

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name MICHAELIS #3 Test No. 1 Date 12/12/93
Company ABERCROMBIE DRILLING INC Zone TORONTO
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3097
Co. Rep./Geo. MIKE DIXION Cont. ABERCROMBIE DRLG RIG #4 Est. Ft. of Pay 3
Location: Sec. 15 Twp. 12S Rge. 33W Co. LOGAN State KS

Interval Tested 3998-4034 Drill Pipe Size 4.5" XH
Anchor Length 36 Wt. Pipe I.D. - 2.7 Ft. Run 635
Top Packer Depth 3993 Drill Collar - 2.25 Ft. Run 9.2
Bottom Packer Depth 3998 Mud Wt. 52 lb/Gal.
Total Depth 4034 Viscosity 52 Filtrate 8.8

Tool Open @ 1:57 AM Initial Blow SURFACE BLOW TO 3.5" IN 30 MINUTES

Final Blow SURFACE BLOW TO 4.5" IN 60 MINUTES

Recovery - Total Feet 115 Flush Tool? NO

Rec. 189 Feet of GAS IN PIPE
Rec. 85 Feet of CLEAN OIL
Rec. 30 Feet of OIL CUT MUD- 20% OIL/ 80% MUD
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 110 °F Gravity 34 °API @ 70 °F Corrected Gravity 33 °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 5000 ppm System

(A) Initial Hydrostatic Mud 1867.1 PSI AK1 Recorder No. 13308 Range 4700

(B) First Initial Flow Pressure 43.9 PSI @ (depth) 4003 w / Clock No. 7452

(C) First Final Flow Pressure 45.2 PSI AK1 Recorder No. 11057 Range 4500

(D) Initial Shut-in Pressure 1019.0 PSI @ (depth) 4029 w / Clock No. 30401

(E) Second Initial Flow Pressure 65.7 PSI AK1 Recorder No. _____ Range _____

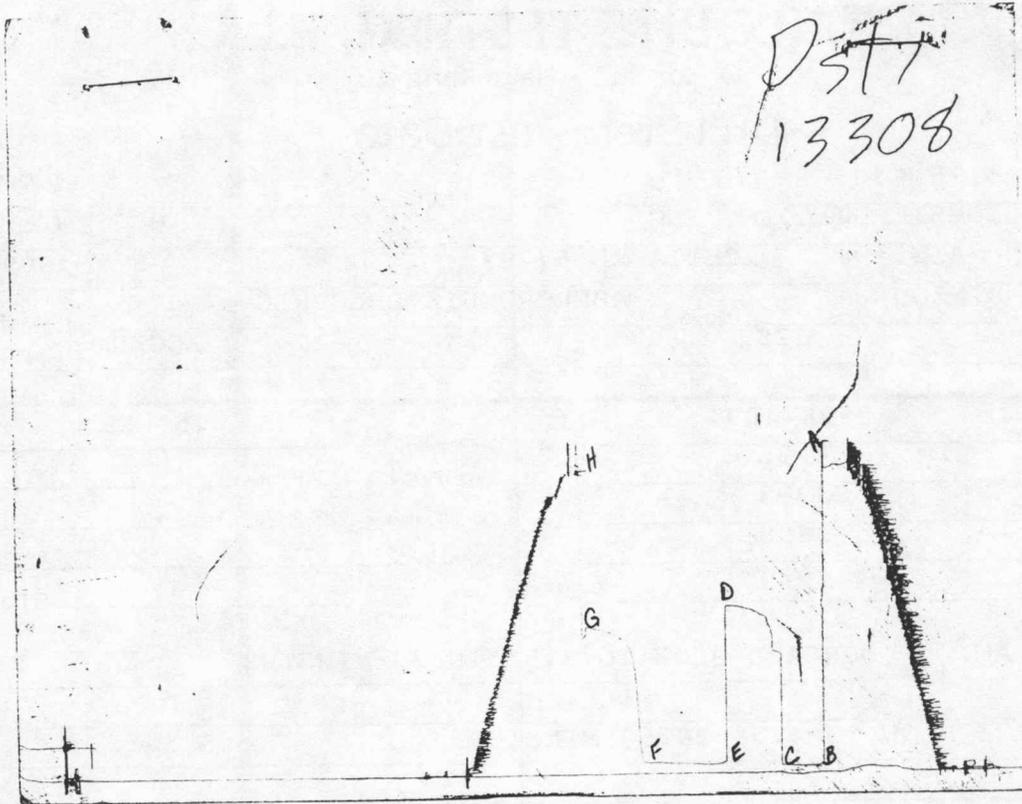
(F) Second Final Flow Pressure 71.7 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 906.5 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 1861.1 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative MARK HERSKOWITZ

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1890	1867.1
(B) FIRST INITIAL FLOW PRESSURE	24	43.9
(C) FIRST FINAL FLOW PRESSURE	36	45.2
(D) INITIAL CLOSED-IN PRESSURE	1006	1019
(E) SECOND INITIAL FLOW PRESSURE	48	65.7
(F) SECOND FINAL FLOW PRESSURE	60	71.7
(G) FINAL CLOSED-IN PRESSURE	900	906.5
(H) FINAL HYDROSTATIC MUD	1867	1861.1

CALCULATED RECOVERY ANALYSIS

WEIGHT PIPE

DST #

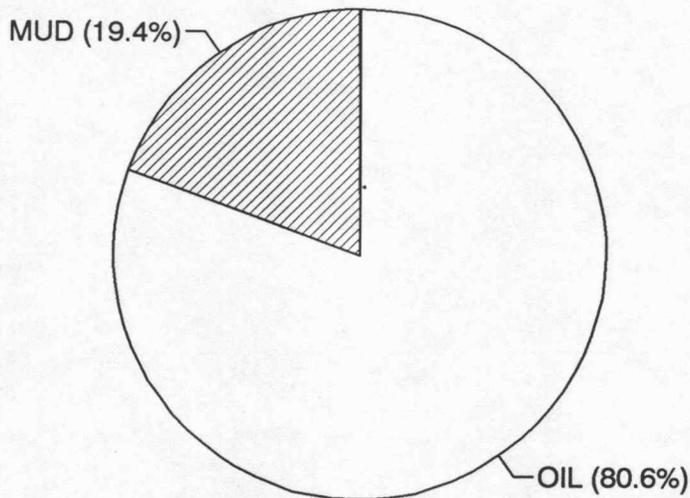
1

TICKET #

6799

SAMPLE #	TOTAL FEET	GAS		OIL		WATER		MUD	
		%	FEET	%	FEET	%	FEET	%	FEET
1	85	0	0	100	85	0	0	0	0
2	30	0	0	20	15	0	0	80	24
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
TOTAL	115	0	0	86.956522	100	0	0	20.87	24

		HRS OPEN	BBL/DAY
BBL OIL=	0.7 *	1.5	11.2
BBL WATER=	0 *		0
BBL MUD=	0.168		
BBL GAS=	0		



TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 6799

Well Name & No. Michael 15 3^{##} Test No. 1 Date 12-12-93
 Company ABERCROMBIE INC Zone Tested TORONTO
 Address 150N MAIN ST #801 Wichita Elevation 3097 ~~KS~~ K19
 Co. Rep./Geo. MIKE DRAXION cont. ALA Rig 4 Est. Ft. of Pay 3
 Location: Sec. 15 Twp. 12 S Rge. 33 W Co. LOGAN State KS
 No. of Copies _____ Distribution Sheet _____ Yes _____ No _____ Turnkey _____ Yes _____ No _____ Evaluation _____

Interval Tested 3998-4034 Drill Pipe Size 4 1/2 X H
 Anchor Length 36 Top Choke — 1" _____ Bottom Choke — 3/4" _____
 Top Packer Depth 3993 Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
 Bottom Packer Depth 3998 Wt. Pipe I.D. — 2.7 Ft. Run 635
 Total Depth 4034 Drill Collar — 2.25 Ft. Run _____
 Mud Wt. 9.2 LCM TR. lb/gal. Viscosity 52 Filtrate 8.8
 Tool Open @ 1:57 AM Initial Blow SUR TO 3 1/2" IN 30 MIN

Final Blow SUR Blow to 4 1/2 IN 60 MIN

Recovery — Total Feet	Feet of Gas in Pipe	Flush Tool?
<u>115</u>	<u>189</u>	_____
Rec. <u>85</u> Feet Of <u>C. Oil</u>	% gas <u>100%</u> oil _____	% water _____ % mud _____
Rec. <u>30</u> Feet Of <u>Oil C Mud</u>	% gas <u>20%</u> oil _____	% water <u>80%</u> mud _____
Rec. _____ Feet Of _____	% gas _____ oil _____	% water _____ % mud _____
Rec. _____ Feet Of _____	% gas _____ oil _____	% water _____ % mud _____
Rec. _____ Feet Of _____	% gas _____ oil _____	% water _____ % mud _____

BHT 110 °F Gravity 34 °API ~~30~~ 70 Corrected Gravity 33 °API
 RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 5000 ppm System
 (A) Initial Hydrostatic Mud 1890 PSI AK1 Recorder No. 13308 Range 4700
 (B) First Initial Flow Pressure 24 PSI @ (depth) 4003 w/Clock No. 7452
 (C) First Final Flow Pressure 36 PSI AK1 Recorder No. 11057 Range 4500
 (D) Initial Shut-In Pressure 1000 PSI @ (depth) 4029 w/Clock No. 30401
 (E) Second Initial Flow Pressure 48 PSI AK1 Recorder No. _____ Range _____
 (F) Second Final Flow Pressure 60 PSI @ (depth) _____ w/Clock No. _____
 (G) Final Shut-In Pressure 900 PSI Initial Opening 30 Test
 (H) Final Hydrostatic Mud 1867 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.

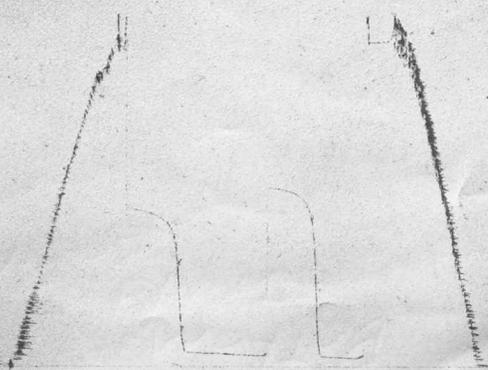
Final Flow 60 Safety Joint ~~NC~~
 Final Shut-In 45 Straddle _____
 Circ. Sub NC
 Sampler _____
 Extra Packer _____
 Other _____

Approved By [Signature]
 Our Representative [Signature]
 Printcraft Printers - Hays, KS

TOTAL PRICE \$ _____

Abercrombie

Dst 1
11057



TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name MICHAELIS #3 Test No. 2 Date 12/12/93
Company ABERCROMBIE DRILLING INC Zone LANSING "A"
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3097
Co. Rep./Geo. MIKE DIXION Cont. ABERCROMBIE DRLG RIG #4 Est. Ft. of Pay 4
Location: Sec. 15 Twp. 12S Rge. 33W Co. LOGAN State KS

Interval Tested 4033-4050 Drill Pipe Size 4.5" XH
Anchor Length 17 Wt. Pipe I.D. - 2.7 Ft. Run 635
Top Packer Depth 4028 Drill Collar - 2.25 Ft. Run 8.7
Bottom Packer Depth 4033 Mud Wt. 8.7 lb/Gal.
Total Depth 4050 Viscosity 51 Filtrate 8

Tool Open @ 1:52 PM Initial Blow GOOD BLOW OFF BOTTOM IN 4 MINUTES

Final Blow GOOD BLOW OFF BOTTOM IN 4 MINUTES

Recovery - Total Feet 1280 Flush Tool? NO

Rec. 186 Feet of GAS IN PIPE
Rec. 350 Feet of CLEAN OIL
Rec. 186 Feet of SLTLY OIL CUT WATER
Rec. 744 Feet of WATER
Rec. _____ Feet of _____

BHT 116 °F Gravity 34 °API @ 75 °F Corrected Gravity 32.5 °API
RW 0.11 @ _____ °F Chlorides 78000 ppm Recovery Chlorides 6000 ppm System

(A) Initial Hydrostatic Mud 1955.2 PSI AK1 Recorder No. 11057 Range 4500

(B) First Initial Flow Pressure 73.9 PSI @ (depth) 4035 w / Clock No. 7452

(C) First Final Flow Pressure 313.9 PSI AK1 Recorder No. 2023 Range 4000

(D) Initial Shut-in Pressure 1188.3 PSI @ (depth) 4045 w / Clock No. 30401

(E) Second Initial Flow Pressure 357.6 PSI AK1 Recorder No. _____ Range _____

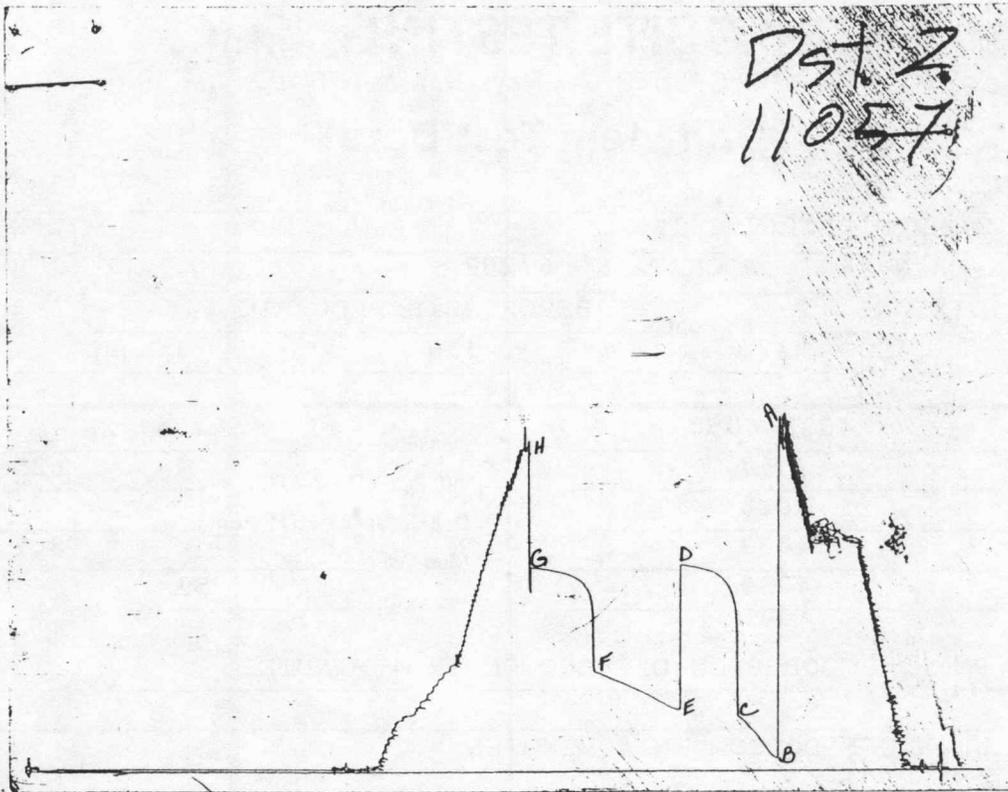
(F) Second Final Flow Pressure 572.5 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 1174.8 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 1913.6 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative MARK HERSKOWITZ

