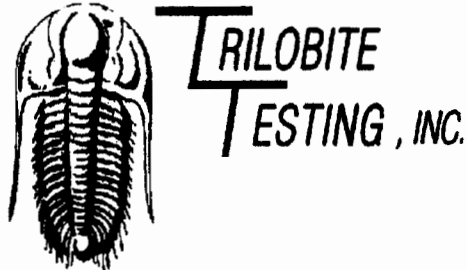


15-065-23449

30-95-23w



DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil CO**

PO Box 372
Hays KS 67601

ATTN: Jason Alm

30 9S 23W Graham KS

Gano # 1-30

Start Date: 2008.07.12 @ 01:53:36

End Date: 2008.07.12 @ 09:28:30

Job Ticket #: 32838 DST #: 1

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Printed: 2008.07.16 @ 10:45:56 Page 1

Downing-Nelson Oil CO

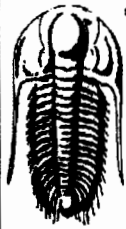
Gano # 1-30

30 9S 23W Graham KS

DST # 1

LKC "C-D"

2008.07.12



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dowling-Nelson Oil CO

Gano # 1-30

PO Box 372
Hays KS 67601

30 9S 23W Graham KS

Job Ticket: 32838

DST#: 1

ATTN: Jason Alm

Test Start: 2008.07.12 @ 01:53:36

GENERAL INFORMATION:

Formation: LKC "C-D"

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:42:01

Time Test Ended: 09:28:30

Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

Interval: 3831.00 ft (KB) To 3875.00 ft (KB) (TVD)

Total Depth: 3875.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 2476.00 ft (KB)

2469.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8371 Outside

Press@RunDepth: 633.63 psig @ 3835.00 ft (KB)

Start Date: 2008.07.12

End Date:

2008.07.12

Start Time: 01:53:36

End Time:

09:28:30

Capacity: 7000.00 psig

Last Calib.: 2008.07.12

Time On Btm: 2008.07.12 @ 03:41:01

Time Off Btm: 2008.07.12 @ 06:46:30

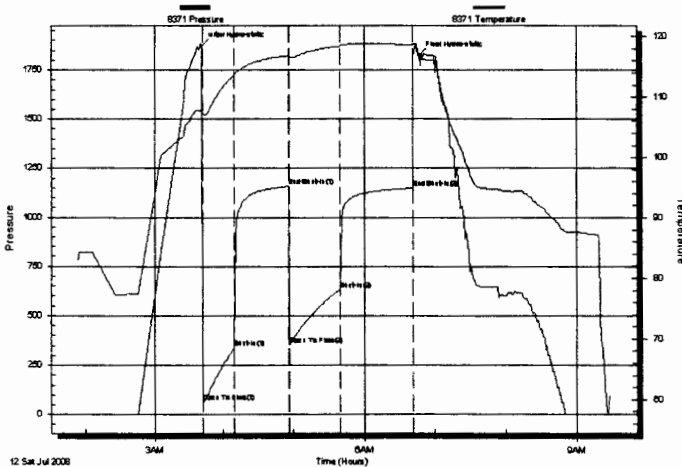
TEST COMMENT: IFF BOB 1 1/2 min.

ISI BOB 8 min.

FFP BOB 3 min.

FSI BOB 6 min.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1872.86	107.81	Initial Hydro-static
1	64.59	107.11	Open To Flow (1)
29	339.57	113.64	Shut-In(1)
75	1157.66	116.81	End Shut-In(1)
76	354.98	116.38	Open To Flow (2)
119	633.63	118.40	Shut-In(2)
180	1148.76	118.56	End Shut-In(2)
186	1821.58	117.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1115.00	GMW 10%G 80%W 10%M	15.36
250.00	G FREE OIL 10%G 85%O 5%M	3.51
0.00	1300' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil CO

