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JAN 06 2004

KCC WICHITA

15-153-20824



## DRILL STEM TEST REPORT

Prepared For: **Ritchie Explor Inc.**

PO Box 783188  
Wichita ,Ks 67278

ATTN: Ritchie Explor

**25-1-34 Rawlins, Ks**

**Horinek #1 25-C**

Start Date: 2003.11.08 @ 04:59:00

End Date: 2003.11.08 @ 12:05:13

Job Ticket #: 17719                      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 Explor Inc.

PO Box 783188  
Wichita ,Ks 67278

ATTN: Ritchie Explor

**Horinek #1 25-C**

**25-1-34 Rawlins, Ks**

Job Ticket: 17719

DST#: 1

Test Start: 2003.11.08 @ 04:59:00

## GENERAL INFORMATION:

Formation: **A**  
 Deviated: **No Whipstock** ft (KB)  
 Time Tool Opened: 07:07:43  
 Time Test Ended: 12:05:13

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KCC WICHITA**

Test Type: **Conventional Bottom Hole**  
 Tester: **Shane McBride**  
 Unit No: **25**

Interval: **3942.00 ft (KB) To 4002.00 ft (KB) (TVD)**  
 Total Depth: **4002.00 ft (KB) (TVD)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **3046.00 ft (KB)**  
**3041.00 ft (CF)**  
 KB to GR/CF: **5.00 ft**

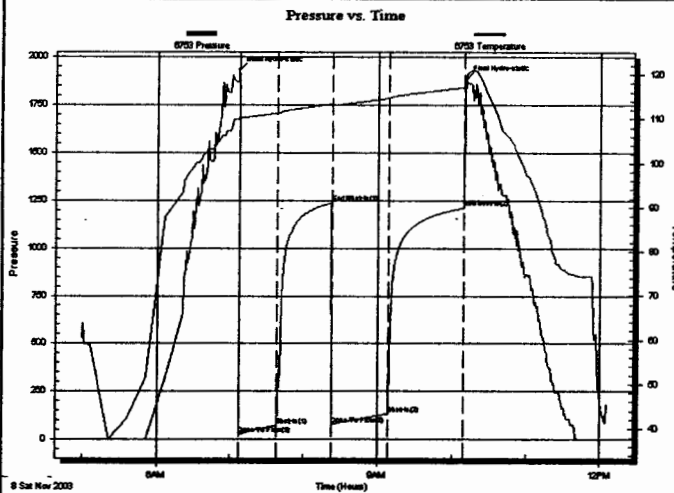
**Serial #: 6753**

**Inside**

Press@RunDepth: **132.02 psig @ 3943.00 ft (KB)**  
 Start Date: **2003.11.08** End Date: **2003.11.08**  
 Start Time: **04:59:00** End Time: **12:05:13**

Capacity: **7000.00 psig**  
 Last Calib.: **1899.12.30**  
 Time On Btrm: **2003.11.08 @ 07:07:13**  
 Time Off Btrm: **2003.11.08 @ 10:10:13**

TEST COMMENT: **1/2" in. @ open built to 3" in.**  
**No return**  
**Surface blow in 3 min. built to 1/2" in.**  
**No return**



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1932.42	109.91	Initial Hydro-static
1	23.79	109.67	Open To Flow (1)
32	71.38	111.26	Shut-In(1)
76	1237.63	113.32	End Shut-In(1)
76	77.04	113.08	Open To Flow(2)
121	132.02	114.59	Shut-In(2)
183	1212.23	117.07	End Shut-In(2)
183	1885.95	118.94	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
80.00	w c m w/oil spots 30%w 70%m	0.39
120.00	m c w w/oil spots 70%w 30%m	0.59

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Ritchie Explor Inc.

