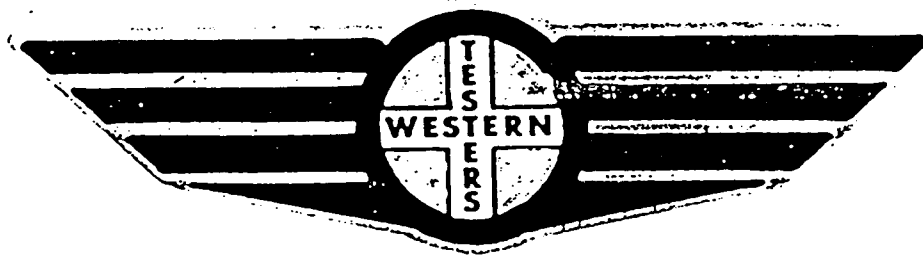


# FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY FRONTIER OIL COMPANY, INC. LEASE & WELL NO. BROWN A-1 SEC. 2 TWP. 34S RGE. 12W TEST NO. 1 DATE 12/29/89

RECOVERED : 90 FT OF: SLIGHTLY OIL CUT MUD 3% OIL  
RECOVERED : 60 FT OF: SLIGHTLY OIL CUT WATER MUD  
RECOVERED : 0 FT OF: 5% OIL 35% WATER 60% MUD  
RECOVERED : 558 FT OF: WATER  
RECOVERED : 0 FT OF: CHLORIDES 75000 PPM

Total Barrels Fluid = 4.10  
Total Fluid Prod Rate = 49.23 BFPD  
Indicated Oil Rate = 0.40 BOPD  
Indicated Wtr Rate = 40.32 BWPD  
Corrected Oil Rate = 43.61 BOPD  
Corrected Wtr Rate = 4436.28 BWPD

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

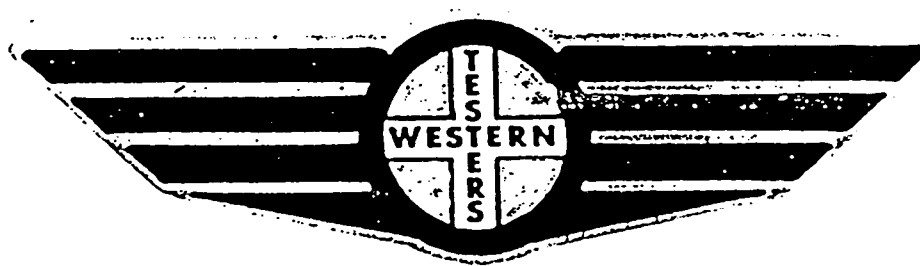
SET PACKER(S) : 11:45 AM TIME STARTED OFF BOTTOM : 3:15 PM  
WELL TEMPERATURE : 131  
INITIAL HYDROSTATIC PRESSURE (A) 2398  
INITIAL FLOW PERIOD MIN: 60 (B) 138 PSI TO (C) : 271  
INITIAL CLOSED IN PERIOD MIN: 45 (D) 1501  
FINAL FLOW PERIOD MIN: 60 (E) 312 PSI TO (F) : 373  
FINAL CLOSED IN PERIOD MIN: 45 (G) 1468  
FINAL HYDROSTATIC PRESSURE (H) 2374

