

TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Raydon Exp. Inc.**

9400 N. Broadway #400
Oklahoma City, OK 73114

ORIGINAL

ATTN: Ed Grieves

4-34S-29W Meade KS

Irish Flats "1-4"

Start Date: 2001.10.24 @ 08:21:06

End Date: 2001.10.24 @ 18:09:36

Job Ticket #: 14948

DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

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AUG 20 2002
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Raydon Exp. Inc.

Irish Flats "1-4"

4-34S-29W Meade KS

DST # 1

Marmaton

2001.10.24


**TRILOBITE
TESTING, INC.**
DRILL STEM TEST REPORT

Raydon Exp. Inc.

9400 N. Broadway #400
Oklahoma City, OK 73114

ATTN: Ed Grieves

Irish Flats "1-4"**4-34S-29W Meade KS**

Job Ticket: 14948

DST#: 1

Test Start: 2001.10.24 @ 08:21:06

GENERAL INFORMATION:Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:44:06

Time Test Ended: 18:09:36

Test Type: Conventional Bottom Hole

Tester: Lanny Saloga

Unit No: 14

Interval: **5219.00 ft (KB) To 5228.00 ft (KB) (TVD)**

Total Depth: 5228.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2554.00 ft (KB)

2543.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 3289**Inside**

Press@RunDepth: 366.66 psig @ 5221.00 ft (KB)

Start Date: 2001.10.24

End Date:

2001.10.24

Capacity: 7000.00 psig

Last Calib.: 1899.12.30

Start Time: 08:21:11

End Time:

18:09:36

Time On Btm: 2001.10.24 @ 10:42:51

Time Off Btm: 2001.10.24 @ 15:13:05

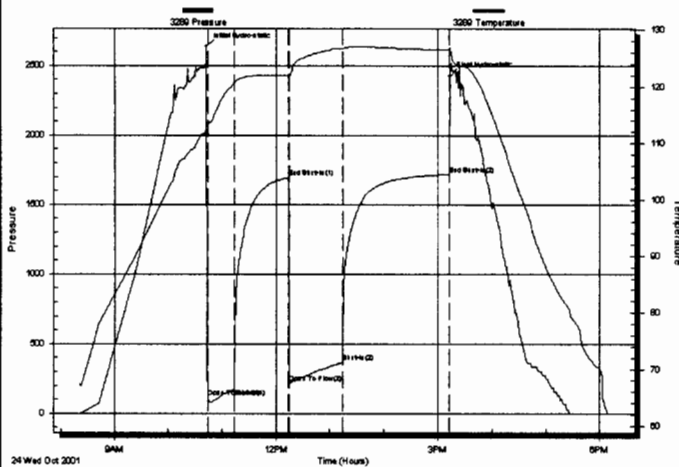
TEST COMMENT: IF: Strong OBB immed. Cracked 2". Decreased 30min IFP

IS: Strong OBB blow-back. GTS

FF: 1' to strong OBB in 7 min. See flow chart.

FS: 6" blow-back. "Gas burned."

Pressure vs. Time

**PRESSURE SUMMARY**

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	2635.79	113.02	Initial Hydro-static
2	117.62	113.26	Open To Flow (1)
31	176.40	120.78	Shut-In (1)
91	1694.47	122.01	End Shut-In (1)
92	220.52	121.94	Open To Flow (2)
152	366.66	126.77	Shut-In (2)
270	1717.40	126.48	End Shut-In (2)
271	2426.00	126.81	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
540.00	Gassy Wtr 6%G 94%W	4.26
110.00	O&GcMuddy Wtr 14%G 8%O 45%W 33%	1.54
50.00	Cln Gassy Oil 45%G 55%O 42 Gravity	0.70
0.00	4522 ft. GIP	0.00
0.00	RW 0.072 at 68 F. 120,000 PPM.	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	1.20	5.84
Last Gas Rate	0.13	1.60	5.99
Max. Gas Rate	0.13	1.60	5.99

ORIGINAL

 TRILOBITE TESTING, INC.	DRILL STEM TEST REPORT		TOOL DIAGRAM																																																																																				
	Raydon Exp. Inc. 9400 N. Broadway #400 Oklahoma City, OK 73114 ATTN: Ed Grieves		Irish Flats "1-4" 4-34S-29W Meade KS Job Ticket: 14948 DST#: 1 Test Start: 2001.10.24 @ 08:21:06																																																																																				
Tool Information <table style="width: 100%;"> <tr> <td>Drill Pipe: Length: 4858.00 ft</td> <td>Diameter: 3.80 inches</td> <td>Volume: 68.14 bbl</td> <td>Tool Weight: 1800.00 lb</td> </tr> <tr> <td>Heavy Wt. Pipe: Length: 0.00 ft</td> <td>Diameter: 0.00 inches</td> <td>Volume: 0.00 bbl</td> <td>Weight set on Packer: 24000.00 lb</td> </tr> <tr> <td>Drill Collar: Length: 364.00 ft</td> <td>Diameter: 2.25 inches</td> <td>Volume: 1.79 bbl</td> <td>Weight to Pull Loose: 8000.00 lb</td> </tr> <tr> <td colspan="3" style="text-align: center;">Total Volume: 69.93 bbl</td> <td>Tool Chased: ft</td> </tr> <tr> <td>Drill Pipe Above KB: 30.00 ft</td> <td colspan="2"></td> <td>String Weight: Initial 64000.00 lb</td> </tr> <tr> <td>Depth to Top Packer: 5219.00 ft</td> <td colspan="2"></td> <td>Final 67000.00 lb</td> </tr> <tr> <td>Depth to Bottom Packer: ft</td> <td colspan="2"></td> <td></td> </tr> <tr> <td>Interval between Packers: 9.00 ft</td> <td colspan="2"></td> <td></td> </tr> <tr> <td>Tool Length: 36.00 ft</td> <td colspan="2"></td> <td></td> </tr> <tr> <td>Number of Packers: 2</td> <td>Diameter: 6.75 inches</td> <td colspan="2"></td> </tr> <tr> <td colspan="4">Tool Comments:</td> </tr> </table>				Drill Pipe: Length: 4858.00 ft	Diameter: 3.80 inches	Volume: 68.14 bbl	Tool Weight: 1800.00 lb	Heavy Wt. Pipe: Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb	Drill Collar: Length: 364.00 ft	Diameter: 2.25 inches	Volume: 1.79 bbl	Weight to Pull Loose: 8000.00 lb	Total Volume: 69.93 bbl			Tool Chased: ft	Drill Pipe Above KB: 30.00 ft			String Weight: Initial 64000.00 lb	Depth to Top Packer: 5219.00 ft			Final 67000.00 lb	Depth to Bottom Packer: ft				Interval between Packers: 9.00 ft				Tool Length: 36.00 ft				Number of Packers: 2	Diameter: 6.75 inches			Tool Comments:																																											
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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Raydon Exp. Inc.