Horinek #1 25-C

PO Box 783188  
Wichita ,Ks 67278

25-1-34 Rawlins, Ks

ATTN: Ritchie Explor

Job Ticket: 17719

DST#: 1

Test Start: 2003.11.08 @ 04:59:00

**Tool Information**

Drill Pipe:	Length: 3360.00 ft	Diameter: 3.80 inches	Volume: 47.13 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 585.00 ft	Diameter: 2.25 inches	Volume: 2.88 bbl	Weight to Pull Loose: 80000.00 lb
		<b>Total Volume:</b>	<b>50.01 bbl</b>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3942.00 ft			Final 57000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	82.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

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**Tool Description                      Length (ft)    Serial No.    Position    Depth (ft)    Accum. Lengths**

Change Over Sub	1.00			3921.00	
Shut In Tool	5.00			3926.00	
Hydraulic tool	5.00			3931.00	
Safety Joint	2.00			3933.00	
Packer	5.00			3938.00	22.00      Bottom Of Top Packer
Packer	4.00			3942.00	
Stubb	1.00			3943.00	
Recorder	0.00	6753	Inside	3943.00	
Perforations	21.00			3964.00	
Change Over Sub	1.00			3965.00	
drillpipe	31.00			3996.00	
Change Over Sub	1.00			3997.00	
Recorder	0.00	11058	Outside	3997.00	
Bullnose	5.00			4002.00	60.00      Bottom Packers & Anchor

**Total Tool Length:      82.00**



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**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Ritchie Explor Inc.  
PO Box 783188  
Wichita ,Ks 67278  
ATTN: Ritchie Explor

**Horinek #1 25-C**  
**25-1-34 Rawlins, Ks**  
Job Ticket: 17719      **DST#: 1**  
Test Start: 2003.11.08 @ 04:59:00

**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:	27000 ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.17 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 800.00 ppm			
Filter Cake: 2.00 inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
80.00	w c m w /oil spots 30%w 70%m	0.393
120.00	m c w w /oil spots 70%w 30%m	0.590

Total Length: 200.00 ft      Total Volume: 0.983 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:

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**KCC WICHITA**

DST Test Number: 1

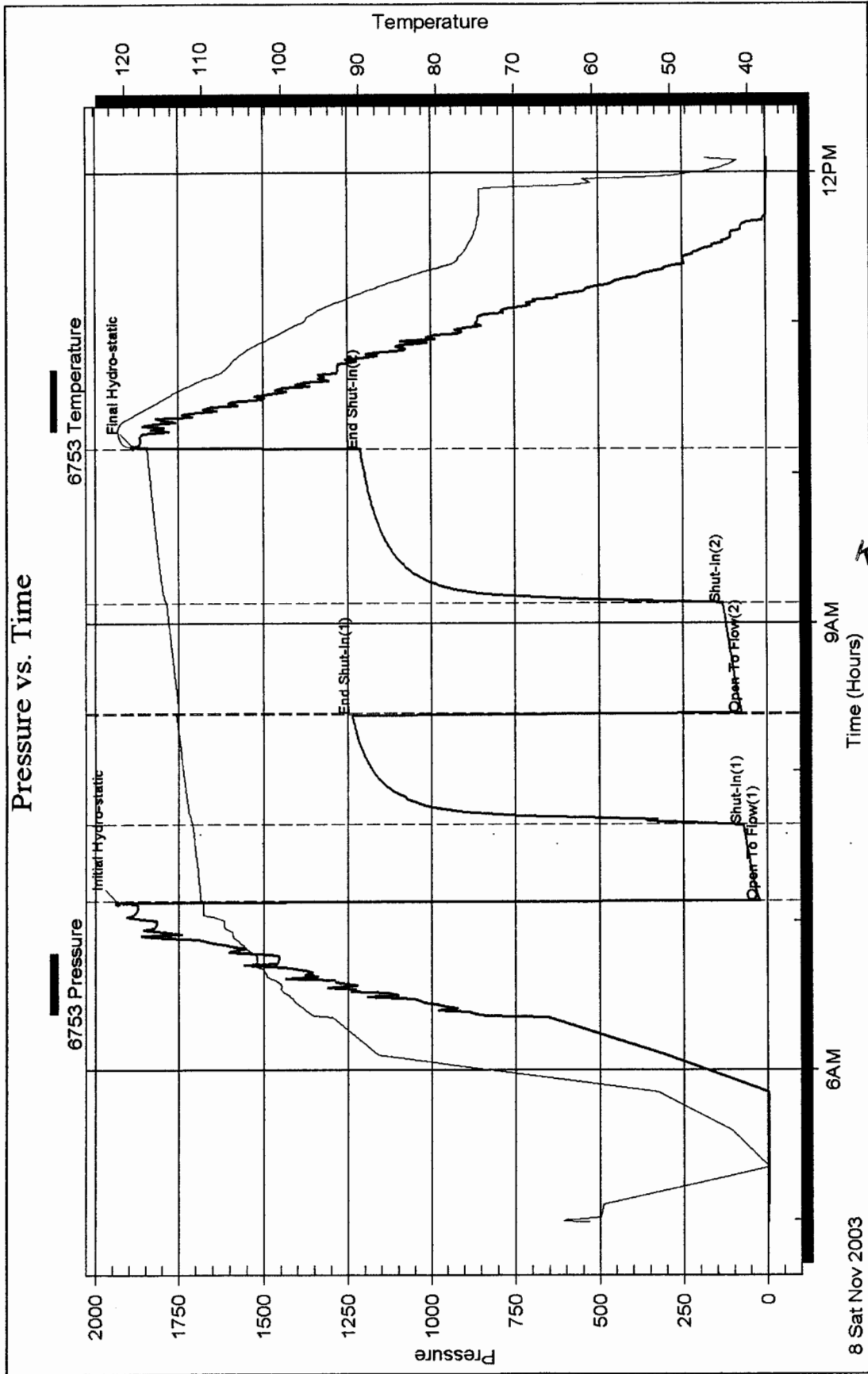
25-1-34 Raw lins, Ks

Ritchie Explor Inc.

Inside

Serial #: 6753

### Pressure vs. Time

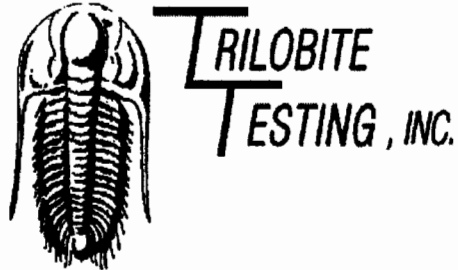


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Ref. No: 17719

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KCC WICHITA



## DRILL STEM TEST REPORT

Prepared For: **Ritchie Explor Inc.**

PO Box 783188  
Wichita ,Ks 67278

ATTN: Ritchie Explor

**25-1-34 Rawlins, Ks**

**Horinek #1 25-C**

Start Date: 2003.11.08 @ 23:35:08

End Date: 2003.11.09 @ 06:39:21

Job Ticket #: 17720                      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 Explor Inc.

**Horinek #1 25-C**

PO Box 783188  
Wichita ,Ks 67278

**25-1-34 Rawlins, Ks**

Job Ticket: 17720

**DST#: 2**

ATTN: Ritchie Explor

Test Start: 2003.11.08 @ 23:35:08

**GENERAL INFORMATION:**

Formation: **50'-100' zones**  
 Deviated: **No Whipstock:** ft (KB)  
 Time Tool Opened: **01:31:21**  
 Time Test Ended: **06:39:21**  
 Interval: **4004.00 ft (KB) To 4110.00 ft (KB) (TVD)**  
 Total Depth: **4110.00 ft (KB) (TVD)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**

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Test Type: **Conventional Bottom Hole**  
 Tester: **Shane McBride**  
 Unit No: **25**

Reference Elevations: **3046.00 ft (KB)**  
**3041.00 ft (CF)**  
 KB to GR/CF: **5.00 ft**

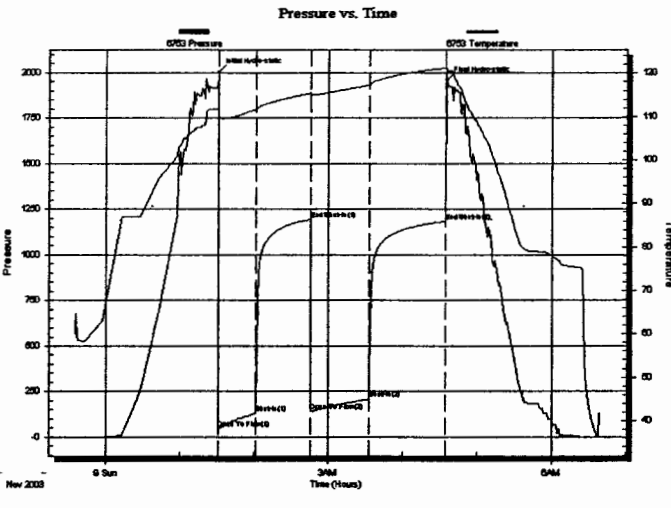
**Serial #: 6753**

**Inside**

Press@RunDepth: **208.90 psig @ 4005.00 ft (KB)**  
 Start Date: **2003.11.08** End Date: **2003.11.09**  
 Start Time: **23:35:08** End Time: **06:39:21**

