

## DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

PO Box 783188  
Wichita, KS 67278-3188

ATTN: Brad Rine

**33-15s-23w-Trego**

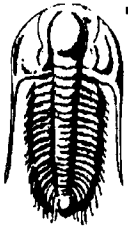
**Schwartzkopf 33C #1**

Start Date: 2005.08.08 @ 02:38:15

End Date: 2005.08.08 @ 11:15:00

Job Ticket #: 22069                      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

Ritchie Exploration, Inc.  
PO Box 783188  
Wichita, KS 67278-3188  
ATTN: Brad Rine

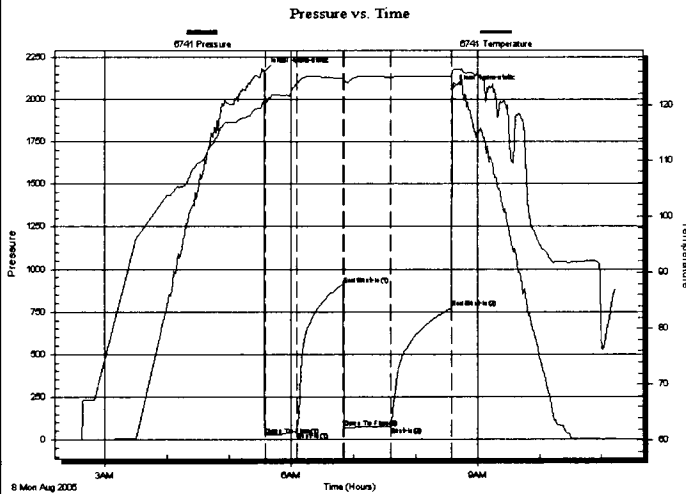
**Schwartzkopf 33C #1**  
**33-15s-23w-Trego**  
Job Ticket: 22069      **DST#: 1**  
Test Start: 2005.08.08 @ 02:38:15

## GENERAL INFORMATION:

Formation: **Cherokee**  
Deviated: No Whipstock:                      ft (KB)  
Time Tool Opened: 05:34:45  
Time Test Ended: 11:15:00  
Interval: **4345.00 ft (KB) To 4400.00 ft (KB) (TVD)**  
Total Depth: **4400.00 ft (KB) (TVD)**  
Hole Diameter: **7.80 inches** Hole Condition: **Good**  
Test Type: **Conventional Bottom Hole**  
Tester: **Jason McLemore**  
Unit No: **32**  
Reference Elevations: **2440.00 ft (KB)**  
**2432.00 ft (CF)**  
KB to GR/CF: **8.00 ft**

**Serial #: 6741**      **Inside**  
Press@RunDepth: **74.51 psig @ 4348.00 ft (KB)**      Capacity: **7000.00 psig**  
Start Date: **2005.08.08**      End Date: **2005.08.08**      Last Calib.: **2005.08.08**  
Start Time: **02:38:17**      End Time: **11:15:00**      Time On Btm: **2005.08.08 @ 05:34:00**  
Time Off Btm: **2005.08.08 @ 08:35:15**

**TEST COMMENT:** FFP-Fair Blow , Built to 8"  
ISI-Dead  
FFP-Fair Blow , Built to 8"  
FSI-Dead



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2165.96	120.60	Initial Hydro-static
1	22.57	120.26	Open To Flow (1)
31	44.86	123.72	Shut-In(1)
76	908.68	124.73	End Shut-In(1)
77	67.59	124.48	Open To Flow (2)
121	74.51	124.97	Shut-In(2)
181	770.56	125.18	End Shut-In(2)
182	2061.45	125.98	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
25.00	Clean Oil	0.35
15.00	Mud Cut Oil-70%O-30%M	0.21
60.00	Mud Cut Oil-5%G-60%O-35%M	0.84
60.00	HOCM-10%G-45%O-45%M	0.84

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Ritchie Exploration, Inc.

