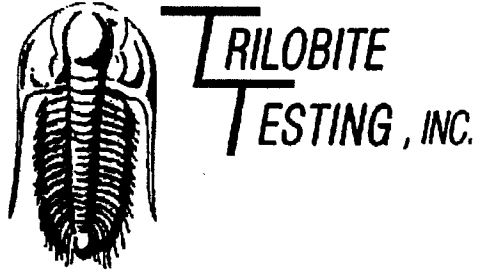


15-109-20945

31-12s-33w



DRILL STEM TEST REPORT

Prepared For: **Phillips Exploration Co**

1601 N Sagebrush
Wichita, KS 67230

ATTN: Jim Phillips

S31-12-33 Logan,KS

Lee 1-31

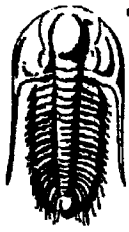
Start Date: 2011.04.10 @ 17:25:00

End Date: 2011.04.11 @ 00:08:47

Job Ticket #: 43107 DST #: 1

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

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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Phillips Exploration Co

Lee 1-31

1601 N Sagebrush
Wichita, KS 67230

S31-12-33 Logan, KS

Job Ticket: 43107

DST#: 1

ATTN: Jim Phillips

Test Start: 2011.04.10 @ 17:25:00

GENERAL INFORMATION:

Formation: **Johnson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:47:24

Time Test Ended: 00:08:47

Test Type: Conventional Bottom Hole

Tester: Chuck Smith

Unit No: 37

Interval: 4575.00 ft (KB) To 4635.00 ft (KB) (TVD)

Reference Elevations: 3102.00 ft (KB)

Total Depth: 4635.00 ft (KB) (TVD)

3091.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 8018

Inside

Press@RunDepth: 34.84 psig @ 4579.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.04.10 End Date: 2011.04.11

Last Calib.: 2011.04.11

Start Time: 17:25:05 End Time: 00:08:48

Time On Btm: 2011.04.10 @ 19:46:00

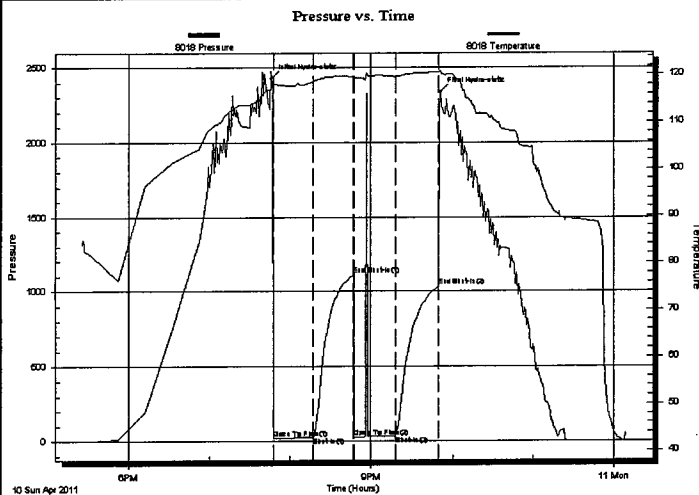
Time Off Btm: 2011.04.10 @ 21:51:12

TEST COMMENT: IF: 1/2" Blow died @ 13 min.

IS: No return.

FF: No blow, flushed tool, surge died.

FS: No return.