Capacity: **7000.00 psig**  
 Last Calib.: **1899.12.30**  
 Time On Btrn: **2003.11.09 @ 01:31:06**  
 Time Off Btrn: **2003.11.09 @ 04:35:36**

**TEST COMMENT:** 20' of fill on bottom 2" in blow @ open built to 4" in.  
 No return  
 Surface blow built to 1/2" in.



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2004.47	111.34	Initial Hydro-static
1	45.56	109.86	Open To Flow (1)
31	131.97	111.70	Shut-In(1)
75	1195.47	115.40	End Shut-In(1)
75	140.91	114.94	Open To Flow (2)
122	208.90	117.27	Shut-In(2)
184	1184.56	121.22	End Shut-In(2)
185	1957.30	120.74	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
125.00	s o & w c m 3%o 15%w 82%m	0.61
240.00	s o c m w 3%o 55%w 42%m	1.18

**Gas Rates**

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



**TRILOBITE  
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## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Ritchie Explor Inc.

**Horinek #1 25-C**

PO Box 783188  
Wichita ,Ks 67278

**25-1-34 Rawlins, Ks**

ATTN: Ritchie Explor

Job Ticket: 17720

**DST#: 2**

Test Start: 2003.11.08 @ 23:35:08

### Tool Information

Drill Pipe:	Length: 3427.00 ft	Diameter: 3.80 inches	Volume: 48.07 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 585.00 ft	Diameter: 2.25 inches	Volume: 2.88 bbl	Weight to Pull Loose: 80000.00 lb
		<b>Total Volume:</b>	<b>50.95 bbl</b>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4004.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	106.00 ft			
Tool Length:	128.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3983.00		
Shut In Tool	5.00			3988.00		
Hydraulic tool	5.00			3993.00		
Safety Joint	2.00			3995.00		
Packer	5.00			4000.00	22.00	Bottom Of Top Packer
Packer	4.00			4004.00		
Stubb	1.00			4005.00		
Recorder	0.00	6753	Inside	4005.00		
Perforations	5.00			4010.00		
Change Over Sub	1.00			4011.00		
drillpipe	93.00			4104.00		
Change Over Sub	1.00			4105.00		
Recorder	0.00	11058	Outside	4105.00		
Bullnose	5.00			4110.00	106.00	Bottom Packers & Anchor

**Total Tool Length: 128.00**



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**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Ritchie Explor Inc.

**Horinek #1 25-C**

PO Box 783188  
Wichita ,Ks 67278

**25-1-34 Rawlins, Ks**

Job Ticket: 17720

**DST#: 2**

ATTN: Ritchie Explor

Test Start: 2003.11.08 @ 23:35:08

**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:

22500 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.16 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbf
125.00	s o & w c m 3%o 15%w 82%m	0.615
240.00	s o c m w 3%o 55%w 42%m	1.180

