

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name #1 THORN Test No. 1 Date 10/13/94
Company ABERCROMBIE DRILLING INC Zone TORONTO
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3089
Co. Rep./Geo. TOM FUNK Cont. ABERCROMBIE DRLG RIG #8
Location: Sec. 16 Twp. 12S Rge. 33W Co. LOGAN Est. Ft. of Pay KS

Interval Tested 3992-4028 Drill Pipe Size 4.5" XH
Anchor Length 36 Wt. Pipe I.D. - 2.7 Ft. Run 469
Top Packer Depth 3987 Drill Collar - 2.25 Ft. Run 8.7
Bottom Packer Depth 3992 Mud Wt. 43 lb/Gal. 9.0
Total Depth 4028 Viscosity 43 Filtrate 9.0

Tool Open @ 1:40 A.M. Initial Blow WEAK - BUILDING TO 1"

Final Blow NO BLOW

Recovery - Total Feet 30 Flush Tool? NO

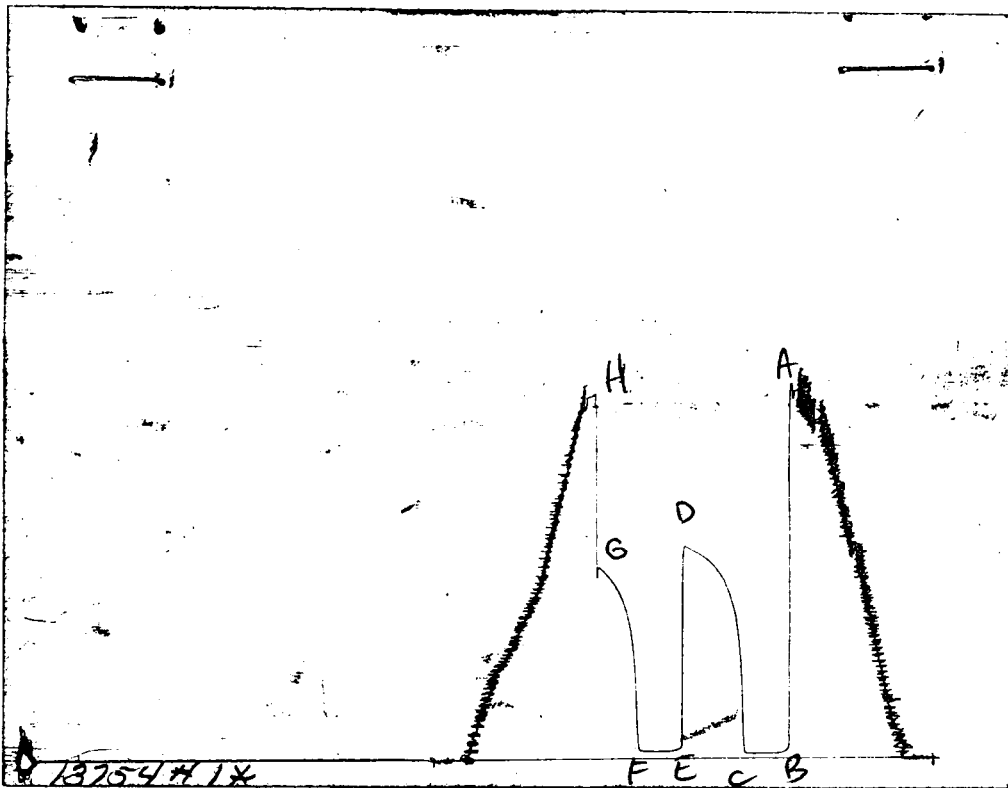
Rec. 30 Feet of DRILLING MUD 100% MUD
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 115 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 3000 ppm System

(A) Initial Hydrostatic Mud 1935.9 PSI AK1 Recorder No. 13754 Range 4000
(B) First Initial Flow Pressure 16.7 PSI @ (depth) 3996 w / Clock No. 27501
(C) First Final Flow Pressure 16.7 PSI AK1 Recorder No. 13849 Range 4375
(D) Initial Shut-in Pressure 1085.0 PSI @ (depth) 4024 w / Clock No. 27810
(E) Second Initial Flow Pressure 35.4 PSI AK1 Recorder No. _____ Range _____
(F) Second Final Flow Pressure 35.4 PSI @ (depth) _____ w / Clock No. _____
(G) Final Shut-in Pressure 988.1 PSI Initial Opening 30 Final Flow 30
(H) Final Hydrostatic Mud 1897.9 PSI Initial Shut-in 45 Final Shut-in 30

Our Representative DAN BANGLE

CHART PAGE



This is an actual photograph of recorder chart 13754

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1916	1935.9
(B) FIRST INITIAL FLOW PRESSURE	29	16.7
(C) FIRST FINAL FLOW PRESSURE	29	16.7
(D) INITIAL CLOSED-IN PRESSURE	1086	1085
(E) SECOND INITIAL FLOW PRESSURE	49	35.4
(F) SECOND FINAL FLOW PRESSURE	49	35.4
(G) FINAL CLOSED-IN PRESSURE	986	988.1
(H) FINAL HYDROSTATIC MUD	1876	1897.9

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 7632

Well Name & No. <u>#1 Thorn</u>	Test No. <u>1</u>	Date <u>10-13-94</u>
Company <u>Abercrombie Drilg. Inc.</u>	Zone Tested <u>Toronto</u>	
Address <u>150 N. Main, Wichita, Ks. 67202</u>	Elevation <u>2089 K.B.</u>	
Co. Rep./Geo. <u>Tom Funk</u>	Cont. <u>Abercrombie #8</u>	Est. Ft. of Pay _____
Location: Sec. <u>16</u>	Twp. <u>12</u>	Rge. <u>33</u>
	Co. <u>Logan</u>	State <u>Ks.</u>
No. of Copies _____	Distribution Sheet _____	Yes _____ No _____
Turnkey _____	Yes _____ No _____	Evaluation _____

Interval Tested <u>3992 - 4028</u>	Drill Pipe Size <u>4.5 XH</u>
Anchor Length <u>36</u>	Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth <u>3987</u>	Hole Size — 77/8" _____ Rubber Size — 63/4" _____
Bottom Packer Depth <u>3992</u>	Wt. Pipe I.D. — 2.7 Ft. Run <u>469</u>
Total Depth <u>4028</u>	Drill Collar — 2.25 Ft. Run _____
Mud Wt. <u>8.7</u> lb/gal.	Viscosity <u>43</u> Filtrate <u>9.0</u>
Tool Open @ <u>1:40 a.m.</u> Initial Blow <u>weak - building to 1"</u>	

Final Blow No blow

Recovery — Total Feet <u>30</u>	Feet of Gas In Pipe _____	Flush Tool? _____
Rec. <u>30</u> Feet Of <u>D.M.</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 115 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 3,000 ppm System

- (A) Initial Hydrostatic Mud 1916 PSI Ak1 Recorder No. 13754 Range 4000
- (B) First Initial Flow Pressure 29 PSI @ (depth) 3996 w/Clock No. 27501
- (C) First Final Flow Pressure 29 PSI AK1 Recorder No. 13849 Range 4375
- (D) Initial Shut-In Pressure 1086 PSI @ (depth) 4024 w/Clock No. 27810
- (E) Second Initial Flow Pressure 49 PSI AK1 Recorder No. _____ Range _____
- (F) Second Final Flow Pressure 49 PSI @ (depth) _____ w/Clock No. _____
- (G) Final Shut-In Pressure 986 PSI Initial Opening 30 Test 600
- (H) Final Hydrostatic Mud 1876 PSI Initial Shut-In 45 Jars _____

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE 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.

Final Flow 30 Safety Joint _____

Final Shut-In 30 Straddle _____

Approved By [Signature]

Our Representative [Signature]

Circ. Sub _____

Sampler _____

Extra Packer _____

Other _____

TOTAL PRICE \$ 600

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name #1 THORN Test No. 2 Date 10/13/94
Company ABERCROMBIE DRILLING INC Zone A' LANSING
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3089
Co. Rep./Geo. TOM FUNK Cont. ABERCROMBIE DRLG RIG #8 Est. Ft. of Pay _____
Location: Sec. 16 Twp. 12S Rge. 33W Co. LOGAN State KS

Interval Tested 4028-4050 Drill Pipe Size 4.5" XH
Anchor Length 22 Wt. Pipe I.D. - 2.7 Ft. Run 469
Top Packer Depth 4023 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 4028 Mud Wt. 8.9 lb/Gal.
Total Depth 4050 Viscosity 50 Filtrate 9.6

Tool Open @ 1:36 P.M. Initial Blow WEAK-BUILDING TO 4" FAIR BLOW

Final Blow WEAK-BUILDING TO 2"

Recovery - Total Feet 190 Flush Tool? NO

Rec. 190 Feet of MUDDY WATER WITH A FEW OIL SPOTS ON TOP
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 116 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW 0.09 @ 80 °F Chlorides 75000 ppm Recovery Chlorides 3000 ppm System

(A) Initial Hydrostatic Mud 1960.9 PSI AK1 Recorder No. 13754 Range 4000

(B) First Initial Flow Pressure 23.6 PSI @ (depth) 4032 w / Clock No. 8179

(C) First Final Flow Pressure 43.3 PSI AK1 Recorder No. 13849 Range 4375

(D) Initial Shut-in Pressure 1115.9 PSI @ (depth) 4046 w / Clock No. 25810

(E) Second Initial Flow Pressure 65.9 PSI AK1 Recorder No. _____ Range _____

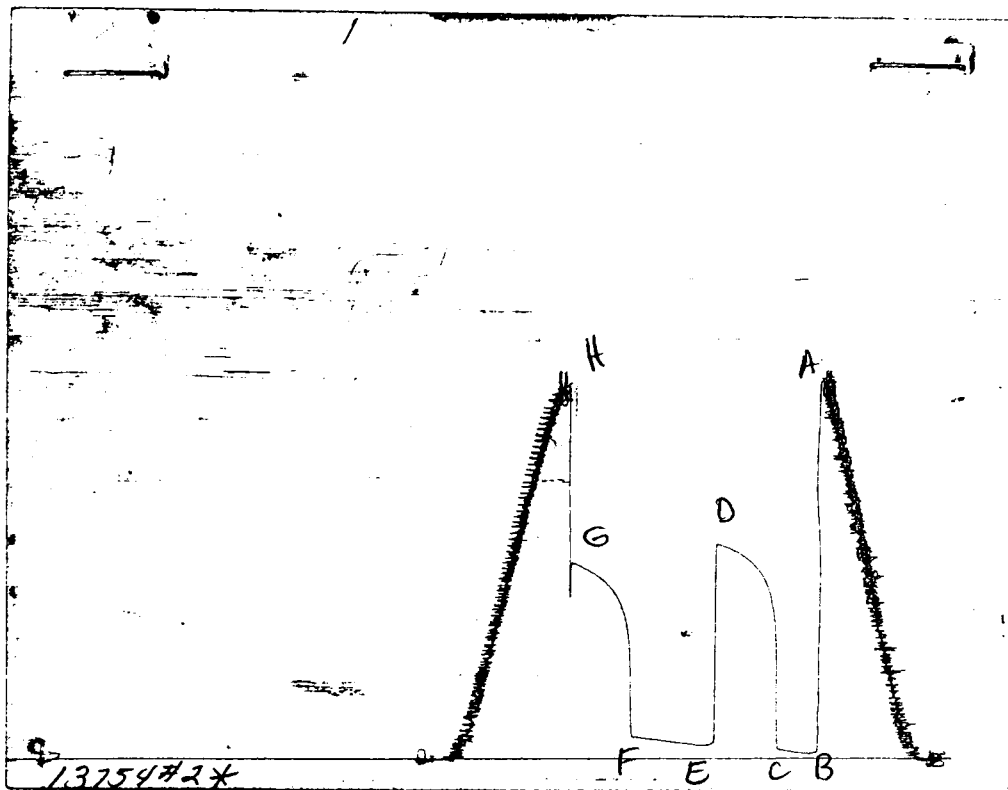
(F) Second Final Flow Pressure 109.2 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 1017.0 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 1947.9 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative DAN BANGLE

