



**TRILOBITE
TESTING, INC.**

RECEIVED
SEP 10 2003
KCC WICHITA

DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co., Inc.**

P.O. Box 372
Hays, Ks. 67601

ATTN: Ron Nelson

ORIGINAL

30-13s-20w

Pfeifer # 1-30

Start Date: 2003.02.15 @ 12:20:55

End Date: 2003.02.15 @ 18:57:25

Job Ticket #: 17433 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Downing-Nelson Oil Co., Inc.

Pfeifer # 1-30

30-13s-20w

DST # 1

L.Kc-E

2003.02.15



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Downing-Nelson Oil Co., Inc.
P.O. Box 372
Hays, Ks. 67601
ATTN: Ron Nelson

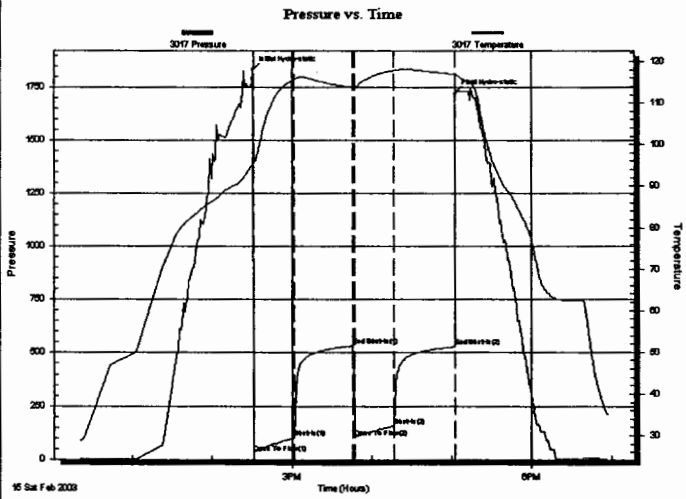
Pfeifer # 1-30
30-13s-20w
Job Ticket: 17433 DST#: 1
Test Start: 2003.02.15 @ 12:20:55

GENERAL INFORMATION:

Formation: **L.Kc.-E**
Deviated: **No** Whipstock: ft (KB)
Time Tool Opened: 14:31:25
Time Test Ended: 18:57:25
Interval: **3680.00 ft (KB) To 3696.00 ft (KB) (TVD)**
Total Depth: **3696.00 ft (KB) (TVD)**
Hole Diameter: **7.88 inches** Hole Condition: **Fair**
Reference Elevations: **2329.00 ft (KB)**
2321.00 ft (CF)
KB to GR/CF: **8.00 ft**

Serial #: 3017 **Inside**
Press@RunDepth: **159.56 psig @ 3683.01 ft (KB)** Capacity: **7000.00 psig**
Start Date: **2003.02.15** End Date: **2003.02.15** Last Calib.: **2003.02.15**
Start Time: **12:20:57** End Time: **18:57:25** Time On Btm: **2003.02.15 @ 14:30:55**
Time Off Btm: **2003.02.15 @ 17:02:55**

TEST COMMENT: **F-Strong B.O.B. 14 min.** **ISI- very weak blow back**
FF-Good to Strong B.O.B. 29 min. **FSL-very weak blow back**



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1831.91	95.29	Initial Hydro-static
1	31.58	95.51	Open To Flow (1)
31	102.42	115.66	Shut-In(1)
75	532.78	113.86	End Shut-In(1)
76	105.84	113.84	Open To Flow (2)
106	159.56	117.82	Shut-In(2)
152	528.22	116.95	End Shut-In(2)
152	1720.46	116.95	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
279.00	salt water	3.63
1.00	oil	0.01

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co., Inc.

Pfeifer # 1-30

P.O. Box 372
Hays, Ks. 67601

30-13s-20w

Job Ticket: 17433

DST#: 1

ATTN: Ron Nelson

Test Start: 2003.02.15 @ 12:20:55


Tool Information

Drill Pipe: Length: 3658.00 ft	Diameter: 3.80 inches	Volume: 51.31 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe: Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar: Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 54000.00 lb
	<u>Total Volume: 51.46 bbl</u>		Tool Chased 0.00 ft
Drill Pipe Above KB: 29.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer: 3680.00 ft			Final 46000.00 lb
Depth to Bottom Packer: ft			
Interval between Packers: 16.02 ft			
Tool Length: 36.02 ft			
Number of Packers: 2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			3661.00	
S.I. Tool	5.00			3666.00	
HMV	5.00			3671.00	
Packer	4.00			3675.00	20.00 Bottom Of Top Packer
Packer	5.00			3680.00	
Stubb	1.00			3681.00	
Perforations	2.00			3683.00	
Recorder	0.01	3017	Inside	3683.01	
Perforations	10.00			3693.01	
Recorder	0.01	13308	Outside	3693.02	
Bullnose	3.00			3696.02	16.02 Bottom Packers & Anchor