Total Length: 365.00 ft

Total Volume: 1.795 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

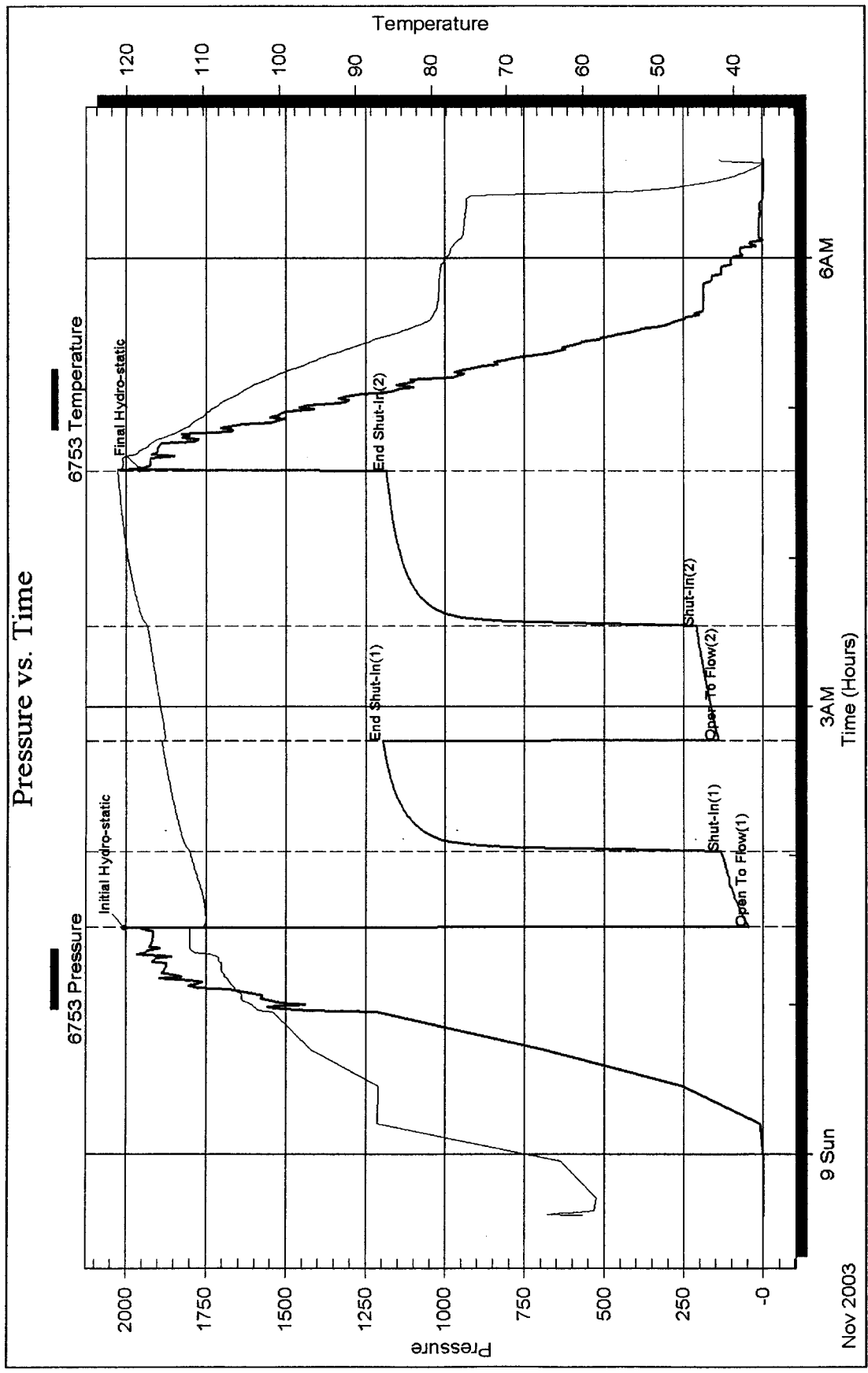
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

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## DRILL STEM TEST REPORT

Prepared For: **Ritchie Explor Inc.**

PO Box 783188  
Wichita ,Ks 67278

ATTN: Ritchie Explor

**25-1-34 Rawlins, Ks**

**Horinek #1 25-C**

Start Date: 2003.11.09 @ 18:46:05

End Date: 2003.11.10 @ 02:16:18

Job Ticket #: 17721                      DST #: 3

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



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# DRILL STEM TEST REPORT

Ritchie Explor. Inc.

PO Box 783188  
Wichita ,Ks 67278

ATTN: Ritchie Explor

**Horinek #1 25-C**

**25-1-34 Rawlins, Ks**

Job Ticket: 17721

**DST#: 3**

Test Start: 2003.11.09 @ 18:46:05

## GENERAL INFORMATION:

Formation: **140'-180'**  
Deviated: **No Whipstock** ft (KB)  
Time Tool Opened: **21:14:48**  
Time Test Ended: **02:16:18**

Interval: **4106.00 ft (KB) To 4202.00 ft (KB) (TVD)**  
Total Depth: **4202.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: **Fair**

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**KCC WICHITA**

Test Type: **Conventional Bottom Hole**  
Tester: **Shane McBride**  
Unit No: **25**

Reference Elevations: **3046.00 ft (KB)**  
**3041.00 ft (CF)**  
KB to GR/CF: **5.00 ft**

