TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name WEIGAND #1 Test No. 1 Date 3/20/91

Company ABERCROMBIE DLRG INC Zone Tested LANSING B

Address 150 N MAIN #801 WICHITA KS Elevation 2055 KB

Co. Rep./Geo. STEVE FRANKAMP Cont. ABERCROMBIE #8 Est. Ft. of Pay 4

Location: Sec. 3 Twp. 18S Rge. 18W Co. RUSH State KANSAS

3-18S-18W

Interval Tested 3454-3475 Drill Pipe Size 4.5 XH

Anchor Length 21 Wt. Pipe I.D. - 2.7 Ft. Run 536

Top Packer Depth 3449 Drill Collar — 2.25 Ft. Run

Bottom Packer Depth 3454

Total Depth 3475

Mud Wt. 8.8 lb / gal. Viscosity 47 Filtrate 8

Tool Open @ 5:13 PM Initial Blow VERY WEAK SURFACE BLOW BUILDING TO BOTTOM OF BUCK IN 46 MIN-BLED 2" @5 MIN-NO BLOW BACK

Final Blow WEAK SURFACE BLOW BUILDING TO BOTTOM OF BUCKET IN 33 MIN-BLED 2" @5 MIN-NO BLOW BACK

Recovery — Total Feet 120 Flush Tool? NO

Rec. 480 Feet of GAS IN PIPE

Rec. 60 Feet of GSY WTR & OIL CUT MUD-2%GAS/48%OIL/10%WTR/40%MUD

Rec. 60 Feet of GSY WTR & OIL CUT MUD-15%GAS/5%WTR/25%OIL/55%MUD

Rec. Feet of

Rec. Feet of

BHT 100 °F Gravity °API @ °F Corrected Gravity 43 °API

RW @ °F Chlorides ppm Recovery Chlorides 6000 ppm System

(A) Initial Hydrostatic Mud	1672.7 PSI	Ak1 Recorder No.	11038	Range	5075
(B) First Initial Flow Pressure	8.7 PSI	@ (depth)	3456	w/Clock No.	17640
(C) First Final Flow Pressure	41.4 PSI	AK1 Recorder No.	13337	Range	3975
(D) Initial Shut-In Pressure	1100.5 PSI	@ (depth	3472	w/Clock No.	27594
(E) Second Initial Flow Pressure	74 PSI	AK1 Recorder No.		Range	
(F) Second Final Flow Pressure	71.3 PSI	@ (depth)		w/Clock No.	
(G) Final Shut-In Pressure	1126.7 PSI	Initial Opening	60	Final Flow	60
(H) Final Hydrostatic Mud	1650 PSI	Initial Shut-In	30	Final Shut-In	45

