



DRILL STEM TEST REPORT

Prepared For: **Mai Oil Operations**

P.O. Box 33
Russell, Ks. 67665

ATTN: Allen Bangert

Sec29-10-20-Rooks-Ks

Keller #3

Start Date: 2001.02.21 @ 10:35:00

End Date: 2001.02.21 @ 15:14:00

Job Ticket #: 14171 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

Mai Oil Operations

P.O. Box 33
Russell, Ks. 67665

ATTN: Allen Bangert

Keller #3

Sec29-10-20-Rooks-Ks

Job Ticket: 14171

DST#: 1

Test Start: 2001.02.21 @ 10:35:00

GENERAL INFORMATION:

Formation: **Topeka**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:23:02

Time Test Ended: 15:14:00

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 11

Interval: **3197.00 ft (KB) To 3218.00 ft (KB) (TVD)**

Total Depth: 3218.00 ft (KB)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 2144.00 ft (KB)

2139.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: **2357**

Press@RunDepth: 61.09 psig @ ft (KB)

Start Date: 2001.02.21

End Date:

2001.02.21

Start Time: 10:35:03

End Time:

16:55:32

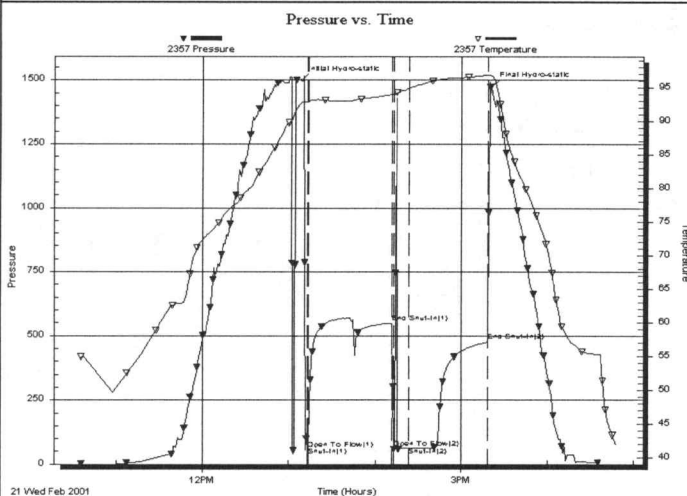
Capacity: 7000.00 psig

Last Calib.: 1899.12.30

Time On Btm: 2001.02.21 @ 13:08:32

Time Off Btm: 2001.02.21 @ 15:21:32

TEST COMMENT: Slid tool 12' to bottom Flushed tool on FF-Tool plugging on IF IF-Weak died in 13 min
FF-Weak steady surface blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
154	1499.46	92.66	Initial Hydro-static
158	56.44	92.94	Open To Flow (1)
159	64.17	92.97	Shut-In(1)
217	549.51	93.94	End Shut-In(1)
218	58.60	93.97	Open To Flow (2)
228	61.09	94.86	Shut-In(2)
284	475.25	96.83	End Shut-In(2)
287	1475.01	96.75	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	Drilling mud	0.34

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operations

Keller #3

P.O. Box 33
Russell, Ks. 67665

Sec29-10-20-Rooks-Ks

Job Ticket: 14171

DST#: 1

ATTN: Allen Bangert

Test Start: 2001.02.21 @ 10:35:00

Tool Information

Drill Pipe:	Length:	3025.00 ft	Diameter:	3.80 inches	Volume:	42.43 bbl	Tool Weight:	1000.00 lb
Drill Collar:	Length:	184.00 ft	Diameter:	2.25 inches	Volume:	0.90 bbl	Weight set on Packer:	30000.00 lb
Heavy Wt. Pipe:	Length:	0.01 ft	Diameter:	0.01 inches	Volume:	0.00 bbl	Weight to Pull Loose:	70000.00 lb
Drill Pipe Above KB:		33.01 ft					Tool Chased	12.00 ft
Depth to Top Packer:		3192.00 ft					String Weight: Initial	42000.00 lb
Depth to Bottom Packer:		ft					Final	42000.00 lb
Interval between Packers:		ft						
Tool Length:		41.02 ft						
Number of Packers:		2	Diameter:	6.75 inches				

