Table 1. Maximum Probabilities Over Time for Crane to Kemper

Number of Pipe Digs	1995 Max POE	1999 1 (mil/yr) Max POE	1999 7 (mil/yr) Max POE		Odometer	Pipeline Feature	Predicted Length (in.)	Predicted Depth (%)
0	7.52E-01	8.30E-01	9.96E-01		297965.9	S 3	22.44	50%
1	2.72E-01	3.62E-01	8.91E-01		493952.6	S 5 - DIG 2C	7.44	50%
2	1.40E-01	2.01E-01	7.58E-01		303496.9	S 4	6.00	50%
3	1.40E-01	2.01E-01	7.58E-01		494335.5	S 6 - DIG 3	6.00	50%
4	1.52E-03	3.62E-03	1.57E-01		494751.0	M 35	111.00	25%
5	1.39E-03	3.33E-03	1.48E-01		297968.9	M 19	84.00	25%
6	8.93E-04	2.17E-03	1.13E-01		223512.9	M 18	45.00	25%
7	6.71E-04	1.64E-03	9.33E-02		434713.5	M 25	36.00	25%
8	5.87E-04	1.44E-03	8.54E-02		453031.8	M 27	33.00	25%
9	3.28E-04	8.18E-04	5.70E-02		494832.3	M 36	24.00	25%
10	1.80E-04	4.55E-04	3.67E-02		452407.8	M 26	18.00	25%
11	1.24E-04	3.14E-04	2.75E-02		494521.3	M 34 - DIG 4	15.00	25%
12	9.89E-05	2.51E-04	2.30E-02		223490.1	M 17	13.44	25%
13	1.17E-05	2.98E-05	3.68E-03		454155.5	M 28	7.44	25%
14	3.41E-06	8.52E-06	1.13E-03		494749.3	M35	6.00	25%
15	3.70E-07	8.81E-07	1.12E-04		491806.2	M 29 - DIG 1	4.44	25%
16	3.70E-07	8.81E-07	1.12E-04		493902.1	M 31 - DIG 2A/B	4.44	25%
17	9.78E-09	2.03E-08	1.59E-06		223004.3	M 16	3.00	25%
18	9.78E-09	2.03E-08	1.59E-06		320035.0	M 20	3.00	25%
19	9.78E-09	2.03E-08	1.59E-06		331455.8	M 21	3.00	25%
20	9.78E-09	2.03E-08	1.59E-06		343509.4	M 22	3.00	25%
21	9.78E-09	2.03E-08	1.59E-06		398327.8	M 23	3.00	25%
22	9.78E-09	2.03E-08	1.59E-06		401339.0	M 24	3.00	25%
23	9.78E-09	2.03E-08	1.59E-06		493808.3	M 30	3.00	25%
24	9.78E-09	2.03E-08	1.59E-06		494190.5	M 32	3.00	25%
25	9.78E-09	2.03E-08	1.59E-06		494288.3	M 33	3.00	25%
26	6.43E-09	1.86E-08	6.80E-06		223764.4	L	6.00	15%
27	6.43E-09	1.86E-08	6.80E-06		238342.5	L	6.00	15%
28	6.43E-09	1.86E-08	6.80E-06		238929.3	L	6.00	15%
29	6.43E-09	1.86E-08	6.80E-06		243102.0	L	6.00	15%
30	6.43E-09	1.86E-08	6.80E-06		250534.3	L	6.00	15%
31	6.43E-09	1.86E-08	6.80E-06		251538.6	L	6.00	15%
32	6.43E-09	1.86E-08	6.80E-06		272932.4	L	6.00	15%
33	6.43E-09	1.86E-08	6.80E-06		290846.0	L	6.00	15%
34	6.43E-09	1.86E-08	6.80E-06		303741.4	L	6.00	15%
35	6.43E-09	1.86E-08	6.80E-06		307179.0	L	6.00	15%
36	6.43E-09	1.86E-08	6.80E-06		309816.8	L	6.00	15%
37	6.43E-09	1.86E-08	6.80E-06		317474.1	L	6.00	15%
38	6.43E-09	1.86E-08	6.80E-06		332057.5	L	6.00	15%
39	6.43E-09	1.86E-08	6.80E-06		340817.8	L	6.00	15%
40	6.43E-09	1.86E-08	6.80E-06		352539.6	L	6.00	15%
41	6.43E-09	1.86E-08	6.80E-06		355433.8	L	6.00	15%
42	6.43E-09	1.86E-08	6.80E-06		387021.8	L	6.00	15%
43	6.43E-09	1.86E-08	6.80E-06		452405.5	L	6.00	15%
44	6.43E-09	1.86E-08	6.80E-06		452756.3	L	6.00	15%
45	6.43E-09	1.86E-08	6.80E-06		479991.9	L	6.00	15%
46	6.43E-09	1.86E-08	6.80E-06		490989.3	L	6.00	15%
47	6.43E-09	1.86E-08	6.80E-06		491061.3	L	6.00	15%
48	6.43E-09	1.86E-08	6.80E-06		491327.3	L	6.00	15%
49	6.43E-09	1.86E-08	6.80E-06		491614.0	L	6.00	15%
50	6.43E-09	1.86E-08	6.80E-06		491956.5	L	6.00	15%

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Table 1. Maximum Probabilities Over Time for Crane to Kemper

Number of Pipe Digs	1995 Max POE	1999 1 (mil/yr) Max POE	1999 7 (mil/yr) Max POE		Odometer	Pipeline Feature	Predicted Length (in.)	Predicted Depth (%)
51	6.43E-09	1.86E-08	6.80E-06		491975.4	L	6.00	15%
52	6.43E-09	1.86E-08	6.80E-06		492275.4	L	6.00	15%
53	6.43E-09	1.86E-08	6.80E-06		492380.3	L	6.00	15%
54	6.43E-09	1.86E-08	6.80E-06		492468.5	L	6.00	15%
55	6.43E-09	1.86E-08	6.80E-06		492987.5	L	6.00	15%
56	6.43E-09	1.86E-08	6.80E-06		493452.3	L	6.00	15%
57	6.43E-09	1.86E-08	6.80E-06		493602.1	L	6.00	15%
58	6.43E-09	1.86E-08	6.80E-06		493661.5	L	6.00	15%
59	6.43E-09	1.86E-08	6.80E-06		493798.8	L	6.00	15%
60	6.43E-09	1.86E-08	6.80E-06		493853.3	L	6.00	15%
61	6.43E-09	1.86E-08	6.80E-06		494015.3	L	6.00	15%
62	6.43E-09	1.86E-08	6.80E-06		494139.0	L	6.00	15%
63	6.43E-09	1.86E-08	6.80E-06		494427.8	L	6.00	15%
64	6.43E-09	1.86E-08	6.80E-06		494754.3	L	6.00	15%

Table 2. Maximum Probabilities Over Time for Kemper to Satsuma

Number of Pipe Digs	1995 Max POE	1999 1 (mil/yr) Max POE	1999 7 (mil/yr) Max POE	Odometer	Vetco Pipeline Feature	Predicted Length (in.)	Predicted Depth (%)	Exxon Feature Number
0	8.77E-01	9.22E-01	9.98E-01	245170.922	S 6	477.00	50%	8
1	8.77E-01	9.22E-01	9.98E-01	898504.047	S 20	477.00	50%	22
2	8.77E-01	9.22E-01	9.98E-01	1453920.875	S 71	453.00	50%	73
3	8.77E-01	9.18E-01	9.97E-01	986005.297	S 28	477.00	50%	30
4	8.77E-01	9.18E-01	9.97E-01	987014.297	S 31	477.00	50%	33
5	8.77E-01	9.22E-01	9.98E-01	918266.297	S 27	450.00	50%	29
6	8.77E-01	9.18E-01	9.97E-01	135053.547	S 3	432.00	50%	5
7	8.76E-01	9.21E-01	9.98E-01	1384913.125	S 65	348.00	50%	67
8	8.76E-01	9.17E-01	9.97E-01	986994.547	S 30	294.00	50%	32
9	8.75E-01	9.20E-01	9.98E-01	317164.047	S 9	252.00	50%	11
10	8.75E-01	9.20E-01	9.98E-01	1443667.875	S 69	234.00	50%	71
11	8.74E-01	9.19E-01	9.98E-01	898685.797	S 21	198.00	50%	23
12	8.73E-01	9.15E-01	9.97E-01	1233092.313	S 43	204.00	50%	45
13	8.72E-01	9.18E-01	9.98E-01	918253.047	S 26	174.00	50%	28
14	8.71E-01	9.14E-01	9.97E-01	1234052.813	S 44	168.00	50%	46
15	8.69E-01	9.12E-01	9.97E-01	136545.547	S 4	144.00	50%	6
16	8.68E-01	9.15E-01	9.98E-01	1517098.375	S 74	132.00	50%	76
17	8.67E-01	9.11E-01	9.97E-01	986880.797	S 29	132.00	50%	31
18	8.61E-01	9.10E-01	9.98E-01	1326623.406	S 56	99.00	50%	58
19	8.60E-01	9.05E-01	9.96E-01	1283707.125	S 45	102.00	50%	47
20	8.57E-01	9.07E-01	9.98E-01	898415.047	S 19	90.00	50%	21
21	8.54E-01	9.05E-01	9.98E-01	787076.547	S 14	84.00	50%	16
22	8.51E-01	8.98E-01	9.96E-01	1197652.313	S 41	82.44	50%	43
23	8.36E-01	8.91E-01	9.97E-01	917432.547	S 25	63.00	50%	27
24	8.36E-01	8.86E-01	9.95E-01	1291901.063	S 46	66.00	50%	48
25	8.36E-01	8.86E-01	9.95E-01	1301204.125	S 50	66.00	50%	52
26	8.34E-01	8.85E-01	9.95E-01	1197655.688	S 42	64.44	50%	44
27	8.27E-01	8.85E-01	9.97E-01	1384870.313	S 64	57.00	50%	66
28	8.22E-01	8.80E-01	9.97E-01	1531447.125	S 75	54.00	50%	77
29	8.15E-01	8.75E-01	9.96E-01	1469903.125	S 72	51.00	50%	74
30	8.00E-01	8.58E-01	9.93E-01	999959.797	S 35	48.00	50%	37
31	8.00E-01	8.58E-01	9.93E-01	1065473.672	S 38	48.00	50%	40
32	7.98E-01	8.62E-01	9.96E-01	1430715.375	S 66	45.00	50%	68
33	7.57E-01	8.29E-01	9.93E-01	1339631.625	S 60	36.00	50%	62
34	7.45E-01	8.12E-01	9.88E-01	998004.797	S 33	36.00	50%	35
35	7.12E-01	7.92E-01	9.90E-01	1513240.375	S 73	30.00	50%	75
36	6.98E-01	7.71E-01	9.83E-01	1006071.297	S 37	30.00	50%	39
37	6.45E-01	7.32E-01	9.84E-01	261252.047	S 7	24.00	50%	9
38	6.45E-01	7.32E-01	9.84E-01	669680.797	S 13	24.00	50%	15
39	6.45E-01	7.32E-01	9.84E-01	813024.797	S 16	24.00	50%	18
40	6.45E-01	7.32E-01	9.84E-01	884414.047	S 18	24.00	50%	20
41	6.45E-01	7.32E-01	9.84E-01	917357.797	S 23	24.00	50%	25
42	6.45E-01	7.32E-01	9.84E-01	917383.797	S 24	24.00	50%	26
43	6.45E-01	7.32E-01	9.84E-01	1432119.375	S 68	24.00	50%	70
44	6.27E-01	7.08E-01	9.72E-01	999674.797	S 34	24.00	50%	36
45	5.45E-01	6.41E-01	9.69E-01	272910.547	S 8	18.00	50%	10
46	5.45E-01	6.41E-01	9.69E-01	879300.047	S 17	18.00	50%	19
47	5.45E-01	6.41E-01	9.69E-01	1304868.125	S 52	18.00	50%	54

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Table 2. Maximum Probabilities Over Time for Kemper to Satsuma

Number of Pipe Digs	1995 Max POE	1999 1 (mil/yr) Max POE	1999 7 (mil/yr) Max POE	Odometer	Vetco Pipeline Feature	Predicted Length (in.)	Predicted Depth (%)	Exxon Feature Number
48	5.45E-01	6.41E-01	9.69E-01	1314331.125	S 55	18.00	50%	57
49	5.45E-01	6.41E-01	9.69E-01	1326667.063	S 57	18.00	50%	59
50	5.45E-01	6.41E-01	9.69E-01	1330499.625	S 58	18.00	50%	60
51	5.45E-01	6.41E-01	9.69E-01	1336429.625	S 59	18.00	50%	61
52	5.45E-01	6.41E-01	9.69E-01	1431311.875	S 67	18.00	50%	69
53	5.45E-01	6.41E-01	9.69E-01	1452607.625	S 70	18.00	50%	72
54	5.45E-01	6.41E-01	9.69E-01	1583620.875	S 76	18.00	50%	78
55	5.45E-01	6.41E-01	9.69E-01	1612994.625	S 77	18.00	50%	79
56	5.45E-01	6.41E-01	9.69E-01	1678430.625	S 78	18.00	50%	80
57	5.27E-01	6.14E-01	9.49E-01	1491.547	S 1	18.00	50%	3
58	5.27E-01	6.14E-01	9.49E-01	1304380.625	S 51	18.00	50%	53
59	3.91E-01	4.86E-01	9.26E-01	240488.922	S 5	12.00	50%	7
60	3.91E-01	4.86E-01	9.26E-01	354594.797	S 10	12.00	50%	12
61	3.91E-01	4.86E-01	9.26E-01	607363.047	S 11	12.00	50%	13
62	3.91E-01	4.86E-01	9.26E-01	795601.172	S 15	12.00	50%	17
63	3.91E-01	4.86E-01	9.26E-01	1306179.125	S 53	12.00	50%	55
64	3.91E-01	4.86E-01	9.26E-01	1308553.375	S 54	12.00	50%	56
65	3.91E-01	4.86E-01	9.26E-01	1340538.625	S 62	12.00	50%	64
66	3.91E-01	4.86E-01	9.26E-01	1362406.875	S 63	12.00	50%	65
67	3.91E-01	4.86E-01	9.26E-01	1777629.875	S 79	12.00	50%	81
68	3.66E-01	4.50E-01	8.85E-01	9598.922	S 2	12.00	50%	4
69	3.66E-01	4.50E-01	8.85E-01	996986.297	S 32	12.00	50%	34
70	3.66E-01	4.50E-01	8.85E-01	[illegible]	S 36	12.00	50%	38
71	3.66E-01	4.50E-01	8.85E-01	1297414.125	S 47	12.00	50%	49
72	3.66E-01	4.50E-01	8.85E-01	1298236.125	S 48	12.00	50%	50
73	3.66E-01	4.50E-01	8.85E-01	1298387.625	S 49	12.00	50%	51
74	2.40E-01	3.19E-01	8.38E-01	1339761.438	S 61	9.00	50%	63
75	2.12E-01	2.77E-01	7.61E-01	1197230.813	S 40	9.00	50%	42
76	5.56E-02	8.48E-02	5.02E-01	917102.547	S 22	6.00	50%	24
77	4.24E-04	1.03E-03	6.13E-02	245139.672	M 35	477.00	25%	34
78	4.24E-04	1.03E-03	6.13E-02	318067.297	M 57	477.00	25%	56
79	4.24E-04	1.03E-03	6.13E-02	918319.547	M 139	477.00	25%	138
80	4.24E-04	9.47E-04	4.25E-02	985888.047	M 158	477.00	25%	157
81	4.24E-04	9.47E-04	4.25E-02	985912.297	M 159	477.00	25%	158
82	4.24E-04	9.47E-04	4.25E-02	985944.047	M 160	477.00	25%	159
83	4.24E-04	9.47E-04	4.25E-02	986028.547	M 161	477.00	25%	160
84	4.24E-04	9.47E-04	4.25E-02	986054.547	M 162	477.00	25%	161
85	4.22E-04	1.03E-03	6.11E-02	813233.234	M 119	396.00	25%	118
86	4.22E-04	1.03E-03	6.11E-02	298482.547	M 48	384.00	25%	47
87	4.22E-04	9.43E-04	4.23E-02	170059.547	M 26	399.00	25%	25
88	4.22E-04	1.03E-03	6.10E-02	1629622.875	M 293	372.00	25%	292
89	4.21E-04	1.03E-03	6.10E-02	1453901.875	M 263	366.00	25%	262
90	4.21E-04	9.41E-04	4.23E-02	986920.297	M 164	366.00	25%	163
91	4.20E-04	9.40E-04	4.22E-02	1269043.563	M 214	354.00	25%	213
92	4.20E-04	9.40E-04	4.22E-02	1268970.563	M 212	351.00	25%	211
93	4.19E-04	9.38E-04	4.22E-02	987048.797	M 166	336.00	25%	165
94	4.19E-04	9.37E-04	4.21E-02	1009733.297	M 180	330.00	25%	179
95	4.19E-04	1.02E-03	6.08E-02	303569.297	M 50	312.00	25%	49

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Table 2. Maximum Probabilities Over Time for Kemper to Satsuma