Irish Flats "1-4"

9400 N. Broadway #400
Oklahoma City, OK 73114

4-34S-29W Meade KS

Job Ticket: 14948

DST#: 1

ATTN: Ed Grieves

Test Start: 2001.10.24 @ 08:21:06

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

42 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

120000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbl

Water Loss: 9.56 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
540.00	Gassy Wtr 6%G 94%W	4.259
110.00	O&GcMuddy Wtr 14%G 8%O 45%W 33%M	1.543
50.00	Cln Gassy Oil 45%G 55%O 42 Gravity	0.701
0.00	4522 ft. GIP	0.000
0.00	RW 0.072 at 68 F. 120,000 PPM.	0.000

Total Length: 700.00 ft

Total Volume: 6.503 bbl

Num Fluid Samples: 1

Num Gas Bombs: 1

Serial #: 1

Laboratory Name: Caraway

Laboratory Location: Liberal KS

Recovery Comments:



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

GAS RATES

Raydon Exp. Inc.

Irish Flats "1-4"

9400 N. Broadway #400
Oklahoma City, OK 73114

4-34S-29W Meade KS

Job Ticket: 14948

DST#: 1

ATTN: Ed Grieves

Test Start: 2001.10.24 @ 08:21:06

Gas Rates Information

Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m ³ /d)
2	10	0.13	1.20	5.84
2	10	0.13	1.20	5.84
2	10	0.13	1.20	5.84
2	20	0.13	1.40	5.91
2	30	0.13	1.60	5.99

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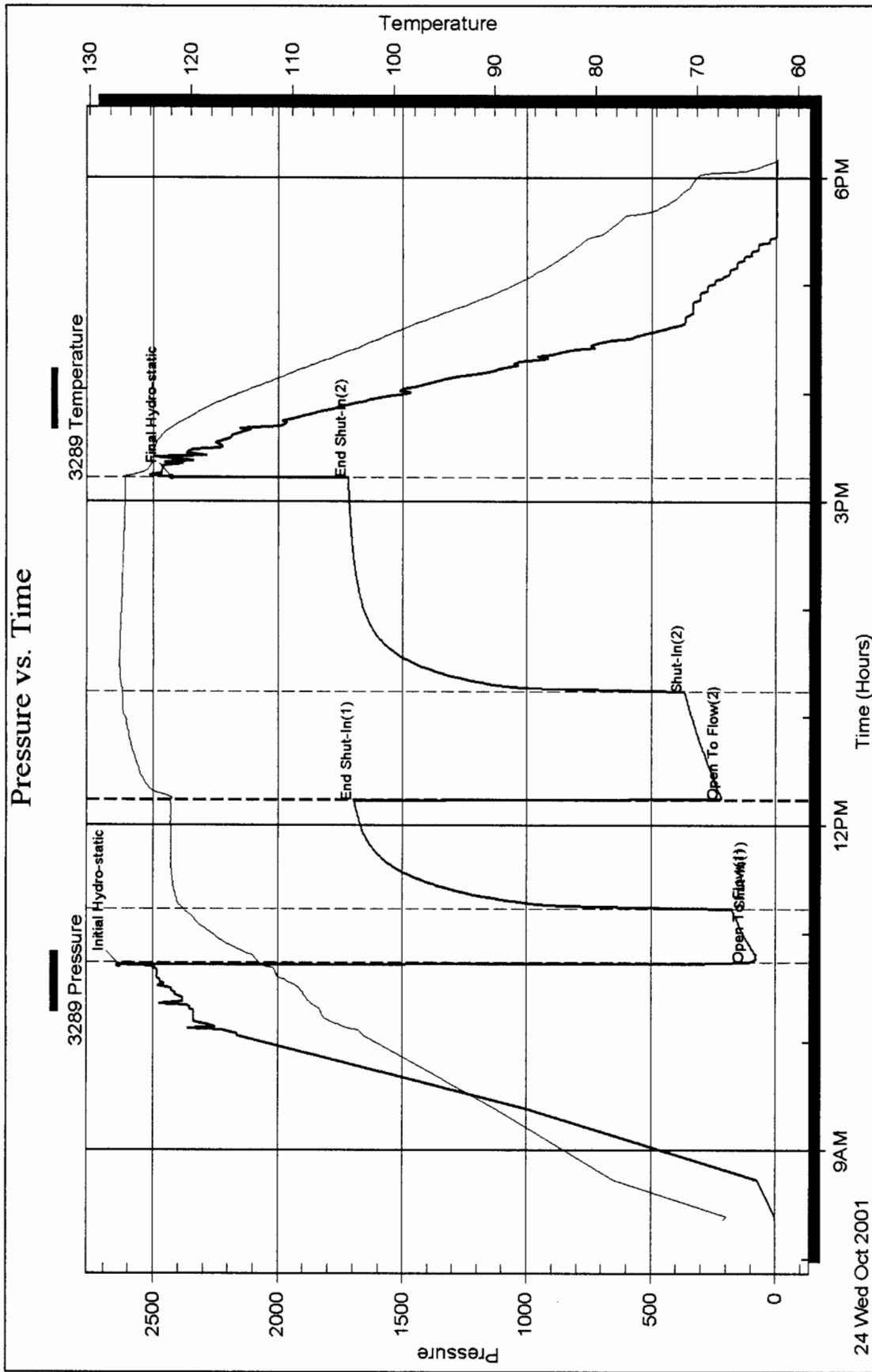
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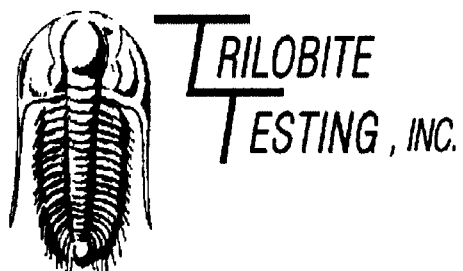
Inside

Raydon Exp. Inc.

4-34S-29W Meade KS

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Raydon Exp. Inc.**

9400 N. Broadway #400
Oklahoma City, OK 73114

ATTN: Ed Grieves

4-34S-29W Meade KS

Irish Flats "1-4"

Start Date: 2001.10.27 @ 03:10:50

End Date: 2001.10.27 @ 12:49:05

Job Ticket #: 13443 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

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Raydon Exp. Inc.

