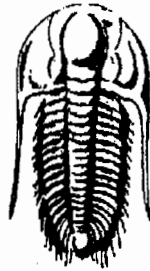


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KCC WICHITA



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

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

P.O.Box 372
Hays, Ks. 67601

ORIGINAL

ATTN: Ron Nelson

17-13s-21w Trego KS

Bollig # 1-17

Start Date: 2003.09.19 @ 13:00:44

End Date: 2003.09.19 @ 19:01:29

Job Ticket #: 18160 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

ORIGINAL


**TRILOBITE
TESTING, INC.**
DRILL STEM TEST REPORT

Downing-Nelson Oil Co., Inc.

 P.O. Box 372
Hays, Ks. 67601

ATTN: Ron Nelson

Bollig # 1-17
17-13s-21w Trego KS

Job Ticket: 18160

DST#: 1

Test Start: 2003.09.19 @ 13:00:44

GENERAL INFORMATION:

 Formation: **L.Kc.-A,B&C**

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

Time Tool Opened: 14:30:14

Time Test Ended: 19:01:29

 Interval: **3542.00 ft (KB) To 3597.00 ft (KB) (TVD)**

 Total Depth: **3597.00 ft (KB) (TVD)**

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

 Test Type: **Conventional Bottom Hole**

 Tester: **John Schmidt**

 Unit No: **18**

 Reference Elevations: **2218.00 ft (KB)**
2210.00 ft (CF)

 KB to GR/CF: **8.00 ft**
Serial #: 3227
Inside

 Press@RunDepth: **23.92 psig @ 3548.00 ft (KB)**

 Start Date: **2003.09.19**

End Date:

2003.09.19

 Capacity: **7000.00 psig**

 Last Calib.: **2003.09.19**

 Start Time: **13:00:45**

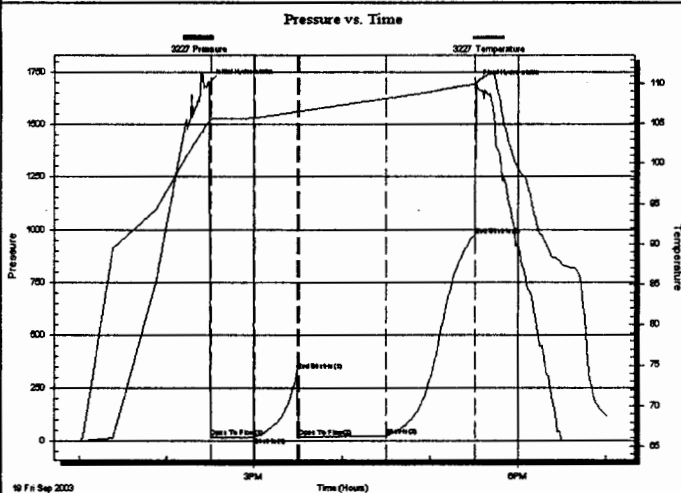
End Time:

19:01:29

 Time On Btm: **2003.09.19 @ 14:28:59**

 Time Off Btm: **2003.09.19 @ 17:31:14**

 TEST COMMENT: IF-Weak built to 1" in
FF-Weak 2" blow

 ISI-Dead
FSI-Dead

PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1700.18	105.31	Initial Hydro-static
2	16.81	105.46	Open To Flow (1)
32	18.67	105.75	Shut-In (1)
61	329.39	106.53	End Shut-In (1)
62	17.33	106.54	Open To Flow (2)
122	23.92	108.14	Shut-In (2)
182	971.95	109.92	End Shut-In (2)
183	1695.39	110.04	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
25.00	MCO-50%Mud 50%Oil	0.35
5.00	Free Oil	0.07
0.00	60 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. P.O. Box 372 Hays, Ks. 67601 ATTN: Ron Nelson		Bollig # 1-17 17-13s-21w Trego KS Job Ticket: 18160 DST#: 1 Test Start: 2003.09.19 @ 13:00:44

Tool Information			
Drill Pipe:	Length: 3539.00 ft	Diameter: 3.80 inches	Volume: 49.64 bbl
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl
		Total Volume: 49.64 bbl	
Drill Pipe Above KB:	16.00 ft		
Depth to Top Packer:	3542.00 ft		
Depth to Bottom Packer:	ft		
Interval between Packers:	55.00 ft		
Tool Length:	74.00 ft		
Number of Packers:	2	Diameter: 6.75 inches	
Tool Comments:			

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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3528.00	
Hydraulic tool	5.00			3533.00	
Packer	4.00			3537.00	19.00 Bottom Of Top Packer
Packer	5.00		Fluid	3542.00	
Stubb	1.00			3543.00	
Perforations	4.00			3547.00	
Change Over Sub	1.00			3548.00	
Recorder	0.00	3227	Inside	3548.00	
Blank Spacing	30.00			3578.00	
Perforations	15.00			3593.00	
Change Over Sub	1.00			3594.00	
Recorder	0.00	13308		3594.00	
Bullnose	3.00			3597.00	55.00 Bottom Packers & Anchor
Total Tool Length:				74.00	



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co., Inc.

