STATE OF NEVADA
OFFICE OF THE STATE ENGINEER

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WELL DATA IN LAS VEGAS AND INDIAN SPRING VALLEYS, NEVADA

By
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TABLE OF CONTENTS

		PAGE
Foreword		5
Introduction		7
Explanation of Tables		7
Table 1.	Index for State Engineer's local field numbers, permit numbers, and U. S. Geological Survey numbers of wells in Las Vegas Valley, Nevada	11
Table 2.	Record of wells in Las Vegas and Indian Spring Valleys, Nevada	20
Table 3.	Logs and casing records of wells in Las Vegas and Indian Spring Valleys, Nevada	78
Table 4.	Analyses of water from wells and springs in Las Vegas and Indian Spring Valleys, Nevada	122

ILLUSTRATIONS

Plate 1. Map of Las Vegas Artesian Basin, Clark County, Nevada, showing location of wells, springs and boundary between valley fill and bedrock ..... In pocket

FOREWORD

This report is the fourth in the series of Nevada Water Resources Bulletins prepared by the U. S. Department of Interior, Geological Survey, in cooperation with the State Engineer.

A cooperative arrangement for a study of the ground-water resources in Las Vegas Valley was begun in July 1944 as the result of an agreement between the Director of the Geological Survey and the State Engineer of Nevada. Expansion of this arrangement for a State-wide investigation of the ground-water resources was made possible by the action of the Forty-second Session of the Legislature in appropriating $35,000 for the biennium, to be matched by an equal amount by the Geological Survey.

The program for the State is under the supervision of Hugh A. Shamberger, Assistant State Engineer. The program of the Geological Survey is under the direction of Thomas W. Robinson, District Engineer in Nevada for the Ground Water Division, Geological Survey.

The need for a systematic collection, tabulation, and recording of well data in Las Vegas Valley was recognized by Mr. Shamberger in 1938 when Penn Livingston of the Ground Water Division, Geological Survey, at the request of the State Engineer, made a brief investigation of the underground leakage from artesian wells in the vicinity of Las Vegas. The results of this investigation are set forth in U. S. Geological Survey Water-Supply Paper 849–D. The local field numbers established at that time were expanded by the State Engineer to include all of the wells in the Valley.

A systematic collection of well data (which was beyond the scope of the State Engineer's office) was begun in July 1944 by George B. Maxey, Associate Geologist assigned to the Las Vegas Valley investigation, and by C. H. Jameson, Artesian Well Supervisor. Some of the well data, together with the more important results of this investigation, were summarized in a report by them entitled, "Progress Report on the Ground-Water Resources of the Las Vegas Artesian Basin, Nevada," published in 1945. This report, by the same authors, includes the results of their systematic work on the collection of well data.

ALFRED MERRITT SMITH,
State Engineer.

July 19, 1946.

WELL DATA IN LAS VEGAS AND INDIAN SPRING VALLEYS, NEVADA

By G. B. Maxey and C. H. Jameson

INTRODUCTION

The need for detailed information on wells in Las Vegas Valley has long been felt by the State Engineer, by local residents, and by the many other individuals and organizations interested in the ground-water resources of the valley. The purpose of this report is to satisfy, at least in part, that need, and to record information and data which might otherwise be lost to posterity. The report includes all available data on 570 wells in Las Vegas Valley that have been collected and compiled by the Geological Survey and the Office of the State Engineer as of April 30, 1946. In addition, data on 15 wells in Indian Spring Valley, northwest of Las Vegas Valley, are included.

The table is not complete in that data for many of the wells are missing. Most of these missing data are probably lost or destroyed. The compilation was conducted with great care and every effort was made to avoid possible errors.

The large amount of information and data presented in the following tables could not have been collected without the assistance and cooperation of many organizations and individuals in Las Vegas Valley. Much of the data in Tables 2 and 3 were collected through the courtesy of the local well-drillers from their records of well-drilling operations, often at inconvenience to them. The writers are especially grateful for the valuable assistance rendered by the well-drillers, the many individuals, and organizations who through their efforts have made available more complete records than would otherwise have been possible. Special thanks are due Zaida E. Bell who collected and compiled much of the information on wells.

EXPLANATION OF THE TABLES

TABLE 1

Table 1 is an index showing the various numbers used to identify individual wells since the Office of the State Engineer began active study of the wells in 1938. The first column lists, in consecutive order, the State Engineer's local field number which was used by him for several years prior to the present investigation to designate individual wells on his field records and map, several editions of which have been released to the public since

1938. The third column lists the State permit number which is the State Engineer's official record in designating the permit held by the owner of a well or spring to appropriate the public waters of the State of Nevada.[1]

Each State permit number in the table is opposite the State Engineer's local field number for the well on which the permit applies.

The second column lists the numbers used by the Geological Survey to designate individual wells and their locations. Each number in the table is opposite the State Engineer's local field number for the well on which both numbers apply. The Geological Survey numbers are not in consecutive order in this table. However, they are in consecutive order in Table 2. A description of the Geological Survey system of numbering wells in Las Vegas Valley is given below so the reader can make complete use of the well numbers.

The numbering system is based on the network of surveys by the General Land Office and serves to locate the well in the township, range, and section. In order to locate the well within an area of 10 acres, the sections have been subdivided into quarters, the northeast quarter being designated by the letter a, the northwest by the letter b, the southwest by the letter c, and the southeast by the letter d. The quarter sections have similarly been subdivided and designated and these 40-acre subdivisions further divided and similarly designated in 10-acre tracts. The wells in a 10-acre tract are numbered consecutively in the order in which they are recorded, beginning with 1. Thus, each well is designated by eight units if it can be located within a 10-acre tract. The first unit in the designation, either the letter N, or the letter S, indicates that the well is either north or south of the Mt. Diablo baseline. The second and third units in the designation indicate the Township and Range in which the well is located. These first three units are separated by hyphens and enclosed by parentheses. The fourth unit is the number of the section; the fifth, sixth, and seventh units indicate the 160-acre tract, the 40-acre tract, and the 10-acre tract, respectively, in which the well is located. The eighth unit in the expression designates the well within a 10-acre tract. Thus the first well in the southeast quarter of Section 31, Township 20 South, Range 60 East, would be numbered (S-20-61)31aad1, the second would be (S-20-61)31aad2,

[1]For a description of laws relating to ground water in Nevada, see "An Act Relating to Underground Waters," approved March 25, 1939, Nevada State Legislature. (Available from Office of the State Engineer, Carson City, Nevada.)

and so forth. A graphical illustration of the numbering system is shown on the accompanying map. Plate 1.

