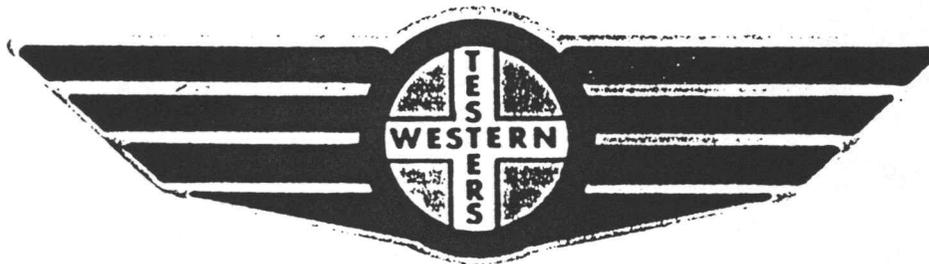


# FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY BARNES HUGOTON CORP.

LEASE & WELL NO. LIGHT #1-20

SEC. 20 TWP. 32SRGE. 40M TEST NO. 1 DATE 11-8-87

WESTERN TESTING CO. INC.  
SUBSURFACE PRESSURE SURVEY

DATE : 11-8-87 TICKET : 12614  
CUSTOMER : BARNES HUGOTON CORP. LEASE : LIGHT  
WELL : #1-20 TEST: 1 GEOLOGIST : S. SHAPURJI  
ELEVATION : NA FORMATION : MORROW  
SECTION : 20 TOWNSHIP : 32S  
RANGE : 40W COUNTY : MORTON STATE : KANSAS  
GAUGE SN# : 10270 RANGE : 4150 CLOCK : 12

INTERVAL FROM : 5360 TO : 5436 TOTAL DEPTH : 5436  
DEPTH OF SELECTIVE ZONE :  
PACKER DEPTH : 5355 SIZE : 6.63  
PACKER DEPTH : 5360 SIZE : 6.63  
PACKER DEPTH : SIZE :  
PACKER DEPTH : SIZE :

DRILLING CON. : BEREDO RIG #6  
MUD TYPE : CHEMICAL VISCOSITY : 54  
WEIGHT : 8.8 WATER LOSS (CC) : NA  
CHLORIDES (PPM) : 1800  
JARS-MAKE : WTC SERIAL NUMBER : 421  
DID WELL FLOW ? : GAS REVERSED OUT ? : NO

DRILL COLLAR LENGTH : 605 FT I.D. inch : 2.20  
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00  
DRILL PIPE LENGTH : 4728 FT I.D. inch : 3.80  
TEST TOOL LENGTH : 27 FT TOOL SIZE : 5.50  
ANCHOR LENGTH : 76 FT ANCHOR SIZE : 5.50  
SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75  
MAIN HOLE SIZE : 7.875 IN TOOL JOINT SIZE : 4.5 XH

BLOW COMMENT #1 : INITIAL FLOW-STRONG BLOW IN 2 MINUTES.  
BLOW COMMENT #2 : GAS TO SURFACE IN 24 MINUTES-SEE ATACHED FLOW CHART.  
BLOW COMMENT #3 : FINAL FLOW-GAS TO SURFACE.  
BLOW COMMENT #4 :

RECOVERED : 180 FT OF: MUD

Total Barrels Fluid = 0.85  
Total Fluid Prod Rate = 13.54 BFPD  
Indicated Wtr Rate = 1.35 BWPD

REMARK 1 :  
REMARK 2 :  
REMARK 3 :  
REMARK 4 :

