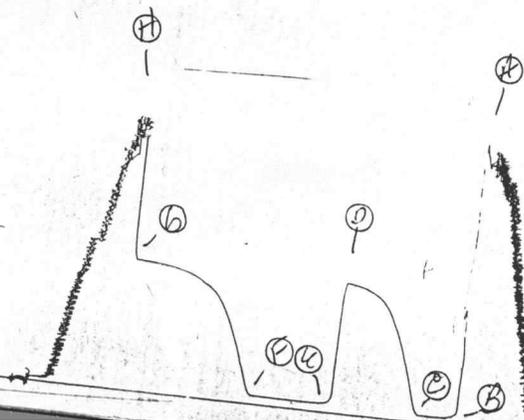


JK # 12593

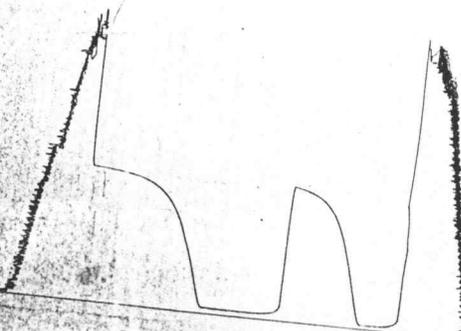
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JK # 12593

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12593

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

WESTERN TESTING CO., INC.
SUBSURFACE PRESSURE SURVEY

DATE : 12-1-87 TICKET : 12593
CUSTOMER : PENDLETON LAND & EXPLOR. & H&C OIL OPER.
WELL : #1 TEST: 1 LEASE : PHELAN
ELEVATION : 1775 GL GEOLOGIST : D. DAVIS
SECTION : 11 FORMATION : LANSING
RANGE : 10W COUNTY : ELLSWORTH STATE : KANSAS
GAUGE SN# : 13549 RANGE : 4100 CLOCK : 12

INTERVAL FROM : 2997 TO : 3010 TOTAL DEPTH : 3010
DEPTH OF SELECTIVE ZONE :
PACKER DEPTH : 2992 SIZE : 6.63
PACKER DEPTH : 2997 SIZE : 6.63
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : ALLEN RIG #3
MUD TYPE : CHEMICAL VISCOSITY : 41
WEIGHT : 8.8 WATER LOSS (CC) : 11.2
CHLORIDES (PPM) : 5500
JARS-MAKE : WTC SERIAL NUMBER : 592
DID WELL FLOW ? : REVERSED OUT ? :

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00
DRILL PIPE LENGTH : 2969 FT I.D. inch : 3.80
TEST TOOL LENGTH : 28 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 13 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-OFF BOTTOM IN 2 MINUTES.
BLOW COMMENT #2 : FINAL FLOW-STRONG BLOW-OFF BOTTOM IN 1 MINUTE.
BLOW COMMENT #3 :
BLOW COMMENT #4 :

WESTERN TESTING CO. INC.
WICHITA - KANSAS

Pressure Transient Report

COMPANY : PENDLETON LAND & EXPLOR. & H&C OIL OPER.
RIG : ELLSWORTH-KANSAS
FIELD : PHELAN
WELL : #1
DATE : 12-1-87
GAUGE NO : 13549

OPERATIONAL COMMENTS

RECOVERED 1630 FEET OF GAS ABOVE FLUID.

COMPANY : PENDLETON LAND & EXPLOR. & H&C OIL OPER.

FIELD : PHELAN

WELL : #1
 GAUGE # : 13549

JOB # : 12593

DATE : 1/12/87

DEPTH : 3010

TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	6:40:0	0.000	29.000	108.00	0.000
2	6:44:59	0.083	29.000	108.00	0.000
3	6:50:0	0.167	29.000	108.00	0.000
4	6:55:0	0.250	29.000	108.00	0.000
5	6:59:59	0.333	29.000	108.00	0.000
6	7:05:0	0.417	29.000	108.00	0.000
7	7:10:0	0.500	29.000	108.00	0.000
8	7:13:0	0.550	79.000	108.00	50.000
9	7:16:0	0.600	154.000	108.00	75.000
10	7:19:0	0.650	224.000	108.00	70.000
11	7:22:0	0.700	293.000	108.00	69.000
12	7:25:0	0.750	360.000	108.00	67.000
13	7:28:0	0.800	419.000	108.00	59.000
14	7:31:0	0.850	475.000	108.00	56.000
15	7:34:0	0.900	516.000	108.00	41.000
16	7:37:0	0.950	567.000	108.00	51.000
17	7:40:0	1.000	600.000	108.00	33.000
18	7:43:0	1.050	626.000	108.00	26.000
19	7:46:0	1.100	642.000	108.00	16.000
20	7:49:0	1.150	657.000	108.00	15.000
21	7:52:0	1.200	669.000	108.00	12.000
22	7:55:0	1.250	677.000	108.00	8.000
23	7:58:0	1.300	685.000	108.00	8.000
24	8:01:0	1.350	692.000	108.00	7.000
25	8:04:0	1.400	695.000	108.00	3.000
26	8:07:0	1.450	700.000	108.00	5.000
27	8:10:0	1.500	703.000	108.00	3.000
28	8:11:0	1.517	38.000	108.00	-665.000
29	8:14:59	1.583	38.000	108.00	0.000
30	8:20:0	1.667	38.000	108.00	0.000
31	8:25:0	1.750	38.000	108.00	0.000
32	8:29:59	1.833	38.000	108.00	0.000
33	8:35:0	1.917	38.000	108.00	0.000
34	8:40:0	2.000	38.000	108.00	0.000
35	8:44:59	2.083	38.000	108.00	0.000
36	8:50:0	2.167	38.000	108.00	0.000
37	8:55:0	2.250	38.000	108.00	0.000
38	8:59:59	2.333	38.000	108.00	0.000
39	9:05:0	2.417	38.000	108.00	0.000
40	9:10:0	2.500	38.000	108.00	0.000
41	9:13:0	2.550	68.000	108.00	30.000
42	9:16:0	2.600	139.000	108.00	71.000
43	9:19:0	2.650	205.000	108.00	66.000
44	9:22:0	2.700	271.000	108.00	66.000
45	9:25:0	2.750	327.000	108.00	56.000
46	9:28:0	2.800	390.000	108.00	63.000
47	9:31:0	2.850	441.000	108.00	51.000
48	9:34:0	2.900	491.000	108.00	50.000
49	9:37:0	2.950	525.000	108.00	34.000
50	9:40:0	3.000	558.000	108.00	33.000
51	9:43:0	3.050	580.000	108.00	22.000
52	9:46:0	3.100	597.000	108.00	17.000

COMPANY : PENDLETON LAND & EXPLOR. & H&C OIL OPER.

