GROUND WATER REPORT NUMBER 6

STATE OF OREGON

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RECORDS OF WELLS, WATER LEVELS AND CHEMICAL QUALITY OF WATER
IN
BAKER VALLEY, BAKER COUNTY, OREGON

BY
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PREPARED IN COOPERATION WITH
THE UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
MARCH, 1965

FOREWORD

An investigation of the ground-water resources of Baker Valley was made in 1950 in cooperation with the U. S. Geological Survey. The investigation was part of the State Engineer's continuing program of appraising the ground water resources of the State. This report presents the ground-water data collected during the investigation and the records of wells, water levels and water quality information obtained subsequent to the investigation. This report has been prepared at this time to aid in the location and development of the ground water resources of the area.

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RECORDS OF WELLS, WATER LEVELS, AND CHEMICAL QUALITY OF WATER IN BAKER VALLEY, BAKER COUNTY, OREGON

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By G. L. Ducret, Jr., and D. B. Anderson

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INTRODUCTION

Purpose of the Report

Because of the continuing demand for additional water, it is necessary to update and make available information on ground-water resources in order to aid the orderly development of the water resources of Baker Valley.

In 1950, a report by F. D. Trauger presented basic well data and associated facts and an interpretation of the geology of the area. The current report contains additional and more detailed data on wells and chemical quality of water, and will provide supporting information for a forthcoming publication, which will show the relationship of geology to the ground-water resources of Baker Valley.

Location and General Features of the Area

The Baker Valley study area is located roughly in the northwest corner of Baker County, and includes about 550 square miles. The approximate perimeter of the area is formed by lat 44°45' N. on the south, a combination of lat 45°10' N. and the Baker County line on the north, long 117°30' W. on the east, and long 118°05' W. on the west. The details of the boundary and the general topographic features found within the study area are shown in figure 1.

Baker Valley is an intermountain alluviated valley that is situated at an altitude of about 3,400 feet. The valley is bounded on the west by rugged peaks that reach altitudes of 9,100 feet and on the north, south, and east by less formidable hills. Many small streams descend from the higher areas through deep canyons and meander across the valley floor to join the Powder River, which flows north and then southeast across the study area.

The main centers of population within Baker Valley are the towns of Baker, North Powder, and Haines, whose combined population is about 10,500 people. The rural community of this region is composed of ranches and farms widely scattered throughout the study area.

Acknowledgments

The owners and operators of wells in the area allowed free access to their wells; they and the drillers of the wells also provided much general information. The friendly cooperation of all is gratefully acknowledged.

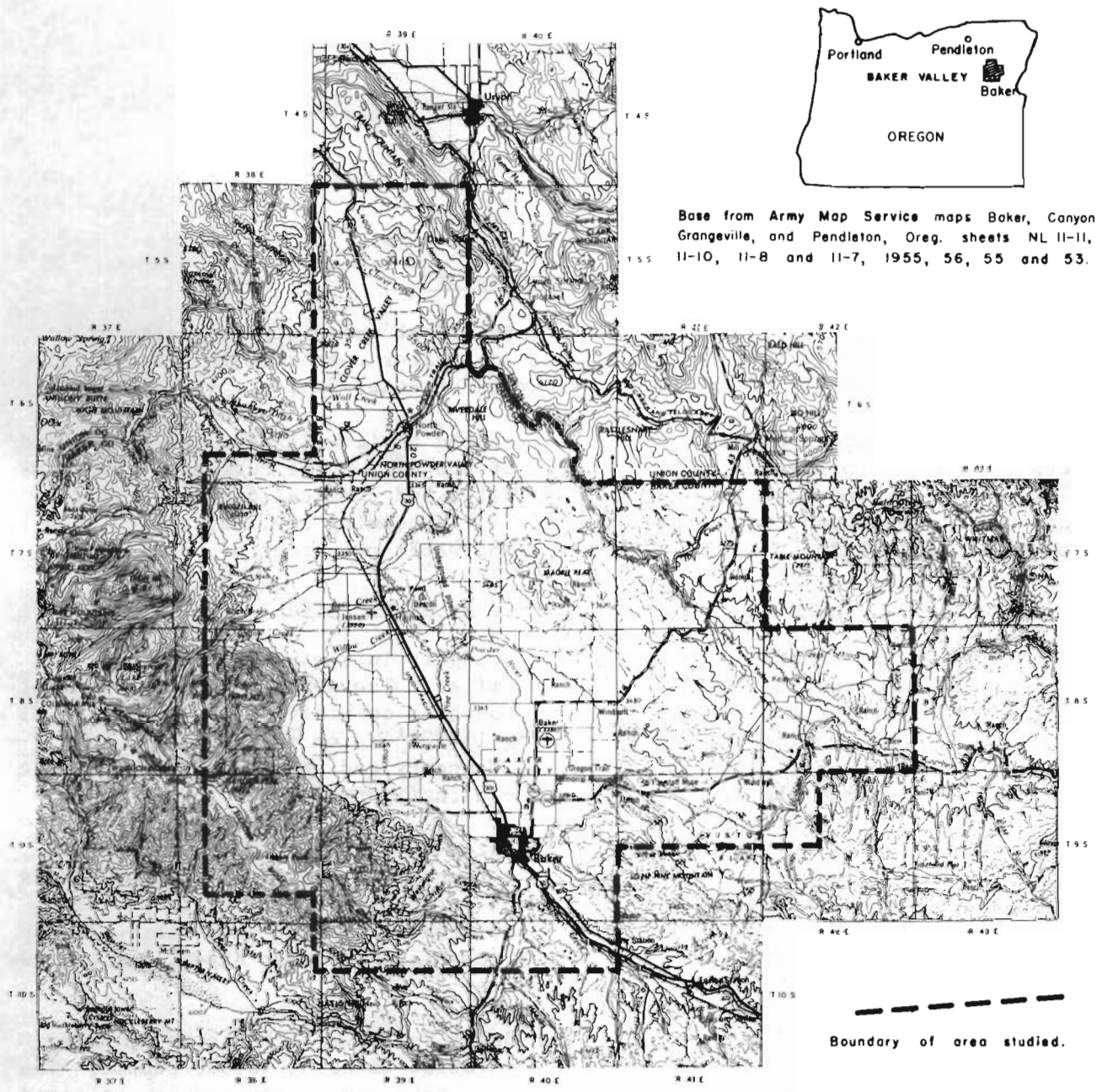

Figure 1.--Map showing project boundaries and general features of Baker Valley.

EXPLANATION OF DATA

Well-Numbering System

In this report, wells are designated by symbols that indicate their location according to the official rectangular subdivision of public lands. For example, in the symbol for well 8/39-25Q1, the numerals that precede the hyphen indicate respectively the township and range (T. 8 S., R. 39 E.) south and east of the Willamette base line and meridian. The number after the hyphen indicates the section (sec. 25), and the letter indicates the 40-acre subdivision of that section (fig. 2). The final digit is the serial number of that particular well. Thus, well 8/39-25Q1 is in the SW¼SE¼ sec. 25, T. 8 S., R. 39 E., and was the first well in that tract to be listed. It is identified on the map (fig. 3) by the letter and serial number that follow the section number--that is, Q1. A spring is denoted by an "s" following the location symbols, as in 7/39-28G1s.

Records of Wells

Table 1 contains records of 66 irrigation wells, 37 domestic wells, 3 public-supply wells, 14 stock wells, 5 observation wells, and 10 unused wells. The locations of these wells are shown on figure 3, map of the Baker Valley study area. Many of the records in the table were selected as representative for areas from which many other well records are available; the additional records are on file at the offices of the Oregon State Engineer, Salem, and of the U.S. Geological Survey, Portland, Oreg.

The figures in the depth-of-well column indicate the most recent measurements and may not in every case be the same as the depths recorded by the driller. This apparent discrepancy is probably caused by loose aquifer material sloughing into the well.

In the use column of the table, only the major uses of the well water are shown. Some irrigation wells are used also for domestic and stock supplies, and some of the wells classified as domestic also furnish stock supplies. Public-supply wells include those supplying nonirrigation water for parks and schools, municipal-supply wells, and private wells supplying group housing.

Most of the temperatures recorded in the remarks column were reported by the well drillers and presumably were measured when the wells were completed or tested. Additional temperature measurements were made at some wells when water samples were collected, and these are listed in table 3 (chemical analyses).

The records of nearly all the wells listed in this report were obtained from well drillers' or owners' reports that were submitted to the Oregon State Engineer.

Drillers' Logs of Wells

Table 2 contains logs of 69 wells in the Baker Valley study area. Descriptions of materials penetrated during construction of the wells may vary somewhat, depending on the terminology of the person compiling the log. For example, compacted clay might be called "clay," "shale," or "hardpan." Similarly, compacted gravel and clay may be called "dirty gravel," "conglomerate," "cemented gravel," "rock and clay," or (rarely) "rock." These logs have been edited for consistency of presentation, but were not otherwise changed;