Total Tool Length: 36.02

 <p style="font-size: 2em; font-weight: bold; margin: 0;">TRILOBITE TESTING, INC</p>	DRILL STEM TEST REPORT		FLUID SUMMARY
	Downing-Nelson Oil Co., Inc. P.O. Box 372 Hays, Ks. 67601 ATTN: Ron Nelson	Pfeifer # 1-30 30-13s-20w Job Ticket: 17433 Test Start: 2003.02.15 @ 12:20:55	

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:
Mud Weight: 9.00 lb/gal	Cushion Length: ft	deg API
Viscosity: 47.00 sec/qt	Cushion Volume: bbl	Water Salinity: 55000 ppm
Water Loss: 8.57 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: ppm		
Filter Cake: inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
279.00	salt water	3.631
1.00	oil	0.014

Total Length: 280.00 ft Total Volume: 3.645 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

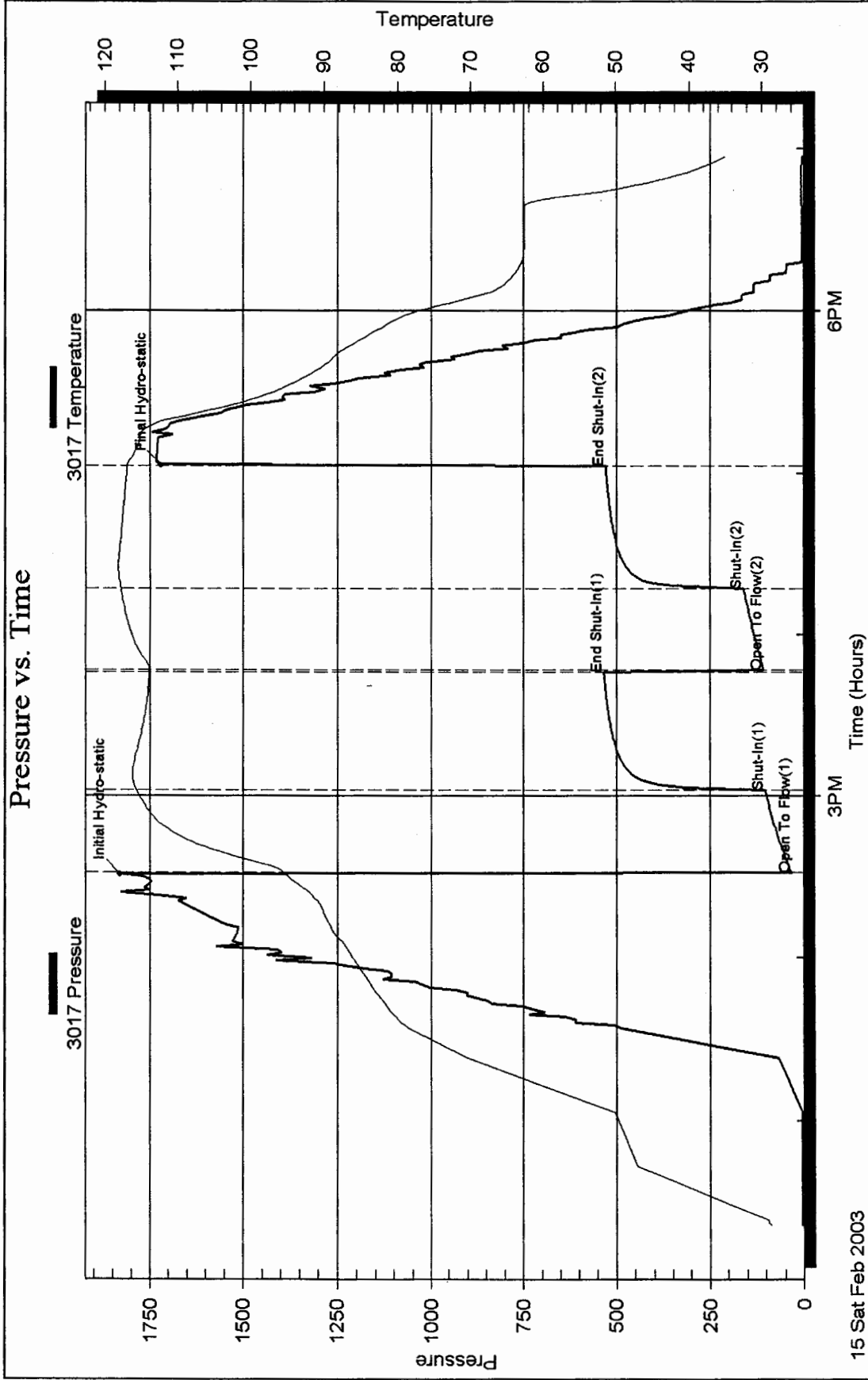
Serial #: 3017

Inside Downing-Nelson Oil Co., Inc.

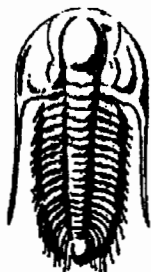
30-13s--20w

DST Test Number: 1

Pressure vs. Time



15 Sat Feb 2003



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co., Inc.**

P.O. Box 372
Hays, Ks. 67601

ATTN: Ron Nelson

30-13s-20w

Pfeifer # 1-30

Start Date: 2003.02.16 @ 17:11:04

End Date: 2003.02.16 @ 23:41:04

Job Ticket #: 17434 DST #: 2

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Downing-Nelson Oil Co., Inc.

Pfeifer # 1-30

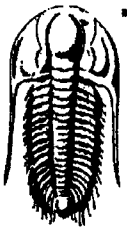
30-13s-20w

DST # 2

Marmaton

2003.02.16

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Downing-Nelson Oil Co., Inc.
P.O. Box 372
