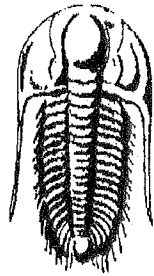


15-179-21178

14-65-26w



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **IA Operating**

900 N Tyler Rd #14
Wichita KS 67212

ATTN: Randy Killian

14 6 26W Sheridan KS

Moss #14-1

Start Date: 2007.08.27 @ 09:54:13

End Date: 2007.08.27 @ 16:17:58

Job Ticket #: 30577 DST #: 1

**CONFIDENTIAL
OCT 18 2007
KCC**

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

IA Operating

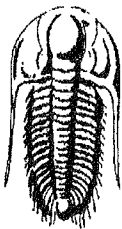
Moss #14-1

14 6 26W Sheridan KS

DST # 1

LKC "C"

2007.08.27



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

IA Operating

Moss #14-1

900 N Tyler Rd #14
Wichita KS 67212

14 6 26W Sheridan KS

ATTN: Randy Killian

Job Ticket: 30577

DST#: 1

Test Start: 2007.08.27 @ 09:54:13

GENERAL INFORMATION:

Formation: **LKC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:17:13

Time Test Ended: 16:17:58

Test Type: Conventional Bottom Hole

Tester: Tyson Flax

Unit No: 21

Interval: **3721.00 ft (KB) To 3745.00 ft (KB) (TVD)**

Total Depth: 3745.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2602.00 ft (KB)

2597.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8290 Inside

Press@RunDepth: 43.40 psig @ 3722.00 ft (KB)

Start Date: 2007.08.27

End Date:

2007.08.27

Start Time: 09:54:15

End Time:

16:17:58

Capacity: 7000.00 psig

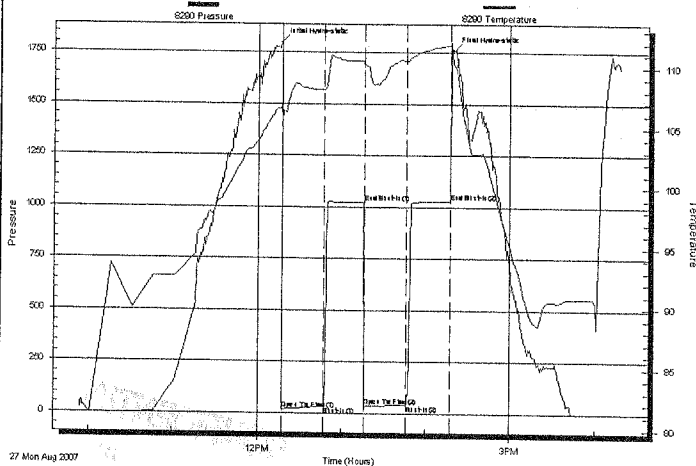
Last Calib.: 2007.08.27

Time On Btm: 2007.08.27 @ 12:16:43

Time Off Btm: 2007.08.27 @ 14:20:13

TEST COMMENT: IFP Weak surface blow built to 3/4 "
ISI No blow back
FFP Weak surface blow built to 3/4 "
FSI No blow back

Pressure vs. Time



PRESSURE SUMMARY

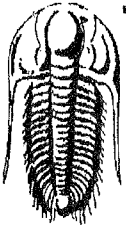
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1796.35	106.88	Initial Hydro-static
1	17.88	105.51	Open To Flow (1)
31	32.22	108.12	Shut-In(1)
59	1024.85	110.52	End Shut-In(1)
60	36.85	110.04	Open To Flow (2)
90	43.40	110.56	Shut-In(2)
122	1025.98	111.81	End Shut-In(2)
124	1758.24	110.26	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	WM 30%W 70%M	0.57

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

IA Operating

Moss #14-1

900 N Tyler Rd #14
Wichita KS 67212

14 6 26W Sheridan KS

Job Ticket: 30577

DST#: 1

ATTN: Randy Killian

Test Start: 2007.08.27 @ 09:54:13

Tool Information

Drill Pipe:	Length: 3666.00 ft	Diameter: 3.82 inches	Volume: 51.97 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 52.12 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3721.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	52.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

