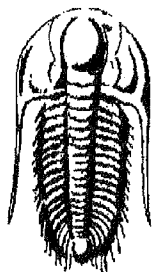


15-063-21631

4-15s-26w



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

Prepared For: **Central Operations**

1600 Broadway Ste 1050  
Denver CO 80202

ATTN: Ed Glassman

**4 15 26W Gove KS**

**Raymond/Parsons 1**

Start Date: 2006.09.14 @ 02:23:09

End Date: 2006.09.14 @ 10:20:22

Job Ticket #: 26176                      DST #: 1

**RECEIVED  
KANSAS CORPORATION COMMISSION**

**DEC 26 2007**

**CONSERVATION DIVISION  
WICHITA, KS**

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

Central Operations

Raymond/Parsons 1

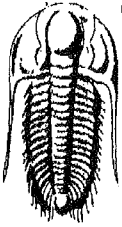
4 15 26W Gove KS

DST # 1

Mississippian

2006.09.14





**TRILOBITE**  
TESTING, INC.

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Central Operations

Raymond/Parsons 1

1600 Broadway Ste 1050  
Denver CO 80202

4 15 26W Gove KS

Job Ticket: 26176

DST#: 1

ATTN: Ed Glassman

Test Start: 2006.09.14 @ 02:23:09

### Tool Information

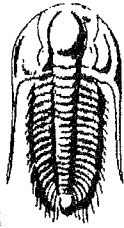
Drill Pipe:	Length: 4144.00 ft	Diameter: 3.80 inches	Volume: 58.13 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 58.13 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	4136.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	72.02 ft			
Tool Length:	92.02 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

### Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4121.00	
Hydraulic tool	5.00			4126.00	
Packer	5.00			4131.00	20.00 Bottom Of Top Packer
Packer	5.00			4136.00	
Stubb	1.00			4137.00	
Perforations	1.00			4138.00	
Recorder	0.01	6769	Inside	4138.01	
Blank Spacing	62.00			4200.01	
Perforations	5.00			4205.01	
Recorder	0.01	13548	Outside	4205.02	
Bullnose	3.00			4208.02	72.02 Bottom Packers & Anchor

**Total Tool Length: 92.02**



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Central Operations  
1600 Broadway Ste 1050  
Denver CO 80202  
ATTN: Ed Glassman

**Raymond/Parsons 1**  
**4 15 26W Gove KS**  
Job Ticket: 26176      **DST#: 1**  
Test Start: 2006.09.14 @ 02:23:09

### Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 52.00 sec/qt  
Water Loss: 8.75 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 4000.00 ppm  
Filter Cake: inches

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

Oil API: deg API  
Water Salinity: ppm

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
50.00	GHOCM 5%G 45%O 50%M	0.701

Total Length: 50.00 ft      Total Volume: 0.701 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: 30' GIP