Our Representativve MR ROGER SELLS TOTAL PRICE $ 550

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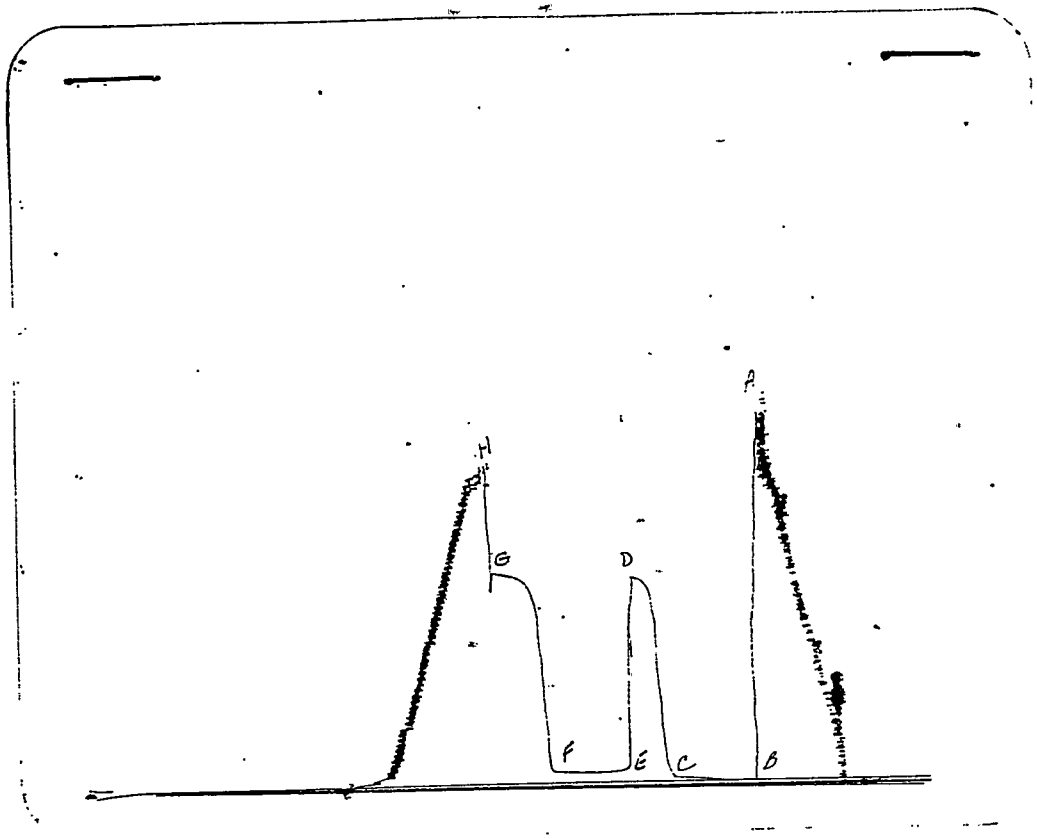


This is an actual photograph of recorder chart

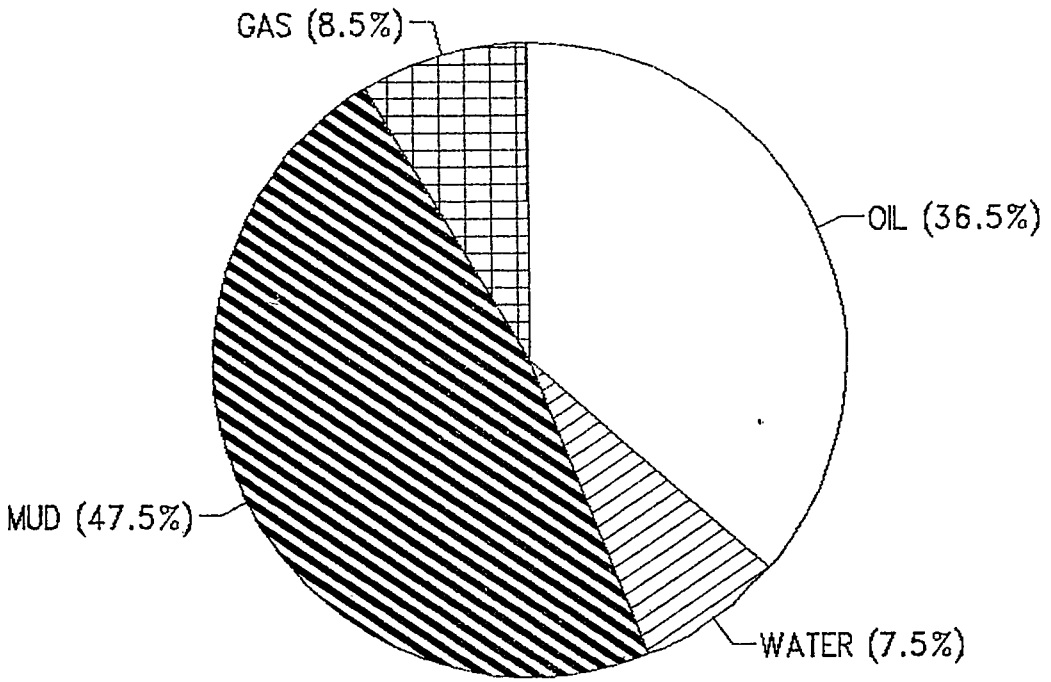
POINT	PRESSURE	
	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1675	1672.7
(B) FIRST INITIAL FLOW PRESSURE	0	8.7
(C) FIRST FINAL FLOW PRESSURE	14	41.4
(D) INITIAL CLOSED-IN PRESSURE	1083	1100.5
(E) SECOND INITIAL FLOW PRESSURE	41	74
(F) SECOND FINAL FLOW PRESSURE	55	71.3
(G) FINAL CLOSED-IN PRESSURE	1109	1126.7
(H) FINAL HYDROSTATIC MUD	1662	1650

