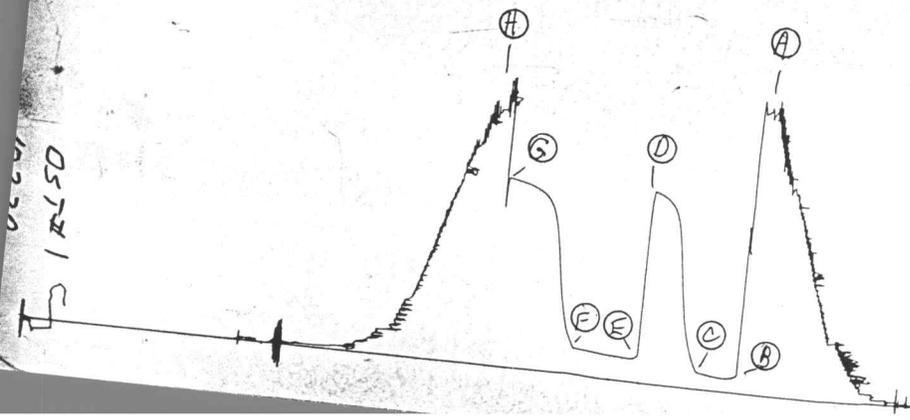


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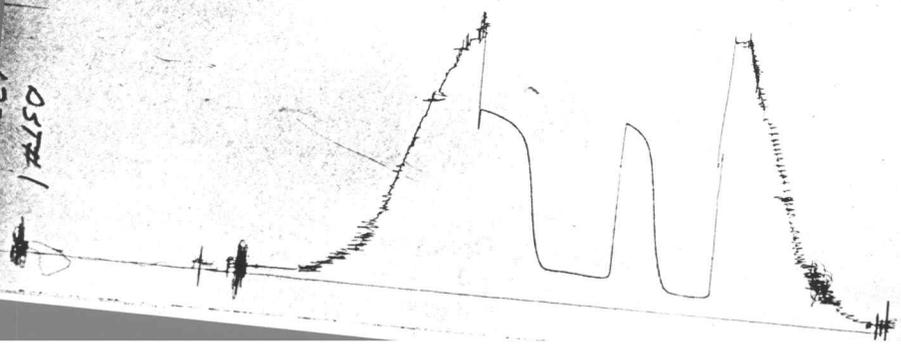
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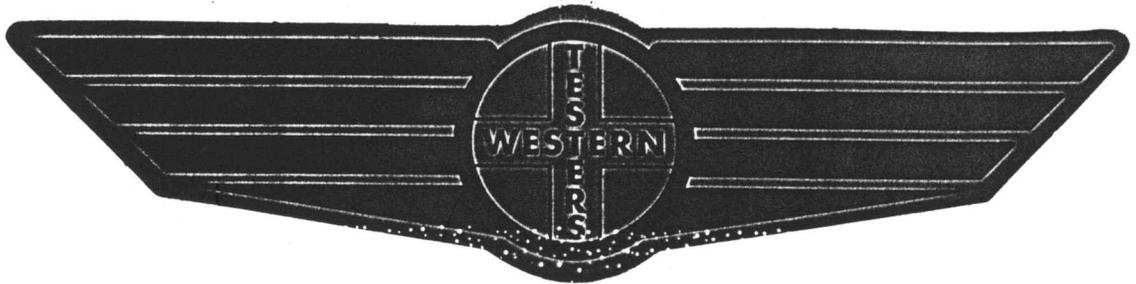
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# FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY MACK ENERGY COMPANY LEASE & WELL NO. #1 OSTRANDER SEC. 1 TWP. 31S RGE. 2W TEST NO. 1 DATE 1/12/87

WESTERN TESTERS INC  
SUBSURFACE PRESSURE SURVEY

DATE : 1-12-87  
CUSTOMER : MACK ENERGY COMPANY  
WELL : #1 TEST: 1  
ELEVATION : NA  
SECTION : 1  
RANGE : 2W COUNTY : SUMNER  
GAUGE SN# : 10270 RANGE : 4150  
TICKET : 13168  
LEASE : OSTRANDER  
GEOLOGIST : J. OLESON  
FORMATION : KANSAS CITY  
TOWNSHIP : 31S  
STATE : KANSAS  
CLOCK : 12

INTERVAL FROM : 3235 TO : 3276 TOTAL DEPTH : 3276  
DEPTH OF SELECTIVE ZONE :  
PACKER DEPTH : 3230 SIZE : 6.63  
PACKER DEPTH : 3235 SIZE : 6.63  
PACKER DEPTH : SIZE :  
PACKER DEPTH : SIZE :