In some cases, the boundaries of the 40-acre and 10-acre tracts are unknown. The numbering system is then modified to include only the designations for the subdivisions of the section which are known. If more than one well is recorded in that particular subdivision, the wells are numbered consecutively in the order in which they are recorded, beginning with 1. Thus, if a well can be located only to the northeast 160-acre tract of Section 31, Township 20 South, Range 61 East, the number would be (S-20-61)31a, or if other wells are located in the same 160-acre tract, the number would be (S-20-61)31a1. Similarly, if a well can be located only in the northeast 40-acre tract of the northeast 160-acre tract of Section 31 of the same Township, the number would be (S-20-61)31aa or (S-20-61)aa1.

TABLE 2

Table 2 is a list of all the known wells in Las Vegas and Indian Spring Valleys, 585 in all. The wells are listed consecutively by their respective Geological Survey numbers in the first column on the left side of the table. The State Engineer's local field numbers and permit numbers are listed in the second and third columns, respectively. The "Remarks" column lists miscellaneous information which does not properly fit in the other columns, the headings of which are self-explanatory. It should be particularly noted that when records of well logs and casing data, pumping data, and analyses of water from the wells are available, this fact is noted in the "Remarks" column. The records of well logs and casing data are listed under consecutive well numbers in Table 3 and available water analyses are listed in the same manner in Table 4. The use of water from each well is indicated by the following abbreviations: DI, domestic and irrigation; Ind, industrial; N, unused; O, observation; P, public supply; and S, stock. In many instances water from the well is used for more than one purpose and is so indicated in each case. Blank spaces in the columns opposite each well indicate that the information is either unavailable, or unknown. All of the wells listed in this table are also located on the accompanying map. (Plate 1).

The well data were compiled and most of it was collected by the Office of the State Engineer and the Geological Survey between 1938 and April 30, 1946. In some instances, data were reported orally by reliable individuals, but in most cases, the data were taken from written records or collected in the field. All altitudes of measuring points are referred to sea-level datum and were

determined by third order instrumental leveling. Artesian pressures were measured with a mercury manometer and water levels were determined with a steel tape. A complete record of all significant measurements of water levels in wells in Las Vegas Valley may be found in another publication.[2] The flow of each well measured was determined either volumetrically with the aid of a stop watch, or by means of a weir.

TABLE 3

Table 3 lists all available well logs and casing records from well drilling operations in Las Vegas and Indian Spring Valleys. This information is listed in consecutive order according to Geological Survey number. A total of 168 logs are included in the table. Many of the well logs were reported by well-drillers or well-owners and are accordingly marked "driller's log." The descriptions of the materials have generally been copied *verbatum* from the drillers' logs, but in a few instances have been edited for clarity and consistency.

The remaining well logs are those described by the Geological Survey from samples taken by the driller or by the staff of the Geological Survey at the time of drilling, and supplemented by the drillers' written logs. The terms in the descriptions of materials in these logs are those suggested by Wentworth[3] and by Allen.[4]

The altitudes of land surface listed in this table were determined by altimeter or by instrumental leveling. The diameter of the well is given as its diameter at land surface. All well logs and casing records in this table are also mentioned in the "Remarks" column in Table 2.

TABLE 4

Table 4 is self-explanatory. It contains available significant analyses of well and spring waters, 96 in all, in Las Vegas and Indian Spring Valleys and refers the reader to a few other analyses not included in this report. Authorities for the analyses are shown at the beginning of the table.

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[2]Water Levels and Artesian Pressure in Wells in Las Vegas Valley and in Other Valleys in Nevada, 1913–1945: State of Nevada, Office of the State Engineer, Water Resources Bulletin No. 3, 1946.

[3]Wentworth, C. K., A Scale of Grade and Class Terms for Clastic Sediments: Journal of Geology, vol. 30, 1922, pp. 377–392.

[4]Allen, V. T., et al., Terminology of Medium-Grained Sediments: National Research Council, Division of Geology and Geography, Annual Report 1935–1936, Exhibit B, Appendix 1.

APPENDIX I

TABLE 1

Index for State Engineer's Local Field Numbers, Permit Numbers, and U. S. Geological Survey Numbers of Wells in Las Vegas Valley, Nevada.

(State Engineer's local field numbers are arranged in consecutive order)

