



DRILL STEM TEST REPORT

Prepared For: **C&B Operating INC.**

P O Box 65
St John KS 67576

ATTN: Jim Musgrove

2-22s-12w Stafford

Helmerts B 2-5

Start Date: 2005.08.08 @ 12:00:07

End Date: 2005.08.08 @ 18:46:07

Job Ticket #: 23531 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

C&B Operating INC.

P O Box 65
St John KS 67576

ATTN: Jim Musgrove

Helmets B 2-5

2-22s-12w Stafford

Job Ticket: 23531

DST#: 1

Test Start: 2005.08.08 @ 12:00:07

GENERAL INFORMATION:

Formation: **Lans**

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

Time Tool Opened: 14:21:17

Time Test Ended: 18:46:07

Test Type: **Conventional Bottom Hole**

Tester: **Michael**

Unit No: **15**

Interval: **3432.00 ft (KB) To 3543.00 ft (KB) (TVD)**

Total Depth: **3543.00 ft (KB) (TVD)**

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

Reference Elevations: **1832.00 ft (KB)**

1825.00 ft (CF)

KB to GR/CF: **7.00 ft**

Serial #: 8166

Inside

Press@RunDepth: **20.63 psig @ 3439.00 ft (KB)**

Start Date: **2005.08.08**

End Date:

2005.08.08

Start Time: **12:00:08**

End Time:

18:46:07

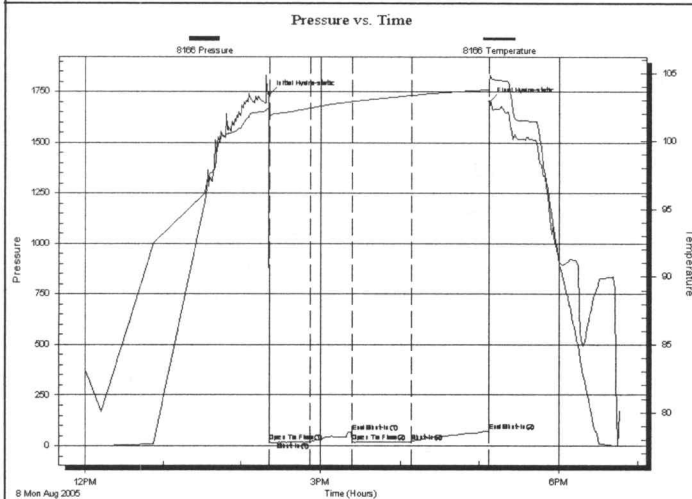
Capacity: **7000.00 psig**

Last Calib.: **2005.08.08**

Time On Btm: **2005.08.08 @ 14:20:57**

Time Off Btm: **2005.08.08 @ 17:07:37**

TEST COMMENT: IF- Slow building 9 1/2 Blow
IS- No Blow
FF-Built to 2 1/2" in 5m remained there



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1737.02	102.35	Initial Hydro-static
1	19.94	101.90	Open To Flow (1)
32	17.51	102.41	Shut-In (1)
63	67.05	102.89	End Shut-In (1)
63	18.61	102.89	Open To Flow (2)
108	20.63	103.35	Shut-In (2)
166	72.28	103.77	End Shut-In (2)
167	1702.70	104.85	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	Drilling mud	0.28
0.00	100' GIP	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

C&B Operating INC.

P O Box 65
St John KS 67576

ATTN: Jim Musgrove

Helmerts B 2-5

2-22s-12w Stafford

Job Ticket: 23531

DST#: 1

Test Start: 2005.08.08 @ 12:00:07

Tool Information

Drill Pipe:	Length:	3427.00 ft	Diameter:	3.80 inches	Volume:	48.07 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.25 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:	43000.00 lb
					Total Volume:	48.07 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		16.00 ft					String Weight: Initial	40000.00 lb
Depth to Top Packer:		3432.00 ft					Final	43000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		111.00 ft						
Tool Length:		132.00 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			3412.00	
Shut In Tool	5.00			3417.00	
Hydraulic tool	5.00			3422.00	
Packer	5.00			3427.00	21.00 Bottom Of Top Packer
Packer	5.00			3432.00	
Blank Spacing	1.00			3433.00	
Perforations	5.00			3438.00	
Change Over Sub	1.00			3439.00	
Recorder	0.00	8166	Inside	3439.00	
Drill Pipe	95.00			3534.00	
Change Over Sub	1.00			3535.00	
Recorder	0.00	10991	Outside	3535.00	
Perforations	5.00			3540.00	
Bullnose	3.00			3543.00	111.00 Bottom Packers & Anchor

