

TAX LOT 304

102

1

2

TL #303

108F

107C

4 113E

81D

3

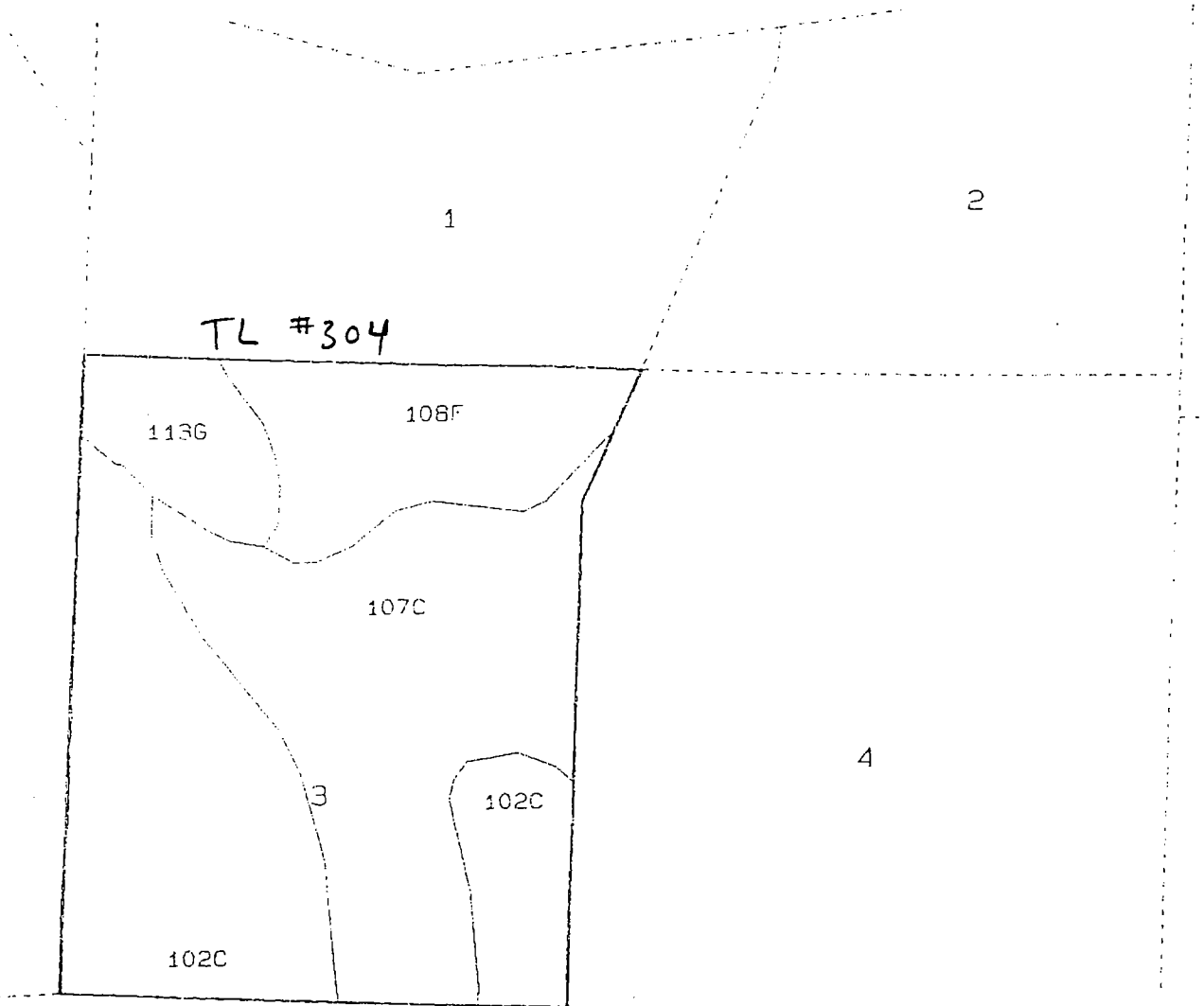
102C

108F

100

100

700



TL #304

1

2

113G

108F

107C

4

3

102C

102C

100

100

TABLE 2

## DOUGLAS FIR EMPIRICAL YIELD TABLE

SOURCE: For Douglas fir tables 2 through 10, D.N.R. Report No. 20 - May 1971, "Empirical Yield Tables for the Douglas fir Zone" by Charles Chambers, and Franklin Wilson. "Comprehensive Tree Volume Tarif Tables" by Dr. K. J. Turnbull, Gene Little, and Gerald Hoyer, June 1972. Stepwise multiple regression conversion made by Tom Wheatley, Publishers Paper Co., June 1978.

SITE 70

Total Age	Normal Basal Area	Mean Diameter	CVTS	CV4	SV6(32')	C/SCR Ratio
20	---	---	---	---	---	---
26	9	8.25	---	---	---	---
30	38	8.57	517	517	1,185	.436
40	91	9.36	1,874	1,847	4,196	.440
41	96	9.44	2,004	1,963	4,554	.431
50	128	10.11	3,126	3,008	8,115	.371
60	158	10.80	4,275	4,138	12,572	.329
70	182	11.43	5,320	5,196	17,176	.302
80	202	11.98	6,261	6,141	21,544	.285
90	220	12.43	7,099	6,941	25,350	.274
100	235	12.78	7,833	7,574	28,374	.267
110	249	13.01	8,463	8,021	30,405	.264
120	261	13.10	8,989	8,266	31,279	.264
130	273	13.04	9,412	8,297	30,900	.269

TABLE 3

SITE 80

Total Age	Normal Basal Area	Mean Diameter	CVTS	CV4	SV6(32')	C/SCR Ratio
20	---	---	---	---	---	---
26	26	8.52	269	269	633	.425
30	55	8.91	921	921	1,614	.570
40	108	9.87	2,479	2,330	5,870	.397
41	113	9.96	2,630	2,467	6,342	.389
50	146	10.79	3,934	3,707	11,118	.333
60	175	11.65	5,285	5,060	17,062	.297
70	199	12.45	6,532	6,330	23,187	.273
80	219	13.17	7,675	7,473	29,038	.257
90	237	13.79	8,715	8,454	34,240	.247
100	252	14.31	9,651	9,251	38,541	.240
110	266	14.71	10,482	9,842	41,709	.236
120	279	14.97	11,211	10,216	43,565	.235
130	290	15.08	11,835	10,365	44,000	.236

TABLE 4

SITE 90

Total Age	Normal Basal Area	Mean Diameter	CVTS	CV4	SV6(32')	C/SCR Ratio
20	---	---	---	---	---	---
26	49	8.91	777	777	1,351	.575
30	77	9.36	1,506	1,426	2,708	.526
40	128	10.49	3,256	2,985	8,393	.356
41	132	10.60	3,425	3,145	9,019	.349
50	165	11.57	4,902	4,591	15,209	.302
60	193	12.60	6,444	6,160	22,777	.270
70	217	13.56	7,893	7,630	30,483	.250
80	236	14.44	9,217	8,949	37,795	.237
90	254	15.23	10,448	10,087	44,347	.227
100	269	15.90	11,576	11,016	49,807	.221
110	283	16.45	12,599	11,726	53,977	.217
120	295	16.87	13,519	12,204	56,690	.215
130	306	17.14	14,335	12,432	57,813	.215

DOUGLAS FIR EMPIRICAL YIELD TABLE

TABLE 5  
SITE 100

Total Age	Normal Basal Area	Mean Diameter	CV15	CV4	SV6 (32')	C/SCR Ratio
20	17	8.53	85	85	335	.254
26	70	9.33	1,324	1,236	2,561	.483
30	97	9.85	2,130	1,913	4,601	.416
40	146	11.14	4,071	3,703	11,450	.323
41	150	11.27	4,259	3,886	12,248	.317
50	181	12.39	5,909	5,541	19,972	.277
60	209	13.59	7,643	7,325	29,247	.250
70	232	14.71	9,273	8,982	38,528	.233
80	252	15.75	10,799	10,468	47,294	.221
90	269	16.69	12,222	11,750	55,131	.213
100	284	17.53	13,541	12,805	61,760	.207
110	297	18.24	14,756	13,624	66,922	.204
120	310	18.81	15,867	14,190	70,448	.201
130	321	19.24	16,875	14,502	72,234	.201

TABLE 6  
SITE 110

Total Age	Normal Basal Area	Mean Diameter	CV15	CV4	SV6 (32')	C/SCR Ratio
20	30	8.74	327	327	666	.491
26	83	9.82	1,688	1,494	3,299	.453
30	109	10.23	2,574	2,251	5,812	.388
40	158	11.69	4,717	4,275	14,125	.303
41	162	11.83	4,926	4,482	15,074	.297
50	194	13.11	6,757	6,345	24,305	.261
60	222	14.47	8,693	8,344	35,244	.237
70	245	15.75	10,525	10,200	46,141	.221
80	254	16.97	12,253	11,863	56,425	.210
90	281	18.09	13,878	13,304	65,675	.203
100	296	19.09	15,396	14,503	73,549	.197
110	310	19.97	16,815	15,448	79,636	.193
120	322	20.72	18,129	16,126	84,358	.191
130	333	21.31	19,338	16,528	86,957	.190

TABLE 7  
SITE 120

Total Age	Normal Basal Area	Mean Diameter	CV15	CV4	SV6 (32')	C/SCR Ratio
20	51	9.11	819	770	1,355	.568
26	101	10.10	2,294	1,961	4,810	.408
30	126	10.77	3,257	2,821	7,992	.353
40	173	12.39	5,592	5,093	18,116	.281
41	177	12.55	5,820	5,324	19,255	.277
50	208	13.98	7,823	7,389	30,132	.245
60	235	15.50	9,951	9,588	42,783	.224
70	258	16.96	11,974	11,611	55,265	.210
80	277	18.33	13,894	13,424	66,954	.200
90	294	19.50	15,710	14,992	77,437	.194
100	309	20.76	17,423	16,297	86,410	.189
110	322	21.80	19,031	17,334	93,643	.185
120	334	22.70	20,536	18,091	98,946	.183
130	345	23.45	21,937	18,561	102,187	.182

SITE 107 23,005 Bd.f PER ACRE

SITE 112 25,470 Bd.f PER ACRE

NUMBERS SHOWN OBTAINED BY INTERPOLATION

# Lane County Soil Ratings for Forestry and Agriculture

Map Symbol	Lane County Soil Map Unit	Douglas Fir Site Index	Cu. Ft./ Acre/ Year	Agricultural Capability Class	High Value Farmland
72F	Klickitat stony loam, 30 - 50% south slopes	112	158	6	
72G	Klickitat stony loam, 50 - 75% south slopes	112	158	7	
73	Linslaw loam	none		3	X <sup>1</sup>
74B	Lint silt loam, 0 - 7% slopes	117	169	3	
74C	Lint silt loam, 7 - 12% slopes	117	169	3	
74D	Lint silt loam, 12 - 20% slopes	117	169	3	
74E	Lint silt loam, 20 - 40% slopes	117	169	4	
75	Malabon silty clay loam	none		1	X
76	Malabon-Urban land complex	none		1	X
77B	Marcola cobbly silty clay loam, 2 - 7% slopes	none		4	
78	McAlpin silty clay loam	none		2	X
79	McBee silty clay loam	none		3	X <sup>2</sup>
80F	McCully clay loam, 30 - 35% slopes	118	171	6	
80G	McCully clay loam, 50 - 70% slopes	118	171	7	
<u>81D</u>	<u>McDuff clay loam, 3 - 25% slopes</u>	<u>112</u>	<u>158</u>	6	
81F	McDuff clay loam, 25 - 50% slopes	112	158	6	
81G	McDuff clay loam, 50 - 70% slopes	112	158	7	
82C	Meda loam, 2 - 12% slopes	none		3	X
83B	Minniece silty clay loam, 0 - 8% slopes	none		6	
84D	Mulkey loam, 5 - 25% slopes	none		6	
85	Natroy silty clay loam	none		4	X
86	Natroy silty clay	none		4	X
87	Natroy-Urban land complex	none		4	X
88	Nehalem silt loam	none		2	X
89C	Nekia silty clay loam, 2 - 12% slopes	113	160	3	X
89D	Nekia silty clay loam, 12 - 20% slopes	113	160	3	X
89E	Nekia silty clay loam, 20 - 30% slopes	113	160	4	
89F	Nekia silty clay loam, 30 - 50% slopes	113	160	6	
90	Nekoma silt loam	none		3	
91D	Neskowin silt loam, 12 - 20% slopes	none		6	
91E	Neskowin silt loam, 20 - 40% slopes	none		6	
92G	Neskowin-Salander silt loams, 40 - 60% slopes	none		6	
93	Nestucca silt loam	none		3	
94C	Netarts fine sand, 3 - 12% slopes	none		6	
94E	Netarts fine sand, 12 - 30% slopes	none		6	
95	Newberg fine sandy loam	none		2	X
96	Newberg loam	none		2	X

# Lane County Soil Ratings for Forestry and Agriculture

Map Symbol	Lane County Soil Map Unit	Douglas Fir Site Index	Cu. Ft./ Acre/ Year	Agricultural Capability Class	High Value Farmland
97	Newberg-Urban land complex	none		2	X
98	Noti loam	none		4	X
99H	Ochrepts & Umbrepts, very steep	none		--	
100	Oxley gravelly silt loam	none		3	
101	Oxley-Urban land complex	none		3	
102C	Panther silty clay loam, 2 - 12% slopes	none		6	
103C	Panther-Urban land complex, 2 - 12% slopes	none		6	
104E	Peavine silty clay loam, 3 - 30% slopes	125	184	6	
104G	Peavine silty clay loam, 30 - 60% slopes	125	184	6	
105A	Pengra silt loam, 1 - 4% slopes	none		3	X <sup>1</sup>
106A	Pengra-Urban land complex, 1 - 4% slopes	none		3	
107C	Philomath silty clay, 3 - 12% slopes	none		6	
108C	Philomath cobbly silty clay, 3 - 12% slopes	none		6	
108F	Philomath cobbly silty clay, 12 - 45% slopes	none		6	
109F	Philomath-Urban land complex, 12 - 45% slopes	none		6	
110	Pits	none		8	
111D	Preacher loam, 0 - 25% slopes	128	190	6	
111F	Preacher loam, 25 - 50% slopes	128	190	6	
112G	Preacher-Bohannon-Slickrock complex, 50 - 75% slopes	***	188	7	
113C	Ritner cobbly silty clay loam, 2 - 12% slopes	107	149	4	
113E	Ritner cobbly silty clay loam, 12 - 30% slopes	107	149	6	
113G	Ritner cobbly silty clay loam, 30 - 60% slopes	107	149	7	
114	Riverwash	none		8	
115H	Rock outcrop-Kilchis complex, 30 - 90% slopes	***	27	8	
116G	Rock outcrop-Witzel complex, 10 - 70% slopes	***	none	8	
117E	Salander silt loam, 12 - 30% slopes	125	184	6	
118	Salem gravelly silt loam	none		2	X
119	Salem-Urban land complex	none		2	X
120B	Salkum silt loam, 2 - 6% slopes	116	167	2	X
121B	Salkum silty clay loam, 2 - 8% slopes	116	167	2	X
121C	Salkum silty clay loam, 8 - 16% slopes	116	167	3	X
122	Saturn clay loam	123	180	3	
123	Sifton gravelly loam	124	182	3	X
124D	Slickrock gravelly loam, 3 - 25% slopes	137	209	6	
124F	Slickrock gravelly loam, 25 - 50% slopes	137	209	6	
125C	Steiwer loam, 3 - 12% slopes	none		3	
125D	Steiwer loam, 12 - 20% slopes	none		4*	



LANE COUNTY FOREST SOIL RATINGS

Map Symbol	Soil Name	[1] Site Index	[2] Cubic Foot /Acre/Year
077B	Marcola cob sicl, 2-7%	97	130
078	McAlpin sicl	125	184
079	McBee sicl	119	173
080F	McCully cl, 30-35%	125	184
080G	McCully cl, 50-70%	125	184
081D	McDuff cl, 3-25%	115	163
081F	McDuff cl, 25-50%	115	163
081G	McDuff cl, 50-70%	120	175
082C	Meda l, 2-12%	128	190
083B	Minniece sicl, 0-8%	112	158
084D	Mulkey l, 5-25%	90*	116
085	Natroy sicl	none	60**
086	Natroy sic	none	60**
087	Natroy-Urban land complex	***	40**
088	Nehalem sil	124	182
089C	Nekia sicl, 2-12%	115	163
089D	Nekia sicl, 12-20%	115	163
089E	Nekia sicl, 20-30%	115	163
089F	Nekia sicl, 30-50%	112	158
090	Nekoma sil	140	214
091D	Neskowin sil, 12-20%	109*	152
091E	Neskowin sil, 20-40%	109*	152
092G	Neskowin-Salander sil, 40-60%	***	205**
093	Nestucca sil	99	134
094C	Netarts fs, 3-12%	95	125
094E	Netarts fs, 12-30%	95	125
095	Newberg fsl	110	154
096	Newberg l	110	154
097	Newberg-Urban land complex	***	100**
098	Noti l	none	30**
099H	Ochrepts & Umbrepts, v. steep	***	130**
100	Oxley gr sil	none	80**
101	Oxley-Urban land complex	***	60**
<u>102C</u>	Panther sicl, 2-12%	none	<u>45**</u>
103C	Panther-Urban land complex, 2-12%	***	40**
104E	Peavine sicl, 3-30%	124	182
104G	Peavine sicl, 30-60%	124	182
105A	Pengra sil, 1-4%	none	45**
106A	Pengra-Urban land complex, 1-4%	***	30**
<u>107C</u>	Philomath sic, 3-12%	none	<u>45**</u>

All ratings are taken from the "Single Phase Interpretation Sheets" (green sheets) published by the Soil Conservation Service (SCS) for the Lane County Area, Oregon except those marked \*\*

All ratings are for Douglas Fir unmanaged, fully stocked stands.

\* ratings for additional tree species are listed on SCS green sheets

\*\* These estimated soils ratings are taken from an Office of State Forester Memorandum, February 8, 1990, General File 7-1-1

\*\*\* multiple site indices; refer to the cu.ft./acre/yr column for a composite rating for this complex

[1] 50 year base

[2] volume produced at age of culmination

LANE COUNTY FOREST SOIL RATINGS

Map Symbol	Soil Name	[1] Site Index	[2] Cubic Foot /Acre/Year
108C	Philomath cob sic, 3-12%	none	45**
<u>108F</u>	Philomath cob sic, 12-45%	none	<u>45**</u>
109F	Philomath-Urban land complex, 12-45%	***	20**
110	Pits	none	none
111D	Preacher 1, 0-25%	128*	190
111F	Preacher 1, 25-50%	128*	190
112G	Preacher-Bohannon-Slickrock, 50-75%	***	185**
113C	Ritner cob sicl, 2-12%	102*	140
113E	Ritner cob sicl, 12-30%	102*	140
113G	Ritner cob sicl, 30-60%	102*	140
114	Riverwash	none	none
115H	Rock outcrop-Kilchis complex, 30-90%	***	34**
116G	Rock outcrop-Witzel complex, 10-70%	***	21**
117E	Salander sil, 12-30%	<u>125*</u>	<u>184</u>
118	Salem gr sil	<u>114</u>	<u>162</u>
119	Salem-Urban land complex	***	100**
120B	Salkum sil, 2-6%	119	173
121B	Salkum sil, 2-6%	126	186
121C	Salkum sicl, 8-16%	126	186
122	Saturn cl	104	143
123	Sifton gr 1	110	154
124D	Slickrock gr 1, 3-25%	137*	209
124F	Slickrock gr 1, 25-50%	137*	209
125C	Steiber 1, 3-12%	none	30**
125D	Steiber 1, 12-20%	none	30**
125F	Steiber 1, 20-50%	none	30**
126F	Tahkenitch 1, 20-45%	120	175
126G	Tahkenitch 1, 45-75%	112	158
127C	Urban land-Hazelair-Dixonville, 3-12%	***	45**
128B	Veneta 1, 0-7%	108	150
129B	Veneta variant sil, 0-7%	128	190
130	Waldo sicl	none	45**
131C	Waldport fs, 0-12%	90	116
131E	Waldport fs, 12-30%	90	116
131G	Waldport fs, 30-70%	90	116
132E	Waldport fs, thin surf., 0-30%	none	29**
133C	Waldport-Urban land complex, 0-12%	***	20**
134	Wapato sicl	none	none
135C	Willakenzie cl, 2-12%	110	154
135D	Willakenzie cl, 12-20%	110	154

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All ratings are for Douglas Fir unmanaged, fully stocked stands.