Gano # 1-30

PO Box 372
Hays KS 67601

30 9S 23W Graham KS

Job Ticket: 32838

DST#: 1

ATTN: Jason Alm

Test Start: 2008.07.12 @ 01:53:36

Tool Information

Drill Pipe:	Length: 3805.00 ft	Diameter: 3.80 inches	Volume: 53.37 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: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 90000.00 lb
		Total Volume:	53.52 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3831.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	44.00 ft			
Tool Length:	64.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3816.00	
Hydraulic tool	5.00			3821.00	
Packer	5.00			3826.00	20.00 Bottom Of Top Packer
Packer	5.00			3831.00	
Stubb	1.00			3832.00	
Perforations	2.00			3834.00	
Change Over Sub	1.00			3835.00	
Recorder	0.00	8018	Inside	3835.00	
Recorder	0.00	8371	Outside	3835.00	
Blank Spacing	31.00			3866.00	
Change Over Sub	1.00			3867.00	
Perforations	5.00			3872.00	
Bullnose	3.00			3875.00	44.00 Bottom Packers & Anchor

Total Tool Length: 64.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing-Nelson Oil CO

Gano # 1-30

PO Box 372
Hays KS 67601

30 9S 23W Graham KS

Job Ticket: 32838 **DST#: 1**

ATTN: Jason Alm

Test Start: 2008.07.12 @ 01:53:36

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 37 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 23000 ppm
Viscosity: 47.00 sec/qt	Cushion Volume: bbl	
Water Loss: 8.84 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 2800.00 ppm		
Filter Cake: inches		

Recovery Information

Recovery Table

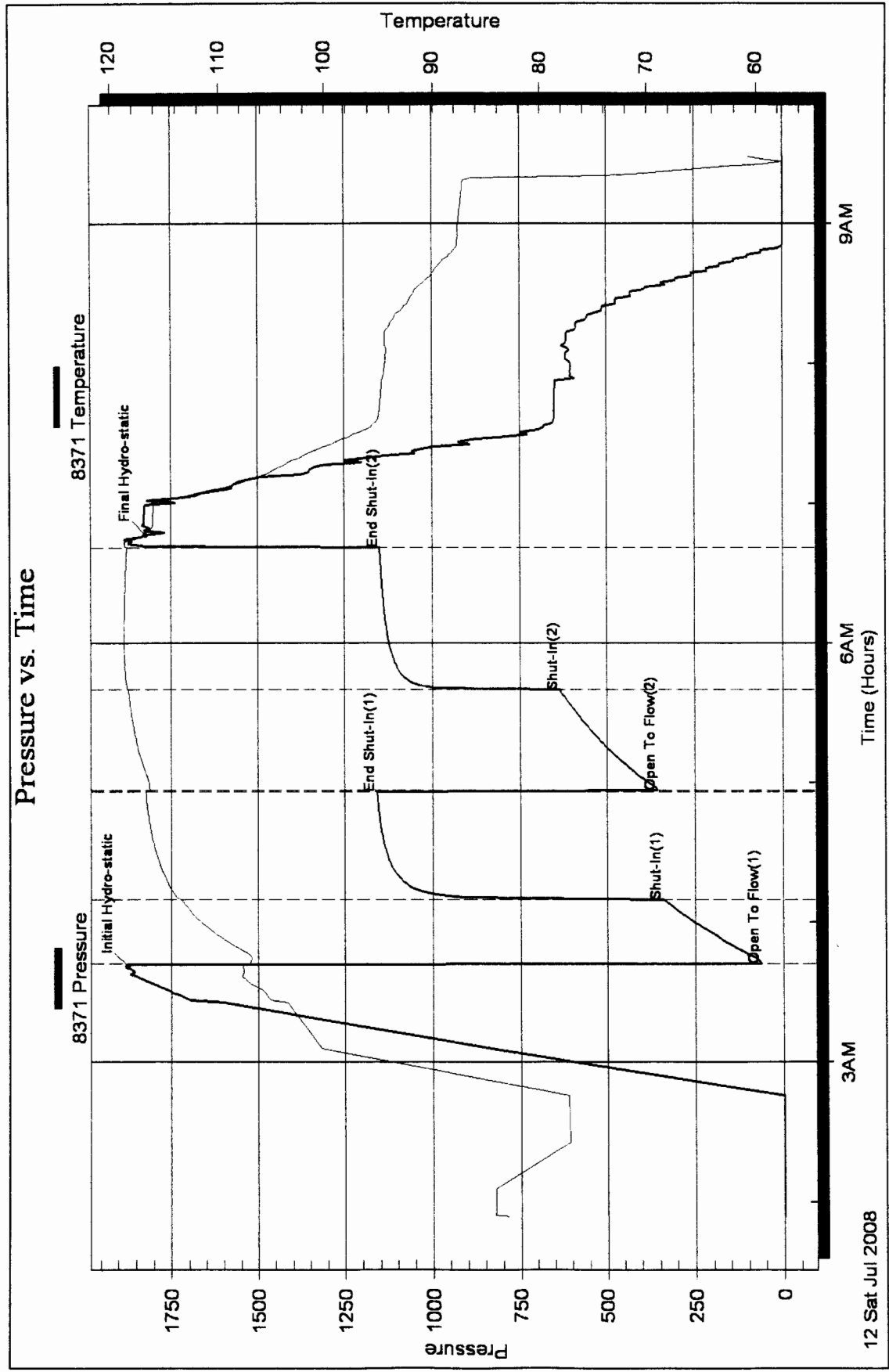
Length ft	Description	Volume bbl
1115.00	GMW 10%G 80%W 10%M	15.358
250.00	G FREE OIL 10%G 85%O 5%M	3.507
0.00	1300' GIP	0.000