COMPANY : FRONTIER OIL COMPANY  
WELL : 1-A  
GAUGE # : 3849  
DATE : 29/12/89

FIELD : BROWN  
JOB # : 13543  
DEPTH : 4790  
TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
INITIAL FLOW PERIOD					
2	11:45: 0	0.000	138.000	131.00	0.000
3	11:49:59	0.083	138.000	131.00	0.000
4	11:55: 0	0.167	143.000	131.00	5.000
5	12: 0: 0	0.250	153.000	131.00	10.000
6	12: 4:59	0.333	169.000	131.00	16.000
7	12:10: 0	0.417	183.000	131.00	14.000
8	12:15: 0	0.500	200.000	131.00	17.000
9	12:19:59	0.583	214.000	131.00	14.000
10	12:25: 0	0.667	226.000	131.00	12.000
11	12:30: 0	0.750	238.000	131.00	12.000
12	12:34:59	0.833	252.000	131.00	14.000
13	12:40: 0	0.917	263.000	131.00	11.000
14	12:45: 0	1.000	271.000	131.00	8.000
INITIAL SHUT-IN PERIOD					
15	12:48: 0	1.050	512.000	131.00	241.000
16	12:51: 0	1.100	754.000	131.00	242.000
17	12:54: 0	1.150	902.000	131.00	148.000
18	12:57: 0	1.200	1019.000	131.00	117.000
19	13: 0: 0	1.250	1109.000	131.00	90.000
20	13: 3: 0	1.300	1185.000	131.00	76.000
21	13: 6: 0	1.350	1241.000	131.00	56.000
22	13: 9: 0	1.400	1290.000	131.00	49.000
23	13:12: 0	1.450	1331.000	131.00	41.000
24	13:15: 0	1.500	1368.000	131.00	37.000
25	13:18: 0	1.550	1401.000	131.00	33.000
26	13:21: 0	1.600	1431.000	131.00	30.000
27	13:24: 0	1.650	1461.000	131.00	30.000
28	13:27: 0	1.700	1481.000	131.00	20.000
29	13:30: 0	1.750	1501.000	131.00	20.000
FINAL FLOW PERIOD					
30	13:31: 0	1.767	312.000	131.00	-1189.000
31	13:34:59	1.833	312.000	131.00	0.000
32	13:40: 0	1.917	316.000	131.00	4.000
33	13:45: 0	2.000	321.000	131.00	5.000
34	13:49:59	2.083	328.000	131.00	7.000
35	13:55: 0	2.167	336.000	131.00	8.000
36	14: 0: 0	2.250	345.000	131.00	9.000
37	14: 4:59	2.333	350.000	131.00	5.000
38	14:10: 0	2.417	356.000	131.00	6.000
39	14:15: 0	2.500	364.000	131.00	8.000
40	14:19:59	2.583	368.000	131.00	4.000
41	14:25: 0	2.667	370.000	131.00	2.000
42	14:30: 0	2.750	373.000	131.00	3.000
FINAL SHUT-IN PERIOD					
43	14:33: 0	2.800	572.000	131.00	199.000
44	14:36: 0	2.850	770.000	131.00	198.000
45	14:39: 0	2.900	935.000	131.00	165.000
46	14:42: 0	2.950	1048.000	131.00	113.000
47	14:45: 0	3.000	1130.000	131.00	82.000
48	14:48: 0	3.050	1201.000	131.00	71.000

# FORMATION TEST REPORT



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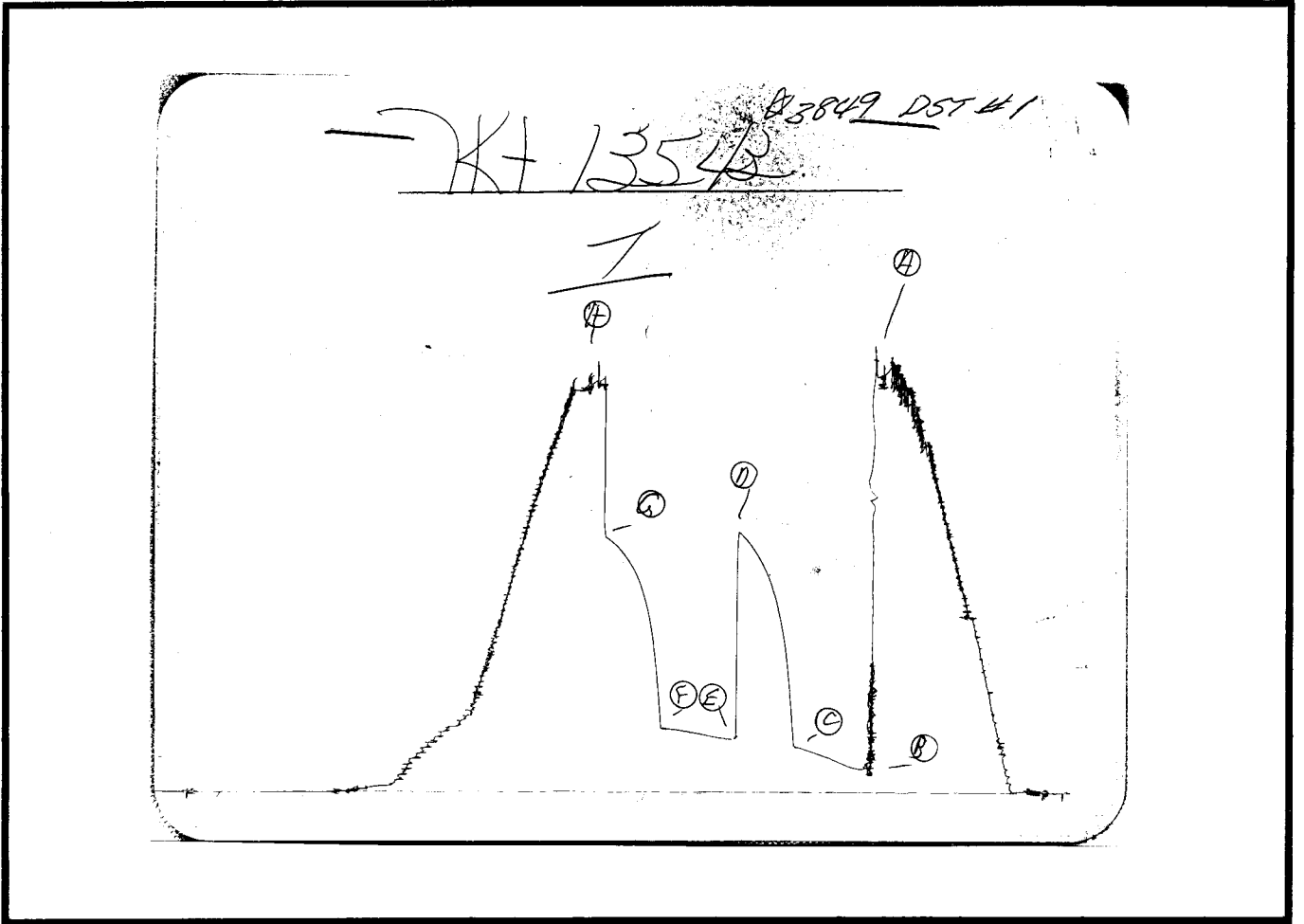
COMPANY FRONTIER OIL COMPANY LEASE & WELL NO. BROWN 1-A SEC. 2 TWP. 34S RGE. 12W TEST NO. 2 DATE 12/31/89