SET PACKER(S) : 10:15 AM

TIME STARTED OFF BOTTOM : 2:45 PM

WELL TEMPERATURE : 132

INITIAL HYDROSTATIC PRESSURE

(A) 2514

INITIAL FLOW PERIOD MIN: 30

(B) 96 PSI TO (C) : 116

INITIAL CLOSED IN PERIOD MIN: 60

(D) 1323

FINAL FLOW PERIOD MIN: 60

(E) 66 PSI TO (F) : 102

FINAL CLOSED IN PERIOD MIN: 120

(G) 1319

FINAL HYDROSTATIC PRESSURE

(H) 2466

GAS FLOW REPORT

Date : 11-8-87	Ticket # : 12614
Customer : BARNES HUGOTON CORP.	Lease : LIGHT
Well : #1-20            Test : 1	Geologist : S. SHAPURJI
Elevation (KB) : NA            Formation : MORROW	
Section : 20                    Township : 32S	
Range : 40W                    County : MORTON	State : KANSAS
Gauge SN # : 10270            Range : 4150	Clock : 12

TIME GAUGE (MIN)	TESTER TYPE	ORFICE SIZE	PRESSURE (PSI)	FLOW DESCRIPTION
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PRE FLOW

=====

24	MERLA	1/2"	INCHES OF WTR	
28			17	GAS TO SURFACE 25800 CFPD

SECOND FLOW

=====

10	MERLA	1/2"	8#	101000 CFPD
20			17	159000 CFPD
30			22	189000 CFPD
40			26	211000 CFPD
50			30	231000 CFPD
55			30	231000 CFPD
60			33	248000 CFPD

Gas Bottle SN # : 601  
 Date Bottle Filled : 11-8-87  
 Date to be Invoiced :

WESTERN TESTING CO. INC.  
WICHITA - KANSAS

Pressure Transient Report  
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COMPANY : BARNES HUGOTON CORP.  
RIG : MORTON-KANSAS  
FIELD : LIGHT  
WELL : #1-20  
DATE : 11-8-87  
GAUGE NO : 10270

OPERATIONAL COMMENTS

COMPANY : BARNES HUGOTON CORP.  
 WELL : #1-20  
 GAUGE # : 10270  
 DATE : 8/11/87

FIELD : LIGHT  
 JOB # : 12614  
 DEPTH : 5436  
 TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	10:15:0	0.000	96.000	132.00	0.000
2	10:19:59	0.083	96.000	132.00	0.000
3	10:25:0	0.167	96.000	132.00	0.000
4	10:30:0	0.250	106.000	132.00	10.000
5	10:34:59	0.333	116.000	132.00	10.000
6	10:40:0	0.417	116.000	132.00	0.000
7	10:45:0	0.500	116.000	132.00	0.000
8	10:48:0	0.550	622.000	132.00	506.000
9	10:51:0	0.600	1010.000	132.00	388.000
10	10:54:0	0.650	1213.000	132.00	203.000
11	10:57:0	0.700	1282.000	132.00	69.000
12	11:0:0	0.750	1292.000	132.00	10.000
13	11:3:0	0.800	1302.000	132.00	10.000
14	11:6:0	0.850	1309.000	132.00	7.000
15	11:9:0	0.900	1312.000	132.00	3.000
16	11:12:0	0.950	1315.000	132.00	3.000
17	11:15:0	1.000	1317.000	132.00	2.000
18	11:18:0	1.050	1318.000	132.00	1.000
19	11:21:0	1.100	1319.000	132.00	1.000
20	11:24:0	1.150	1320.000	132.00	1.000
21	11:27:0	1.200	1321.000	132.00	1.000
22	11:30:0	1.250	1321.000	132.00	0.000
23	11:33:0	1.300	1322.000	132.00	1.000
24	11:36:0	1.350	1322.000	132.00	0.000
25	11:39:0	1.400	1323.000	132.00	1.000
26	11:42:0	1.450	1323.000	132.00	0.000
27	11:45:0	1.500	1323.000	132.00	0.000
28	11:46:0	1.517	66.000	132.00	-1257.000
29	11:49:59	1.583	66.000	132.00	0.000
30	11:55:0	1.667	66.000	132.00	0.000
31	12:0:0	1.750	66.000	132.00	0.000
32	12:4:59	1.833	69.000	132.00	3.000
33	12:10:0	1.917	75.000	132.00	6.000
34	12:15:0	2.000	81.000	132.00	6.000
35	12:19:59	2.083	89.000	132.00	8.000
36	12:25:0	2.167	93.000	132.00	4.000
37	12:30:0	2.250	96.000	132.00	3.000
38	12:34:59	2.333	98.000	132.00	2.000
39	12:40:0	2.417	100.000	132.00	2.000
40	12:45:0	2.500	102.000	132.00	2.000
41	12:48:0	2.550	823.000	132.00	721.000
42	12:51:0	2.600	1155.000	132.00	332.000
43	12:54:0	2.650	1234.000	132.00	79.000
44	12:57:0	2.700	1263.000	132.00	29.000
45	13:0:0	2.750	1280.000	132.00	17.000
46	13:3:0	2.800	1287.000	132.00	7.000
47	13:6:0	2.850	1294.000	132.00	7.000
48	13:9:0	2.900	1297.000	132.00	3.000
49	13:12:0	2.950	1300.000	132.00	3.000
50	13:15:0	3.000	1303.000	132.00	3.000
51	13:18:0	3.050	1305.000	132.00	2.000
52	13:21:0	3.100	1307.000	132.00	2.000

