



DRILL STEM TEST REPORT

Prepared For: **Larson Operating Co**

562 West Hwy 4
Olmitz KS 67564

ATTN: Tom Funk

21 16 27 Lane KS

Hall #1-21

Start Date: 2006.10.30 @ 11:00:16

End Date: 2006.10.30 @ 19:15:25

Job Ticket #: 25575 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

Larson Operating Co

562 West Hwy 4
Olmitz KS 67564

ATTN: Tom Funk

Hall #1-21

21 16 27 Lane KS

Job Ticket: 25575

DST#: 1

Test Start: 2006.10.30 @ 11:00:16

GENERAL INFORMATION:

Formation: J

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:13:41

Time Test Ended: 19:15:25

Test Type: Conventional Bottom Hole

Tester: Shane McBride

Unit No: Beredco 10

Interval: 4193.00 ft (KB) To 4218.00 ft (KB) (TVD)

Total Depth: 4218.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2707.00 ft (KB)

2698.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 6667

Inside

Press@RunDepth: 273.13 psig @ 4194.00 ft (KB)

Start Date: 2006.10.30

End Date:

2006.10.30

Capacity: 7000.00 psig

Last Calib.: 2006.10.30

Start Time: 11:00:16

End Time:

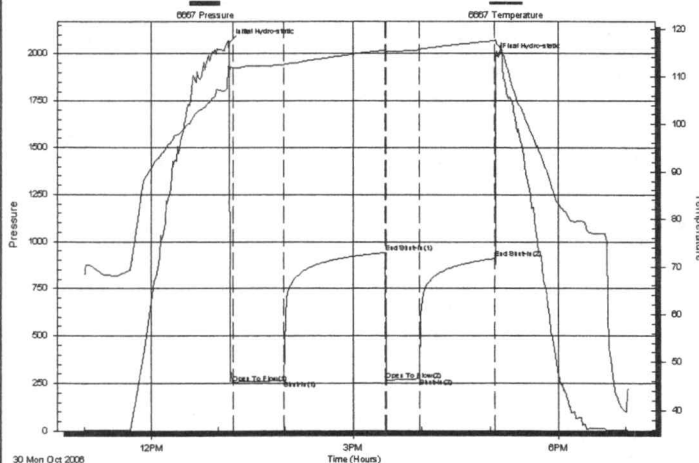
19:02:25

Time On Btm: 2006.10.30 @ 13:10:41

Time Off Btm: 2006.10.30 @ 17:04:40

TEST COMMENT: Packers failed @ open reset mud dropped set more w weight packers held bled off mud blow weak surface blow
No return
Weak surface blow
No return

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2058.82	111.79	Initial Hydro-static
3	251.44	111.72	Open To Flow (1)
49	265.60	112.47	Shut-In (1)
138	941.80	115.51	End Shut-In (1)
139	267.90	115.32	Open To Flow (2)
168	273.13	115.60	Shut-In (2)
234	910.62	117.48	End Shut-In (2)
234	1983.95	117.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	MCW 20%M 80%W	0.59
384.00	Mud	3.15

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

Larson Operating Co

562 West Hwy 4
Olmritz KS 67564

ATTN: Tom Funk

Hall #1-21

21 16 27 Lane KS

Job Ticket: 25575

DST#: 1

Test Start: 2006.10.30 @ 11:00:16

Tool Information

Drill Pipe:	Length: 4025.00 ft	Diameter: 3.00 inches	Volume: 35.19 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: 25000.00 lb
Drill Collar:	Length: 174.00 ft	Diameter: 2.25 inches	Volume: 0.86 bbl	Weight to Pull Loose: 60000.00 lb
		Total Volume:	36.05 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4193.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	52.00 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			4167.00	
Shut In Tool	5.00			4172.00	
Hydraulic tool	5.00			4177.00	
Jars	5.00			4182.00	
Safety Joint	2.00			4184.00	
Packer	5.00		Fluid	4189.00	27.00 Bottom Of Top Packer
Packer	4.00			4193.00	
Stubb	1.00			4194.00	
Recorder	0.00	6667	Inside	4194.00	
Perforations	19.00			4213.00	
Recorder	0.00	11058	Inside	4213.00	
Bullnose	5.00			4218.00	25.00 Bottom Packers & Anchor

