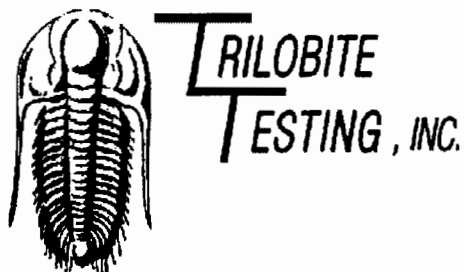


15-053-21120

16-16s-7w



DRILL STEM TEST REPORT

Prepared For: **Larson Operating Co.**

562 W. Highway 4
Olmitz, KS. 67564

ATTN: Steve Davis

16-16s-7w-Ellsworth

Reed #1-16

Start Date: 2003.11.01 @ 15:30:00

End Date: 2003.11.01 @ 18:29:45

Job Ticket #: 18193 . DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Larson Operating Co.

Reed #1-16

16-16s-7w-Ellsworth

DST # 1

Chase Group

2003.11.01



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Larson Operating Co.

Reed #1-16

562 W. Highway 4
Olmitz, KS. 67564

16-16s-7w-Ellsworth

Job Ticket: 18193

DST#: 1

ATTN: Steve Davis

Test Start: 2003.11.01 @ 15:30:00

GENERAL INFORMATION:

Formation: **Chase Group**

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

Time Tool Opened: 16:02:15

Time Test Ended: 18:29:45

Test Type: **Conventional Bottom Hole**

Tester: **Jason McLemore**

Unit No: **24**

Interval: **1044.00 ft (KB) To 1065.00 ft (KB) (TVD)**

Reference Elevations: **1591.00 ft (KB)**

Total Depth: **1065.00 ft (KB) (TVD)**

1585.00 ft (CF)

Hole Diameter: **6.80 inches** Hole Condition: **Good**

KB to GR/CF: 6.00 ft

Serial #: 6752 **Inside**

Press@RunDepth: **30.30 psig @ 1045.00 ft (KB)**

Capacity: **7000.00 psig**

Start Date: **2003.11.01**

End Date: **2003.11.01**

Last Calib.: **1899.12.30**

Start Time: **15:30:00**

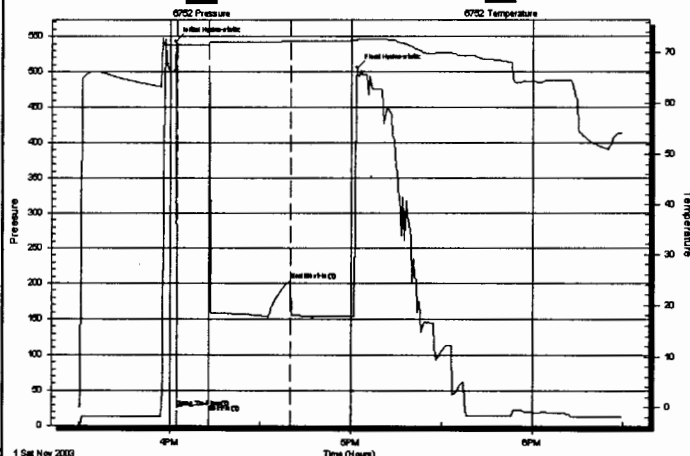
End Time: **18:29:45**

Time On Btm: **2003.11.01 @ 16:01:55**

Time Off Btm: **2003.11.01 @ 17:01:45**

**TEST COMMENT: FP- Weak Blow , Built to 5 1/2", Packer Seat Lost During Shut In
FFP-Weak Surface Blow , Died in 5 min**

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	543.02	71.57	Initial Hydro-static
1	25.15	71.37	Open To Flow (1)
11	30.30	71.54	Shut-In(1)
38	204.29	72.28	End Shut-In(1)
60	506.09	72.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
270.00	Drilling Mud	2.09

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Operating Co.

Reed #1-16

562 W. Highway 4
Olmitz, KS. 67564

16-16s-7w-Ellsworth

Job Ticket: 18193

DST#: 1

ATTN: Steve Davis

Test Start: 2003.11.01 @ 15:30:00

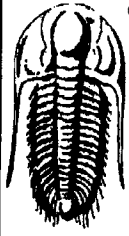
Tool Information

Drill Pipe:	Length: 843.00 ft	Diameter: 3.80 inches	Volume: 11.83 bbl	Tool Weight: 1800.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight set on Packer: 18000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 30000.00 lb
			<u>Total Volume: 12.74 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 28000.00 lb
Depth to Top Packer:	1044.00 ft			Final 28000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	21.00 ft			
Tool Length:	44.00 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			1022.00	
Shut In Tool	5.00			1027.00	
Sampler	2.00			1029.00	
Hydraulic tool	5.00			1034.00	
Packer	5.00			1039.00	23.00 Bottom Of Top Packer
Packer	5.00			1044.00	
Stubb	1.00			1045.00	
Recorder	0.00	6752	Inside	1045.00	
Perforations	17.00			1062.00	
Recorder	0.00	13252	Outside	1062.00	
Bullnose	3.00			1065.00	21.00 Bottom Packers & Anchor

Total Tool Length: 44.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Operating Co.

Reed #1-16

562 W. Highway 4
Olmitz, KS. 67564

16-16s-7w-Ellsworth

Job Ticket: 18193

DST#: 1

ATTN: Steve Davis

Test Start: 2003.11.01 @ 15:30:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 30.00 sec/qt

Cushion Volume:

bbl

Water Loss: in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 88000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
270.00	Drilling Mud	2.093