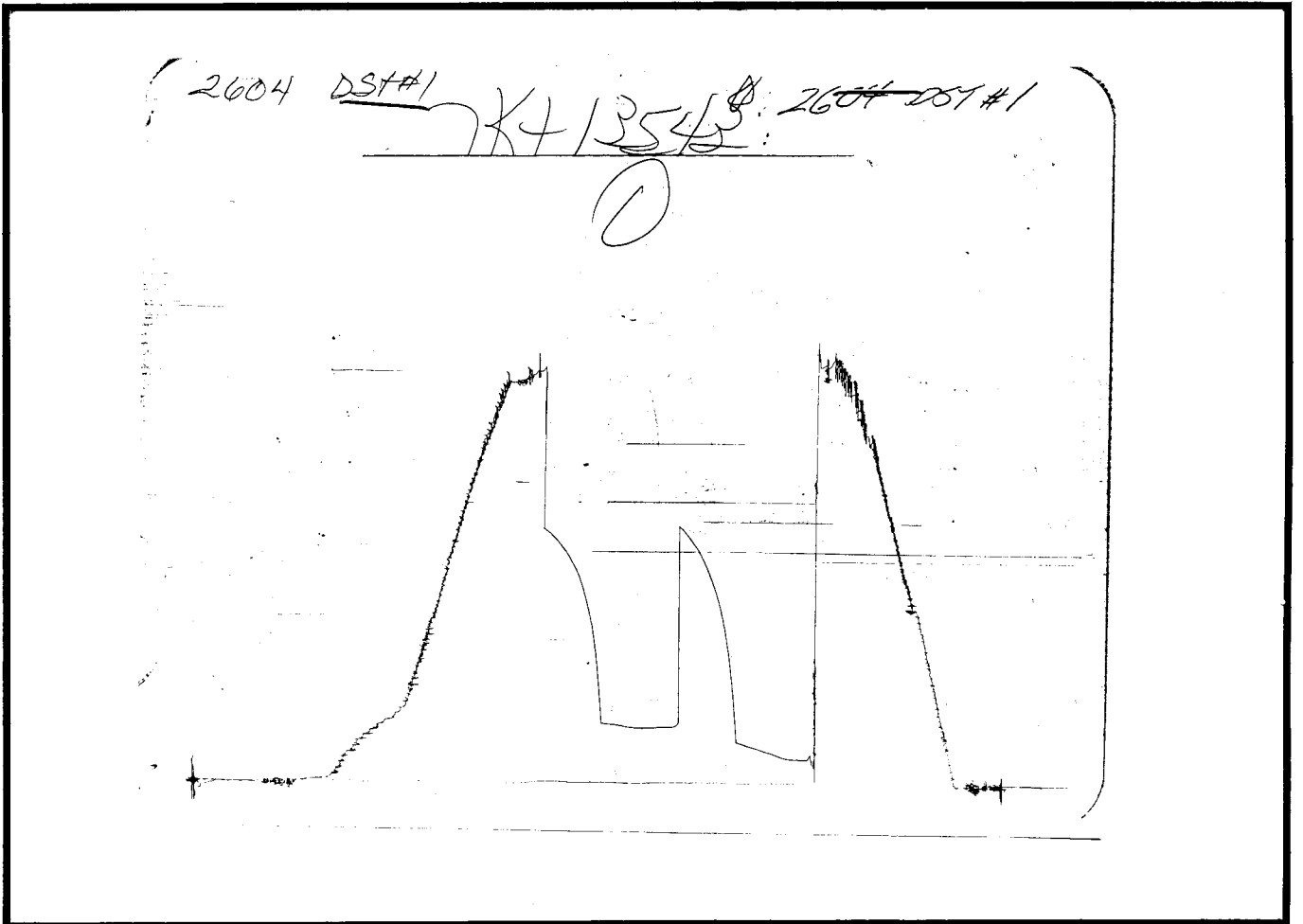
COMPANY : FRONTIER OIL COMPANY  
 WELL : 1-A  
 GAUGE # : 3849  
 DATE : 31/12/89

