U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

MISCELLANEOUS FIELD STUDIES
MAP MF-2265
SHEET 2 OF 2

Table 1.--Locations and depths to bedrock for drill-holes in the Tacoma and part of the Centralia 30' by 60' quadrangles, Washington

[Codes for source of well-log data are as follows: W, USGS, Tacoma, files from unpub. well logs; G, Washington Div. of Geology and Earth Resources, Olympia, unpub. mineral exploration well data from files; 1, Garling and others (1965); 2, Ritzi (1983, fig. 6, app. A); 3, Luzier (1969, table 5); 4, McFarland (1983, plus addendum 7/89, and unpub. logs, see G); 5, Molenaar and Noble (1970); 6, Walters and Kimmel (1968); 7, A.M. Piper, McNeil Island (written commun., 1930); E, Washington Dept of Ecology, Olympia, unpub. geotechnical well data; 8, Wallace and Molenaar (1961); 9, Noble and Wallace (1966); H, Hart Crowser & Associates, Inc. (1986, 1988, 1989a, b); S, Snavely and others (1958); CC, Clover Creek, Brown and Caldwell (1985). Leaders (----) indicate data not available. Well locations verified in field except as noted: u, unverified; ?, uncertain]

Data entry no.	Township	Range	Section[1]	Altitude Feet	Altitude Meters	Depth Feet	Depth Meters	Driller	Year drilled	Source of log data	Bed-rock	Remarks
						Kitsap County						
1	23 N.	01 W.	12Q02	480	146.40	237	72.29	Crabtree	81	W	No	
2	23 N.	01 E.	15K01	240	73.20	450	137.25	Nicholson	74	W	No	
3	23 N.	01 E.	35G01	200	61.00	540	164.70	Harbor	76	W	No	
4	23 N.	02 E.	08L02	----	----	512	156.16	Nicholson	82	W	No	
5	23 N.	02 E.	11G02	----	----	500	152.50	Nicholson	77	W	No	
6	23 N.	02 E.	18N01	335	102.10	498	151.89	Harbor	78	W	No	
7	22 N.	01 W.	11J02	400	122.00	6688	2039.80	Fillmore	49	G	Yes	Basalt at 620 ft (189 m).
8	22 N.	01 E.	01P01	130	39.65	638	194.59	Stoican	59	1	No	
9	22 N.	01 E.	03H01	340	103.70	400	122.00	Tyee	78	W	No	
10	22 N.	01 E.	08A01	320	97.60	382	116.51	Olympia-West	77	W	No	
11	22 N.	01 E.	12F01	63	19.21	517	157.68	Harbor	79	W	No	
12	22 N.	02 E.	03D05	380	115.90	390	118.95	Meyer Co.	55	W	No	
13	22 N.	02 E.	08F02	340	103.70	547	166.83	Richardson	68	W	No	
14	22 N.	02 E.	09P03	260	79.30	426	129.93	Nicholson	76	W	No	
						King County						
15	23 N.	02 E	25Q01	373	113.70	469	143.04	---	---	2	No	Well No. 121.
16	23 N.	03 E.	31Q01	411	125.30	1005	306.52	Olympic	79	W,2	No	Well No.150.
17	23 N.	04 E.	12G04	235	71.67	280	85.40	Jannsen	45	3	Yes	Shale at 188 ft (57 m).
18	23 N.	04 E.	16M01	390	118.90	729	222.34	Hart Crowser & Assoc., Inc	85	W	Yes	Well OW-31; sandstone at 704 ft (215 m).
19	23 N.	04 E.	19H03	375	114.30	621	189.40	Jannsen	48	3	Yes	"Rock" at 590 ft (180 m).
20	23 N.	04 E.	24C01	89	27.14	71	21.66	Metro Engineers	59	3	Yes	Andesite at 42 ft (12.8 m).
21	23 N.	04 E.	27C04	420	128.10	500	152.50	Bell	43	3,W	No	
22	23 N.	04 E.	30E01	290	88.45	780	237.90	Service	53	3	No	Several drifts penetrated.
23	23 N.	05 E.	09E01	285	86.92	424	129.32	----	43	3	No	Sandstone(?) and shale(?).
24	23 N.	05 E.	17G03	40	12.20	400	122.00	Hart Crowser & Assoc., Inc.	83	W	No	
25	23 N.	05 E.	23M01	103	31.41	665	202.82	Dorsten	62	3	No	Drift >1000 ft (>305 m) thick.
26	23 N.	05 E.	25R02	550	167.70	255	77.78	Johnson	61	W,3	Yes	Sandstone at 68 ft (21 m).
27	23 N.	05 E.	27E01	350	106.70	304	92.72	B&J	83	W	No	
28	23 N.	05 E.	30P01	20	6.10	62	18.91	---	63	W,3	Yes	Sandstone at 50 ft (15 m); see section A-A', *in* Luzier (1969).
29	23 N.	05 E.	32L01	475	144.80	510	155.55	Service	52	W,3	Yes	Bedrock(?) at 145 ft (44 m); see section A-A', *in* Luzier (1969).
30	23 N.	05 E.	32N01	470	143.30	470	143.35	Johnson	78	W	Yes	Gray rock at 330 ft (101 m).
31	23 N.	05 E.	33L01	400	122.00	196	59.78	Jannsen	49	W,3	Yes	Sandstone at 98 ft (30 m); see section A-A', *in* Luzier (1969).
32	23 N.	05 E.	34B01	496	151.20	347	105.83	Maxwell	53	3	No	See section A-A'., *in* Luzier (1969).
33	23 N.	05 E.	35A01 u	537	163.70	155	47.28	---	---	3	Yes	Bedrock at 55 ft (17 m).
34	23 N.	05 E.	35C01 u	474	144.50	195	59.48	---	---	3	Yes	Bedrock at 195 ft (59 m); see section A-A'., *in* Luzier (1969).