\* ratings for additional tree species are listed on SCS green sheets

\*\* These estimated soils ratings are taken from an Office of State Forester Memorandum, February 8, 1990, General File 7-1-1

\*\*\* multiple site indices; refer to the cu.ft./acre/yr column for a composite rating for this complex

[1] 50 year base

[2] volume produced at age of culmination

LOG PRICES - 3rd Quarter 1983

WEST OREGON, SANTIAM, LANE, FOREST GROVE, TILLAMOOK AND ASTORIA UNITS

Douglas-Fir

Ø1P			\$505
Ø2P			425
Ø3P			340
SM			285
Ø2S	☆	☆	255
Ø3S	☆	☆	215
Ø4S			200
SC			140
Utility			75
CR			240

Hemlock

P			\$375
SM			260
Ø2S			220
Ø3S			190
Ø4S			175
Utility			65
CR			190

Spruce

SM			\$255
Ø2S			230
Ø3S			180
Ø4S			160
Utility			45

W. R. Cedar

Ø1S			\$390
Ø2S			380
Ø3S			310
Ø4S			230
CR			330
Wormy			135

Alder

Sawlogs CR			\$190
Pulp			125

CHAI FOR FONDROSA PINE  
 100 YR. TABLE  
 (PIPO)  
 600-MEYER

CHAI FOR LODGEPOLE PINE  
 100 YR. TABLE  
 (PICO)  
 520-ALEXANDER

CHAI FOR WESTERN LARCH  
 50 YR. TABLE  
 (LADC)  
 265-SCHMIDT

SITE: CU.FT. / CU.M. / TOTAL ED.FT. / TOTAL ED.FT. / INTER. 1/8"  
 INDEX: FAC./YR. HA./YR. AGE FAC./YR. AGE FAC./YR. AGE FAC./YR. AGE FAC./YR. AGE

70	55	3.8	50	172	160	232	130	59	4.1	90	101	7.1	70
71	56	3.9	50	177	160	240	130	60	4.2	90	103	7.2	70
72	58	4.1	50	192	160	247	130	61	4.3	90	105	7.3	70
73	59	4.1	50	198	160	255	130	62	4.3	90	107	7.5	70
74	60	4.2	50	193	160	263	130	63	4.4	90	109	7.6	70
75	62	4.3	50	198	160	270	130	64	4.5	90	111	7.8	70
76	63	4.4	50	203	160	278	130	65	4.5	90	113	7.9	70
77	64	4.5	50	209	160	285	130	66	4.6	90	116	8.1	70
78	65	4.5	50	214	160	293	130	67	4.7	90	118	8.3	70
79	67	4.7	50	217	160	300	130	68	4.8	90	120	8.4	70
80	67	4.8	40	225	150	313	110	69	4.8	90	122	8.5	70
81	70	4.9	40	232	150	321	110	70	4.9	90			
82	72	5.0	40	238	150	330	110	71	5.0	90			
83	74	5.2	40	245	150	337	110	72	5.0	90			
84	75	5.2	40	252	150	347	110	73	5.1	90			
85	77	5.4	40	258	150	356	110	74	5.2	90			
86	78	5.5	40	265	150	365	110	75	5.2	90			
87	80	5.6	40	271	150	373	110	76	5.3	90			
88	82	5.7	40	278	150	382	110	77	5.4	90			
89	83	5.8	40	284	150	391	110	78	5.5	90			
90	85	5.9	40	292	150	403	100	79	5.5	90			
91	87	6.1	40	300	150	413	100	80	5.6	90			
92	88	6.2	40	308	150	423	100	81	5.7	90			
93	90	6.3	40	316	150	433	100	82	5.7	90			
94	92	6.4	40	324	150	443	100	83	5.8	90			
95	94	6.6	40	332	150	453	100	84	5.9	90			
96	96	6.7	40	340	150	463	100	85	5.9	90			
97	97	6.8	40	348	150	473	100	86	6.0	90			
98	99	6.7	40	356	150	483	100	87	6.1	90			
99	101	7.1	40	364	150	493	100	88	6.2	90			
100	102	7.1	40	372	150	507	90	89	6.2	90			
101	104	7.3	40	381	120	519	90	90	6.3	90			
102	106	7.4	40	390	120	530	90	91	6.4	90			
103	108	7.6	40	399	120	542	90	92	6.4	90			
104	110	7.7	40	408	120	554	90	93	6.5	90			
105	112	7.8	40	417	120	566	90	94	6.6	90			
106	114	8.0	40	426	120	578	90	95	6.6	90			
107	116	8.1	40	435	120	590	90	96	6.7	90			
108	118	8.3	40	444	120	602	90	97	6.8	90			
109	120	8.4	40	453	120	614	90	98	6.9	90			

## Determining site index

Professionals with sophisticated tools and techniques usually determine site indexes. You can make your own estimates if you wish.

Some tools to help you are a clinometer, increment borer, and tape. You'll find a description of each in EC 1129, *Tools for Measuring Your Forest* (available for \$1.50 from Extension and Station Communications, Oregon State University, 422 Kerr Administration, Corvallis, OR 97331-2119).

Determine site index by measuring the age and height of trees that dominate their neighbors. Here's how:

Select at least three of the taller trees for each area you wish to sample.

Estimate the age of each sample tree. Annual rings—the layers of wood a tree produces in a year's growth—provide a good record of age.

You can obtain a core sample (see Figure 1) with an increment borer, a hollow drill that is used most conveniently at breast height (b.h.=4.5 feet above the ground). Your ring count estimates the b.h. age.

For most site index systems, you need to know the total age of the tree. In such cases, you must add 5 to 10 years to allow for the time it took the tree to grow to 4.5 feet.

It may be necessary, or more convenient, to count the rings on the surface of a stump. This will provide an answer that is closer to the total age of the tree.

For stumps less than a foot tall, the ring count may be only 2 years less than the total age of the tree. The same stumps would have fewer rings showing if they were cut 3 feet tall because it may take 5 years for the tree to grow that tall.

You can estimate the age of young trees by counting the layers of branches (whorls).

This works well on species that form one distinct layer of branches each year such as pines, true firs, and Douglas-fir. It does not work on cedars, hemlocks, and alder because they lack this particular branching habit.

It is easy to count the whorls for about the first 30 years, but trees

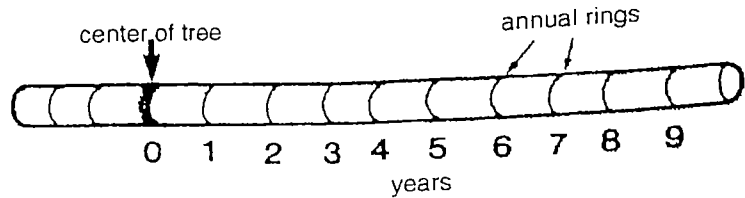


Figure 1.—Counting the rings: a band of light wood is formed in the spring of each year and is followed by a darker band of denser summer wood.

growing closely together in dense stands often lose their lower branches because of natural pruning. In such cases, you can look for limb scars or knot indicators.

Broken tops can cause you to underestimate age, and false whorls (Figure 2) can cause you to overestimate age.

Estimate height of the sample trees. Measure to the nearest foot if it is possible with your tools. Wind-thrown trees can provide good height estimates if they were dominant, healthy trees before they fell.

After you estimate age and height of your trees, you can determine site index. To do this, refer to the appendices (or similar tables) and find the age of the tree in the left column. Look to the right on the same line to find tree height. Follow this column down to find the site index and various groupings of site indexes.

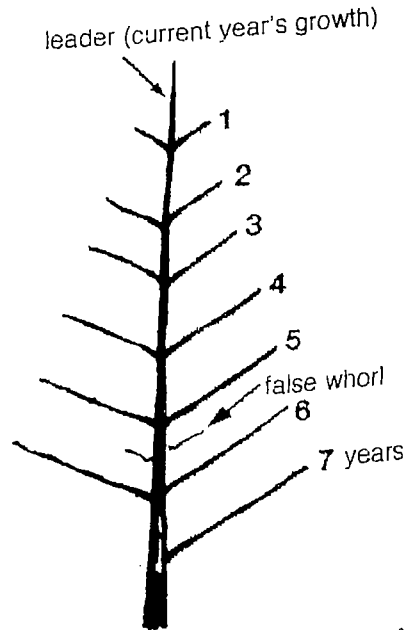


Figure 2.—Determining the age of a tree by counting the whorls.

Appendix A.—Site index and site class for Douglas-fir, 100-year basis.

Total age (years)	Tree height (feet)														
	20	21	24	26	29	31	34	37	39	42	44	47	49	52	54
20	21	24	26	29	31	34	37	39	42	44	47	49	52	54	
30	37	41	46	50	55	60	64	69	74	78	83	88	92	96	
40	48	54	60	66	72	78	84	90	96	102	108	114	120	126	
50	56	63	70	77	84	91	98	105	112	119	125	132	139	146	
60	63	70	78	86	93	101	109	117	124	132	140	148	156	163	
70	68	77	85	94	102	110	119	127	135	144	152	161	170	178	
80	73	82	91	100	109	118	127	136	145	154	163	172	181	190	
90	77	86	96	105	115	125	134	144	153	163	172	182	192	201	
100	80	90	100	110	120	130	140	150	160	170	180	190	200	210	
Site index	80	90	100	110	120	130	140	150	160	170	180	190	200	210	
Site class	V		IV			III			II			I			
ODR* tax site class	FG		FF		FE		FD		FC		FB		FA		

\*Oregon Department of Revenue.

Appendix B.— Site index and site class for Douglas-fir, western Oregon, 50-year basis.

b.h. age (years)	Total height (feet)									
	10	16	18	20	22	24	27	29	32	34
20	30	35	40	44	49	54	59	65	68	73
30	42	49	56	63	70	76	83	90	97	103
40	53	61	69	78	86	95	103	112	120	129
50	60	70	80	90	100	110	120	130	140	150
Site index	60	70	80	90	100	110	120	130	140	150
Site class	V		IV		III		II		I	
ODR* site class	FG		FF		FE		FD		FA	

\*Oregon Department of Revenue.

Appendix D.— Site index and site class for Sitka spruce and western hemlock, 100-year basis.

Total age (years)	Total height (feet)								
	20	13	17	21	25	30	34	38	43
30	23	30	37	45	52	60	67	75	
40	31	41	51	62	72	82	92	103	
50	38	51	63	76	88	101	114	126	
60	44	58	73	87	102	117	131	146	
70	49	64	81	97	114	130	146	162	
80	53	70	88	105	123	140	158	176	
90	56	75	94	113	132	151	169	188	
100	60	80	100	120	140	160	180	200	
Site index	60	80	100	120	140	160	180	200	
Site class	V		IV		III		II		I

Appendix C.— Site index and site class for ponderosa pine, 100-year basis.

Total age (years)	Total height (feet)												
	20	6	9	12	16	20	25	30	36	40	45	50	55
30	11	15	20	26	32	38	44	51	57	64	70	77	84
40	16	22	28	35	42	49	55	63	70	77	85	93	100
50	21	28	35	43	51	58	65	73	80	89	97	105	113
60	26	34	42	50	58	66	73	81	90	99	107	115	124
70	30	39	47	56	64	73	81	89	98	108	116	125	134
80	34	43	52	61	70	79	88	97	106	116	124	133	143
90	37	47	57	66	75	85	94	104	113	123	132	142	152
100	40	50	60	70	80	90	100	110	120	130	140	150	160
Site index	40	50	60	70	80	90	100	110	120	130	140	150	160
Site class	VI		V		IV		III		II		I		

Appendix E.— Site index and site class for alder, 50-year basis.

Total age (years)	Total height (feet)							
	10	23	27	31	35	39	42	45
20	37	44	50	56	63	69	75	
30	47	55	63	71	79	87	95	
40	54	63	72	81	91	100	109	
50	60	70	80	90	100	110	120	
Site index	60	70	80	90	100	110	120	
Site class	IV		III		II		I	

EXAMPLE: 60 YRS TOTAL AGE  
81' TOTAL HEIGHT  
= SITE INDEX AND CLASS  
SITE INDEX  
IS 110 FOR THIS TREE

The Woodland Workbook is a collection of publications prepared by the Oregon State University Extension Service specifically for owners and managers of private, nonindustrial woodlands. The Workbook is organized into separate sections, containing information of long-range and day-to-day value for anyone interested in wise management, conservation, and use of woodland properties. It's available in a 3-ring binder with tabbed dividers for each section.

For information about how to order, and for a current list of titles and prices, inquire at the office of the OSU Extension Service that serves your county.

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Table 1- Total volume inside bark of ponderosa pine 1.5 cm (0.6 in) and larger in d.b.h. (39)

Age	Site index at base age 100 years <sup>1</sup>			
	18 m or 60 ft	27 m or 90 ft	37 m or 120 ft	46 m or 150 ft
yr	m <sup>3</sup> /ha			
20	28	94	168	262
40	122	238	396	588
60	192	340	570	861
80	238	413	696	1060
100	273	472	794	1204
120	308	518	868	-
140	336	556	928	-
yr	ft <sup>3</sup> /acre			
20	400	1,350	2,400	3,750
40	1,750	3,400	5,650	8,400
60	2,750	4,850	8,150	12,300
80	3,400	5,900	9,950	15,150
100	3,900	6,750	11,350	17,200
120	4,400	7,400	12,400	-
140	4,800	7,950	13,250	-

<sup>1</sup>Height of dominant and codominant trees of average d.b.h.

stand data.

**INSTRUCTIONS FOR USE OF TABLE**

As a rough approximation, the Silvics handbook has the following yield table. To calculate the cubic ft/ac/year, determine the mean annual increment (MAI, = total stand volume divided by age) for a given site index. For example, for SI=120, the MAI at age 40 is 5,650 cubic ft / 40 years = 141 cubic ft per acre per year. For a 50 year base site index, would have to first convert to 100-base value.

SITE INDEX →

YR.	60	90	120	150
	ft <sup>3</sup> /ACRE			
40	1,750	3,400	5,650	8,400
60	2,750	4,850	8,150	12,300
80	3,400	5,900	9,950	15,150
100	3,900	6,750	11,350	17,200
120	4,400	7,400	12,400	-
140	4,800	7,950	13,250	-

<sup>1</sup>Height of dominant and codominant trees of average d.b.h.

EXAMPLE: 104 SITE INDEX:  
50 YEAR ROTATION

INTERPOLATION PUTS TOTAL  
ft<sup>3</sup>/ACRE HERE = 5420 cu. ft.

5420 cu. ft. ÷ 50 YEAR ROTATION =  
108.4 cf/AC/YR

: Fletcher, Rick  
Sent: Tuesday, January 27, 2004 9:40 AM  
To: Jim Just  
Cc: Bennett, Max  
Subject: RE: ponderosa pine soils ratings

Jim:





OGLE 1936 PARCEL



F-3-23

OGLE PARCEL IN 1947



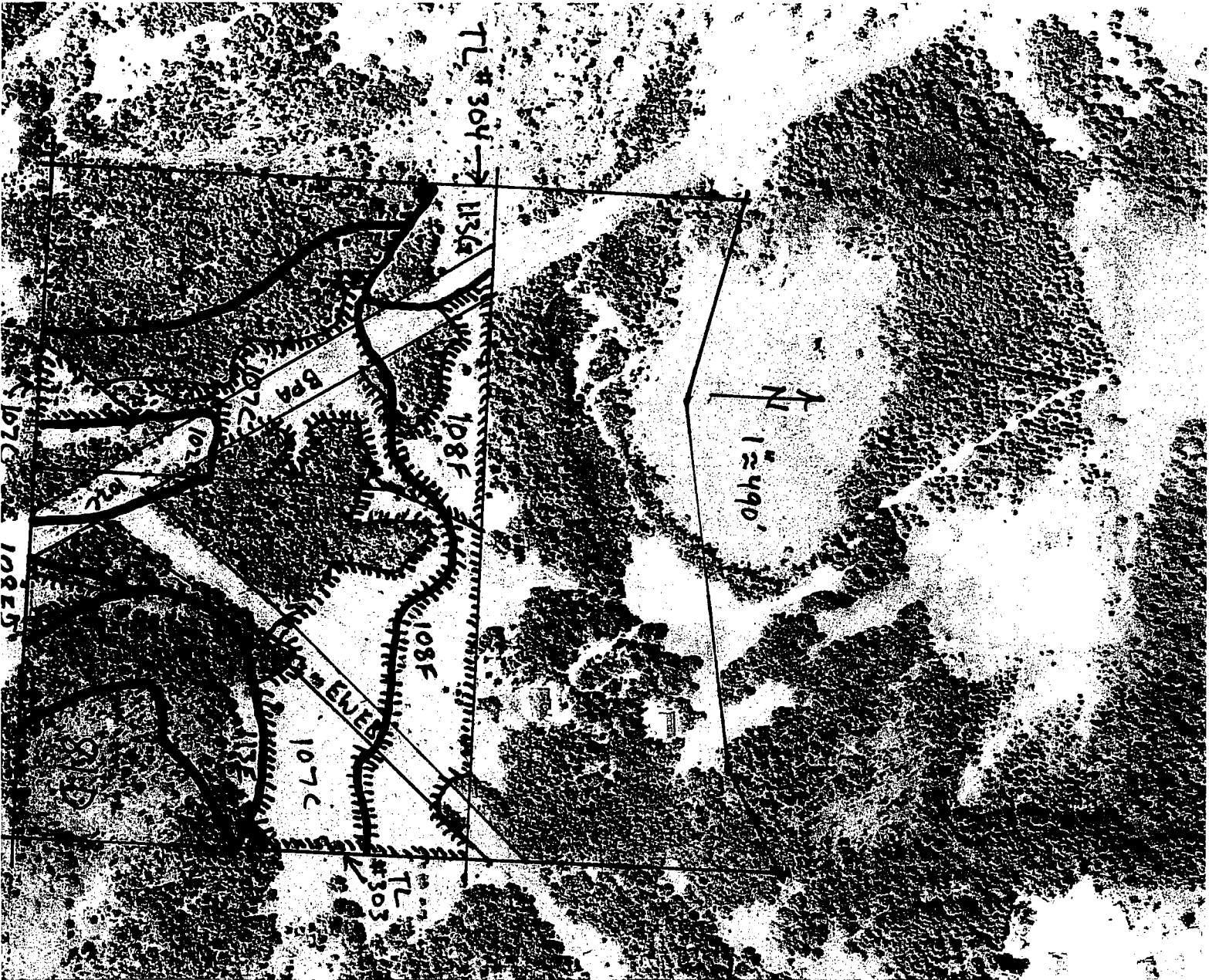
938- -15 PS)(8 -15-36 11A)(12 -15000) WILLAMETTE VALLEY PROJECT ORE

EXHIBIT J  
Page 27 of 32




OGLE PARCEL IN 1952 (AUGUST PHOTO)

0.61E  
 PARCEL  
 ENTIRE PARCEL  
 SHOWN WITHIN  
 RED BOUNDARY  
 LINES. SOIL TYPES  
 SHOWN WITHIN AREA  
 BEING LOOKED AT  
 FOR MARGINAL  
 LANDS DESIGNATION.



ONLY AREAS  
 WITHIN THE 107c  
 & 108f SOIL TYPES  
 HAVE BEEN DEDUCTED



THE POWERLINE  
 BOUNDARIES ARE  
 CLEARLY DEFINED.

March 1997

Supplement to Marginal Lands Information Sheet

BOARD OF COUNTY COMMISSIONERS DIRECTION REGARDING THE INTERPRETATION AND ADMINISTRATION OF MARGINAL LANDS APPLICATIONS

On February 26, 1997, the Lane County Board of Commissioners reviewed the state Marginal Lands law and developed responses to seven issues in the law needing clarification for purposes of administration by Lane County. Those issues are identified below, followed by the direction provided by the Board. Any application for the Marginal Land designation within the Lane County Rural Comprehensive Plan's jurisdiction must be in compliance with the Board's directions. Refer to the Marginal Lands Information Sheet, or to Oregon Revised Statutes 197.247 (1991 laws), for an explanation of the law itself.

ISSUE 1: What is the Marginal Lands concept?

Board's Direction:

The Board recognized that marginal land is intended to be a sub-set of resource land, i.e., there are "prime" resource lands and "marginal" resource lands. The marginal lands are to be available for occupancy and use as smaller tracts than are required in the better resource lands. The criteria in the law define which lands may be designated as marginal. Evidence for this position is found in the legislative history and the fact that marginal lands are recognized in both Statewide Goal 3 - Agricultural Lands and Goal 4 - Forest Lands.

ISSUE 2: Definition of "Management"

When considering forest land, the entire growth cycle must be considered for evidence of management. This is because even the best managed forest operations may have nothing occurring on the land during the five-year window (1978 - 1982) stated in the marginal lands statute (ORS 197.247(1)(a)(1991 Edition). For farm operations, however, it is hard to conceive of an operating farm on which nothing occurred for five years.

Board's Direction :

No evidence of human activity on the land is required for forest land to be "managed". The conscious decision not to convert the land to another use is enough evidence of management to meet the statutory intent, provided there is a significant amount of merchantable or potentially merchantable trees on the property. Likewise, evidence of timber harvest since 1978 would suffice to show management even if there were no trees currently on the property. For farm land, no evidence of farm use during the 5-year statutory window would indicate that land was not managed for farm use.

ISSUE 3. Managed "as part of" a (farm or forest) operation during (1978-1982).

Does this phrase in ORS 197.247(1)(a)(1991) mean, for example, that if a large timber company owned and managed a 2000 acre tract during the five-year window, and then sold someone a 40 acre portion of non-forest land in 1985, that 40 acres would not be eligible for Marginal Lands designation?

Board's Direction :

The Board found that the law creates a general presumption that all contiguous land owned during 1978-82 was part of the owner's "operation". That presumption could be rebutted, however, by substantial evidence

that the parcel in question was not, in fact, a "contributing part" of the operation. The applicant would bear the burden of producing such evidence.

**ISSUE 4: What price data should be used to calculate gross annual income for forest lands?**

**Board's Direction :**

The legislative intent of the "management and income test" of the Marginal Lands Law was to identify those lands which were not, at the time the Marginal Lands law was enacted (1983), making a "significant contribution" to commercial forestry. Therefore, it is appropriate and statistically valid to use the following methodology:

1. Based on the best information available regarding soils, topography, etc., determine the optimal level of timber production for the tract assuming reasonable management.
2. Assume that the stand was, in 1983, fully mature and ready for harvest.
3. Using the volumes calculated in step (1), and 1983 prices, calculate the average gross annual income over the growth cycle.

**ISSUE 5: What "growth cycle" should be used to calculate gross annual income?**

**Board's Direction :**

The consensus of the Board was that a 50-year growth cycle should be adopted as the usual standard, with the option that another standard could be used if substantiated by compelling scientific evidence presented by the applicant. The Board's choice was based on evidence that the USDA Natural Resource Conservation Service has adopted the 50-year cycle for rating soil productivity, plus the administrative ease of having a standardized figure.

**ISSUE 6: Weight of evidence.**

One of the main holdings of the Ericsson case, which arose in Lane County, is that on-site evaluation by a qualified expert is weightier evidence than published data. Given this ruling, what is the appropriate role of the parcelization table in Lane Code 16.211(10)(b) and the legislative findings for Goal 4 of the Rural Comprehensive Plan as an income standard?

**Board's Direction :**

As a matter of administrative ease, and in the absence of other substantial evidence, the parcelization test could still be used. It is one method of identifying the acreage required of a given forest capability classification to achieve the \$10,000 income standard.

**ISSUE 7: Ambiguities in the parcelization tests of ORS 197.247(1)(b)(A) & (B).**

Is the parcelization test measuring the percent of an area (acreage) or the percent of the number of parcels a "parcel count"? If the test in ORS 197.247(1)(b)(A) is an area test, does the percentage requirement apply to the acreage or to the number of parcels that lie wholly or partly within the 1/4 mile of the subject tract?

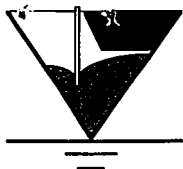
**Board's Direction :**

Regard the tests in ORS 197.247(1)(b)(A) & (B) as "area" tests with the difference being that (A) specifies an area including the subject parcel and land within 1/4 mile and uses a 50% small lot test, whereas (B) increases the area to a minimum of 240 acres but raises the small lot test to 60%.

