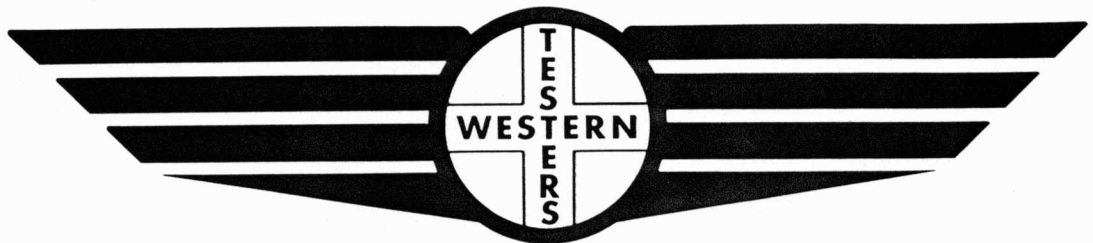


FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY MCCONATHY PRODUCTION CO., INC. LEASE & WELL NO. #1-28 LEE SEC. 28 TWP. 25S RGE. 36W TEST NO. 1 DATE 4/5/86

SUBSURFACE PRESSURE SURVEY

DATE : 4-5-86 TICKET : 8972
 CUSTOMER : MCCONATHY PRODUCTION CO. INC. LEASE : LEE
 WELL : #1-28 TEST: 1 GEOLOGIST : OSTERBUR
 ELEVATION : FORMATION :
 SECTION : 28 TOWNSHIP : 25S
 RANGE : 36W COUNTY : KEARNY STATE : KANSAS
 GAUGE SN# : 3086 RANGE : 4500 CLOCK : 12

INTERVAL FROM : 4958 TO : 4978 TOTAL DEPTH : 4978
 DEPTH OF SELECTIVE ZONE :
 PACKER DEPTH : 4953 SIZE : 6.63
 PACKER DEPTH : 4958 SIZE : 6.63
 PACKER DEPTH : SIZE :
 PACKER DEPTH : SIZE :

DRILLING CON. : CHEYENNE RIG #1
 MUD TYPE : CHEMICAL VISCOSITY : 64
 WEIGHT : 9.0 WATER LOSS (CC) : 6.8
 CHLORIDES (PPM) : 4500
 JARS-MAKE : WTC SERIAL NUMBER : 408
 DID WELL FLOW ? : NO REVERSED OUT ? : NO

DRILL COLLAR LENGTH : 540 FT I.D. inch : 2.25
 WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00
 DRILL PIPE LENGTH : 4387 FT I.D. inch : 3.80
 TEST TOOL LENGTH : 31 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 FH

BLOW COMMENT #1 : WEAK BLOW THROUGHOUT THE INITIAL FLOW.
 BLOW COMMENT #2 : WEAK BLOW DIED IN 52 MINUTES ON
 BLOW COMMENT #3 : THE FINAL FLOW.
 BLOW COMMENT #4 :

RECOVERED : 10 FT OF: CLEAN OIL 0.05 Barrels
 RECOVERED : 0 FT OF: 26 GRAVITY CORRECTED @ 60 0.00 Barrels
 RECOVERED : 120 FT OF: OIL CUT MUD 0.59 Barrels
 RECOVERED : 0 FT OF: 25% OIL 0.00 Barrels
 RECOVERED : 60 FT OF: OILY MUDDY WATER 0.30 Barrels
 RECOVERED : 0 FT OF: 0.00 Barrels
 RECOVERED : 0 FT OF: 0.00 Barrels
 RECOVERED : 0 FT OF: 0.00 Barrels
 RECOVERED : 0 FT OF: 0.00 Barrels
 Total Barrels = 0.9 Total Production = 14.9 Bpd

REMARK 1 : CHLORIDES 35000 PPM
 REMARK 2 :
 REMARK 3 :
 REMARK 4 :