Irish Flats "1-4"

4-34S-29W Meade KS

DST # 2

Morrow Sand Stone

2001.10.27



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Raydon Exp. Inc.
9400 N. Broadway #400
Oklahoma City, OK 73114
ATTN: Ed Grieves

Irish Flats "1-4"
4-34S-29W Meade KS
Job Ticket: 13443 **DST#: 2**
Test Start: 2001.10.27 @ 03:10:50

GENERAL INFORMATION:

Formation: **Morrow Sand Stone**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:46:05

Time Test Ended: 12:49:05

Test Type: Conventional Bottom Hole

Tester: Blake Wallace

Unit No: 20

Interval: **5791.00 ft (KB) To 5826.00 ft (KB) (TVD)**

Total Depth: 5826.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2554.00 ft (KB)

2543.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 3027

Inside

Press@RunDepth: 54.41 psig @ 5794.00 ft (KB)

Start Date: 2001.10.27

End Date:

2001.10.27

Start Time: 03:10:52

End Time:

12:49:05

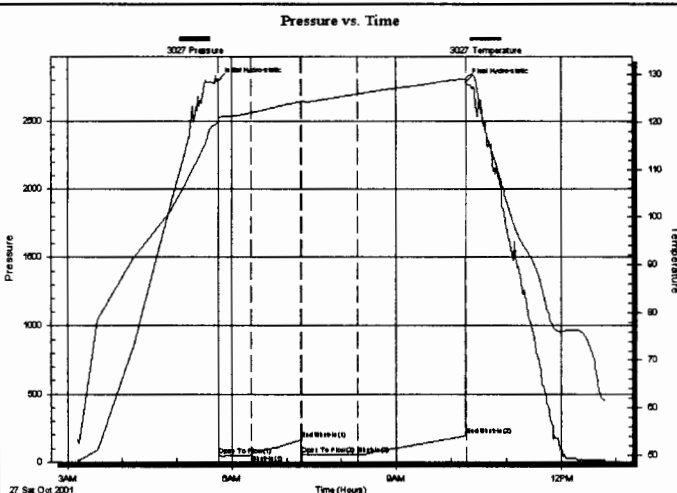
Capacity: 7000.00 psig

Last Calib.: 1899.12.30

Time On Btm: 2001.10.27 @ 05:45:35

Time Off Btm: 2001.10.27 @ 10:16:35

TEST COMMENT: IF-weak surface blow built to 3"
ISI-no blow back
FF-weak surface blow built to 3.5"
FSI-no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2798.80	120.43	Initial Hydro-static
1	45.09	120.70	Open To Flow (1)
37	52.10	121.97	Shut-In(1)
91	164.25	124.32	End Shut-In(1)
92	53.54	124.36	Open To Flow (2)
153	54.41	125.89	Shut-In(2)
271	194.30	129.09	End Shut-In(2)
271	2786.20	129.08	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	100% mud	0.15

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Raydon Exp. Inc.

9400 N. Broadway #400
Oklahoma City, OK 73114

ATTN: Ed Grieves

Irish Flats "1-4"

4-34S-29W Meade KS

Job Ticket: 13443

DST#: 2

Test Start: 2001.10.27 @ 03:10:50

Tool Information

Drill Pipe:	Length: 5409.00 ft	Diameter: 3.80 inches	Volume: 75.87 bbl	Tool Weight: 1800.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 365.00 ft	Diameter: 2.25 inches	Volume: 1.80 bbl	Weight to Pull Loose: 140000.0 lb
			Total Volume: 77.67 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	5791.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	62.00 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
C.O. Sub	1.00			5765.00	
S.I. Tool	5.00			5770.00	
HMV	5.00			5775.00	
Jars	5.00			5780.00	
Safety Joint	2.00			5782.00	
Packer	5.00			5787.00	27.00 Bottom Of Top Packer
Packer	4.00			5791.00	
Stubb	1.00			5792.00	
Perforations	2.00			5794.00	
Recorder	0.00	3027	Inside	5794.00	
Perforations	30.00			5824.00	
Recorder	0.00	11019	Outside	5824.00	
Bullnose	2.00			5826.00	35.00 Bottom Packers & Anchor

Total Tool Length: 62.00



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TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Raydon Exp. Inc.

Irish Flats "1-4"

9400 N. Broadway #400
Oklahoma City, OK 73114

4-34S-29W Meade KS

Job Ticket: 13443

DST#: 2

ATTN: Ed Grieves

Test Start: 2001.10.27 @ 03:10:50

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: 47.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2700.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	100% mud	0.148