FIELD : PHELAN

WELL : #1

JOB # : 12593

GAUGE # : 13549

DEPTH : 3010

DATE : 1/12/87

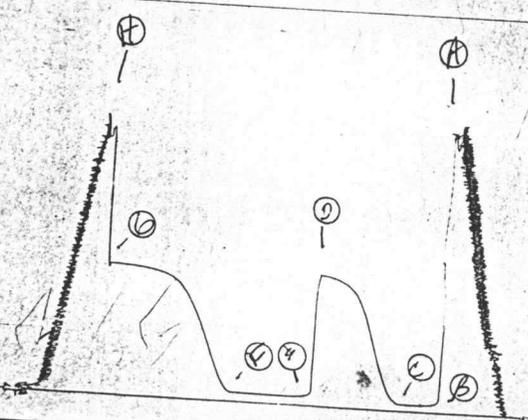
TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
53	9:49: 0	3.150	613.000	108.00	16.000
54	9:52: 0	3.200	623.000	108.00	10.000
55	9:55: 0	3.250	639.000	108.00	16.000
56	9:58: 0	3.300	652.000	108.00	13.000
57	10: 1: 0	3.350	661.000	108.00	9.000
58	10: 4: 0	3.400	667.000	108.00	6.000
59	10: 7: 0	3.450	667.000	108.00	0.000
60	10:10: 0	3.500	674.000	108.00	7.000
61	10:13: 0	3.550	680.000	108.00	6.000
62	10:16: 0	3.600	684.000	108.00	4.000
63	10:19: 0	3.650	690.000	108.00	6.000
64	10:22: 0	3.700	694.000	108.00	4.000
65	10:25: 0	3.750	697.000	108.00	3.000
66	10:28: 0	3.800	701.000	108.00	4.000
67	10:31: 0	3.850	703.000	108.00	2.000
68	10:34: 0	3.900	705.000	108.00	2.000
69	10:37: 0	3.950	706.000	108.00	1.000
70	10:40: 0	4.000	707.000	108.00	1.000
71	10:43: 0	4.050	708.000	108.00	1.000

WESTERN TESTING CO. INC.

JK #12594

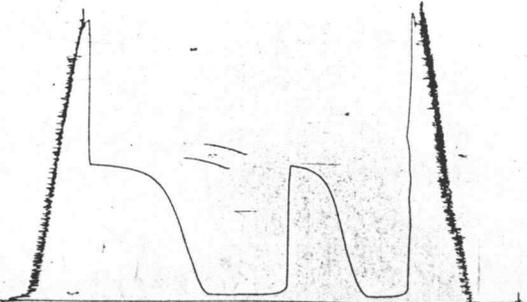
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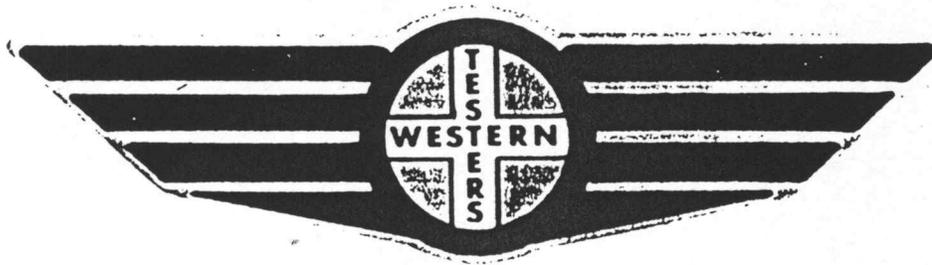
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JK #12594

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FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE : 12-1-87 TICKET : 12594
CUSTOMER : PENDLETON LAND & EXPLOR. & H&C OIL OPER.
LEASE : PHELAN
WELL : #1 TEST: 2 GEOLOGIST : D. DAVIS
ELEVATION : 1775 GL FORMATION : LANSING
SECTION : 11 TOWNSHIP : 17S
RANGE : 10W COUNTY : ELLSWORTH STATE : KANSAS
GAUGE SN# : 13549 RANGE : 4100 CLOCK : 12

INTERVAL FROM : 2995 TO : 3015 TOTAL DEPTH : 3015
DEPTH OF SELECTIVE ZONE :
PACKER DEPTH : 2990 SIZE : 6.63
PACKER DEPTH : 2995 SIZE : 6.63
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : ALLEN RIG #3
MUD TYPE : CHEMICAL VISCOSITY : 48
WEIGHT : 9.3 WATER LOSS (CC) : 13.6
CHLORIDES (PPM) : 6000
JARS-MAKE : WTC SERIAL NUMBER : 592
DID WELL FLOW ? : - REVERSED OUT ? : -

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00
DRILL PIPE LENGTH : 2967 FT I.D. inch : 3.80
TEST TOOL LENGTH : 28 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 20 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-OFF BOTTOM OF BUCKET IN
16 MINUTES.
BLOW COMMENT #2 : FINAL FLOW-STRONG BLOW-OFF BOTTOM OF BUCKET IN
1 MINUTE.
BLOW COMMENT #3 :
BLOW COMMENT #4 :

WESTERN TESTING CO. INC.
WICHITA - KANSAS

Pressure Transient Report

COMPANY : PENDLETON LAND & EXPLOR. & H&C OIL OPER.
RIG : ELLSWORTH-KANSAS
FIELD : PHELAN
WELL : #1
DATE : 12-1-87
GAUGE NO : 13549

OPERATIONAL COMMENTS

RECOVERED 780 FEET OF GAS ABOVE FLUID.

COMPANY : PENDLETON LAND & EXPLOR. & H&C OIL OPER.

FIELD : PHELAN

WELL : #1

JOB # : 12594

GAUGE # : 13549

DEPTH : 3015

DATE : 1/12/87

TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	9:25:0	0.000	35.000	109.00	0.000
2	9:29:59	0.083	35.000	109.00	0.000
3	9:35:0	0.167	35.000	109.00	0.000
4	9:40:0	0.250	35.000	109.00	0.000
5	9:44:59	0.333	35.000	109.00	0.000
6	9:50:0	0.417	35.000	109.00	0.000
7	9:55:0	0.500	35.000	109.00	0.000
8	9:58:0	0.550	54.000	109.00	19.000
9	10:01:0	0.600	79.000	109.00	25.000
10	10:04:0	0.650	125.000	109.00	46.000
11	10:07:0	0.700	178.000	109.00	53.000
12	10:10:0	0.750	242.000	109.00	64.000
13	10:13:0	0.800	309.000	109.00	67.000
14	10:16:0	0.850	385.000	109.00	76.000
15	10:19:0	0.900	452.000	109.00	67.000
16	10:22:0	0.950	517.000	109.00	65.000
17	10:25:0	1.000	563.000	109.00	46.000
18	10:28:0	1.050	604.000	109.00	41.000
19	10:31:0	1.100	632.000	109.00	28.000
20	10:34:0	1.150	653.000	109.00	21.000
21	10:37:0	1.200	668.000	109.00	15.000
22	10:40:0	1.250	679.000	109.00	11.000
23	10:43:0	1.300	690.000	109.00	11.000
24	10:46:0	1.350	698.000	109.00	8.000
25	10:49:0	1.400	703.000	109.00	5.000
26	10:52:0	1.450	706.000	109.00	3.000
27	10:55:0	1.500	711.000	109.00	5.000
28	10:58:0	1.550	714.000	109.00	3.000
29	10:59:0	1.567	50.000	109.00	-664.000
30	11:02:59	1.633	50.000	109.00	0.000
31	11:08:0	1.717	50.000	109.00	0.000
32	11:13:0	1.800	50.000	109.00	0.000
33	11:17:59	1.883	50.000	109.00	0.000
34	11:23:0	1.967	50.000	109.00	0.000
35	11:28:0	2.050	50.000	109.00	0.000
36	11:32:59	2.133	50.000	109.00	0.000
37	11:38:0	2.217	50.000	109.00	0.000
38	11:43:0	2.300	50.000	109.00	0.000
39	11:47:59	2.383	50.000	109.00	0.000
40	11:53:0	2.467	50.000	109.00	0.000
41	11:58:0	2.550	50.000	109.00	0.000
42	12:01:0	2.600	68.000	109.00	18.000
43	12:03:59	2.650	101.000	109.00	33.000
44	12:07:0	2.700	143.000	109.00	42.000
45	12:10:0	2.750	192.000	109.00	49.000
46	12:13:0	2.800	252.000	109.00	60.000
47	12:16:0	2.850	308.000	109.00	56.000
48	12:18:59	2.900	366.000	109.00	58.000
49	12:22:0	2.950	421.000	109.00	55.000
50	12:25:0	3.000	464.000	109.00	43.000
51	12:28:0	3.050	508.000	109.00	44.000
52	12:31:0	3.100	547.000	109.00	39.000