Total Tool Length: 132.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

C&B Operating INC.

Helmerts B 2-5

P O Box 65
St John KS 67576

2-22s-12w Stafford

Job Ticket: 23531

DST#: 1

ATTN: Jim Musgrove

Test Start: 2005.08.08 @ 12:00:07

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbl

Water Loss: 11.97 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
20.00	Drilling mud	0.281
0.00	100' GIP	0.000

Total Length: 20.00 ft

Total Volume: 0.281 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

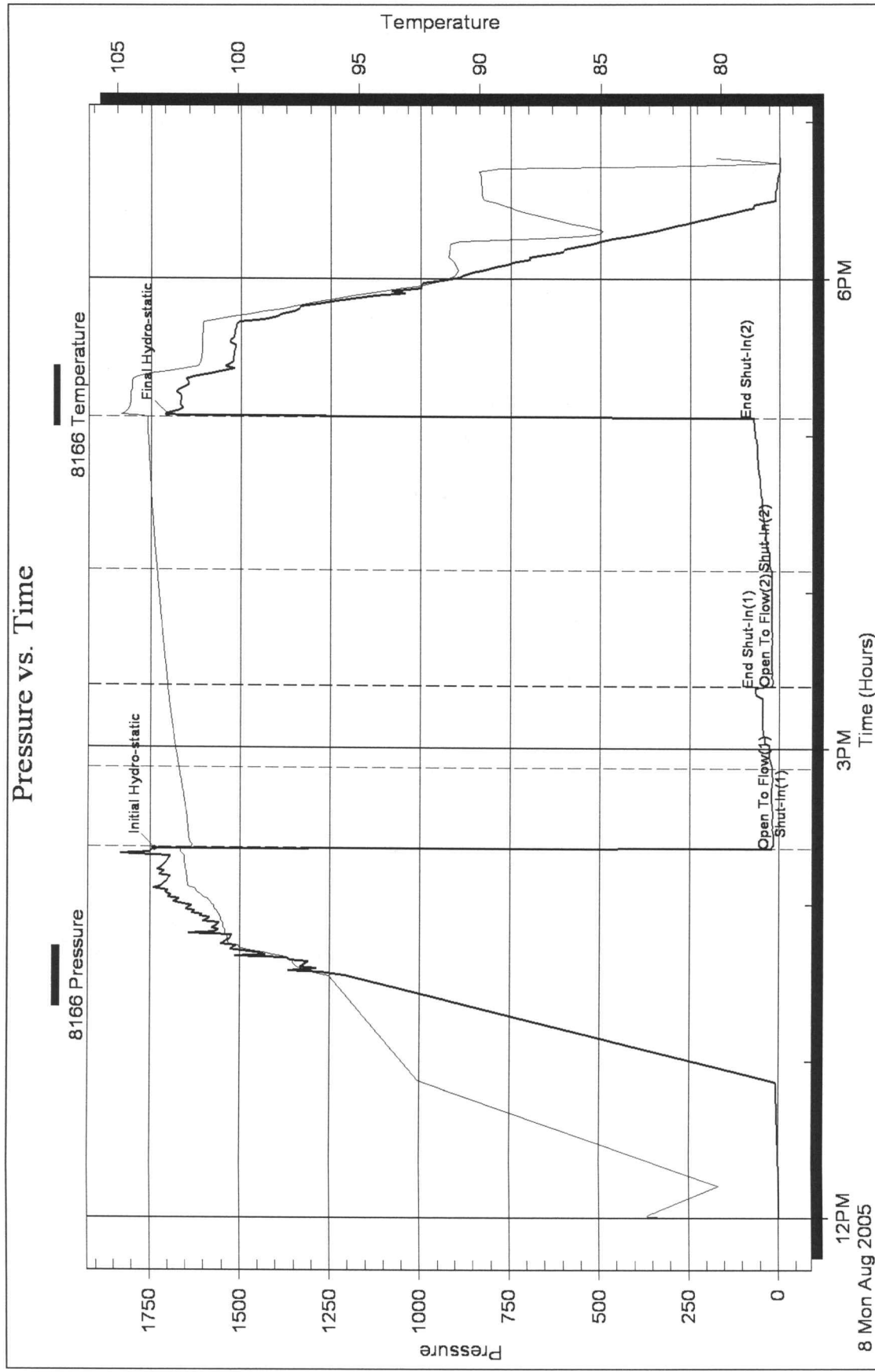
Serial #: 8166

Inside

C&B Operating INC.

2-22s-12w Stafford

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **C&B Operating INC.**

P O Box 65
St John KS 67576

ATTN: Jim Musgrove

2-22s-12w Stafford

Helmerts B 2-5

Start Date: 2005.08.09 @ 09:07:05

End Date: 2005.08.09 @ 14:22:05

Job Ticket #: 23532 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



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TESTING, INC.

DRILL STEM TEST REPORT

C&B Operating INC.

P O Box 65
St John KS 67576

ATTN: Jim Musgrove

Helmets B 2-5

2-22s-12w Stafford

Job Ticket: 23532

DST#: 2

Test Start: 2005.08.09 @ 09:07:05

GENERAL INFORMATION:

Formation: **ARB**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:48:55

Time Test Ended: 14:22:05

Test Type: Conventional Bottom Hole

Tester: Michael

Unit No: 15

Interval: **3621.00 ft (KB) To 3633.00 ft (KB) (TVD)**

Total Depth: 3633.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1832.00 ft (KB)

1825.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8166

Inside

Press@RunDepth: 31.06 psig @ 3622.00 ft (KB)

Start Date: 2005.08.09

End Date:

2005.08.09

Start Time: 09:07:06

End Time:

14:22:05

Capacity: 7000.00 psig

Last Calib.: 2005.08.09

Time On Btm: 2005.08.09 @ 10:48:35

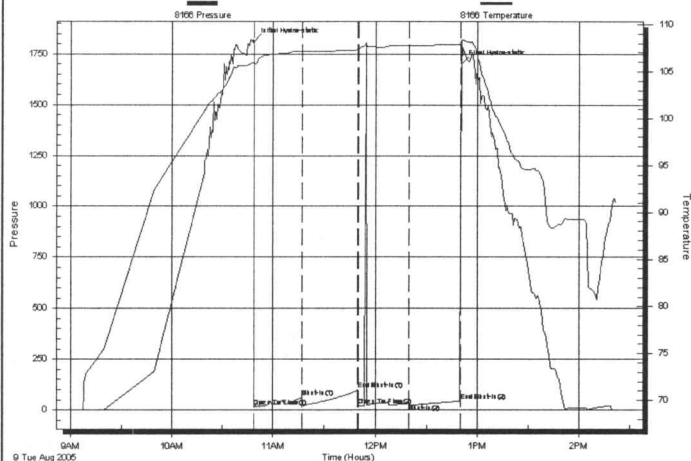
Time Off Btm: 2005.08.09 @ 12:50:50

TEST COMMENT: IF- 1/2" Blow died after 25m

IS- No blow

FF- No blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1812.71	105.98	Initial Hydro-static
1	16.13	105.51	Open To Flow (1)
29	61.76	107.12	Shut-In(1)
61	97.26	107.31	End Shut-In(1)
62	20.03	107.32	Open To Flow (2)
91	31.06	107.74	Shut-In(2)
122	43.47	107.91	End Shut-In(2)
123	1703.01	108.35	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	Drilling Mud	0.28

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

C&B Operating INC.