**Schwartzkopf 33C #1**

PO Box 783188  
Wichita, KS 67278-3188

**33-15s-23w-Trego**

Job Ticket: 22069

**DST#: 1**

ATTN: Brad Rine

Test Start: 2005.08.08 @ 02:38:15

## Tool Information

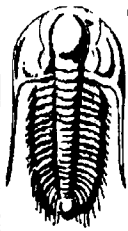
Drill Pipe:	Length: 4336.00 ft	Diameter: 3.80 inches	Volume: 60.82 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 60.82 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 57000.00 lb
Depth to Top Packer:	4345.00 ft			Final 57000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	76.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4325.00	
Shut In Tool	5.00			4330.00	
Hydraulic tool	5.00			4335.00	
Packer	5.00			4340.00	21.00 Bottom Of Top Packer
Packer	5.00			4345.00	
Stubb	1.00			4346.00	
Perforations	2.00			4348.00	
Recorder	0.00	6741	Inside	4348.00	
Change Over Sub	1.00			4349.00	
Blank Spacing	32.00			4381.00	
Change Over Sub	1.00			4382.00	
Perforations	15.00			4397.00	
Recorder	0.00	13221	Outside	4397.00	
Bullnose	3.00			4400.00	55.00 Bottom Packers & Anchor

**Total Tool Length: 76.00**



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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Ritchie Exploration, Inc.

**Schwartzkopf 33C #1**

PO Box 783188  
Wichita, KS 67278-3188

**33-15s-23w-Trego**

Job Ticket: 22069

**DST#: 1**

ATTN: Brad Rine

Test Start: 2005.08.08 @ 02:38:15

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

32 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbf

Water Loss: 9.58 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
25.00	Clean Oil	0.351
15.00	Mud Cut Oil-70%O-30%M	0.210
60.00	Mud Cut Oil-5%G-60%O-35%M	0.842
60.00	HOCM-10%G-45%O-45%M	0.842