Total Length: 270.00 ft

Total Volume: 2.093 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6752

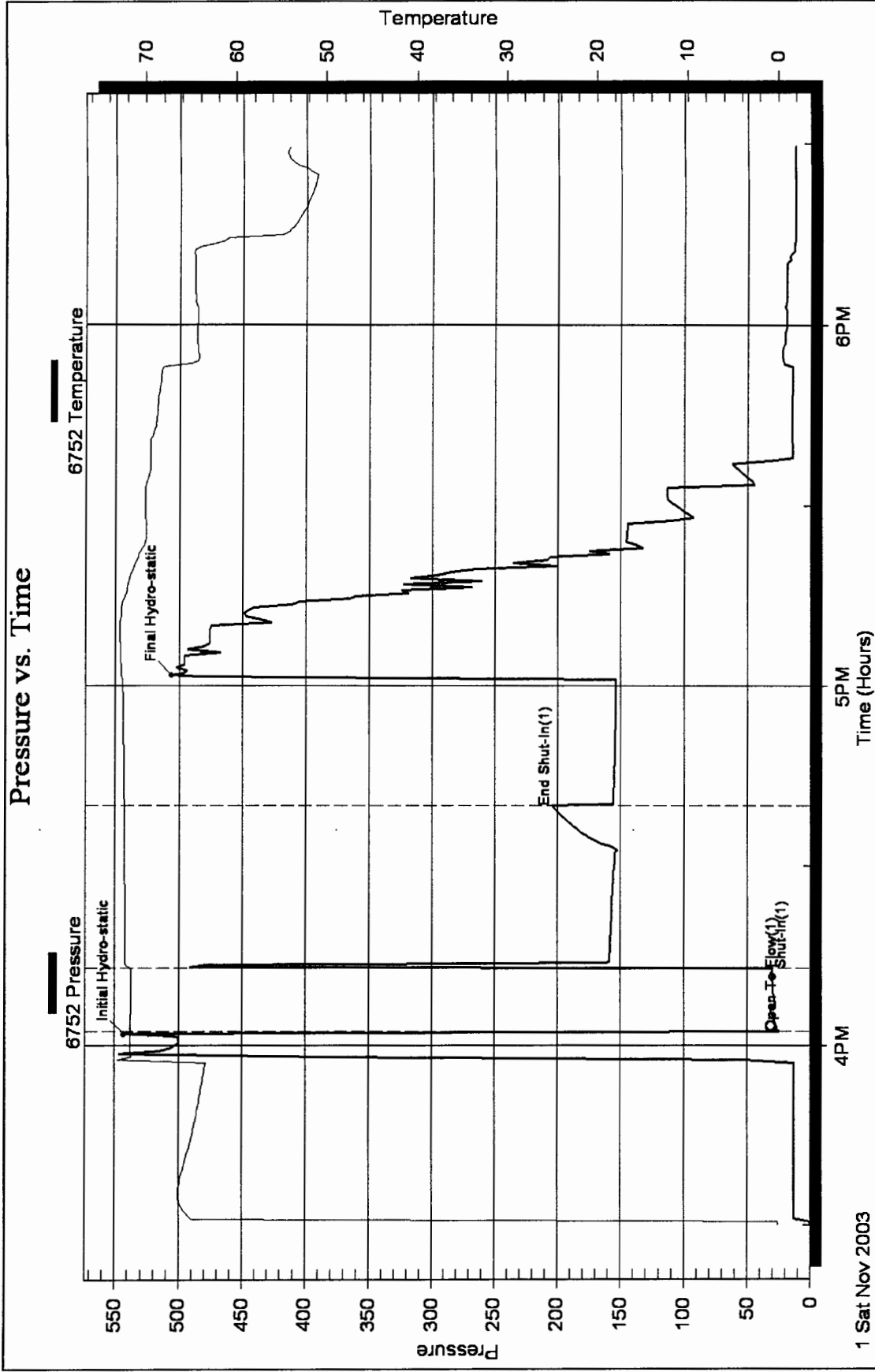
Inside

Larson Operating Co.

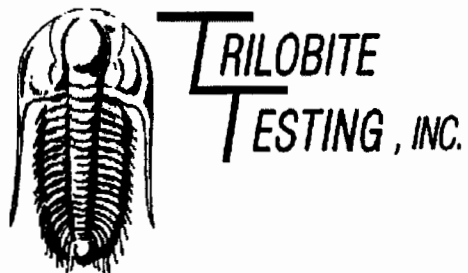
16-16s-7w-Elisw orth

DST Test Number: 1

Pressure vs. Time



1 Sat Nov 2003



DRILL STEM TEST REPORT

Prepared For: **Larson Operating Co.**

562 W. Highway 4
Olmitz, KS. 67564

ATTN: Steve Davis

16-16s-7w-Ellsworth

Reed #1-16

Start Date: 2003.11.01 @ 00:44:13

End Date: 2003.11.01 @ 01:30:53

Job Ticket #: 18194 DST #: 2

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.

Reed #1-16

562 W. Highway 4
Olmritz, KS. 67564

16-16s-7w-Ellsworth

Job Ticket: 18194

DST#: 2

ATTN: Steve Davis

Test Start: 2003.11.01 @ 00:44:13

GENERAL INFORMATION:

Formation: **Towanda**

Deviated: No Whipstock: ft (KB)

Time Tool Opened:

Time Test Ended: 01:30:53

Test Type: Conventional Bottom Hole

Tester: Jason McLemore

Unit No: 24

Interval: **1101.00 ft (KB) To 1125.00 ft (KB) (TVD)**

Reference Elevations: 1591.00 ft (KB)

Total Depth: 1125.00 ft (KB) (TVD)

1585.00 ft (CF)

Hole Diameter: 6.80 inches Hole Condition: Good

KB to GR/CF: 6.00 ft

Serial #: **6752** Inside

Press@RunDepth: psig @ 1102.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2003.11.01

End Date: 2003.11.01

Last Calib.: 1899.12.30

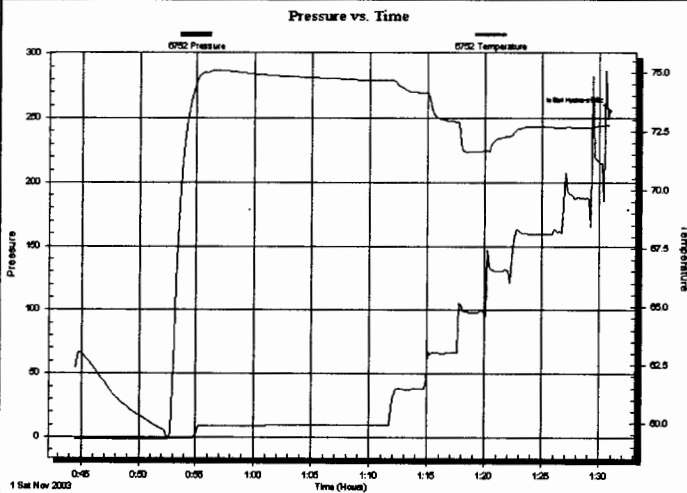
Start Time: 00:44:28

End Time: 01:30:53

Time On Btm: 2003.11.01 @ 01:30:53

Time Off Btm:

TEST COMMENT: FFP- Good Blow , Built to 6", No Blow back
FFP- Good Blow , BOB in 20 min, No Blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	255.25	72.77	Initial Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	Mud	0.30

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Operating Co.

Reed #1-16

562 W. Highway 4
Olmitz, KS. 67564

16-16s-7w-Ellsworth

Job Ticket: 18194

DST#: 2

ATTN: Steve Davis

Test Start: 2003.11.01 @ 00:44:13

Tool Information

Drill Pipe:	Length: 774.00 ft	Diameter: 3.80 inches	Volume: 10.86 bbl	Tool Weight: 1800.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 310.00 ft	Diameter: 2.25 inches	Volume: 1.52 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: 12.38 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 34000.00 lb
Depth to Top Packer:	1101.00 ft			Final 34000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	47.00 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			1079.00	
Shut In Tool	5.00			1084.00	
Sampler	2.00			1086.00	
Hydraulic tool	5.00			1091.00	
Packer	5.00			1096.00	23.00 Bottom Of Top Packer
Packer	5.00			1101.00	
Stubb	1.00			1102.00	
Recorder	0.00	6752	Inside	1102.00	
Perforations	20.00			1122.00	
Recorder	0.00	13252	Outside	1122.00	
Bullnose	3.00			1125.00	24.00 Bottom Packers & Anchor

Total Tool Length: 47.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Operating Co.