FIELD : BROWN  
 JOB # : 13544  
 DEPTH : 5042  
 TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
INITIAL FLOW PERIOD					
2	6: 0: 0	0.000	683.000	138.00	57.000
3	6: 4:59	0.083	683.000	138.00	0.000
4	6:10: 0	0.167	826.000	138.00	143.000
5	6:15: 0	0.250	969.000	138.00	143.000
6	6:19:59	0.333	1092.000	138.00	123.000
7	6:25: 0	0.417	1205.000	138.00	113.000
8	6:30: 0	0.500	1305.000	138.00	100.000
9	6:34:59	0.583	1393.000	138.00	88.000
10	6:40: 0	0.667	1474.000	138.00	81.000
11	6:45: 0	0.750	1536.000	138.00	62.000
12	6:49:59	0.833	1592.000	138.00	56.000
13	6:55: 0	0.917	1640.000	138.00	48.000
14	7: 0: 0	1.000	1685.000	138.00	45.000
INITIAL SHUT-IN PERIOD					
15	7: 2:59	1.050	1884.000	138.00	199.000
16	7: 6: 0	1.100	1907.000	138.00	23.000
17	7: 9: 0	1.150	1923.000	138.00	16.000
18	7:12: 0	1.200	1932.000	138.00	9.000
19	7:15: 0	1.250	1939.000	138.00	7.000
20	7:18: 0	1.300	1945.000	138.00	6.000
21	7:21: 0	1.350	1950.000	138.00	5.000
22	7:24: 0	1.400	1954.000	138.00	4.000
23	7:27: 0	1.450	1959.000	138.00	5.000
24	7:30: 0	1.500	1962.000	138.00	3.000
25	7:33: 0	1.550	1965.000	138.00	3.000
26	7:36: 0	1.600	1967.000	138.00	2.000
27	7:39: 0	1.650	1969.000	138.00	2.000
28	7:42: 0	1.700	1970.000	138.00	1.000
29	7:45: 0	1.750	1971.000	138.00	1.000
FINAL FLOW PERIOD					
30	7:46: 0	1.767	1745.000	138.00	-226.000
31	7:49:59	1.833	1758.000	138.00	13.000
32	7:55: 0	1.917	1787.000	138.00	29.000
33	8: 0: 0	2.000	1812.000	138.00	25.000
34	8: 4:59	2.083	1836.000	138.00	24.000
35	8:10: 0	2.167	1857.000	138.00	21.000
36	8:15: 0	2.250	1784.000	138.00	-73.000
FINAL SHUT-IN PERIOD					
37	8:18: 0	2.300	1944.000	138.00	160.000
38	8:21: 0	2.350	1959.000	138.00	15.000
39	8:24: 0	2.400	1967.000	138.00	8.000
40	8:27: 0	2.450	1970.000	138.00	3.000
41	8:30: 0	2.500	1973.000	138.00	3.000
42	8:33: 0	2.550	1975.000	138.00	2.000
43	8:36: 0	2.600	1977.000	138.00	2.000
44	8:39: 0	2.650	1977.000	138.00	0.000
45	8:42: 0	2.700	1977.000	138.00	0.000
46	8:45: 0	2.750	1977.000	138.00	0.000
47	8:48: 0	2.800	1977.000	138.00	0.000
48	8:51: 0	2.850	1977.000	138.00	0.000