Hays, Ks. 67601
ATTN: Ron Nelson

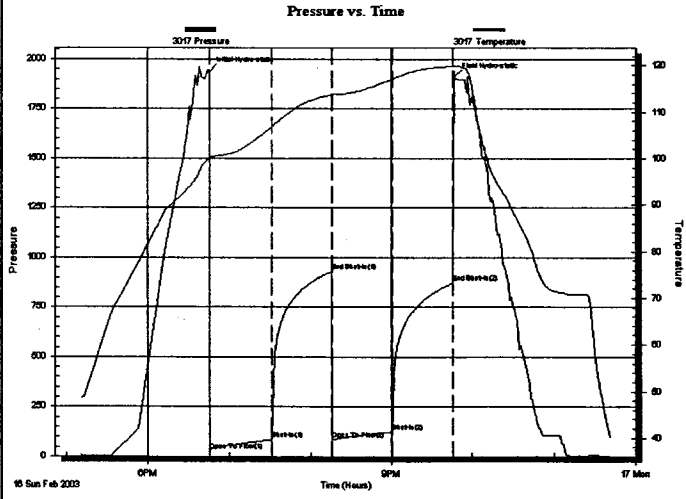
Pfeifer # 1-30
30-13s-20w
Job Ticket: 17434 **DST#: 2**
Test Start: 2003.02.16 @ 17:11:04

GENERAL INFORMATION:

Formation: **Marmaton**
Deviated: **No Whipstock:** **ft (KB)**
Time Tool Opened: 18:45:34
Time Test Ended: 23:41:04
Interval: **3929.00 ft (KB) To 3970.00 ft (KB) (TVD)**
Total Depth: **3696.00 ft (KB) (TVD)**
Hole Diameter: **7.88 inches** Hole Condition: **Fair**
Test Type: **Conventional Bottom Hole**
Tester: **John Schmidt**
Unit No: **18**
Reference Elevations: **2329.00 ft (KB)**
2321.00 ft (CF)
KB to GR/CF: **8.00 ft**

Serial #: 3017 Inside
Press@RunDepth: **123.69 psig @ 3936.01 ft (KB)** Capacity: **7000.00 psig**
Start Date: **2003.02.16** End Date: **2003.02.16** Last Calib.: **2003.02.16**
Start Time: **17:11:06** End Time: **23:41:04** Time On Btm: **2003.02.16 @ 18:45:04**
Time Off Btm: **2003.02.16 @ 21:47:34**

TEST COMMENT: **IF-Good built to 10" in. IS-Dead**
FF-Good built to 7" in FSI-Dead



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1939.12	99.96	Initial Hydro-static
1	29.06	100.00	Open To Flow (1)
46	84.77	106.90	Shut-In(1)
90	929.94	113.68	End Shut-In(1)
91	86.38	113.72	Open To Flow (2)
135	123.69	117.04	Shut-In(2)
181	872.89	119.87	End Shut-In(2)
183	1910.50	119.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
220.00	Muddy Salt Water 25% mud 75% water	2.80

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing-Nelson Oil Co., Inc.