SET PACKER(S) : 6:20 PM TIME STARTED OFF BOTTOM : 10:20 PM
 WELL TEMPERATURE : 127
 INITIAL HYDROSTATIC PRESSURE (A) 2465
 INITIAL FLOW PERIOD MIN: 30 (B) 14 PSI TO (C) : 20
 INITIAL CLOSED IN PERIOD MIN: 60 (D) 945
 FINAL FLOW PERIOD MIN: 60 (E) 97 PSI TO (F) : 102
 FINAL CLOSED IN PERIOD MIN: 93 (G) 953
 FINAL HYDROSTATIC PRESSURE (H) 2429

FLUID SAMPLE REPORT

Date : 4-5-86

Ticket No. : 8972

Company : MCCONATHY PRODUCTION CO.INC.

Well Name & No. : LEE #1-28

DST No. 1

County : KEARNY

State : KANSAS

Sampler No. :

Test Interval : 4958-4978

Pressure in Sampler PSIG BHT 127 Deg F

Total Volume of Sampler : 3150 cc

Total Volume of Sample : 2650 cc

Oil: SCUM OF OIL

cc

Water: 650 cc

Mud: cc

Gas: cu ft

Other: cc

RESITIVITY

Water .2 @ 64 Deg F Chloride Content 35000 ppm

Mud Pit Sample @ Deg F Chloride Content ppm

Gas/Oil Ratio Gravity API @ Deg F

Where was sample drained PRATT SHOP

Remarks:

Pressure Transient Report

DATA FILE.....

COMPANY.....MCCONATHY PRODUCTION CO.INC.

DATE OF TEST.....4-5-86

FIELD NAME.....LEE

WELL NAME.....#1-28

LOCATION.....KEARNY-KANSAS

JOB NUMBER.....8972

GAUGE NUMBER.....3086

GAUGE DEPTH.....4978

COMMENTS
CHLORIDES 35000 PPM

START UP TIME	(mo/da/yr)	(hr:min:sec)
	4./5/86.	6.: 20.: 0.

COMPANY : MCCONATHY PRODUCTION CO. INC. FIELD : LEE
 WELL : #1-28 JOB # : 8972
 GAUGE # : 3086 DEPTH : 4978
 MON/DAY : 4/ 5