(Note: This is the position adopted by Lane County in the Jackson case. In that case, Lane County ruled that the area was limited to the 1/4-mile line, whereas DLCD argued that the area line should expand to include the entirety of any parcel partly located within the 1/4 mile boundary. DLCD threatened to appeal the Jackson case on that basis, but did not do so.)

**EXHIBIT "L"**





**Aquifer Test For Tax Lot # 304, Sections 10 and 11, Township  
16 South, Range 2 West of the Willamette Meridian**

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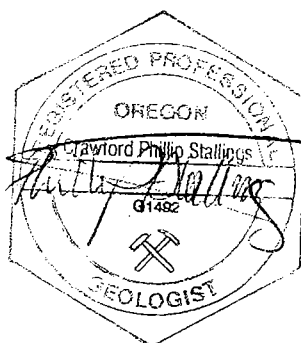
**May 2002**

***Prepared For:***

**Brad Ogle  
3103 Timberline Drive  
Eugene, OR.**

***Principal Authors:***

**EGR and Associates, Inc.  
Phillip Stallings, R.P.G.  
Robert Murray, Geologic Associate**



**Aquifer Test for PA 3826-92, Tax Lot 304 Sections 10 and 11, Township 16 South,  
Range 2 West of the Willamette Meridian,**

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**Aquifer Test for PA 3826-92, Tax Lot 304 Sections 10 and 11, Township 16 South,  
Range 2 West of the Willamette Meridian,**

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**INTRODUCTION**

EGR & Associates (EGR) was retained by Brad Ogle to investigate whether the proposed partition of Tax Lot 304 would adversely impact the neighboring wells or properties, or deplete the aquifer (Lane County Code 13.050 for groundwater quantity limited areas, Appendix A).

The subject property consists of Parcels one and two of Tax Lot 304 totaling 55.34 and 58.4 acres in size (113.7 acres). Parcels 1 and 2 of Tax Lot 304 is proposed to be partitioned into nine lots (Figures 1 and 2). The property is zoned (F-2) Impacted Forest Lands.

To satisfy the requirements of the Lane conditions for approval (under Lane Code 13.050), an aquifer pumping and recovery test was performed on Tax Lot 304 between May 6 and 7, 2002. The purpose of the test and interpretation is to estimate aquifer potential and assess whether the aquifer is sufficiently productive to support additional demands caused by the development of seven new residential homes to the site (two homes are currently located on the property). In addition to the aquifer test, drill logs from neighboring wells were used to characterize local groundwater production.

**HYDROLOGY, GEOLOGY, AND HYDROGEOLOGY**

The property is located between approximately 680 to 1020 feet elevation in the Spencer Creek Watershed. Surface water from the site drains to the south to an unnamed tributary to Spencer Creek (Figure 1).

The Soil Survey of Lane County indicates five soil types are presented on the site<sup>1</sup>. The locations of the different soil types relative to approximate property boundaries is included in Figure 3.

These soils include the McDuff clay loam (81D), Panther silty clay loam (102C), Philomath silty clay (107C), Philomath cobbly silty clay (108 F), and Ritner cobbly, silty clay loam (113E).

The McDuff clay loam (81D) is a moderately deep, well drained soil commonly found in swales and benches on broad ridges and slump benches. The surface layer is typically very dark brown clay loam about 6 inches thick. The upper 8 inches of the subsoil is very dark grayish brown clay loam, and the lower 23 inches is dark brown and brown clay and silty clay. Weathered bedrock is at a depth of 20 to 40 inches below the surface. The available water capacity is 0.19-0.21 inches/inch.

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<sup>1</sup>*Patching, W.R. (1987) Soil Survey of the Lane County Area, U.S.D.A. Soil Conservation Service Publication, map sheet 89.*

The Panther silty clay loam (102C) is a deep, poorly drained soil commonly found in swales and benches on foothills. The surface layer is typically very dark brown silty clay loam about 10 inches thick. The subsoil is very dark brown and dark grayish brown clay about 19 inches thick. The substratum is dark grayish brown mottled clay about 13 inches thick. Weathered bedrock ranges between 40 to 60 inches below the surface. The available water capacity is 0.19-0.21 inches/inch.

The Philomath silty clay (107C) is a shallow, well drained soil commonly found in colluvium and residuum derived from igneous rock. The surface layer is typically very dark brown silty clay approximately 6 inches thick. The subsoil is very dark brown clay about 8 inches thick. Depth to bedrock ranges from 12 to 20 inches. The available water capacity is 0.18-0.21 inches/inch.

The Philomath cobbly silty clay (108F) is a shallow, well drained soil commonly found in colluvium and residuum derived from igneous rock. The surface layer is typically very dark brown cobbly silty clay approximately 6 inches thick. The subsoil is very dark brown cobbly silty clay about 8 inches thick. Depth to weathered bedrock ranges from 12 to 20 inches below the surface. The available water capacity is 0.14-0.17 inches/inch.

The Ritner cobbly, silty clay loam (113E) is a moderately deep, well drained soil commonly found on foothills. The surface layer is typically dark reddish brown cobbly silty clay loam about 7 inches thick. The subsoil is dark reddish brown and yellowish red very cobbly silty clay loam about 25 inches thick. Weathered bedrock, consisting of fractured basalt, ranges between 20 to 40 inches. The available water capacity is 0.12-0.19 inches/inch.

Beneath these top soils are marine deposited sediments of the Eugene Formation. The Eugene Formation consists of fine grained arkosic micaceous sandstone, with intercalated shale and occasional lenses of fine volcanic ash from the Oligocene (approximately 34-38 million years old)<sup>2</sup>. Lithologic descriptions found in drillers' well logs in the area corroborate the presence of mixed sedimentary deposits consisting of sand and clay overlying sandstone, and claystone.

The well log for the pumping well (P-1) describes the underlying geology of the site as a 1/2 foot layer of topsoil overlying sandstone to a depth of at least 220 feet below the surface. The observation well (O-1), also located on the site, describes the underlying geology as a 3 foot layer of topsoil overlying sandstone and claystone to a depth of 380 feet below the surface. O-1 is located approximately 600 feet northwest of P-1. Drillers' logs from 85 wells of record in sections 10, 11, 14, and 15, Township 18 South, Range 4 West of the Willamette Meridian are presented with summary statistics in Appendix B. The well logs pertaining to the pumping well and observation well (Appendix C) indicate that the local water bearing zone encountered by the well on site is confined. A confined aquifer is defined as a water bearing zone isolated from the atmosphere by impermeable confining geologic formations, and which is generally subject to pressures higher than

---

<sup>2</sup>Frank Geologic Map of the Eugene-Springfield Area, Southern Willamette Valley, Oregon 1973

atmospheric (water rises in the well above the point where it is initially encountered during drilling).<sup>3</sup>

Well completion depths in Sections 10, 11, 14, and 15 average 206 feet, with a minimum and maximum of 50 and 600 feet, respectively. Yields reported in well logs within Sections 10, 11, 14, and 15, Township 18 South, Range 4 West from recorded wells range from 0.8 gallon per minute (gpm) to 180 gpm. The average production is 20 gpm.

## **PUMP TEST**

The pump test and data interpretation was used to estimate the hydraulic conductivity (K), transmissivity (T), and storage coefficient (S) of the confined aquifer underlying the property. Although there is inconsistent information on the well log for O-1, this well log seems to indicate a confined aquifer. The well log for P-1 indicates the aquifer underneath the subject property is confined.

The total depth of the pumping and observation wells was determined using a 300 foot tape. The pumping well (P-1) is approximately 220 feet deep and has a six-inch casing. The observation well (O-1) was too deep to measure with the tape, according to the well log the well is 380 feet deep.

Initial depth to water in P-1 was 80.96 feet from the top of casing (TOC). Initial depth to water in O-1 was 7.29 feet from TOC. Water levels in the pumping well and observation well were recorded on one-minute intervals using a pressure transducer and data logger. Transducer recordings were confirmed manually using an electronic water probe (Appendix D). Prior to the test, 200 feet of 1 inch diameter schedule 40 PVC pipe was inserted down the well to create a conduit for the transducer.

In addition to the constant pumping of the well P-1 at 5.5 gpm, sporadic domestic use of the well occurred. The observation well was not in use.

The submersible pump at P-1 was turned on at 9:36 AM on May 6, 2002 at an initial rate of 20 gpm. It was determined that pumping the well at this rate would overly stress the aquifer and the pumping was halted at 9:44 AM. A 7-gallon per minute flow restrictor was used to maintain a flow of 7 gpm during the test. The actual flow, as timed into a 5 gallon bucket, was 5.5 gpm. The pump was turned on again at 10:53 AM at a continual flow rate of 5.5 gpm. This constant pumping rate was maintained throughout the test and confirmed periodically during the pump test by timing the flow into a 5-gallon bucket.

Pumping was discontinued at 11:20 AM the next day and the water level recovery was recorded for approximately 127 minutes. The maximum drawdown from the constant pumping and sporadic use of the well was 19 feet from TOC during the test. This was caused by the sporadic domestic use of the well however, and does not represent the maximum drawdown caused by the constant pumping of the well. The actual maximum drawdown due to the constant pumping in the pumping well was approximately 13.4 feet. The well recovered to within 4.16 feet of static water level (80.93 feet) during the 127 minutes following the pump shut off. The observation well, located approximately 500

<sup>3</sup> Driscoll, F.G., (1986) *Groundwater and Wells, U.S. Filter/Johnson Screens. St. Paul MN. pp.62.*

feet to the east, fluctuated, however did not show any obvious effects from the constant pumping at P-1.

The 24-hour pumping period exceeds the minimum 5-hour test indicated by the Lane Code requirements. The pump test on P-1 was run for this extended amount of time to identify potential flow boundaries further out in the aquifer.

Appendix D contains a tabulation of the transducer data collected from the pumping and observation wells. These data were used to estimate aquifer properties (Appendix E).

Plots illustrating the drawdown in the two wells versus time are presented in Appendix E. There is no evidence from the drawdown curve that, either a no-flow boundary or recharge boundary (near infinite source of water, such as a surface water stream), was intersected by the drawdown cone\* which developed around the well.

### AQUIFER TEST ANALYSIS

Three primary characteristics of the aquifer are needed to assess aquifer potential, hydraulic conductivity, transmissivity, and storage coefficient. These properties were estimated by interpreting the pump test data with mathematical models.

Transmissivity (T) is the rate at which water is transmitted through a 1-foot-wide vertical section of the entire thickness of the aquifer under a unit hydraulic gradient. More intuitively, T is a measure of how easily water moves through a formation of a given thickness. The units of T used in this report are gallons per day per foot (gpd/ft).

Hydraulic Conductivity (K) is a measure of the rate at which water can be transmitted through a unit area under a unit hydraulic gradient. It is directly proportional to T ( $K = T / \text{formation thickness}$ ). The units of K used in this report are gallons per day per square foot (gpd/ft<sup>2</sup>).

In confined aquifers the storage coefficient (S) represents the volume of water that an aquifer releases from storage per unit area per unit decline in hydraulic head (a dimensionless value) and typically ranges between  $10^{-3}$  and  $10^{-5}$  for confined aquifers. The drill logs for the area indicate that the aquifer beneath the property is confined. Data collected from the pump test was used to calculate S. Since the observation well used for the test appears to be affected by an additional source, the storage coefficient could not be calculated.

The most suitable and simple mathematical models for interpretation are the Theis<sup>4</sup> non-equilibrium equation and the Cooper-Jacob modification of the Theis equation<sup>5</sup>. Like all

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\* A cone of depression or drawdown cone is a depression in the groundwater table or potentiometric surface that has the shape of an inverted cone and develops around a well from which water is being withdrawn. It defines the area of influence of a well.

<sup>4</sup> Theis C.V., 1935. *The relation between the lowering of the piezometric surface and the rate and duration of discharge of a well using groundwater storage. Trans. Amer. Geophys. Union. 2 pp. 519-524.*

mathematical models, application of the Theis and Jacob equations requires certain simplifying assumptions apply to the aquifer. These assumptions and the degree to which they are satisfied by the aquifer are noted below. The Jacob solution has all the same assumptions as the Theis plus the first assumption listed below, regarding the size of the exponential integral ( $\mu$ ). The exponential integral is inversely proportional to the transmissivity and duration of the test, and directly proportional to the storage coefficient and distance from pumping well.

Theis equation: 
$$s = \frac{114.6 Q W(\mu)}{T}$$

Where:  $s$ = drawdown in feet at any point in the vicinity of a well discharging at a constant rate.  
 $Q$ = pumping rate.  
 $T$ = coefficient of transmissivity of the aquifer in gpd/ft.  
 $W(\mu)$ = is read “well function of  $u$ ” and represents an exponential integral.

In the  $W(\mu)$  function,  $u$  is equal to:

$$\mu = \frac{1.87r^2S}{Tt}$$

Where  $r$  = distance, in ft, from the center of a pumped well to a point where the drawdown is measured.  
 $S$ = coefficient of storage Dimensionless).  
 $T$ = coefficient of transmissivity, in gpd/ft.  
 $t$ = time since pumping started, in days.

Cooper-Jacob equation: 
$$T = \frac{264Q}{\Delta s}$$

Where:  $T$ = coefficient of transmissivity of the aquifer in gpd/ft.  
 $Q$ = pumping rate in gpd.  
 $\Delta s$ = (read “delta  $s$ ”) slope of the time-drawdown graph expressed as the change in drawdown between any two times on the log scale whose ratio is 10 (one log cycle).

The exponential integral of  $\mu$  is sufficiently small to simplify the Theis equation to the Jacob solution. *In this example  $\mu$  is approximately less than  $2 \times 10^{-7}$  for a day-long test, sufficiently small for a simple solution. Driscoll suggests  $\mu$  be less than 0.05 for use of Jacob<sup>6</sup>.*

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<sup>5</sup> Jacob C.E., 1946b. Drawdown test to determine effective radius of artesian well. *Trans. Am. Society of Civil Engineer. Vol. 112. pp 1047-1070.*

<sup>6</sup> Driscoll, F.G., (1986) *Groundwater and Wells, U.S. Filter/Johnson Screens. St. Paul MN. pp.219-220*

- Aquifer has infinite areal extent. *No aquifer actually has an infinite areal extent. However, because the areal extent of the aquifer is likely much larger than the study area, it can usually be assumed infinite for the purposes of the model.*
- Aquifer is homogeneous, isotropic, and of uniform thickness. *While an aquifer composed of sedimentary rock can not generally be assumed to be perfectly isotropic and homogenous and uniformly thick over a large enough area, the aquifer begins to take on the characteristics due to scale changes relative to the inhomogeneity. Therefore, the response to pumping in real aquifers (which are rarely perfectly homogeneous, isotropic, or uniform in thickness) can be interpreted. The longer the test, the closer the test comes to this assumption thus the 24 hour test versus the 5 hour test.*
- Aquifer potentiometric surface is initially horizontal. *The well was most likely in use prior to the test, therefore locally induced gradients may have been present. Any induced gradients from neighboring wells are assumed to be sufficiently low and distant to not interfere.*
- The aquifer receives no recharge from any source. *Over a 24-hour pumping test this assumption is essentially met.*
- The pumping well is fully penetrating. *The pumping well is probably not fully penetrating. Therefore, aquifer potential (yield per feet drawdown) will be underestimated because some of the groundwater produced by the well must travel upward through a smaller cross-sectional area.*
- Flow to pumping well is horizontal and laminar. *We do not have enough information to determine if flow to the well is exclusively horizontal. On average, flow to the well is expected to be primarily horizontal and laminar.*
- All water removed from the well comes from aquifer storage. *This criteria is essentially met.*
- Aquifer is confined. *This criteria is essentially met.*
- Flow is unsteady. *Flow in the aquifer is unsteady.*
- The pumping well is 100 % efficient. *The well is not perfectly efficient, since there probably are head losses at the intake. Water level changes due to friction head loss at the intake will indicate a greater aquifer response to pumping than is actually occurring in the aquifer, yielding a more conservative estimate of transmissivity.*
- Diameter of pumping well is small so that the storage in the well can be neglected. *The volume of water in the well is negligible compared to the volume of water in storage in the surrounding aquifer and the amount of water pumped during the test.*

Experience has shown that even though real aquifers are rarely as simply as the model requires, the Jacob method yields results of sufficient accuracy for most engineering purposes<sup>7</sup>.

Interpretation of the drawdown in the pumping and observation wells yields aquifer transmissivities ranging between 283 (Theis) and 484 (Cooper-Jacob) gpd/ft. Assuming an

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<sup>7</sup> Driscoll F.G., (1986). *Groundwater and Wells 2<sup>nd</sup> Ed. Johnson Screens, St. Paul, MN. P.266.*



aquifer thickness of 140 feet (depth of water in the well), the hydraulic conductivity is approximately 2.02 to 3.46 gpd/ft<sup>2</sup>, within the range commonly observed for sandstone<sup>8</sup>.

To test the validity of the calculated transmissivity (T), the transmissivities derived from the Cooper Jacob solution (484 gpd/ft) and the Theis recovery solution (283 gpd/ft) were inserted into the full Theis<sup>9</sup> non-equilibrium equation. The Theis recovery solution, derived in *Aqtesolve*, uses a storativity ratio (storativity pumping/storativity recovery) of 1.155. Since S could not be calculated due to the indeterminate results at the observation well, a conservative estimate of 0.0001 was used for both solutions.

As shown in Appendix E, the estimated T from the Cooper Jacob equation (484 gpd/ft) provides a close match when inserted back into the Theis solution. The Cooper Jacob model predicts a drawdown of 19.3 feet (from TOC), while the actual drawdown observed at the well was 13.4 feet (from TOC). This can be attributed to an inefficient well resulting from head loss at the intake. Inserting the more conservative transmissivity of 283 gpd/ft (derived from Theis recovery data) into the Theis non-equilibrium equation predicted a drawdown of 31.5 feet (from TOC).

## WATER USE

To determine whether adequate water is available for the proposed use, the maximum drawdown possible in the aquifer under peak summer use with no recharge (rain) was approximated using cumulative Theisian drawdown cone calculations (Appendix E). To estimate cumulative drawdown due to pumping from the proposed use and existing users, drawdown in overlapping cones was added together<sup>8</sup>. The Theis model provides a first approximation of aquifer drawdown and is commonly used for this application. The conservative estimate of transmissivity derived from the Theis equation (283 gpd/ft) was used for aquifer prediction. A conservative (high) estimate of the water needed to supply a single-family dwelling averages 500 gpd (0.35 gpm) on an annual basis. (Eugene Water and Electric Board figures indicate approximately 300 gpd including irrigation for domestic use). Peak use, during the irrigation months of July and August, is expected to be three times average use. For maximum drawdown in the aquifer, the typical use is assumed to be 1 gpm (more than three times the EWEB average).

Maximum drawdown of the overlapping cones, was calculated by eight new theoretical wells spaced approximately 250 feet from the old well (Appendix E). The actual distance between wells is expected to be greater than 250 feet and the maximum drawdown is therefore a conservative estimate. The model estimates maximum drawdown where the drawdown cones intersect after six months of pumping. Using the Theis solution, the drawdown where all the cones intersect is approximately 33.3 feet after 6 months (maximum potential rainless season) without recharge. The estimated saturated thickness

<sup>8</sup> Freeze R.A., Cherry J.A. (1979). *Groundwater*. Prentice Hall. Toronto ON. p.29

<sup>9</sup> Theis C.V., (1935). *The relation between the lowering of the piezometric surface and the rate and duration of discharge of a well using groundwater storage*. *Trans. Amer. Geophys. Union*. 2 pp. 519-524.

<sup>8</sup> Freeze R.A. Cherry J.A. 1979. *Ibid.* p.328

of the aquifer is 140 feet, thus the maximum expected drawdown is less than 24% (approximately 3% per well) of the saturated thickness observed in the well.

Thus, a combined total withdrawal at a rate of 9 gpm (nine wells spaced 250 feet apart) over an entire summer without recharge in the vicinity of the proposed development will result in acceptable drawdown to the aquifer.

### **POTENTIAL FOR AQUIFER DEPLETION**

The potential for aquifer depletion was addressed in the peak water use calculations above. Based on these calculations, which omit natural precipitation recharge, induced recharge from pumping or recharge from irrigation or drainage fields, a six month cycle would result in less than 34 feet of combined drawdown from nine wells.

Recharge for the aquifer underlying the subject property occurs primarily from precipitation.

Annual aquifer recharge to the Willamette Aquifer in the Willamette Valley area is estimated to be 13 inches<sup>9</sup> Although, the property, located in the Spencer Creek watershed, most likely receives less recharge than the Willamette Aquifer, it is reasonable to assume aquifer recharge at the site will be greater than paved urban areas (3.1 inches)<sup>10</sup> Therefore, over 114 acres (Parcels 1 and 2), 3.1 inches amounts to *29.45 acre feet* of water each year. Assuming average water consumption of a single-family dwelling is 500 gallons per day, approximately *0.56 acre feet* per year are used by a family. The combined use by nine dwellings (*5.04 acre feet* of water per year) constitutes approximately 18% of the recharge volume provided by precipitation. Since the aquifer receives adequate recharge to offset the residential withdrawal, aquifer depletion is unlikely and its ability to store or transmit water is unchanged. Therefore, the predicted temporary drawdown of the aquifer, contributed to by peak use and lack of recharge, will be mitigated during fall, winter, and spring months, when precipitation recharge to the surrounding aquifer will resupply the seasonal drawdown. Water use associated with the proposed partition does not constitute aquifer depletion.

### **LIMITATIONS**

The aquifer test analysis presented above is based on assumptions that are conservative. The estimates given herein are in accordance with generally accepted principles and practices. The analyses, conclusions, and recommendations in this report are based upon site conditions as they presently exist and assume that the limited data reviewed is generally representative of subsurface conditions.