COMPANY : PENDLETON LAND & EXPLOR. & H&C OIL OPER.

FIELD : PHELAN

WELL : #1

JOB # : 12594

GAUGE # : 13549

DEPTH : 3015

DATE : 1/12/87

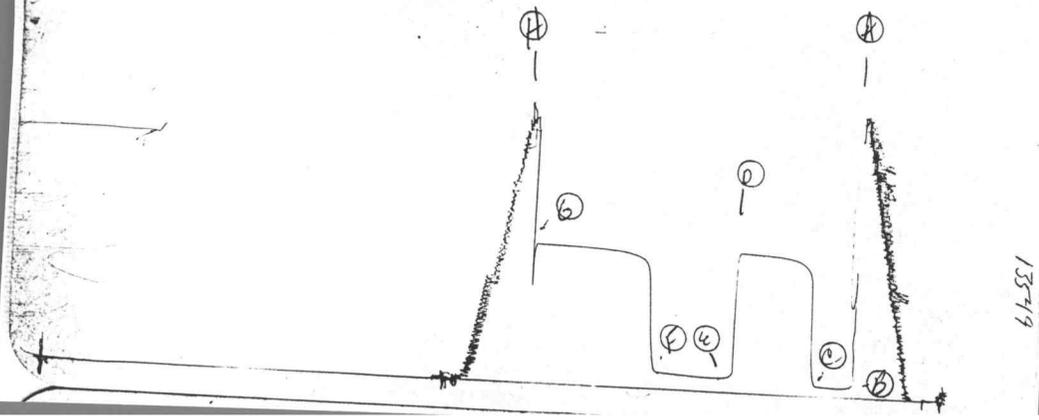
TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
53	12:34: 0	3.150	581.000	109.00	34.000
54	12:36:59	3.200	610.000	109.00	29.000
55	12:40: 0	3.250	632.000	109.00	22.000
56	12:43: 0	3.300	649.000	109.00	17.000
57	12:46: 0	3.350	663.000	109.00	14.000
58	12:49: 0	3.400	675.000	109.00	12.000
59	12:51:59	3.450	681.000	109.00	6.000
60	12:55: 0	3.500	686.000	109.00	5.000
61	12:58: 0	3.550	693.000	109.00	7.000
62	13: 1: 0	3.600	696.000	109.00	3.000
63	13: 4: 0	3.650	700.000	109.00	4.000
64	13: 6:59	3.700	703.000	109.00	3.000
65	13:10: 0	3.750	706.000	109.00	3.000
66	13:13: 0	3.800	708.000	109.00	2.000
67	13:16: 0	3.850	710.000	109.00	2.000
68	13:19: 0	3.900	712.000	109.00	2.000
69	13:22: 0	3.950	713.000	109.00	1.000
70	13:25: 0	4.000	714.000	109.00	1.000
71	13:28: 0	4.050	715.000	109.00	1.000
72	13:31: 0	4.100	716.000	109.00	1.000

WESTERN TESTING CO. INC.

2/4 # 12595

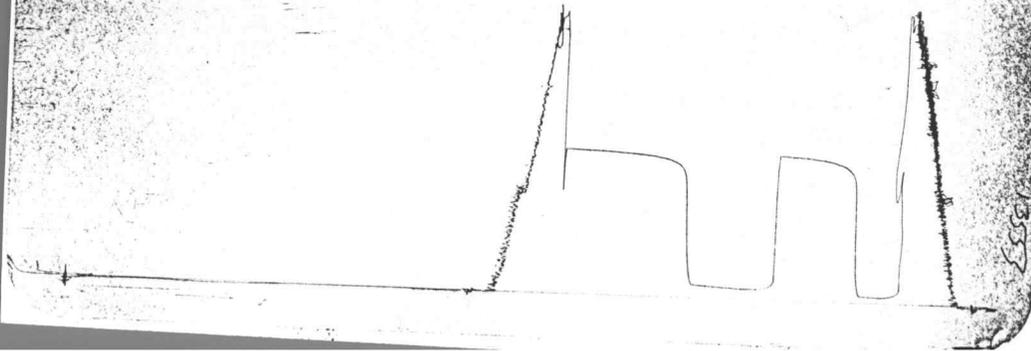
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13549

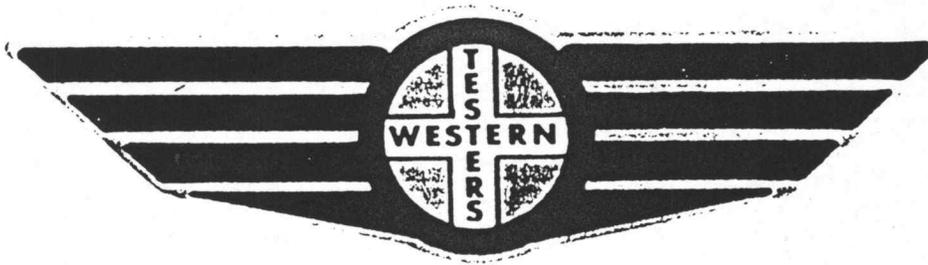
JK. # 12595

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1353

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE : 12-2-87 TICKET : 12595
CUSTOMER : PENDLETON LAND & EXPLOR. & H&C OIL OPER. LEASE : PHELAN
WELL : #1 TEST: 3 GEOLOGIST : D. DAVIS
ELEVATION : 1775 GL FORMATION : LANSING
SECTION : 11 TOWNSHIP : 17S
RANGE : 10W COUNTY : ELLSWORTH STATE : KANSAS
GAUGE SN# : 13549 RANGE : 4100 CLOCK : 12

INTERVAL FROM : 3012 TO : 3025 TOTAL DEPTH : 3025
DEPTH OF SELECTIVE ZONE :
PACKER DEPTH : 3007 SIZE : 6.63
PACKER DEPTH : 3012 SIZE : 6.63
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : ALLEN RIG #3
MUD TYPE : CHEMICAL VISCOSITY : 48
WEIGHT : 9.3 WATER LOSS (CC) : 13.6
CHLORIDES (PPM) : 6000
JARS-MAKE : WTC SERIAL NUMBER : 592
DID WELL FLOW ? : 6 REVERSED OUT ? : -

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00
DRILL PIPE LENGTH : 2984 FT I.D. inch : 3.80
TEST TOOL LENGTH : 28 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 13 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 IN 6 INCHES.
BLOW COMMENT #2 : FINAL FLOW-WEAK BLOW BUILDING IN 1 INCH.
BLOW COMMENT #3 :
BLOW COMMENT #4 :

WESTERN TESTING CO. INC.
WICHITA - KANSAS

Pressure Transient Report

COMPANY : PENDLETON LAND & EXPLOR. & H&C OIL OPER.
RIG : ELLSWORTH-KANSAS
FIELD : PHELAN
WELL : #1
DATE : 12-2-87
GAUGE NO : 13549

OPERATIONAL COMMENTS

COMPANY : PENDLETON LAND & EXPLOR. & H&C OIL OPER.