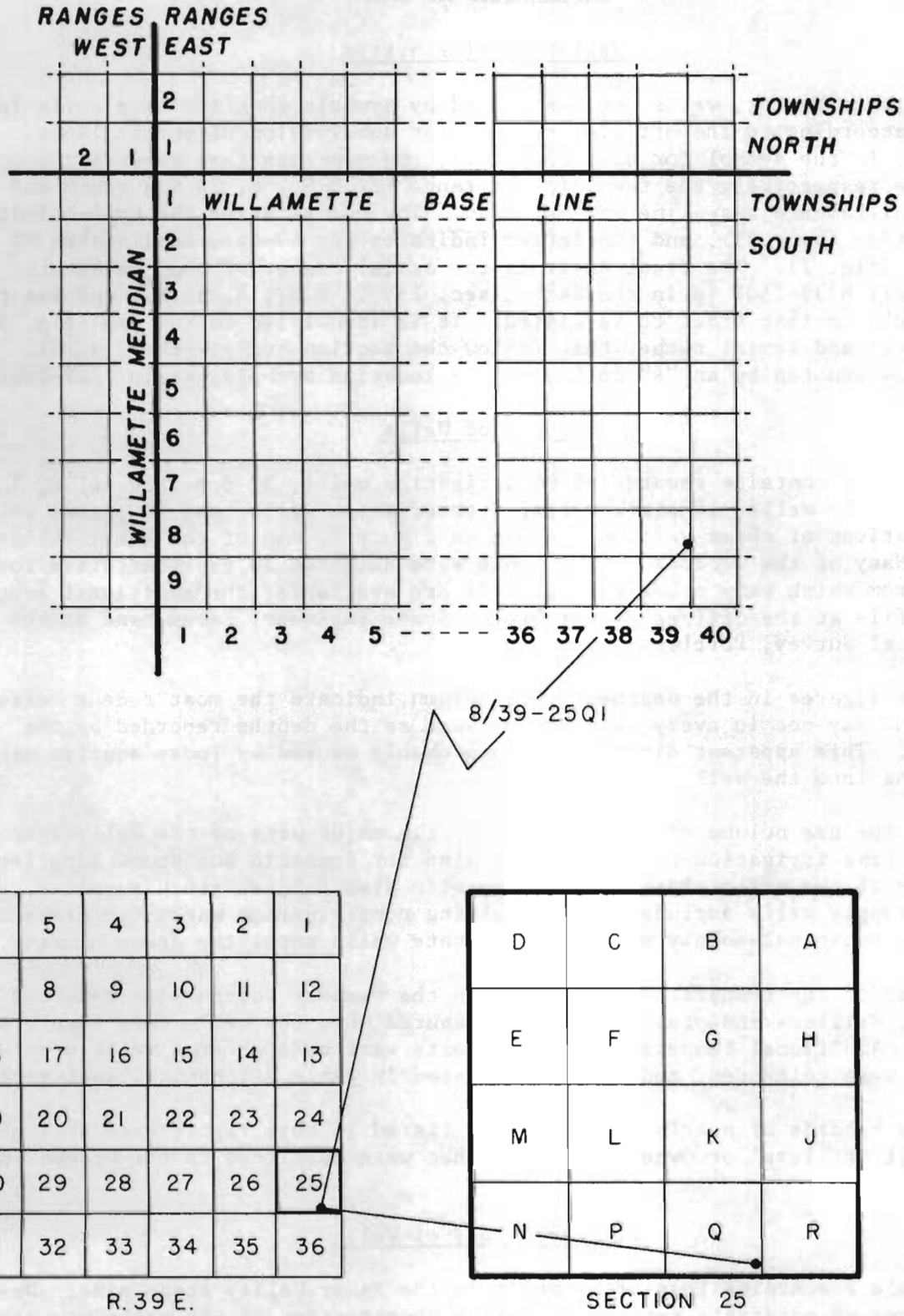

Figure 2. — Diagram showing well-numbering system.

however, for the purpose of clarity, the writer's interpretations have been added in parentheses after some of the driller's designations.

Chemical Analyses of Ground Water

Forty-nine analyses of water from wells, and two analyses of water from springs are included in table 3. Forty-seven of the water samples were analyzed for most constituents usually reported in water analyses; two were analyzed for only a few major constituents. Three of the analyses were by the U.S. Geological Survey, and the remaining 46 by the U.S. Bureau of Reclamation Laboratory, Boise, Idaho.

Water-Level Fluctuations

Hydrographs of wells 8/39-22F1 and 8/40-19D1 for the period 1936-64 are shown in figure 4. A maximum yearly fluctuation of about 7 feet is defined for well 8/39-22F1 for the 26-year period (1938-64), when the water levels were observed one to five times annually; the average yearly fluctuation was about 3 feet. Well 8/40-19D1 had a maximum fluctuation of about 6 feet for the same 26-year period, with an average yearly fluctuation of about 2 feet. Both hydrographs indicate the highest water levels occurred in winter and spring and the lowest from late summer to early fall.

REFERENCE

Trauger, F. D., 1950, Ground-water resources of Baker Valley, Baker County, Oregon: U.S. Geol. Survey open-file report.

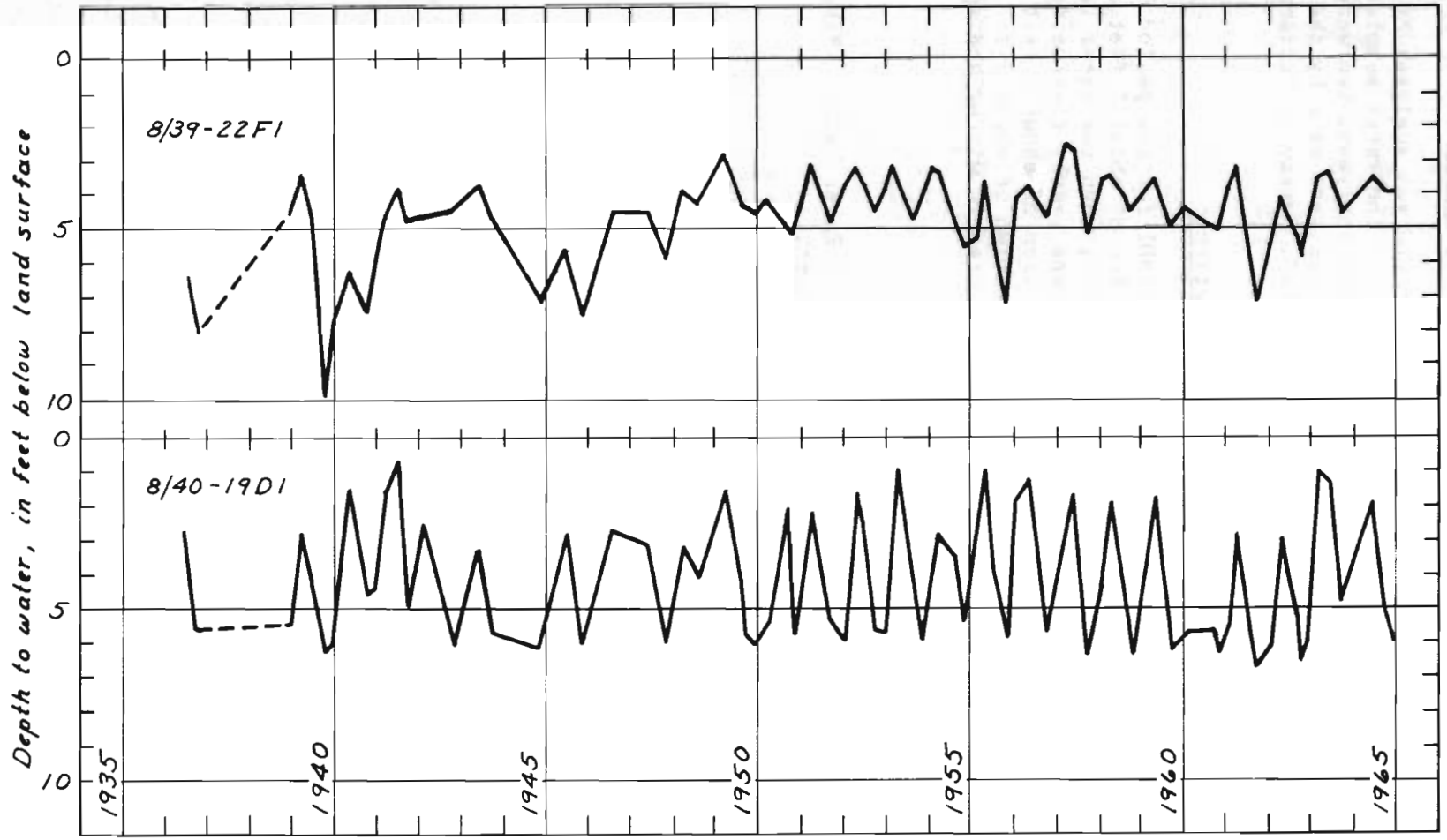

Figure 4.--Hydrographs of two wells in Baker Valley for the period 1936-64.

Table 1.--Records of representative wells in Baker Valley

Well number: See p. for description of well-numbering system.

Type of well: Dg, dug; Dr, drilled; Dn, driven; Bd, bored; J, jetted.

Finish: B, open bottom (no perforations); G, gravel packed; P, casing perforated. Depth interval of gravel pack and perforations given in feet below land surface at well.

Altitude: Altitude of land surface at well, in feet above mean sea level, interpolated from topographic maps.

Water level: Depths to water given in feet and decimal fractions are measured; those given in whole feet are reported by well owner or driller. F, flowing well whose static water level is not known.

Type of pump: C, centrifugal; Cy, cylinder, J, jet; N, none; S, submersible turbine; T, turbine.

Well performance: Yield, in gallons per minute (gpm), and drawdown, in feet below nondischarging water level, reported by owner, operator, driller, or pump company. Bailed yields are indicated by "b"; flowing yields are indicated by "f."

Use: D, domestic; Irr, irrigation; N, none; O, observation; PS, public supply; S, stock.

Acres irrigated: Approximate number of acres irrigated or planned for irrigation reported by owner; may vary from year to year.

Remarks: Ca, chemical analysis in table 3; L, driller's log of well in table 2; Temp, temperature of water in degrees Fahrenheit. Remarks on adequacy, dependability, general quality, and materials penetrated are reported by owners, tenants, drillers, or others.

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 5 S., R. 39 E.																			
17D1	H. P. Glenn	Dr	1963	500	16-10-8	500	B	500	--	Basalt	3,410	15	8-14-64	--	50	200	Irr	--	L.
T. 6 S., R. 39 E.																			
18N1	Gordon Gorham	Dr	1959	144	4	123	P, 113-123	116	6	Sand, granitic	3,475	F	6-27-59	--	f, 3½ b, 20	16	D	--	L.
T. 7 S., R. 38 E.																			
23M1	Muddy Creek School	Dr	1936	416	--	--	--	--	--	--	3,685	--	--	--	--	--	PS	--	L.
24E1	Roy Vanderwall	Dr	1957	75	6	47	P, 15-47	13	71	Sand	3,460	7.6	8-12-64	C, 3/4	40	15	D	--	L, temp 50.
26E1	William Stewart	Dr	1964	30.5	10-6	33	B	29	4	Sand and gravel	3,725	5.3	do	J, 1/2	b, 5	5	D	--	L.
27G1	O. L. Jacobson	Dr	1962	57.5	8	60	P, 28-32, 56-60	28	--	Sand	3,795	12.4	do	T, 1/2	4	28	D	--	L.
34H1	Mr. Strong	Dr	1961	27	6	27	B	27	--	Sand, granitic	3,795	10	9-15-61	J, 3/4	14	18	D	--	L.
34L1	R. D. Eccles	Dr	1957	22	6	21	B	20	3	Sand	3,885	2.8	8-12-64	Cy	b, 5	11	D	--	L, temp 52.