Total Length: 160.00 ft

Total Volume: 2.245 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

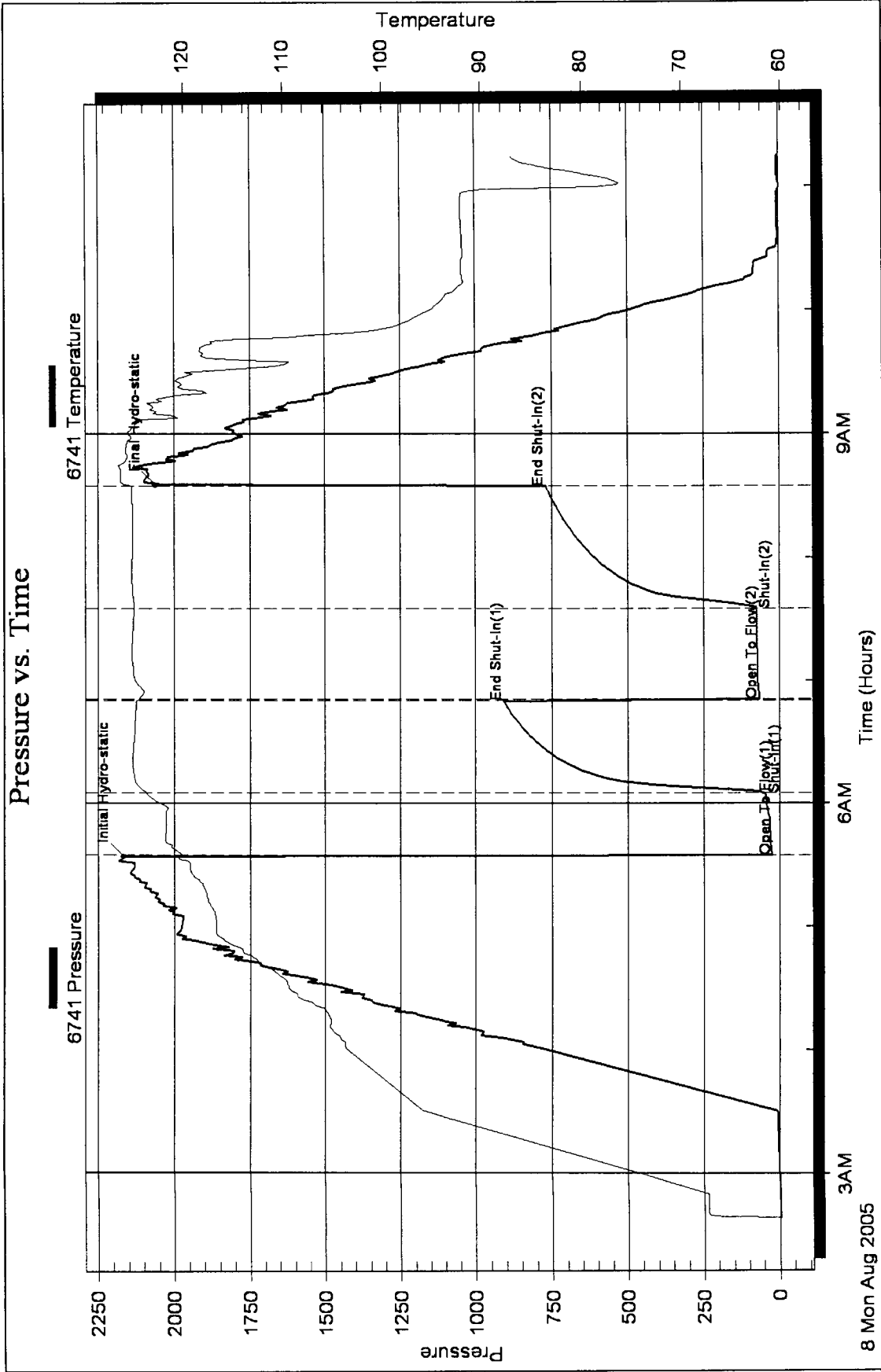
Serial #: 6741

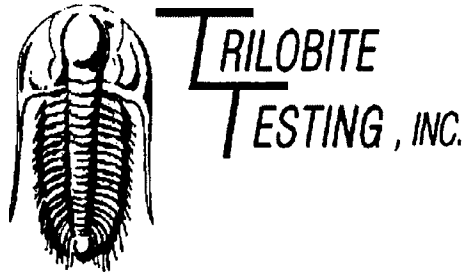
Inside

Ritchie Exploration, Inc.

33-15s-23w - Trego

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

PO Box 783188  
Wichita, KS 67278-3188

ATTN: Brad Rine

**33-15s-23w-Trego**

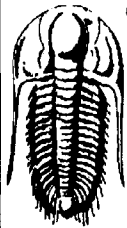
**Schwartzkopf 33C #1**

Start Date: 2005.08.08 @ 19:16:38

End Date: 2005.08.09 @ 04:17:08

Job Ticket #: 22070                      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

Ritchie Exploration, Inc.

PO Box 783188  
Wichita, KS 67278-3188

ATTN: Brad Rine

**Schwartzkopf 33C #1**

**33-15s-23w-Trego**

Job Ticket: 22070

**DST#: 2**

Test Start: 2005.08.08 @ 19:16:38

## GENERAL INFORMATION:

Formation: **Cherokee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:29:53

Time Test Ended: 04:17:08

Test Type: Conventional Bottom Hole

Tester: Jason McLemore

Unit No: 32

Interval: **4343.00 ft (KB) To 4406.00 ft (KB) (TVD)**

Reference Elevations: 2440.00 ft (KB)

Total Depth: 4406.00 ft (KB) (TVD)

2432.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

**Serial #: 6741** Inside

Press@RunDepth: 393.40 psig @ 4346.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2005.08.08