Serial #: 6769

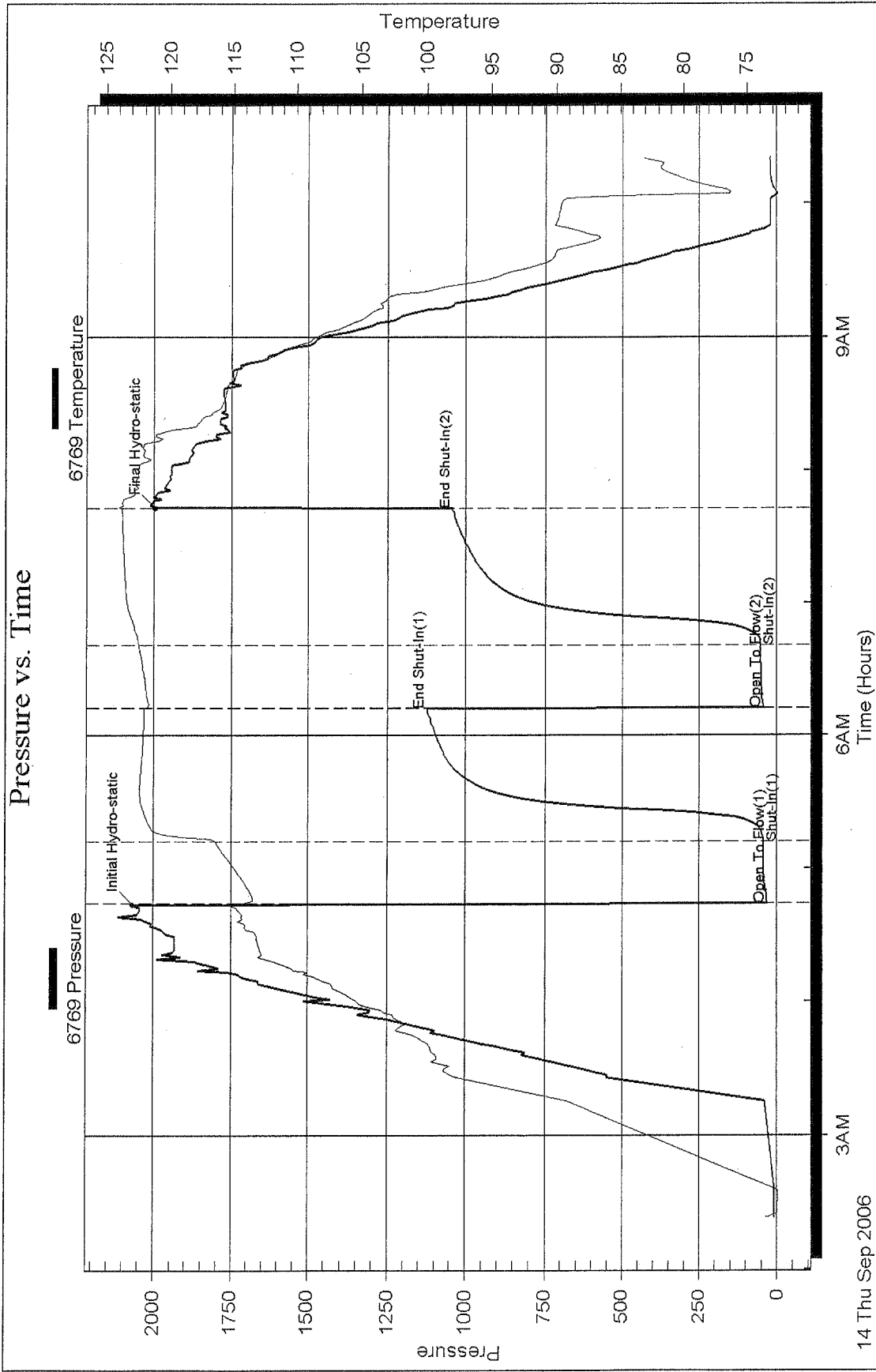
Inside

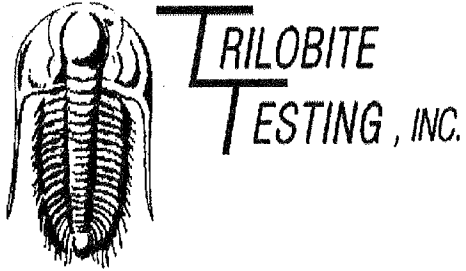
Central Operations

4 15 26W Gove KS

DST Test Number: 1

### Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Central Operations**

1600 Broadway Ste 1050  
Denver CO 80202

ATTN: Ed Glassman

**4 15 26W Gove KS**

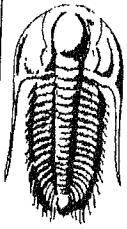
**Raymond/Parsons 1**

Start Date: 2006.09.14 @ 20:24:39

End Date: 2006.09.15 @ 06:48:37

Job Ticket #: 26177                      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