COMPANY : BARNES HUGOTON CORP.  
WELL : #1-20  
GAUGE # : 10270  
DATE : 8/11/87

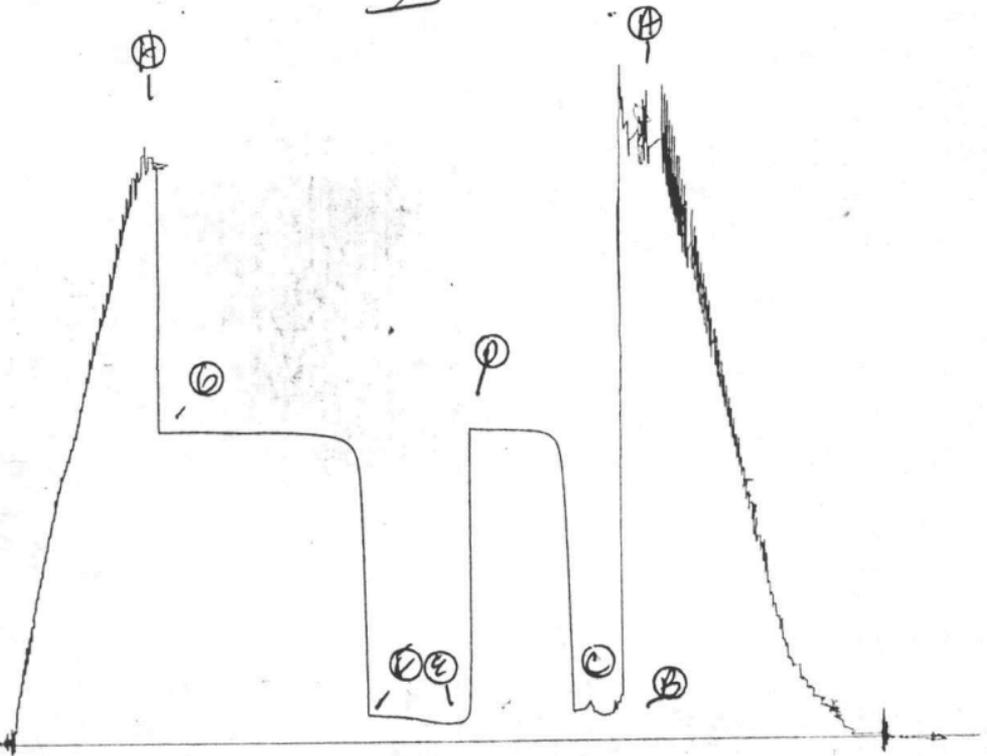
FIELD : LIGHT  
JOB # : 12614  
DEPTH : 5436  
TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
53	13:24: 0	3.150	1309.000	132.00	2.000
54	13:27: 0	3.200	1311.000	132.00	2.000
55	13:30: 0	3.250	1313.000	132.00	2.000
56	13:33: 0	3.300	1314.000	132.00	1.000
57	13:36: 0	3.350	1315.000	132.00	1.000
58	13:39: 0	3.400	1315.000	132.00	0.000
59	13:42: 0	3.450	1315.000	132.00	0.000
60	13:45: 0	3.500	1316.000	132.00	1.000
61	13:48: 0	3.550	1316.000	132.00	0.000
62	13:51: 0	3.600	1316.000	132.00	0.000
63	13:54: 0	3.650	1316.000	132.00	0.000
64	13:57: 0	3.700	1316.000	132.00	0.000
65	14: 0: 0	3.750	1316.000	132.00	0.000
66	14: 3: 0	3.800	1317.000	132.00	1.000
67	14: 6: 0	3.850	1317.000	132.00	0.000
68	14: 9: 0	3.900	1318.000	132.00	1.000
69	14:12: 0	3.950	1318.000	132.00	0.000
70	14:15: 0	4.000	1319.000	132.00	1.000
71	14:18: 0	4.050	1319.000	132.00	0.000
72	14:21: 0	4.100	1319.000	132.00	0.000
73	14:24: 0	4.150	1319.000	132.00	0.000
74	14:27: 0	4.200	1319.000	132.00	0.000
75	14:30: 0	4.250	1319.000	132.00	0.000
76	14:33: 0	4.300	1319.000	132.00	0.000
77	14:36: 0	4.350	1319.000	132.00	0.000
78	14:39: 0	4.400	1319.000	132.00	0.000
79	14:42: 0	4.450	1319.000	132.00	0.000
80	14:45: 0	4.500	1319.000	132.00	0.000