End Date: 2005.08.09

Last Calib.: 2005.08.09

Start Time: 19:16:40

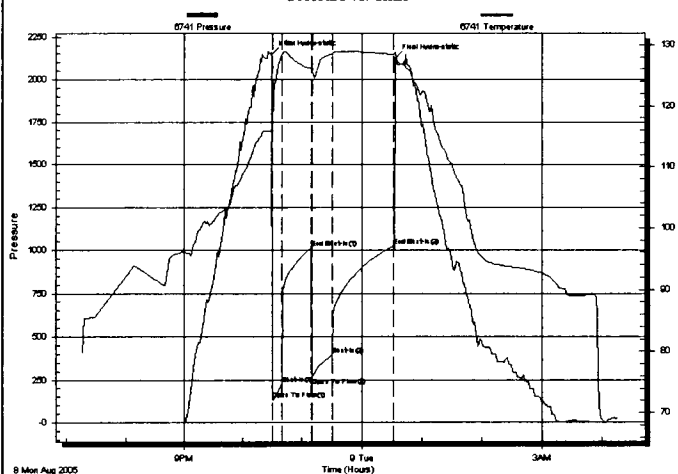
End Time: 04:17:08

Time On Btm: 2005.08.08 @ 22:29:23

Time Off Btm: 2005.08.09 @ 00:32:53

**TEST COMMENT:** FFP-Strong Blow ,BOB in 1 Min,40 Seconds.  
ISI-Blow back Built to 1-1/2"  
FFP-Strong Blow ,BOB in 2 Mn.  
FSI-Dead

Pressure vs. Time



## PRESSURE SUMMARY

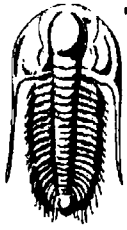
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2149.17	115.85	Initial Hydro-static
1	132.95	116.10	Open To Flow (1)
11	222.81	128.34	Shut-In(1)
40	1011.11	126.14	End Shut-In(1)
41	266.12	125.65	Open To Flow (2)
61	393.40	128.49	Shut-In(2)
123	1023.30	128.42	End Shut-In(2)
124	2124.66	128.71	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
270.00	Clean Oil	3.79
420.00	Frothy Oil-25%G-70%O-5%M	5.89
120.00	MCO-10%G-70%O-20%M	1.68
120.00	HOCMV-25%G-35%O-15%W-25%M	1.68

## Gas Rates

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



**TRILOBITE**  
TESTING, INC.

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.

**Schwartzkopf 33C #1**

PO Box 783188  
Wichita, KS 67278-3188

**33-15s-23w-Trego**

Job Ticket: 22070

DST#: 2

ATTN: Brad Rine

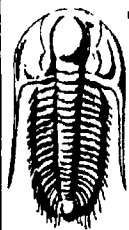
Test Start: 2005.08.08 @ 19:16:38

### Tool Information

Drill Pipe:	Length: 4329.00 ft	Diameter: 3.80 inches	Volume: 60.72 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 62000.00 lb
			<u>Total Volume: 60.72 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4343.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	63.00 ft			
Tool Length:	84.00 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			4323.00	
Shut In Tool	5.00			4328.00	
Hydraulic tool	5.00			4333.00	
Packer	5.00			4338.00	21.00 Bottom Of Top Packer
Packer	5.00			4343.00	
Stubb	1.00			4344.00	
Perforations	2.00			4346.00	
Recorder	0.00	6741	Inside	4346.00	
Change Over Sub	1.00			4347.00	
Blank Spacing	32.00			4379.00	
Change Over Sub	1.00			4380.00	
Perforations	23.00			4403.00	
Recorder	0.00	13221	Outside	4403.00	
Bullnose	3.00			4406.00	63.00 Bottom Packers & Anchor