DRILLING CON. : THOMAS DRILLING  
MUD TYPE : CHEMICAL VISCOSITY : 43  
WEIGHT : 8.8 WATER LOSS (CC) : NA  
CHLORIDES (PPM) : NA  
JARS-MAKE : WTC SERIAL NUMBER : 417  
DID WELL FLOW ? : NO REVERSED OUT ? : NO

DRILL COLLAR LENGTH : 630 FT I.D. inch : 2.20  
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00  
DRILL PIPE LENGTH : 2577 FT I.D. inch : 3.80  
TEST TOOL LENGTH : 28 FT TOOL SIZE : 5.50  
ANCHOR LENGTH : 41 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-WEAK BLOW BUILDING TO A STRONG BLOW  
BLOW COMMENT #2 : IN 6 MINUTES.  
BLOW COMMENT #3 : FINAL FLOW-STRONG BLOW THROUGHOUT.  
BLOW COMMENT #4 :





WESTERN TESTERS INC  
WITICHA - KANSAS

Pressure Transient Report  
-----

COMPANY : MACK ENERGY COMPANY  
RIG : SUMNER-KANSAS  
FIELD : OSTRANDER  
WELL : #1  
DATE : 1-12-87  
GAUGE NO : 10270

OPERATIONAL COMMENTS

RECOVERED 1370 FEET OF GAS ABOVE FLUID.

COMPANY : MACK ENERGY COMPANY  
 WELL : #1  
 GAUGE # : 10270  
 DATE : 12/ 1/87

FIELD : OSTRANDER  
 JOB # : 13168  
 DEPTH : 3276.  
 TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	2:55: 0	0.000	59.000	101.00	0.000
2	2:59:59	0.083	59.000	101.00	0.000
3	3: 5: 0	0.167	59.000	101.00	0.000
4	3:10: 0	0.250	60.000	101.00	1.000
5	3:14:59	0.333	65.000	101.00	5.000
6	3:20: 0	0.417	71.000	101.00	6.000
7	3:25: 0	0.500	75.000	101.00	4.000
8	3:28: 0	0.550	121.000	101.00	46.000
9	3:31: 0	0.600	176.000	101.00	55.000
10	3:34: 0	0.650	252.000	101.00	76.000
11	3:37: 0	0.700	362.000	101.00	110.000
12	3:40: 0	0.750	503.000	101.00	141.000
13	3:43: 0	0.800	682.000	101.00	179.000
14	3:46: 0	0.850	825.000	101.00	143.000
15	3:49: 0	0.900	915.000	101.00	90.000
16	3:52: 0	0.950	961.000	101.00	46.000
17	3:55: 0	1.000	989.000	101.00	28.000
18	3:58: 0	1.050	1010.000	101.00	21.000
19	4: 1: 0	1.100	1022.000	101.00	12.000
20	4: 4: 0	1.150	1031.000	101.00	9.000
21	4: 7: 0	1.200	1040.000	101.00	9.000
22	4:10: 0	1.250	1043.000	101.00	3.000
23	4:11: 0	1.267	118.000	101.00	-925.000
24	4:14:59	1.333	118.000	101.00	0.000
25	4:20: 0	1.417	118.000	101.00	0.000
26	4:25: 0	1.500	120.000	101.00	2.000
27	4:29:59	1.583	123.000	101.00	3.000
28	4:35: 0	1.667	126.000	101.00	3.000
29	4:40: 0	1.750	129.000	101.00	3.000
30	4:44:59	1.833	134.000	101.00	5.000
31	4:50: 0	1.917	139.000	101.00	5.000
32	4:55: 0	2.000	142.000	101.00	3.000
33	4:58: 0	2.050	146.000	101.00	4.000
34	5: 1: 0	2.100	187.000	101.00	41.000
35	5: 4: 0	2.150	240.000	101.00	53.000
36	5: 7: 0	2.200	323.000	101.00	83.000
37	5:10: 0	2.250	440.000	101.00	117.000
38	5:13: 0	2.300	584.000	101.00	144.000
39	5:16: 0	2.350	711.000	101.00	127.000
40	5:19: 0	2.400	819.000	101.00	108.000
41	5:22: 0	2.450	889.000	101.00	70.000
42	5:25: 0	2.500	928.000	101.00	39.000
43	5:28: 0	2.550	956.000	101.00	28.000
44	5:31: 0	2.600	974.000	101.00	18.000
45	5:34: 0	2.650	988.000	101.00	14.000
46	5:37: 0	2.700	999.000	101.00	11.000
47	5:40: 0	2.750	1008.000	101.00	9.000
48	5:43: 0	2.800	1012.000	101.00	4.000
49	5:46: 0	2.850	1019.000	101.00	7.000
50	5:49: 0	2.900	1023.000	101.00	4.000
51	5:52: 0	2.950	1028.000	101.00	5.000
52	5:55: 0	3.000	1032.000	101.00	4.000

