

DRILL STEM TEST REPORT

Prepared For: **DNOC**

P O Box 372
Hays Ks 67601

ATTN: Ron Nelson

20-13-21-Trego-Ks

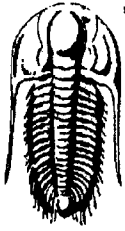
Doug Egger # 1-20

Start Date: 2004.05.11 @ 13:40:01

End Date: 2004.05.11 @ 20:59:31

Job Ticket #: 19285 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

DNOC
P O Box 372
Hays Ks 67601
ATTN: Ron Nelson

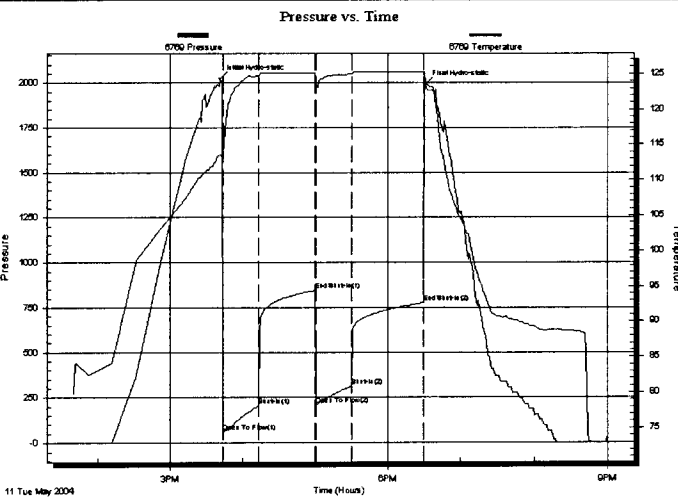
Doug Egger # 1-20
20-13-21-Trego-Ks
Job Ticket: 19285 **DST#: 1**
Test Start: 2004.05.11 @ 13:40:01

GENERAL INFORMATION:

Formation: **Marmaton**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:43:31
Time Test Ended: 20:59:31
Interval: **4005.00 ft (KB) To 4037.00 ft (KB) (TVD)**
Total Depth: **4037.00 ft (KB) (TVD)**
Hole Diameter: **7.88 inches** Hole Condition: Good
Reference Elevations: **2306.00 ft (KB)**
2298.00 ft (CF)
KB to GR/CF: **8.00 ft**
Test Type: Conventional Bottom Hole
Tester: Dan Bangle
Unit No: 21

Serial #: 6769 Inside
Press@RunDepth: **312.95 psig @ 4006.00 ft (KB)** Capacity: **7000.00 psig**
Start Date: **2004.05.11** End Date: **2004.05.11** Last Calib.: **2004.05.11**
Start Time: **13:40:02** End Time: **20:59:31** Time On Btm: **2004.05.11 @ 15:41:01**
Time Off Btm: **2004.05.11 @ 18:31:01**

TEST COMMENT: IF-Strong B-B in 3 min
ISI-Strong B-B in 20 min
FF-Strong B-B in 7 min
FSI-Weak building to 2"



PRESSURE SUMMARY

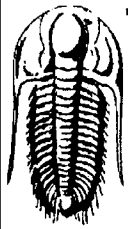
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2022.53	113.52	Initial Hydro-static
3	61.95	113.72	Open To Flow (1)
32	206.76	124.71	Shut-In(1)
79	845.33	125.11	End Shut-In(1)
80	212.27	123.28	Open To Flow (2)
109	312.95	124.97	Shut-In(2)
169	775.97	125.25	End Shut-In(2)
170	1988.52	123.68	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
185.00	OCWtr 10%o 90%w	2.32
185.00	Frothy O	2.60
420.00	CGsyO 30%g 70%o	5.89
0.00	760 GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

DNOC
P O Box 372
Hays Ks 67601
ATTN: Ron Nelson

Doug Egger # 1-20
20-13-21-Trego-Ks
Job Ticket: 19285 **DST#: 1**
Test Start: 2004.05.11 @ 13:40:01