Tool Comments

Slid tool 12' to bottom Flushed tool on FF-Tool plugging on IF

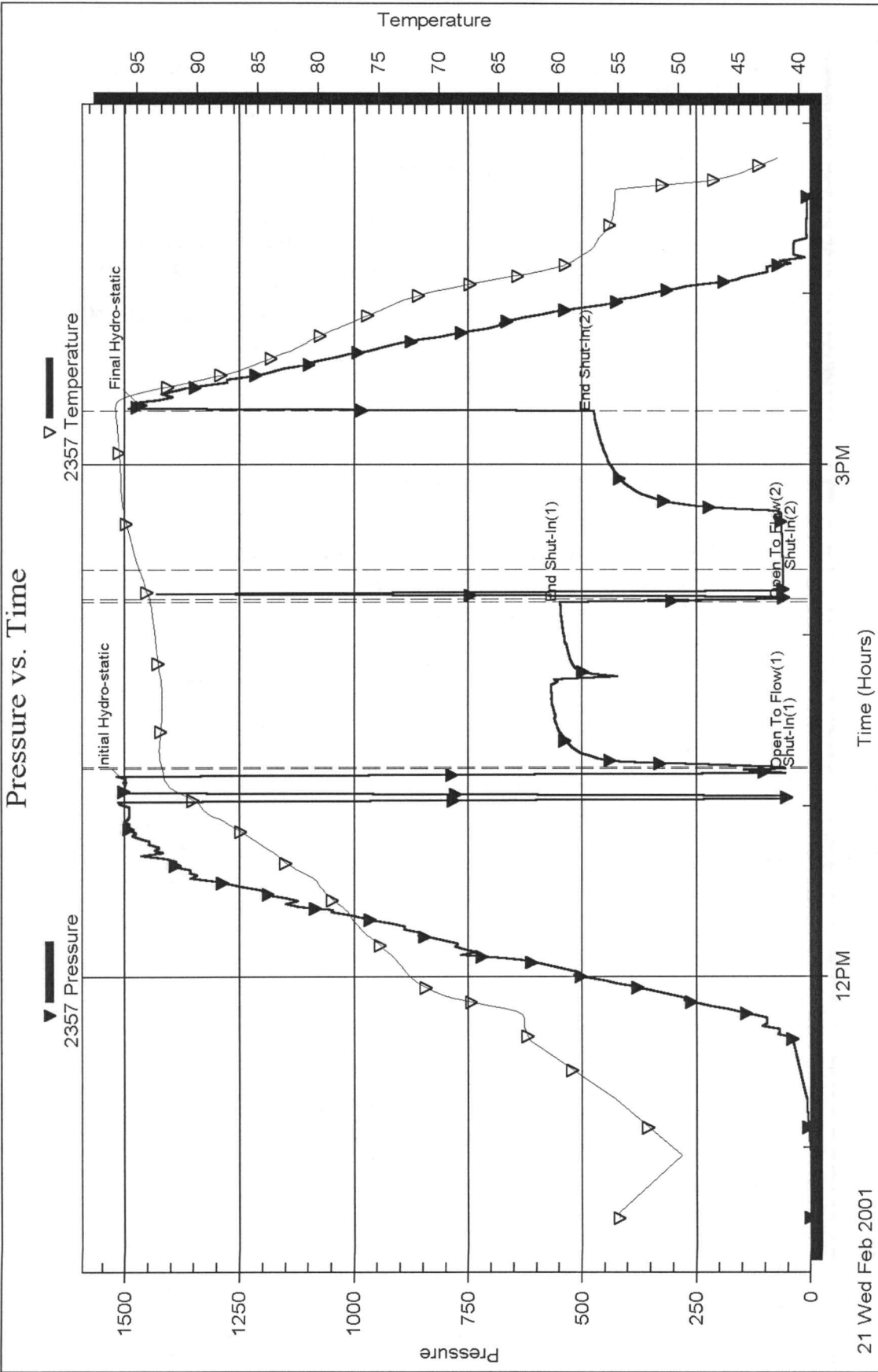
Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
C.O. Sub	1.00			3177.00		
S.I. Tool	5.00			3182.00		
HYD S.I. Tool	5.00			3187.00		
Packer	5.00			3192.00	16.00	Bottom Of Top Packer
Packer	5.00			3197.00		
Stubb	1.00			3198.00		
Recorder	0.01	2357	Inside	3198.01		
Perforations	14.00			3212.01		
Recorder	0.01	13254	Outside	3212.02		
Bullnose	5.00			3217.02	25.02	Bottom Packers & Anchor
Total Tool Length:		41.02				

