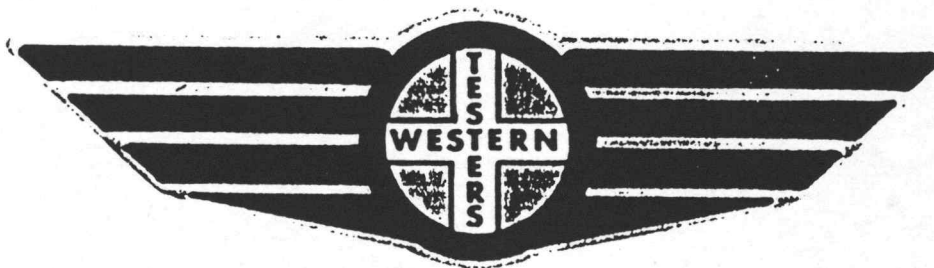


FORMATION TEST REPORT



Home Office:

P.O. Box 1599

Wichita, Kansas 67201

Phone (316) 262-5861

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE	:	4-17-88	TICKET	:	13731
CUSTOMER	:	AOP OPERATING CORP.	LEASE	:	TODD
WELL	:	#1 TEST: 1	GEOLOGIST	:	G. RICKS
ELEVATION	:	2305 GL	FORMATION	:	-
SECTION	:	20	TOWNSHIP	:	21S
RANGE	:	22W	STATE	:	KANSAS
GAUGE SN#	:	13540	CLOCK	:	12
		COUNTY :	HODGEMAN		
		RANGE :	4100		

INTERVAL FROM	:	4502	TO	:	4524	TOTAL DEPTH	:	4524
DEPTH OF SELECTIVE ZONE	:							
PACKER DEPTH	:	4497	SIZE	:	6.63			
PACKER DEPTH	:	4502	SIZE	:	6.63			
PACKER DEPTH	:		SIZE	:				
PACKER DEPTH	:		SIZE	:				

DRILLING CON.	:	H-30 RIG 7			
MUD TYPE	:	CHEMICAL	VISCOSITY	:	50
WEIGHT	:	9.5	WATER LOSS (CC)	:	7.2
CHLORIDES (PPM)	:	11000			
JARS-MAKE	:	-	SERIAL NUMBER	:	-
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	:	4474	FT	I.D. inch	:	3.80
TEST TOOL LENGTH	:	28	FT	TOOL SIZE	:	5.50
ANCHOR LENGTH	:	22	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-FAIR BLOW-OFF BOTTOM OF BUCKET IN 5 MIN
BLOW COMMENT #2 : FINAL FLOW-FAIR BLOW-OFF BOTTOM OF BUCKET ON 6 MIN
BLOW COMMENT #3 :
BLOW COMMENT #4 :

RECOVERED : 1340 FT OF: WATER

CHLORIDES: 23000 PPM

Total Barrels Fluid = 18.80
Total Fluid Prod Rate = 451.09 BFPD
Indicated Wtr Rate = 451.09 BWPD