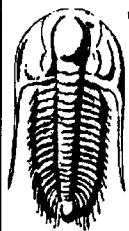
Tool Information

Drill Pipe:	Length: 3978.00 ft	Diameter: 3.80 inches	Volume: 55.80 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 55.95 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4005.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	32.00 ft			
Tool Length:	53.00 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			3985.00	
Shut In Tool	5.00			3990.00	
Hydraulic tool	5.00			3995.00	
Packer	5.00			4000.00	21.00 Bottom Of Top Packer
Packer	5.00			4005.00	
Stubb	1.00			4006.00	
Recorder	0.00	6769	Inside	4006.00	
Perforations	28.00			4034.00	
Recorder	0.00	13254	Outside	4034.00	
Bullnose	3.00			4037.00	32.00 Bottom Packers & Anchor
Total Tool Length:	53.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

DNOC
P O Box 372
Hays Ks 67601
ATTN: Ron Nelson

Doug Egger # 1-20
20-13-21-Trego-Ks
Job Ticket: 19285 **DST#: 1**
Test Start: 2004.05.11 @ 13:40:01

Mud and Cushion Information

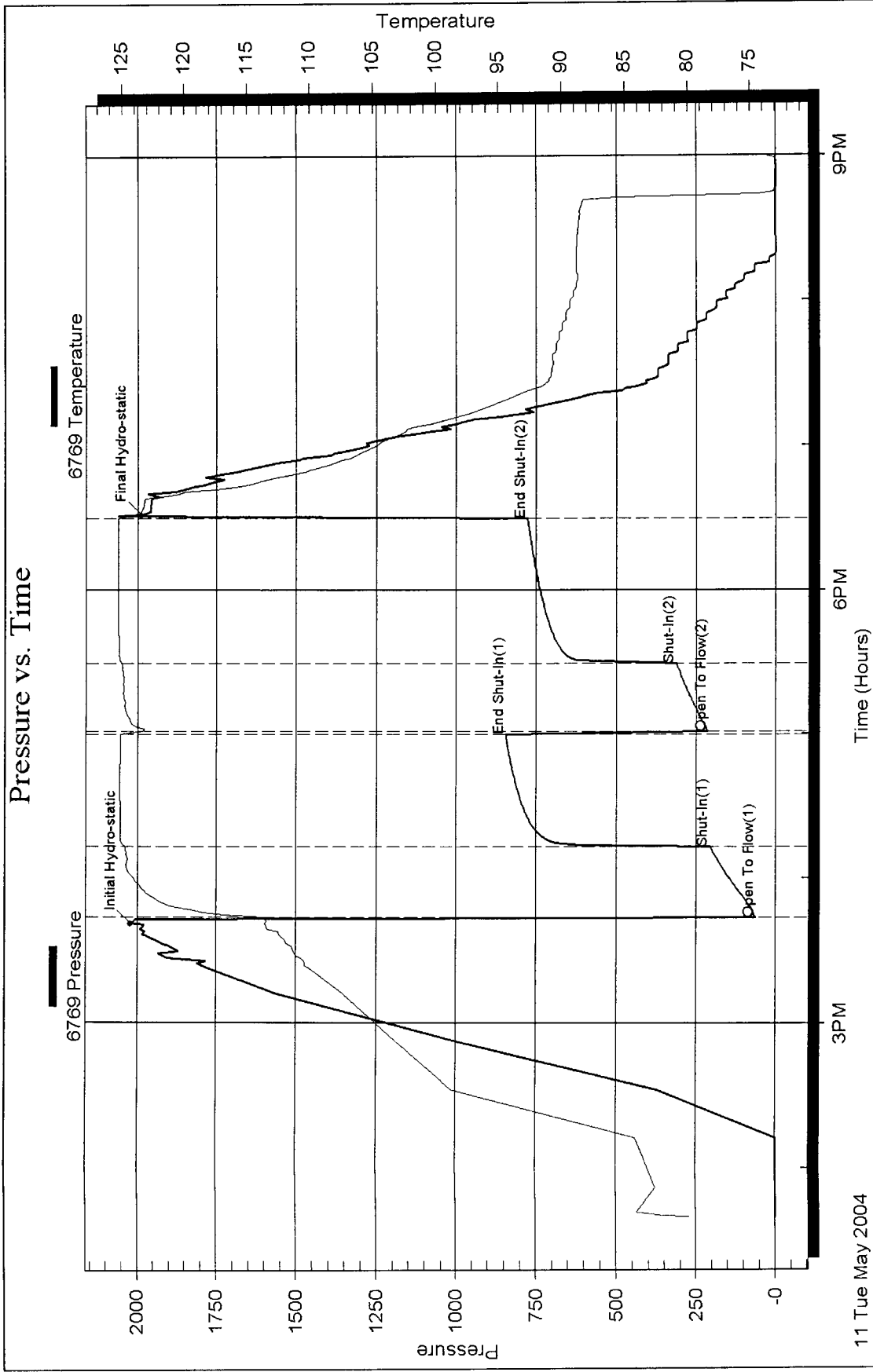
Mud Type: Gel Chem	Cushion Type:	Oil API: 39 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 52.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.19 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 3000.00 ppm		
Filter Cake: inches		