CHART PAGE



This is an actual photograph of recorder chart 13754

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1986	1960.9
(B) FIRST INITIAL FLOW PRESSURE	29	23.6
(C) FIRST FINAL FLOW PRESSURE	49	43.3
(D) INITIAL CLOSED-IN PRESSURE	1106	1115.9
(E) SECOND INITIAL FLOW PRESSURE	78	65.9
(F) SECOND FINAL FLOW PRESSURE	108	109.2
(G) FINAL CLOSED-IN PRESSURE	1006	1017
(H) FINAL HYDROSTATIC MUD	1946	1947.9

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

No 7633

Test Ticket

Well Name & No. <u>#1 Thorn</u>	Test No. <u>2</u>	Date <u>10-13-94</u>
Company <u>Abercrombie Drilg. Inc.</u>	Zone Tested <u>A Lansing</u>	
Address _____	Elevation <u>3089 K.B.</u>	
Co. Rep./Geo. <u>Tom Funk</u>	Cont. <u>Abercrombie #8</u>	Est. Ft. of Pay _____
Location: Sec. <u>16</u>	Twp. <u>12</u>	Rge. <u>33</u>
	Co. <u>Logan</u>	State <u>Ks.</u>
No. of Copies _____	Distribution Sheet _____	Yes _____ No _____
Turnkey _____	Yes _____ No _____	Evaluation _____

Interval Tested <u>4028-4050</u>	Drill Pipe Size <u>4.5 XH</u>
Anchor Length <u>22</u>	Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth <u>4023</u>	Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth <u>4028</u>	Wt. Pipe I.D. — 2.7 Ft. Run <u>469</u>
Total Depth <u>4050</u>	Drill Collar — 2.25 Ft. Run _____
Mud Wt. <u>8.9</u> lb/gal.	Viscosity <u>50</u> Filtrate <u>9.6</u>
Tool Open @ <u>1:36 p.m.</u>	Initial Blow <u>weak-building to 4" fair blow</u>

Final Blow weak-building to 2"

Recovery — Total Feet	Feet of Gas In Pipe	Flush Tool?
Rec. <u>190</u>	Feet Of <u>mdy wtr w/ few</u>	%gas _____ %oil _____ %water _____ %mud _____
Rec. _____	Feet Of <u>oil spots on top</u>	%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 116 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW 109 @ 80 °F Chlorides 25,000 ppm Recovery Chlorides 3,000 ppm System

- (A) Initial Hydrostatic Mud 1986 PSI AK1 Recorder No. 13754 Range 4000
- (B) First Initial Flow Pressure 29 PSI @ (depth) 4032 w/Clock No. 8179
- (C) First Final Flow Pressure 49 PSI AK1 Recorder No. 13849 Range 4375
- (D) Initial Shut-In Pressure 1106 PSI @ (depth) 4046 w/Clock No. 25810
- (E) Second Initial Flow Pressure 78 PSI AK1 Recorder No. _____ Range _____
- (F) Second Final Flow Pressure 108 PSI @ (depth) _____ w/Clock No. _____
- (G) Final Shut-In Pressure 1006 PSI Initial Opening 30 Test 600
- (H) Final Hydrostatic Mud 1946 PSI Initial Shut-In 45 Jars _____

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Final Flow 60 Safety Joint _____

Final Shut-In 45 Straddle _____

Circ. Sub _____

Sampler _____

Approved By [Signature]

Our Representative [Signature]

Extra Packer _____

Other _____

TOTAL PRICE \$ 600

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name #1 THORN Test No. 3 Date 10/14/94
Company ABERCROMBIE DRILLING INC Zone C' LKC
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3089
Co. Rep./Geo. TOM FUNK Cont. ABERCROMBIE DRLG RIG #8 Est. Ft. of Pay _____
Location: Sec. 16 Twp. 12S Rge. 33W Co. LOGAN State KS

Interval Tested 4054-4080 Drill Pipe Size 4.5" XH
Anchor Length 26 Wt. Pipe I.D. - 2.7 Ft. Run 469
Top Packer Depth 4049 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 4054 Mud Wt. 9 lb/Gal.
Total Depth 4080 Viscosity 51 Filtrate 9.6

Tool Open @ 1:45 A.M. Initial Blow HIT BRIDGE AT 2350 - WEAK-BUILDING TO 4" FAIR BLOW

Final Blow WEAK-BUILDING TO 2"

Recovery - Total Feet 253 Flush Tool? NO

Rec. 5 Feet of SLIGHT CLEAN OIL
Rec. 62 Feet of DRILLING MUD
Rec. 186 Feet of MUDDY WATER
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 116 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW 0.07 @ 80 °F Chlorides 84000 ppm Recovery Chlorides 3000 ppm System

(A) Initial Hydrostatic Mud 1883.9 PSI AK1 Recorder No. 13754 Range 4000

(B) First Initial Flow Pressure 63.9 PSI @ (depth) 4058 w / Clock No. 8179

(C) First Final Flow Pressure 78.7 PSI AK1 Recorder No. 13849 Range 4375

(D) Initial Shut-in Pressure 1113.9 PSI @ (depth) 4076 w / Clock No. 25810

(E) Second Initial Flow Pressure 109.2 PSI AK1 Recorder No. _____ Range _____

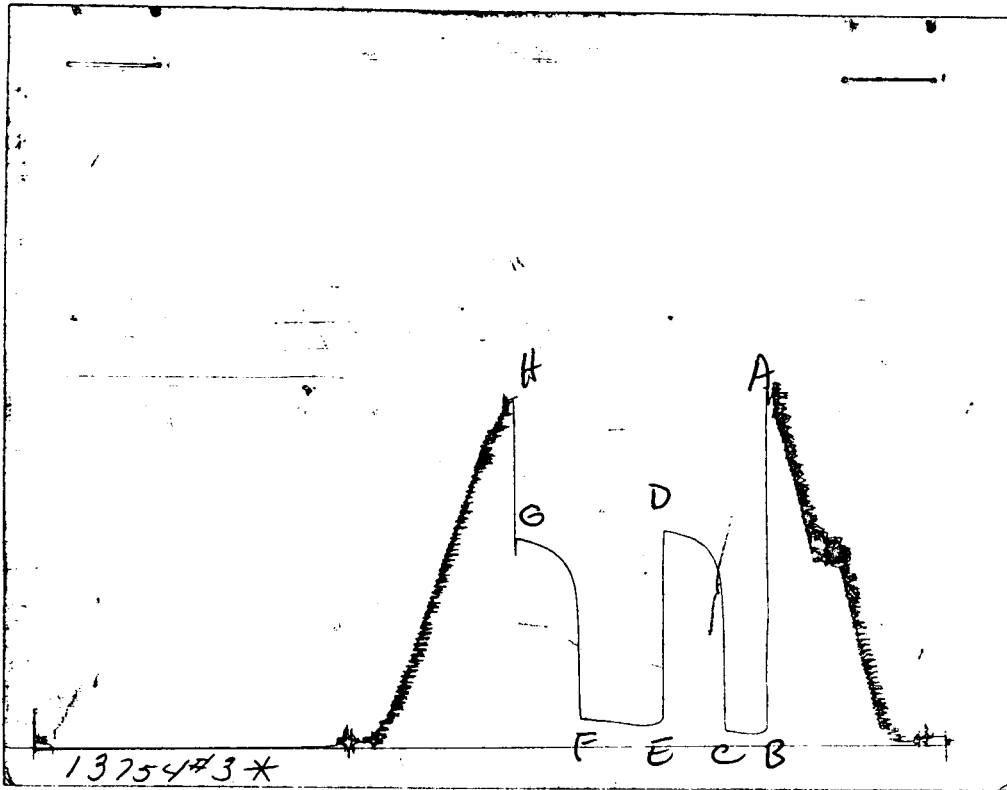
(F) Second Final Flow Pressure 141.7 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 1076.0 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 1809.9 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative DAN BANGLE

CHART PAGE



This is an actual photograph of recorder chart 13754

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1886	1883.9
(B) FIRST INITIAL FLOW PRESSURE	68	63.9
(C) FIRST FINAL FLOW PRESSURE	88	78.7
(D) INITIAL CLOSED-IN PRESSURE	1116	1113.9
(E) SECOND INITIAL FLOW PRESSURE	118	109.2
(F) SECOND FINAL FLOW PRESSURE	147	141.7
(G) FINAL CLOSED-IN PRESSURE	1076	1076
(H) FINAL HYDROSTATIC MUD	1816	1809.9

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 7634

Well Name & No. <u>#1 Thorn</u>	Test No. <u>3</u>	Date <u>10-14-94</u>
Company <u>Abercrombie Drilg. Inc.</u>	Zone Tested <u>C</u>	<u>HKC</u>
Address _____	Elevation <u>3089 K.B.</u>	
Co. Rep./Geo. <u>Tom Funk</u>	Cont. <u>Abercrombie #8</u>	Est. Ft. of Pay _____
Location: Sec. <u>16</u>	Twp. <u>12</u>	Rge. <u>33</u>
	Co. <u>Logan</u>	State <u>Ks.</u>
No. of Copies _____	Distribution Sheet _____	Yes _____ No _____
Turnkey _____	Yes _____ No _____	Evaluation _____