Table 1.--Records of representative wells in Baker Valley--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 7 S., R. 39 E.																			
7J1	Carl Wendt	Dr	1956	150	12	147½	P, 0-147½	30	--	Sand and gravel	3,360	15	--	T, 50	1,000	80	Irr	--	L, temp 56.
21M1	Haines Cemetery Maintenance Dist.	Dr	1961	260	8-6	223	P, 40-223	40	220	Granite	3,315	--	--	S	25	146	Irr	--	L, temp 52.
21M2	do	Dr	1963	138.5	6	--	--	35	--	do	3,315	5.9	do	N	10	--	N	--	L.
28L1	J. A. Cantrell and Martha Traverso	Dr	1954	316	10	316	--	--	--	--	3,325	--	--	T, 40	1,000	--	Irr	200	Temp 55.
33F1	Town of Haines	Dr	1962	162	12-8	162	P, 45-53, 91-101, 146-150, 153-160	91	10	Sand and gravel	3,325	8.0	8-12-64	S, 10	150	30	PS	--	L.
T. 7 S., R. 40 E.																			
29E1	Vernon Schoulte and William Schaan	Dr	1958	250	24	--	--	--	--	--	3,445	--	--	--	--	--	O	--	"Dry hole."
29E2	do	Dr	--	134.5	4	--	--	--	--	--	3,480	117.5	8- 6-64	J, 1	--	--	S	--	
29K1	Jim Conro	Dr	1953	521	12	521	P, 9-180	--	--	"Sandstone"	3,475	117.4	8-11-64	T, 60	600	--	Irr	140	L.
30F1	Lee Savely	Dg	--	6	144x72	--	--	--	--	--	3,400	5.7	8- 6-64	T, 75	--	--	Irr	--	
30H1	Vernon Schoulte and William Schaan	Dr	--	472	12	472	P, 80-472	--	--	--	3,455	88.0	do	?, 200	1,200	250	Irr	200	
33K1	Walter Colton	Dr	1954	305	12	305	P, 149-305	140	165	Sand, clay, and gravel	3,455	80	--	T, 75	450	276	Irr	100	L.
33N1	Alvin Culley	Dr	1953	300	10	--	P	--	--	Sand, pea gravel	3,420	54	8- 4-64	T, 75	700	--	D	--	
T. 8 S., R. 38 E.																			
1R2	Frank Evans	Dr	1959	40	6	38	P, 29-38	34	3	Sand, coarse, granitic	3,445	5.5	4- 3-59	--	22	17	D	--	L.
25L1	Cecil Medlin	Dr	1963	29	6	39	B	39	--	Sand, coarse, and gravel	3,935	7.0	8- 7-64	J, 1/3	8	0	D	--	L.
25N1	S. R. Calhoun	Dr	1963	62	6	62	B	--	--	--	3,985	--	--	S	--	--	D	--	
25R1	Daisy Smull	Dr	1959	30	6	34	B	30	4	Gravel	3,810	9.6	8- 7-64	Cy, 1/3	--	--	D	--	L.

Table 1.--Records of representative wells in Baker Valley--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 8 S., R. 39 E.																			
1J1	Farmer Bros. Coffee Co.	Dr	--	24	6	27	P, (?)	22	5	Sand and gravel	3,340	3.0	8-11-64	N	12	0	S	--	L, Ca, temp 52.
8D1	N. E. Dodd	Dg	--	12	48	12	--	--	--	--	3,405	6.7	5-10-49	Cy	--	--	D	--	Ca.
8R1	L. A. Sieg	Dg	1920	40	18	--	--	--	--	Sand, fine	3,415	25	--	Cy	--	--	D	--	Ca.
13Q1	E. L. Kipling	Dn	--	23	1½	--	--	--	--	Gravel, fine	3,340	1.5	--	Cy	--	--	D	--	L, Ca.
22F1	U.S. Geol. Survey	Dg	1936	4.5	18	--	--	8	4	Sand and gravel	3,385	3.8	5- 8-49	N	--	--	O	--	L, Ca, hydrograph.
22L1	Emil Rehner	--	--	--	--	--	--	--	--	--	3,390	--	--	--	--	--	D	--	Ca.
24H1	El Paso Natural Gas Co.	Dr	1956	668	8	507.8	B	648	20	Clay and sparse gravel	3,345	50	--	T, 3	45	--	Irr	--	L.
24K1	Herbert Chandler	Bd	--	7.5	8	--	--	--	--	--	3,345	1.5	3-31-49	Cy	--	--	S	--	Ca.
25E1	Delray Funk	Dg,Dn	--	15	72x144	--	--	--	--	Sand and gravel	3,355	8.2	5- 7-49	C, 5	400	--	Irr	--	Ca, temp 45.
25Q1	S. R. Calhoun	Dr	1956	74	4	74	P, 64-74	70	3	do	3,360	3	9-29-56	--	b, 12	64	D	--	L, temp 52.
27F1	F. B. Clark	Dr	--	35.5	6	--	--	--	--	--	3,400	4.2	8-10-64	N	--	--	O	--	Ca.
30N1	Bill Smull	Dr	1953	39	6	38	P, 18-38	--	--	--	3,750	8.6	8- 7-64	J, 1/3	--	--	D	--	
30Q1	Lester Loftus	Dr	1960	45	6	45	P, 17-45	26	19	Sand and gravel	3,675	10.1	do	J, 1/2	b, 6	7	D	--	Cased with concrete to 19 ft.
32G1	C. D. Simpson	Dr	1962	38	6	39	B	36	3	Gravel	3,600	12	8-10-64	C, 1/2	b, 12	0	S	--	L.
32H1	Bufford Kennison	Dn	--	28	1½	--	--	--	--	--	3,540	7	4-23-49	Cy	--	--	D	--	Ca.
34G1	Roland George	Dr	1964	34.5	4	24	B	20	4	Sand and gravel	3,410	25.1	8-10-64	J, 3/4	9	25	D	--	L.
34K1	do	Dr	1964	27.5	6	17	B	15	2	Clay, sand, and gravel	3,410	5.2	do	C, 1/2	20	6	D	--	L.
34L1	E. P. Hill	Dr	--	86	6	86	--	--	--	--	3,410	3	4- -49	C, 1/2	--	--	D	--	Ca.

Table 1.--Records of representative wells in Baker Valley--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 8 S., R. 40 E.																			
2N1	L. H. Schetky	Dr	1956	210	12	--	P, (?)	--	--	Basalt(?)	3,375	28.3	8- 4-64	T, 75	900	--	Irr	--	
4D1	Charles Colton	Dr	1949	315	12	--	P, (?)	--	--	Sand and gravel	3,360	120	8- 5-64	T, 75	900	--	Irr	--	
4E1	do	Dr	1958	69	6	68	B	25	--	Clay and coarse gravel	3,350	30	9- 9-58	C, 1/3	12	--	D	--	L.
4N1	do	J	--	35	2	--	--	--	--	Sand and gravel	3,340	8	8- 5-64	C, 30	--	--	Irr	--	
9E1	Carl Parker	Dn	1900	22	2	--	--	--	--	--	3,335	--	--	Cy	--	--	D	--	Ca.
9E2	do	Dg	1890	7	--	--	--	--	--	--	3,335	1.2	3-28-49	Cy	--	--	S	--	Ca.
11C1	L. H. Schetky	Dr	--	600	12	--	P, (?)	--	--	Basalt(?)	3,375	27.4	8- 4-64	N	600	--	Irr	--	
12N1	Charles Colton	Dg	--	34	48	--	--	--	--	--	3,365	28.3	do	Cy	--	--	S	--	
13R1	Gertrude Lee	Dr	1957	70	6	70	P, 60-70	70	--	Rock, broken	3,465	45	4- 8-57	Cy	b, 18	25	S	--	L.
14P1	Joe Geddes	Dg,Dr	--	60	--	--	--	--	--	--	3,350	3.2	3-26-49	Cy	--	--	N	--	Well dug to 5.5 ft; Ca.
15N2	F. S. Mack	Dr	1962	27.5	12	40	P, 10-40	10	30	Sand and gravel with clay streaks	3,350	4.3	8- 5-64	C, 30	320	--	Irr	--	L.
16J1	Lee Savely	Dg	--	9	36	--	--	--	--	--	3,345	4.1	3-30-49	Cy	--	--	S	--	Ca.
18R2	W. R. Truscott	Dn	--	--	1½	--	--	--	--	--	3,340	--	--	Cy	--	--	N	--	Ca.
19D1	U.S. Geol. Survey	Dg,Bd	1936	8	18	13	P, (?)	2	6	Sand, coarse, and fine gravel	3,340	2.2	3-31-49	N	--	--	O	--	L, Ca, hydrograph.
19D2	Baker County	Bd	--	--	--	--	--	--	--	--	3,340	--	--	--	--	--	O	--	Bored by Bur. Reclamation for water sample. Never cased. Ca.
21P2	Fred Prochnow	Dn	--	20.5	1½	--	--	--	--	--	3,355	+1.5	3-28-49	N	--	--	N	--	Ca.
22H1	William Schaan	Dr	1962	36	16	40	P, 0-40	4	32	Sand and gravel	3,355	4.6	8- 4-64	N	477	--	Irr	--	L.
26J1	Gertrude Lee	Dg	--	7.5	--	--	--	--	--	--	3,360	3.2	do	Cy	--	--	S	--	

Table 1.--Records of representative wells in Baker Valley--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 8 S., R. 40 E.--Continued																			
27G1	Vernon Schoulte and William Schaan	Dr	1961	38	16	40	P, 0-40	25	15	Sand, coarse, and fine gravel	3,360	4.4	8- 4-64	T, 25	465	28	Irr	--	L.
28G1	Missouri Flat School	Dr	--	77.5	6	--	--	--	--	--	3,360	6.4	3-27-49	Cy	--	--	N	--	Ca.
29E1	Otha Perkins	Dn	--	21	1½	--	--	--	--	--	3,360	2.7	4-15-49	Cy	--	--	D	--	Ca.
29E3	Francis & Powers	Dr	1960	85	8	92	P, 9-92	63	31	Sand	3,360	3.8	8- 4-64	N	b, 60	3	Irr	--	L.
30Q1	John Osborne	Dg	--	21	1½	--	--	--	--	Gravel	3,360	--	--	C, 1/4	--	--	D	--	Ca.
31G1	Oregon Trail Dairy	Dg	--	8	72	--	--	--	--	--	3,370	3.0	4-15-49	Cy, 1/4 Cy, 2	--	--	S	--	Ca.
32G1	Francis & Powers	Dr	1960	43.5	12	38	P, 7-38	11	30	Gravel	3,375	4.2	8- 2-64	--	400	10	Irr	--	L.
33B2	W. M. Widman	Dr	1960	40	6	42	P, 6-42	14	29	Sand and gravel	3,370	8.7	8- 3-64	C, 7½	275	8	Irr	--	L.
33G2	Francis & Powers	Dr	1960	50	6	49	P, 19-49	15	26	Sand and some gravel	3,370	--	--	C, 3	b, 60	4	Irr	--	L, temp 52.
33P1	Fred Widman	Dr	1964	35	16-12	40	P, 19-40	26	14	Sand and gravel	3,380	2.5	8- 2-64	C, 7	300	0	Irr	--	L.
33Q1	Wendt Bros.	Dg	--	19.5	72	--	--	--	--	--	3,385	4.3	3-29-49	C, 7½	600	--	Irr	--	Ca.
34L1	C. W. Linscott	Dr	1961	17	6	23½	B	22	--	Sand	3,375	3.4	8- 3-64	--	--	--	Irr	--	L.
34R2	Everett Zimmerman	Dr	1956	67.5	6	70	P, 61-70	61	9	Clay, sand, and gravel	3,380	--	--	J, 1/2	10	58	Irr	--	L, temp 52.
T. 8 S., R. 41 E.																			
7D1	Charles Colton	Bd	1954	300	8	--	--	285	5	Rock, loose	3,550	168	8-17-64	Cy	--	--	S	--	L.
14B1	Stewart Morrissey, Inc.	Dr	1963	685	14-6	685	G, 0-80 P, 0-685	--	--	Lava rock and cinders	2,795	18	8-13-64	T, 100	1,560	50	Irr	240	L, temp 58.
T. 8 S., R. 42 E.																			
7A1	H. K. Hoarn	Dr	1963	61.5	6	50	B	34	26	Sandstone	2,810	3.0	do	J, 1/2	b, 12	7	Irr	--	L.
18N1	Warren Spencer	Dr	1952	375	16	--	--	--	--	--	2,795	28.1	do	N	400	--	N	--	Log similar to that of 8/42-29B1.