Recovery Information

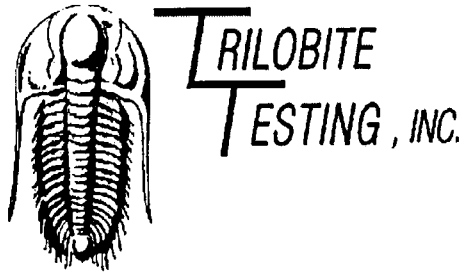
Recovery Table

Length ft	Description	Volume bbl
185.00	OCWtr 10%o 90%w	2.322
185.00	Frothy O	2.595
420.00	CGsyO 30%g 70%o	5.891
0.00	760 GIP	0.000

Total Length: 790.00 ft Total Volume: 10.808 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:



11 Tue May 2004



DRILL STEM TEST REPORT

Prepared For: **DNOC**

P O Box 372
Hays Ks 67601

ATTN: Ron Nelson

20-13-21-Trego-Ks

Doug Egger # 1-20

Start Date: 2004.05.12 @ 05:35:38

End Date: 2004.05.12 @ 12:17:08

Job Ticket #: 19286 DST #: 2

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

DNOC

Doug Egger # 1-20

20-13-21-Trego-Ks

DST # 2

Cong Sd

2004.05.12



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

DNOC
 P O Box 372
 Hays Ks 67601
 ATTN: Ron Nelson

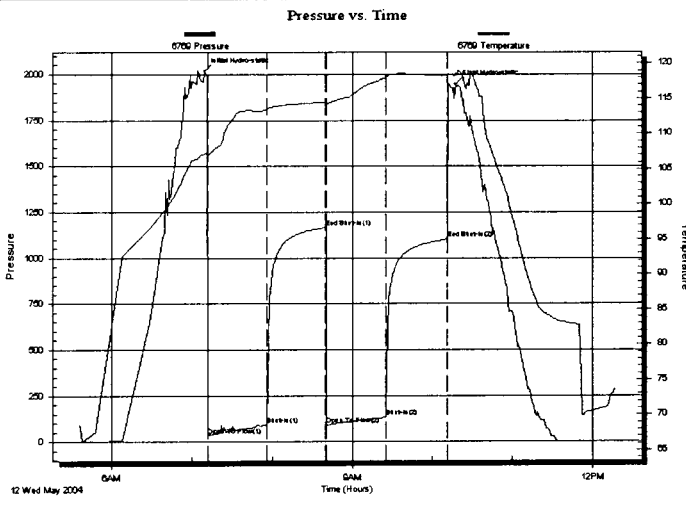
Doug Egger # 1-20
20-13-21-Trego-Ks
 Job Ticket: 19286 **DST#: 2**
 Test Start: 2004.05.12 @ 05:35:38

GENERAL INFORMATION:

Formation: **Cong Sd**
 Deviated: **No** Whipstock: **ft (KB)** Test Type: **Conventional Bottom Hole**
 Time Tool Opened: **07:11:38** Tester: **Dan Bangle**
 Time Test Ended: **12:17:08** Unit No: **21**
 Interval: **4027.00 ft (KB) To 4077.00 ft (KB) (TVD)** Reference Elevations: **2306.00 ft (KB)**
 Total Depth: **4077.00 ft (KB) (TVD)** **2298.00 ft (CF)**
 Hole Diameter: **7.88 inches** Hole Condition: **Good** KB to GR/CF: **8.00 ft**

Serial #: 6769 **Inside**
 Press@RunDepth: **131.99 psig @ 4032.00 ft (KB)** Capacity: **7000.00 psig**
 Start Date: **2004.05.12** End Date: **2004.05.12** Last Calib.: **2004.05.12**
 Start Time: **05:35:39** End Time: **12:17:08** Time On Btm: **2004.05.12 @ 07:09:08**
 Time Off Btm: **2004.05.12 @ 10:17:08**

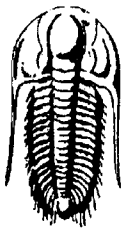
TEST COMMENT: IF-Weak building to 6 1/2"
 FF-Weak building to 1"
 Times-45-45-45-45



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2015.95	107.13	Initial Hydro-static
3	33.71	106.88	Open To Flow (1)
47	88.86	113.50	Shut-In(1)
91	1164.84	114.47	End Shut-In(1)
92	90.15	114.25	Open To Flow (2)
136	131.99	117.93	Shut-In(2)
182	1101.26	118.25	End Shut-In(2)
188	1944.41	118.52	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
185.00	Mdy Wtr	2.32
75.00	DM	1.05

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

DNOOC
P O Box 372
Hays Ks 67601
ATTN: Ron Nelson

Doug Egger # 1-20
20-13-21-Trego-Ks
Job Ticket: 19286 **DST#: 2**
Test Start: 2004.05.12 @ 05:35:38

Tool Information

Drill Pipe:	Length: 4008.00 ft	Diameter: 3.80 inches	Volume: 56.22 bbl	Tool Weight: 1500.00 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 56.37 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4027.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	71.00 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			4007.00	
Shut In Tool	5.00			4012.00	
Hydraulic tool	5.00			4017.00	
Packer	5.00			4022.00	21.00 Bottom Of Top Packer
Packer	5.00			4027.00	
Stubb	1.00			4028.00	
Perforations	3.00			4031.00	
Change Over Sub	1.00			4032.00	
Recorder	0.00	6769	Inside	4032.00	
Drill Pipe	31.00			4063.00	
Change Over Sub	1.00			4064.00	
Recorder	0.00	13254	Outside	4064.00	
Perforations	10.00			4074.00	
Bullnose	3.00			4077.00	50.00 Bottom Packers & Anchor
Total Tool Length:	71.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

DNOC

Doug Egger # 1-20

P O Box 372
Hays Ks 67601

20-13-21-Trego-Ks

Job Ticket: 19286

DST#: 2

ATTN: Ron Nelson

Test Start: 2004.05.12 @ 05:35:38

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: 46.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.39 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
185.00	Mdy Wtr	2.322
75.00	DM	1.052