If, during further evaluation, information is found which has not been previously reviewed, EGR must be advised at once so these conditions and our recommendations can

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<sup>9</sup> Woodward D.G., M.W. Gannett, J.J.Vaccaro. 1998. *Hydrogeologic Framework of the Willamette Lowland Aquifer System. Oregon and Washington. USGS Professional Paper 1424-B. Table 10.*

<sup>10</sup> Woodward D.G., M.W. Gannett, J.J.Vaccaro. 1998. *Ibid. Table 11*

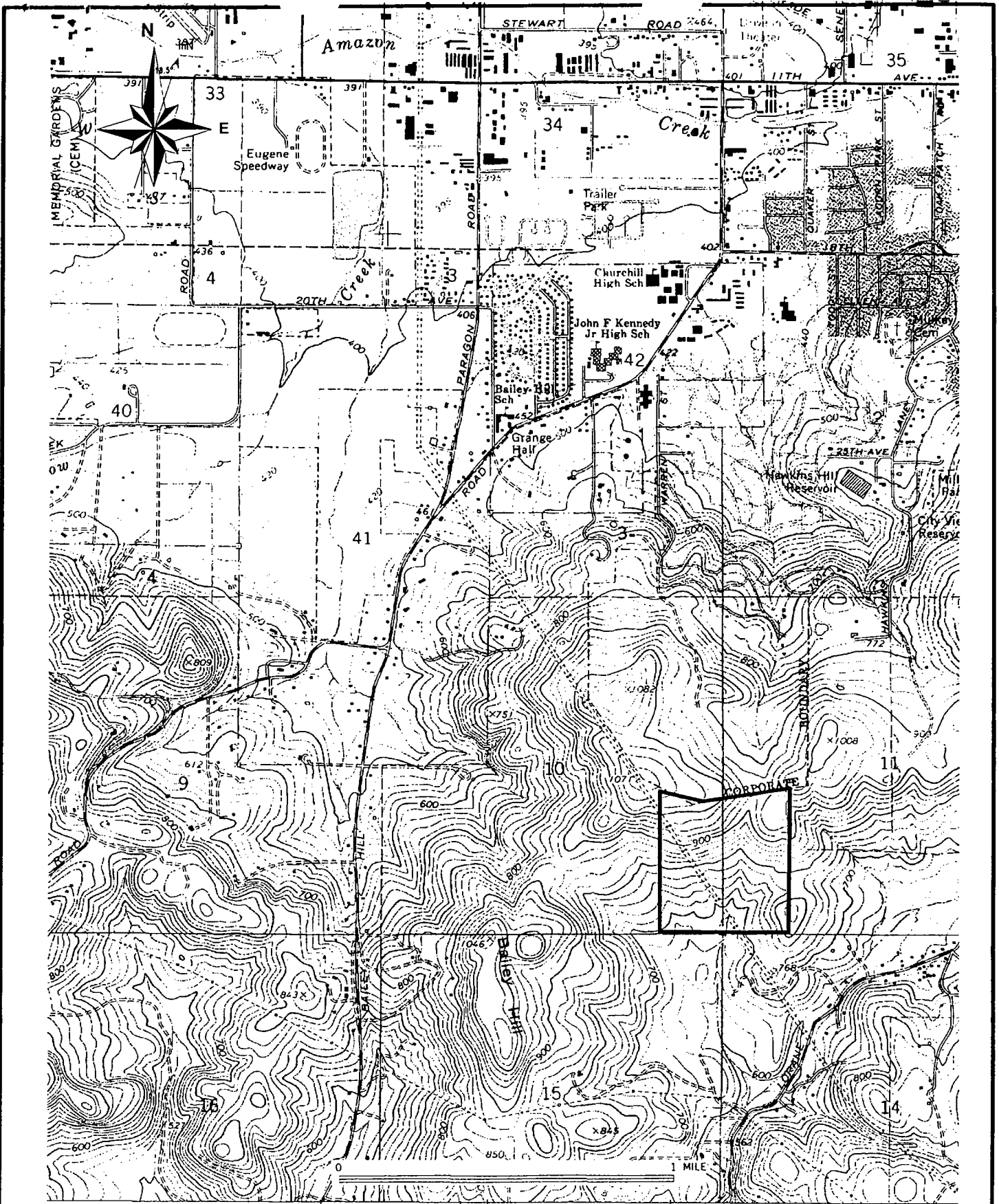
be reviewed and revised, if necessary. Should a substantial lapse of time occur between this investigation and its use as an evaluation of site conditions, or if conditions have changed due to nearby construction or natural causes the data contained in this report should be reviewed to determine its applicability.

EGR does not warrant the use of this report to assess other sites which neighbor or abut the specific property referenced in this report.

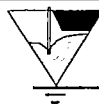
## **CONCLUSIONS**

Per Lane County Code 13.050, we conclude that the underlying aquifer will yield an adequate residential water supply for the additional proposed dwellings without adversely affecting wells on adjacent properties or the underlying aquifer. Due to the additional demands of the aquifer caused by the sporadic domestic use of P-1 during the test, the results concluded in this report are conservative.

Based on the aquifer test results, mathematical modeling and review of published information, the aquifer beneath the subject property can accommodate nine domestic use wells at normal or peak usage. Not every well drilled in the area will have the same production.



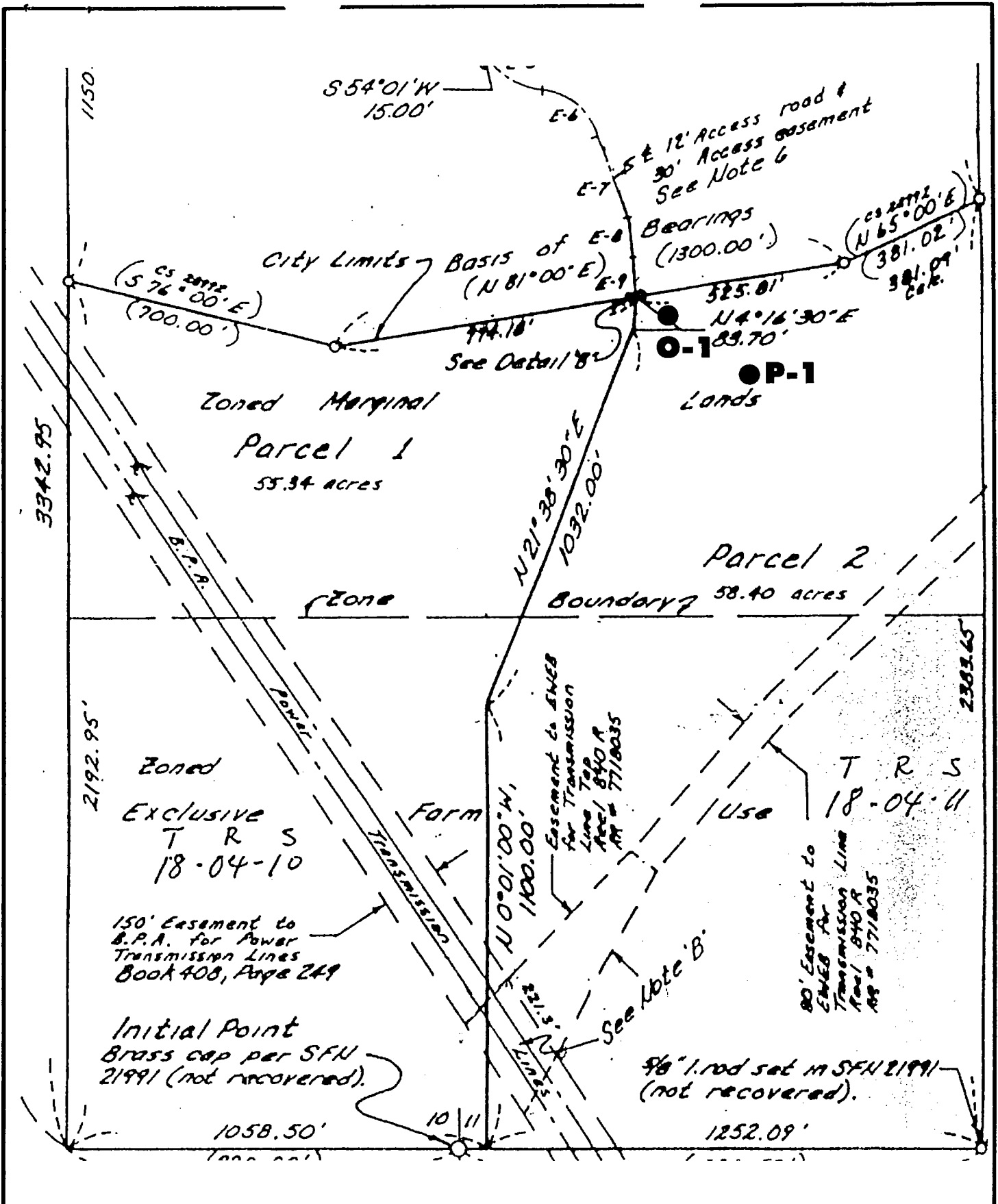
**Figure 1:**  
Location Map



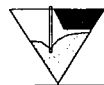
**EGR & Associates, Inc.**  
Engineers, Geologists and Surveyors

2535 B Prairie Road  
Phone (541) 688-8322  
FAX (541) 688-8087

**Ogle Aquifer Test**  
Eugene, OR



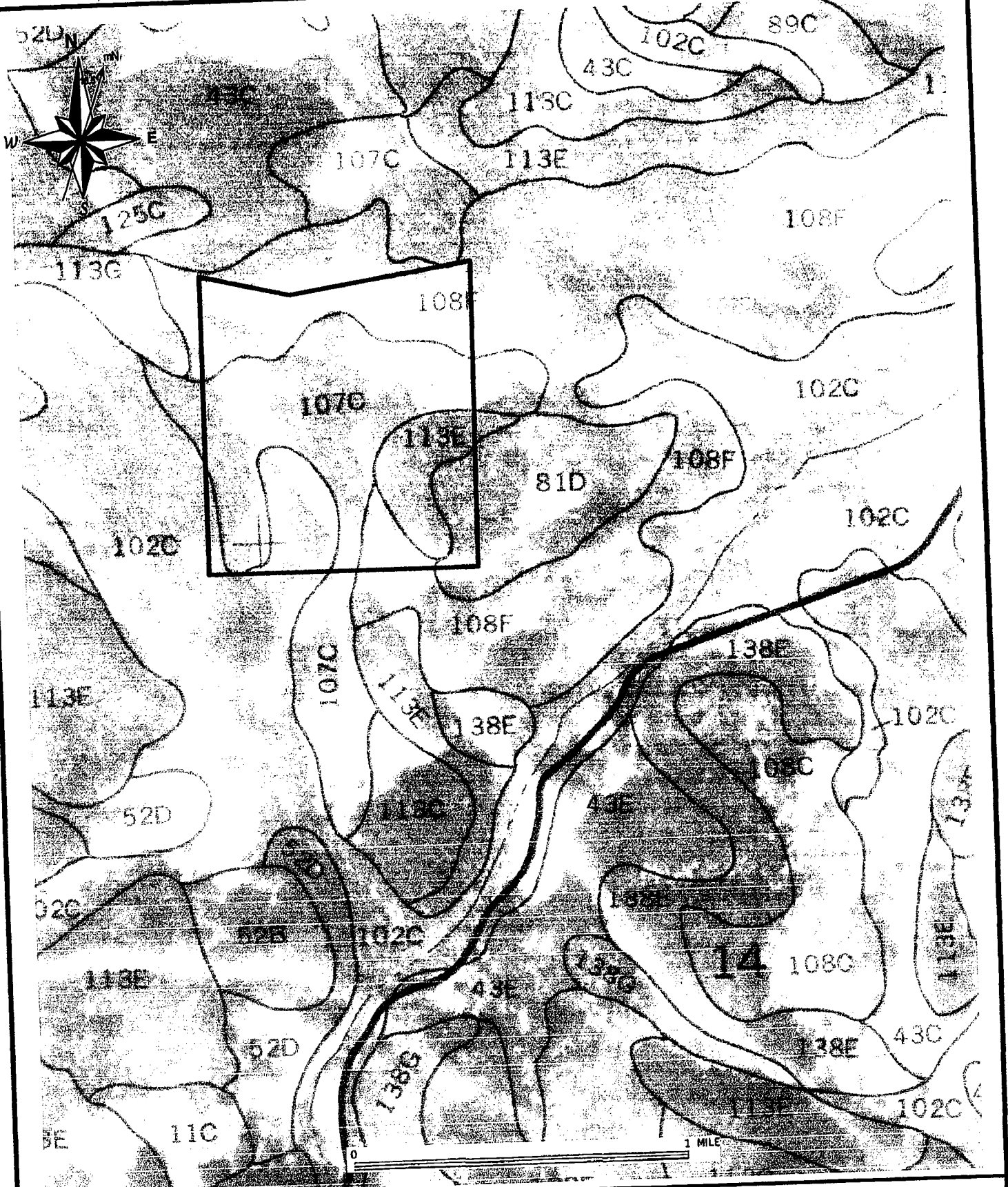
**Figure 2:  
Tax Lot Map**



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Eugene, OR**



**Figure 3:**  
USDA Soil Map



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**Ogle Aquifer Test**  
**Eugene, OR**



**APPENDIX A**  
**LANE COUNTY CODE 13.050**



system and replacement area are designed to serve, then a variance must first be applied for and may be approved if in compliance with the variance section of this Chapter.

(13) Water Supply. Lots and parcels shall be served by an approved public, community or individual water system. No construction or development work on proposed lots or parcels shall be started until information pertaining to water availability and quality is submitted to and approved by the Department. Water system shall be in accordance with and subject to applicable provisions of ORS, as well as all appropriate rules, regulations and policies promulgated under authority of these statutes, Lane Code and Manual. The establishment of rural water systems shall be consistent with RCP Goal 2 policy #24 and RCP Goal 11 policies.

(a) Public or Community Water System. The County may require that a new community or public water system be developed to serve lots or parcels when no existing public or community water system is available or suitable for use by the lots or parcels, and individual water systems are not feasible due to the density of the lots or parcels and/or the possibility of problems concerning the long-term availability of adequate quantities of suitable water. Aquifer and quality tests as discussed in LC 13.050(13)(c) below shall be required.

(b) Individual Water Systems. When lots or parcels are to be served by individual water systems, sufficient evidence shall be submitted to show that each parcel or lot will have available at time of development an adequate supply of potable water which will meet minimum County standards for drinking water. Aquifer and quality tests as discussed in LC 13.050(13)(c) below may be required.

(c) Aquifer and Quality Tests or Geological Evaluation. Aquifer and quality tests or geological evaluation may be required by Lane County for any lot or parcel. These requirements may include, but need not be limited to, evaluation of existing well logs and preparation of a geological report on the area, an evaluation of the site by a professional geologist or engineering geologist or full scale aquifer tests as required. In determining the detail of analysis required, the following apply:

(1) Areas designated by Board order as having problems in the quantity or quality of available water as adopted, documented in Lane Manual and filed in the office of the Department shall meet the following requirements for all parcels less than 20 acres in size. The applicant must affirmatively demonstrate, in a manner acceptable to Lane County, that the proposed subdivision/partition is capable of sustaining the development anticipated with

sufficient potable water. This demonstration must include, but need not be limited to, aquifer tests. More specifically, the aquifer test shall show coefficient of transmissivity, permeability, storage and the specific yield. The bacteriology/chemical tests shall show compliance with standards set by the Oregon State Health Division and Lane County. The test procedure shall utilize standard acceptable practices for aquifer tests using pumped and observation wells and records of static water level, date, clock, elapsed time (in min.), depth of water, drawdown and recovery. Analysis using the non-equilibrium method (or other methods where appropriate) must be performed by a licensed geologist or engineer. A copy of all field notes and test results shall be submitted with the report, together with summary statements which indicate whether the proposed use of the aquifer could adversely impact the neighboring wells or properties or deplete the aquifer and the general impact of the proposed use.

(d) For all areas not designated as problem areas by the procedures documented in LC 13.050(13)(a) above, a pump test report or a well log report shall be supplied, unless determined by Lane County to be not necessary. Pump test and well log reports shall be prepared according to the following criteria:

(i) Pump Test. The test shall be a minimum five-hour pumping duration and record the following information: static water level, pumping level, drawdown, recovery, residual drawdown, well yield (pumping rate) and specific capacity. Measurements shall be made before pumping begins, during the pumping phase and during the recovery phase as necessary.

(ii) Well log reports shall include tax map showing the subject property and surrounding area, all well logs of record from adjacent and surrounding properties and the location of the wells on the tax lot map.

**(14) Additional Cluster Subdivision Requirements.**

(a) The land in a cluster subdivision not platted as a building lot shall be secured and maintained as private open space and recreation area by covenant or association prepared by the applicant and approved by Director or County Counsel. Said approved covenant shall be recorded with and referenced on the cluster subdivision plat.

(b) The largest lot in a cluster subdivision, if platted as a mobile home or dwelling lot, shall be restricted from further development, unless future zoning and/or changes in the comprehensive plan increase the density allowed for the overall cluster subdivision. Said restriction shall be in the form of a covenant prepared by the applicant and approved by the Director or County Counsel, and recorded with and referenced on the cluster subdivision plat.

(c) The type and number of living units intended for each cluster subdivision lot shall be specified in the covenants, and each lot shall be restricted from an increase in the number of living units, unless the future zoning and/or changes in the comprehensive plan increase the density allowed for the overall subdivision and unless new cluster subdivision plans are submitted and approved. Said restriction shall be in the form of a covenant prepared by the applicant and approved by the Director or County Counsel, and recorded with and referenced on the cluster subdivision plat.

#### 13.100 Application Requirements for Preliminary Partition Plans.

(1) An application for preliminary partition approval shall be filed with the Department pursuant to LC 14.050.

(2) The application shall be accompanied by 5 copies of the preliminary partition plan one of which must be 8 1/2" x 11".

(3) Preliminary partition plans shall show all required information and shall be clearly and legibly drawn to a scale sufficient enough to enable the approving authority to have an adequate understanding of what is proposed. The following information is required on a preliminary partition plan:

✓(a) North point, scale and date of the preliminary plan.

✓(b) Appropriate identification clearly stating the drawing is a preliminary partition plan.

✓(c) Names and addresses of the landowners, applicant and the engineer, surveyor, land planner, landscape architect or any other person responsible for designing the preliminary plan.

✓(d) The map number (township, range and section) and tax lot number of the tract being divided.

(e) The boundary lines of the tract to be divided and approximate acreage of the property.

(f) For partitions of land within an adopted urban growth boundary, contour lines sufficient to show the direction and general grade of land slope having the following intervals:

**APPENDIX B**  
**OREGON WATER WELL DRILLERS LOGS**

**Well Log Report**

**Township: 18S, Range: 4W, Section: 10,11,14,15**

Well Log	First Water (ft. bgs)	Completed Depth (ft. bgs)	Static Water (ft. bgs)	Yield (gpm)
LANE 1385	30	90	1	150
LANE 1386	62	200	41	20
LANE 1387	80	240	55	25
LANE 1388	90	110	32	15
LANE 1389	80	180	10	14
LANE 1390	31	400	15	1
LANE 1391	125	200	12	15
LANE 16780	142	190	42	9
LANE 16990		215	40	40
LANE 16991	85	90	30	25
LANE 16992	70	100	30	10
LANE 16993	190	192	140	60
LANE 16994	125			
LANE 16995	52	97	30	30
LANE 16997		132	75	0.8
LANE 16999		140	62	25
LANE 17000	78	105	46	20
LANE 17001	240	250	50	20
LANE 17002	83	294	56	15
LANE 17003	110	112	95	15
LANE 17004	44	95	15	9
LANE 17005	32	255	18	12
LANE 17006	92	100	20	11
LANE 17007		210	42	9
LANE 17021	70	160	20	20
LANE 17022	129	275	51	2
LANE 17023	350	385	100	7.5
LANE 17024		84	22	7.5
LANE 17025	215	290	30	15
LANE 17026	130	360	28	2
LANE 17027	40	105	25	1.5
LANE 17028	60			
LANE 17029	45	400	50	7.5
LANE 17030	30	205	5	2
LANE 17031	72	127	13	8
LANE 17032		120	7.5	8
LANE 17033		155	60	10
LANE 17034		230	80	9
LANE 17035	78	155	24	18
LANE 17036	185	425	90	1.5
LANE 17037	210	270	210	
LANE 17039	75	100	21	15
LANE 17040		150	30	1
LANE 17041		97	25	30
LANE 17042		230		1
LANE 17043		222	40	3
LANE 17044	104	150	48	7.5
LANE 17045	191	201	41	16
LANE 17046	60	88	18	35
LANE 17047	55	67	17	40
LANE 17048	90	340	15	2

Well Log	First Water (ft. bgs)	Completed Depth (ft. bgs)	Static Water (ft. bgs)	Yield (gpm)
LANE 17049		300	17	4
LANE 17050		50		
LANE 17051		105	24	1.7
LANE 17052		502	180	20
LANE 17053		120	65	8
LANE 17054	130	240	2	60
LANE 17055	148	228	48	10.5
LANE 17056	80	175	15	12
LANE 17057				
LANE 17058				
LANE 17059	125	137	28	5.8
LANE 17060		360	70	8
LANE 17061		131	54	1
LANE 17062		200	55	180
LANE 17063		310	150	60
LANE 17064		145	20	10
LANE 17065		65	23	60
LANE 17066	140	240	40	2
LANE 17067	65	80	35	17
LANE 17068		171	55	50
LANE 2829	138	145	59	20
LANE 2927	90	160	45	12
LANE 3330	28	50	9	10
LANE 4056	44	110	16	12.5
LANE 4472	73	120	15	100
LANE 4704	470	550	190	15
LANE 4818	81	330	24	4
LANE 50024	185	450	177	50
LANE 50594	58	380	58	2.5
LANE 50595	68	160	14	13
LANE 50600	113	220	75	21
LANE 51061	74	170	28	5
LANE 52540		200	6	2
LANE 52541	218	235	62	14.5
LANE 52916	65	145	60	10
LANE 52917	280	360	60	8
LANE 58511				
LANE 58653				
LANE 58950	566	600	165	12
LANE 59411	180	330	97	11
LANE 59895	87	110	20	8
LANE 89	75	173	18	50

<b>Count</b>	<b>64</b>	<b>87</b>	<b>85</b>	<b>85</b>
<b>Min</b>	<b>28</b>	<b>50</b>	<b>1</b>	<b>0.8</b>
<b>Max</b>	<b>566</b>	<b>600</b>	<b>210</b>	<b>180</b>
<b>Mean</b>	<b>119</b>	<b>206</b>	<b>48</b>	<b>20</b>
<b>Median</b>	<b>84</b>	<b>175</b>	<b>35</b>	<b>12</b>
<b>Mode</b>	<b>80</b>	<b>200</b>	<b>15</b>	<b>15</b>

WATER WELL REPORT  
STATE OF OREGON

**RECEIVED**  
SEP 18 1981

State Well No. 18S/HW-10  
State Permit No. 1235

WATER RESOURCES DEPT

(1) OWNER: **SALEM, OREGON**  
Name Ken Kumbler  
Address 3492 W 15<sup>th</sup>  
City Eugene State OR

(10) LOCATION OF WELL:  
County LANE Driller's well number  
Tax Lot # 500 Lot 10 Blk T. 18S R. 9W Subdivision  
Address at well location:

(2) TYPE OF WORK (check):  
New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL: (4) PROPOSED USE (check):  
Rotary Air  Driven  Domestic  Industrial  Municipal   
Rotary Mud  Dug  Irrigation  Test Well  Other   
 Bored  Thermal  Withdrawal  Rejection

(5) CASING INSTALLED: Steel  Plastic   
Threaded  Welded   
Diam. from 6 ft. to 9.5 ft. Gauge 15.0  
Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gauge \_\_\_\_\_

(6) LINER INSTALLED:  
Diam. from 10 ft. to 9.0 ft. Gauge 16.0

(6) PERFORATIONS:  
Type of perforator used rod drill Perforated?  Yes  No  
Size of perforations 7 in. by \_\_\_\_\_ in.  
2.50 perforations from 90 ft. to 30 ft.  
perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(7) SCREENS: Well screen installed?  Yes  No  
Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot Size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot Size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(8) WELL TESTS: Drawdown is amount water level is lowered below static level  
Was a pump test made?  Yes  No If yes, by whom?  
Air test 150 + gal/min. with drill stem at 90 ft. / hr.  
Bailer test \_\_\_\_\_ gal/min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hr.  
Artesian flow \_\_\_\_\_ g.p.m.  
Temperature of water \_\_\_\_\_ Depth artesian flow encountered 90 ft.