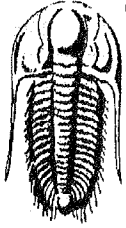
Tool Comments:

Tool Description

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

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3694.00	
Shut In Tool	5.00			3699.00	
Hydraulic tool	5.00			3704.00	
Jars	5.00			3709.00	
Safety Joint	2.00			3711.00	
Packer	5.00			3716.00	28.00 Bottom Of Top Packer
Packer	5.00			3721.00	
Stubb	1.00			3722.00	
Recorder	0.00	8290	Inside	3722.00	
Perforations	20.00			3742.00	
Recorder	0.00	13401	Inside	3742.00	
Bullnose	3.00			3745.00	24.00 Bottom Packers & Anchor

Total Tool Length: 52.00



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

IA Operating

Moss #14-1

900 N Tyler Rd #14
Wichita KS 67212

14 6 26W Sheridan KS

Job Ticket: 30577

DST#: 1

ATTN: Randy Killian

Test Start: 2007.08.27 @ 09:54:13

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:

26000 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	WM 30%W 70%M	0.573

Total Length: 60.00 ft

Total Volume: 0.573 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

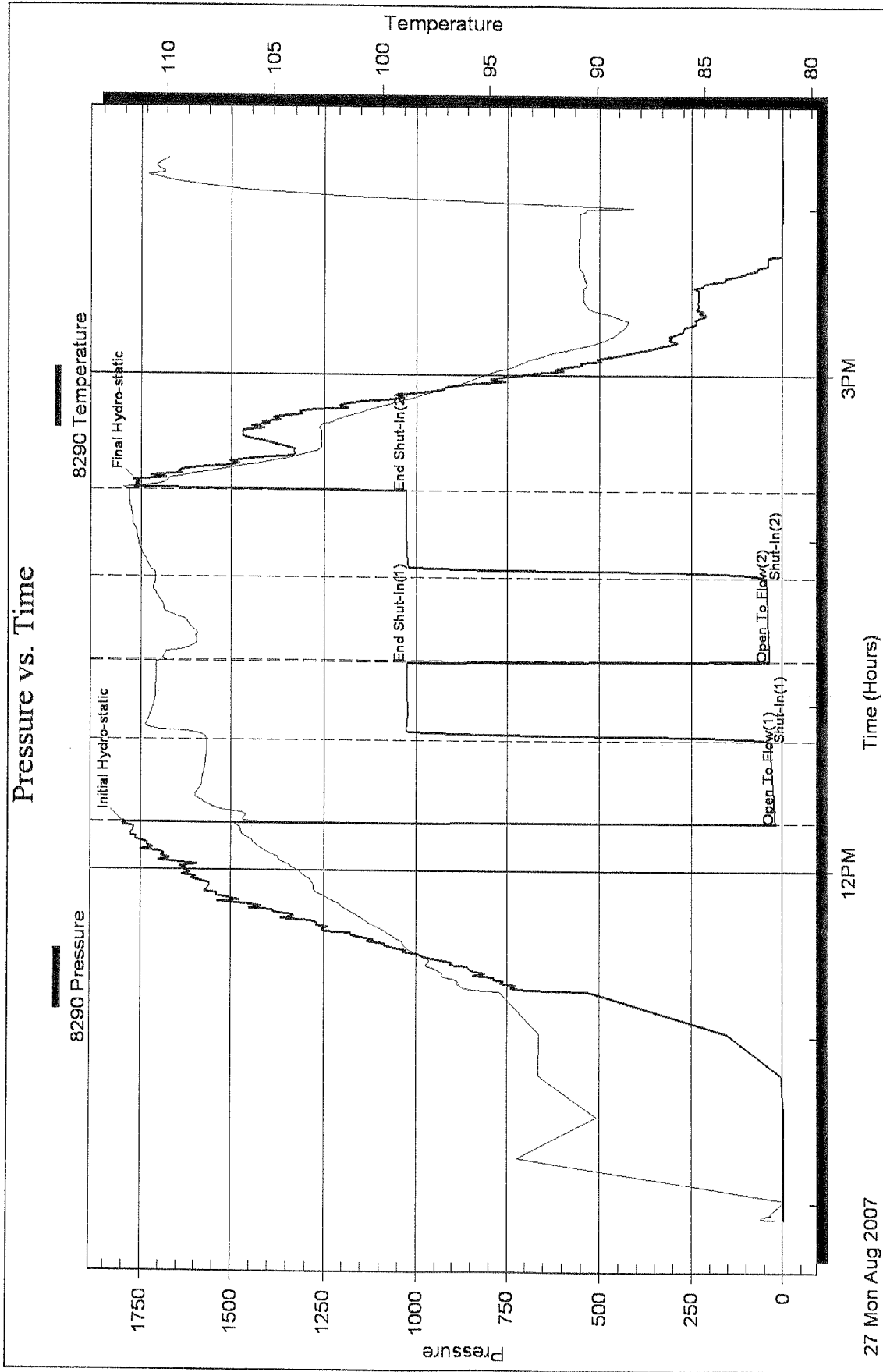
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