Total Length: 260.00 ft

Total Volume: 3.374 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

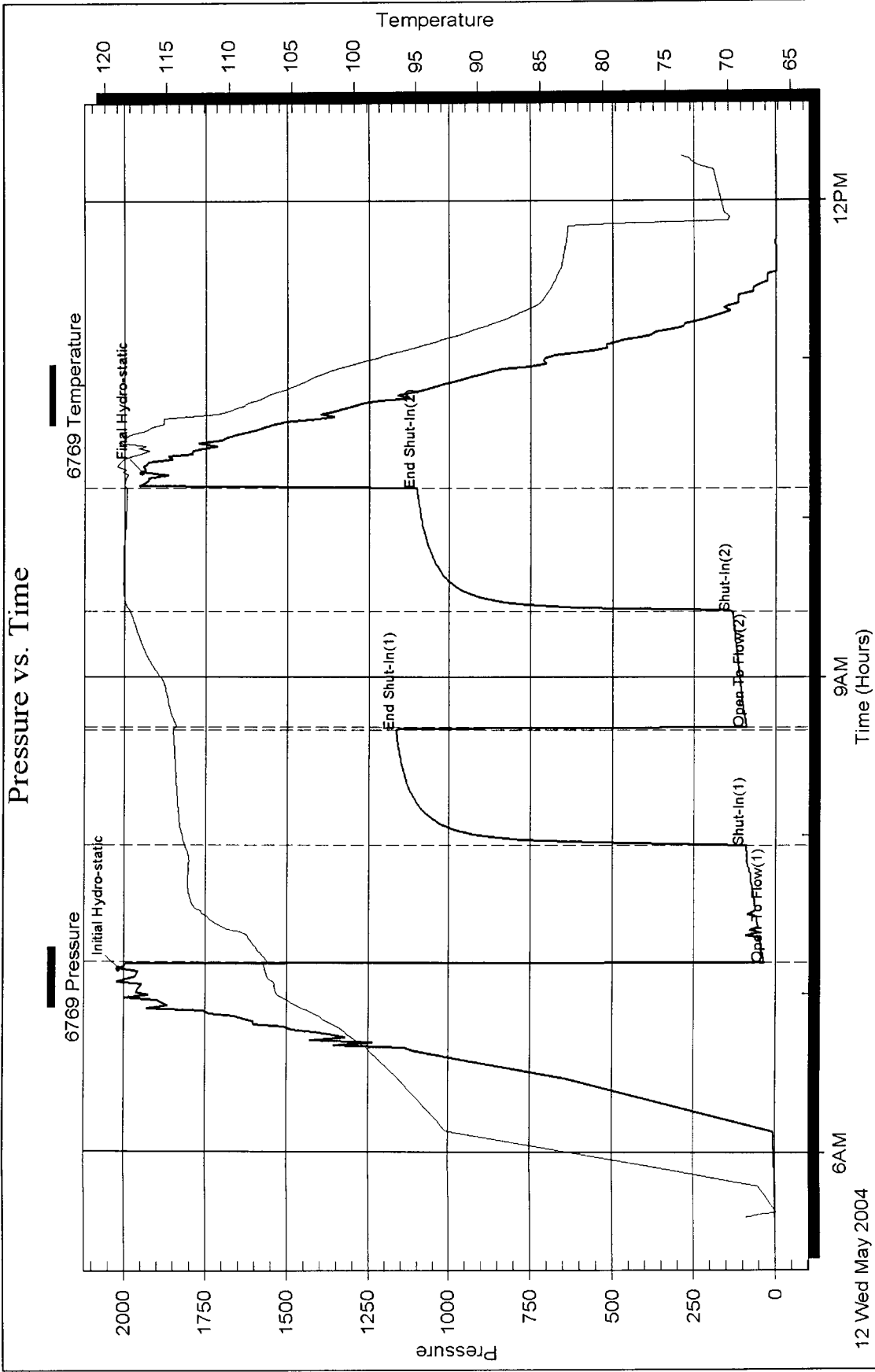
Serial #:

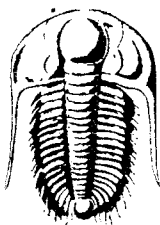
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No. 19285

