

DRILL STEM TEST REPORT

Prepared For: **Deep Rock Exploration**

111 W 12th
Goodland KS 67735

ATTN: Ross McGuckin

18-9S-41W Sherman KS

Parish #1

Start Date: 2002.11.19 @ 16:58:36

End Date: 2002.11.19 @ 22:04:36

Job Ticket #: 15167 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Deep Rock Exploration

111 W 12th
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ATTN: Ross McGuckin

Parish #1

18-9S-41W Sherman KS

Job Ticket: 15167

DST#: 1

Test Start: 2002.11.19 @ 16:58:36

GENERAL INFORMATION:

Formation: **Dakota**

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

Time Tool Opened: 18:46:21

Time Test Ended: 22:04:36

Test Type: **Conventional Bottom Hole**

Tester: **Rod Steinbrink**

Unit No: **22**

Interval: **2266.00 ft (KB) To 2277.00 ft (KB) (TVD)**

Total Depth: **2277.00 ft (KB) (TVD)**

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

Reference Elevations: **3870.00 ft (KB)**

3857.00 ft (CF)

KB to GR/CF: **13.00 ft**

Serial #: 3030

Inside

Press@RunDepth: **419.77 psig @ 2267.00 ft (KB)**

Start Date: **2002.11.19**

End Date:

2002.11.19

Start Time: **16:58:38**

End Time:

22:04:36

Capacity: **7000.00 psig**

Last Calib.: **1899.12.30**

Time On Btm: **2002.11.19 @ 18:45:21**

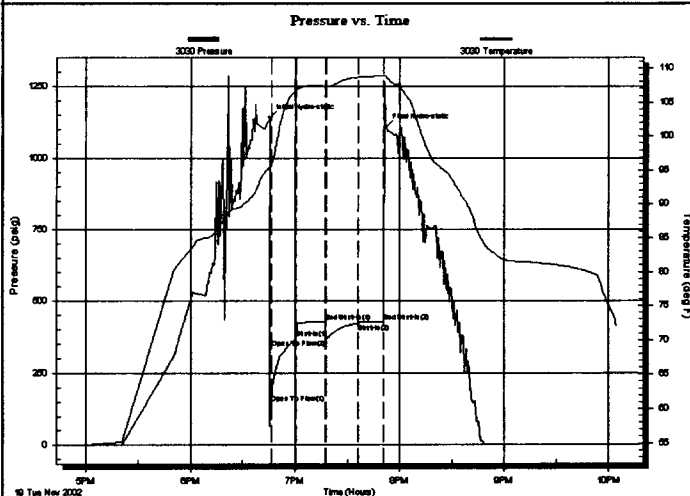
Time Off Btm: **2002.11.19 @ 19:51:51**

TEST COMMENT: **IF; Strong blow off btm in 2 mins**

IS; No return blow

FF; Strong blow off btm in 2 mins

FS; No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1140.83	95.53	Initial Hydro-static
1	145.02	95.96	Open To Flow (1)
16	367.34	106.80	Shut-In (1)
32	424.05	107.42	End Shut-In (1)
33	363.82	107.41	Open To Flow (2)
51	419.77	108.69	Shut-In (2)
66	423.84	108.92	End Shut-In (2)
67	1107.31	108.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
150.00	MW 60%w tr 40% mud	0.74
810.00	Wtr	7.65

Gas Rates

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

Deep Rock Exploration

Parish #1

111 W 12th
Goodland KS 67735

18-9S-41W Sherman KS

Job Ticket: 15167

DST#: 1

ATTN: Ross McGuckin

Test Start: 2002.11.19 @ 16:58:36

Tool Information

Drill Pipe:	Length: 1716.00 ft	Diameter: 3.80 inches	Volume: 24.07 bbl	Tool Weight: 1800.00 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: 558.00 ft	Diameter: 2.25 inches	Volume: 2.74 bbl	Weight to Pull Loose: 90000.00 lb
		Total Volume:	26.81 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	2266.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	11.00 ft			
Tool Length:	33.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			2249.00	
Hydraulic tool	5.00			2254.00	
Safety Joint	2.00			2256.00	
Packer	5.00			2261.00	22.00 Bottom Of Top Packer
Packer	5.00			2266.00	
Stubb	1.00			2267.00	
Recorder	0.00	3030	Inside	2267.00	
Perforations	5.00			2272.00	
Recorder	0.00	13371	Outside	2272.00	
Bullnose	5.00			2277.00	11.00 Bottom Packers & Anchor
Total Tool Length:	33.00				



