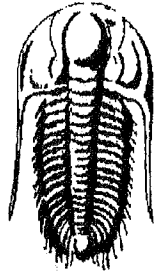


29-18s-29w

15-101-22116-00-00

KGS

15-101-22116.0000



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Larsen**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Steve Davis

29 18 29 Lane KS

Melissa #1-29

Start Date: 2008.10.09 @ 19:30:05

End Date: 2008.10.09 @ 21:25:30

Job Ticket #: 33516 DST #: 1

RECEIVED
KANSAS CORPORATION COMMISSION

FEB 02 2009

CONSERVATION DIVISION
WICHITA, KS

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

Larsen

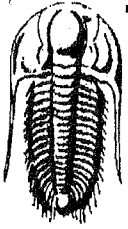
Melissa #1-29

29 18 29 Lane KS

DST # 1

LKC "H"

2008.10.09



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larsen
562 W State Rd 4
Olmitz, KS 67564
ATTN: Steve Davis

Melissa #1-29
29 18 29 Lane KS
Job Ticket: 33516 DST#: 1
Test Start: 2008.10.09 @ 19:30:05

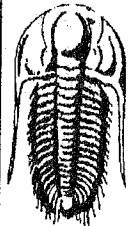
Tool Information

Drill Pipe:	Length: 3951.00 ft	Diameter: 3.80 inches	Volume: 55.42 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: 155.00 ft	Diameter: 2.25 inches	Volume: 0.76 bbl	Weight to Pull Loose: lb
			Total Volume: 56.18 bbl	Tool Chased: ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial: lb
Depth to Top Packer:	4110.00 ft			Final: lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	58.00 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			4083.00	
Shut In Tool	5.00			4088.00	
Hydraulic tool	5.00			4093.00	
Jars	5.00			4098.00	
Safety Joint	3.00			4101.00	
Packer	5.00			4106.00	28.00 Bottom Of Top Packer
Packer	4.00			4110.00	
Stubb	1.00			4111.00	
Recorder	0.00	8353	Inside	4111.00	
Recorder	0.00	6741	Inside	4111.00	
Perforations	24.00			4135.00	
Bullnose	5.00			4140.00	30.00 Bottom Packers & Anchor

Total Tool Length: 58.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larsen

Melissa #1-29

562 W State Rd 4
Olmitz, KS 67564

29 18 29 Lane KS

Job Ticket: 33516

DST#: 1

ATTN: Steve Davis

Test Start: 2008.10.09 @ 19:30:05

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 49.00 sec/qt

Water Loss: 9.53 in³

Resistivity: 0.00 ohm.m

Salinity: 2100.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API: deg API

Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl

Total Length: ft Total Volume: bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