P O Box 65
St John KS 67576

ATTN: Jim Musgrove

Helmerts B 2-5

2-22s-12w Stafford

Job Ticket: 23532

DST#: 2

Test Start: 2005.08.09 @ 09:07:05

Tool Information

Drill Pipe:	Length: 3612.00 ft	Diameter: 3.80 inches	Volume: 50.67 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.25 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: 70000.00 lb
			<u>Total Volume: 50.67 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3621.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	12.00 ft			
Tool Length:	33.00 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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Change Over Sub	1.00			3601.00	
Shut In Tool	5.00			3606.00	
Hydraulic tool	5.00			3611.00	
Packer	5.00			3616.00	21.00 Bottom Of Top Packer
Packer	5.00			3621.00	
Blank Spacing	1.00			3622.00	
Recorder	0.00	8166	Inside	3622.00	
Perforations	8.00			3630.00	
Recorder	0.00	10991	Outside	3630.00	
Bullnose	3.00			3633.00	12.00 Bottom Packers & Anchor
Total Tool Length:	33.00				



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DRILL STEM TEST REPORT

FLUID SUMMARY

C&B Operating INC.

Helmerts B 2-5

P O Box 65
St John KS 67576

2-22s-12w Stafford

Job Ticket: 23532

DST#: 2

ATTN: Jim Musgrove

Test Start: 2005.08.09 @ 09:07:05

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbl

Water Loss: 11.99 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
20.00	Drilling Mud	0.281

Total Length: 20.00 ft

Total Volume: 0.281 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

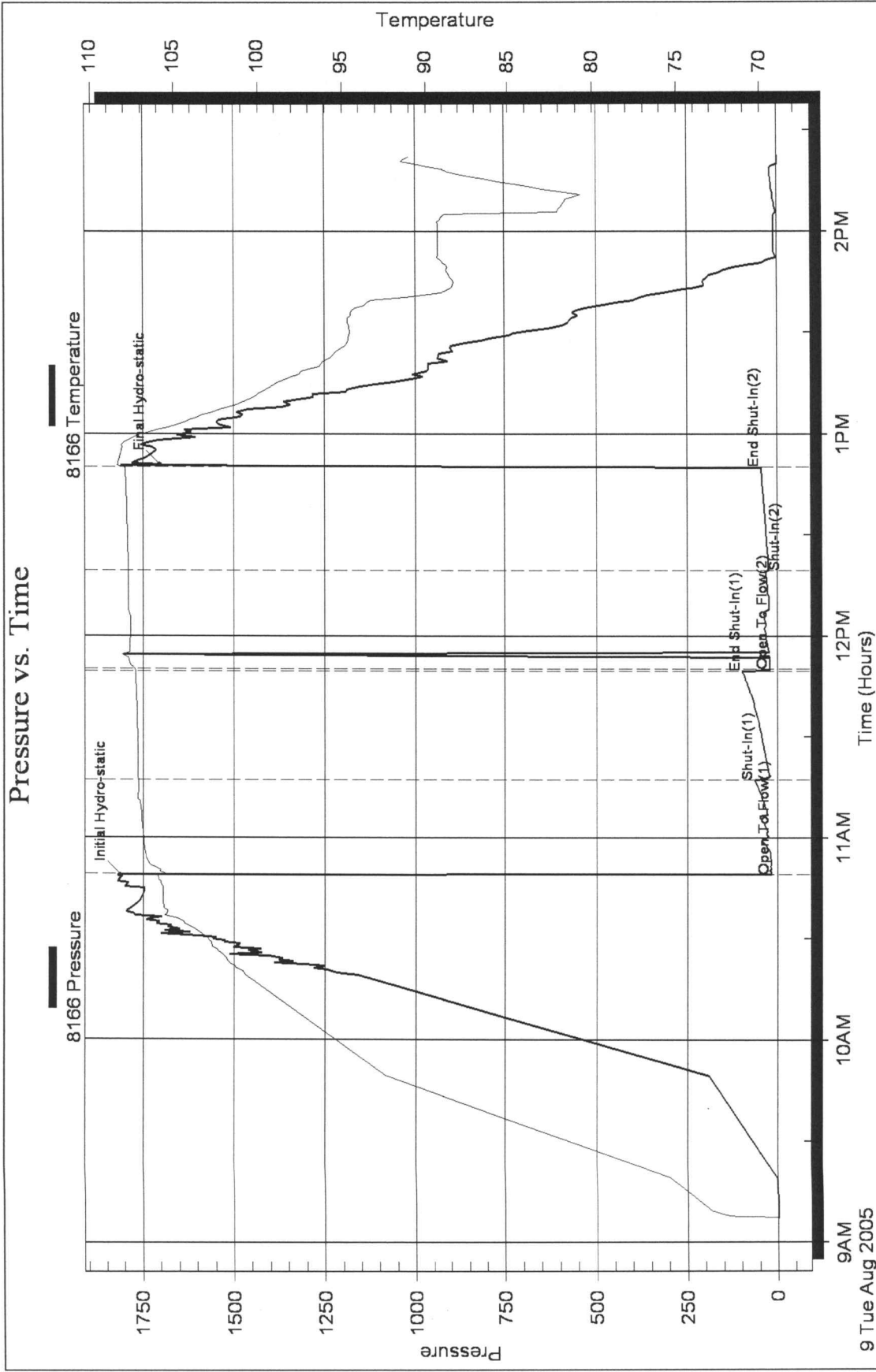
Serial #:

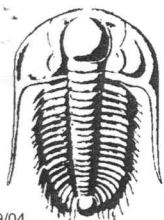
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 23531

7770

9/04

Test Ticket

Well Name & No. <u>Helmets B 2-5</u>	Test No. <u>1</u>	Date <u>8-8-05</u>
Company <u>C&B Operating INC.</u>	Zone Tested <u>Lans</u>	
Address <u>P.O. Box 65 St. John KS 67574</u>	Elevation <u>1832</u> KB <u>1825</u>	GL
Co. Rep / Geo. <u>Jim Musgrove</u>	Cont. <u>Southwind 2</u>	Est. Ft. of Pay _____ Por. _____ %
Location: Sec. <u>2</u> Twp. <u>22s</u> Rge. <u>12</u>	Co. <u>Stafford</u>	State <u>KS</u>
No. of Copies _____	Disbtribution Sheet (Y, N) _____	Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested <u>3432-3543</u>	Initial Str Wt./Lbs. <u>40000</u>	Unseated Str Wt./Lbs. <u>43000</u>
Anchor Length <u>111</u>	Wt. Set Lbs. <u>20000</u>	Wt. Pulled Loose/Lbs. <u>18000</u>
Top Packer Depth <u>3427</u>	Tool Weight <u>2500</u>	
Bottom Packer Depth <u>3432</u>	Hole Size <u>7 7/8"</u>	Rubber Size <u>6 3/4"</u>
Total Depth <u>3543</u>	Wt. Pipe Run _____	Drill Collar Run <u>0</u>
Mud Wt. <u>9.5</u> LCM _____ Vis. <u>55</u> WL <u>12</u>	Drill Pipe Size <u>4 1/2</u>	Ft. Run <u>3427</u>
Blow Description <u>IF-9 1/2 Slow Building Blow</u>		
<u>ISI-No Blow Back</u>		
<u>FF-2 1/2 Blow after 15m Stayed there for 45 min</u>		

Recovery - Total Feet <u>20</u>	GIP <u>100</u>	Ft. in DC _____	Ft. in DP _____
Rec. <u>20</u>	Feet of <u>Drilling Mud</u>	%gas _____	%oil _____
Rec. _____	Feet of _____	%gas _____	%oil _____
Rec. _____	Feet of _____	%gas _____	%oil _____
Rec. _____	Feet of _____	%gas _____	%oil _____
Rec. _____	Feet of _____	%gas _____	%oil _____
BHT <u>104</u>	°F Gravity _____	°API D @ _____	°F Corrected Gravity _____
RW _____	@ _____	°F Chlorides _____	ppm Recovery _____
		Chlorides _____	ppm System _____

