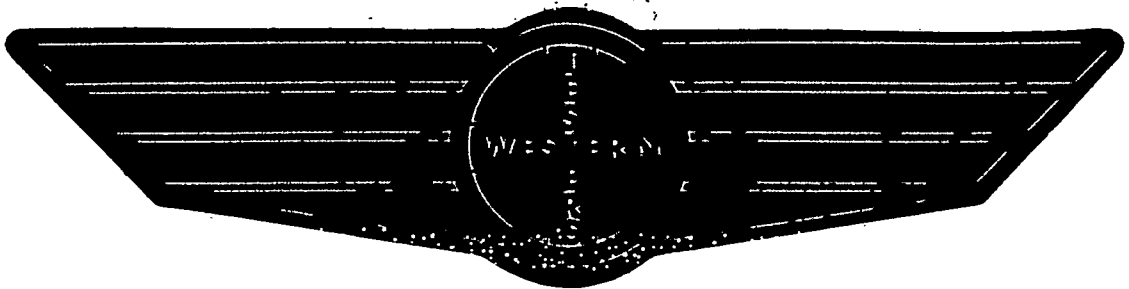


FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY LANDMARK OIL EXPLORATION, INC. LEASE & WELL NO. #1-14 HAGANS SEC. 14 TWP. 17S RGE. 27W TEST NO. 1 DATE 12/22/86

WESTERN TESTERS INC
SUBSURFACE PRESSURE SURVEY

DATE : 12-22-86 TICKET : 18161
CUSTOMER : LANDMARK OIL EXPLORATION INC. LEASE : HAGANS
WELL : #1-14 TEST: 1 GEOLOGIST : M. DIXON
ELEVATION : 2640 KB FORMATION : LANSING J-K
SECTION : 14 TOWNSHIP : 17S
RANGE : 27W COUNTY : LANE STATE : KANSAS
GAUGE SN# : 6233 RANGE : 4000 CLOCK : 12

INTERVAL FROM : 4169 TO : 4220 TOTAL DEPTH : 4220
DEPTH OF SELECTIVE ZONE :
PACKER DEPTH : 4164 SIZE : 6.75
PACKER DEPTH : 4169 SIZE : 6.75
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : ABERCROMBIE RIG #5
MUD TYPE : DAPAC VISCOSITY : 44
WEIGHT : 9.3 WATER LOSS (CC) : 8.4
CHLORIDES (PPM) : 10000
JARS-MAKE : NO SERIAL NUMBER :
DID WELL FLOW ? : NO REVERSED OUT ? : NO

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 476 FT I.D. inch : 3.20
DRILL PIPE LENGTH : 3673 FT I.D. inch : 3.80
TEST TOOL LENGTH : 20 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 51 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 OF BUCKET IN
BLOW COMMENT #2 : 15 MINUTES.
BLOW COMMENT #3 : FINAL FLOW-STRONG BLOW-OFF BOTTOM OF BUCKET IN
BLOW COMMENT #4 : 25 MINUTES.

