

DRILL STEM TEST REPORT

Prepared For: **IA Operating Co**

900 N Tyler Rd # 14
Wichita Ks 67212

ATTN: Hal Porter

19-8-26-Sheridan-Ks

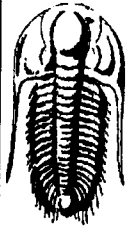
Kathleen # 19-1

Start Date: 2004.10.13 @ 02:20:11

End Date: 2004.10.13 @ 09:29:11

Job Ticket #: 20188 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

IA Operating Co
900 N Tyler Rd # 14
Wichita Ks 67212
ATTN: Hal Porter

Kathleen # 19-1
19-8-26-Sheridan-Ks
Job Ticket: 20188 **DST#: 1**
Test Start: 2004.10.13 @ 02:20:11

GENERAL INFORMATION:

Formation: **K LKC**
Deviated: **No Whipstock:** ft (KB)
Time Tool Opened: 04:31:41
Time Test Ended: 09:29:11

Test Type: **Conventional Bottom Hole**
Tester: **Dan Bangle**
Unit No: **21**

Interval: **3799.00 ft (KB) To 3820.00 ft (KB) (TVD)**
Total Depth: **3820.00 ft (KB) (TVD)**
Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **2473.00 ft (KB)**
2468.00 ft (CF)
KB to GR/CF: **5.00 ft**

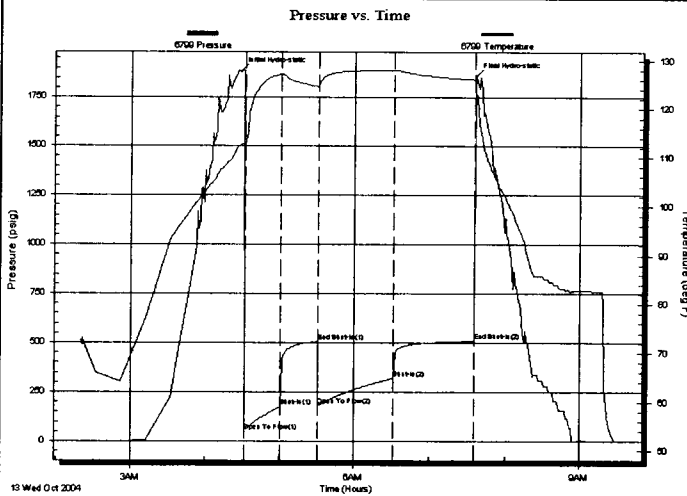
Serial #: 6799

Inside

Press@RunDepth: **319.35 psig @ 3800.00 ft (KB)**
Start Date: **2004.10.13** End Date: **2004.10.13**
Start Time: **02:20:12** End Time: **09:29:11**

Capacity: **7000.00 psig**
Last Calib.: **2004.10.13**
Time On Btm: **2004.10.13 @ 04:28:11**
Time Off Btm: **2004.10.13 @ 07:36:11**

TEST COMMENT: **IF-Strong B-B in 8 min**
IS-Weak building to 2"
FF-Strong B-B in 10 min
FSI-Weak building to 2"



PRESSURE SUMMARY

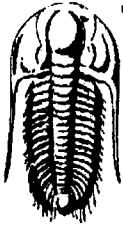
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1883.29	112.56	Initial Hydro-static
4	46.43	112.14	Open To Flow (1)
33	174.23	127.15	Shut-In(1)
63	505.93	124.68	End Shut-In(1)
63	183.40	124.49	Open To Flow (2)
123	319.35	127.98	Shut-In(2)
187	509.32	126.09	End Shut-In(2)
188	1859.07	123.52	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
495.00	Wtr	5.81
30.00	O&WCM 10%o 20%w 70%m	0.42
215.00	CGsyO 10%g 90%o	3.02
0.00	620 GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

IA Operating Co
900 N Tyler Rd # 14
Wichita Ks 67212
ATTN: Hal Porter

Kathleen # 19-1
19-8-26-Sheridan-Ks
Job Ticket: 20188 **DST#: 1**
Test Start: 2004.10.13 @ 02:20:11

Tool Information

Drill Pipe:	Length: 3705.00 ft	Diameter: 3.80 inches	Volume: 51.97 bbl	Tool Weight: 1200.00 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: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 52.58 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	51.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3799.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	21.00 ft			
Tool Length:	42.00 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			3779.00	
Shut In Tool	5.00			3784.00	
Hydraulic tool	5.00			3789.00	
Packer	5.00			3794.00	21.00 Bottom Of Top Packer
Packer	5.00			3799.00	
Stubb	1.00			3800.00	
Recorder	0.00	6799	Inside	3800.00	
Perforations	17.00			3817.00	
Recorder	0.00	13254	Outside	3817.00	
Bullnose	3.00			3820.00	21.00 Bottom Packers & Anchor
Total Tool Length:	42.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