Pfeifer # 1-30

P.O. Box 372
Hays, Ks. 67601

30-13s-20w

Job Ticket: 17434

DST#: 2

ATTN: Ron Nelson

Test Start: 2003.02.16 @ 17:11:04

Tool Information


Drill Pipe:	Length: 3908.00 ft	Diameter: 3.80 inches	Volume: 54.82 bbl	Tool Weight: 3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 54.97 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3929.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	41.02 ft			
Tool Length:	61.02 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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C.O. Sub	1.00			3910.00	
S.I. Tool	5.00			3915.00	
HMV	5.00			3920.00	
Packer	4.00			3924.00	20.00 Bottom Of Top Packer
Packer	5.00			3929.00	
Stubb	1.00			3930.00	
Perforations	6.00			3936.00	
Recorder	0.01	3017	Inside	3936.01	
Perforations	31.00			3967.01	
Recorder	0.01	13308	Outside	3967.02	
Bullnose	3.00			3970.02	41.02 Bottom Packers & Anchor

Total Tool Length: 61.02

 <p style="font-size: 2em; font-weight: bold; margin: 0;">TRILOBITE TESTING, INC.</p>	DRILL STEM TEST REPORT		FLUID SUMMARY						
	Downing-Nelson Oil Co., Inc. P.O. Box 372 Hays, Ks. 67601 ATTN: Ron Nelson	Pfeifer # 1-30 30-13s-20w Job Ticket: 17434 DST#: 2 Test Start: 2003.02.16 @ 17:11:04							
Mud and Cushion Information									
Mud Type: Gel Chem Mud Weight: 9.00 lb/gal Viscosity: 46.00 sec/qt Water Loss: 7.99 in ³ Resistivity: ohm.m Salinity: ppm Filter Cake: inches	Cushion Type: Cushion Length: ft Cushion Volume: bbl Gas Cushion Type: Gas Cushion Pressure: psig	Oil API: deg API Water Salinity: 42000 ppm							
Recovery Information									
Recovery Table									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Length ft</th> <th style="width: 65%;">Description</th> <th style="width: 20%;">Volume bbl</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">220.00</td> <td>Muddy Salt Water 25% mud 75% water</td> <td style="text-align: center;">2.804</td> </tr> </tbody> </table>				Length ft	Description	Volume bbl	220.00	Muddy Salt Water 25% mud 75% water	2.804
Length ft	Description	Volume bbl							
220.00	Muddy Salt Water 25% mud 75% water	2.804							
Total Length: 220.00 ft		Total Volume: 2.804 bbl							
Num Fluid Samples: 0		Num Gas Bombs: 0 Serial #:							
Laboratory Name:		Laboratory Location:							
Recovery Comments:									