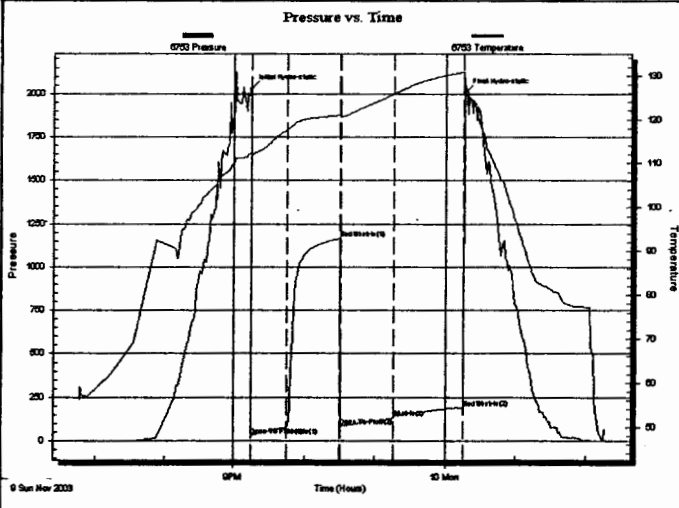
**Serial #: 6753**

**Inside**

Press@RunDepth: **130.37 psig @ 4107.00 ft (KB)**  
Start Date: **2003.11.09** End Date: **2003.11.10**  
Start Time: **18:46:05** End Time: **02:16:18**

Capacity: **7000.00 psig**  
Last Calib.: **1899.12.30**  
Time On Btm: **2003.11.09 @ 21:14:33**  
Time Off Btm: **2003.11.10 @ 00:16:48**

TEST COMMENT: **1/2" in @ open built to 1 1/2" in.**  
**No return**  
**Surface blow built to**  
**No return**



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2030.40	112.47	Initial Hydro-static
1	30.02	112.02	Open To Flow (1)
31	76.29	117.76	Shut-in(1)
75	1164.86	120.96	End Shut-in(1)
76	85.65	120.68	Open To Flow (2)
121	130.37	125.82	Shut-in(2)
181	190.98	130.85	End Shut-in(2)
183	2007.89	127.38	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	free oil	0.01
120.00	s o & w c m 7%o 13%w 80%m	0.59
60.00	s o c w m 5%o 40%w 55%m	0.30
118.00	s o & m c w 3%o 17%m 80%w	0.58

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Explor Inc.

Horinek #1 25-C

PO Box 783188  
Wichita, Ks 67278

25-1-34 Rawlins, Ks

Job Ticket: 17721

DST#: 3

ATTN: Ritchie Explor

Test Start: 2003.11.09 @ 18:46:05

### Tool Information

Drill Pipe:	Length: 3519.00 ft	Diameter: 3.80 inches	Volume: 49.36 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 585.00 ft	Diameter: 2.25 inches	Volume: 2.88 bbl	Weight to Pull Loose: 84000.00 lb
			<u>Total Volume: 52.24 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4106.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	96.00 ft			
Tool Length:	118.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			4085.00	
Shut In Tool	5.00			4090.00	
Hydraulic tool	5.00			4095.00	
Safety Joint	2.00			4097.00	
Packer	5.00			4102.00	22.00 Bottom Of Top Packer
Packer	4.00			4106.00	
Stubb	1.00			4107.00	
Recorder	0.00	6753	Inside	4107.00	
Perforations	25.00			4132.00	
Change Over Sub	1.00			4133.00	
drillpipe	63.00			4196.00	
Change Over Sub	1.00			4197.00	
Recorder	0.00	11058	Outside	4197.00	
Bullnose	5.00			4202.00	96.00 Bottom Packers & Anchor

**Total Tool Length: 118.00**



**TRILOBITE  
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### DRILL STEM TEST REPORT

### FLUID SUMMARY

Ritchie Explor Inc.