CHART PAGE



This is an actual photograph of recorder chart

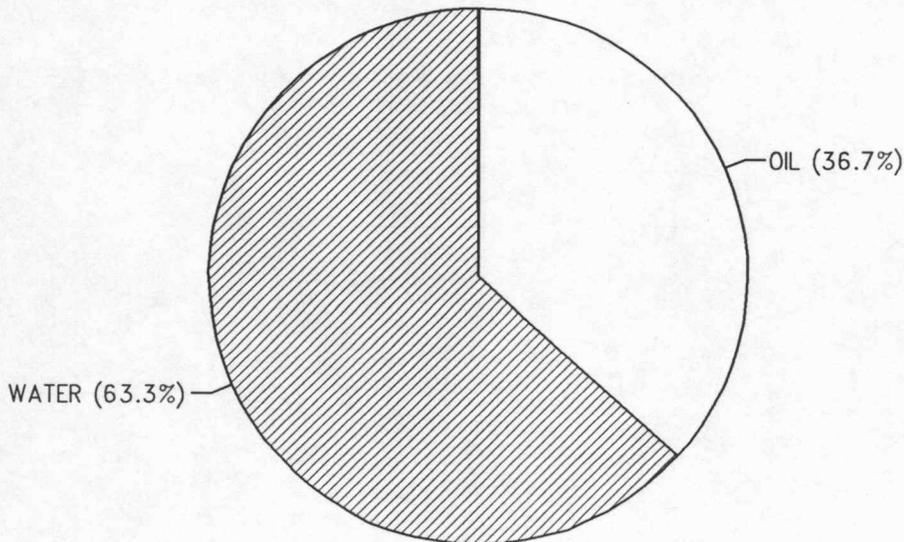
	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1998	1955.2
(B) FIRST INITIAL FLOW PRESSURE	87	73.9
(C) FIRST FINAL FLOW PRESSURE	287	313.9
(D) INITIAL CLOSED-IN PRESSURE	1176	1188.3
(E) SECOND INITIAL FLOW PRESSURE	379	357.6
(F) SECOND FINAL FLOW PRESSURE	577	572.5
(G) FINAL CLOSED-IN PRESSURE	1157	1174.8
(H) FINAL HYDROSTATIC MUD	1968	1913.6

CALCULATED RECOVERY ANALYSIS

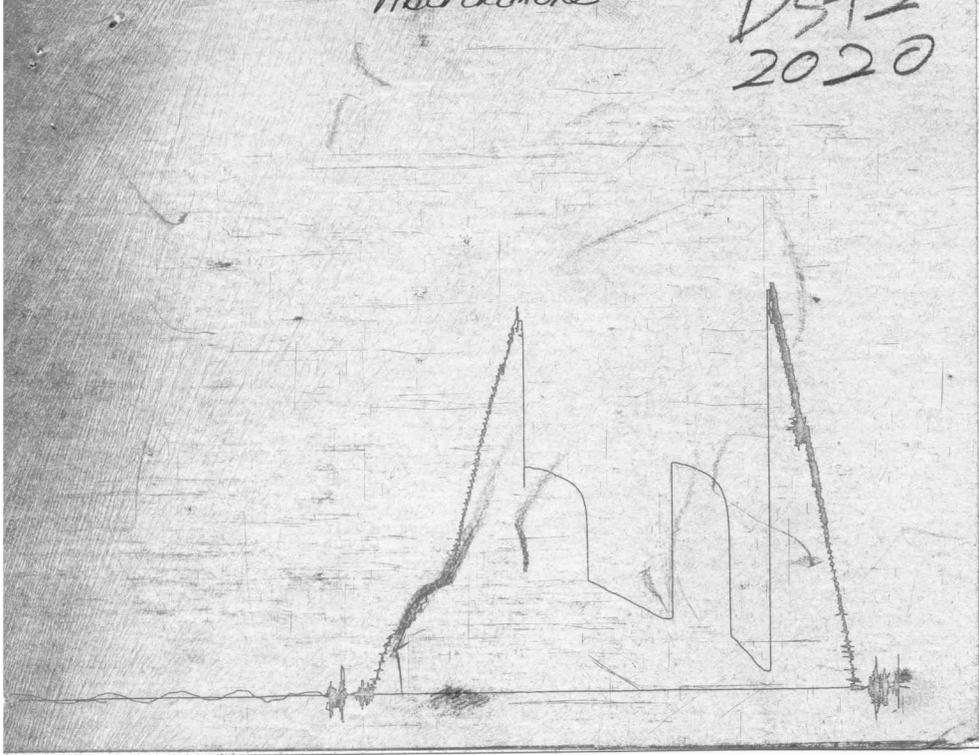
DST 2 TICKET # 6800

SAMPLE #	TOTAL FEET	GAS		OIL		WATER		MUD	
		%	FEET	%	FEET	%	FEET	%	FEET
DRILL 1	350	0	0	100	350	0	0	0	0
PIPE 2	186	0	0	1	1.86	99	184.14	0	0
3	109	0	0	0	0	100	109	0	0
4			0		0		0		0
5			0		0		0		0
6			0		0		0		0
WEIGHT 1	635	0	0	0	0	100	635	0	0
PIPE 2			0		0		0		0
3			0		0		0		0
4			0		0		0		0
DRILL 1			0		0		0		0
COLLAR 2			0		0		0		0
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
TOTAL	1280		0		351.86		928.14		0

		HRS OPEN	BBL/DAY
BBL OIL=	5.0034492 *	1.5	80.055187
BBL WATER=	8.6134508 *		137.81521
BBL MUD=	0		.
BBL GAS =	0		



VST-
2020



Abercrombie - DST #2

Recorder # 11057

30-45-60-45

A.	1.746	-	1955.2
B.	.066	-	73.9
C.	.280	-	313.9
D.	1.062	-	1188.3
E.	.319	-	357.6
F.	.511	-	572.5
G.	1.050	-	1174.8
H.	1.709	-	1913.6

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 6800

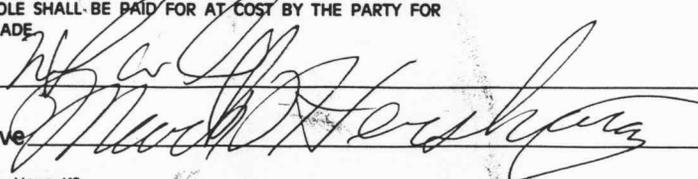
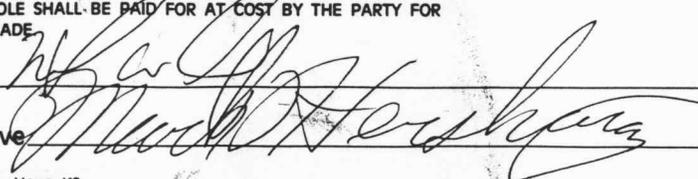
Well Name & No.	MICHAELIS 3	Test No.	2	Date	12-12-93										
Company	ABERCROMBIE INC	Zone Tested	LAN #												
Address	150 N MAIN ST #801 WICHITA	Elevation	3097 KB												
Co. Rep./Geo.	MIKE DIXON	Cont.	A.H.A. Rig 4	Est. Ft. of Pay	4										
Location: Sec.	15	Twp.	12S	Rge.	33W	Co.	LOGAN	State	KS						
No. of Copies		Distribution Sheet		Yes		No		Turnkey		Yes		No		Evaluation	

Interval Tested	4033 - 4050	Drill Pipe Size	4 1/2 X #				
Anchor Length	17	Top Choke - 1"		Bottom Choke - 3/4"			
Top Packer Depth	4028	Hole Size - 7 7/8"		Rubber Size - 6 3/4"			
Bottom Packer Depth	4033	Wt. Pipe I.D. - 2.7 Ft. Run	635				
Total Depth	4050	Drill Collar - 2.25 Ft. Run					
Mud Wt.	8.7	lb/gal		Viscosity	51	Filtrate	8.0
Tool Open @	1:52 PM	Initial Blow	Good Blow OFF BOTTOM IN 4 MIN				
Final Blow	Good Blow OFF BOTTOM IN 4 MIN						

Recovery - Total Feet	1280	Feet of Gas in Pipe	186	Flush Tool?							
Rec.	350	Feet Of	C.O.I.	%gas	100%	%oil		%water		%mud	
Rec.	186	Feet Of	SOIL WATER	%gas		%oil		%water		%mud	
Rec.	744	Feet Of	WATER	%gas		%oil		%water		%mud	
Rec.		Feet Of		%gas		%oil		%water		%mud	
Rec.		Feet Of		%gas		%oil		%water		%mud	

BHT	116	°F	Gravity	34	°API @	75 75	°F	Corrected Gravity	32.5	°API	
RW	11	@	62	°F	Chlorides	78000	ppm	Recovery	6000	ppm	System
(A) Initial Hydrostatic Mud	1998	PSI	AK1 Recorder No.	11057	Range	4500					
(B) First Initial Flow Pressure	87	PSI	@ (depth)	4035	w/Clock No.	7452					
(C) First Final Flow Pressure	287	PSI	AK1 Recorder No.	2023	Range	4000					
(D) Initial Shut-In Pressure	1176	PSI	@ (depth)	4045	w/Clock No.	30401					
(E) Second Initial Flow Pressure	379	PSI	AK1 Recorder No.		Range						
(F) Second Final Flow Pressure	577	PSI	@ (depth)		w/Clock No.						
(G) Final Shut-In Pressure	1157	PSI	Initial Opening	30	Test	<input checked="" type="checkbox"/>					
(H) Final Hydrostatic Mud	1968	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 
Our Representative 

Printcraft Printers - Hays, KS

Final Flow	40	Safety Joint	
Final Shut-In	45	Straddle	
		Circ. Sub	<input checked="" type="checkbox"/> NC
		Sampler	
		Extra Packer	
		Other	
		TOTAL PRICE \$	

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name MICHAELIS #3 Test No. 3 Date 12/13/93
Company ABERCROMBIE DRILLING INC Zone LANSING "B"
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3097
Operator/Geo. MIKE DIXION Cont. ABERCROMBIE DRLG RIG #4 Est. Ft. of Pay 4
Location: Sec. 15 Twp. 12S Rge. 33W Co. LOGAN State KS

Interval Tested 4062-4084 Drill Pipe Size 4.5" XH
Anchor Length 22 Wt. Pipe I.D. - 2.7 Ft. Run 635
Packer Depth 4057 Drill Collar - 2.25 Ft. Run 9.2
Bottom Packer Depth 4062 Mud Wt. 70 lb/Gal.
Total Depth 4084 Viscosity 70 Filtrate 8

Time of Open @ 4:03 AM Initial Blow GOOD BLOW OFF BOTTOM IN 5 MINUTES 30 SECONDS
Final Blow OFF BOTTOM IN 7 MINUTES

Recovery - Total Feet 1120 Flush Tool? NO

c. 372 Feet of GAS IN PIPE
c. 210 Feet of CLEAN OIL
c. 620 Feet of GSY WATER CUT OIL-20%GAS/50%OIL/30%WTR
c. 186 Feet of GSY OIL & MUD CUT WTR-10%GAS/10%OIL/50%WTR/30%MUD
c. 104 Feet of WATER

API 117 °F Gravity 30 °API @ 60 °F Corrected Gravity 30 °API
V 0.25 @ 60 °F Chlorides 32000 ppm Recovery Chlorides 6000 ppm System

Initial Hydrostatic Mud 2085.9 PSI AK1 Recorder No. 11057 Range 4500

First Initial Flow Pressure 56.0 PSI @ (depth) 4064 w / Clock No. 7452

First Final Flow Pressure 218.6 PSI AK1 Recorder No. 2023 Range 4000

Initial Shut-in Pressure 1210.7 PSI @ (depth) 4079 w / Clock No. 30401

Second Initial Flow Pressure 399.1 PSI AK1 Recorder No. _____ Range _____

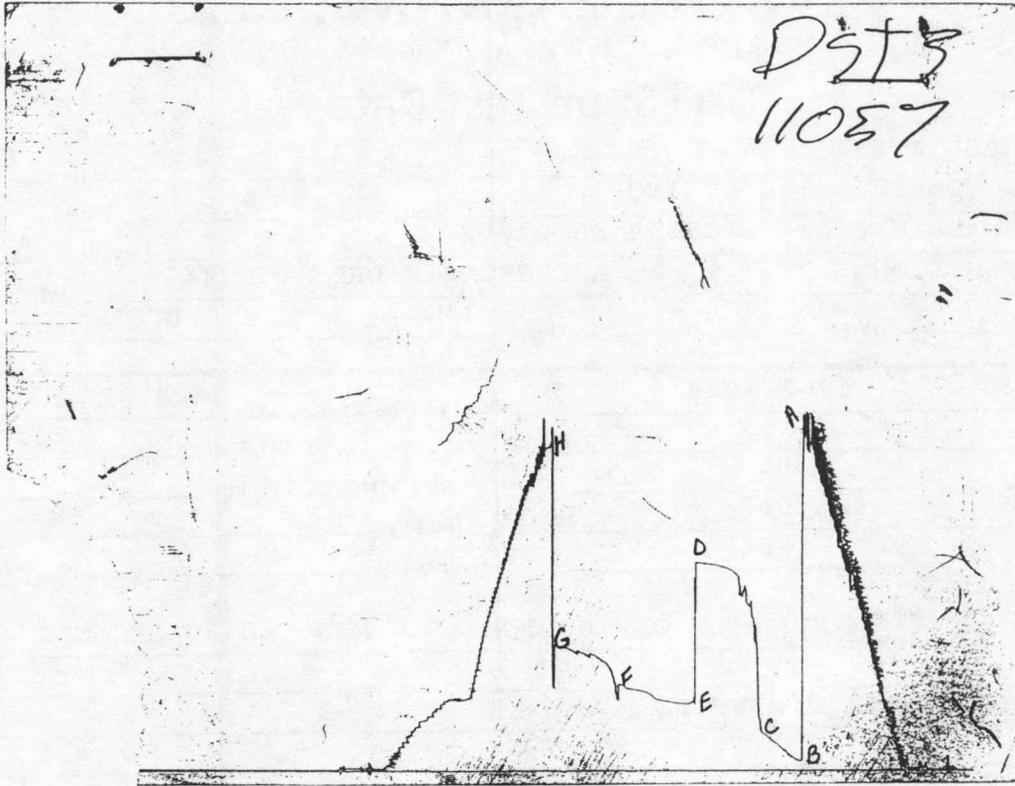
Second Final Flow Pressure 501.0 PSI @ (depth) _____ w / Clock No. _____

