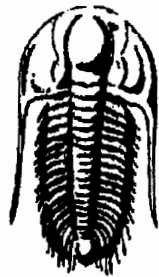


15-101-22200

4-19s-30w



**TRILOBITE
TESTING, INC.**

KCC
MAR 01 2010
CONFIDENTIAL

DRILL STEM TEST REPORT

Prepared For: **Larson Op Co.**

562 West State Road 4
Olmitz, KS 67564

ATTN: Vern Schrag

4 19s 30w Scott KS

Bryant #1-4

Start Date: 2009.11.08 @ 11:45:15

End Date: 2009.11.08 @ 17:19:45

Job Ticket #: 35392 DST #: 1

Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

RECEIVED
KANSAS GEOLOGICAL SURVEY COMMISSION

MAR 02 2010

COMMISSION DIVISION
WICHITA, KS

Larson Op Co.

Bryant #1-4

4 19s 30w Scott KS

DST # 1

KC "L"

2009.11.08



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Op Co.

562 West State Road 4
Olmritz, KS 67564

ATTN: Vern Schrag

Bryant #1-4

4 19s 30w Scott KS

Job Ticket: 35392

DST#: 1

Test Start: 2009.11.08 @ 11:45:15

GENERAL INFORMATION:

Formation: **KC "L"**

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

Time Tool Opened: **13:56:30**

Time Test Ended: **17:19:45**

Test Type: **Conventional Bottom Hole**

Tester: **Shane McBride**

Unit No: **40**

Interval: **4282.00 ft (KB) To 4295.00 ft (KB) (TVD)**

Total Depth: **4295.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **2889.00 ft (KB)**

2884.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8368

Inside

Press@RunDepth: **25.87 psig @ 4290.00 ft (KB)**

Start Date: **2009.11.08**

End Date:

2009.11.08

Capacity: **8000.00 psig**

Last Calib.: **2009.11.08**

Start Time: **11:45:15**

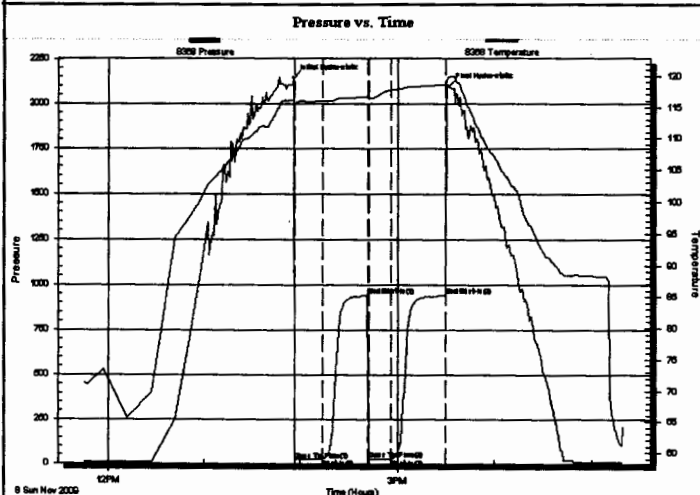
End Time:

17:19:45

Time On Btm: **2009.11.08 @ 13:55:30**

Time Off Btm: **2009.11.08 @ 15:31:15**

TEST COMMENT: IF: no blow
IS: no return
FF: no blow
FS: no retur



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2144.14	116.10	Initial Hydro-static
1	22.26	115.17	Open To Flow (1)
18	24.49	115.94	Shut-In (1)
47	940.20	116.66	End Shut-In (1)
47	24.95	116.33	Open To Flow (2)
61	25.87	117.75	Shut-In (2)
95	938.56	118.66	End Shut-In (2)
96	2095.10	119.77	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud w/oil spots 100% _m	0.01

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Op Co.