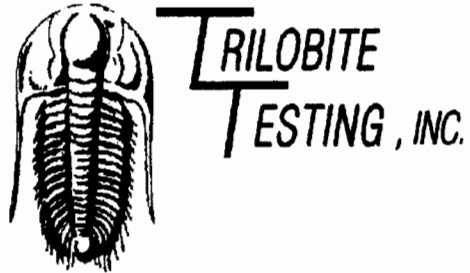
Total Length: 1365.00 ft Total Volume: 18.865 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil CO**

PO Box 372
Hays KS 67601

ATTN: Jason Alm

30 9S 23W Graham KS

Gano # 1-30

Start Date: 2008.07.12 @ 16:04:08

End Date: 2008.07.12 @ 22:43:02

Job Ticket #: 32839 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

Downing-Nelson Oil CO

Gano # 1-30

PO Box 372
Hays KS 67601

30 9S 23W Graham KS

Job Ticket: 32839

DST#: 2

ATTN: Jason Alm

Test Start: 2008.07.12 @ 16:04:08

GENERAL INFORMATION:

Formation: **LKC "E-F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:04:03

Time Test Ended: 22:43:02

Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

Interval: **3870.00 ft (KB) To 3898.00 ft (KB) (TVD)**

Total Depth: 3898.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 2476.00 ft (KB)

2469.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8371 Outside

Press@RunDepth: 137.45 psig @ 3875.00 ft (KB)

Start Date: 2008.07.12

End Date:

2008.07.12

Start Time: 16:04:08

End Time:

22:43:02

Capacity: 7000.00 psig

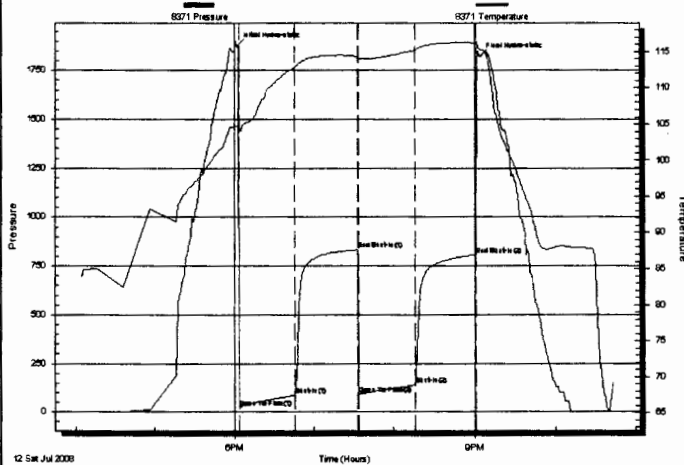
Last Calib.: 2008.07.12

Time On Btm: 2008.07.12 @ 18:02:33

Time Off Btm: 2008.07.12 @ 21:03:32

TEST COMMENT: IFP BOB 33 min.
ISI Sur blow back died 14 min.
FFP BOB 30 min.
FSI Sur blow back died 13 min.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1872.94	104.69	Initial Hydro-static
2	19.14	104.09	Open To Flow (1)
44	87.48	112.83	Shut-In(1)
91	833.21	114.35	End Shut-In(1)
92	89.16	113.99	Open To Flow (2)
134	137.45	115.23	Shut-In(2)
178	806.73	116.25	End Shut-In(2)
181	1822.33	115.36	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
250.00	MW 80%W 20%M	3.22
10.00	G FREE OIL 10%G 85%O 5%M	0.14
0.00	60' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil CO

Gano # 1-30

PO Box 372
Hays KS 67601

30 9S 23W Graham KS

Job Ticket: 32839 **DST#:2**

ATTN: Jason Alm

Test Start: 2008.07.12 @ 16:04:08

Tool Information

Drill Pipe:	Length: 3838.00 ft	Diameter: 3.80 inches	Volume: 53.84 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: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 53.99 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3870.00 ft			Final 57000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	28.00 ft			
Tool Length:	48.00 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			3855.00	
Hydraulic tool	5.00			3860.00	
Packer	5.00			3865.00	20.00 Bottom Of Top Packer
Packer	5.00			3870.00	
Stubb	1.00			3871.00	
Perforations	4.00			3875.00	
Recorder	0.00	8018	Inside	3875.00	
Recorder	0.00	8371	Outside	3875.00	
Perforations	20.00			3895.00	
Bullnose	3.00			3898.00	28.00 Bottom Packers & Anchor
Total Tool Length:	48.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing-Nelson Oil CO

Gano # 1-30

PO Box 372
Hays KS 67601

30 9S 23W Graham KS

Job Ticket: 32839

DST#: 2

ATTN: Jason Alm

Test Start: 2008.07.12 @ 16:04:08

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 36 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 24000 ppm
Viscosity: 55.00 sec/qt	Cushion Volume: bbl	
Water Loss: 8.76 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 4500.00 ppm		
Filter Cake: inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
250.00	MW 80%W 20%M	3.224
10.00	G FREE OIL 10%G 85%O 5%M	0.140
0.00	60' GIP	0.000

Total Length: 260.00 ft Total Volume: 3.364 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