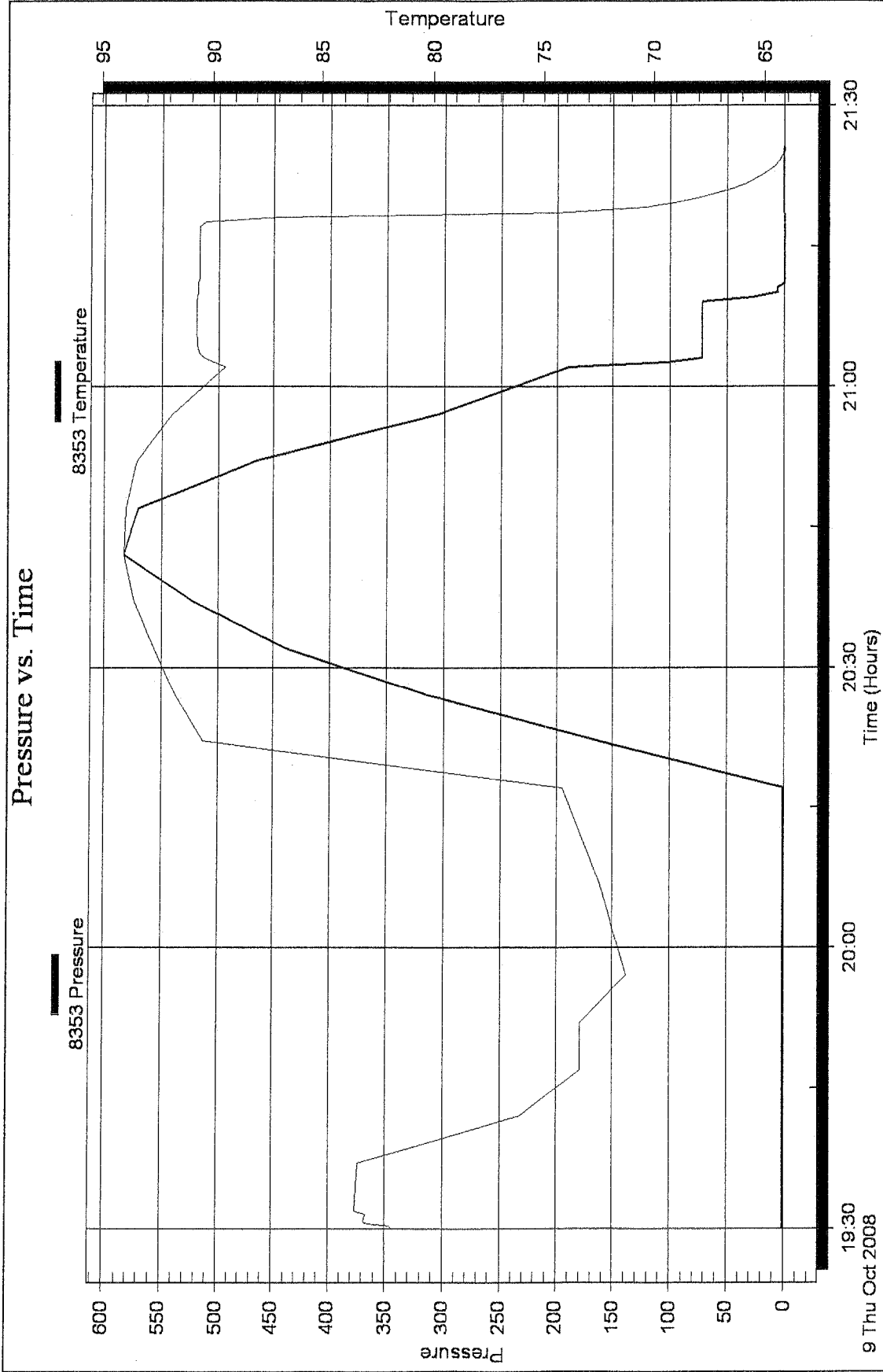
Recovery Comments:

Serial #: 8353

Inside Larsen

29 18 29 Lane KS

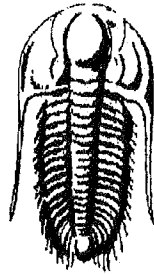
DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 33516

Printed: 2008.10.22 @ 13:19:32 Page 5



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Larsen**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Steve Davis

29 18 29 Lane KS

Melissa #1-29

Start Date: 2008.10.10 @ 04:33:05

End Date: 2008.10.10 @ 13:55:30

Job Ticket #: 33517 DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Larsen

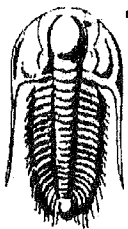
Melissa #1-29

29 18 29 Lane KS

DST # 2

LKC "H"

2008.10.10



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larsen
562 W State Rd 4
Olmritz, KS 67564
ATTN: Steve Davis

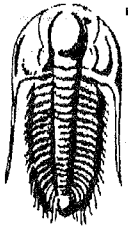
Melissa #1-29
29 18 29 Lane KS
Job Ticket: 33517 **DST#: 2**
Test Start: 2008.10.10 @ 04:33:05