Total Length: 30.00 ft

Total Volume: 0.148 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

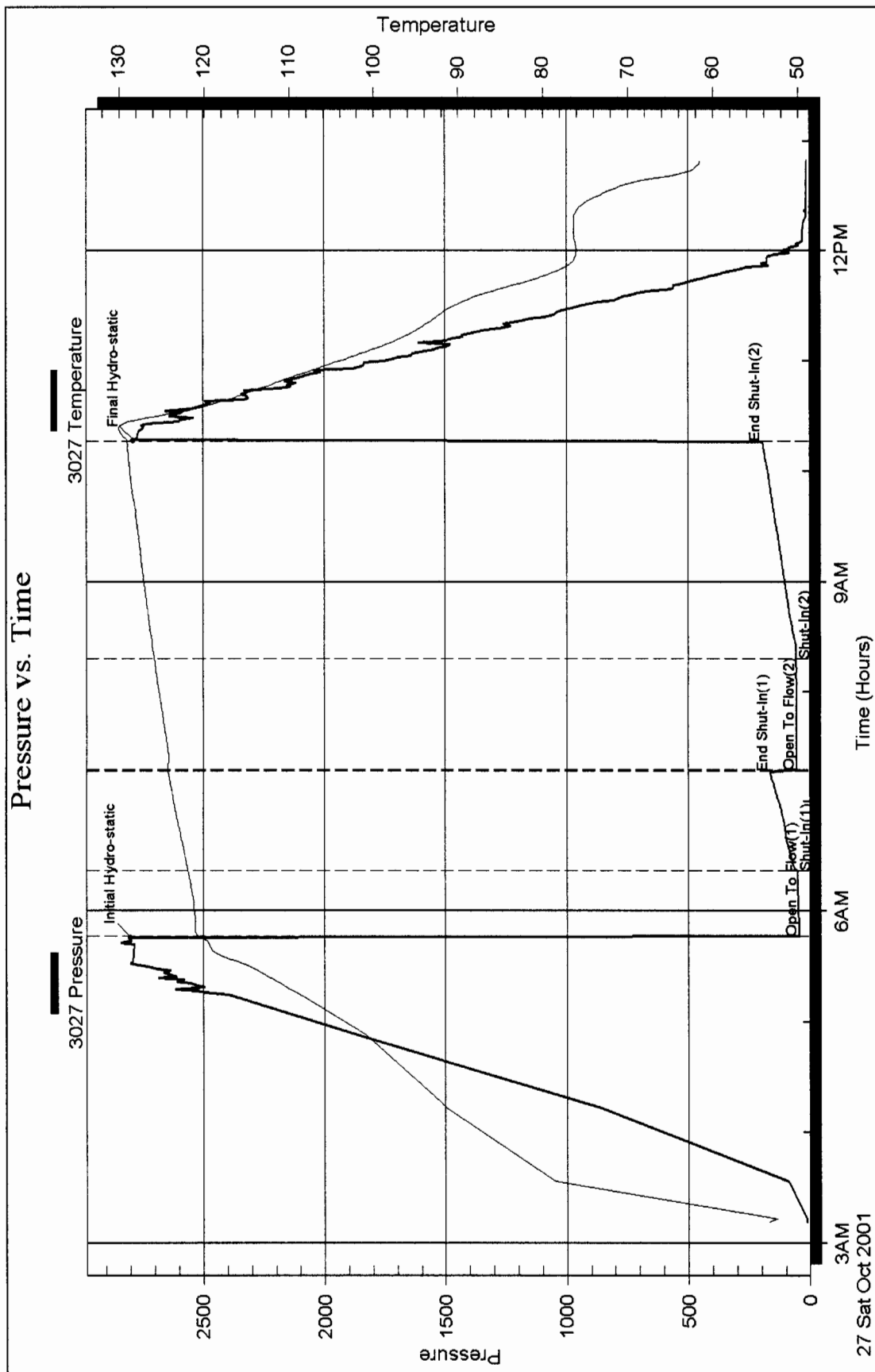
DST Test Number: 2

4-34S-29W Meade KS

Inside Raydon Exp. Inc.

Serial #: 3027

Pressure vs. Time



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Ref. No: 13443

Tribble Testing, Inc



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Raydon Exp. Inc.**

9400 N. Broadway #400
Oklahoma City, OK 73114

ATTN: Ed Grieves

4-34S-29W Meade KS

Irish Flats "1-4"

Start Date: 2001.10.28 @ 06:06:13

End Date: 2001.10.28 @ 15:39:58

Job Ticket #: 13444 DST #: 3

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

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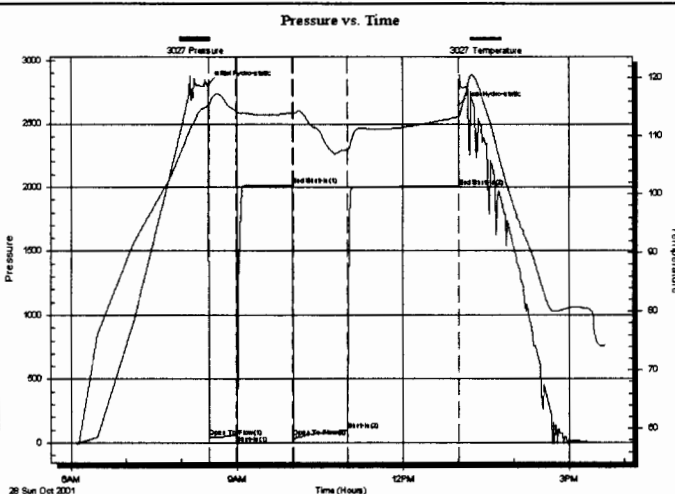
Irish Flats "1-4"
4-34S-29W Meade KS
Job Ticket: 13444 **DST#: 3**
Test Start: 2001.10.28 @ 06:06:13

GENERAL INFORMATION:

Formation: **Chester**
Deviated: **No** Whipstock: **ft (KB)**
Time Tool Opened: 08:29:43
Time Test Ended: 15:39:58
Interval: **5840.00 ft (KB) To 5889.00 ft (KB) (TVD)**
Total Depth: **5889.00 ft (KB) (TVD)**
Hole Diameter: **7.88 inches** Hole Condition: **Fair**
Test Type: **Conventional Bottom Hole**
Tester: **Blake Wallace**
Unit No: **20**
Reference Elevations: **2554.00 ft (KB)**
2543.00 ft (CF)
KB to GR/CF: **11.00 ft**

Serial #: 3027 **Inside**
Press@RunDepth: **96.89 psig @ 5842.00 ft (KB)**
Start Date: **2001.10.28** End Date: **2001.10.28**
Start Time: **06:06:15** End Time: **15:39:58**
Capacity: **7000.00 psig**
Last Calib.: **1899.12.30**
Time On Btm: **2001.10.28 @ 08:28:58**
Time Off Btm: **2001.10.28 @ 13:00:58**

TEST COMMENT: IF-strong blow BOB 15 sec GTS 20 min
ISI-no blow back
FF-strong blow BOB as soon as open
FSI-no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2808.60	115.19	Initial Hydro-static
1	42.66	115.37	Open To Flow (1)
31	56.64	114.16	Shut-In(1)
92	2013.08	114.01	End Shut-In(1)
92	40.92	114.05	Open To Flow (2)
151	96.89	107.61	Shut-In(2)
272	2000.10	113.32	End Shut-In(2)
273	2643.24	113.31	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	30% G 70% O	0.30
60.00	20% O 30% M 50% G	0.30
60.00	5% G 95% M	0.30

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	1.00	5.76
Last Gas Rate	0.13	21.00	13.25
Max. Gas Rate	0.13	21.00	13.25



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Raydon Exp. Inc.

9400 N. Broadway #400
Oklahoma City, OK 73114

ATTN: Ed Grieves

Irish Flats "1-4"

4-34S-29W Meade KS

Job Ticket: 13444

DST#: 3

Test Start: 2001.10.28 @ 06:06:13

Tool Information

Drill Pipe:	Length: 5471.00 ft	Diameter: 3.80 inches	Volume: 76.74 bbl	Tool Weight:	1800.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 365.00 ft	Diameter: 2.25 inches	Volume: 1.80 bbl	Weight to Pull Loose:	110000.0 lb
			Total Volume: 78.54 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial	78000.00 lb
Depth to Top Packer:	5840.00 ft			Final	80000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	49.00 ft				
Tool Length:	76.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
C.O. Sub	1.00			5814.00		
S.I. Tool	5.00			5819.00		
HMV	5.00			5824.00		
Jars	5.00			5829.00		
Safety Joint	2.00			5831.00		
Packer	5.00			5836.00	27.00	Bottom Of Top Packer
Packer	4.00			5840.00		
Stubb	1.00			5841.00		
Perforations	1.00			5842.00		
Recorder	0.00	3027	Inside	5842.00		
Perforations	7.00			5849.00		
C.O. Sub	1.00			5850.00		
Blank Spacing	31.00			5881.00		
C.O. Sub	1.00			5882.00		
Perforations	5.00			5887.00		
Recorder	0.00	11019	Outside	5887.00		
Bullnose	2.00			5889.00	49.00	Bottom Packers & Anchor
Total Tool Length:		76.00				

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TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Raydon Exp. Inc.