35	23 N.	05 E.	35D01 u	505	154.00	646	197.03	---	---	3	Yes	"Depth to bedrock 646 ft" (197 m); see section A-A', *in* Luzier (1969).
36	23 N.	05 E.	35F01 u	513	156.40	444	135.42	---	---	3	Yes	"Depth to bedrock 444 ft" (135 m); see section A-A', *in* Luzier (1969).
37	23 N.	05 E.	36B02 u	500	152.50	150	45.75	---	51	3	Yes	Bedrock at 50 ft (15 m).
38	23 N.	05 E.	36E02 u	587	179.00	395	120.47	Meyer	55	3	Yes	Sandstone at 50 ft (15 m).
39	23 N.	06 E.	16 coal	----	----	2015	614.57	Getty Oil	83	4	Yes	Well GRW3 cased to 560 ft (170 m).
40	23 N.	06 E.	20K01	----	----	540	164.70	Johnson	87	W	No	
41	23 N.	06 E.	21R01	----	----	535	163.17	Richardson	72	W	No	
42	23 N.	06 E.	29M01	200?	60.00?	30	9.15	Johnson	85	W	Yes	Gray shale at 19 ft (6 m).
43	23 N.	06 E.	31A01	600	183.00	220	67.10	Johnson	62	W,3	No	
44	23 N.	06 E.	32G02	275	83.87	349	106.44	Evergreen	85	W	Yes	Gray shale at 345 ft (105 m).
45	22 N.	02 E.	12Q01	330	100.60	596	181.78	----	80	2	No	Well No. 40.
46	22 N.	02 E.	35E01	335	102.10	330	100.65	----	----	2	No	Well No. 67.
47	22 N.	03 E.	05A01	290	88.45	405	123.52	----	----	2	No	Well No. 73.
48	22 N.	03 E.	16F01	56	17.08	462	140.91	----	41	1,2	No	Well No. 88.
49	22 N.	03 E.	20Q01	----	----	755	230.27	Statewide	89	W	No	
50	22 N.	03 E.	21J01	382	116.50	518	157.99	Gaudio	60	W,1,2	No	Well No. 98.
51	22 N.	03 E.	21P01	390	118.90	520	158.60	----	----	2	No	Well No. 99.
52	22 N.	03 E.	31J01	360	109.80	493	150.36	----	----	1	No	Well No. 113.
53	22 N.	04 E.	01N01	22	6.71	365	111.32	Remedial Invs.	84	W	No	
54	22 N.	04 E.	04L01	250	76.25	593	180.86	Jannsen	----	3	No	
55	22 N.	04 E.	08J01	160	48.80	600	183.00	----	60	3	No	
56	22 N.	04 E.	09A03	335	102.10	500	152.50	Schneider	83	W	No	
57	22 N.	04 E.	17Q04	162	49.41	1001	305.30	Richardson	60	3	Yes	Bedrock(?) at 986 ft (301 m).
58	22 N.	04 E.	24G01	40	12.20	428	130.54	Jensen	38	3	No	
59	22 N.	04 E.	35L01	40	12.20	458	139.69	----	62	3	No	
60	22 N.	05 E.	03A01	625	190.60	525	160.12	Service	54	W	Yes	Sandstone at 78 ft (24 m).
61	22 N.	05 E.	04R oil	458	139.60	9291	2833.70	Geothermal Resource	67	4	Yes	No log 0-800 ft; cased to 795 ft (242 m).
62	22 N.	05 E.	06P05	40	12.20	395	120.47	Armstrong	83	W	No	
63	22 N.	05 E.	07J03	275	83.87	500	152.50	Burt	81	W	No	City of Kent, Garrison Creek Park.
64	22 N.	05 E.	10F oil	351	107.00	6801	2074.30	Intex Oil	66	4	Yes	No log 0-750 ft; cased to 692 ft (211 m).
65	22 N.	05 E.	13P02	535	163.10	137	41.79	Johnson	62	W,3	Yes	Coal at 134 ft (41 m).
66	22 N.	05 E.	16L01	480	146.40	470	143.35	Gaudio	59	3	No	
67	22 N.	05 E.	19B01	340	103.70	598	182.39	Jannsen	50	3	No	
68	22 N.	05 E.	28E02	425	129.60	431	131.45	Burt	81	W	No	City of Kent, Soos Creek well.
69	22 N.	05 E.	33Q01	490	149.40	508	154.94	Oelke	81	W	No	
70	22 N.	06 E.	08R01	602	183.60	350	106.75	----	----	3	No?	No log; casing pulled to 275 ft (84 m); gray sand at 229 ft (70 m).
71	22 N.	06 E.	15H02	600	183.00	273	83.27	----	----	W	No	Water-bearing gravel 270-273 ft (83 m).
72	22 N.	06 E.	22L02	575	175.30	301	91.81	Oelke	83	W	No	
73	22 N.	06 E.	26F02 u	600?	182.88?	160	48.80	Johnson	78	W	Yes	Coal at 9 ft (3 m). Average depth is 6 m.
74	22 N.	06 E.	26F04	625	190.60	200	61.00	Northwest	77	W	Yes	Coal at 25 ft (8 m).
75	22 N.	06 E.	26F05	675?	205.80?	240	73.20	Johnson	83	W	Yes	Sandstone at 15 ft (5 m)
76	22 N.	06 E.	26F06	675	205.80	320	97.60	Johnson	82	W	Yes	Sandstone at 22 ft (7 m).
77	22 N.	06 E.	29B01	----	----	1213	369.96	Schneider	89	W	Yes	Brittle clay at 1040 ft (317 m).
78	22 N.	06 E.	29R01	560	170.80	355	108.27	Bell	59	3	No	
79	22 N.	06 E.	32Q01	455	138.70	95	28.98	Northwest	73	W	Yes	Sandstone(?) at 77 ft (24 m).