Reed #1-16

562 W. Highway 4
Olmitz, KS. 67564

16-16s-7w-Ellsworth

Job Ticket: 18194

DST#: 2

ATTN: Steve Davis

Test Start: 2003.11.01 @ 00:44:13

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 30.00 sec/qt

Cushion Volume:

bbl

Water Loss: in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 88000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	Mud	0.295

Total Length: 60.00 ft Total Volume: 0.295 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

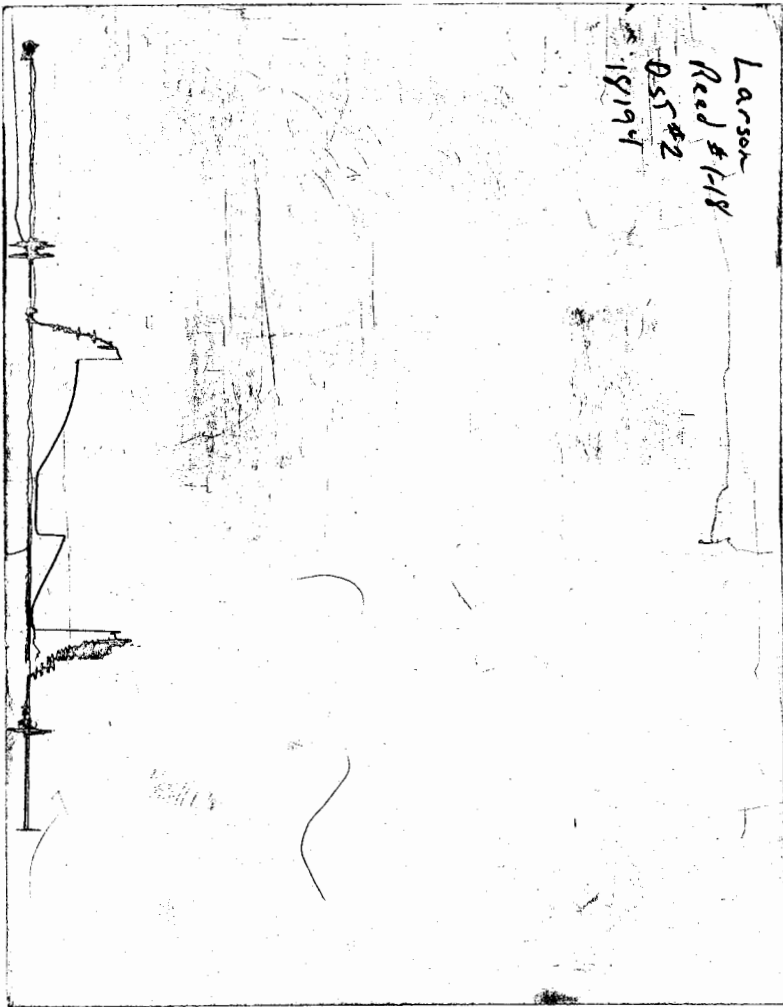
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

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





DRILL STEM TEST REPORT

Prepared For: **Larson Operating Co.**

562 W. Highway 4
Olmitz, KS. 67564

ATTN: Steve Davis

16-16s-7w-Ellsworth

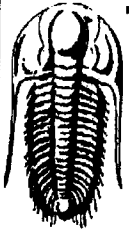
Reed #1-16

Start Date: 2003.11.03 @ 06:43:22

End Date: 2003.11.03 @ 13:16:07

Job Ticket #: 18195 DST #: 3

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 W. Highway 4
Olmitz, KS. 67564

ATTN: Steve Davis

Reed #1-16

16-16s-7w-Ellsworth

Job Ticket: 18195

DST#: 3

Test Start: 2003.11.03 @ 06:43:22

GENERAL INFORMATION:

Formation: **Grand Haven**

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

Time Tool Opened: 08:18:22

Time Test Ended: 13:16:07

Test Type: **Conventional Bottom Hole**

Tester: **Jason McLemore**

Unit No: **24**

Interval: **1776.00 ft (KB) To 1803.00 ft (KB) (TVD)**

Total Depth: **1803.00 ft (KB) (TVD)**

Hole Diameter: **6.80 inches** Hole Condition: **Good**

Reference Elevations: **1591.00 ft (KB)**

1585.00 ft (CF)

KB to GR/CF: **6.00 ft**

Serial #: 2342

Inside

Press@RunDepth: **265.87 psig @ 1777.00 ft (KB)**

Capacity: **7000.00 psig**

Start Date: **2003.11.03**

End Date: **2003.11.03**

Last Calib.: **1899.12.30**

Start Time: **06:43:23**

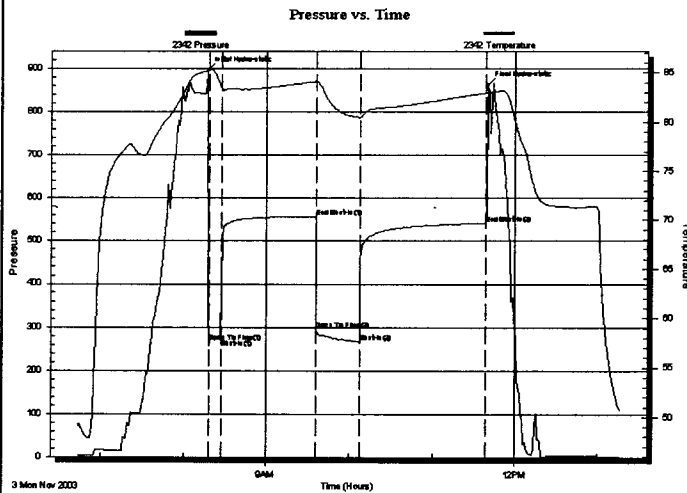
End Time: **13:16:07**

Time On Btm: **2003.11.03 @ 08:17:22**

Time Off Btm: **2003.11.03 @ 11:39:52**

TEST COMMENT: FFP-Strong Blow ,BOB in 10 sec, Gas to Surface in 1 min, Blow back to BOB in 10 min, (6")

FFP-Strong Blow , Guaging Gas, No Blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	896.51	85.22	Initial Hydro-static
1	264.87	85.25	Open To Flow (1)
10	272.00	83.52	Shut-In(1)
79	557.60	84.12	End Shut-In(1)
80	294.83	84.13	Open To Flow (2)
111	265.87	80.47	Shut-In(2)
202	541.74	82.97	End Shut-In(2)
203	863.02	83.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	Mud	0.31

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	1.00	25.00	1132.70
Last Gas Rate	1.00	43.00	1650.18
Max. Gas Rate	1.00	46.00	1736.43



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Operating Co.

Reed #1-16

562 W. Highway 4
Olmitz, KS. 67564

16-16s-7w-Ellsworth

Job Ticket: 18195

DST#: 3

ATTN: Steve Davis

Test Start: 2003.11.03 @ 06:43:22

Tool Information

Drill Pipe:	Length: 1585.00 ft	Diameter: 3.80 inches	Volume: 22.23 bbl	Tool Weight: 1800.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 38000.00 lb
			<u>Total Volume: 23.14 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 33000.00 lb
Depth to Top Packer:	1776.00 ft			Final 33000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	27.00 ft			
Tool Length:	50.00 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			1754.00	
Shut In Tool	5.00			1759.00	
Sampler	2.00			1761.00	
Hydraulic tool	5.00			1766.00	
Packer	5.00			1771.00	23.00 Bottom Of Top Packer
Packer	5.00			1776.00	
Stubb	1.00			1777.00	
Recorder	0.00	2342	Inside	1777.00	
Perforations	23.00			1800.00	
Recorder	0.00	13252	Outside	1800.00	
Bullnose	3.00			1803.00	27.00 Bottom Packers & Anchor

Total Tool Length: 50.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Operating Co.