Irish Flats "1-4"

9400 N. Broadway #400
Oklahoma City, OK 73114

4-34S-29W Meade KS

Job Ticket: 13444

DST#: 3

ATTN: Ed Grieves

Test Start: 2001.10.28 @ 06:06:13

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: 54.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	30% G 70% O	0.295
60.00	20% O 30% M 50% G	0.295
60.00	5% G 95% M	0.295

Total Length: 180.00 ft

Total Volume: 0.885 bbl

Num Fluid Samples: 1

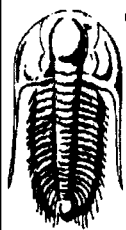
Num Gas Bombs: 0

Serial #:

Laboratory Name: Caraway

Laboratory Location: Liberal, Ks

Recovery Comments:



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

GAS RATES

Raydon Exp. Inc.

Irish Flats "1-4"

9400 N. Broadway #400
Oklahoma City, OK 73114

4-34S-29W Meade KS

Job Ticket: 13444

DST#: 3

ATTN: Ed Grieves

Test Start: 2001.10.28 @ 06:06:13

Gas Rates Information

Temperature: 59 deg C

Relative Density: 0.65

Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m³/d)
1	20	0.13	1.00	5.76
1	20	0.13	1.00	5.76
1	20	0.13	1.00	5.76
1	30	0.13	4.00	6.89
2	10	0.13	6.00	7.63
2	20	0.13	11.00	9.51
2	30	0.13	18.00	12.13
2	40	0.13	21.00	13.25

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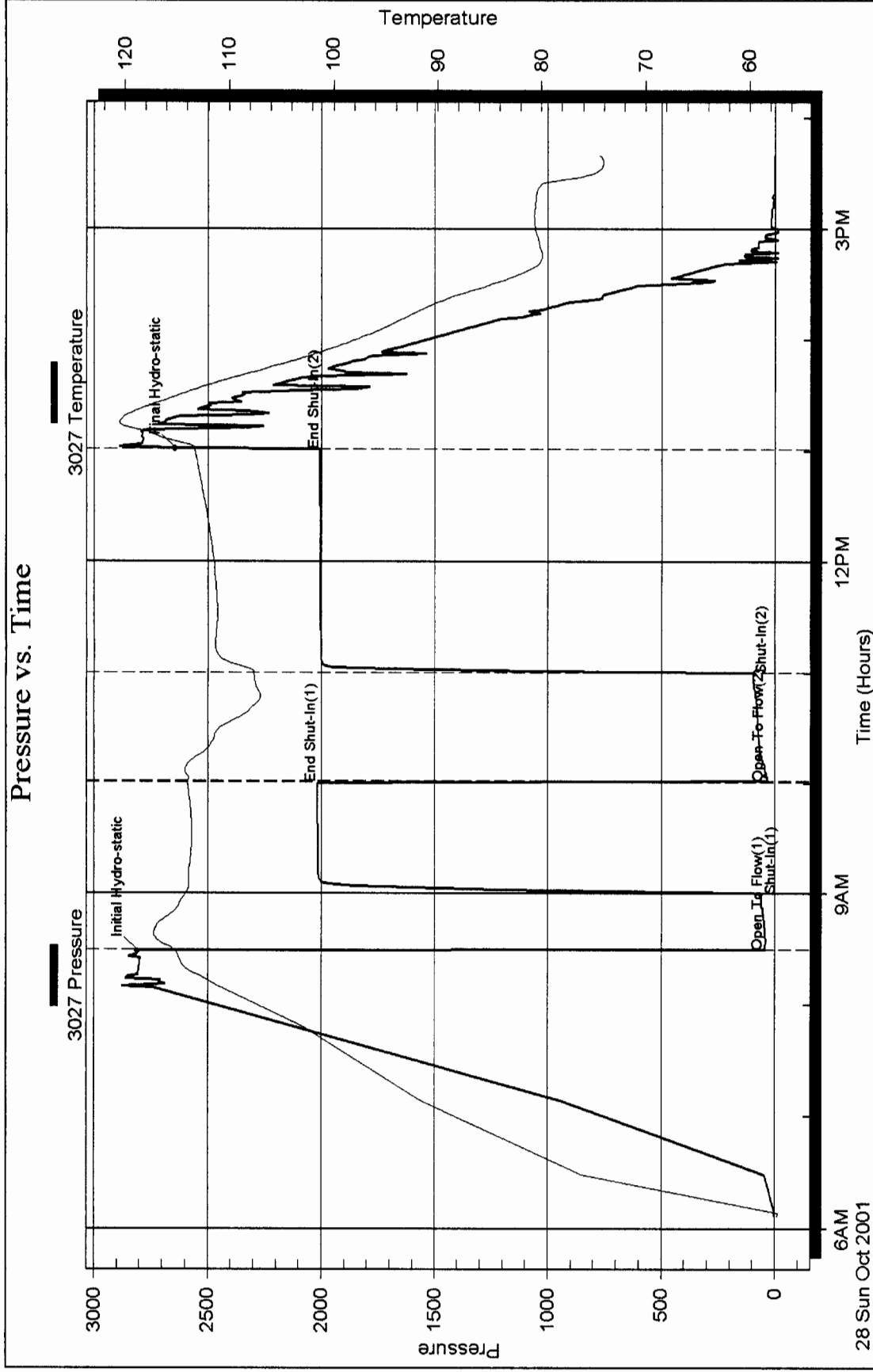
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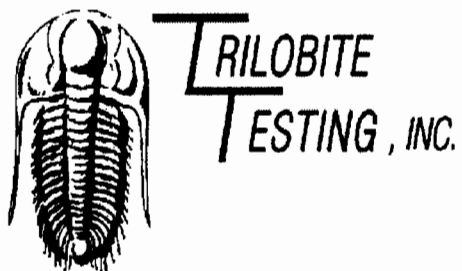
Inside

Raydon Exp. Inc.