Central Operations  
 1600 Broadway Ste 1050  
 Denver CO 80202  
 ATTN: Ed Glassman

**Raymond/Parsons 1**

**4 15 26W Gove KS**

Job Ticket: 26177

DST#: 2

Test Start: 2006.09.14 @ 20:24:39

## GENERAL INFORMATION:

Formation: **Mississippian 2)**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 23:16:52  
 Time Test Ended: 06:48:37

Test Type: Conventional Bottom Hole  
 Tester: Brian Fairbank  
 Unit No: 24

Interval: **4136.00 ft (KB) To 4218.00 ft (KB) (TVD)**  
 Total Depth: 4218.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2293.00 ft (KB)  
 2288.00 ft (CF)  
 KB to GR/CF: 5.00 ft

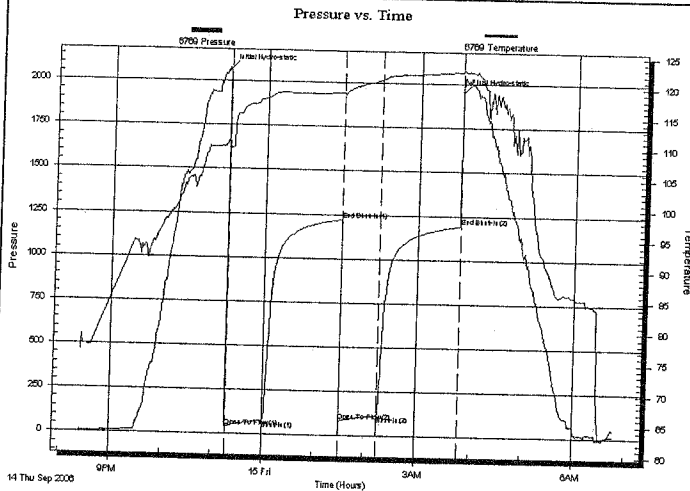
**Serial #: 6769**

**Inside**

Press@RunDepth: 115.93 psig @ 4138.01 ft (KB)  
 Start Date: 2006.09.14 End Date: 2006.09.15  
 Start Time: 20:24:39 End Time: 06:48:37

Capacity: 7000.00 psig  
 Last Calib.: 2006.09.15  
 Time On Btm: 2006.09.14 @ 23:16:22  
 Time Off Btm: 2006.09.15 @ 03:47:37

TEST COMMENT: IFP BOB 28 min.  
 ISI No blow back  
 FFP BOB 36 min.  
 FSI Sur blow back died 12 min.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2071.05	110.78	Initial Hydro-static
1	42.54	110.00	Open To Flow (1)
45	80.99	117.91	Shut-In(1)
135	1220.72	118.91	End Shut-In(1)
135	81.92	118.66	Open To Flow (2)
180	115.93	121.07	Shut-In(2)
271	1191.89	122.48	End Shut-In(2)
272	1955.05	122.72	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	GHOEM 5%G 60%O 35%M	0.84
135.00	GMCO 5%G 60%O 35%M	1.89

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Central Operations  
1600 Broadway Ste 1050  
Denver CO 80202

**Raymond/Parsons 1**  
**4 15 26W Gove KS**  
Job Ticket: 26177      **DST#: 2**  
Test Start: 2006.09.14 @ 20:24:39

ATTN: Ed Glassman

### Tool Information

Drill Pipe:	Length: 4144.00 ft	Diameter: 3.80 inches	Volume: 58.13 bbl	Tool Weight: 2500.00 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
		<b>Total Volume:</b>	<b>58.13 bbl</b>	Tool Chased 1.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	4136.00 ft			Final 41000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	82.02 ft			
Tool Length:	102.02 ft			
Number of Packers:	2	Diameter: 6.75 inches		

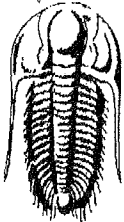
### Tool Comments:

Hit multiple bridges at 1100' off bottom and 250' off bottom

### Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4121.00	
Hydraulic tool	5.00			4126.00	
Packer	5.00			4131.00	20.00      Bottom Of Top Packer
Packer	5.00			4136.00	
Stubb	1.00			4137.00	
Perforations	1.00			4138.00	
Recorder	0.01	6769	Inside	4138.01	
Blank Spacing	62.00			4200.01	
Perforations	15.00			4215.01	
Recorder	0.01	13548	Outside	4215.02	
Bullnose	3.00			4218.02	82.02      Bottom Packers & Anchor

**Total Tool Length: 102.02**



**TRILOBITE**  
TESTING, INC

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Central Operations

**Raymond/Parsons 1**

1600 Broadway Ste 1050  
Denver CO 80202

**4 15 26W Gove KS**

Job Ticket: 26177

**DST#: 2**

ATTN: Ed Glassman

Test Start: 2006.09.14 @ 20:24:39

**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: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.96 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4000.00 ppm			
Filter Cake: inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
60.00	GHOCM 5%G 60%O 35%M	0.842
135.00	GMCO 5%G 60%O 35%M	1.894

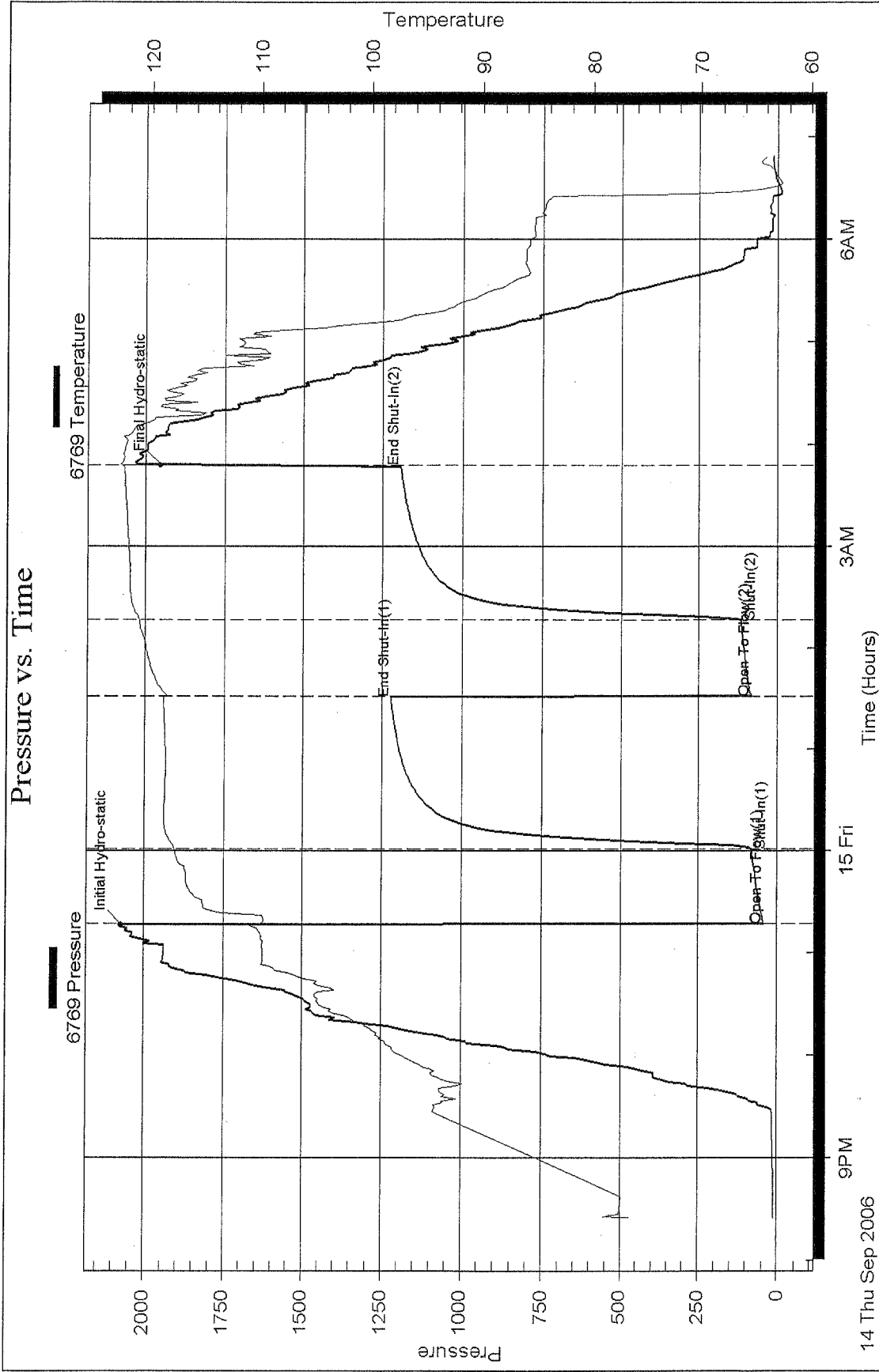
Total Length: 195.00 ft      Total Volume: 2.736 bbl