Reed #1-16

562 W. Highway 4
Olmitz, KS. 67564

16-16s-7w-Ellsworth

Job Ticket: 18195

DST#: 3

ATTN: Steve Davis

Test Start: 2003.11.03 @ 06:43:22

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:	ppm
Viscosity: 37.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.78 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2200.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	Mud	0.310

Total Length: 63.00 ft Total Volume: 0.310 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 700 psig In Sample Chamber, 66 Cubic Ft.



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

GAS RATES

Larson Operating Co.

Reed #1-16

562 W. Highway 4
Olmritz, KS. 67564

16-16s-7w-Ellsworth

Job Ticket: 18195

DST#: 3

ATTN: Steve Davis

Test Start: 2003.11.03 @ 06:43:22

Gas Rates Information

Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m ³ /d)
1	5	1.00	25.00	1132.70
1	10	1.00	28.50	1233.32
2	5	1.00	46.00	1736.43
2	10	1.00	45.00	1707.68
2	20	1.00	44.00	1678.93
2	25	1.00	43.00	1650.18
2	30	1.00	43.00	1650.18

Serial #: 2342

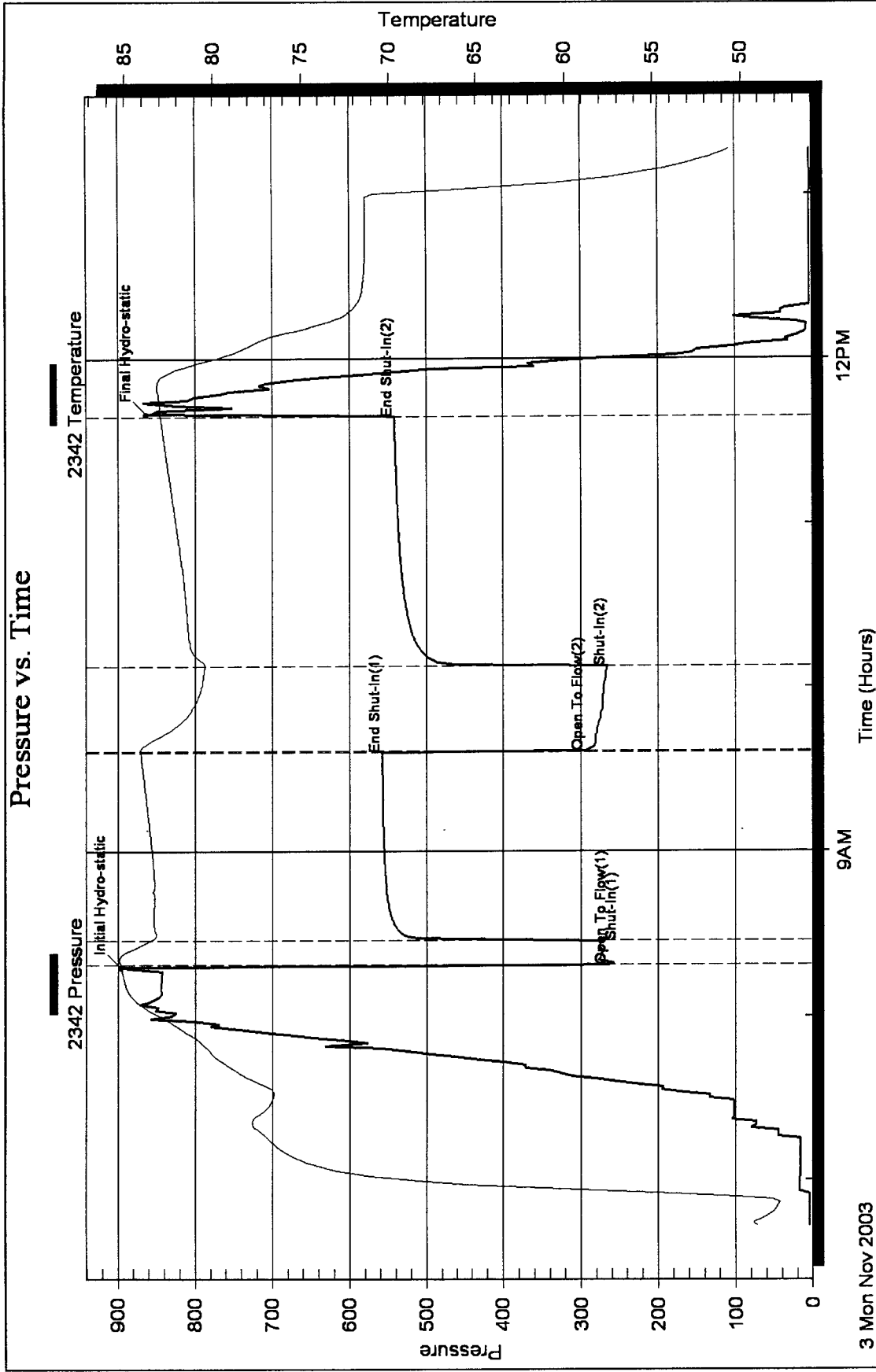
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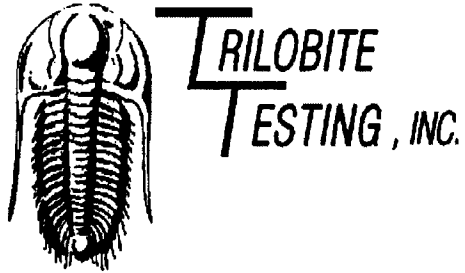
Larson Operating Co.

16-16s-7w-Elisw orth

DST Test Number: 3

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Larson Operating Co.**

562 W. Highway 4
Olmitz, KS. 67564

ATTN: Steve Davis

16-16s-7w-Ellsworth

Reed #1-16

Start Date: 2003.11.04 @ 06:03:03

End Date: 2003.11.04 @ 12:13:03

Job Ticket #: 18196 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Larson Operating Co.

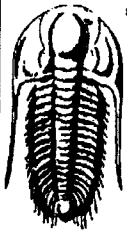
Reed #1-16

16-16s-7w-Ellsworth

DST # 4

Cedarvale

2003.11.04



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Larson Operating Co.
562 W. Highway 4
Olmitz, KS. 67564
ATTN: Steve Davis

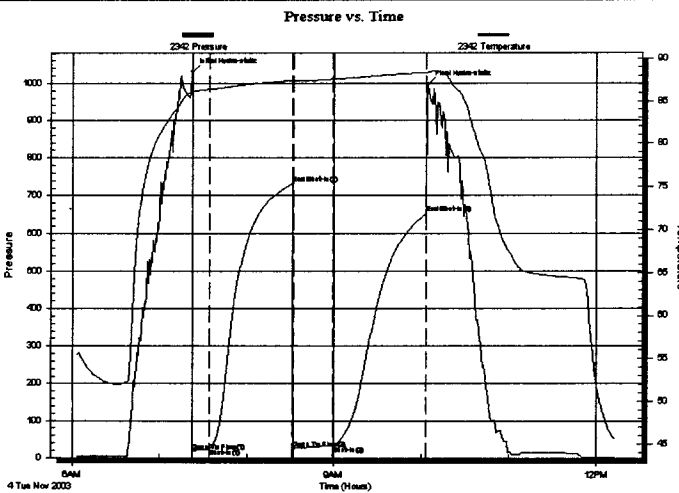
Reed #1-16
16-16s-7w-Ellsworth
Job Ticket: 18196 DST#: 4
Test Start: 2003.11.04 @ 06:03:03

GENERAL INFORMATION:

Formation: **Cedarvale**
Deviated: **No** Whipstock: ft (KB)
Time Tool Opened: 07:22:33
Time Test Ended: 12:13:03
Interval: **2011.00 ft (KB) To 2071.00 ft (KB) (TVD)**
Total Depth: **2071.00 ft (KB) (TVD)**
Hole Diameter: **6.80 inches** Hole Condition: **Good**
Test Type: **Conventional Bottom Hole**
Tester: **Jason McLemore**
Unit No: **24**
Reference Elevations: **1591.00 ft (KB)**
1585.00 ft (CF)
KB to GR/CF: **6.00 ft**

Serial #: 2342 **Inside**
Press@RunDepth: **32.47 psig @ 2018.00 ft (KB)** Capacity: **7000.00 psig**
Start Date: **2003.11.04** End Date: **2003.11.04** Last Calib.: **1899.12.30**
Start Time: **06:03:18** End Time: **12:13:03** Time On Btm: **2003.11.04 @ 07:22:23**
Time Off Btm: **2003.11.04 @ 10:04:43**

TEST COMMENT: FFP- Weak Blow , Built to 1-1/2", No Blow back
FFP-Weak Surface Blow , Died in 12 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1031.21	86.09	Initial Hydro-static
1	18.54	86.09	Open To Flow (1)
13	23.91	86.37	Shut-In(1)
69	731.84	87.43	End Shut-In(1)
70	25.67	87.43	Open To Flow (2)
97	32.47	87.58	Shut-In(2)
161	652.61	88.33	End Shut-In(2)
163	997.39	88.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
6.00	Mud	0.03

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Operating Co.

Reed #1-16

562 W. Highway 4
Olmitz, KS. 67564

16-16s-7w-Ellsworth

Job Ticket: 18196

DST#: 4

ATTN: Steve Davis

Test Start: 2003.11.04 @ 06:03:03

Tool Information

Drill Pipe:	Length: 1834.00 ft	Diameter: 3.80 inches	Volume: 25.73 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: 25000.00 lb
Drill Collar:	Length: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: 26.64 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 36000.00 lb
Depth to Top Packer:	2011.00 ft			Final 36000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	83.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

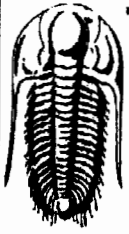
Tool Comments:

Tool Description

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

Change Over Sub	1.00			1989.00	
Shut In Tool	5.00			1994.00	
Sampler	2.00			1996.00	
Hydraulic tool	5.00			2001.00	
Packer	5.00			2006.00	23.00 Bottom Of Top Packer
Packer	5.00			2011.00	
Stubb	1.00			2012.00	
Perforations	5.00			2017.00	
Change Over Sub	1.00			2018.00	
Recorder	0.00	2342	Inside	2018.00	
Blank Spacing	31.00			2049.00	
Change Over Sub	1.00			2050.00	
Perforations	18.00			2068.00	
Recorder	0.00	13252	Outside	2068.00	
Bullnose	3.00			2071.00	60.00 Bottom Packers & Anchor

Total Tool Length: 83.00



**TRIOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Operating Co.

Reed #1-16

562 W. Highway 4
Olmitz, KS. 67564

16-16s-7w-Ellsworth

Job Ticket: 18196

DST#: 4

ATTN: Steve Davis

Test Start: 2003.11.04 @ 06:03:03

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:	ppm
Viscosity: 42.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.99 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4300.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
6.00	Mud	0.030

Total Length: 6.00 ft Total Volume: 0.030 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: 25 PSIG in Sampler, 650ml of Mud

Serial #: 2342

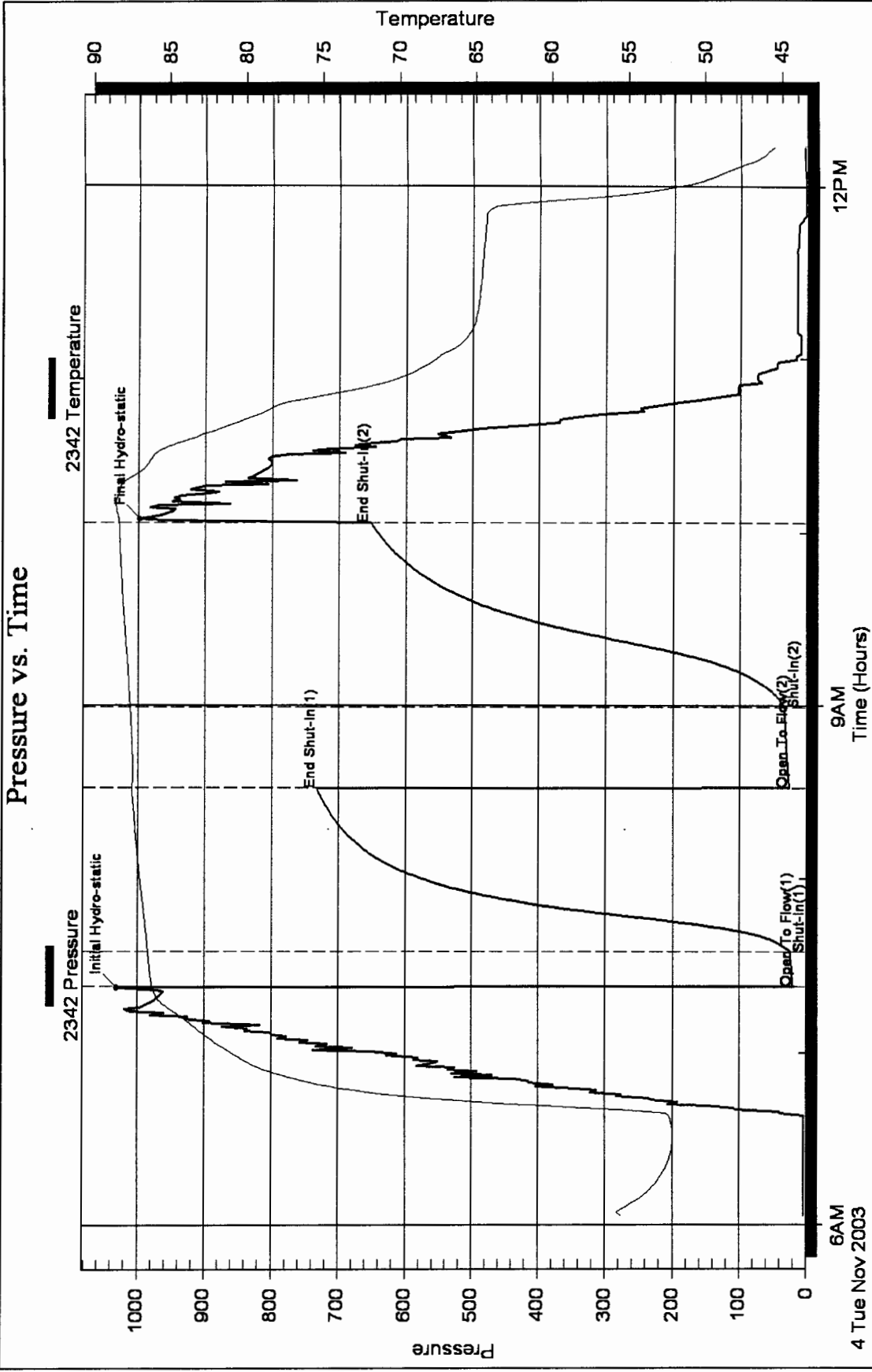
Inside

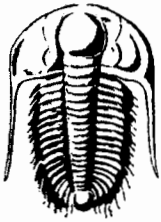
Larson Operating Co.