80	22 N.	06 E.	33P03	500	152.5	695	211.97	Armstrong	87	W	No	
81	21 N.	03 E.	12J01	275	83.87	416	126.88	Richardson	61	3	No	
82	21 N.	04 E.	01D01	50	15.25	450	137.25	Maxwell	60	3	No	
83	21 N.	04 E.	07Q05	320	97.60	820	250.10	Hokkaido	84	W	No	
84	21 N.	04 E.	08F01	448	136.60	1205	367.52	Oelke	88	W	No	
85	21 N.	04 E.	15L02	410	125.00	1007	307.13	Meyers	---	3	No	
86	21 N.	04 E.	20L02	240	73.20	472	143.96	Richardson	62	W	No	
87	21 N.	04 E.	32M01	90	27.45	1124	342.82	Story	73	W	No	
88	21 N.	05 E.	08M02	55	16.77	550	167.75	Armstrong	83	W	No	
89	21 N.	05 E.	10N02	315	96.07	666	203.13	Maxwell	63	3	No	
90	21 N.	05 E.	14D01	380	115.90	718	218.99	Johnson	62	3	No	
91	21 N.	05 E.	15M01	320	97.60	1000	305.00	King&Jannsen	64	3	Yes?	Clay and rocks at 787 ft (240 m).
92	21 N.	05 E.	24E03	335	102.10	404	123.22	Richardson	78	W	No	
93	21 N.	06 E.	10K02	520	158.60	----	----	----	----	3	Yes	"Bedrock," 94 ft (29 m).
94	21 N.	06 E.	16P01	----	----	562	171.41	Hayes	83	W	Yes	Coal(?) at 148 ft (45 m).
95	21 N.	06 E.	20J coal	225	68.62	2480	756.40	Material Exploration	83	G	Yes	MIT1; Puget Group at 336 ft (102 m).
96	21 N.	06 E.	22J01	650	198.20	140	42.70	Northwest	78	W	Yes	Sandstone at 75 ft (22.9 m).
97	21 N.	06 E.	22R04	670	204.30	200	61.00	Johnson	78	W	Yes	Sandstone at 113 ft (34 m).
98	21 N.	06 E.	23B01	591	180.20	----	----	----	----	3	Yes	Hammer Bluff Formation at 191 ft (58 m),.
99	21 N.	06 E.	23C01	680	207.40	----	----	----	----	3	Yes	Hammer Bluff Formation at 260 ft (79 m),.
100	21 N.	06 E.	23P01	635	193.60	230	70.15	Evergreen	76	W	Yes	Sandstone at 35 ft (11 m).
101	21 N.	06 E.	28A01	510	155.50	400	122.00	----	76	W	Yes	Sandstone at 216 ft (66 m).
102	21 N.	06 E.	28R01	550	167.70	400	122	Northwest	85	W	No	
103	21 N.	06 E.	29L01	540	164.70	380	115.90	Johnson	77	W	No	
104	21 N.	06 E.	34A oil	565	172.30	2362	720.41	Flaming Geyser	28	4	Yes	Geyser No. 1 well; bedrock at 290 ft (88 m).
105	21 N.	06 E.	34H oil	638	194.50	3411	1040.30	McCroskey	61	4	Yes	Brandt No. 2 well; coal at 660 ft (201 m).
106	21 N.	06 E.	34K oil	605	184.50	5047	1539.30	Sound City	37	4	Yes	Kraupa No. 1 well; bedrock at 950 ft (290 m).
107	21 N.	06 E.	34P oil	575	175.30	4326	1319.40	McCulloch	57	4	Yes	Pasquier No. 2 well; cased to 599 ft (188 m).
108	21 N.	06 E.	35P02	700	213.50	228	69.54	Evergreen	76	W	Yes	Bedrock at 155 ft (47 m).
109	20 N.	05 E.	01F coal	508	154.90	1440	439.20	Material Exploration	83	G	Yes	MIT2; bedrock at 545 ft (166 m).
110	20 N.	06 E.	02K01	740	225.70	380	115.90	Richardson	57	3	No	231 ft of clay.
111	20 N.	06 E.	10D oil	592	180.50	5069	1546.00	McCulloch	58	4	Yes	McCulloch-Krainich No. 1 well; no log 0-745 ft; cased to 715 ft (218 m).
						Mason County						
112	23 N.	02 W.	19H01	420	128.10	263	80.22	Tyee	74	W	No	
113	23 N.	01 W.	21F01	120	36.60	285	86.93	----	76	W	No	
114	23 N.	01 W.	32H01 ?	----	----	538	164.09	Nicholson	82	W	No	
115	22 N.	02 W.	02E01 ?	----	----	335	102.17	Nicholson	84	W	No	
116	22 N.	02 W.	12R01 ?	----	----	356	108.58	Nicholson	82	W	No	
117	22 N.	01 W.	06B02	10	3.05	363	110.71	Tyee	65	5	No	
118	22 N.	01 W.	08E01	280	85.40	384	117.12	Tyee	73	W	No	
119	22 N.	01 W.	20F02	----	----	263	80.22	Nicholson	81	W	No	
120	22 N.	01 W.	28G01 ?	----	----	400	122.00	Stoican	84	W	No	
121	21 N.	02 W.	08A01	320	97.60	245	74.73	Bedell	64	5	No	
122	21 N.	01 W.	05B01	10	3.05	352	107.36	----	----	5	No	Sand at 225-350 ft (69-107 m).
123	21 N.	01 W.	08R01	60	18.30	610	186.05	Bedell	---	5	No	Blue clay beds at 146 ft (45 m); 345 ft (105 m) thick.