(9) CONSTRUCTION: Special standards: Yes  No   
Well seal—Material used Cement grout  
Well sealed from land surface to \_\_\_\_\_ ft.  
Diameter of well bore to bottom of seal \_\_\_\_\_ in.  
Diameter of well bore below seal \_\_\_\_\_ in.  
Number of sacks of cement used in well seal \_\_\_\_\_ sacks  
How was cement grout placed? Pushed  
Was pump installed? \_\_\_\_\_ Type \_\_\_\_\_ HP \_\_\_\_\_ Depth \_\_\_\_\_ ft.  
Was a drive shoe used?  Yes  No Plug \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
Type of Water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(11) WATER LEVEL: Completed well.  
Depth at which water was first found 30 ft.  
Static level + ft. below land surface. Date 9-17-81  
Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

(12) WELL LOG: Diameter of well below casing 6 ft.  
Depth drilled 90 ft. Depth of completed well 90 ft.  
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of State Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
silt clay	0	13	
red Boggy	13	23	
Blue Rock	23	27	
red rock	27	37	
Blue Rock w/B	37	60	
light grey	60	70 + 1'	
soft sand	70	81	
light grey	81	90 + 1'	

Work started 9-13 1981 Completed 9-13 1981  
Date well drilling machine moved off of well 9-13 1981

Drilling Machine Operator's Certification:  
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
[Signed] Carl P. [Signature] Date 9-13, 1981  
(Drilling Machine Operator)

Drilling Machine Operator's License No. 3BC  
Water Well Contractor's Certification:  
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
Name Fletcher Pump & Drilling  
Address 1822 S. [Address]  
[Signed] Carl P. [Signature] (Water Well Contractor)  
Contractor's License No. 494 Date 9-13, 1981

NOTICE TO WATER WELL CONTRACTOR  
The original and first copy of this report are to be filed with the

WATER RESOURCES DEPARTMENT,  
SALEM, OREGON 97310  
within 30 days from the date of well completion.

SP-12658-690

NOTICE TO WATER WELL CONTRACTOR  
The original and first copy of this report are to be filed with the  
WATER RESOURCES DEPARTMENT.  
SALEM, OREGON 97310  
within 30 days from the date of well completion.

WATER WELL REPORT  
STATE OF OREGON  
(Please type or print)  
AUG 7 1978  
Do not write above this line

PUMP  
12330

State Well No. 183/4w-10  
State Permit No.

(1) OWNER: WAH SALEM, OREGON  
Name Mr. Jerry Gilbert  
Address 3175 Bailey Hill Road, Eugene, Oregon

(10) LOCATION OF WELL:  
County Lane Driller's well number  
1/4 Section 10 T. 18S R. 4W W.M.  
Bearing and distance from section or subdivision corner

(2) TYPE OF WORK (check):  
New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 11

(3) TYPE OF WELL: (4) PROPOSED USE (check):  
Rotary  Driven  Domestic  Industrial  Municipal   
Cable  Jetted  Irrigation  Test Well  Other   
Dug  Bored

(11) WATER LEVEL: Completed well.  
Depth at which water was first found 62 ft.  
Static level 41 ft. below land surface. Date 7/11/78  
Artesian pressure lbs. per square inch. Date

(6) CASING INSTALLED: Threaded  Welded   
" Diam. from +1 ft. to 39 ft. Gage 250  
" Diam. from ft. to ft. Gage  
" Diam. from ft. to ft. Gage

(12) WELL LOG: Diameter of well below casing 6  
Depth drilled 200 ft. Depth of completed well 200 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Topsoil	0	3	
Brown clay	3	19	
Weathered sandstone	19	25	
Gray sandstone	25	200	41'

(8) PERFORATIONS: Perforated?  Yes  No.  
Type of perforator used  
Size of perforations in. by in.  
perforations from ft. to ft.  
perforations from ft. to ft.  
perforations from ft. to ft.

(7) SCREENS: Well screen installed?  Yes  No  
Manufacturer's Name  
Type Model No.  
Diam. Slot size Set from ft. to ft.  
Diam. Slot size Set from ft. to ft.

(8) WELL TESTS: Drawdown is amount water level is lowered below static level  
Was a pump test made?  Yes  No If yes, by whom?  
Yield: 20 gal./min. with 159 ft. drawdown after 2 hrs.  
Air Rotary Developed " "  
Baller test gal./min. with ft. drawdown after hrs.  
Artesian flow g.p.m.  
Temperature of water Depth artesian flow encountered ft.

Work started 7/7 1978 Completed 7/11 1978  
Date well drilling machine moved off of well 7/11 1978

(9) CONSTRUCTION:  
Well seal—Material used Portland Cement  
Well sealed from land surface to 39 ft.  
Diameter of well bore to bottom of seal 10 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal 11 sacks  
How was cement grout placed? Mixed and poured from the top.

Drilling Machine Operator's Certification:  
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
[Signed] Ronald J. Lewis Date 7/13, 1978  
(Drilling Machine Operator)  
Drilling Machine Operator's License No. 1043

Was a drive shoe used?  Yes  No Plugs Size: location ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? depth of strata  
Method of sealing strata off  
Was well gravel packed?  Yes  No Size of gravel:  
Gravel placed from ft. to ft.

Water Well Contractor's Certification:  
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
Name Pitcher Pump & Drilling Company  
(Person, firm or corporation) (Type or print)  
Address 150 River Ave., Eugene, Or 97404  
[Signed] Carl Pitcher  
(Water Well Contractor)  
Contractor's License No. 494 Date 7/13 1978



NOTICE TO WATER WELL CONTRACTOR  
The original and first copy  
of this report are to be  
filed with the

STATE ENGINEER, SALEM, OREGON  
within 30 days from the date  
of well completion.

WATER WELL REPORT

STATE OF OREGON  
(Please type or print)

(Do not write above this line)

RECEIVED  
APR 29 1974

State Well No. 185/4W-11

State Permit No.

STATE ENGINEER  
SALEM, OREGON

(1) OWNER:

Name Dr. Don Fox  
Address 3790 Onyx St.  
Eugene, Oregon

(2) TYPE OF WORK (check):

New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary  Driven   
Cable  Jetted   
Dug  Bored

(4) PROPOSED USE (check):

Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

(5) CASING INSTALLED:

Threaded  Welded   
6" Diam. from 0 ft. to 32 ft. Gage 250  
" Diam. from " ft. to " ft. Gage  
" Diam. from " ft. to " ft. Gage

(6) PERFORATIONS:

Perforated?  Yes  No.  
Type of perforator used \_\_\_\_\_  
Size of perforations in. by in. \_\_\_\_\_  
perforations from ft. to ft.  
perforations from ft. to ft.  
perforations from ft. to ft.

(7) SCREENS:

Well screen installed?  Yes  No  
Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. Slot size Set from ft. to ft.  
Diam. Slot size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level  
Was a pump test made?  Yes  No. If yes, by whom?  
Yield: gal./min. with ft. drawdown after hrs.  
\_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
\_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Artesian flow \_\_\_\_\_ g.p.m.  
Temperature of water \_\_\_\_\_ Depth artesian flow encountered \_\_\_\_\_ ft.

(9) CONSTRUCTION:

Well seal—Material used Cement  
Well sealed from land surface to 0 to 32 ft.  
Diameter of well bore to bottom of seal 10 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal 8 sacks  
Number of sacks of bentonite used in well seal \_\_\_\_\_ sacks  
Brand name of bentonite \_\_\_\_\_  
Number of pounds of bentonite per 100 gallons of water \_\_\_\_\_ lbs./100 gals.  
Was a drive shoe used?  Yes  No. Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Was well gravel packed?  Yes  No. Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(10) LOCATION OF WELL:

County Lane Driller's well number 776-71  
1/4 NW 1/4 Section 17 T. 18 R. 14W W.M.  
Bearing and distance from section or subdivision corner \_\_\_\_\_

(11) WATER LEVEL: Completed well.

Depth at which water was first found 80 ft.  
Static level 55 ft. below land surface. Date 3-29-74  
Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

(12) WELL LOG:

Diameter of well below casing 6"  
Depth drilled 240 ft. Depth of completed well 240 ft.  
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Brown Top Soil	0	1	
Yellow Clay	1	20	
Dark Blue Shale	20	65	
Blue Shale	65	100	55
Dark Brown Shale	100	155	
Blue & Red Mixed Shale	155	190	
Red Shale	190	205	
Blue Shale	205	240	55

Work started 3-25 1974 Completed 4-1 1974  
Date well drilling machine moved off of well 4-1 1974

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

[Signed] Clifford Cronin Date 4-1, 1974  
(Drilling Machine Operator)

Drilling Machine Operator's License No. 148

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name CARTER DRILLING & PUMP SERVICE  
(Person, firm or corporation) (Type or print)  
Address P.O. BOX 46, SPRINGFIELD, OREGON 97477

[Signed] \_\_\_\_\_ Date \_\_\_\_\_  
(Water well Contractor)

Contractor's License No. 126 Date April 11, 1974

(USE ADDITIONAL SHEETS IF NECESSARY)

EP-4855-110

STATE OF OREGON  
WATER WELL REPORT  
(as required by ORS 537.765)

NOV 9 1987

WATER RESOURCES DEPT.  
SALEM, OREGON

*Ramm*  
**1388**  
*1844w-1f*

**(1) OWNER:** Well Number: \_\_\_\_\_  
Name Evelyn Hile  
Address 2887 Harlow Rd.  
City Eugene State Or. Zip 97401

**(2) TYPE OF WORK:**  
 New Well  Deepen  Recondition  Abandon

**(3) DRILL METHOD**  
 Rotary Air  Rotary Mud  Cable  
 Other \_\_\_\_\_

**(4) PROPOSED USE:**  
 Domestic  Community  Industrial  Irrigation  
 Thermal  Injection  Other \_\_\_\_\_

**(5) BORE HOLE CONSTRUCTION:**  
Special Construction approval Yes  No  Depth of Completed Well 110 ft.  
Explosives used  Yes  No  Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE			SEAL			Amount
Diameter	From	To	Material	From	To	sacks or pounds
10"	0	77	Cement	0	77	30 sacks
6"	77	110				

How was seal placed: Method  A  B  C  D  E  
 Other \_\_\_\_\_  
Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

**(6) CASING/LINER:**

Casing/Liner	Diameter	From	To	Gauge	Material			
					Steel	Plastic	Welded	Threaded
Casing:	6"	+1	79	.250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner:					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Location of shoe(s) 79'

**(7) PERFORATIONS/SCREENS:**

Perforations			Screens		Casing	Liner
From	To	Slot size	Type	Material		
					<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>

**(8) WELL TESTS: Minimum testing time is 1 hour**  
 Pump  Bailor  Air  Flowing  Artesian  
Yield gal/min 15 Drawdown 77 Drill stem at 110 Time 1 hr.

Temperature of water \_\_\_\_\_ Depth Artesian Flow Found \_\_\_\_\_  
Was a water analysis done?  Yes By whom \_\_\_\_\_  
Did any strata contain water not suitable for intended use?  Too little  
 Salty  Muddy  Odor  Colored  Other not tested  
Depth of strata: \_\_\_\_\_

**(9) LOCATION OF WELL by legal description:**  
County Lane Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Township 18S Nor S. Range 4W E or W, WM. \_\_\_\_\_  
Section 14 1/4 1/4  
Tax Lot 700 Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) next to 86448  
Lorane Hwy. Eugene, Or. 97405

**(10) STATIC WATER LEVEL:**  
32 ft. below land surface. Date 10-16-87  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

**(11) WATER BEARING ZONES:** Depth at which water was first found 90'

From	To	Estimated Flow Rate	SWL
90	91'	15	32'

**(12) WELL LOG:** Ground elevation \_\_\_\_\_

Material	From	To	SWL
Topsoil	0	1	
Brown Clay	1	19	
Boulders	19	20	
Brown Clay	20	31	
Gray Brown Claystone	31	40	
Gray Brown Fractured Claystone	40	72	
Blue Soft Sandstone	72	110	32'

Date started 10-16-87 Completed 10-16-87

**(unbonded) Water Well Constructor Certification:**  
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.  
Signed Bob Murphy WWC Number 1344 Date 10-16-87

**(bonded) Water Well Constructor Certification:**  
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.  
Signed Cathy Jones WWC Number 559 Date 10-16-87

NOTICE TO WATER WELL CONTRACTOR  
The original and first copy of this report are to be filed with the  
WATER RESOURCES DEPARTMENT,  
SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

**WATER WELL REPORT**  
**STATE OF OREGON**  
(Please type or print)  
(Do not write above this line)

*1383*

State Well No. 1854w-14b  
State Permit No. \_\_\_\_\_

**(1) OWNER:**

Name Jerry Strand  
Address 86501 Loraine Hwy.  
Eugene, Oregon

**(2) TYPE OF WORK (check):**

New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

**(3) TYPE OF WELL:**

Driven  Cable  Jetted  Dug  Bored

**(4) PROPOSED USE (check):**

Domestic  Industrial  Municipal  Irrigation  Test Well  Other

**(5) CASING INSTALLED:**

Threaded  Welded   
6" Diam. from +1 ft. to 39 ft. Gage .250  
5" Diam. from 30 ft. to 180 ft. Gage .188

**(6) PERFORATIONS:**

Perforated?  Yes  No.  
Type of perforator used Torch (Steel Liner Only)  
Size of perforations 4 in. by 3/8 in.  
33 perforations from 80 ft. to 100 ft.  
33 perforations from 110 ft. to 160 ft.

**(7) SCREENS:**

Well screen installed?  Yes  No  
Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**(8) WELL TESTS:**

Drawdown is amount water level is lowered below static level.  
Air  
Was a pump test made?  Yes  No If yes, by whom? Driller  
Yield: 14 gal./min. with 160 ft. drawdown after 1 hrs.  
Water test NO gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Artesian flow \_\_\_\_\_ g.p.m.  
Temperature of water 58 Depth artesian flow encountered \_\_\_\_\_ ft.

**(9) CONSTRUCTION:**

Well seal—Material used Portland Cement Type III  
Well sealed from land surface to 22 ft.  
Diameter of well bore to bottom of seal 10 in.  
Diameter of well bore below seal 8 3/4-6 in.  
Number of sacks of cement used in well seal 6 sacks  
How was cement grout placed? Method "C"  
Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**(10) LOCATION OF WELL:**

County Lane Driller's well number 2194/670  
NW Section 14 T. 18 R. 4W W.M.  
Bearing and distance from section or subdivision corner \_\_\_\_\_

**(11) WATER LEVEL: Completed well.**

Depth at which water was first found 80 ft.  
Static level 10 ft. below land surface. Date 9/24/79  
Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

**(12) WELL LOG:**

Diameter of well below casing 6"  
Depth drilled 180 ft. Depth of completed well 180 ft.  
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Top Soil	0	2	
Brown Clay	2	6	
Blue Clay	6	13	
Soft Blue Shale	13	115	10
Hard Gray Basalt	115	145	10
Soft Blue Shale	145	180	10

**RECEIVED**  
OCT - 3 1979

WATER RESOURCES DEPT

Work started 9/21/79 Completed 9/24/79  
Date well drilling machine moved off of well 9/25/79

**Drilling Machine Operator's Certification:**  
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
[Signed] Arthur J. ... Date \_\_\_\_\_, 19\_\_\_\_  
Drilling Machine Operator  
Drilling Machine Operator's License No. 717

**Water Well Contractor's Certification:**  
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
Name Carter's Drilling & Pump Service  
Address P.O. Box 16 Springfield, Oregon 97477  
[Signed] James ... (Water Well Contractor)  
Contractor's License No. 126 Date 9/25/79

NOTICE TO WATER WELL CONTRACTOR  
The original and first copy  
of this report are to be  
filed with the

STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

WATER WELL REPORT

STATE OF OREGON

(Please type or print)  
(Do not write above this line)

RECEIVED

Well No. 185/4W-14

FEB 8 1977 State Permit No.

WATER RESOURCES DEPT

(10) LOCATION OREGON:

County LANE Driller's well number 7672  
Section 14 T. 18S R. 4W W.M.

Bearing and distance from section or subdivision corner

(1) OWNER:

Name LARRY DOUVOUX  
Address 88319 LORANE HIGHWAY  
EUGENE

(2) TYPE OF WORK (check):

New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in item 12.

(3) TYPE OF WELL:

Rotary  Driven   
Cable  Jetted   
Dug  Bored

(4) PROPOSED USE (check):

Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

(5) CASING INSTALLED:

6" Diam. from +1 ft. to 27.3 ft. Gage 14  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_

(6) PERFORATIONS:

Perforated?  Yes  No.

Type of perforator used

Size of perforations in. by in.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(7) SCREENS:

Well screen installed?  Yes  No

Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made?  Yes  No If yes, by whom?  
d: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
" WELL OUTPUT MAY FLUCTUATE  
" AIR under test 1 gal./min. with MAX ft. drawdown after 8 hrs.  
Artesian flow \_\_\_\_\_ g.p.m.  
Temperature of water \_\_\_\_\_ Depth artesian flow encountered \_\_\_\_\_ ft.

(9) CONSTRUCTION:

Well seal—Material used CEMENT GROUT  
Well sealed from land surface to 27 ft.  
Diameter of well bore to bottom of seal 6 1/2 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal 6 sacks  
Number of sacks of bentonite used in well seal \_\_\_\_\_ sacks  
Brand name of bentonite \_\_\_\_\_  
Number of pounds of bentonite per 100 gallons  
of water \_\_\_\_\_ lbs./100 gals.  
Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No.  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(11) WATER LEVEL: Completed well.

Depth at which water was first found 31 ft.  
Static level 15 ft. below land surface. Date 9-22-76  
Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

(12) WELL LOG:

Diameter of well below casing 6  
Depth drilled 400 ft. Depth of completed well 400 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
BASALT	0	135	
TUFFACEOUS SS	135	344	
BASALT	344	364	
TUFFACEOUS SS	364	400	

Work started 9-20 1976 Completed 9-22 1976  
Date well drilling machine moved off of well 9-22 1976

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
[Signed] Paul Christensen Date 9/23, 1976  
(Drilling Machine Operator)  
Drilling Machine Operator's License No. 612

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
Name MARK CHRISTENSEN (Type or print)  
(Person, firm or corporation)  
Address 33132 COLEMAN RD EUGENE  
[Signed] Mark Christensen  
(Water Well Contractor)  
Contractor's License No. 97 Date 9-23, 1976

(USE ADDITIONAL SHEETS IF NECESSARY)

RP\*45656-119

NOTICE TO WATER WELL CONTRACTOR  
 The original and first copy of this report  
 are to be filed with the  
 WATER RESOURCES DEPARTMENT,  
 SALEM, OREGON 97310  
 within 30 days from the date  
 of well completion.

**WATER WELL REPORT**  
**STATE OF OREGON**  
 (Please type or print)  
 (Do not write above this line)

*Handwritten:* 1391

State Well No. 180/4w-15  
 State Permit No. \_\_\_\_\_

(1) OWNER:  
 Name Mr. Robert G. Smith  
 Address 86182 Lorane Hwy  
Eugene OR 97405

(2) TYPE OF WORK (check):  
 New Well  Deepening  Reconditioning  Abandon   
 If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL: (4) PROPOSED USE (check):  
 Rotary  Driven  Domestic  Industrial  Municipal   
 Cable  Jetted  Irrigation  Test Well  Other   
 Dug  Bored

CASING INSTALLED: Threaded  Welded   
 6" Id Diam. from Plus 1 ft. to 24 ft. Gage 250  
 " Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_  
 " Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_

PERFORATIONS: Perforated?  Yes  No.  
 Type of perforator used \_\_\_\_\_  
 Size of perforations in. by in.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(7) SCREENS: Well screen installed?  Yes  No  
 Manufacturer's Name \_\_\_\_\_  
 Type \_\_\_\_\_ Model No. \_\_\_\_\_  
 Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(8) WELL TESTS: Drawdown is amount water level is lowered below static level  
 Was a pump test made?  Yes  No If yes, by whom?  
 Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
 Well output may fluctuate " " "  
 Air \_\_\_\_\_ " " "  
 XXXer test 15 gal./min. with max ft. drawdown after 1 hrs.  
 Artesian flow \_\_\_\_\_ g.p.m.  
 Temperature of water \_\_\_\_\_ Depth artesian flow encountered \_\_\_\_\_ ft.