State Engineer's local field No.	Well No.	Permit No.
1	(S-20-60) 24dac1	
2	(S-20-60) 24adb1	
3	(S-20-61) 19bcb2	
4	(S-20-61) 19bcc1	
5	(S-20-61) 19abd1	
6	(S-20-61) 20cbb1	
7	(S-20-61) 20cbc1	9389
8	(S-20-61) 20caa1	11165
9	(S-20-61) 21dbc1	
10	(S-20-61) 22dcd1	9992
11	(S-20-61) 22dcd2	9992
12	(S-20-61) 28cbd1	10293
13	(S-20-61) 33dad1	
14	(S-20-61) 33ccb1	10035
15	(S-20-61) 33ccb2	
16	(S-20-61) 32acb1	
17	(S-20-61) 32dcb1	11166
18	(S-20-60) 36dbb1	
19	(S-21-61) 6acb1	11283
20	(S-21-61) 6acb2	10757
21	(S-21-61) 6acc1	10409
22	(S-21-61) 6acc2	10409
23	(S-21-61) 6adc1	
24	(S-21-61) 5bac1	10987
25	(S-21-61) 5caa1	
26	(S-21-61) 4bcb1	10988
27	(S-21-61) 4acb1	
28	(S-21-61) 7ddd1	
29	(S-21-61) 18bbc1	
30	(S-21-61) 18dbd1	
31	(S-21-61) 17dbc1	10183
32	(S-21-61) 16bcc1	9832
33	(S-21-61) 15bdc1	
34	(S-21-61) 22bca1	10624
35	(S-21-61) 27cbb1	
36	(S-21-61) 27cbb2	
37	(S-21-61) 34abc1	
38	(S-21-61) 27ccc1	11080
39	(S-21-61) 33bac1	
40	(S-21-61) 28ccc1	
41	(S-22-61) 4bcc1	
42	(S-22-61) 9cbb1	
43	(S-20-61) 20cbc2	9389
44	(S-20-61) 19bcb1	
45	(S-20-61) 19bdb1	
46	(S-20-61) 22dcb1	10181
47	(S-20-61) 34adc1	
48	(S-21-61) 4baa1	
49	(S-21-61) 4abb1	
50	(S-20-61) 35ddc1	10152
51	(S-21-61) 2cbb1	
52	(S-20-61) 29dca1	10434
53	(S-21-61) 28bcc1	10854
54	(S-21-61) 3abb1	
55	(S-22-61) 11bac1	
56	(S-22-61) 11bac2	
57	(S-22-61) 1dac1	2303
58	(S-22-61) 1dab1	2303
59	(S-22-61) 1cda1	
60	(S-22-61) 1cda2	

TABLE 1—*Continued.*

State Engineer's local field No.	Well No.	Permit No.
61	(S-22-61) 1cdc2	
62	(S-22-61) 1bdb1	
63	(S-22-61) 1bdb2	
64	(S-21-61) 4bcc1	10988
65	(S-21-61) 4bda1	10986
66	(S-21-61) 4bca1	10988
67	(S-21-61) 3bcc1	10392
68	(S-20-60) 11b	
69	(S-22-61) 10bda1	4374
70	(S-22-61) 10acc1	4374
71	(S-21-61) 36abb1	
72	(S-21-61) 34dbc1	
73	(S-21-61) 34dcb1	
74	(S-21-61) 34dcc1	
75	(S-21-61) 4abc1	
76	(S-21-61) 4bad1	
77	(S-20-61) 29ccc1	7201
78	(S-20-61) 35dbd1	
79	(S-22-61) 3bda1	7593
80	(S-20-61) 19cdc1	7930
81	(S-20-61) 29cbb1	10720
82	(S-20-61) 29cbc1	10721
83	(S-20-61) 29cbc2	10722
84	(S-21-61) 1cdc1	
85	(S-21-61) 26bbb1	9239
86	(S-21-61) 26bba1	9239
87	(S-21-61) 27baa1	9243
88	(S-21-61) 4ddb1	9323
89	(S-20-61) 14ddd1	
90	(S-21-61) 2dcc1	10830*
91	(S-20-61) 33bcc1	
92	(S-21-61) 35ccb1	9498
93	(S-21-61) 29dda1	9516
94	(S-21-61) 29dac1	9516
95	(S-20-61) 35dcb1	9520*
96	(S-20-61) 23cba1	9522*
97	(S-20-61) 23cba2	9522*
98	(S-20-61) 23cbc1	9522*
99	(S-20-61) 29dac1	9525
100	(S-20-61) 26cad1	9601
101	(S-20-61) 27dcd1	9602
102	(S-20-61) 26bbb1	9614
103	(S-20-61) 26bbb2	9614
104	(S-21-61) 36ccc1	9652
105	(S-20-61) 27acc1	9653
106	(S-21-61) 2ddc1	9885
107	(S-20-61) 27aaa1	9914
108	(S-20-61 27dcc1	9939
109	(S-20-61) 30bbb1	8173
110	(S-20-61) 30bbb2	9940
111	(S-21-61) 16bdb1	10013
112	(S-21-61) 16bda1	10019
113	(S-20-61) 20ccb1	10066
114	(S-20-61) 31aad1	10127
115	(S-20-61) 30baa1	10182
116	(S-20-61) 20cab1	10241
117	(S-21-61) 22ccc1	10243
118	(S-20-61) 28cad1	10245
119	(S-20-61) 23cbd1	10260
120	(S-20-61 32ddd1	10301
121	(S-22-61) 3caa1	10321
122	(S-22-61) 3acc1	10321

*Canceled.