4-34S-29W Meade KS

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Raydon Exp. Inc.**

9400 N. Broadway #400
Oklahoma City, OK 73114

ATTN: Ed Grieves

4-34S-29W Meade KS

Irish Flats "1-4"

Start Date: 2001.10.29 @ 15:20:30

End Date: 2001.10.30 @ 01:33:15

Job Ticket #: 13445 DST #: 4

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

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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Raydon Exp. Inc.

9400 N. Broadway #400
Oklahoma City, OK 73114

ATTN: Ed Grieves

Irish Flats "1-4"

4-34S-29W Meade KS

Job Ticket: 13445

DST#: 4

Test Start: 2001.10.29 @ 15:20:30

GENERAL INFORMATION:

Formation: **Chester**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:27:30

Time Test Ended: 01:33:15

Test Type: Conventional Bottom Hole

Tester: Blake Wallace

Unit No: 20

Interval: **5970.00 ft (KB) To 6022.00 ft (KB) (TVD)**

Total Depth: 6022.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2554.00 ft (KB)

2543.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 3027

Inside

Press@RunDepth: 66.93 psig @ 5972.00 ft (KB)

Start Date: 2001.10.29

End Date:

2001.10.30

Start Time: 15:20:32

End Time:

01:33:15

Capacity: 7000.00 psig

Last Calib.: 1899.12.30

Time On Btm: 2001.10.29 @ 17:23:45

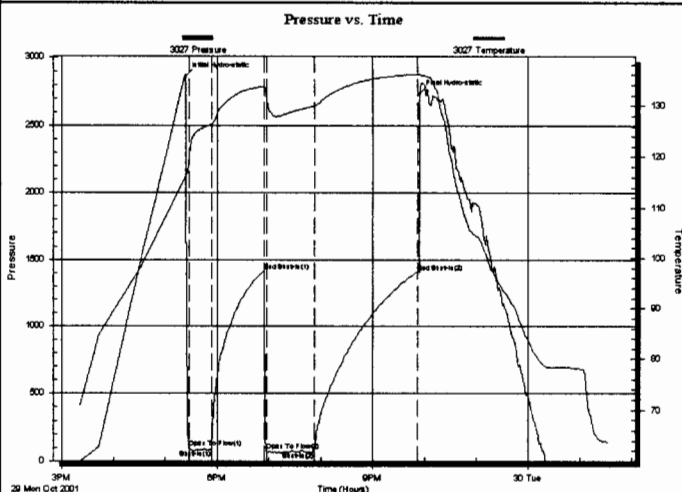
Time Off Btm: 2001.10.29 @ 21:54:15

TEST COMMENT: IF-strong blow BOB 30 sec GTS 4 min

ISI-no blow back

FF-strong blow BOB as soon as open too little to gauge after 23 min

FSI-no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2863.01	116.14	Initial Hydro-static
4	97.15	120.01	Open To Flow (1)
31	83.13	126.43	Shut-In (1)
91	1413.88	133.56	End Shut-In (1)
94	73.32	131.42	Open To Flow (2)
150	66.93	129.95	Shut-In (2)
268	1407.41	136.06	End Shut-In (2)
271	2730.15	136.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	100% gas cut mud	0.89

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	14.00	10.63
Last Gas Rate	0.13	10.00	9.13
Max. Gas Rate	0.13	14.00	10.63



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Raydon Exp. Inc.

9400 N. Broadway #400
Oklahoma City, OK 73114

ATTN: Ed Grieves

Irish Flats "1-4"

4-34S-29W Meade KS

Job Ticket: 13445

DST#: 4

Test Start: 2001.10.29 @ 15:20:30

Tool Information

Drill Pipe:	Length: 5597.00 ft	Diameter: 3.80 inches	Volume: 78.51 bbl	Tool Weight:	1800.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 365.00 ft	Diameter: 2.25 inches	Volume: 1.80 bbl	Weight to Pull Loose:	90000.00 lb
		Total Volume:	80.31 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial	78000.00 lb
Depth to Top Packer:	5970.00 ft			Final	81000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	52.00 ft				
Tool Length:	79.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

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Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			5944.00	
S.I. Tool	5.00			5949.00	
HMV	5.00			5954.00	
Jars	5.00			5959.00	
Safety Joint	2.00			5961.00	
Packer	5.00			5966.00	27.00 Bottom Of Top Packer
Packer	4.00			5970.00	
Stubb	1.00			5971.00	
Perforations	1.00			5972.00	
Recorder	0.00	3027	Inside	5972.00	
Perforations	15.00			5987.00	
C.O. Sub	1.00			5988.00	
Blank Spacing	31.00			6019.00	
C.O. Sub	1.00			6020.00	
Recorder	0.00	11019	Outside	6020.00	
Bullnose	2.00			6022.00	52.00 Bottom Packers & Anchor
Total Tool Length:	79.00				



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Raydon Exp. Inc.

Irish Flats "1-4"

9400 N. Broadway #400
Oklahoma City, OK 73114

4-34S-29W Meade KS

Job Ticket: 13445

DST#: 4

ATTN: Ed Grieves

Test Start: 2001.10.29 @ 15:20:30

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: 52.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2300.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	100% gas cut mud	0.885

Total Length: 180.00 ft

Total Volume: 0.885 bbl

Num Fluid Samples: 1

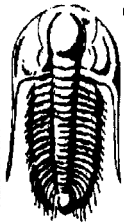
Num Gas Bombs: 0

Serial #:

Laboratory Name: Caraway

Laboratory Location: Liberal, KS

Recovery Comments:



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DRILL STEM TEST REPORT

GAS RATES

Raydon Exp. Inc.

9400 N. Broadway #400
Oklahoma City, OK 73114

ATTN: Ed Grieves

Irish Flats "1-4"

4-34S-29W Meade KS

Job Ticket: 13445

DST#: 4

Test Start: 2001.10.29 @ 15:20:30

Gas Rates Information

Temperature: 59 deg C

Relative Density: 0.65

Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m³/d)
1	10	0.13	14.00	10.63
1	10	0.13	14.00	10.63
1	20	0.13	10.00	9.13
1	30	0.13	5.00	7.26
2	10	0.13	10.00	9.13

