

DRILL STEM TEST DATA

BOTTOM HOLE CHOKE	5/8" SURFACE 1" adj.	CUSHION	None	ELEVATION	4195'	G.L.
TIME TOOL OPENED	3:30 P.M. N.M.	RECORDER DATA				
TOOL OPEN BEFORE I.S.I.P.	30 MIN.	TYPE	AK-1	CAPACITY	8375	
INITIAL SHUT-IN	1 HRS. - MIN.	TOP	13,390	DEPTH	8971	
TOOL OPEN	1 HRS. 30 MIN.	BOTTOM	13,391	DEPTH	9027	
FINAL SHUT-IN	3 HRS. - MIN.	CLOCK: TOP	18 hr.	BOTTOM	24 hr.	
SURFACE ACTION						
Pre-flow: Opened with a very weak blow, 1/4" in water column. Steadily built to 3/4" in water at 15 minutes and 1" in water column at 25 minutes and remained same.						
Final Flow: Opened with a very weak blow, barely skimming top of water and remained same throughout flow.						
RECOVERY 80' Drilling Mud. No sign of oil or gas.						
Chlorides - Top 93,000 P.P.M. Rw .065 @ 60°.						
Middle 90,000 P.P.M. Rw .066 @ 60°.						
Bottom 90,000 P.P.M. Rw .066 @ 60°.						
SUCCESSFUL TEST Yes.						

COMPANY Grand Banks Energy
 LEASE NAME & NO. Hilleman # 1
 INTERVAL TESTED 8988 to 9030 (42')

	RECORDER NO.
	13,390
A (INITIAL HYDROSTATIC PRESSURE)	4730.0 P.S.I.
B (INITIAL PRE-FLOW PRESSURE)	51.2 P.S.I.
C (FINAL PRE-FLOW PRESSURE) 30 MIN.	30.8 P.S.I.
D (INITIAL SHUT-IN PRESSURE) 60 MIN.	3051.2 P.S.I.
E (INITIAL FLOW PRESSURE)	45.1 P.S.I.
F (FINAL FLOW PRESSURE) 90 MIN.	45.1 P.S.I.
G (FINAL SHUT-IN PRESSURE) 180 MIN.	3032.4 P.S.I.
H (FINAL HYDROSTATIC PRESSURE)	4677.6 P.S.I.

HOLE AND MUD DATA

TOTAL DEPTH	9030	MAIN HOLE	7 7/8
DEPTH OF CSG.	4000	CASING SIZE	8 5/8
MUD WT.	9.6	VISCOSITY	46
WATER LOSS	10.6	CAKE	3/32
TYPE MUD	Salt Gel		
CHLORIDE	85,000 P.P.M.		
RESISTIVITY	.070	@ 60	°F

COUNTY Lea
 STATE New Mexico
 FORMATION Abq

TOOL DATA

NO. PACKERS	2			
SIZE PACKERS	6 3/4			
CONVENTIONAL TEST	Yes			
TYPE TOOL	DEPTH	LENGTH	I.D.	O.D.
4 1/2 XII DP		8268	3.8	4.5
4 1/2 H90 DC		532	2.3	6.25
Cir.Sub.	8801	1		
5 DC		147		
X-0 Sub		1		
Shut-in		6		
Sampler		3		
Hyd. Tool		5		
Jars		6		
Recorder		5		
S.J.		2		
Packer	8982	6		
Packer	8988	6		
Shoe				
4' Perf.				
X-0 Sub				
1 DC				
X-0 Sub				
Perf.&Rec.		42		
DRLG. CONT.	Ziadril		RIG # 10	

DATE October 9, 1990
 TICKET # 6904
 TEST # 1

SAMPLER REPORT

PRESSURE IN SAMPLER	0	PSI
BHT	142 °F @	8970 F.T.
OIL:		CC.
WATER:		CC.
MUD:	1500	CC.
GAS:		CU.FT.
RESISTIVITY	.065 @	60 °F
CHLORIDE	93,000	PPM.
GRAVITY	•API @	°F
CAPACITY	1500	

REMARKS: _____

ESTER Glen Hogue, Jr.

APPROVED BY: Thomas F. Klepfer

RECORDER NO. 13390 DEPTH 8971 FT.