Interval Tested <u>4054 - 4080</u>	Drill Pipe Size <u>4.5 XH</u>
Anchor Length <u>26</u>	Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth <u>4049</u>	Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth <u>4054</u>	Wt. Pipe I.D. — 2.7 Ft. Run <u>469</u>
Total Depth <u>4080</u>	Drill Collar — 2.25 Ft. Run _____
Mud Wt. <u>9</u> lb/gal.	Viscosity <u>51</u> Filtrate <u>9.6</u>
Tool Open @ <u>1:45 a.m.</u> Initial Blow <u>HIT bridge @ 2350' - weak-building to 4" fair blow</u>	
Final Blow <u>weak-building to 2"</u>	

Recovery — Total Feet	Feet of Gas In Pipe	Flush Tool?
Rec. <u>5</u> Feet Of <u>500</u>	%gas _____ %oil _____ %water _____ %mud _____	
Rec. <u>62</u> Feet Of <u>D.M.</u>	%gas _____ %oil _____ %water _____ %mud _____	
Rec. <u>186</u> Feet Of <u>MDJ WTP.</u>	%gas _____ %oil _____ %water _____ %mud _____	
Rec. _____ Feet Of _____	%gas _____ %oil _____ %water _____ %mud _____	
Rec. _____ Feet Of _____	%gas _____ %oil _____ %water _____ %mud _____	

BHT 116 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW 107 @ 80 °F Chlorides 84,000 ppm Recovery Chlorides 3,000 ppm System

- (A) Initial Hydrostatic Mud 1886 PSI AK1 Recorder No. 13754 Range 4000
- (B) First Initial Flow Pressure 68 PSI @ (depth) 4058 w/Clock No. 8179
- (C) First Final Flow Pressure 88 PSI AK1 Recorder No. 13849 Range 4375
- (D) Initial Shut-in Pressure 1116 PSI @ (depth) 4076 w/Clock No. 25810
- (E) Second Initial Flow Pressure 118 PSI AK1 Recorder No. _____ Range _____
- (F) Second Final Flow Pressure 147 PSI @ (depth) _____ w/Clock No. _____
- (G) Final Shut-in Pressure 1076 PSI Initial Opening 30 Test 600
- (H) Final Hydrostatic Mud 1816 PSI Initial Shut-in 45 Jars _____

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Final Flow 60 Safety Joint _____
 Final Shut-in 45 Straddle _____
 Circ. Sub _____
 Sampler _____

Approved By [Signature]
 Our Representative Dan Baner

Extra Packer _____
 Other _____
 TOTAL PRICE \$ 600

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name #1 THORN Test No. 4 Date 10/14/94
Company ABERCROMBIE DRILLING INC Zone E' LKC
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3089
Co. Rep./Geo. TOM FUNK Cont. ABERCROMBIE DRLG RIG #8 Est. Ft. of Pay _____
Location: Sec. 16 Twp. 12S Rge. 33W Co. LOGAN State KS

Interval Tested	<u>4100-4123</u>	Drill Pipe Size	<u>4.5" XH</u>
Anchor Length	<u>23</u>	Wt. Pipe I.D. - 2.7 Ft. Run	<u>469</u>
Top Packer Depth	<u>4095</u>	Drill Collar - 2.25 Ft. Run	_____
Bottom Packer Depth	<u>4100</u>	Mud Wt.	<u>9</u> lb/Gal.
Total Depth	<u>4123</u>	Viscosity	<u>49</u> Filtrate <u>9.6</u>

Tool Open @ 2:48 P.M. Initial Blow WEAK-BUILDING TO 12" FAIR BLOW

Final Blow WEAK-BUILDING TO FAIR BLOW BOTTOM OF BUCKET IN 58 MIN

Recovery - Total Feet 372 Flush Tool? NO

Rec. <u>62</u>	Feet of	<u>MUD CUT OIL 80%OIL/20%MUD</u>
Rec. <u>62</u>	Feet of	<u>OIL CUT MUD 20%OIL/80%MUD</u>
Rec. <u>62</u>	Feet of	<u>SLIGHTLY OIL CUT MUDDY WATER 5%OIL/60%WATER/35%MUD</u>
Rec. <u>186</u>	Feet of	<u>WATER</u>
Rec. _____	Feet of	_____

BHT 118 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW 0.13 @ _____ °F Chlorides 54000 ppm Recovery Chlorides 4000 ppm System

(A) Initial Hydrostatic Mud 2019.3 PSI AK1 Recorder No. 13754 Range 4000

(B) First Initial Flow Pressure 35.4 PSI @ (depth) 4104 w / Clock No. 8179

(C) First Final Flow Pressure 76.7 PSI AK1 Recorder No. 13849 Range 4375

(D) Initial Shut-in Pressure 1107.9 PSI @ (depth) 4119 w / Clock No. 25810

(E) Second Initial Flow Pressure 113.1 PSI AK1 Recorder No. _____ Range _____

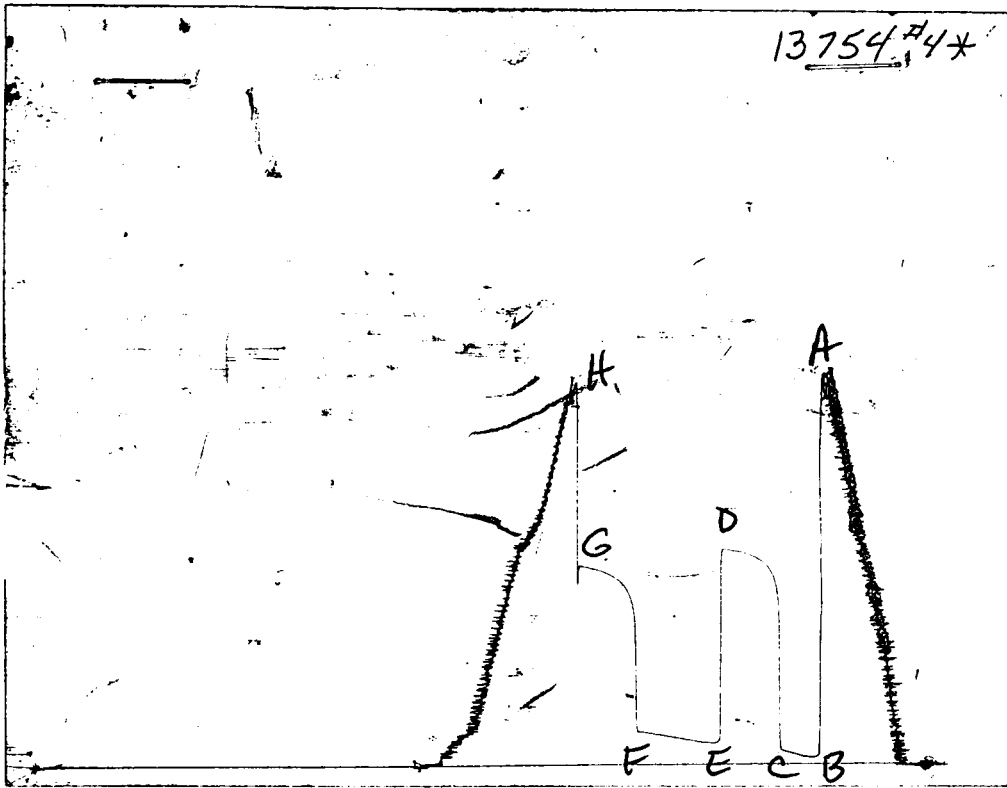
(F) Second Final Flow Pressure 172.2 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 1024.0 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 1979.9 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative DAN BANGLE

CHART PAGE



This is an actual photograph of recorder chart 13754

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2036	2019.3
(B) FIRST INITIAL FLOW PRESSURE	29	35.4
(C) FIRST FINAL FLOW PRESSURE	78	76.7
(D) INITIAL CLOSED-IN PRESSURE	1106	1107.9
(E) SECOND INITIAL FLOW PRESSURE	98	113.1
(F) SECOND FINAL FLOW PRESSURE	167	172.2
(G) FINAL CLOSED-IN PRESSURE	1016	1024
(H) FINAL HYDROSTATIC MUD	1986	1979.9

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 7635

Well Name & No. <u>#1 Thorn</u>	Test No. <u>4</u>	Date <u>10-14-94</u>
Company <u>Abercrombie Drilg. Inc.</u>	Zone Tested <u>F</u>	<u>L.K.C.</u>
Address _____	Elevation <u>3089 K.B.</u>	
Co. Rep./Geo. <u>Tom Funk</u>	Cont. <u>Abercrombie #8</u>	Est. Ft. of Pay _____
Location: Sec. <u>16</u>	Twp. <u>12</u>	Rge. <u>33</u>
	Co. <u>Hogan</u>	State <u>Ks.</u>
No. of Copies _____	Distribution Sheet _____	Yes _____ No _____
Turnkey _____	Yes _____ No _____	Evaluation _____

Interval Tested <u>4100 - 4123</u>	Drill Pipe Size <u>4.5 XH</u>
Anchor Length <u>23</u>	Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth <u>4095</u>	Hole Size — 77/8" _____ Rubber Size — 63/4" _____
Bottom Packer Depth <u>4100</u>	Wt. Pipe I.D. — 2.7 Ft. Run <u>469</u>
Total Depth <u>4123</u>	Drill Collar — 2.25 Ft. Run _____
Mud Wt. <u>9</u> lb/gal.	Viscosity <u>49</u> Filtrate <u>9.6</u>
Tool Open @ <u>2:48 p.m.</u>	Initial Blow <u>Weak- building to 12" fair blow</u>
Final Blow <u>Weak- building to fair blow B.O.B. in 58 min.</u>	

Recovery — Total Feet	Feet of Gas In Pipe	Flush Tool?
Rec. <u>62</u> Feet Of <u>MC</u>	%gas <u>80</u> %oil _____ %water <u>20</u> %mud _____	
Rec. <u>62</u> Feet Of <u>OCM</u>	%gas <u>20</u> %oil _____ %water <u>80</u> %mud _____	
Rec. <u>62</u> Feet Of <u>5 1/4 OCMdy WTR.</u>	%gas <u>5</u> %oil <u>60</u> %water <u>35</u> %mud _____	
Rec. <u>186</u> Feet Of <u>WTR.</u>	%gas _____ %oil _____ %water _____ %mud _____	
Rec. _____ Feet Of _____	%gas _____ %oil _____ %water _____ %mud _____	

BHT 118 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW .13 @ 80 °F Chlorides 54,000 ppm Recovery Chlorides 4,000 ppm System