(9) CONSTRUCTION:  
 Well seal—Material used Cement grout  
 Well sealed from land surface to 24 ft.  
 Diameter of well bore to bottom of seal 10 in.  
 Diameter of well bore below seal 6 in.  
 Number of sacks of cement used in well seal 9 sacks  
 How was cement grout placed?  
Machine mixed - pumped to dry seal area  
 Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
 Did any strata contain unusable water?  Yes  No  
 Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
 Method of sealing strata off \_\_\_\_\_  
 Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
 Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(10) LOCATION OF WELL:  
 County Lane Driller's well number 7950  
 1/4 Section 15 T. 18s R. 4w W.M.  
 Bearing and distance from section or subdivision corner \_\_\_\_\_

(11) WATER LEVEL: Completed well.  
 Depth at which water was first found 125 ft.  
 Static level 12 ft. below land surface. Date 6-15-79  
 Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

(12) WELL LOG: Diameter of well below casing 6"  
 Depth drilled 200 ft. Depth of completed well 200 ft.  
 Formation: Describe color, texture, grain size and structure of materials;  
 and show thickness and nature of each stratum and aquifer penetrated,  
 with at least one entry for each change of formation. Report each change in  
 position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Clay - Brown Boulders/small	0	12	
B/G Med. Hard Sandstone	12	27	
Basalt - Blue/hard	27	42	
B/G Med. Hard Sandstone	42	200	

**RECEIVED**  
 JUN 26 1979

WATER RESOURCES DEPT  
 SALEM, OREGON

Work started 6-14-79 19 Completed 6-15-79 19  
 Date well drilling machine moved off of well 6-15-79 19

Drilling Machine Operator's Certification:  
 This well was constructed under my direct supervision.  
 Materials used and information reported above are true to my  
 best knowledge and belief.  
 [Signed] Mark Christensen Date 6-15-79 19  
 (Drilling Machine Operator)  
 Drilling Machine Operator's License No. 1234

Water Well Contractor's Certification:  
 This well was drilled under my jurisdiction and this report is  
 true to the best of my knowledge and belief.  
 Name Mark Christensen  
 (Person, firm or corporation) (Type or print)  
 Address 33132 Coleman Road Eugene, OR 97401  
 [Signed] Mark Christensen  
 (Water Well Contractor)  
 Contractor's License No. 97 Date 6-15-79 19

RECEIVED LANE

JAN 26 1989

16780 B342/14

STATE OF OREGON WATER WELL REPORT (as required by ORS 537.786)

(START CARD) # 9505

(1) OWNER: Name Evelyn Hile Address 2887 Harlow Rd. City Eugene State Or. Zip 97401

Well Number:

(9) LOCATION OF WELL by legal description:

County Lane Latitude Longitude Township 18S Nor S, Range 4W E or W, WM. Section 14 Tax Lot 700 Lot Block Subdivision Street Address of Well (or nearest address) ACROSS from 86448 Lorane Hwy. Eugene, Or.

(2) TYPE OF WORK: [X] New Well [ ] Deepen [ ] Recondition [ ] Abandon

(3) DRILL METHOD [X] Rotary Air [ ] Rotary Mud [ ] Cable [ ] Other

(4) PROPOSED USE: [X] Domestic [ ] Community [ ] Industrial [ ] Irrigation [ ] Thermal [ ] Injection [ ] Other

(5) BORE HOLE CONSTRUCTION: Special Construction approval Yes No Depth of Completed Well 190 ft. Explosives used [ ] [X] Type Amount

Table with columns for HOLE Diameter, From, To, Material, SEAL From, To, Amount sacks or pounds. Includes rows for 10", 8 1/2", and 6" diameters.

How was seal placed: Method [ ] A [ ] B [ ] C [X] D [ ] E Backfill placed from ft. to ft. Material Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER: Table with columns for Diameter, From, To, Gauge, Steel, Plastic, Welded, Threaded. Includes rows for Casing (6" diameter) and Liner (4 1/2" diameter).

(7) PERFORATIONS/SCREENS: [X] Perforations Method SAW [ ] Screens Type Material

Table with columns for From, To, Slot size, Number, Diameter, Tele/pipe size, Casing, Liner. Includes rows for perforations at 170-190, 130-150, and 90-110 feet.

(8) WELL TESTS: Minimum testing time is 1 hour [ ] Pump [ ] Bailor [X] Air [ ] Flowing [ ] Artesian Yield gal/min Drawdown Drill stem at Time

Table with columns for Yield gal/min, Drawdown, Drill stem at, Time. Includes row for 9 gal/min, 148' drawdown, 190' drill stem at, 1 hr. time.

Temperature of water Depth Artesian Flow Found Was a water analysis done? [ ] Yes By whom Did any strata contain water not suitable for intended use? [ ] Too little [ ] Salty [ ] Muddy [ ] Odor [ ] Colored [ ] Other

(10) STATIC WATER LEVEL: 42' ft. below land surface. Date 1-18-89 Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES: Table with columns for From, To, Estimated Flow Rate, SWL. Includes rows for 142' to 144' and 171' to 175' depths.

(12) WELL LOG: Table with columns for Material, From, To, SWL. Includes rows for Topsoil, Gray Brown Fractured Basalt, Gray Basalt, Gray Green Blue Brown Cong., Gray Brown Cong., Gray Green Blue Brown Cong., Gray Blue Cong.

Date started 1-16-89 Completed 1-18-89

(unbonded) Water Well Constructor Certification: I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Signed Bob Murphy WWC Number 1344 Date 1-18-89

(bonded) Water Well Constructor Certification: I accept responsibility for the construction, alteration, or abandonment of this well during the construction dates reported above. Signed Casey J. Jones WWC Number 559 Date 1-18-89

STATE OF OREGON  
WATER WELL REPORT  
(as required by ORS 537.765)

**LANE RECEIVE D**  
**16990** AUG 3 1985  
PLEASE TYPE or PRINT INK. RESOURCES DEPT. *deep.*  
(for official use only)

(1) OWNER:  
Name Mel Purvis  
Address 1754 W. 11th #1  
City Eugene State OR

(2) TYPE OF WORK (check):  
New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL: Rotary Air  Driven   
Rotary Mud  Dug   
 Bored

(4) PROPOSED USE (check):  
Domestic  Industrial  Municipal   
Irrigation  Thermal:  Withdrawal  Reinflection   
Other:  Piezometric  Grounding  Test

(5) CASING INSTALLED: Steel  Plastic   
Threaded  Welded   
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gauge \_\_\_\_\_

LINER INSTALLED: Steel  Plastic   
Threaded  Welded   
4 1/2" Diam. from 120 ft. to 215 ft. Gauge 188

(6) PERFORATIONS: Perforated?  Yes  No  
Size of perforations 1/4 in. by 4 in.  
60 perforations from 160 ft. to 200 ft.  
perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(7) SCREENS: Well screen installed?  Yes  No  
Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot Size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot Size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(8) WELL TESTS: Drawdown is amount water level is lowered below static level  
Was a pump test made?  Yes  No If yes, by whom?  
\_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Air test 40 gal./min. with drill stem at 190 ft. 1 1/2 hrs.  
Bailer test \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Artesian flow \_\_\_\_\_ g.p.m.  
Temperature of water 52 Depth artesian flow encountered \_\_\_\_\_ ft.

(9) CONSTRUCTION: Special standards: Yes  No   
Well seal—Material used Undisturbed  
Well sealed from land surface to \_\_\_\_\_ ft.  
Diameter of well bore to bottom of seal \_\_\_\_\_ in.  
Diameter of well bore below seal \_\_\_\_\_ in.  
Amount of sealing material \_\_\_\_\_ sacks  pounds   
How was cement grout placed? \_\_\_\_\_

Was pump installed? \_\_\_\_\_ Type \_\_\_\_\_ HP \_\_\_\_\_ Depth \_\_\_\_\_ ft.  
Was a drive shoe used?  Yes  No Plug \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
Type of Water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(10) LOCATION OF WELL by legal description:  
County Lane NW of Section 10 of  
Township 18S Range 4W WM.  
(Township is North or South) (Range is East or West)  
Tax Lot 501 Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
MAILING ADDRESS OF WELL (or nearest address):  
86839 Bailey Hill  
Eugene, Or.

(11) WATER LEVEL of COMPLETED WELL:  
Depth at which water was first found \_\_\_\_\_ ft.  
Static level 40 ft. below land surface. Date 7/2/85  
Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

(12) WELL LOG: Diameter of well below casing 6"  
Depth drilled 115 ft. Depth of completed well 215 ft.  
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Brown Shale	100	128	
Blue Shale	128	215	40

Date work started 7/1/85 /completed 7/2/85  
Date well drilling machine moved off of well 7/2/1985  
(unbonded) Water Well Constructor Certification (if applicable):  
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
[Signed] Thomas E. Howell Date 7/21, 1985

(bonded) Water Well Constructor Certification:  
Bond # 5032206 Issued by: Sareco  
(number) (Surety Company Name)  
On behalf of Carter's Drilling & Pump Service  
(type or print name of Water Well Constructor)

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
(Signed) James G. Carter  
(Water Well Constructor)  
(Dated) 7/2/85

RECEIVED

JUN 11 1984 State Well No. 185/4W-1066

WATER WELL REPORT  
STATE OF OREGON

WATER RESOURCES DEPT. PERMIT NO. LANE 1699  
SALEM, OREGON

PLEASE TYPE or PRINT

(1) OWNER:

Name STEVEN BENNETT  
Address 1590 HIGH ST.  
City EUGENE State ORE

(2) TYPE OF WORK (check):

New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary Air  Driven  Domestic  Industrial  Municipal   
Rotary Mud  Dug  Irrigation  Test Well  Other   
 Bored  Thermal  Withdrawal  Rejection

(4) PROPOSED USE (check):

(5) CASING INSTALLED: Steel  Plastic   
Threaded  Welded   
6" Diam. from 7.1 ft. to 18 ft. Gauge 25.0  
" Diam. from ft. to ft. Gauge

LINER INSTALLED:

" Diam. from ft. to ft. Gauge

(6) PERFORATIONS:

Perforated?  Yes  No  
Type of perforator used  
Size of perforations in by in  
perforations from ft. to ft.  
perforations from ft. to ft.  
perforations from ft. to ft.

(7) SCREENS:

Well screen installed?  Yes  No  
Manufacturer's Name  
Type Model No.  
Diam. Slot Size Set from ft. to ft.  
Diam. Slot Size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level  
a pump test made?  Yes  No If yes, by whom?  
id: gal/min. with ft. drawdown after hrs.  
Air test 20 gal/min. with drill stem at 80 ft. 1 hrs.  
Bailer test gal/min. with ft. drawdown after hrs.  
Artesian flow g.p.m.  
Temperature of water Depth artesian flow encountered ft.

(9) CONSTRUCTION:

Special standards: Yes  No   
Well seal—Material used CEMENT  
Well sealed from land surface to 19 ft.  
Diameter of well bore to bottom of seal 1.0 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal 4  
How was cement grout placed? PUMPED BOTTOM UP  
Was pump installed? Type HP Depth ft.  
Was a drive shoe used?  Yes  No Flugs Size: location ft.  
Did any strata contain unusable water?  Yes  No  
Type of Water? depth of strata  
Method of sealing strata off  
Was well gravel packed?  Yes  No Size of gravel: ft.  
Gravel placed from ft. to ft.

(10) LOCATION OF WELL:

County LANE Driller's well number  
NW 1/4 NW 1/4 Section 10 T. 185 R. 4W W.M.  
Tax Lot # Lot Blk Subdivision  
Address at well location: BAILEY HILL RD.

(11) WATER LEVEL: Completed well.

Depth at which water was first found 85 ft.  
Static level 30 ft. below land surface. Date 6/1/84  
Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing 6  
Depth drilled 90 ft. Depth of completed well 90 ft.  
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
BROWN CLAY	0	4	
YELLOW CLAY	4	15	
BLUE ROCK	15	60	
GRAY ROCK	60	85	
BLUE ROCK	85	90	30

Work started 5/31/84 Completed 6/1/84  
Date well drilling machine moved off of well 6/1/84

(unbonded) Water Well Constructor Certification (if applicable):  
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
(Signed) Date 19 84

Bonded Water Well Constructor Certification:  
Bond 57403682 Issued by: TRANSAMERICAN  
(number) Surety Company Name  
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
Name FRANK WILSON DRILLING  
(Person, firm or corporation) (Type or print)  
Address 1325 135th SPRINGFIELD, ORE  
(Signed) Frank Wilson  
Water Well Constructor  
Date 6/1, 19 84

NOTICE TO WATER WELL CONSTRUCTOR  
The original and first copy of this report are to be filed with the

WATER RESOURCES DEPARTMENT,  
SALEM, OREGON 97310  
within 30 days from the date of well completion.

SP-45292-890



**WATER WELL REPORT**  
STATE OF OREGON

#19 - Material used was Cement  
per WWC 5/11/83 JCB

State Well No. 1854W-10b

State Permit No. LANE 16992

PLEASE TYPE or PRINT IN INK

(1) OWNER:  
Name Mel Purvis Purvis Real Estate  
Address 1754 W. 11th Suite 11  
City Eugene State Oregon

(2) TYPE OF WORK (check):  
New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL: Rotary Air  Driven   
Rotary Mud  Dug   
Bored  (4) PROPOSED USE (check): Domestic  Industrial  Municipal   
Irrigation  Test Well  Other   
Thermal: Withdrawal  Rejection

(5) CASING INSTALLED: Steel  Plastic   
Threaded  Welded   
6" Diam. from +1 ft. to 50 ft. Gauge #250  
" Diam. from ft. to ft. Gauge

LINER INSTALLED:  
" Diam. from ft. to ft. Gauge

(6) PERFORATIONS: Perforated?  Yes  No  
Type of perforator used  
Size of perforations in. by in.  
perforations from ft. to ft.  
perforations from ft. to ft.  
perforations from ft. to ft.

(7) SCREENS: Well screen installed?  Yes  No  
Manufacturer's Name  
Type Model No.  
Diam. Slot Size Set from ft. to ft.  
Diam. Slot Size Set from ft. to ft.

(8) WELL TESTS: Drawdown is amount water level is lowered below static level  
Is a pump test made?  Yes  No If yes, by whom?  
Field gal/min. with ft. drawdown after hrs.  
Air test 10 gal/min. with drill stem at 75 ft. 1 hr.  
Bailer test gal/min. with ft. drawdown after hrs.  
Artesian flow g.p.m.  
Temperature of water 52° Depth artesian flow encountered ft.

(9) CONSTRUCTION: Special standards: Yes  No   
Well seal - Material used Bentonite  
Well sealed from land surface to 50 ft.  
Diameter of well bore to bottom of seal 10 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal 15 sacks  
How was cement grout placed? Method "C"

Was pump installed? Type HP Depth ft.  
Was a drive shoe used?  Yes  No Plug Size: location ft.  
Did any strata contain unusable water?  Yes  No  
Type of Water? depth of strata  
Method of sealing strata off  
Was well gravel packed?  Yes  No Size of gravel: ft.  
Gravel placed from ft. to ft.

(10) LOCATION OF WELL:  
County Lane Driller's well number 1108-650 CP  
Tax Lot # 501 Section 10 T. 18 R. 4W W.M.  
Address at well location: Balfey Hill Road

(11) WATER LEVEL: Completed well.  
Depth at which water was first found 70 ft.  
Static level 30 ft. below land surface. Date 5/3/83  
Artesian pressure lbs. per square inch. Date

(12) WELL LOG: Diameter of well below casing 6"  
Depth drilled 100 ft. Depth of completed well 100 ft.  
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Top Soil	0	3	
Blue Clay	3	6	
Yellow Clay	6	21	
Brown Clay	21	42	
Blue Shale	42	90	30
Brown Shale	90	100	30

**RECEIVED**  
MAY 9 1983  
WATER RESOURCES DEPT.  
SALEM, OREGON

Work started 5/2/ 19 83 Completed 5/3/ 19 83  
Date well drilling machine moved off of well 5/4/ 19 83

(unbonded) Water Well Constructor Certification (if applicable):  
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
[Signed] James S. Carter Date 5/4/ 19 83

Bonded Water Well Constructor Certification:  
Bond U3-66353 Issued by: United Pacific  
(number) Surety Company Name

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
Name CARTER'S DRILLING & PUMP SERVICE  
(Person, firm or corporation)  
Address P.O. Box 46 Springfield, Oregon 97151  
[Signed] James S. Carter Water Well Constructor  
Date 5/4/ 19 83

NOTICE TO WATER WELL CONSTRUCTOR  
The original and first copy of this report are to be filed with the

WATER RESOURCES DEPARTMENT,  
SALEM, OREGON 97310  
within 30 days from the date of well completion.

SP-46292-690



NOTICE TO WATER WELL CONTRACTOR: The original and first copy of this report are to be filed with the WATER WELL REPORT

WATER RESOURCES DEPARTMENT SALEM, OREGON 97310 MAR 08 1979 STATE OF OREGON (Please type or print) WATER RESOURCES DEPT. SALEM, OREGON (Do not write above this line)

State Well No. 183/4w-10 State Permit LAINE 10994

(1) OWNER: Name Mr. Roy Duncan #1 Address 1681 West 7th Street Eugene, OR 97402

(2) TYPE OF WORK (check): New Well XX Deepening [ ] Reconditioning [ ] Abandon XX If abandonment, describe material and procedure in Item 11.

(3) TYPE OF WELL: Rotary XX Driven [ ] Cable [ ] Jetted [ ] Dug [ ] Bored [ ] (4) PROPOSED USE (check): Domestic XX Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ]

CASING INSTALLED: Threaded [ ] Welded [ ] " Diam. from See Log ft. to ft. Gage

PERFORATIONS: Perforated? [ ] Yes XX No. Type of perforator used Size of perforations in. by in. perforations from ft. to ft.

(7) SCREENS: Well screen installed? [ ] Yes XX No Manufacturer's Name Type Model No. Diam. Slot size Set from ft. to ft.

(8) WELL TESTS: Drawdown is amount water level is lowered below static level Was a pump test made? [ ] Yes XX No If yes, by whom? Yield: gal./min with ft. drawdown after hrs. Well output may fluctuate

Temperature of water Depth artesian flow encountered ft.

(9) CONSTRUCTION: Well seal—Material used See Well Log Well sealed from land surface to ft. Diameter of well bore to bottom of seal in. Diameter of well bore below seal in. Number of sacks of cement used in well seal sacks How was cement grout placed?

Was a drive shoe used? [ ] Yes XX No Plugs Size: location ft. Did any strata contain unusable water? [ ] Yes XX No Type of water? depth of strata Method of sealing strata off Was well gravel packed? [ ] Yes XX No Size of gravel: Gravel placed from ft. to ft.

(10) LOCATION OF WELL: County Lane Driller's well number 7922 1/4 1/4 Section 10 T. 18s R. 4w W.M. Bearing and distance from section or subdivision corner

(11) WATER LEVEL: Completed well. Depth at which water was first found 125 - 1 1/2 gpm ft. Static level -0- ft. below land surface. Date 2-28-79 Artesian pressure lbs. per square inch. Date

(12) WELL LOG: Diameter of well below casing 6" Depth drilled 207 ft. Depth of completed well -0- ft. Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

Table with 4 columns: MATERIAL, From, To, SWL. Rows include Gravel Driveway, Light Brown Clay & Weathered Sandstone, Blue Gray Sandstone, and Well Bore filled with cement.

Work started 2-27-79 19 Completed 2-28-79 19 Date well drilling machine moved off of well 2-28-79 19

Drilling Machine Operator's Certification: This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief. [Signed] Mark Christensen Date 2-28-79 19 Drilling Machine Operator's License No. 9

Water Well Contractor's Certification: This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief. Name Mark Christensen (Person, firm or corporation) (Type or print) Address 33132 Coleman Road, Eugene, OR 97401 [Signed] Mark Christensen (Water Well Contractor) Contractor's License No. 97 Date 2-28-79 19

NOTICE TO WATER WELL CONTRACTOR  
The original and first copy of this report  
are to be filed with the

WATER WELL REPORT

WATER RESOURCES DEPARTMENT,  
SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

STATE OF OREGON  
(Please type or print)  
(Do not write above this line)

State Well No. 188/TW-10  
State Permit No. LANE 16995

RECEIVED

DEC 21 1977

(1) OWNER:  
Name Don Dealy  
Address 3055 Bailey Hill Rd, Eugene, Oregon

WATER RESOUR. DEPT.

(10) LOCATION OF WELL:  
County Lane Driller's well number  
1/4 Section 10 T. 185 R. 4 W. W.M.

(2) TYPE OF WORK (check):  
New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 13.

(3) TYPE OF WELL: Rotary  Driven   
Cable  Jetted   
Dug  Bored

(4) PROPOSED USE (check): Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

CASING INSTALLED: Threaded  Welded   
Diam. from +1 ft. to 47 ft. Gage 2.50  
Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_  
Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_

PERFORATIONS: Perforated?  Yes  No.  
Type of perforator used  
Size of perforations in. by in.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(7) SCREENS: Well screen installed?  Yes  No  
Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. Slot size Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. Slot size Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(8) WELL TESTS: Drawdown is amount water level is lowered below static level.  
Was a pump test made?  Yes  No If yes, by whom?  
Yield: gal./min. with ft. drawdown after hrs.  
\_\_\_\_\_ " " " " " "  
\_\_\_\_\_ " " " " " "  
Ballor test 30 gal./min. with 60 ft. drawdown after 1 hrs.  
Artesian flow g.p.m.  
Temperature of water Depth artesian flow encountered \_\_\_\_\_ ft.

(9) CONSTRUCTION: Well seal—Material used Cement  
Well sealed from land surface to 45 ft.  
Diameter of well bore to bottom of seal 10 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal 32 sacks  
How was cement grout placed? Slurry poured from the top.  
Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size; location \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(11) WATER LEVEL: Completed well.  
Depth at which water was first found 52 ft.  
Static level 30 ft. below land surface. Date 10/11/77  
Artesian pressure lbs. per square inch. Date \_\_\_\_\_

(12) WELL LOG: Diameter of well below casing 6 ft.  
Depth drilled 97 ft. Depth of completed well 97 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Topsoil	0	2	
Clay with sand	2	12	
Brown sandstone	12	32	
Brown & blue sandstone	32	42	
Blue sandstone	42	62	30'
Gray sandstone	62	87	
Gray sandstone (very soft)	87	94	
Red clay stone	94	97	30'

Work started 10/10 1977 Completed 10/12 1977  
Date well drilling machine moved off of well 10/12 1977  
Drilling Machine Operator's Certification:  
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
[Signed] \_\_\_\_\_ Date 12/2 1977  
(Drilling Machine Operator)  
Drilling Machine Operator's License No. 1076  
Water Well Contractor's Certification:  
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
Name PITCHER Pump & Drilling Company  
(Person, firm or corporation) (Type or print)  
Address 150 River Ave., Eugene, Oregon 97404  
[Signed] Carl Pitcher  
(Water Well Contractor)  
Contractor's License No. 494 Date 12/2 1977

**NOTICE TO WATER WELL CONTRACTOR**

The original and first copy of this report are to be filed with the STATE ENGINEER, SALEM, OREGON 97310 within 30 days from the date of well completion.