Total Tool Length: 52.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Operating Co

Hall #1-21

562 West Hwy 4
Olmitz KS 67564

21 16 27 Lane KS

Job Ticket: 25575

DST#: 1

ATTN: Tom Funk

Test Start: 2006.10.30 @ 11:00:16

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

48500 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.73 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2700.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	MCW 20%M 80%W	0.590
384.00	Mud	3.151

Total Length: 504.00 ft

Total Volume: 3.741 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

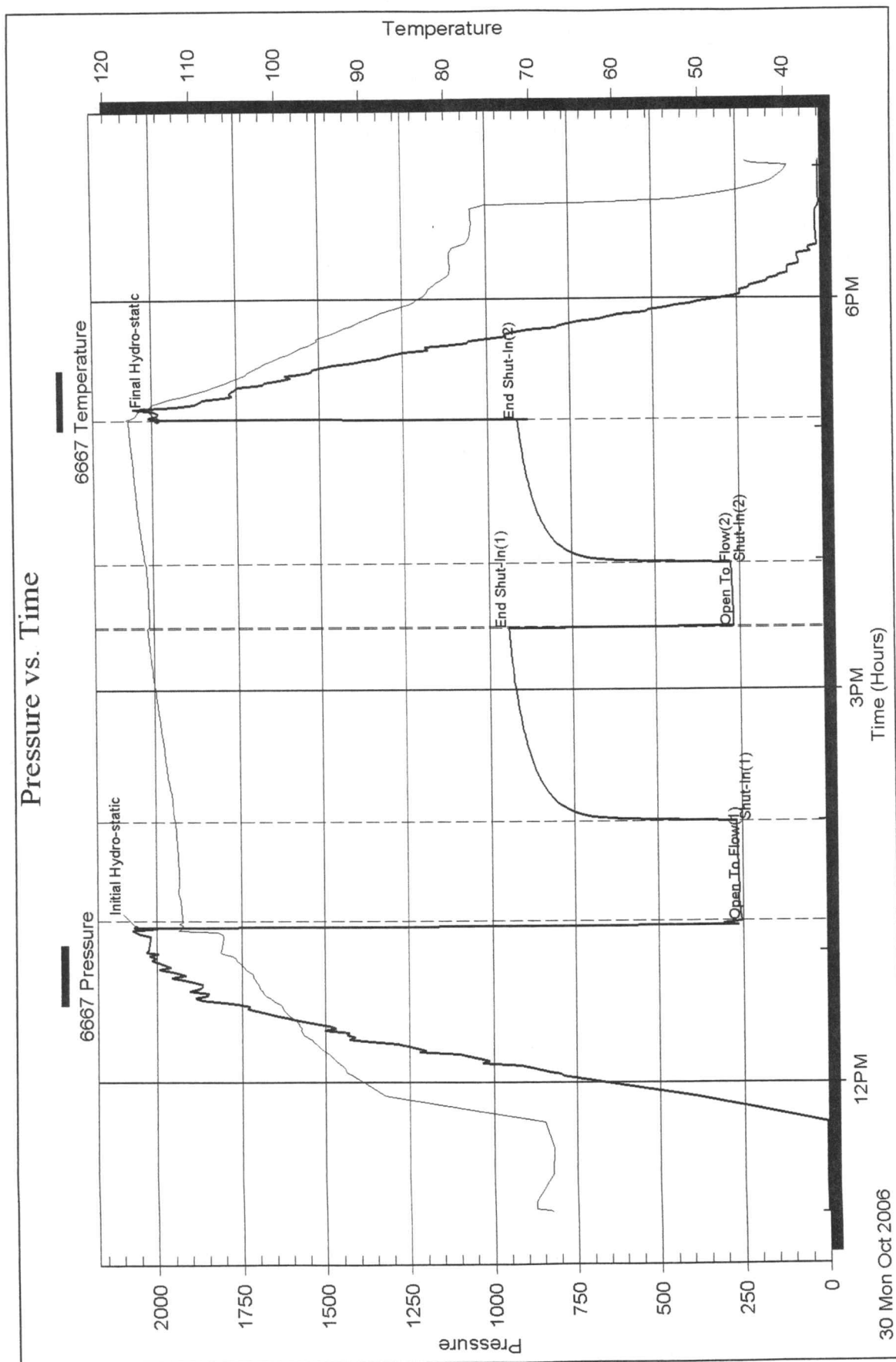
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw .20 @ 50*f = 48500