(A) Initial Hydrostatic Mud 2036 PSI AK1 Recorder No. 13754 Range 4000

(B) First Initial Flow Pressure 29 PSI @ (depth) 4104 w/Clock No. 8179

(C) First Final Flow Pressure 78 PSI AK1 Recorder No. 13849 Range 4375

(D) Initial Shut-In Pressure 1106 PSI @ (depth) 4119 w/Clock No. 25810

(E) Second Initial Flow Pressure 98 PSI AK1 Recorder No. _____ Range _____

(F) Second Final Flow Pressure 167 PSI @ (depth) _____ w/Clock No. _____

(G) Final Shut-In Pressure 1016 PSI Initial Opening 30 Test 600

(H) Final Hydrostatic Mud 1986 PSI Initial Shut-In 45 Jars _____

Final Flow 60 Safety Joint _____

Final Shut-In 45 Straddle _____

Circ. Sub _____

Sampler _____

Extra Packer _____

Other _____

Approved By Tom Funk

Our Representative Dan Ranoff

TOTAL PRICE \$ 600

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name #1 THORN Test No. 5 Date 10/15/94
Company ABERCROMBIE DRILLING INC Zone H' LKC
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3089
Co. Rep./Geo. TOM FUNK Cont. ABERCROMBIE DRLG RIG #8 Est. Ft. of Pay _____
Location: Sec. 16 Twp. 12S Rge. 33W Co. LOGAN State KS

Interval Tested	<u>4176-4210</u>	Drill Pipe Size	<u>4.5" XH</u>
Anchor Length	<u>34</u>	Wt. Pipe I.D. - 2.7 Ft. Run	<u>469</u>
Top Packer Depth	<u>4171</u>	Drill Collar -- 2.25 Ft. Run	_____
Bottom Packer Depth	<u>4176</u>	Mud Wt.	<u>9</u> lb/Gal.
Total Depth	<u>4210</u>	Viscosity	<u>50</u>
		Filtrate	<u>9.6</u>

Tool Open @ 6:30 A.M. Initial Blow WEAK-BUILDING TO 7" FAIR BLOW

Final Blow WEAK-BUILDING TO 2"

Recovery - Total Feet 248 Flush Tool? NO

Rec. <u>62</u>	Feet of	<u>CLEAN OIL 100% OIL</u>
Rec. <u>62</u>	Feet of	<u>OIL CUT GASSY MUD 10%GAS/10%OIL/80%MUD</u>
Rec. <u>62</u>	Feet of	<u>OIL CUT GASSY MUD 15%GAS/5%OIL/80%MUD</u>
Rec. <u>62</u>	Feet of	<u>SLIGHTLY OIL % WATER CUT MUD 3%OIL/10%WATER/87%MUD</u>
Rec. _____	Feet of	_____

BHT 116 °F Gravity _____ °API @ _____ °F Corrected Gravity 34 °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 4000 ppm System

(A) Initial Hydrostatic Mud 2108.2 PSI AK1 Recorder No. 13754 Range 4000

(B) First Initial Flow Pressure 33.4 PSI @ (depth) 4180 w / Clock No. 27501

(C) First Final Flow Pressure 65.9 PSI AK1 Recorder No. 13849 Range 4375

(D) Initial Shut-in Pressure 564.2 PSI @ (depth) 4206 w / Clock No. 25810

(E) Second Initial Flow Pressure 81.6 PSI AK1 Recorder No. _____ Range _____

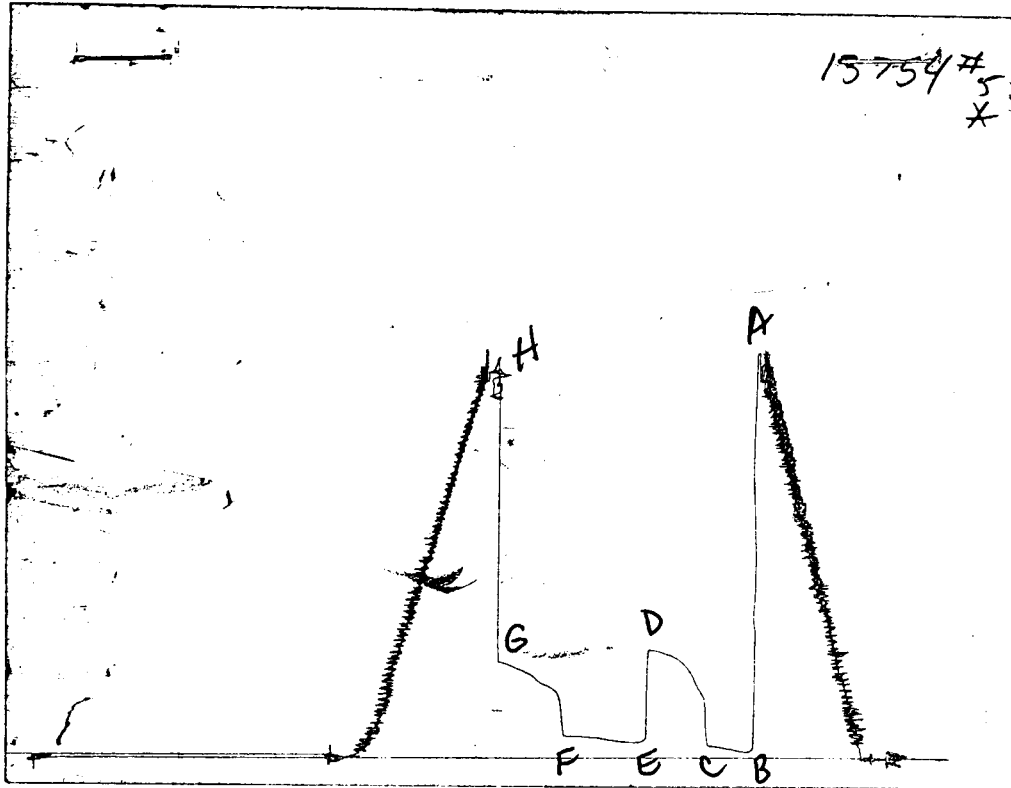
(F) Second Final Flow Pressure 117.1 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 499.0 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2072.8 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative DAN BANGLE

CHART PAGE



This is an actual photograph of recorder chart 13754

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2107	2108.2
(B) FIRST INITIAL FLOW PRESSURE	39	33.4
(C) FIRST FINAL FLOW PRESSURE	68	65.9
(D) INITIAL CLOSED-IN PRESSURE	561	564.2
(E) SECOND INITIAL FLOW PRESSURE	88	81.6
(F) SECOND FINAL FLOW PRESSURE	108	117.1
(G) FINAL CLOSED-IN PRESSURE	501	499
(H) FINAL HYDROSTATIC MUD	2073	2072.8

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 7636

Well Name & No. #1 Thorn Test No. 5 Date 10-15-94
 Company Abercrombie Drilg. Inc. Zone Tested 'H' h.K.C.
 Address _____ Elevation 3089 K.B.
 Co. Rep./Geo. Tom Funk Cont. Abercrombie #8 Est. Ft. of Pay _____
 Location: Sec. 16 Twp. 12 Rge. 33 Co. Hogan State Ks.
 No. of Copies _____ Distribution Sheet _____ Yes _____ No _____ Turnkey _____ Yes _____ No _____ Evaluation _____

Interval Tested 4176 - 4210 Drill Pipe Size 4.5XH
 Anchor Length 34 Top Choke — 1" _____ Bottom Choke — 1/4" _____
 Top Packer Depth 4171 Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
 Bottom Packer Depth 4176 Wt. Pipe I.D. — 2.7 Ft. Run 469
 Total Depth 4210 Drill Collar — 2.25 Ft. Run _____
 Mud Wt. 9 lb/gal. Viscosity 50 Filtrate 2.6
 Tool Open @ 6:30 am. Initial Blow Weak-building to 7" fair blow
 Final Blow Weak-building to 2"

Recovery — Total Feet 248 Feet of Gas in Pipe _____ Flush Tool? _____
 Rec. 62 Feet Of C.O. %gas 100%oil _____ %water _____ %mud _____
 Rec. 62 Feet Of OCGsym 10%gas 10%oil _____ %water 80%mud _____
 Rec. 62 Feet Of OCGsym 15%gas 5%oil _____ %water 80%mud _____
 Rec. 62 Feet Of SITLY O+WTC CM 9%gas 3%oil 10%water 87%mud _____
 Rec. _____ Feet Of _____ %gas _____ %oil _____ %water _____ %mud _____
 BHT 116 °F Gravity _____ °API @ _____ °F Corrected Gravity 34 °API
 RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 4,000 ppm System
 (A) Initial Hydrostatic Mud 2107 PSI AK1 Recorder No. 13754 Range 4000
 (B) First Initial Flow Pressure 39 PSI @ (depth) 4180 w/Clock No. 27501
 (C) First Final Flow Pressure 68 PSI AK1 Recorder No. 13849 Range 4375
 (D) Initial Shut-In Pressure 561 PSI @ (depth) 4206 w/Clock No. 25810
 (E) Second Initial Flow Pressure 88 PSI AK1 Recorder No. _____ Range _____
 (F) Second Final Flow Pressure 108 PSI @ (depth) _____ w/Clock No. _____
 (G) Final Shut-In Pressure 501 PSI Initial Opening 30 Test 600
 (H) Final Hydrostatic Mud 2073 PSI Initial Shut-In 45 Jars _____

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE 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 [Signature]
 Our Representative Dave Bonafide

Printcraft Printers - Hays, KS

Final Flow 60 Safety Joint _____
 Final Shut-In 45 Straddle _____
 Circ. Sub _____
 Sampler _____
 Extra Packer _____
 Other _____
 TOTAL PRICE \$ 600

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name #1 THORN Test No. 6 Date 10/15/94
Company ABERCROMBIE DRILLING INC Zone 'J' LKC
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3089
Co. Rep./Geo. TOM FUNK Cont. ABERCROMBIE DRLG RIG #8 Est. Ft. of Pay _____
Location: Sec. 16 Twp. 12S Rge. 33W Co. LOGAN State KS

Interval Tested 4245-4266 Drill Pipe Size 4.5" XH
Anchor Length 21 Wt. Pipe I.D. - 2.7 Ft. Run 469
Top Packer Depth 4240 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 4245 Mud Wt. 9. lb/Gal.
Total Depth 4266 Viscosity 50 Filtrate 9.6

Tool Open @ 10:28 P.M. Initial Blow STRONG-BOTTOM OF BUCKET IN 1 1/2 MIN

Final Blow STRONG-BOTTOM OF BUCKET IN 15 MIN

Recovery - Total Feet 620 Flush Tool? NO

Rec. 1240 Feet of GAS IN PIPE
Rec. 496 Feet of CLEAN GASSY OIL 20%GAS/80%OIL
Rec. 124 Feet of OIL CUT GASSY MUD 40%GAS/5%OIL/5%WATER/50%MUD
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 122 °F Gravity _____ °API @ _____ °F Corrected Gravity 38 °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 4000 ppm System