PAGE 1

REC#	REAL TIME HR:MIN:SEC	ELAPSE TIME MINS HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P (Po-Pi)	DP/DT Psi/hr
1	6:20: 0	0 0.000	14.00	127.0	0.00	0.00
2	6:25: 0	5 0.083	17.00	127.0	3.00	35.93
3	6:30: 0	10 0.167	19.00	127.0	5.00	24.02
4	6:35: 0	15 0.250	20.00	127.0	6.00	12.01
5	6:40: 0	20 0.333	20.00	127.0	6.00	0.00
6	6:45: 0	25 0.417	20.00	127.0	6.00	0.00
7	6:50: 0	30 0.500	20.00	127.0	6.00	0.00
8	6:53: 0	33 0.550	120.00	127.0	106.00	1998.05
9	6:56: 0	36 0.600	351.00	127.0	337.00	4615.49
10	6:59: 0	39 0.650	587.00	127.0	573.00	4715.40
11	7: 2: 0	42 0.700	692.00	127.0	678.00	2097.95
12	7: 5: 0	45 0.750	748.00	127.0	734.00	1124.39
13	7: 8: 0	48 0.800	787.00	127.0	773.00	779.24
14	7:11: 0	51 0.850	815.00	127.0	801.00	559.45
15	7:14: 0	54 0.900	838.00	127.0	824.00	459.55
16	7:17: 0	57 0.950	856.00	127.0	842.00	359.65
17	7:20: 0	60 1.000	873.00	127.0	859.00	341.33
18	7:23: 0	63 1.050	885.00	127.0	871.00	239.77
19	7:26: 0	66 1.100	895.00	127.0	881.00	199.80
20	7:29: 0	69 1.150	904.00	127.0	890.00	179.82
21	7:32: 0	72 1.200	911.00	127.0	897.00	139.86
22	7:35: 0	75 1.250	920.00	127.0	906.00	180.71
23	7:38: 0	78 1.300	925.00	127.0	911.00	99.90
24	7:41: 0	81 1.350	931.00	127.0	917.00	119.88
25	7:44: 0	84 1.400	938.00	127.0	924.00	139.86
26	7:47: 0	87 1.450	941.00	127.0	927.00	59.94
27	7:50: 0	90 1.500	945.00	127.0	931.00	80.31
28	7:51: 0	91 1.517	97.00	127.0	83.00	-50339.25
29	7:55: 0	95 1.583	97.00	127.0	83.00	0.00
30	8: 0: 0	100 1.667	97.00	127.0	83.00	0.00
31	8: 5: 0	105 1.750	97.00	127.0	83.00	0.00
32	8:10: 0	110 1.833	97.00	127.0	83.00	0.00
33	8:15: 0	115 1.917	97.00	127.0	83.00	0.00
34	8:20: 0	120 2.000	97.00	127.0	83.00	0.00
35	8:25: 0	125 2.083	97.00	127.0	83.00	0.00
36	8:30: 0	130 2.167	97.00	127.0	83.00	0.00
37	8:35: 0	135 2.250	97.00	127.0	83.00	0.00
38	8:40: 0	140 2.333	98.00	127.0	84.00	11.98
39	8:45: 0	145 2.417	100.00	127.0	86.00	24.02
40	8:50: 0	150 2.500	102.00	127.0	88.00	24.02
41	8:53: 0	153 2.550	172.00	127.0	158.00	1398.63
42	8:56: 0	156 2.600	351.00	127.0	337.00	3576.51
43	8:59: 0	159 2.650	542.00	127.0	528.00	3816.27
44	9: 2: 0	162 2.700	649.00	127.0	635.00	2137.91
45	9: 5: 0	165 2.750	712.00	127.0	698.00	1264.94
46	9: 8: 0	168 2.800	753.00	127.0	739.00	819.20
47	9:11: 0	171 2.850	786.00	127.0	772.00	659.36
48	9:14: 0	174 2.900	808.00	127.0	794.00	439.57
49	9:17: 0	177 2.950	825.00	127.0	811.00	339.67

COMPANY : MCCONATHY PRODUCTION CO. INC. FIELD : LEE
WELL : #1-28 JOB # : 8972
GAUGE # : 3086 DEPTH : 4978
MON/DAY : 4/ 5

PAGE 2

REC#	REAL TIME HR:MIN:SEC	ELAPSE TIME MINS	ELAPSE TIME HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P (Po-Pi)	DP/DT Psi/hr
50	9:20: 0	180	3.000	841.00	127.0	827.00	321.25
51	9:23: 0	183	3.050	857.00	127.0	843.00	319.69
52	9:26: 0	186	3.100	869.00	127.0	855.00	239.77
53	9:29: 0	189	3.150	877.00	127.0	863.00	159.84
54	9:32: 0	192	3.200	885.00	127.0	871.00	159.84
55	9:35: 0	195	3.250	893.00	127.0	879.00	160.63
56	9:38: 0	198	3.300	897.00	127.0	883.00	79.92
57	9:41: 0	201	3.350	907.00	127.0	893.00	199.80
58	9:44: 0	204	3.400	914.00	127.0	900.00	139.86
59	9:47: 0	207	3.450	918.00	127.0	904.00	79.92
60	9:50: 0	210	3.500	924.00	127.0	910.00	120.47
61	9:53: 0	213	3.550	929.00	127.0	915.00	99.90
62	9:56: 0	216	3.600	934.00	127.0	920.00	99.90
63	9:59: 0	219	3.650	937.00	127.0	923.00	59.94
64	10: 2: 0	222	3.700	940.00	127.0	926.00	59.94
65	10: 5: 0	225	3.750	942.00	127.0	928.00	40.16
66	10: 8: 0	228	3.800	944.00	127.0	930.00	39.96
67	10:11: 0	231	3.850	946.00	127.0	932.00	39.96
68	10:14: 0	234	3.900	948.00	127.0	934.00	39.96
69	10:17: 0	237	3.950	950.00	127.0	936.00	39.96
70	10:20: 0	240	4.000	952.00	127.0	938.00	40.16
71	10:23: 0	243	4.050	953.00	127.0	939.00	19.98