IA Operating Co
900 N Tyler Rd # 14
Wichita Ks 67212
ATTN: Hal Porter

Kathleen # 19-1
19-8-26-Sheridan-Ks
Job Ticket: 20188 **DST#: 1**
Test Start: 2004.10.13 @ 02:20:11

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 36 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 80 ppm
Viscosity: 45.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.99 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 500.00 ppm		
Filter Cake: inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
495.00	Wtr	5.814
30.00	O&WCM 10%o 20%w 70%m	0.421
215.00	CGsyO 10%g 90%o	3.016
0.00	620 GIP	0.000

Total Length: 740.00 ft Total Volume: 9.251 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: Rw .11 @ 78 = 80000 ppm

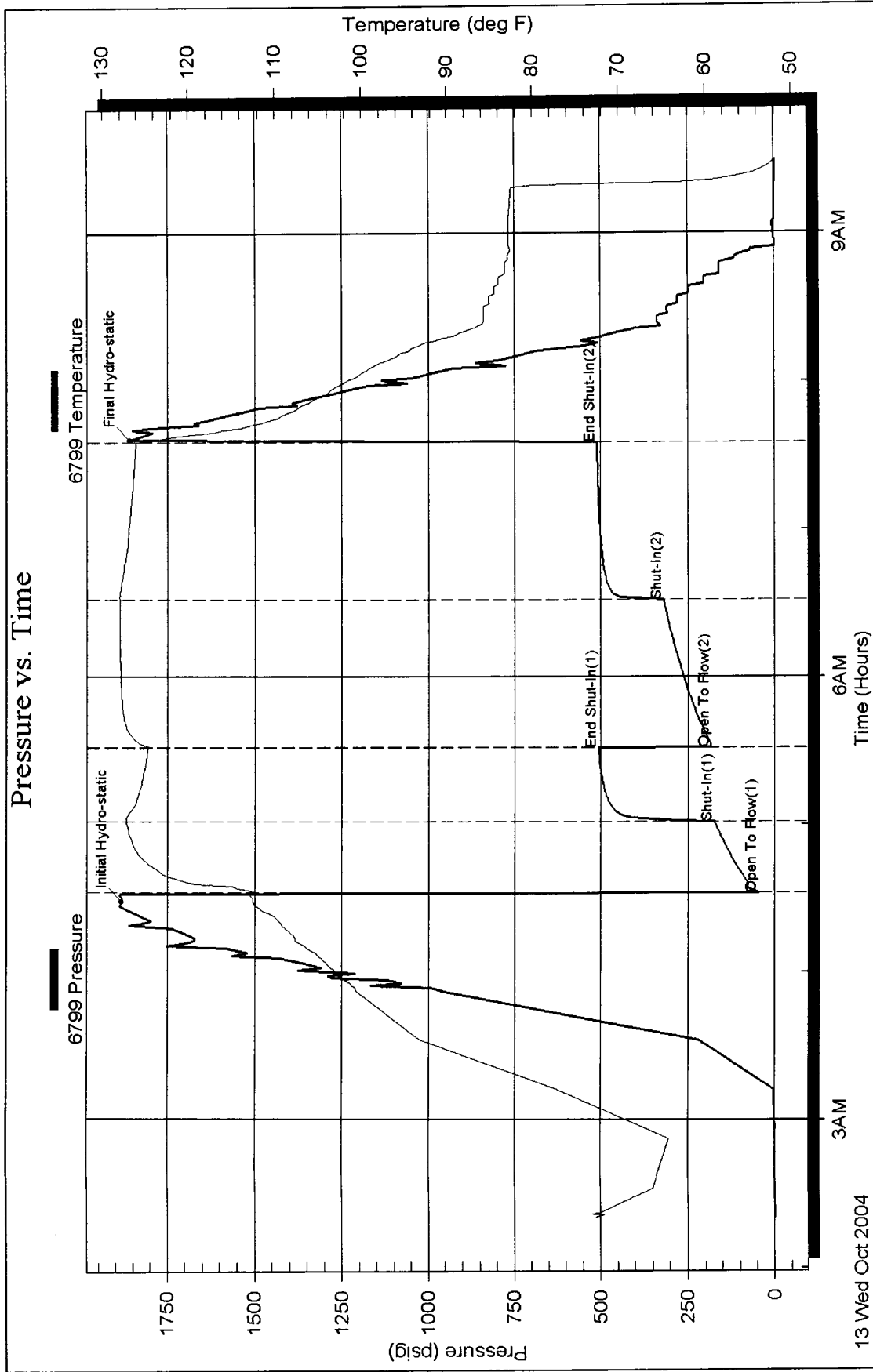
Serial #: 6799

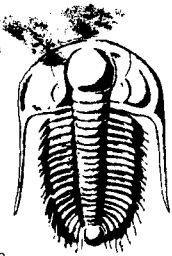
Inside

IA Operating Co

19-8-26-Sheridan-Ks

DST Test Number: 1





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

6858

No 20188 ✓

05/03

Test Ticket

Well Name & No. Kathleen #19-1 Test No. 1 Date 10-13-04
 Company I.A. Operating Inc Zone Tested 'K' LKC
 Address 900 N. Tyler, Rd #14, Wichita, Ks. 67212 Elevation 2473 KB 2468 GL
 Co. Rep / Geo. Randy Kilian Cont. Murfin #16 Est. Ft. of Pay _____ Por. _____ %
 Location: Sec. 19 Twp. 8 Rge. 26 Co. Sheridan State Ks
 No. of Copies _____ Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 3799 — 3820 Initial Str Wt./Lbs. 54,000 Unseated Str Wt./Lbs. 56,000
 Anchor Length 21 Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 69,000
 Top Packer Depth 3794 Tool Weight 1200
 Bottom Packer Depth 3799 Hole Size 7 7/8" Rubber Size 6 3/4"
 Total Depth 3820 Wt. Pipe Run _____ Drill Collar Run 124
 Mud Wt. 8.8 LCM _____ Vis. 45 WL 8 Drill Pipe Size 4.5x11 Ft. Run 3705

Blow Description F.F. Strong - B-B in 8 min.