Final Shut-in Pressure 727.6 PSI Initial Opening 30 Final Flow 60

Final Hydrostatic Mud 1994.5 PSI Initial Shut-in 45 Final Shut-in 45

Operator Representative MARK HERSKOWITZ

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2027	2085.9
(B) FIRST INITIAL FLOW PRESSURE	44	56
(C) FIRST FINAL FLOW PRESSURE	213	218.6
(D) INITIAL CLOSED-IN PRESSURE	1197	1210.7
(E) SECOND INITIAL FLOW PRESSURE	392	399.1
(F) SECOND FINAL FLOW PRESSURE	493	501
(G) FINAL CLOSED-IN PRESSURE	727	727.6
(H) FINAL HYDROSTATIC MUD	1993	1994.5

CALCULATED RECOVERY ANALYSIS

DST

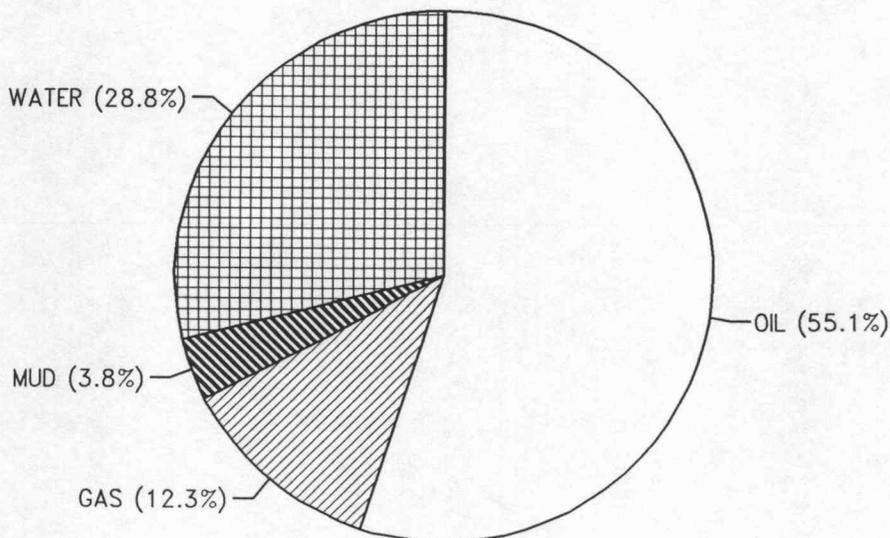
3

TICKET #

6351

SAMPLE #	TOTAL FEET	GAS		OIL		WATER		MUD	
		%	FEET	%	FEET	%	FEET	%	FEET
DRILL 1	210	0	0	100	210	0	0	0	0
PIPE 2	275	20	55	50	137.5	30	82.5	0	0
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
6			0		0		0		0
WEIGHT 1	345	20	69	50	172.5	30	103.5	0	0
PIPE 2	186	10	18.6	10	18.6	50	93	30	55.8
3	104	0	0	0	0	100	104	0	0
4			0		0		0		0
DRILL 1			0		0		0		0
COLLAR 2			0		0		0		0
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
TOTAL	1120		142.6		538.6		383		55.8

	BBL OIL=	BBL WATER=	BBL MUD=	BBL GAS =	HRS OPEN	BBL/DAY
	6.27915	3.27665	0.43524	1.3953	1.5	100.4664
	*	*	.			52.4264



TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 6351

Well Name & No. Michaelis 3 Test No. 3 Date 12-13-93
Company ABERROMBIE INC Zone Tested LAN B'
Address 150 N MAIN STE 801 WICHITA Elevation 3097 MIB
Co. Rep./Geo. MIKE DIVION cont. ALA Rig 4 Est. Ft. of Pay 4
Location: Sec. 15 Twp. 12 S Rge. 3 E Co. LOGAN State KS
No. of Copies _____ Distribution Sheet _____ Yes _____ No _____ Turnkey _____ Yes _____ No _____ Evaluation _____

Interval Tested 4062 4084 Drill Pipe Size 4 1/2 XH
Anchor Length 22 Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth 4057 Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth 4062 Wt. Pipe I.D. — 2.7 Ft. Run 635
Total Depth 4084 Drill Collar — 2.25 Ft. Run _____
Mud Wt. 9.2 LCM TR lb/gal. Viscosity 70 Filtrate 8.0
Tool Open @ 4:03 AM Initial Blow Good Blow OFF BOTTOM IN 5 MIN
30 SEC
Final Blow OFF BOTTOM IN 7 MIN

Recovery — Total Feet	Feet of Gas in Pipe	Flush Tool?
<u>120</u>	<u>372</u>	_____
Rec. <u>210</u> Feet Of <u>COIL</u>	%gas _____ %oil _____ %water _____ %mud _____	
Rec. <u>420</u> Feet Of <u>GWC OIL</u>	<u>20</u> %gas <u>50</u> %oil <u>30</u> %water _____ %mud _____	
Rec. <u>186</u> Feet Of <u>OGC MIN</u>	<u>10</u> %gas <u>10</u> %oil <u>50</u> %water <u>30</u> %mud	
Rec. <u>109</u> Feet Of <u>WATER</u>	%gas _____ %oil _____ %water _____ %mud _____	
Rec. _____ Feet Of _____	%gas _____ %oil _____ %water _____ %mud _____	

BHT 117 °F Gravity 30 °API @ 60' °F Corrected Gravity 30 °API
RW 25 @ 60 °F Chlorides 32000 ppm Recovery Chlorides 4000 ppm System

(A) Initial Hydrostatic Mud 2027 PSI Ak1 Recorder No. 11057 Range 4500
(B) First Initial Flow Pressure 44 PSI @ (depth) 4064 w/Clock No. 7452
(C) First Final Flow Pressure 213 PSI AK1 Recorder No. 2023 Range 4000
(D) Initial Shut-In Pressure 1197 PSI @ (depth) 4079 w/Clock No. 30401
(E) Second Initial Flow Pressure 392 PSI AK1 Recorder No. _____ Range _____
(F) Second Final Flow Pressure 493 PSI @ (depth) _____ w/Clock No. _____
(G) Final Shut-In Pressure 727 PSI Initial Opening 30 Test
(H) Final Hydrostatic Mud 1993 PSI Initial Shut-In 45 Jars _____

Final Flow 40 Safety Joint _____
Final Shut-In 45 Straddle _____
Circ. Sub NC
Sampler _____
Extra Packer _____
Other _____

Approved By _____
Our Representative Mark J. [Signature]

Abercrombie

VSI
2023

No. Name: Abercrombie/ Michaels
DST #: 3 Recorder # 11057

30-45-60-45

1.862	2085.9	2085.9	2
.050		56.0	3
.195		218.6	4
1.082		1210.7	5
.356		399.1	6
.447		501.0	7
.650		727.6	8
1.781		1994.5	9
			10
			11
			12
			13
			14
			15

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name MICHAELIS #3 Test No. 4 Date 12/13/93
Company ABERCROMBIE DRILLING INC Zone LANSING "E&F"
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3097
Co. Rep./Geo. MIKE DIXION Cont. ABERCROMBIE DRLG RIG #4 Est. Ft. of Pay 4
Location: Sec. 15 Twp. 12S Rge. 33W Co. LOGAN State KS

Interval Tested 4113-4130 Drill Pipe Size 4.5" XH
Anchor Length 17 Wt. Pipe I.D. - 2.7 Ft. Run 635
Top Packer Depth 4108 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 4113 Mud Wt. 9.1 lb/Gal.
Total Depth 4130 Viscosity 50 Filtrate 8.8

Tool Open @ 9:52 PM Initial Blow GOOD BLOW OFF BOTTOM IN 2 MINUTES

Final Blow GOOD BLOW OFF BOTTOM IN 2 MINUTES 30 SECONDS

Recovery - Total Feet 1920 Flush Tool? NO

Rec. 350 Feet of GAS IN PIPE
Rec. 1890 Feet of CLEAN OIL
Rec. 30 Feet of SLTLY WTR CUT MUDDY OIL-50%OIL/ 5%WTR/45%MUD
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 120 °F Gravity 34 °API @ 70 °F Corrected Gravity 33 °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 6000 ppm System

(A) Initial Hydrostatic Mud 2016.9 PSI AK1 Recorder No. 11057 Range 4500

(B) First Initial Flow Pressure 60.5 PSI @ (depth) 4115 w / Clock No. 7452

(C) First Final Flow Pressure 364.3 PSI AK1 Recorder No. 2023 Range 4000

(D) Initial Shut-in Pressure 1225.3 PSI @ (depth) 4125 w / Clock No. 30401

(E) Second Initial Flow Pressure 402.4 PSI AK1 Recorder No. _____ Range _____

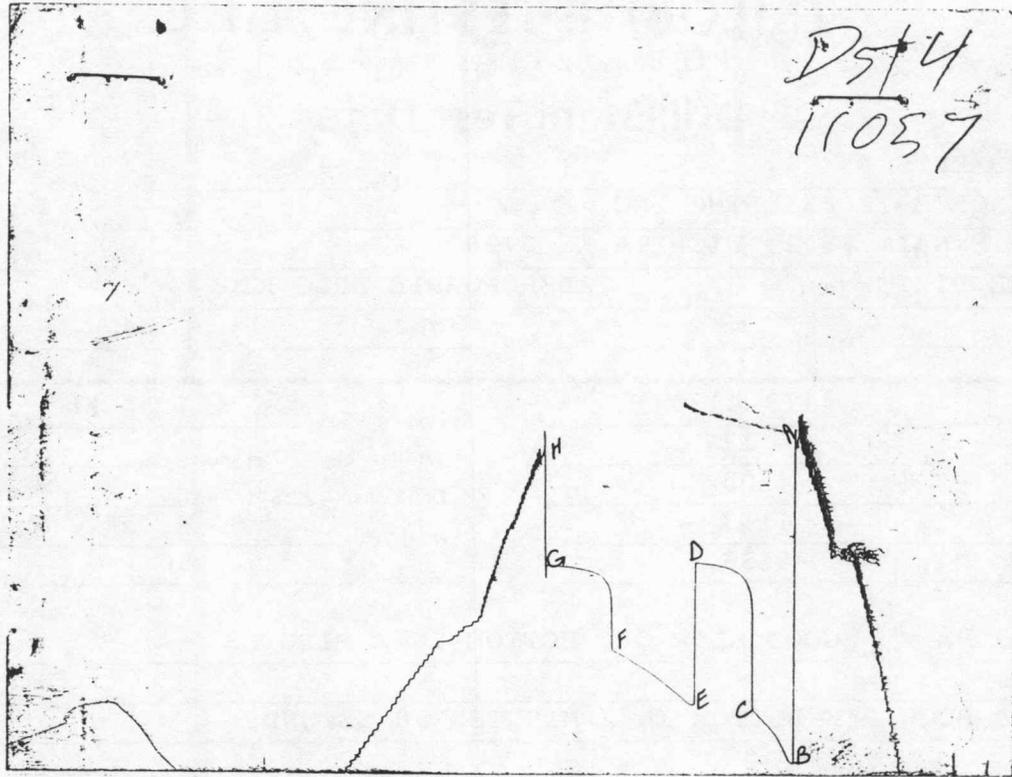
(F) Second Final Flow Pressure 704.2 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 1199.5 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2010.2 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative MARK HERSKOWITZ

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2039	2016.9
(B) FIRST INITIAL FLOW PRESSURE	109	60.5
(C) FIRST FINAL FLOW PRESSURE	357	364.3
(D) INITIAL CLOSED-IN PRESSURE	1235	1225.3
(E) SECOND INITIAL FLOW PRESSURE	459	402.4
(F) SECOND FINAL FLOW PRESSURE	732	704.2
(G) FINAL CLOSED-IN PRESSURE	1235	1199.5
(H) FINAL HYDROSTATIC MUD	2018	2010.2

CALCULATED RECOVERY ANALYSIS

DST

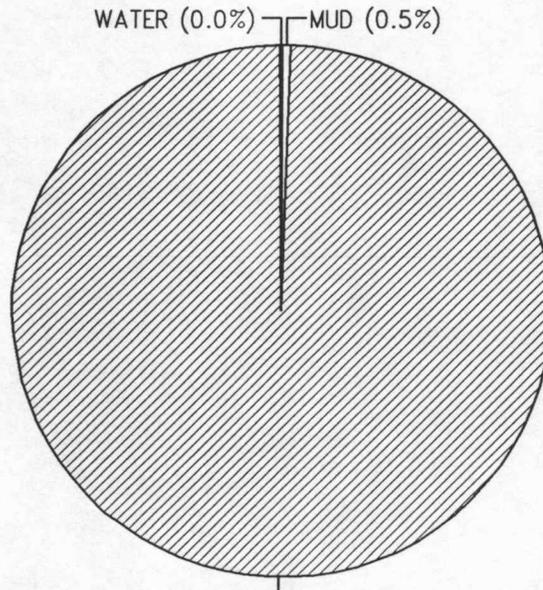
4

TICKET #

6352

SAMPLE #	TOTAL FEET	GAS		OIL		WATER		MUD	
		%	FEET	%	FEET	%	FEET	%	FEET
DRILL 1	1285	0	0	100	1285	0	0	0	0
PIPE 2			0		0		0		0
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
6			0		0		0		0
WEIGHT 1	605	0	0	100	605	0	0	0	0
PIPE 2	30	0	0	50	15	5	1.5	45	13.5
3			0		0		0		0
4			0		0		0		0
DRILL 1			0		0		0		0
COLLAR 2			0		0		0		0
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
TOTAL	1920		0		1905		1.5		13.5

			HRS OPEN	BBL/DAY
BBL OIL=	22.6127	*	1.5	361.8032
BBL WATER=	0.0105	*		0.168
BBL MUD=	0.1053			
BBL GAS =	0			



TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 6352

Well Name & No.	Michaelis 3	Test No.	4	Date	12-13-93
Company	ABERCROMBIE INC	Zone Tested	LAN E & F		
Address	150 N MAIN STE 801 WICHITA	Elevation	3097 KB		
Co. Rep./Geo.	MIKE DIXON	cont.	ALA. PIGY	Est. Ft. of Pay	4
Location: Sec.	15	Twp.	12S	Rge.	33W
			Co. Logan	State	KS
No. of Copies		Distribution Sheet	Yes	No	Turnkey
			Yes	No	Evaluation