Serial #: 2357

Mai Oil Operations

Sec29-10-20-Rooks-Ks

Pressure vs. Time





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DRILL STEM TEST REPORT

Prepared For: **Mai Oil Operations**

P.O. Box 33
Russell, Ks. 67665

ATTN: Allen Bangert

Sec29-10-20-Rooks-Ks

Keller #3

Start Date: 2001.02.22 @ 18:00:00

End Date: 2001.02.22 @ 23:00:00

Job Ticket #: 14172 DST #: 2

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DRILL STEM TEST REPORT

Mai Oil Operations

P.O. Box 33
Russell, Ks. 67665

ATTN: Allen Bangert

Keller #3

Sec29-10-20-Rooks-Ks

Job Ticket: 14172

DST#: 2

Test Start: 2001.02.22 @ 18:00:00

GENERAL INFORMATION:

Formation: **LKC**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 19:07:00

Time Test Ended: 23:00:00

Test Type: **Conventional Bottom Hole**

Tester: **Dan Bangle**

Unit No: **11**

Interval: **3434.00 ft (KB) To 3528.00 ft (KB) (TVD)**

Total Depth: **3528.00 ft (KB)**

Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **2144.00 ft (KB)**

2139.00 ft (CF)

KB to GR/CF: **5.00 ft**

Serial #: 2357 Inside

Press@RunDepth: **137.89 psig @ 3441.01 ft (KB)**

Start Date: **2001.02.22**

End Date:

2001.02.23

Start Time: **18:00:31**

End Time:

01:00:30

Capacity: **7000.00 psig**

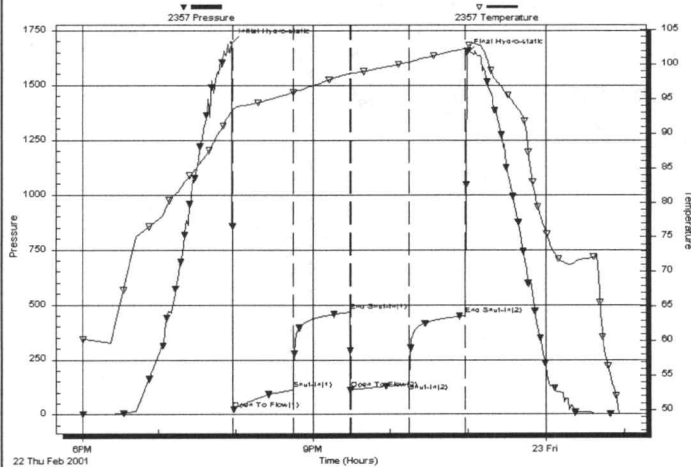
Last Calib.: **1899.12.30**

Time On Btm: **2001.02.22 @ 19:57:00**

Time Off Btm: **2001.02.22 @ 22:59:00**

TEST COMMENT: **IF- Weak building to 5"**
FF-Weak building to 1/2"