Table 1.--Records of representative wells in Baker Valley--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 8 S., R. 42 E.--Continued																			
25B1	Phillips Ranch	Dr	1953	370	14-10	140	B	360	10	Basalt	2,770	F	--	N	f, 400 1,500	105+	Irr	--	Pumicelike rock 0-360 ft.
29B1	Marion Hewlett	--	1952	368	16	--	--	357	11	Gravel	2,775	33.0	8-13-64	N	200-300	28	N	--	L.
T. 9 S., R. 39 E.																			
2D1	Chris Lee	Dr	--	77.5	6	--	--	--	--	--	3,385	1.5	4-20-49	Cy, 3/4	--	--	D	--	Ca.
2M1	do	Dr	--	477	4	--	--	--	--	--	3,395	F	do	T, 1½	1/2	--	S	--	Ca, temp 58.
2N1	do	Dr	--	321	12	--	P, 0-(?)	--	--	--	3,420	6.5	4-20-49	N	--	--	N	--	Ca.
4E1	Bert Brink	Dr	1959	103	6	--	P, 19-49, 85-93	28	30	Sand and gravel	3,545	19.3	8- 1-64	S, 1	b, 19	20	Irr	--	L, temp 48. Well deepened in 1964.
4E2	M. H. Spreet	Dg	1964	18	6	--	--	12	6	Gravel, coarse	3,560	2	do	Cy, 3/4	130	--	Irr	--	L.
4K1	Joe Goff	Dr	1955	48	6	36	P, 24-36	30	30	Gravel and clay	3,500	8.2	do	J, 1/3	b, 6	20	D	--	L, temp 48.
4L3	John McEnroe	Dr	1964	80.5	8	--	P, (?)	--	--	Sand and gravel	3,515	7.2	do	N	--	--	D	--	
4Q1	Glenn Wolfe	Dg	1942	23	--	--	--	17	6	Gravel	3,520	3.2	4-20-49	N	--	--	N	--	Ca.
5A1	Charles Simpson	Dg	--	14	--	--	--	--	--	--	3,560	5.0	4-23-49	C, 1/3	--	--	D	--	Ca.
9G1	C. F. Rohner	Dr	1955	100	6	98	P, 78-98	83	15	Rock, broken, and sand	3,660	F	8- 1-64	N	f, 3 b, 9	--	D	--	L, temp 48.
10C1	Hugh Doherty	Dr	--	80	--	--	--	--	--	--	3,445	--	--	Cy	--	--	PS	--	Ca.
T. 9 S., R. 40 E.																			
1N2	Arlie Patton	Dr	1956	123.5	10	131	P, 1-131	120	11	Clay with sand and gravel streaks	3,460	32.6	7-14-64	T, 3	100	0	Irr	--	L.
2B1	G. E. Spencer	Dg	--	42.5	30-10	50	--	35	15	Sand, coarse	3,385	6.9	do	T	800	--	Irr	--	L.
2G2	Jack Stillman	Dr	1946	148	6	60	--	133	15	Sand, fine	3,400	28.3	3-24-49	T, 5	120	17	Irr	--	Ca, temp 52.
3B2	G. E. Spencer	Dn	1910	11	2	--	--	--	--	--	3,380	6	--	Cy, 1	--	--	D	--	Ca.

Table 1.--Records of representative wells in Baker Valley--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 9 S., R. 40 E.--Continued																			
3Q1	W. R. Wellman	Dn	--	21	2	--	--	--	--	--	3,385	19	--	C	--	--	D	--	Ca.
4K3	Jack Rouse	Dn	--	22	1½	--	--	--	--	--	3,395	10	--	C, 1/4	--	--	D	--	Ca.
6B2	J. Williams	Dr	1959	27.5	6	--	--	28	2	Gravel, loose	3,385	5.7	7-16-64	J, 3/4	b, 40	3	Irr	--	L, Ca, temp 52.
7A1	Clyde Ward & Sons	Dr	1945	37	14	53	--	9	33	Gravel	3,400	17.5	7-15-64	T, 15	1,000	--	Irr	--	Ca, temp 52.
7A2	do	Dg	--	36	24	--	--	--	--	--	3,400	9.6	7-16-64	T, 15	1,200	--	Irr	--	
7G1	do	Dr	--	67	12	67½	--	10	65	Gravel	3,400	15	3-10-49	T, 25	700	40	Irr	--	Ca, temp 49.
7G2	do	Dr	--	46	14	46	--	7	39	do	3,400	14.1	7-16-64	T, 20	880	18	Irr	--	Ca, temp 54.
7H2	do	Dr	1948	82.5	18	--	--	20	20	Gravel and cobbles	3,405	19.7	3-10-49	T, 30	900	40	Irr	--	
7H4	do	Dr	--	28.5	16	--	--	--	--	--	3,405	8.9	7-16-64	N	--	--	Irr	--	Ca.
8D1	John Kirkland	Dg	--	22	48	--	--	10	12	Gravel	3,400	--	--	C, 1/4	--	--	D	--	Ca.
8D2	Sam Emerich	Dr	1961	19.5	6	39	B	33	6	Sand, coarse, and fine gravel	3,400	8.7	7-17-64	J, 1	--	--	Irr	--	L.
8D3	Roy Weisenberger	Dr	1957	31.5	6	32	P, 22-32	30	2	Sand and gravel	3,405	8.6	7-20-64	J, 3/4	b, 30	2	D	--	L.
8G1	Elmer Satterberg	Dg	1943	25	96-72	--	--	12	13	Gravel	3,410	17.1	3-10-49	C, 5	300	--	Irr	--	Ca.
8K1	Church of Latter Day Saints	Dg	--	26	30	--	--	--	--	--	3,410	--	--	C, 7½	300	--	Irr	--	Temp 51.
8P1	Omar Bowers	Dg	1927	23.5	48	--	--	4	22	Sand and gravel	3,415	21.9	4-18-49	C, 1/2	--	--	Irr	--	Ca.
8P4	Vernon Manary	Dr	1960	32	6	31½	P, 0-31½	11	20	do	3,415	12.0	7-21-64	C, 1	10	0	Irr	--	L.
8R1	Clyde Ward & Sons	Dg	1956	33	24	40	P, 14-40	8	32	Gravel	3,415	8.2	7-17-64	N	200-500	--	Irr	--	L.
9B4	Harry Crawford	Dr	1957	21	6	27	B	25	2	do	3,400	6.7	do	C, 1/2	6	0	D	--	L.
9H2	Roy Scarbrough	Dg	--	--	--	--	--	--	--	Gravel, coarse	3,405	12.6	7-23-64	T, 3	--	--	Irr	14	Well caved in at present.
9L2	Mrs. F. D. Baird	Dg	--	21.5	60	--	--	--	--	--	3,410	11.2	7-17-64	C, 20	400	--	Irr	--	L, temp 51.

Table 1.--Records of representative wells in Baker Valley--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 9 S. R. 40 E.--Continued																			
9L4	R. E. McNeil	Dr	1960	29	8	31	P, 0-31	31	--	Sand and gravel	3,415	9.4	7-20-64	C, 1	b, 20	--	Irr	--	L.
10M1	Roy Wright	Dr	--	40.5	10	40	P, 20-40	--	--	do	3,410	10.2	7-23-64	T, 10	200	4	Irr	--	Gravel and clay alternating to 30 ft.
15G1	Sunny Slope Ranch	Dr	1948	740	14	--	--	700	40	Basalt	3,475	18	3-24-49	T, 35	2,200	16	Irr	--	Ca.
16A3	Willard Bunch	Dg,Dr	1962	149	8	--	--	--	--	Sand	3,420	15	1964	S, 7½	100	65	Irr	--	
16G3	Trasey Edison	Dr	1963	26	6	26	B	24	2	Sand and gravel	3,425	13.6	7-20-64	C, 3/4	--	--	Irr	--	L.
16H1	Baker Packing Co.	Dr	--	600	8	--	--	--	--	--	3,420	F	4-13-49	N	f, 2	--	S	--	Ca, temp 79.
16K1	Victor Neiger	Dr	1960	30.5	--	31	B	24	6½	Sand, gravel, and clay	3,430	12	3-26-60	--	--	--	Irr	--	L.
16L3	Paul Edwards	Dr	1961	18	4	19	P, 0-19	8½	10½	Gravel	3,435	11.6	7-20-64	C, 1/2	--	--	Irr	--	L.
17A1	W. P. Riordan	Dr	1961	22.5	6	31	B	26	5	Sand, coarse	3,420	11.0	7-22-64	J, 3/4	--	--	Irr	--	L.
17G1	J. F. Carpenter	Dr	1961	26	6	29	B	25	4	Gravel, coarse	3,425	14.4	7-21-64	J, 1/2	b, 12	0	Irr	--	L.
17M1	J. A. McLeish	Dr	1961	38.5	6	38	B	20	18	Sand and fine gravel	3,425	9.9	do	J, 1/2	16	0	Irr	--	L.
18J2	H. C. Schlingman	Dg	1964	19	48	19	P, (?)	15	4	Gravel	3,420	9.2	do	N	800	2	Irr	--	L.
18Q1	P. V. Hill	Dr	1955	575	12	575	P, 165-575	180	358	Gravel and clay	3,475	46.4	7-23-64	T, 50	850	--	Irr	--	L, Ca, temp 60.
18R3	John Himmelberger	Dg	1957	24.5	66x72	22	B	5	17	Gravel	3,440	11.9	do	C, 5	160	20	Irr	--	Soil to 5 ft and gravel 5-22 ft.
19Q1	Tony Brandenthaler	Dr	1954	230	4	--	--	--	--	Basalt	3,760	--	--	T	11	--	S	--	
21D1	Oliver Hardman	Bd	--	14	12	15	G, (?); B	8	9	Gravel	3,455	8.7	7-21-64	C, 1/2	--	--	Irr	--	L.
21D2	William Pedracine	Bd	1961	16.5	16	--	G, (?); P, 4-18	9	7	Gravel, medium	3,485	10.2	7-22-64	(?),1/2	--	--	Irr	--	L.
28D1	Baker Industries & Resources Corp.	Dr	1936	578	15	100	--	--	--	Basalt	3,480	35.4	7-21-64	T, 60	1,000	107	N	--	L, temp 58.
29A3	H. D. French	Dg	1954	13.5	36	12	--	--	--	--	3,485	11.2	7-23-64	C, 1	--	--	Irr	--	
34Q1	Horace Logan	Dr	1964	60	24-12	55	G,20-55;P,20-55	37	18	Pea gravel	3,570	10.2	8- 3-64	T	300	40	Irr	30	L, temp 60.
T. 9 S., R. 41 E.																			
9R1	B. M. H. Preston	Dr	1963	165	6	20	B	155	1	Gravel	3,415	139.5	7-14-64	Cy	b, 5	0	Irr	--	L, temp 50.