Number of Pipe Digs	1995 Max POE	1999 1 (mil/yr) Max POE	1999 7 (mil/yr) Max POE	Odometer	Vetco Pipeline Feature	Predicted Length (in.)	Predicted Depth (%)	Exxon Feature Number
96	4.19E-04	9.37E-04	4.21E-02	140186.297	M 21	327.00	25%	20
97	4.19E-04	9.37E-04	4.21E-02	1021400.047	M 185	324.00	25%	184
98	4.16E-04	1.01E-03	6.05E-02	298879.797	M 49	270.00	25%	48
99	4.15E-04	1.01E-03	6.04E-02	317027.797	M 54	258.00	25%	53
100	4.15E-04	1.01E-03	6.03E-02	317069.547	M 55	252.00	25%	54
101	4.13E-04	1.01E-03	6.02E-02	330891.922	M 63	240.00	25%	62
102	4.11E-04	1.00E-03	5.99E-02	330596.047	M 60	222.00	25%	59
103	4.10E-04	9.18E-04	4.15E-02	12581.422	M 5 - DIG 1	229.44	25%	4
104	4.10E-04	9.99E-04	5.99E-02	1316103.625	M 228	216.00	25%	227
105	4.09E-04	9.15E-04	4.14E-02	1233121.813	M 203	222.00	25%	202
106	4.08E-04	9.13E-04	4.13E-02	1232724.313	M 197	216.00	25%	196
107	4.03E-04	9.02E-04	4.10E-02	135235.047	M 14	192.00	25%	13
108	4.03E-04	9.02E-04	4.10E-02	949016.047	M 145	192.00	25%	144
109	4.01E-04	9.78E-04	5.89E-02	919840.547	M 141	174.00	25%	140
110	4.01E-04	9.78E-04	5.89E-02	1454655.625	M 266	174.00	25%	265
111	4.00E-04	8.95E-04	4.07E-02	996853.797	M 174	180.00	25%	173
112	3.99E-04	9.73E-04	5.87E-02	314107.797	M 51	168.00	25%	50
113	3.99E-04	9.73E-04	5.87E-02	745331.578	M 97	168.00	25%	96
114	3.99E-04	8.93E-04	4.06E-02	140241.609	M 22	177.00	25%	21
115	3.98E-04	8.91E-04	4.06E-02	135340.797	M 16	174.00	25%	15
116	3.97E-04	9.68E-04	5.85E-02	813278.797	M 120	162.00	25%	119
117	3.97E-04	9.68E-04	5.85E-02	1678364.375	M 295	162.00	25%	294
118	3.92E-04	9.57E-04	5.80E-02	780937.297	M 104	150.00	25%	103
119	3.91E-04	8.76E-04	4.01E-02	140124.547	M 19	156.00	25%	18
120	3.90E-04	8.73E-04	4.00E-02	969169.797	M 156	153.00	25%	155
121	3.89E-04	9.50E-04	5.77E-02	858093.297	M 128 - DIG 5	144.00	25%	127
122	3.89E-04	8.71E-04	3.99E-02	140139.297	M 20	151.44	25%	19
123	3.88E-04	8.70E-04	3.98E-02	171772.047	M 30	150.00	25%	29
124	3.88E-04	8.70E-04	3.98E-02	1232689.563	M 196	150.00	25%	195
125	3.86E-04	9.42E-04	5.74E-02	900357.547	M 133	138.00	25%	132
126	3.86E-04	9.42E-04	5.74E-02	1453856.375	M 262	138.00	25%	261
127	3.85E-04	8.63E-04	3.96E-02	963331.047	M 150	144.00	25%	149
128	3.84E-04	9.38E-04	5.72E-02	316910.297	M 52	135.00	25%	51
129	3.83E-04	8.59E-04	3.95E-02	171482.797	M 28	141.00	25%	27
130	3.82E-04	9.34E-04	5.70E-02	796626.797	M 116	132.00	25%	115
131	3.82E-04	9.34E-04	5.70E-02	908393.547	M 135	132.00	25%	134
132	3.82E-04	9.32E-04	5.70E-02	1536112.000	M 282	131.16	25%	281
133	3.78E-04	9.24E-04	5.66E-02	1431496.625	M 252	126.00	25%	251
134	3.78E-04	9.24E-04	5.66E-02	1629731.875	M 294	126.00	25%	293
135	3.73E-04	9.13E-04	5.61E-02	1539326.625	M 283	120.00	25%	282
136	3.73E-04	8.37E-04	3.87E-02	1234095.313	M 204	126.00	25%	203
137	3.73E-04	8.37E-04	3.87E-02	1234129.813	M 205	126.00	25%	204
138	3.73E-04	8.37E-04	3.87E-02	1269009.813	M 213	126.00	25%	212
139	3.71E-04	8.32E-04	3.85E-02	1235874.063	M 208	123.00	25%	207
140	3.68E-04	9.00E-04	5.56E-02	1539335.359	M 284 - DIG 11	114.00	25%	283
141	3.68E-04	8.26E-04	3.83E-02	1234417.563	M 206	120.00	25%	205
142	3.64E-04	8.90E-04	5.51E-02	330867.672	M 62	109.44	25%	61
143	3.62E-04	8.86E-04	5.49E-02	1432149.375	M 253	108.00	25%	252

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Table 2. Maximum Probabilities Over Time for Kemper to Satsuma

Number of Pipe Digs	1995 Max POE	1999 1 (mil/yr) Max POE	1999 7 (mil/yr) Max POE	Odometer	Vetco Pipeline Feature	Predicted Length (in.)	Predicted Depth (%)	Exxon Feature Number
144	3.56E-04	7.99E-04	3.74E-02	986937.547	M 165	108.00	25%	164
145	3.55E-04	8.69E-04	5.42E-02	272599.297	M 44	102.00	25%	43
146	3.55E-04	8.69E-04	5.42E-02	917822.047	M 138	102.00	25%	137
147	3.55E-04	8.69E-04	5.42E-02	1703892.375	M 296	102.00	25%	295
148	3.47E-04	8.50E-04	5.33E-02	330742.516	M 61	96.00	25%	60
149	3.47E-04	8.50E-04	5.33E-02	796563.297	M 115	96.00	25%	114
150	3.32E-04	8.15E-04	5.18E-02	381595.047	M 71	87.00	25%	70
151	3.29E-04	7.41E-04	3.53E-02	1232778.813	M 198	90.00	25%	197
152	3.27E-04	8.02E-04	5.11E-02	870659.547	M 130	84.00	25%	129
153	2.99E-04	7.34E-04	4.80E-02	1335633.875	M 235	72.00	25%	234
154	2.99E-04	7.34E-04	4.80E-02	1462702.875	M 267	72.00	25%	266
155	2.88E-04	6.50E-04	3.19E-02	33090.547	M 7	72.00	25%	6
156	2.88E-04	6.50E-04	3.19E-02	968982.797	M 154	72.00	25%	153
157	2.85E-04	7.02E-04	4.64E-02	316996.547	M 53	67.44	25%	52
158	2.81E-04	6.91E-04	4.59E-02	332123.172	M 64	66.00	25%	63
159	2.81E-04	6.91E-04	4.59E-02	1501594.375	M 270	66.00	25%	269
160	2.69E-04	6.08E-04	3.04E-02	160617.297	M 24	66.00	25%	23
161	2.69E-04	6.08E-04	3.04E-02	972153.047	M 157	66.00	25%	156
162	2.69E-04	6.08E-04	3.04E-02	1234460.063	M 207	66.00	25%	206
163	2.69E-04	6.08E-04	3.04E-02	1253156.188	M 210	66.00	25%	209
164	2.66E-04	4.57E-04	1.03E-02	666686.547	S 39	3.00	50%	125
165	2.66E-04	4.84E-04	7.59E-03	1174836.438	S 12	3.00	50%	291
166	2.59E-04	6.40E-04	4.34E-02	840926.547	M 126	60.00	25%	296
167	2.59E-04	6.40E-04	4.34E-02	1629576.375	M 292	60.00	25%	191
168	2.59E-04	6.40E-04	4.34E-02	1703899.375	M 297	60.00	25%	46
169	2.58E-04	5.84E-04	2.94E-02	1180118.438	M 192	63.00	25%	24
170	2.34E-04	5.78E-04	4.03E-02	298381.547	M 47	54.00	25%	168
171	2.21E-04	5.01E-04	2.61E-02	166315.047	M 25	54.00	25%	169
172	2.21E-04	5.01E-04	2.61E-02	994494.406	M 169	54.00	25%	208
173	2.21E-04	5.01E-04	2.61E-02	994566.156	M 170	54.00	25%	280
174	2.21E-04	5.01E-04	2.61E-02	1235909.563	M 209	54.00	25%	55
175	2.20E-04	5.44E-04	3.85E-02	1531482.875	M 281	51.00	25%	64
176	2.04E-04	5.07E-04	3.65E-02	317148.797	M 56	48.00	25%	263
177	2.04E-04	5.07E-04	3.65E-02	334057.047	M 65	48.00	25%	264
178	2.04E-04	5.07E-04	3.65E-02	1454039.875	M 264	48.00	25%	3
179	2.04E-04	5.07E-04	3.65E-02	1454258.875	M 265	48.00	25%	16
180	1.91E-04	4.34E-04	2.34E-02	11638.172	M 4	48.00	25%	145
181	1.91E-04	4.34E-04	2.34E-02	135614.297	M 17	48.00	25%	200
182	1.91E-04	4.34E-04	2.34E-02	949084.047	M 146	48.00	25%	111
183	1.91E-04	4.34E-04	2.34E-02	1232905.563	M 201	48.00	25%	113
184	1.70E-04	4.23E-04	3.19E-02	795738.422	M 112	42.00	25%	233
185	1.70E-04	4.23E-04	3.19E-02	796421.297	M 114	42.00	25%	8
186	1.70E-04	4.23E-04	3.19E-02	1334960.375	M 234	42.00	25%	12
187	1.57E-04	3.58E-04	2.01E-02	42001.297	M 9	42.00	25%	151
188	1.57E-04	3.58E-04	2.01E-02	133559.047	M 13	42.00	25%	181
189	1.57E-04	3.58E-04	2.01E-02	964064.047	M 152	42.00	25%	65
190	1.57E-04	3.58E-04	2.01E-02	1011274.547	M 182	42.00	25%	105
191	1.32E-04	3.31E-04	2.64E-02	341568.797	M 66	36.00	25%	135

Table 2. Maximum Probabilities Over Time for Kemper to Satsuma

Number of Pipe Digs	1995 Max POE	1999 1 (mil/yr) Max POE	1999 7 (mil/yr) Max POE	Odometer	Vetco Pipeline Feature	Predicted Length (in.)	Predicted Depth (%)	Exxon Feature Number
192	1.32E-04	3.31E-04	2.64E-02	785918.984	M 106	36.00	25%	229
193	1.32E-04	3.31E-04	2.64E-02	914078.797	M 136	36.00	25%	247
194	1.32E-04	3.31E-04	2.64E-02	1316278.875	M 230	36.00	25%	255
195	1.32E-04	3.31E-04	2.64E-02	1382114.625	M 248	36.00	25%	260
196	1.32E-04	3.31E-04	2.64E-02	1443913.125	M 256	36.00	25%	267
197	1.32E-04	3.31E-04	2.64E-02	1453413.625	M 261	36.00	25%	270
198	1.32E-04	3.31E-04	2.64E-02	1479194.875	M 268	36.00	25%	284
199	1.32E-04	3.31E-04	2.64E-02	1505308.625	M 271	36.00	25%	297
200	1.32E-04	3.31E-04	2.64E-02	1541925.125	M 285	36.00	25%	26
201	1.32E-04	3.31E-04	2.64E-02	1753828.875	M 298	36.00	25%	152
202	1.20E-04	2.76E-04	1.63E-02	171341.047	M 27 - DIG 2	36.00	25%	177
203	1.20E-04	2.76E-04	1.63E-02	968967.297	M 153	36.00	25%	186
204	1.20E-04	2.76E-04	1.63E-02	1005041.047	M 178	36.00	25%	279
205	1.20E-04	2.76E-04	1.63E-02	1035062.047	M 187	36.00	25%	170
206	1.12E-04	2.82E-04	2.34E-02	1530559.875	M 280	33.00	25%	97
207	1.01E-04	2.33E-04	1.42E-02	995864.297	M 171	33.00	25%	106
208	9.29E-05	2.34E-04	2.02E-02	745394.078	M 98	30.00	25%	305
209	9.29E-05	2.34E-04	2.02E-02	786689.297	M 107	30.00	25%	30
210	9.29E-05	2.34E-04	2.02E-02	1792328.875	M 306	30.00	25%	148
211	8.32E-05	1.92E-04	1.21E-02	171913.047	M 31	30.00	25%	166
212	8.32E-05	1.92E-04	1.21E-02	963218.297	M 149	30.00	25%	188
213	8.32E-05	1.92E-04	1.21E-02	992258.047	M 167	30.00	25%	198
214	8.32E-05	1.92E-04	1.21E-02	1066460.922	M 189	30.00	25%	199
215	8.32E-05	1.92E-04	1.21E-02	1232808.313	M 199	30.00	25%	81
216	8.32E-05	1.92E-04	1.21E-02	1232865.063	M 200	30.00	25%	89
217	5.66E-05	1.44E-04	1.37E-02	541945.547	M 82	24.00	25%	91
218	5.66E-05	1.44E-04	1.37E-02	663224.078	M 90	24.00	25%	104
219	5.66E-05	1.44E-04	1.37E-02	692989.578	M 92	24.00	25%	109
220	5.66E-05	1.44E-04	1.37E-02	783640.047	M 105	24.00	25%	136
221	5.66E-05	1.44E-04	1.37E-02	795623.984	M 110	24.00	25%	230
222	5.66E-05	1.44E-04	1.37E-02	917330.047	M 137	24.00	25%	245
223	5.66E-05	1.44E-04	1.37E-02	1316358.625	M 231	24.00	25%	253
224	5.66E-05	1.44E-04	1.37E-02	1377079.375	M 246	24.00	25%	286
225	5.66E-05	1.44E-04	1.37E-02	1439842.125	M 254	24.00	25%	314
226	5.66E-05	1.44E-04	1.37E-02	1562566.375	M 287 - DIG 15	24.00	25%	22
227	5.66E-05	1.44E-04	1.37E-02	1944579.156	M 315	24.00	25%	28
228	5.01E-05	1.16E-04	7.97E-03	140252.297	M 23	24.00	25%	143
229	5.01E-05	1.16E-04	7.97E-03	171701.797	M 29 - DIG 3	24.00	25%	146
230	5.01E-05	1.16E-04	7.97E-03	945633.047	M 144	24.00	25%	154
231	5.01E-05	1.16E-04	7.97E-03	958232.797	M 147	24.00	25%	167
232	5.01E-05	1.16E-04	7.97E-03	969130.047	M 155	24.00	25%	171
233	5.01E-05	1.16E-04	7.97E-03	994454.047	M 168	24.00	25%	178
234	5.01E-05	1.16E-04	7.97E-03	996601.297	M 172	24.00	25%	180
235	5.01E-05	1.16E-04	7.97E-03	1005057.297	M 179	24.00	25%	187
236	5.01E-05	1.16E-04	7.97E-03	1009901.297	M 181	24.00	25%	190
237	5.01E-05	1.16E-04	7.97E-03	1051430.297	M 188	24.00	25%	201
238	5.01E-05	1.16E-04	7.97E-03	1079189.172	M 191	24.00	25%	35
239	5.01E-05	1.16E-04	7.97E-03	1232910.313	M 202	24.00	25%	218