PRESSURE SUMMARY

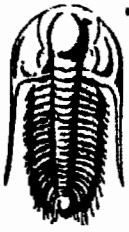
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2428.05	117.71	Initial Hydro-static
2	19.70	117.69	Open To Flow (1)
32	24.86	118.59	Shut-In(1)
61	1111.12	119.56	End Shut-In(1)
62	27.12	119.23	Open To Flow (2)
92	34.84	119.55	Shut-In(2)
124	1036.73	120.52	End Shut-In(2)
126	2337.74	120.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
45.00	OSM 100m	0.22

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Phillips Exploration Co

Lee 1-31

1601 N Sagebrush
Wichita, KS 67230

S31-12-33 Logan,KS

Job Ticket: 43107

DST#: 1

ATTN: Jim Phillips

Test Start: 2011.04.10 @ 17:25:00

Tool Information

Drill Pipe:	Length: 4321.00 ft	Diameter: 3.80 inches	Volume: 60.61 bbl	Tool Weight: 2500.00 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: 237.00 ft	Diameter: 2.25 inches	Volume: 1.17 bbl	Weight to Pull Loose: 66000.00 lb
			Total Volume: 61.78 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.50 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4575.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	87.50 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			4548.50	
Shut In Tool	5.00			4553.50	
Hydraulic tool	5.00			4558.50	
Jars	5.00			4563.50	
Safety Joint	2.50			4566.00	
Packer	5.00			4571.00	27.50 Bottom Of Top Packer
Packer	4.00			4575.00	
Stubb	1.00			4576.00	
Perforations	3.00			4579.00	
Recorder	0.00	8018	Inside	4579.00	
Recorder	0.00	6751	Outside	4579.00	
Perforations	20.00			4599.00	
Change Over Sub	1.00			4600.00	
Drill Pipe	31.00			4631.00	
Change Over Sub	1.00			4632.00	
Bullnose	3.00			4635.00	60.00 Bottom Packers & Anchor
Total Tool Length:	87.50				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Phillips Exploration Co

Lee 1-31

1601 N Sagebrush
Wichita, KS 67230

S31-12-33 Logan, KS

Job Ticket: 43107

DST#: 1

ATTN: Jim Phillips

Test Start: 2011.04.10 @ 17:25:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 10.00 lb/gal	Cushion Length: ft	Water Salinity:	0 ppm
Viscosity: 58.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.76 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 11000.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
45.00	OSM 100m	0.221

Total Length: 45.00 ft Total Volume: 0.221 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Serial #: 8018