Pressure vs. Time



PRESSURE SUMMARY

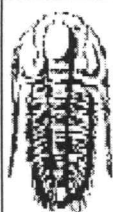
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
117	1692.61	93.17	Initial Hydro-static
118	20.99	93.43	Open To Flow (1)
164	111.08	95.93	Shut-In(1)
208	466.26	98.67	End Shut-In(1)
209	111.98	98.70	Open To Flow (2)
254	137.89	100.30	Shut-In(2)
298	449.19	102.28	End Shut-In(2)
299	1642.98	102.36	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
128.00	Drilling mud	0.63
128.00	Muddy water Rw.35@70=28000ppm	1.29

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operations

Keller #3

P.O. Box 33
Russell, Ks. 67665

Sec29-10-20-Rooks-Ks

Job Ticket: 14172

DST#: 2

ATTN: Allen Bangert

Test Start: 2001.02.22 @ 18:00:00

Tool Information

Drill Pipe:	Length: 3254.00 ft	Diameter: 3.80 inches	Volume: 45.65 bbl	Tool Weight: 1500.00 lb
Drill Collar:	Length: 184.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight set on Packer: 30000.00 lb
Heavy Wt. Pipe:	Length: 0.01 ft	Diameter: 0.01 inches	Volume: 0.00 bbl	Weight to Pull Loose: 45000.00 lb
Drill Pipe Above KB:	25.01 ft			Tool Chased 0.01 ft
Depth to Top Packer:	3429.00 ft			String Weight: Initial 42000.00 lb
Depth to Bottom Packer:	ft			Final 42000.00 lb
Interval between Packers:	ft			
Tool Length:	115.02 ft			
Number of Packers:	2	Diameter: 6.75 inches		