**WATER WELL REPORT**

STATE OF OREGON (Please type or print) Do not write above this line

NC

**RECEIVED**

MAR 10 1969

18/4w-10

STATE ENGINEER LANE 16996 SALEM, OREGON

STATE ENGINEER SALEM, OREGON

(1) OWNER: SALEM, OREGON  
Name GERALD GILBERT  
Address 933 PEARL EUGENE

(2) TYPE OF WORK (check):  
New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in item 12.

(3) TYPE OF WELL: (4) PROPOSED USE (check):  
Rotary  Driven  Domestic  Industrial  Municipal   
Cable  Jetted  Irrigation  Test Well  Other   
Dug  Bored

CASING INSTALLED: Threaded  Welded   
6" Diam. from 7.5 ft. to 29 ft. Gage 25

PERFORATIONS: Perforated?  Yes  No.  
Type of perforator used \_\_\_\_\_  
Size of perforations in. by in.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(7) SCREENS: Well screen installed?  Yes  No  
Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(8) WATER LEVEL: Completed well.  
Static level 147 ft. below land surface Date 4-5-68  
Pneumatic pressure \_\_\_\_\_ lbs. per square inch Date \_\_\_\_\_

(9) WELL TESTS: Drawdown is amount water level is lowered below static level  
Was a pump test made?  Yes  No If yes, by whom?  
Yield: 50 gal./min. with 1/2 in. drawdown after 1 hrs.

Artesian flow \_\_\_\_\_ g.p.m. Date \_\_\_\_\_  
Temperature of water \_\_\_\_\_ Was a chemical analysis made?  Yes  No

(10) CONSTRUCTION:  
Well seal—Material used CEMENT GROUT  
Depth of seal 28 ft.  
Diameter of well bore to bottom of seal 9.75 in.  
Were any loose strata cemented off?  Yes  No Depth \_\_\_\_\_  
Was a drive shoe used?  Yes  No  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata \_\_\_\_\_  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(11) LOCATION OF WELL:  
County LANE Driller's well number \_\_\_\_\_  
1/4 Section 10 T. 18 R. 4 W W.M. 1  
Bearing and distance from section or subdivision corner \_\_\_\_\_

(12) WELL LOG: Diameter of well below casing 6  
Depth drilled 250 ft. Depth of completed well 250 ft.  
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level as drilling proceeds. Note drilling rates.

MATERIAL	From	To	SWL
TOP SOIL	0	1	
W SS TAN	1	3	
W SS BAN	3	23	
BL SS	23	97	
BR GRAY SS	97	250	

Work started 4-1 1968 Completed 4-5 1968  
Date well drilling machine moved off of well 4-5 1968

Drilling Machine Operator's Certification:  
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
[Signed] Mark H. Christensen Date 4-5 1968  
(Drilling Machine Operator)

Drilling Machine Operator's License No. 94512

Water Well Contractor's Certification:  
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
NAME MARIE CHRISTENSEN (Type or print)  
Address 3550 W 18 EUGENE  
[Signed] Marie Christensen (Water Well Contractor)  
Contractor's License No. 97 Date 4-5 1968



**NOTICE TO WATER WELL CONTRACTOR**  
The original and first copy of this report are to be filed with the  
**STATE ENGINEER, SALEM, OREGON 97310**  
within 30 days from the date of well completion.

**RECEIVED**  
**STATE OF OREGON**  
ENGINEER

State Well No. 1B/4W-10  
State Permit No. LANE 16999

(1) **OWNER:**  
Name Robert Hanochick  
Address Box 3 Box 572  
Eugene, Oregon

(2) **LOCATION OF WELL:**  
County Lane Driller's well number  
¼ Section 10 T. 18 S. R. 4 W. W.M.  
Bearing and distance from section or subdivision corner

(3) **TYPE OF WORK (check):**  
New Well  Deepening  Reconditioning  Abandon   
Abandonment, describe material and procedure in Item 12.

(4) **PROPOSED USE (check):** (5) **TYPE OF WELL:**  
Domestic  Industrial  Municipal  Rotary  Driven   
Irrigation  Test Well  Other  Cable  Jetted   
Dug  Bored

(6) **CASING INSTALLED:** Threaded  Welded   
6" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage 250  
" Diam. from FXLS TONG ft. Gage  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage

(7) **PERFORATIONS:** Perforated?  Yes  No  
Type of perforator used  
Size of perforations in. by in.  
perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(8) **SCREENS:** Well screen installed?  Yes  No  
Manufacturer's Name \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(9) **CONSTRUCTION:**  
Well seal—Material used in seal EXISTING  
Depth of seal \_\_\_\_\_ ft. Was a packer used? \_\_\_\_\_  
Diameter of well bore to bottom of seal \_\_\_\_\_ in.  
Were any loose strata cemented off?  Yes  No Depth \_\_\_\_\_  
Was a drive shoe used?  Yes  No  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_

(10) **WATER LEVELS:**  
Static level 62' ft. below land surface Date 11/17/66  
Artesian pressure \_\_\_\_\_ lbs. per square inch Date \_\_\_\_\_

(11) **WELL TESTS:** Drawdown is amount water level is lowered below static level  
Was a pump test made?  Yes  No If yes, by whom?  
Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Baller test 2.5 gal./min. with 0 ft. drawdown after 1 hrs.  
Artesian flow \_\_\_\_\_ g.p.m. Date \_\_\_\_\_  
Temperature of water \_\_\_\_\_ Was a chemical analysis made?  Yes  No

(12) **WELL LOG:** Diameter of well below casing 6"  
Depth drilled 33 ft. Depth of completed well 140 ft.  
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
<u>light blue clay</u>	<u>55</u>	<u>107</u>

Work started 11-15 1966 Completed 11-17 1966  
Date well drilling machine moved off of well 11-17 1966

(13) **PUMP:** Manufacturer's Name BERKELEY  
Type: SUB H.P. 3/4

**Water Well Contractor's Certification:**  
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
**CHRISTENSEN DRILLING & IRRIGATION**  
NAME \_\_\_\_\_ (Type or print)  
Address \_\_\_\_\_  
Drilling Machine Operator's License No. 386  
[Signed] \_\_\_\_\_ (Water Well Contractor)  
Contractor's License No. 27 Date 11/18 1966

(USE ADDITIONAL SHEETS IF NECESSARY)





NOTICE TO WATER WELL CONTRACTOR  
The original and first copy of this report  
are to be filed with the

WATER RESOURCES DEPARTMENT,  
SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

**WATER WELL REPORT**

STATE OF OREGON  
(Please type or print)

(Do not write above this line)

**RECEIVED**

MAY 27 1977

State Well No.

185/4W-106

Permit No.

LANE 17001

SALEM, OREGON

(1) OWNER:  
Name Rosemead Realty Inc.  
Address 915 Oak  
Eugene, Oregon

(2) TYPE OF WORK (check):  
New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL: (4) PROPOSED USE (check):  
Rotary  Driven  Domestic  Industrial  Municipal   
Cable  Jetted  Irrigation  Test Well  Other   
Dug  Bored

CASING INSTALLED:  
0" Diam. from +1 ft. to 41 ft. Gage 250  
5" Diam. from 40 ft. to 250 ft. Gage 10

PERFORATIONS: Perforated?  Yes  No.  
Type of perforator used Torch in steel line only  
Size of perforations 4 in. by 1/4 in.  
57 perforations from 230 ft. to 250 ft.  
perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(7) SCREENS: Well screen installed?  Yes  No  
Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(8) WELL TESTS: Drawdown is amount water level is lowered below static level  
Was a pump test made?  Yes  No If yes, by whom Driller  
Yield: 20 gal./min. with 180 ft. drawdown after 2 hrs.  
Ballor test NO gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Arterian flow \_\_\_\_\_ g.p.m.  
Temperature of water 54° Depth artesian flow encountered \_\_\_\_\_ ft.

(9) CONSTRUCTION:  
Well seal—Material used Portland Cement  
Well sealed from land surface to 40 ft.  
Diameter of well bore to bottom of seal 10 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal 10 sacks  
How was cement grout placed? Mixed 5 gallons of  
water per sack - poured in from the top.

Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(10) LOCATION OF WELL:  
County Lane Driller's well number 2736-GP  
NW Section 10 T. 18 R. 1W W.M.

Bearing and distance from section or subdivision corner

(11) WATER LEVEL: Completed well.  
Depth at which water was first found 240 ft.  
Static level 50 ft. below land surface. Date 5/16/77  
Arterian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

(12) WELL LOG: Diameter of well below casing 6"  
Depth drilled 250 ft. Depth of completed well 250 ft.  
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Top Soil	0	7	
Heavy Brown Clay	7	28	
Blue Clay	28	33	
Soft Blue Shale	33	173	
Grey Sandstone	173	250	50

Work started 5/12/ 1977 Completed 5/17/ 1977  
Date well drilling machine moved off of well 5/18/ 1977

Drilling Machine Operator's Certification:  
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
[Signed] William L. Harris Date 5/19/ 1977  
(Drilling Machine Operator)  
Drilling Machine Operator's License No. 717

Water Well Contractor's Certification:  
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
Name Carter's Drilling & Pump Service  
(Person, firm or corporation) (Type or print)  
Address P.O. Box 46 Springfield, Ore. 97177  
[Signed] James J. Carter  
(Water Well Contractor)  
Contractor's License No. 126 Date 5/19/ 1977



NOTICE TO WATER WELL CONTRACTOR  
The original and first copy  
of this report are to be  
filed with the

STATE ENGINEER, SALEM, OREGON  
within 30 days from the date  
of well completion.

**WATER WELL REPORT**

STATE OF OREGON  
(Please type or print)  
(Do not write above this line)

State Well No. 18s/4w-10db  
State Permit No. LAKE 17003

**RECEIVED**  
JUN 20 1977

(1) OWNER: WATER RESOURCES DEPT.  
Name Joe Anselmi SALEM, OREGON  
Address Bailey Hill Rd

(2) TYPE OF WORK (check):  
New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 13.

(3) TYPE OF WELL: (4) PROPOSED USE (check):  
Rotary  Driven  Domestic  Industrial  Municipal   
Cable  Jetted  Irrigation  Test Well  Other   
Dug  Bored

CASING INSTALLED: Threaded  Welded   
" Diam. from 7 1/2 ft. to 8 6 ft. Gage 250  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_

PERFORATIONS: Perforated?  Yes  No.  
Type of perforator used \_\_\_\_\_  
Size of perforations \_\_\_\_\_ in. by \_\_\_\_\_ in.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(7) SCREENS: Well screen installed?  Yes  No  
Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ Model No. \_\_\_\_\_  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(8) WELL TESTS: Drawdown is amount water level is lowered below static level.  
Was a pump test made?  Yes  No If yes, by whom?  
Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Baller test 15 gal./min. with 3 ft. drawdown after 1 hrs.  
Artesian flow \_\_\_\_\_ g.p.m.  
Temperature of water \_\_\_\_\_ Depth artesian flow encountered \_\_\_\_\_ ft.

(9) CONSTRUCTION:  
Well seal—Material used Cement  
Well sealed from land surface to 2 1/2 ft.  
Diameter of well bore to bottom of seal 10 in.  
Diameter of well bore below seal 6 in.  
Number of sacks of cement used in well seal 5 sacks  
Number of sacks of bentonite used in well seal \_\_\_\_\_ sacks  
Brand name of bentonite \_\_\_\_\_  
Number of pounds of bentonite per 100 gallons of water \_\_\_\_\_ lbs./100 gals.  
Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(10) LOCATION OF WELL:  
County Tam Driller's well number \_\_\_\_\_  
NW 1/4 5E 1/4 Section 10 T. 18S R. 4W W.M.  
Bearing and distance from section or subdivision corner \_\_\_\_\_

(11) WATER LEVEL: Completed well.  
Depth at which water was first found 110 ft.  
Static level 95 ft. below land surface. Date 3-25  
Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

(12) WELL LOG: Diameter of well below casing 6"  
Depth drilled 112 ft. Depth of completed well 112 ft.  
Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
<u>Silt</u>	<u>0</u>	<u>2</u>	
<u>Clay</u>	<u>2</u>	<u>15</u>	
<u>Sandstone (Brown)</u>	<u>15</u>	<u>16</u>	
<u>Blue Sandstone</u>	<u>60</u>	<u>112</u>	<u>95</u>

Work started 3-24 1977 Completed 3-25 1977  
Date well drilling machine moved off of well 3-25 1977

Drilling Machine Operator's Certification:  
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
[Signed] Thomas May Date 3-28 1977  
(Drilling Machine Operator)  
Drilling Machine Operator's License No. 839

Water Well Contractor's Certification:  
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
Name Tom May Well Drilling  
(Person, firm or corporation) (Type or print)  
Address 77138 London Rd. Cottage Grove  
[Signed] Tom May  
(Water Well Contractor)  
Contractor's License No. 646 Date 3-28 1977

NOTICE TO WATER WELL CONTRACTOR

The original and first copy of this report are to be filed with the

STATE ENGINEER, SALEM, OREGON, within 30 days from the date of well completion.

**RECEIVED**  
**RECEIVED**  
 AUG 10 1972 STATE OF OREGON OCT 24 1972  
 STATE ENGINEER SALEM, OREGON STATE ENGINEER SALEM, OREGON

State Well No. 185/4W-1A  
 Permit No. LANE 17004

(1) OWNER:

Name Douglas Capps  
 Address Rt 3 Box 189E  
Eugene, Oregon

(2) TYPE OF WORK (check):

New Well  Deepening  Reconditioning  Abandon   
 If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:

Rotary  Driven   
 Cable  Jetted   
 Dug  Bored

(4) PROPOSED USE (check):

Domestic  Industrial  Municipal   
 Irrigation  Test Well  Other

(5) CASING INSTALLED:

Threaded  Welded   
6" diam. from 0 ft. to 20 ft. Gage 250  
5" diam. from 0 ft. to 95 ft. Gage 10  
   " diam. from     ft. to     ft. Gage    

(6) PERFORATIONS:

Perforated?  Yes  No.  
 Type of perforator used \_\_\_\_\_  
 Size of perforations in. by in.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(7) SCREENS:

Well screen installed?  Yes  No  
 Manufacturer's Name \_\_\_\_\_ Model No. \_\_\_\_\_  
 Type \_\_\_\_\_  
 Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level  
 Was a pump test made?  Yes  No. If yes, by whom?  
 Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
tested with air; estimate could fluctuate  
MOORE test 9 gal./min. with 80 ft. drawdown after 1 hrs.  
 Artesian flow \_\_\_\_\_ g.p.m.  
 Temperature of water \_\_\_\_\_ Depth artesian flow encountered \_\_\_\_\_ ft.

(9) CONSTRUCTION:

Well seal—Material used Cement grout  
 Well sealed from land surface to 18 ft.  
 Diameter of well bore to bottom of seal 10 in.  
 Diameter of well bore below seal 6 in.  
 Number of sacks of cement used in well seal 5 sacks  
 Number of sacks of bentonite used in well seal \_\_\_\_\_ sacks  
 Brand name of bentonite \_\_\_\_\_  
 Number of pounds of bentonite per 100 gallons \_\_\_\_\_  
 of water \_\_\_\_\_ lbs./100 gals.  
 Was a drive shoe used?  Yes  No. Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
 Did any strata contain unusable water?  Yes  No  
 Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
 Method of sealing strata off \_\_\_\_\_  
 Was well gravel packed?  Yes  No. Size of gravel: \_\_\_\_\_  
 Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(10) LOCATION OF WELL:

County Lane Driller's well number \_\_\_\_\_  
 1/4 Section 24 1/2 T. 14S R. 4W W.M. \_\_\_\_\_  
 Bearing and distance from section or subdivision corner  
Sec-11 Township 18S

(11) WATER LEVEL: Completed well.

Depth at which water was first found 44 ft.  
 Static level 15 ft. below land surface. Date 8/5/72  
 Artesian pressure \_\_\_\_\_ lbs. per square inch. Data \_\_\_\_\_

(12) WELL LOG:

Diameter of well below casing 6"  
 Depth drilled 95 ft. Depth of completed well 95 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Black clay	0'	9'	
blue claystone	9	24	
gray claystone	24	29	
blue claystone	29	48	
blue sandstone	48	63	
blue claystone	63	70	
light blue sandstone	70	76	
blue claystone	76	95	

Work started 8/5/72 19 Completed 8/7/72 19  
 Date well drilling machine moved off of well 8/7/72 19

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
 [Signed] Casey L Jones Date Aug. 8, 1972  
 (Drilling Machine Operator)  
 Drilling Machine Operator's License No. 3708 521

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
 Name CASEY JONES WELL DRILLING CO INC  
 (Person, firm or corporation) (Type or print)  
 Address Rt 8 Box 695 Pleasant Hill, Oregon  
 [Signed] Casey L Jones  
 (Water Well Contractor)  
 Contractor's License No. 559 Date August 8, 1972

NOTICE TO WATER WELL CONTRACTOR  
The original and first copy  
of this report are to be  
filed with the  
STATE ENGINEER, SALEM, OREGON 97310  
within 30 days from the date  
of well completion.

WATER WELL REPORT  
STATE OF OREGON  
(Please type or print)  
(Do not write above this line)

RECEIVED LANE 17005  
State Well No.

JUN 1 1976  
State Permit No. 183/4W-11

WATER RESOURCES DEPT.

(1) OWNER:

Name S. GILBERT CUDEBACK

Address 2100 Keith Way

Eugene, OR 97401

(2) TYPE OF WORK (check):

New Well  Deepening  Reconditioning  Abandon

If abandonment, describe material and procedure in Item 11.

(3) TYPE OF WELL:

Rotary  Driven   
Cable  Jetted   
Dug  Bored

(4) PROPOSED USE (check):

Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

CASING INSTALLED:

Threaded  Welded

6" Diam. from ± 2 ft. to 100 ft. Gage 250

" Diam. from ft. to ft. Gage

" Diam. from ft. to ft. Gage

PERFORATIONS:

Perforated?  Yes  No

Type of perforator used

Size of perforations in. by in.

perforations from ft. to ft.

perforations from ft. to ft.

perforations from ft. to ft.

(7) SCREENS:

Well screen installed?  Yes  No

Manufacturer's Name

Type Model No.

Diam. Slot size Set from ft. to ft.

Diam. Slot size Set from ft. to ft.

(8) WELL TESTS:

Drawdown is amount water level is lowered below static level

Was a pump test made?  Yes  No If yes, by whom?

Yield: gal./min. with ft. drawdown after hrs.

Baller test 12 gal./min. with 225 ft. drawdown after 1 hrs.

Artesian flow g.p.m.

Temperature of water 55° Depth artesian flow encountered ft.

(9) CONSTRUCTION:

Well seal—Material used CEMENT GROUT

Well sealed from land surface to 30 ft.

Diameter of well bore to bottom of seal 10 in.

Diameter of well bore below seal 6 in.

Number of sacks of cement used in well seal 15 sacks

Number of sacks of bentonite used in well seal 0 sacks

Brand name of bentonite

Number of pounds of bentonite per 100 gallons of water lbs./100 gals.

Was a drive shoe used?  Yes  No Plugs Size: location ft.

Did any strata contain unusable water?  Yes  No

Type of water? depth of strata

Method of sealing strata off

Was well gravel packed?  Yes  No Size of gravel:

Gravel placed from ft. to ft.

(10) LOCATION OF WELL:

County LANE Driller's well number 264

S. E. 1/4 N. E. 1/4 Section 11 T. 18S R. 4 W. W.M.

Bearing and distance from section or subdivision corner

(11) WATER LEVEL: Completed well.

Depth at which water was first found 32 ft.

Static level 18 ft. below land surface. Date 5/21/76

Artesian pressure lbs. per square inch. Date

(12) WELL LOG:

Diameter of well below casing 6"

Depth drilled 255 ft. Depth of completed well 255 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Brown Clay	0	19	
Blue Claystone	19	30	
Dark Blue-Grey Basalt	30	105	18'
Red-Brown Claystone	105	140	18'
Blue Claystone	140	150	18'
Grey Claystone	150	155	18'
Light Blue Claystone	155	167	18'
Brown Claystone	167	190	18'
Blue Sandstone	190	255	18'

Work started 5 - 10 1976 Completed 5 - 21 1976

Date well drilling machine moved off of well 5 - 21 1976

Drilling Machine Operator's Certification:

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.

(Signed) *Pauland Corp* Date 5-26-76

(Drilling Machine Operator) License No. 512

Water Well Contractor's Certification:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Name GUS STORES LOGGING & WELL DRILLING

(Type or print) (Person, firm or corporation)

Address 5555 West 11th Ave., Eugene OR 97402

(Signed) *Pauland Corp*

(Water Well Contractor) License No. 578 Date 5-26-76

(USE ADDITIONAL SHEETS IF NECESSARY)

SP-45656-119

**NOTICE TO WATER WELL CONTRACTOR**

The original and first copy of this report are to be filed with the

STATE ENGINEER, SALEM, OREGON within 30 days from the date of well completion.

**RECEIVED**  
 SEP 7 - 1972 STATE OF OREGON  
 STATE ENGINEER  
 SALEM, OREGON

State Well No. 185/4W-11  
 State Permit No. LAKE 17006

**(1) OWNER:**

Name Herb Chapman  
 Address Engene Ore

**(2) TYPE OF WORK (check):**

New Well  Deepening  Reconditioning  Abandon   
 If abandonment, describe material and procedure in Item 12.

**(3) TYPE OF WELL:**

Rotary  Driven   
 Cable  Jetted   
 Dug  Bored

**(4) PROPOSED USE (check):**

Domestic  Industrial  Municipal   
 Irrigation  Test Well  Other

**(5) CASING INSTALLED:**

Threaded  Welded   
6 Diam. from 0 ft. to 20 ft. Gage .250  
5 Diam. from 10 ft. to 100 ft. Gage .10

**(6) PERFORATIONS:**

Perforated?  Yes  No  
 Type of perforator used Forch  
 Size of perforations 6 in. by 78 in.  
30 perforations from 60 ft. to 100 ft.