Bollig # 1-17

P.O.Box 372
Hays,Ks.67601

17-13s-21w Trego KS

Job Ticket: 18160

DST#: 1

ATTN: Ron Nelson

Test Start: 2003.09.19 @ 13:00:44

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: 56.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
25.00	MCO-50%Mud 50%Oil	0.351
5.00	Free Oil	0.070
0.00	60 gas in pipe	0.000

Total Length: 30.00 ft

Total Volume: 0.421 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

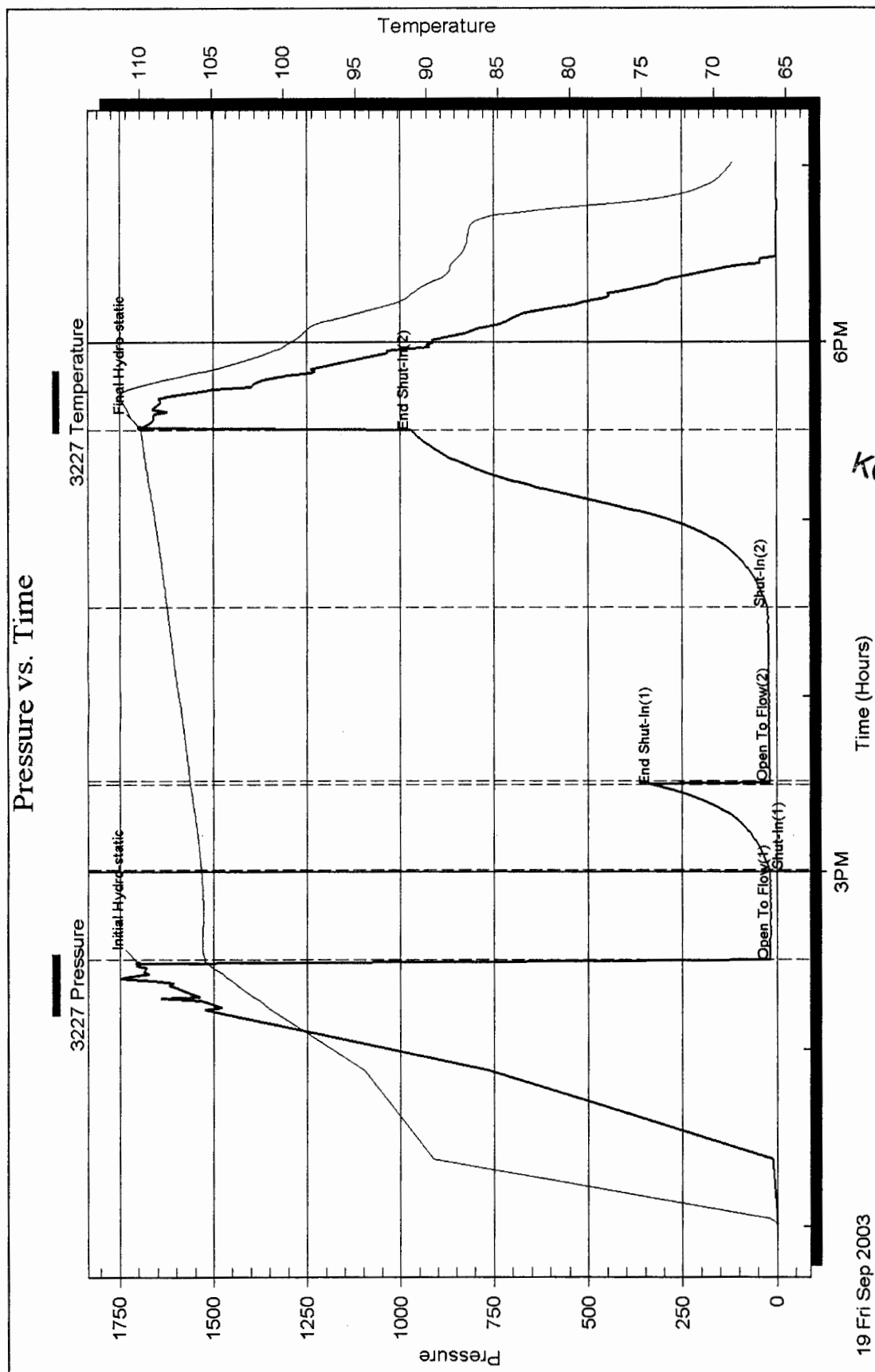
Recovery Comments:

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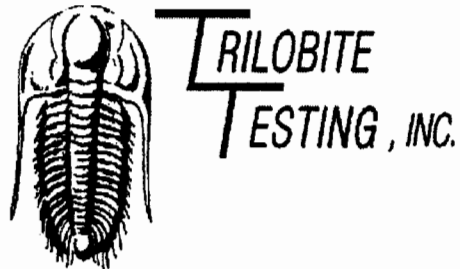
KCC WICHITA

Pressure vs. Time



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KCC WICHITA

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KCC WICHITA



DRILL STEM TEST REPORT

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

P.O.Box 372
Hays, Ks. 67601

ATTN: Ron Nelson

17-13s-21w Trego KS

Bollig # 1-17

Start Date: 2003.09.20 @ 01:19:18

End Date: 2003.09.20 @ 06:41:18

Job Ticket #: 18161 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

Dowling-Nelson Oil Co., Inc.

P.O. Box 372
Hays, Ks. 67601

ATTN: Ron Nelson

Bollig # 1-17

17-13s-21w Trego KS

Job Ticket: 18161

DST#: 2

Test Start: 2003.09.20 @ 01:19:18

GENERAL INFORMATION:

Formation: **Lansing E**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:10:33

Time Test Ended: 06:41:18

Interval: **3609.00 ft (KB) To 3627.00 ft (KB) (TVD)**

Total Depth: **3597.00 ft (KB) (TVD)**

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

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KCC WICHITA

Test Type: Conventional Bottom Hole

Tester: Paul Simpson

Unit No: 18

Reference Elevations: 2218.00 ft (KB)

2210.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 3227

Inside

Press@RunDepth: 20.25 psig @ 3614.00 ft (KB)

Start Date: 2003.09.20

End Date:

2003.09.20

Start Time: 01:19:19

End Time:

06:41:18

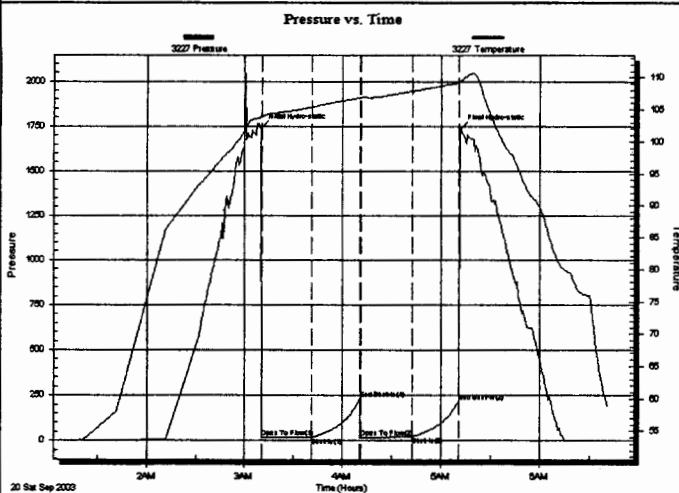
Capacity: 7000.00 psig

Last Calib.: 2003.02.13

Time On Btm: 2003.09.20 @ 03:10:18

Time Off Btm: 2003.09.20 @ 05:12:03

TEST COMMENT: IF weak 1/2" blow building to 3/4"
FF- 2" blow building to 3"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1741.93	103.97	Initial Hydro-static
1	14.64	103.95	Open To Flow (1)
31	16.17	105.37	Shut-in(1)
61	230.24	106.83	End Shut-in(1)
61	14.98	106.84	Open To Flow (2)
92	20.25	107.82	Shut-in(2)
121	212.73	109.13	End Shut-in(2)
122	1736.17	109.42	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
25.00	mud cut oil 50% oil 50% mud	0.35
0.00	60' 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.

Bollig # 1-17

P.O.Box 372
Hays, Ks. 67601

17-13s-21w Trego KS

Job Ticket: 18161

DST#: 2

ATTN: Ron Nelson

Test Start: 2003.09.20 @ 01:19:18

Tool Information

Drill Pipe:	Length: 3599.00 ft	Diameter: 3.80 inches	Volume: 50.48 bbl	Tool Weight: 3400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 40000.00 lb
			Total Volume: 50.48 bbl	Tool Chased ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 39000.00 lb
Depth to Top Packer:	3609.00 ft			Final 39000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	37.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3595.00	
Hydraulic tool	5.00			3600.00	
Packer	4.00			3604.00	19.00 Bottom Of Top Packer
Packer	5.00		Fluid	3609.00	
Stubb	1.00			3610.00	
Perforations	4.00			3614.00	
Recorder	0.00	3227	Inside	3614.00	
Perforations	10.00			3624.00	
Recorder	0.00	13308		3624.00	
Bullnose	3.00			3627.00	18.00 Bottom Packers & Anchor
Total Tool Length:	37.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing-Nelson Oil Co., Inc.

Bollig # 1-17

P.O.Box 372
Hays, Ks. 67601

17-13s-21w Trego KS

Job Ticket: 18161

DST#: 2

ATTN: Ron Nelson

Test Start: 2003.09.20 @ 01:19:18

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: 56.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
25.00	mud cut oil 50% oil 50% mud	0.351
0.00	60' gas in pipe	0.000

Total Length: 25.00 ft

Total Volume: 0.351 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

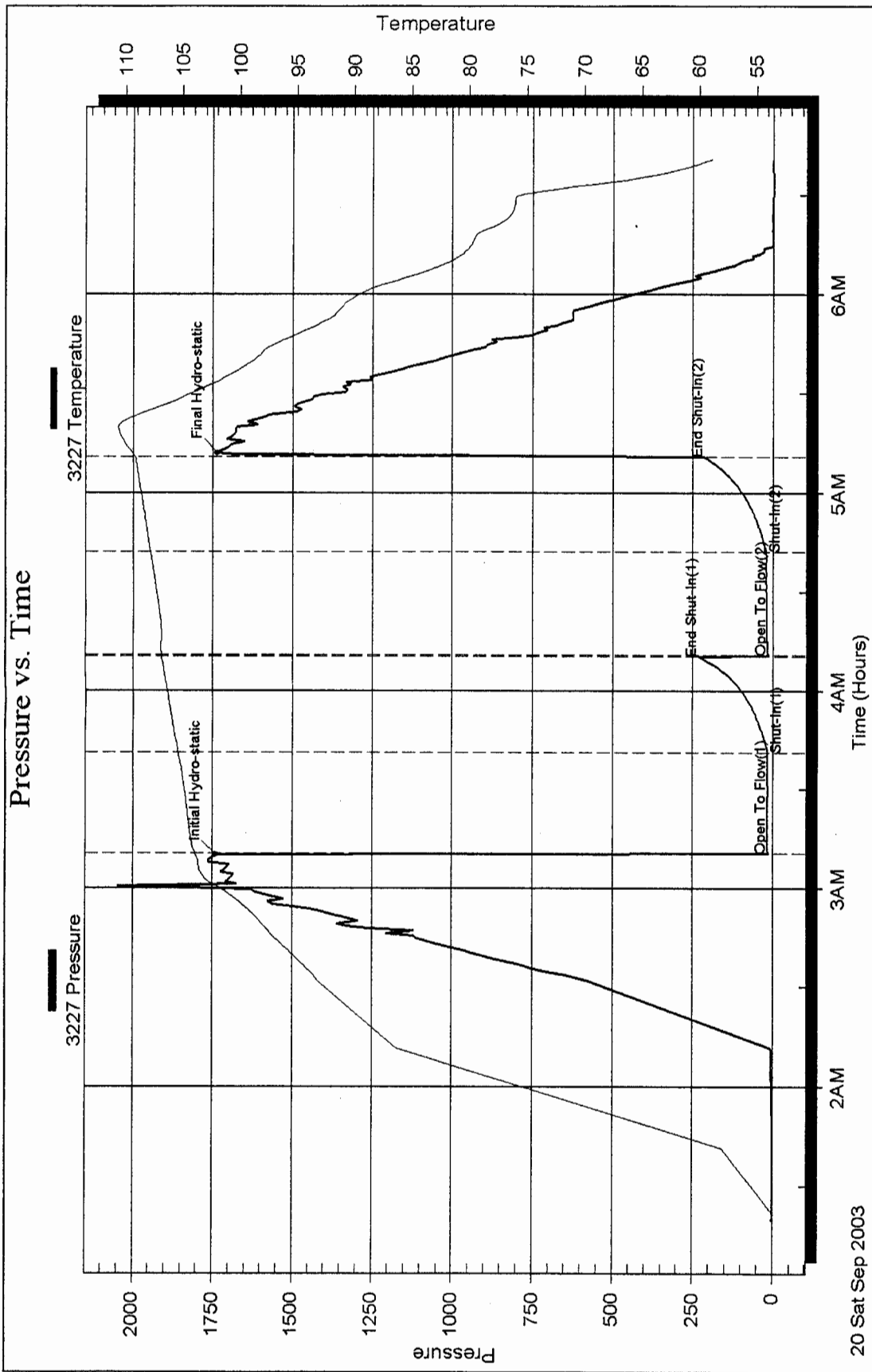
Recovery Comments:

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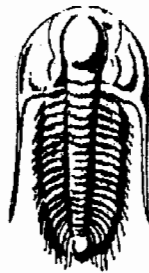
KCC WICHITA

Pressure vs. Time



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KCC WICHITA

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KCC WICHITA



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

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

P.O.Box 372
Hays, Ks. 67601

ATTN: Ron Nelson

17-13s-21w Trego KS

Bollig # 1-17

Start Date: 2003.09.20 @ 12:14:49

End Date: 2003.09.20 @ 16:42:34

Job Ticket #: 18162 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

Dow ning-Nelson Oil Co., Inc.

P.O.Box 372
Hays, Ks. 67601

ATTN: Ron Nelson

Bollig # 1-17

17-13s-21w Trego KS

Job Ticket: 18162

DST#: 3

Test Start: 2003.09.20 @ 12:14:49

GENERAL INFORMATION:

Formation: **Lansing F**

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

Time Tool Opened: 13:27:04

Time Test Ended: 16:42:34

Interval: **3609.00 ft (KB) To 3637.00 ft (KB) (TVD)**

Total Depth: **3597.00 ft (KB) (TVD)**

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

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KCC WICHITA

Test Type: **Conventional Bottom Hole**

Tester: **Paul Simpson**

Unit No: **18**

Reference Elevations: **2218.00 ft (KB)**

2210.00 ft (CF)

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

Serial #: **3227**

Inside

Press@RunDepth: **26.46 psig @ 3614.00 ft (KB)**

Start Date: **2003.09.20**

End Date:

2003.09.20

Start Time: **12:14:50**

End Time:

16:42:34

Capacity: **7000.00 psig**

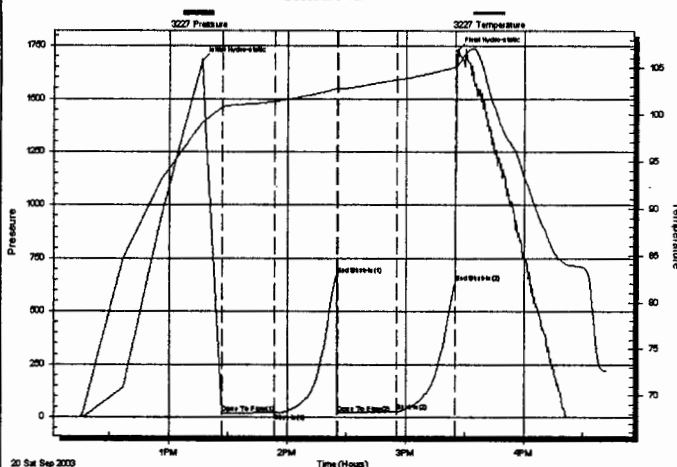
Last Calib.: **2003.02.13**

Time On Btm: **2003.09.20 @ 13:16:49**

Time Off Btm: **2003.09.20 @ 15:26:04**

TEST COMMENT: IF-weak 1/4" blow building to 1"
FF- 1/2" blow building to 1"

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1679.05	99.12	Initial Hydro-static
11	16.45	100.78	Open To Flow (1)
37	19.65	101.40	Shut-In(1)
69	672.98	102.76	End Shut-In(1)
69	19.57	102.73	Open To Flow (2)
99	26.46	103.69	Shut-In(2)
129	637.93	105.10	End Shut-In(2)
130	1727.91	105.24	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	sl. ocm 15% O 85%M	0.42
0.00	30' gas in pipe	0.00

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing-Nelson Oil Co., Inc.

Bollig # 1-17

P.O.Box 372
Hays, Ks. 67601

17-13s-21w Trego KS

Job Ticket: 18162

DST#: 3

ATTN: Ron Nelson

Test Start: 2003.09.20 @ 12:14:49

Tool Information

Drill Pipe:	Length: 3599.00 ft	Diameter: 3.80 inches	Volume: 50.48 bbl	Tool Weight:	3400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	lb
		Total Volume:	50.48 bbl	Tool Chased	ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial	39000.00 lb
Depth to Top Packer:	3609.00 ft			Final	39000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	28.00 ft				
Tool Length:	47.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3595.00	
Hydraulic tool	5.00			3600.00	
Packer	4.00			3604.00	19.00 Bottom Of Top Packer
Packer	5.00		Fluid	3609.00	
Stubb	1.00			3610.00	
Perforations	4.00			3614.00	
Recorder	0.00	3227	Inside	3614.00	
Perforations	20.00			3634.00	
Recorder	0.00	13308		3634.00	
Bullnose	3.00			3637.00	28.00 Bottom Packers & Anchor
Total Tool Length:	47.00				



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing-Nelson Oil Co., Inc.