FIELD : PHELAN

WELL : #1

JOB # : 12595

GAUGE # : 13549

DEPTH : 3025

DATE : 2/12/87

TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P $P_i - P(i-1)$
1	8: 0: 0	0.000	51.000	111.00	0.000
2	8: 4: 59	0.083	51.000	111.00	0.000
3	8: 10: 0	0.167	51.000	111.00	0.000
4	8: 15: 0	0.250	51.000	111.00	0.000
5	8: 19: 59	0.333	53.000	111.00	2.000
6	8: 25: 0	0.417	54.000	111.00	1.000
7	8: 30: 0	0.500	55.000	111.00	1.000
8	8: 33: 0	0.550	333.000	111.00	278.000
9	8: 36: 0	0.600	668.000	111.00	335.000
10	8: 39: 0	0.650	703.000	111.00	35.000
11	8: 42: 0	0.700	719.000	111.00	16.000
12	8: 45: 0	0.750	732.000	111.00	13.000
13	8: 48: 0	0.800	739.000	111.00	7.000
14	8: 51: 0	0.850	744.000	111.00	5.000
15	8: 54: 0	0.900	746.000	111.00	2.000
16	8: 57: 0	0.950	750.000	111.00	4.000
17	9: 0: 0	1.000	753.000	111.00	3.000
18	9: 2: 59	1.050	754.000	111.00	1.000
19	9: 6: 0	1.100	755.000	111.00	1.000
20	9: 9: 0	1.150	756.000	111.00	1.000
21	9: 12: 0	1.200	757.000	111.00	1.000
22	9: 15: 0	1.250	758.000	111.00	1.000
23	9: 18: 0	1.300	759.000	111.00	1.000
24	9: 21: 0	1.350	760.000	111.00	1.000
25	9: 24: 0	1.400	761.000	111.00	1.000
26	9: 27: 0	1.450	762.000	111.00	1.000
27	9: 30: 0	1.500	763.000	111.00	1.000
28	9: 31: 0	1.517	78.000	111.00	-685.000
29	9: 34: 59	1.583	78.000	111.00	0.000
30	9: 40: 0	1.667	78.000	111.00	0.000
31	9: 45: 0	1.750	78.000	111.00	0.000
32	9: 49: 59	1.833	78.000	111.00	0.000
33	9: 55: 0	1.917	79.000	111.00	1.000
34	10: 0: 0	2.000	80.000	111.00	1.000
35	10: 4: 59	2.083	83.000	111.00	3.000
36	10: 10: 0	2.167	87.000	111.00	4.000
37	10: 15: 0	2.250	90.000	111.00	3.000
38	10: 19: 59	2.333	91.000	111.00	1.000
39	10: 25: 0	2.417	92.000	111.00	1.000
40	10: 30: 0	2.500	93.000	111.00	1.000
41	10: 33: 0	2.550	502.000	111.00	409.000
42	10: 36: 0	2.600	686.000	111.00	184.000
43	10: 39: 0	2.650	711.000	111.00	25.000
44	10: 42: 0	2.700	720.000	111.00	9.000
45	10: 45: 0	2.750	730.000	111.00	10.000
46	10: 48: 0	2.800	734.000	111.00	4.000
47	10: 51: 0	2.850	740.000	111.00	6.000
48	10: 54: 0	2.900	745.000	111.00	5.000
49	10: 57: 0	2.950	747.000	111.00	2.000
50	11: 0: 0	3.000	748.000	111.00	1.000
51	11: 3: 0	3.050	749.000	111.00	1.000
52	11: 6: 0	3.100	750.000	111.00	1.000

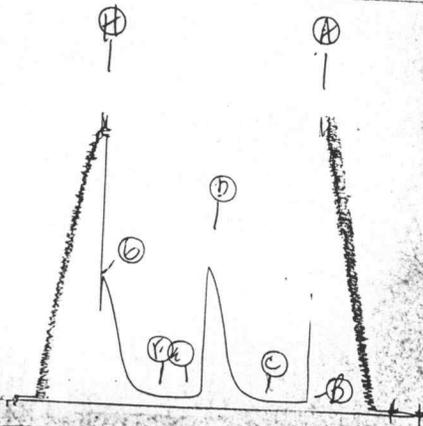
COMPANY : PENDLETON LAND & EXPLOR. & H&C OIL OPER. . .
 FIELD : PHELAN
 WELL : #1
 JOB # : 12595
 GAUGE # : 13549
 DEPTH : 3025
 DATE : 2/12/87
 TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P $P_i - P_{(i-1)}$
53	11: 9: 0	3.150	752.000	111.00	2.000
54	11:12: 0	3.200	754.000	111.00	2.000
55	11:15: 0	3.250	756.000	111.00	2.000
56	11:18: 0	3.300	757.000	111.00	1.000
57	11:21: 0	3.350	758.000	111.00	1.000
58	11:24: 0	3.400	759.000	111.00	1.000
59	11:27: 0	3.450	760.000	111.00	1.000
60	11:30: 0	3.500	760.000	111.00	0.000
61	11:33: 0	3.550	760.000	111.00	0.000
62	11:36: 0	3.600	761.000	111.00	1.000
63	11:39: 0	3.650	761.000	111.00	0.000
64	11:42: 0	3.700	762.000	111.00	1.000
65	11:45: 0	3.750	762.000	111.00	0.000
66	11:48: 0	3.800	763.000	111.00	1.000
67	11:51: 0	3.850	763.000	111.00	0.000
68	11:54: 0	3.900	764.000	111.00	1.000
69	11:57: 0	3.950	764.000	111.00	0.000
70	12: 0: 0	4.000	764.000	111.00	0.000

WESTERN TESTING CO. INC.

