

DRILL STEM TEST REPORT

Prepared For: **K & B Norton Oil & Invest.**

510 W 36th St
Hays KS 67601

ATTN: Brad Hutchinson

25-13s-16w/Ellis

Hoffman / Furthmyer #1

Start Date: 2006.01.21 @ 07:51:00

End Date: 2006.01.21 @ 13:52:59

Job Ticket #: 23400 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

K & B Norton Oil & Invest.

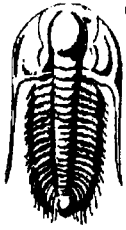
Hoffman / Furthmyer #1

25-13s-16w/Ellis

DST # 1

LKC "A-B"

2006.01.21



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

K & B Norton Oil & Invest.

Hoffman / Furthmyer #1

510 W 36th St
Hays KS 67601

25-13s-16w/Ellis

ATTN: Brad Hutchinson

Job Ticket: 23400

DST#: 1

Test Start: 2006.01.21 @ 07:51:00

GENERAL INFORMATION:

Formation: **LKC "A-B"**

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

Time Tool Opened: 09:36:29

Time Test Ended: 13:52:59

Test Type: **Conventional Bottom Hole**

Tester: **Brian Fairbank**

Unit No: **15**

Interval: **3113.00 ft (KB) To 3170.00 ft (KB) (TVD)**

Total Depth: **3170.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **1936.00 ft (KB)**

1931.00 ft (CF)

KB to GR/CF: **5.00 ft**

Serial #: 6625

Inside

Press@RunDepth: **37.56 psig @ 3114.01 ft (KB)**

Start Date: **2006.01.21**

End Date:

2006.01.21

Start Time: **07:51:00**

End Time:

13:52:59

Capacity: **7000.00 psig**

Last Calib.: **2006.01.21**

Time On Btm: **2006.01.21 @ 09:32:59**

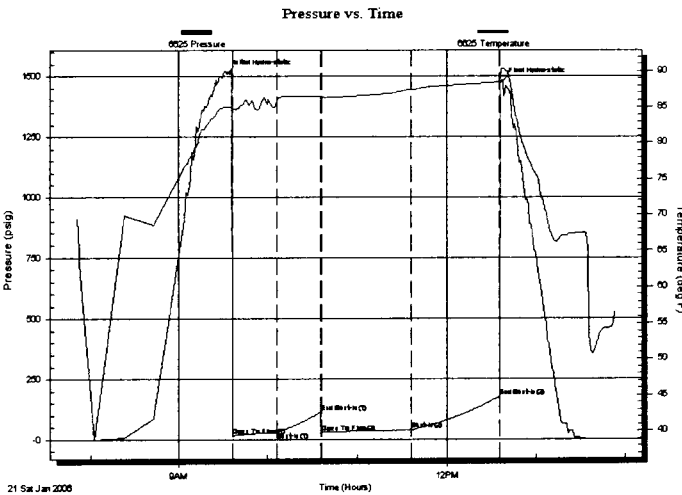
Time Off Btm: **2006.01.21 @ 12:37:29**

TEST COMMENT: FP - weak blow throughout - 1/2" - 3 1/4"

SI - no blow back

FFP - weak to fair blow - 1" - 6"

FSI - surface blow back



PRESSURE SUMMARY

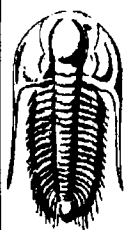
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1513.31	85.01	Initial Hydro-static
4	14.50	84.79	Open To Flow (1)
34	29.90	85.75	Shut-In(1)
63	112.48	86.47	End Shut-In(1)
63	27.82	86.40	Open To Flow (2)
123	37.56	87.42	Shut-In(2)
183	176.69	88.45	End Shut-In(2)
185	1478.20	90.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	OCGM 20% G, 10% O, 70% M	0.05
50.00	VSOCGM 1% O, 99% M	0.25

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

K & B Norton Oil & Invest.