Pressure vs. Time





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Larson Operating Co**

562 West Hwy 4
Olmitz KS 67564

ATTN: Tom Funk

21 16 27 Lane KS

Hall #1-21

Start Date: 2006.10.31 @ 11:40:55

End Date: 2006.10.31 @ 18:00:34

Job Ticket #: 26601 DST #: 2

Trilobite Testing, Inc

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



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DRILL STEM TEST REPORT

Larson Operating Co

562 West Hwy 4
Olmitz KS 67564

ATTN: Tom Funk

Hall #1-21

21 16 27 Lane KS

Job Ticket: 26601

DST#: 2

Test Start: 2006.10.31 @ 11:40:55

GENERAL INFORMATION:

Formation: L

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:30:20

Time Test Ended: 18:00:34

Test Type: Conventional Bottom Hole

Tester: Shane McBride

Unit No: Beredco 10

Interval: 4256.00 ft (KB) To 4279.00 ft (KB) (TVD)

Total Depth: 4279.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2707.00 ft (KB)

2698.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 6667

Inside

Press@RunDepth: 428.72 psig @ 4257.00 ft (KB)

Start Date: 2006.10.31

End Date:

2006.10.31

Capacity: 7000.00 psig

Last Calib.: 2006.10.31

Start Time: 11:40:55

End Time:

17:54:34

Time On Btm: 2006.10.31 @ 13:30:05

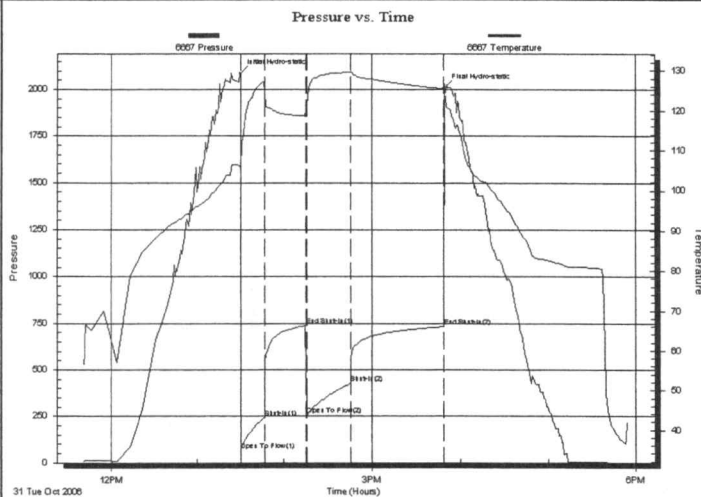
Time Off Btm: 2006.10.31 @ 15:49:35

TEST COMMENT: BOB in 4 min.

No return

BOB in 7 min.

No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2086.75	106.22	Initial Hydro-static
1	64.29	105.46	Open To Flow (1)
17	243.94	127.40	Shut-In(1)
45	737.23	118.59	End Shut-In(1)
46	257.96	121.30	Open To Flow (2)
76	428.72	129.62	Shut-In(2)
139	731.99	125.47	End Shut-In(2)
140	2009.96	124.42	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
720.00	Water	5.63
120.00	SMCW 15%M 85%W	1.05
90.00	MCW 50%M 50%W	0.79

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Operating Co

Hall #1-21

562 West Hwy 4
Olmitz KS 67564

21 16 27 Lane KS

Job Ticket: 26601

DST#: 2

ATTN: Tom Funk

Test Start: 2006.10.31 @ 11:40:55

Tool Information

Drill Pipe:	Length: 4087.00 ft	Diameter: 3.00 inches	Volume: 35.73 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:	25000.00 lb
Drill Collar:	Length: 174.00 ft	Diameter: 2.25 inches	Volume: 0.86 bbl	Weight to Pull Loose:	65000.00 lb
		Total Volume:	36.59 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial	47000.00 lb
Depth to Top Packer:	4256.00 ft			Final	49000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	23.00 ft				
Tool Length:	50.00 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			4230.00	
Shut In Tool	5.00			4235.00	
Hydraulic tool	5.00			4240.00	
Jars	5.00			4245.00	
Safety Joint	2.00			4247.00	
Packer	5.00		Fluid	4252.00	27.00 Bottom Of Top Packer
Packer	4.00			4256.00	
Stubb	1.00			4257.00	
Recorder	0.00	6667	Inside	4257.00	
Perforations	17.00			4274.00	
Recorder	0.00	11058	Inside	4274.00	
Bullnose	5.00			4279.00	23.00 Bottom Packers & Anchor