Table 2.--Drillers' logs of representative wells

5/39-17D1. H. P. Glenn. Altitude 3,410 ft. Drilled by Charles Jungmann Drilling Co., 1963

Materials	Thickness (feet)	Depth (feet)
Clay, brown	40	40
Clay, sandy, brown	30	70
Clay, gravel, gray	20	90
Clay, gravel, brown	34	124
Basalt, hard, gray	9	133
Basalt, broken, gray	32	165
Basalt, hard, black	45	210
Basalt, medium-hard, red	10	220
Basalt, black	45	265
Basalt, hard, gray	27	292
Basalt, black	49	341
Clay and broken basalt	26	367
Basalt, black	44	411
Basalt, brown	30	441
Basalt, black	3	444
Clay and broken red basalt	56	500

Casing: 16-in. 0-20 ft, 10-in. 0-250 ft, 8-in. 250-500 ft.

6/39-18N1. Gordon Gorham. Altitude 3,475 ft. Drilled by O. C. Tandy, 1959

Soil	3	3
Gravel	8	11
Clay, sandy	33	44
Clay	11	55
Sand, some clay	5	60
Sand	8	68
Sand, granitic	6	74
Clay	6	80
Sand mixed with clay	5	85
Clay	3	88
Sand	4	92
Clay	8	100
Sand, granitic	10	110
Clay, some sand	6	116
Sand, granitic	6	122
Sand mixed with clay	14	136
Sand	8	144

Casing: 4-in. to 123 ft; perforated 113-123 ft.

7/38-23M1. Muddy Creek School. Altitude 3,685 ft. Drilled by A. A. Durand, 1936

Soil	10	10
"Hardpan"	20	30
"Granite" (boulder gravel cemented?)	12	42
Gravel, cemented	2	44

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
"Granite, decomposed" (granitic gravel?)	44	88
"Hardpan" and clay	293	381
Quartz rock	35	416
Casing: No data.		

7/38-24E1. Roy Vanderwall. Altitude 3,460 ft. Drilled by O. C. Tandy, 1957

Soil	3½	3½
Clay, hardpan	9½	13
Sand, granitic	1	14
Clay, some sand	16	30
Sand, granitic	1	31
Gravel and coarse sand, some clay	14	45
Clay, some sand	39	84
Casing: 6-in. 0-47 ft; perforated 15-47 ft.		

7/38-26E1. William Stewart. Altitude 3,725 ft. Drilled by A. W. Robinson Water Well Drilling, 1964

Soil	5	5
Clay, yellow	4	9
Sand, granitic, with yellow clay streaks and black serpentine(?) rock	24	33
Casing: 10-in. 0-18 ft, 6-in. 18-33 ft.		

7/38-27G1. O. L. Jacobson. Altitude 3,795 ft. Drilled by Charles Jungmann Drilling Co., 1962

Clay, brown	12	12
Clay, sandy, brown	8	20
Sand, brown	8	28
Sand and brown boulders	14	42
Sand and brown clay	12	54
Sand, gray	6	60
Casing: 8-in. +2-60 ft; perforated 28-32 and 56-61 ft.		

7/38-34H1. Mr. Strong. Altitude 3,795 ft. Drilled by A. W. Robinson Water Well Drilling, 1961

Boulders in very hard green clay	26	26
Sand, granitic, gray	1	27
Casing: 6-in. to 27 ft.		

Table 2.--Drillers' logs of representative wells--Continued

7/38-34L1. R. D. Eccles. Altitude 3,885 ft. Drilled by O. C. Tandy, 1957

Materials	Thickness (feet)	Depth (feet)
Soil	4	4
Boulders	16	20
Sand, fine	3	23

Casing: 6-in. to 21 ft.

7/39-7J1. Carl Wendt. Altitude 3,360 ft. Drilled by A. W. Robinson Water Well Drilling, 1956

Soil	5	5
Clay, light-colored	20	25
Sand	35	60
Gravel, fine	15	75
Sand, coarse	25	100
Sand, fine	50	150
Gravel, water-bearing	--	--

Casing: 12-in. 0-147½ ft; perforated 0-147½ ft.

7/39-21M1. Haines Cemetery Maintenance Dist. Altitude 3,315 ft. Drilled by O. C. Tandy, 1961

Soil	4	4
Clay, sandy	24	28
Granite, partially decomposed	14	42
Granite, solid	143	185
Granite, partially decomposed	45	230
Granite, solid	30	260

Casing: 8-in. 0-30 ft, 6-in. 0-223 ft; perforated 40-223 ft.

7/39-21M2. Haines Cemetery Maintenance Dist. Altitude 3,315 ft. Drilled by O. C. Tandy, 1962

Soil, sandy	3	3
Silt, black	5	8
Gravel, coarse, and sand	2	10
Sand and black silt	6	16
Granite, sand, and yellow clay	14	30
Granite, decomposed, and some small gravel (water from about 35 ft)	12	42
Granite, partially decomposed	18	60
Granite, solid	66	126
Granite, partially decomposed	11	137
Granite	25	162

Casing: 6-in. to 50 ft; perforated 26-38 ft.

Table 2.--Drillers' logs of representative wells--Continued

7/39-33F1. Town of Haines. Altitude 3,325 ft. Drilled by Charles Jungmann Drilling Co., 1962

Materials	Thickness (feet)	Depth (feet)
Soil	4	4
Sand	5	9
Clay and sand	5	14
Sand, cemented	2	16
Sand and clay	12	28
Sand, cemented	5	33
Sand and clay	12	45
Sand and gravel	8	53
Sand	21½	74½
Gravel, cemented	17	91½
Sand and gravel	6	97½
Gravel	3½	101
Clay and gravel	5	106
Sand and gravel	4	110
Gravel, cemented	6	116
Clay, sand, and mud	9	125
Sand and clay	21	146
Sand, granitic	4	150
Sand, cemented	3	153
Gravel and rocks	3	156
Rocks, large	7	163

Casing: 12-in. 0-81 ft, 8-in. +1-162 ft; perforated 45-53, 91-101, 146-150, and 153-160 ft.

7/40-29K1. Jim Conro. Altitude 3,475 ft. Drilled by L. H. Williams, 1953

Soil, lava ash	3	3
Hardpan	5	8
Sandstone	513	521

Casing: 12-in. to 521 ft; perforated 0-180 ft.

7/40-33K1. Walter Colton. Altitude 3,455 ft. Drilled by Baker Drilling Co., 1954

Soil	3	3
Sand and gravel	17	20
Clay with gravel	5	25
Sand and gravel	25	50
Clay, sandy	8	58
Clay, sandy, and gravel	17	75
Gravel	13	88
Rock	1	89
Clay	2	91
Boulders	2	93
Sand	24	117
Clay	2	119
Sand and gravel	21	140
Clay, sandy	20	160

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Clay, sandy, and gravel	35	195
Clay	10	205
Clay, sandy	15	220
Clay	2	222
Sand	48	270
Clay and sand	10	280
Sand	20	300
Clay	5	305

Casing: 12-in. to 305 ft; perforated 149-305 ft.

8/38-1R2. Frank Evans. Altitude 3,445 ft. Drilled by O. C. Tandy, 1959

Soil	2	2
Gravel, coarse	7	9
Gravel, loose, and sand	3	12
Clay	4	16
Gravel and clay, packed	18	34
Sand, granitic	3	37
Gravel and clay, packed	3	40

Casing: 6-in. to 38 ft; perforated 29-38 ft.

8/38-25L1. Cecil Medlin. Altitude 3,935 ft. Drilled by A. W. Robinson Water Well Drilling, 1963

Rocks and clay	20	20
Boulders and big rocks	4	24
Clay, yellow	--	--
Sand, coarse, and gravel	--	39

Casing: 6-in. to 39 ft.

8/38-25R1. Daisy Smull. Altitude 3,810 ft. Drilled by A. W. Robinson Water Well Drilling, 1959

Soil	3	3
Gravel, dry	5	8
Clay	22	30
Gravel, water-bearing	4	34

Casing: 6-in. to 34 ft.

8/39-1J1. Farmer Bros. Coffee Co. Altitude 3,340 ft. Drilled by A. W. Robinson Water Well Drilling; date drilled unknown

Soil	5	5
Sand and gravel	22	27

Casing: 6-in. to 27 ft; perforated.

Table 2.--Drillers' logs of representative wells--Continued

8/39-13Q1. E. L. Kipling. Altitude 3,340 ft. Driven by owner; date driven unknown

Materials	Thickness (feet)	Depth (feet)
Alkali soil and clay	4½	4½
Gravel, medium	4	8½
Clay, yellow	2	10½
Gravel, medium	3½	14
Clay with sand stringers	3	17
Gravel, medium	3	20
Clay	1	21
Gravel, medium	2	23

Casing: 1¼ in. to unknown depth.

8/39-22F1. U.S. Geol. Survey. Altitude 3,385 ft. Dug by U.S. Geol. Survey, 1936

Soil, sandy silt, loam	3	3
Sand and gravel	1	4
Sand, coarse, and gravel	5	9
Sand and coarse gravel	3	12

Casing: 18-in. to unknown depth.

8/39-24H1. El Paso Natural Gas Co. Altitude 3,345 ft. Drilled by W. R. Ille & Co., 1956

Soil	4	4
Sand and gravel, cemented	10	14
Sand and gravel, cemented; imbedded in hard clay	46	60
Sand and gravel	136	196
Sand (lower 30 ft contains silt)	51	247
Sand, black	75	322
Sand and silt	11	333
Sand, gravel, and silt	25	358
Sand and clay	9	367
Sand, gravel, and silt	18	385
Clay, hard	8	393
Sand and gravel	17	410
Clay	6	416
Silt, sand, and gravel	38	454
Silt and sand	42	496
Clay, sand, and gravel	9	505
Clay and shale	99	604
Clay and sparse gravel	64	668

Casing: 8-in. to 507.8 ft.