(A) Initial Hydrostatic Mud	AK-1 <u>1737</u> PSI	Alpine <u>11020</u>	Recorder No. <u>11020</u>	Test <u>950</u>
(B) First Initial Flow Pressure	<u>20</u> PSI	(depth) <u>3439</u>	Jars _____	
(C) First Final Flow Pressure	<u>18</u> PSI	Recorder No. <u>8166</u>	Safety Jt. _____	
(D) Initial Shut-In Pressure	<u>67</u> PSI	(depth) <u>3542</u>	Circ Sub _____	
(E) Second Initial Flow Pressure	<u>19</u> PSI	Recorder No. _____	Sampler _____	
(F) Second Final Flow Pressure	<u>21</u> PSI	(depth) _____	Straddle _____	
(G) Final Shut-In Pressure	<u>72</u> PSI	Initial Opening <u>30</u>	Ext. Packer _____	
(Q) Final Hydrostatic Mud	<u>1703</u> PSI	Initial Shut-In <u>30</u>	Shale Packer _____	

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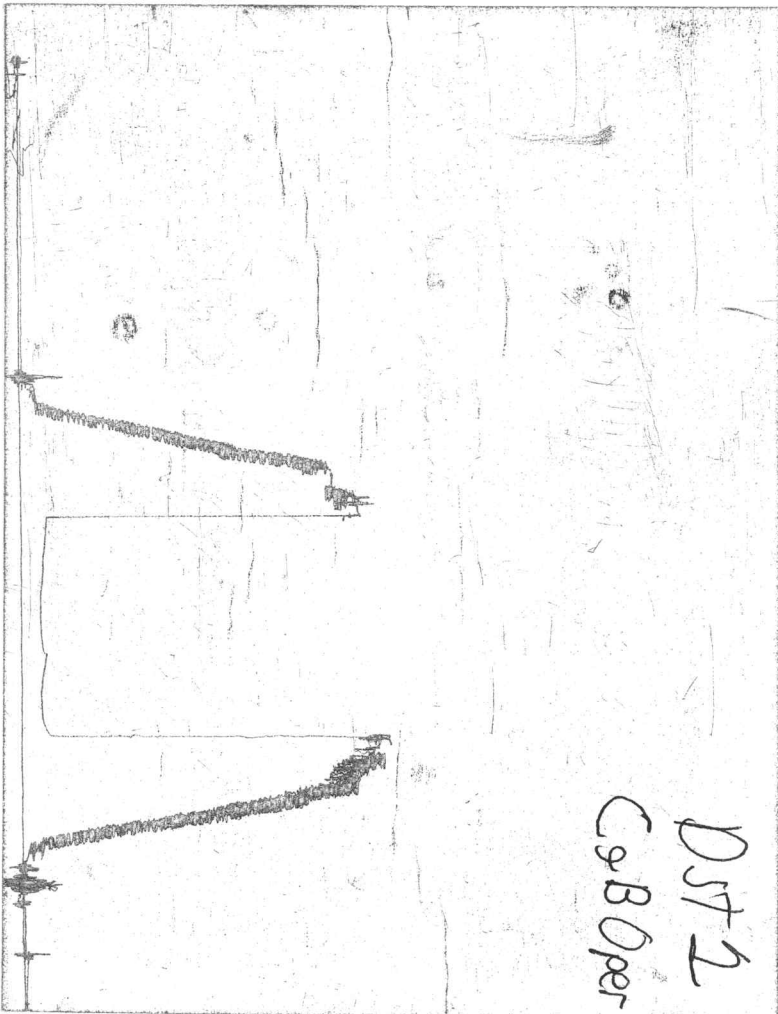
Approved By _____

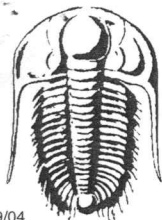
Our Representative Michael Arntson

Final Flow <u>45</u>	T-Started <u>12:00</u>	Std. By _____
Final Shut-In <u>60</u>	T-Open <u>14:25</u>	Other _____
T-On Location <u>11:00</u>	T-Pulled <u>17:10</u>	Total: <u>1114</u>
	T-Out <u>18:52</u>	