WELL TEST ANALYSIS REPORT HORNER METHOD

COMPANY : MCCONATHY PRODUCTION CO INC
DATE : 4/5/86
FIELD : LEE
WELL : 1-28
AREA : KEARNY-KS
JOB NUMBER : 8972
GAUGE NUMBER : 3086
GAUGE DEPTH : 4978
ZONE TESTED : 4958-4978

=====I=N=P=U=T=====D=A=T=A=====S=U=M=M=A=R=Y=====

NETPAY	H	6.0	Feet
POROSITY	POR	0.08	Frac
VISCOSITY	U	2.4000	Cp
FORMATION VOLUME FACTOR	B	0.62	Rb/stb
TOTAL COMPRESSIBILITY	Ct	25.0000-06	Psi^-1
WELLBORE RADIUS	Rw	0.520	Feet
DRAINAGE RADIUS	Re	1500.0	Feet
RESERVOIR TEMPERATURE	T	127.0	Deg F
GRAVITY OF FLUID	G	26.0	
INITIAL PRESSURE	Pi	102.00E+00	Psig
PRESSURE AT SHUT-IN	Pwf	140.00E-01	Psig
FINAL BUILDUP PRESSURE	Ps	953.00E+00	Psig
FLOW RATE at SHUT-IN	Q	14.9	Bbl/day
TOTAL FLOW TIME	T	1.5	Hours

=====R=E=G=R=E=S=S=I=O=N=====R=E=S=U=L=T=S=====

LEAST SQUARE RESULTS OVER THE INTERVAL :
FROM .393 TO .534

SLOPE OF THE LINE	464.55E+00	psi/cycle
FALSE PRESSURE, PSTAR	923.90E+00	psi
PRESSURE AT 1 HOUR	464.56E+00	psi

=====A=N=A=L=Y=S=I=S=====R=E=S=U=L=T=S=====

TRANSMISSIBILITY	Kh/u	3.23	md-ft/cp
FLOW CAPACITY	Kh	7.76	md-ft
PERMEABILITY to PHASE	K	1.29	md
DAMAGE RATIO	Dr	0.6	
RADIUS OF INVESTIGATION	Rinv	20.6	ft
SKIN FACTOR	S	-1.8	
AVERAGE PRESSURE	Pbar	923.86E+00	psig
DIMENSIONLESS TIME	Tda	0.000	
MATTHEWS-BRONS-HAZEBROEK	PDmbh	0.000	

COMPANY : MCCONATHY PRODUCTION CO INC
WELL : 1-28
FIELD : LEE
LOCATION : KEARNY-KS
DATE OF TEST : 4/5/86
GAUGE-DEPTH : 3086/4978
JOB NUMBER : 8972