Table 2. Maximum Probabilities Over Time for Kemper to Satsuma

Number of Pipe Digs	1995 Max POE	1999 1 (mil/yr) Max POE	1999 7 (mil/yr) Max POE	Odometer	Vetco Pipeline Feature	Predicted Length (in.)	Predicted Depth (%)	Exxon Feature Number
240	4.13E-05	1.05E-04	1.06E-02	245292.922	M 36	21.00	25%	246
241	4.13E-05	1.05E-04	1.06E-02	1305566.625	M 219	21.00	25%	38
242	4.13E-05	1.05E-04	1.06E-02	1381368.625	M 247	21.00	25%	41
243	2.87E-05	7.31E-05	7.84E-03	264049.297	M 39	18.00	25%	44
244	2.87E-05	7.31E-05	7.84E-03	266121.047	M 42	18.00	25%	90
245	2.87E-05	7.31E-05	7.84E-03	281888.547	M 45	18.00	25%	95
246	2.87E-05	7.31E-05	7.84E-03	690649.828	M 91	18.00	25%	98
247	2.87E-05	7.31E-05	7.84E-03	744393.078	M 96	18.00	25%	107
248	2.87E-05	7.31E-05	7.84E-03	745835.203	M 99	18.00	25%	108
249	2.87E-05	7.31E-05	7.84E-03	794690.547	M 108	18.00	25%	112
250	2.87E-05	7.31E-05	7.84E-03	795404.297	M 109	18.00	25%	117
251	2.87E-05	7.31E-05	7.84E-03	796177.547	M 113	18.00	25%	120
252	2.87E-05	7.31E-05	7.84E-03	810199.047	M 118	18.00	25%	126
253	2.87E-05	7.31E-05	7.84E-03	814268.297	M 121	18.00	25%	128
254	2.87E-05	7.31E-05	7.84E-03	852088.047	M 127	18.00	25%	131
255	2.87E-05	7.31E-05	7.84E-03	868557.047	M 129	18.00	25%	133
256	2.87E-05	7.31E-05	7.84E-03	872608.547	M 132	18.00	25%	220
257	2.87E-05	7.31E-05	7.84E-03	908382.797	M 134	18.00	25%	224
258	2.87E-05	7.31E-05	7.84E-03	1305858.625	M 221	18.00	25%	226
259	2.87E-05	7.31E-05	7.84E-03	1313165.875	M 225	18.00	25%	228
260	2.87E-05	7.31E-05	7.84E-03	1316089.375	M 227	18.00	25%	236
261	2.87E-05	7.31E-05	7.84E-03	1316214.375	M 229	18.00	25%	237
262	2.87E-05	7.31E-05	7.84E-03	1336345.625	M 237	18.00	25%	243
263	2.87E-05	7.31E-05	7.84E-03	1340485.375	M 238	18.00	25%	244
264	2.87E-05	7.31E-05	7.84E-03	1364748.375	M 244	18.00	25%	248
265	2.87E-05	7.31E-05	7.84E-03	1365235.625	M 245	18.00	25%	259
266	2.87E-05	7.31E-05	7.84E-03	1384808.375	M 249	18.00	25%	274
267	2.87E-05	7.31E-05	7.84E-03	1453352.875	M 260	18.00	25%	277
268	2.87E-05	7.31E-05	7.84E-03	1512953.625	M 275	18.00	25%	285
269	2.87E-05	7.31E-05	7.84E-03	1517135.375	M 278	18.00	25%	302
270	2.87E-05	7.31E-05	7.84E-03	1544162.875	M 286	18.00	25%	304
271	2.87E-05	7.31E-05	7.84E-03	1782510.125	M 303	18.00	25%	307
272	2.87E-05	7.31E-05	7.84E-03	1789647.875	M 305	18.00	25%	308
273	2.87E-05	7.31E-05	7.84E-03	1811280.906	M 308	18.00	25%	310
274	2.87E-05	7.31E-05	7.84E-03	1818504.406	M 309	18.00	25%	311
275	2.87E-05	7.31E-05	7.84E-03	1846831.406	M 311	18.00	25%	312
276	2.87E-05	7.31E-05	7.84E-03	1847732.656	M 312	18.00	25%	7
277	2.87E-05	7.31E-05	7.84E-03	1904281.656	M 313	18.00	25%	11
278	2.54E-05	5.92E-05	4.47E-03	33247.672	M 8	18.00	25%	172
279	2.54E-05	5.92E-05	4.47E-03	105390.047	M 12	18.00	25%	174
280	2.54E-05	5.92E-05	4.47E-03	996785.547	M 173	18.00	25%	278
281	2.54E-05	5.92E-05	4.47E-03	997399.797	M 175	18.00	25%	162
282	1.89E-05	4.83E-05	5.51E-03	1522880.375	M 279	15.00	25%	214
283	1.66E-05	3.88E-05	3.08E-03	986802.797	M 163	15.00	25%	33
284	1.66E-05	3.88E-05	3.08E-03	1269095.063	M 215	15.00	25%	36
285	9.98E-06	2.56E-05	3.17E-03	216424.047	M 34	12.00	25%	37
286	9.98E-06	2.56E-05	3.17E-03	254141.422	M 37	12.00	25%	39
287	9.98E-06	2.56E-05	3.17E-03	263290.047	M 38	12.00	25%	40

Table 2. Maximum Probabilities Over Time for Kemper to Satsuma

Number of Pipe Digs	1995 Max POE	1999 1 (mil/yr) Max POE	1999 7 (mil/yr) Max POE	Odometer	Vetco Pipeline Feature	Predicted Length (in.)	Predicted Depth (%)	Exxon Feature Number
288	9.98E-06	2.56E-05	3.17E-03	264155.047	M 40	12.00	25%	42
289	9.98E-06	2.56E-05	3.17E-03	264753.047	M 41	12.00	25%	45
290	9.98E-06	2.56E-05	3.17E-03	268767.297	M 43	12.00	25%	57
291	9.98E-06	2.56E-05	3.17E-03	285903.297	M 46	12.00	25%	58
292	9.98E-06	2.56E-05	3.17E-03	320063.297	M 58	12.00	25%	66
293	9.98E-06	2.56E-05	3.17E-03	325332.797	M 59	12.00	25%	67
294	9.98E-06	2.56E-05	3.17E-03	342288.047	M 67	12.00	25%	68
295	9.98E-06	2.56E-05	3.17E-03	355547.047	M 68	12.00	25%	69
296	9.98E-06	2.56E-05	3.17E-03	363095.047	M 69	12.00	25%	72
297	9.98E-06	2.56E-05	3.17E-03	372281.797	M 70	12.00	25%	73
298	9.98E-06	2.56E-05	3.17E-03	401148.297	M 73	12.00	25%	74
299	9.98E-06	2.56E-05	3.17E-03	408311.797	M 74	12.00	25%	76
300	9.98E-06	2.56E-05	3.17E-03	412587.547	M 75	12.00	25%	80
301	9.98E-06	2.56E-05	3.17E-03	434805.547	M 77	12.00	25%	82
302	9.98E-06	2.56E-05	3.17E-03	538786.297	M 81	12.00	25%	83
303	9.98E-06	2.56E-05	3.17E-03	574343.797	M 83	12.00	25%	84
304	9.98E-06	2.56E-05	3.17E-03	596713.547	M 84	12.00	25%	85
305	9.98E-06	2.56E-05	3.17E-03	632601.078	M 85	12.00	25%	86
306	9.98E-06	2.56E-05	3.17E-03	648043.828	M 86	12.00	25%	87
307	9.98E-06	2.56E-05	3.17E-03	650956.453	M 87	12.00	25%	88
308	9.98E-06	2.56E-05	3.17E-03	654949.453	M 88	12.00	25%	92
309	9.98E-06	2.56E-05	3.17E-03	655430.703	M 89	12.00	25%	93
310	9.98E-06	2.56E-05	3.17E-03	699513.578	M 93	12.00	25%	94
311	9.98E-06	2.56E-05	3.17E-03	733739.328	M 94	12.00	25%	99
312	9.98E-06	2.56E-05	3.17E-03	744155.453	M 95	12.00	25%	101
313	9.98E-06	2.56E-05	3.17E-03	751420.953	M 100	12.00	25%	110
314	9.98E-06	2.56E-05	3.17E-03	766910.797	M 102	12.00	25%	116
315	9.98E-06	2.56E-05	3.17E-03	795716.734	M 111	12.00	25%	121
316	9.98E-06	2.56E-05	3.17E-03	797110.297	M 117	12.00	25%	122
317	9.98E-06	2.56E-05	3.17E-03	815850.797	M 122	12.00	25%	123
318	9.98E-06	2.56E-05	3.17E-03	816188.047	M 123	12.00	25%	124
319	9.98E-06	2.56E-05	3.17E-03	823067.047	M 124	12.00	25%	130
320	9.98E-06	2.56E-05	3.17E-03	826869.797	M 125	12.00	25%	139
321	9.98E-06	2.56E-05	3.17E-03	871371.547	M 131	12.00	25%	141
322	9.98E-06	2.56E-05	3.17E-03	919079.047	M 140	12.00	25%	217
323	9.98E-06	2.56E-05	3.17E-03	928305.047	M 142	12.00	25%	219
324	9.98E-06	2.56E-05	3.17E-03	1304812.375	M 218	12.00	25%	221
325	9.98E-06	2.56E-05	3.17E-03	1305699.625	M 220	12.00	25%	222
326	9.98E-06	2.56E-05	3.17E-03	1306919.125	M 222	12.00	25%	223
327	9.98E-06	2.56E-05	3.17E-03	1307511.375	M 223	12.00	25%	231
328	9.98E-06	2.56E-05	3.17E-03	1311240.375	M 224	12.00	25%	232
329	9.98E-06	2.56E-05	3.17E-03	1320273.625	M 232	12.00	25%	235
330	9.98E-06	2.56E-05	3.17E-03	1333172.125	M 233	12.00	25%	238
331	9.98E-06	2.56E-05	3.17E-03	1336031.625	M 236	12.00	25%	239
332	9.98E-06	2.56E-05	3.17E-03	1340579.625	M 239	12.00	25%	240
333	9.98E-06	2.56E-05	3.17E-03	1350394.875	M 240	12.00	25%	241
334	9.98E-06	2.56E-05	3.17E-03	1355812.375	M 241	12.00	25%	242
335	9.98E-06	2.56E-05	3.17E-03	1356075.625	M 242	12.00	25%	250

Table 2. Maximum Probabilities Over Time for Kemper to Satsuma

Number of Pipe Digs	1995 Max POE	1999 1 (mil/yr) Max POE	1999 7 (mil/yr) Max POE	Odometer	Vetco Pipeline Feature	Predicted Length (in.)	Predicted Depth (%)	Exxon Feature Number
336	9.98E-06	2.56E-05	3.17E-03	1359865.875	M 243	12.00	25%	254
337	9.98E-06	2.56E-05	3.17E-03	1430336.125	M 251	12.00	25%	256
338	9.98E-06	2.56E-05	3.17E-03	1440318.125	M 255	12.00	25%	257
339	9.98E-06	2.56E-05	3.17E-03	1444416.125	M 257	12.00	25%	258
340	9.98E-06	2.56E-05	3.17E-03	1444569.375	M 258	12.00	25%	268
341	9.98E-06	2.56E-05	3.17E-03	1447450.375	M 259	12.00	25%	272
342	9.98E-06	2.56E-05	3.17E-03	1483164.375	M 269	12.00	25%	273
343	9.98E-06	2.56E-05	3.17E-03	1510456.875	M 273	12.00	25%	275
344	9.98E-06	2.56E-05	3.17E-03	1512952.625	M 274	12.00	25%	276
345	9.98E-06	2.56E-05	3.17E-03	1515320.625	M 276	12.00	25%	287
346	9.98E-06	2.56E-05	3.17E-03	1515820.875	M 277	12.00	25%	288
347	9.98E-06	2.56E-05	3.17E-03	1563579.875	M 288	12.00	25%	298
348	9.98E-06	2.56E-05	3.17E-03	1578881.125	M 289	12.00	25%	299
349	9.98E-06	2.56E-05	3.17E-03	1757059.125	M 299	12.00	25%	300
350	9.98E-06	2.56E-05	3.17E-03	1761627.125	M 300	12.00	25%	301
351	9.98E-06	2.56E-05	3.17E-03	1766276.625	M 301	12.00	25%	303
352	9.98E-06	2.56E-05	3.17E-03	1777912.125	M 302	12.00	25%	306
353	9.98E-06	2.56E-05	3.17E-03	1787737.125	M 304	12.00	25%	309
354	9.98E-06	2.56E-05	3.17E-03	1800222.656	M 307	12.00	25%	313
355	9.98E-06	2.56E-05	3.17E-03	1829550.906	M 310	12.00	25%	5
356	9.98E-06	2.56E-05	3.17E-03	1941018.156	M 314	12.00	25%	10
357	8.30E-06	1.94E-05	1.65E-03	18268.547	M 6	12.00	25%	17
358	8.30E-06	1.94E-05	1.65E-03	68054.797	M 11	12.00	25%	32
359	8.30E-06	1.94E-05	1.65E-03	137548.547	M 18	12.00	25%	77
360	8.30E-06	1.94E-05	1.65E-03	199517.109	M 33	12.00	25%	78
361	8.30E-06	1.94E-05	1.65E-03	441327.297	M 78	12.00	25%	79
362	8.30E-06	1.94E-05	1.65E-03	443685.547	M 79	12.00	25%	142
363	8.30E-06	1.94E-05	1.65E-03	495570.047	M 80	12.00	25%	147
364	8.30E-06	1.94E-05	1.65E-03	945375.297	M 143	12.00	25%	150
365	8.30E-06	1.94E-05	1.65E-03	959594.797	M 148	12.00	25%	175
366	8.30E-06	1.94E-05	1.65E-03	963421.047	M 151	12.00	25%	176
367	8.30E-06	1.94E-05	1.65E-03	999902.047	M 176	12.00	25%	182
368	8.30E-06	1.94E-05	1.65E-03	1000344.797	M 177	12.00	25%	183
369	8.30E-06	1.94E-05	1.65E-03	1013606.297	M 183	12.00	25%	185
370	8.30E-06	1.94E-05	1.65E-03	1017244.547	M 184	12.00	25%	189
371	8.30E-06	1.94E-05	1.65E-03	1026970.797	M 186	12.00	25%	210
372	8.30E-06	1.94E-05	1.65E-03	1078061.672	M 190	12.00	25%	215
373	8.30E-06	1.94E-05	1.65E-03	1260446.438	M 211	12.00	25%	216
374	8.30E-06	1.94E-05	1.65E-03	1282276.125	M 216	12.00	25%	249
375	8.30E-06	1.94E-05	1.65E-03	1299748.875	M 217	12.00	25%	289
376	3.04E-06	7.78E-06	1.07E-03	1425558.125	M 250	9.00	25%	38
377	3.04E-06	7.78E-06	1.07E-03	1582494.375	M 290	9.00	25%	11
378	2.33E-06	5.43E-06	5.02E-04	9825.047	M 3	9.00	25%	2
379	2.33E-06	5.43E-06	5.02E-04	1184136.938	M 194	9.00	25%	193
380	1.07E-06	2.70E-06	3.94E-04	1315158.750	M 226	7.44	25%	225
381	7.69E-07	1.77E-06	1.68E-04	8197.047	M 2	7.44	25%	1
382	2.45E-07	6.07E-07	8.93E-05	382242.547	M 72	6.00	25%	71
383	2.45E-07	6.07E-07	8.93E-05	428820.047	M 76	6.00	25%	75

Table 2. Maximum Probabilities Over Time for Kemper to Satsuma

Number of Pipe Digs	1995 Max POE	1999 1 (mil/yr) Max POE	1999 7 (mil/yr) Max POE	Odometer	Vetco Pipeline Feature	Predicted Length (in.)	Predicted Depth (%)	Exxon Feature Number
384	2.45E-07	6.07E-07	8.93E-05	1509666.625	M 272	6.00	25%	271
385	2.45E-07	6.07E-07	8.93E-05	1599284.625	M 291	6.00	25%	290
386	1.63E-07	3.67E-07	3.41E-05	5815.797	M 1	6.00	25%	0
387	1.63E-07	3.67E-07	3.41E-05	1352561.547	M 15	6.00	25%	14
388	1.63E-07	3.67E-07	3.41E-05	195059.047	M 32	6.00	25%	31
389	1.63E-07	3.67E-07	3.41E-05	1184029.938	M 193	6.00	25%	192
390	1.63E-07	3.67E-07	3.41E-05	1211402.313	M 195	6.00	25%	194
391	2.94E-10	5.89E-10	9.97E-08	756622.203	M 101	3.00	25%	9
392	2.94E-10	5.89E-10	9.97E-08	771910.547	M 103	3.00	25%	100
393	2.54E-10	7.10E-10	2.40E-07	211370.297	L	6.00	15%	102

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Table 3. Probabilities and their associated depths and RPRs

Probability	Corrosion Depth	Rupture Pressure Ratio
1.0×10^{-1}	69%	0.84
1.0×10^{-2}	60%	0.90
1.0×10^{-3}	54%	0.94
1.0×10^{-4}	48%	0.98
1.0×10^{-5}	44%	1.01
1.0×10^{-6}	39%	1.04
1.0×10^{-7}	35%	1.07
1.0×10^{-8}	32%	1.09
1.0×10^{-9}	29%	1.11
1.0×10^{-10}	25%	1.13