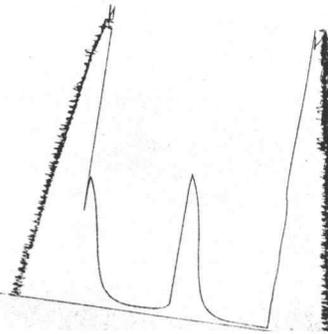
SK # 12596

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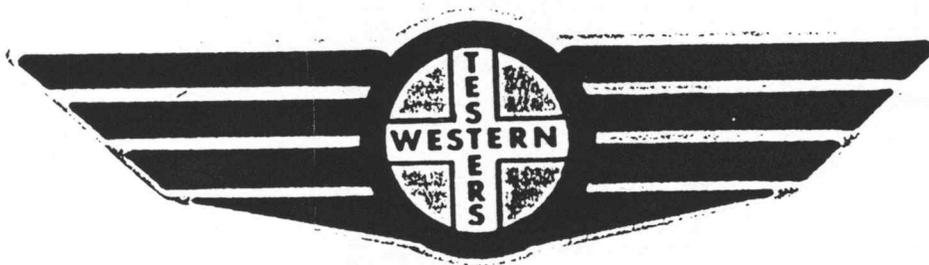
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JK # 12596
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1355

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY PENDELETON / H & C OIL

LEASE & WELL NO. PHELAN #1

SEC. 11 TWP. 17S RGE. 10W TEST NO. 4 DATE 12-2-87

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE : 12-2-87
CUSTOMER : PENDLETON LAND & EXPLOR. & H&C OIL OPER.
WELL : #1 TEST: 4
ELEVATION : 1775 GL
SECTION : 11
RANGE : 10W COUNTY : ELLSWORTH
GAUGE SN# : 13549 RANGE : 4100
TICKET : 12596
LEASE : PHELAN
GEOLOGIST : D. DAVIS
FORMATION : LANSING J
TOWNSHIP : 17S
STATE : KANSAS
CLOCK : 12

INTERVAL FROM : 3088 TO : 3108 TOTAL DEPTH : 3108
DEPTH OF SELECTIVE ZONE :
PACKER DEPTH : 3083 SIZE : 6.63
PACKER DEPTH : 3088 SIZE : 6.63
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : ALLEN RIG #3
MUD TYPE : CHEMICAL VISCOSITY : 44
WEIGHT : 9.3 WATER LOSS (CC) : 11.6
CHLORIDES (PPM) : 9000
JARS-MAKE : WTC SERIAL NUMBER : 592
DID WELL FLOW ? : - REVERSED OUT ? : -

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00
DRILL PIPE LENGTH : 3060 FT I.D. inch : 3.80
TEST TOOL LENGTH : 28 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 20 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 IN 2 INCHES.
BLOW COMMENT #2 : FINAL FLOW-WEAK BLOW-BUILDING IN 1 INCH.
BLOW COMMENT #3 :
BLOW COMMENT #4 :

WESTERN TESTING CO. INC.
WICHITA - KANSAS

Pressure Transient Report

COMPANY : PENDLETON LAND & EXPLOR. & H&C OIL OPER.
RIG : ELLSWORTH-KANSAS
FIELD : PHELAN
WELL : #1
DATE : 12-2-87
GAUGE NO : 13549

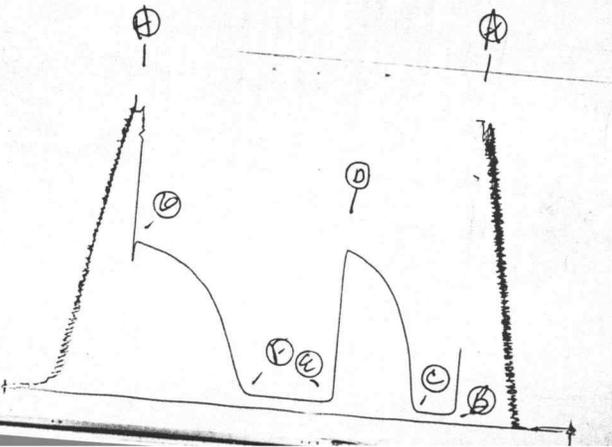
OPERATIONAL COMMENTS

RECOVERED 90 FEET OF GAS ABOVE FLUID.

COMPANY : PENDLETON LAND & EXPLOR. & H&C OIL OPER.
 FIELD : PHELAN
 WELL : #1
 JOB # : 12596
 GAUGE # : 13549
 DEPTH : 3108
 DATE : 2/12/87
 TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	11:20:00	0.000	33.000	112.00	0.000
2	11:24:59	0.083	33.000	112.00	0.000
3	11:30:00	0.167	33.000	112.00	0.000
4	11:35:00	0.250	33.000	112.00	0.000
5	11:39:59	0.333	33.000	112.00	0.000
6	11:45:00	0.417	33.000	112.00	0.000
7	11:50:00	0.500	33.000	112.00	0.000
8	11:53:00	0.550	35.000	112.00	2.000
9	11:56:00	0.600	40.000	112.00	5.000
10	11:59:00	0.650	47.000	112.00	7.000
11	12:02:00	0.700	55.000	112.00	8.000
12	12:05:00	0.750	68.000	112.00	13.000
13	12:08:00	0.800	79.000	112.00	11.000
14	12:11:00	0.850	97.000	112.00	18.000
15	12:14:00	0.900	132.000	112.00	35.000
16	12:17:00	0.950	185.000	112.00	53.000
17	12:20:00	1.000	269.000	112.00	84.000
18	12:23:00	1.050	379.000	112.00	110.000
19	12:26:00	1.100	497.000	112.00	118.000
20	12:29:00	1.150	587.000	112.00	90.000
21	12:32:00	1.200	667.000	112.00	80.000
22	12:35:00	1.250	716.000	112.00	49.000
23	12:38:00	1.300	755.000	112.00	39.000
24	12:39:00	1.317	37.000	112.00	-718.000
25	12:42:59	1.383	37.000	112.00	0.000
26	12:48:00	1.467	37.000	112.00	0.000
27	12:53:00	1.550	37.000	112.00	0.000
28	12:57:59	1.633	37.000	112.00	0.000
29	13:03:00	1.717	37.000	112.00	0.000
30	13:08:00	1.800	37.000	112.00	0.000
31	13:11:00	1.850	39.000	112.00	2.000
32	13:14:00	1.900	44.000	112.00	5.000
33	13:17:00	1.950	50.000	112.00	6.000
34	13:20:00	2.000	56.000	112.00	6.000
35	13:23:00	2.050	63.000	112.00	7.000
36	13:26:00	2.100	73.000	112.00	10.000
37	13:28:59	2.150	95.000	112.00	22.000
38	13:32:00	2.200	128.000	112.00	33.000
39	13:35:00	2.250	183.000	112.00	55.000
40	13:38:00	2.300	255.000	112.00	72.000
41	13:41:00	2.350	339.000	112.00	84.000
42	13:44:00	2.400	427.000	112.00	88.000
43	13:46:59	2.450	505.000	112.00	78.000
44	13:50:00	2.500	585.000	112.00	80.000
45	13:53:00	2.550	642.000	112.00	57.000
46	13:56:00	2.600	673.000	112.00	31.000

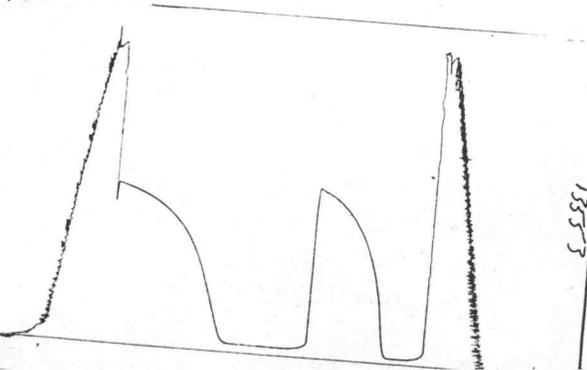
OK # 12597
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13549