REGRESSION BASED ON HORNER PRESSURE ANALYSIS

REGRESSION RUN THRU THE FOLLOWING POINTS

STARTING AT: .5 TO: .655

STANDARD DEVIATION OF ESTIMATE : .8371
COEFFICIENT OF DETERMINATION : .9983
ERROR SUM OF SQUARES IS EQUAL TO : 4.9059

PSTAR = 1041.17
P@ 1 HOUR = 949.4963
SLOPE = 520.6046

COMPANY : MCCONATHY PRODUCTION CO INC

FIELD : LEE

WELL : 1-28

JOB # : 8972

GAUGE # : 3086

DEPTH : 4978

MON/DAY : 4/ 5

PAGE 1

TEST REPORTED : SHUTIN 1
PRODUCTION Tp : 30 Minutes

REC#	REAL TIME HR:MIN:SEC	ELAPSE TIME MINS HOURS	PRESSURE PSIG	TEMP DEG F	HORNER dt/(T+dt)	DELTA P PSIG
8	6:53: 0	33 0.000	120.00	127.0	0.000000000	0.00
9	6:56: 0	36 0.050	351.00	127.0	0.09098979	231.00
10	6:59: 0	39 0.100	587.00	127.0	0.16680227	467.00
11	7: 2: 0	42 0.150	692.00	127.0	0.23094255	572.00
12	7: 5: 0	45 0.200	748.00	127.0	0.28566447	628.00
13	7: 8: 0	48 0.250	787.00	127.0	0.333333334	667.00
14	7:11: 0	51 0.300	815.00	127.0	0.37503815	695.00
15	7:14: 0	54 0.350	838.00	127.0	0.41183227	718.00
16	7:17: 0	57 0.400	856.00	127.0	0.44453484	736.00
17	7:20: 0	60 0.450	873.00	127.0	0.47365716	753.00
18	7:23: 0	63 0.500	885.00	127.0	0.50000000	765.00
19	7:26: 0	66 0.550	895.00	127.0	0.52383167	775.00
20	7:29: 0	69 0.600	904.00	127.0	0.54549491	784.00
21	7:32: 0	72 0.650	911.00	127.0	0.56527275	791.00
22	7:35: 0	75 0.700	920.00	127.0	0.58331639	800.00
23	7:38: 0	78 0.750	925.00	127.0	0.60000002	805.00
24	7:41: 0	81 0.800	931.00	127.0	0.61539906	811.00
25	7:44: 0	84 0.850	938.00	127.0	0.62965643	818.00
26	7:47: 0	87 0.900	941.00	127.0	0.64289451	821.00
27	7:50: 0	90 0.950	945.00	127.0	0.65516078	825.00

COMPANY : MCCONATHY PRODUCTION CO INC
WELL : 1-28
FIELD : LEE
LOCATION : KEARNY-KS
DATE OF TEST : 4/5/86
GAUGE-DEPTH : 3086/4978
JOB NUMBER : 8972