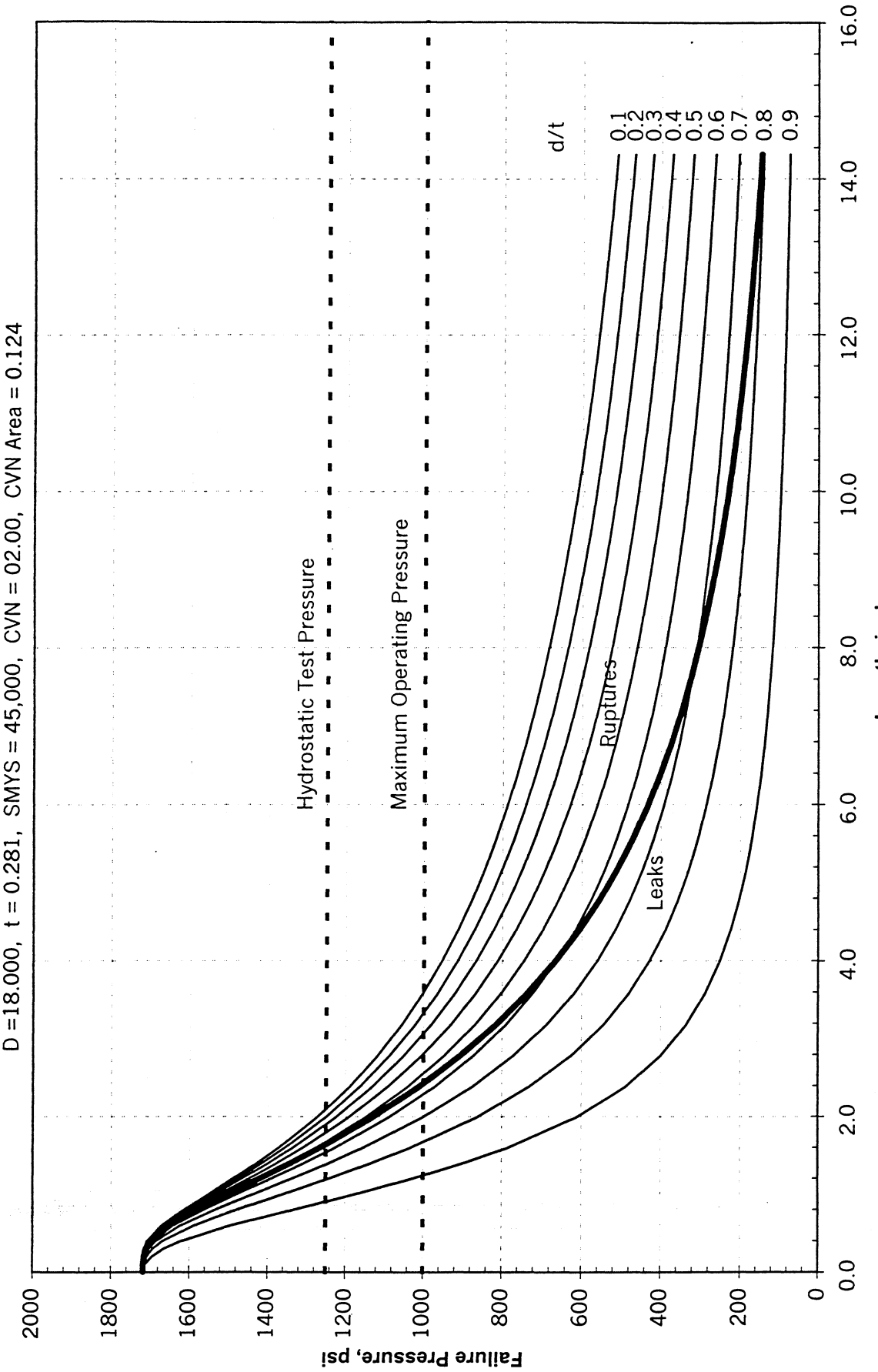


Figure 1. **Failure pressure versus flaw size relationships representing the behavior of a low-toughness region of the ERW bondline.**

RAD 38988

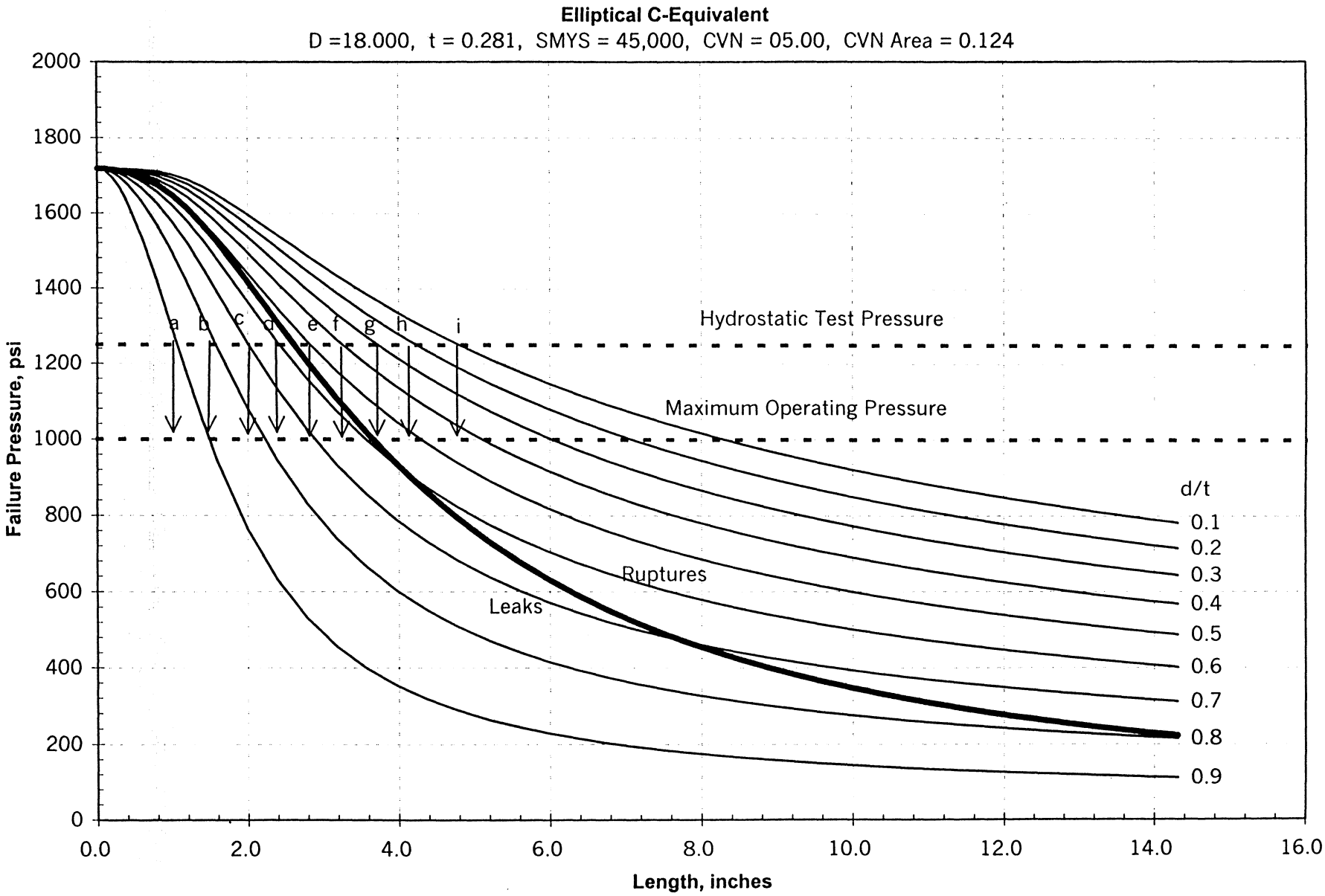


Figure 2. **Failure pressure versus flaw size relationships representing the behavior of a medium toughness region of the ERW bondline.**

RAD 38989

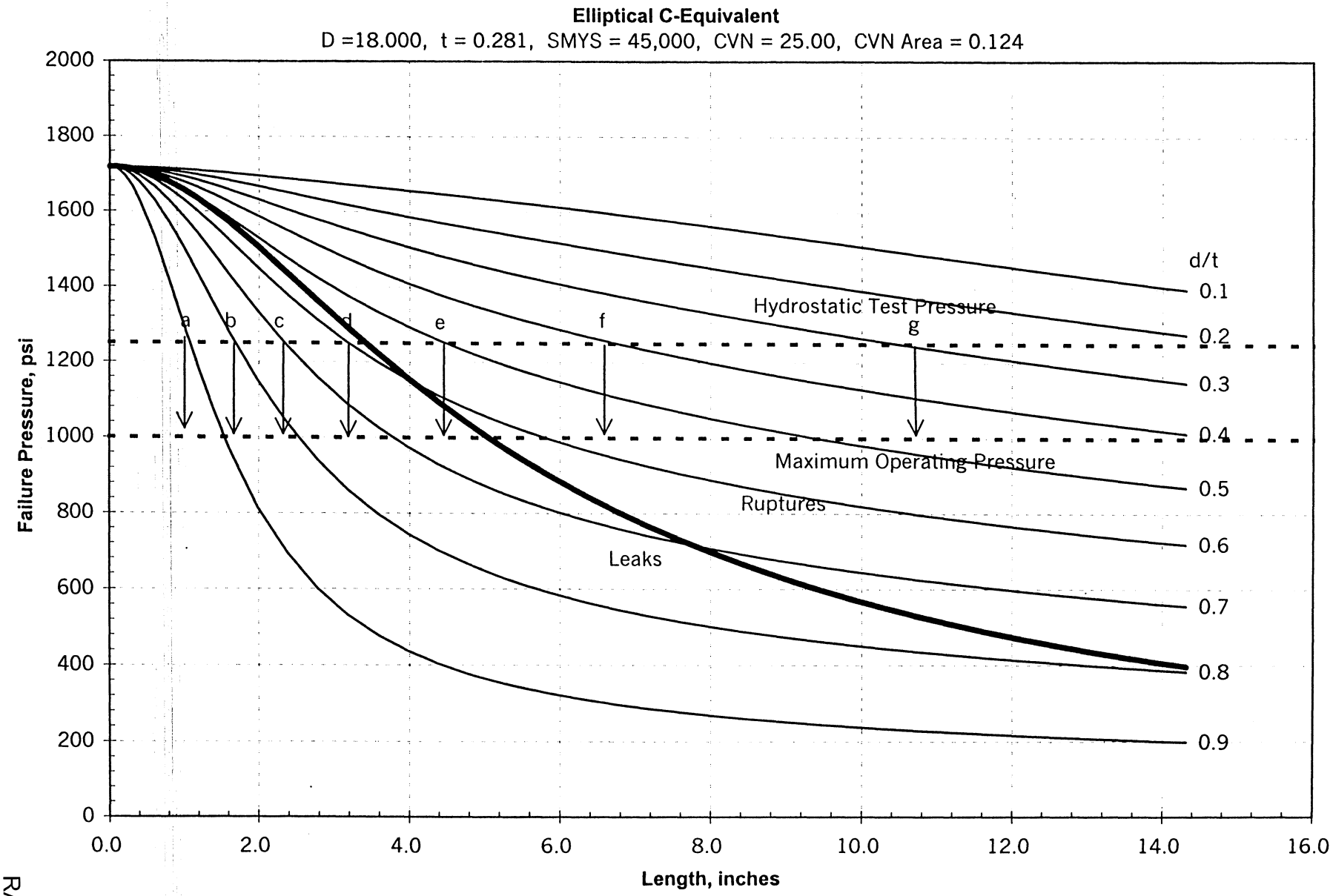
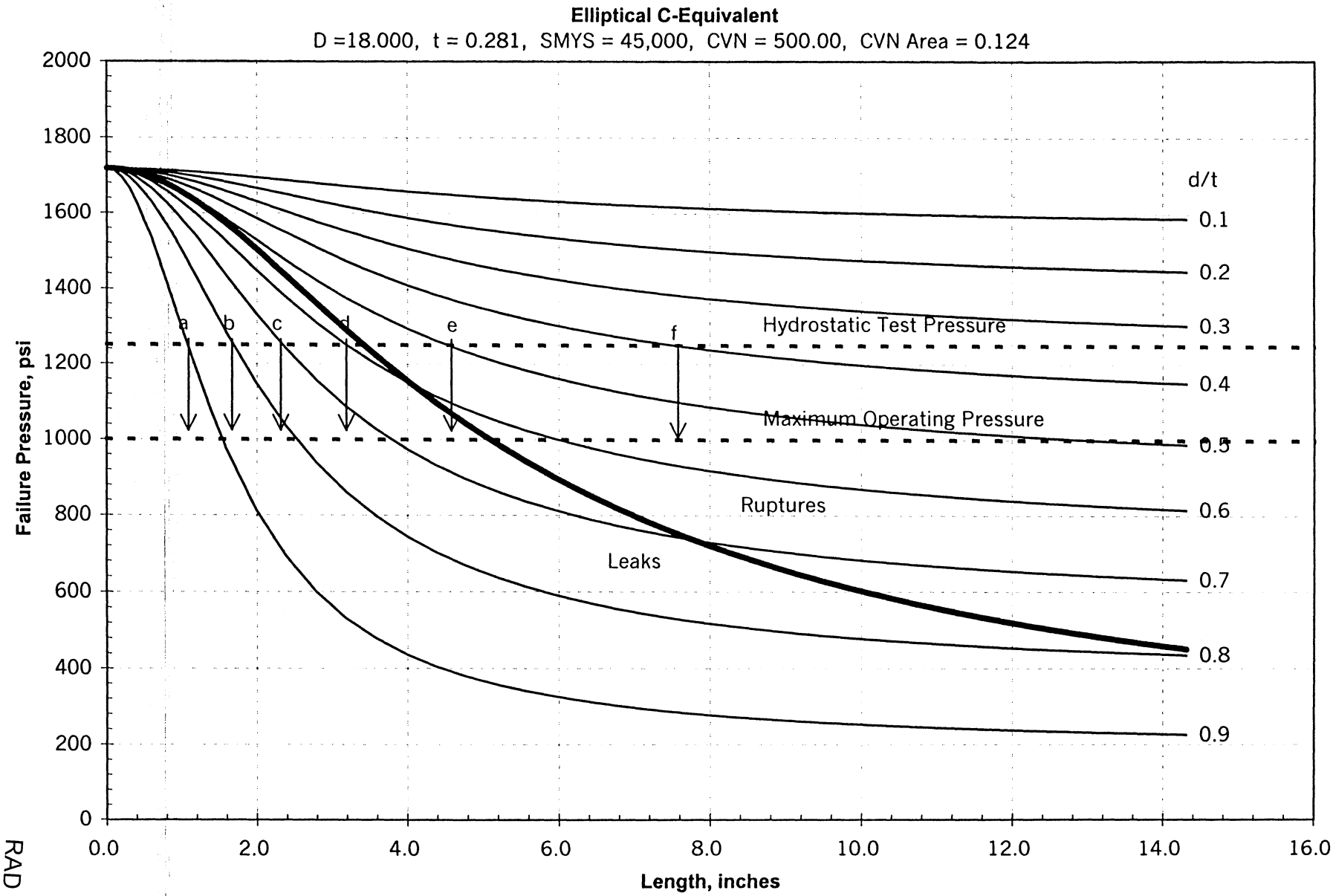


Figure 3. **Failure pressure versus flaw size relationships representing the behavior of the parent metal in 1950-vintage line pipe.**

RAD 38990



RAD 38991

Figure 4. **Failure pressure versus flaw size relationships representing the behavior of blunt flaws (e.g. corrosion) in the parent metal.**

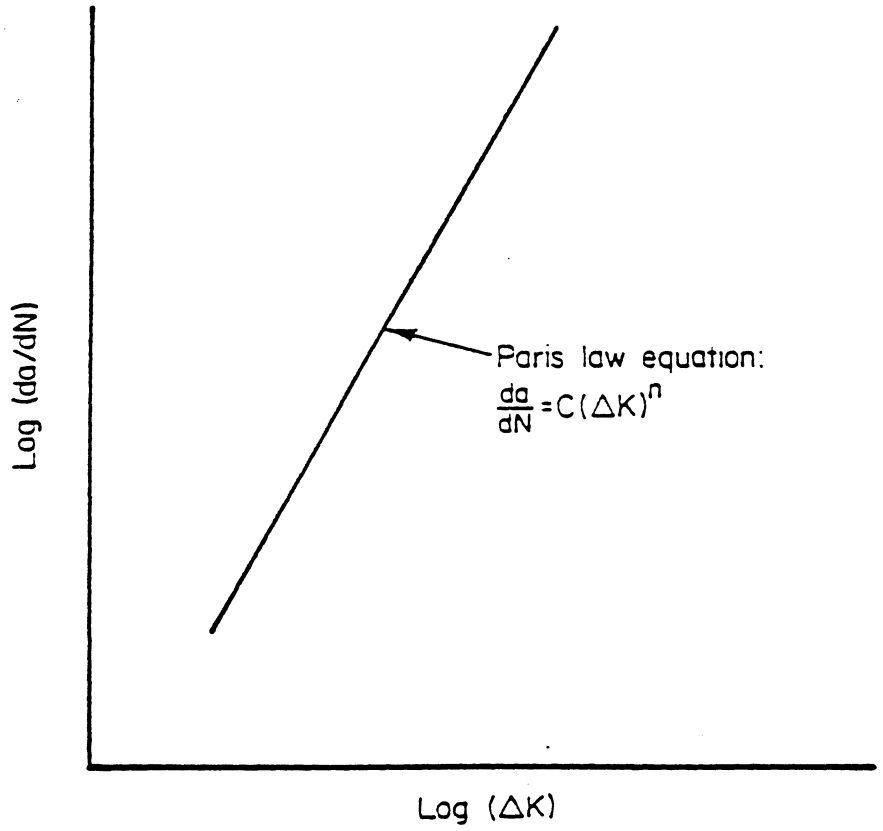


Figure 5. **Typical plot of fatigue-crack-growth rate (da/dN) versus change in stress-intensity factor (ΔK) on log-log coordinates showing Paris Law fit of the data for a specific material.**