Tool Information

Drill Pipe:	Length: 3951.00 ft	Diameter: 3.80 inches	Volume: 55.42 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: 155.00 ft	Diameter: 2.25 inches	Volume: 0.76 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 56.18 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4110.00 ft			Final 63000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	58.00 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			4083.00	
Shut In Tool	5.00			4088.00	
Hydraulic tool	5.00			4093.00	
Jars	5.00			4098.00	
Safety Joint	3.00			4101.00	
Packer	5.00			4106.00	28.00 Bottom Of Top Packer
Packer	4.00			4110.00	
Stubb	1.00			4111.00	
Recorder	0.00	8353	Inside	4111.00	
Recorder	0.00	6741	Inside	4111.00	
Perforations	24.00			4135.00	
Bullnose	5.00			4140.00	30.00 Bottom Packers & Anchor
Total Tool Length:		58.00			



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Larsen
562 W State Rd 4
Olmitz, KS 67564
ATTN: Steve Davis

Melissa #1-29
29 18 29 Lane KS
Job Ticket: 33517 **DST#: 2**
Test Start: 2008.10.10 @ 04:33:05

Mud and Cushion Information

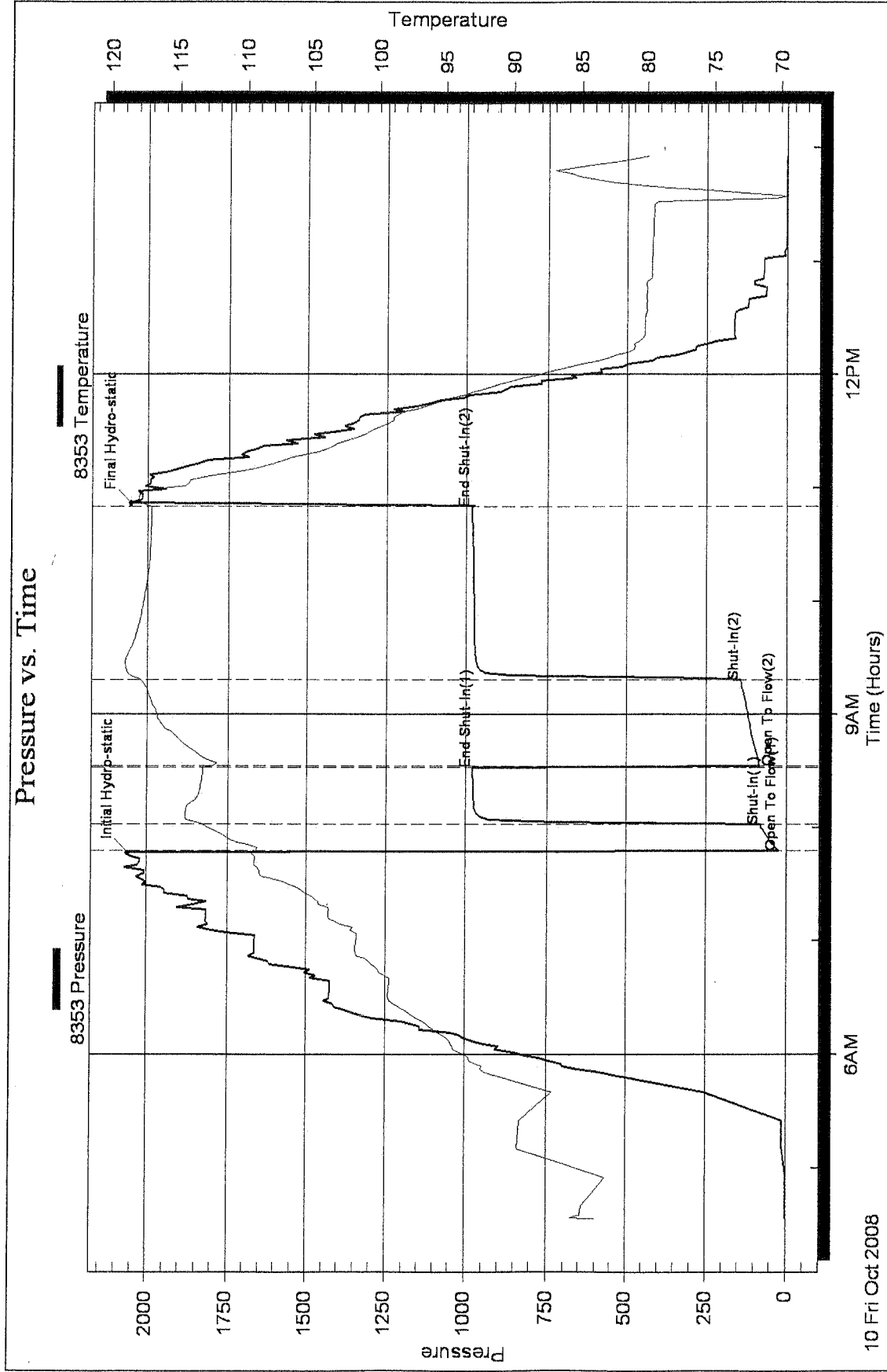
Mud Type: Gel Chem	Cushion Type:	Oil API:	33 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 49.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.51 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 2100.00 ppm			
Filter Cake: 1.00 inches			