124	20 N.	01 W.	30M01	240	73.20	419	127.79	Bedell	54	5	No	
						Pierce County						
125	22 N.	01 E.	14E01	260	79.30	397	121.08	----	71	W	No	
126	22 N.	01 E.	19F01	270	82.35	309	94.25	----	67	W	No	
127	22 N.	01 E.	22Q01	280	85.40	326	99.43	----	66	W	No	
128	22 N.	01 E.	25C03	80	24.40	473	144.26	----	72	W	No	
129	22 N.	01 E.	36R02	330	100.60	511	155.85	Burt	77	W	No	
130	22 N.	02 E.	21Q01	305	93.02	430	131.15	Harbor	77	W	No	
131	22 N.	02 E.	30G01	295	89.97	378	115.29	Harbor	79	W	No	
132	22 N.	02 E.	33F02	310	94.55	351	107.05	Harbor	60	W	No	
133	21 N.	01 W.	25E04	40	12.20	485	147.92	----	67	W	No	
134	21 N.	01 W.	26M01	190	57.95	361	110.10	----	63	W	No	
135	21 N.	01 E.	10C01	155	47.27	307	93.64	Harbor Dr	59	W	No	
136	21 N.	01 E.	15M01	316	96.38	381	116.20	----	74	W	No	
137	21 N.	01 E.	23K01	265	80.82	310	94.55	----	68	W	No	
138	21 N.	01 E.	28G02 u	11	3.36	604	184.22	----	----	W	No	
139	21 N.	01 E.	35D01	25	7.63	432	131.76	----	52	W	No	
140	21 N.	02 E.	06P02	310	94.55	460	140.30	----	78	W	No	
141	21 N.	02 E.	17F02	341	104.00	909	277.24	----	78	W	No	
142	21 N.	02 E.	20F01	230	70.15	392	119.56	----	77	W	No	
143	21 N.	02 E.	28P01	195	59.47	634	193.37	----	73	W	No	
144	21 N.	02 E.	31K02 u	90	27.45	725	221.12	----	50	W	No	
145	21 N.	02 E.	34N01	225	68.62	432	131.76	----	62	W	No	
146	21 N.	03 E.	16N02	100	30.50	419	127.79	Gaudio	60	6	No	
147	21 N.	03 E.	27G01	80	24.40	1216	370.88	Jannsen	38	6	No	
148	21 N.	03 E.	35B01	80	24.40	856	261.08	Jannsen	27	6	No	
149	21 N.	03 E.	36L01	19	5.80	950	289.75	Durand	52	6	No	Holocene marine sedimentary deposits.
150	20 N.	01 W.	04L01	300	91.50	271	82.66	----	72	W	No	
151	20 N.	01 W.	10E01	245	74.72	352	107.36	----	73	W	No?	
152	20 N.	01 W.	24D01	100	30.50	332	101.26	----	65	W	No	
153	20 N.	01 W.	35C02	160	48.80	264	80.52	----	73	W	No	
154	20 N.	01 E.	07K01	4	1.22	700	213.50	----	43	W	No	"600 ft blue clay" aquifer gravel.
155	20 N.	01 E.	07Q01	80	24.40	450	137.25	----	67	W	No	
156	20 N.	01 E.	12J01	305	93.02	323	98.52	----	79	W	No	
157	20 N.	01 E.	19D01	180	54.90	400	122.00	----	62	W	No	
158	20 N.	01 E.	22J01	190	57.95	532	162.26	----	26	7	No	
159	20 N.	01 E.	27B01	30	9.15	700	213.50	----	10	7	No	
160	20 N.	01 E.	32Q01	200	61.00	246	75.03	----	69	W	No	
161	20 N.	02 E.	02L02	310	94.55	468	142.74	----	83	W	No	
162	20 N.	02 E.	09C03	15	4.58	608	185.44	----	65	W	No	
163	20 N.	02 E.	11K02	228	69.54	397	121.08	Denny	----	6	No	
164	20 N.	02 E.	15M01	410	125.00	440	134.20	----	40	6	No	
165	20 N.	02 E.	20Q01	15	4.58	1211	369.35	----	68	W	No	
166	20 N.	02 E.	25L01	245	74.72	1139	347.39	Richardson	88	E	No	Tacoma Public Utilities test well No. 88.1.
167	20 N.	02 E.	27M01	245	74.72	894	272.67	Gaudio	64	W	No	
168	20 N.	02 E.	32B01	22	6.71	1172	357.46	Jannsen	48	6	No	
169	20 N.	02 E.	32K01	235	71.67	1065	324.82	Gaudio	62	W	No	
170	20 N.	02 .E.	33B01u	245	74.72	935	285.17	Jannsen	38	6	No	Washington State Hospital; changed from 19 N. 2 E.
171	20 N.	02 E.	35L01	260	79.3	768	234.24	Jannsen	37	6	No	
172	20 N.	03 E.	03L01	10	3.05	534	162.87	Gaudio	60	6	No	
173	20 N.	03 E.	04H02	20	6.10	1501	457.80	Jannsen	40	6	No	
174	20 N.	03 E.	09F01	40	12.20	618	188.49	Sylte	50	6	No	
175	20 N.	03 E.	19F01	266	81.13	378	115.29	Jannsen	30	6	No	
176	20 N.	03 E.	30L01	255	77.77	1200	366.00	Oelke	87	E	No	Tacoma Public Utilities test well No. 87.1.
177	20 N.	03 E.	31F02	300	91.5	629	191.84	Gaudio	61	W	No	
178	20 N.	03 E.	34L01	410	125.00	505	154.02	Sylte	47	6	No	
179	20 N.	03 E.	36P01	440	134.20	573	174.76	Spry	78	W	No	Ebbert and others, 1987.
180	20 N.	04 E.	03C01	230	70.15	805	245.52	----	----	W	No	Horan test well.