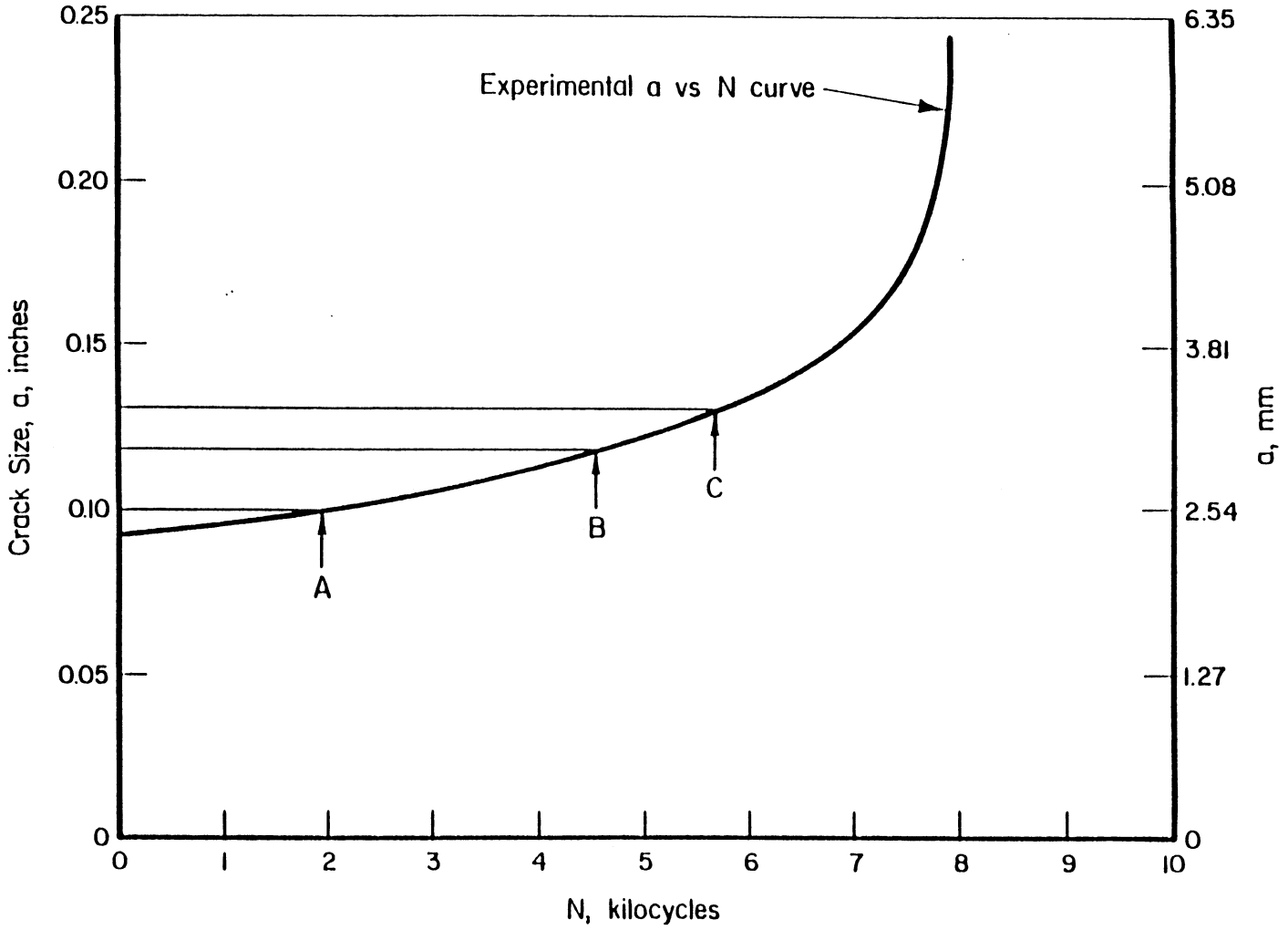


Figure 6. **Example of an actual a versus N relationship used to compare effects of initial flaw size.**

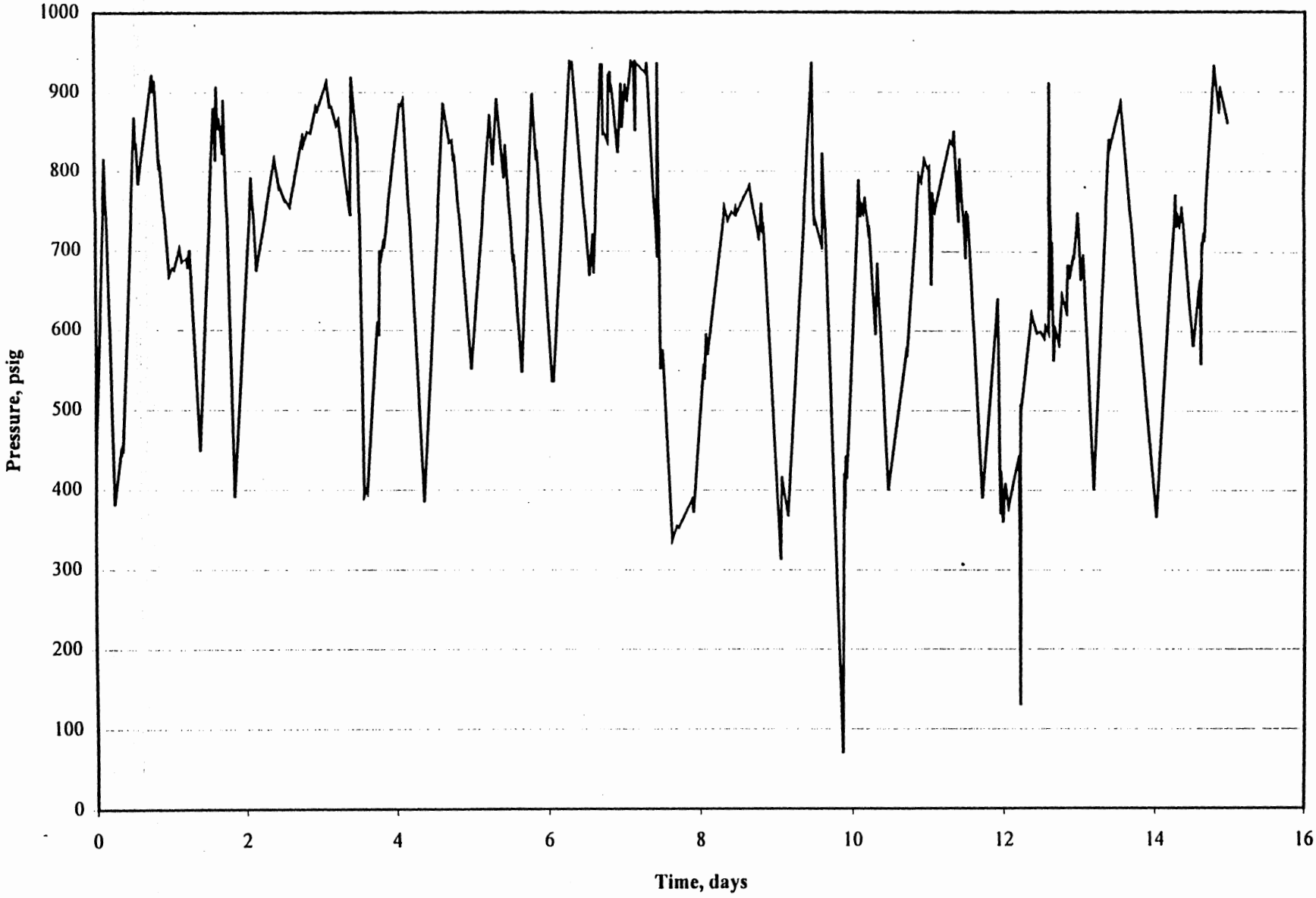


Figure 7. Pressure cycle spectrum for Pipeline X

```
TODAY'S DATE IS 08-24-1999   THE TIME IS 11:24:32  PL15.BAS 3/19/97
THE DATA FILENAME IN USE IS K11.TXT
SECTION 1.  ANALYSIS ID
  1.  ANALYSIS TITLE IS Longhorn
  2.  CLIENT IS Case 11 3/25/98-4/8/98
  3.  PIPELINE NO. IS 15 Actual Days
  4.  DATE & TIME OF DATA FILE CREATION IS 2-27-1998   12:29:00

SECTION 2.  GEOMETRY ID                SECTION 4.  PRESSURE HISTORY-MOP, HTP
  1.  OUTER DIAMETER=18in.                1.  MAXIMUM OPERATING PRESSURE=1000 psi
  2.  WALL THICKNESS=.281 in.             2.  HYDROSTATIC TEST PRESSURE=1250 psi

SECTION 3.  MATERIAL ID                SECTION 5.  SCALE & SHIFT FACTORS
  1.  MATERIAL ID IS X45                  1.  MEAN SHIFT (ADD.) FACTOR=0
  2.  YIELD STRESS=45000 psi              2.  SCALE (MULT.) FACTOR=1
  3.  FLOW STRESS=55000 psi
  4.  CHARPY V-NOTCH=25 ft-lbs          SECTION 6.  PRESSURE HISTORY
  5.  CHARPY V-NOTCH AREA=0.124 sq in                -PMAX,PMIN,CYCLE NO.
  6.  FRACTURE TOUGHNESS= 269407.9    1.  NUMBER OF HISTORIES=125
  7.  YOUNG'S MODULUS,E=30000000
                                       SECTION 7.  da/dN HISTORY
                                         1.  NUMBER OF HISTORIES=1


PIPE DIAMETER=  18 in    WALL THICKNESS=  .281 in
FLOW STRESS  =  55000
CVN          =  25
C =  5.56D-18      n =  2.77
HTP=  1250   NO. OF PRESSURE HISTORIES=  125

These results DO NOT consider THRESHOLD effects
These results DO NOT consider BENDING
The bending multiplication factor is   1.00
These results use an eccentricity (e/t) equal to  0.00,
 include Fc (by WAM), Qmax=Qmin, & allows C1 to grow greater than Cinit,
 eliminated the TWC crack growth model, outputs final crack lengths,
 models area as an elliptical shape (PI/4), and 2c/Rt^.5 <= OR > 9, and
 allows the user to enter stop cycles.  This program considers a bending
 relationship for a SPECIFIC DEFECT GEOMETRY with an eccentricity of 0.0.
 Change lines 4325 and 4326 for different defect geometries.  Corrects KTH
 and SBMin & SBMax with eccentricity, added Multiplication factor for Bending
   1  PMax =  816  PMin =  442  N =      1
   2  PMax =  448  PMin =  446  N =      2
   3  PMax =  453  PMin =  451  N =      2
   4  PMax =  816  PMin =  381  N =      1
 122  PMax =  933  PMin =   70  N =      1
 123  PMax =  933  PMin =  861  N =      1
 124  PMax =  905  PMin =  861  N =      1
 125  PMax =  905  PMin =  861  N =      1

Cycle Spectrum  PMax =  938  PMin =   70

       No. Of Days in the   125 Pressure Pair(s) =       30
No. of Cycles (N's) in the   125 Pressure Pair(s) =      242
                                Conversion Factor =    2,944.33 Cycles/Year
        a       c    Cyles to Years To   a/t     a       c
 a/t INITIAL INITIAL  LEAK     LEAK     FINAL  FINAL   FINAL  PFail PMax
-------------------------------------------------------------------------
 0.900 0.2529  0.540    23082     7.84  0.950  0.2671  0.5523   936  937
 0.800 0.2248  0.845    23470     7.97  0.896  0.2519  0.8555   938  938
 0.700 0.1967  1.175    25164     8.55  0.836  0.2350  1.1826   938  938
 0.600 0.1686  1.595    27680     9.40  0.769  0.2161  1.5998   936  937
 0.500 0.1405  2.245    32908    11.18  0.690  0.1940  2.2475   937  938
 0.400 0.1124  3.385    50332    17.09  0.604  0.1697  3.3861   937  938
 0.300 0.0843  5.255   107686    36.57  0.518  0.1455  5.2552   937  938
 0.200 0.0562  7.705   284830    96.74  0.437  0.1227  7.7051   938  938
 0.100 0.0281 10.530   862968   293.09  0.360  0.1012 10.5302   938  938
```

Figure 8. PIPELIFE calculation for Pipeline X

RAD 38995

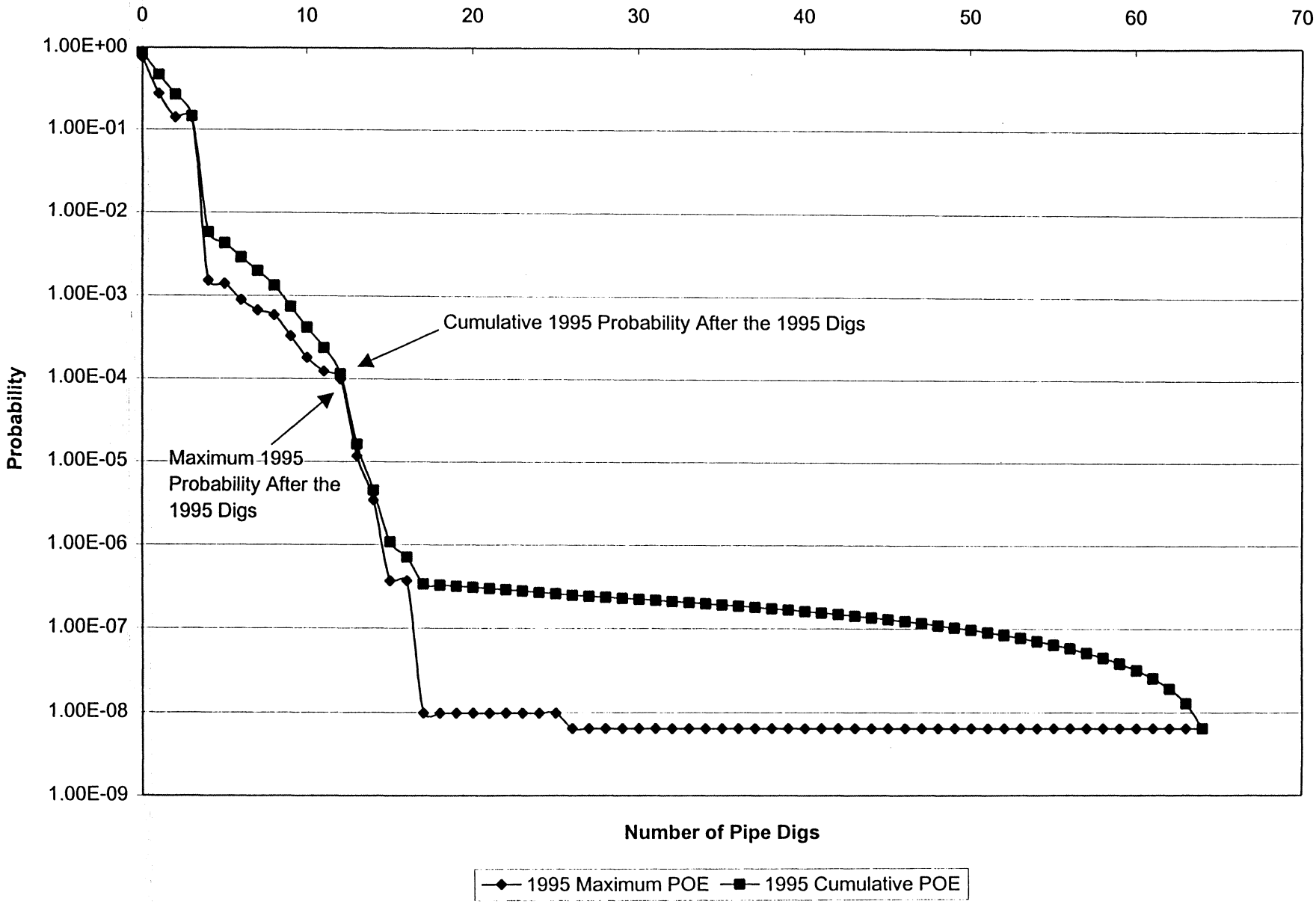
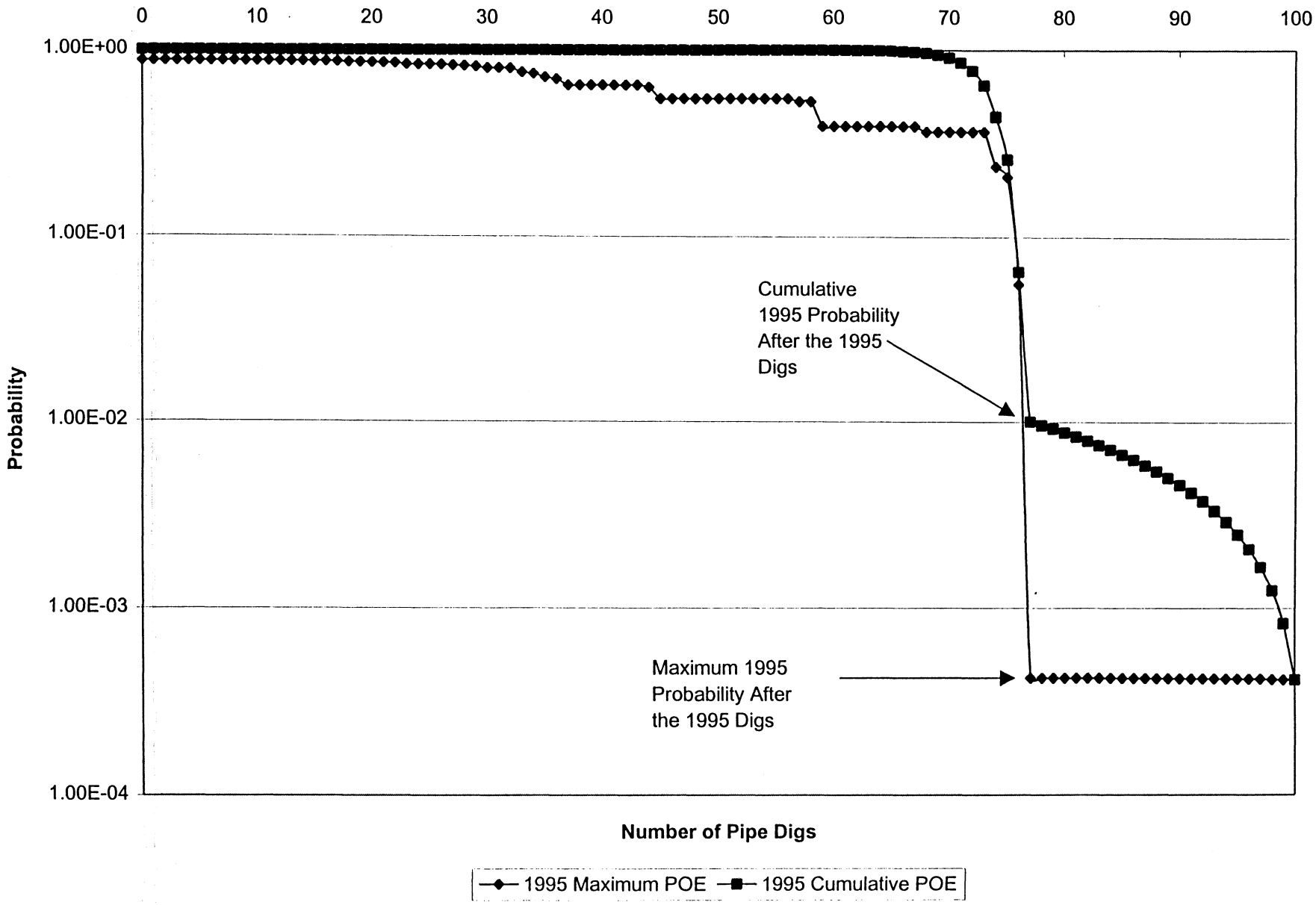