WESTERN TESTERS INC
WITICHA - KANSAS

Pressure Transient Report

COMPANY : LANDMARK OIL EXPLORATION INC.
RIG : LANE-KANSAS
FIELD : HAGANS
WELL : #1-14
DATE : 12-22-86
GAUGE NO : 6233

OPERATIONAL COMMENTS

RECOVERED 180 FEET OF GAS ABOVE FLUID.
CHLORIDES: 62000 PPM

COMPANY : LANDMARK OIL EXPLORATION INC.
 WELLS : #1-14
 GAUGE # : 6233
 DATE : 22/12/86

FIELD : HAGANS
 JOB # : 18161
 DEPTH : 4220
 TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	11:25: 0	0.000	50.000	120.00	0.000
2	11:29:59	0.083	50.000	120.00	0.000
3	11:35: 0	0.167	55.000	120.00	5.000
4	11:40: 0	0.250	68.000	120.00	13.000
5	11:44:59	0.333	81.000	120.00	13.000
6	11:50: 0	0.417	94.000	120.00	13.000
7	11:55: 0	0.500	107.000	120.00	13.000
8	11:58: 0	0.550	487.000	120.00	380.000
9	12: 1: 0	0.600	526.000	120.00	39.000
10	12: 4: 0	0.650	579.000	120.00	53.000
11	12: 7: 0	0.700	627.000	120.00	48.000
12	12:10: 0	0.750	655.000	120.00	28.000
13	12:13: 0	0.800	679.000	120.00	24.000
14	12:16: 0	0.850	701.000	120.00	22.000
15	12:19: 0	0.900	715.000	120.00	14.000
16	12:22: 0	0.950	731.000	120.00	16.000
17	12:25: 0	1.000	740.000	120.00	9.000
18	12:28: 0	1.050	748.000	120.00	8.000
19	12:31: 0	1.100	753.000	120.00	5.000
20	12:34: 0	1.150	762.000	120.00	9.000
21	12:37: 0	1.200	770.000	120.00	8.000
22	12:40: 0	1.250	774.000	120.00	4.000
23	12:41: 0	1.267	144.000	120.00	-630.000
24	12:44:59	1.333	144.000	120.00	0.000
25	12:50: 0	1.417	148.000	120.00	4.000
26	12:55: 0	1.500	156.000	120.00	8.000
27	12:59:59	1.583	164.000	120.00	8.000
28	13: 5: 0	1.667	174.000	120.00	10.000
29	13:10: 0	1.750	183.000	120.00	9.000
30	13:14:59	1.833	193.000	120.00	10.000
31	13:20: 0	1.917	203.000	120.00	10.000
32	13:25: 0	2.000	209.000	120.00	6.000
33	13:28: 0	2.050	485.000	120.00	276.000
34	13:31: 0	2.100	523.000	120.00	38.000
35	13:34: 0	2.150	587.000	120.00	64.000
36	13:37: 0	2.200	649.000	120.00	62.000
37	13:40: 0	2.250	681.000	120.00	32.000
38	13:43: 0	2.300	707.000	120.00	26.000
39	13:46: 0	2.350	721.000	120.00	14.000
40	13:49: 0	2.400	732.000	120.00	11.000
41	13:52: 0	2.450	743.000	120.00	11.000
42	13:55: 0	2.500	749.000	120.00	6.000
43	13:58: 0	2.550	754.000	120.00	5.000
44	14: 1: 0	2.600	759.000	120.00	5.000
45	14: 4: 0	2.650	764.000	120.00	5.000
46	14: 7: 0	2.700	768.000	120.00	4.000
47	14:10: 0	2.750	770.000	120.00	2.000
48	14:13: 0	2.800	773.000	120.00	3.000
49	14:16: 0	2.850	776.000	120.00	3.000
50	14:19: 0	2.900	779.000	120.00	3.000
51	14:22: 0	2.950	782.000	120.00	3.000
52	14:25: 0	3.000	784.000	120.00	2.000

COMPANY : LANDMARK OIL EXPLORATION INC.
WELL : #1-14
GAUGE # : 6233
DATE : 22/12/86

FIELD : HAGANS
JOB # : 18161
DEPTH : 4220
TEST :

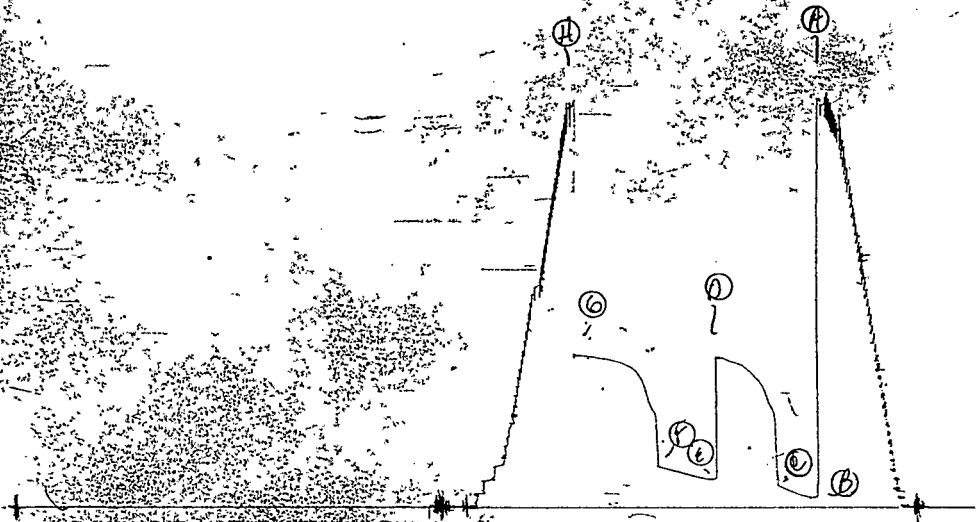
DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P P _i -P _(i-1)
53	14:28: 0	3.050	786.000	120.00	2.000