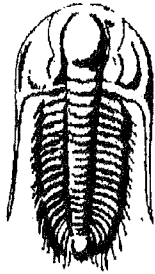
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
96.00	M&O 50%o 50%m	0.472
186.00	G&MCO 15%g 75%o 10%m	2.072
90.00	CG&O 20%g 80%o	1.262
0.00	GIP = 124 FT	0.000
0.00	API = 35@80F= 33	0.000

Total Length: 372.00 ft Total Volume: 3.806 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Larsen**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Steve Davis

29 18 29 Lane KS

Melissa #1-29

Start Date: 2008.10.10 @ 23:35:05

End Date: 2008.10.11 @ 09:03:30

Job Ticket #: 33518 DST #: 3

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Larsen

Melissa #1-29

29 18 29 Lane KS

DST # 3

LKC "r"

2008.10.10



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Larsen
562 W State Rd 4
Olmitz, KS 67564
ATTN: Steve Davis

Melissa #1-29
29 18 29 Lane KS
Job Ticket: 33518 **DST#: 3**
Test Start: 2008.10.10 @ 23:35:05

GENERAL INFORMATION:

Formation: **LKC "I"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:19:30
Time Test Ended: 09:03:30
Interval: **4149.00 ft (KB) To 4176.00 ft (KB) (TVD)**
Total Depth: 4176.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

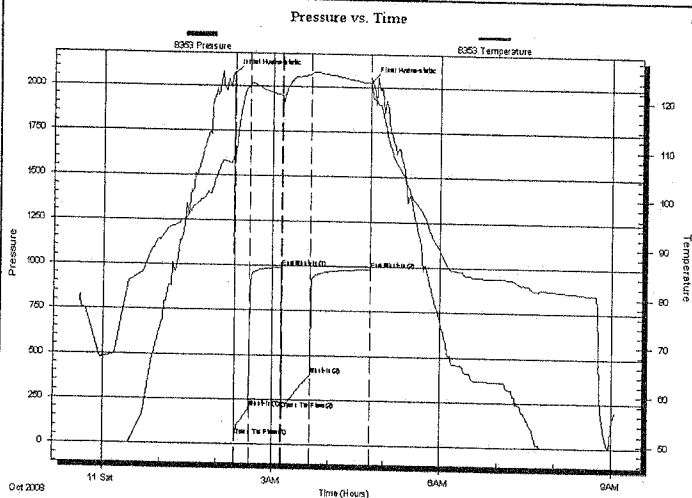
Test Type: Conventional Bottom Hole
Tester: Brandon Domsch
Unit No: 25
Reference Elevations: 2831.00 ft (KB)
2826.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8353

Inside

Press@RunDepth: 388.73 psig @ 4150.00 ft (KB)
Start Date: 2008.10.10 End Date: 2008.10.11
Start Time: 23:35:05 End Time: 09:03:30
Capacity: 7000.00 psig
Last Calib.: 2008.10.11
Time On Btm: 2008.10.11 @ 02:19:00
Time Off Btm: 2008.10.11 @ 04:46:29

TEST COMMENT: IF: BOB in 3 1/2 mins.
IS: Built to BOB.
FF: BOB in 3 1/2 mins.
FS: Built to 2 inches died in 42 mins.