INITIAL FLOW

<u>DT (MIN)</u>	<u>PRESSURE (PSIG)</u>
0	51.2
2	39.0
5	36.9
10	36.9
15	39.0
20	30.8
25	30.8
30	30.8

RECORDER NO. 13390 DEPTH 8971 FT.

FINAL FLOW

<u>DT (MIN)</u>	<u>PRESSURE (PSIG)</u>
0	45.1
5	43.1
10	34.9
20	34.9
30	34.9
40	35.9
50	36.9
60	37.9
70	39.0
80	43.1
90	45.1

I Hyd 4730.0

F Hyd 4677.6

RECORDER NO. 13390 DEPTH 8971 FT.

INITIAL SHUT-IN

INITIAL FLOW TIME: T = 30 MIN.

<u>DT(MIN)</u>	<u>LOG((T+DT)/DT)</u>	<u>PRESSURE (PSIG)</u>	<u>DP (PSIG)</u>
0		30.8	0.0
1	1.491	418.5	387.7
2	1.204	830.6	799.9
4	.929	1419.2	1388.5
6	.778	1798.1	1767.4
8	.677	2033.9	2003.2
10	.602	2215.7	2184.9
12	.544	2368.4	2337.6
14	.497	2464.6	2433.8
16	.459	2560.9	2530.1
18	.426	2627.9	2597.1
20	.398	2678.2	2647.4
25	.342	2787.1	2756.3
30	.301	2856.3	2825.5
35	.269	2910.8	2880.0
40	.243	2950.6	2919.8
45	.222	2986.2	2955.5
50	.204	3013.5	2982.7
55	.189	3036.6	3005.8
60	.176	3051.2	3020.5

EXTRAPOLATED PRESSURE: 3339.4 PSI
SLOPE: 1604.2 PSI/LOG CYCLE
POINTS USED: 8

RECORDER NO. 13390 DEPTH 8971 FT.

FINAL SHUT-IN

TOTAL FLOW TIME: T = 120 MIN.

DT (MIN)	LOG((T+DT)/DT)	PRESSURE (PSIG)	DP (PSIG)
0		45.1	0.0
1	2.083	49.2	4.1
2	1.785	57.4	12.3
4	1.491	157.8	112.7
6	1.322	525.4	480.3
8	1.204	975.4	930.3
10	1.114	1359.0	1313.9
12	1.041	1612.7	1567.6
14	.981	1806.5	1761.4
16	.929	1956.7	1911.6
18	.885	2065.3	2020.2
20	.845	2159.3	2114.2
25	.763	2322.4	2277.2
30	.699	2437.4	2392.3
35	.646	2529.5	2484.4
40	.602	2596.5	2551.4
45	.564	2644.7	2599.6
50	.531	2688.7	2643.6
55	.503	2728.5	2683.4
60	.477	2764.1	2719.0
70	.434	2814.4	2769.3
80	.398	2852.1	2807.0
90	.368	2885.6	2840.5
100	.342	2910.8	2865.7
110	.320	2931.7	2886.6
120	.301	2952.7	2907.6
130	.284	2970.5	2925.4
140	.269	2986.2	2941.1
150	.255	2998.8	2953.7
160	.243	3011.4	2966.3
170	.232	3019.8	2974.7
180	.222	3032.4	2987.3

EXTRAPOLATED PRESSURE: 3259.8 PSI
SLOPE: 1022.5 PSI/LOG CYCLE
POINTS USED: 12

T E S T P A R A M E T E R S

DRILLPIPE CAPACITY	.0142 BBLS/FT	HOLE SIZE	7.875 IN
DRILLCOLLAR CAPACITY	.00496 BBLS/FT	PAY THICKNESS	26.0 FT
DRILLCOLLAR LENGTH	681 FT	VISCOSITY	.55 CP
BOTTOM HOLE TEMP	142 DEG F	COMPRESSIBILITY	.000010 1/PSI
POROSITY FRACTION	.10 (EST)	1ST FLOW TIME	30 MIN
RECORDER NUMBER	13390	1ST SHUT-IN TIME	60 MIN
RECORDER DEPTH	8971 FT	2ND FLOW TIME	90 MIN
ELEVATION	4195 G.L.	2ND SHUT-IN TIME	180 MIN
DATUM	-4776 FT		