CALCULATED RECOVERY ANALYSIS - WEIGHT PIPE

DST # 1 TICKET # 3108

SAMPLE #	TOTAL FEET	GAS %	GAS FEET	OIL %	OIL FEET	WATER %	WATER FEET	MUD %	MUD FEET
1	60	2	1.2	48	28.8	10	6	40	24
2	60	15	9	25	15	5	3	55	33
3			0		0	0	0		0
4			0		0		0		0
5			0		0		0		0
TOTAL	120	8.5	10.2	36.5	43.8	7.5	9	47.5	57

			HRS OPEN	BBL/DAY
BBL OIL=	0.3066	*	2	3.6792
BBL WATER	0.063	*		0.756
BBL MUD=	0.399			



COMPUTER EVALUATION BY TRILOBITE TESTING
ABERCROMBIE DRILLING INC
REPORT FOR DST#1 FOR THE WEIGAND #1
3-18S-18W RUSH KANSAS

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TEST PARAMETERS

ELEVATION:	2055 KB	EST. PAY:	4 FT
DATUM:	-1402	ZONE TESTED:	LANSING "B"
TEST INTERVAL:	3454-3475	TIME INTERVALS:	60-30-60-45
RECORDER DEPTH:	3456	VISCOSITY:	6.864721 CP
BOTTOM HOLE TEMP:	100	HOLE SIZE:	7.875 IN

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CALCULATIONS

CUBIC FEET OF GAS IN PIPE: 21.34241

TOTAL FEET OF RECOVERY: 120
BARRELS IN WEIGHT PIPE: .8400001
GAS OIL RATIO: 25.40763 CU.FT./BBL
BUBBLE POINT PRESSURE: ; .1122557
TOTAL BARRELS OF RECOVERY: .8400001
UNCORR. INIT. PROD.: 10.08 BBL/DAY

API GRAVITY: 43
FLUID GRADIENT: .351

CORRECTED PIPE FILLUP: 203.1339
CORR. BARRELS OF RECOVERY: 1.421 BBL

INITIAL PRODUCTION CORRECTED TO FINAL FLOW PRESSURE: 17.052 BBL/DAY
INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE
250.1882

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INITIAL SLOPE 445.28 PSI/CYCLE
INITIAL P* 1301 PSI

FINAL SLOPE 288.16 PSI/CYCLE
FINAL P* 1278 PSI

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TRANSMISSIBILITY	9.621929 (MD.-FT./CP.)
PERMEABILITY	16.51296 (MD.)
INDICATED FLOW CAPACITY	66.05186 (MD.FT)
PRODUCTIVITY INDEX	1.087278E-02 (BARRELS/DAY/PSI)
DAMAGE RATIO	.7663315
RADIUS OF INVESTIGATION	44.51467 (FT.)
POTENTIOMETRIC SURFACE	1562.682 (FT.)
DRAWDOWN FACTOR	1.767874 (%)

