

# TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Drill-Stem Test Data

Well Name KIMPLER #14-8 Test No. 1 Date 7/6/92  
Company KODIAK PETROLEUM, INC. Zone LWR KRIDER  
Address 44 INVERNESS DR E BLDG D ENGLEWOOD CO 80112 Elevation 2194  
Co. Rep./Geo. CHARLEY COOK Cont. ABERC DRLG RIG #8 Est. Ft. of Pay 5  
Location: Sec. 14 Twp. 20S Rge. 20W Co. PAWNEE State KS

Interval Tested	<u>2265-2277</u>	Drill Pipe Size	<u>4.5" XH</u>
Anchor Length	<u>12</u>	Wt. Pipe I.D. - 2.7 Ft. Run	<u>619</u>
Top Packer Depth	<u>2260</u>	Drill Collar - 2.25 Ft. Run	<u>9</u>
Bottom Packer Depth	<u>2265</u>	Mud Wt.	<u>9</u> lb/Gal.
Total Depth	<u>2277</u>	Viscosity	<u>44</u>
		Filtrate	<u>N/A</u>

Tool Open @ 12:35 AM Initial Blow STRONG SURGING BLOW

Final Blow BOTTOM OF BUCKET IN 30 SECONDS  
GAS TO SURFACE IN 11 MIN INTO FINAL FLOW-GAUGED GAS

Recovery - Total Feet 60 Flush Tool? NO

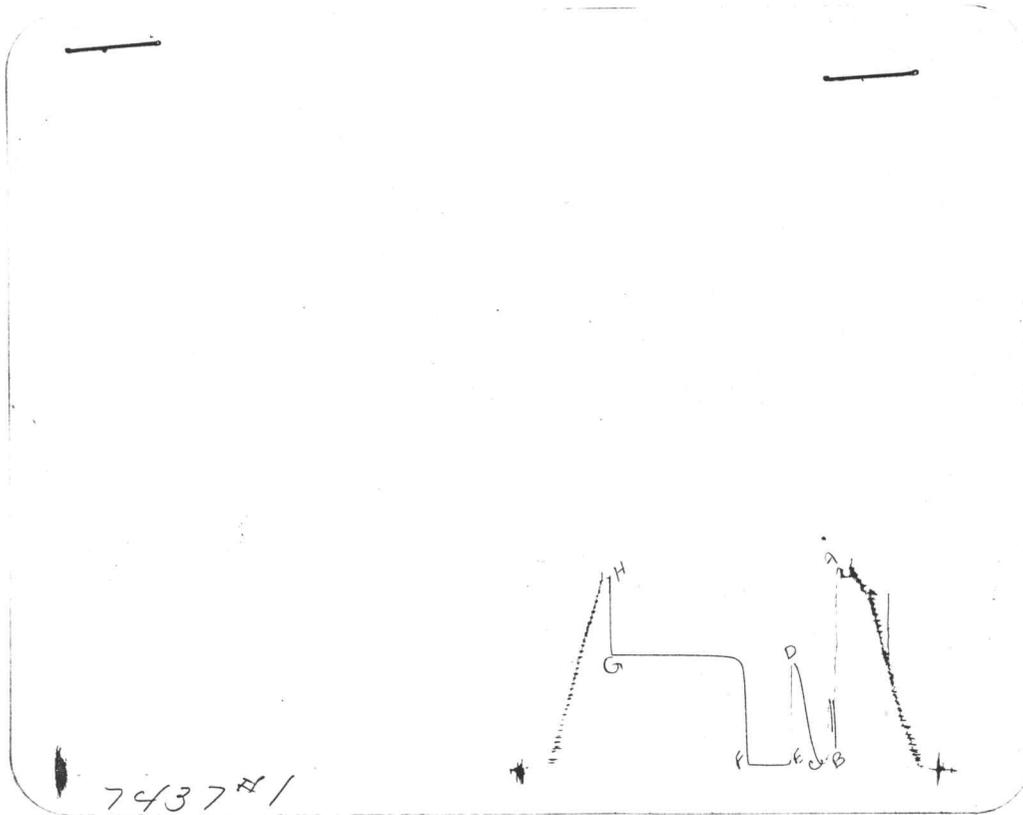
Rec. <u>2217</u>	Feet of	<u>GAS IN PIPE</u>
Rec. <u>60</u>	Feet of	<u>DRILLING MUD</u>
Rec. _____	Feet of	_____
Rec. _____	Feet of	_____
Rec. _____	Feet of	_____