REGRESSION BASED ON HORNER PRESSURE ANALYSIS

REGRESSION RUN THRU THE FOLLOWING POINTS

STARTING AT: .393 TO: .534

STANDARD DEVIATION OF ESTIMATE : 1.2915
COEFFICIENT OF DETERMINATION : .996
ERROR SUM OF SQUARES IS EQUAL TO : 13.3444

PSTAR = 1063.745
P@ 1HOUR = 923.8989
SLOPE = 464.5599

COMPANY : MCCONATHY PRODUCTION CO INC

FIELD : LEE

WELL : 1-28

JOB # : 8972

GAUGE # : 3086

DEPTH : 4978

MON/DAY : 4/ 5

PAGE 1

TEST REPORTED : SHUTIN 2

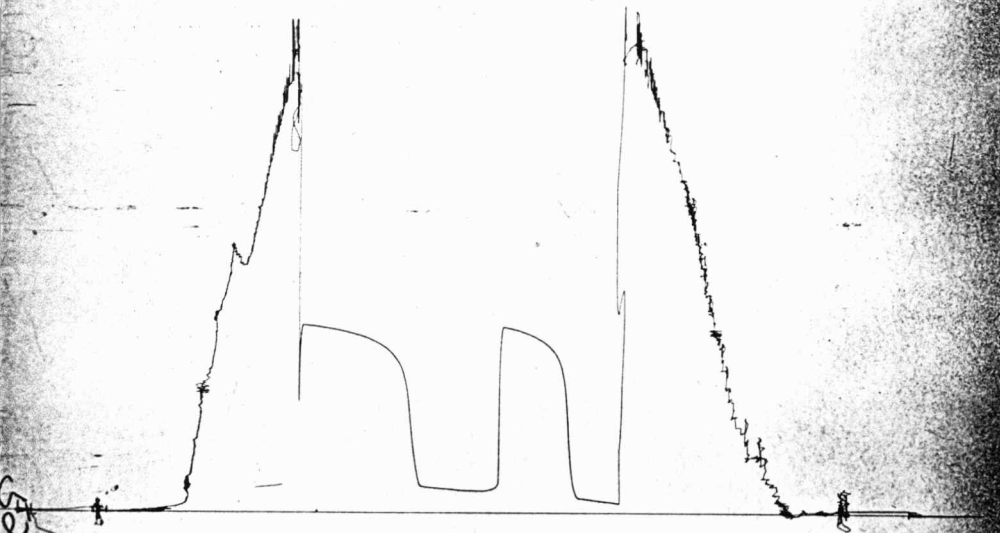
PRODUCTION Tp : 60 Minutes

REC#	REAL TIME HR:MIN:SEC	ELAPSE TIME MINS HOURS	PRESSURE PSIG	TEMP DEG F	HORNER dt/(T+dt)	DELTA P PSIG
40	8:50: 0	150 0.000	102.00	127.0	0.00000000	0.00
41	8:53: 0	153 0.050	172.00	127.0	0.04766334	70.00
42	8:56: 0	156 0.100	351.00	127.0	0.09098979	249.00
43	8:59: 0	159 0.150	542.00	127.0	0.13054553	440.00
44	9: 2: 0	162 0.200	649.00	127.0	0.16680227	547.00
45	9: 5: 0	165 0.250	712.00	127.0	0.20000000	610.00
46	9: 8: 0	168 0.300	753.00	127.0	0.23079813	651.00
47	9:11: 0	171 0.350	786.00	127.0	0.25931284	684.00
48	9:14: 0	174 0.400	808.00	127.0	0.28578901	706.00
49	9:17: 0	177 0.450	825.00	127.0	0.31043771	723.00
50	9:20: 0	180 0.500	841.00	127.0	0.33333334	739.00
51	9:23: 0	183 0.550	857.00	127.0	0.35485902	755.00
52	9:26: 0	186 0.600	869.00	127.0	0.37503815	767.00
53	9:29: 0	189 0.650	877.00	127.0	0.39399320	775.00
54	9:32: 0	192 0.700	885.00	127.0	0.41183227	783.00
55	9:35: 0	195 0.750	893.00	127.0	0.42857143	791.00
56	9:38: 0	198 0.800	897.00	127.0	0.44445953	795.00
57	9:41: 0	201 0.850	907.00	127.0	0.45948800	805.00
58	9:44: 0	204 0.900	914.00	127.0	0.47372478	812.00
59	9:47: 0	207 0.950	918.00	127.0	0.48723084	816.00
60	9:50: 0	210 1.000	924.00	127.0	0.50000000	822.00
61	9:53: 0	213 1.050	929.00	127.0	0.51220673	827.00
62	9:56: 0	216 1.100	934.00	127.0	0.52383167	832.00
63	9:59: 0	219 1.150	937.00	127.0	0.53491539	835.00
64	10: 2: 0	222 1.200	940.00	127.0	0.54549491	838.00
65	10: 5: 0	225 1.250	942.00	127.0	0.55555558	840.00
66	10: 8: 0	228 1.300	944.00	127.0	0.56522661	842.00
67	10:11: 0	231 1.350	946.00	127.0	0.57448578	844.00
68	10:14: 0	234 1.400	948.00	127.0	0.58335876	846.00
69	10:17: 0	237 1.450	950.00	127.0	0.59186929	848.00
70	10:20: 0	240 1.500	952.00	127.0	0.60000002	850.00
71	10:23: 0	243 1.550	953.00	127.0	0.60785067	851.00

8972

47

0



8972

46

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