PRESSURE SUMMARY

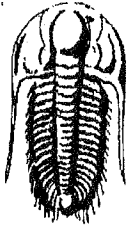
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	2066.39	108.67	Initial Hydro-static
1	46.03	107.70	Open To Flow (1)
16	200.87	122.51	Shut-In(1)
50	989.56	120.78	End Shut-In(1)
51	197.52	120.46	Open To Flow (2)
81	388.73	124.98	Shut-In(2)
146	983.91	123.35	End Shut-In(2)
148	2034.41	120.91	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
248.00	O&GCM 15%g 20%o 65%m	2.07
806.00	CG&O 30%g 70%o	11.31
0.00	GIP 496ft	0.00
0.00	API = 35@50F= 36	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larsen
562 W State Rd 4
Olmitz, KS 67564

ATTN: Steve Davis

Melissa #1-29
29 18 29 Lane KS
Job Ticket: 33518 **DST#: 3**
Test Start: 2008.10.10 @ 23:35:05

Tool Information

Drill Pipe:	Length: 3981.00 ft	Diameter: 3.80 inches	Volume: 55.84 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: 155.00 ft	Diameter: 2.25 inches	Volume: 0.76 bbl	Weight to Pull Loose: 90000.00 lb
		Total Volume:	56.60 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 63000.00 lb
Depth to Top Packer:	4149.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	27.00 ft			
Tool Length:	55.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

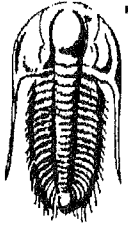
Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4122.00	
Shut In Tool	5.00			4127.00	
Hydraulic tool	5.00			4132.00	
Jars	5.00			4137.00	
Safety Joint	3.00			4140.00	
Packer	5.00			4145.00	28.00 Bottom Of Top Packer
Packer	4.00			4149.00	
Stubb	1.00			4150.00	
Recorder	0.00	8353	Inside	4150.00	
Recorder	0.00	6741	Inside	4150.00	
Perforations	21.00			4171.00	
Bullnose	5.00			4176.00	27.00 Bottom Packers & Anchor

Total Tool Length: 55.00



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Larsen
562 W State Rd 4
Olmitz, KS 67564
ATTN: Steve Davis

Melissa #1-29
29 18 29 Lane KS
Job Ticket: 33518 DST#: 3
Test Start: 2008.10.10 @ 23:35:05

Mud and Cushion Information

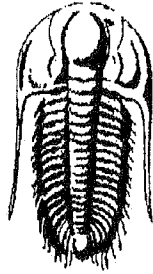
Mud Type: Gel Chem	Cushion Type:	Oil API: 36 deg API
Mud Weight: 3.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 55.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.95 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 2200.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
248.00	O&GCM 15%g 20%o 65%m	2.067
806.00	CG&O 30%g 70%o	11.306
0.00	GIP 496ft	0.000
0.00	API = 35@50F= 36	0.000

Total Length: 1054.00 ft Total Volume: 13.373 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Larsen**

562 W State Rd 4
Olmitz, KS 67564

ATTN: Steve Davis

29 18 29 Lane KS

Melissa #1-29

Start Date: 2008.10.11 @ 18:01:05

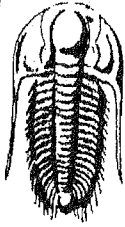
End Date: 2008.10.12 @ 04:35:30

Job Ticket #: 33519 DST #: 4

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larsen
562 W State Rd 4
Olmitz, KS 67564
ATTN: Steve Davis

Melissa #1-29
29 18 29 Lane KS
Job Ticket: 33519 **DST#: 4**
Test Start: 2008.10.11 @ 18:01:05

GENERAL INFORMATION:

Formation: **LKC "J"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 20:14:00
Time Test Ended: 04:35:30
Interval: 4179.00 ft (KB) To 4198.00 ft (KB) (TVD)
Total Depth: 4198.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole
Tester: Brandon Domsch
Unit No: 25
Reference Elevations: 2831.00 ft (KB)
2826.00 ft (CF)
KB to GR/CF: 5.00 ft