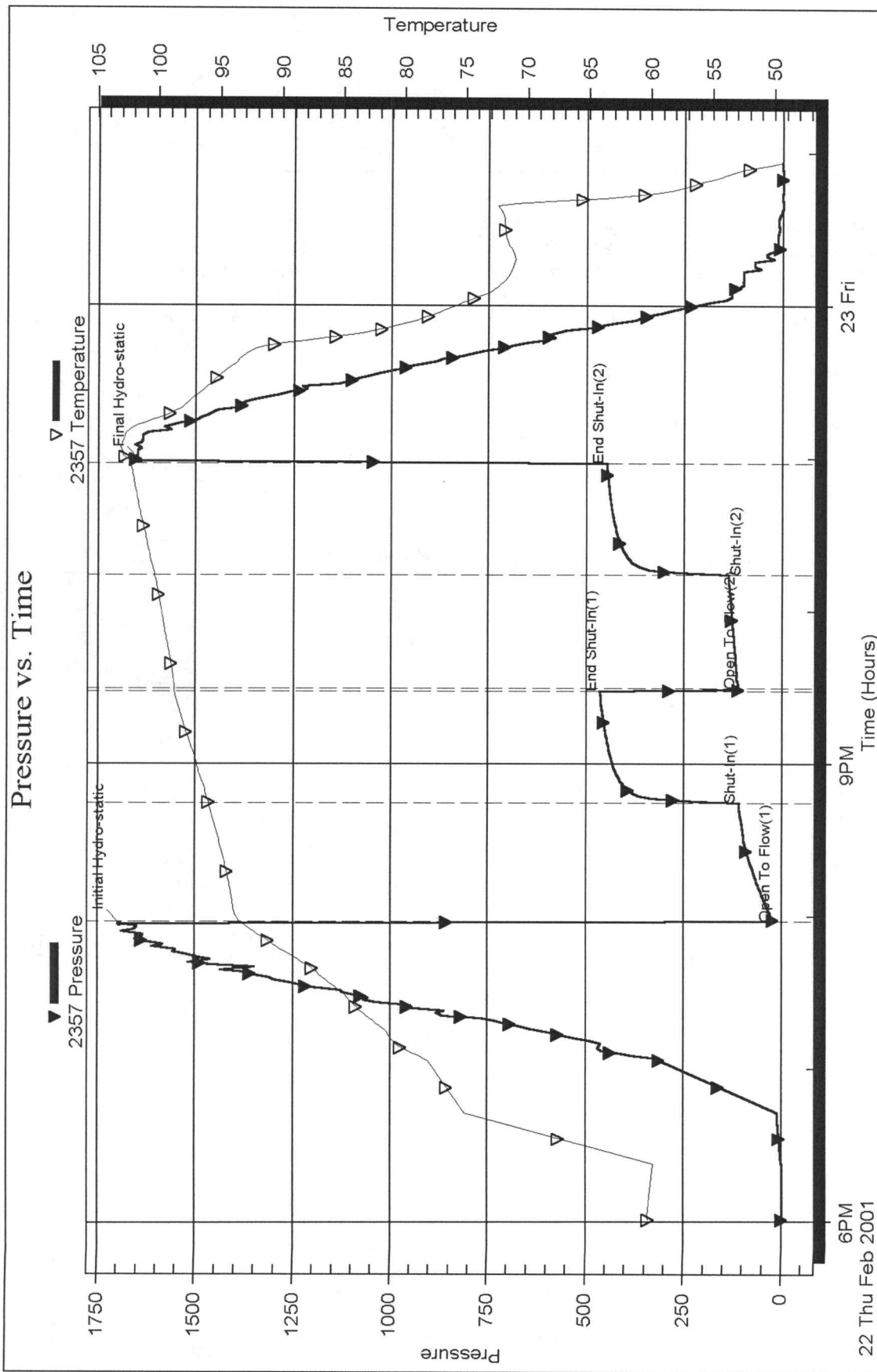
Tool Comments

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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C.O. Sub	1.00			3414.00	
S.I. Tool	5.00			3419.00	
HYD S.I. Tool	5.00			3424.00	
Packer	5.00			3429.00	16.00 Bottom Of Top Packer
Packer	5.00			3434.00	
Stubb	1.00			3435.00	
Perforations	5.00			3440.00	
C.O. Sub	1.00			3441.00	
Recorder	0.01	2357	Inside	3441.01	
Blank Spacing	61.00			3502.01	
C.O. Sub	1.00			3503.01	
Recorder	0.01	13254	Outside	3503.02	
Perforations	20.00			3523.02	
Bullnose	5.00			3528.02	99.02 Bottom Packers & Anchor

Total Tool Length: 115.02

Pressure vs. Time





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P.O. Box 33
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ATTN: Allen Bangert

Sec29-10-20-Rooks-Ks

Keller #3

Start Date: 2001.02.23 @ 11:22:00

End Date: 2001.02.23 @ 16:40:00

Job Ticket #: 14173 DST #: 3

Trilobite Testing, Inc

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DRILL STEM TEST REPORT

Mai Oil Operations

P.O. Box 33
Russell, Ks. 67665

ATTN: Allen Bangert

Keller #3

Sec29-10-20-Rooks-Ks

Job Ticket: 14173

DST#: 3

Test Start: 2001.02.23 @ 11:22:00

GENERAL INFORMATION:

Formation: "H-I" LKC

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:47:30

Time Test Ended: 16:40:00

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 11

Interval: 3545.00 ft (KB) To 3590.00 ft (KB) (TVD)

Total Depth: 3590.00 ft (KB)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2144.00 ft (KB)

2139.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 2357

Press@RunDepth: 66.49 psig @ ft (KB)

Start Date: 2001.02.23

End Date:

2001.02.23

Start Time: 11:22:31

End Time:

18:30:30

Capacity: 7000.00 psig

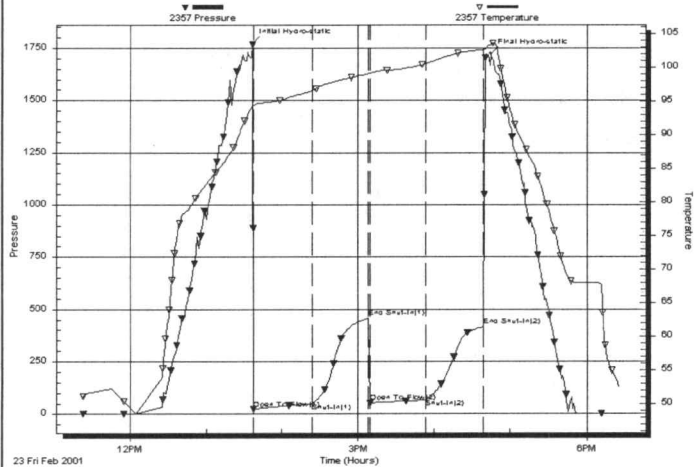
Last Calib.: 1899.12.30

Time On Btm: 2001.02.23 @ 13:36:30

Time Off Btm: 2001.02.23 @ 16:44:30

TEST COMMENT: 120' Gas in pipe IF-Weak building to 4"
FF-Weak building to 3"

Pressure vs. Time



PRESSURE SUMMARY

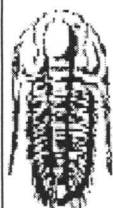
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
134	1773.26	94.31	Initial Hydro-static
135	21.87	94.50	Open To Flow (1)
181	48.29	96.62	Shut-In(1)
226	457.35	99.15	End Shut-In(1)
227	51.23	99.20	Open To Flow (2)
271	66.49	100.59	Shut-In(2)
317	416.63	102.72	End Shut-In(2)
322	1723.71	103.47	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	Clean Oil	0.10
80.00	Mud cut oil 60%o 40%w	0.39

Gas Rates

	Choke(inches)	Pressure (psig)	Gas Rate (Mcf/d)
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operations

Keller #3

P.O. Box 33
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Sec29-10-20-Rooks-Ks

Job Ticket: 14173

DST#: 3

ATTN: Allen Bangert

Test Start: 2001.02.23 @ 11:22:00

Tool Information

Drill Pipe:	Length: 3368.00 ft	Diameter: 3.80 inches	Volume: 47.24 bbl	Tool Weight: 1800.00 lb
Drill Collar:	Length: 184.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight set on Packer: 30000.00 lb
Heavy Wt. Pipe:	Length: 0.01 ft	Diameter: 0.01 inches	Volume: 0.00 bbl	Weight to Pull Loose: 70000.00 lb
Drill Pipe Above KB:	28.01 ft			Tool Chased 0.01 ft
Depth to Top Packer:	3540.00 ft			String Weight: Initial 42000.00 lb
Depth to Bottom Packer:	ft			Final 42000.00 lb
Interval between Packers:	ft			
Tool Length:	66.02 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			3525.00	
S.I. Tool	5.00			3530.00	
HYD S.I. Tool	5.00			3535.00	
Packer	5.00			3540.00	16.00 Bottom Of Top Packer
Packer	5.00			3545.00	
Stubb	1.00			3546.00	
Perforations	5.00			3551.00	
Recorder	0.01	2357	Inside	3551.01	
Perforations	34.00			3585.01	
Recorder	0.01	13254	Outside	3585.02	
Bullnose	5.00			3590.02	50.02 Bottom Packers & Anchor