**Total Tool Length: 84.00**



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## DRILL STEM TEST REPORT

FLUID SUMMARY

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Schwartzkopf 33C #1

PO Box 783188  
Wichita, KS 67278-3188

33-15s-23w-Trego

Job Ticket: 22070

DST#: 2

ATTN: Brad Rine

Test Start: 2005.08.08 @ 19:16:38

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

32 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

13000 ppm

Viscosity: 46.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
270.00	Clean Oil	3.787
420.00	Frothy Oil-25%G-70%O-5%M	5.891
120.00	MCO-10%G-70%O-20%M	1.683
120.00	HOCMV-25%G-35%O-15%W-25%M	1.683

Total Length: 930.00 ft

Total Volume: 13.044 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

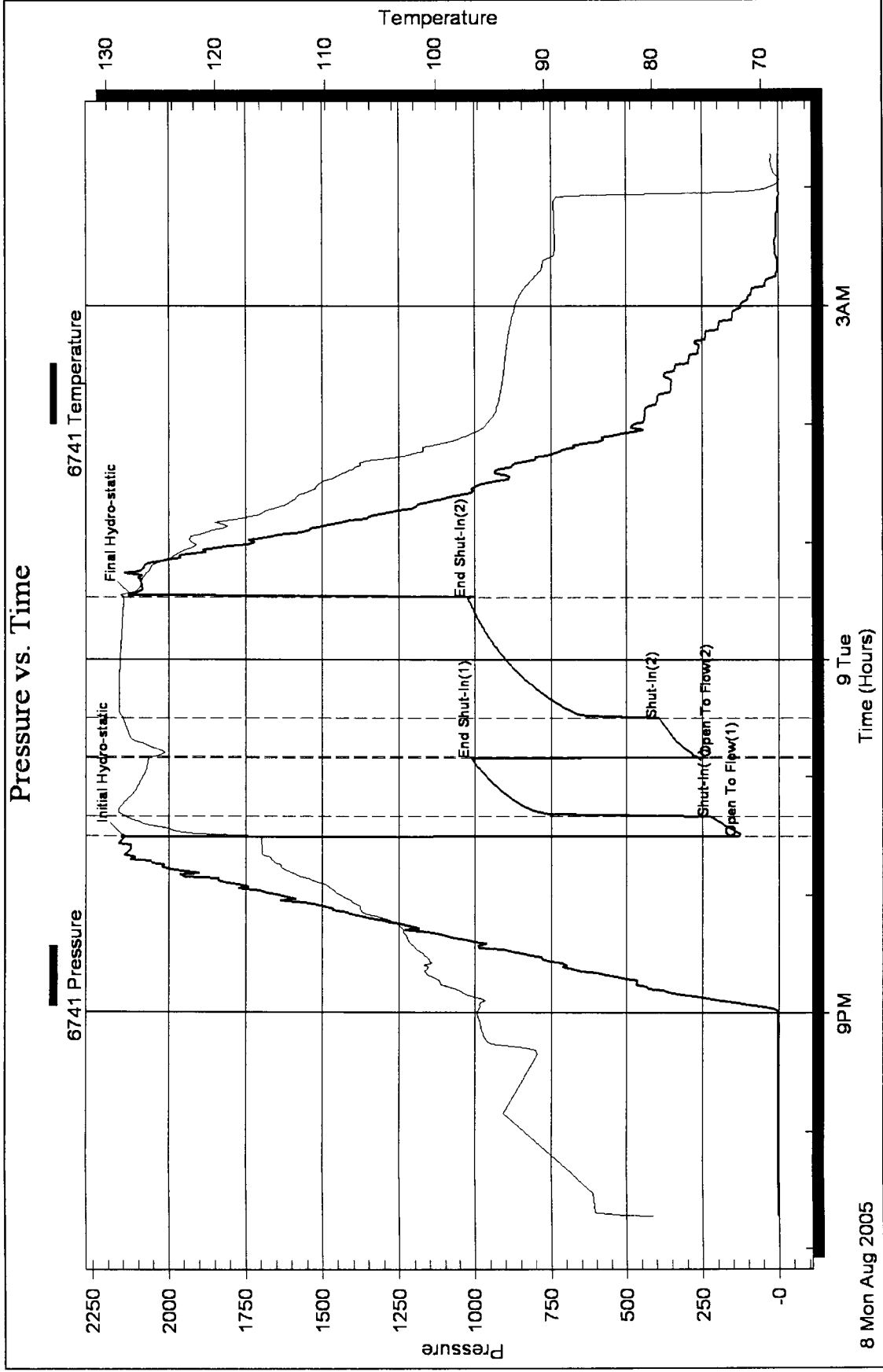
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