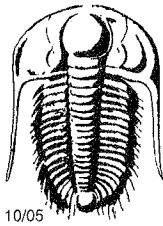
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: 165' GIP

### Pressure vs. Time





# TRILOBITE TESTING INC.

26176

P.O. Box 362 • Hays, Kansas 67601

## Test Ticket

Well Name & No. Raymond / Parsons #1 Test No. 1 Date 9-14-06  
 Company Central operation Zone Tested Mississippi  
 Address 1600 Broadway, Ste. 1050 Denver, Co 80202 Elevation 2293 KB 2288 GL  
 Co. Rep / Geo. Ed Glasman Rig AA 2  
 Location: Sec. 4 Twp. 15<sup>s</sup> Rge. 26<sup>w</sup> Co. Case State Ks  
 Comment: Work on rig 45 min out w/ test Release date / time: \_\_\_\_\_

Interval Tested 4136-4208 Initial Str Wt./Lbs. 40,000 Unseated Str Wt./Lbs. 42,000  
 Anchor Length 72 Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 60,000  
 Top Packer Depth 4131 Tool Weight 2500  
 Bottom Packer Depth 4136 Hole Size 7 7/8" Rubber Size 6 3/4"  
 Total Depth 4208 Wt. Pipe Run \_\_\_\_\_ Drill Collar Run \_\_\_\_\_  
 Mud Wt. 9.4 LCM \_\_\_\_\_ Vis. 52 WL 8.8 Drill Pipe Size 4 1/2 FH Ft. Run 4144  
 Blow Description IFP - weak blow throughout sur-3  
ISI - no blow back  
FFP - weak blow throughout sur-3  
FSI - no blow back

Recovery - Total Feet 50 GIP 30 Ft. in DC \_\_\_\_\_ Ft. in DP 50  
 Rec. 50 Feet of GHOCM 5 %gas 45 %oil \_\_\_\_\_ %water 50 %mud  
 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 124 °F Gravity \_\_\_\_\_ °API D @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
 RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery \_\_\_\_\_ Chlorides 4000 ppm System

	AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud		<u>2045</u> PSI	<u>6769</u>	<input checked="" type="checkbox"/> <u>1200</u>
(B) First Initial Flow Pressure		<u>32</u> PSI	(depth) <u>4138</u>	Jars _____
(C) First Final Flow Pressure		<u>43</u> PSI	Recorder No. <u>13548</u>	Safety Jt. _____
(D) Initial Shut-In Pressure		<u>1125</u> PSI	(depth) <u>4205</u>	Circ Sub _____
(E) Second Initial Flow Pressure		<u>45</u> PSI	Recorder No. _____	Sampler _____
(F) Second Final Flow Pressure		<u>53</u> PSI	(depth) _____	Straddle _____
(G) Final Shut-In Pressure		<u>1041</u> PSI	<b>Initial Opening</b> <u>30</u>	Ext. Packer _____
(Q) Final Hydrostatic Mud		<u>2005</u> PSI	Initial Shut-In <u>60</u>	Shale Packer _____