WESTERN TESTERS INC

6233

St # 18161

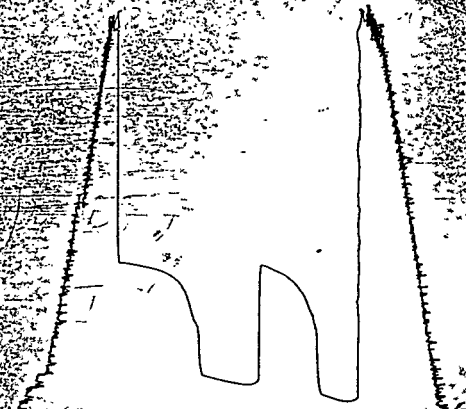
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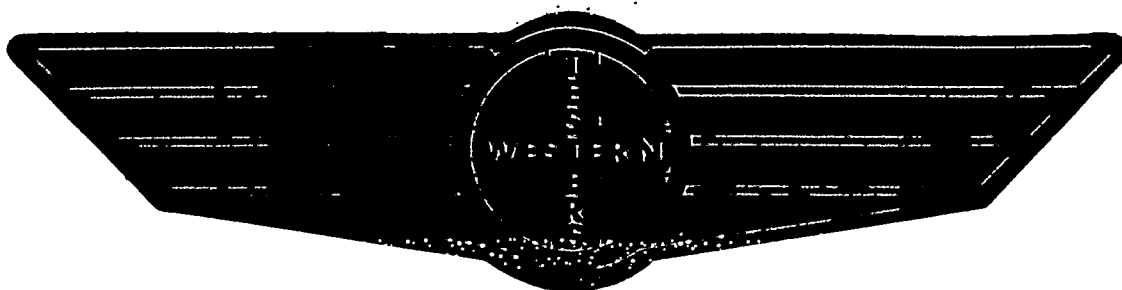
73400

Box # 18161

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FORMATION TEST REPORT



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Phone (316) 262-5861

COMPANY LANDMARK OIL EXPLORATION, INC LEASE & WELL NO. #1-14 HAGGANS SEC. 14 TWP. 17S RGE. 27W TEST NO. 2 DATE 12/23/86

WESTERN TESTERS INC
SUBSURFACE PRESSURE SURVEY

DATE : 12/23/86 TICKET : 18162
CUSTOMER : LANDMARK OIL EXPLORATION INC LEASE : HAGANS
WELL : 1-14 TEST: 2 GEOLOGIST : DIXON
ELEVATION : 2640 FORMATION : LANS. L.-PAWNEE
SECTION : 14 TOWNSHIP : 17S
RANGE : 27W COUNTY : LANE STATE : KANSAS
GAUGE SN# : 6233 RANGE : 4000 CLOCK : 12

INTERVAL FROM : 4243 TO : 4380 TOTAL DEPTH : 4380
DEPTH OF SELECTIVE ZONE :
PACKER DEPTH : 4238 SIZE : 6.75
PACKER DEPTH : 4243 SIZE : 6.75
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : ABERCROMBIE RIG 5
MUD TYPE : CHEMICAL VISCOSITY : 46
WEIGHT : 9.3 WATER LOSS (CC) : 8.8
CHLORIDES (PPM) : 10000
JARS-MAKE : NO SERIAL NUMBER :
DID WELL FLOW ? : NO REVERSED OUT ? : NO

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 444 FT I.D. inch : 3.20
DRILL PIPE LENGTH : 3779 FT I.D. inch : 3.80
TEST TOOL LENGTH : 20 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 137 FT ANCHOR SIZE : 5.50
SURFACE CHOKÉ SIZE : .75 IN BOTTOM CHOKÉ SIZE : .75
MAIN HOLE SIZE : 7.875 IN TOOL JOINT SIZE : 4.5XH

BLOW COMMENT #1 : INITIAL FLOW PERIOD FAIR BLOW - 4 INCHES IN
BLOW COMMENT #2 : WATER.
BLOW COMMENT #3 : FINAL FLOW PERIOD FAIR BLOW - 3 INCHES IN WATER.
BLOW COMMENT #4 :

RECOVERED : 1 FT OF: OIL
RECOVERED : 60 FT OF: MUD
RECOVERED : 279 FT OF: MUDDY WATER

Total Barrels Fluid = 3.38
Total Fluid Prod Rate = 54.11 BFPD
Indicated Oil Rate = 0.16 BOPD
Indicated Wtr Rate = 52.36 BWPD