(A) Initial Hydrostatic Mud 2147.7 PSI AK1 Recorder No. 13754 Range 4000

(B) First Initial Flow Pressure 101.3 PSI @ (depth) 4249 w / Clock No. 27501

(C) First Final Flow Pressure 169.2 PSI AK1 Recorder No. 13849 Range 4375

(D) Initial Shut-in Pressure 241.1 PSI @ (depth) 4262 w / Clock No. 25810

(E) Second Initial Flow Pressure 203.7 PSI AK1 Recorder No. _____ Range _____

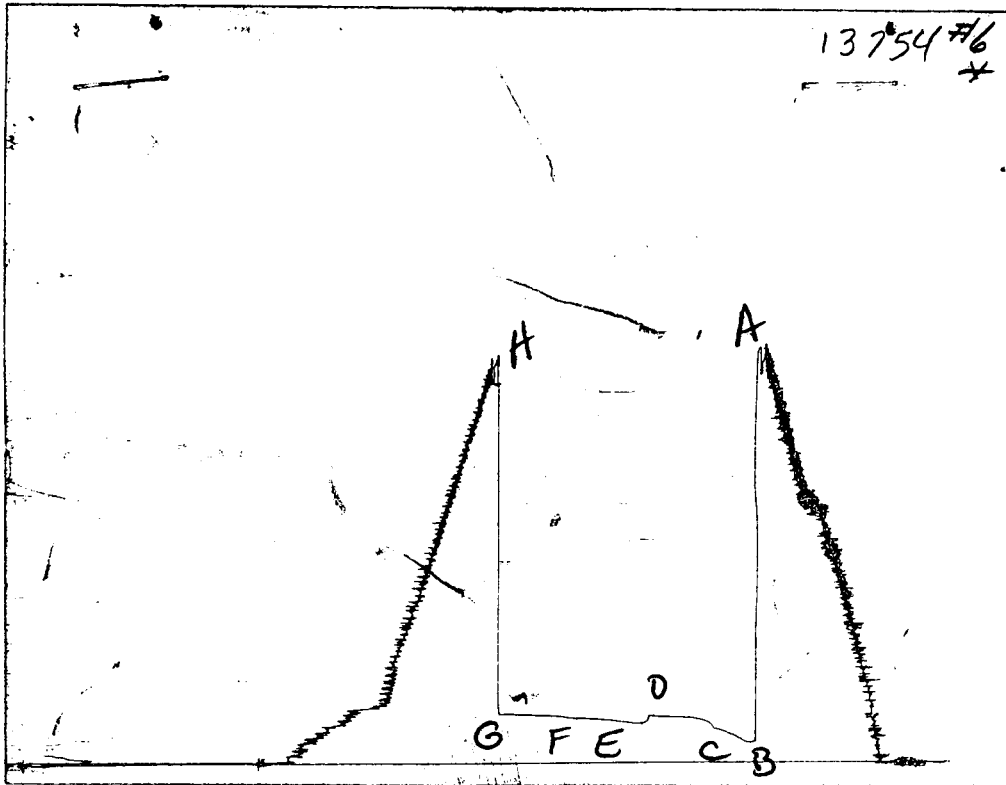
(F) Second Final Flow Pressure 227.3 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 248.0 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2073.8 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative DAN BANGLE

CHART PAGE



This is an actual photograph of recorder chart 13754

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2137	2147.7
(B) FIRST INITIAL FLOW PRESSURE	98	101.3
(C) FIRST FINAL FLOW PRESSURE	177	169.2
(D) INITIAL CLOSED-IN PRESSURE	246	241.1
(E) SECOND INITIAL FLOW PRESSURE	196	203.7
(F) SECOND FINAL FLOW PRESSURE	226	227.3
(G) FINAL CLOSED-IN PRESSURE	255	248
(H) FINAL HYDROSTATIC MUD	2087	2073.8

TRILOBITE TESTING L.L.C.

P.O. BOX 362 • Hays, Kansas 67601

Test Ticket

No 7637

Well Name & No. <u>#1 Thorn</u>	Test No. <u>6</u>	Date <u>10-15-94</u>
Company <u>Abercrombie Drilg. Inc.</u>	Zone Tested <u>J</u>	<u>L.K.C.</u>
Address _____	Elevation <u>2089 K.B.</u>	
Co. Rep./Geo. <u>Tom Funk</u>	Cont. <u>Abercrombie #8</u>	Est. Ft. of Pay <u>8</u>
Location: Sec. <u>16</u>	Twp. <u>12</u>	Rge. <u>33</u>
	Co. <u>Logan</u>	State <u>Ks.</u>
No. of Copies _____	Distribution Sheet _____	Yes _____ No _____ Turnkey _____
		Yes _____ No _____ Evaluation _____

Interval Tested <u>4245 - 4266</u>	Drill Pipe Size <u>4.5 X 11</u>
Anchor Length <u>21</u>	Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth <u>4240</u>	Hole Size — 77/8" _____ Rubber Size — 63/4" _____
Bottom Packer Depth <u>4245</u>	Wt. Pipe I.D. — 2.7 Ft. Run <u>469</u>
Total Depth <u>4266</u>	Drill Collar — 2.25 Ft. Run _____
Mud Wt. <u>9</u> lb/gal.	Viscosity <u>50</u> Filtrate <u>9.6</u>
Tool Open @ <u>10:28 p.m.</u>	Initial Blow <u>Strong - B.O.B. in 1 1/2 min.</u>

Final Blow Strong - B.O.B. in 15 min.

Recovery — Total Feet <u>620</u>	Feet of Gas in Pipe <u>1240</u>	Flush Tool? _____
Rec. <u>496</u> Feet Of <u>CGsy 0</u>	<u>20% gas 80% oil</u>	% water _____ % mud _____
Rec. <u>124</u> Feet Of <u>OCGsy M</u>	<u>40% gas 5% oil</u>	<u>5% water 50% mud</u>
Rec. _____ Feet Of _____	% gas _____ % oil _____	% water _____ % mud _____
Rec. _____ Feet Of _____	% gas _____ % oil _____	% water _____ % mud _____
Rec. _____ Feet Of _____	% gas _____ % oil _____	% water _____ % mud _____

BHT 122 °F Gravity _____ °API @ _____ °F Corrected Gravity 38 °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 4,000 ppm System

- (A) Initial Hydrostatic Mud 2137 PSI Ak1 Recorder No. 13754 Range 4000
- (B) First Initial Flow Pressure 98 PSI @ (depth) 4249 w/Clock No. 27501
- (C) First Final Flow Pressure 177 PSI AK1 Recorder No. 13849 Range 4975
- (D) Initial Shut-in Pressure 246 PSI @ (depth) 4262 w/Clock No. 25810
- (E) Second Initial Flow Pressure 196 PSI AK1 Recorder No. _____ Range _____
- (F) Second Final Flow Pressure 226 PSI @ (depth) _____ w/Clock No. _____
- (G) Final Shut-in Pressure 255 PSI Initial Opening 30 Test 600
- (H) Final Hydrostatic Mud 2087 PSI Initial Shut-in 45 Jars _____

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE 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 [Signature]
Our Representative [Signature]

Final Flow 60 Safety Joint _____
Final Shut-in 45 Straddle _____
Circ. Sub _____
Sampler _____
Extra Packer _____
Other _____
TOTAL PRICE \$ 600

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name #1 THORN Test No. 7 Date 10/16/94
Company ABERCROMBIE DRILLING INC Zone 'K' LKC
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3089
Co. Rep./Geo. TOM FUNK Cont. ABERCROMBIE DRLG RIG #8 Est. Ft. of Pay _____
Location: Sec. 16 Twp. 12S Rge. 33W Co. LOGAN State KS

Interval Tested	<u>4266-4289</u>	Drill Pipe Size	<u>4.5" XH</u>
Anchor Length	<u>23</u>	Wt. Pipe I.D. - 2.7 Ft. Run	<u>469</u>
Top Packer Depth	<u>4261</u>	Drill Collar - 2.25 Ft. Run	_____
Bottom Packer Depth	<u>4266</u>	Mud Wt.	<u>9</u> lb/Gal.
Total Depth	<u>4289</u>	Viscosity	<u>55</u>
		Filtrate	<u>8.8</u>

Tool Open @ 1:00 P.M. Initial Blow WEAK-BUILDING TO 5" FAIR BLOW

Final Blow WEAK-BUILDING TO 3"

Recovery - Total Feet 278 Flush Tool? NO

Rec. <u>30</u>	Feet of	<u>DRILLING MUD WITH OIL SPOTS</u>
Rec. <u>248</u>	Feet of	<u>WATER</u>
Rec. _____	Feet of	_____
Rec. _____	Feet of	_____
Rec. _____	Feet of	_____

BHT 118 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW 0.12 @ 80 °F Chlorides 55000 ppm Recovery Chlorides 5000 ppm System

(A) Initial Hydrostatic Mud 2204.5 PSI AK1 Recorder No. 13754 Range 4000

(B) First Initial Flow Pressure 28.5 PSI @ (depth) 4270 w / Clock No. 8179

(C) First Final Flow Pressure 63.9 PSI AK1 Recorder No. 13849 Range 4275

(D) Initial Shut-in Pressure 496.0 PSI @ (depth) 4285 w / Clock No. 27501

(E) Second Initial Flow Pressure 83.6 PSI AK1 Recorder No. _____ Range _____

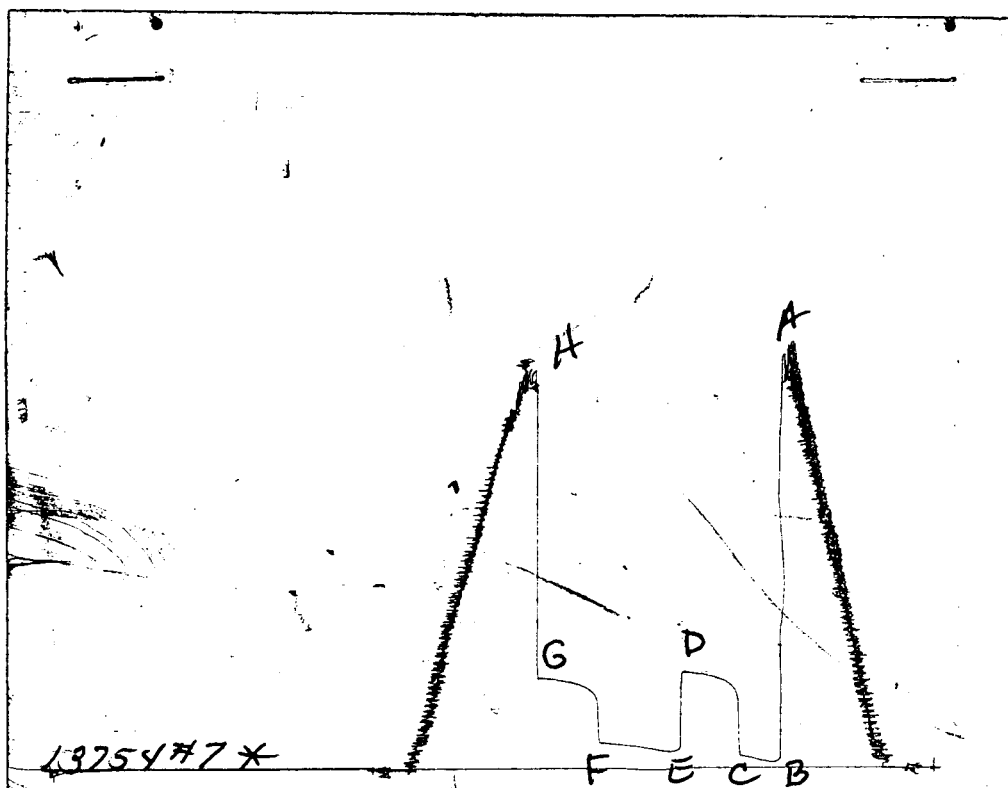
(F) Second Final Flow Pressure 129.9 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 463.5 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2059.7 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative DAN BANGLE