WESTERN TESTING CO. INC.

JK # 12614

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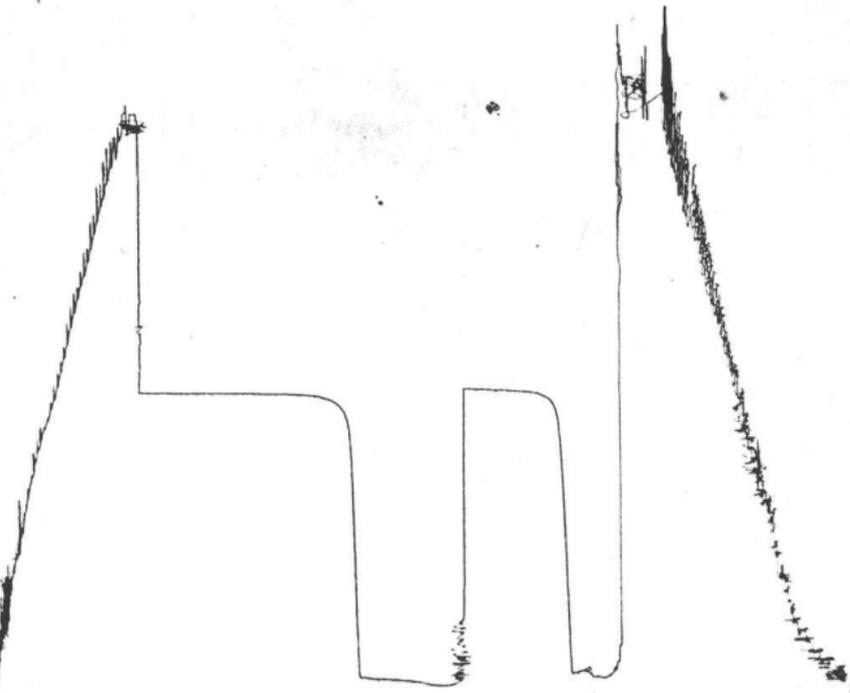
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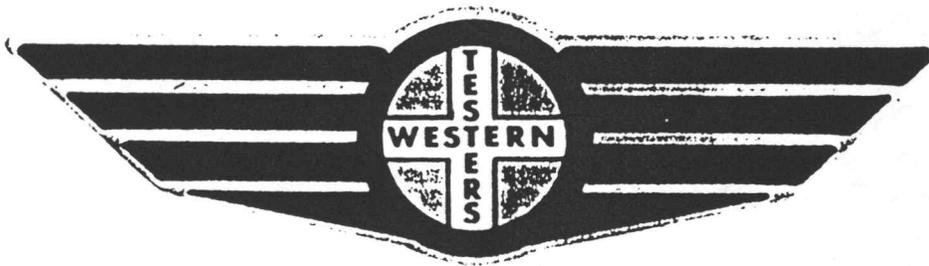
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13268



# FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

WESTERN TESTING CO. INC.  
SUBSURFACE PRESSURE SURVEY

DATE : 11-9-87  
CUSTOMER : BARNES HUGOTON CORP.  
WELL : #1-20 TEST: 2  
ELEVATION : NA  
SECTION : 20  
RANGE : 40W COUNTY : MORTON  
GAUGE SN# : 10270 RANGE : 4150  
TICKET : 12615  
LEASE : LIGHT  
GEOLOGIST : S. SHAPURJI  
FORMATION : KEYS  
TOWNSHIP : 32S  
STATE : KANSAS  
CLOCK : 12

INTERVAL FROM : 5477 TO : 5488 TOTAL DEPTH : 5488  
DEPTH OF SELECTIVE ZONE :  
PACKER DEPTH : 5472 SIZE : 6.63  
PACKER DEPTH : 5477 SIZE : 6.63  
PACKER DEPTH : SIZE :  
PACKER DEPTH : SIZE :

DRILLING CON. : BEREDCO RIG #6  
MUD TYPE : CHEMICAL VISCOSITY : 65  
WEIGHT : 8.9 WATER LOSS (CC) : 3  
CHLORIDES (PPM) : 1000  
JARS-MAKE : WTC SERIAL NUMBER : 421  
DID WELL FLOW ? : GAS REVERSED OUT ? : NO

DRILL COLLAR LENGTH : 635 FT I.D. inch : 2.20  
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00  
DRILL PIPE LENGTH : 4815 FT I.D. inch : 3.80  
TEST TOOL LENGTH : 27 FT TOOL SIZE : 5.50  
ANCHOR LENGTH : 11 FT ANCHOR SIZE : 5.50  
SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75  
MAIN HOLE SIZE : 7.875 IN TOOL JOINT SIZE : 4.5 XH

BLOW COMMENT #1 : INITIAL FLOW-STRONG BLOW IN 1 MINUTE-GAS TO  
SURFACE IN 3 MINUTES.  
BLOW COMMENT #2 : FINAL FLOW-GAS TO SURFACE.  
BLOW COMMENT #3 : SEE ATTACHED FLOW CHART.  
BLOW COMMENT #4 :

RECOVERED : 95 FT OF: SLIGHTLY OIL CUT MUD  
2% OIL-98% MUD  
RECOVERED : 90 FT OF: SLIGHTLY OIL CUT MUDDY WATER  
2% OIL-38% MUD-60% WATER  
RECOVERED : 90 FT OF: SLIGHTLY OIL CUT MUDDY WATER  
2% OIL-15% MUD-83% WATER  
RECOVERED : 90 FT OF: SLIGHTLY OIL CUT MUDDY WATER  
2% OIL-8% MUD-90% WATER

CHLORIDES: 11000 PPM  
RESISTIVITY 1.3 @ 62 DEG.F.

Total Barrels Fluid = 1.72  
Total Fluid Prod Rate = 20.59 BFPD  
Indicated Oil Rate = 0.41 BOPD  
Indicated Wtr Rate = 12.30 BWPD

REMARK 1 : LOST INITIAL FLOW.  
REMARK 2 : LOST WEIGHT SET ON TOOL-CLOSED OFF HYDRAULIC TOOL.  
REMARK 3 :  
REMARK 4 :