Total Tool Length: 50.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Operating Co

Hall #1-21

562 West Hwy 4
Olmitz KS 67564

21 16 27 Lane KS

Job Ticket: 26601

DST#: 2

ATTN: Tom Funk

Test Start: 2006.10.31 @ 11:40:55

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.18 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
720.00	Water	5.629
120.00	SMCW 15%M 85%W	1.049
90.00	MCW 50%M 50%W	0.787

Total Length: 930.00 ft Total Volume: 7.465 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

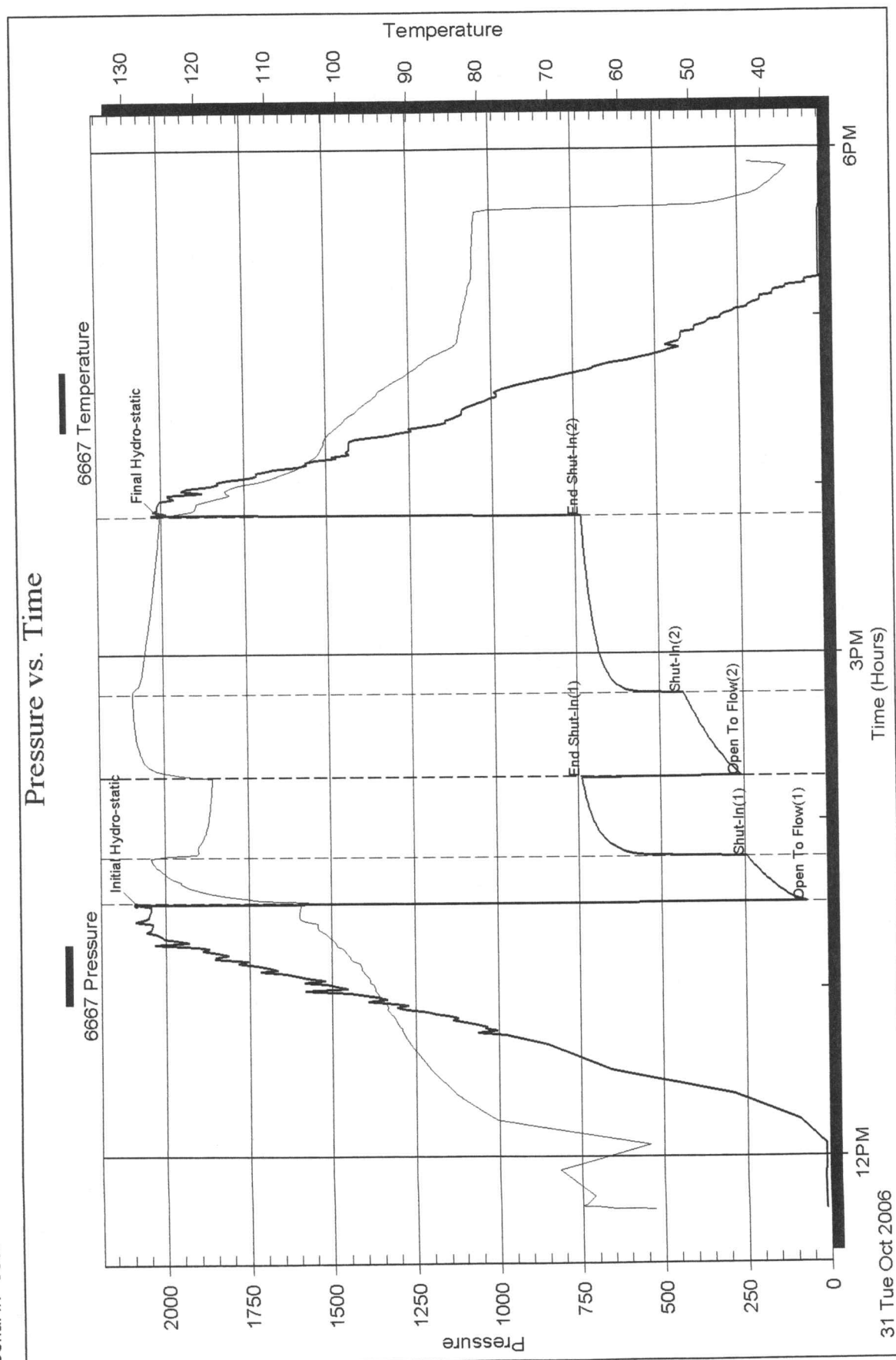
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: rw .151 @ 55*f = 61000