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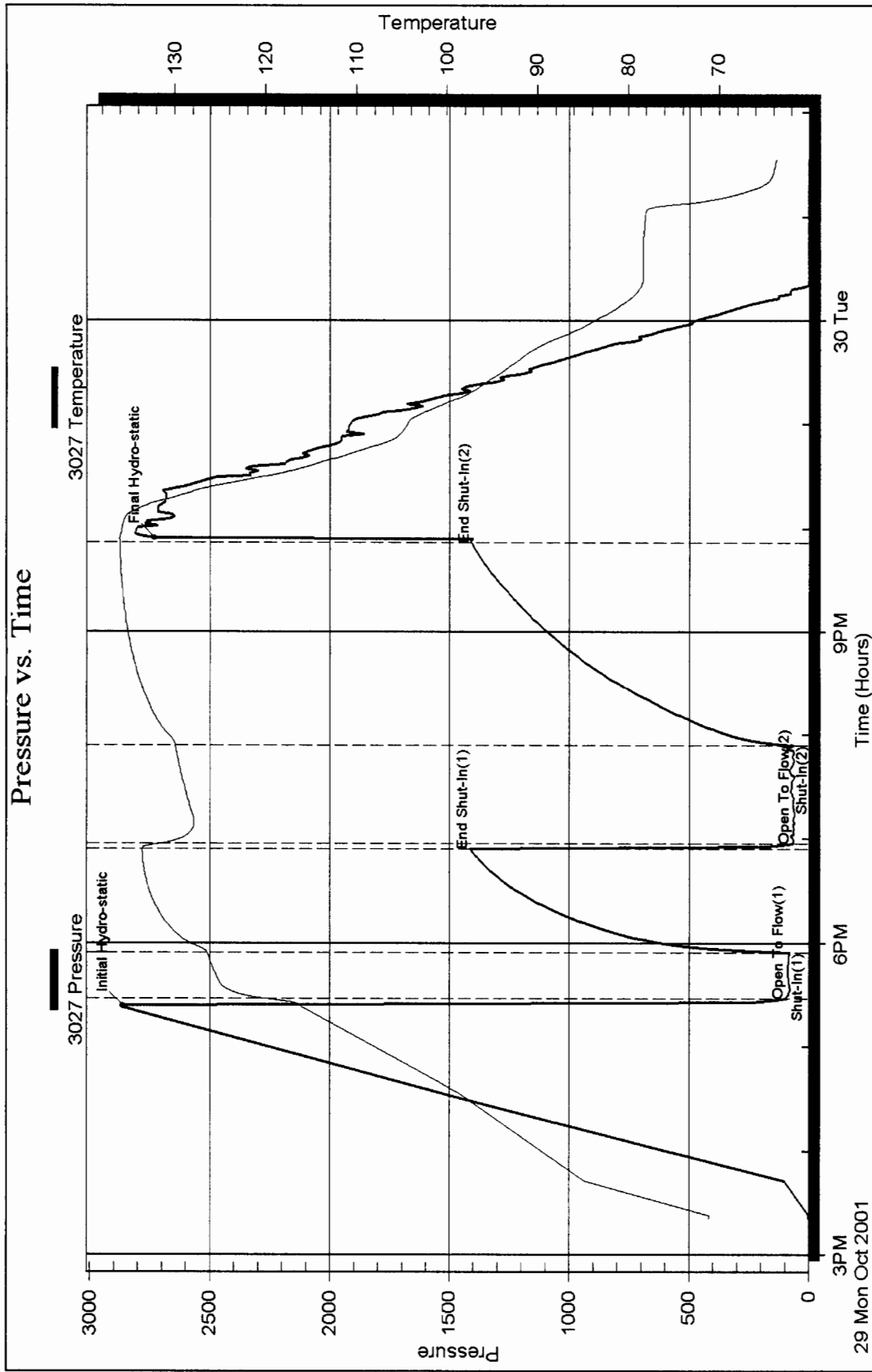
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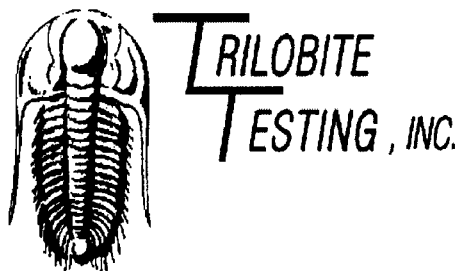
Inside

Raydon Exp. Inc.

4-34S-29W Meade KS

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **Raydon Exp. Inc.**

9400-N. Broadway #400
Oklahoma City, OK 73114

ATTN: Ed Grieves

4-34S-29W Meade KS

Irish Flats "1-4"

Start Date: 2001.10.31 @ 00:14:32

End Date: 2001.10.31 @ 09:45:02

Job Ticket #: 13446

DST #: 5

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

**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Raydon Exp. Inc.

9400 N. Broadway #400
Oklahoma City, OK 73114

ATTN: Ed Grieves

Irish Flats "1-4"

4-34S-29W Meade KS

Job Ticket: 13446

DST#: 5

Test Start: 2001.10.31 @ 00:14:32

GENERAL INFORMATION:

Formation: **Lower Chester sand s**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:43:17

Time Test Ended: 09:45:02

Test Type: Conventional Bottom Hole

Tester: Blake Wallace

Unit No: 20

Interval: 6103.00 ft (KB) To 6161.00 ft (KB) (TVD)

Total Depth: 6161.00 ft (KB) (TVD)

Reference Elevations: 2554.00 ft (KB)

2543.00 ft (CF)

Hole Diameter: 7.88 inchesHole Condition: Fair

KB to GR/CF: 11.00 ft

Serial #: 3027

Inside

Press@RunDepth: 85.12 psig @ 6106.00 ft (KB)

Start Date: 2001.10.31

End Date:

2001.10.31

Capacity: 7000.00 psig

Last Calib.: 1899.12.30

Start Time: 00:14:34

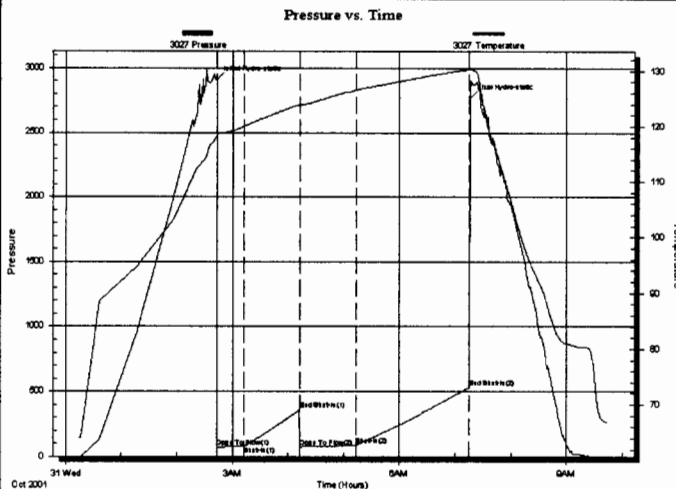
End Time:

09:45:02

Time On Btm: 2001.10.31 @ 02:42:47

Time Off Btm: 2001.10.31 @ 07:15:32

TEST COMMENT: IF-fair blow built to 8"
IS- no blow back
FF-fair blow built to 9"
FSI-no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2913.08	118.24	Initial Hydro-static
1	75.02	118.47	Open To Flow (1)
31	78.45	120.07	Shut-In(1)
90	357.51	123.91	End Shut-In(1)
91	73.46	123.96	Open To Flow (2)
151	85.12	126.53	Shut-In(2)
273	531.70	130.29	End Shut-In(2)
273	2772.09	130.22	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
80.00	5% O 95% M	0.39
60.00	80% O 20%M	0.30

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Raydon Exp. Inc.