CHART PAGE



This is an actual photograph of recorder chart

13754

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2208	2204.5
(B) FIRST INITIAL FLOW PRESSURE	29	28.5
(C) FIRST FINAL FLOW PRESSURE	68	63.9
(D) INITIAL CLOSED-IN PRESSURE	492	496
(E) SECOND INITIAL FLOW PRESSURE	98	83.6
(F) SECOND FINAL FLOW PRESSURE	127	129.9
(G) FINAL CLOSED-IN PRESSURE	472	463.5
(H) FINAL HYDROSTATIC MUD	2076	2059.7

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 7638

Well Name & No. #1 Thorn Test No. 7 Date 10-16-94
 Company Abercrombie Drlg. Inc. Zone Tested 'K' h-K.C
 Address _____ Elevation 3089 K.B.
 Co. Rep./Geo. Tom Funk Cont. Abercrombie #8 Est. Ft. of Pay _____
 Location: Sec. 16 Twp. 12 Rge. 33 Co. Logan State Ks
 No. of Copies _____ Distribution Sheet _____ Yes _____ No _____ Turnkey _____ Yes _____ No _____ Evaluation _____

Interval Tested 4266 - 4289 Drill Pipe Size 4.5XH
 Anchor Length 23 Top Choke — 1" _____ Bottom Choke — 3/4" _____
 Top Packer Depth 4261 Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
 Bottom Packer Depth 4266 Wt. Pipe I.D. — 2.7 Ft. Run 469
 Total Depth 4289 Drill Collar — 2.25 Ft. Run _____
 Mud Wt. 9 lb/gal. Viscosity 55 Filtrate 8.8
 Tool Open @ 1:00 p.m. Initial Blow Weak - building to 5" fair blow

Final Blow Weak - building to 3"

Recovery — Total Feet	Feet of Gas in Pipe	Flush Tool?
Rec. <u>30</u> Feet Of <u>D.M w/oil spots</u>	%gas _____ %oil _____ %water _____ %mud _____	
Rec. <u>248</u> Feet Of <u>WTR.</u>	%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 @ _____ °F Corrected Gravity _____ °API

RW 1.2 @ 80 °F Chlorides 55,000 ppm Recovery Chlorides 5,000 ppm System

- (A) Initial Hydrostatic Mud 2208 PSI AK1 Recorder No. 13754 Range 4000
- (B) First Initial Flow Pressure 29 PSI @ (depth) 4270 w/Clock No. 8179
- (C) First Final Flow Pressure 68 PSI AK1 Recorder No. 13849 Range 4375
- (D) Initial Shut-In Pressure 492 PSI @ (depth) 4285 w/Clock No. 27501
- (E) Second Initial Flow Pressure 98 PSI AK1 Recorder No. _____ Range _____
- (F) Second Final Flow Pressure 127 PSI @ (depth) _____ w/Clock No. _____
- (G) Final Shut-In Pressure 472 PSI Initial Opening 30 Test 600
- (H) Final Hydrostatic Mud 2076 PSI Initial Shut-in 45 Jars _____

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE 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.

Final Flow 60 Safety Joint _____
 Final Shut-in 45 Straddle _____
 Circ. Sub _____
 Sampler _____
 Extra Packer _____
 Other _____

Approved By Thomas Funk

Our Representative Dave Banche

TOTAL PRICE \$ 650

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name #1 THORN Test No. 8 Date 10/17/94
Company ABERCROMBIE DRILLING INC Zone MYRICK STA/F
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3089
Co. Rep./Geo. TOM FUNK Cont. ABERCROMBIE DRLG RIG #8 Est. Ft. of Pay _____
Location: Sec. 16 Twp. 12S Rge. 33W Co. LOGAN State KS

Interval Tested 4493-4545 Drill Pipe Size 4.5" XH
Anchor Length 52 Wt. Pipe I.D. - 2.7 Ft. Run 469
Top Packer Depth 4488 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 4493 Mud Wt. 9.2 lb/Gal.
Total Depth 4545 Viscosity 53 Filtrate 8.0

Tool Open @ 2:35 P.M. Initial Blow SURFACE BLOW INCREASED TO 4" BLOW-ISI: BLED OFF BLOW-N

Final Blow SURFACE RETURN IN 10 MIN BUILT TO 1/2"

Recovery - Total Feet 200 Flush Tool? NO

Rec. 140 Feet of DRILLING MUD WITH OIL SPOTS
Rec. 60 Feet of MUDDY WATER 70%WATER-30%MUD
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 123 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW 0.68 @ _____ °F Chlorides 8000 ppm Recovery Chlorides 4000 ppm System

(A) Initial Hydrostatic Mud 2253.4 PSI AK1 Recorder No. 13309 Range 4700

(B) First Initial Flow Pressure 61.3 PSI @ (depth) 4501 w / Clock No. 23832

(C) First Final Flow Pressure 75.9 PSI AK1 Recorder No. 13339 Range 4025

(D) Initial Shut-in Pressure 775.5 PSI @ (depth) 4540 w / Clock No. 23934

(E) Second Initial Flow Pressure 106.0 PSI AK1 Recorder No. _____ Range _____

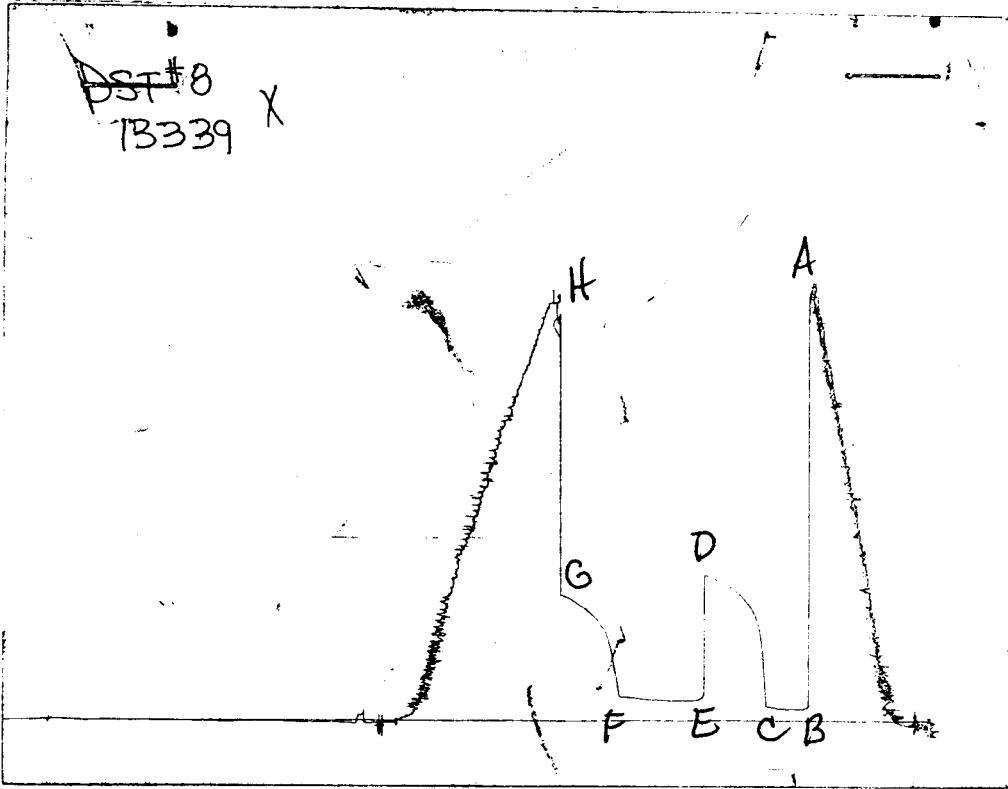
(F) Second Final Flow Pressure 128.9 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 674.4 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2145.2 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative ROD STEINBRINK

CHART PAGE



This is an actual photograph of recorder chart 13339

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2243	2253.4
(B) FIRST INITIAL FLOW PRESSURE	41	61.3
(C) FIRST FINAL FLOW PRESSURE	62	75.9
(D) INITIAL CLOSED-IN PRESSURE	769	775.5
(E) SECOND INITIAL FLOW PRESSURE	104	106
(F) SECOND FINAL FLOW PRESSURE	124	128.9
(G) FINAL CLOSED-IN PRESSURE	669	674.4
(H) FINAL HYDROSTATIC MUD	2213	2145.2

TRILOBITE TESTING L.L.C.