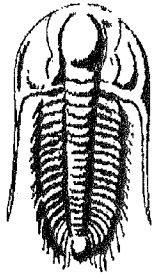


27 Mon Aug 2007

Time (Hours)

3PM

12PM



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **IA Operating**

900 N Tyler Rd #14
Wichita KS 67212

ATTN: Randy Killian

14 6 26W Sheridan KS

Moss #14-1

Start Date: 2007.08.27 @ 22:34:38

End Date: 2007.08.28 @ 05:35:08

Job Ticket #: 30578 DST #: 2

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

IA Operating

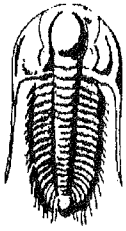
Moss #14-1

14 6 26W Sheridan KS

DST # 2

LKC "F"

2007.08.27



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

IA Operating

Moss #14-1

900 N Tyler Rd #14
Wichita KS 67212

14 6 26W Sheridan KS

ATTN: Randy Killian

Job Ticket: 30578

DST#: 2

Test Start: 2007.08.27 @ 22:34:38

GENERAL INFORMATION:

Formation: **LKC "F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:38:08

Time Test Ended: 05:35:08

Test Type: Conventional Bottom Hole

Tester: Tyson Flax

Unit No: 21

Interval: **3755.00 ft (KB) To 3785.00 ft (KB) (TVD)**

Total Depth: 3785.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2602.00 ft (KB)

2597.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8290

Inside

Press@RunDepth: 718.13 psig @ 3756.00 ft (KB)

Start Date: 2007.08.27

End Date:

2007.08.28

Start Time: 22:34:40

End Time:

05:35:08

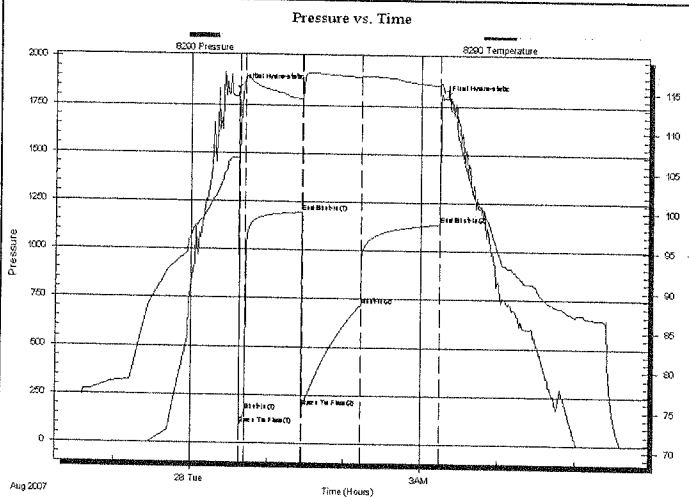
Capacity: 7000.00 psig

Last Calib.: 2007.08.28

Time On Btm: 2007.08.28 @ 00:36:53

Time Off Btm: 2007.08.28 @ 03:17:53

TEST COMMENT: IFP BOB in 1.5 min
ISI No blow back
FFP BOB in 2 min
FSI Weak surface blow back throughout