C A L C U L A T I O N S

EXTRAPOLATED INITIAL SHUT-IN PRESSURE (PSI)	3339.4
NUMBER OF POINTS USED	8
SLOPE (PSI/LOG CYCLE)	1604.2
EXTRAPOLATED FINAL SHUT-IN PRESSURE (PSI)	3259.8
NUMBER OF POINTS USED	12
SLOPE (PSI/LOG CYCLE)	1022.5
AVERAGE PRODUCTION RATE (BARRELS/DAY)	4.8
TRANSMISSIBILITY (MD.-FT./CP.)76
FLOW CAPACITY (MD.-FT.)42
PERMEABILITY (MD.)00
PRODUCTIVITY INDEX (BARRELS/DAY/PSI)001
DAMAGE RATIO6
SKIN FACTOR (S)	2.3
PRESSURE DROP DUE TO SKIN (PSI)	2078.0
APPROXIMATE RADIUS OF INVESTIGATION (FT.)	2.2
DRAWDOWN FACTOR (%)	2.4
POTENTIOMETRIC SURFACE (FT.)	2819.3

3500

HORNER PLOT

GRAND BANKS ENERGY
HILEMAN #1, DST #1

T-6904, REC. 13390

8988' - 9030' 42'

P*1 = 3339.4 PSI 8 pts.

Pwf = 3259.8 PSI 12 pts.

FINAL SHUT-IN

INITIAL SHUT-IN

PRESSURE (PSI)

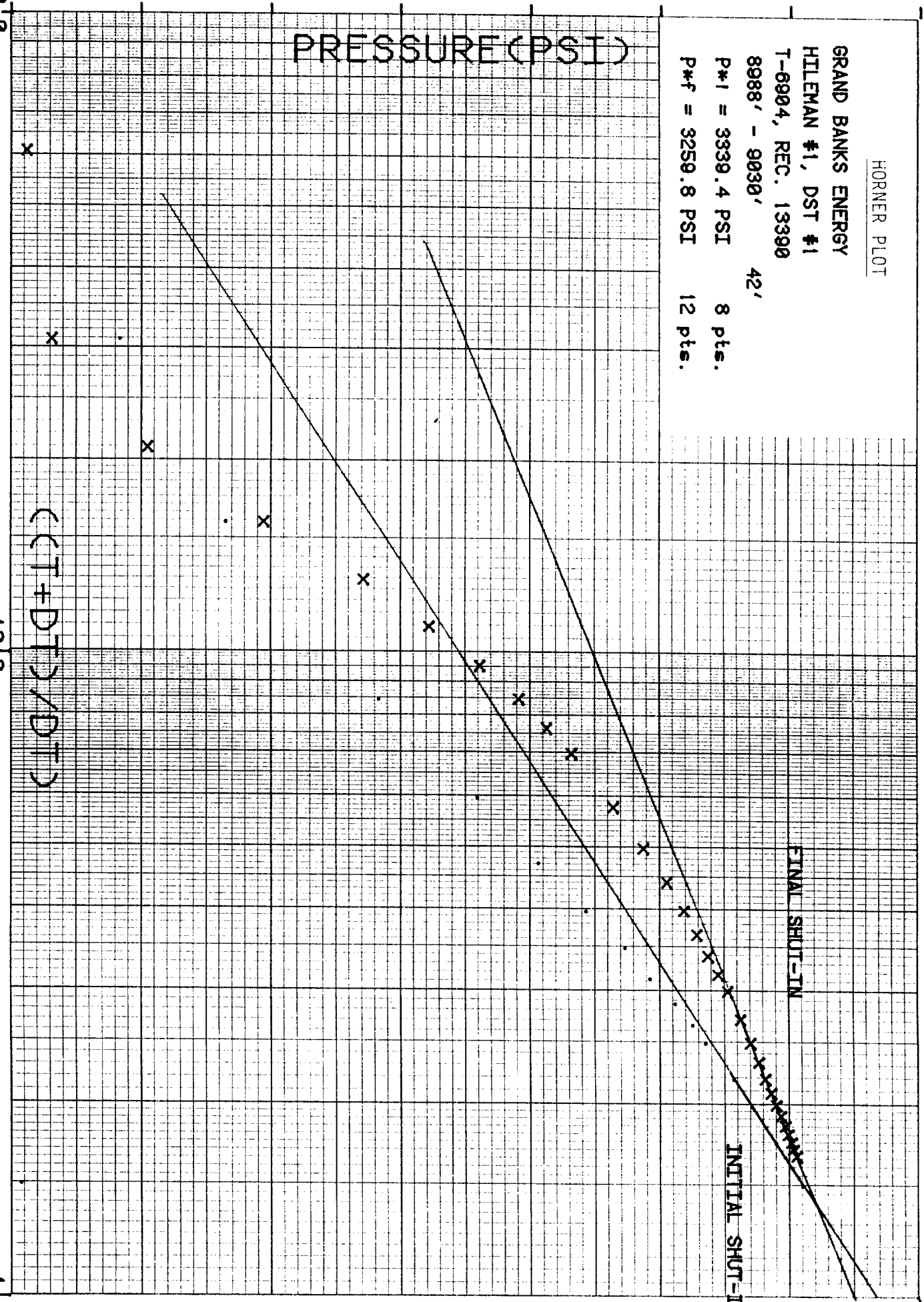
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0
100.0