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Larson Operating Co**

562 West Hwy 4
Olmitz KS 67564

ATTN: Tom Funk

21 16 27 Lane KS

Hall #1-21

Start Date: 2006.11.01 @ 08:00:15

End Date: 2006.11.01 @ 17:54:40

Job Ticket #: 26602 DST #: 3

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PO Box 362 Hays, KS 67601

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



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DRILL STEM TEST REPORT

Larson Operating Co

562 West Hwy 4
Olmitz KS 67564

ATTN: Tom Funk

Hall #1-21

21 16 27 Lane KS

Job Ticket: 26602

DST#: 3

Test Start: 2006.11.01 @ 08:00:15

GENERAL INFORMATION:

Formation: **Marm**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:58:40

Time Test Ended: 17:54:40

Test Type: Conventional Bottom Hole

Tester: Shane McBride

Unit No: Beredco 10

Interval: **4318.00 ft (KB) To 4370.00 ft (KB) (TVD)**

Total Depth: 4370.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2707.00 ft (KB)

2698.00 ft (CF)

KB to GR/CF: 9.00 ft

Serial #: 6667

Inside

Press@RunDepth: 740.61 psig @ 4319.00 ft (KB)

Start Date: 2006.11.01

End Date:

2006.11.01

Capacity: 7000.00 psig

Last Calib.: 2006.11.01

Start Time: 08:00:15

End Time:

17:54:40

Time On Btm: 2006.11.01 @ 09:58:25

Time Off Btm: 2006.11.01 @ 11:42:10

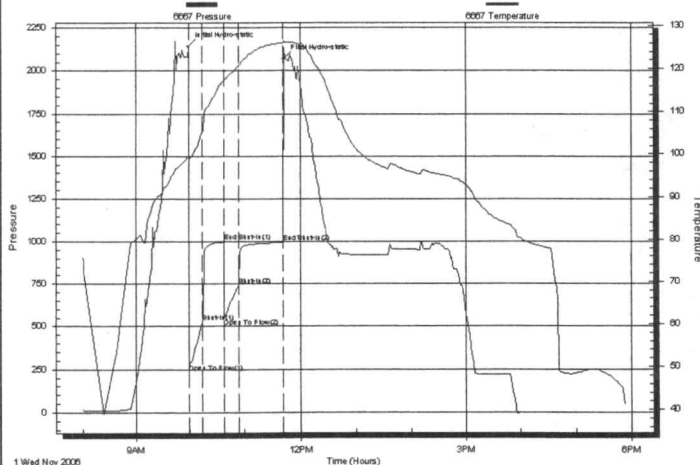
TEST COMMENT: BOB in 1 1/2 min.

Return to BOB. in 4 min

BOB @ open

Return to BOB in 3 1/2 min. GTS 20 min. into shutin

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2141.14	99.37	Initial Hydro-static
1	229.48	98.83	Open To Flow (1)
16	524.74	105.43	Shut-In (1)
39	998.55	117.31	End Shut-In (1)
39	545.47	117.33	Open To Flow (2)
55	740.61	120.64	Shut-In (2)
104	994.00	126.00	End Shut-In (2)
104	2069.10	126.30	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	MCOG 35%M 35%G 30%O	0.59
1805.00	CGO reversed out 45%G 55%O	15.57
95.00	CGO 50%G 50%O	0.83