PRESSURE SUMMARY

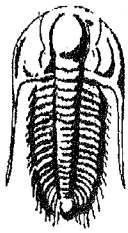
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1839.17	106.74	Initial Hydro-static
2	96.23	106.47	Open To Flow (1)
6	165.62	116.29	Shut-In(1)
50	1195.12	114.15	End Shut-In(1)
51	189.11	113.76	Open To Flow (2)
97	718.13	116.97	Shut-In(2)
159	1138.50	115.96	End Shut-In(2)
161	1787.94	115.23	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1020.00	Water	14.18
180.00	MW 90%W 10%M	2.55
297.00	OCWM 10%O 40%W 50%M	4.21
3.00	CO	0.04
0.00	120' GIP	0.00

Gas Rates

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



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

IA Operating

Moss #14-1

900 N Tyler Rd #14
Wichita KS 67212

14 6 26W Sheridan KS

Job Ticket: 30578

DST#: 2

ATTN: Randy Killian

Test Start: 2007.08.27 @ 22:34:38

Tool Information

Drill Pipe:	Length: 3730.00 ft	Diameter: 3.82 inches	Volume: 52.87 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 53.02 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3755.00 ft			Final 50000.00 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		

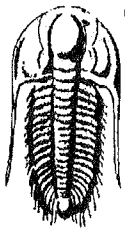
Tool Comments:

Tool Description

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

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3728.00	
Shut In Tool	5.00			3733.00	
Hydraulic tool	5.00			3738.00	
Jars	5.00			3743.00	
Safety Joint	2.00			3745.00	
Packer	5.00			3750.00	28.00 Bottom Of Top Packer
Packer	5.00			3755.00	
Stubb	1.00			3756.00	
Recorder	0.00	8290	Inside	3756.00	
Perforations	26.00			3782.00	
Recorder	0.00	13401	Inside	3782.00	
Bullnose	3.00			3785.00	30.00 Bottom Packers & Anchor

Total Tool Length: 58.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

IA Operating

Moss #14-1

900 N Tyler Rd #14
Wichita KS 67212

14 6 26W Sheridan KS

ATTN: Randy Killian

Job Ticket: 30578

DST#: 2

Test Start: 2007.08.27 @ 22:34:38

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:

29000 ppm

Viscosity: 44.00 sec/qt

Cushion Volume:

bbf

Water Loss: 9.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
1020.00	Water	14.181
180.00	MW 90%W 10%M	2.552
297.00	OCWM 10%O 40%W 50%M	4.210
3.00	CO	0.043
0.00	120' GIP	0.000