BHT 91 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 63000 ppm System

(A) Initial Hydrostatic Mud	<u>1130.9</u> PSI	AK1 Recorder No.	<u>13754</u>	Range	<u>4000</u>
(B) First Initial Flow Pressure	<u>43.3</u> PSI	@ (depth)	<u>2269</u>	w / Clock No.	<u>26199</u>
(C) First Final Flow Pressure	<u>35.4</u> PSI	AK1 Recorder No.	<u>7437</u>	Range	<u>4200</u>
(D) Initial Shut-in Pressure	<u>604.7</u> PSI	@ (depth)	<u>2273</u>	w / Clock No.	<u>27567</u>
(E) Second Initial Flow Pressure	<u>32.4</u> PSI	AK1 Recorder No.	_____	Range	_____
(F) Second Final Flow Pressure	<u>23.6</u> PSI	@ (depth)	_____	w / Clock No.	_____
(G) Final Shut-in Pressure	<u>643.2</u> PSI	Initial Opening	<u>10</u>	Final Flow	<u>30</u>
(H) Final Hydrostatic Mud	<u>1115.9</u> PSI	Initial Shut-in	<u>20</u>	Final Shut-in	<u>90</u>

Our Representative DAN BANGLE

# CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1146	1130.9
(B) FIRST INITIAL FLOW PRESSURE	55	43.3
(C) FIRST FINAL FLOW PRESSURE	55	35.4
(D) INITIAL CLOSED-IN PRESSURE	632	604.7
(E) SECOND INITIAL FLOW PRESSURE	55	32.4
(F) SECOND FINAL FLOW PRESSURE	55	23.6
(G) FINAL CLOSED-IN PRESSURE	684	643.2
(H) FINAL HYDROSTATIC MUD	1104	1115.9

COMPUTER EVALUATION BY TRILOBITE TESTING, L.L.C.

KODIAK PETROLEUM, INC.

KIMPLER #14-8

DST 1

14 20S 20W

PAWNEE KS

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ELEVATION:	2194 KB	EST. PAY:	5 FT.
DATUM:	-2270	ZONE TESTED:	LWR KRIDER
TEST INTERVAL:	2265-2277	TIME INTERVALS:	10-20-30-90
RECORDER DEPTH:	2269	VISCOSITY:	0.01158 CP
BOTTOM HOLE TEMP:	91	HOLE SIZE:	7.875 IN
COMPRESSIBILITY:	0.9979	GAS GRAVITY:	0.8569

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TEMPERATURE RANKINE:	551.00	&
TRANSMISSIBILITY:	12808.85	Kh/%
THEORITICAL FLOW CAPICITY:	148.28	Kh
AVERAGE EFFECTIVE PERMEABILITY:	29.66	K(md.)
RADIUS OF INVESTIGATION:	34.44	FT.
DAMAGE RATIO:	23.83	
ABSOLUTE OPEN FLOW(MAX)	31.94	MCFD
ABSOLUTE OPEN FLOW(MIN)	31.92	MCFD
THEORITICAL OPEN FLOW(MAX)	761.19	MCFD
THEORITICAL OPEN FLOW(MIN)	760.68	MCFD
POTENTIOMETRIC SURFACE	0.00	(FT.)

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INITIAL SHUT-IN VALUES:

THEORETICAL STATIC PRESSURE	296073.85
SLOPE	813

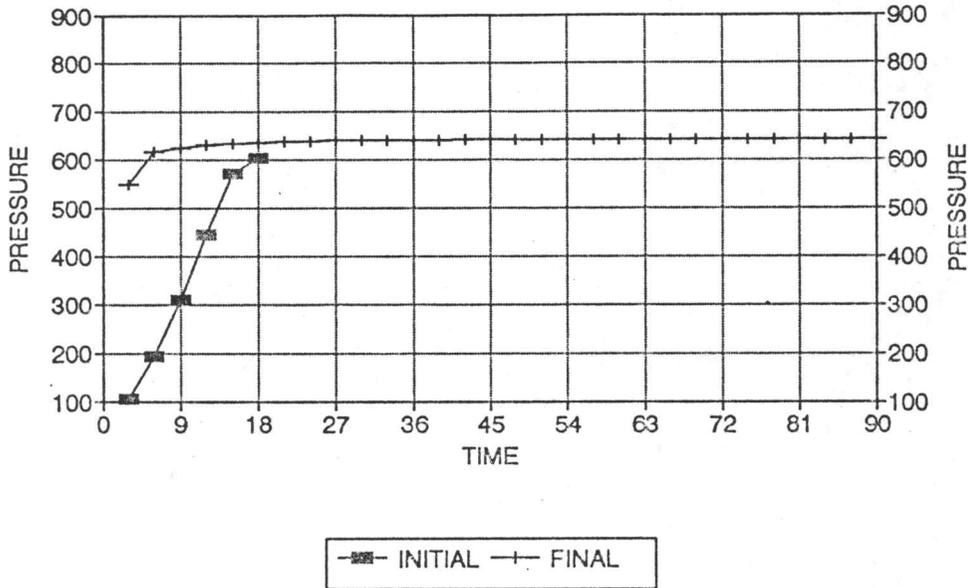
FINAL SHUT-IN VALUES:

THEORETICAL STATIC PRESSURE	2241.65
SLOPE	645

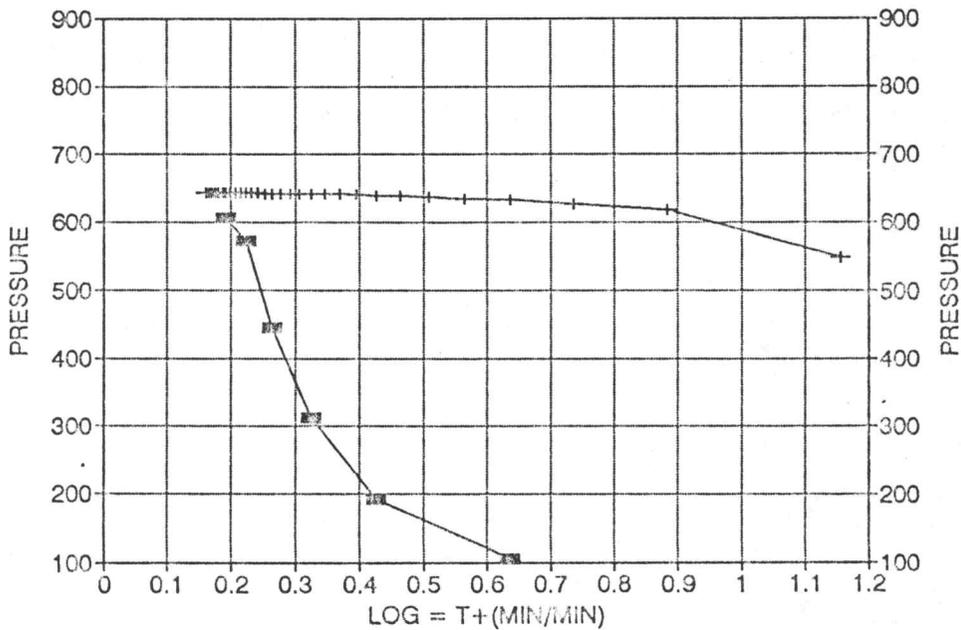
DRAWDOWN FACTOR: 20.72 (%)



# KIMPLER #14-8 / DST #1 DELTA T DELTA P



## HORNER PLOT



KIMPLER #14-8  
INITIAL

DST #1  
SHUTIN

10 TOTAL FLOW TIME

-----  
Slope 296073.85 psi/cycle  
P \* 813 psi  
-----

TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
3	105.3	0.637	105.3	4
6	191.9	0.426	86.6	3
9	311.0	0.325	119.1	2
12	444.8	0.263	133.8	2
X 15	572.1	0.222	127.3	2
X 18	604.7	0.192	32.6	2