Bollig # 1-17

P.O. Box 372
Hays, Ks. 67601

17-13s-21w Trego KS

Job Ticket: 18162

DST#: 3

ATTN: Ron Nelson

Test Start: 2003.09.20 @ 12:14:49

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 51.00 sec/qt

Water Loss: 9.58 in³

Resistivity: ohm.m

Salinity: ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	sl. ocm 15% O 85%M	0.421
0.00	30' gas in pipe	0.000

Total Length: 30.00 ft

Total Volume: 0.421 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

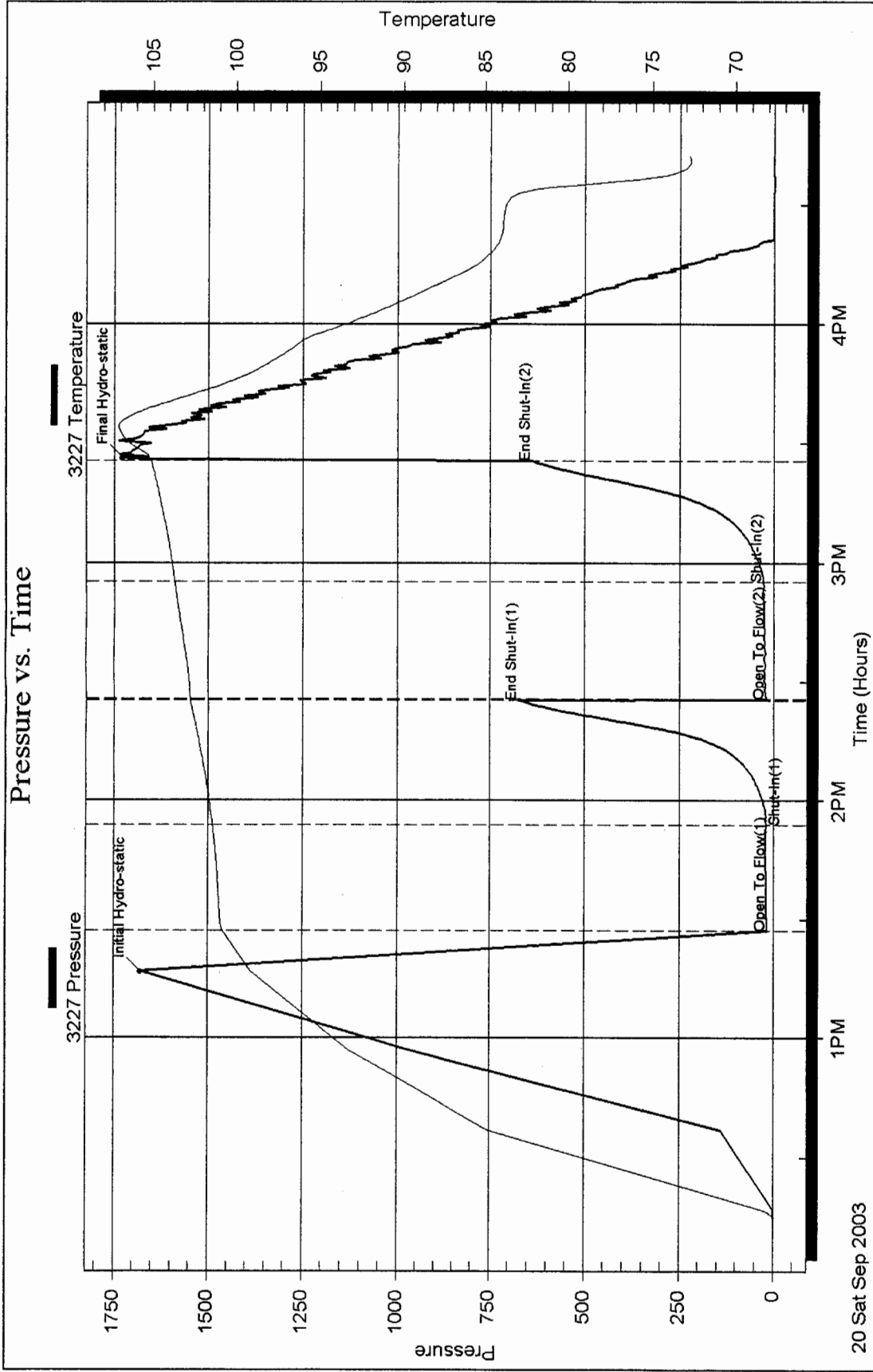
Recovery Comments:

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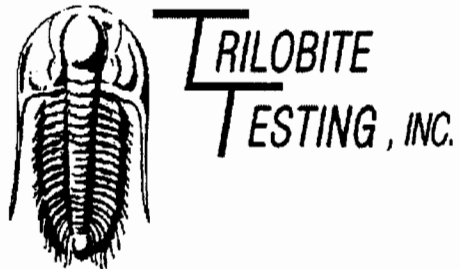
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Pressure vs. Time



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KCC WICHITA



DRILL STEM TEST REPORT

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

P.O.Box 372
Hays, Ks. 67601

ATTN: Ron Nelson

17-13s-21w Trego KS

Bollig # 1-17

Start Date: 2003.09.21 @ 13:15:07

End Date: 2003.09.21 @ 16:55:06

Job Ticket #: 18163 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co., Inc.