8/39-25Q1. S. R. Calhoun. Altitude 3,360 ft. Drilled by O. C. Tandy, 1956

Soil	6	6
Gravel with clay	3	9

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Gravel, small, and sand	19	28
Gravel, small, and sand; some clay	32	60
Gravel with clay	5	65
Gravel and sand	8	73
Gravel and clay	3	76
Casing: 4-in. to 74 ft; perforated 64-70 ft.		

8/39-32G1. C. D. Simpson. Altitude 3,600 ft. Drilled by A. W. Robinson Water Well Drilling, 1962

Soil, black	5	5
Conglomerate	16	21
Clay, yellow	15	36
Rock, soft; bottom coarse gravel, water-bearing	3	39
Casing: 6-in. to 39 ft.		

8/39-34G1. Roland George. Altitude 3,410 ft. Drilled by A. W. Robinson Water Well Drilling, 1964

Soil and large rocks	10	10
Clay, yellow, with large rocks	10	20
Sand, coarse, and gravel; yellow clay at bottom, and water	4	24
Casing: 4-in. to 24 ft.		

8/39-34K1. Roland George. Altitude 3,410 ft. Drilled by A. W. Robinson Water Well Drilling, 1964

Soil, black	3	3
Rocks, small, and yellow clay	2	5
Clay, yellow	6	11
Gravel and sand, some water	1	12
Clay, yellow	3	15
Clay, yellow, and coarse sand and gravel, lots of water(?)	2	17
Casing: 6-in. to 17 ft.		

8/40-4E1. Charles Colton. Altitude 3,350 ft. Drilled by A. W. Robinson Water Well Drilling, 1958

Soil	3	3
Hardpan	3	6
Clay and coarse gravel (some water at 25 ft)	34	40
Clay and cobbles	29	69
Casing: 6-in. to 68 ft.		

Table 2.--Drillers' logs of representative wells--Continued

8/40-13R1. Gertrude Lee. Altitude 3,465 ft. Drilled by O. C. Tandy, 1957

Materials	Thickness (feet)	Depth (feet)
Soil, reddish-brown, with rock fragments	14	14
Clay, sandy, reddish	43	57
Rock, small, broken	13	70

Casing: 6-in. to 70 ft; perforated 60-70 ft.

8/40-15N2. F. S. Mack. Altitude 3,350 ft. Drilled by A. W. Robinson Water Well Drilling, 1962

Soil	6	6
Sand, coarse	4	10
Sand and gravel, with small streaks of clay	30	40

Casing: 12-in. to 40 ft; perforated 10-40 ft.

8/40-19D1. U.S. Geol. Survey. Altitude 3,340 ft. Dug and bored by U.S. Geol. Survey, 1936

Loam, fine, sandy	2	2
Sand, coarse, and fine gravel	6	8
Quicksand	6	14

Casing: 18-in. to 13 ft; perforated at unknown depth.

8/40-22H1. William Schaan. Altitude 3,355 ft. Drilled by A. W. Robinson Water Well Drilling, 1962

Soil	4	4
Sand, gravel, and clay (thin layers), dark-gray	36	40

Casing: 16-in. to 40 ft; perforated 0-40 ft.

8/40-27G1. Vernon Schoulte and William Schaan. Altitude 3,360 ft. Drilled by A. W. Robinson Water Well Drilling, 1961

Soil, black	8	8
Clay	4	12
Sand and gravel	7	19
Clay, yellow	6	25
Sand, coarse, water-bearing	1	26
Sand, coarse, and fine gravel	15	41

Casing: 16-in. to 40 ft; perforated 0-40 ft.

8/40-29E3. Francis & Powers. Altitude 3,360 ft. Drilled by O. C. Tandy, 1960

Soil	7	7
Gravel	5	12
Gravel in clay	3	15
Gravel	3	18

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, coarse	3	21
Gravel in clay	9	30
Sand, fine	2	32
Clay, sandy	19	51
Gravel, small, partially filled with clay	9	60
Clay, sandy	3	63
Gravel, small, and sand	4	67
Clay	3	70
Sand, coarse; some clay	16	86
Sand in clay	4	90
Gravel, small, and coarse sand	4	94
Casing: 8-in. to 92 ft; perforated 9-92 ft.		

8/40-32G1. Francis & Powers. Altitude 3,375 ft. Drilled by O. C. Tandy, 1960

Soil	9	9
Gravel	2	11
Gravel, clay-filled	6	17
Gravel, small, and sand	2	19
Gravel, small, partially clay-filled	17	36
Gravel, medium	5	41
Casing: 12-in. to 38 ft; perforated 7-38 ft.		

8/40-33B2. W. M. Widman. Altitude 3,370 ft. Drilled by O. C. Tandy, 1960

Soil	8	8
Gravel and clay	6	14
Gravel, small, and sand	4	18
Gravel and sand	9	27
Clay and coarse sand	3	30
Gravel and sand, some clay	13	43
Casing: 6-in. to 42 ft; perforated 6-42 ft.		

8/40-33G2. Francis & Powers. Altitude 3,370 ft. Drilled by O. C. Tandy, 1960

Soil	8	8
Gravel	2	10
Gravel, cemented	5	15
Gravel and sand	7	22
Gravel and sand, clay binder	3	25
Sand, coarse	5	30
Sand, coarse, and some clay	9	39
Sand, coarse	2	41
Clay, sandy	10	51
Casing: 6-in. to 49 ft; perforated 19-49 ft.		

Table 2.--Drillers' logs of representative wells--Continued

8/40-33P1. Fred Widman. Altitude 3,380 ft. Drilled by A. W. Robinson Water Well Drilling, 1964

Materials	Thickness (feet)	Depth (feet)
Soil	5	5
Sand and gravel, dry	6	11
Clay	2	13
Sand and gravel, mixed	4	17
Clay, yellow	9	26
Sand, coarse, water-bearing	4	30
Gravel, coarse, water-bearing	10	40

Casing: 16-in. to 19 ft, 12-in. 0-40 ft; perforated 19-40 ft.

8/40-34L1. C. W. Linscott. Altitude 3,375 ft. Drilled by A. W. Robinson Water Well Drilling, 1961

Soil	5	5
"Hardpan" or cemented gravel	4	9
Sand and gravel	10	19
Sand and gravel, caving, water-bearing	2	21
Clay	1	22
Clay in coarse sand, water-bearing	1	23

Casing: 6-in. to 23½ ft.

8/40-34R2. Everett Zimmerman. Altitude 3,380 ft. Drilled by O. C. Tandy, 1956

Soil	3	3
Clay and gravel, mixed	5	8
Gravel, small, and sand	19	27
Gravel, packed with clay	8	35
Sand mixed with clay	10	45
Sand and clay	12	57
Clay, soft	4	61
Clay, hard, and gravel	7	68
Sand, coarse	2	70

Casing: 6-in. to 70 ft; perforated 61-70 ft.

8/41-7D1. Charles Colton. Altitude 3,550 ft. Bored by Lester Grade, 1954

Soil	4	4
Sand and gravel	31	35
Clay, sandy	10	45
Clay rock	6	51
Sand	2	53
Clay, sandy	61	114
Clay and lava rock	24	138
Clay, sandy	4	142
Rock, red	1	143
Sand	1	144
Lava, red	25	169

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Lava and soapstone	8	177
Rock, soft	3	180
Rock, lava	17	197
Rock, red	28	225
Rock, lava	20	245
Clay, sandy	5	250
Rock, lava	35	285
Rock, loose; possible water	5	290
Rock, hard	10	300

Casing: 8-in. to unknown depth.

8/41-14B1. Stewart Morrissey, Inc. Altitude 2,795 ft. Drilled by B & M Equipment Co., 1963

Boulders, hard, gray to black	17	17
Clay, brown	8	25
Cinders, medium-red	10	35
Clay, brown	5	40
Clay, blue, with fine sand	43	83
Volcanic rock, hard, black	32	115
Cinders, medium-red	9	124
Volcanic rock, hard, black	31	155
Volcanic rock, broken	13	168
Volcanic rock, hard, black	26	194
Cinders, medium-red	3	197
Volcanic rock, hard, black	68	265
Volcanic rock, broken	22	287
Claystone, blue	29	316
Volcanic rock, broken, black	15	331
Volcanic rock, hard, black	13	344
Claystone, blue	10	354
Volcanic rock, hard, black	213	567
Volcanic rock, hard, red	2	569
Volcanic rock, broken, black	116	685

Casing: 14-in. 0-82 ft, 6-in. 80-685 ft; perforated 0-685 ft.

Table 2.--Drillers' logs of representative wells--Continued

8/42-7A1. H. K. Hoarn. Altitude 2,810 ft. Drilled by A. W. Robinson Water Well Drilling, 1963

Materials	Thickness (feet)	Depth (feet)
Unknown	6	6
Clay, yellow	10	16
Clay, blue, sticky	8	24
Clay, hard, black	10	34
Sandstone, black, water-bearing	16	50

Casing: 6-in. to 50 ft.

8/42-29B1. Marion Hewlett. Altitude 2,775 ft. Drilled by Mr. Forrest(?), 1952

Clay, consolidated	43	43
Gravel, poorly sorted and unconsolidated	17	60
Clay, bluish-gray	78	138
Gravel, pea-sized (some water; water level raised to 30 ft below land surface)	7	145
Clay, layered with "peaty lignite"	212	357
Gravel, water-bearing	11	368

Casing: 16-in. to unknown depth.

9/39-4E1. Bert Brink. Altitude 3,545 ft. Well deepened by O. C. Tandy, 1964

Gravel and clay, packed	20	20
Sand and gravel, mixed with clay	8	28
Sand, coarse, and fine gravel; mixed with clay	14	42
Sand, coarse, loose	2	44
Gravel, some clay	4	48
Clay, yellow	34	82
Gravel, medium, and some yellow clay; possibly water-bearing	2	84
Gravel, coarse, mixed with yellow clay	19	103

Casing: 6-in. to 93 ft; perforated 19-49 ft and 85-93 ft.

9/39-4E2. M. H. Spreet. Altitude 3,560 ft. Dug by owner, 1964

Soil	4	4
Clay, "kaolinite"	2	6
Gravel	3½	9½
Clay	2½	12
Gravel	6	18

Casing: 6-in. to unknown depth.