TABLE 1—*Continued.*

State Engineer's local field No.	Well No.	Permit No.
123	(S-21-61) 21bbb1	10820
124	(S-21-61) 21aaa1	10821
125	(S-21-61) 35dcc1	
126	(S-21-61) 23ccb1	10608
127	(S-21-62) 31bdb1	
128	(S-21-62) 30dbb1	
129	(S-21-62) 30dbb2	
130	(S-21-62) 19acd1	
131	(S-21-62) 31bdc1	
132	(S-21-62) 31bdc2	
133	(S-21-62) 29ccb1	
134	(S-21-62) 29ccc1	
135	(S-21-61) 36cdc1	
136	(S-22-62) 6bbc1	
137	(S-22-62) 6bac1	
138	(S-21-61) 9dcd1	10813
139	(S-22-61) 2cbc1	10579
140	(S-20-60) 13dcc1	
141	(S-20-60) 24bac1	
142	(S-21-61) 33bbc1	
143	(S-22-61) 8aba1	
144	(S-19-60) 35cc	
145	(S-22-61) 3ccb1	
146	(S-21-60) 1ab	
147	(S-20-61) 22dcc1	
148	(S-21-61) 6acc3	10409
149	(S-21-61) 25cab1	
150	(S-22-61) 2aca1	10367
151	(S-21-61) 6acb3	
152	(S-20-61) 22ddd2	
153	(S-20-61) 22dab1	
154	(S-20-61) 22ddd4	
155	(S-21-61) 7acc1	
156	(S-20-61) 22acd1	11131
157	(S-20-61) 27add1	
158	(S-20-61) 27adc1	
159	(S-20-61) 34bcb1	
160	(S-21-61) 21cbb1	
161	(S-20-61) 22ddd1	
162	(S-20-61) 22ddd5	
163	(S-20-61) 34aab1	
164	(S-20-61) 23ccb1	
165	(S-20-61) 22ddc1	
166	(S-20-61) 20cac1	11158
167	(S-20-61) 22ddd6	
168	(S-22-61) 1cdc1	
169	(S-20-61) 27abc1	10612
170	(S-20-61) 22ddd3	
171	(S-20-61) 29dab1	
172	(S-21-61) 3bcc2	10392
173	(S-20-61) 27ada1	
174	(S-20-61) 34acd1	10391
175	(S-22-61) 2abd1	
176	(S-21-61) 27acc1	
177	(S-21-61) 33ccc1	
178	(S-21-61) 3cbb1	10643
179	(S-20-61) 30dda1	10458
180	(S-20-61) 27daa1	10439
181	(S-20-61) 27aaa2	
182	(S-20-61) 34dbb1	10466
183	(S-20-61) 33ccc1	
184	(S-20-61) 21abb1	

TABLE 1—*Continued.*

State Engineer's local field No.	Well No.	Permit No.
185	(S-20-61) 21ddb1	
186	(S-20-61) 21ddb2	
187	(S-20-61) 22dac1	
188	(S-20-61) 23bdc1	
189	(S-20-61) 23dad1	
190	(S-20-61) 23cbc2	
191	(S-20-61) 22dcb2	
192	(S-20-61) 22cdb1	
193	(S-20-61) 22dca1	
194	(S-20-61) 22dca2	11130
195	(S-20-61) 28cac1	10474
196	(S-20-61) 28dbd1	
197	(S-20-61) 28dbc1	
198	(S-20-61) 28dbd2	11143
199	(S-20-61) 28dac1	
200	(S-20-61) 28dac2	
201	(S-20-61) 32ddb1	11271
202	(S-20-61) 33ccd1	
203	(S-20-61) 33cbc1	
204	(S-20-61) 33cba1	
205	(S-20-61) 33cca1	10471
206	(S-20-61) 33cca2	
207	(S-20-61) 33cdb1	
208	(S-20-61) 16bdb1	
209	(S-20-61) 27acd1	
210	(S-20-61) 35dca1	
211	(S-20-61) 27add2	
212	(S-20-61) 22cdd1	
213	(S-20-61) 27adb1	
214	(S-20-61) 4dcc1	
215	(S-21-61) 4abd1	
216	(S-21-61) 4aba1	
217	(S-21-61) 4bbb1	
218	(S-21-61) 4bbb2	
219	(S-21-61) 1bbb1	
220	(S-21-61) 17dbc2	
221	(S-21-61) 18dbc1	
222	(S-21-61) 17dad1	
223	(S-21-61) 27bbb1	
224	(S-21-61) 27dcb1	
225	(S-21-61) 2aba2	
226	(S-22-61) 2aba1	
227	(S-22-61) 2bab1	
228	(S-22-61) 2bbc1	
229	(S-22-61) 34adb1	
230	(S-20-61) 34aaa1	
231	(S-20-61) 35bcb1	
232	(S-20-61) 34add1	
233	(S-20-61) 35cbb1	
234	(S-21-62) 1aab1	10623
235	(S-21-61) 3bac1	
236	(S-21-61) 3bab1	
237	(S-21-61) 3baa1	
238	(S-21-61) 3abb2	
239	(S-21-61) 3abb3	
240	(S-21-61) 4ddc1	
241	(S-21-61) 4ddd1	
242	(S-21-61) 16bab1	10497
243	(S-21-61) 16cbb1	
244	(S-21-61) 16cbb2	
245	(S-21-61) 16cbb3	
246	(S-21-61) 16cbc1	10792

TABLE 1—*Continued.*

State Engineer's local field No.	Well No.	Permit No.
247	(S-21-61) 17dcb1	
248	(S-20-61) 17aac1	
249	(S-21-61) 33bca1	
250	(S-22-61) 3adb1	
251	(S-22-61) 3dcb1	
252	(S-22-61) 10aab1	
253	(S-22-61) 10aac1	
254	(S-22-61) 10adc1	
255	(S-22-61) 10adc2	
256	(S-22-61) 10add1	
257	(S-22-61) 10dab1	
258	(S-22-61) 10dad1	
259	(S-22-61) 10dad2	
260	(S-22-61) 2cdd1	
261	(S-22-61) 11bac3	
262	(S-22-61) 11bdb1	
263	(S-22-61) 11bdb2	
264	(S-22-61) 11bdc1	
265	(S-22-61) 2ddc1	
266	(S-22-61) 12bbb1	
267	(S-22-61) 1cdd1	
268	(S-22-61) 1dcb1	
269	(S-22-61) 1bcb1	
270	(S-22-61) 1bcb2	
271	(S-22-61) 1bcb3	
272	(S-22-61) 1bcb4	
273	(S-22-61) 1cbb1	
274	(S-22-61) 1cbb2	
275	(S-22-61) 1cbb3	
276	(S-20-61) 27cdd1	
277	(S-20-61) 31ada1	10508
278	(S-20-61) 25ccb1	
279	(S-20-61) 25ccc1	
280	(S-20-61) 36bbb2	
281	(S-20-61) 36bdb1	11095
282	(S-20-61) 36bdc1	11100
283	(S-21-62) 7bad1	
284	(S-21-62) 7bac1	
285	(S-21-62) 7bad2	
286	(S-21-62) 7bac2	
287	(S-21-62) 7bab2	
288	(S-21-62) 7bab1	
289	(S-21-61) 12dac1	
290	(S-21-61) 12dca1	
291	(S-21-61) 12dcd1	
292	(S-21-61) 13dbd1	
293	(S-21-62) 28aad1	
294	(S-21-62) 28ada1	
295	(S-21-62) 21ddd1	
296	(S-21-62) 27cba1	
297	(S-21-62) 28acd1	
298	(S-21-62) 30dbb3	
299	(S-21-62) 30dbb4	
300	(S-21-62) 30dbb5	
301	(S-21-62) 29bcc1	
302	(S-21-62) 30dcc1	
303	(S-20-61) 28bbd1	
304	(S-20-61) 28bca1	
305	(S-20-61) 21bdb1	
306	(S-20-61) 21bdc1	
307	(S-20-61) 17cdb1	
308	(S-20-61) 17cdc1	