**(7) SCREENS:**

Well screen installed?  Yes  No  
 Manufacturer's Name \_\_\_\_\_  
 Type \_\_\_\_\_ Model No. \_\_\_\_\_  
 Diam. \_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**(8) WELL TESTS:**

Drawdown is amount water level is lowered below static level  
 Was a pump test made?  Yes  No If yes, by whom?  
 Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Test w/A est. 11gpm cov'd fluctuate  
 Baller test \_\_\_\_\_ gal./min. with 75 ft. drawdown after 1 hrs.  
 Artesian flow \_\_\_\_\_ g.p.m.  
 Temperature of water \_\_\_\_\_ Depth artesian flow encountered \_\_\_\_\_ ft.

**(9) CONSTRUCTION:**

Well seal—Material used Cement  
 Well sealed from land surface to 7 ft.  
 Diameter of well bore to bottom of seal 10 in.  
 Diameter of well bore below seal 6 in.  
 Number of sacks of cement used in well seal 5 sacks  
 Number of sacks of bentonite used in well seal \_\_\_\_\_ sacks  
 Brand name of bentonite \_\_\_\_\_  
 Number of pounds of bentonite per 100 gallons of water \_\_\_\_\_ lbs./100 gals.  
 Was a drive shoe used?  Yes  No Plugs \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
 Did any strata contain unusable water?  Yes  No  
 Type of water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
 Method of sealing strata off \_\_\_\_\_  
 Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
 Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**(10) LOCATION OF WELL:**

County LAKE Driller's well number \_\_\_\_\_  
 Section 11 T. 18S R. 4W W.M.  
 Bearing and distance from section or subdivision corner \_\_\_\_\_

**(11) WATER LEVEL: Completed well.**

Depth at which water was first found 92 ft.  
 Static level 20 ft. below land surface. Date 8/17/72  
 Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

**(12) WELL LOG:**

Diameter of well below casing 6"  
 Depth drilled 100 ft. Depth of completed well 100 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.

MATERIAL	From	To	SWL
Brown soil	0	6	
Blue claystone	6	100	

Work started 8/17 19 72 Completed 8/17 19 72  
 Date well drilling machine moved off of well 8/17 19 72

**Drilling Machine Operator's Certification:**

This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
 [Signed] Ray Jones Date 8/25 19 72  
 (Drilling Machine Operator)  
 Drilling Machine Operator's License No. 158

**Water Well Contractor's Certification:**

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
 Name JONES'S DRILLING Co INC  
 (Type or print)  
 Address St. Rt. 2 Box 120 Lebanon  
 (Type or print)  
 [Signed] Ray Jones  
 (Water Well Contractor)  
 Contractor's License No. 514 Date 8/25 19 72

File Original and First Copy with the STATE ENGINEER, SALEM, OREGON

**WATER WELL REPORT**  
STATE OF OREGON

State Well No. 18/4W-11J  
State Permit No. LANE 17007

**(1) OWNER:**  
Name GORDAN MOORE  
Address 2203 Terrace Highway Eugene

**(2) LOCATION OF WELL:**  
County LANE Owner's number, if any \_\_\_\_\_  
NE 1/4 SE 1/4 Section 11 T. 185 R. 4 W.M.  
Bearing and distance from section or subdivision corner

approx 300' N of East West Creek 100' W of N.S. creek

**(3) TYPE OF WORK (check):**  
New Well  Deepening  Reconditioning  Abandon   
If abandonment, describe material and procedure in Item 11.

**(4) PROPOSED USE (check):**          **(5) TYPE OF WELL:**  
Domestic  Industrial  Municipal  Rotary  Driven   
Irrigation  Test Well  Other  Cable  Jetted   
Dug  Bored

**(6) CASING INSTALLED:**          Threaded  Welded   
6.60 Diam. from +1 ft. to 71 ft. Gage 4"  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_  
" Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gage \_\_\_\_\_

**(7) PERFORATIONS:**          Perforated?  Yes  No  
Type of perforator used \_\_\_\_\_  
SIZE of perforations          in. by in.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**(8) SCREENS:**          Well screen installed  Yes  No  
Manufacturer's Name \_\_\_\_\_ Model No. \_\_\_\_\_  
\_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ Slot size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**(9) CONSTRUCTION:**  
Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
Was a surface seal provided?  Yes  No To what depth? \_\_\_\_\_ ft.  
Material used in seal \_\_\_\_\_  
Did any strata contain unusable water?  Yes  No  
Type of water? \_\_\_\_\_ Depth of strata \_\_\_\_\_  
Method of sealing strata off \_\_\_\_\_

**(10) WATER LEVELS:**  
Static level 42 ft. below land surface Date Apr 14 58  
Artesian pressure \_\_\_\_\_ lbs. per square inch Date \_\_\_\_\_  
Log Accepted by: \_\_\_\_\_  
[Signed] \_\_\_\_\_ Date \_\_\_\_\_ 19\_\_\_\_ (Owner)

**(11) WELL TESTS:**          Drawdown is amount water level is lowered below static level  
Was a pump test made?  Yes  No If yes, by whom? \_\_\_\_\_  
Yield:          gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Ballor test 9 gal./min. with 100 ft. drawdown after 1 hrs.  
Artesian flow \_\_\_\_\_ g.p.m. Date \_\_\_\_\_  
Temperature of water \_\_\_\_\_ Was a chemical analysis made?  Yes  No

**(12) WELL LOG:**          Diameter of well 6 inches.  
Depth drilled 210 ft. Depth of completed well 210 ft.  
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
<u>Clay &amp; boulders</u>	<u>0</u>	<u>44</u>
<u>Red gray tuffaceous ss.</u>	<u>44</u>	<u>79</u>
<u>red-brown tuffaceous ss.</u>	<u>79</u>	<u>83</u>
<u>basalt</u>	<u>83</u>	<u>101</u>
<u>tuffaceous ss</u>	<u>101</u>	<u>210</u>

Work started 10 1959 Completed 11 1958

**(13) PUMP:**  
Manufacturer's Name Berkeley  
Type: jet H.P. 1

**Well Driller's Statement:**  
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
NAME MARK CHRISTENSEN (Person, firm, or corporation) (Type or print)  
Address 3550 W. 18th  
Driller's well number \_\_\_\_\_  
[Signed] Mark Christensen (Well Driller)  
License No. 97 Date Mar 13, 1958

(USE ADDITIONAL SHEETS IF NECESSARY)

STATE OF OREGON  
WATER WELL REPORT  
(as required by ORS 537.765)

APR 24 1989  
WATER RESOURCES DEPT.  
SALEM, OREGON

LANE

17024  
9493  
(START CARD) # 9493

(1) OWNER: Well Number \_\_\_\_\_  
Name JERRY LANDAUER  
Address 1016 N. ST. ART. C  
City SPRINGFIELD State OR Zip 97477

(2) TYPE OF WORK:  
 New Well  Deepen  Recondition  Abandon

(3) DRILL METHOD  
 Rotary Air  Rotary Mud  Cable  
 Other \_\_\_\_\_

(4) PROPOSED USE:  
 Domestic  Community  Industrial  Irrigation  
 Thermal  Injection  Other \_\_\_\_\_

(5) BORE HOLE CONSTRUCTION:  
Special Construction approval Yes  No  Depth of Completed Well 160 ft.  
Explosives used Yes  No  Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE			SEAL			Amount sacks or pounds
Diameter	From	To	Material	From	To	
<u>10</u>	<u>0</u>	<u>40</u>	<u>CEMENT</u>	<u>0</u>	<u>40</u>	<u>13</u>
<u>6</u>	<u>40</u>	<u>160</u>				

How was seal placed: Method  A  B  C  D  E  
 Other \_\_\_\_\_  
Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

(6) CASING/LINER:

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing: <u>6</u>	<u>1</u>	<u>40</u>	<u>350</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner: <u>4 1/2</u>	<u>30</u>	<u>160</u>	<u>PR26</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) \_\_\_\_\_

(7) PERFORATIONS/SCREENS:  
 Perforations Method SAW  
 Screens Type \_\_\_\_\_ Material \_\_\_\_\_

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
<u>140</u>	<u>155</u>	<u>78</u>	<u>75</u>	<u>4 1/2</u>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour  
 Pump  Bailer  Air  Flowing  
Yield gal/min \_\_\_\_\_ Drawdown \_\_\_\_\_ Drill stem at \_\_\_\_\_ Time \_\_\_\_\_  
20 \_\_\_\_\_ 160 \_\_\_\_\_ 1 hr.

Temperature of water \_\_\_\_\_ Depth Artesian Flow Found \_\_\_\_\_  
Was a water analysis done?  Yes By whom \_\_\_\_\_  
Did any strata contain water not suitable for intended use?  Too little  
 Salty  Muddy  Odor  Colored  Other \_\_\_\_\_  
Depth of strata: \_\_\_\_\_

(9) LOCATION OF WELL by legal description:  
County LANE Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Township 18 S Nor S, Range 4 W E or W, WM.  
Section 14 NW 1/4 NE 1/4  
Tax Lot \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) 26514 KORANE HWY  
EUGENE, OR.

(10) STATIC WATER LEVEL:  
\_\_\_\_\_ ft. below land surface. Date 4/20/89  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) WATER BEARING ZONES:  
Depth at which water was first found 70

From	To	Estimated Flow Rate	SWL
<u>68</u>	<u>70</u>	<u>4</u>	<u>20'</u>
<u>160</u>	<u>161</u>	<u>16</u>	<u>20'</u>

(12) WELL LOG: \_\_\_\_\_ Ground elevation \_\_\_\_\_

Material	From	To	SWL
<u>Sand</u>	<u>0</u>	<u>2</u>	
<u>BROWN CLAY</u>	<u>2</u>	<u>16</u>	
<u>YELLOW CLAY</u>	<u>16</u>	<u>24</u>	
<u>BLUE CLAY</u>	<u>24</u>	<u>32</u>	
<u>BLUE ROCK</u>	<u>32</u>	<u>160</u>	<u>20'</u>

Date started 4/18/89 Completed 4/24/89

(unbonded) Water Well Constructor Certification:  
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.  
WWC Number \_\_\_\_\_  
Signed \_\_\_\_\_ Date \_\_\_\_\_

(bonded) Water Well Constructor Certification:  
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. all work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.  
WWC Number 562  
Signed Frank Wilson Date 4/21/89



STATE OF OREGON  
**WATER WELL REPORT**  
 (as required by ORS 637.785)

CCT 24 1988  
 WATER RESOURCES DEPT  
 LLANE 17022  
 (START CARD) # 4465

(1) OWNER: Well Number: \_\_\_\_\_  
 Name Robert Gunter  
 Address 86281 Loraine Hwy  
 City Eugene State Oregon Zip 97405

(2) TYPE OF WORK:  
 New Well  Deepen  Recondition  Abandon

(3) DRILL METHOD  
 Rotary Air  Rotary Mud  Cable  
 Other

(4) PROPOSED USE:  
 Domestic  Community  Industrial  Irrigation  
 Thermal  Injection  Other

(5) BORE HOLE CONSTRUCTION:  
 Special Construction approval  Yes  No Depth of Completed Well 270 ft.  
 Explosives used  Yes  No Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE			SEAL			Amount
Diameter	From	To	Material	From	To	sacks or pounds
10	0	19	cement	0	19	7
8	19	91	cement	19	51	9
6	91	270				

How was seal placed: Method  A  B  C  D  E  
 Other  
 Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
 Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

(6) CASING/LINER:

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing: 6	+1	92	.250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner: 4	0	270	160#	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Final location of shoe(s) \_\_\_\_\_

(7) PERFORATIONS/SCREENS:  
 Perforations Method 4 round holes  
 Screens Type \_\_\_\_\_ Material \_\_\_\_\_

From	To	Slot size	Number	Diameter	Telo/plpe size	Casing	Liner
86	250		500			<input type="checkbox"/>	<input checked="" type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour  
 Pump  Bailer  Air  Flowing Artesian  
 Yield gal/min 2 Drawdown \_\_\_\_\_ Drill stem at 270 Time 1 hr.

Temperature of water \_\_\_\_\_ Depth Artesian Flow Found \_\_\_\_\_  
 Was a water analysis done?  Yes By whom \_\_\_\_\_  
 Did any strata contain water not suitable for intended use?  Too little  
 Salty  Muddy  Odor  Colored  Other \_\_\_\_\_  
 Depth of strata: \_\_\_\_\_

(9) LOCATION OF WELL by legal description:  
 County lane Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
 Township 18 North, Range 4 East, WM.  
 Section 14 Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
 Tax Lot 3507 Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
 Street Address of Well (or nearest address) same

(10) STATIC WATER LEVEL:  
51 ft. below land surface. Date 9-20-88  
 Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) WATER BEARING ZONES:  
 Depth at which water was first found 129

From	To	Estimated Flow Rate	SWL
128	129	2	51

(12) WELL LOG: Ground elevation \_\_\_\_\_

Material	From	To	SWL
Brown clay & cobbles	0	9	
Black basalt	9	39	
Blue sandstone	39	70	
Red shale caving	70	72	
Blue shale caving	72	78	
Red shale caving	78	88	
Blue sandstone med hd	88	200	
Red shale	200	210	
Black basalt w/ quartz	210	245	
Red shale caving	245	254	
Blue shale caving	254	275	

Date started 9/15/88 Completed 9/20/88

(unbonded) Water Well Constructor Certification:  
 I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.  
 WWC Number \_\_\_\_\_  
 Signed \_\_\_\_\_ Date \_\_\_\_\_

(bonded) Water Well Constructor Certification:  
 I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. all work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.  
 WWC Number 749  
 Signed Gay K... Date 9-22-88

RECEIVED

STATE OF OREGON  
WATER WELL REPORT  
(as required by ORS 537.766)

SEP 24 1987

-185/4W-14  
LANE 17023

(1) OWNER:  
Name Rudy Powell Well Number: WATER RESOURCES DEPT.  
Address 26721 Pickens Rd. SALEM, OREGON  
City Eugene State Or. Zip 97402

(2) TYPE OF WORK:  
 New Well  Deepen  Recondition  Abandon

(3) DRILL METHOD  
 Rotary Air  Rotary Mud  Cable  
 Other

(4) PROPOSED USE:  
 Domestic  Community  Industrial  Irrigation  
 Thermal  Injection  Other

(5) BORE HOLE CONSTRUCTION:  
Special Construction approval Yes No   Depth of Completed Well 385 ft.  
Explosives used   Type \_\_\_\_\_ Amount \_\_\_\_\_

HOLE			SEAL			Amount sacks or pounds
Diameter	From	To	Material	From	To	
6"	0	58	Cement	0	58	15 sacks

How was seal placed: Method  A  B  C  D  E  
 Other \_\_\_\_\_  
Backfill placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Material \_\_\_\_\_  
Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Size of gravel \_\_\_\_\_

(6) CASING/LINER:

Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing: 6"	+1	59	.250	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Liner: 4 1/2"	0	385	PVC	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(7) PERFORATIONS/SCREENS:

Perforations Method BAW  
 Screens Type \_\_\_\_\_ Material \_\_\_\_\_

From	To	Slot size	Number	Diameter	Tel./pipe size	Casing	Liner
285	385	2"	1000	1/8"	4 1/2"	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(8) WELL TESTS: Minimum testing time is 1 hour  
 Pump  Boiler  Air  Flowing Artesian  
Yield gal/min 7 1/2 GPM Drawdown 285 Drill stem at 385 Time 1 hr.

Temperature of water \_\_\_\_\_ Depth Artesian Flow Found \_\_\_\_\_  
Was a water analysis done?  Yes By whom \_\_\_\_\_  
Did any strata contain water not suitable for intended use?  Too little  
 Salty  Muddy  Odor  Colored  Other not tested  
Depth of strata: \_\_\_\_\_

(9) LOCATION OF WELL by legal description:  
County Lane Latitude \_\_\_\_\_ Longitude \_\_\_\_\_  
Township 18S Nor S. Range 4W E or W, WM.  
Section 14 1/4 1/4  
Tax Lot 4100 Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
Street Address of Well (or nearest address) 86433 Lorane Hwy.  
Eugene, Or.

(10) STATIC WATER LEVEL:  
100' ft. below land surface. Date 8-28-87  
Artesian pressure \_\_\_\_\_ lb. per square inch. Date \_\_\_\_\_

(11) WATER BEARING ZONES:  
Depth at which water was first found 350'

From	To	Estimated Flow Rate	SWL
350'	355'	7 1/2 gpm	100'

(12) WELL LOG: Ground elevation \_\_\_\_\_

Material	From	To	SWL
Topsoil	0	1	
Brown Clay	1	27	
Brown Gray Green soft Cong.	27	50	
Gray Green Cong.	50	78	
Gray Sandstone	78	133	
Basalt	133	138	
Light Green Sandstone soft	138	223	
Gray Green Sandstone	223	255	
Gray Blue Green Cong.	255	330	
Brown Claystone	330	344	
Gray Green Sandy Cong.	344	385	100'

Date started 8-27-87 Completed 8-28-87

(unbonded) Water Well Constructor Certification:  
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.  
Signed Bob Murphy WWC Number 1344  
Date 8-28-87

(bonded) Water Well Constructor Certification:  
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.  
Signed Cindy L. Jones WWC Number 559  
Date 8-28-87

STATE OF OREGON  
**WATER WELL REPORT**  
 (as required by ORS 537.766)

**RECEIVED**

JAN 30 1985

WATER RESOURCES DEPARTMENT

SALEM, OREGON

LANE

189/4W-14

17024

Record

(for official use only)

(1) OWNER:  
 Name Bob Engelstad  
 Address P.O. Box 10202 Eugene, OR  
 City Eugene State OR

(2) TYPE OF WORK (check):  
 New Well  Deepening  Reconditioning  Abandon   
 If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL: (4) PROPOSED USE (check):  
 Rotary Air  Drilled  Domestic  Industrial  Municipal   
 Rotary Mud  Dug  Irrigation  Thermal  Rejection   
 Other:  Pneumatic  Grounding  Test

(5) CASING INSTALLED: Steel  Plastic   
 Threaded  Welded   
 Diam. from EXISTING ft. to \_\_\_\_\_ ft. Gauge \_\_\_\_\_

LINER INSTALLED: Steel  Plastic   
 Threaded  Welded   
 Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Gauge \_\_\_\_\_

(6) PERFORATIONS: Perforated?  Yes  No  
 Size of perforations \_\_\_\_\_ in. by \_\_\_\_\_ in.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(7) SCREENS: Well screen installed?  Yes  No  
 Manufacturer's Name \_\_\_\_\_  
 Type \_\_\_\_\_ Model No. \_\_\_\_\_  
 Diam. \_\_\_\_\_ Slot Size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Diam. \_\_\_\_\_ Slot Size \_\_\_\_\_ Set from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

(8) WELL TESTS: Drawdown is amount water level is lowered below static level  
 Was a pump test made?  Yes  No If yes, by whom? Christensen Well Drilling  
 Rate: 7 1/2 gal./min. with 10 ft. drawdown after \_\_\_\_\_ hrs.  
 Air test \_\_\_\_\_ gal./min. with drill stem at \_\_\_\_\_ ft. hrs.  
 Bailer test \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
 Artesian flow \_\_\_\_\_ g.p.m.  
 Temperature of water \_\_\_\_\_ Depth artesian flow encountered \_\_\_\_\_ ft.

(9) CONSTRUCTION: Special standards: Yes  No   
 Well seal—Material used \_\_\_\_\_  
 Well sealed from land surface to \_\_\_\_\_ ft.  
 Diameter of well bore to bottom of seal \_\_\_\_\_ in.  
 Diameter of well bore below seal \_\_\_\_\_ in.  
 Amount of sealing material \_\_\_\_\_ sacks  pounds   
 How was cement group placed \_\_\_\_\_  
 Was pump installed? \_\_\_\_\_ Type \_\_\_\_\_ HP \_\_\_\_\_ Depth \_\_\_\_\_ ft.  
 Was a drive shoe used?  Yes  No Plug \_\_\_\_\_ Size: location \_\_\_\_\_ ft.  
 Did any strata contain unusable water?  Yes  No  
 Type of Water? \_\_\_\_\_ depth of strata \_\_\_\_\_  
 Method of sealing strata off \_\_\_\_\_  
 Was well gravel packed?  Yes  No Size of gravel: \_\_\_\_\_  
 Gravel placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

NOTICE TO WATER WELL CONSTRUCTOR  
 The original and first copy of this report are to be filed with the

(10) LOCATION OF WELL by legal description:  
 County LANE W. 1/4 of Section 14  
 Township 18 S. Range 4 W. WM.  
 (Township is North or South) (Range is East or West)  
 Tax Lot \_\_\_\_\_ Lot \_\_\_\_\_ Block \_\_\_\_\_ Subdivision \_\_\_\_\_  
 MAILING ADDRESS OF WELL (or nearest address) 86279 LOCUST WAY, Eugene

(11) WATER LEVEL OF COMPLETED WELL:  
 Depth at which water was first found \_\_\_\_\_ ft.  
 Static level 22 ft. below land surface. Date 1/28  
 Artesian pressure \_\_\_\_\_ lbs. per square inch. Date \_\_\_\_\_

(12) WELL LOG: Diameter of well below casing \_\_\_\_\_"  
 Depth drilled \_\_\_\_\_ ft. Depth of completed well 87 ft.  
 Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. Report each change in position of Static Water Level and indicate principal water-bearing strata.  

MATERIAL	From	To	SWL
Well Drilled For			
Wayne Weber			
6/24/76	155'		
Well Grouted with			
Cement from	155'	to 84'	
12 sacks cement			

 Date work started 1/25/85 / completed 1/28/85  
 Date well drilling machine moved off of well \_\_\_\_\_ 19\_\_\_\_  
 (unbonded) Water Well Constructor Certification (if applicable):  
 This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.  
 [Signed] \_\_\_\_\_ Date \_\_\_\_\_, 19\_\_\_\_  
 (bonded) Water Well Constructor Certification  
 Bond 6627655-3 issued by: TRAVELERS  
 (number) (Surety Company Name)  
 On behalf of: CHRISTENSEN WELL DRILLING CO.  
 (type or print name of Water Well Constructor)  
 This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
 (Signed) Paul Christensen V-Pres  
 (Water Well Constructor)  
 (Date) 1/29/85

WATER RESOURCES DEPARTMENT,  
 SALEM, OREGON 97810  
 within 30 days from the date of well completion. SP-48968-890