9/39-4K1. Joe Goff. Altitude 3,500 ft. Drilled by O. C. Tandy, 1955

Soil	3	3
Clay with sand and gravel	17	20
Clay, yellow	10	30

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Gravel and sand, loose	2	32
Gravel and clay	4	36
Clay	22	58
Gravel and clay, water-bearing	2	60
Casing: 6-in. to 36 ft; perforated 24-36 ft.		
9/39-9G1. C. F. Rohner. Altitude 3,660 ft. Drilled by O. C. Tandy, 1955		
Soil	3	3
Clay, blue	32	35
Clay, yellow	48	83
Rock, broken, and coarse sand	1	84
Clay	4	88
Rock, sandy, broken	2	90
Rock, broken, and packed clay	10	100
Casing: 6-in. to 98 ft; perforated 78-98 ft.		
9/40-1N2. Arlie Patton. Altitude 3,460 ft. Drilled by A. W. Robinson Water Well Drilling, 1956		
Soil	8	8
Clay	42	50
Clay with sand streaks, water-bearing	30	80
Clay with thin streaks of gravel	25	105
Clay	15	120
Clay with sand and gravel streaks, water-bearing	11	131
Casing: 10-in. to 131 ft; perforated 1-131 ft.		
9/40-2B1. G. E. Spencer. Altitude 3,385 ft. Dug segment by Shorty Anderson, drilled segment by A. W. Robinson Water Well Drilling, dates dug and drilled unknown		
Soil	10	10
Gravel	15	25
"Hardpan"	10	35
Sand, fine to coarse	15	50
Casing: 30-in. 0-50 ft, 10-in. steel liner 0-50 ft.		
9/40-6B2. J. Williams. Altitude 3,385 ft. Drilled by O. C. Tandy, 1959		
Soil	4	4
Clay and gravel	7	11
Gravel, sand, and clay	3	14
Clay	10	24
Gravel, loose, and granite	4	28
Gravel, loose	2	30
Casing: 6-in. to unknown depth.		

Table 2.--Drillers' logs of representative wells--Continued

9/40-8D2. Sam Emerich. Altitude 3,400 ft. Drilled by A. W. Robinson Water Well Drilling, 1961

Materials	Thickness (feet)	Depth (feet)
Soil, black	7	7
Sand and gravel, dry	15	22
Clay, yellow, and sand and gravel layers, water-bearing	11	33
Sand, coarse, and fine gravel; yellow clay at bottom	6	39

Casing: 6-in. to 39 ft.

9/40-8D3. Roy Weisenberger. Altitude 3,405 ft. Drilled by O. C. Tandy, 1957

Soil	3	3
Clay	7	10
Sand and gravel	4	14
Gravel and clay	10	24
Sand and gravel	8	32

Casing: 6-in. to 32 ft; perforated 22-32 ft.

9/40-8P4. Vernon Manary. Altitude 3,415 ft. Drilled by A. W. Robinson Water Well Drilling, 1960

Soil	6	6
Cement	5	11
Gravel	3	14
Sand and gravel	17	31

Casing: 6-in. to 31½ ft; perforated 0-31½ ft.

9/40-8R1. Clyde Ward & Sons. Altitude 3,415 ft. Dug by owners, 1956

Soil	8	8
Gravel	32	40

Casing: 24-in. to 40 ft; perforated 14-40 ft.

9/40-9B4. Harry Crawford. Altitude 3,400 ft. Drilled by A. W. Robinson Water Well Drilling, 1957

Soil	2	2
Sand, coarse, black	8	10
Gravel, cemented	15	25
Gravel, water-bearing	2	27

Casing: 6-in. to 27 ft.

9/40-9L2. Mrs. F. D. Baird. Altitude 3,410 ft. Drilled by A. W. Robinson Water Well Drilling, 1955

Old well, no record	40	40
Gravel, sand, and clay	37	77

Casing: 12-in. to unknown depth.

Table 2.--Drillers' logs of representative wells--Continued

9/40-9L4. R. E. McNeil. Altitude 3,415 ft. Drilled by A. W. Robinson Water Well Drilling, 1960

Materials	Thickness (feet)	Depth (feet)
Soil, black	5	5
Sand and gravel	21	26
Clay, yellow	5	31
Sand, coarse, and gravel	--	--

Casing: 8-in. to 31 ft; perforated 0-31 ft.

9/40-16G3. Trasey Edison. Altitude 3,425 ft. Drilled by A. W. Robinson Water Well Drilling, 1963

Soil, black	4	4
Gravel, cemented, and conglomerate	20	24
Clay, yellow	2	26
Gravel and sand, water-bearing	--	--

Casing: 6-in. to 26 ft.

9/40-16K1. Victor Neiger. Altitude 3,430 ft. Drilled by A. W. Robinson Water Well Drilling, 1960

Soil, black	6	6
Sand and gravel, dry	18	24
Clay, yellow, and sand and gravel	6½	30½

Casing: ?-in. to 31 ft.

9/40-16L3. Paul Edwards. Altitude 3,435 ft. Drilled by Carlson Construction Co., 1961

Soil	5	5
Gravel	3½	8½
Gravel, water-bearing	9½	18
Gravel and clay, water-bearing	1	19

Casing: 4-in. to 19 ft; perforated 0-19 ft.

9/40-17A1. W. P. Riordan. Altitude 3,420 ft. Drilled by A. W. Robinson Water Well Drilling, 1961

Soil, black	4½	4½
Gravel, coarse	21½	26
Clay; coarse sand at bottom	5	31

Casing: 6-in. to 31 ft.

Table 2.--Drillers' logs of representative wells--Continued

9/40-17G1. J. F. Carpenter. Altitude 3,425 ft. Drilled by A. W. Robinson Water Well Drilling, 1961

Materials	Thickness (feet)	Depth (feet)
Soil, black	5	5
Gravel and sand, coarse	20	25
Clay; coarse gravel at bottom	4	29

Casing: 6-in. to 29 ft.

9/40-17M1. J. A. McLeish. Altitude 3,425 ft. Drilled by A. W. Robinson Water Well Drilling, 1961

Soil, black	4	4
Sand and gravel, fine, dry	16	20
Sand and gravel, fine, water-bearing	18	38

Casing: 6-in. to 38 ft.

9/40-18J2. H. C. Schlingman. Altitude 3,420 ft. Dug by owner(?), 1964

Loam, sandy	4	4
Gravel, alluvial, to 4-in.-diameter	11	15
Gravel, to 1-in.-diameter	4	19

Casing: 48-in. to 20 ft.

9/40-18Q1. P. V. Hill. Altitude 3,475 ft. Drilled by Roy T. French, 1955

Soil and clay	38	38
Shale, gravel, and sand	22	60
Gravel and red clay, cemented	120	180
Gravel, shale, and clay	106	286
Gravel and clay	122	408
Granite, hard and soft, and soapstone	80	488
Clay, soapstone, and gravel	50	538
Granite	27	565
Clay and soapstone	10	575

Casing: 12-in. to 575 ft.

9/40-21D1. Oliver Hardman. Altitude 3,455 ft. Drilled by Carlson Construction Co., 1961

Soil	4	4
Sand and gravel, fine	3	7
Gravel, medium, and fine sand	1	8
Gravel, medium, water-bearing	4	12
Gravel, medium to coarse	5	17

Casing: 12-in. to 15 ft.

Table 2.--Drillers' logs of representative wells--Continued

9/40-21D2. William Pedracine. Altitude 3,485 ft. Bored by Carlson Construction Co., 1961

Materials	Thickness (feet)	Depth (feet)
Soil	3	3
Clay	2	5
Sand, fine	2	7
Gravel and clay	2	9
Gravel, medium, water-bearing	10	19

Casing: 16-in. to unknown depth; perforated 4-18 ft.

9/40-28D1. Baker Industries & Resources Corp. Altitude 3,480 ft. Drilled by A. A. Durand & Son, 1936

Soil	8	8
Gravel	28	36
Basalt	86	122
Silt	4	126
Rock	114	240
Rock and clay	75	315
Rock, soft, medium, and hard	253	568
Basalt, hard	10	578

Casing: 15-in. to 100± ft.

9/40-34Q1. Horace Logan. Altitude 3,570 ft. Drilled by Otto Ellsworth, 1964

Clay, brown	19	19
Gravel, fine	12	31
Clay, blue	6	37
Gravel, pea-sized	18	55
Clay, blue	10	65

Casing: 12-in. to 55 ft; perforated 20-55 ft.

9/41-9R1. B. M. H. Preston. Altitude 3,415 ft. Drilled by owner, 1963

Soil	2	2
Clay, yellow	1	3
Rock, loose	5	8
Clay, hard, yellow	90	98
Rock, hard, blue	18	116
Rock, gray	29	145
Rock, blue	10	155
Gravel, medium	1	156

Casing: 6-in. to 20 ft.

Table 3.--Chemical analyses of ground water from Baker Valley

Number	Depth of well (feet)	Depth of water-bearing zone (feet)	Date of collection	Temperature (°F)	Parts per million												Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Calculated	Dissolved solids: Residue on evaporation at 180°C			
7/39-28G1	[1] --	--	5-1-55	135	1.6	0.0	63	2.0	47	101	31	17	0.2	--	246	--	14	290	9.7
8/39-1J1	24	22-27	11-28-60	52	15	4	187	3	.0	311	102	79	.0	3.27	--	--	11	986	7.6
8/39-8D1	12	--	July 1947	--	30	14	15	3.1	.0	170	14	3.9	--	Tr	--	--	.6	230	7.3
8/39-8R1	40	--	do	--	27	7.0	12	0.78	.0	109	14	1.4	--	.0	--	--	.5	170	6.9
8/39-13Q1	23	--	do	--	24	9.4	77	2.7	.0	277	37	6.8	--	.0	--	--	3.4	340	7.3
8/39-22F1	4.5	8-12	June 1947	--	42	12	19	2.4	.0	232	2.4	.0	--	Tr	--	--	.7	320	6.8
8/39-22L1	--	--	July 1947	--	42	9.5	11	2.7	.0	163	18	1.8	--	.0	--	--	.4	230	7.0
8/39-24K1	7.5	--	Aug. 1947	--	85	35	294	6.3	.0	802	249	91	--	Tr	--	--	6.8	770	7.8
8/39-25E1	15	--	do	--	33	14	15	3.1	.0	199	7.7	2.5	--	Tr	--	--	.6	220	7.1
Do	15	--	3-31-60	45	35	15	52	2	.0	298	20	3	.0	.08	--	--	1.9	475	7.4
8/39-27F1	35.5	--	July 1947	--	29	11	14	1.2	.0	108	12	1.4	--	.0	--	--	.5	170	7.5
8/39-32H1	28	--	Aug. 1947	--	29	8.2	1.6	1.2	.0	110	9.1	0.71	--	Tr	--	--	.1	150	7.1
8/39-34L1	86	--	do	--	34	11	10	2.4	.0	173	11	0.36	--	.0	--	--	.4	200	6.8
8/40-9E1	22	--	Sept. 1947	--	25	13	54	5.1	.0	213	48	9.2	--	.20	--	--	2.2	510	7.6
8/40-9E2	7	--	do	--	47	16	49	4.3	.0	281	38	7.5	--	.08	--	--	1.6	510	6.9
8/40-14P1	60	--	do	--	43	19	36	3.9	.0	239	34	17	--	.08	--	--	1.2	510	7.5
8/40-16J1	9	--	June 1947	--	38	15	42	2.0	.0	232	16	3.6	--	.04	--	--	1.5	310	7.5
Do	9	--	7-28-60	--	33	15	29	1	.0	134	70	13	.0	.04	--	--	1.1	397	6.9