10.0

1.0

2500
2000
1500
1000
500



5000.0

4000.0

3000.0

2000.0

1000.0

.0

-1000.0

PRESSURE (PSI)

T-6904, REC. 13390

DST #1

TIME (MIN)

0:0

50:0

100:0

150:0

200:0

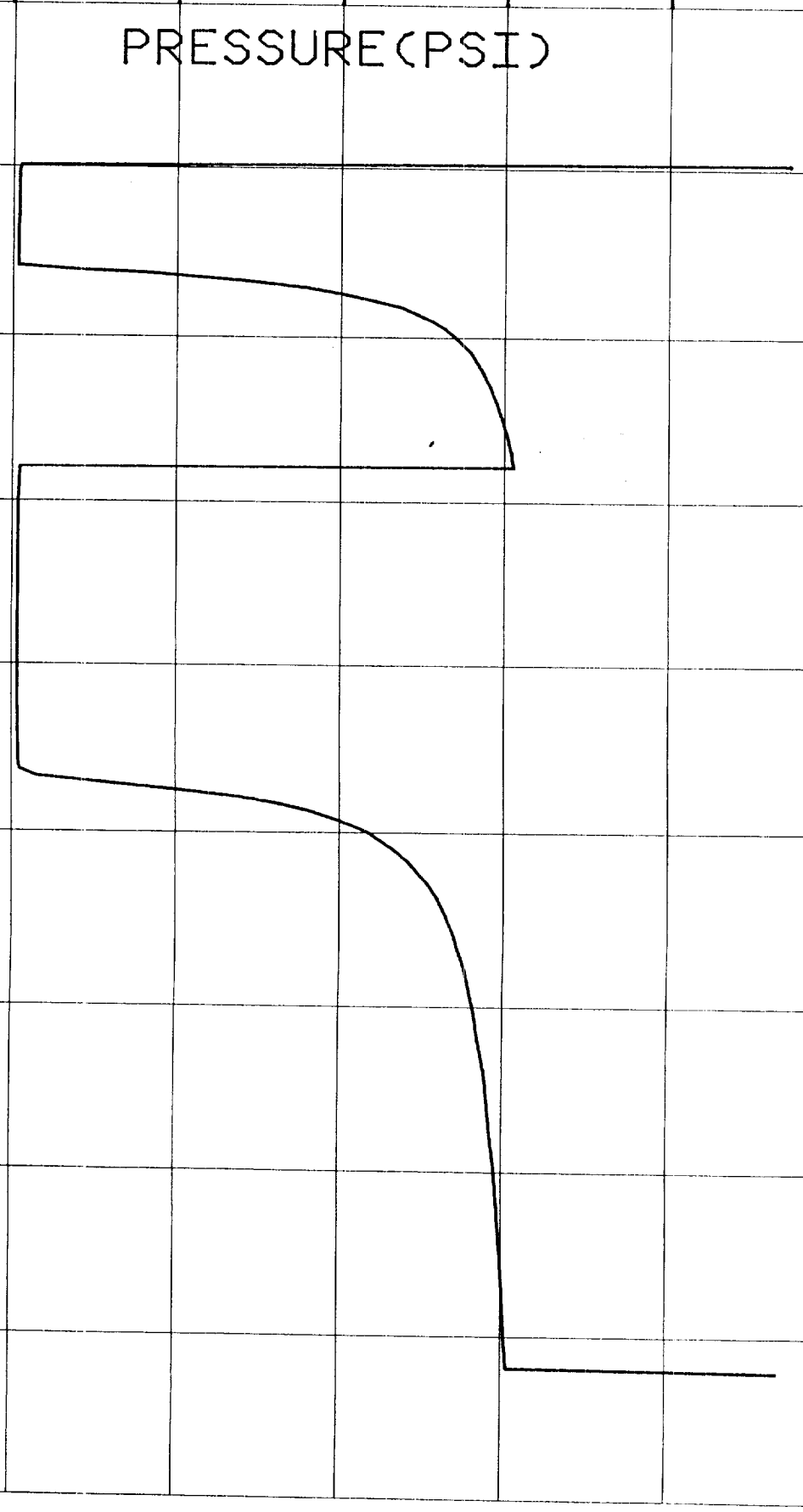
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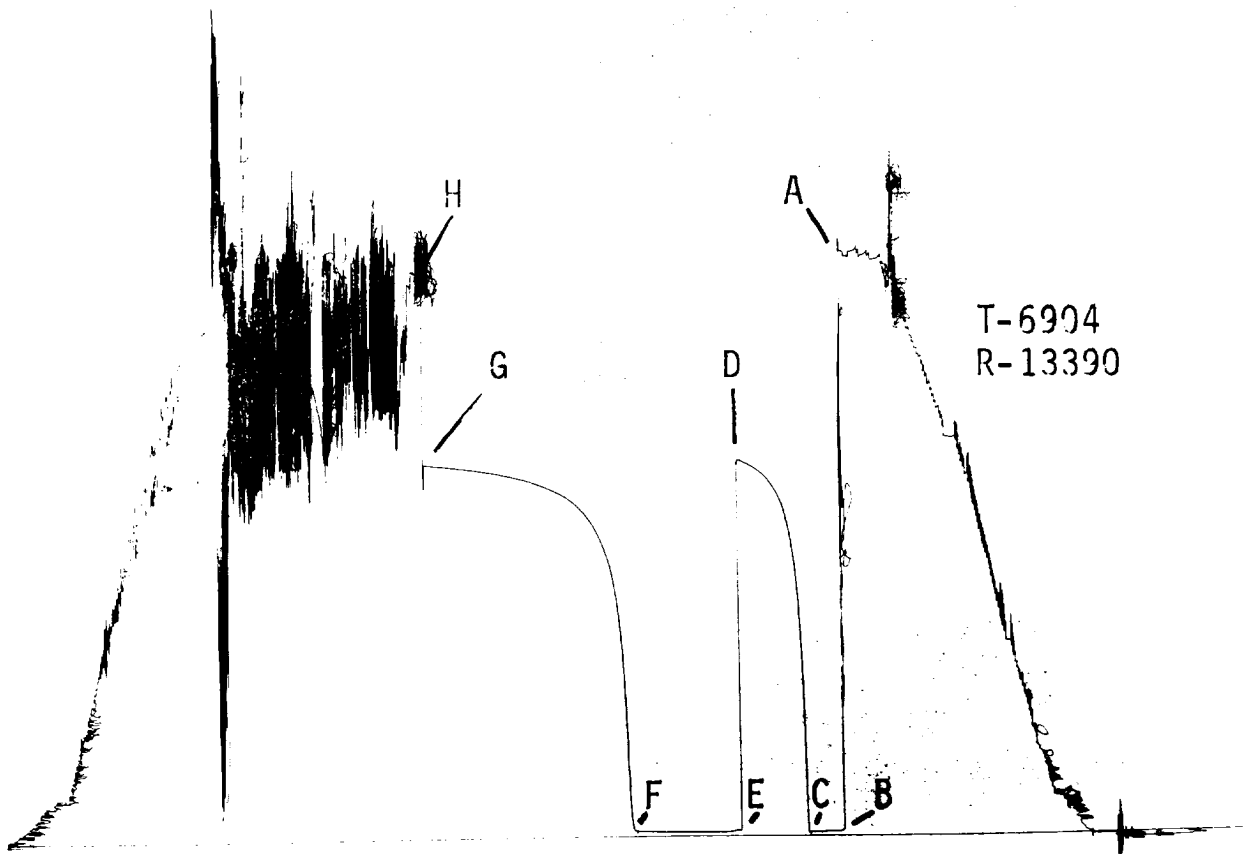
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T-6904
R-13390