181	20 N.	04 E.	07G01	15	4.58	600	183.00	----	83	W	No	
182	20 N.	04 E.	11Q01	450	137.20	590	179.95	----	81	W	No	
183	20 N.	04 E.	16G01	140	42.70	704	214.72	----	69	W	No	
184	20 N.	04 E.	20C01	30	9.15	801	244.30	Richardson	52	6	No	Ebbert and others, 1987.
185	20 N.	04 E.	23P03	60	18.30	545	166.22	----	75	W	No	
186	20 N.	04 E.	24C01	60	18.30	575	175.37	----	----	W	No	
187	20 N.	04 E.	30P01	385	117.40	450	137.25	----	67	W	No	
188	20 N.	04 E.	34G01	140	42.70	574	175.07	Gaudio	62	6	No	
189	20 N.	05 E.	08M01	510	155.50	403	122.91	----	73	W	No	
190	20 N.	05 E.	17M01	655	199.70	382	116.51	Gaudio	---	6	No	
191	20 N.	05 E.	28F01	643	196.10	337	102.78	Nicholaon	59	6	No	Volcanic agglom. "mud flow" at 262 ft (80 m).
192	20 N.	05 E.	36A oil	642	195.80	12920	3940.60	Phillips	63	4	Yes	No log 0-1020 ft (311 m); cased to 989 ft (301 m).
193	20 E.	06 E.	31N oil	670	204.30	7562	2306.40	Carr	61	4	Yes	No log 0-778 ft (237 m); glacial deposits at <776 ft (235 m).
194	19 N.	01 E.	02R01	163	49.71	762	232.41	Gaudio	56	6	No	
195	19 N.	01 E.	04F03	----	----	295	89.98	----	71	W	No	
196	19 N.	01 E.	27C01	217	66.18	331	100.95	Jannsen	45	6	No	
197	19 N.	01 E.	35A01	240	73.20	349	106.44	----	25	6	No	
198	19 N.	02 E.	02M02	260	79.30	572	174.46	Gaudio	----	6	No	
199	19 N.	02 E.	05H01	340	103.70	898	273.89	Gaudio	61	6	No	
200	19 N.	02 E.	08A01	290	88.45	915	279.07	Gaudio	58	6	No	
201	19 N.	02 E.	10L01	270	82.35	638	194.59	Jannsen	47	6	No	
202	19 N.	02 E.	13N01	280	85.40	634	193.37	P&P	73	CC	No	Clover Creek study.
203	19 N.	02 E.	18H1,2	235	71.67	1450	442.25	Jannsen	41	6	No	U.S. Government (USG) well No. 4.
204	19 N.	02 E.	22N01	280	85.40	2261	689.60	Moss	41	6	Yes	USG well No. 7; bedrock at 1981 ft (604 m).
205	19 N.	02 E.	27G01 u	287	87.53	1008	307.44	Moss	43	6	No	USG well No. 8.
206	19 N.	02 E.	31J01	282	86.01	1000	305.00	Moss	41	6	No	USG well No. 5.
207	19 N.	02 E.	32H1,2	293	89.36	1570	478.85	Moss	41	6	No	USG well No. 6.
208	19 N.	03 E.	03G02	427	130.20	422	128.71	----	58	6	No	
209	19 N.	03 E.	08H02	330	100.60	507	154.63	----	76	W	No	
210	19 N.	03 E.	08N04	290	88.45	1197	365.08	Richardson	63	CC	No	
211	19 N.	03 E.	16D01	305	93.02	715	218.07	Wutz	55	6	No	
212	19 N.	03 E.	17R01	315	96.07	778	237.29	Richardson	----	CC	No	
213	19 N.	03 E.	22D06	360	109.80	625	190.62	----	64	W	No	
214	19 N.	03 E.	23C01	350	106.70	550	167.75	Richardson	53	6	No	
215	19 N.	03 E.	27L07	370	112.80	906	276.33	----	71	W	No	
216	19 N.	03 E.	28G04	370	112.80	700	213.50	----	67	W	No	
217	19 N.	04 E.	03A01	450	137.20	847	258.33	----	64	W	No	
218	19 N.	04 E.	03R02	----	----	918	279.99	Richardson	79	W	No	
219	19 N.	04 E.	05F01	330	100.60	417	127.18	Charlton	54	6	Yes	Sandstone(?) at 401 ft (122 m).
220	19 N.	04 E.	08A02	349	106.40	434	132.37	----	63	W	No	
221	19 N.	04 E.	11K01	526	160.40	418	127.49	Jannsen	36	6	No	
222	19 N.	04 E.	17N01	470	143.30	1010	308.05	Richardson	81	CC	No	
223	19 N.	04 E.	22D02	470	143.30	455	138.77	----	63	W	No	
224	19 N.	04 E.	27A01	585	178.40	842	256.81	Richardson	80	CC	No	
225	19 N.	04 E.	27L02	540	164.70	354	107.97	Richardson	71	W	No	
226	19 N.	04 E.	28B01	13	3.97	697	212.43	Ramlo	85	W	No	
227	19 N.	05 E.	5Q01	610	186.00	297	90.59	Richardson	70	W	No	
228	19 N.	05 E.	06C01	82	25.01	300	91.50	Kincy	75	W	No	
229	19 N.	05 E.	16A01	709	216.20	324	98.82	Richardson	76	W	No	
230	19 N.	05 E.	31F oil	198	60.39	2015	614.57	Concept Resources	73	4	Yes	Shale at 480 ft (146 m).
231	19 N.	06 E.	04M01	698	212.80	305	93.03	Northwest	53	6	No	
232	19 N.	06 E.	07K01	600	183.00	372	113.46	Pioneer	76	W	No	
233	19 N.	06 E.	34Q01	1400	427.00	456	139.08	TacPump	82	W	Yes	Siltstone at 14 ft (4 m).