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

SET PACKER(S) : 7:30 AM

TIME STARTED OFF BOTTOM : 10:15 AM

WELL TEMPERATURE : 134

INITIAL HYDROSTATIC PRESSURE

(A) 2336

INITIAL FLOW PERIOD MIN: 30

(B) 110

PSI TO (C) : 310

INITIAL CLOSED IN PERIOD MIN: 48

(D) 1358

FINAL FLOW PERIOD MIN: 30

(E) 402

PSI TO (F) : 571

FINAL CLOSED IN PERIOD MIN: 63

(G) 1361

FINAL HYDROSTATIC PRESSURE

(H) 2309

WESTERN TESTING CO. INC.
WICHITA-KANSAS

Pressure Transient Report

COMPANY : AOP OPERATING CORP.
RIG : HODGEMAN-KANSAS
FIELD : TODD
WELL : #1
DATE : 4-17-88
GAUGE NO : 13540

OPERATIONAL COMMENTS

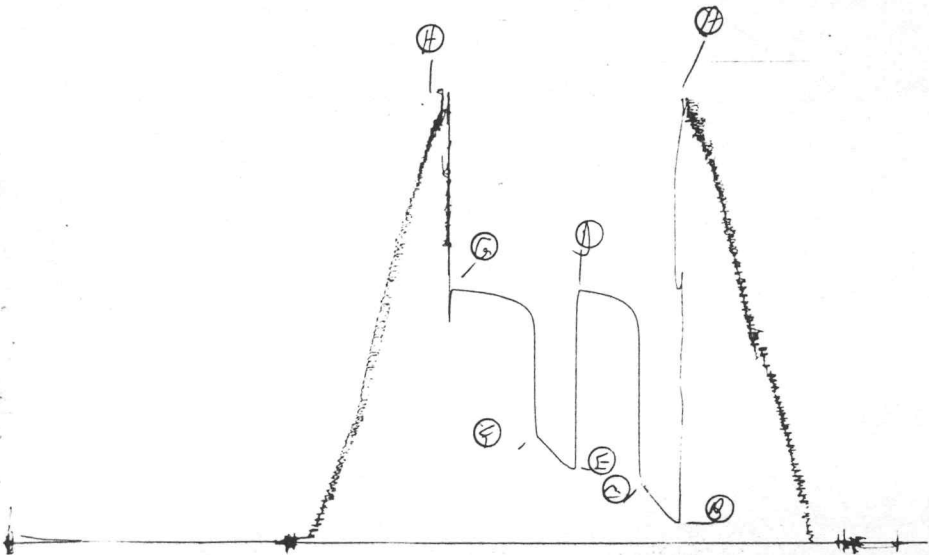
COMPANY : AOP OPERATING CORP.
WELL : #1
GAUGE # : 13540
DATE : 17/ 4/88

FIELD : TODD
JOB # : 13731
DEPTH : 4524
TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	7:30: 0	0.000	110.000	134.00	0.000
2	7:34:59	0.083	122.000	134.00	12.000
3	7:40: 0	0.167	156.000	134.00	34.000
4	7:45: 0	0.250	200.000	134.00	44.000
5	7:49:59	0.333	248.000	134.00	48.000
6	7:55: 0	0.417	288.000	134.00	40.000
7	8: 0: 0	0.500	310.000	134.00	22.000
8	8: 3: 0	0.550	1083.000	134.00	773.000
9	8: 6: 0	0.600	1217.000	134.00	134.000
10	8: 9: 0	0.650	1253.000	134.00	36.000
11	8:12: 0	0.700	1276.000	134.00	23.000
12	8:15: 0	0.750	1292.000	134.00	16.000
13	8:18: 0	0.800	1304.000	134.00	12.000
14	8:21: 0	0.850	1314.000	134.00	10.000
15	8:24: 0	0.900	1324.000	134.00	10.000
16	8:27: 0	0.950	1330.000	134.00	6.000
17	8:30: 0	1.000	1335.000	134.00	5.000
18	8:33: 0	1.050	1340.000	134.00	5.000
19	8:36: 0	1.100	1344.000	134.00	4.000
20	8:39: 0	1.150	1349.000	134.00	5.000
21	8:42: 0	1.200	1352.000	134.00	3.000
22	8:45: 0	1.250	1356.000	134.00	4.000
23	8:48: 0	1.300	1358.000	134.00	2.000
24	8:49: 0	1.317	402.000	134.00	-956.000
25	8:52:59	1.383	410.000	134.00	8.000
26	8:58: 0	1.467	435.000	134.00	25.000
27	9: 3: 0	1.550	476.000	134.00	41.000
28	9: 7:59	1.633	516.000	134.00	40.000
29	9:13: 0	1.717	552.000	134.00	36.000
30	9:18: 0	1.800	571.000	134.00	19.000
31	9:21: 0	1.850	1054.000	134.00	483.000
32	9:24: 0	1.900	1227.000	134.00	173.000
33	9:27: 0	1.950	1254.000	134.00	27.000
34	9:30: 0	2.000	1274.000	134.00	20.000
35	9:33: 0	2.050	1287.000	134.00	13.000
36	9:36: 0	2.100	1297.000	134.00	10.000
37	9:38:59	2.150	1307.000	134.00	10.000
38	9:42: 0	2.200	1315.000	134.00	8.000
39	9:45: 0	2.250	1320.000	134.00	5.000
40	9:48: 0	2.300	1327.000	134.00	7.000
41	9:51: 0	2.350	1332.000	134.00	5.000
42	9:54: 0	2.400	1337.000	134.00	5.000
43	9:56:59	2.450	1340.000	134.00	3.000
44	10: 0: 0	2.500	1344.000	134.00	4.000
45	10: 3: 0	2.550	1347.000	134.00	3.000
46	10: 6: 0	2.600	1349.000	134.00	2.000
47	10: 9: 0	2.650	1351.000	134.00	2.000
48	10:11:59	2.700	1354.000	134.00	3.000
49	10:15: 0	2.750	1357.000	134.00	3.000
50	10:18: 0	2.800	1359.000	134.00	2.000
51	10:21: 0	2.850	1361.000	134.00	2.000