Interval Tested	4113 - 4130	Drill Pipe Size	4 1/2 X H	
Anchor Length	17	Top Choke - 1"	Bottom Choke - 3/4"	
Top Packer Depth	4108	Hole Size - 7 7/8"	Rubber Size - 6 3/4"	
Bottom Packer Depth	4113	Wt. Pipe I.D. - 2.7 Ft. Run	635	
Total Depth	4130	Drill Collar - 2.25 Ft. Run		
Mud Wt.	9.1	lb/gal.	Viscosity 50	Filtrate 8.8
Tool Open @	9:52	Initial Blow	Good Blow OFF Bottom in 2 min	
Final Blow	Good Blow OFF Bottom in 2 MIN 30 SES			

Recovery - Total Feet	1920	Feet of Gas in Pipe	350	Flush Tool?			
Rec.	1890	Feet Of	C OIL	%gas 100%	%oil	%water	%mud
Rec.	30	Feet Of	SWMC OIL	%gas 50%	%oil	5%water	45% mud
Rec.		Feet Of		%gas	%oil	%water	%mud
Rec.		Feet Of		%gas	%oil	%water	%mud
Rec.		Feet Of		%gas	%oil	%water	%mud

BHT 120 °F Gravity 34 °API @ 70 °F Corrected Gravity 33 °API
RW @ °F Chlorides ppm Recovery Chlorides 4000 ppm System

(A) Initial Hydrostatic Mud	2039	PSI	AK1 Recorder No.	11057	Range	4500
(B) First Initial Flow Pressure	109	PSI	@ (depth)	4115	w/Clock No.	7452
(C) First Final Flow Pressure	357	PSI	AK1 Recorder No.	2023	Range	4000
(D) Initial Shut-in Pressure	1235	PSI	@ (depth)	4125	w/Clock No.	30401
(E) Second Initial Flow Pressure	459	PSI	AK1 Recorder No.		Range	
(F) Second Final Flow Pressure	732	PSI	@ (depth)		w/Clock No.	
(G) Final Shut-in Pressure	1235	PSI	Initial Opening	30	Test	✓
(H) Final Hydrostatic Mud	2018	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	✓ NC
		Sampler	
		Extra Packer	
		Other	
		TOTAL PRICE \$	

Approved By [Signature]
Our Representative [Signature]

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name MICHAELIS #3 Test No. 5 Date 12/14/93
Company ABERCROMBIE DRILLING INC Zone LANSING "H"
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3097
Co. Rep./Geo. MIKE DIXION Cont. ABERCROMBIE DRLG RIG #4 Est. Ft. of Pay 5
Location: Sec. 15 Twp. 12S Rge. 33W Co. LOGAN State KS

Interval Tested	<u>4186-4217</u>	Drill Pipe Size	<u>4.5" XH</u>
Anchor Length	<u>31</u>	Wt. Pipe I.D. - 2.7 Ft. Run	<u>635</u>
Top Packer Depth	<u>4181</u>	Drill Collar - 2.25 Ft. Run	<u>9.1</u>
Bottom Packer Depth	<u>4186</u>	Mud Wt.	<u>45</u> lb/Gal.
Total Depth	<u>4217</u>	Viscosity	<u>45</u>
		Filtrate	<u>9.2</u>

Tool Open @ 2:02 PM Initial Blow OPEN TO 2.5" IN 5 MINUTES-DIED OFF TO 1/2" IN 30 MINUTES

Final Blow WEAK SURFACE TO NO BLOW IN 26 MINUTES

Recovery - Total Feet 857 Flush Tool? NO

Rec. <u>323</u>	Feet of	<u>GAS IN PIPE</u>
Rec. <u>609</u>	Feet of	<u>CLEAN GASSY OIL-10%GAS/ 90%OIL</u>
Rec. <u>62</u>	Feet of	<u>SLTLY GAS & MUD CUT OIL-10%GAS/80%OIL/10%MUD</u>
Rec. <u>186</u>	Feet of	<u>SLTLY WTR CUT GSY MUDDY OIL-30%GAS/40%OIL/5%WTR/25%MUD</u>
Rec. _____	Feet of	_____

BHT 115 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 6000 ppm System

(A) Initial Hydrostatic Mud 2002.3 PSI AK1 Recorder No. 11057 Range 4500

(B) First Initial Flow Pressure 75.1 PSI @ (depth) 4183 w / Clock No. 7452

(C) First Final Flow Pressure 270.1 PSI AK1 Recorder No. 2023 Range 4000

(D) Initial Shut-in Pressure 687.5 PSI @ (depth) 4212 w / Clock No. 30401

(E) Second Initial Flow Pressure 299.3 PSI AK1 Recorder No. _____ Range _____

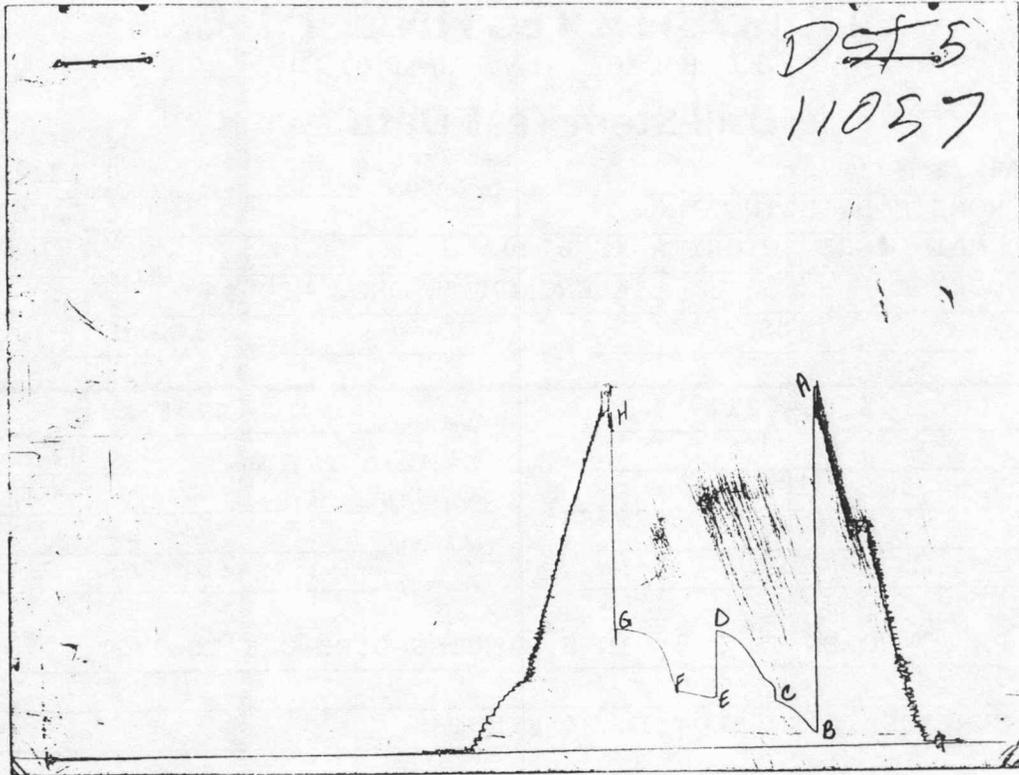
(F) Second Final Flow Pressure 337.4 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 704.2 PSI Initial Opening 30 Final Flow 30

(H) Final Hydrostatic Mud 1976.5 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative MARK HERSKOWITZ

CHART PAGE



This is an actual photograph of recorder chart

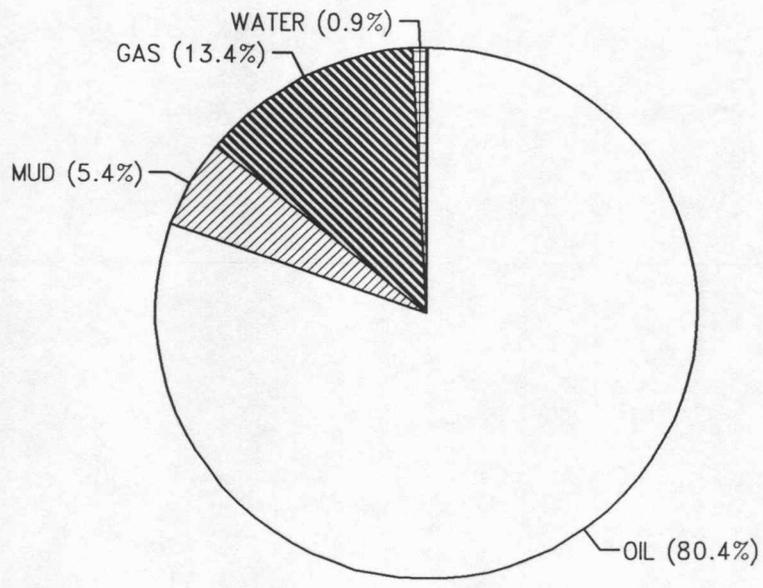
	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2018	2002.3
(B) FIRST INITIAL FLOW PRESSURE	87	75.1
(C) FIRST FINAL FLOW PRESSURE	246	270.1
(D) INITIAL CLOSED-IN PRESSURE	684	687.5
(E) SECOND INITIAL FLOW PRESSURE	308	299.3
(F) SECOND FINAL FLOW PRESSURE	338	337.4
(G) FINAL CLOSED-IN PRESSURE	694	704.2
(H) FINAL HYDROSTATIC MUD	1988	1976.5

CALCULATED RECOVERY ANALYSIS

DST 5 TICKET # 6353

SAMPLE #	TOTAL FEET	GAS		OIL		WATER		MUD	
		%	FEET	%	FEET	%	FEET	%	FEET
DRILL 1	222	10	22.2	90	199.8	0	0	0	0
PIPE 2			0		0		0		0
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
6			0		0		0		0
WEIGHT 1	387	10	38.7	90	348.3	0	0	0	0
PIPE 2	62	10	6.2	80	49.6	0	0	10	6.2
3	186	30	55.8	40	74.4	5	9.3	25	46.5
4			0		0		0		0
DRILL 1			0		0		0		0
COLLAR 2			0		0		0		0
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
TOTAL	857		122.9		672.1		9.3		52.7

	BBL	HRS OPEN	BBL/DAY
BBL OIL=	6.147256	*	1 147.53414
BBL WATER=	0.0651	*	1.5624
BBL MUD=	0.41106		.
BBL GAS =	1.020584		



TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 6353

Well Name & No. Michaelis 3 Test No. 5 Date 12-14-93
 Company ABERCROMBIE INC Zone Tested LAN+KC H
 Address 150 N MAIN STE 801 WICHITA Elevation 3097 X B
 Co. Rep./Geo. MIKE LIXION cont. ALA Rig 4 Est. Ft. of Pay 5
 Location: Sec. 15 Twp. 12S Rge. 33W Co. LOGAN State KS
 No. of Copies _____ Distribution Sheet _____ Yes _____ No _____ Turnkey _____ Yes _____ No _____ Evaluation _____

Interval Tested 4186-4217 Drill Pipe Size 4 1/2 X H
 Anchor Length 31 Top Choke — 1" _____ Bottom Choke — 3/4" _____
 Top Packer Depth 4181 Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
 Bottom Packer Depth 4186 Wt. Pipe I.D. — 2.7 Ft. Run 6.35
 Total Depth 4217 Drill Collar — 2.25 Ft. Run _____
 Mud Wt. 9.1 LCM lb/gal. Viscosity 45 Filtrate 9.2
 Tool Open @ 2:02 PM Initial Blow OPEN TO 2 1/2" IN 5 MIN DIES OFF
TO 1/2" IN 30 MIN
 Final Blow WEAK SUR TO NO BLOW IN 26 MIN

Recovery — Total Feet	Feet of Gas in Pipe	Flush Tool?
<u>857</u>	<u>323</u>	_____
Rec. <u>609</u> Feet Of <u>CGAS OIL</u> 10% gas 90% oil %water %mud		
Rec. <u>62</u> Feet Of <u>SMG OIL</u> 10% gas 80% oil %water 10% mud		
Rec. <u>186</u> Feet Of <u>SWC MGO</u> 130% gas 40% oil 5% water 25% mud		
Rec. _____ Feet Of _____ %gas %oil %water %mud		
Rec. _____ Feet Of _____ %gas %oil %water %mud		

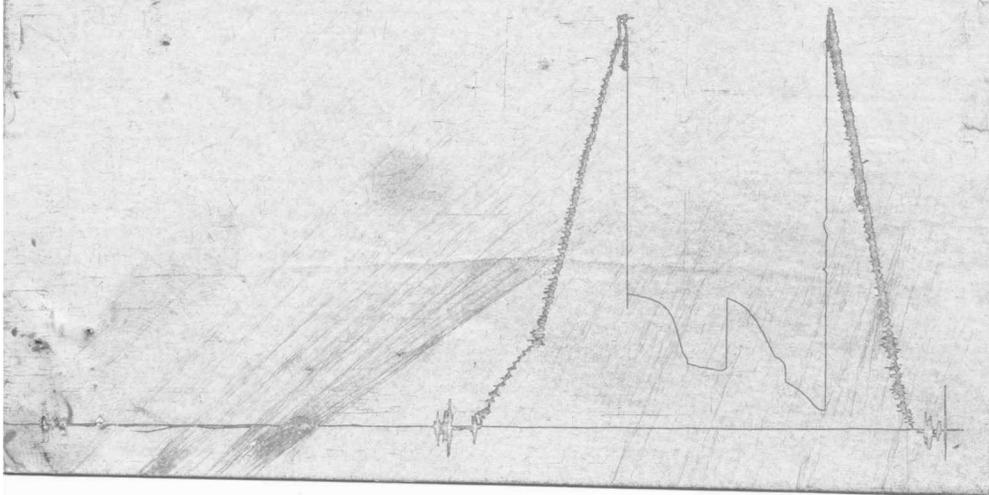
BHT 115 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
 RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 6000 ppm System
 (A) Initial Hydrostatic Mud 2018 PSI Ak1 Recorder No. 11057 Range 4500
 (B) First Initial Flow Pressure 87 PSI @ (depth) 4183 w/Clock No. 7452
 (C) First Final Flow Pressure 246 PSI AK1 Recorder No. 2023 Range 4000
 379 (D) Initial Shut-In Pressure 684 PSI @ (depth) 4212 w/Clock No. 30401
 (E) Second Initial Flow Pressure 308 PSI AK1 Recorder No. _____ Range _____
 (F) Second Final Flow Pressure 338 PSI @ (depth) _____ w/Clock No. _____
 379 (G) Final Shut-In Pressure 694 PSI Initial Opening 30 Test
 (H) Final Hydrostatic Mud 1988 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 45 Straddle _____
 Circ. Sub NC
 Sampler _____
 Extra Packer _____
 Other _____
 TOTAL PRICE \$ _____

Approved By [Signature]
 Our Representative [Signature]