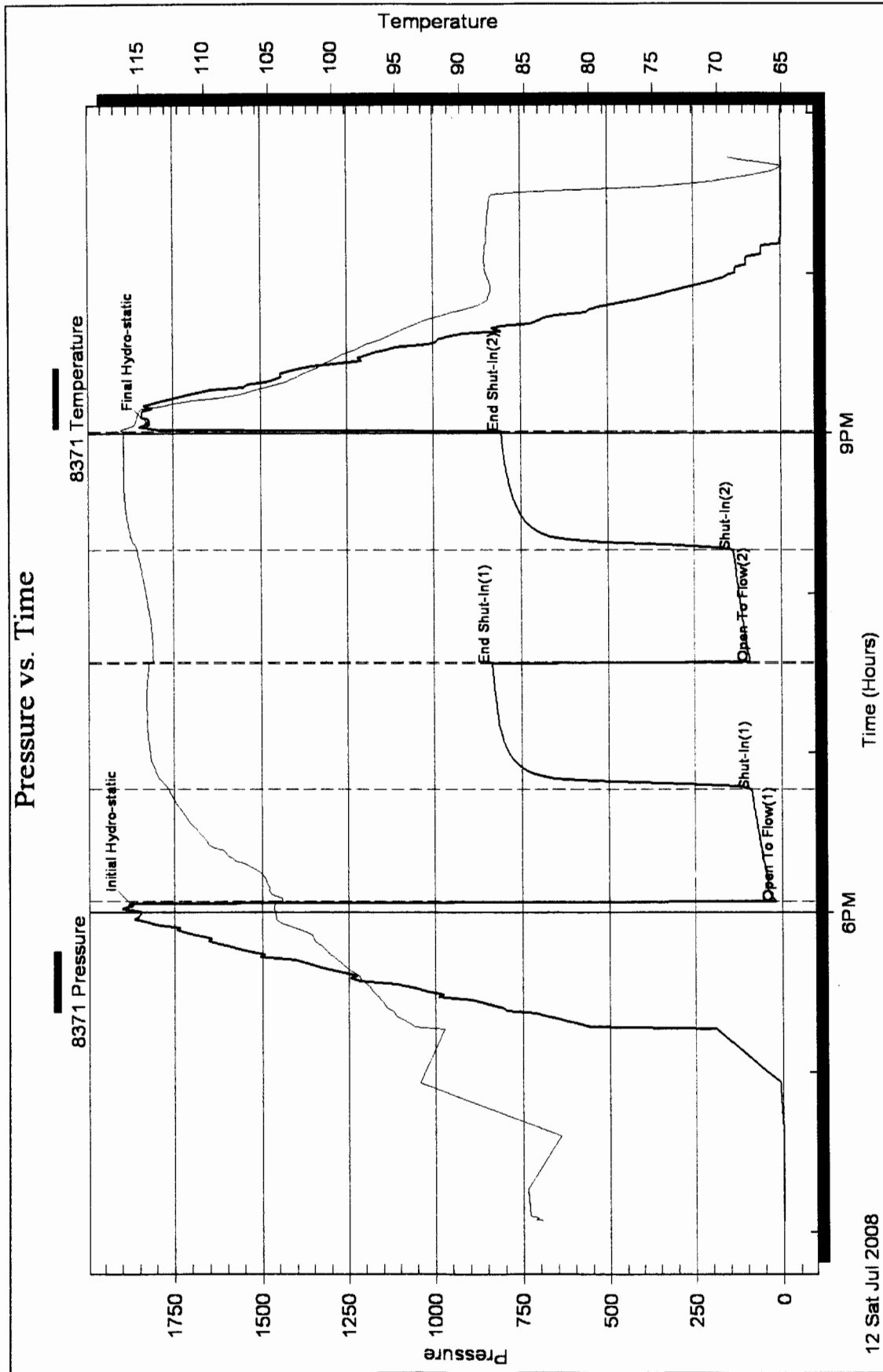
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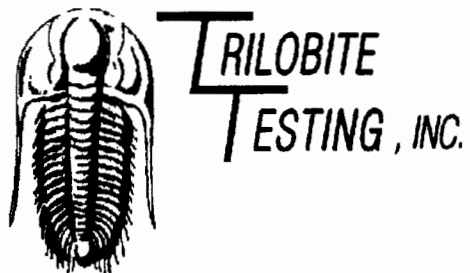
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil CO**

PO Box 372
Hays KS 67601

ATTN: Jason Alm

30 9S 23W Graham KS

Gano # 1-30

Start Date: 2008.07.13 @ 05:00:05

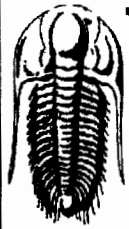
End Date: 2008.07.13 @ 10:32:29

Job Ticket #: 32840 DST #: 3

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Downing-Nelson Oil CO

Gano # 1-30

PO Box 372
Hays KS 67601

30 9S 23W Graham KS

Job Ticket: 32840

DST#: 3

ATTN: Jason Alm

Test Start: 2008.07.13 @ 05:00:05

GENERAL INFORMATION:

Formation: **LKC G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:17:00

Time Test Ended: 10:32:29

Test Type: Conventional Bottom Hole

Tester: Brett Dickinson

Unit No: 41

Interval: **3901.00 ft (KB) To 3915.00 ft (KB) (TVD)**

Reference Elevations: 2476.00 ft (KB)