SET PACKER(S) : 8:30 AM TIME STARTED OFF BOTTOM : 1:30 PM  
WELL TEMPERATURE : 142  
INITIAL HYDROSTATIC PRESSURE (A) 2590  
INITIAL FLOW PERIOD MIN: 30 (B) 139 PSI TO (C) : 139  
INITIAL CLOSED IN PERIOD MIN: 63 (D) 1188  
FINAL FLOW PERIOD MIN: 90 (E) 181 PSI TO (F) : 370  
FINAL CLOSED IN PERIOD MIN: 120 (G) 1190  
FINAL HYDROSTATIC PRESSURE (H) 2580

GAS FLOW REPORT

Date : 11-9-87	Ticket # : 12615
Customer : BARNES HUGOTON CORP.	Lease : LIGHT
Well : #1-20      Test : 2	Geologist : S. SHAPURJI
Elevation (KB) : NA      Formation : KEYS	
Section : 20      Township : 32S	
Range : 40W      County : MORTON	State : KANSAS
Gauge SN # : 10270      Range : 4150	Clock : 12

TIME GAUGE (MIN)	TESTER TYPE	ORFICE SIZE	PRESSURE (PSI)	FLOW DESCRIPTION
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PRE FLOW  
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5	MERLA	1"	3#	242000 CFPD
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SECOND FLOW  
=====

5	MERLA	3/4"	3#	133000 CFPD
10		1"	12	526000 CFPD
20		1"	22	773000 CFPD
30		1"	30	951000 CFPD
40		1"	34	1043000 CFPD
50		1"	42	1205000 CFPD
60		1"	46	1291000 CFPD
70		1"	50	1379000 CFPD
80		1"	50	1379000 CFPD
90		1"	50	1379000 CFPD

Gas Bottle SN # : 639  
 Date Bottle Filled : 11-9-87  
 Date to be Invoiced :

WESTERN TESTING CO. INC.  
WICHITA - KANSAS

Pressure Transient Report  
-----

COMPANY : BARNES HUGOTON CORP.  
RIG : MORTON-KANSAS  
FIELD : LIGHT  
WELL : #1-20  
DATE : 11-9-87  
GAUGE NO : 10270

OPERATIONAL COMMENTS

LOST INITIAL FLOW.  
LOST WEIGHT SET ON TOOL-CLOSED OFF HYDRAULIC TOOL.

COMPANY : BARNES HUGOTON CORP.  
 WELL : #1-20  
 GAUGE # : 10270  
 DATE : 9/11/87

FIELD : LIGHT  
 JOB # : 12615  
 DEPTH : 5488  
 TEST : LOST INITIAL FLOW.

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	8:30:0	0.000	139.000	142.00	0.000
2	9:0:0	0.500	139.000	142.00	0.000
3	9:3:0	0.550	788.000	142.00	649.000
4	9:6:0	0.600	1139.000	142.00	351.000
5	9:9:0	0.650	1168.000	142.00	29.000
6	9:12:0	0.700	1176.000	142.00	8.000
7	9:15:0	0.750	1181.000	142.00	5.000
8	9:18:0	0.800	1182.000	142.00	1.000
9	9:21:0	0.850	1183.000	142.00	1.000
10	9:24:0	0.900	1184.000	142.00	1.000
11	9:27:0	0.950	1185.000	142.00	1.000
12	9:30:0	1.000	1186.000	142.00	1.000
13	9:33:0	1.050	1187.000	142.00	1.000
14	9:36:0	1.100	1188.000	142.00	1.000
15	9:39:0	1.150	1188.000	142.00	0.000
16	9:42:0	1.200	1188.000	142.00	0.000
17	9:45:0	1.250	1188.000	142.00	0.000
18	9:48:0	1.300	1188.000	142.00	0.000
19	9:51:0	1.350	1188.000	142.00	0.000
20	9:54:0	1.400	1188.000	142.00	0.000
21	9:57:0	1.450	1188.000	142.00	0.000
22	10:0:0	1.500	1188.000	142.00	0.000
23	10:3:0	1.550	1188.000	142.00	0.000
24	10:4:0	1.567	181.000	142.00	-1007.000
25	10:7:59	1.633	187.000	142.00	6.000
26	10:13:0	1.717	237.000	142.00	50.000
27	10:18:0	1.800	264.000	142.00	27.000
28	10:22:59	1.883	268.000	142.00	4.000
29	10:28:0	1.967	270.000	142.00	2.000
30	10:33:0	2.050	281.000	142.00	11.000
31	10:37:59	2.133	273.000	142.00	-8.000
32	10:43:0	2.217	320.000	142.00	47.000
33	10:48:0	2.300	335.000	142.00	15.000
34	10:52:59	2.383	358.000	142.00	23.000
35	10:58:0	2.467	360.000	142.00	2.000
36	11:3:0	2.550	360.000	142.00	0.000
37	11:7:59	2.633	363.000	142.00	3.000
38	11:13:0	2.717	366.000	142.00	3.000
39	11:18:0	2.800	370.000	142.00	4.000
40	11:22:59	2.883	370.000	142.00	0.000
41	11:28:0	2.967	370.000	142.00	0.000
42	11:33:0	3.050	370.000	142.00	0.000
43	11:36:0	3.100	1041.000	142.00	671.000
44	11:38:59	3.150	1136.000	142.00	95.000
45	11:42:0	3.200	1152.000	142.00	16.000
46	11:45:0	3.250	1165.000	142.00	13.000
47	11:48:0	3.300	1171.000	142.00	6.000
48	11:51:0	3.350	1176.000	142.00	5.000
49	11:53:59	3.400	1178.000	142.00	2.000
50	11:57:0	3.450	1180.000	142.00	2.000
51	12:0:0	3.500	1181.000	142.00	1.000
52	12:3:0	3.550	1182.000	142.00	1.000