Hoffman / Furthmyer #1

510 W 36th St
Hays KS 67601

25-13s-16w/ELLIS

Job Ticket: 23400

DST#: 1

ATTN: Brad Hutchinson

Test Start: 2006.01.21 @ 07:51:00

Tool Information

Drill Pipe:	Length: 2990.00 ft	Diameter: 3.80 inches	Volume: 41.94 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 42.53 bbl</u>	Tool Chased 1.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3113.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	57.02 ft			
Tool Length:	77.02 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
S.I. Tool	5.00			3098.00	
HYD S.I. Tool	5.00			3103.00	
Packer	5.00			3108.00	20.00 Bottom Of Top Packer
Packer	5.00			3113.00	
Stubb	1.00			3114.00	
Recorder	0.01	6625	Inside	3114.01	
Perforations	15.00			3129.01	
C.O. Sub	1.00			3130.01	
Blank Spacing	32.00			3162.01	
C.O. Sub	1.00			3163.01	
Perforations	4.00			3167.01	
Recorder	0.01	13548	Outside	3167.02	
Bullnose	3.00			3170.02	57.02 Bottom Packers & Anchor

Total Tool Length: 77.02



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DRILL STEM TEST REPORT

FLUID SUMMARY

K & B Norton Oil & Invest.

Hoffman / Furthmyer #1

510 W 36th St
Hays KS 67601

25-13s-16w/Ellis

Job Ticket: 23400

DST#: 1

ATTN: Brad Hutchinson

Test Start: 2006.01.21 @ 07:51:00

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: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.76 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	OCGM 20% G, 10% O, 70% M	0.049
50.00	VSOCGM 1% O, 99% M	0.246

Total Length: 60.00 ft Total Volume: 0.295 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