Table 3.--Chemical analyses of ground water from Baker Valley--Continued

Number	Depth of well (feet)	Depth of water-bearing zone (feet)	Date of collection	Temperature (°F)	Parts per million												Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Calculated	Dissolved solids: Residue on evaporation at 180°C			
8/40-18R2	--	--	June 1947	--	59	22	30	3.9	0.0	305	33	11	--	0.04	--	--	0.9	410	7.2
8/40-19D1	13	2-8	Apr. 1947	--	3.4	2.9	289	13	19	634	81	18	--	.47	--	851	28	1,070	8.2
Do	8	do	11-28-60	57	5	2	177	4	195	90	2	15	0.0	.34	--	--	12	838	10.4
8/40-19D2	--	--	June 1947	--	9.0	4.0	336	20	39	604	98	25	--	.88	--	--	23	1,100	9.2
8/40-21P2	20.5	--	do	--	29	12	24	.78	--	--	6.2	--	--	.04	--	--	.9	--	--
8/40-28G1	77.5	--	May 1947	--	23	8.7	17	2.4	--	--	--	--	--	.04	--	--	.8	200	7.2
8/40-29E1	21	--	July 1947	--	44	18	17	4.7	.0	212	23	1.8	--	.0	--	--	.6	270	7.0
8/40-30Q1	21	--	Apr. 1947	--	11	6.8	290	15	17	608	76	15	--	.48	--	873	17	940	8.3
Do	15	--	11-28-60	51	31	13	32	3	.0	225	20	5	1	.04	--	--	1.2	374	7.2
8/40-31G1	8	--	June 1947	--	26	10	22	2.4	.0	140	20	7.1	--	.04	--	--	.9	250	7.4
8/40-33Q1	19.5	--	Sept. 1947	--	26	7.9	18	3.1	.0	152	16	2.5	--	.08	--	--	.8	300	6.9
9/39-2D1	77.5	--	do	--	29	11	2.8	1.2	.0	146	2.4	Tr	--	Tr	--	--	.1	230	7.3
9/39-2M1	477	--	do	--	16	.61	29	.78	.0	126	15	.0	--	Tr	--	--	2.0	220	7.7
9/39-2N1	321	--	June 1947	--	54	15	21	1.6	.0	250	13	.0	--	Tr	--	--	.8	350	7.6
9/39-4Q1	23	--	do	--	28	7.9	29	.0	.0	165	19	.0	--	Tr	--	--	1.3	250	7.7
9/39-5A1	14	--	Aug. 1947	--	14	4.3	3.0	.0	.0	73	2.9	.71	--	Tr	--	--	.2	100	6.9
9/39-10C1	80	--	June 1947	--	26	9.4	37	.78	.0	159	17	.0	--	Tr	--	--	1.6	230	8.1
9/40-26Z	148	133-148	Aug. 1947	52	79	29	72	9.0	.0	321	123	61	--	.30	--	--	1.8	500	7.5

Table 3.--Chemical analyses of ground water from Baker Valley--Continued

Number	Depth of well (feet)	Depth of water-bearing zone (feet)	Date of collection	Temperature (°F)	Parts per million												Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH
					Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Calculated	Dissolved solids: Residue on evaporation at 180°C			
9/40-3B2	11	--	Sept. 1947	--	27	8.2	44	2.4	0.0	199	20	7.1	--	0.12	--	--	1.9	370	7.0
9/40-3Q1	21	--	do	--	26	7.7	41	2.7	.0	192	14	3.6	--	.30	--	--	1.8	500	7.5
9/40-4K3	22	--	June 1947	--	27	8.9	13	2.0	.0	134	19	11	--	.12	--	--	0.6	240	7.1
9/40-6B2	30	28-30	11-28-60	56	16	6	20	2	.0	112	10	3	0.0	.04	--	--	1.0	201	7.7
9/40-7A1	47.5	9-42	July 1947	--	37	11	45	4.3	.0	172	37	22	--	Tr	--	--	1.7	320	7.1
9/40-7G1	67	10-75	Aug. 1947	--	25	9.6	13	4.3	.0	134	16	3.6	--	Tr	--	--	.5	200	6.7
9/40-7G2 [2]	46	7-46	6-12-52	49	31	10	16	3.7	--	126	29	5.1	26	.14	221	223	.6	315	7.1
9/40-7H4	28.5	--	7-28-60	--	32	11	20	4	.0	187	13	7	1	.04	--	--	.8	327	6.8
9/40-8D1	22	--	June 1947	--	38	12	41	1.2	.0	171	44	18	--	.04	--	--	1.5	380	7.2
9/40-8G1	25	--	do	--	31	11	19	0.39	.0	159	13	0.0	--	Tr	--	--	.8	250	7.2
9/40-8P1	23.5	4-26	do	--	46	15	53	2.0	.0	195	63	32	--	.12	--	--	1.7	470	7.4
9/40-15G1	740	--	do	--	12	7.6	175	9.8	.0	476	12	14	--	1.9	--	--	9.7	600	8.1
9/40-16H1	600	--	do	--	14	7.3	172	9.8	.0	543	0.96	18	--	1.6	--	--	9.3	650	7.9
9/40-16J1s	--	--	do	--	13	15	185	10	.0	573	1.4	18	--	1.8	--	--	8.3	650	8.0
9/40-18Q1 [3]	575	--	8-15-64	60	19	13	60	5.4	.0	258	19	5.0	.6	.30	302	312	2.6	443	7.7

[1] Silica (SiO_2) = 80ppm, iron (Fe) = 0.0ppm, manganese (Mn) = 0.0ppm, fluoride (F) = 1.0ppm, hardness: As $CaCO_3$ = 4ppm, noncarbonate = 0.0ppm. -- U.S.G.S. lab., Salt Lake City, Utah.

[2] Silica (SiO_2) = 38ppm, iron (Fe) = 0.05ppm, manganese (Mn) = 0.0ppm, fluoride (F) = 0.1ppm, hardness: As $CaCO_3$ = 118ppm, noncarbonate = 15ppm. -- U.S.G.S. lab, Salt Lake City, Utah.

[3] Silica (SiO_2) = 52ppm, iron (Fe) = 0.16ppm, manganese (Mn) = 0.0ppm, fluoride (F) = 0.4ppm, orthophosphate (as PO_4) = 0.18ppm, hardness: As $CaCO_3$ = 102ppm, noncarbonate = 0.0ppm. -- U.S.G.S. lab., Portland, Oreg.

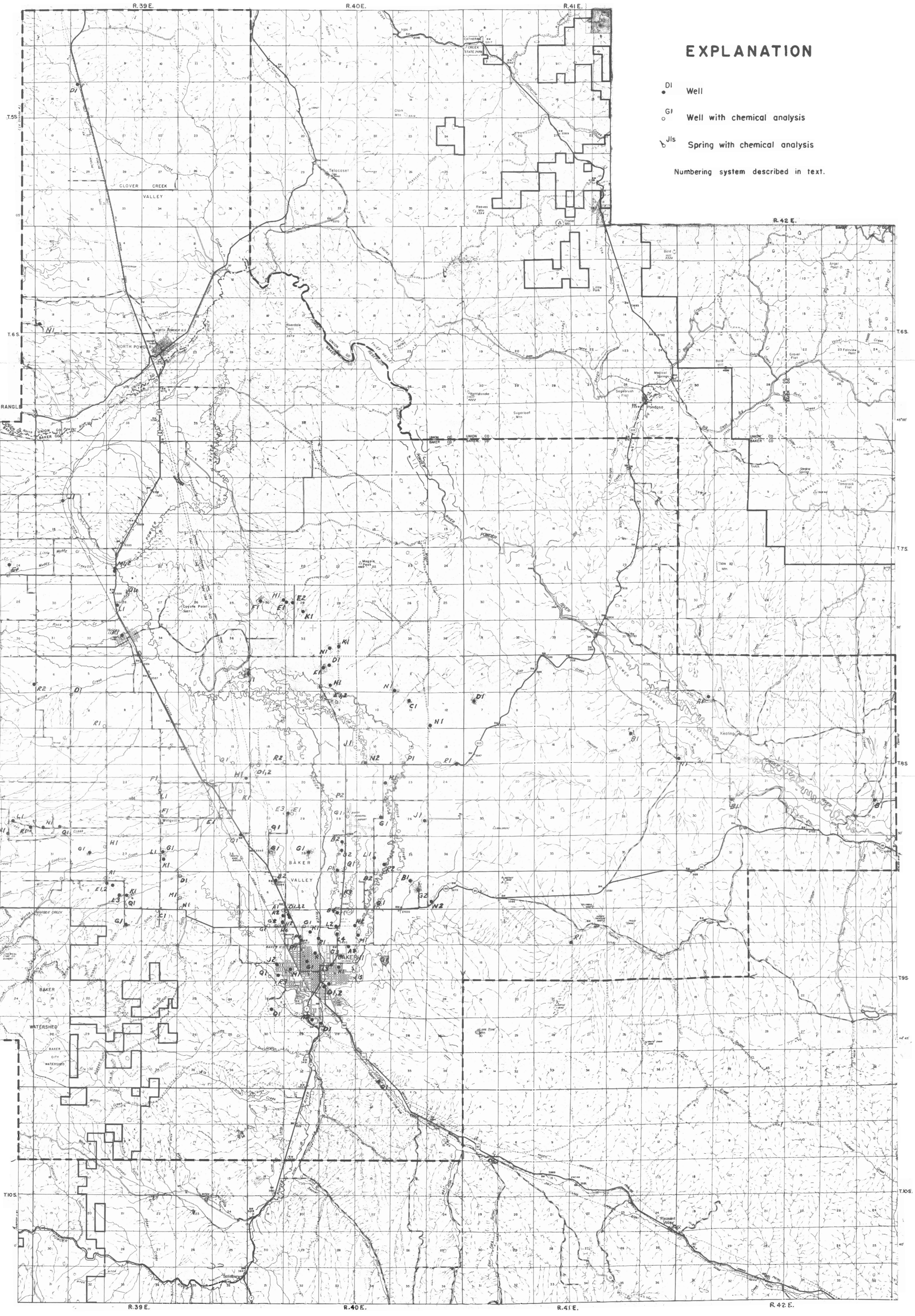

Figure 3. — Map of Baker Valley showing locations of representative wells and springs.