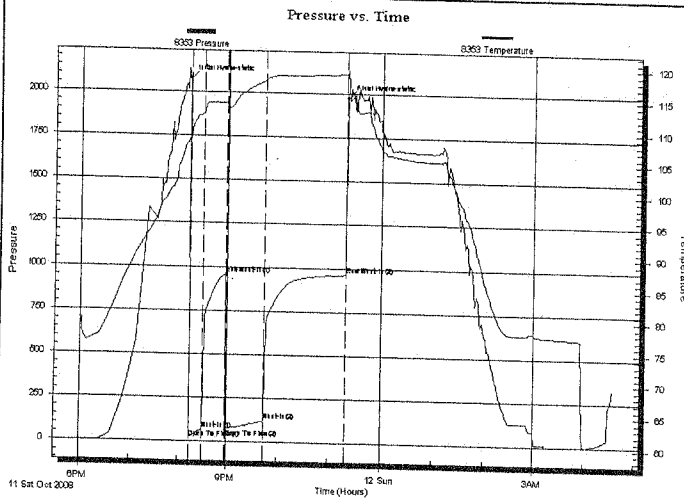
Serial #: 8353

Inside

Press@RunDepth: 123.29 psig @ 4180.00 ft (KB)
Start Date: 2008.10.11 End Date: 2008.10.12
Start Time: 18:01:05 End Time: 04:35:30

Capacity: 7000.00 psig
Last Calib.: 2008.10.12
Time On Btm: 2008.10.11 @ 20:13:30
Time Off Btm: 2008.10.11 @ 23:20:59

TEST COMMENT: IF Built to 9 inches
IS 1/2 inch died back to surface
FF BOB in 19 mins
FS Built to 2 inches died back to 1/2 inch



PRESSURE SUMMARY

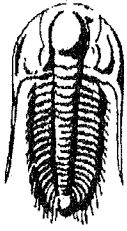
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2070.83	108.71	Initial Hydro-static
1	21.30	108.42	Open To Flow (1)
16	71.40	112.38	Shut-In(1)
45	957.25	114.12	End Shut-In(1)
46	76.99	113.58	Open To Flow (2)
91	123.29	117.77	Shut-In(2)
187	963.00	118.82	End Shut-In(2)
188	1973.72	119.23	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	O&GCM 10%g 25%o 65%om	0.30
218.00	CG&O 20%g 80%o	2.21
0.00	GIP 280FT	0.00
0.00	API = 33@50F=34	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larsen
562 W State Rd 4
Olmitz, KS 67564

ATTN: Steve Davis

Melissa #1-29
29 18 29 Lane KS
Job Ticket: 33519 **DST#: 4**
Test Start: 2008.10.11 @ 18:01:05

Tool Information

Drill Pipe:	Length: 4011.00 ft	Diameter: 3.80 inches	Volume: 56.26 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: 155.00 ft	Diameter: 2.25 inches	Volume: 0.76 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 57.02 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4179.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	19.00 ft			
Tool Length:	47.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

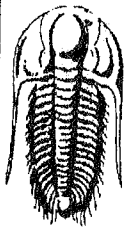
Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4152.00	
Shut In Tool	5.00			4157.00	
Hydraulic tool	5.00			4162.00	
Jars	5.00			4167.00	
Safety Joint	3.00			4170.00	
Packer	5.00			4175.00	28.00 Bottom Of Top Packer
Packer	4.00			4179.00	
Stubb	1.00			4180.00	
Recorder	0.00	8353	Inside	4180.00	
Recorder	0.00	6741	Inside	4180.00	
Perforations	13.00			4193.00	
Bullnose	5.00			4198.00	19.00 Bottom Packers & Anchor

Total Tool Length: 47.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larsen
562 W State Rd 4
Olimitz, KS 67564
ATTN: Steve Davis

Melissa #1-29
29 18 29 Lane KS
Job Ticket: 33519 DST#: 4
Test Start: 2008.10.11 @ 18:01:05

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 34 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 49.00 sec/qt	Cushion Volume: bbl	
Water Loss: 9.53 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 2100.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	O&GCM 10%g 25%o 65%m	0.305
218.00	CG&O 20%g 80%o	2.211
0.00	GIP 280FT	0.000
0.00	API = 33@50F=34	0.000