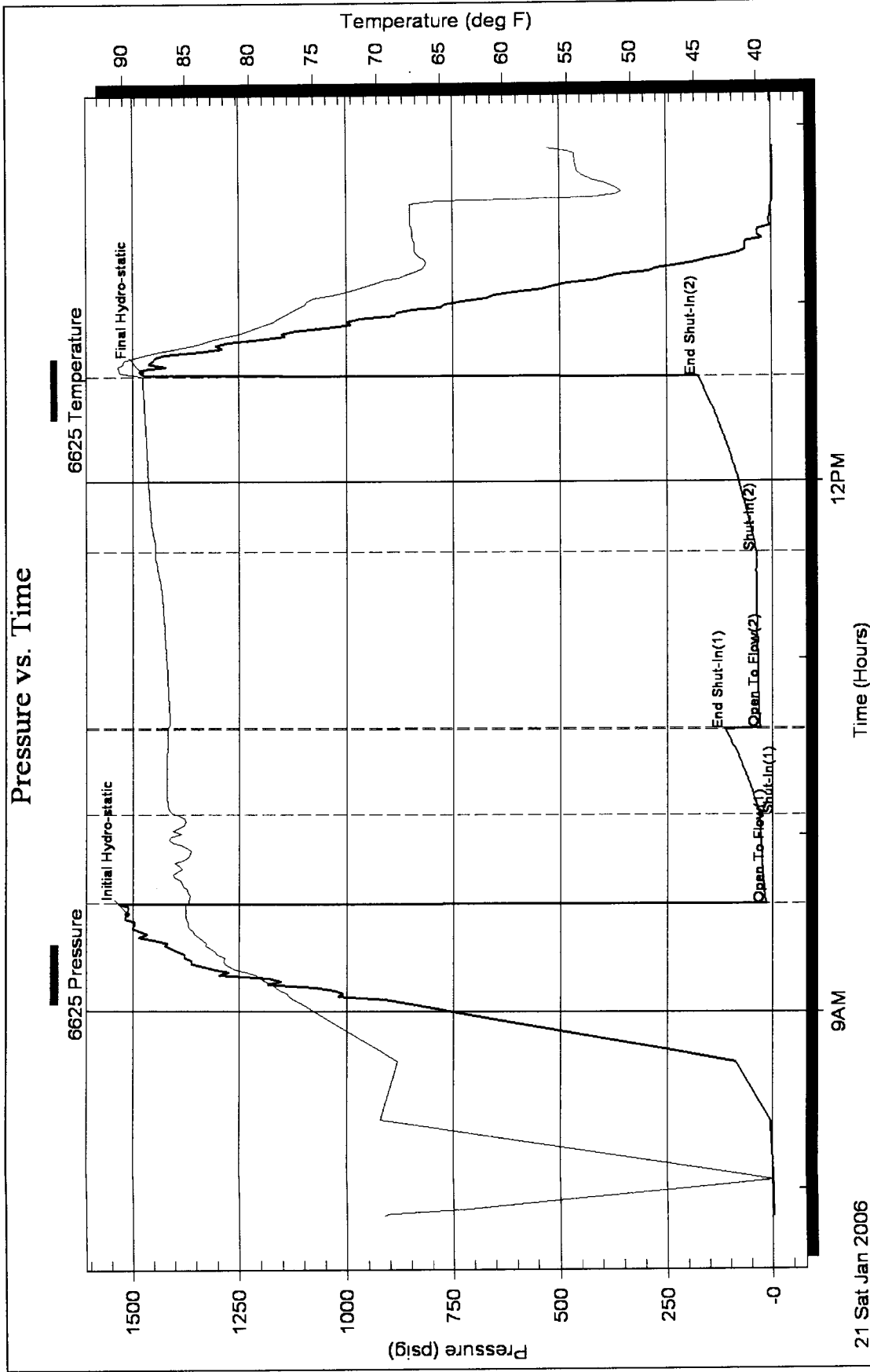
Serial #: 6625

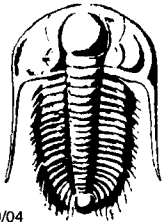
Inside

K & B Norton Oil & Invest.

25-13s-16w/Ellis

DST Test Number: 1





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

8343
No 23400

Test Ticket

Well Name & No. Hoffman / Furthmyer #1 Test No. 1 Date 1-21-06
 Company A+B Zone Tested LKC "A+B"
 Address 510 W 36th St, Hays, KS 67601 Elevation 1936 KB 1931 GL
 Co. Rep / Geo. Brod Hutchinson Cont. WW 2 Est. Ft. of Pay — Por. — %
 Location: Sec. 25 Twp. 13^s Rge. 16^w Co. Ellis State KU
 No. of Copies Reg Distribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 3113 - 3170 Initial Str Wt./Lbs. 44,000 Unseated Str Wt/Lbs. 49,000
 Anchor Length 57 Wt. Set Lbs. 25,000 Wt. Pulled Loose/Lbs. 60,000
 Top Packer Depth 3108 Tool Weight 2500
 Bottom Packer Depth 3113 Hole Size 7 7/8" Rubber Size 6 3/4"
 Total Depth 3170 Wt. Pipe Run — Drill Collar Run 120
 Mud Wt. 9.0 LCM _____ Vis. 50 WL 10.8 Drill Pipe Size 4 1/2 x 4 Ft. Run 2990
 Blow Description IFP - weak blow throughout - 1/2" - 3/4"
ISI - no blow back
FFP - weak to fair blow - 1" - 6"
FSI - surface blow back

Recovery - Total Feet	GIP	Ft. in DC	Ft. in DP
<u>60</u>	<u>0</u>	<u>60</u>	<u>0</u>
Rec. <u>10'</u>	Feet of <u>OLGM</u>	<u>20</u> %gas <u>10</u> %oil	%water <u>70</u> %mud
Rec. <u>50'</u>	Feet of <u>VSOLM</u>	%gas <u>1</u> %oil	%water <u>99</u> %mud
Rec. _____	Feet of _____	%gas _____ %oil _____	%water _____ %mud _____
Rec. _____	Feet of _____	%gas _____ %oil _____	%water _____ %mud _____
Rec. _____	Feet of _____	%gas _____ %oil _____	%water _____ %mud _____
BHT <u>88</u>	°F Gravity _____	°API D @ _____	°F Corrected Gravity _____ °API _____
RW _____ @ _____ °F	Chlorides _____ ppm Recovery _____	Chlorides <u>4000</u>	ppm System _____

	AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud	<u>1513</u>	PSI	<u>6625</u>	<u>1000</u>
(B) First Initial Flow Pressure	<u>14</u>	PSI	(depth) <u>3114</u>	Jars _____
(C) First Final Flow Pressure	<u>29</u>	PSI	Recorder No. <u>13548</u>	Safety Jt. _____
(D) Initial Shut-In Pressure	<u>112</u>	PSI	(depth) <u>3167</u>	Circ Sub _____
(E) Second Initial Flow Pressure	<u>27</u>	PSI	Recorder No. _____	Sampler _____
(F) Second Final Flow Pressure	<u>37</u>	PSI	(depth) _____	Straddle _____
(G) Final Shut-In Pressure	<u>176</u>	PSI	Initial Opening <u>30</u>	Ext. Packer _____
(Q) Final Hydrostatic Mud	<u>1478</u>	PSI	Initial Shut-In <u>30</u>	Shale Packer _____
			Final Flow <u>60</u>	Ruined Packer _____
			Final Shut-In <u>60</u>	Mileage <u>38 RT</u>
			T-On Location <u>0648</u>	Sub Total: <u>1038</u>
			T-Started <u>0750</u>	Std. By _____
			T-Open <u>0935</u>	Other _____
			T-Pulled <u>1235</u>	Total: _____
			T-Out _____	

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Approved By _____
 Our Representative Brian Fairbank (thub)

Picked up tools
 08:00 1-22-06

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