COMPANY : MACK ENERGY COMPANY  
WELL : #1  
GAUGE # : 10270  
DATE : 12/1/87

FIELD : OSTRANDER  
JOB # : 13168  
DEPTH : 3276  
TEST :

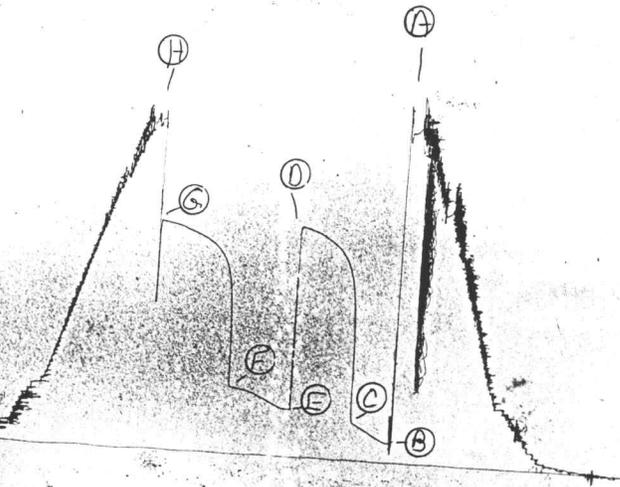
DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
53	5:58: 0	3.050	1035.000	101.00	3.000

WESTERN TESTERS INC

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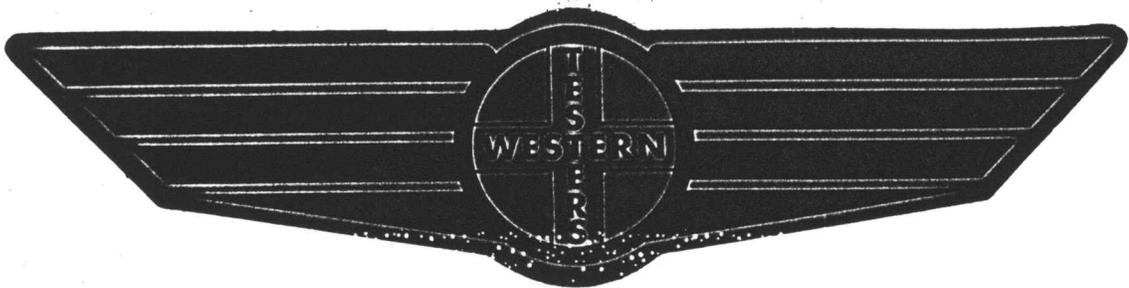


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DST 2

13265

# FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY

MACK ENERGY COMPANY

LEASE & WELL NO.

#1 OSTRANDER

SEC. 1

TWP. 31S

RGE. 2W

TEST NO. 2

DATE 1/14/87

WESTERN TESTERS INC  
SUBSURFACE PRESSURE SURVEY

DATE : 1-14-87  
CUSTOMER : MACK ENERGY CO.  
WELL : #1 TEST: 2  
ELEVATION : 1322 KB  
SECTION : 1  
RANGE : 2W COUNTY : SUMNER  
GAUGE SN# : 10979 RANGE : 4100  
TICKET : 11687  
LEASE : OSTRANDER  
GEOLOGIST : J. OLESON  
FORMATION : MISSISSIPPI  
TOWNSHIP : 31S  
STATE : KANSAS  
CLOCK : 12

INTERVAL FROM : 3762 TO : 3799 TOTAL DEPTH : 3799  
DEPTH OF SELECTIVE ZONE :  
PACKER DEPTH : 3762 SIZE : 6.75  
PACKER DEPTH : 3757 SIZE : 6.75  
PACKER DEPTH : SIZE :  
PACKER DEPTH : SIZE :

DRILLING CON. : THOMAS DRILLING RIG #8  
MUD TYPE : CHEMICAL VISCOSITY : 48  
WEIGHT : 8.8 WATER LOSS (CC) : 12.8  
CHLORIDES (PPM) : 2200  
JARS-MAKE : WTC SERIAL NUMBER : 411  
DID WELL FLOW ? : NO REVERSED OUT ? : NO

DRILL COLLAR LENGTH : 632 FT I.D. inch : 2.25  
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00  
DRILL PIPE LENGTH : 3099 FT I.D. inch : 3.80  
TEST TOOL LENGTH : 31 FT TOOL SIZE : 5.50  
ANCHOR LENGTH : 37 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 : FAIR BLOW THROUGHOUT THE TEST.  
BLOW COMMENT #2 :  
BLOW COMMENT #3 :  
BLOW COMMENT #4 :