Dst. 5
2023



Abercrombie - Michaelis

DST #5 - / Rec # 11057

30-45-30-45

A	1.788	2002.3	
B	.067	75.1	
C	.241	270.1	
D	.614	687.5	
E	.267	299.3	
F	.301	337.4	
G	.629	704.2	
H	1.765	1976.5	

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name MICHAELIS #3 Test No. 6 Date 12/15/93
Company ABERCROMBIE DRILLING INC Zone LKC-"I"
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3097
Co. Rep./Geo. MIKE DIXION Cont. ABERCROMBIE DRLG RIG #4 Est. Ft. of Pay _____
Location: Sec. 15 Twp. 12S Rge. 33W Co. LOGAN State KS

Interval Tested 4217-4250 Drill Pipe Size 4.5" XH
Anchor Length 33 Wt. Pipe I.D. - 2.7 Ft. Run 635
Top Packer Depth 4212 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 4217 Mud Wt. 8.9 lb/Gal.
Total Depth 4250 Viscosity 49 Filtrate 9.2

Tool Open @ 3:00 AM Initial Blow SURFACE TO BOTTOM IN 10 MINUTES

Final Blow SURFACE TO BOTTOM IN 14 MINUTES

Recovery - Total Feet 712 Flush Tool? NO

Rec. 206 Feet of GAS IN PIPE
Rec. 30 Feet of CLEAN OIL
Rec. 372 Feet of OIL CUT MUDDY WATER-10%OIL/40%WTR/50%MUD
Rec. 186 Feet of SLTLY OIL CUT MUDDY WTR-2%OIL/85%WTR/13%MUD
Rec. 124 Feet of S.M. WATER

BHT 119 °F Gravity 38 °API @ 70 °F Corrected Gravity 37 °API
RW 0.21 @ 68 °F Chlorides 35000 ppm Recovery Chlorides 6000 ppm System

(A) Initial Hydrostatic Mud 2057.2 PSI AK1 Recorder No. 11057 Range 4500

(B) First Initial Flow Pressure 199.6 PSI @ (depth) 4220 w / Clock No. 7452

(C) First Final Flow Pressure 321.5 PSI AK1 Recorder No. 2023 Range 4000

(D) Initial Shut-in Pressure 395.4 PSI @ (depth) 4245 w / Clock No. 30401

(E) Second Initial Flow Pressure 343.9 PSI AK1 Recorder No. _____ Range _____

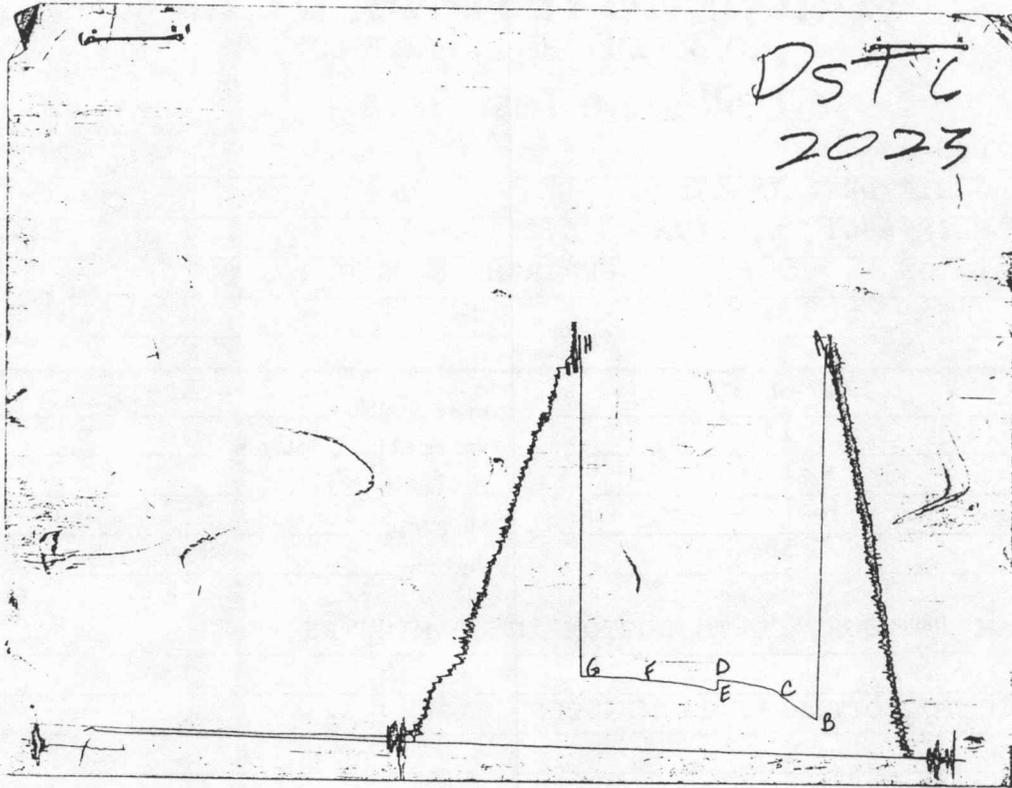
(F) Second Final Flow Pressure 381.3 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 388.4 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2033.1 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative MARK HERSKOWITZ

CHART PAGE



This is an actual photograph of recorder chart

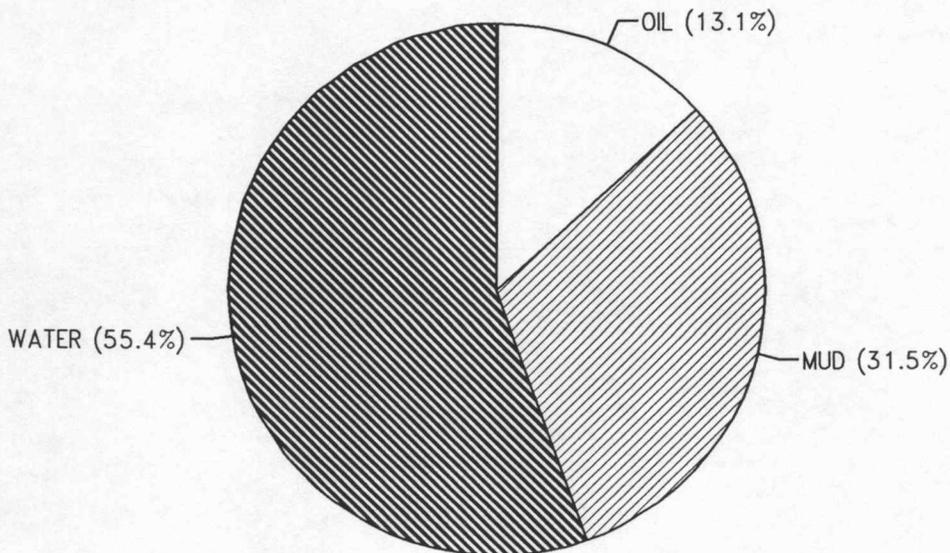
	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2059	2057.2
(B) FIRST INITIAL FLOW PRESSURE	173	199.6
(C) FIRST FINAL FLOW PRESSURE	287	321.5
(D) INITIAL CLOSED-IN PRESSURE	389	395.4
(E) SECOND INITIAL FLOW PRESSURE	328	343.9
(F) SECOND FINAL FLOW PRESSURE	369	381.3
(G) FINAL CLOSED-IN PRESSURE	389	388.4
(H) FINAL HYDROSTATIC MUD	2029	2033.1

CALCULATED RECOVERY ANALYSIS

DST 6 TICKET # 6354

SAMPLE #	TOTAL FEET	GAS		OIL		WATER		MUD	
		%	FEET	%	FEET	%	FEET	%	FEET
DRILL 1	30	0	0	100	30	0	0	0	0
PIPE 2	47	0	0	10	4.7	40	18.8	50	23.5
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
6			0		0		0		0
WEIGHT 1	325	0	0	10	32.5	40	130	50	162.5
PIPE 2	186	0	0	2	3.72	85	158.1	13	24.18
3	124	0	0	0	0	100	124	0	0
4			0		0		0		0
DRILL 1			0		0		0		0
COLLAR 2			0		0		0		0
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
TOTAL	712		0		70.92		430.9		210.18

BBL OIL=	0.746974	*	HRS OPEN	1.5	BBL/DAY	11.951584
BBL WATER=	3.152036	*				50.432576
BBL MUD=	1.790274					
BBL GAS =	0					



TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 6354

Well Name & No. Michaelis 3 Test No. 4 Date 12-15-93
Company ABERCROMBIE INC Zone Tested LAN KC I
Address 150 N MAIN STE 801 Wichita Elevation 3097 MIB
Co. Rep./Geo. MIKE DIXON cont. ALA Rig 4 Est. Ft. of Pay _____
Location: Sec. 15 Twp. 12S Rge. 33W Co. LOGAN State KS
No. of Copies _____ Distribution Sheet _____ Yes _____ No _____ Turnkey _____ Yes _____ No _____ Evaluation _____

Interval Tested 4217-4250 Drill Pipe Size 4 1/2 XH
Anchor Length 33 Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth 4212 Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth 4217 Wt. Pipe I.D. — 2.7 Ft. Run 635
Total Depth 4250 Drill Collar — 2.25 Ft. Run _____
Fluid Wt. 8.9 LCM — lb/gal. Viscosity 49 Filtrate 9.2
Tool Open @ 3:00 AM Initial Blow SUR TO BOTTOM IN 10 MIN

Final Blow SUR TO BOTTOM IN 14 MIN

Recovery — Total Feet	Feet of Gas in Pipe	Flush Tool?
<u>712</u>	<u>206</u>	_____
ec. <u>30</u> Feet Of <u>C OIL</u> %gas <u>100%</u> oil _____ %water _____ %mud _____		
ec. <u>372</u> Feet Of <u>OIL C MUD WATER</u> %gas <u>10%</u> oil _____ %water <u>40%</u> %mud <u>50%</u>		
ec. <u>186</u> Feet Of <u>SOIL C M WATER</u> %gas <u>2%</u> oil _____ %water <u>85%</u> %mud <u>13%</u>		
ec. <u>124</u> Feet Of <u>SM WATER</u> %gas _____ %oil _____ %water _____ %mud _____		
ec. _____ Feet Of _____ %gas _____ %oil _____ %water _____ %mud _____		

HT 119 °F Gravity 38 °API @ 70 °F Corrected Gravity 37 °API
W 0.21 @ 68 °F Chlorides 35 ppm Recovery Chlorides 6000 ppm System

1) Initial Hydrostatic Mud 2059 PSI Ak1 Recorder No. 11057 Range 4500
2) First Initial Flow Pressure 173 PSI @ (depth) 4220 w/Clock No. 7452
3) First Final Flow Pressure 287 PSI AK1 Recorder No. 2023 Range 4000
4) Initial Shut-In Pressure 389 PSI @ (depth) 4245 w/Clock No. 30401
5) Second Initial Flow Pressure 328 PSI AK1 Recorder No. _____ Range _____
6) Second Final Flow Pressure 369 PSI @ (depth) _____ w/Clock No. _____
7) Final Shut-In Pressure 389 PSI Initial Opening 30 Test 600
8) Final Hydrostatic Mud 2029 PSI Initial Shut-In 45 Jars _____

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

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]
Your Representative [Signature]

D514
~~11057~~
11057

Abercrombie - DST #6 - Recorder #2023
30-45-60-45

			27
A	2.068	20572	26
B	.185	199.6	25
C	.303	321.5	24
D	.376	395.4	23
E	.325	343.9	22
F	.362	381.3	21
G	.369	388.4	20
H	2.044	20330	19
			18
			17
			16
			15
			14
			13

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name MICHAELIS #3 Test No. 7 Date 12/15/93
Company ABERCROMBIE DRILLING INC Zone LKC-"J"
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3097
Co. Rep./Geo. MIKE DIXION Cont. ABERCROMBIE DRLG RIG #4 Est. Ft. of Pay _____
Location: Sec. 15 Twp. 12S Rge. 33W Co. LOGAN State KS

Interval Tested 4246-4275 Drill Pipe Size 4.5" XH
Anchor Length 29 Wt. Pipe I.D. - 2.7 Ft. Run 635
Top Packer Depth 4241 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 4246 Mud Wt. _____ 9 lb/Gal.
Total Depth 4275 Viscosity 52 Filtrate 9.6

Tool Open @ 4:10 PM Initial Blow GOOD BLOW OFF BOTTOM IN 4 MINUTES

Final Blow GOOD BLOW OFF BOTTOM IN 5 MINUTES 30 SECONDS

Recovery - Total Feet 750 Flush Tool? NO

Rec. 308 Feet of GAS IN PIPE
Rec. 109 Feet of WTR CUT MUDDY OIL-40%OIL/ 20% WTR/ 40%MUD
Rec. 104 Feet of GSY OIL & MUD CUT WTR-30%GAS/15%OIL/35%WTR/20%MUD
Rec. 104 Feet of SLTLY OIL CUT WTR-2%OIL/98%WTR
Rec. 433 Feet of WATER

BHT 117 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW 0.19 @ _____ °F Chlorides 35000 ppm Recovery Chlorides 7500 ppm System

(A) Initial Hydrostatic Mud 2066.2 PSI AK1 Recorder No. 11057 Range 4500

(B) First Initial Flow Pressure 95.2 PSI @ (depth) 4248 w / Clock No. 7452

(C) First Final Flow Pressure 271.4 PSI AK1 Recorder No. 2023 Range 4000

(D) Initial Shut-in Pressure 395.4 PSI @ (depth) 4270 w / Clock No. 30401

(E) Second Initial Flow Pressure 338.8 PSI AK1 Recorder No. _____ Range _____

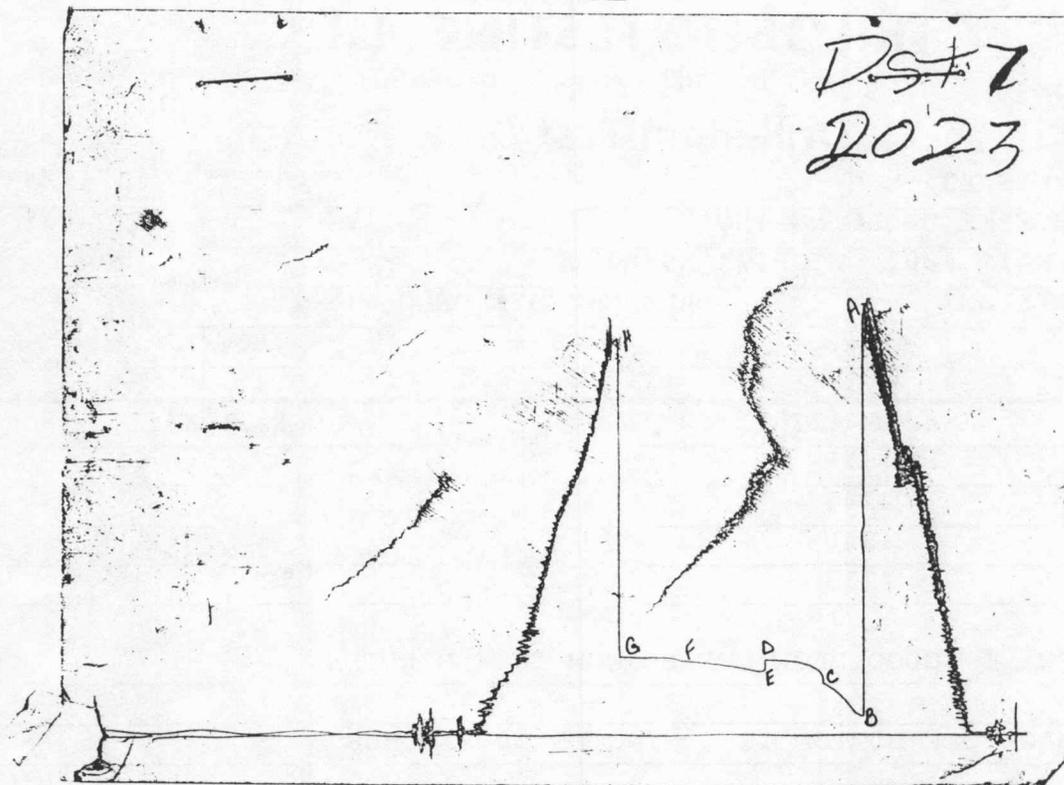
(F) Second Final Flow Pressure 383.4 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 400.4 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2045.1 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative MARK HERSKOWITZ