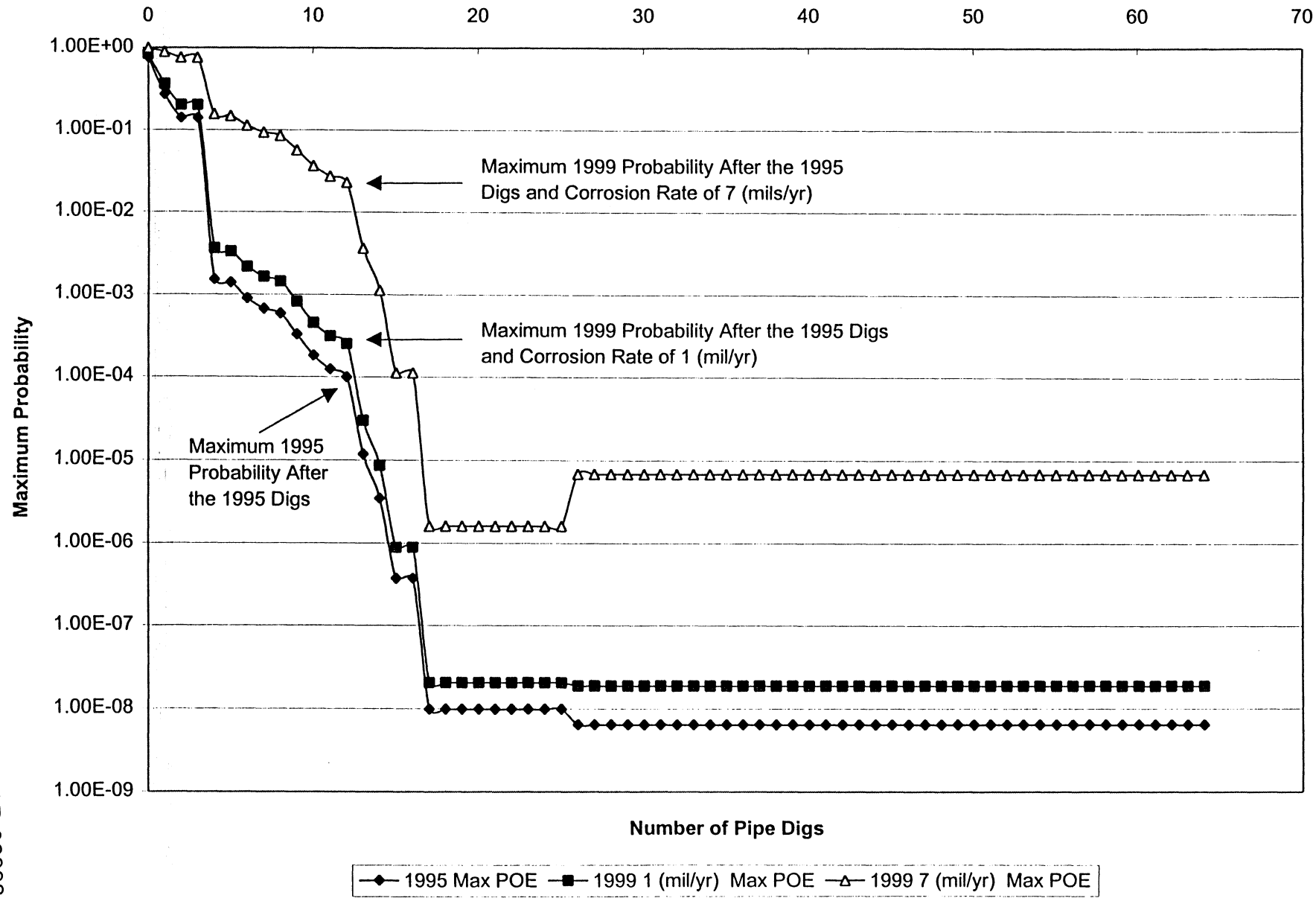
Figure 9. 1995 Probabilities Crane to Kemper

RAD 38996



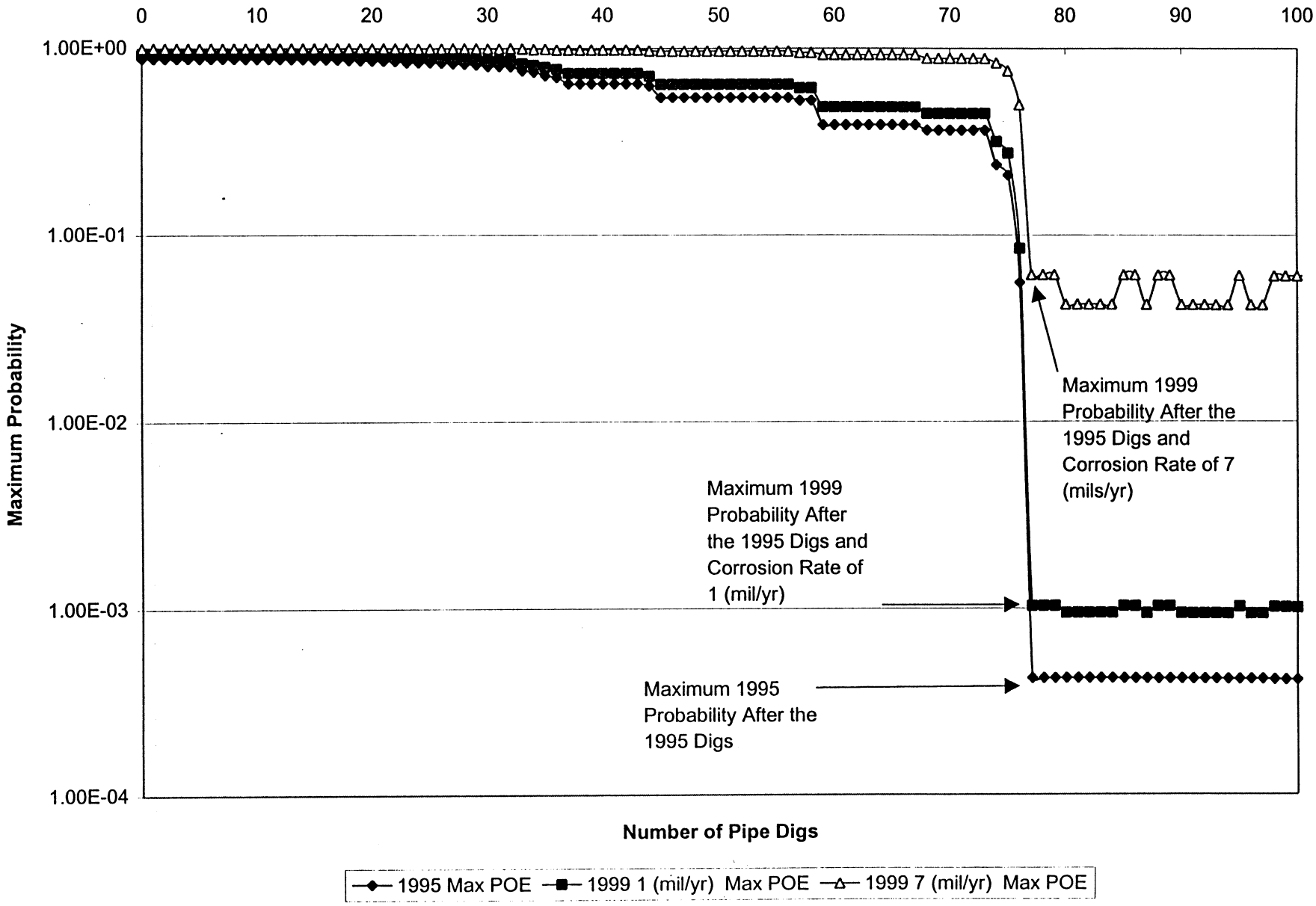
RAD 38997

Figure 10. 1995 Probabilities Kemper to Satsuma



RAD 38998

Figure 11. Maximum Probabilities for1995 and 1999 Crane to Kemper



RAD 38999

Figure 12. Maximum Probabilities for 1995 and 1999 Kemper to Satsuma

FIRST SUPPLEMENT TO THE LONGHORN MITIGATION PLAN

Longhorn Partners Pipeline, L.P. ("Longhorn") submits the following First Supplement to The Longhorn Mitigation Plan:

1. Longhorn Mitigation Commitment No. 39 is supplemented by adding the following language immediately after the end of said Commitment:

   Any changes or modifications proposed by Longhorn to The Longhorn Mitigation Plan shall be for the purpose of adapting to changing technology and circumstances. Changes or modifications will not be proposed for any purpose that would be contrary to Longhorn's Continuing Integrity Commitment set out in Section 3.2.14 hereof that the integrity of the Longhorn pipeline will continue to be maintained and the environment will continue to be protected at levels which are equivalent to those adopted by Longhorn at the start up of its pipeline, judged, at all times, by industry accepted and proven standards (as the same may change and improve over time). At the time Longhorn submits any proposed changes or modifications to the Longhorn Mitigation Plan for DOT/OPS review and approval, the proposed changes or modifications along with Longhorn's justifications therefor shall (a) be made available to the public by posting the same on the Longhorn corporate Internet website and (b) be provided to the General Manager of the Lower Colorado River Authority and to the Mayors of Houston, Austin, and El Paso. The Longhorn Mitigation Plan, and associated Pipeline System Integrity Plan and Operational Reliability Assessment, shall be considered part of Longhorn's written procedures for conducting normal operations and maintenance activities, as specified under 49 C.F.R. § 195.402 and any violation of the Longhorn Mitigation Plan is subject to enforcement under 49 C.F.R. Part 190.

2. The following new Mitigation Commitment No. 40 shall be added to the Longhorn Mitigation Plan:

   Longhorn will monitor or cause to be monitored the river gauge at the Pedernales River. When the river stage reaches 100,000 cfs at the gauge, Longhorn will immediately shut down the pipeline until the river has receded below the action level (100,000 cfs) at the gauge. Longhorn personnel are to make an inspection of the pipeline at the river crossing and any related facilities that could have been damaged by the flood event to determined whether it is safe to commence flowing products through the pipeline again. If any damage is discovered that requires repair before pipeline operations can be safely resumed, those damages will be repaired before operations are resumed.

LONGHORN PIPELINE

Orville D. "O. B." Harris
Vice President, Asset Manager

January 15, 2001

Mr. Jerry J. Malone
Chief of Staff
Office of the Secretary
U.S. Department of Transportation
400 Seventh Street, S.W., Suite 10200
Washington, D.C. 20590

Dear Mr. Malone:

Thank you for meeting with me and other representatives of Longhorn Partners Pipeline, L.P. on December 21, 2000. I know it was a busy time for you and your colleagues, and I appreciate your willingness to hear us out.

You made a valuable suggestion during our meeting, and I am writing to follow up on it. You recommended that Longhorn take the initiative to convene periodic meetings with Austin area community leaders to exchange information regarding the pipeline. You recommended that Longhorn reach out particularly to minority and low income residents who have expressed interest in the pipeline's safe operation.

As I promised during our meeting, Longhorn intends to do what you suggested. Specifically, Longhorn will convene not less than two community meetings annually, and we will expressly invite participation by the community organizations that have contacted your office: PODER and the NAACP.

We have always sought to work closely with our neighbors, and I have personally spent many hundreds of hours meeting with citizens and community leaders in Houston, Austin, El Paso and many other communities along the line. We pledged in the Longhorn Mitigation Plan to share extensive operational and maintenance information with the public, and to support an on-going public education program. The litigation brought against Longhorn has frustrated some communications, but it has not weakened our determination to work constructively with the residents and officials of the communities through which our pipeline passes.

3633 Allen Parkway, Suite 220
Houston, Texas 77019
Tel (713) 529-1555
Fax (713) 524-3999

Again, thank you for meeting with me and for your helpful suggestion, which Longhorn is pleased to accept.

Sincerely yours,

Orville D. Harris

cc: Rosalind A. Knapp, Esq.
Paul Sanchez, Esq.
Rod Seeley
Carter Montgomery
Allan Wolff

bcc: Barry Cannaday
Vince Murchison
Tom Jensen
Patti Barker
Russ Korbe
Kent Myers
Bob Cronk

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION

ETHEL SPILLER,[1]	§	
MARIAN COLLINS,	§	
BARTON SPRINGS - EDWARDS	§	
AQUIFER CONSERVATION DISTRICT,	§	
and DAVID ROBERTSON,	§	
	§	
Plaintiffs,	§	
	§	
CITY OF AUSTIN and LOWER	§	
COLORADO RIVER AUTHORITY,	§	
	§	
Plaintiffs - Intervenors,	§	
	§	
v.	§	**CIVIL ACTION NO. A 98 CA 255 SS**
	§	
ROBERT M. WALKER, in his official capacity as Acting Secretary of the Department of the Army,	§	
RODNEY SLATER, in his official capacity as Secretary of Transportation,	§	
CAROL A. BROWNER, in her official capacity as Administrator of the Environmental Protection Agency,	§	
UNITED STATES, and	§	
LONGHORN PARTNERS PIPELINE, L.P.,	§	
	§	
Defendants.	§	

SETTLEMENT AGREEMENT

THIS AGREEMENT is made by and between Plaintiff Intervenor, the Lower Colorado

[1] Ethel Spiller has withdrawn from the case but she is listed in the caption of the motion to avoid confusion.

River Authority ("LCRA"), Defendant Longhorn Partners Pipeline, L.P. ("Longhorn" or "LPP") and Defendants Secretary of the U.S. Department of Transportation; Administrator of the Environmental Protection Agency, Secretary of the Department of the Army, and the United States ("Federal Agencies").

WHEREAS, LCRA filed an Original Complaint and Motion for Preliminary Injunction on August 7, 1998 against Longhorn and Federal Agencies;

WHEREAS, the Court entered a preliminary injunction on August 25, 1998, and required federal government to prepare an environmental impact statement ("EIS") in accordance with 42 U.S.C. §§ 4321-4347 ("NEPA") and enjoined Longhorn from transporting petroleum products in the pipeline until further order of the Court;

WHEREAS, on March 5, 1999, the Court approved a Settlement Agreement entered into by all parties to the above styled and numbered cause ("March 1999 Settlement") which called for an Environmental Assessment ("EA") in accordance with NEPA and the stipulations of such settlement;

WHEREAS, Federal Agencies conducted the EA and issued a Finding of No Significant Impact ("FONSI") on November 3, 2000 which was conditioned upon Longhorn's implementation of certain mitigation measures (the "Longhorn Mitigation Plan");

WHEREAS, the March 1999 Settlement provided that LCRA, and the other Plaintiffs, could challenge the sufficiency of the EA and the FONSI in the event that LCRA or the other Plaintiffs did not believe that the EA had been conducted in accordance with NEPA;

WHEREAS, LCRA challenged the EA and the FONSI in an amended Complaint dated January 22, 2001 and asserted along with other allegations that the mitigation requirements were insufficient to protect the Highland Lakes which provide drinking water for 750,000 or more people and the water of the Colorado River;

WHEREAS, pursuant to the standards and guidelines set out in its System Integrity Plan, Longhorn has agreed to provide a definitive time table for implementation of the measures set out in Exhibit A attached hereto;

WHEREAS, it is the position of Longhorn that the measures set out in Exhibit A attached hereto are consistent with its existing commitments and obligations to protect the environment under the standards and guidelines set out in its System Integrity Plan and that these measures are the result of further definition of existing obligations and the setting of specific timetables;

WHEREAS, it is the position of LCRA that the measures set out in Exhibit A attached hereto together with the measures previously agreed to in the Longhorn Mitigation Plan, provide adequate protection and assurances that the drinking water supply for Central Texas, the Highland Lakes and the waters and natural resources of the Colorado River will be adequately

protected from the potential risks of the operation of the Longhorn Pipeline;

NOW THEREFORE, in consideration of the foregoing recitals, the mutual agreements and promises contained in this Agreement, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, LCRA, Longhorn and the Federal Agencies agree as follows:

1. Longhorn agrees to timely perform and implement the protective environmental measures described in Exhibit A, which is attached hereto and incorporated herein for all purposes and agrees to timely perform and implement the terms and conditions of this Settlement Agreement.