234	18 N.	03 E.	03R04	400	122.00	474	144.57	Rainier	70	W	No	
235	18 N.	03 E.	12E01	430	131.10	626	190.93	Richardson	79	W	No	
236	18 N.	03 E.	15H01	420	128.10	304	92.72	Tacoma	75	W	No	
237	18 N.	04 E.	13B02	828	252.50	235	71.68	----	74	W	No	
238	18 N.	04 E.	14N02	----	----	256	78.08	----	79	W	No	
239	18 N.	04 E.	21R01	890	271.40	382	116.51	----	74	W	No	
240	18 N.	04 E.	30D01	480	146.40	370	112.85	----	69	W	No	
241	18 N.	04 E.	34R01	----	----	253	77.17	Richardson	77	W	No	
242	18 N.	05 E.	06C01	----	----	500	152.50	Oelke	84	W	Yes	Siltstone at 469 ft (143 m).
243	18 N.	05 E.	06P oil	225	68.62	845	257.72	Seacoast	73	4	Yes	180 ft +150 ft in gravel (101 m).
244	18 N.	05 E.	09F02	620	189.10	285	86.93	----	76	W	Yes?	Decomposed rock at 195 ft (59 m).
245	18 N.	06 E.	17G oil	1680	512.40	1367	416.93	Wilexco	85	4	Yes	0-300 ft (91 m) gravel and conglomerate of Lily Creek Formation.
246	18 N.	06 E.	20J oil	1915	584.00	6000	1830.00	Carbon River	87		Yes	Drilled 5 wells in E 1/2 sec. 20 through
247	18 N.	06 E.	20R oil	2005	611.50							about 50 ft (15 m) Wingate Hill Drift, bout 250 ft (76 m)
248	18 N.	06 E.	20Q oil	1860	567.30							Lily Creek Formation; average depth to rock 275 ft (84 m).
249	18 N.	06 E.	20	1887	575.50							Carbon River, oral commun.,, 1987.
250	17 N.	02 E.	13C02	420	128.10	332	101.26	----	72	W	Yes	Mashel(?) Formation at 160 ft (49 m).
251	17 N.	02 E.	23R01	----	----	317	96.69	----	73	W	Yes	Mashel(?) Formation clay, pumice, wood, gravel at 257 ft (78 m).
252	17 N.	02 E.	27K01	370	112.80	258	78.69	----	74	W	Yes	Mashel(?) Formation at 146 ft (45 m).
253	17 N.	03 E.	02J01	465	141.80	593	180.86	Spry	76	W	Yes	Mashel(?) Formation at 200 ft (62 m).
254	17 N.	03 E.	06Q01	390	118.90	260	79.30	Service	52	6	Yes	Mashel(?) Formation at 175 ft (53 m).
255	17 N.	03 E.	28A oil	518	157.90	5721	1744.90	Humble	61	4,6	Yes	Mashel(?) Formation 247 ft (75 m); basalt 1037 ft (316 m).
256	17 N.	04 E.	20P01	----	----	415	126.57	Gustin	74	W	Yes	Mashel(?) Formation at 149 ft (45 m).
257	17 N.	04 E.	27P01	----	----	255	77.78	Tacoma	72	W	Yes	Mashel(?) Formation at 132 ft (40 m).
258	17 N.	04 E.	31P01	----	----	250	76.25	Richardson	75	W	Yes	Mashel (?) Formation at 18 ft (5 m).
259	17 N.	04 E.	32A01	----	----	240	73.20	Richardson	72	W	Yes	Mashel(?) Formation at 38 ft (12 m).
260	17 N.	05 E.	07K01	630	192.10	182	55.51	Graf	52	6	Yes	Mashel(?) Formation at 60 ft (18 m).
261	17 N.	05 E.	21E01	----	----	702	214.11	Richardson	84	W	Yes	Siltstone at 622 ft (190 m).
262	16 N.	03 E.	11J01	680	207.40	242	73.81	----	76	W	Yes	Mashel(?) Formation at 23 ft (7 m).
263	16 N.	03 E.	14C01	625	190.60	295	89.98	Bell	40	6	Yes	Mashel(?) Formationat 60 ft (18 m); 235 ft (72 m) sand.
264	16 N.	04 E.	03G01	----	----	211	64.36	Tacoma	65	W	Yes?	Mashel(?) Formation at 10 ft (3 m).
265	16 N.	04 E.	07R02	690	----	34	10.37	Sylte	57	6	Yes?	Mashel(?) Formationat 15 ft (5 m).
266	16 N.	04 E.	14A01	780	237.90	73	22.27	Richardson	76	W	Yes	Bedrock at 72 ft (22 m).
267	16 N.	04 E.	24Q01	1270	387.30	50	15.25	Richardson	73	W	Yes	Bedrock at 47 ft (14 m).
						Thurston County						
268	20 N.	02 W	28P01	10	3.05	425	129.62	Patterson	58	8	No	
269	20 N.	02 W.	33Q02	80	24.40	770	234.85	Richardson	81	W	No	
270	20 N.	01 W.	33L02	5	1.53	500	152.50	----	40	8	No	
271	19 N.	03 W.	12Q01	100	30.50	199	60.70	----	78	W	No	
272	19 N.	02 W.	09R02	10	3.05	460	140.30	Patterson	39	8	No	270 ft (82 m) of blue clay.
273	19 N.	02 W.	11R01	85	25.92	524	159.82	Patterson	57	8	No	494 ft (151 m) of clay.
274	19 N.	02 W.	16K02	55	16.77	382	116.51	Kincy	79	W	No	
275	19 N.	02 W.	22M06	10	3.05	439	133.89	Patterson	---	9	No	
276	19 N.	01 W.	17M01	12	3.66	1000	305.00	Jannsen	28	8	No	
277	19 N.	01 W.	20L01	15	4.58	377	114.98	Russell	83	W	No	370 ft (113 m) of clay.
278	19 N.	01 W.	28M02	30	9.15	393	119.86	Battell	66	W	No	
279	19 N.	01 W.	35M01	290	88.45	667	203.43	Hart Crowser & Assoc., Inc.	89a	W	No	City of Lacey, Hawkes Prairie well.