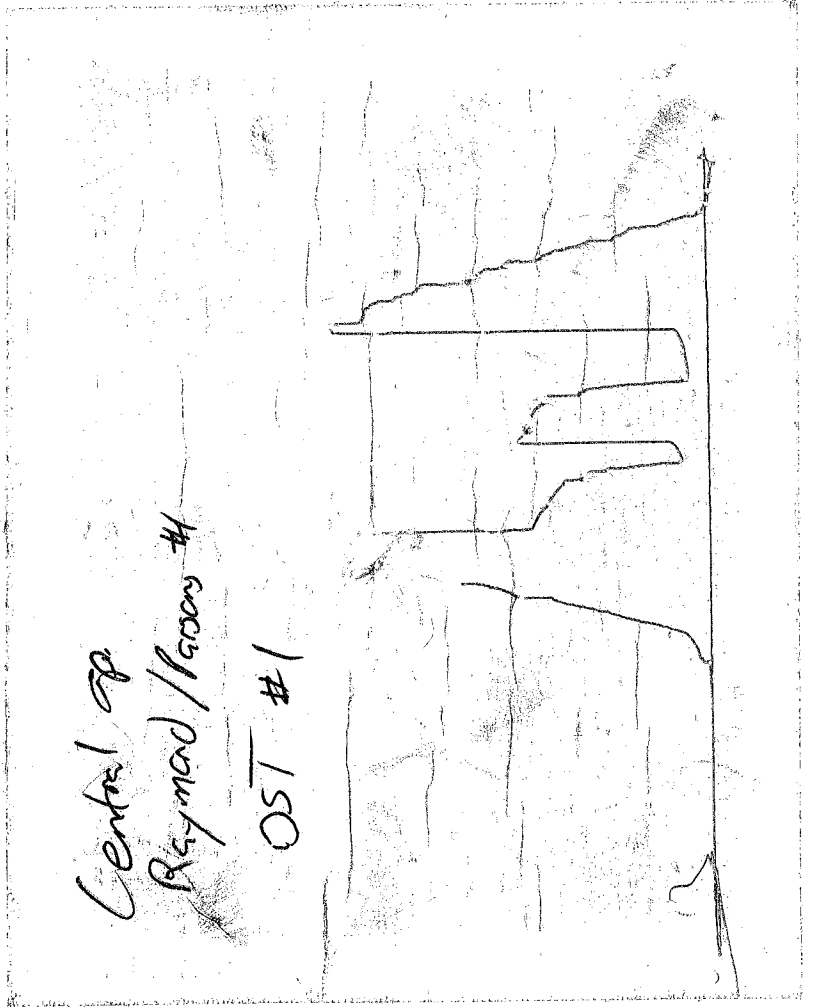
TRILOBITE TESTING INC. SHALL NOT BE LIABLE FOR DAMAGED OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

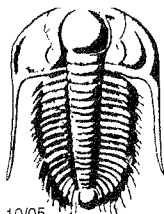
Final Flow 30 Ruined Packer 196  
 Final Shut-In 60 Mileage  157 ~~157~~  
**T-On Location** 0207 Sub Total: \_\_\_\_\_  
 T-Started 0223 Std. By \_\_\_\_\_  
 T-Open 0443 Acc. Chg: 1396.25  
 T-Pulled 0743 Other: \_\_\_\_\_  
 T-Out 1020 Total: \_\_\_\_\_

Approved By \_\_\_\_\_  
 Our Representative Brian Fairbank (frank)