TABLE 1—*Continued.*

State Engineer's local field No.	Well No.	Permit No.
309	(S-20-61) 22aaa1	
310	(S-20-61) 15dcc1	
311	(S-20-61) 15dcb1	
312	(S-20-61) 15dca1	
313	(S-20-61) 15dcb2	
314	(S-20-61) 3dab1	
315	(S-20-61) 3adc1	
316	(S-20-61) 3acc1	
317	(S-20-61) 3acb1	
318	(S-20-61) 4add1	
319	(S-20-61) 27abb1	
320	(S-20-61) 27acc2	
321	(S-20-61) 27bad1	
322	(S-20-61) 27caa1	
323	(S-20-61) 20dba1	
324	(S-20-61) 20dba2	
325	(S-20-61) 36cca1	10503
326	(S-20-61) 34adc2	
327	(S-20-61) 34adc3	
328	(S-20-61) 33cdc1	10580
329	(S-21-61) 10cdc1	
330	(S-21-61) 11bbb1	10520
331	(S-21-62) 8cca1	
332	(S-20-61) 29ada1	
333	(S-20-61) 27cbd1	
334	(S-20-61) 27cac1	
335	(S-20-61) 27cba1	
336	(S-20-61) 27cbc1	
337	(S-21-62) 4aaa2	
338	(S-21-62) 4aaa1	
339	(S-21-62) 3bac1	
340	(S-21-62) 3bac2	
341	(S-21-61) 9aac1	10553
342	(S-21-62) 27bcb1	10559*
343	(S-20-61) 20ccb2	10066
344	(S-21-61) 16bac1	10528
345	(S-21-61) 26bbc1	10573
346	(S-21-61) 32dda1	10574
347	(S-21-61) 4dac1	10582
349	(S-21-61) 3baa2	
350	(S-22-62) 1cba1	10602*
351	(S-20-61) 27adb2	
352	(S-22-61) 11bac2	
353	(S-20-61) 34dbb2	10717*
354	(S-20-61) 19ddc1	10630
355	(S-21-62) 27bcd1	10635
356	(S-21-61) 3cbb2	10660
357	(S-20-61) 29dad1	10669
358	(S-20-61) 22dda1	10670
359	(S-20-61) 28cdb1	10675
360	(S-20-61) 20cdc1	10679
361	(S-21-61) 6aca1	10680
362	(S-20-61) 35cac1	10697*
363	(S-20-61) 35cbb2	10702
364	(S-20-61) 21aba1	10958
365	(S-22-61) 16ccc1	10705
366	(S-20-61) 30dda2	10706
367	(S-20-61) 31aad2	10707
368	(S-20-61) 35ddc2	10713
369	(S-21-61) 29ddb1	11051
370	(S-21-61) 9aab1	10718
371	(S-20-62) 4acb1	10734

*Canceled.

TABLE 1—*Continued.*

State Engineer's local field No.	Well No.	Permit No.
372	(S-21-61) 16bcc2	10740*
373	(S-22-61) 3ddb1	10745
374	(S-21-62) 17ddc1	
375	.....	
376	(S-21-61) 1aab2	10753*
377	(S-21-61) 9acd1	10754
378	(S-21-61) 16bcd1	10758
379	(S-21-61) 6aca2	10761
380	(S-20-61) 29dbb1	10781
381	(S-20-61) 20cba1	10784
382	(S-22-62) 9dcc1	10785
383	(S-20-61) 33cca3	10786
384	(S-19-60) 27aab1	10795
385	(S-21-62) 21cbc1	10802
386	(S-21-61) 4aad1	10818
387	(S-21-61) 16bab2	11039
388	(S-20-61) 34aab2	10725
389	(S-21-61) 6adc2	10787
390	(S-20-61) 32acb2	10791
391	(S-20-61) 23ddb1	10823
392	(S-21-61) 17cac1	11325
393	(S-20-61) 36bbb1	10844
394	(S-20-61) 32ddb2	10847
395	(S-21-61) 1aba1	10848
396	(S-20-61) 19dab1	10858
397	(S-21-61) 4bab1	10860
398	(S-20-61) 31add1	10867
399	(S-20-61) 31dab1	10868
400	(S-20-61) 31ddb1	10869
401	(S-20-61) 31ddc1	10870
402	(S-21-61) 9aad1	10885
403	(S-20-61) 28cda1	10951
404	(S-22-61) 2ccc1	10894
405	(S-20-61) 36bcb1	10919
406	(S-20-61) 19cdd1	10930
407	(S-21-62) 20ddd1	10948
408	(S-21-62) 20ddd2	10949
409	(S-21-61) 6bdb1	
410	(S-20-61) 28cdb2	
411	(S-20-61) 20cdb1	11144
412	(S-20-61) 20cca1	10990
413	(S-21-61) 27baa2	10969
414	(S-21-61) 1bba1	
415	(S-21-61) 1bda1	
416	(S-20-62) 4add1	
417	(S-20-62) 4dca1	
418	(S-20-61) 3adc3	
419	(S-20-61) 3adc2	
420	(S-21-61) 4dac2	10942
421	(S-20-61) 20bdb1	10952
422	(S-20-61) 36bbc1	10996
423	(S-22-62) 9cdb2	10961
424	(S-22-62) 9cdb1	10961
425	(S-21-61) 4acc1	
426	(S-19-60) 9bdd1	10917
427	(S-19-60) 9bcc1	10931†
428	(S-19-60) 9abb1	10991
429	(S-19-60) 9cda1	10940
430	(S-21-62) 21cbc2	10971
431	(S-22-62) 1ccc1	10826
432	(S-22-62) 1bdc1	10825
433	(S-20-61) 20cbb2	10970