KT. 13721

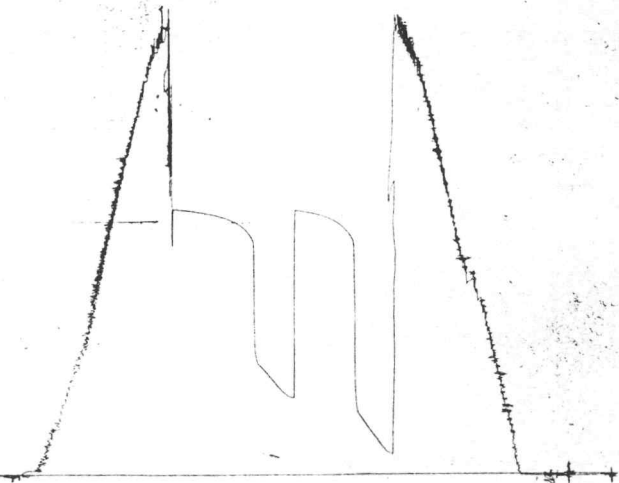
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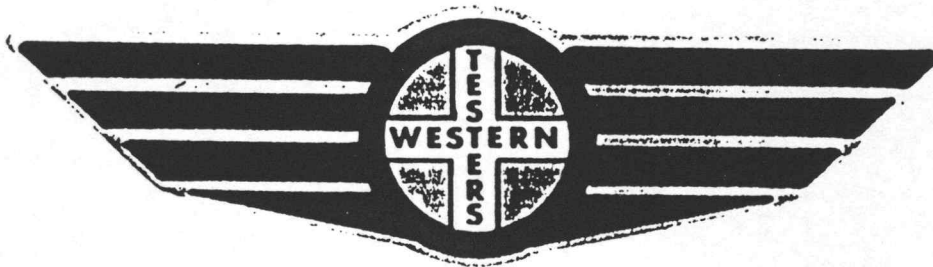
TKT 13731

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13731



FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE	:	4-18-88	TICKET	:	13732
CUSTOMER	:	AOP OPERATING CORP.	LEASE	:	TODD
WELL	:	#1 TEST: 2	GEOLOGIST	:	B. MAY
ELEVATION	:	2305 GL	FORMATION	:	MISSISSIPPI
SECTION	:	20	TOWNSHIP	:	21S
RANGE	:	22W	STATE	:	KANSAS
GAUGE SN#	:	13549	CLOCK	:	12
		COUNTY :	HODGEMAN		
		RANGE :	4100		

INTERVAL FROM	:	4439	TO	:	4500	TOTAL DEPTH	:	4554
DEPTH OF SELECTIVE ZONE	:							
PACKER DEPTH	:	4434	SIZE	:	6.63			
PACKER DEPTH	:	4439	SIZE	:	6.63			
PACKER DEPTH	:	4500	SIZE	:	6.63			
PACKER DEPTH	:	4505	SIZE	:	6.63			