CHART PAGE



This is an actual photograph of recorder chart

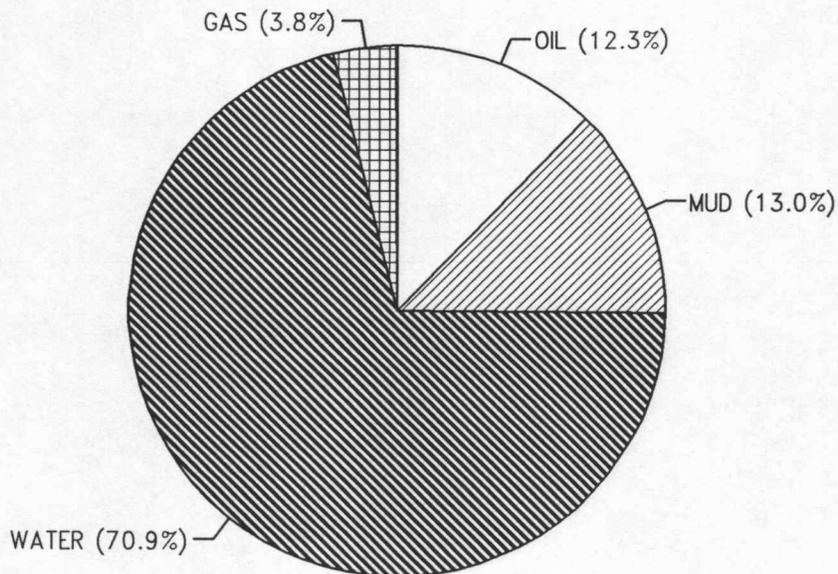
	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2089	2066.2
(B) FIRST INITIAL FLOW PRESSURE	87	95.2
(C) FIRST FINAL FLOW PRESSURE	277	271.4
(D) INITIAL CLOSED-IN PRESSURE	399	395.4
(E) SECOND INITIAL FLOW PRESSURE	328	338.8
(F) SECOND FINAL FLOW PRESSURE	389	383.4
(G) FINAL CLOSED-IN PRESSURE	409	400.4
(H) FINAL HYDROSTATIC MUD	2039	2045.1

CALCULATED RECOVERY ANALYSIS

DST 7 TICKET # 6355

SAMPLE #	TOTAL FEET	GAS		OIL		WATER		MUD	
		%	FEET	%	FEET	%	FEET	%	FEET
DRILL 1	109	0	0	40	43.6	20	21.8	40	43.6
PIPE 2	6	30	1.8	15	0.9	35	2.1	20	1.2
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
6			0		0		0		0
WEIGHT 1	98	30	29.4	15	14.7	35	34.3	20	19.6
PIPE 2	104	0	0	2	2.08	98	101.92	0	0
3	433	0	0	0	0	100	433	0	0
4			0		0		0		0
DRILL 1			0		0		0		0
COLLAR 2			0		0		0		0
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
TOTAL	750		31.2		61.28		593.12		64.4

	BBL OIL=	BBL WATER=	BBL MUD=	BBL GAS =	HRS OPEN	BBL/DAY
	0.75025	4.324398	0.789936	0.231396	1.5	12.004
	*	*				69.190368



TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 6355

Well Name & No. Michaelis 3 Test No. 7 Date 12-15-93
Company ABERCROMBIE INC Zone Tested LAN-KS J
Address 150 N MAIN STE 801 WICHITA Elevation 3097 K13
Co. Rep./Geo. MIKE DIXON Cont. ALA Rig 4 Est. Ft. of Pay _____
Location: Sec. 15 Twp. 12S Rge. 33W Co. LOGAN State KS
No. of Copies _____ Distribution Sheet _____ Yes _____ No _____ Turnkey _____ Yes _____ No _____ Evaluation _____

Interval Tested 4246-4275 Drill Pipe Size 4 1/2 X H
Anchor Length 29 Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth 4241 Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth 4246 Wt. Pipe I.D. — 2.7 Ft. Run 635
Total Depth 4275 Drill Collar — 2.25 Ft. Run _____
Mud Wt. 90 WCM lb/gal. Viscosity 52 Filtrate 9.6
Tool Open @ 4:10 PM Initial Blow Good Blow OFF BOTTOM IN 4 MIN

Final Blow Good Blow OFF BOTTOM IN 5 MIN 30 SEC

Recovery — Total Feet	Feet of Gas in Pipe	Flush Tool?
Rec. <u>109</u> Feet Of <u>WCM OIL</u> %gas <u>40</u> %oil <u>20</u> %water <u>40</u> %mud	<u>308</u>	_____
Rec. <u>104</u> Feet Of <u>GOMCW</u> 30%gas 15%oil 35%water 20%mud		
Rec. <u>104</u> Feet Of <u>SO CW</u> %gas 2%oil 98%water %mud		
Rec. <u>435</u> Feet Of <u>SLU WATER</u> %gas %oil 100%water %mud		
Rec. _____ Feet Of _____ %gas %oil %water %mud		

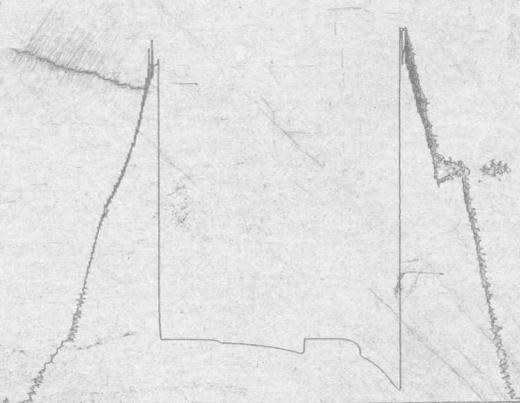
BHT 117P °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW 0.19 @ 72 °F Chlorides 35 ppm Recovery Chlorides 7500 ppm System

(A) Initial Hydrostatic Mud 2089 PSI Ak1 Recorder No. 11057 Range 4500
(B) First Initial Flow Pressure 87 PSI @ (depth) 4248 w/Clock No. 7452
(C) First Final Flow Pressure 277 PSI AK1 Recorder No. 2023 Range 4000
(D) Initial Shut-In Pressure 399 PSI @ (depth) 4270 w/Clock No. 30401
(E) Second Initial Flow Pressure 328 PSI AK1 Recorder No. _____ Range _____
(F) Second Final Flow Pressure 389 PSI @ (depth) _____ w/Clock No. _____
(G) Final Shut-In Pressure 409 PSI Initial Opening 30 Test 600
(H) Final Hydrostatic Mud 2039 PSI Initial Shut-In 45 Jars _____

Final Flow 40 Safety Joint _____
Final Shut-In 45 Straddle _____
Circ. Sub NC
Sampler _____

Approved By [Signature]
Our Representative [Signature]
Extra Packer _____
Other _____
TOTAL PRICE \$ 600

DST 1
11059



Abercrombie - DST #7 RC #2023

30-45-60-45

WELL NAME _____ DST # _____

INIT. HYD. MUD. _____ FI

INITIAL FLOW MINUTES _____ INITIAL SHUTIN MINUTES _____
INTERVAL _____ INTERVAL _____

	INITIAL FLOW MINUTES	INITIAL SHUTIN MINUTES	
A	2.077	2066.2	
B	.087	95.2	
C	.254	271.4	
D	.376	395.4	
E	.320	338.8	
F	.364	383.4	
G	.381	400.4	
H	2.056	2045.1	

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name MICHAELIS #3 Test No. 8 Date 12/16/93
Company ABERCROMBIE DRILLING INC Zone LKC-"K"
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3097
Co. Rep./Geo. MIKE DIXION Cont. ABERCROMBIE DRLG RIG #4 Est. Ft. of Pay _____
Location: Sec. 15 Twp. 12S Rge. 33W Co. LOGAN State KS

Interval Tested 4291-4302 Drill Pipe Size 4.5" XH
Anchor Length 11 Wt. Pipe I.D. - 2.7 Ft. Run 635
Top Packer Depth 4286 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 4291 Mud Wt. 9 lb/Gal.
Total Depth 4302 Viscosity 52 Filtrate 9.6

Tool Open @ 6:06 AM Initial Blow WEAK SURFACE TO 4.25" BLOW IN 30 MINUTES

Final Blow WEAK SURFACE TO 3 3/9" IN 60 MINUTES

Recovery - Total Feet 134 Flush Tool? NO

Rec. 134 Feet of MUDDY WATER-90% WTR/ 10% MUD
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 119 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW 0.19 @ 68 °F Chlorides 43000 ppm Recovery Chlorides 7500 ppm System

(A) Initial Hydrostatic Mud 2074.3 PSI AK1 Recorder No. 11057 Range 4500

(B) First Initial Flow Pressure 60.5 PSI @ (depth) 4293 w / Clock No. 7452

(C) First Final Flow Pressure 61.6 PSI AK1 Recorder No. 2023 Range 4000

(D) Initial Shut-in Pressure 548.2 PSI @ (depth) 4297 w / Clock No. 30401

(E) Second Initial Flow Pressure 93.1 PSI AK1 Recorder No. _____ Range _____

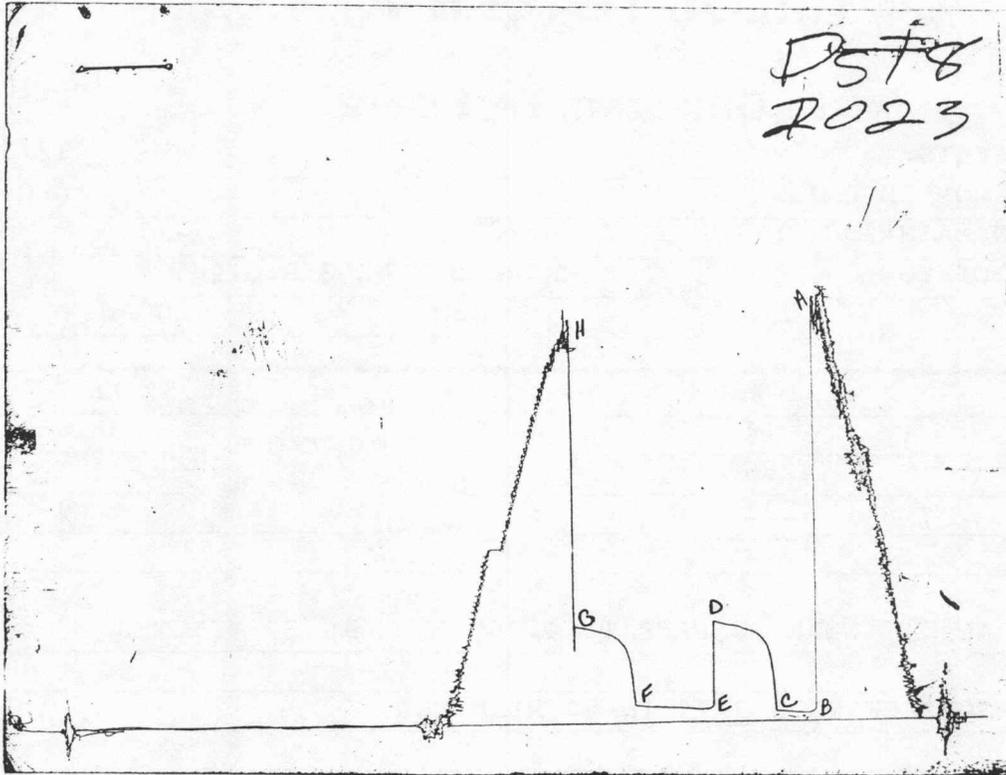
(F) Second Final Flow Pressure 96.3 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 523.5 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2045.1 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative MARK HERSKOWITZ

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2089	2074.3
(B) FIRST INITIAL FLOW PRESSURE	33	60.5
(C) FIRST FINAL FLOW PRESSURE	44	61.6
(D) INITIAL CLOSED-IN PRESSURE	538	548.2
(E) SECOND INITIAL FLOW PRESSURE	66	93.1
(F) SECOND FINAL FLOW PRESSURE	87	96.3
(G) FINAL CLOSED-IN PRESSURE	518	523.5
(H) FINAL HYDROSTATIC MUD	2049	2045.1

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 6356

Well Name & No. <u>Michaelis 3</u>	Test No. <u>8</u>	Date <u>12-16-93</u>
Company <u>ABERCOMBIE INC</u>	Zone Tested <u>LAN-PC K</u>	
Address <u>150 N MAIN STE 801 WICHITA</u>	Elevation <u>3097 K13</u>	
Co. Rep./Geo. <u>MIKE DIXON</u>	cont. <u>ALH Rig 4</u>	Est. Ft. of Pay _____
Location: Sec. <u>15</u>	Twp. <u>129</u>	Rge. <u>33w</u> Co. <u>LOGAN</u> State <u>KS</u>
No. of Copies _____	Distribution Sheet _____	Yes _____ No _____ Turnkey _____ Yes _____ No _____ Evaluation _____

Interval Tested <u>4291-4302</u>	Drill Pipe Size <u>4 1/2 XH</u>
Anchor Length <u>11</u>	Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth <u>4286</u>	Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth <u>4291</u>	Wt. Pipe I.D. — 2.7 Ft. Run <u>635</u>
Total Depth <u>4302</u>	Drill Collar — 2.25 Ft. Run _____
Mud Wt. <u>9.0</u> <u>LCM</u> — lb/gal.	Viscosity <u>52</u> Filtrate <u>9.4</u>
Tool Open @ <u>4:00 AM</u>	Initial Blow <u>WEAK SUR TO 4 1/4" BLOW IN 30 MIN</u>