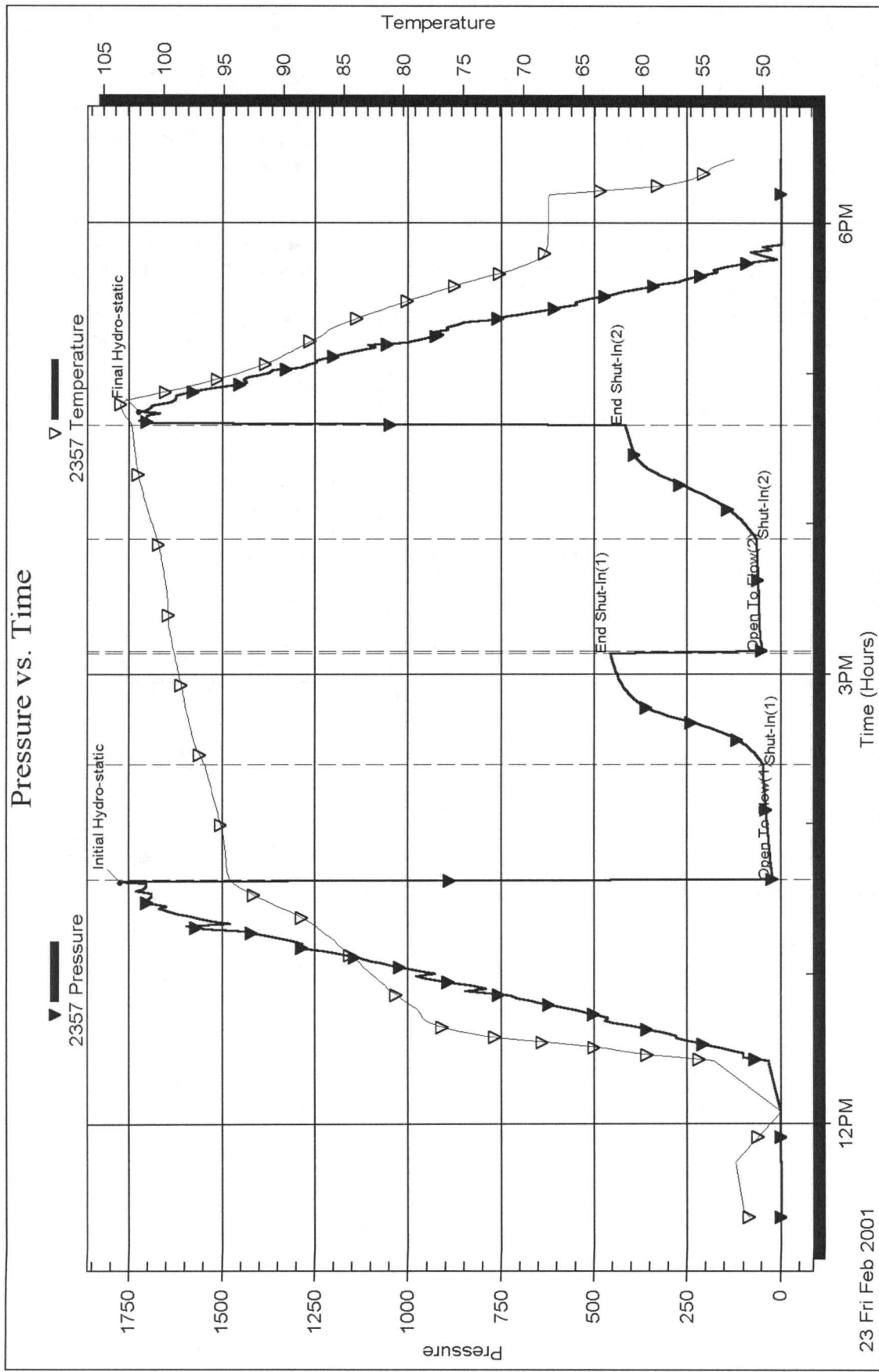
Total Tool Length: 66.02

Serial #: 2357

Mai Oil Operations

Sec29-10-20-Rooks-Ks

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Mai Oil Operations**

P.O. Box 33
Russell, Ks. 67665

ATTN: Allen Bangert

Sec29-10-20-Rooks-Ks

Keller #3

Start Date: 2001.02.24 @ 02:03:00

End Date: 2001.02.24 @ 07:23:00

Job Ticket #: 14174 DST #: 4

Trilobite Testing, Inc
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DRILL STEM TEST REPORT

Mai Oil Operations

P.O. Box 33
Russell, Ks. 67665

ATTN: Allen Bangert

Keller #3

Sec29-10-20-Rooks-Ks

Job Ticket: 14174

DST#: 4

Test Start: 2001.02.24 @ 02:03:00

GENERAL INFORMATION:

Formation: "K" LKC

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:30:14

Time Test Ended: 07:23:00

Test Type: Conventional Bottom Hole

Tester: Dan Bangle

Unit No: 11

Interval: 3604.00 ft (KB) To 3626.00 ft (KB) (TVD)

Total Depth: 3626.00 ft (KB)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2144.00 ft (KB)

2139.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 2357

Press@RunDepth: 71.72 psig @ ft (KB)

Start Date: 2001.02.24

End Date:

2001.02.24

Start Time: 02:03:15

End Time:

09:20:44

Capacity: 7000.00 psig

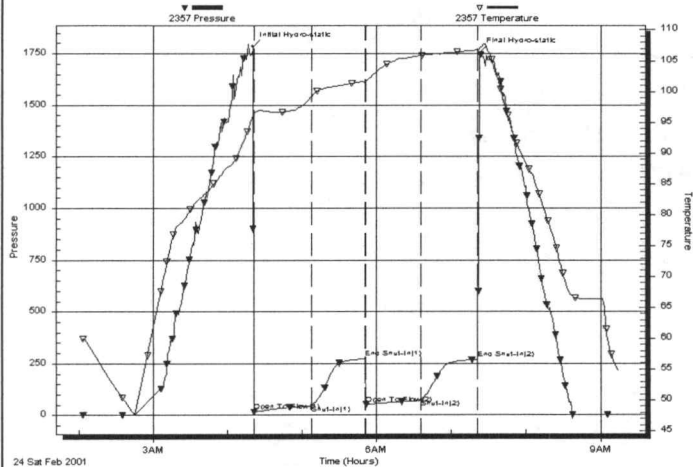
Last Calib.: 1899.12.30

Time On Btm: 2001.02.24 @ 04:20:44

Time Off Btm: 2001.02.24 @ 07:22:44

TEST COMMENT: 120 Gas in pipe IF-Weak building to 4"
FF-Weak bulding to 3"

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
138	1784.39	96.14	Initial Hydro-static
138	14.34	96.34	Open To Flow (1)
185	46.11	99.22	Shut-In(1)
227	271.75	101.70	End Shut-In(1)
228	49.93	101.73	Open To Flow (2)
273	71.72	105.87	Shut-In(2)
318	269.27	106.80	End Shut-In(2)
320	1752.83	107.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	Clean Oil	0.59
30.00	Mud cut oil 60%o 40%w	0.15

Gas Rates

	Choke(inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Mai Oil Operations

Keller #3

P.O. Box 33
Russell, Ks. 67665

Sec29-10-20-Rooks-Ks

Job Ticket: 14174

DST#: 4

ATTN: Allen Bangert

Test Start: 2001.02.24 @ 02:03:00

Tool Information

Drill Pipe:	Length: 3430.00 ft	Diameter: 3.80 inches	Volume: 48.11 bbl	Tool Weight: 1000.00 lb
Drill Collar:	Length: 184.00 ft	Diameter: 2.25 inches	Volume: 0.90 bbl	Weight set on Packer: 30000.00 lb
Heavy Wt. Pipe:	Length: 0.01 ft	Diameter: 0.01 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
Drill Pipe Above KB:	31.01 ft			Tool Chased 0.01 ft
Depth to Top Packer:	3599.00 ft			String Weight: Initial 43000.00 lb
Depth to Bottom Packer:	ft			Final 43000.00 lb
Interval between Packers:	ft			
Tool Length:	43.02 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			3584.00	
S.I. Tool	5.00			3589.00	
HYD S.I. Tool	5.00			3594.00	
Packer	5.00			3599.00	16.00 Bottom Of Top Packer
Packer	5.00			3604.00	
Stubb	1.00			3605.00	
Recorder	0.01	2357	Inside	3605.01	
Perforations	16.00			3621.01	
Recorder	0.01	13254	Outside	3621.02	
Bullnose	5.00			3626.02	27.02 Bottom Packers & Anchor
Total Tool Length:	43.02				

Serial #: 2357

Mai Oil Operations

Sec29-10-20-Rooks-Ks