REMARK 1 : CHLORIDES 58000 PPM
REMARK 2 :
REMARK 3 :
REMARK 4 :

SET PACKER(S) : 8:20 AM

TIME STARTED OFF BOTTOM : 11:35 AM

WELL TEMPERATURE : 121

INITIAL HYDROSTATIC PRESSURE

(A) 2147

INITIAL FLOW PERIOD MIN: 30

(B) 45 PSI TO (C) : 73

INITIAL CLOSED IN PERIOD MIN: 45

(D) 859

FINAL FLOW PERIOD MIN: 60

(E) 102 PSI TO (F) : 183

FINAL CLOSED IN PERIOD MIN: 66

(G) 837

FINAL HYDROSTATIC PRESSURE

(H) 2147

COMPANY : LANDMARK OIL EXPLORATION INC
WELL : 1-14
GAUGE # : 6233
DATE : 23/12/86

FIELD : HAGANS
JOB # : 18162
DEPTH : 4380
TEST : CHLORIDES 58000 PPM

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	8:20: 0	0.000	45.000	121.00	0.000
2	8:24:59	0.083	46.000	121.00	1.000
3	8:30: 0	0.167	47.000	121.00	1.000
4	8:35: 0	0.250	51.000	121.00	4.000
5	8:39:59	0.333	59.000	121.00	8.000
6	8:45: 0	0.417	68.000	121.00	9.000
7	8:50: 0	0.500	73.000	121.00	5.000
8	8:53: 0	0.550	589.000	121.00	516.000
9	8:56: 0	0.600	827.000	121.00	238.000
10	8:59: 0	0.650	839.000	121.00	12.000
11	9: 2: 0	0.700	844.000	121.00	5.000
12	9: 5: 0	0.750	846.000	121.00	2.000
13	9: 8: 0	0.800	848.000	121.00	2.000
14	9:11: 0	0.850	850.000	121.00	2.000
15	9:14: 0	0.900	852.000	121.00	2.000
16	9:17: 0	0.950	853.000	121.00	1.000
17	9:20: 0	1.000	854.000	121.00	1.000
18	9:23: 0	1.050	855.000	121.00	1.000
19	9:26: 0	1.100	856.000	121.00	1.000
20	9:29: 0	1.150	857.000	121.00	1.000
21	9:32: 0	1.200	858.000	121.00	1.000
22	9:35: 0	1.250	859.000	121.00	1.000
23	9:36: 0	1.267	102.000	121.00	-757.000
24	9:39:59	1.333	102.000	121.00	0.000
25	9:45: 0	1.417	104.000	121.00	2.000
26	9:50: 0	1.500	108.000	121.00	4.000
27	9:54:59	1.583	116.000	121.00	8.000
28	10: 0: 0	1.667	126.000	121.00	10.000
29	10: 5: 0	1.750	133.000	121.00	7.000
30	10: 9:59	1.833	142.000	121.00	9.000
31	10:15: 0	1.917	151.000	121.00	9.000
32	10:20: 0	2.000	159.000	121.00	8.000
33	10:24:59	2.083	166.000	121.00	7.000
34	10:30: 0	2.167	173.000	121.00	7.000
35	10:35: 0	2.250	183.000	121.00	10.000
36	10:38: 0	2.300	660.000	121.00	477.000
37	10:41: 0	2.350	798.000	121.00	138.000
38	10:44: 0	2.400	809.000	121.00	11.000
39	10:47: 0	2.450	814.000	121.00	5.000
40	10:50: 0	2.500	816.000	121.00	2.000
41	10:53: 0	2.550	818.000	121.00	2.000
42	10:56: 0	2.600	820.000	121.00	2.000
43	10:59: 0	2.650	822.000	121.00	2.000
44	11: 2: 0	2.700	824.000	121.00	2.000
45	11: 5: 0	2.750	825.000	121.00	1.000
46	11: 8: 0	2.800	826.000	121.00	1.000
47	11:11: 0	2.850	827.000	121.00	1.000
48	11:14: 0	2.900	828.000	121.00	1.000
49	11:17: 0	2.950	829.000	121.00	1.000
50	11:20: 0	3.000	830.000	121.00	1.000
51	11:23: 0	3.050	831.000	121.00	1.000
52	11:26: 0	3.100	832.000	121.00	1.000