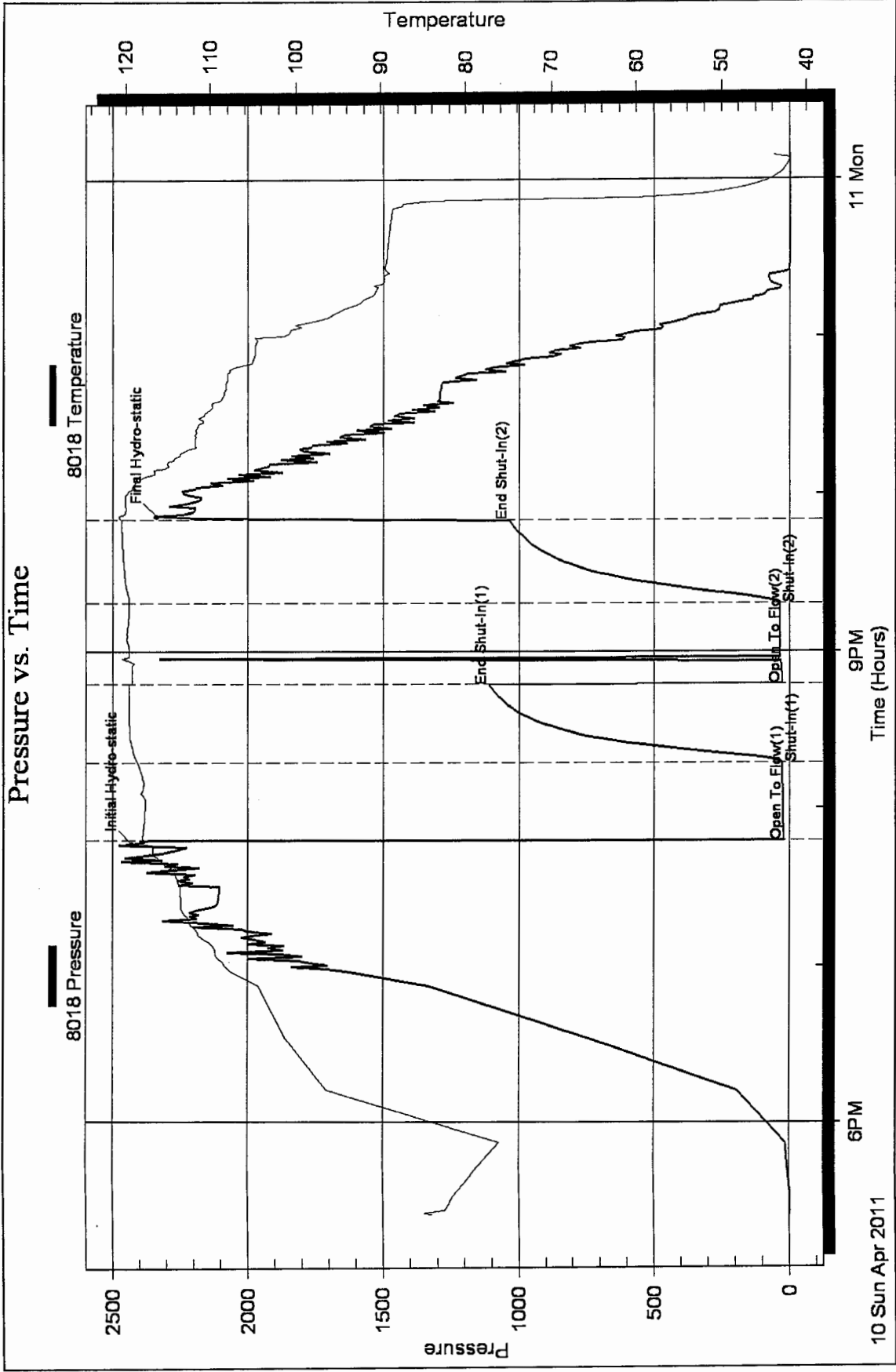
Inside

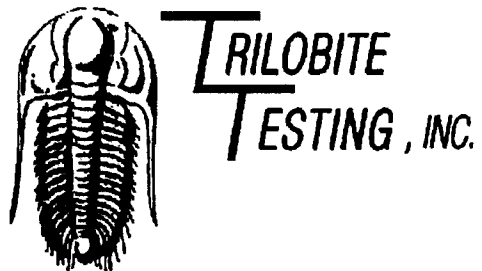
Phillips Exploration Co

S31-12-33 Logan, KS

DST Test Number: 1

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Phillips Exploration Co**

1601 N Sagebrush
Wichita, KS 67230

ATTN: Jim Phillips

S31-12-33 Logan,KS

Lee 1-31

Start Date: 2011.04.11 @ 08:35:00

End Date: 2011.04.11 @ 14:32:00

Job Ticket #: 43108 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

Phillips Exploration Co

Lee 1-31

1601 N Sagebrush
Wichita, KS 67230

S31-12-33 Logan, KS

ATTN: Jim Phillips

Job Ticket: 43108

DST#: 2

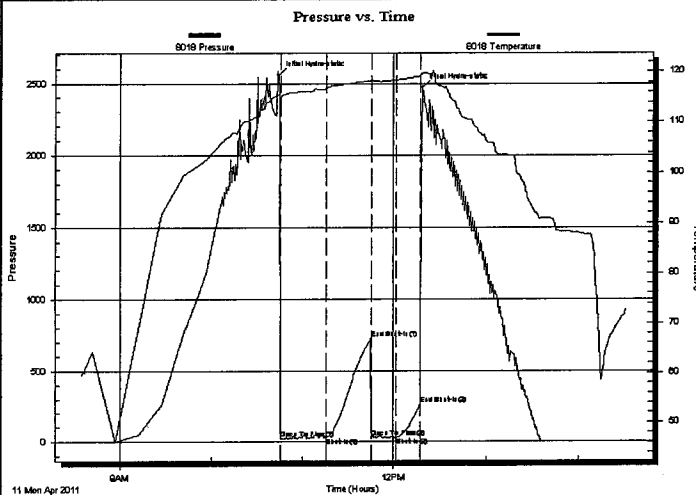
Test Start: 2011.04.11 @ 08:35:00

GENERAL INFORMATION:

Formation: Basal Penn SJ
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 10:45:36
 Time Test Ended: 14:32:00
 Interval: 4635.00 ft (KB) To 4690.00 ft (KB) (TVD)
 Total Depth: 4690.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole
 Tester: Chuck Smith
 Unit No: 37
 Reference Elevations: 3102.00 ft (KB)
 3091.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8018 Inside
 Press@RunDepth: 30.47 psig @ 4639.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.04.11 End Date: 2011.04.11 Last Calib.: 2011.04.11
 Start Time: 08:35:05 End Time: 14:31:59 Time On Btm: 2011.04.11 @ 10:44:00
 Time Off Btm: 2011.04.11 @ 12:18:48

TEST COMMENT: IF: 1/2" Blow.
 IS: No return.
 FF: No blow.
 FSI: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2557.77	115.39	Initial Hydro-static
2	20.56	114.72	Open To Flow (1)
32	26.88	116.54	Shut-In(1)
61	724.82	118.27	End Shut-In(1)
62	28.91	117.89	Open To Flow (2)
78	30.47	118.38	Shut-In(2)
94	266.32	119.05	End Shut-In(2)
95	2471.25	119.58	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	M 100m	0.15

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Phillips Exploration Co

Lee 1-31

1601 N Sagebrush
Wichita, KS 67230

S31-12-33 Logan, KS

ATTN: Jim Phillips

Job Ticket: 43108

DST#: 2

Test Start: 2011.04.11 @ 08:35:00

Tool Information

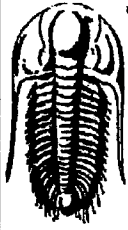
Drill Pipe:	Length: 4384.00 ft	Diameter: 3.80 inches	Volume: 61.50 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 237.00 ft	Diameter: 2.25 inches	Volume: 1.17 bbl	Weight to Pull Loose: 70000.00 lb
			Total Volume: 62.67 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.50 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	4635.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	77.50 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			4613.50	
Shut In Tool	5.00			4618.50	
Hydraulic tool	5.00			4623.50	
Safety Joint	2.50			4626.00	
Packer	5.00			4631.00	22.50 Bottom Of Top Packer
Packer	4.00			4635.00	
Stubb	1.00			4636.00	
Perforations	3.00			4639.00	
Recorder	0.00	8018	Inside	4639.00	
Recorder	0.00	6751	Outside	4639.00	
Perforations	15.00			4654.00	
Change Over Sub	1.00			4655.00	
Drill Pipe	31.00			4686.00	
Change Over Sub	1.00			4687.00	
Bullnose	3.00			4690.00	55.00 Bottom Packers & Anchor

Total Tool Length: 77.50



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Phillips Exploration Co

Lee 1-31

1601 N Sagebrush
Wichita, KS 67230

S31-12-33 Logan, KS

Job Ticket: 43108

DST#: 2

ATTN: Jim Phillips

Test Start: 2011.04.11 @ 08:35:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 10.00 lb/gal
Viscosity: 77.00 sec/qt
Water Loss: 9.75 in³
Resistivity: 0.00 ohm.m
Salinity: 11000.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 0 deg API
Water Salinity: 0 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	M 100m	0.148

Total Length: 30.00 ft Total Volume: 0.148 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Serial #: 8018

Inside

Phillips Exploration Co

S31-12-33 Logan, KS

DST Test Number: 2