Total Length: 280.00 ft Total Volume: 2.516 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

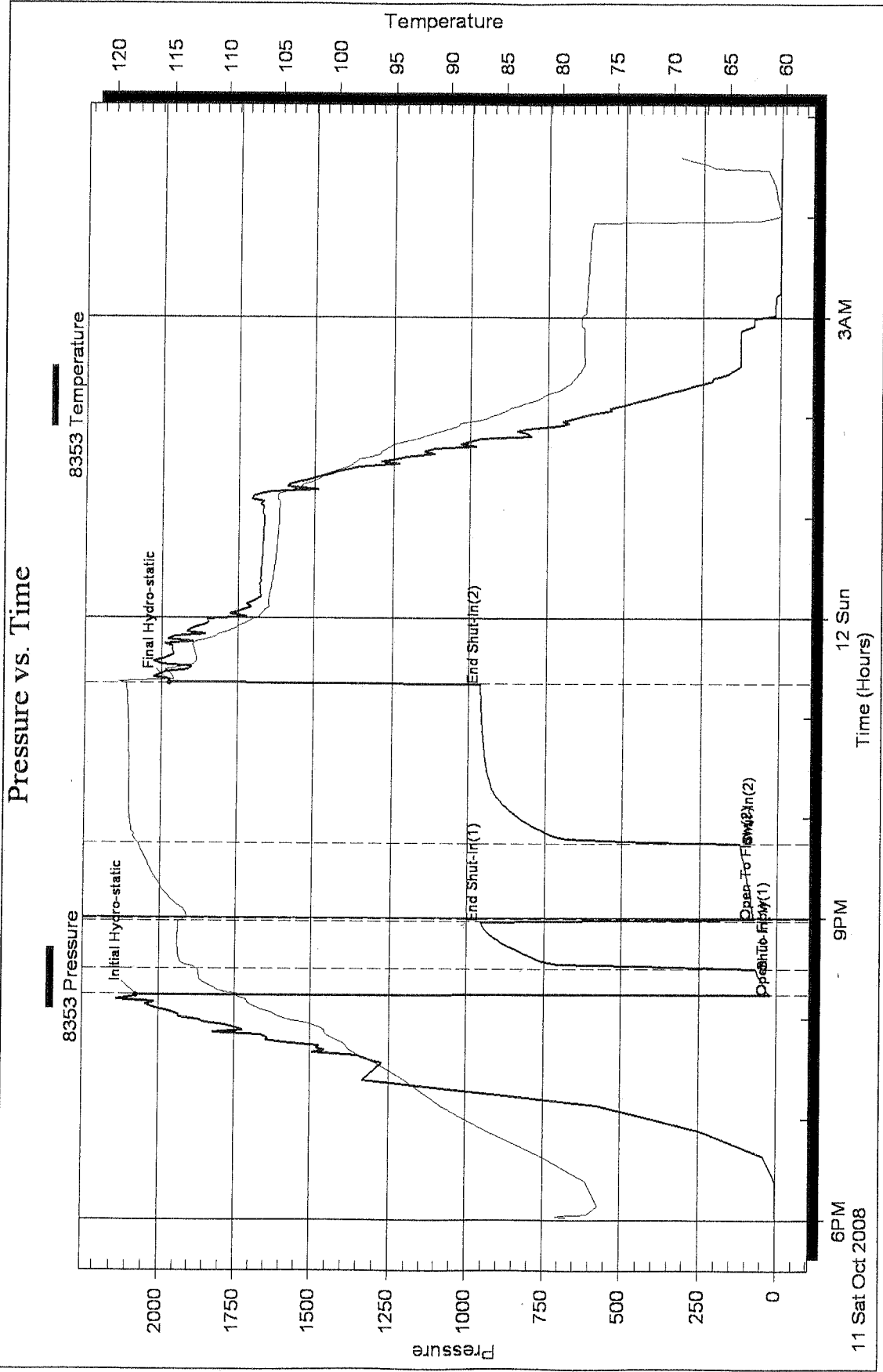
Serial #: 8353

Inside Larsen

29 18 29 Lane KS

DST Test Number: 4

Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 33519