INITIAL FLOW

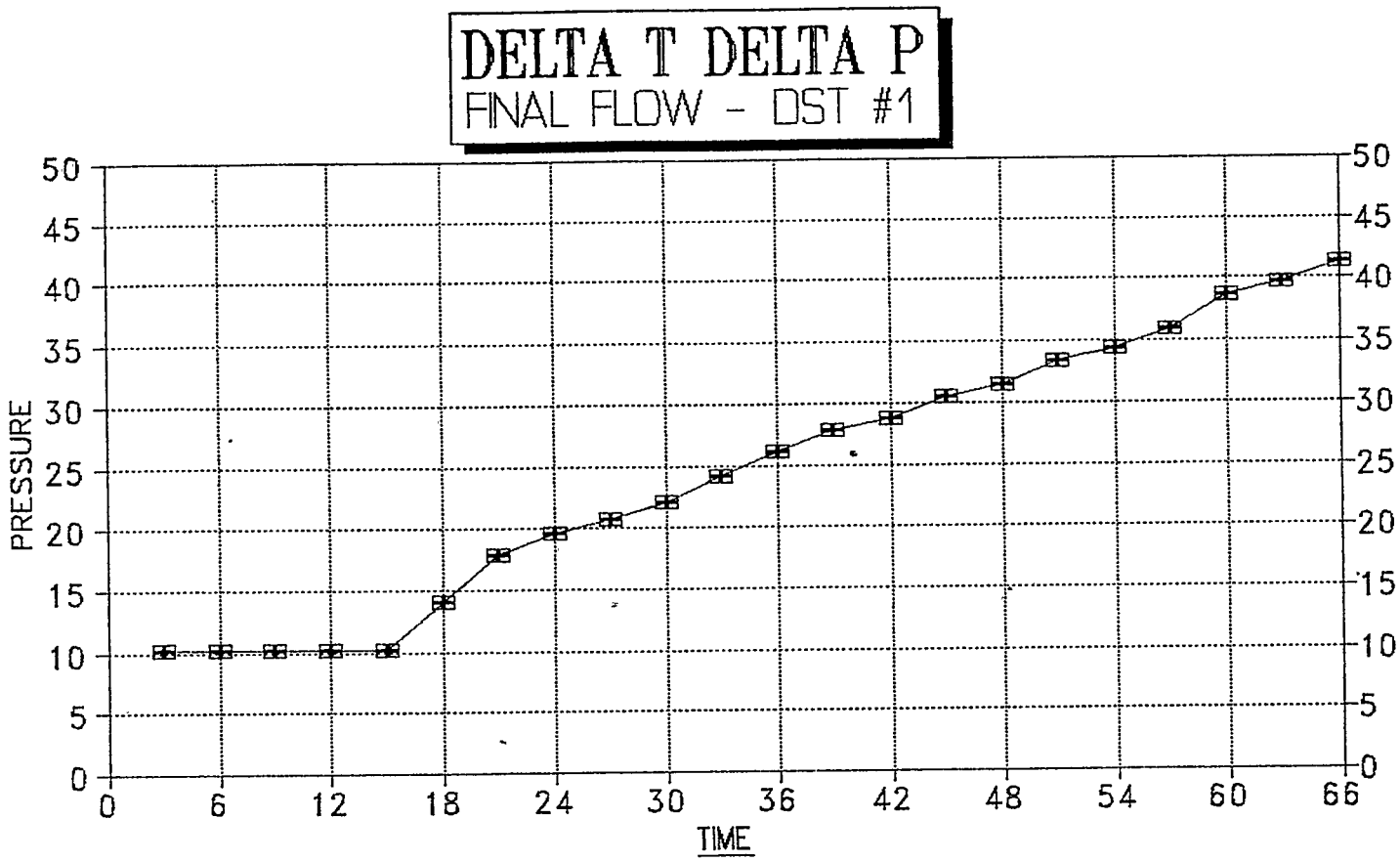
RECORDER # 11038
DST #1

DT(MIN)	PRESSURE	<> PRESSURE
0	8.7	8.7
3	10.2	1.5
6	10.2	0
9	10.2	0
12	10.2	0
15	10.2	0
18	14.1	3.900001
21	17.8	3.699999
24	19.6	1.800001
27	20.7	1.1
30	26.1	5.4
33	26.1	0
36	26.1	0
39	27.8	1.699999
42	28.8	1
45	30.5	1.700001
48	31.5	1
51	33.3	1.799999
54	34.3	1
57	35.9	1.600002
60	38.7	2.799999
63	39.7	1
66	41.4	1.700001

FINAL FLOW

RECORDER # 11038
DST #1

DT(MIN)	PRESSURE	<> PRESSURE
0	74	74
3	72.9	-1.099999
6	71.3	-1.599999
9	71.3	0
12	71.3	0
15	71.3	0
18	71.3	0
21	71.3	0
24	71.3	0
27	71.3	0
30	71.3	0
33	71.3	0
36	71.3	0
39	71.3	0
42	71.3	0
45	71.3	0
48	71.3	0
51	71.3	0
54	71.3	0
57	71.3	0
60	71.3	0
63	71.3	0



INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE 16.33732 BBL/DAY

WEIGAND #1 DST #1
INITIAL SHUTIN

60 INITIAL FLOW TIME

Slope -445.28 psi/cycle
P * 1,301 psi

	TIME(MIN)	Pws (psi)	Horn T	Log Horn T	<> PRESSURE
	3	53.3	21	1.322	53.3
	6	115.7	11	1.041	62.4
	9	268.8	8	0.885	153.1
	12	610.2	6	0.778	341.4
	15	878.6	5	0.699	268.4
	18	987.8	4	0.637	109.2
	21	1033.3	4	0.586	45.5
X	24	1058.6	4	0.544	25.3
	27	1076.3	3	0.508	17.7
	30	1089.4	3	0.477	13.1
X	33	1100.5	3	0.450	11.1

WEIGAND #1 DST #1
FINAL SHUTIN

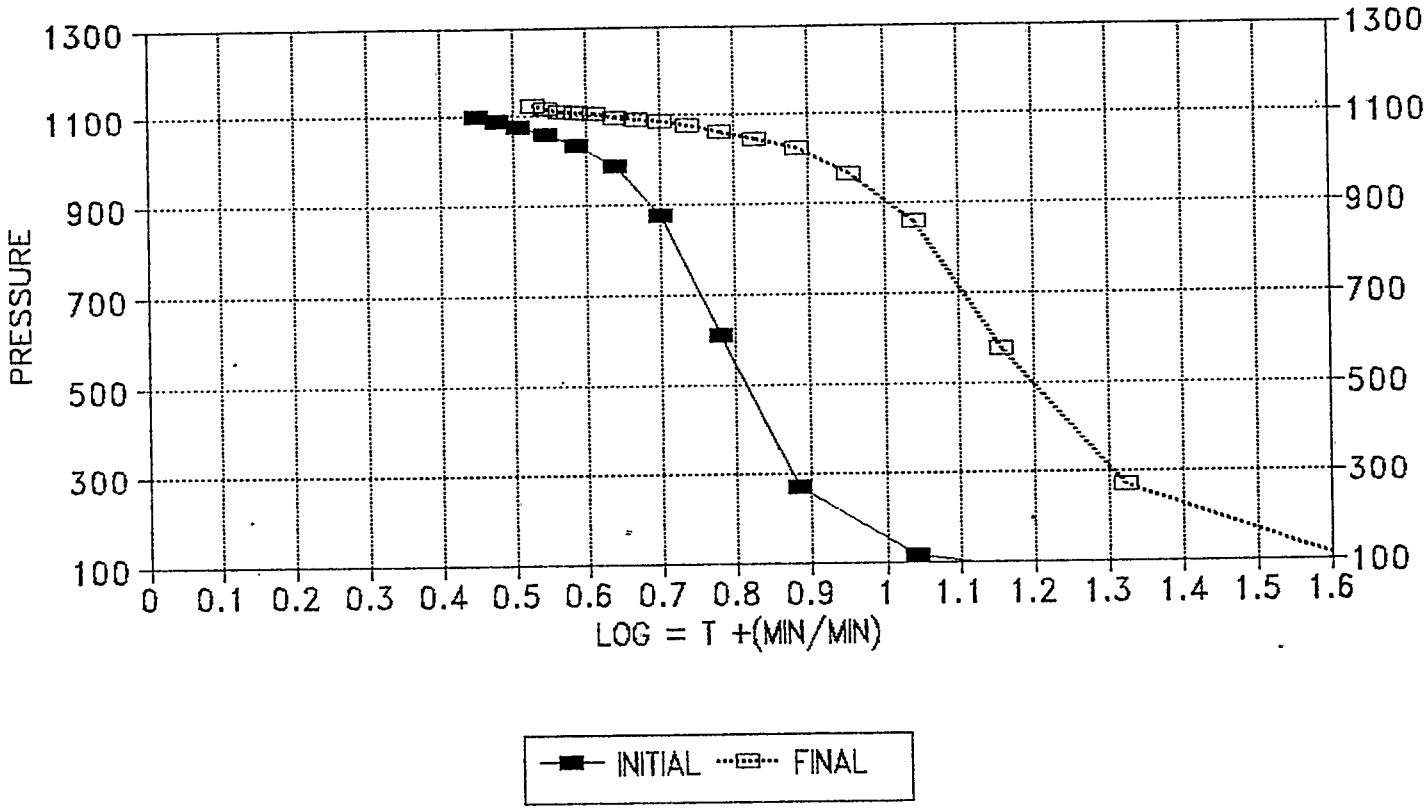
120 TOTAL FLOW TIME

Slope -288.16 psi/cycle
P * 1,278 psi

	TIME(MIN)	Pws (psi)	Horn T	Log Horn T	<> PRESSURE
	3	103.9	41	1.613	103.9
	6	267.8	21	1.322	163.9
	9	578.1	14	1.156	310.3
	12	860.8	11	1.041	282.7
	15	967.5	9	0.954	106.7
X	18	1023.2	8	0.885	55.7
	21	1043.4	7	0.827	20.2
	24	1062.5	6	0.778	19.1
	27	1076.3	5	0.736	13.8
	30	1083.9	5	0.699	7.6
	33	1091.4	5	0.666	7.5
	36	1096.5	4	0.637	5.1
	39	1104	4	0.610	7.5
	42	1109.1	4	0.586	5.1
	45	1111.6	4	0.564	2.5
	48	1116.7	4	0.544	5.1
X	51	1126.7	3	0.525	10.0