KIMPLER #14-8  
FINAL

DST #1  
SHUTIN

40 TOTAL FLOW TIME

-----  
Slope 2241.65 psi/cycle  
P \* 645 psi  
-----

TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
3	548.4	1.156	548.4	14
6	617.5	0.885	69.1	8
9	626.4	0.736	8.9	5
12	632.3	0.637	5.9	4
15	634.3	0.564	2.0	4
18	637.3	0.508	3.0	3
21	638.3	0.463	1.0	3
24	639.3	0.426	1.0	3
27	640.3	0.395	1.0	2
30	641.2	0.368	0.9	2
33	641.2	0.345	0.0	2
36	641.2	0.325	0.0	2
39	641.2	0.307	0.0	2
42	642.2	0.291	1.0	2
45	642.2	0.276	0.0	2
48	642.2	0.263	0.0	2
X 51	642.2	0.251	0.0	2
54	643.2	0.241	1.0	2
57	643.2	0.231	0.0	2
60	643.2	0.222	0.0	2
63	643.2	0.213	0.0	2
66	643.2	0.206	0.0	2
69	643.2	0.199	0.0	2
72	643.2	0.192	0.0	2
75	643.2	0.186	0.0	2
78	643.2	0.180	0.0	2
81	643.2	0.174	0.0	1
84	643.2	0.169	0.0	1
87	643.2	0.164	0.0	1
X 90	643.2	0.160	0.0	1

# GAS VOLUME REPORT

KODIAK PETROLEUM, INC.

KIMPLER #14-8

DST # 1

MIN	PSIG	ORIFICE	MCF/D	MIN	PSIG	ORIFICE	MCF/D
				11	15	0.5	24.5
				16	37	0.5	38.6
				21	26	0.5	31.9
				26	26	0.5	31.9
				30	32	0.5	35.5

Remarks:

GAS TO SURFACE IN 11 MINUTES FINAL FLOW



# TRILOBITE TESTING, L.L.C.

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## Drill-Stem Test Data

Well Name KIMPLER #14-8 Test No. 2 Date 7/6/92  
Company KODIAK PETROLEUM, INC. Zone LWR WINFIELD  
Address 44 INVERNESS DR E BLDG D ENGLEWOOD CO 80112 Elevation 2194  
Co. Rep./Geo. CHARLEY COOK Cont. ABERC DRLG RIG #8 Est. Ft. of Pay \_\_\_\_\_  
Location: Sec. 14 Twp. 20S Rge. 20W Co. PAWNEE State KS

Interval Tested	<u>2311-2322</u>	Drill Pipe Size	<u>4.5" XH</u>
Anchor Length	<u>11</u>	Wt. Pipe I.D. - 2.7 Ft. Run	<u>619</u>
Top Packer Depth	<u>2306</u>	Drill Collar - 2.25 Ft. Run	_____
Bottom Packer Depth	<u>2311</u>	Mud Wt.	<u>9.2</u> lb/Gal.
Total Depth	<u>2322</u>	Viscosity	<u>42</u>
		Filtrate	<u>6.4</u>

Tool Open @ 10:17 AM Initial Blow BOTTOM OF BUCKET IN 5.5 MINUTES

Final Blow BOTTOM OF BUCKET IN 9.5 MINUTES

Recovery - Total Feet 90 Flush Tool? NO

Rec. 90 Feet of MUDDY WATER-60%WTR/40%MUD  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

BHT 93 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
RW 0.038 @ 87 °F Chlorides 220000 ppm Recovery Chlorides 25000 ppm System

(A) Initial Hydrostatic Mud 1194.5 PSI AK1 Recorder No. 13754 Range 4000

(B) First Initial Flow Pressure 31.2 PSI @ (depth) 2315 w / Clock No. 26199

(C) First Final Flow Pressure 31.2 PSI AK1 Recorder No. 7437 Range 4200

(D) Initial Shut-in Pressure 594.6 PSI @ (depth) 2318 w / Clock No. 27567

(E) Second Initial Flow Pressure 40.6 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_