DRILLING CON.	:	H-30 RIG 7			
MUD TYPE	:	CHEMCIAL	VISCOSITY	:	47
WEIGHT	:	9.4	WATER LOSS (CC)	:	9.2
CHLORIDES (PPM)	:	14000			
JARS-MAKE	:	-	SERIAL NUMBER	:	-
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	:	4411	FT	I.D. inch	:	3.80
TEST TOOL LENGTH	:	28	FT	TOOL SIZE	:	5.50
ANCHOR LENGTH	:	61	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 THROUGHOUT.
BLOW COMMENT #2 : FINAL FLOW-NO BLOW.
BLOW COMMENT #3 :
BLOW COMMENT #4 :

RECOVERED : 5 FT OF: MUD / WITH OIL SPECKS

Total Barrels Fluid = 0.07
Total Fluid Prod Rate = 1.68 BFPD
Indicated Wtr Rate = 0.17 BWPD

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

SET PACKER(S) : 4:40 AM

TIME STARTED OFF BOTTOM : 7:25 AM

WELL TEMPERATURE : 134

INITIAL HYDROSTATIC PRESSURE

(A) 2329

INITIAL FLOW PERIOD MIN: 30

(B) 70

PSI TO (C) : 70

INITIAL CLOSED IN PERIOD MIN: 51

(D) 818

FINAL FLOW PERIOD MIN: 30

(E) 71

PSI TO (F) : 71

FINAL CLOSED IN PERIOD MIN: 60

(G) 640

FINAL HYDROSTATIC PRESSURE

(H) 2305

WESTERN TESTING CO. INC.
WICHITA-KANSAS

Pressure Transient Report

COMPANY : AOP OPERATING CORP.
RIG : HODGEMAN-KANSAS
FIELD : TODD
WELL : #1
DATE : 4-18-88
GAUGE NO : 13549

OPERATIONAL COMMENTS

COMPANY : AOP OPERATING CORP.
WELL : #1
GAUGE # : 13549
DATE : 18/ 4/88

FIELD : TODD
JOB # : 13732
DEPTH : 4554
TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	4:40: 0	0.000	70.000	134.00	0.000
2	4:44:59	0.083	70.000	134.00	0.000
3	4:50: 0	0.167	70.000	134.00	0.000
4	4:55: 0	0.250	70.000	134.00	0.000
5	4:59:59	0.333	70.000	134.00	0.000
6	5: 5: 0	0.417	70.000	134.00	0.000
7	5:10: 0	0.500	70.000	134.00	0.000
8	5:13: 0	0.550	82.000	134.00	12.000
9	5:16: 0	0.600	117.000	134.00	35.000
10	5:19: 0	0.650	170.000	134.00	53.000
11	5:22: 0	0.700	229.000	134.00	59.000
12	5:25: 0	0.750	290.000	134.00	61.000
13	5:28: 0	0.800	350.000	134.00	60.000
14	5:31: 0	0.850	415.000	134.00	65.000
15	5:34: 0	0.900	472.000	134.00	57.000
16	5:37: 0	0.950	523.000	134.00	51.000
17	5:40: 0	1.000	568.000	134.00	45.000
18	5:43: 0	1.050	612.000	134.00	44.000
19	5:46: 0	1.100	648.000	134.00	36.000
20	5:49: 0	1.150	693.000	134.00	45.000
21	5:52: 0	1.200	725.000	134.00	32.000
22	5:55: 0	1.250	756.000	134.00	31.000
23	5:58: 0	1.300	785.000	134.00	29.000
24	6: 1: 0	1.350	818.000	134.00	33.000
25	6: 2: 0	1.367	71.000	134.00	-747.000
26	6: 5:59	1.433	71.000	134.00	0.000
27	6:11: 0	1.517	71.000	134.00	0.000
28	6:16: 0	1.600	71.000	134.00	0.000
29	6:20:59	1.683	71.000	134.00	0.000
30	6:26: 0	1.767	71.000	134.00	0.000
31	6:31: 0	1.850	71.000	134.00	0.000
32	6:34: 0	1.900	77.000	134.00	6.000
33	6:37: 0	1.950	83.000	134.00	6.000
34	6:40: 0	2.000	112.000	134.00	29.000
35	6:43: 0	2.050	145.000	134.00	33.000
36	6:46: 0	2.100	181.000	134.00	36.000
37	6:49: 0	2.150	224.000	134.00	43.000
38	6:52: 0	2.200	264.000	134.00	40.000
39	6:55: 0	2.250	302.000	134.00	38.000
40	6:58: 0	2.300	340.000	134.00	38.000
41	7: 1: 0	2.350	375.000	134.00	35.000
42	7: 4: 0	2.400	407.000	134.00	32.000
43	7: 7: 0	2.450	440.000	134.00	33.000
44	7:10: 0	2.500	467.000	134.00	27.000
45	7:13: 0	2.550	500.000	134.00	33.000
46	7:16: 0	2.600	522.000	134.00	22.000
47	7:19: 0	2.650	542.000	134.00	20.000
48	7:22: 0	2.700	572.000	134.00	30.000
49	7:25: 0	2.750	594.000	134.00	22.000
50	7:28: 0	2.800	620.000	134.00	26.000
51	7:31: 0	2.850	640.000	134.00	20.000