Bryant #1-4

562 West State Road 4
Olmitz, KS 67564

4 19s 30w Scott KS

Job Ticket: 35392

DST#: 1

ATTN: Vern Schrag

Test Start: 2009.11.08 @ 11:45:15

Tool Information

Drill Pipe:	Length: 4281.00 ft	Diameter: 3.80 inches	Volume: 60.05 bbl	Tool Weight: 20000.00 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 82000.00 lb
		Total Volume: 60.05 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4282.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	13.00 ft			
Tool Length:	40.00 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			4256.00	
Shut In Tool	5.00			4261.00	
Hydraulic tool	5.00			4266.00	
Jars	5.00			4271.00	
Safety Joint	2.00			4273.00	
Packer	5.00			4278.00	27.00 Bottom Of Top Packer
Packer	4.00			4282.00	
Stubb	1.00			4283.00	
Perforations	7.00			4290.00	
Recorder	0.00	8368	Inside	4290.00	
Recorder	0.00	6771	Inside	4290.00	
Bullnose	5.00			4295.00	13.00 Bottom Packers & Anchor
Total Tool Length:		40.00			



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Op Co.

Bryant #1-4

562 West State Road 4
Olmitz, KS 67564

4 19s 30w Scott KS

Job Ticket: 35392

DST#: 1

ATTN: Vern Schrag

Test Start: 2009.11.08 @ 11:45:15

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:

0 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.34 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	Mud w/oil spots 100% _m	0.014

Total Length:

1.00 ft

Total Volume:

0.014 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

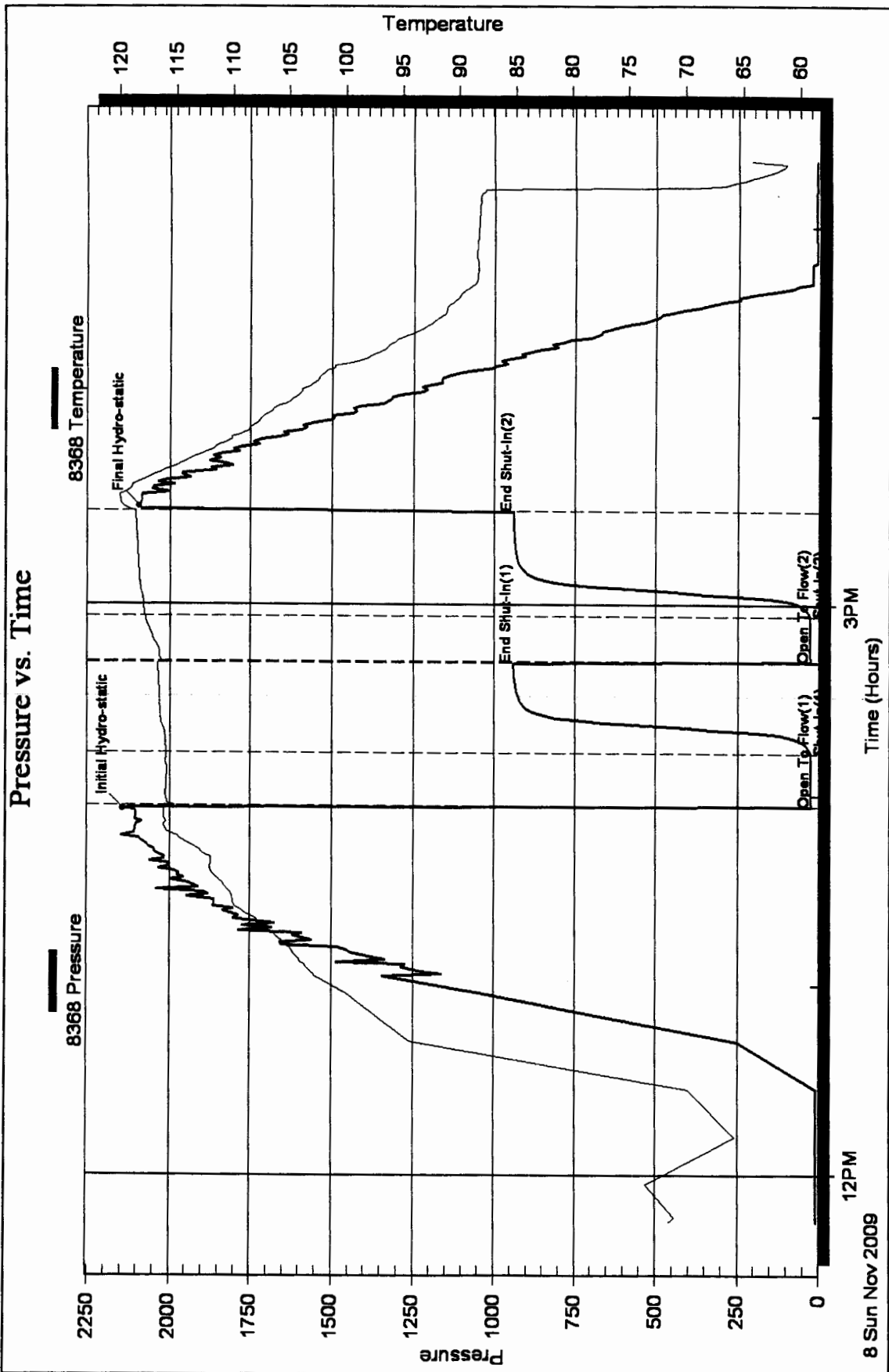
Serial #: 8368

Inside

Larson Op Co.

4 19s 30w Scott KS

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 35392

Printed: 2009.11.18 @ 13:14:33 Page 5



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Larson Op Co.**

562 West State Road 4
Olmitz, KS 67564

ATTN: Vern Schrag

4 19s 30w Scott KS

Bryant #1-4

Start Date: 2009.11.09 @ 08:05:15

End Date: 2009.11.09 @ 14:33:30

Job Ticket #: 35393 DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Larson Op Co.

562 West State Road 4
Olmritz, KS 67564

ATTN: Vern Schrag

Bryant #1-4

4 19s 30w Scott KS

Job Ticket: 35393

DST#: 2

Test Start: 2009.11.09 @ 08:05:15

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:09:30

Time Test Ended: 14:33:30

Test Type: Conventional Bottom Hole

Tester: Shane McBride

Unit No: 40

Interval: **4339.00 ft (KB) To 4405.00 ft (KB) (TVD)**

Total Depth: 4405.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2889.00 ft (KB)

2884.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8368 Inside

Press@RunDepth: 29.46 psig @ 4440.00 ft (KB)

Start Date: 2009.11.09

End Date:

2009.11.09

Start Time: 08:05:15

End Time:

14:33:30

Capacity: 8000.00 psig

Last Calib.: 2009.11.09

Time On Btm: 2009.11.09 @ 10:08:00

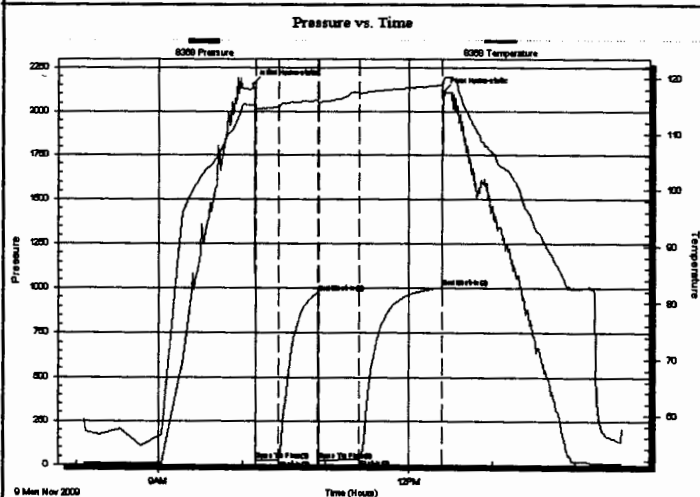
Time Off Btm: 2009.11.09 @ 12:24:30

TEST COMMENT: IF:1/8 " blow

IS:no return

FF:no blow

FS:no return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2155.47	115.21	Initial Hydro-static
2	24.87	114.52	Open To Flow (1)
18	27.39	114.87	Shut-In(1)
47	975.01	116.05	End Shut-In(1)
47	26.44	115.48	Open To Flow(2)
76	29.46	117.32	Shut-In(2)
136	1004.90	118.79	End Shut-In(2)
137	2110.59	119.25	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	100%m	0.07

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Op Co.

Bryant #1-4

562 West State Road 4
Olmitz, KS 67564

4 19s 30w Scott KS

Job Ticket: 35393

DST#: 2

ATTN: Vern Schrag

Test Start: 2009.11.09 @ 08:05:15

Tool Information

Drill Pipe:	Length: 4440.00 ft	Diameter: 3.80 inches	Volume: 62.28 bbl	Tool Weight: 20000.00 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 62.28 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 63000.00 lb
Depth to Top Packer:	4439.00 ft			Final 63000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	66.00 ft			
Tool Length:	93.00 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			4413.00	
Shut In Tool	5.00			4418.00	
Hydraulic tool	5.00			4423.00	
Jars	5.00			4428.00	
Safety Joint	2.00			4430.00	
Packer	5.00			4435.00	27.00 Bottom Of Top Packer
Packer	4.00			4439.00	
Stubb	1.00			4440.00	
Recorder	0.00	8368	Inside	4440.00	
Recorder	0.00	6771	Inside	4440.00	
Perforations	27.00			4467.00	
Change Over Sub	1.00			4468.00	
Drill Pipe	31.00			4499.00	
Change Over Sub	1.00			4500.00	
Bullnose	5.00			4505.00	66.00 Bottom Packers & Anchor

Total Tool Length: 93.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Op Co.

Bryant #1-4

562 West State Road 4
Olmitz, KS 67564

4 19s 30w Scott KS

Job Ticket: 35393

DST#: 2

ATTN: Vern Schrag

Test Start: 2009.11.09 @ 08:05:15

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:

0 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.17 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	100% m	0.070

Total Length:

5.00 ft

Total Volume:

0.070 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

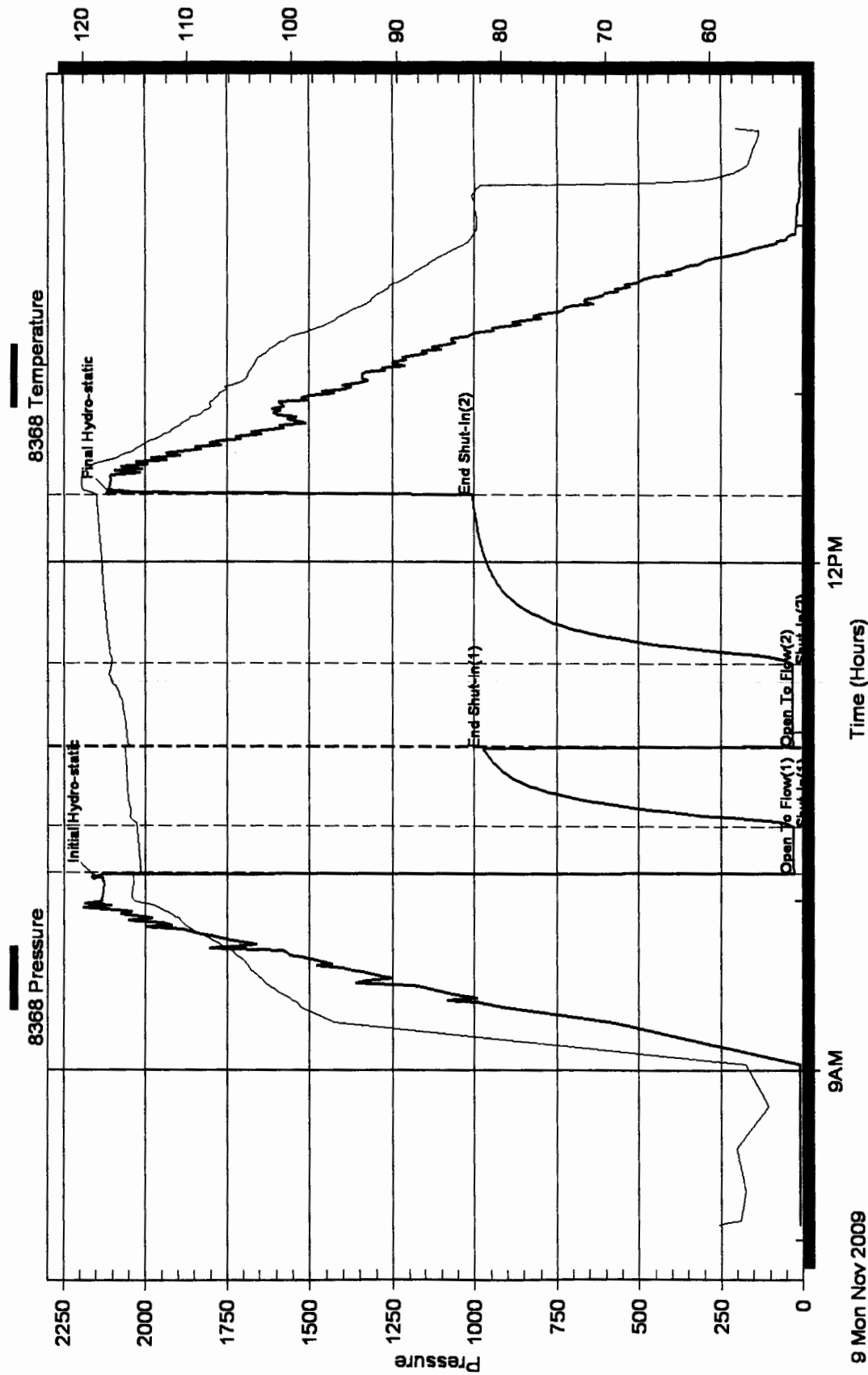
Serial #:

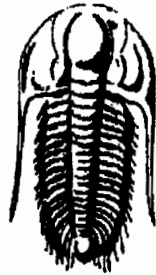
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Larson Op Co.**

562 West State Road 4
Olmitz, KS 67564

ATTN: Vern Schrag

4 19s 30w Scott KS

Bryant #1-4

Start Date: 2009.11.10 @ 11:43:15

End Date: 2009.11.10 @ 18:46:15

Job Ticket #: 35394 DST #: 3

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Larson Op Co.

Bryant #1-4

4 19s 30w Scott KS

DST # 3

Cherokee

2009.11.10



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Larson Op Co.

562 West State Road 4
Olmitz, KS 67564

ATTN: Vern Schrag

Bryant #1-4

4 19s 30w Scott KS

Job Ticket: 35394

DST#: 3

Test Start: 2009.11.10 @ 11:43:15

GENERAL INFORMATION:

Formation: **Cherokee**

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

Time Tool Opened: 13:44:45

Time Test Ended: 18:46:15

Test Type: **Conventional Bottom Hole**

Tester: **Shane McBride**

Unit No: **40**

Interval: **4455.00 ft (KB) To 4573.00 ft (KB) (TVD)**

Total Depth: **4573.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **2889.00 ft (KB)**

2884.00 ft (CF)

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

Serial #: 8368

Inside

Press@RunDepth: **47.98 psig @ 4456.00 ft (KB)**

Start Date: **2009.11.10**

End Date:

2009.11.10

Start Time: **11:43:15**

End Time:

18:46:15

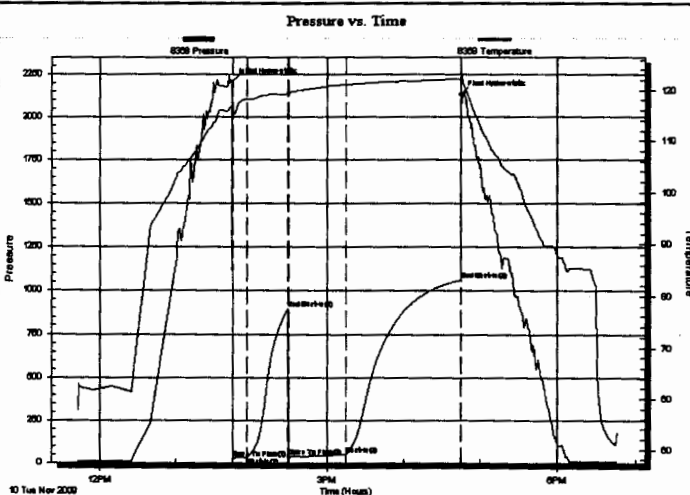
Capacity: **8000.00 psig**

Last Calib.: **2009.11.10**

Time On Btm: **2009.11.10 @ 13:44:30**

Time Off Btm: **2009.11.10 @ 16:45:00**

TEST COMMENT: IF:3/4" blow
IS:no return
FF:Built to 8" blow
FS:no return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2206.96	116.72	Initial Hydro-static
1	27.18	115.61	Open To Flow (1)
12	31.44	118.31	Shut-In(1)
44	896.25	119.30	End Shut-In(1)
45	35.53	119.33	Open To Flow (2)
90	47.98	121.08	Shut-In(2)
181	1062.95	122.23	End Shut-In(2)
181	2133.27	122.79	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
55.00	ocm 10% o 90% m	0.77
0.00	GIP 245'	0.00

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Op Co.

Bryant #1-4

562 West State Road 4
Olmitz, KS 67564

4 19s 30w Scott KS

Job Ticket: 35394

DST#: 3

ATTN: Vern Schrag

Test Start: 2009.11.10 @ 11:43:15

Tool Information

Drill Pipe:	Length: 4463.00 ft	Diameter: 3.80 inches	Volume: 62.60 bbl	Tool Weight:	20000.00 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	80000.00 lb	
			Total Volume:	62.60 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	35.00 ft			String Weight: Initial	66000.00 lb	
Depth to Top Packer:	4455.00 ft			Final	68000.00 lb	
Depth to Bottom Packer:	ft					
Interval between Packers:	118.00 ft					
Tool Length:	145.00 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			4429.00	
Shut In Tool	5.00			4434.00	
Hydraulic tool	5.00			4439.00	
Jars	5.00			4444.00	
Safety Joint	2.00			4446.00	
Packer	5.00			4451.00	27.00 Bottom Of Top Packer
Packer	4.00			4455.00	
Stubb	1.00			4456.00	
Recorder	0.00	8368	Inside	4456.00	
Recorder	0.00	6771	Outside	4456.00	
Perforations	14.00			4470.00	
Change Over Sub	1.00			4471.00	
Drill Pipe	64.00			4535.00	
Drill Pipe	32.00			4567.00	
Change Over Sub	1.00			4568.00	
Bullnose	5.00			4573.00	118.00 Bottom Packers & Anchor
Total Tool Length:	145.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Op Co.

Bryant #1-4

562 West State Road 4
Olmitz, KS 67564

4 19s 30w Scott KS

Job Ticket: 35394

DST#: 3

ATTN: Vern Schrag

Test Start: 2009.11.10 @ 11:43:15

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:

0 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.78 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
55.00	ocm 10% o 90% m	0.772
0.00	GIP 245'	0.000

Total Length: 55.00 ft

Total Volume: 0.772 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8368

Inside Larson Op Co.

4 19s 30w Scott KS

DST Test Number: 3