2. Longhorn agrees to notify LCRA when petroleum products are introduced into the Longhorn Pipeline which for purposes of this Agreement shall be considered the Longhorn Pipeline "start-up" date.

3. Longhorn agrees to consult with LCRA regarding field siting and location of new pipe and valves which will be constructed or installed as provided in Items 1 and 2 of Exhibit A. For purposes of this Agreement the term "to consult with" shall mean that Longhorn will seek and consider in good faith any comments submitted by LCRA and in the event that Longhorn can not agree with LCRA on the matter, then Longhorn shall provide LCRA with a written explanation of the reasons for its position.

4. Longhorn represents that its good faith calculations, based upon accepted engineering standards, reflect that upon implementation of Item No.2 to Exhibit A, draindown volume between valves of all sections of pipe in the Pedernales River basin will be less than

200,000 gallons, except for approximately 3000 feet of the eastern end of segment 5 which will have a draindown volume of less than 231,000 gallons.

5. Longhorn agrees to provide LCRA with copies of all plans, procedures and information developed pursuant to Item 3, Exhibit A for review and comment and agrees to consult with LCRA relative to such plans and procedures. LCRA or Longhorn shall be allowed to share these plans and procedures with potentially affected communities.

6. During the first five (5) years of operation, Longhorn agrees to conduct three full-scale response drills in the Pedernales River basin. These drills will be initiated by LCRA. Provided however, that such drills will not be initiated more than once per year and the first such drill will not be initiated any earlier than six (6) months after start-up. LCRA intends to initiate notice of the drill during storm conditions when flows for the Pedernales River at the Johnson City gauge approach or exceed approximately 5,000 cfs. Longhorn shall prepare a formal critique and report of each such exercise within 30 days of the exercise, and shall correct any deficiencies in its capabilities to meet the requirements in its Emergency Response Plan. Such reports and a report of the corrective actions taken shall be provided to the LCRA.

Thereafter, Longhorn agrees to conduct a full-scale response drill at least once every three (3) years in the Pedernales basin. Longhorn shall notify LCRA when it conducts these drills and shall share information with LCRA regarding the results of the drills. Longhorn agrees to amend its Emergency Response Plan to implement any corrective action identified as a result of such drills.

7. Longhorn agrees that all sections of the pipeline through the Pedernales River watershed (approximate milepost 188 through 220) that are currently classified as Tier I will be

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION

ETHEL SPILLER,[1]	§	
MARIAN COLLINS,	§	
BARTON SPRINGS - EDWARDS	§	
AQUIFER CONSERVATION DISTRICT,	§	
and DAVID ROBERTSON,	§	
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Plaintiffs,	§	
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WHEREAS, the Court entered a preliminary injunction on August 25, 1998, and required federal government to prepare an environmental impact statement ("EIS") in accordance with 42 U.S.C. §§ 4321-4347 ("NEPA") and enjoined Longhorn from transporting petroleum products in the pipeline until further order of the Court;

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WHEREAS, Federal Agencies conducted the EA and issued a Finding of No Significant Impact ("FONSI") on November 3, 2000 which was conditioned upon Longhorn's implementation of certain mitigation measures (the "Longhorn Mitigation Plan");

WHEREAS, the March 1999 Settlement provided that LCRA, and the other Plaintiffs, could challenge the sufficiency of the EA and the FONSI in the event that LCRA or the other Plaintiffs did not believe that the EA had been conducted in accordance with NEPA;

WHEREAS, LCRA challenged the EA and the FONSI in an amended Complaint dated January 22, 2001 and asserted along with other allegations that the mitigation requirements were insufficient to protect the Highland Lakes which provide drinking water for 750,000 or more people and the water of the Colorado River;

WHEREAS, pursuant to the standards and guidelines set out in its System Integrity Plan, Longhorn has agreed to provide a definitive time table for implementation of the measures set out in Exhibit A attached hereto;

WHEREAS, it is the position of Longhorn that the measures set out in Exhibit A attached hereto are consistent with its existing commitments and obligations to protect the environment under the standards and guidelines set out in its System Integrity Plan and that these measures are the result of further definition of existing obligations and the setting of specific timetables;

WHEREAS, it is the position of LCRA that the measures set out in Exhibit A attached hereto together with the measures previously agreed to in the Longhorn Mitigation Plan, provide adequate protection and assurances that the drinking water supply for Central Texas, the Highland Lakes and the waters and natural resources of the Colorado River will be adequately

protected from the potential risks of the operation of the Longhorn Pipeline;

NOW THEREFORE, in consideration of the foregoing recitals, the mutual agreements and promises contained in this Agreement, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, LCRA, Longhorn and the Federal Agencies agree as follows:

1. Longhorn agrees to timely perform and implement the protective environmental measures described in Exhibit A, which is attached hereto and incorporated herein for all purposes and agrees to timely perform and implement the terms and conditions of this Settlement Agreement.

2. Longhorn agrees to notify LCRA when petroleum products are introduced into the Longhorn Pipeline which for purposes of this Agreement shall be considered the Longhorn Pipeline "start-up" date.

3. Longhorn agrees to consult with LCRA regarding field siting and location of new pipe and valves which will be constructed or installed as provided in Items 1 and 2 of Exhibit A. For purposes of this Agreement the term "to consult with" shall mean that Longhorn will seek and consider in good faith any comments submitted by LCRA and in the event that Longhorn can not agree with LCRA on the matter, then Longhorn shall provide LCRA with a written explanation of the reasons for its position.

4. Longhorn represents that its good faith calculations, based upon accepted engineering standards, reflect that upon implementation of Item No.2 to Exhibit A, draindown volume between valves of all sections of pipe in the Pedernales River basin will be less than

200,000 gallons, except for approximately 3000 feet of the eastern end of segment 5 which will have a draindown volume of less than 231,000 gallons.

5. Longhorn agrees to provide LCRA with copies of all plans, procedures and information developed pursuant to Item 3, Exhibit A for review and comment and agrees to consult with LCRA relative to such plans and procedures. LCRA or Longhorn shall be allowed to share these plans and procedures with potentially affected communities.

6. During the first five (5) years of operation, Longhorn agrees to conduct three full-scale response drills in the Pedernales River basin. These drills will be initiated by LCRA. Provided however, that such drills will not be initiated more than once per year and the first such drill will not be initiated any earlier than six (6) months after start-up. LCRA intends to initiate notice of the drill during storm conditions when flows for the Pedernales River at the Johnson City gauge approach or exceed approximately 5,000 cfs. Longhorn shall prepare a formal critique and report of each such exercise within 30 days of the exercise, and shall correct any deficiencies in its capabilities to meet the requirements in its Emergency Response Plan. Such reports and a report of the corrective actions taken shall be provided to the LCRA.

Thereafter, Longhorn agrees to conduct a full-scale response drill at least once every three (3) years in the Pedernales basin. Longhorn shall notify LCRA when it conducts these drills and shall share information with LCRA regarding the results of the drills. Longhorn agrees to amend its Emergency Response Plan to implement any corrective action identified as a result of such drills.

7. Longhorn agrees that all sections of the pipeline through the Pedernales River watershed (approximate milepost 188 through 220) that are currently classified as Tier I will be

managed as Tier II (sensitive) for purposes of the Longhorn Mitigation Plan.

8. For any pump stations located in the Pedernales River watershed, Longhorn agrees to provide LCRA with copies of its submittal prepared pursuant to Mitigation Item No. 36, of the Longhorn Mitigation Plan thirty (30) days prior to the formal submittal of such studies to the Department of Transportation.

9. Federal Agencies and Longhorn agree that Exhibit A shall be incorporated into the Longhorn Mitigation Plan as if such measures had originally been part of the Longhorn Mitigation Plan.

10. Federal Agencies agree that all enforcement provisions of the Longhorn Mitigation Plan and applicable laws shall apply to the measures set out in Exhibit A to the full extent of the Department of Transportation's regulatory authority.

11. Longhorn agrees, so long as the pipeline is used for refined products service, that in the event that the mitigation measures in Exhibit A or in the Longhorn Mitigation Plan are amended, removed, changed or invalidated in whole or in part for any reason, that it agrees to fully comply and implement the Exhibit A and the Longhorn Mitigation Plan requirements in the Colorado River Watershed regardless of the enforceability, applicability, recognition of the measures by the Federal Agencies or any regulatory agency and as if such amendment, removal, change or invalidation had not occurred. Provided however, that any change or amendment to the Longhorn Mitigation Plan or Exhibit A that is made for the purpose of adapting to changing technology and circumstances while maintaining equivalent or improved mitigation measures or any change or amendment to the Longhorn Mitigation Plan or Exhibit A that is required by court order, or by law, rule or regulation shall not be prohibited by this provision.

12. In particular, Longhorn hereby affirms Longhorn Mitigation Commitment No. 35 and agrees that it will not transport any petroleum product containing MTBE or similar aliphatic ether additives, nor allow any other person to transport any petroleum products containing MTBE or similar aliphatic ether additives in the Longhorn pipeline in greater than trace amounts. In the event that Longhorn is required by Court Order, or by law, rule, or regulation to transport petroleum products in the pipeline containing MTBE, or similar aliphatic ether additives, Longhorn agrees that it shall implement additional mitigation measures sufficient to prevent MTBE, or similar aliphatic ether additives from the Longhorn pipeline, from contaminating any public drinking water supply of the Highland Lakes at the intake of such drinking water supply in a concentration of 15ppb or greater. Longhorn agrees to consult with and obtain approval from LCRA regarding the sufficiency of such measures. In the event that Longhorn and LCRA can not agree to the method, manner or sufficiency of the supplemental mitigation measures, the parties agree that they shall submit the controversy to binding arbitration in accordance with the provisions of Exhibit C, attached hereto and incorporated herein by reference for all purposes. In lieu of the above, Longhorn can choose to replace all pipe (not previously replaced) with .375 inch thick wall X-65 pipe, or better, across the length of the Pedernales watershed. Such pipe shall be buried 5 feet or greater and construction of the new pipe shall be completed prior to Longhorn's transport of any petroleum product containing MTBE, or similar aliphatic ether additives.

13. LCRA agrees that immediately upon execution of this Agreement by Longhorn and the Federal Agencies that it will immediately cause to be filed a Motion to Dismiss this lawsuit with Prejudice to refile any suit against Longhorn or the Federal Agencies relative to the

March 1999 Settlement or relative to any action or cause of action, matter, or issue which has arisen or which could have arisen relative to LCRA's claims against the Longhorn pipeline project, Longhorn or Federal Agencies consistent with the provisions of paragraph 14 below. Federal Agencies and Longhorn agree to stipulate to the Motion to Dismiss and Order attached hereto as Exhibit B.

14. By execution of this Agreement, the parties agree to release each other from any legal rights, actions, claims, suits, damages, or demands of any nature, and whether such claim or cause of action was made in this lawsuit or not and whether known or unknown at the time of this Agreement and which in any way arose out of or in relation to the construction or ultimate operation of the Longhorn Pipeline, the Environmental Assessment, the NEPA analysis, the March 1999 Settlement or any other matter or issue related thereto. It being the intent of the parties to finally settle and dispose of any and all claims, suits, demands, causes of action, issues, controversies, costs or legal obligations whatsoever, that arose or could have arisen whether known or unknown both directly and indirectly associated with the Longhorn Pipeline project and LCRA's participation in opposing said project and also including any claims, suits, demands, damages, or actions resulting from or that could result from LCRA's participation, support, coordination, information, consultation, cooperation or assistance by LCRA with or on behalf of the other plaintiffs to this lawsuit or any other person.

15. LCRA agrees that upon execution of this Agreement it shall not voluntarily aid, assist or cooperate with any claimant or plaintiff or their attorneys or agents in opposing the Longhorn Pipeline project. However, it shall not be a breach of this provision if LCRA is required by law or subpoena to provide information or to testify in depositions or at trial.

16. LCRA, Longhorn, and Federal Agencies agree that notwithstanding the above language, no party to this Agreement shall be prevented from enforcing the terms of this Agreement in the event of a breach of this Agreement by LCRA, Longhorn or Federal Agencies. Any failure by Longhorn to fully complete or fully implement in all material respects any mitigation measure identified in Exhibit A or in the Longhorn Mitigation Plan or any term or condition of this Agreement shall be considered a material breach of this Agreement.

17. To the extent that LCRA may have any rights to appeal arising out of this lawsuit, such rights are hereby waived.

18. To the extent that Longhorn or Federal Agencies may participate in any appeal or litigation in furtherance of this lawsuit with the other Plaintiffs, Longhorn and Federal Agencies agree that such appeal or litigation shall not affect the validity of this Agreement.

19. Longhorn agrees not to seek or support any Legislation, rule-making, or litigation whether federal or state which would attempt to invalidate this Agreement in whole or in part. LCRA agrees not to seek or support any Legislation, rule-making, or litigation whether federal or state which would attempt to hinder, delay or prevent Longhorn from commencing operation of its pipeline.

20. Longhorn represents that no other person or entity has ownership or control over the pipeline which would prevent Longhorn from implementing the mitigation measures described in Exhibit A or in the Longhorn Mitigation Plan. Longhorn represents that it is unaware of any fact, condition or situation which would prevent it from complying with the terms and conditions of this Agreement.

21. Each party executing this Agreement represents that they have the necessary

authority to execute this Agreement on behalf of the entity or party they purport to represent.

22. The parties to this Agreement agree that this Agreement is contingent upon the Court approving LCRA's Motion to Dismiss with Prejudice. In the event that the Court does not approve LCRA's Motion to Dismiss with Prejudice or in the event that LCRA, Longhorn or Federal Agencies fail to execute this Agreement, this Agreement shall become null and void and the parties shall be left in the status quo ante.

23. The terms "LCRA," "Longhorn" and "Federal Agencies" shall include in addition to the entity or entities represented by each of them, their respective officers, directors, shareholders, employees, attorneys, agents, successors in interest, heirs, executors, administrators, legal representatives, partners, and assigns.

24. Venue for enforcement of this Agreement if governed by federal law shall be in the United States District Court for the Western District of Texas, Austin Division, Travis County, Texas; or if governed by Texas law, venue shall be in State District Court, Travis County, Texas.

25. The parties agree that this Agreement shall be binding upon and inure to the benefit of the parties, and their respective agents, representatives, successors and assigns.

26. The parties hereby acknowledge that no admission is made or inferred by the execution of this Agreement as to the potential outcome of the pending lawsuit or as to the strength or weakness of any parties' claim, defense or argument. This Agreement is entered into to resolve the controversy among and between these parties and for the sole purpose of avoiding the uncertainties of litigation.

27. Each party further agrees, declares and warrants to all other parties to this

Agreement that (1) they are freely and voluntarily entering into this Agreement, based upon their own evaluation of the risks and benefits of going forward with litigation; (2) they have conferred with their counsel of choice and have had the legal consequences and affects of entering into this Agreement explained to them; and (3) no promises, inducements, representations, or conduct by any other party, agent or attorney, or any other person have induced them to execute this Agreement.

28. This Agreement may be executed in multiple identical counterparts, any of which shall be an original, but all of which shall constitute one document.

29. Should any provision of this Agreement be declared, or be determined by any Court to be illegal or invalid, the validity of the remaining parts, terms or provisions of this Agreement shall not be affected.

30. The parties to this Agreement agree to cooperate fully and to take all further action necessary and appropriate to give full force and effect to the terms, spirit and intent of this Settlement Agreement.

31. This Agreement is entered into by the parties signing below and shall become effective when all parties have executed it and the Court has granted LCRA's Motion of Dismissal.

32. The parties to this Agreement agree that Federal Agencies shall only be bound by the following provisions of this Agreement: Paragraphs 9, 10, 14, 16, 18, and 21 through 32.

STATE OF TEXAS §
§
COUNTY OF TRAVIS §

Plaintiff:
LOWER COLORADO RIVER AUTHORITY

By: _____
Joseph Beal
Title: _____
Date: _____

SWORN TO AND SUBSCRIBED by the undersigned on this the _____ day of _____, 2001.