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FLUID SUMMARY

Deep Rock Exploration

Parish #1

111 W 12th
Goodland KS 67735

18-9S-41W Sherman KS

Job Ticket: 15167

DST#: 1

ATTN: Ross McGuckin

Test Start: 2002.11.19 @ 16:58:36

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:

5000 ppm

Viscosity: 44.00 sec/qt

Cushion Volume:

bbl

Water Loss: 10.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 300.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
150.00	MW 60%w tr 40%mud	0.738
810.00	Wtr	7.645

Total Length: 960.00 ft

Total Volume: 8.383 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

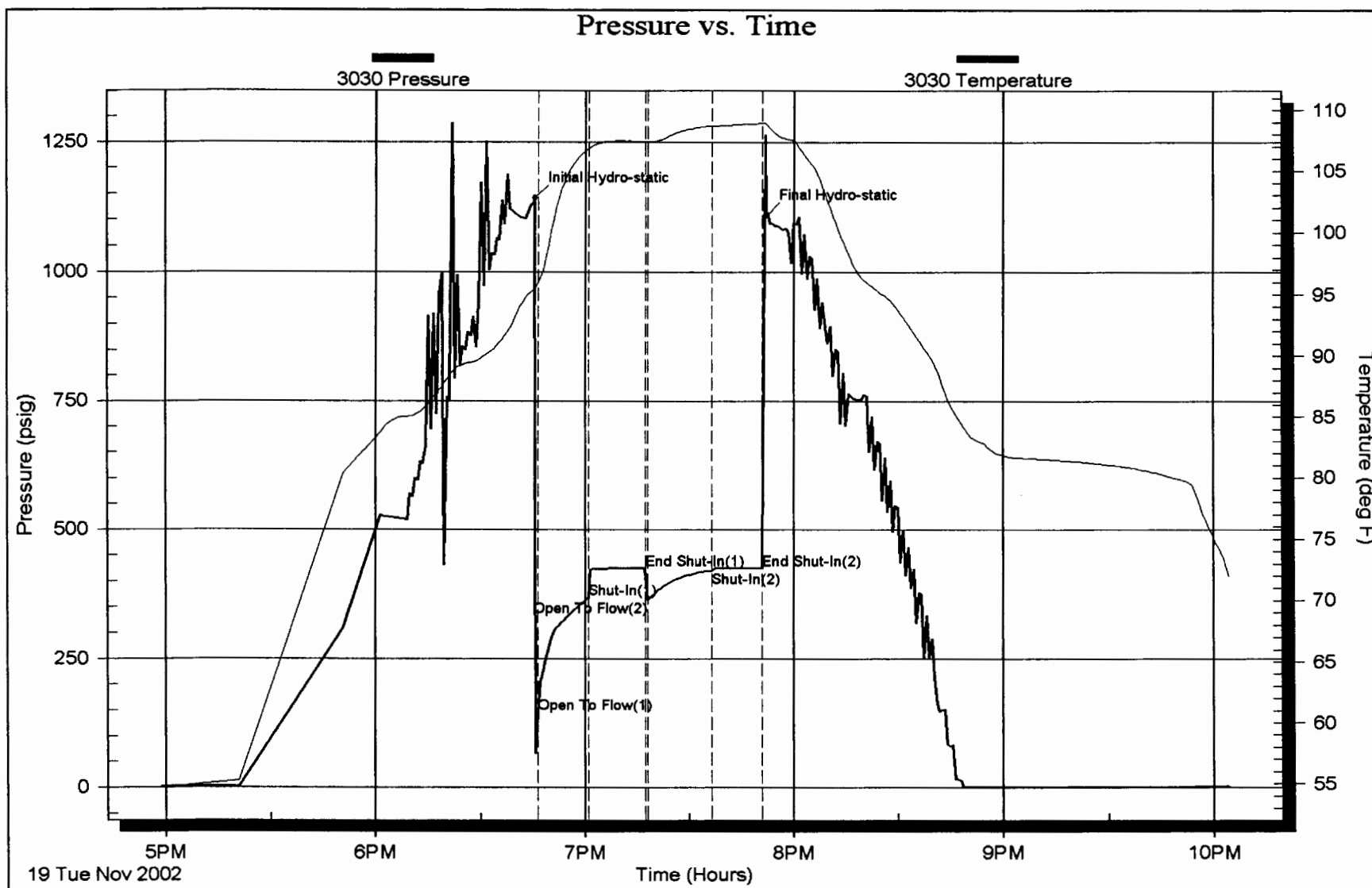
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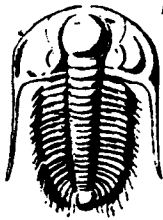
Serial #: 3030