Final Blow WEAK SUR TO 3 3/4" IN 60 MIN

Recovery — Total Feet	Feet of Gas in Pipe	Flush Tool?
Rec. <u>134</u>	Feet Of <u>Mud WATER</u>	%gas _____ %oil <u>90</u> %water <u>10</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>119</u> °F Gravity _____	°API @ _____	°F Corrected Gravity _____	°API _____
RW <u>0.19 @ 68</u> °F	Chlorides <u>43000</u> ppm Recovery	Chlorides <u>7500</u> ppm System	
(A) Initial Hydrostatic Mud <u>2089</u> PSI	AK1 Recorder No. <u>18057</u>	Range <u>4500</u>	
(B) First Initial Flow Pressure <u>33</u> PSI	@ (depth) <u>4293</u>	w/Clock No. <u>7452</u>	
(C) First Final Flow Pressure <u>44</u> PSI	AK1 Recorder No. <u>2023</u>	Range <u>4000</u>	
(D) Initial Shut-in Pressure <u>538</u> PSI	@ (depth) <u>4297</u>	w/Clock No. <u>30401</u>	
(E) Second Initial Flow Pressure <u>64</u> PSI	AK1 Recorder No. _____	Range _____	
(F) Second Final Flow Pressure <u>87</u> PSI	@ (depth) _____	w/Clock No. _____	
(G) Final Shut-in Pressure <u>518</u> PSI	Initial Opening <u>30</u>	Test <input checked="" type="checkbox"/>	
(H) Final Hydrostatic Mud <u>2049</u> PSI	Initial Shut-in <u>45</u>	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 <u>60</u>	Safety Joint _____
Final Shut-in <u>45</u>	Straddle _____
	Circ. Sub <input checked="" type="checkbox"/> <u>NC</u>
	Sampler _____
	Extra Packer _____
	Other _____

Approved By [Signature]
 Our Representative [Signature]

DST
17027



Abercrombie - dst # 8

RECORDER # # 2023

AL HYD. MUD 30-45-60-45

FINAL FLOW MINUTES _____
INTERVAL _____

FINAL SHUTIN MINUTES _____
INTERVAL _____

	FINAL FLOW MINUTES	FINAL SHUTIN MINUTES	
A	2.085	2074.3	
B	.055	60.5	
C	.056	61.6	
D	.530	578.2	
E	.085	93.1	
F	.088	96.3	
G	.505	523.5	
H	2.056	2045.1	

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name MICHAELIS #3 Test No. 9 Date 12/17/93
Company ABERCROMBIE DRILLING INC Zone JOHNSON
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3097
Co. Rep./Geo. MIKE DIXION Cont. ABERCROMBIE DRLG RIG #4 Est. Ft. of Pay 5
Location: Sec. 15 Twp. 12S Rge. 33W Co. LOGAN State KS

Interval Tested 4578-4618 Drill Pipe Size 4.5" XH
Anchor Length 40 Wt. Pipe I.D. - 2.7 Ft. Run 635
Top Packer Depth 4573 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 4578 Mud Wt. 9.2 lb/Gal.
Total Depth 4618 Viscosity 56 Filtrate 10.4

Tool Open @ 8:23 PM Initial Blow STRONG BLOW OFF BOTTOM IN 45 SECONDS/GAS TO SURFACE
30 MINUTES INTO FIRST SHUTIN
Final Blow STRONG BLOW OFF BOTTOM IN 30 SECONDS/ 60 MIN 2" OF
WATER ON 1/4" ORIFICE = 2.37 MCF/DAY

Recovery - Total Feet 3430 Flush Tool? NO

Rec. 1128 Feet of GAS IN PIPE
Rec. 3058 Feet of CLEAN GASSY OIL-10% GAS/ 90% OIL
Rec. 372 Feet of SLTLY WTR & MUD CUT GSY OIL-10%GAS/75%OIL/5%WTR/10%MUD
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 120 °F Gravity _____ °API @ _____ °F Corrected Gravity 36 °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 9000 ppm System

(A) Initial Hydrostatic Mud 2213.3 PSI AK1 Recorder No. 11057 Range 4500

(B) First Initial Flow Pressure 746.6 PSI @ (depth) 4580 w / Clock No. 7452

(C) First Final Flow Pressure 903.6 PSI AK1 Recorder No. 2023 Range 4000

(D) Initial Shut-in Pressure 1140.1 PSI @ (depth) 4613 w / Clock No. 30401

(E) Second Initial Flow Pressure 915.1 PSI AK1 Recorder No. _____ Range _____

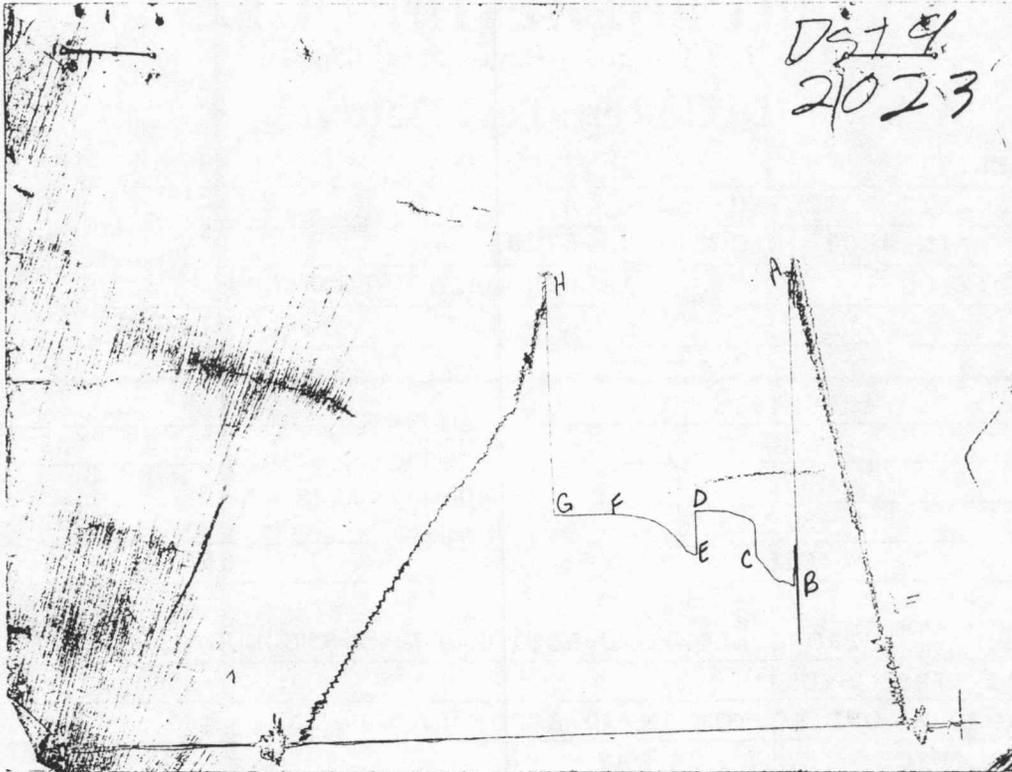
(F) Second Final Flow Pressure 1134.3 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 1139.2 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2193.2 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative MARK HERSKOWITZ

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2220	2213.3
(B) FIRST INITIAL FLOW PRESSURE	732	746.6
(C) FIRST FINAL FLOW PRESSURE	896	903.6
(D) INITIAL CLOSED-IN PRESSURE	1128	1140.1
(E) SECOND INITIAL FLOW PRESSURE	916	915.1
(F) SECOND FINAL FLOW PRESSURE	1128	1134.3
(G) FINAL CLOSED-IN PRESSURE	1128	1139.2
(H) FINAL HYDROSTATIC MUD	2190	2193.2

CALCULATED RECOVERY ANALYSIS

DST

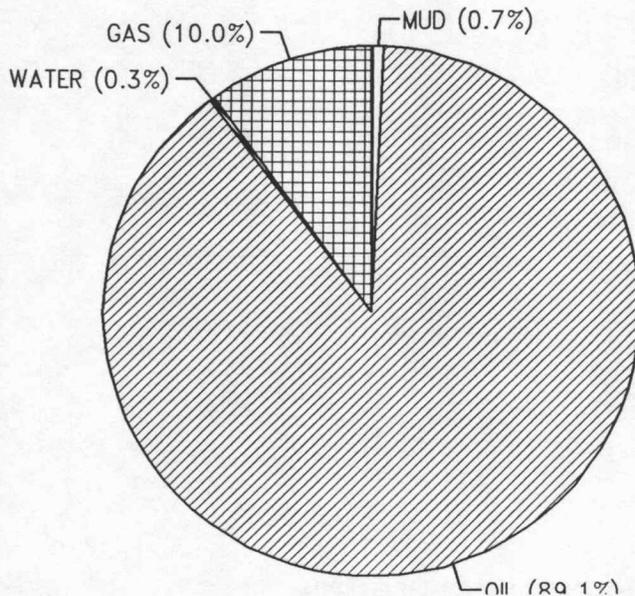
9

TICKET #

6357

SAMPLE #	TOTAL FEET	GAS		OIL		WATER		MUD	
		%	FEET	%	FEET	%	FEET	%	FEET
DRILL 1	2795	10	279.5	90	2515.5	0	0	0	0
PIPE 2			0		0		0		0
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
6			0		0		0		0
WEIGHT 1	263	10	26.3	90	236.7	0	0	0	0
PIPE 2	372	10	37.2	75	279	5	18.6	10	37.2
3			0		0		0		0
4			0		0		0		0
DRILL 1			0		0		0		0
COLLAR 2			0		0		0		0
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
TOTAL	3430		343		3031.2		18.6		37.2

	BBL OIL=	BBL WATER=	BBL MUD=	BBL GAS =	HRS OPEN	BBL/DAY
	39.38031	0.1302	0.29016	4.41899	1.5	630.08496
	*	*				2.0832



GAS VOLUME REPORT

ABERCROMBIE DRILLING INC

MICHAELIS #3

DST # 9

MIN	PSIG	ORIFICE	MCF/D	MIN	INCHES OF WTR	ORIFICE	MCF/D
				0	0	0	0
				5	40	0.25	10.6
				10	10	0.25	5.32
				15	6	0.25	4.12
				20	6	0.25	4.12
				25	5	0.25	3.71
				30	5	0.25	3.71
				35	4	0.25	3.37
				40	4	0.25	3.37
				4	3	0.25	2.92
				50	3	0.25	2.92
				55	2	0.25	2.37
				60	2	0.25	2.37

Remarks: GAS TO SURFACE 30 MINUTES INTO INITIAL SHUTIN

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 6357

Well Name & No. <u>Michaelis 3</u>	Test No. <u>9</u>	Date <u>12-17-93</u>
Company <u>ABERCROMBIE INC</u>	Zone Tested <u>JOHNSON</u>	
Address <u>150 N MAIN STE 801 WICHITA</u>	Elevation <u>3097 MB</u>	
CO. Rep./Geo. <u>MIKE DIXON</u>	Cont. <u>A.L.A. Big 4</u>	Est. Ft. of Pay <u>5</u>
Location: Sec. <u>15</u>	Twp. <u>12S</u>	Rge. <u>33W</u> Co. <u>LOGAN</u> State <u>KS</u>
No. of Copies _____	Distribution Sheet _____	Yes _____ No _____ Turnkey _____ Yes _____ No _____ Evaluation _____

Interval Tested <u>4578 - 4618</u>	Drill Pipe Size <u>4 1/2 XH</u>
Anchor Length <u>40</u>	Top Choke - 1" _____ Bottom Choke - 3/4" _____
Top Packer Depth <u>4573</u>	Hole Size - 7 7/8" _____ Rubber Size - 6 3/4" _____
Bottom Packer Depth <u>4578</u>	Wt. Pipe I.D. - 2.7 Ft. Run <u>635</u>
Total Depth <u>4618</u>	Drill Collar - 2.25 Ft. Run _____
Mud Wt. <u>9.2</u> <u>LCM</u> - lb/gal.	Viscosity <u>56</u> Filtrate <u>10.4</u>

Tool Open @ 8:23 PM Initial Blow STRONG BLOW OFF BOTTOM IN 45 SEC
GAS TO SUR 30 MIN INTO FIRST SHUT-IN
Final Blow STRONG BLOW OFF BOTTOM 30 SEC

0 MIN 2 I OF WATER ON 1/4" ORIFICE = 2.37 MCF/DAY

Recovery - Total Feet <u>3430</u>	Feet of Gas in Pipe <u>1128</u>	Flush Tool? _____
Rec. <u>3058</u> Feet Of <u>CG OIL</u>	10% gas 90% oil	% water _____ % mud _____
Rec. <u>372</u> Feet Of <u>SWM CG OIL</u>	10% gas 75% oil	5% water 10% mud
Rec. _____ Feet Of _____	% gas _____ % oil _____	% water _____ % mud _____
Rec. _____ Feet Of _____	% gas _____ % oil _____	% water _____ % mud _____
Rec. _____ Feet Of _____	% gas _____ % oil _____	% water _____ % mud _____

BHT 120 °F Gravity _____ °API @ _____ °F Corrected Gravity 36 °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 9000 ppm System

(A) Initial Hydrostatic Mud <u>2220</u> PSI	AK1 Recorder No. <u>11057</u>	Range <u>4500</u>
(B) First Initial Flow Pressure <u>732</u> PSI	@ (depth) <u>4580</u>	w/Clock No. <u>7452</u>
(C) First Final Flow Pressure <u>894</u> PSI	AK1 Recorder No. <u>2023</u>	Range <u>4000</u>
(D) Initial Shut-In Pressure <u>1128</u> PSI	@ (depth) <u>4613</u>	w/Clock No. <u>30401</u>
(E) Second Initial Flow Pressure <u>914</u> PSI	AK1 Recorder No. _____	Range _____
(F) Second Final Flow Pressure <u>1128</u> PSI	@ (depth) _____	w/Clock No. _____
(G) Final Shut-In Pressure <u>1128</u> PSI	Initial Opening <u>30</u>	Test <input checked="" type="checkbox"/>
(H) Final Hydrostatic Mud <u>2190</u> PSI	Initial Shut-In <u>45</u>	Jars _____