*7111
6/3/04*

05/03

Test Ticket

Well Name & No. <u>Doug Egger #1-20</u>	Test No. <u>1</u>	Date <u>5-11-04</u>
Company <u>Downing-Nelson Oil Co. Inc</u>	Zone Tested <u>Marmaton</u>	
Address <u>P.O. Box 372, Hays, Ks. 67601</u>	Elevation <u>2306</u> KB <u>2298</u>	GL
Co. Rep / Geo. <u>Ron Nelson</u>	Cont. <u>Discovery #2</u>	Est. Ft. of Pay _____ Por. _____ %
Location: Sec. <u>20</u> Twp. <u>13</u> Rge. <u>21</u> Co. <u>Trego</u> State <u>KS</u>		
No. of Copies _____	Distribution Sheet (Y, N) _____	Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested <u>4005 - 4037</u>	Initial Str Wt./Lbs. <u>48,000</u>	Unseated Str Wt/Lbs. <u>59,000</u>
Anchor Length <u>32</u>	Wt. Set Lbs. <u>25,000</u>	Wt. Pulled Loose/Lbs. <u>60,000</u>
Top Packer Depth <u>4000</u>	Tool Weight <u>1800</u>	
Bottom Packer Depth <u>4005</u>	Hole Size <u>7 7/8"</u>	Rubber Size <u>6 3/4"</u>
Total Depth <u>4037</u>	Wt. Pipe Run _____	Drill Collar Run <u>30</u>
Mud Wt. <u>8.9</u> LCM _____ Vis. <u>52</u> WL <u>2.2</u>	Drill Pipe Size <u>4.5XH</u>	Ft. Run <u>3978</u>
Blow Description <u>I.F. Strong B-B in 3 min.</u>		
<u>ISI - Strong B-B in 20 min.</u>		
<u>E.F. - Strong B-B in 7 min.</u>		
<u>F.SI - Weak - building</u>		
Recovery - Total Feet <u>790</u>	GIP <u>760</u>	Ft. in DC <u>30</u> Ft. in DP <u>760</u>
Rec. <u>420</u> Feet of <u>CGO</u>	<u>30%</u> gas	%oil _____ %water _____ %mud _____
Rec. <u>185</u> Feet of <u>Frothy Oil</u>	%gas _____	%oil _____ %water _____ %mud _____
Rec. <u>185</u> Feet of <u>OCWTR</u>	%gas <u>10</u>	%oil _____ %water <u>90</u> %mud _____
Rec. _____ Feet of _____	%gas _____	%oil _____ %water _____ %mud _____
Rec. _____ Feet of _____	%gas _____	%oil _____ %water _____ %mud _____
BHT <u>125</u> °F Gravity _____	°API D @ _____	°F Corrected Gravity <u>39</u> °API _____
RW <u>.14</u> @ <u>76</u> °F	Chlorides <u>6000</u> ppm Recovery _____	Chlorides <u>3000</u> ppm System _____

	AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud	<u>2022</u> PSI		<u>6769</u>	<u>800</u>
(B) First Initial Flow Pressure	<u>61</u> PSI		(depth) <u>4006</u>	Elec. Rec. <u>X</u> <u>150</u>
(C) First Final Flow Pressure	<u>206</u> PSI		Recorder No. <u>1320-4</u>	Jars _____
(D) Initial Shut-In Pressure	<u>845</u> PSI		(depth) <u>4034</u>	Safety Jt. _____
(E) Second Initial Flow Pressure	<u>212</u> PSI		Recorder No. _____	Circ Sub _____
(F) Second Final Flow Pressure	<u>312</u> PSI		(depth) _____	Sampler _____
(G) Final Shut-In Pressure	<u>775</u> PSI	Initial Opening	<u>30</u>	Straddle _____
(Q) Final Hydrostatic Mud	<u>1988</u> PSI	Initial Shut-In	<u>45</u>	Ext. Packer _____
		Final Flow	<u>30</u>	Shale Packer _____
		Final Shut-In	<u>60</u>	Mileage <u>22</u> <u>37.40</u>
		T-On Location	<u>12:45</u>	Sub Total: <u>987.40</u>
		T-Started	<u>13:40</u>	Std. By _____
		T-Open	<u>15:42</u>	Other _____
		T-Pulled	<u>18:27</u>	Total: _____
		T-Out	<u>20:59</u>	