P.O.Box 372
Hays, Ks. 67601

ATTN: Ron Nelson

Bollig # 1-17

17-13s-21w Trego KS

Job Ticket: 18163

DST#: 4

Test Start: 2003.09.21 @ 13:15:07

GENERAL INFORMATION:

Formation: **Marmaton**

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

Time Tool Opened: 14:27:36

Time Test Ended: 16:55:06

Interval: **3881.00 ft (KB) To 3918.00 ft (KB) (TVD)**

Total Depth: **3597.00 ft (KB) (TVD)**

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

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KCC WICHITA

Test Type: **Conventional Bottom Hole**

Tester: **Paul Simpson**

Unit No: **18**

Reference Elevations: **2218.00 ft (KB)**

2210.00 ft (CF)

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

Serial #: 3227

Inside

Press@RunDepth: **16.09 psig @ 3886.00 ft (KB)**

Start Date: **2003.09.21**

End Date:

2003.09.21

Start Time: **13:15:07**

End Time:

16:55:06

Capacity: **7000.00 psig**

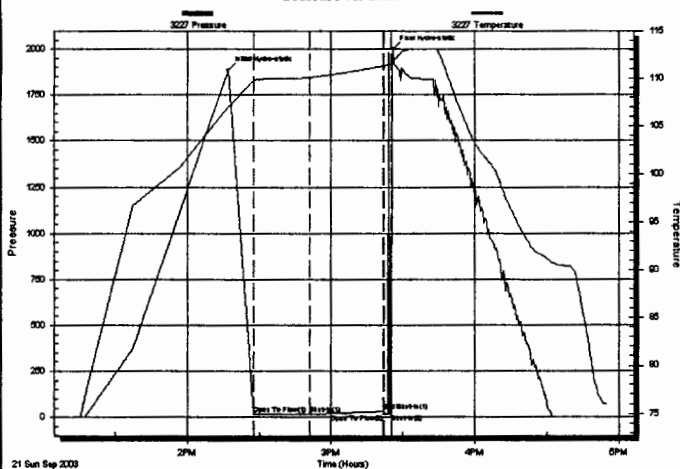
Last Calib.: **2003.02.06**

Time On Btm: **2003.09.21 @ 14:17:06**

Time Off Btm: **2003.09.21 @ 15:26:06**

TEST COMMENT: IF- weak surface blow - died in 5 minutes
FF- no blow - flush tool no blow after surge

Pressure vs. Time



PRESSURE SUMMARY

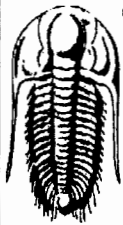
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1885.81	106.94	Initial Hydro-static
11	16.54	109.73	Open To Flow (1)
34	16.09	110.09	Shut-In(1)
65	30.83	111.26	End Shut-In(1)
65	15.85	111.29	Open To Flow (2)
69	17.05	111.52	Shut-In(2)
69	2001.63	111.80	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	mud with oil spots	0.01

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing-Nelson Oil Co., Inc.

Bollig # 1-17

P.O.Box 372
Hays, Ks. 67601

17-13s-21w Trego KS

Job Ticket: 18163

DST#: 4

ATTN: Ron Nelson

Test Start: 2003.09.21 @ 13:15:07

Tool Information

Drill Pipe:	Length: 3880.00 ft	Diameter: 3.80 inches	Volume: 54.43 bbl	Tool Weight: 3400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 45000.00 lb
			<u>Total Volume: 54.43 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3881.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	37.00 ft			
Tool Length:	56.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				
30-30-flush out				

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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3867.00	
Hydraulic tool	5.00			3872.00	
Packer	4.00			3876.00	19.00 Bottom Of Top Packer
Packer	5.00		Fluid	3881.00	
Stubb	1.00			3882.00	
Perforations	4.00			3886.00	
Recorder	0.00	3227	Inside	3886.00	
Perforations	29.00			3915.00	
Recorder	0.00	13308		3915.00	
Bullnose	3.00			3918.00	37.00 Bottom Packers & Anchor
Total Tool Length:	56.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing-Nelson Oil Co., Inc.

Bollig # 1-17

P.O.Box 372
Hays, Ks. 67601

17-13s-21w Trego KS

Job Ticket: 18163

DST#: 4

ATTN: Ron Nelson

Test Start: 2003.09.21 @ 13:15:07

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: 57.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	mud with oil spots	0.014

Total Length:

1.00 ft

Total Volume:

0.014 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

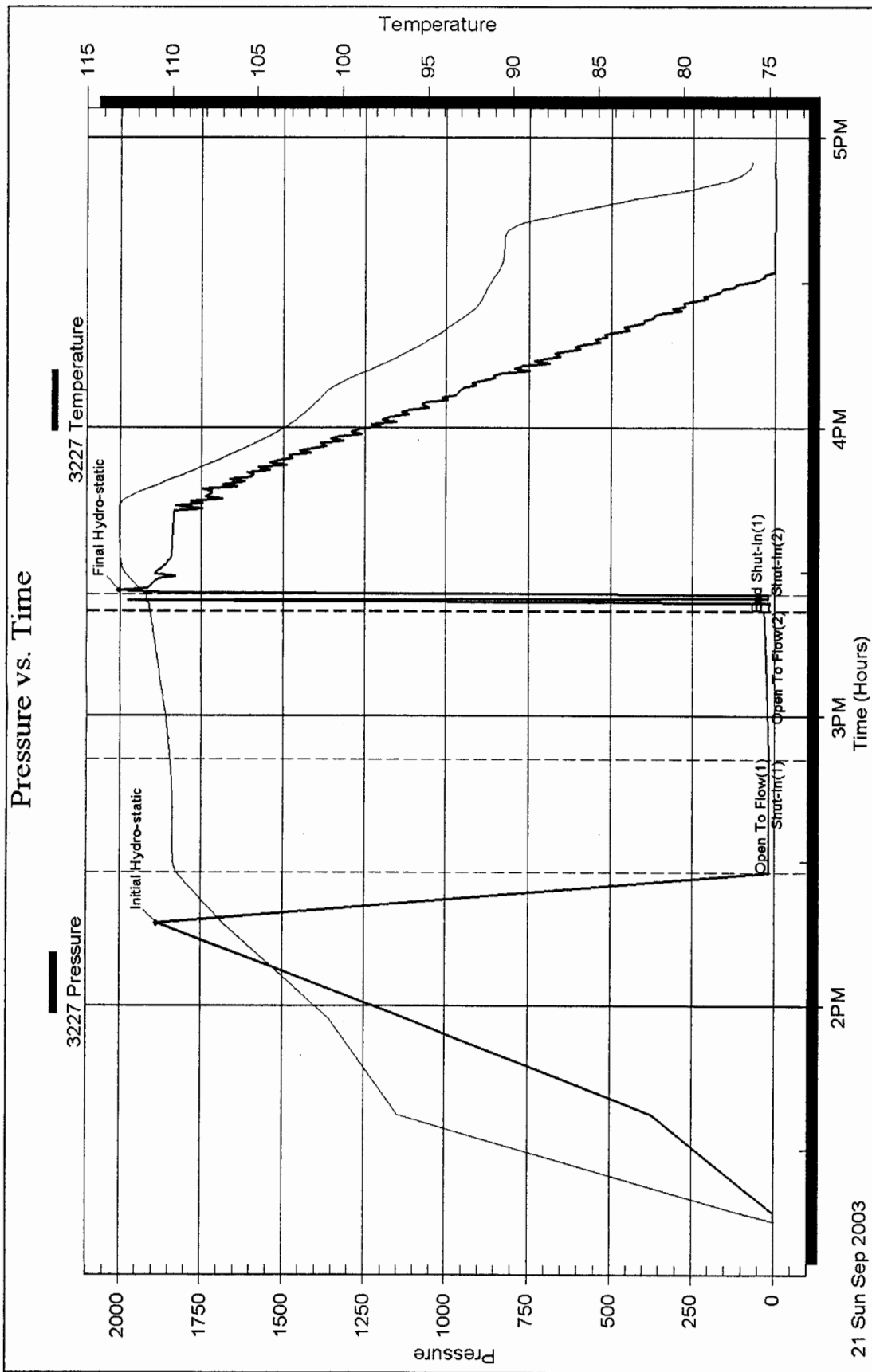
Laboratory Location:

Recovery Comments:

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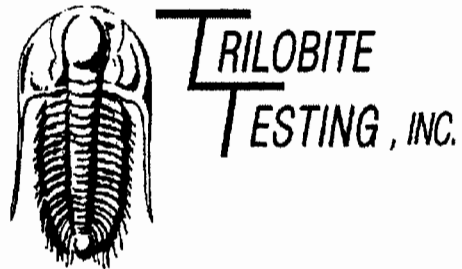
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MAR 04 2004
KCC WICHITA



DRILL STEM TEST REPORT

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

P.O.Box 372
Hays, Ks. 67601

ATTN: Ron Nelson

17-13s-21w Trego KS

Bollig # 1-17

Start Date: 2003.09.22 @ 02:11:03

End Date: 2003.09.22 @ 08:49:03

Job Ticket #: 19164 DST #: 5

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

Bollig # 1-17

17-13s-21w Trego KS

Job Ticket: 19164

DST#: 5

Test Start: 2003.09.22 @ 02:11:03

GENERAL INFORMATION:

Formation: **Cong-Arbukle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:02:33

Time Test Ended: 08:49:03

Interval: **3909.00 ft (KB) To 3981.00 ft (KB) (TVD)**

Total Depth: **3597.00 ft (KB) (TVD)**

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

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Test Type: Conventional Bottom Hole

Tester: Paul Simpson

Unit No: 18

Reference Elevations: 2218.00 ft (KB)

2210.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 3227

Inside

Press@RunDepth: 204.94 psig @ 3915.00 ft (KB)

Start Date: 2003.09.22 End Date: 2003.09.22

Start Time: 02:11:04 End Time: 08:49:03

Capacity: 7000.00 psig

Last Calib.: 2003.02.06

Time On Btm: 2003.09.22 @ 04:02:18

Time Off Btm: 2003.09.22 @ 07:04:33

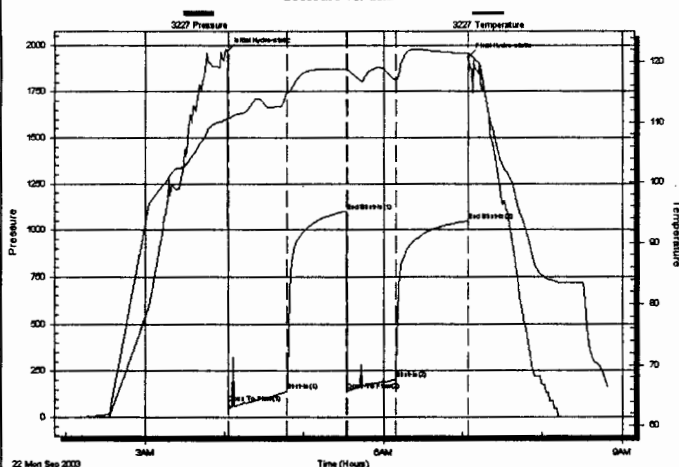
TEST COMMENT: IF- 1" blow building to bottom of bucket in 9 minutes

IS- no blow

FF- surface blow building to bottom of bucket in 15 minutes

FSI- no blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1970.12	110.85	Initial Hydro-static
1	75.49	110.74	Open To Flow (1)
45	143.32	115.09	Shut-In(1)
90	1102.12	118.78	End Shut-In(1)
91	144.18	118.68	Open To Flow (2)
127	204.94	117.05	Shut-In(2)
182	1048.39	121.33	End Shut-In(2)
183	1936.26	121.43	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	gsy HOCM 15% G 25% O 60%M	1.26
90.00	gsy Muddy Oil 10% G 50%O 40%M	1.26
240.00	clean oil 10% G 90 O	3.37
0.00	180' gas in pipe	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing-Nelson Oil Co., Inc.