16-16s-7w-Elisw orth

DST Test Number: 4

Pressure vs. Time





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

INV 5957

No 18193

Test Ticket

Well Name & No. Reed #1-16 Test No. 1 Date 11-1-03
 Company Larsen Operating Co. Zone Tested Chase Group
 Address 562 W. Highway 4, Olmitz Ks. 67564 Elevation 1591 KB 1585 GL
 Co. Rep / Geo. Steve Davis Cont. Usafeldt Est. Ft. of Pay _____ Por. _____ %
 Location: Sec. 16 Twp. 16s Rge. 7w Co. Ellsworth State KS
 No. of Copies Reg Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 1044 - 1065 Initial Str Wt./Lbs. 28,000 Unseated Str Wt./Lbs. 29,000
 Anchor Length 21' Wt. Set Lbs. 18,000 Wt. Pulled Loose/Lbs. 30,000
 Top Packer Depth 1039 Tool Weight 1800
 Bottom Packer Depth 1044 Hole Size 7 7/8" ✓ Rubber Size 6 3/4" ✓
 Total Depth 1065 Wt. Pipe Run 0 Drill Collar Run 186
 Mud Wt. 9.6 LCM 0 Vis. 30 WL NC Drill Pipe Size 4 1/2 X 4 Ft. Run 843
 Blow Description IFP - Weak Blow, Built to 5 1/2", packers pulled loose on shut in,
FFP - Weak Surface Blow, Died in 5 min.

Recovery - Total Feet 270 GIP _____ Ft. in DC _____ Ft. in DP _____
 Rec. 270 Feet of Mud %gas _____ %oil _____ %water _____ %mud _____
 Rec. _____ Feet of _____ %gas _____ %oil _____ %water _____ %mud _____
 Rec. _____ Feet of _____ %gas _____ %oil _____ %water _____ %mud _____
 Rec. _____ Feet of _____ %gas _____ %oil _____ %water _____ %mud _____
 Rec. _____ Feet of _____ %gas _____ %oil _____ %water _____ %mud _____
 BHT _____ °F Gravity _____ °API D @ _____ °F Corrected Gravity _____ °API
 RW _____ @ _____ °F Chlorides _____ ppm Recovery _____ Chlorides 88,000 ppm System

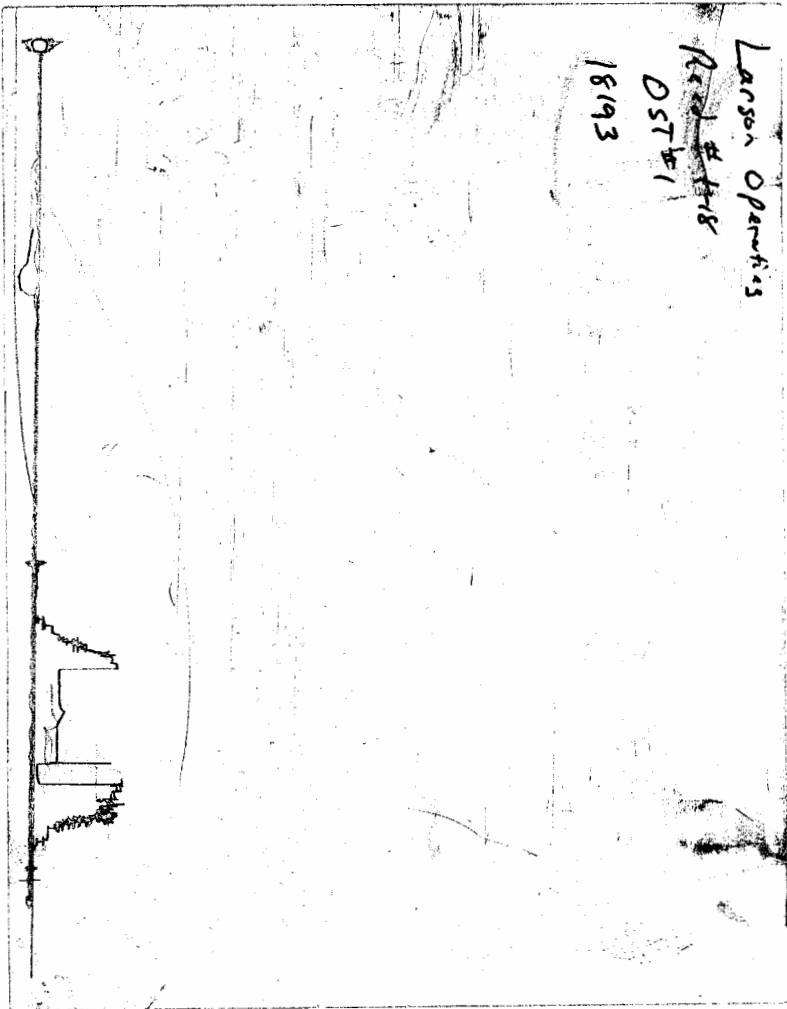
AK-1	Alpine	PSI	Recorder No.	Test
(A) Initial Hydrostatic Mud			<u>6752</u>	<input checked="" type="checkbox"/>
(B) First Initial Flow Pressure			<u>1047</u>	Elec. Rec. <input checked="" type="checkbox"/>
(C) First Final Flow Pressure			<u>13252</u>	Jars _____
(D) Initial Shut-In Pressure			<u>1062</u>	Safety Jt. _____
(E) Second Initial Flow Pressure				Circ Sub _____
(F) Second Final Flow Pressure				Sampler <input checked="" type="checkbox"/>
(G) Final Shut-In Pressure			<u>15</u>	Straddle _____
(Q) Final Hydrostatic Mud			<u>30</u>	Ext. Packer _____
			<u>10</u>	Shale Packer _____
			<u>30</u>	Mileage <u>84</u>
			<u>14:45</u>	Sub Total: <u>1138.00</u>
			<u>15:27</u>	Std. By _____
			<u>16:35</u>	Other _____
			<u>18:00</u>	Total: _____
			<u>19:32</u>	

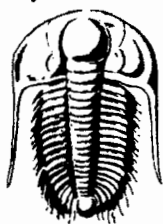
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Approved By _____
 Our Representative Jason Mc Larson

CHART PAGE

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





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

N^o 18194

05/03

Test Ticket

Well Name & No. Reed #1-18 Test No. 2 Date 11-1-03
 Company Larson Operating Co. Zone Tested Towanda
 Address 562 W. Highway 4, Olmitz, KS. 67564 Elevation 1591 KB 1585 GL
 Co. Rep / Geo. Steve Davis Cont. Vonfeldt Est. Ft. of Pay _____ Por. _____ %
 Location: Sec. 16 Twp. 16s Rge. 7w Co. Ellsworth State KS
 No. of Copies Reg Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 1101 - 1125 Initial Str Wt./Lbs. 34,000 Unseated Str Wt/Lbs. _____
 Anchor Length 24' Wt. Set Lbs. 24,000 Wt. Pulled Loose/Lbs. _____
 Top Packer Depth 1096 Tool Weight 1800
 Bottom Packer Depth 1101 Hole Size 7 7/8" ✓ Rubber Size 6 3/4" ✓
 Total Depth 1125 Wt. Pipe Run 0 Drill Collar Run 310
 Mud Wt. 9.6 LCM 0 Vis. 30 WL NC Drill Pipe Size 4 1/2 XH Ft. Run 774
 Blow Description IFP - Good Blow, Built to 6", No Blowback
FFP - Good Blow, BOBIN 20min, No Blowback
Sampler had 25 psi, 300 ml mud