ISI - Weak - building to 2"
F.F. Strong - B-B - in 10 min.
F.SI - Weak - building to 2"

Recovery - Total Feet	GIP	Ft. in DC	Ft. in DP
<u>740</u>	<u>620</u>	<u>124</u>	<u>616</u>
Rec. <u>215</u>	Feet of <u>CGSYD</u>	<u>10</u> %gas	<u>90</u> %oil
Rec. <u>30</u>	Feet of <u>OTWC M</u>	<u>10</u> %gas	<u>20</u> %oil
Rec. <u>495</u>	Feet of <u>WTC</u>	<u>10</u> %gas	<u>70</u> %oil
Rec. _____	Feet of _____	<u>10</u> %gas	<u>20</u> %oil
Rec. _____	Feet of _____	<u>10</u> %gas	<u>20</u> %oil

BHT 126 °F Gravity _____ °API D @ _____ °F Corrected Gravity 36 °API
 RW .11 @ 78 °F Chlorides 80,000 ppm Recovery _____ Chlorides 500 ppm System

AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud	<u>1883</u> PSI	<u>6799</u>	<u>900</u>
(B) First Initial Flow Pressure	<u>46</u> PSI	(depth) <u>3800</u>	Elec. Rec. <u>X</u>
(C) First Final Flow Pressure	<u>174</u> PSI	Recorder No. <u>13254</u>	Jars _____
(D) Initial Shut-In Pressure	<u>505</u> PSI	(depth) <u>3817</u>	Safety Jt. _____
(E) Second Initial Flow Pressure	<u>183</u> PSI	Recorder No. _____	Circ Sub _____
(F) Second Final Flow Pressure	<u>319</u> PSI	(depth) _____	Sampler _____
(G) Final Shut-In Pressure	<u>509</u> PSI	Initial Opening <u>30</u>	Straddle _____
(Q) Final Hydrostatic Mud	<u>1809</u> PSI	Initial Shut-In <u>30</u>	Ext. Packer _____
		Final Flow <u>60</u>	Shale Packer _____
		Final Shut-In <u>60</u>	Mileage <u>170</u> <u>144.50</u>
		T-On Location <u>02:00</u>	Sub Total: <u>1044.50</u>
		T-Started <u>02:20</u>	Std. By _____
		T-Open <u>04:31</u>	Other _____
		T-Pulled <u>07:31</u>	Total: <u>1044.50</u>
		T-Out <u>09:29</u>	

Approved By _____
 Our Representative Dan Rausche

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.

CHART PAGE

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