COMPANY : BARNES HUGOTON CORP.  
WELL : #1-20  
GAUGE # : 10270  
DATE : 9/11/87

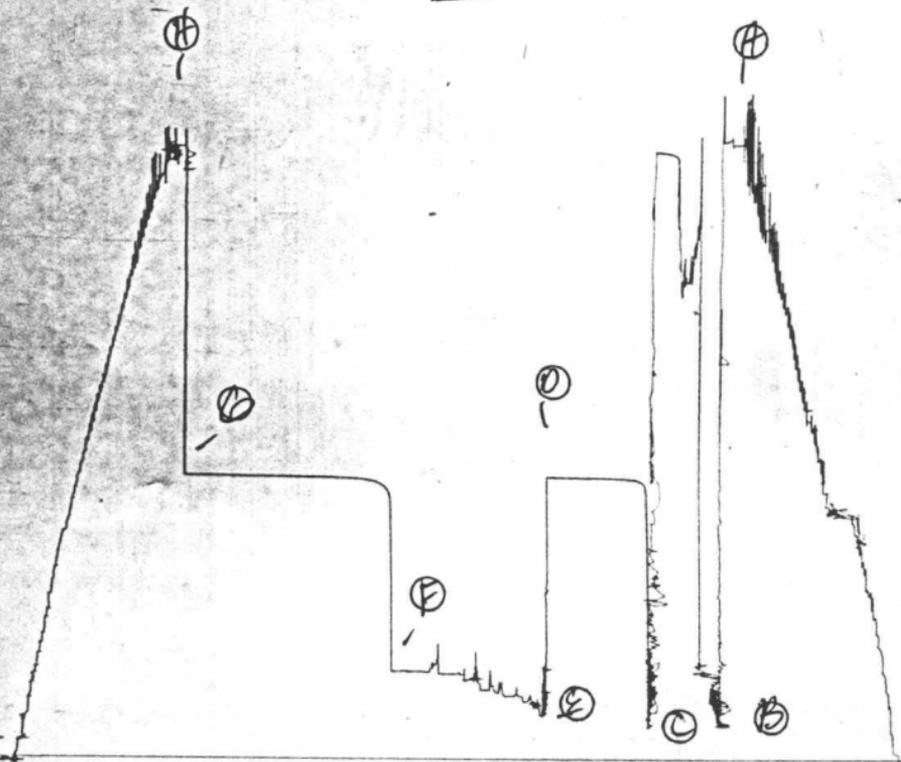
FIELD : LIGHT  
JOB # : 12615  
DEPTH : 5488  
TEST : LOST INITIAL FLOW.