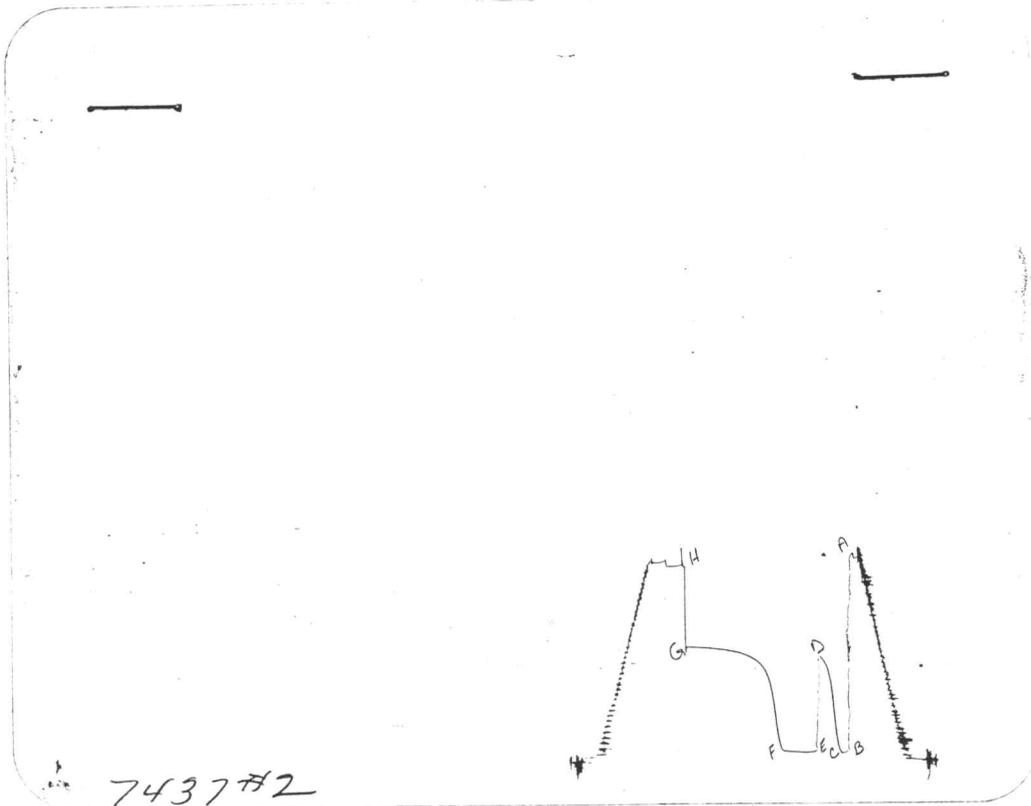
(F) Second Final Flow Pressure 40.6 PSI @ (depth) \_\_\_\_\_ w / Clock No. \_\_\_\_\_

(G) Final Shut-in Pressure 641.2 PSI Initial Opening 7 Final Flow 22

(H) Final Hydrostatic Mud 1088.7 PSI Initial Shut-in 15 Final Shut-in 60

Our Representative DAN BANGLE

# CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1186	1194.5
(B) FIRST INITIAL FLOW PRESSURE	29	31.2
(C) FIRST FINAL FLOW PRESSURE	29	31.2
(D) INITIAL CLOSED-IN PRESSURE	590	594.6
(E) SECOND INITIAL FLOW PRESSURE	39	40.6
(F) SECOND FINAL FLOW PRESSURE	39	40.6
(G) FINAL CLOSED-IN PRESSURE	640	641.2
(H) FINAL HYDROSTATIC MUD	1086	1088.7

# TRILOBITE TESTING, L.L.C.

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## Drill-Stem Test Data

Well Name KIMPLER #14-8 Test No. 3 Date 7/6/92  
Company KODIAK PETROLEUM, INC. Zone FT RILEY  
Address 44 INVERNESS DR E BLDG D ENGLEWOOD CO 80112 Elevation 2194  
Co. Rep./Geo. CHARLEY COOK Cont. ABERC DRLG RIG #8 Est. Ft. of Pay \_\_\_\_\_  
Location: Sec. 14 Twp. 20S Rge. 20W Co. PAWNEE State KS

Interval Tested	<u>2406-2420</u>	Drill Pipe Size	<u>4.5" XH</u>
Anchor Length	<u>14</u>	Wt. Pipe I.D. - 2.7 Ft. Run	<u>619</u>
Top Packer Depth	<u>2401</u>	Drill Collar - 2.25 Ft. Run	<u>9.1</u>
Bottom Packer Depth	<u>2406</u>	Mud Wt.	<u>9.1</u> lb/Gal.
Total Depth	<u>2420</u>	Viscosity	<u>42</u>
		Filtrate	<u>6.4</u>

Tool Open @ 10:17 PM <sup>Initial</sup> Blow WEAK-BUILDING TO 3.25"

Final Blow WEAK-BUILDING TO 3.5"

Recovery - Total Feet 70 Flush Tool? NO

Rec. 70 Feet of MUDDY WATER-70%WTR/30%MUD  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