_____
Notary Public, in and for the State of Texas

STATE OF _____ §
§
COUNTY OF _____ §

Federal Agencies:
Secretary, U.S. Department of Transportation; Administrator, Environmental Protection Agency; Secretary, Department of the Army and the United States

By: _____
John Watts
Environmental and Natural Resources Division
U.S. Department of Justice on behalf of
listed Federal Agencies

Title: _____
Date: _____

SWORN TO AND SUBSCRIBED by the undersigned on this the _____ day of _____, 2001.

_____
Notary Public, in and for the State of
_____

STATE OF TEXAS §
§
COUNTY OF DALLAS §

Longhorn:
LONGHORN PARTNERS PIPELINE, L.P.
By: Longhorn Partners GP, L.L.C.
Its General Partner

By: _____
Carter Montgomery
President and Chief Executive Officer
Date: May 14, 2001

SWORN TO AND SUBSCRIBED by the undersigned on this the 14th day of May, 2001.

JEANNINE M. GIBBS
MY COMMISSION EXPIRES
June 29, 2002

_____
Notary Public, in and for the State of Texas

EXHIBIT A TO SETTLEMENT AGREEMENT

Longhorn Partners Pipeline, L.P. ("Longhorn") submits the following for The Longhorn Mitigation Plan for the purposes of providing a definitive time table for certain of the protective measures Longhorn has agreed to implement under the standards and guidelines set out in its System Integrity Plan.

1. (a) The following language will be added to Longhorn Mitigation Commitment No. 3:

Longhorn shall install additional new pipe for approximately six miles in the Pedernales River watershed that is characterized as having a time of travel for a spill from the pipeline to Lake Travis of eight hours or less.

(b) The following language will be added to Longhorn Mitigation Appendix Item 3:

Longhorn will replace approximately six miles of existing pipeline in the Pedernales River watershed that is characterized as having a time of travel for a spill from Lake Travis of eight hours or less. Pipeline segments having this characteristic are approximately as follows:

Segment No.	Approximate Pipeline Station to Station	Description
1	9968+64 to 10057+00	Beginning at the watershed divide between Barton Creek and the Pedernales River then continuing west for approximately 8,836 feet and across four distinct tributaries to the Pedernales River to a high point with an elevation of approximately 1,190 feet.
2	10107+00 to 10142+00	Beginning at a high point with elevation 1,190 feet between two tributaries of and just east of Flat Creek, then continuing west for approximately 3,500 feet and across two tributaries of Flat Creek to a high point with an elevation of approximately 1,160 feet.
3	10179+00 to 10209+00	Beginning approximately 700 feet west of the Hays/Blanco County line and approximately 1,400 feet east of Flat Creek at an elevation of approximately 940 feet, then continuing west for approximately 3,000 feet and across Flat Creek to a high point with an elevation of approximately 1060 feet.
4	10275+00 to 10375+00	Beginning approximately 1,500 feet inside of the east boundary of Pedernales State Park at a high point with an elevation of approximately 1,160 feet, then continuing west for approximately 10,000 feet and through the park to a high point at the approximate west boundary of the park with

Segment No.	Approximate Pipeline Station to Station	Description
		an elevation of approximately 1,130 feet.
5	10459+00 to 10509+00	Beginning approximately 200 feet east of a tributary to the Pedernales River and approximately 0.5 miles east of the Pedernales River at an elevation of approximately 950 feet, then continuing west for approximately 5,000 feet and across the Pedernales River to a high point with an elevation of approximately 1,020 feet which is approximately 200 feet west of a small drainage way leading to a tributary to the Pedernales River.

Actual beginning and ending points will be determined in the field by Longhorn after consulting with LCRA.

The new pipe will be constructed with a minimum depth of cover of five feet. The new pipe will be 0.375 inch thick wall X-65 pipe (which is the same grade and thickness of pipe to be used in the Edwards Aquifer Replacement).

Segment 5 crossing the Pedernales River will be completed prior to the date of pipeline startup. Horizontal directional drill construction methods will be used to install the section of pipe under the Pedernales River. Segments 1 through 4 will be replaced as determined by the System Integrity Plan and Operational Reliability Assessment, but in any case no later than seven years from the startup date.

2. The following language will be added to Longhorn Mitigation Appendix Item 22:

Longhorn will install new check valves and relocate currently planned check valves at the approximate locations through the Colorado River basin described below to reduce the total potential drain down volumes.

River Basin	**Approximate Station Location**	**Location Description**	**Notes**
Pedernales River (maximum drain down volume of 200,000 gallons)	10210-24	Near Flat Creek	Previously included in Final EA
	10263+24		**New valve**
	10503+95	Near the Pedernales River	Previously installed
	10538+00		Previously included in Final EA
	10742+50	Near Cottonwood Creek	Previously included in Final EA
	10850+24		**New valve**
	11192+24		Relocation of check valve required by EA, originally at 11092+41
	11310+24	Near White Oak	Relocation of check valve required by EA, originally at 11260+14 at White Oak
Colorado River between Austin and Bastrop (maximum drain down volume of 300,000 gallons)	7110+74	Near Colorado River	Previously installed
	7355+24		**New valve**
	7877+24		**New valve**
Llano River (maximum drain down volume of 250,000 gallons)	14606+47	Near the Llano River	Previously included in Final EA
	14834+24		**New valve**
	15015+24		**New valve**
San Saba River (maximum drain down volume of 350,000 gallons)	**17143+24**		**New valve**
	17886-24		**New valve**
	18299-24		**New valve**

All locations are approximate and will be field located near the appropriate topographical feature and in accordance with access requirements for maintenance. All valves will be installed before startup.

3. The following language will be added to Longhorn Mitigation Appendix, Items 23, 24 and 26:

Without limiting Longhorn's commitments as set out above, Longhorn will implement the following enhancements to its Emergency Response Plan prior to startup:

(a) Longhorn shall prepare plans and specifications sealed by a professional engineer registered in Texas that details the modifications necessary to public water systems that are regulated by Texas Natural Resource Conservation Commission, or any successor agency, that take water from Lake Travis or Lake Austin ("Public Water Systems") to ensure that in the event of a spill from the Longhorn pipeline as it crosses the Pedernales River watershed, all Public Water Systems taking water from Lake Travis or Lake Austin will be able to meet drinking water standards promulgated by the EPA for benzene or any other constituent that would be released from the pipeline. The design intake concentration to be used for the untreated water will be no less than 64 µg/L benzene for systems taking water from Lake Travis and no less than 16 µg/L for systems taking water from Lake Austin.

No modifications to any water treatment systems will be made unless an event occurs from the Longhorn Pipeline that results in detectable concentrations of benzene reaching Lake Travis that could reasonably be expected to exceed EPA drinking water standards at a Public Water System. If such an event occurs, Longhorn shall fully fund all modifications necessary at all affected public water treatment systems to ensure that treated water from the affected systems meets applicable drinking water standards within the shortest time possible and to provide potable drinking water to the residents of affected communities until treatment modifications can be installed. In addition, as part of the plans and specifications, Longhorn shall include detailed cost estimates, equipment listings and sources for supplying such equipment, procedures for acquiring and providing temporary sources of potable water, procedures for monitoring water supplies in Lake Travis and Lake Austin in the event of a spill in the Pedernales River watershed, and procedures for notifying all potentially affected communities.

The plans and information developed in this item will be included in Longhorn's emergency response plans. All plans will be completed before start-up of the pipeline. The plans will be reviewed, revised as necessary to meet the objectives of this provision and re-sealed by a professional engineer at least once every five years.

(b) To further ensure that any released product reaching the Pedernales River is minimized, Longhorn will prepare specific emergency response plans for the 12.5 miles of pipeline in the Pedernales River watershed (from the watershed divide between the Barton Creek and Pedernales River watershed through approximate milepost 201). The plan shall include travel and access routes,

equipment lists, personnel requirements, maps, potential stream conditions, and any other such elements necessary to thoroughly prepare for a major release of product from any point. The design conditions shall include a release of at least 275,000 gallons suddenly released during storm conditions that produce stream flows with a return frequency of one year and a Pedernales River flow of 5,000 cubic feet per second (cfs) at the Johnson City gauge. The plan must be adequate to prevent a majority of such a release from reaching the Pedernales River. The plan shall be finalized prior to startup. Longhorn shall also pre-stage all equipment and personnel to meet these conditions prior to start-up. All access routes and easements will be obtained within one year from startup.

(c) Longhorn's Emergency Response Plan prepared pursuant to subparagraph (b) above shall be amended from time to time as necessary to incorporate corrective action measures identified during emergency response full-scale drills.

EXHIBIT B

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION

ETHEL SPILLER,[1]	§	
MARIAN COLLINS,	§	
BARTON SPRINGS - EDWARDS	§	
AQUIFER CONSERVATION DISTRICT,	§	
and DAVID ROBERTSON,	§	
	§	
Plaintiffs,	§	
	§	
CITY OF AUSTIN and LOWER	§	
COLORADO RIVER AUTHORITY,	§	
	§	
Plaintiffs - Intervenors,	§	
	§	
v.	§	**CIVIL ACTION NO. A 98 CA 255 SS**
	§	
ROBERT M. WALKER, in his official	§	
capacity as Acting Secretary of	§	
the Department of the Army,	§	
RODNEY SLATER, in his official	§	
capacity as Secretary of	§	
Transportation,	§	
CAROL A. BROWNER, in her official	§	
capacity as Administrator of the	§	
Environmental Protection Agency,	§	
UNITED STATES, and	§	
LONGHORN PARTNERS PIPELINE, L.P.,	§	
	§	
Defendants.	§	

MOTION FOR DISMISSAL WITH PREJUDICE
PURSUANT TO RULE 41, FEDERAL RULES OF CIVIL PROCEDURE

TO THE HONORABLE JUDGE OF SAID COURT:

COMES NOW Intervenor Lower Colorado River Authority ("LCRA"), by and through

[1] Ethel Spiller has withdrawn from the case but she is listed in the caption of the motion to avoid confusion.

its undersigned attorney of record, and pursuant to Rule 41(a)(2), Federal Rules of Civil Procedure, hereby files its Motion for Dismissal with Prejudice. In support thereof, Intervenor, LCRA offers the following:

I.

Pursuant to Rule 41(a)(2), Federal Rules of Civil Procedure, Intervenor LCRA voluntarily moves for dismissal with prejudice its claims and causes of action against Defendants Longhorn Partners Pipeline, L.P. ("Longhorn") and Defendants Secretary of the U.S. Department of Transportation, Administrator of the Environmental Protection Agency, Secretary of the Department of the Army, and the United States ("Federal Defendants" or "Federal Agencies").

II.

Intervenor, LCRA and Longhorn and Federal Defendants have reached a Settlement Agreement, attached hereto as Exhibit "A", which settlement resolves all issues of controversy raised by LCRA in this lawsuit against the Defendants. Longhorn and Federal Defendants have filed an answer in this suit but have not filed any counterclaim against Intervenor LCRA.

III.

Longhorn and Federal Defendants have represented in Exhibit "A" their consent to dismissal of LCRA's claims in this lawsuit with prejudice.

WHEREFORE, PREMISES CONSIDERED, Intervenor LCRA prays that the Court, in consideration of the Settlement Agreement, dismiss this cause with prejudice and grant such other and further relief to which LCRA may show itself entitled.

Respectfully submitted,

LOWER COLORADO RIVER AUTHORITY
P.O. Box 220
Austin, Texas 78767-0220
(512) 473-3559
(512) 473-4010 [FAX]

JAMES N. RADER
Associate General Counsel
State Bar Number 16452570

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(512) 320-5638 [FAX]

PATRICIA L. AKERS
State Bar Number 11795470

By: _____
JAMES N. RADER

CERTIFICATE OF SERVICE

This is to certify that on this the _____ day of May, 2001, a true and correct copy of the above and foregoing instrument has been filed with the clerk of the Court and forwarded to the following persons via hand-delivery or by Certified Mail, Return Receipt Requested in compliance with Rule 5, Fed. Rules Civ. Proc.:

John Watts
Charles W. Findlay
Environmental and Natural
Resources Division
U.S. Department of Justice
P.O. Box 663
Washington, D.C. 20044-0663

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Western District of Texas
United States Attorney's Office
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114 West 7th Street
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1445 ROSS AVENUE, SUITE 3200
Dallas, Texas 75202

Connie Ode
P O Box 1574
El Prado, New Mexico 87529

_____
JAMES N. RADER

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION

ETHEL SPILLER,[1]	§	
MARIAN COLLINS,	§	
BARTON SPRINGS - EDWARDS	§	
AQUIFER CONSERVATION DISTRICT,	§	
and DAVID ROBERTSON,	§	
	§	
Plaintiffs,	§	
	§	
CITY OF AUSTIN and LOWER	§	
COLORADO RIVER AUTHORITY,	§	
	§	
Plaintiffs - Intervenors,	§	
	§	
v.	§	CIVIL ACTION NO. A 98 CA 255 SS
	§	
ROBERT M. WALKER, in his official	§	
capacity as Acting Secretary of	§	
the Department of the Army,	§	
RODNEY SLATER, in his official	§	
capacity as Secretary of	§	
Transportation,	§	
CAROL A. BROWNER, in her official	§	
capacity as Administrator of the	§	
Environmental Protection Agency,	§	
UNITED STATES, and	§	
LONGHORN PARTNERS PIPELINE, L.P.,	§	
	§	
Defendants.	§	

ORDER OF DISMISSAL WITH PREJUDICE
PURSUANT TO RULE 41a(2), FEDERAL RULES OF CIVIL PROCEDURE

CAME ON THIS DAY for consideration Intervenor LCRA's Motion for Dismissal with Prejudice pursuant to Rule 41 (a)(2) of the Federal Rules of Civil Procedure. The Court, having

[1] Ethel Spiller has withdrawn from the case but she is listed in the caption of the motion to avoid confusion.

reviewed the Motion for Dismissal with Prejudice and the parties' Settlement Agreement is of the opinion that the Motion should be and is hereby GRANTED. Accordingly, it is, ORDERED that Intervenor LCRA's claims and causes of action herein against Defendant Longhorn Partners Pipeline, L.P. and Defendants Secretary of the U.S. Department of Transportation, Administrator of the Environmental Protection Agency, Secretary of the Department of the Army, and the United States are hereby DISMISSED with PREJUDICE. It is further ORDERED that each party shall bear its own costs.

SIGNED this _____ day of _____, 2001.

_____
UNITED STATES DISTRICT JUDGE

EXHIBIT C
TO
SETTLEMENT AGREEMENT

1. Any controversy between Longhorn and LCRA as to the necessary and adequate mitigation measures required to be implemented by Longhorn under the provisions of Paragraph 12 of the Settlement shall be submitted to arbitration. Arbitration may be initiated by either party serving upon the other notice (i) stating that the notifying party desires to have such controversy reviewed by a board of three arbitrators, and (ii) naming one person whom such party chooses to act as one of the three arbitrators. Within fifteen (15) days after receipt of such a notice, the other party shall designate one person to act as arbitrator and shall notify the party requesting arbitration of such designation and the name of the person so designated. If the party upon whom a request for arbitration is served shall fail to designate its arbitrator within fifteen (15) days after receipt of such a notice, then the arbitrator designated by the party requesting arbitration shall act as the sole arbitrator to resolve the controversy at hand.

2. If both parties have designated an arbitrator, the two arbitrators designated as aforesaid shall promptly select a third arbitrator. If the two arbitrators chosen by the parties hereto are not able to agree on such third arbitrator within thirty (30) days after the second arbitrator is designated, unless such time is extended by the parties, then either arbitrator, on five days notice to the other, shall apply to the American Arbitration Association ("AAA") to designate and appoint such third arbitrator.

3. The arbitration shall be conducted according to the Commercial Arbitration Rules of the AAA and such dispute shall be resolved in accordance with the Federal Arbitration Act (Title 9 of the United States Code). Each arbitrator selected to act hereunder shall be qualified by education and experience to pass on the particular questions in dispute and shall be independent and not affiliated with any of the parties hereto. The arbitrator shall resolve all disputes in controversy in accordance with the standards set forth in the Settlement Agreement.

4. The Arbitrators are empowered to resolve disputes by summary rulings in response to motions filed prior to the final arbitration hearing. The arbitrators appointed pursuant to these provisions shall promptly hear and determine (after due notice and hearing and giving the parties reasonable opportunity to be heard) the questions submitted, and shall render their decision within 60 days after the arbitration hearing is completed. If within such period a decision is not rendered by the board or a majority thereof, a new arbitration panel may be named and shall act hereunder at the election of either party in like manner as if none had previously been named. The decisions of the arbitrators, made in writing, shall absent manifest error be final and binding upon the parties hereto as to the questions submitted, and each party shall abide by such decision. Such decisions by the arbitrators shall be based upon substantial evidence and the arbitrators shall be required to issue their decision based upon findings of fact and conclusions of law.

5. No provision hereof shall limit the right of any party to exercise remedies such as enforcement of the Settlement Agreement or injunctive relief from a court of competent jurisdiction before, after or during the pendency of any arbitration or other proceeding. The exercise of any such remedy shall not waive the right of any party to compel arbitration hereunder.

6. Each party shall bear the cost of the arbitrator appointed by said party and the parties shall share equally on the cost of the third arbitrator. Except as provided in the preceding sentence, each party to the arbitration shall bear his or its own attorney's fees and expenses and the parties shall bear equally all other costs and expenses of the arbitration.