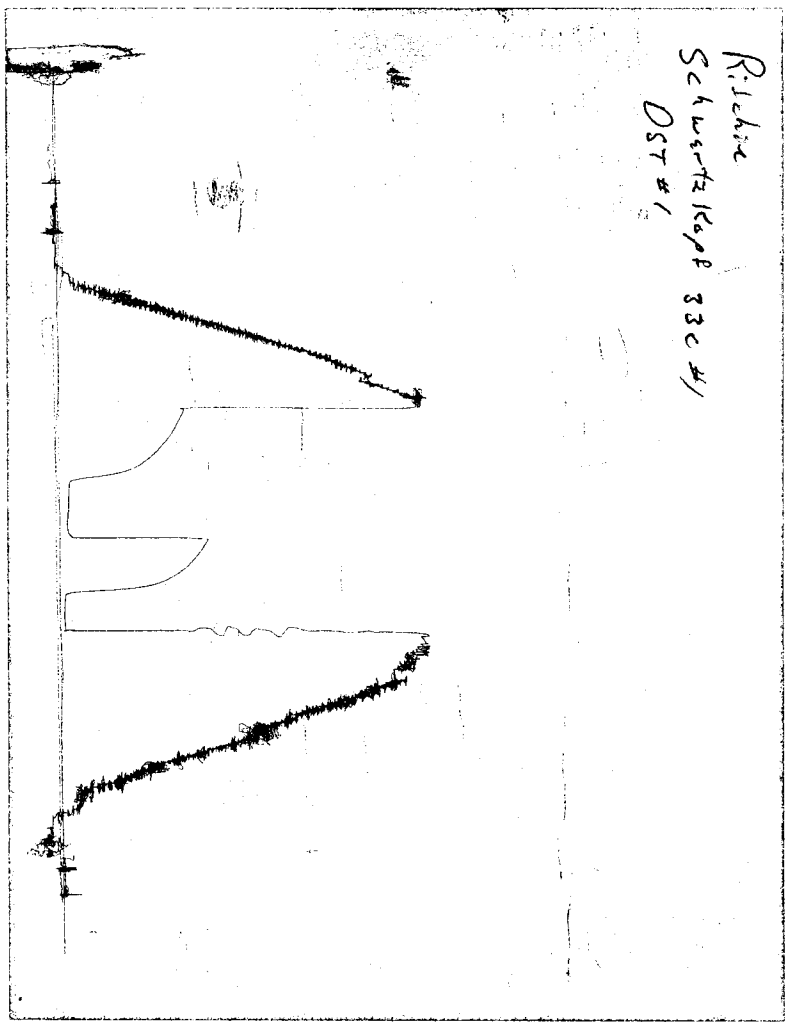
### Pressure vs. Time

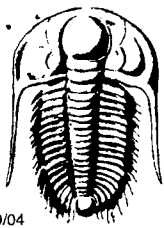




**CHART PAGE**  
This is a photocopy of the actual AK-1 recorder chart.

R: Jeline  
Schwartzkopf 330 #1  
DST #1





# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 22070

## Test Ticket

Well Name & No. Schwartz Kopf 33c #1 Test No. 2 Date 8-8-05  
 Company Ritchie Exploration, Inc Zone Tested Cherokee  
 Address PO Box 783188, Wichita, Ks, 67278-3188 Elevation 2440 KB 2432 GL  
 Co. Rep / Geo. Brad Rine Cont. American Eagle Est. Ft. of Pay \_\_\_\_\_ Por. \_\_\_\_\_ %  
 Location: Sec. 33 Twp. 15s Rge. 23w Co. Trego State Ks  
 No. of Copies Reg Distribution Sheet (Y, N) \_\_\_\_\_ Turnkey (Y, N) \_\_\_\_\_ Evaluation (Y, N) \_\_\_\_\_