COMPANY : LANDMARK OIL EXPLORATION INC
WELL : 1-14
GAUGE # : 6233
DATE : 23/12/86

FIELD : HAGANS
JOB # : 18162
DEPTH : 4380
TEST : CHLORIDES 58000 PPM

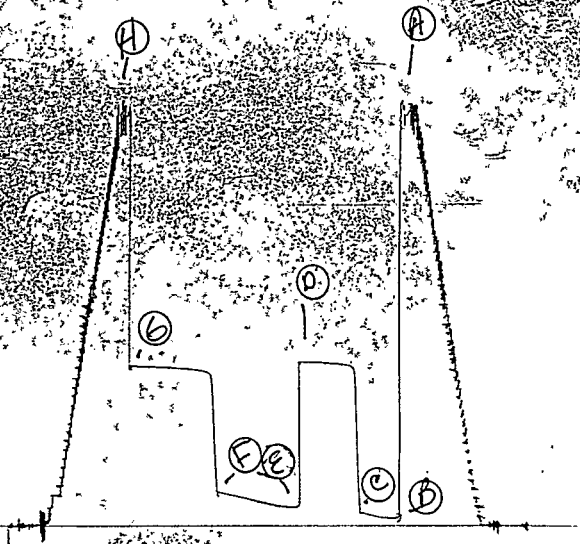
DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P P1-P(1-1)
53	11:29: 0	3.150	833.000	121.00	1.000
54	11:32: 0	3.200	834.000	121.00	1.000
55	11:35: 0	3.250	835.000	121.00	1.000
56	11:38: 0	3.300	836.000	121.00	1.000
57	11:41: 0	3.350	837.000	121.00	1.000

WESTERN TESTERS INC

6233

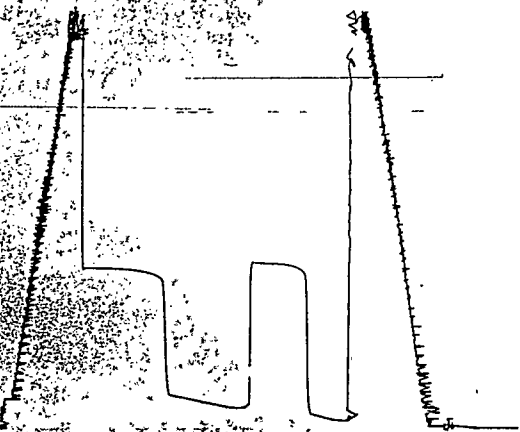
Site # 18162

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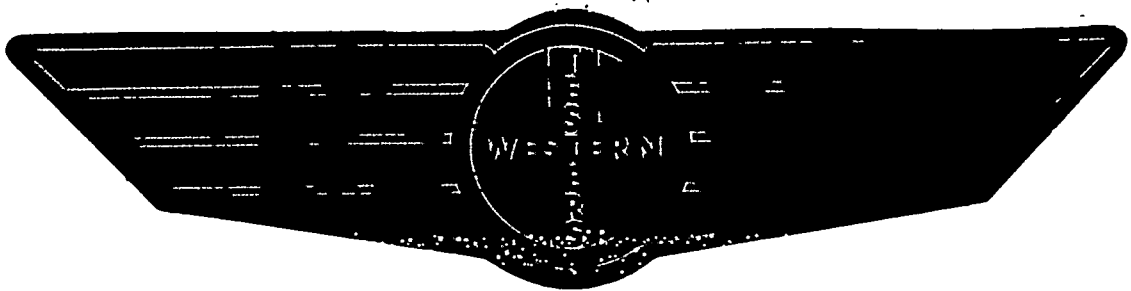


TK # 18162

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FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY LANDMARK OIL EXPLORATION, INC LEASE & WELL NO. #1-14 HAGANS SEC. 14 TWP. 17S RGE. 27W TEST NO. 3 DATE 12/27/86

WESTERN TESTERS INC
SUBSURFACE PRESSURE SURVEY

DATE : 12-27-86 TICKET : 18163
CUSTOMER : LANDMARK OIL EXPLORATION INC. LEASE : HAGANS
WELL : #1-14 TEST: 3 GEOLOGIST : M. DIXON
ELEVATION : 2640 KB FORMATION : FT. SCOTT-CHER.
SECTION : 14 TOWNSHIP : 17S
RANGE : 27W COUNTY : LANE STATE : KANSAS
GAUGE SN# : 6233 RANGE : 4000 CLOCK : 12