Serial #: 3017

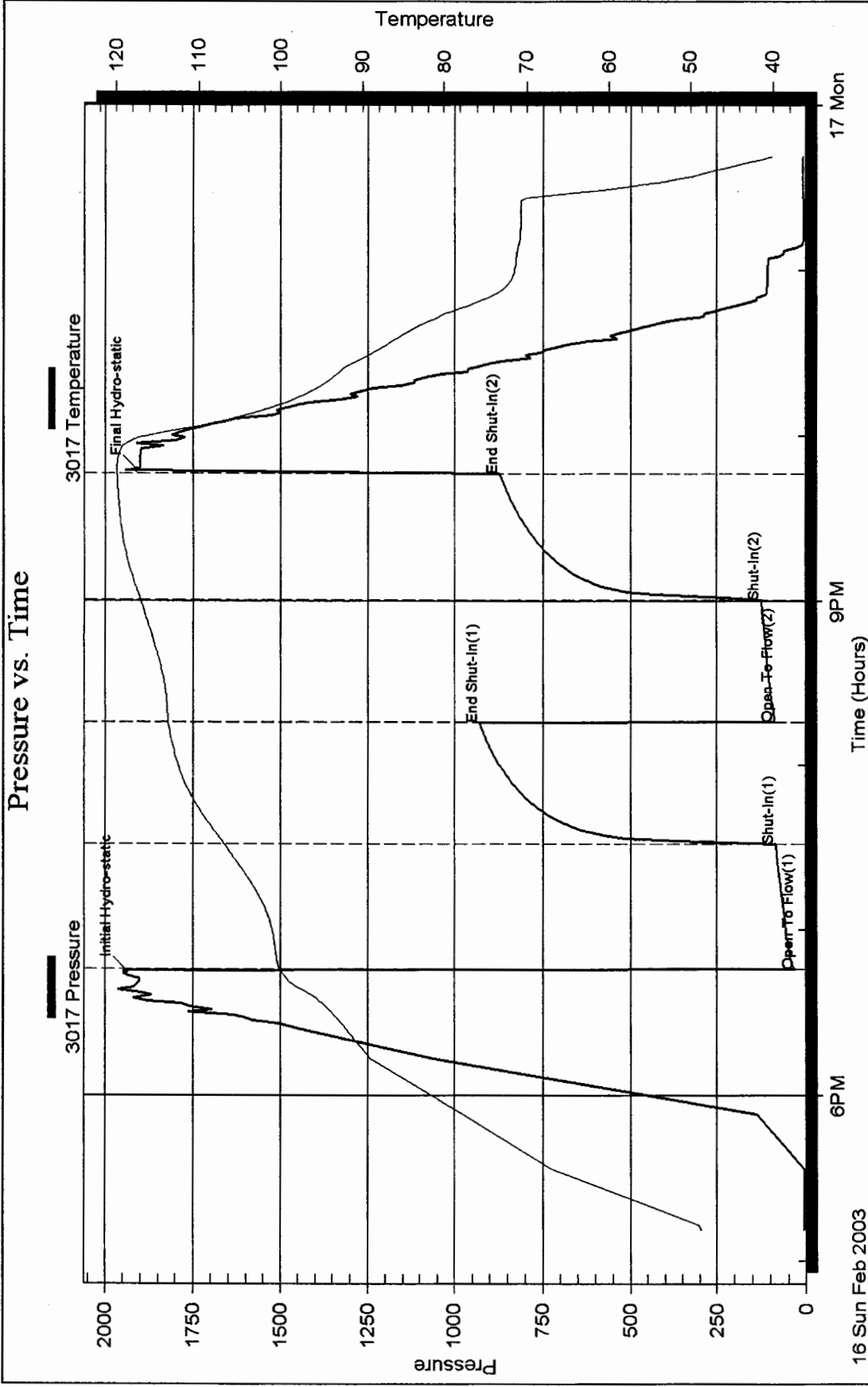
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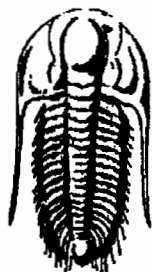
Downing-Nelson Oil Co., Inc.

30-13s--20w

DST Test Number: 2

Pressure vs. Time





**TRILOBITE
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DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co., Inc.**

P.O. Box 372
Hays, Ks. 67601

ATTN: Ron Nelson

30-13s-20w

Pfeifer # 1-30

Start Date: 2003.02.17 @ 08:11:01

End Date: 2003.02.17 @ 14:57:31

Job Ticket #: 17435 DST #: 3

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Downing-Nelson Oil Co., Inc.

Pfeifer # 1-30

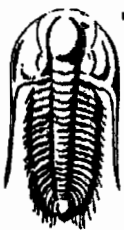
30-13s-20w

DST # 3

Arbuckle

2003.02.17

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Downing-Nelson Oil Co., Inc.