*Canceled. †Withdrawn.

TABLE 1—*Continued.*

State Engineer's local field No.	Well No.	Permit No.
434	(S-22-61) 3dda1	11054
435	(S-20-61) 20bcc1	11101
436	(S-21-61) 12cdb1	11102
437	(S-21-61) 9dcc1	11227
438	(S-20-61) 30adb1	11103
439	(S-20-61) 20ccc1	11155
441	(S-20-61) 25cca1	11233
442	(S-20-62) 19cba1	11277
443	(S-20-62) 19bcc1	
444	(S-20-62) 19bbb1	
445	(S-20-62) 19bab1	
446	(S-20-62) 19bdd1	
447	(S-20-62) 19bda1	
448	(S-20-62) 19dbb1	
449	(S-19-60) 23bbc1	11024
450	(S-19-60) 4dab1	11142
451	(S-21-61) 9cdc1	11156
452	(S-21-61) 4bbb3	11198
453	(S-21-61) 20aaa1	11226
454	(S-21-61) 27baa3	11231
455	(S-21-61) 12cdc1	11244
456	(S-20-61) 32acc1	11246
457	(S-20-61) 31dac1	11249
458	(S-21-61) 26bbb2	11255
459	(S-20-61) 36ccb1	11263
460	(S-20-62) 18bbc2	11340
461	(S-20-61) 22cbc1	10985
462	(S-20-61) 36cca2	11284
463	(S-20-61) 36ccd1	11207
464	(S-20-61) 32cdd1	11306
465	(S-20-61) 32cdc1	11323
466	(S-21-62) 30dcb1	11341
467	(S-21-62) 30bd	11347
468	(S-20-61) 13adc1	11379
469	(S-21-61) 4aca1	11302
470	(S-21-61) 4abd2	11091
471	(S-20-61) 19cdd2	11380
472	(S-21-61) 9dcb1	11300
473	(S-20-61) 36bac1	11241
474	(S-21-61) 7ddb1	11138
475	(S-20-61) 20bdd1	11309
476	(S-19-60) 9aba1	11337
477	(S-20-61) 28bca2	11421
478	(S-21-61) 15bcc1	11327
479	(S-20-61) 22acd2	11437
480	(S-21-61) 6adc3	11175
481	(S-21-61) 16bbd1	11157
482	(S-22-61) 3cab2	11388
483	(S-20-61) 22ccb1	
484	(S-21-61) 36adc1	
485	(S-21-62) 7baa1	
486	(S-22-61) 2daa1	
487	(S-21-61) 17cab1	
488	(S-20-61) 14ddd2	
489	(S-20-62) 32bbb1	
490	(S-21-62) 3bac3	
491	(S-21-62) 27ccc1	
492	(S-22-62) 1bcc1	
493	(S-22-62) 1cab1	
494	(S-22-62) 1cbc1	
495	(S-22-62) 1cbd1	
496	(S-22-62) 12abc1	

TABLE 1—*Continued.*

State Engineer's local field No.	Well No.	Permit No.	State Engineer's local field No.	Well No.	Permit No.
497	(S-20-61) 34add2		506	(S-20-60) 13ddc1	
498	(S-20-61) 34ddb1		507	(S-20-61) 32dbd1	
499	(S-22-61) 1bca1		508	(S-20-61) 32dac1	
500	(S-22-61) 1bca2		509	(S-20-61) 32dac2	
501	(S-22-61) 1bca3		510	(S-20-61) 32dab1	
502	(S-22-61) 1bca4		511	(S-20-61) 32dab2	
503	(S-22-61) 1ccb1		512	(S-20-61) 13adb1	
504	(S-22-61) 1bcb5		513	(S-20-61) 13aac1	
505	(S-20-61) 18bcc1		514	(S-20-62) 18bbc1	

TABLE 2

Record of wells in Las Vegas and Indian Spring Valleys, Nevada. (Use of Water—DI, Domestic and irrigation; Ind., Industrial; N, Unused; O, Observation; P, Public supply; S. Stock.)