Total Depth: 3875.00 ft (KB) (TVD)

2469.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition:

KB to GR/CF: 7.00 ft

Serial #: 8018 Inside

Press@RunDepth: 288.33 psig @ 3902.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2008.07.13

End Date:

2008.07.13

Last Calib.: 2008.07.13

Start Time: 05:00:05

End Time:

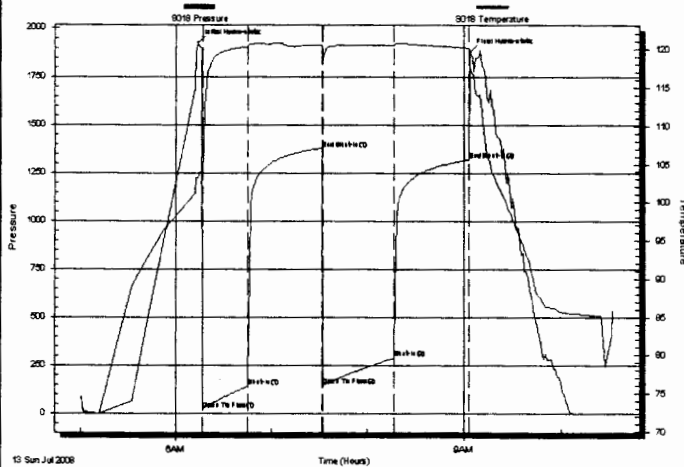
10:32:29

Time On Btm: 2008.07.13 @ 06:14:00

Time Off Btm: 2008.07.13 @ 09:03:30

TEST COMMENT: IFP BOB in 10 min
ISI Weak surface blow
FFP BOB in 18 min
FSI Weak surface blow

Pressure vs. Time



PRESSURE SUMMARY

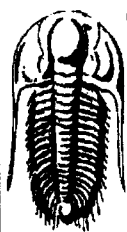
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1923.54	103.23	Initial Hydro-static
3	21.58	102.96	Open To Flow (1)
32	142.31	120.27	Shut-In (1)
78	1375.02	120.47	End Shut-In (1)
79	147.74	118.60	Open To Flow (2)
123	288.33	120.56	Shut-In (2)
169	1318.91	120.18	End Shut-In (2)
170	1876.04	117.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
620.00	15%M 85%W	8.41
30.00	100% O	0.42
0.00	150' GIP	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

Gano # 1-30

PO Box 372
Hays KS 67601

30 9S 23W Graham KS

Job Ticket: 32840

DST#: 3

ATTN: Jason Alm

Test Start: 2008.07.13 @ 05:00:05

Tool Information

Drill Pipe:	Length: 3870.00 ft	Diameter: 3.80 inches	Volume: 54.29 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: 31.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 69000.00 lb
			<u>Total Volume: 54.44 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3901.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	14.00 ft			
Tool Length:	35.00 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			3881.00	
Shut In Tool	5.00			3886.00	
Hydraulic tool	5.00			3891.00	
Packer	5.00			3896.00	21.00 Bottom Of Top Packer
Packer	5.00			3901.00	
Stubb	1.00			3902.00	
Recorder	0.00	8018	Inside	3902.00	
Recorder	0.00	8371	Outside	3902.00	
Perforations	5.00			3907.00	
Perforations	5.00			3912.00	
Bullnose	3.00			3915.00	14.00 Bottom Packers & Anchor

Total Tool Length: 35.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing-Nelson Oil CO

Gano # 1-30

PO Box 372
Hays KS 67601

30 9S 23W Graham KS

Job Ticket: 32840

DST#: 3

ATTN: Jason Alm

Test Start: 2008.07.13 @ 05:00:05

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: 54.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
620.00	15%M 85%W	8.415
30.00	100% O	0.421
0.00	150' GIP	0.000

Total Length: 650.00 ft Total Volume: 8.836 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8018