INTERVAL FROM : 4458 TO : 4581 TOTAL DEPTH : 4581
DEPTH OF SELECTIVE ZONE :
PACKER DEPTH : 4453 SIZE : 6.75
PACKER DEPTH : 4458 SIZE : 6.75
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : ABERCROMBIE RIG #5
MUD TYPE : DAPAC VISCOSITY : 65
WEIGHT : 9.4+ WATER LOSS (CC) : 8.0
CHLORIDES (PPM) : 9000
JARS-MAKE : NO SERIAL NUMBER :
DID WELL FLOW ? : NO REVERSED OUT ? : NO

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 444 FT I.D. inch : 3.20
DRILL PIPE LENGTH : 3994 FT I.D. inch : 3.80
TEST TOOL LENGTH : 20 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 123 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-1/2" IN WATER.
BLOW COMMENT #2 : FINAL FLOW-NO BLOW.
BLOW COMMENT #3 :
BLOW COMMENT #4 :

RECOVERED : 30 FT OF: MUD

Total Barrels Fluid = 0.30
Total Fluid Prod Rate = 7.16 BFPD
Indicated Wtr Rate = 6.45 BWPD

REMARK 1 :
REMARK 2 : CHLORIDES: 10000 PPM
REMARK 3 :
REMARK 4 :

SET PACKER(S) :	2:40 AM	TIME STARTED OFF BOTTOM :	4:40 AM
WELL TEMPERATURE :	122		
INITIAL HYDROSTATIC PRESSURE		(A)	2390
INITIAL FLOW PERIOD MIN:	30	(B)	42 PSI TO (C) : 42
INITIAL CLOSED IN PERIOD MIN:	33	(D)	667
FINAL FLOW PERIOD MIN:	30	(E)	49 PSI TO (F) : 49
FINAL CLOSED IN PERIOD MIN:	33	(G)	481
FINAL HYDROSTATIC PRESSURE		(H)	2326

COMPANY : LANDMARK OIL EXPLORATION INC
 WELL : 1-14
 GAUGE # : 6233
 DATE : 27/12/86

FIELD : HAGANS
 JOB # : 18163
 DEPTH : 4581
 TEST : CHLORIDES 10000 PPM

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	2:40: 0	0.000	42.000	122.00	0.000
2	2:44:59	0.083	42.000	122.00	0.000
3	2:50: 0	0.167	42.000	122.00	0.000
4	2:55: 0	0.250	42.000	122.00	0.000
5	2:59:59	0.333	42.000	122.00	0.000
6	3: 5: 0	0.417	42.000	122.00	0.000
7	3:10: 0	0.500	42.000	122.00	0.000
8	3:13: 0	0.550	42.000	122.00	0.000
9	3:16: 0	0.600	46.000	122.00	4.000
10	3:19: 0	0.650	88.000	122.00	42.000
11	3:22: 0	0.700	168.000	122.00	80.000
12	3:25: 0	0.750	260.000	122.00	92.000
13	3:28: 0	0.800	347.000	122.00	87.000
14	3:31: 0	0.850	428.000	122.00	81.000
15	3:34: 0	0.900	498.000	122.00	70.000
16	3:37: 0	0.950	560.000	122.00	62.000
17	3:40: 0	1.000	620.000	122.00	60.000
18	3:43: 0	1.050	667.000	122.00	47.000
19	3:44: 0	1.067	49.000	122.00	-618.000
20	3:47:59	1.133	49.000	122.00	0.000
21	3:53: 0	1.217	49.000	122.00	0.000
22	3:58: 0	1.300	49.000	122.00	0.000
23	4: 2:59	1.383	49.000	122.00	0.000
24	4: 8: 0	1.467	49.000	122.00	0.000
25	4:13: 0	1.550	49.000	122.00	0.000
26	4:16: 0	1.600	52.000	122.00	3.000
27	4:19: 0	1.650	67.000	122.00	15.000
28	4:22: 0	1.700	100.000	122.00	33.000
29	4:25: 0	1.750	143.000	122.00	43.000
30	4:28: 0	1.800	190.000	122.00	47.000
31	4:31: 0	1.850	247.000	122.00	57.000
32	4:34: 0	1.900	303.000	122.00	56.000
33	4:37: 0	1.950	352.000	122.00	49.000
34	4:40: 0	2.000	409.000	122.00	57.000
35	4:43: 0	2.050	451.000	122.00	42.000
36	4:46: 0	2.100	481.000	122.00	30.000

WESTERN TESTERS INC

13400

Kit # 18163