Well No. and Location	State Engineer's Local Field No.	State Permit No	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
			INDIAN SPRING VALLEY						
(S–16–55½) 11ad	.....	.....	Charles Kielhofer	.....	.....	8	400	.....	.....
(S–16–56) 5dd	.....	.....	Las Vegas Army Airfield—Indian Springs sub-base	.....	1942	8	604	.....	.....
(S–16–56) 8ab	.....	.....	Las Vegas Army Airfield—Indian Springs sub-base	.....	1942	6	576	.....	.....
(S–16–56) 8da	.....	.....	S. C. Schenck	.....	.....	60	25	.....	.....
(S–16–56) 9ac	.....	.....	Unknown	.....	.....	60	74	.....	.....
(S–16–56) 9bb1	.....	.....	State of Nevada, Department of Highways	.....	.....	60	35	.....	.....
(S–16–56) 9bb2	.....	.....	Tim Harnedy	Tim Harnedy and O. G. Hairgrove	.....	60	50	.....	.....
(S–16–56) 9bb3	.....	.....	Tim Harnedy	Tim Harnedy	.....	17	30	.....	.....
(S–16–56) 9bc1	.....	.....	Tim Harnedy	O. G. Hairgrove	.....	6	45	.....	.....
(S–16–56) 9bc2	.....	.....	Tim Harnedy	O. G. Hairgrove	.....	8	582	.....	.....
(S–16–56) 9bd	.....	.....	Mrs. R. Ridge	.....	.....	60	22½	.....	.....
(S–16–56) 16bc	.....	.....	Mrs. Alice MacFarland	.....	.....	60	19½	.....	.....
(S–16–56) 17a1	.....	.....	S. C. Schenck	.....	.....	60	27	.....	.....
(S–16–56) 17a2	.....	.....	S. C. Schenck	.....	.....	60	25	.....	.....
(S–16–56) 17a3	.....	.....	S. C. Schenck	.....	.....	60	16½	.....	.....

Measuring Point			Pressure Head or Water Level					
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
.....	.....	.....	.....	.....	5	DI,S		
.....	.....	.....	.....	.....	.....	P	....	Analysis; 300 G. M. pumped in 1942.
.....	0.0	Land surface	—54.0	9–15–1942	.....	P	....	Log; 185 G. M. pumped, drawdown 30 feet in 1942.
.....	0.0	Top of 8-in. by 8-in. timber cribbing, east side	—23.79	3–18–1946	.....	N		
.....	+1.2	Top of 8-in. by 8-in. timber cribbing	—69.62	3–18–1946	.....	N		
.....	.....	.....	.....	.....	.....	DI		
.....	+0.2	Top of concrete curb	—25.42	3–18–1946	.....	DI	....	Analysis; 5 G. M. pumped in 1945.
.....	+0.4	Top of concrete floor around well	—25.62	3–18–1946	.....	DI		
.....	+0.5	Top of casing	—13.52	3–18–1946	.....	DI		
.....	+0.2	Top of casing	—4.07	3–18–1946	.....	DI		
.....	+2.5	Top of 8-in. by 8-in. timber cribbing	—17.01	3–18–1946	.....	N		
.....	0.0	Top of 8-inch by 8-in. timber	—9.05	3–18–1946	.....	DI		
.....	0.0	Top of 8-in. by 8-in. timber	—22.37	3–18–1946	.....	DI		
.....	0.0	Top of board well cover	—21.79	3–18–1946	.....	N		
.....	0.0	Top of 8-in. by 8-in. timber cribbing	—15.12	3–18–1946	.....	N		

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
				LAS VEGAS VALLEY					
(S-16-57) 24c	.....	.....	Unknown	U. S. Grazing Service	.....	4	151	.....	.....
(S-17-59) 20bc	.....	.....	Grazing Service	.....	.....	6	300	.....	.....
(S-17-59) 32b	.....	.....	Desert Game Refuge	.....	.....	12	250	.....	.....
(S-17-59) 34a	.....	.....	Desert Game Refuge	.....	.....	12	150	.....	.....
(S-17-59) 34b	.....	.....	Desert Game Refuge	.....	.....	8	365	.....	.....
(S-18-59) 4b1	.....	.....	Desert Game Refuge	.....	.....	60	61½	.....	.....
(S-18-59) 4b2	.....	.....	Desert Game Refuge	.....	.....	10	.....	.....	.....
(S-19-60) 4dab1	450	11142	P. J. Goumond	Brockman Drilling Co.	1945	16	780	.....	.....
(S-19-60) 9aba1	476	11337	P. J. Goumond	Thomas Miller	1945	14	716	.....	.....
(S-19-60) 9abb1	428	10991	P. J. Goumond	Brockman Drilling Co.	1943	16	706	.....	.....
(S-19-60) 9bcc1	427	†10931	P. J. Goumond	Brockman Drilling Co.	1943	10	830	190–275	.....
									270–287 533–552 565–570 587–593 690–705 745–750 797–810
(S-19-60) 9bdd1	426	10917	P. J. Goumond	Brockman Drilling Co.	1943	8	1001	425–520	
(S-19-60) 9cda1	429	10940	E. A. and J. T. Gilcrease	Brockman Drilling Co.	1943	8	612	.....	.....
(S-19-60) 21ccc1	.....	.....	Stillwell Springs	.....	.....	36	8	.....	.....
(S-19-60) 23bbc1	449	11024	E. A. and J. T. Gilcrease	Brockman Drilling Co.	1944	12	910	550–570	.....
(S-19-60) 27aab1	384	10795	H. M. Dixon	Thompson and Brockman	1943	8	605	.....	.....
(S-19-60) 35cdc1	.....	144	Engler	.....	1930	12	.....	.....	.....
(S-20-60) 11b	68	.....	Southern Nevada Land and Development Co.	.....	1911	.....	628	.....	.....

†Withdrawn.