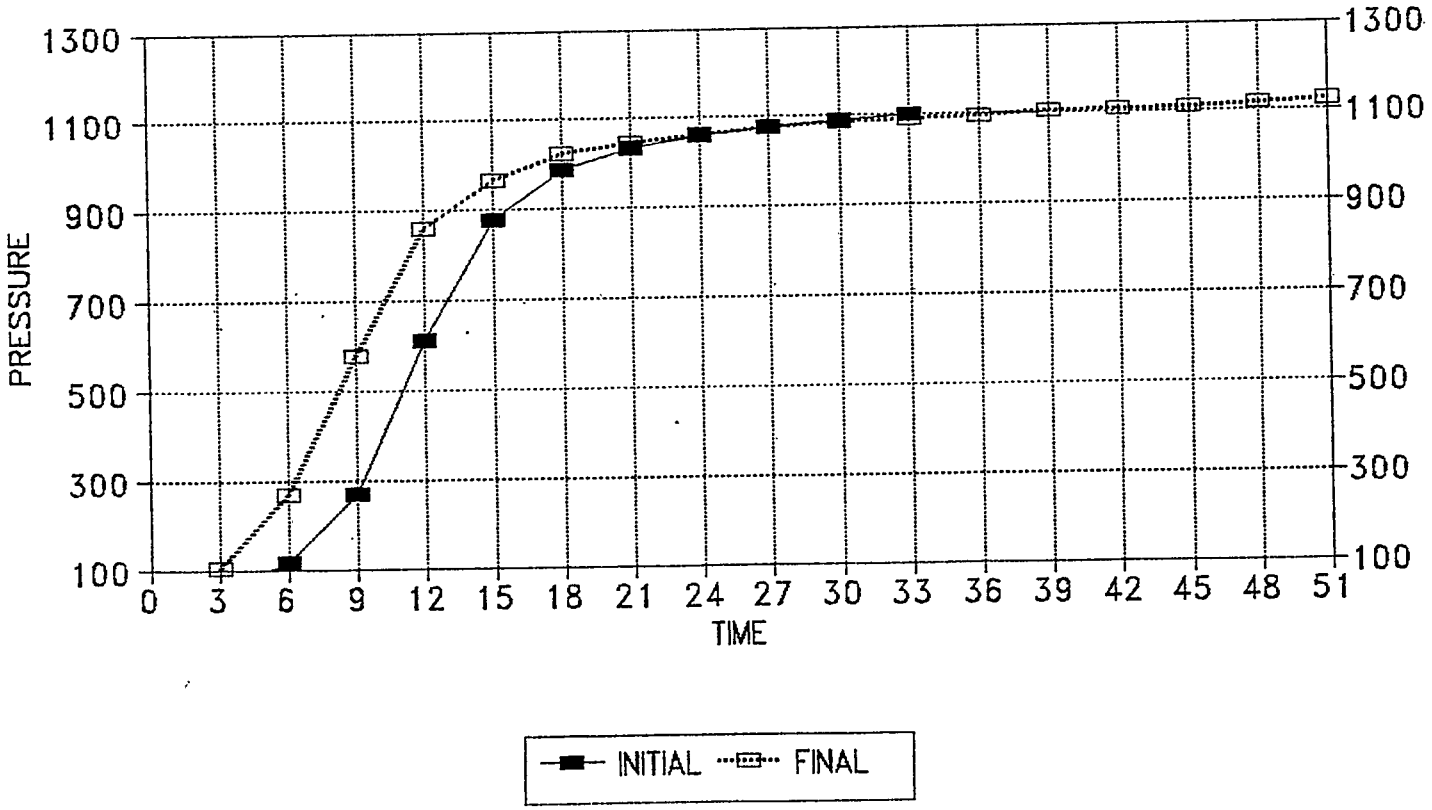
HORNER PLOT

DST #1-WEIGAND #1



DELTA T DELTA P

DST #1-WEIGAND #1



TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name WEIGAND #1 Test No. 2 Date 3/22/91
Company ABERCROMBIE DRILLING INC Zone Tested ARBUCKLE
Address 150 N MAIN #801 WICHITA KS 67202 Elevation 2055 KB
Co. Rep./Geo. MR STEVE FRANKAMP Cont. ABERCROMBIE #8 Est. Ft. of Pay
Location: Sec. 3 Twp. 18W Rge. 18W Co. RUSH State KANSAS

Interval Tested 3779-3837 Drill Pipe Size 4.5 XH
Anchor Length 58 Wt. Pipe I.D. - 2.7 Ft. Run 504
Top Packer Depth 3774 Drill Collar — 2.25 Ft. Run
Bottom Packer Depth 3779
Total Depth 3837

Mud Wt. 9.2 lb / gal. Viscosity 55 Filtrate 10.4

Tool Open @ 5:25 AM Initial Blow GOOD BLOW TO BOTTOM OF BUCKET IN 1 MINUTES
BLED 2" 5 MINUTES-NO BLOW BACK
Final Blow GOOD BLOW BOTTOM OF BUCKET IN 2.5 MINUTES-THEN DYING BA
BLED 2" 5 MINUTES-NO BLOW BACK

Recovery — Total Feet 2800 Flush Tool?

Rec. 90 Feet of MUD
Rec. 180 Feet of WTR CUT MUD-30%WTR/70%MUD
Rec. 180 Feet of MUD CUT WTR-80%WTR/20%MUD
Rec. 2350 Feet of SALT WATER
Rec. Feet of

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