CHART PAGE

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





TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 23532

9/04

Test Ticket

Well Name & No. <u>Helmers B 2-5</u>	Test No. <u>2</u>	Date <u>8-9-05</u>
Company <u>C&B Oper. INC.</u>	Zone Tested <u>ARB</u>	
Address <u>P.O. Box 65 ST John</u>	Elevation <u>1832</u>	KB <u>1825</u> GL
Co. Rep / Geo. <u>Jim Musgrove</u>	Cont. <u>Southwind 2</u>	Est. Ft. of Pay _____ Por. _____ %
Location: Sec. <u>2</u> Twp. <u>22s</u>	Rge. <u>12w</u> Co. <u>Stafford</u>	State <u>KS</u>
No. of Copies _____	Disbtribution Sheet (Y, N) _____	Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested <u>3621 - 3633</u>	Initial Str Wt./Lbs. <u>40,000</u>	Unseated Str Wt./Lbs. <u>40,000</u>
Anchor Length <u>12</u>	Wt. Set Lbs. <u>20,000</u>	Wt. Pulled Loose/Lbs. <u>20,000</u>
Top Packer Depth <u>3616</u>	Tool Weight <u>2000</u>	
Bottom Packer Depth <u>3621</u>	Hole Size <u>7 7/8"</u>	Rubber Size <u>6 3/4"</u>
Total Depth <u>3633</u>	Wt. Pipe Run _____	Drill Collar Run <u>0</u>
Mud Wt. <u>9.5</u> LCM _____ Vis. <u>57</u> WL <u>12</u>	Drill Pipe Size <u>4 1/2</u>	Ft. Run <u>3612</u>
Blow Description <u>IF - 1/2" Blow died 25m</u>		
<u>ISI - No Blow</u>		
<u>FE - No Blow</u>		

Recovery - Total Feet <u>20</u>	GIP _____	Ft. in DC _____	Ft. in DP _____
Rec. <u>20</u> Feet of <u>Drilling Mud</u>	%gas _____	%oil _____	%water <u>100</u> %mud _____
Rec. _____ Feet of _____	%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 <u>108</u> °F Gravity _____	°API D @ _____	°F Corrected Gravity _____	°API _____
RW _____ @ _____ °F	Chlorides _____ ppm Recovery _____	Chlorides _____	ppm System _____

(A) Initial Hydrostatic Mud	AK-1 <u>1813</u> PSI	Alpine <u>1813</u> PSI	Recorder No. <u>8164</u>	Test <u>950</u>
(B) First Initial Flow Pressure	<u>16</u> PSI	<u>16</u> PSI	(depth) <u>3623</u>	Jars _____
(C) First Final Flow Pressure	<u>62</u> PSI	<u>62</u> PSI	Recorder No. <u>11020</u>	Safety Jt. _____
(D) Initial Shut-In Pressure	<u>97</u> PSI	<u>97</u> PSI	(depth) <u>3632</u>	Circ Sub _____
(E) Second Initial Flow Pressure	<u>20</u> PSI	<u>20</u> PSI	Recorder No. _____	Sampler _____
(F) Second Final Flow Pressure	<u>31</u> PSI	<u>31</u> PSI	(depth) _____	Straddle _____
(G) Final Shut-In Pressure	<u>43</u> PSI	<u>43</u> PSI	Initial Opening <u>30</u>	Ext. Packer _____
(Q) Final Hydrostatic Mud	<u>1703</u> PSI	<u>1703</u> PSI	Initial Shut-In <u>30</u>	Shale Packer _____

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Approved By [Signature]

Our Representative [Signature]

Final Flow 30
Final Shut-In 30
T-On Location 8:45
T-Started 9:07
T-Open 10:50
T-Pulled 12:50
T-Out 14:09

Ruined Packer _____
Mileage 46 46
Sub Total: 990
Std. By _____
Other _____
Total: _____

CHART PAGE

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