**CHART PAGE**

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





# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

26177

## Test Ticket

Well Name & No. Raymond / Parsons #1 Test No. 2 Date 9-14-06  
 Company Central Operation Zone Tested Mississippian (2)  
 Address 1600 Broadway Ste. 1050 Denver, Co 80202 Elevation 2293 KB 2288 GL  
 Co. Rep / Geo. Ed Glassman Rig AA2  
 Location: Sec. 4 Twp. 15<sup>s</sup> Rge. 26<sup>w</sup> Co. Cove State K  
 Comment: Hit multiple bridges @ 1100' off both & 250' off both. Release date / time: \_\_\_\_\_

Interval Tested 4136 - 4218 Initial Str Wt./Lbs. 40,000 Unseated Str Wt./Lbs. 41,000  
 Anchor Length 82 Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 50,000  
 Top Packer Depth ~~3157~~ 4131 Tool Weight 2500  
 Bottom Packer Depth 4136 Hole Size 7 7/8" Rubber Size 6 3/4"  
 Total Depth 4218 Wt. Pipe Run \_\_\_\_\_ Drill Collar Run \_\_\_\_\_  
 Mud Wt. 9.4 LCM \_\_\_\_\_ Vis. 48 WL 8.0 Drill Pipe Size 4 1/2 FH Ft. Run 4144  
 Blow Description IFP - BOB 28 min ISI - no blow back Tool slid 1' to bottom  
FFP - BOB 36 min  
FSI - sur blow back died 12 min.

Recovery - Total Feet	GIP	Ft. in DC	Ft. in DP
<u>195</u>	<u>165</u>	<u>—</u>	<u>195</u>
Rec. <u>135</u>	Feet of <u>G MLO</u>	<u>5</u> %gas <u>60</u> %oil	%water <u>35</u> %mud
Rec. <u>60</u>	Feet of <u>G HOCM</u>	<u>5</u> %gas <u>45</u> %oil	%water <u>50</u> %mud
Rec. _____	Feet of _____	%gas _____ %oil _____	%water _____ %mud _____
Rec. _____	Feet of _____	%gas _____ %oil _____	%water _____ %mud _____
Rec. _____	Feet of _____	%gas _____ %oil _____	%water _____ %mud _____

BHT 122 °F Gravity \_\_\_\_\_ °API D @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
 RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery \_\_\_\_\_ Chlorides 4000 ppm System

AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud	<u>2055</u> PSI	<u>6769</u>	<u>1200</u>
(B) First Initial Flow Pressure	<u>43</u> PSI	(depth) <u>4138</u>	Jars _____
(C) First Final Flow Pressure	<u>81</u> PSI	Recorder No. <u>13548</u>	Safety Jt. _____
(D) Initial Shut-In Pressure	<u>1221</u> PSI	(depth) <u>4215</u>	Circ Sub _____
(E) Second Initial Flow Pressure	<u>82</u> PSI	Recorder No. _____	Sampler _____
(F) Second Final Flow Pressure	<u>116</u> PSI	(depth) _____	Straddle _____
(G) Final Shut-In Pressure	<u>1192</u> PSI	Initial Opening <u>45</u>	Ext. Packer _____
(Q) Final Hydrostatic Mud	<u>2012</u> PSI	Initial Shut-In <u>90</u>	Shale Packer _____
		Final Flow <u>45</u>	Ruined Packer _____ <u>196.25</u>
		Final Shut-In <u>90</u>	Mileage <u>✓</u> <u>47.25</u>
		T-On Location <u>1850</u>	Sub Total: _____
		T-Started <u>2024</u>	Std. By <u>2.75</u> <u>275</u>
		T-Open <u>2316</u>	Acc. Chg: _____
		T-Pulled <u>0346</u>	Other: _____
		T-Out <u>0650</u>	Total: <u>\$11671.25</u>

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Approved By \_\_\_\_\_  
 Our Representative Brian Fairbank (Thaly)

**CHART PAGE**

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

Central Ops  
Raymond Jensen #1

DST #2