RW 0.41 @ 54 °F Chlorides 22000 ppm Recovery Chlorides 9000 ppm System

(A) Initial Hydrostatic Mud 1882.5 PSI AK1 Recorder No. 11038 Range 5075
(B) First Initial Flow Pressure 302.4 PSI @ (depth) 3781 w/Clock No. 17640
(C) First Final Flow Pressure 977.7 PSI AK1 Recorder No. 13337 Range 3975
(D) Initial Shut-In Pressure 1209.9 PSI @ (depth 3834 w/Clock No. 27594
(E) Second Initial Flow Pressure 1051 PSI AK1 Recorder No. Range
(F) Second Final Flow Pressure 1179.7 PSI @ (depth) w/Clock No.
(G) Final Shut-In Pressure 1217.4 PSI Initial Opening 30 Final Flow 30
(H) Final Hydrostatic Mud 1804 PSI Initial Shut-In 45 Final Shut-In 45

Our Representativve MR ROGER F SELLS TOTAL PRICE $ 585

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#2

This is an actual photograph of recorder chart

POINT	PRESSURE FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1877	1882.5
(B) FIRST INITIAL FLOW PRESSURE	297	302.4
(C) FIRST FINAL FLOW PRESSURE	982	977.7
(D) INITIAL CLOSED-IN PRESSURE	1209	1209.9
(E) SECOND INITIAL FLOW PRESSURE	1058	1051
(F) SECOND FINAL FLOW PRESSURE	1197	1179.7
(G) FINAL CLOSED-IN PRESSURE	1209	1217.4
(H) FINAL HYDROSTATIC MUD	1814	1804