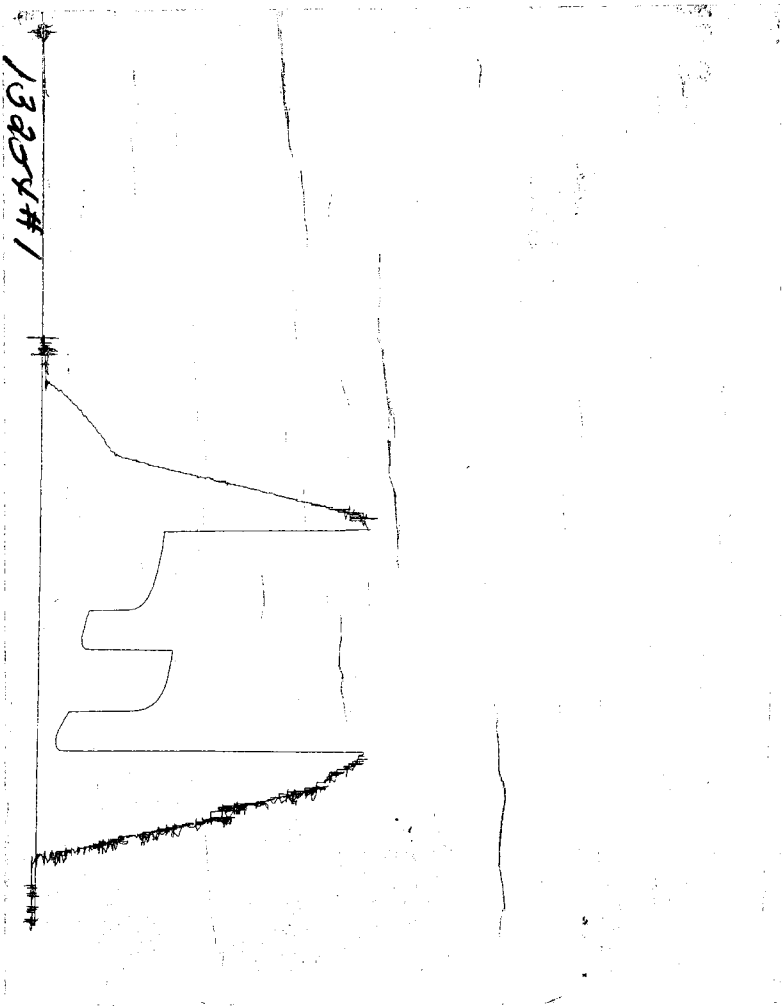
Approved By _____

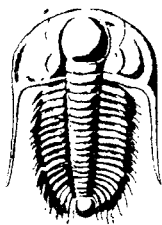
Our Representative Dan Rangle

TRILOBITE TESTING INC. SHALL NOT BE LIABLE FOR DAMAGED OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

CHART PAGE

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





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No. 19286

05/03

Test Ticket

Well Name & No. Doug Egger #1-20 Test No. 2 Date 5-12-04
 Company Downing-Nelson Oil Co. Inc Zone Tested Cong Sd
 Address _____ Elevation 2306' KB 2798 GL _____
 Co. Rep / Geo. Ron Nelson Cont. Discovery #2 Est. Ft. of Pay _____ Por. _____ %
 Location: Sec. 20 Twp. 13 Rge. 21 Co. Trego State Ks
 No. of Copies _____ Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 4027 — 4077 Initial Str Wt./Lbs. 48,000 Unseated Str Wt./Lbs. 48,000
 Anchor Length 50 Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 60,000
 Top Packer Depth 4022 Tool Weight 1500
 Bottom Packer Depth 4027 Hole Size 7 7/8" Rubber Size 6 3/4"
 Total Depth 4077 Wt. Pipe Run _____ Drill Collar Run 30
 Mud Wt. 9.4 LCM _____ Vis. 46 WL 8.4 Drill Pipe Size 4.5XH Ft. Run 4008
 Blow Description I.F. weak-building to 642"

F.F. Weak-building to 1"

Recovery - Total Feet 260 GIP _____ Ft. in DC 30 Ft. in DP 230
 Rec. 75 Feet of D.m %gas _____ %oil _____ %water _____ %mud _____
 Rec. 185 Feet of MDY WTR %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 118 °F Gravity _____ °API D @ _____ °F Corrected Gravity _____ °API
 RW _____ @ _____ °F Chlorides _____ ppm Recovery _____ Chlorides 3,000 ppm System

	AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud		<u>2015</u> PSI	<u>6769</u>	
(B) First Initial Flow Pressure		<u>33</u> PSI	(depth) <u>4032</u>	Elec. Rec. <u>X</u>
(C) First Final Flow Pressure		<u>88</u> PSI	Recorder No. <u>13254</u>	Jars _____
(D) Initial Shut-In Pressure		<u>1164</u> PSI	(depth) <u>4064</u>	Safety Jt. _____
(E) Second Initial Flow Pressure		<u>90</u> PSI	Recorder No. _____	Circ Sub _____
(F) Second Final Flow Pressure		<u>131</u> PSI	(depth) _____	Sampler _____
(G) Final Shut-In Pressure		<u>1101</u> PSI	Initial Opening <u>45</u>	Straddle _____
(Q) Final Hydrostatic Mud		<u>1944</u> PSI	Initial Shut-In <u>45</u>	Ext. Packer _____

TRILOBITE TESTING INC. SHALL NOT BE LIABLE FOR DAMAGED OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

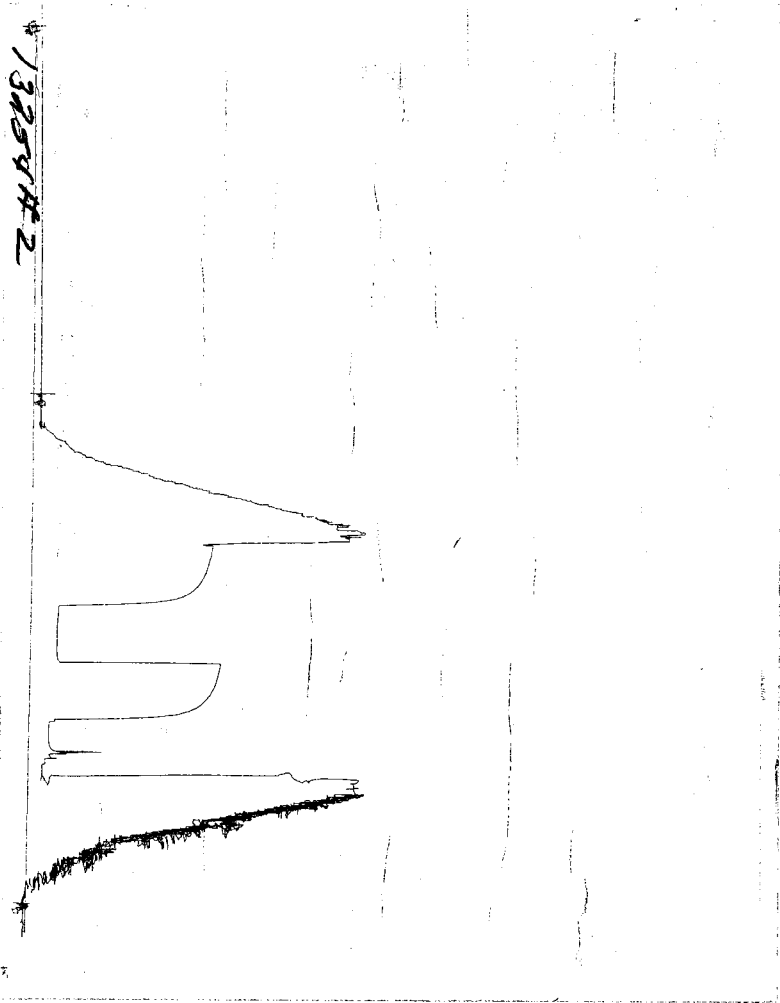
Approved By _____

Our Representative Don Bangle

Final Flow	<u>45</u>	Shale Packer _____
Final Shut-In	<u>45</u>	Mileage <u>22</u>
T-On Location	<u>05:20</u>	Sub Total: <u>057.40</u>
T-Started	<u>05:35</u>	Std. By _____
T-Open	<u>07:10</u>	Other _____
T-Pulled	<u>10:10</u>	Total: _____
T-Out	<u>12:17</u>	

CHART PAGE

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



132259H#2