Inside Deep Rock Exploration

18-9S-41W Sherman KS

DST Test Number: 1





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

INV #5255

1370
Filed to
Goodland 12-19-02
14102

15167

Test Ticket

Well Name & No. Parish #1 Test No. 1 Date 11-19-02
 Company Deep Rock Exploration Zone Tested Dakota
 Address 111 W. 12th Goodland KS. 67735 Elevation 3870 KB 3857 GL
 Co. Rep / Geo. Ross McGuckin Cont. Allen #5 Est. Ft. of Pay Por. %
 Location: Sec. 18 Twp. 9S Rge. 41W Co. Sherman State KS
 No. of Copies Distribution Sheet (Y, N) Turnkey (Y, N) Evaluation (Y, N)

Interval Tested 2266 - 2277 Initial Str Wt./Lbs. 60,000 Unseated Str Wt./Lbs. 70,000
 Anchor Length 11' Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 90,000
 Top Packer Depth 2269 Tool Weight 1,800
 Bottom Packer Depth 2266 Hole Size — 7 7/8" Rubber Size — 6 3/4"
 Total Depth 2277 Wt. Pipe Run Drill Collar Run 558'
 Mud Wt. 9.2 LCM 1# Vis. 44 WL 10.4 Drill Pipe Size 4 1/2" XH Ft. Run 1712'
 Blow Description IF: Strong blow off bttm 2 mins.
IS1: No return blow
FF: Strong blow off bttm 2 mins.
FS1: No return blow

Recovery — Total Feet 960' GIP Ft. in DC 558' Ft. in DP 402'

Rec.	Feet Of	%gas	%oil	%water	%mud
<u>150'</u>	<u>Muddy Wtr.</u>	<u> </u>	<u> </u>	<u>60</u>	<u>40</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>810'</u>	<u>Wtr.</u>	<u> </u>	<u> </u>	<u>100</u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

 BHT 108° °F Gravity °API D@ °F Corrected Gravity °API
 RW 1.6 @ 50° °F Chlorides 5,000 ppm Recovery Chlorides 300 ppm System

	AK-1	Alpine	PSI	Recorder No.	T-On Location
(A) Initial Hydrostatic Mud	<u>112.9</u>	<u>112.9</u>	<u> </u>	<u>3030</u>	<u>1515</u>
(B) First Initial Flow Pressure	<u>145</u>	<u>145</u>	<u> </u>	<u>2267</u>	<u>1658</u>
(C) First Final Flow Pressure	<u>367</u>	<u>367</u>	<u> </u>	<u>13371</u>	<u>1846</u>
(D) Initial Shut-In Pressure	<u>424</u>	<u>424</u>	<u> </u>	<u>2272</u>	<u>1950</u>
(E) Second Initial Flow Pressure	<u>363</u>	<u>363</u>	<u> </u>	<u> </u>	<u>2204</u>
(F) Second Final Flow Pressure	<u>419</u>	<u>419</u>	<u> </u>	<u> </u>	<u>2245</u>
(G) Final Shut-in Pressure	<u>423</u>	<u>423</u>	<u> </u>	<u>15</u>	<u>700</u>
(Q) Final Hydrostatic Mud	<u>1107</u>	<u>1107</u>	<u> </u>	<u>15</u>	<u>200</u>

Final Flow 15 Safety Joint X 50
 Final Shut-in 15 Straddle
 Circ. Sub X N/C
 Sampler
 Shales X 150
 Elec. Rec. X 150
 Mileage 120 1 way 1370
 Other
 TOTAL PRICE \$

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Approved By [Signature]
 Our Representative Rod Steinbrink

CHART PAGE

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