P.O. Box 352 • Hays, Kansas 67601

Test Ticket

No 7485

Well Name & No.	Thorn #1	Test No.	8	Date	10-17-94				
Company	Abercrombie Drilling, Inc.	Zone Tested	Myrick Sta./Ft. Scott						
Address	150 N. Main Ste. 801 Wichita, KS. 67202	Elevation	3089 (KB)						
Co. Rep./Geo.	Tom Funk	Cont.	Abercrombie #8	Est. Ft. of Pay					
Location: Sec.	16	Twp.	12 ^S	Rge.	33 ^W	Co.	Logan	State	KS.
No. of Copies		Distribution Sheet	Yes	No	Turnkey	Yes	No	Evaluation	

Interval Tested	4493 - 4545	Drill Pipe Size	4 1/2" XH	
Anchor Length	52'	Top Choke - 1"	Bottom Choke - 3/4"	
Top Packer Depth	4488	Hole Size - 7 7/8"	Rubber Size - 6 3/4"	
Bottom Packer Depth	4493	Wt. Pipe I.D. - 2.7 Ft. Run	469"	
Total Depth	4545	Drill Collar - 2.25 Ft. Run		
Mud Wt.	9.2	lb/gal.	Viscosity 53	Filtrate 8.0
Tool Open @ 2:35 pm	Initial Blow	Surface blow increased to 4" blow		
ISI: Bled off blow - no return.				
Final Blow	Surface return in 10 mins built to 1/2"			

Recovery - Total Feet	200'	Feet of Gas in Pipe		Flush Tool?	No		
Rec.	Feet Of	%gas	%oil	%water	%mud		
Rec.	Feet Of	%gas	%oil	%water	%mud		
Rec.	140'	Feet Of	Orig Mud w/oil spots	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud		
Rec.	60'	Feet Of	Muddy Wtr.	%gas	%oil	70 %water	30 %mud
BHT	123°	°F Gravity	°API @	°F Corrected Gravity	°API		
RW	.68	@ 80°	°F Chlorides 8,000	ppm Recovery	Chlorides 4,000	ppm System	
(A) Initial Hydrostatic Mud	2243	PSI	AK1 Recorder No.	13309	Range	4700	
(B) First Initial Flow Pressure	41	PSI	@ (depth)	4501	w/Clock No.	23832	
(C) First Final Flow Pressure	62	PSI	AK1 Recorder No.	13339	Range	4025	
(D) Initial Shut-In Pressure	769	PSI	@ (depth)	4540	w/Clock No.	23934	
(E) Second Initial Flow Pressure	104	PSI	AK1 Recorder No.		Range		
(F) Second Final Flow Pressure	124	PSI	@ (depth)		w/Clock No.		
(G) Final Shut-In Pressure	669	PSI	Initial Opening	30	Test	600	
(H) Final Hydrostatic Mud	2213	PSI	Initial Shut-In	45	Jars		

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE 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 Tom Funk
Our Representative Rod Steinbrink

Final Flow 60 Safety Joint _____
Final Shut-In 45 Straddle _____
Circ. Sub X N/C
Sampler _____
Extra Packer _____
Other _____

TOTAL PRICE \$ 600

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name #1 THORN Test No. 9 Date 10/18/94
Company ABERCROMBIE DRILLING INC Zone JOHNSON ZONE
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3089
Co. Rep./Geo. TOM FUNK Cont. ABERCROMBIE DRLG RIG #8 Est. Ft. of Pay 5
Location: Sec. 16 Twp. 12S Rge. 33W Co. LOGAN State KS

Interval Tested	<u>4571-4605</u>	Drill Pipe Size	<u>4.5" XH</u>
Anchor Length	<u>34</u>	Wt. Pipe I.D. - 2.7 Ft. Run	<u>469</u>
Top Packer Depth	<u>4566</u>	Drill Collar - 2.25 Ft. Run	<u>9.3</u>
Bottom Packer Depth	<u>4571</u>	Mud Wt.	<u>50</u> lb/Gal.
Total Depth	<u>4605</u>	Viscosity	<u>50</u> Filtrate <u>8.8</u>

Tool Open @ 7:00 A.M. Initial Blow FAIR TO STRONG BLOW BUILT TO BOTTOM IN 4 MIN
DECREASED TO 4" SURGING BLOW (PLUGGIN ACTION) ISI: STEADY 14" BLOW THRU
Final Blow SURFACE TO 4" SURGING BLOW FSI: BLEED OFF BLOW-SURFACE TO 2" RETURN

Recovery - Total Feet 1675 Flush Tool? NO

Rec. <u>1465</u>	Feet of	<u>CLEAN GAS OIL 25%GAS-75%OIL</u>
Rec. <u>150</u>	Feet of	<u>SLIGHT GAS OIL CUT MUD 5%GAS-40%OIL-55%MUD</u>
Rec. <u>60</u>	Feet of	<u>MUD CUT WATER 90%WATER-10%MUD</u>
Rec. _____	Feet of	_____
Rec. _____	Feet of	_____

BHT BROKE °F Gravity 31 °API @ 77 °F Corrected Gravity 29.3 °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 5000 ppm System

(A) Initial Hydrostatic Mud 2272.5 PSI AK1 Recorder No. 13309 Range 4700

(B) First Initial Flow Pressure 119.5 PSI @ (depth) 4595 w / Clock No. 23832

(C) First Final Flow Pressure 263.0 PSI AK1 Recorder No. 13339 Range 4025

(D) Initial Shut-in Pressure 1070.2 PSI @ (depth) 4600 w / Clock No. 23934

(E) Second Initial Flow Pressure 364.8 PSI AK1 Recorder No. _____ Range _____

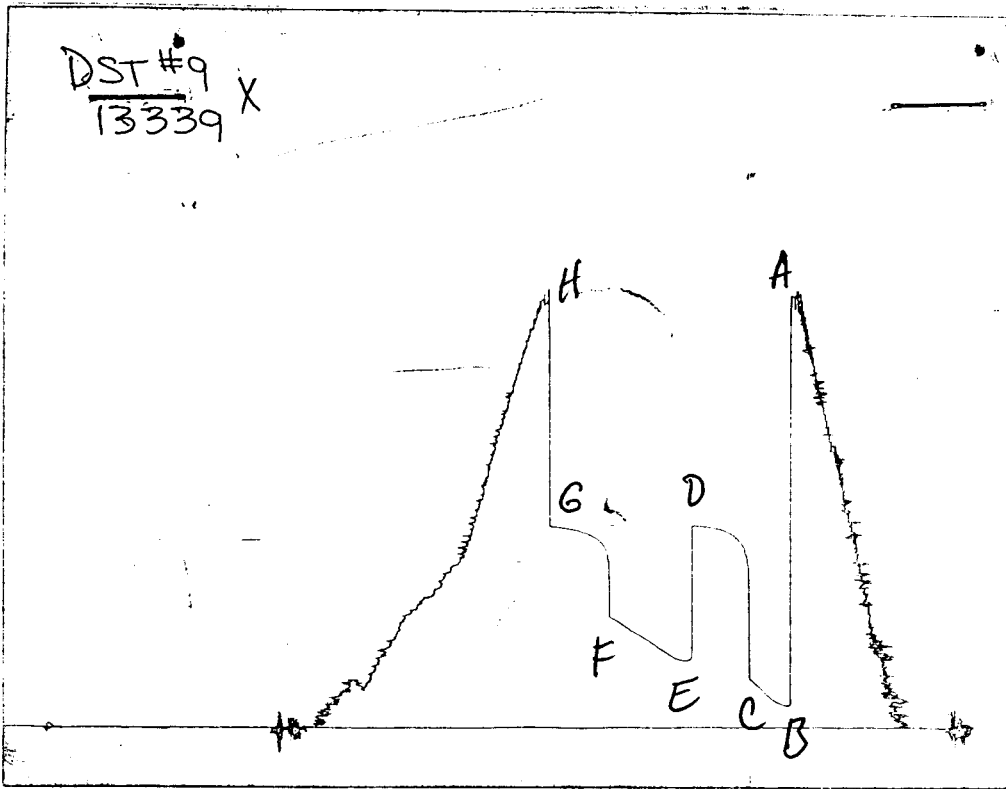
(F) Second Final Flow Pressure 594.2 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 1066.2 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2238.4 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative ROD STEINBRINK

CHART PAGE



This is an actual photograph of recorder chart 13339

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2253	2272.5
(B) FIRST INITIAL FLOW PRESSURE	104	119.5
(C) FIRST FINAL FLOW PRESSURE	259	263
(D) INITIAL CLOSED-IN PRESSURE	1060	1070.2
(E) SECOND INITIAL FLOW PRESSURE	353	364.8
(F) SECOND FINAL FLOW PRESSURE	579	594.2
(G) FINAL CLOSED-IN PRESSURE	1060	1066.2
(H) FINAL HYDROSTATIC MUD	2223	2238.4

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 7486

Well Name & No.	Thorn #1	Test No.	9	Date	10-18-94				
Company	Abercrombie Drilling, Inc.	Zone Tested	Johnson Zone						
Address	150 N. Main Ste 801 Wichita, KS 67202	Elevation	3089 (KB)						
Co. Rep./Geo.	Tom Funk	cont.	Abercrombie #8	Est. Ft. of Pay	5				
Location: Sec.	16	Twp.	12 ^S	Rge.	33 ^W	Co.	Logan	state	KS.
No. of Copies		Distribution Sheet	Yes	No	Turnkey	Yes	No	Evaluation	

Interval Tested 4571 - 4605 Drill Pipe Size 4 1/2" KH
Anchor Length 34' Top Choke — 1" Bottom Choke — 3/4"
Top Packer Depth 4566 Hole Size — 7 7/8" Rubber Size — 6 3/4"
Bottom Packer Depth 4571 Wt. Pipe I.D. — 2.7 Ft. Run 469'
Total Depth 4605 Drill Collar — 2.25 Ft. Run —

Mud Wt. 9.3 lb/gal. Viscosity 50 Filtrate B.B

Tool Open @ 7:00 am Initial Blow Fair to strong blow built to bttm in 4 mins. decreased to 4" surging blow (plugging action) ISI: Steady 1/4" blow thru.
Final Blow Surface to 4" surging blow
ISI: Bled off blow - surface to 2" return blow.

Recovery — Total Feet 1675' Feet of Gas in Pipe GTS @ final of shut-in Flush Tool? No

Rec.	Feet Of	%gas	%oil	%water	%mud
Rec. <u>1465'</u>	Feet Of <u>CGO</u>	<u>25</u> %gas	<u>75</u> %oil	<u>—</u> %water	<u>—</u> %mud
Rec. <u>150'</u>	Feet Of <u>SGOCM</u>	<u>5</u> %gas	<u>40</u> %oil	<u>—</u> %water	<u>55</u> %mud
Rec. <u>60'</u>	Feet Of <u>MCW</u>	<u>—</u> %gas	<u>trc.</u> %oil	<u>90</u> %water	<u>10</u> %mud
Rec. _____	Feet Of _____	%gas <u>36</u>	%oil _____	%water _____	%mud _____

BHT Broke °F Gravity 30 °API @ 77 °F Corrected Gravity 29.3 °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 5,000 ppm System

(A) Initial Hydrostatic Mud 2253 PSI AK1 Recorder No. 13309 Range 4700
(B) First Initial Flow Pressure 104 PSI @ (depth) 4595 w/Clock No. 23832
(C) First Final Flow Pressure 259 PSI AK1 Recorder No. 13339 Range 4025
(D) Initial Shut-In Pressure 1060 PSI @ (depth) 4600 w/Clock No. 23934
(E) Second Initial Flow Pressure 353 PSI AK1 Recorder No. — Range —
(F) Second Final Flow Pressure 579 PSI @ (depth) — w/Clock No. —
(G) Final Shut-In Pressure 1060 PSI Initial Opening 30 Test 600
(H) Final Hydrostatic Mud 2223 PSI Initial Shut-In 45 Jars _____

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE 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.