KT 13722

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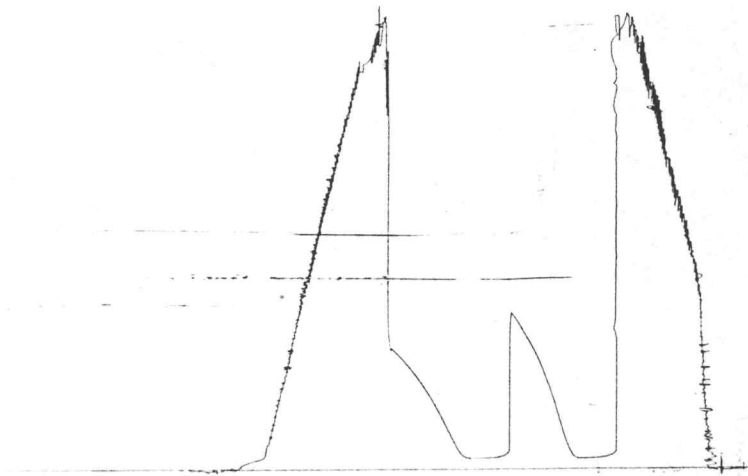
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TK4 B732

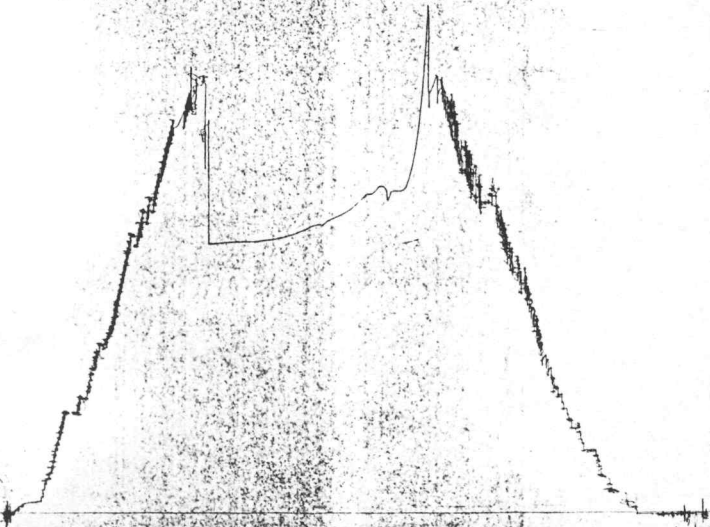
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05502-13533

TK4 13722

Below Straddle



DT# 2
ACOM