Bollig # 1-17

P.O.Box 372
Hays, Ks. 67601

17-13s-21w Trego KS

Job Ticket: 19164

DST#: 5

ATTN: Ron Nelson

Test Start: 2003.09.22 @ 02:11:03

Tool Information

Drill Pipe:	Length: 3912.00 ft	Diameter: 3.80 inches	Volume: 54.88 bbl	Tool Weight: 3400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 44000.00 lb
		Total Volume:	54.88 bbl	Tool Chased ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3909.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	72.00 ft			
Tool Length:	91.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				
45-45-45				

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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3895.00	
Hydraulic tool	5.00			3900.00	
Packer	4.00			3904.00	19.00 Bottom Of Top Packer
Packer	5.00		Fluid	3909.00	
Stubb	1.00			3910.00	
Perforations	4.00			3914.00	
Change Over Sub	1.00			3915.00	
Recorder	0.00	3227	Inside	3915.00	
Blank Spacing	31.00			3946.00	
Perforations	31.00			3977.00	
Change Over Sub	1.00			3978.00	
Recorder	0.00	13308		3978.00	
Bullnose	3.00			3981.00	72.00 Bottom Packers & Anchor

Total Tool Length: 91.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co., Inc.

Bollig # 1-17

P.O.Box 372
Hays,Ks.67601

17-13s-21w Trego KS

Job Ticket: 19164

DST#: 5

ATTN: Ron Nelson

Test Start: 2003.09.22 @ 02:11:03

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

39.5 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	gsy HOCM 15% G 25% O 60%M	1.262
90.00	gsy Muddy Oil 10% G 50%O 40%M	1.262
240.00	clean oil 10% G 90 O	3.367
0.00	180' gas in pipe	0.000

Total Length: 420.00 ft

Total Volume: 5.891 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 40@65

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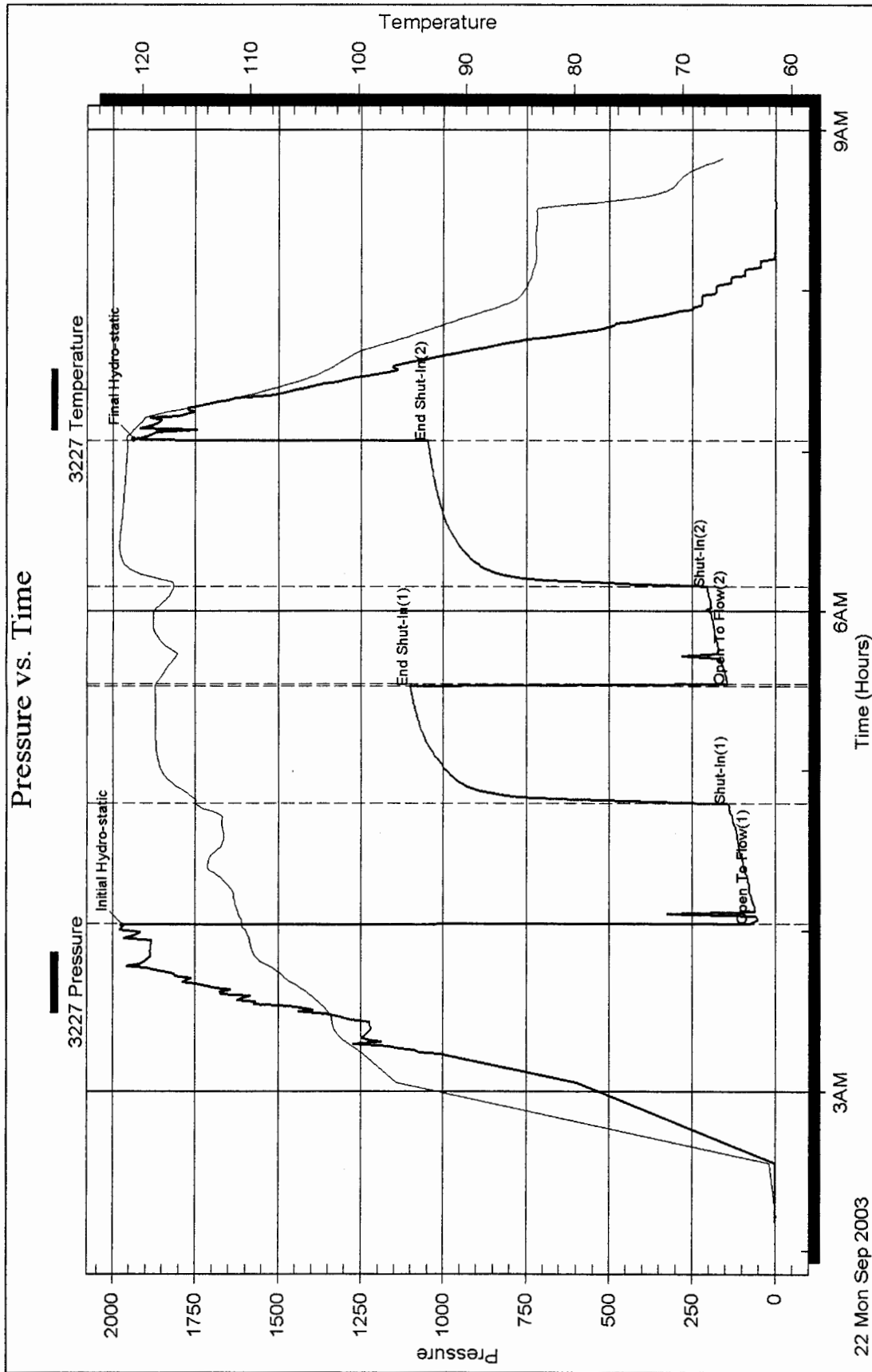
Serial #: 3227

Inside

Downing-Nelson Oil Co., Inc.

17-13s-21w Trego KS

DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 19164

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KCC WICHITA

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