Pfeifer # 1-30

P.O. Box 372
Hays, Ks. 67601

30-13s-20w

Job Ticket: 17435

DST#: 3

ATTN: Ron Nelson

Test Start: 2003.02.17 @ 08:11:01

GENERAL INFORMATION:

Formation: **Arbuckle**

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

Time Tool Opened: 09:51:31

Time Test Ended: 14:57:31

Test Type: **Conventional Bottom Hole**

Tester: **John Schmidt**

Unit No: **18**

Interval: **3962.00 ft (KB) To 4000.00 ft (KB) (TVD)**

Reference Elevations: **2329.00 ft (KB)**

Total Depth: **4000.00 ft (KB) (TVD)**

2321.00 ft (CF)

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

KB to GR/CF: **8.00 ft**

Serial #: 3017

Inside

Press@RunDepth: **88.32 psig @ 3969.01 ft (KB)**

Capacity: **7000.00 psig**

Start Date: **2003.02.17**

End Date: **2003.02.17**

Last Calib.: **2003.02.17**

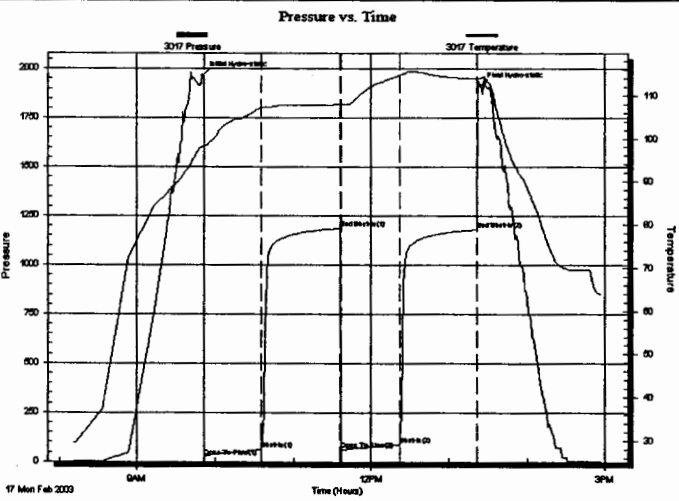
Start Time: **08:11:03**

End Time: **14:57:31**

Time On Btrr: **2003.02.17 @ 09:50:31**

Time Off Btrr: **2003.02.17 @ 13:24:01**

TEST COMMENT: **IF-Strong B.O.B.in 30 min. ISI-weak blow back.**
FF-Strong B.O.B.in 28 min. FSI-weak blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1965.33	98.09	Initial Hydro-static
1	24.79	98.28	Open To Flow (1)
45	64.07	107.08	Shut-In(1)
106	1186.69	107.90	End Shut-In(1)
107	61.24	107.94	Open To Flow (2)
151	88.32	114.64	Shut-In(2)
211	1180.46	113.89	End Shut-In(2)
214	1913.08	114.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
135.00	H.M.G.C.O. 10%gas 20%mud 70%oil	1.61
40.00	C.G.O. 10%gas 90%oil	0.56
0.00	320' gas in pipe	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing-Nelson Oil Co., Inc.

Pfeifer # 1-30

P.O. Box 372
Hays, Ks. 67601

30-13s-20w

Job Ticket: 17435

DST#: 3

ATTN: Ron Nelson

Test Start: 2003.02.17 @ 08:11:01

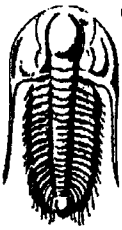
Tool Information

Drill Pipe:	Length: 3939.00 ft	Diameter: 3.80 inches	Volume: 55.25 bbl	Tool Weight: 2900.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Full Loose: 54000.00 lb
			<u>Total Volume: 55.40 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3962.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	38.02 ft			
Tool Length:	58.02 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			3943.00	
S.I. Tool	5.00			3948.00	
HMV	5.00			3953.00	
Packer	4.00			3957.00	20.00 Bottom Of Top Packer
Packer	5.00			3962.00	
Stubb	1.00			3963.00	
Perforations	6.00			3969.00	
Recorder	0.01	3017	Inside	3969.01	
Perforations	28.00			3997.01	
Recorder	0.01	13308	Outside	3997.02	
Bullnose	3.00			4000.02	38.02 Bottom Packers & Anchor

Total Tool Length: 58.02



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Downing-Nelson Oil Co., Inc.

Pfeifer # 1-30

P.O. Box 372
Hays, Ks. 67601

30-13s-20w

Job Ticket: 17435

DST#: 3

ATTN: Ron Nelson

Test Start: 2003.02.17 @ 08:11:01

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 42 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 46.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.99 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: ppm		
Filter Cake: inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
135.00	H.M.G.C.O. 10% gas 20% mud 70% oil	1.611
40.00	C.G.O. 10% gas 90% oil	0.561
0.00	320' gas in pipe	0.000

Total Length: 175.00 ft Total Volume: 2.172 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time