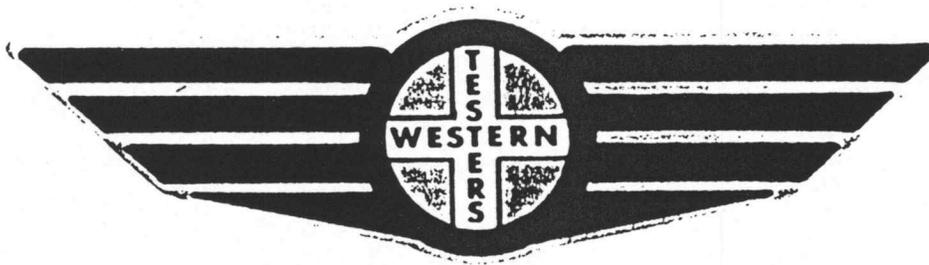
Kit # 12597

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1353

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY PENDLETON / H & C OIL LEASE & WELL NO. PHELAN #1 SEC. 11 TWP. 17S RGE. 10W TEST NO. 5 DATE 12-3-87

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE : 12-3-87 TICKET : 12597
CUSTOMER : PENDLETON LAND & EXPLOR. & H&C OIL OPER.
WELL : #1 TEST: 5 LEASE : PHELAN
ELEVATION : 1775 GL GEOLOGIST : D. DAVIS
SECTION : 11 FORMATION : ARBUCKLE
RANGE : 10W COUNTY : ELLSWORTH STATE : KANSAS
GAUGE SN# : 13549 RANGE : 4100 CLOCK : 12

INTERVAL FROM : 3189 TO : 3259 TOTAL DEPTH : 3259
DEPTH OF SELECTIVE ZONE :
PACKER DEPTH : 3184 SIZE : 6.63
PACKER DEPTH : 3189 SIZE : 6.63
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : ALLEN RIG #3
MUD TYPE : CHEMICAL VISCOSITY : 53
WEIGHT : 9.3 WATER LOSS (CC) : 12.0
CHLORIDES (PPM) : 11000
JARS-MAKE : WTC SERIAL NUMBER : 592
DID WELL FLOW ? : - REVERSED OUT ? : -

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00
DRILL PIPE LENGTH : 3161 FT I.D. inch : 3.80
TEST TOOL LENGTH : 28 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 70 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 6 INCHES.
BLOW COMMENT #2 : FINAL FLOW-WEAK BLOW-BUILDING TO 5 INCHES.
BLOW COMMENT #3 :
BLOW COMMENT #4 :

RECOVERED : 20 FT OF: FREE OIL GRAVITY 46
RECOVERED : 60 FT OF: OIL & GAS CUT MUD
10% OIL-30% GAS-60% MUD

Total Barrels Fluid = 1.12
Total Fluid Prod Rate = 17.95 BFPD
Indicated Oil Rate = 5.83 BOPD
Indicated Wtr Rate = 0.81 BWPD
Corrected Oil Rate = 13.00 BOPD
Corrected Wtr Rate = 1.80 BWPD

REMARK 1 :
REMARK 2 : RECOVERED 40 FEET OF GAS ABOVE FLUID.
REMARK 3 :
REMARK 4 :

SET PACKER(S) : 6:15 PM TIME STARTED OFF BOTTOM : 10:15 PM
WELL TEMPERATURE : 112
INITIAL HYDROSTATIC PRESSURE (A) 1641
INITIAL FLOW PERIOD MIN: 30 (B) 47 PSI TO (C) : 48
INITIAL CLOSED IN PERIOD MIN: 60 (D) 894
FINAL FLOW PERIOD MIN: 60 (E) 62 PSI TO (F) : 67
FINAL CLOSED IN PERIOD MIN: 93 (G) 847
FINAL HYDROSTATIC PRESSURE (H) 1568

WESTERN TESTING CO. INC.
WICHITA - KANSAS

Pressure Transient Report

COMPANY : PENDLETON LAND & EXPLOR. & H&C OIL OPER.
RIG : ELLSWORTH-KANSAS
FIELD : PHELAN
WELL : #1
DATE : 12-3-87
GAUGE NO : 13549

OPERATIONAL COMMENTS

RECOVERED 40 FEET OF GAS ABOVE FLUID.

COMPANY : PENDLETON LAND & EXPLOR. & H&C OIL OPER.,
 FIELD : PHELAN
 WELL : #1
 GAUGE # : 13549
 DATE : 3/12/87
 JOB # : 12597
 DEPTH : 3259
 TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	6:15: 0	0.000	47.000	112.00	0.000
2	6:19:59	0.083	47.000	112.00	0.000
3	6:25: 0	0.167	47.000	112.00	0.000
4	6:30: 0	0.250	47.000	112.00	0.000
5	6:34:59	0.333	47.000	112.00	0.000
6	6:40: 0	0.417	48.000	112.00	1.000
7	6:45: 0	0.500	48.000	112.00	0.000
8	6:48: 0	0.550	198.000	112.00	150.000
9	6:51: 0	0.600	349.000	112.00	151.000
10	6:54: 0	0.650	432.000	112.00	83.000
11	6:57: 0	0.700	504.000	112.00	72.000
12	7: 0: 0	0.750	564.000	112.00	60.000
13	7: 3: 0	0.800	616.000	112.00	52.000
14	7: 6: 0	0.850	663.000	112.00	47.000
15	7: 9: 0	0.900	699.000	112.00	36.000
16	7:12: 0	0.950	733.000	112.00	34.000
17	7:15: 0	1.000	762.000	112.00	29.000
18	7:18: 0	1.050	786.000	112.00	24.000
19	7:21: 0	1.100	803.000	112.00	17.000
20	7:24: 0	1.150	820.000	112.00	17.000
21	7:27: 0	1.200	834.000	112.00	14.000
22	7:30: 0	1.250	849.000	112.00	15.000
23	7:33: 0	1.300	864.000	112.00	15.000
24	7:36: 0	1.350	875.000	112.00	11.000
25	7:39: 0	1.400	886.000	112.00	11.000
26	7:42: 0	1.450	890.000	112.00	4.000
27	7:45: 0	1.500	894.000	112.00	4.000
28	7:46: 0	1.517	62.000	112.00	-832.000
29	7:49:59	1.583	62.000	112.00	0.000
30	7:55: 0	1.667	62.000	112.00	0.000
31	8: 0: 0	1.750	62.000	112.00	0.000
32	8: 4:59	1.833	62.000	112.00	0.000
33	8:10: 0	1.917	63.000	112.00	1.000
34	8:15: 0	2.000	64.000	112.00	1.000
35	8:19:59	2.083	65.000	112.00	1.000
36	8:25: 0	2.167	66.000	112.00	1.000
37	8:30: 0	2.250	67.000	112.00	1.000
38	8:34:59	2.333	67.000	112.00	0.000
39	8:40: 0	2.417	67.000	112.00	0.000
40	8:45: 0	2.500	67.000	112.00	0.000
41	8:48: 0	2.550	75.000	112.00	8.000
42	8:51: 0	2.600	103.000	112.00	28.000
43	8:54: 0	2.650	155.000	112.00	52.000
44	8:57: 0	2.700	209.000	112.00	54.000
45	9: 0: 0	2.750	273.000	112.00	64.000
46	9: 3: 0	2.800	333.000	112.00	60.000
47	9: 6: 0	2.850	395.000	112.00	62.000
48	9: 9: 0	2.900	460.000	112.00	65.000
49	9:12: 0	2.950	500.000	112.00	40.000
50	9:15: 0	3.000	540.000	112.00	40.000
51	9:18: 0	3.050	577.000	112.00	37.000
52	9:21: 0	3.100	613.000	112.00	36.000