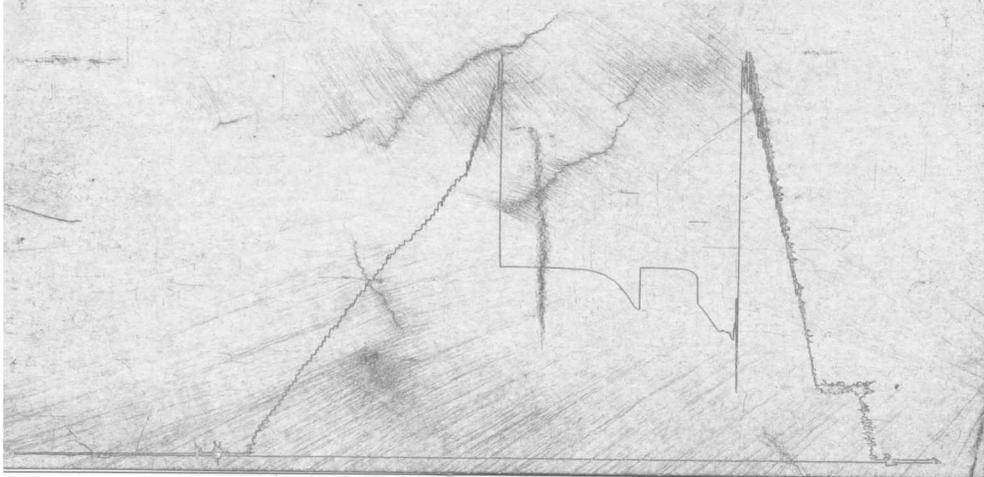
TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS 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 NC

Approved By [Signature]
Our Representative [Signature]

Sampler _____
Extra Packer _____
Other _____
TOTAL PRICE \$ _____

DST
11057



Abereomba - dst #9
RC 2023

30-45-60-45

A	2.223	2213.3	4
B	.734	746.6	6
C	.897	903.6	5
D	1.142	1140.1	4
E	.909	915.1	3
F	1.136	1134.3	2
G	1.141	1139.2	1
H	2.203	2193.2	0
			9
			8
			7
			6
			5
			4
			3

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name MICHAELIS #3 Test No. 10 Date 12/18/93
Company ABERCROMBIE DRILLING INC Zone FT SCT/MYRIK
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 3097
Co. Rep./Geo. MIKE DIXION Cont. ABERCROMBIE DRLG RIG #4 Est. Ft. of Pay 3
Location: Sec. 15 Twp. 12S Rge. 33W Co. LOGAN State KS

Interval Tested 4500-4550 Drill Pipe Size 4.5" XH
Anchor Length 50 Wt. Pipe I.D. - 2.7 Ft. Run 445
Top Packer Depth 4495-4500 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 4550 Mud Wt. 9 lb/Gal.
Total Depth 4759 Viscosity 50 Filtrate 12

Tool Open @ 12:02 PM Initial Blow GOOD BLOW OFF BOTTOM IN 12 MINUTES 30 SECONDS

Final Blow OFF BOTTOM IN 12 MINUTES

Recovery - Total Feet 434 Flush Tool? NO

Rec. 685 Feet of GAS IN PIPE
Rec. 310 Feet of CLEAN OIL
Rec. 93 Feet of GSY OIL CUT WTRY MUD-15%GAS/15%OIL/30%WTR/40%MUD
Rec. 31 Feet of OIL CUT MUDDY WATER-5%OIL/70%WTR/25%MUD
Rec. _____ Feet of _____

BHT _____ °F Gravity 32 °API @ 70 °F Corrected Gravity 31 °API
RW 0.2 @ 63 °F Chlorides 40000 ppm Recovery Chlorides 9000 ppm System

(A) Initial Hydrostatic Mud 2185.1 PSI AK1 Recorder No. 11057 Range 4500

(B) First Initial Flow Pressure 84.4 PSI @ (depth) 4507 w / Clock No. 7452

(C) First Final Flow Pressure 126.4 PSI AK1 Recorder No. 2023 Range 4000

(D) Initial Shut-in Pressure 894.9 PSI @ (depth) 4540 w / Clock No. 30401

(E) Second Initial Flow Pressure 166.9 PSI AK1 Recorder No. 13308 Range 4700

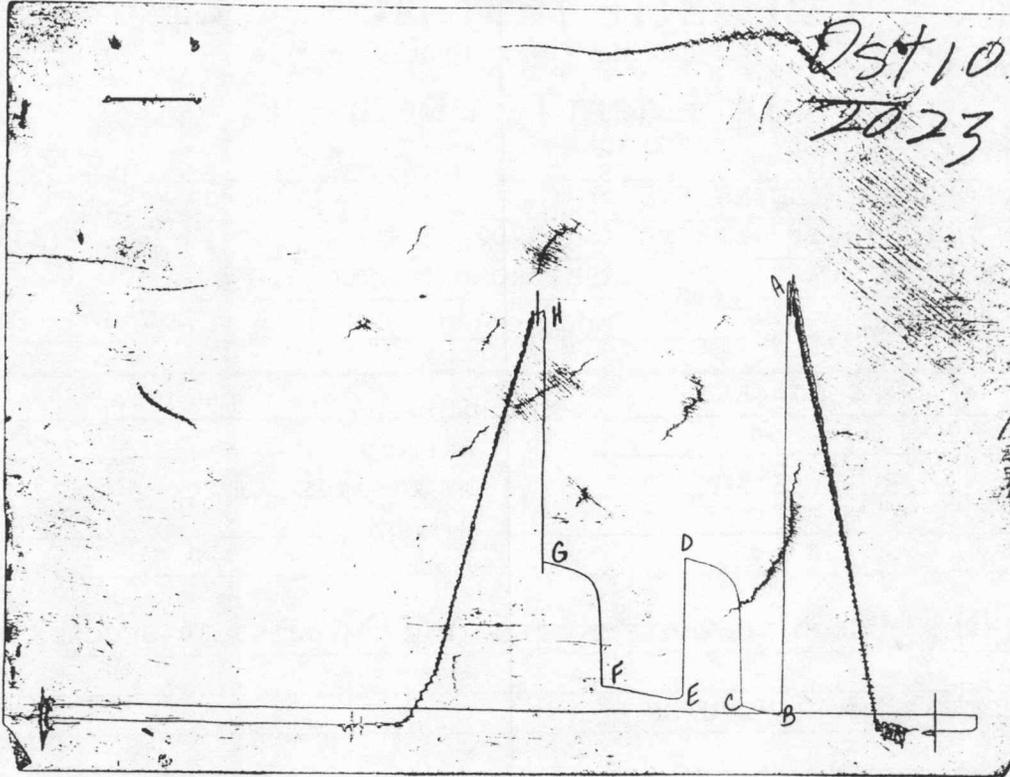
(F) Second Final Flow Pressure 228.8 PSI @ (depth) 4754 w / Clock No. 20272

(G) Final Shut-in Pressure 869.1 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2103.5 PSI Initial Shut-in 45 Final Shut-in 45

Our Representative MARK HERSKOWITZ

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2174	2185.1
(B) FIRST INITIAL FLOW PRESSURE	44	84.4
(C) FIRST FINAL FLOW PRESSURE	100	126.4
(D) INITIAL CLOSED-IN PRESSURE	861	894.9
(E) SECOND INITIAL FLOW PRESSURE	112	166.9
(F) SECOND FINAL FLOW PRESSURE	190	228.8
(G) FINAL CLOSED-IN PRESSURE	850	869.1
(H) FINAL HYDROSTATIC MUD	2117	2103.5

CALCULATED RECOVERY ANALYSIS

WEIGHT PIPE

DST #

10

TICKET #

6358

SAMPLE #	TOTAL FEET	GAS		OIL		WATER		MUD	
		%	FEET	%	FEET	%	FEET	%	FEET
1	310	0	0	100	310	0	0	0	0
2	93	15	13.95	15	15	30	27.9	40	37.2
3	31	0	0	5	1.55	70	21.7	25	7.75
4			0		0		0		0
5			0		0		0		0
TOTAL	434	3.214	13.95	75.241935	326.55	11.429	49.6	10.357	44.95

	BBL OIL=	BBL WATER=	BBL MUD=	BBL GAS=
HRS OPEN	2.28585 *	0.3472 *	0.31465	0.09765
BBL/DAY	1.5	5.5552		

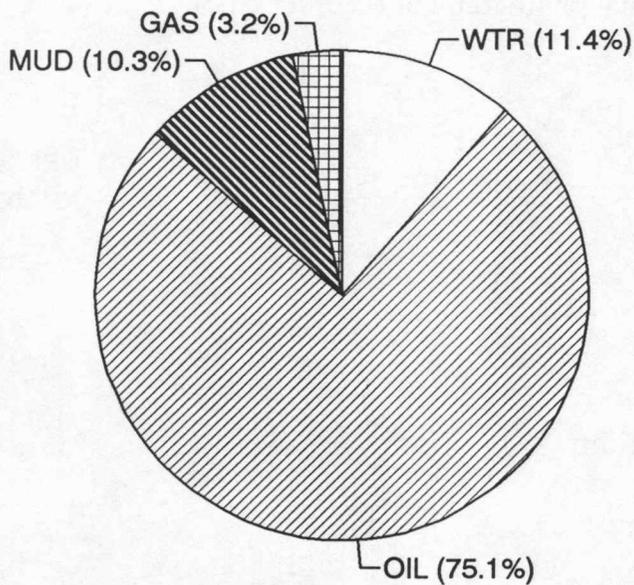
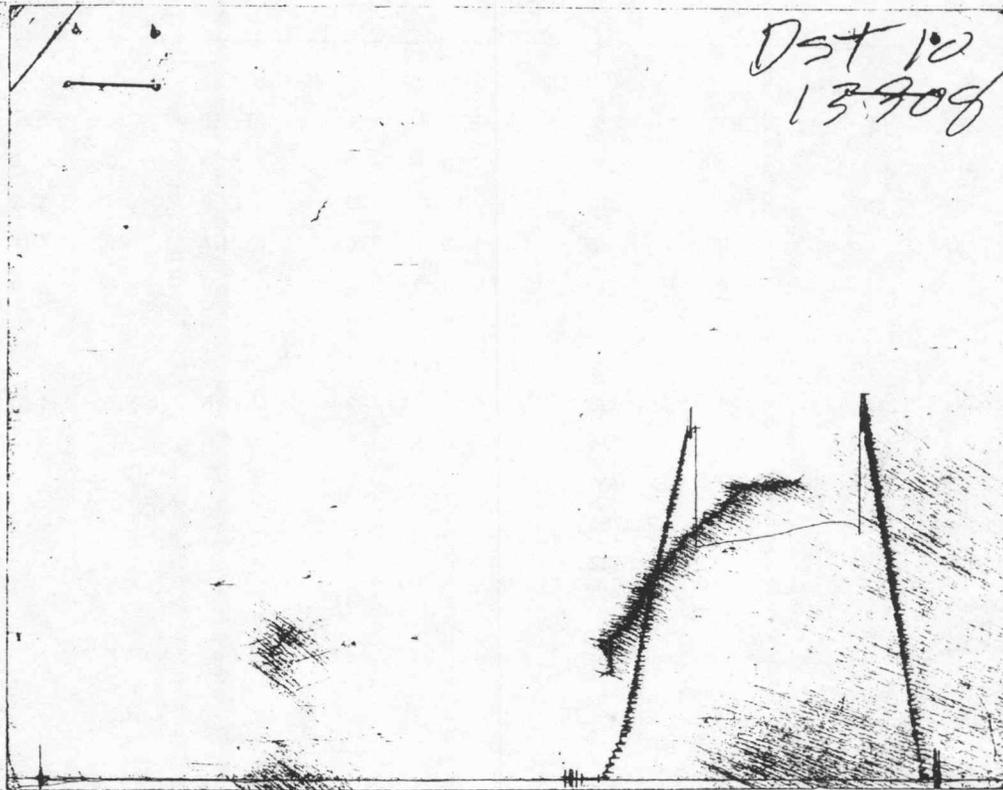


CHART PAGE



This is an actual photograph of recorder chart

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 6358

Well Name & No. Michaelis 3 Test No. 10 Date 12-18-93
 Company ABERCROMBIE INC Zone Tested FT Scott + Myrick Station
 Address 150 N. MAIN ST #800 WICHITA Elevation 8097 K13
 Co. Rep./Geo. MIKE DIXON cont. ALA Rig 4 Est. Ft. of Pay 3
 Location: Sec. 15 Twp. 12S Rge. 33W Co. LOGAN State KS
 No. of Copies _____ Distribution Sheet _____ Yes _____ No _____ Turnkey _____ Yes _____ No _____ Evaluation _____

Interval Tested 4500 4550 Drill Pipe Size 4 1/2 X 11
 Anchor Length 50 T. PIPE 209 Top Choke - 1" _____ Bottom Choke - 3/4" _____
 Top Packer Depth 4495 - 4500 Hole Size - 7 7/8" _____ Rubber Size - 6 3/4" _____
 Bottom Packer Depth 4550 Wt. Pipe I.D. - 2.7 Ft. Run 445
 Total Depth 4759 Drill Collar - 2.25 Ft. Run _____
 Mud Wt. 9.0 LGM TR lb/gal Viscosity 50 Filtrate 12.0
 Tool Open @ 12:02 PM Initial Blow Good Blow OFF BOTTOM IN 12 MIN
30 SEC
 Final Blow OFF BOTTOM IN 12 MIN

Recovery - Total Feet	Feet of Gas In Pipe	Flush Tool?
Rec. <u>310</u> Feet Of <u>C OIL</u> %gas _____ %oil _____ %water _____ %mud _____	<u>683</u>	_____
Rec. <u>93</u> Feet Of <u>GO CWM</u> 15 %gas 15 %oil 30 %water 40 %mud		
Rec. <u>31</u> Feet Of <u>OC M W</u> %gas 5 %oil 70 %water 25 %mud		
Rec. _____ Feet Of _____ %gas _____ %oil _____ %water _____ %mud _____		
Rec. _____ Feet Of _____ %gas _____ %oil _____ %water _____ %mud _____		

BHT _____ °F Gravity 32 °API @ 70 °F Corrected Gravity 31 °API
 RW 0.20 @ 63 °F Chlorides 40 ppm Recovery Chlorides 9000 ppm System
 (A) Initial Hydrostatic Mud 2174 PSI AK1 Recorder No. 11057 Range 4500
 (B) First Initial Flow Pressure 44 PSI @ (depth) 4507 w/Clock No. 7452
100
 (C) First Final Flow Pressure _____ PSI AK1 Recorder No. 2023 Range 4000
 (D) Initial Shut-In Pressure 841 PSI @ (depth) 4540 w/Clock No. 30401
 (E) Second Initial Flow Pressure 112 PSI AK1 Recorder No. 13308 Range 4700
 (F) Second Final Flow Pressure 190 PSI @ (depth) 4754 w/Clock No. 20272 18 Hour
 (G) Final Shut-In Pressure 850 PSI Initial Opening 30 Test 600.00
 (H) Final Hydrostatic Mud 2117 PSI Initial Shut-In 45 Jars _____

Final Flow 40 Safety Joint _____
 Final Shut-In 45 Straddle 250.00
 Circ. Sub NC
 Sampler _____
 Extra Packer 150.00
 Other _____
 TOTAL PRICE \$ 1000.00

Approved By [Signature]
 Our Representative [Signature]

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