Horinek #1 25-C

PO Box 783188  
Wichita ,Ks 67278

25-1-34 Rawlins, Ks

Job Ticket: 17721

DST#: 3

ATTN: Ritchie Explor

Test Start: 2003.11.09 @ 18:46:05

#### 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:

26000 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 2.00 inches

#### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	free oil	0.010
120.00	s o & w c m 7%o 13%w 80%m	0.590
60.00	s o c w m 5%o 40%w 55%m	0.295
118.00	s o & m c w 3%o 17%m 80%w	0.580

Total Length: 300.00 ft      Total Volume: 1.475 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

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DST Test Number: 3

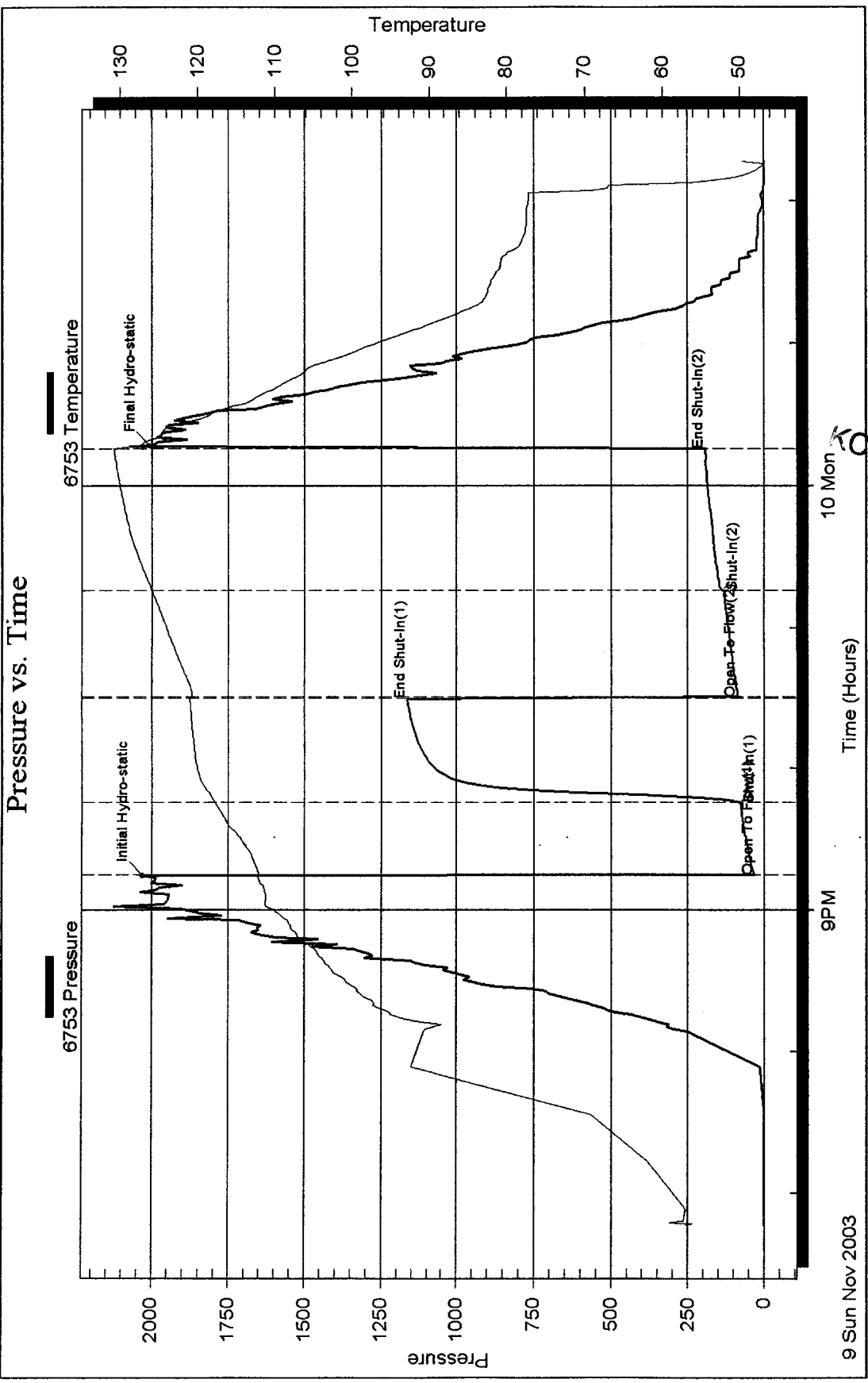
25-1-34 Raw lins, Ks

Ritchie Explor Inc.

Inside

Serial #: 6753

### Pressure vs. Time



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