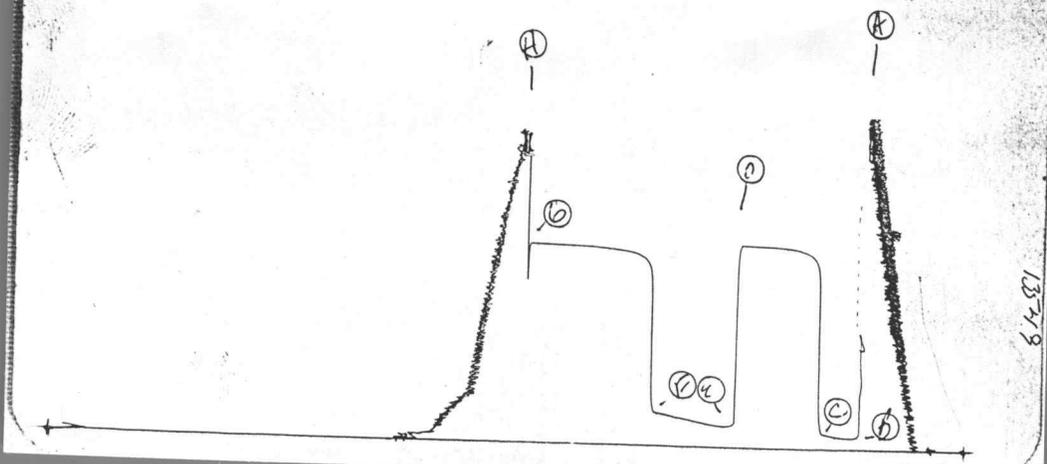
COMPANY : PENDLETON LAND & EXPLOR. & H&C OIL OPER.
 FIELD : PHELAN
 WELL : #1
 GAUGE # : 13549
 DATE : 3/12/87
 JOB # : 12597
 DEPTH : 3259
 TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
53	9:24:0	3.150	640.000	112.00	27.000
54	9:27:0	3.200	661.000	112.00	21.000
55	9:30:0	3.250	680.000	112.00	19.000
56	9:33:0	3.300	706.000	112.00	26.000
57	9:36:0	3.350	725.000	112.00	19.000
58	9:39:0	3.400	741.000	112.00	16.000
59	9:42:0	3.450	754.000	112.00	13.000
60	9:45:0	3.500	765.000	112.00	11.000
61	9:48:0	3.550	779.000	112.00	14.000
62	9:51:0	3.600	790.000	112.00	11.000
63	9:54:0	3.650	799.000	112.00	9.000
64	9:57:0	3.700	806.000	112.00	7.000
65	10:0:0	3.750	813.000	112.00	7.000
66	10:3:0	3.800	820.000	112.00	7.000
67	10:6:0	3.850	827.000	112.00	7.000
68	10:9:0	3.900	833.000	112.00	6.000
69	10:12:0	3.950	839.000	112.00	6.000
70	10:15:0	4.000	845.000	112.00	6.000
71	10:18:0	4.050	847.000	112.00	2.000

WESTERN TESTING CO. INC.

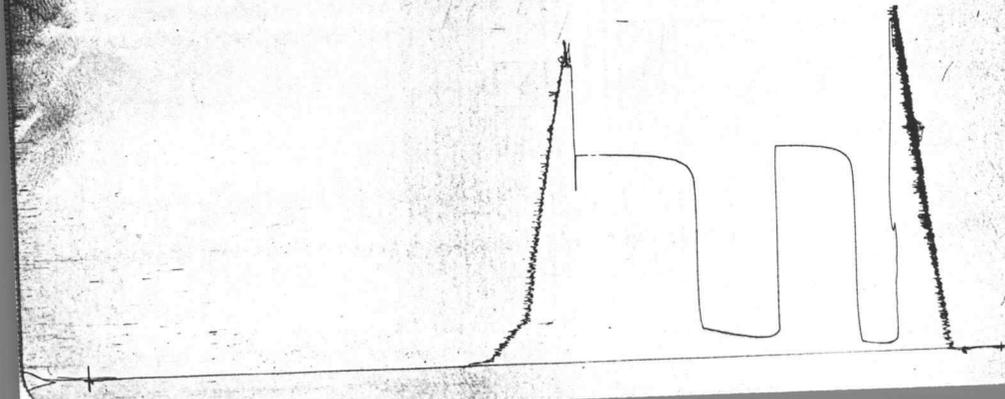
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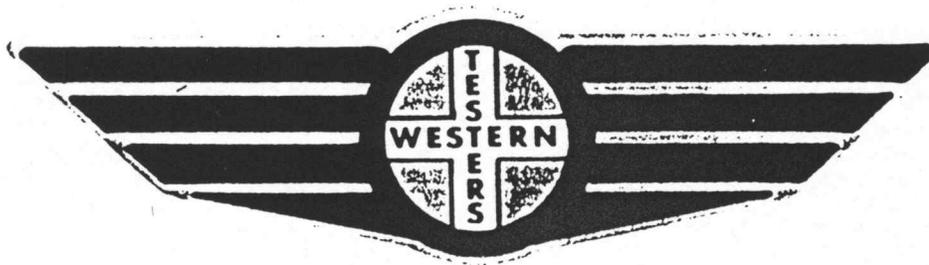
JK # 12598

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1353

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY PENDELTON / H & C OIL LEASE & WELL NO. PHELAN #1 SEC. 11 TWP. 17S RGE. 10W TEST NO. 6 DATE 12-4-87

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE : 12-4-87 TICKET : 12598
CUSTOMER : PENDLETON LAND & EXPLOR. & H&C OIL OPER.
WELL : #1 TEST: 6 LEASE : PHELAN
ELEVATION : 1775 GL GEOLOGIST : D. DAVIS
SECTION : 11 FORMATION : ARBUCKLE
RANGE : 10W COUNTY : ELLSWORTH STATE : KANSAS
GAUGE SN# : 13549 RANGE : 4100 CLOCK : 12

INTERVAL FROM : 3262 TO : 3274 TOTAL DEPTH : 3274
DEPTH OF SELECTIVE ZONE :
PACKER DEPTH : 3257 SIZE : 6.63
PACKER DEPTH : 3262 SIZE : 6.63
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : ALLEN RIG #3
MUD TYPE : CHEMICAL VISCOSITY : 53
WEIGHT : 9.3 WATER LOSS (CC) : 12.0
CHLORIDES (PPM) : 11000
JARS-MAKE : WTC SERIAL NUMBER : 592
DID WELL FLOW ? : - REVERSED OUT ? : -