BHT 96 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
RW 0.035 @ 84 °F Chlorides 200000 ppm Recovery Chlorides 25000 ppm System

(A) Initial Hydrostatic Mud 1240.3 PSI AK1 Recorder No. 13754 Range 4000

(B) First Initial Flow Pressure 44.6 PSI @ (depth) 2410 w / Clock No. 26199

(C) First Final Flow Pressure 48.9 PSI AK1 Recorder No. 7437 Range 4200

(D) Initial Shut-in Pressure 663.2 PSI @ (depth) 2416 w / Clock No. 27567

(E) Second Initial Flow Pressure 55.7 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_

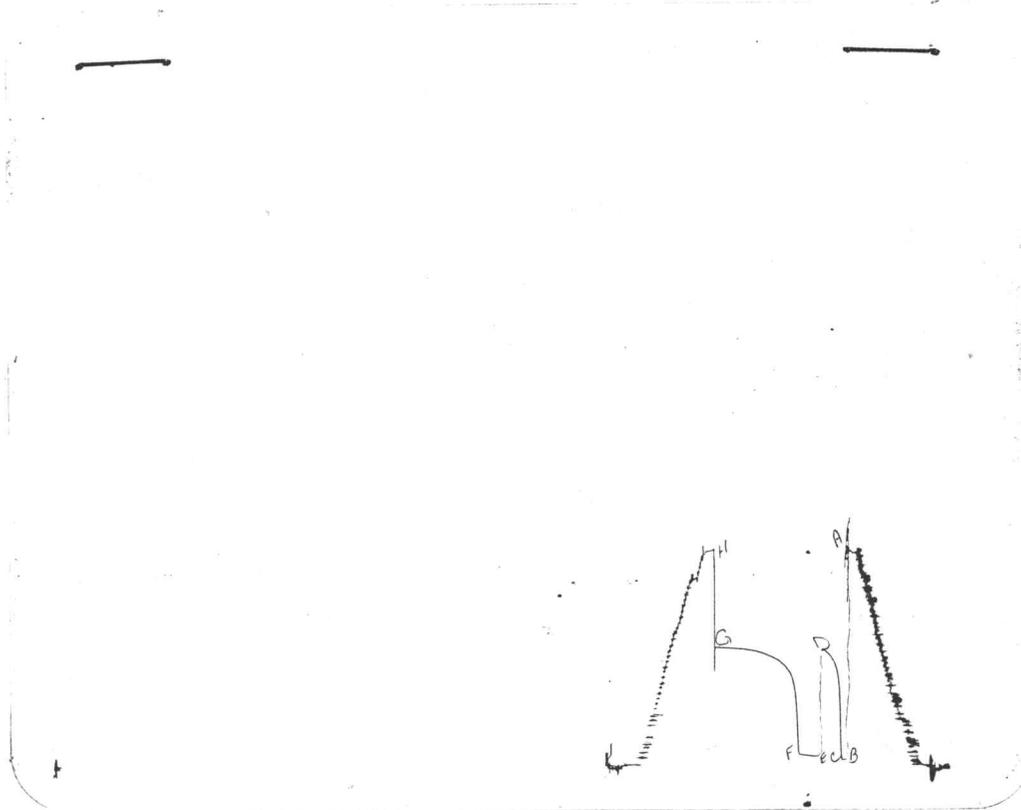
(F) Second Final Flow Pressure 68.2 PSI @ (depth) \_\_\_\_\_ w / Clock No. \_\_\_\_\_

(G) Final Shut-in Pressure 680.1 PSI Initial Opening 5 Final Flow 20

(H) Final Hydrostatic Mud 1190.4 PSI Initial Shut-in 20 Final Shut-in 60

Our Representative DAN BANGLE

# CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1236	1240.3
(B) FIRST INITIAL FLOW PRESSURE	49	44.6
(C) FIRST FINAL FLOW PRESSURE	49	48.9
(D) INITIAL CLOSED-IN PRESSURE	660	663.2
(E) SECOND INITIAL FLOW PRESSURE	59	55.7
(F) SECOND FINAL FLOW PRESSURE	68	68.2
(G) FINAL CLOSED-IN PRESSURE	679	680.1
(H) FINAL HYDROSTATIC MUD	1186	1190.4