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Operating Co

562 West Hwy 4
Olmitz KS 67564

ATTN: Tom Funk

Hall #1-21

21 16 27 Lane KS

Job Ticket: 26602

DST#: 3

Test Start: 2006.11.01 @ 08:00:15

Tool Information

Drill Pipe:	Length: 4149.00 ft	Diameter: 3.00 inches	Volume: 36.27 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:	25000.00 lb
Drill Collar:	Length: 174.00 ft	Diameter: 2.25 inches	Volume: 0.86 bbl	Weight to Pull Loose:	70000.00 lb
		Total Volume:	37.13 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial	44000.00 lb
Depth to Top Packer:	4318.00 ft			Final	51000.00 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:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4292.00	
Shut In Tool	5.00			4297.00	
Hydraulic tool	5.00			4302.00	
Jars	5.00			4307.00	
Safety Joint	2.00			4309.00	
Packer	5.00		Fluid	4314.00	27.00 Bottom Of Top Packer
Packer	4.00			4318.00	
Stubb	1.00			4319.00	
Recorder	0.00	6667	Inside	4319.00	
Perforations	13.00			4332.00	
Change Over Sub	1.00			4333.00	
Drill Pipe	31.00			4364.00	
Change Over Sub	1.00			4365.00	
Recorder	0.00	11058	Inside	4365.00	
Bullnose	5.00			4370.00	52.00 Bottom Packers & Anchor

Total Tool Length: 79.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Operating Co

Hall #1-21

562 West Hwy 4
Olmitz KS 67564

21 16 27 Lane KS

Job Ticket: 26602

DST#: 3

ATTN: Tom Funk

Test Start: 2006.11.01 @ 08:00:15

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:

0 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3300.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	MCGO 35%M 35%G 30%O	0.590
1805.00	CGO reversed out 45%G 55%O	15.574
95.00	CGO 50%G 50%O	0.831