Total Length: 1500.00 ft

Total Volume: 20.986 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

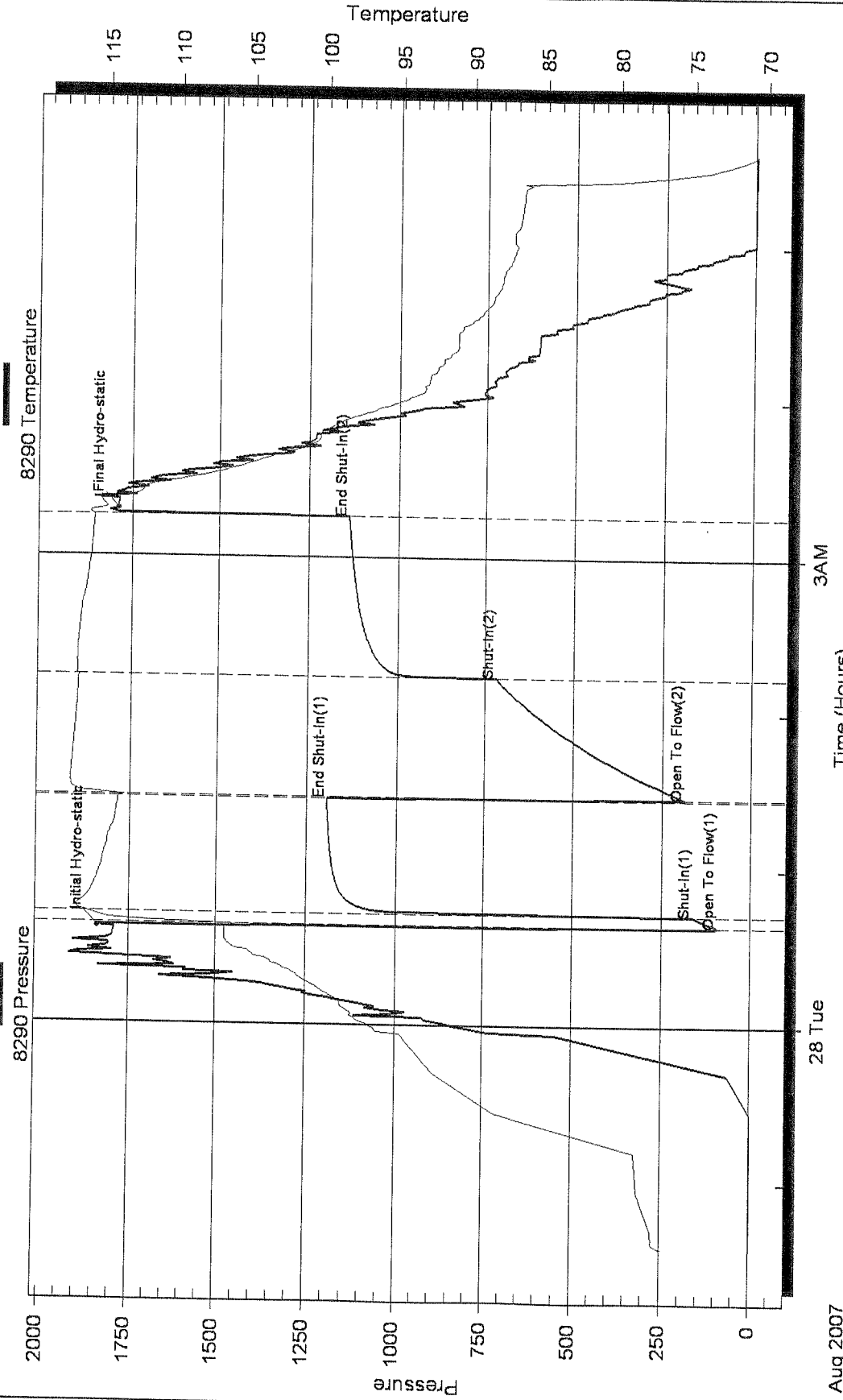
Serial #:

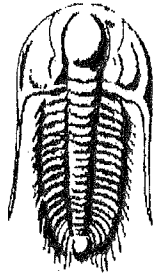
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **IA Operating**

900 N Tyler Rd #14
Wichita KS 67212

ATTN: Randy Killian

14 6 26W Sheridan KS

Moss #14-1

Start Date: 2007.08.28 @ 15:25:13

End Date: 2007.08.29 @ 00:18:28

Job Ticket #: 30579 DST #: 3

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

IA Operating

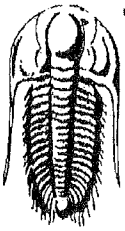
Moss #14-1

14 6 26W Sheridan KS

DST # 3

LKC"J.K"

2007.08.28



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

IA Operating

Moss #14-1

900 N Tyler Rd #14
Wichita KS 67212

14 6 26W Sheridan KS

ATTN: Randy Killian

Job Ticket: 30579

DST#: 3

Test Start: 2007.08.28 @ 15:25:13

GENERAL INFORMATION:

Formation: **LKC"J-K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:37:13

Time Test Ended: 00:18:28

Test Type: Conventional Bottom Hole

Tester: Tyson Flax

Unit No: 21

Interval: **3833.00 ft (KB) To 3885.00 ft (KB) (TVD)**

Total Depth: 3885.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2602.00 ft (KB)

2597.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8290 Inside

Press@RunDepth: 191.97 psig @ 3835.00 ft (KB)

