161 DST #: 2

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 Co LLC
704 East 12th Street
Hays KS 67601
ATTN: Mike Hertel

Kuhn #1
9 14S 16W Ellis KS
Job Ticket: 28161 **DST#: 2**
Test Start: 2007.04.15 @ 01:55:31

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: **No** Whipstock: ft (KB)
Time Tool Opened: 03:10:26
Time Test Ended: 06:40:25
Interval: 3370.00 ft (KB) To 3416.00 ft (KB) (TVD)
Total Depth: 3480.00 ft (KB) (TVD)
Hole Diameter: 7.85 inches Hole Condition: Fair

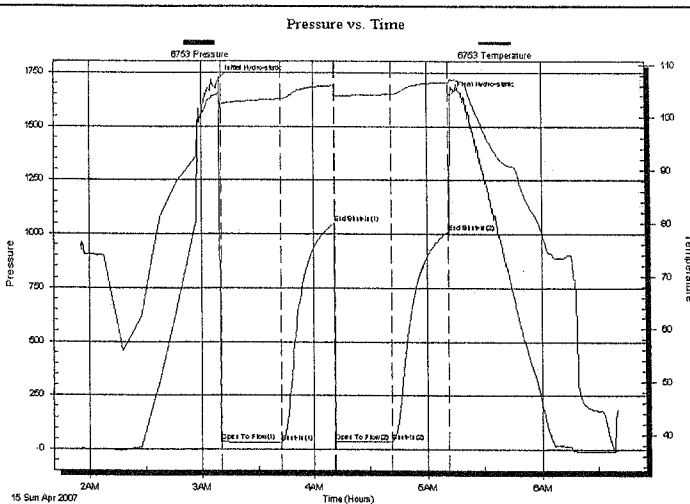
Test Type: Conventional Straddle
Tester: Ray Schwager
Unit No: 28
Reference Elevations: 1891.00 ft (KB)
1883.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6753 Inside

Press@RunDepth: 36.46 psig @ 3372.01 ft (KB)
Start Date: 2007.04.15 End Date: 2007.04.15
Start Time: 01:55:31 End Time: 06:40:25

Capacity: 7000.00 psig
Last Calib.: 2007.04.15
Time On Btm: 2007.04.15 @ 03:09:26
Time Off Btm: 2007.04.15 @ 05:12:26

TEST COMMENT: IFP Wk bl thru-out 1/4 " to 1/2 " bl
FFP Surface bl died in 25 min
Times 30 30 30 30



PRESSURE SUMMARY

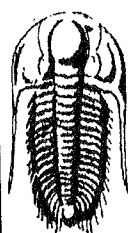
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1719.00	104.72	Initial Hydro-static
1	34.38	102.51	Open To Flow (1)
33	32.40	103.51	Shut-In (1)
62	1048.59	106.04	End Shut-In (1)
62	35.53	104.09	Open To Flow (2)
92	36.46	104.43	Shut-In (2)
122	1011.87	106.73	End Shut-In (2)
123	1647.88	107.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
25.00	SOCM 2%O 98%M	0.35

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 Co LLC

704 East 12th Sreet
Hays KS 67601

ATTN: Mike Hertel

Kuhn #1

9 14S 16W Ellis KS

Job Ticket: 28161

DST#: 2

Test Start: 2007.04.15 @ 01:55:31

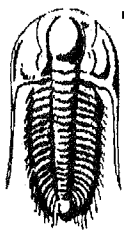
Tool Information

Drill Pipe:	Length: 3361.00 ft	Diameter: 3.80 inches	Volume: 47.15 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:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	50000.00 lb
		Total Volume:	47.15 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial	35000.00 lb
Depth to Top Packer:	3370.00 ft			Final	35000.00 lb
Depth to Bottom Packer:	3416.02 ft				
Interval between Packers:	46.02 ft				
Tool Length:	137.03 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			3350.00	
Shut In Tool	5.00			3355.00	
Hydraulic tool	5.00			3360.00	
Packer	5.00			3365.00	21.00 Bottom Of Top Packer
Packer	5.00			3370.00	
Stubb	1.00			3371.00	
Perforations	1.00			3372.00	
Recorder	0.01	6753	Inside	3372.01	
Perforations	3.00			3375.01	
Blank Spacing	33.00			3408.01	
Recorder	0.01	13534	Outside	3408.02	
Perforations	4.00			3412.02	
Blank Off Sub	1.00			3413.02	
Blank Spacing	3.00			3416.02	46.02 Tool Interval
Packer	5.00			3421.02	
Stubb	1.00			3422.02	
Recorder	0.01	13547	Below	3422.03	
Blank Spacing	61.00			3483.03	
Bullnose	3.00			3486.03	70.01 Bottom Packers & Anchor

Total Tool Length: 137.03



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hertel Oil Co LLC

Kuhn #1

704 East 12th Sreet
Hays KS 67601

9 14S 16W Ellis KS

Job Ticket: 28161

DST#: 2

ATTN: Mike Hertel

Test Start: 2007.04.15 @ 01:55:31

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: 57.00 sec/qt

Cushion Volume:

bbl

Water Loss: 12.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
25.00	SOCM 2%O 98%M	0.351

Total Length: 25.00 ft Total Volume: 0.351 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