Final Flow 60 Safety Joint _____

Final Shut-In 45 Straddle _____

Circ. Sub X n/c

Sampler _____

Extra Packer _____

Other _____

TOTAL PRICE \$ 600

Approved By [Signature]

Our Representative Rod Steinbrink

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name #1 THORN Test No. 10 Date 10/19/94
Company ABERCROMBIE DRILLING INC Zone KC "I"
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3089
Co. Rep./Geo. TOM FUNK Cont. ABERCROMBIE DRLG RIG #8 Est. Ft. of Pay _____
Location: Sec. 16 Twp. 12S Rge. 33W Co. LOGAN State KS

Interval Tested 4208-4240 Drill Pipe Size 4.5" XH
Anchor Length 32 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 4203-4208 Drill Collar - 2.25 Ft. Run 60
Bottom Packer Depth 4240 Mud Wt. 9.2 lb/Gal.
Total Depth 4734 Viscosity 45 Filtrate 8.0

Tool Open @ 2:45 P.M. Initial Blow WEAK TO FAIR BLOW BUILT TO 9"
ISI: BLED OFF BLOW-NO RETURN
Final Blow WEAK SURFACE RETURN IN 10 MIN STEADY THROUGHOUT

Recovery - Total Feet 180 Flush Tool? NO

Rec. 180 Feet of DRILLING MUD
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 115 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 4500 ppm System

(A) Initial Hydrostatic Mud 2148.2 PSI AK1 Recorder No. 13339 Range 4025

(B) First Initial Flow Pressure 81.1 PSI @ (depth) 4212 w / Clock No. 23832

(C) First Final Flow Pressure 87.3 PSI AK1 Recorder No. 13276 Range 4000

(D) Initial Shut-in Pressure 290.0 PSI @ (depth) 4217 w / Clock No. 23934

(E) Second Initial Flow Pressure 114.3 PSI AK1 Recorder No. 13309 Range 4700

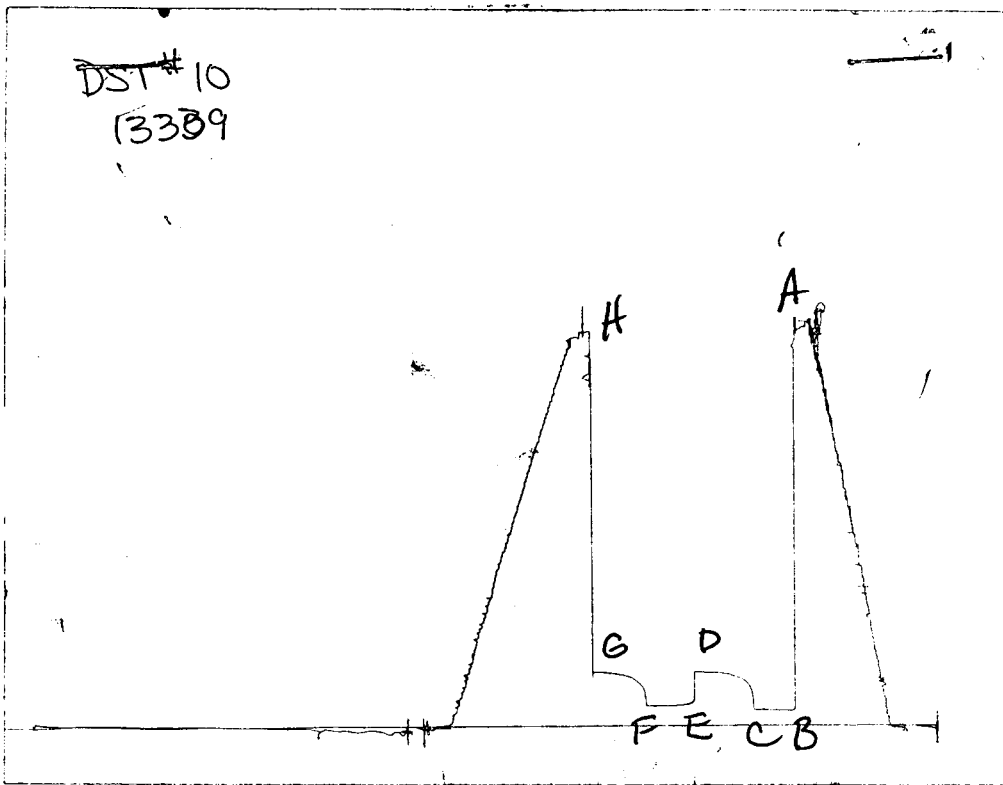
(F) Second Final Flow Pressure 111.2 PSI @ (depth) 4729 w / Clock No. 17640

(G) Final Shut-in Pressure 290.0 PSI Initial Opening 30 Final Flow 30

(H) Final Hydrostatic Mud 2078.1 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative ROD STEINBRINK

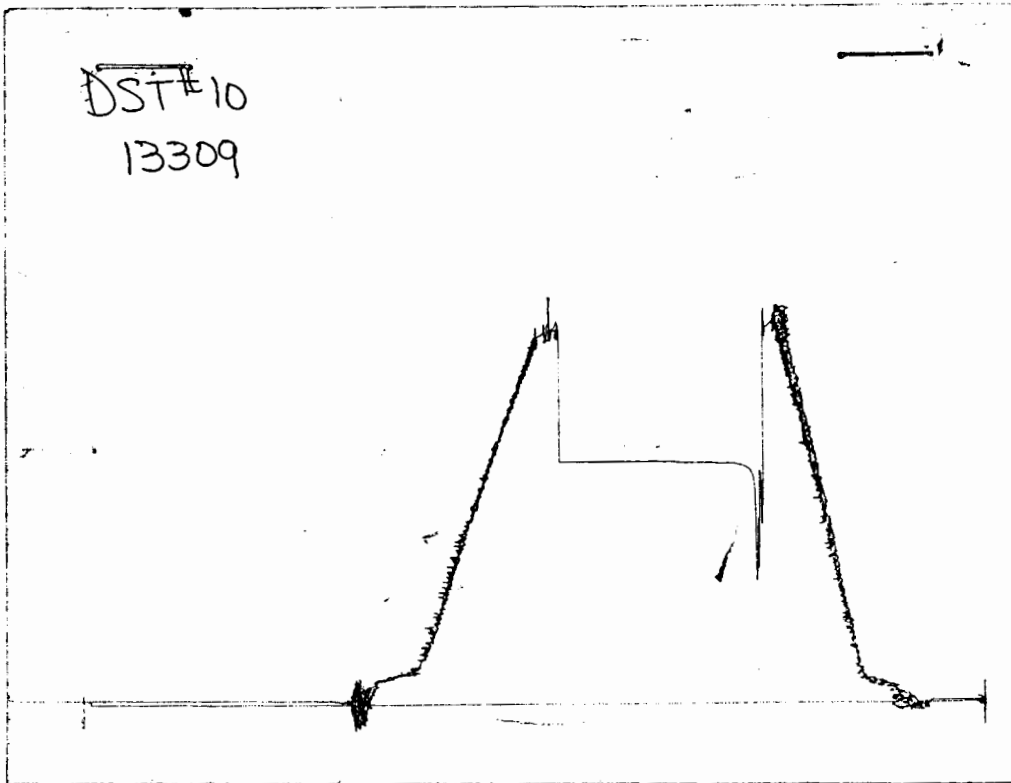
CHART PAGE



This is an actual photograph of recorder chart 13339

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2103	2148.2
(B) FIRST INITIAL FLOW PRESSURE	72	81.1
(C) FIRST FINAL FLOW PRESSURE	83	87.3
(D) INITIAL CLOSED-IN PRESSURE	280	290
(E) SECOND INITIAL FLOW PRESSURE	93	114.3
(F) SECOND FINAL FLOW PRESSURE	93	111.2
(G) FINAL CLOSED-IN PRESSURE	280	290
(H) FINAL HYDROSTATIC MUD	2063	2078.1

CHART PAGE



FIELD
READING

OFFICE
READING

- (A) INITIAL HYDROSTATIC MUD
- (B) FIRST INITIAL FLOW PRESSURE
- (C) FIRST FINAL FLOW PRESSURE
- (D) INITIAL CLOSED-IN PRESSURE
- (E) SECOND INITIAL FLOW PRESSURE
- (F) SECOND FINAL FLOW PRESSURE
- (G) FINAL CLOSED-IN PRESSURE
- (H) FINAL HYDROSTATIC MUD

TRILOBITE TESTING L.L.C.

P.O. Box 362, Hays, Kansas 67601

Test Ticket

No 7487

Well Name & No.	Thorn #1		Test No.	10	Date	10-19-94
Company	Abercrombie Drilling, Inc.		Zone Tested	Kans City 'I'		
Address	150 N. Main Ste #801 Wichita, KS. 67202		Elevation	3089 (KB)		
Co. Rep./Geo.	Tom Funk	Cont.	Abercrombie #8		Est. Ft. of Pay	
Location: Sec.	16	Twp.	12 ^S	Rge.	33 ^W	Co. Logan State KS.
No. of Copies	Distribution Sheet	Yes	No	Turnkey	Yes	No Evaluation

Interval Tested	4208 - 4240	Drill Pipe Size	4 1/2" XH
Anchor Length	32'	Top Choke - 1"	Bottom Choke - 3/4"
Top Packer Depth	4203 - 4208	Hole Size - 7 7/8"	Rubber Size - 6 3/4"
Bottom Packer Depth	4240	Wt. Pipe I.D. - 2.7 Ft. Run	
Total Depth	(LTD) 4734	Drill Collar - 2.25 Ft. Run	60'
Mud Wt.	9.2 lb/gal.	Viscosity	45 Filtrate 8.0
Tool Open @	2:45 pm	Initial Blow	Weak to fair blow built to 9"
	ISI: bled off blow - no return.		
Final Blow	Weak surface return in 10 mins steady throughout.		

Recovery - Total Feet	180'	Feet of Gas in Pipe		Flush Tool?	No
Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	180'	Feet Of	Drlg Mud	%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	115°	°F Gravity	°API @	°F Corrected Gravity	°API

RW	@	°F Chlorides	ppm Recovery	Chlorides	4,500	ppm System
(A) Initial Hydrostatic Mud	2103	PSI	AK1 Recorder No.	13339	Range	4025
(B) First Initial Flow Pressure	72	PSI	@(depth)	4212	w/Clock No.	23832
(C) First Final Flow Pressure	83	PSI	AK1 Recorder No.	13276	Range	4000
(D) Initial Shut-In Pressure	280	PSI	@(depth)	4217	w/Clock No.	23934
(E) Second Initial Flow Pressure	93	PSI	AK1 Recorder No.	13309	Range	4700
(F) Second Final Flow Pressure	93	PSI	@(depth)	4729	w/Clock No.	17640
(G) Final Shut-In Pressure	280	PSI	Initial Opening	30	Test	600
(H) Final Hydrostatic Mud	2063	PSI	Initial Shut-In	45	Jars	

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Approved By [Signature]
 Our Representative Rod Steinbrink

Final Flow	30	Safety Joint	
Final Shut-In	45	Straddle	X 250
		Circ. Sub	X N/C
		Sampler	
		Extra Packer	X 150
		Other	
		TOTAL PRICE \$	1000