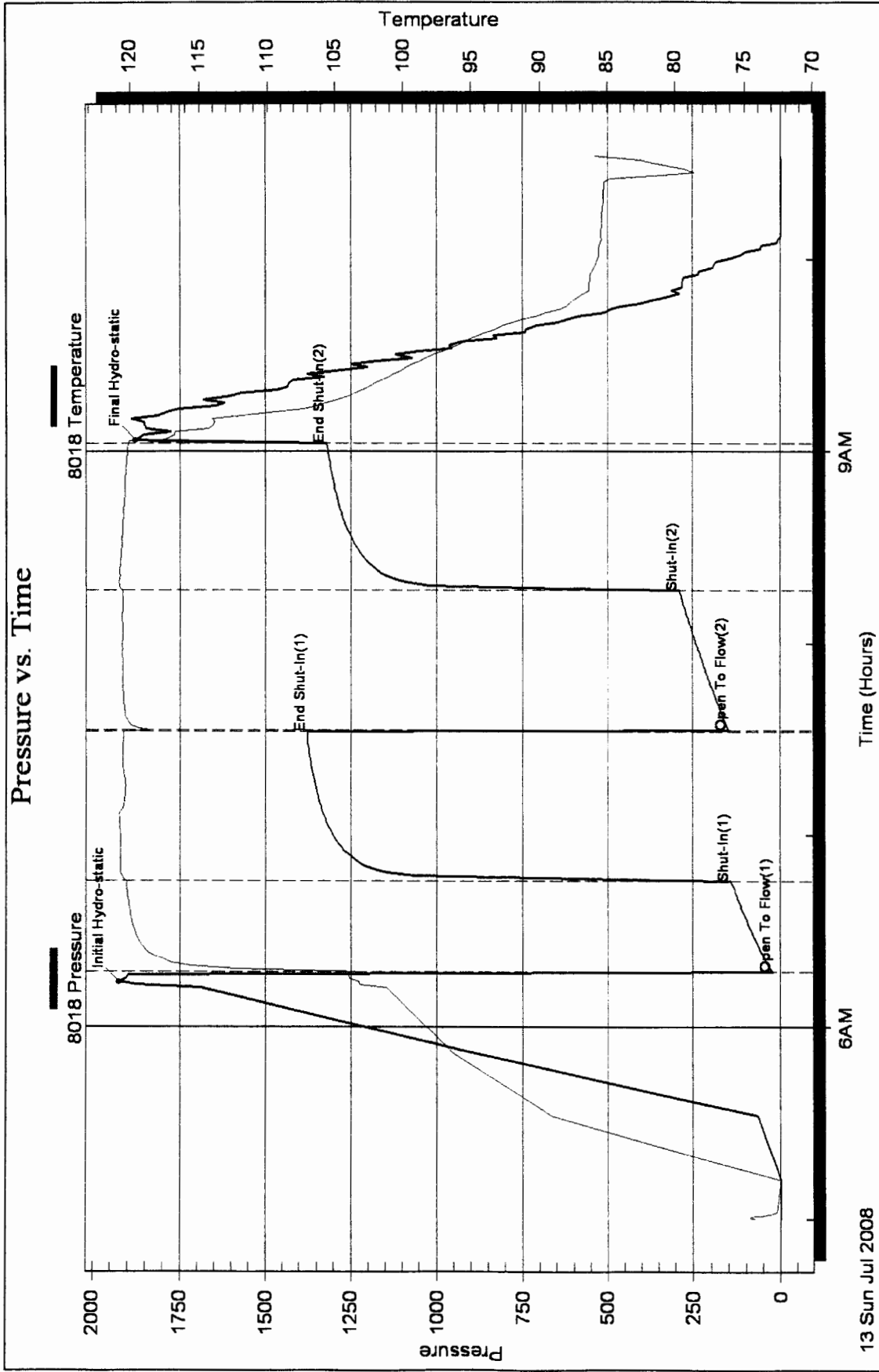
Inside

Downing-Nelson Oil CO

30 9S 23W Graham KS

DST Test Number: 3

Pressure vs. Time



13 Sun Jul 2008

6AM

Time (Hours)

9AM