Recovery - Total Feet	GIP	Ft. in DC	Ft. in DP
<u>60</u>			
Rec. <u>60</u>	Feet of <u>mud, slight Gas Swell in tool</u>	%gas	%oil %water %mud
Rec. _____	Feet of _____	%gas	%oil %water %mud
Rec. _____	Feet of _____	%gas	%oil %water %mud
Rec. _____	Feet of _____	%gas	%oil %water %mud
Rec. _____	Feet of _____	%gas	%oil %water %mud
BHT _____	°F Gravity _____	°API D @ _____	°F Corrected Gravity _____ °API
RW _____	@ _____ °F	Chlorides _____ ppm Recovery _____	Chlorides <u>88,000</u> ppm System

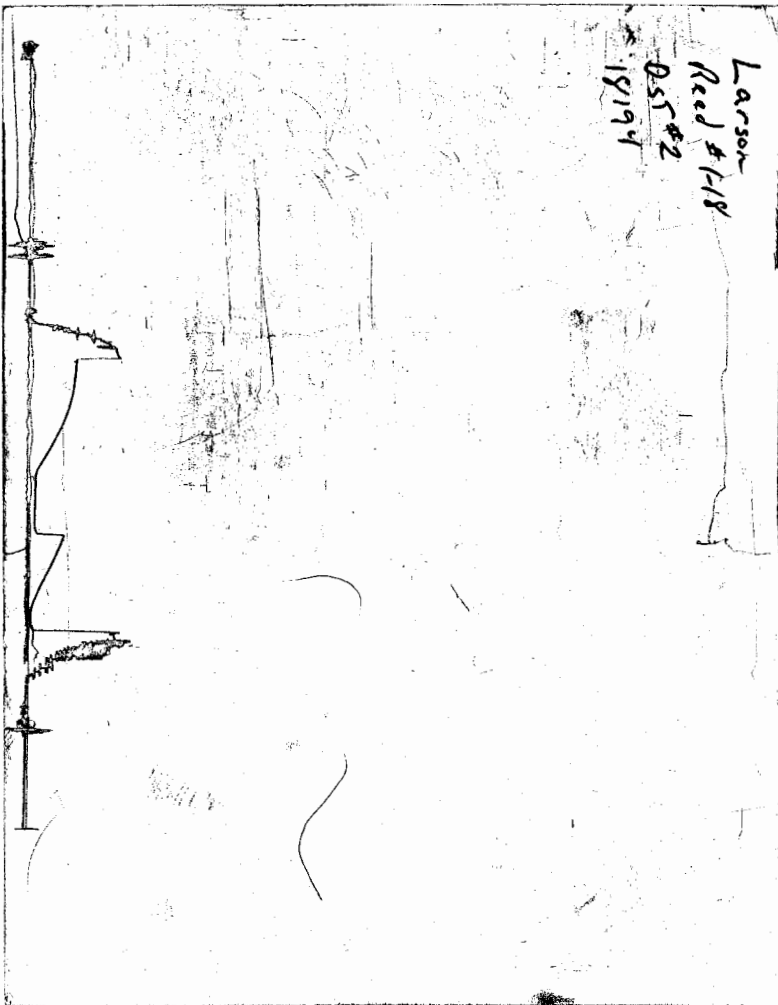
	AK-1	Alpine	PSI	Recorder No.	Test
(A) Initial Hydrostatic Mud	<u>631</u>			<u>6752</u>	✓ <u>700</u>
(B) First Initial Flow Pressure	<u>23</u>			<u>1106</u>	_____
(C) First Final Flow Pressure	<u>23</u>			<u>13252</u>	Jars _____
(D) Initial Shut-In Pressure	<u>207</u>			<u>1122</u>	Safety Jt. _____
(E) Second Initial Flow Pressure	<u>34</u>			_____	Circ Sub _____
(F) Second Final Flow Pressure	<u>46</u>			_____	Sampler ✓ <u>200</u>
(G) Final Shut-In Pressure	<u>276</u>			<u>10</u>	Straddle _____
(Q) Final Hydrostatic Mud	<u>563</u>			<u>60</u>	Ext. Packer _____
				<u>45</u>	Shale Packer _____
				<u>90</u>	Mileage <u>12</u> <u>12</u>
				<u>23:00</u>	Sub Total: <u>912</u>
				<u>00:44</u>	Std. By _____
				<u>1:49</u>	Other _____
				<u>5:14</u>	Total: _____
				<u>6:51</u>	

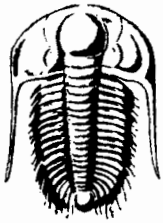
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Approved By Thomas H. Fortal
 Our Representative Jason Mc Larson

CHART PAGE

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TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

N^o 18195

05/03

Test Ticket

Well Name & No. Reed #1-18 Test No. 3 Date 11-3-03
 Company Larson Operating Co. Zone Tested Grand Haven
 Address 562 W. Highway 4, Olmitz, KS. 67564 Elevation 1591 KB 1585 GL
 Co. Rep / Geo. Steve Davis Cont. Vonfeldt Est. Ft. of Pay _____ Por. _____ %
 Location: Sec. 16 Twp. 16s Rge. 7w Co. Ellsworth State KS
 No. of Copies Reg Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 1776 - 1803 Initial Str Wt./Lbs. 33,000 Unseated Str Wt/Lbs. 33,000
 Anchor Length 27' Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 38,000
 Top Packer Depth 1772 Tool Weight 1800
 Bottom Packer Depth 1776 Hole Size 7 7/8" Rubber Size 6 3/4"
 Total Depth 1803 Wt. Pipe Run 0 Drill Collar Run 186
 Mud Wt. 8.7 LCM -0- Vis. 37 WL 8.8 Drill Pipe Size 4 1/2 X H Ft. Run 1585
 Blow Description IFP - Strong Blow, BOB in 10 sec, Gas to surface in 1 min, Blowback BOB in 10 min (6")
FFP - Strong Blow, gauging gas, No Blowback

700 PSI in sample chamber, 6.6 cubic ft

Recovery - Total Feet	GIP	Ft. in DC	Ft. in DP
Rec. <u>63</u>	Feet of <u>mud</u>	%gas	%oil
Rec. _____	Feet of _____	%gas	%oil
Rec. _____	Feet of _____	%gas	%oil
Rec. _____	Feet of _____	%gas	%oil
Rec. _____	Feet of _____	%gas	%oil
BHT <u>82°</u>	°F Gravity _____	°API D @ _____	°F Corrected Gravity _____
RW _____	@ _____ °F	Chlorides _____ ppm	Recovery _____ Chlorides <u>2200</u> ppm System