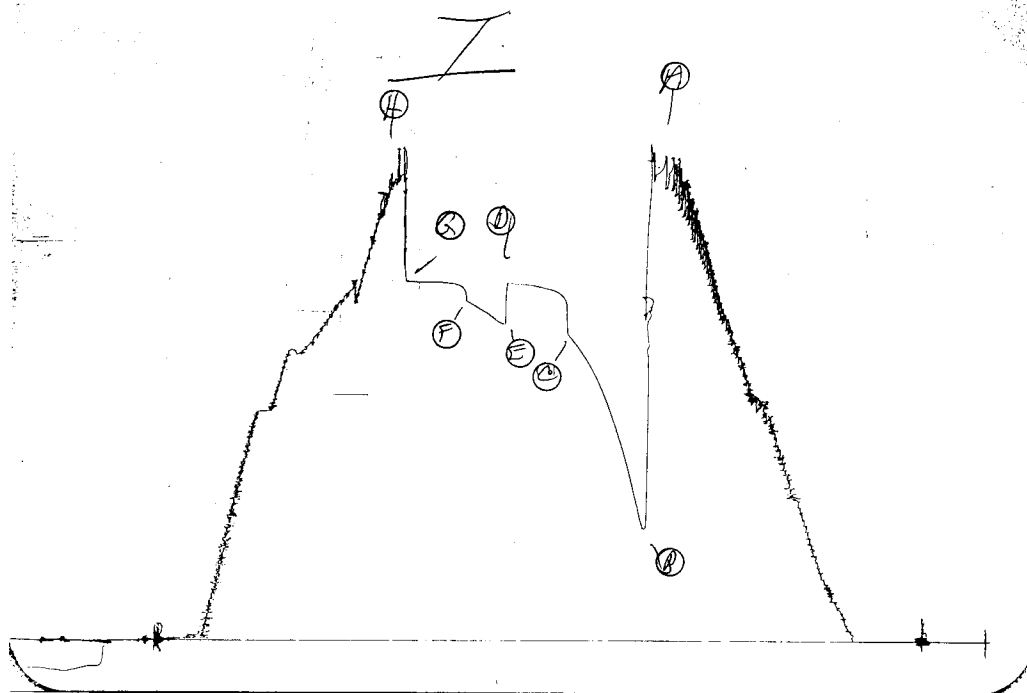
Inside Recorder



Outside Recorder

KT 13544

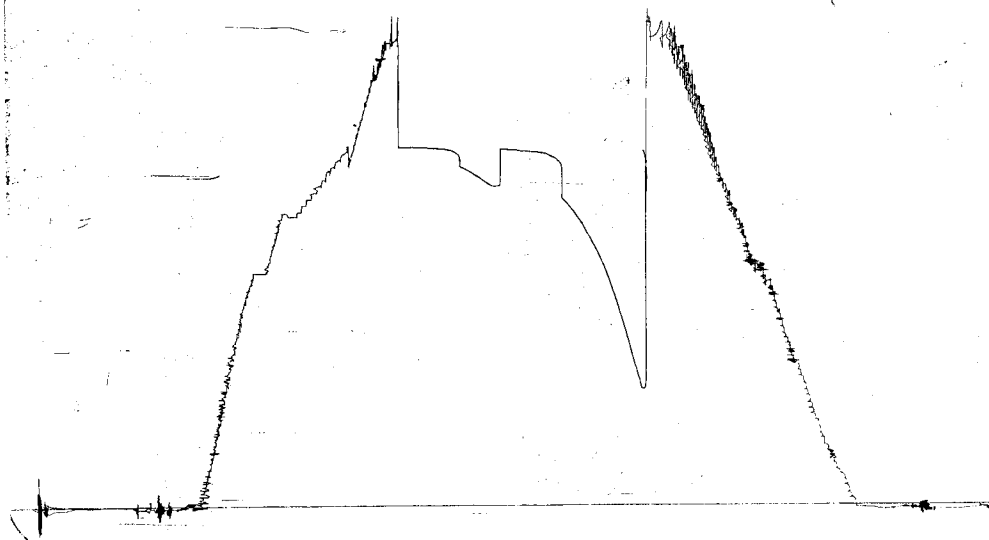
~~#2604~~ DST #2



Inside Recorder

KT 13544 ~~#2604~~ DST #2

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Outside Recorder