9400 N. Broadway #400
Oklahoma City, OK 73114

ATTN: Ed Grieves

Irish Flats "1-4"

4-34S-29W Meade KS

Job Ticket: 13446

DST#: 5

Test Start: 2001.10.31 @ 00:14:32

Tool Information

Drill Pipe:	Length: 5720.00 ft	Diameter: 3.80 inches	Volume: 80.24 bbl	Tool Weight: 1800.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 365.00 ft	Diameter: 2.25 inches	Volume: 1.80 bbl	Weight to Pull Loose: 100000.0 lb
		Total Volume: 82.04 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 80000.00 lb
Depth to Top Packer:	6103.00 ft			Final 80000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	58.00 ft			
Tool Length:	85.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
C.O. Sub	1.00			6077.00		
S.I. Tool	5.00			6082.00		
HMV	5.00			6087.00		
Jars	5.00			6092.00		
Safety Joint	2.00			6094.00		
Packer	5.00			6099.00	27.00	Bottom Of Top Packer
Packer	4.00			6103.00		
Stubb	1.00			6104.00		
Perforations	2.00			6106.00		
Recorder	0.00	3027	Inside	6106.00		
Perforations	15.00			6121.00		
C.O. Sub	1.00			6122.00		
Blank Spacing	31.00			6153.00		
C.O. Sub	1.00			6154.00		
Perforations	5.00			6159.00		
Recorder	0.00	11019	Outside	6159.00		
Bullnose	2.00			6161.00	58.00	Bottom Packers & Anchor
Total Tool Length:		85.00				

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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Raydon Exp. Inc.

Irish Flats "1-4"

9400 N. Broadway #400
Oklahoma City, OK 73114

4-34S-29W Meade KS

Job Ticket: 13446

DST#: 5

ATTN: Ed Grieves

Test Start: 2001.10.31 @ 00:14:32

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: 54.00 sec/qt

Cushion Volume:

bbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 21000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
80.00	5% O 95% M	0.393
60.00	80% O 20%M	0.295

Total Length: 140.00 ft

Total Volume: 0.688 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

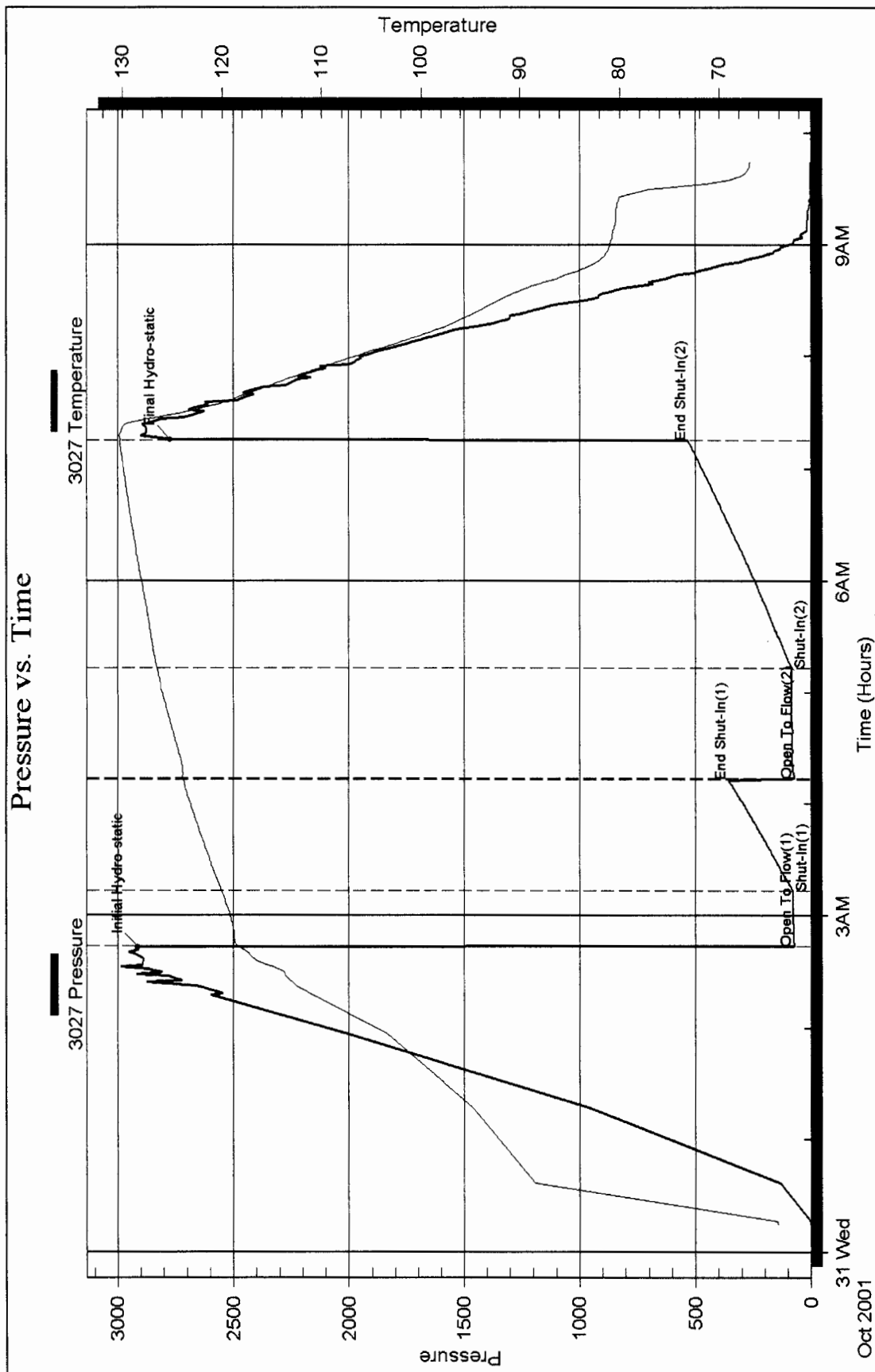
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



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