Total Length: 2020.00 ft

Total Volume: 16.995 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

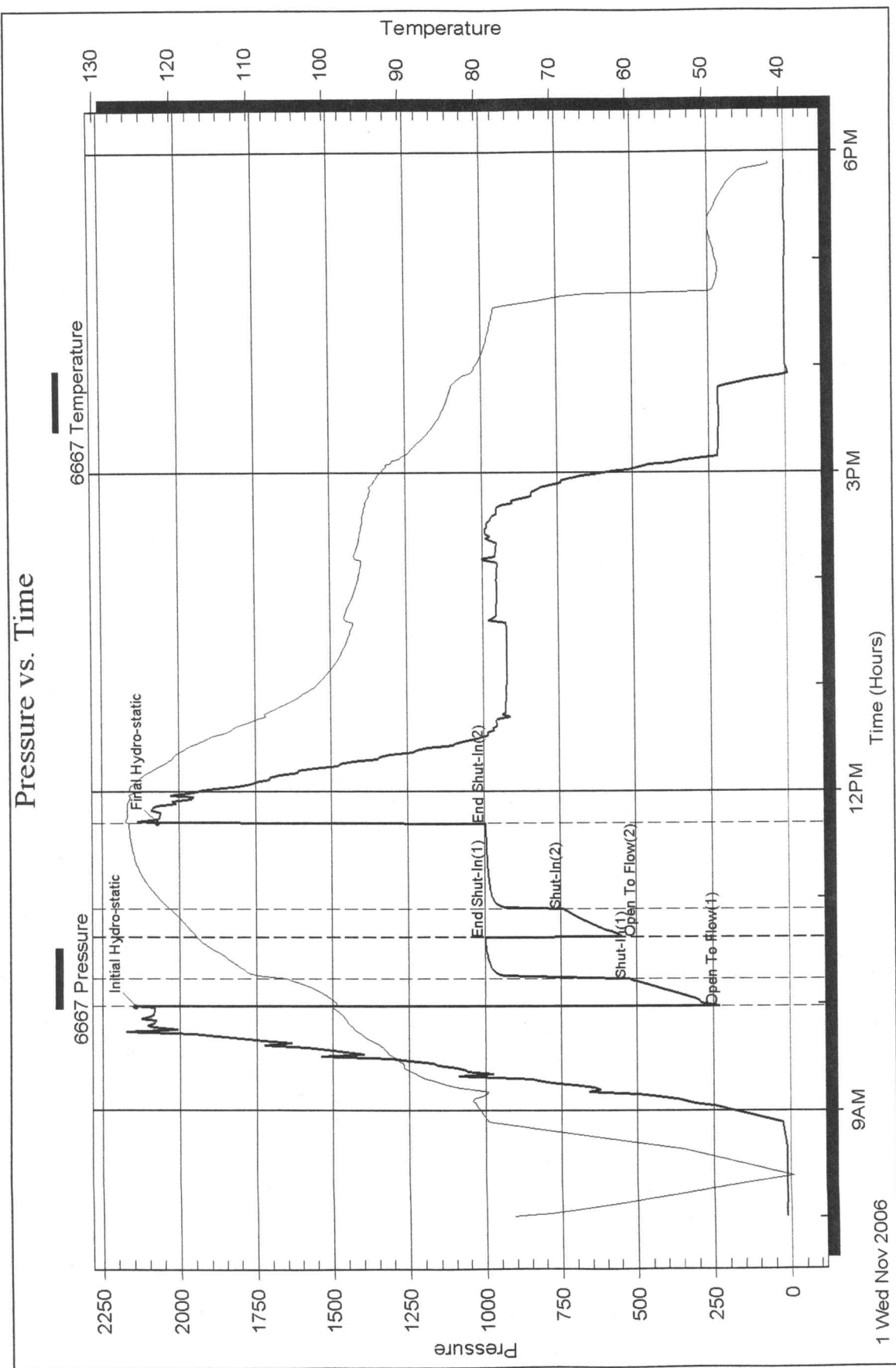


CHART PAGE

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

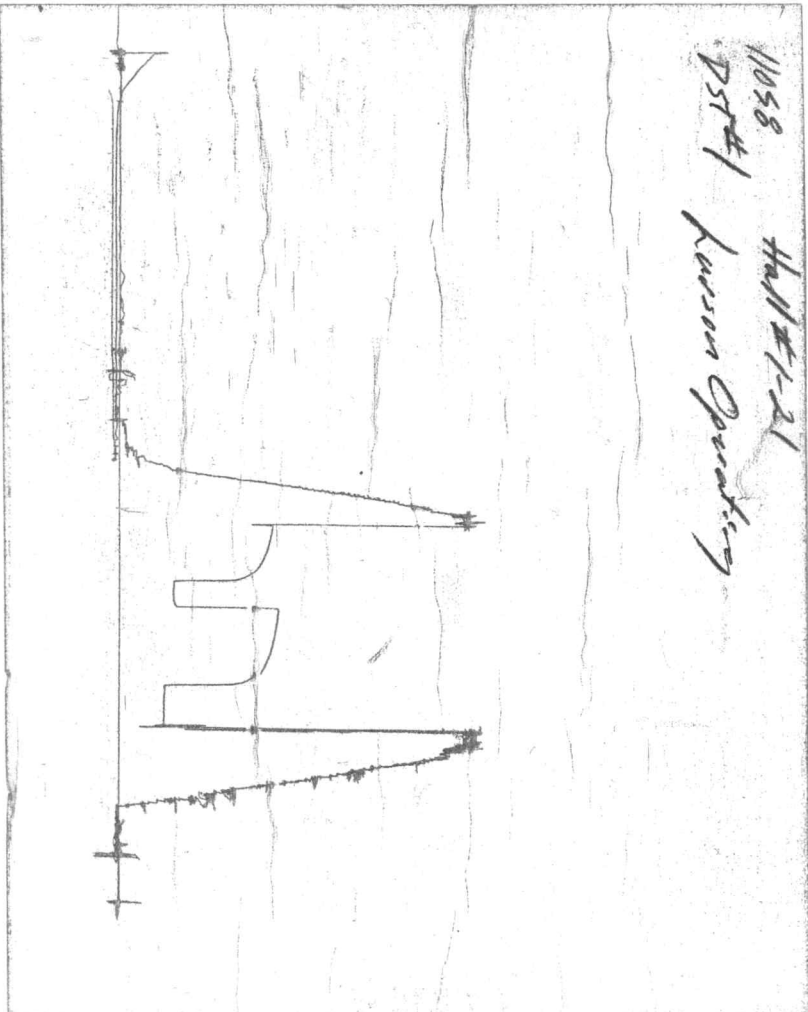


CHART PAGE

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