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
53	12: 6: 0	3.600	1183.000	142.00	1.000
54	12: 9: 0	3.650	1184.000	142.00	1.000
55	12:11:59	3.700	1185.000	142.00	1.000
56	12:15: 0	3.750	1186.000	142.00	1.000
57	12:18: 0	3.800	1186.000	142.00	0.000
58	12:21: 0	3.850	1187.000	142.00	1.000
59	12:24: 0	3.900	1187.000	142.00	0.000
60	12:27: 0	3.950	1187.000	142.00	0.000
61	12:30: 0	4.000	1188.000	142.00	1.000
62	12:33: 0	4.050	1188.000	142.00	0.000
63	12:36: 0	4.100	1188.000	142.00	0.000
64	12:39: 0	4.150	1188.000	142.00	0.000
65	12:42: 0	4.200	1188.000	142.00	0.000
66	12:45: 0	4.250	1188.000	142.00	0.000
67	12:48: 0	4.300	1188.000	142.00	0.000
68	12:51: 0	4.350	1188.000	142.00	0.000
69	12:54: 0	4.400	1188.000	142.00	0.000
70	12:57: 0	4.450	1188.000	142.00	0.000
71	13: 0: 0	4.500	1188.000	142.00	0.000
72	13: 3: 0	4.550	1188.000	142.00	0.000
73	13: 6: 0	4.600	1189.000	142.00	1.000
74	13: 9: 0	4.650	1189.000	142.00	0.000
75	13:12: 0	4.700	1189.000	142.00	0.000
76	13:15: 0	4.750	1189.000	142.00	0.000
77	13:18: 0	4.800	1190.000	142.00	1.000
78	13:21: 0	4.850	1190.000	142.00	0.000
79	13:24: 0	4.900	1190.000	142.00	0.000
80	13:27: 0	4.950	1190.000	142.00	0.000
81	13:30: 0	5.000	1190.000	142.00	0.000
82	13:33: 0	5.050	1190.000	142.00	0.000

WESTERN TESTING CO. INC.

JK # 12615

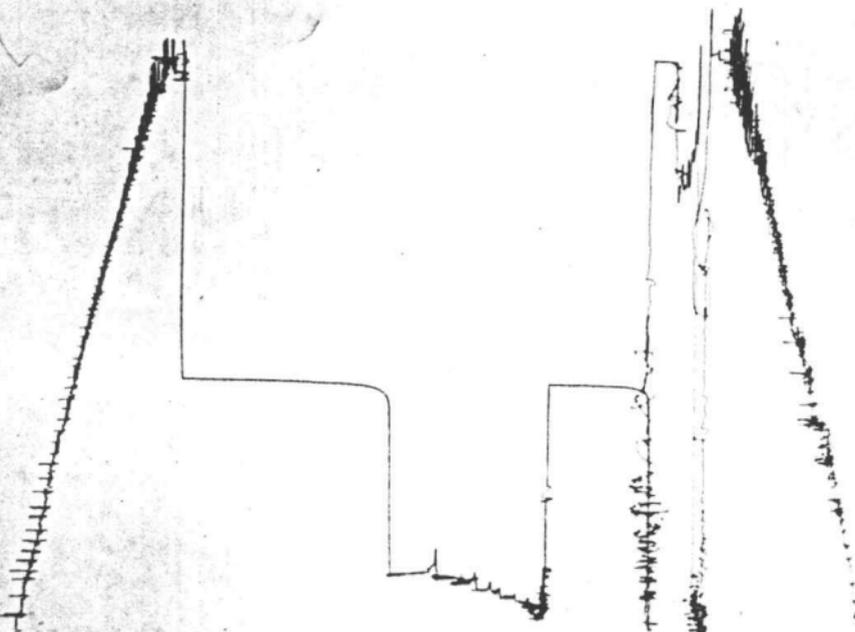
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