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00
DRILL PIPE LENGTH : 3234 FT I.D. inch : 3.80
TEST TOOL LENGTH : 28 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 12 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 OFF BOTTOM OF BUCKET IN
16 MINUTES.
BLOW COMMENT #2 : FINAL FLOW-WEAK BLOW BUILDING OFF BOTTOM OF BUCKET
IN 17 MINUTES.
BLOW COMMENT #3 :
BLOW COMMENT #4 :

RECOVERED : 280 FT OF: GASSY OIL GRAVITY 49
RECOVERED : 60 FT OF: SLIGHTLY OIL & GAS CUT WATERY MUD
10% OIL-20% GAS-40% WATER-30% MUD
RECOVERED : 60 FT OF: WATER

CHLORIDES: 15000 PPM

Total Barrels Fluid = 5.61
Total Fluid Prod Rate = 89.77 BFPD
Indicated Oil Rate = 64.18 BOPD
Indicated Wtr Rate = 19.30 BWPD
Corrected Oil Rate = 78.02 BOPD
Corrected Wtr Rate = 23.46 BWPD

REMARK 1 :
REMARK 2 : RECOVERED 180 FEET OF GAS ABOVE FLUID.
REMARK 3 :
REMARK 4 :

SET PACKER(S) : 6:10 AM TIME STARTED OFF BOTTOM : 10:10 AM
WELL TEMPERATURE : 114
INITIAL HYDROSTATIC PRESSURE (A) 1726
INITIAL FLOW PERIOD MIN: 30 (B) 62 PSI TO (C) : 78
INITIAL CLOSED IN PERIOD MIN: 63 (D) 1089
FINAL FLOW PERIOD MIN: 60 (E) 112 PSI TO (F) : 180
FINAL CLOSED IN PERIOD MIN: 93 (G) 1074
FINAL HYDROSTATIC PRESSURE (H) 1670

WESTERN TESTING CO. INC.
WICHITA - KANSAS

Pressure Transient Report

COMPANY : PENDLETON LAND & EXPLOR. & H&C OIL OPER.
RIG : ELLSWORTH-KANSAS
FIELD : PHELAN
WELL : #1
DATE : 12-4-87
GAUGE NO : 13549

OPERATIONAL COMMENTS

RECOVERED 180 FEET OF GAS ABOVE FLUID.

COMPANY : PENDLETON LAND & EXPLOR. & H&C OIL OPER.

FIELD : PHELAN

WELL : #1

JOB # : 12598

GAUGE # : 13549

DEPTH : 3274

DATE : 4/12/87

TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	6:10:0	0.000	62.000	114.00	0.000
2	6:14:59	0.083	62.000	114.00	0.000
3	6:20:0	0.167	62.000	114.00	0.000
4	6:25:0	0.250	63.000	114.00	1.000
5	6:29:59	0.333	70.000	114.00	7.000
6	6:35:0	0.417	75.000	114.00	5.000
7	6:40:0	0.500	78.000	114.00	3.000
8	6:43:0	0.550	851.000	114.00	773.000
9	6:46:0	0.600	1005.000	114.00	154.000
10	6:49:0	0.650	1034.000	114.00	29.000
11	6:52:0	0.700	1052.000	114.00	18.000
12	6:55:0	0.750	1059.000	114.00	7.000
13	6:58:0	0.800	1067.000	114.00	8.000
14	7: 1:0	0.850	1073.000	114.00	6.000
15	7: 4:0	0.900	1077.000	114.00	4.000
16	7: 7:0	0.950	1079.000	114.00	2.000
17	7:10:0	1.000	1082.000	114.00	3.000
18	7:13:0	1.050	1083.000	114.00	1.000
19	7:16:0	1.100	1084.000	114.00	1.000
20	7:19:0	1.150	1085.000	114.00	1.000
21	7:22:0	1.200	1086.000	114.00	1.000
22	7:25:0	1.250	1087.000	114.00	1.000
23	7:28:0	1.300	1088.000	114.00	1.000
24	7:31:0	1.350	1089.000	114.00	1.000
25	7:34:0	1.400	1089.000	114.00	0.000
26	7:37:0	1.450	1089.000	114.00	0.000
27	7:40:0	1.500	1089.000	114.00	0.000
28	7:43:0	1.550	1089.000	114.00	0.000
29	7:44:0	1.567	112.000	114.00	-977.000
30	7:47:59	1.633	112.000	114.00	0.000
31	7:53:0	1.717	112.000	114.00	0.000
32	7:58:0	1.800	116.000	114.00	4.000
33	8: 2:59	1.883	122.000	114.00	6.000
34	8: 8:0	1.967	130.000	114.00	8.000
35	8:13:0	2.050	138.000	114.00	8.000
36	8:17:59	2.133	145.000	114.00	7.000
37	8:23:0	2.217	152.000	114.00	7.000
38	8:28:0	2.300	159.000	114.00	7.000
39	8:32:59	2.383	167.000	114.00	8.000
40	8:38:0	2.467	175.000	114.00	8.000
41	8:43:0	2.550	180.000	114.00	5.000
42	8:46:0	2.600	892.000	114.00	712.000
43	8:48:59	2.650	983.000	114.00	91.000
44	8:52:0	2.700	1010.000	114.00	27.000
45	8:55:0	2.750	1025.000	114.00	15.000
46	8:58:0	2.800	1034.000	114.00	9.000
47	9: 1:0	2.850	1040.000	114.00	6.000
48	9: 3:59	2.900	1043.000	114.00	3.000
49	9: 7:0	2.950	1048.000	114.00	5.000
50	9:10:0	3.000	1050.000	114.00	2.000
51	9:13:0	3.050	1054.000	114.00	4.000
52	9:16:0	3.100	1056.000	114.00	2.000

COMPANY : PENDLETON LAND & EXPLOR. & H&C OIL OPER.

FIELD : PHELAN

WELL : #1

JOB # : 12598

GAUGE # : 13549

DEPTH : 3274

DATE : 4/12/87

TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
53	9:19: 0	3.150	1058.000	114.00	2.000
54	9:21:59	3.200	1060.000	114.00	2.000
55	9:25: 0	3.250	1062.000	114.00	2.000
56	9:28: 0	3.300	1064.000	114.00	2.000
57	9:31: 0	3.350	1065.000	114.00	1.000
58	9:34: 0	3.400	1066.000	114.00	1.000
59	9:36:59	3.450	1067.000	114.00	1.000
60	9:40: 0	3.500	1068.000	114.00	1.000
61	9:43: 0	3.550	1069.000	114.00	1.000
62	9:46: 0	3.600	1070.000	114.00	1.000
63	9:49: 0	3.650	1071.000	114.00	1.000
64	9:51:59	3.700	1072.000	114.00	1.000
65	9:55: 0	3.750	1072.000	114.00	0.000
66	9:58: 0	3.800	1072.000	114.00	0.000
67	10: 1: 0	3.850	1073.000	114.00	1.000
68	10: 4: 0	3.900	1073.000	114.00	0.000
69	10: 6:59	3.950	1073.000	114.00	0.000
70	10:10: 0	4.000	1074.000	114.00	1.000
71	10:13: 0	4.050	1074.000	114.00	0.000
72	10:16: 0	4.100	1074.000	114.00	0.000

WESTERN TESTING CO. INC.