FLUID SAMPLE REPORT

Date : 1-14-87

Ticket No. : 11687

Company : MACK ENERGY COMPANY

Well Name & No. : OSTRANDER #1

DST No. 2

County : SUMNER

State : KANSAS

Sampler No. : 1

Test Interval : 3762-3799

=====  
 Pressure in Sampler 275 PSIG      BHT 128      Deg F

Total Volume of Sampler : 3150      cc

Total Volume of Sample :              cc

    Oil:                                  cc

    Water: 2800                         cc

    Mud: 300                            cc

    Gas:                                cu ft

    Other:                              cc  
 =====

RESITIVITY

WATER                      .18              @      58 F      Chloride Content 110000 ppm

Mud Pit Sample .95              @      56 F      Chloride Content 2200 ppm

Gas/Oil Ratio                      Gravity                      API @      Deg F

Where was sample drained AT THE RIG

Remarks:

WESTERN TESTERS INC  
WITICHA - KANSAS

Pressure Transient Report  
-----

COMPANY : MACK ENERGY CO.  
RIG : SUMNER-KANSAS  
FIELD : OSTRANDER  
WELL : #1  
DATE : 1-14-87  
GAUGE NO : 10979

OPERATIONAL COMMENTS

HIT BRIDGE 345 FEET OFF BOTTOM-SPUDED TOOL THRU.

COMPANY : MACK ENERGY CO.  
 WELL : #1  
 GAUGE # : 10979  
 DATE : 14/ 1/87

FIELD : OSTRANDER  
 JOB # : 11687  
 DEPTH : 3799  
 TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	7: 0: 0	0.000	110.000	128.00	0.000
2	7: 4: 59	0.083	110.000	128.00	0.000
3	7:10: 0	0.167	125.000	128.00	15.000
4	7:15: 0	0.250	145.000	128.00	20.000
5	7:19: 59	0.333	167.000	128.00	22.000
6	7:25: 0	0.417	188.000	128.00	21.000
7	7:30: 0	0.500	209.000	128.00	21.000
8	7:33: 0	0.550	898.000	128.00	689.000
9	7:36: 0	0.600	1026.000	128.00	128.000
10	7:39: 0	0.650	1086.000	128.00	60.000
11	7:42: 0	0.700	1125.000	128.00	39.000
12	7:45: 0	0.750	1151.000	128.00	26.000
13	7:48: 0	0.800	1172.000	128.00	21.000
14	7:51: 0	0.850	1190.000	128.00	18.000
15	7:54: 0	0.900	1204.000	128.00	14.000
16	7:57: 0	0.950	1217.000	128.00	13.000
17	8: 0: 0	1.000	1229.000	128.00	12.000
18	8: 2: 59	1.050	1237.000	128.00	8.000
19	8: 6: 0	1.100	1245.000	128.00	8.000
20	8: 9: 0	1.150	1253.000	128.00	8.000
21	8:12: 0	1.200	1258.000	128.00	5.000
22	8:15: 0	1.250	1264.000	128.00	6.000
23	8:16: 0	1.267	267.000	128.00	-997.000
24	8:19: 59	1.333	267.000	128.00	0.000
25	8:25: 0	1.417	279.000	128.00	12.000
26	8:30: 0	1.500	294.000	128.00	15.000
27	8:34: 59	1.583	316.000	128.00	22.000
28	8:40: 0	1.667	330.000	128.00	14.000
29	8:45: 0	1.750	347.000	128.00	17.000
30	8:49: 59	1.833	355.000	128.00	8.000
31	8:55: 0	1.917	364.000	128.00	9.000
32	9: 0: 0	2.000	370.000	128.00	6.000
33	9: 3: 0	2.050	950.000	128.00	580.000
34	9: 5: 59	2.100	1045.000	128.00	95.000
35	9: 9: 0	2.150	1088.000	128.00	43.000
36	9:12: 0	2.200	1117.000	128.00	29.000
37	9:15: 0	2.250	1137.000	128.00	20.000
38	9:18: 0	2.300	1155.000	128.00	18.000
39	9:21: 0	2.350	1170.000	128.00	15.000
40	9:24: 0	2.400	1182.000	128.00	12.000
41	9:27: 0	2.450	1192.000	128.00	10.000
42	9:30: 0	2.500	1200.000	128.00	8.000
43	9:33: 0	2.550	1209.000	128.00	9.000
44	9:36: 0	2.600	1217.000	128.00	8.000
45	9:39: 0	2.650	1227.000	128.00	10.000
46	9:42: 0	2.700	1234.000	128.00	7.000
47	9:45: 0	2.750	1240.000	128.00	6.000
48	9:48: 0	2.800	1246.000	128.00	6.000
49	9:51: 0	2.850	1249.000	128.00	3.000
50	9:54: 0	2.900	1251.000	128.00	2.000
51	9:57: 0	2.950	1254.000	128.00	3.000