280	18 N.	03 W.	12H01	170	51.85	207	63.14	Tims	79	W	No	
281	18 N.	03 W.	24H01	25	7.63	207	63.14	Graf	53	8	No	
282	18 N.	03 W.	24J02	20	6.10	105	32.03	Patterson	72	W	Yes	Basalt at 105 ft (32 m).
283	18 N.	02 W.	04F03	100	30.50	420	128.10		62	W	No	
284	18 N.	02 W.	14E01	10	3.05	305	93.03	Patterson	50	8	No	121 ft (37 m) sandy clay over 130 ft (40 m) fine sand.
285	18 N.	02 W.	26L01	135	41.17	158	48.19	Patterson	54	8	Yes	Basalt at 155 ft (47 m).
286	18 N.	02 W.	28J01	198	60.39	184	56.12	Williams	87	W	Yes	"Blue rock" at 27 ft (9 m).
287	18 N.	02 W.	31A01	140	42.7	96	29.28	Patterson	58	8	Yes	Basalt at 96 ft (29 m).
288	18 N.	02 W.	32J01	180	54.9	246	75.03	Jannsen	50	8	Yes	Shale at 120 ft (37 m); see section C-C', *in* Noble and Wallace (1966).
289	18 N.	02 W.	35B01	180	54.9	275	83.88	----		W	Yes	Olympia Brewing Co.--average depth to basalt 271 ft. (83 m).
290	18 N.	02 W.	35F06	100	30.50	136	41.48	----		W	Yes	Olympia Brewing Co.--basalt at 134 ft (41 m).
291	18 N.	02 W.	35K03	110	33.55	393	119.86	Story	82	W	No	
292	18 N.	02 W.	36D01	183	55.81	534	162.87	Armstrong	86	W	No	
293	18 N.	01 W.	08H03	124	37.82	570	173.85	Holt	88	W	No	Pleasant Glade test well; 405 ft (123 m) of sand.
294	18 N.	01 W.	11A01	217	66.18	481	146.70	Richardson	75	W	No	
295	18 N.	01 W.	21B01	182	55.51	650	198.25	----		H	No	Fire Station No. 7 well.
296	18 N.	01 W.	24A02	245	74.72	789	240.64	Kincy	88	W	No	
297	18 N.	01 W.	26N01	185	56.42	496	151.28	Hart and Crowser	89b	W	No	Long Lake well.
298	18 N.	01 W.	30A01	278	84.79	379	115.59	----	84	H	No	Hoffman well.
299	18 N.	01 W.	33N01	197	60.08	440	134.20	Story	81	W	No	
300	18 N.	01 W.	34J02	200	61.00	510	155.55	Kincy	65	W	No	
301	18 N.	01 E.	21P02	230	70.15	417	127.18	----		W	No	
302	18 N.	01 E.	31Q01	130	39.65	373	113.76	Kincy	77	W	No	
303	17 N.	03 W.	01B01	240	73.20	117	35.69	Patterson	71	W	No	
304	17 N.	03 W.	12A04	185	56.42	112	34.16	Kincy	76	W	No	
305	17 N.	02 W.	03R02	190	57.95	334	101.87	Kincy	68	W	No	
306	17 N.	02 W.	06G02	140	42.70	333	101.56	Maxey	78	W	No	
307	17 N.	02 W.	12N02	200	61.00	304	92.72	Patterson	57	8	No	
308	17 N.	02 W.	17R03	192	58.56	257	78.39	Kincy	80	W	No	
309	17 N.	02 W.	22E03	200	61.00	106	32.33	Kincy	73	W	Yes	Basalt at 99 ft (30 m).
310	17 N.	02 W.	24C02	210	64.05	243	74.12	A-1	88	W	Yes	Basalt at 70 ft (21 m).
311	17 N.	02 W.	25N03	217	66.18	80	24.40	Williams	79	W	Yes	"Yellow rock, soft" at 38 ft (12 m).
312	17 N.	02 W.	25Q01	243	74.11	155	47.28	Carrs	77	W	Yes	Basalt at 143 ft (38 m).
313	17 N.	02 W.	30E02	180	54.90	144	43.92	Kincy	73	W	Yes	Basalt at 21 ft (7 m).
314	17 N.	02 W.	30F01	185	56.42	148	45.14	Williams	79	W	Yes	"Rock" at 96 ft (29 m).
315	17 N.	02 W.	30P02	178	54.29	36	10.98	King	87	W	Yes	Bedrock at 36 ft (12 m).
316	17 N.	02 W.	35C01	268	81.74	201	61.31	Williams	88	W	Yes	Sandstone at 20 ft (6 m).
317	17 N.	02 W.	36C02	290	88.45	170	51.85	Russell	78	W	Yes	Sandstone at 25 ft (8 m).
318	17 N.	01 W.	02E04	215	65.57	542	165.31	Richardson	79	W	No	
319	17 N.	01 W.	07R01	210	64.05	320	97.60	Patterson	53	8	No	
320	17 N.	01 W.	11M01	270	82.35	324	98.82	Carpenter	80	W	No	
321	17 N.	01 W.	19M02	340	103.70	270	82.35	Williams	87	W	Yes	"Rock" at 75 ft (23 m).
322	17 N.	01 W.	28B01	295	89.97	167	50.94	Williams	80	W	Yes	"Rock" at 17 ft (5 m).
323	17 N.	01 W.	28H01	260	79.30	140	42.70	Richardson	82	W	Yes	Basalt at 36 ft (12 m).
324	17 N.	01 W.	30F01	260	79.30	405	123.52	Williams	88	W	Yes	Sandstone at 18 ft (6 m).
325	17 N.	01 W.	32F02	250	76.25	270	82.35	Mowery	63	W	No	154 ft (47 m) sand.