Interval Tested 4343 - 4406 Initial Str Wt./Lbs. 54,000 Unseated Str Wt./Lbs. 60,000  
 Anchor Length 63' Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 62,000  
 Top Packer Depth 4338 Tool Weight 2200  
 Bottom Packer Depth 4343 Hole Size 7 7/8" ✓ Rubber Size 6 3/4" ✓  
 Total Depth 4406 Wt. Pipe Run 0 Drill Collar Run 0  
 Mud Wt. 9.3 LCM Tr Vis. 46 WL 8.0 Drill Pipe Size 4 1/2 XH Ft. Run 4329  
 Blow Description IFP - Strong Blow, BOB in 1 minute 40 seconds  
ISI - Blowback Built to  
FFP - Strong Blow, BOB in 2 min.  
FSI - Dead

Recovery - Total Feet	GIP	Ft. in DC	Ft. in DP
Rec. <u>270</u>	Feet of <u>Clean Oil</u>	%gas _____ %oil _____	%water _____ %mud _____
Rec. <u>420</u>	Feet of <u>Frothy oil</u>	<u>25</u> %gas <u>70</u> %oil	%water _____ %mud <u>5</u>
Rec. <u>120</u>	Feet of <u>MCO</u>	<u>10</u> %gas <u>70</u> %oil	%water _____ %mud <u>20</u>
Rec. <u>120</u>	Feet of <u>HOC MW</u>	<u>25</u> %gas <u>35</u> %oil	<u>15</u> %water <u>25</u> %mud
Rec. _____	Feet of _____	%gas _____ %oil _____	%water _____ %mud _____
BHT <u>128</u>	°F Gravity <u>33</u>	°API D @ <u>70</u>	°F Corrected Gravity <u>32</u> °API _____
RW <u>-489</u>	@ <u>70</u> °F	Chlorides <u>13,000</u> ppm	Recovery _____ Chlorides <u>4,000</u> ppm System

AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud	<u>2149</u> PSI	<u>6741</u>	✓ <u>1050</u>
(B) First Initial Flow Pressure	<u>133</u> PSI	(depth) <u>4347</u>	<del>bars</del> ✓ <u>200</u>
(C) First Final Flow Pressure	<u>223</u> PSI	Recorder No. <u>13221</u>	<del>Safety It</del> ✓ <u>50</u>
(D) Initial Shut-In Pressure	<u>1011</u> PSI	(depth) <u>4403</u>	Circ Sub _____
(E) Second Initial Flow Pressure	<u>266</u> PSI	Recorder No. _____	Sampler _____
(F) Second Final Flow Pressure	<u>393</u> PSI	(depth) _____	Straddle _____
(G) Final Shut-In Pressure	<u>1023</u> PSI	Initial Opening <u>10</u>	Ext. Packer _____
(Q) Final Hydrostatic Mud	<u>2125</u> PSI	Initial Shut-In <u>30</u>	Shale Packer _____
		Final Flow <u>20</u>	Ruined Packer _____
		Final Shut-In <u>60</u>	Mileage <u>143</u> rounds <u>143</u>
		T-On Location <u>18:15</u>	Sub Total: <u>1443</u>
		T-Started <u>19:16</u>	Std. By <u>1hr</u> <u>30</u>
		T-Open <u>22:29</u>	Other _____
		T-Pulled <u>00:29</u>	Total: <u>\$1,473</u>
		T-Out <u>4:15</u>	

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Approved By \_\_\_\_\_  
 Our Representative J. Mc Loman

*Thank you*

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