Start Date: 2007.08.28

End Date: 2007.08.29

Start Time: 15:25:15

End Time: 00:18:28

Capacity: 7000.00 psig

Last Calib.: 2007.08.29

Time On Btm: 2007.08.28 @ 17:36:13

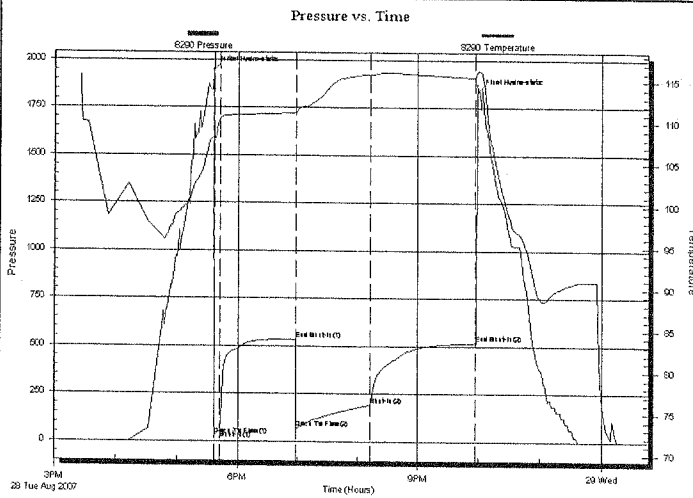
Time Off Btm: 2007.08.28 @ 21:59:58

TEST COMMENT: IFP Blow built to 8.5 "

ISI No blow back

FFP BOB in 6.5 min

FSI Weak surface blow back built to 4 "



PRESSURE SUMMARY

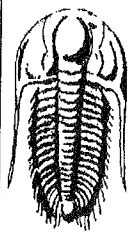
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1945.19	108.28	Initial Hydro-static
1	31.68	107.82	Open To Flow (1)
6	53.38	110.39	Shut-In(1)
82	535.03	111.25	End Shut-In(1)
83	70.40	111.17	Open To Flow (2)
157	191.97	115.81	Shut-In(2)
261	517.07	115.53	End Shut-In(2)
264	1835.84	116.32	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	GOCM 30%G 20%O 50%M	1.42
120.00	CMCO 20%G 50%O 30%M	1.70
220.00	GCO 40%G 60%O	3.12
0.00	480' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

IA Operating

Moss #14-1

900 N Tyler Rd #14
Wichita KS 67212

14 6 26W Sheridan KS

ATTN: Randy Killian

Job Ticket: 30579

DST#: 3

Test Start: 2007.08.28 @ 15:25:13

Tool Information

Drill Pipe:	Length: 3792.00 ft	Diameter: 3.82 inches	Volume: 53.75 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 53.90 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3833.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	52.00 ft			
Tool Length:	73.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

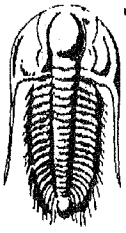
Tool Comments:

Tool Description

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

Change Over Sub	1.00			3813.00	
Shut In Tool	5.00			3818.00	
Hydraulic tool	5.00			3823.00	
Packer	5.00			3828.00	21.00 Bottom Of Top Packer
Packer	5.00			3833.00	
Stubb	1.00			3834.00	
Change Over Sub	1.00			3835.00	
Recorder	0.00	8290	Inside	3835.00	
Blank Spacing	31.00			3866.00	
Perforations	15.00			3881.00	
Change Over Sub	1.00			3882.00	
Recorder	0.00	13401	Inside	3882.00	
Bullnose	3.00			3885.00	52.00 Bottom Packers & Anchor

Total Tool Length: 73.00



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

IA Operating

Moss #14-1

900 N Tyler Rd #14
Wichita KS 67212

14 6 26W Sheridan KS

ATTN: Randy Killian

Job Ticket: 30579

DST#: 3

Test Start: 2007.08.28 @ 15:25:13

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

38 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 64.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	GOCM 30%G 20%O 50%M	1.423
120.00	CMCO 20%G 50%O 30%M	1.701
220.00	GCO 40%G 60%O	3.119
0.00	480' GIP	0.000

Total Length: 460.00 ft

Total Volume: 6.243 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