326	17 N.	01 W.	32K04	265	80.82	168	51.24	King	87	W	Yes	Basalt at 168 ft (51 m).
327	17 N.	01 W.	33A01	256	78.08	375	114.37	Mowery	63	9	Yes	McIntosh Formation; sandstone at 317 ft (97 m).
328	17 N.	01 W.	34E01	280	85.40	142	43.31	Tims	82	W	Yes	Sandstone at 138 ft (42 m).
329	17 N.	01 W.	34L02	280	85.40	125	38.13	A-1	87	W	Yes	Basalt at 45 ft (14 m).
330	17 N.	01 E.	06J03	205	62.52	427	130.23	Richardson	76	W	No	
331	17 N.	01 E.	08L02	218	66.49	258	78.69	Patterson	70	W	No	
332	17 N.	01 E.	24L01	340	103.70	275	83.88	Graf	53	8	Yes	Mashel(?) Formation at 200 ft (60 m).
333	17 N.	01 E.	34L02	450	137.20	285	86.93	Sylte	55	8	No	
334	17 N.	02 E.	32Q02	370	112.80	254	77.47	Graf	52	8	Yes	Mashel(?) Formation at 150 ft (46 m).
335	16 N.	03 W.	01J01	190	57.95	135	41.18	Patterson	63	W	No	
336	16 N.	02 W.	03F01	223	68.01	125	38.13	Mowrey	69	W	Yes	Dark shale at 46 ft (14 m).
337	16 N.	02 W.	06E01	230	70.15	152	46.36	A-1	88	W	No	
338	16 N.	02 W.	12J oil	----	----	4035	1230.60	Mottman	26	4,S	Yes	T-7; bedrock at 180 ft (55 m).
339	16 N.	02 W.	17H01	360	109.80	325	99.13	----	58	8	Yes	"Shale at about 10 ft" (3 m).
340	16 N.	02 W.	19K01	255	77.77	85	25.93	----	60	8	Yes	"Sandstone at 35 ft" (10.7 m).
341	16 N.	02 W.	20Q02	231	70.45	159	48.50	Russel	86	W	No	
342	16 N.	02 W.	26M01	260	79.30	202	61.61	Roberts	87	W	Yes	Basalt at 62 ft (19 m) over 52 ft claystone.
343	16 N.	02 W.	29K01	----	----	148	45.14	Dept of Ecology	87	E	Yes	Siltstone at 135 ft (41 m).
344	16 N.	02 W.	31N01	----	----	122	37.21	Dept of Ecology	87	E	Yes	Claystone at 113 ft (34 m).
345	16 N.	02 W.	32R oil	----	----	2125	648.12	Crescent Oil	15	4,S	Yes	T-3; bedrock at 90 ft (27 m).
346	16 N.	01 W.	06K01	240	73.20	147	44.84	Tims	88	W	No	
347	16 N.	01 W.	10Aoil	650	198.20	2760	841.80	Ohio Oil	26	4	Yes	T-6; shale at 20 ft (6 m).
348	16 N.	01 W.	19A02	280	85.40	120	36.60	King	88	W	Yes	Sandstone at 85 ft (26 m).
349	16 N.	01 W.	21D04	304	92.72	95	28.98	Kincy	74	W	Yes	Shale at 83 ft (25 m).
350	16 N.	01 E.	05K02	507	154.60	283	86.32	Richardson	78	W	No	
351	16 N.	01 E.	06J01	500	152.50	216	65.88	Richardson	50	8	No	
352	16 N.	01 E.	07E01	440	134.20	220	67.10	Patterson	48	9	Yes	McIntosh Formation at 160 ft (49 m).
353	16 N.	01 E.	07J02	455	138.70	119	36.30	Richardson	80	W	Yes	Shale at 88 ft (27 m).
354	16 N.	01 E.	08L01	471	143.60	175	53.38	Richardson	75	W	Yes	Shale at 175 ft (53 m).
355	16 N.	01 E.	08N01	500	152.50	103	31.42	Richardson	76	W	Yes	Sandstone at 60 ft (18 m).
356	16 N.	01 E.	09E01	425	129.60	427	130.23	Kincy	70	W	Yes	Shale at 406 ft (124 m); Mashel(?) Formation at 292 ft (87 m).
357	16 N.	01 E.	16L03	463	141.20	205	62.53	Richardson	86	W	Yes	Shale at 143 ft (44 m).
358	16 N.	01 E.	16Q01	415	126.50	225	68.63	DeRemer	52	8	Yes	Bedrock at 90 ft (27 m).
359	16 N.	01 E.	17G01	398	121.30	200	61.00	Richardson	77	W	Yes	Bedrock at 118 ft (36 m).
360	16 N.	01 E.	27H01	430	131.10	190	57.95	Jannsen	27	8	No	
361	16 N.	02 E.	02G01	450	137.20	225	68.63	Patterson	51	8	Yes	Mashel(?) Formation at 100 ft (30 m).
362	16 N.	02 E.	07Q01	440	134.20	287	87.54	Graf	53	8	Yes	Mashel(?) Formation at 200 ft (60 m).
363	16 N.	02 E.	10D01	460	140.30	210	64.05	Richardson	56	8	No	
364	16 N.	03 E.	29N01	485	147.90	45	13.73	Roberts	60	9	No	
365	15 N.	01 W.	05M01	270	82.35	72	21.96	Roberts	59	8	No	
366	15 N.	01 W.	07M01	315	96.07	127	38.74	Jannsen	----	8	Yes	Shale at 100 ft (30 m).

[1]Codes explained in figure 2.

MAP SHOWING DEPTH TO BEDROCK OF THE TACOMA AND PART OF THE CENTRALIA 30' X 60' QUADRANGLES, WASHINGTON

By

Jane M. Buchanan-Banks and Donley S. Collins

1994