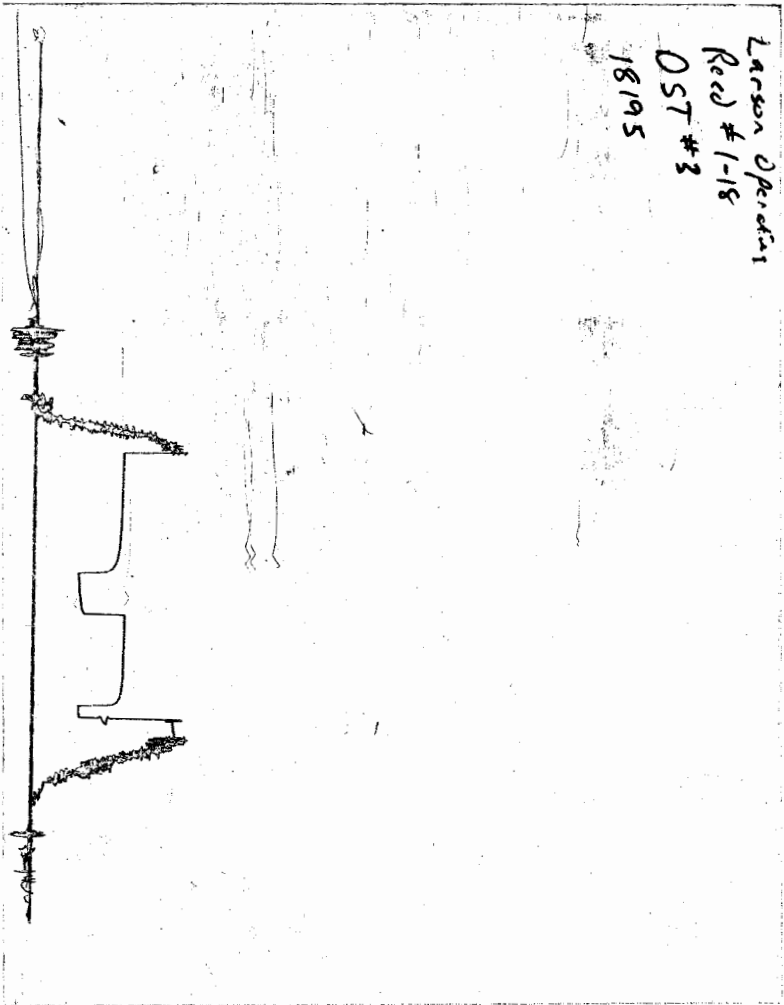
	AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud	<u>896</u>	PSI	<u>2342</u>	<input checked="" type="checkbox"/> <u>700</u>
(B) First Initial Flow Pressure	<u>265</u>	PSI	(depth) <u>1782</u>	Elec. Rec. <input checked="" type="checkbox"/> <u>150</u>
(C) First Final Flow Pressure	<u>272</u>	PSI	Recorder No. <u>13252</u>	Jars _____
(D) Initial Shut-In Pressure	<u>558</u>	PSI	(depth) <u>1800</u>	Safety Jt. _____
(E) Second Initial Flow Pressure	<u>295</u>	PSI	Recorder No. _____	Circ Sub _____
(F) Second Final Flow Pressure	<u>266</u> <u>542</u>	PSI	(depth) _____	Sampler <input checked="" type="checkbox"/> <u>200</u>
(G) Final Shut-In Pressure	<u>542</u>	PSI	Initial Opening <u>10</u>	Straddle _____
(Q) Final Hydrostatic Mud	<u>863</u>	PSI	Initial Shut-In <u>70</u>	Ext. Packer _____
			Final Flow <u>30</u>	Shale Packer _____
			Final Shut-In <u>90</u>	Mileage <u>78</u> <u>12</u>
			T-On Location <u>4:15</u>	Sub Total: <u>1062</u>
			T-Started <u>5:26</u>	Std. By _____
			T-Open <u>7:00</u>	Other _____
			T-Pulled <u>10:20</u>	Total: _____
			T-Out <u>12:04</u>	

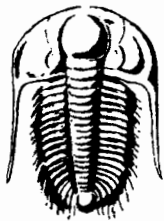
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Approved By Thomas H. Fernald
Our Representative Jason Mc Lomax Thank You

CHART PAGE

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TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 18196

05/03

Test Ticket

Well Name & No. Reed #1-18 Test No. 4 Date 11-3-03
 Company Larson Operating Co. Zone Tested Cedarvale
 Address 562 W. Highway 4, Olmitz, KS. 67564 Elevation 1591 KB 1585 GL
 Co. Rep / Geo. Steve Davis Cont. Vonfeldt Est. Ft. of Pay _____ Por. _____ %
 Location: Sec. 16 Twp. 16s Rge. 7w Co. Ellsworth State KS
 No. of Copies Reg Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 2011-2071 Initial Str Wt./Lbs. 36,000 Unseated Str Wt./Lbs. 36,000
 Anchor Length 60' Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 40,000
 Top Packer Depth 2006 Tool Weight 2200
 Bottom Packer Depth 2011 Hole Size 7 7/8" ✓ Rubber Size 6 3/4" ✓
 Total Depth 2071 Wt. Pipe Run 0 Drill Collar Run 186
 Mud Wt. 9.1 LCM -0- Vis. 42 WL 8.0 Drill Pipe Size 4 1/2 XH Ft. Run 1834
 Blow Description IFP - Weak Blow, Built to 1 1/2", No Blowback
FFP - Weak Blow, Diced in 12 min.

25 psig in sampler 650 ml of mud

Recovery - Total Feet	GIP	Ft. in DC	Ft. in DP
<u>4</u>	<u>mud</u>		
Rec. _____	Feet of _____	%gas _____	%oil _____
Rec. _____	Feet of _____	%gas _____	%oil _____
Rec. _____	Feet of _____	%gas _____	%oil _____
Rec. _____	Feet of _____	%gas _____	%oil _____
Rec. _____	Feet of _____	%gas _____	%oil _____

BHT 88° °F Gravity _____ °API D @ _____ °F Corrected Gravity _____ °API
 RW _____ @ _____ °F Chlorides _____ ppm Recovery _____ Chlorides 4,300 ppm System

	AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud	<u>1031</u>	PSI	<u>2342</u>	<u>700</u>
(B) First Initial Flow Pressure	<u>19</u>	PSI	(depth) <u>2018</u>	Elec. Rec. <u>150</u>
(C) First Final Flow Pressure	<u>24</u>	PSI	Recorder No. <u>13252</u>	Jars _____
(D) Initial Shut-In Pressure	<u>732</u>	PSI	(depth) <u>2068</u>	Safety Jt. _____
(E) Second Initial Flow Pressure	<u>26</u>	PSI	Recorder No. _____	Circ Sub _____
(F) Second Final Flow Pressure	<u>32</u>	PSI	(depth) _____	Sampler <u>200</u>
(G) Final Shut-In Pressure	<u>653</u>	PSI	Initial Opening <u>10</u>	Straddle _____
(Q) Final Hydrostatic Mud	<u>997</u>	PSI	Initial Shut-In <u>60</u>	Ext. Packer _____

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Approved By _____
 Our Representative Jason Mc Somerbank

Final Flow	<u>24 2</u>	Shale Packer _____
Final Shut-In	<u>60 25</u>	Mileage <u>78</u> <u>12</u>
T-On Location	<u>23:20</u>	Sub Total: <u>1062</u>
T-Started	<u>4:46</u>	Std. By <u>3 1/2 hrs</u> <u>105</u>
T-Open	<u>6:06</u>	Other _____
T-Pulled	<u>9:01 8:44</u>	Total: <u>1167</u>
T-Out	<u>10:55</u>	

CHART PAGE

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