Measuring Point			Pressure Head or Water Level					
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
.....	+2.0	Top of casing	—126.09	3–18–1946	.....	N		
.....	+0.3	Top of casing	—31.31	9–12–1944	.....	S,O	67	Windmill well; 15 G. M. pumped during 1944.
.....	0.0	Top of 12-in. casing	—86.61	5–11–1945	.....	N,O	....	Well flooded and filled with silt Nov. 9, 1945.
.....	+0.7	Top of 8-in. by 8-in. tie	—24.33	5–11–1945	.....	N	....	No casing in well.
.....	.....	.....	.....	.....	.....	DI		
.....	+3.0	Top of wood platform under cross-ties	—57.90	8–14–1944	.....	N,O		
.....	.....	.....	.....	.....	.....	N	....	Plugged at 65 feet.
.....	+0.4	Top of 14-in. plate	+30.2	4– 5–1946	70	DI	69	Log.
.....	.....	.....	.....	.....	413	DI	....	Log.
.....	0.0	Top of 14-in. casing	+17.0	12–30–1944	705	DI	....	Analysis; log.
.....	+0.5	Top of casing	—43.0	5– 1–1944	.....	N,O	....	Log.
.....	—6.0	Top of 8-in. welded cap	+2.33	5– 1–1944	308	DI	....	Log.
.....	.....	.....	.....	Fall, 1945	651	DI	69	Analysis; log.
.....	—2.0	Top of culvert pipe casing	—3.75	5– 3–1945	.....	S,O	....	Analysis; Old spring known as "Stillwell Spring;" 10 G. M. pumped during 1945.
.....	0.0	Land surface	+9.0	8——1944	50	DI	....	Analysis; log.
.....	+0.5	Top of 8-in. collar on casing	+16.5	9–19–1944	340	DI	69	Analysis.
2,319.79	0.0	Top of casing	—49.57	3–22–1945	.....	N,O	....	Well bridged at 55 feet.
.....	.....	.....	.....	.....	.....	.....	....	Well destroyed.

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-20-60) 13dcc1	140	.....	Thayer Coon	.....	1915	8	260	.....	.....
(S-20-60) 13ddc1	506	.....	C. E. Smoke	J. L. Filby	1944	10	.....	.....	.....
(S-20-60) 24adb1	2	.....	George Curtis	Floyd Francis	1912	8	270	155-232	.....
(S-20-60) 24bac1	141	.....	Horace Taylor	.....	1924	8	315	.....	.....
(S-20-60) 24dac1	1	.....	Horace Taylor	.....	1913	6	315	.....	.....
(S-20-60) 36dbb1	18	.....	M. D. Kidder	Floyd Francis	1925	8	385	.....	.....
(S-20-61) 3acb1	.....	.....	Woods	Woods	1946	8	50	.....	.....
(S-20-61) 3acb2	317	.....	S. U. Stewart	.....	1934	2	.....	.....	.....
(S-20-61) 3acc1	316	.....	S. U. Stewart	.....	1934	8	300	.....	.....
(S-20-61) 3adc1	315	.....	Las Vegas Army Airfield	Joe Evans	1939	7⅝	340	.....	.....
(S-20-61) 3adc2	419	.....	Las Vegas Army Airfield	Joe Evans	1941	6¼	400	.....	.....
(S-20-61) 3adc3	418	.....	Las Vegas Army Airfield	Brockman Drilling Co.	1943	12	500	.....	.....
(S-20-61) 3dab1	314	.....	Las Vegas Army Airfield	Floyd Francis	1933	8	242	.....	.....
(S-20-61) 4add1	318	.....	George Craig	.....	1912	10	900	.....	.....
(S-20-61) 5b	.....	.....	Armstrong	.....	.....	10	267	.....	.....
(S-20-61) 12cda1	.....	.....	John Greenfield	.....	.....	60	53	.....	.....
(S-20-61) 13aac1	513	.....	F. H. Callahan	.....	.....	8	80	.....	.....
(S-20-61) 13adb1	512	.....	J. R. Cannon	John Frewalt	.....	8	120	.....	.....
(S-20-61) 13adc1	468	11379	L. and M. Van Der Meer	Las Vegas Drilling Co.	1946	8	930	.....	.....
(S-20-61) 13adc2	.....	.....	L. and M. Van Der Meer	Las Vegas Drilling Co.	1946	10	400	.....	.....
(S-20-61) 14ddd1	89	.....	Las Vegas Home Building Investment Co.	.....	1938	8	402	.....	.....

Measuring Point			Pressure Head or Water Level					
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
.....	.....	Top of casing	.....	.....	.....	DI	70	450 G. M. pumped during 1945.
.....	+1.0	Top of casing	—13.49	11–20–1944	.....	N,O	....	This was an old well which was redrilled in 1944.
.....	+2.0	Top of casing	—5.45	1–22–1939	.....	DI	....	Analysis.
2,211.50	+2.0	Top of casing	—14.70	8–15–1938	.....	.....	....	Well destroyed.
.....	+0.5	Top of casing	—18.50	8–18–1930	.....	N	....	Well bridged at 6 feet; dry in July, 1944.
2,229.2	+1.0	Top of casing	—38.32	5– 4–1945	.....	N,O	....	Log.
.....	0.0	Top of 8-in. terra cotta pipe	—42.72	3–30–1946	.....	N		
.....	—1.0	Bottom of lip of 2-in. ell	—19.11	4–25–1946	.....	N		
.....	+1.0	Top of casing	—17.60	8–23–1944	.....	N,O		
.....	+2.3	Inside bend of 4-in. ell	—11.75	8–11–1944	.....	N,O		
.....	.....	.....	.....	.....	.....	N	71	
.....	.....	.....	.....	.....	.....	P	....	Log; 200 G. M. pumped during 1945.
.....	+3.3	Top of 8-in. tee	+2.05	8–23–1944	185	P	....	Analysis.
.....	.....	.....	.....	.....	.....	N	....	Analysis.
.....	+0.3	Top of casing	—39.52	11–15–1944	.....	DI,O	....	15 G. M. pumped during 1944.
.....	0.0	Top of plank well-cover	—48.25	4–19–1946	.....	DI	....	5 G. M. pumped during 1946.
.....	.....	Measurement of water level not possible			.....		67	15 G. M. pumped during 1946.
.....	+1.0	Hole in casing	—39.95	4–19–1946	.....	DI	....	2 G. M. pumped during 1946.
.....	+1.0	Top of casing	—42.53	4–19–1946	.....	DI	74	Log; 6 G. M. pumped during 1946.
.....	+1.0	Top of 10-inch casing	—39.94	4–19–1946	.....	DI		
.....	+0.5	Top of casing collar	+5.8	4– 6–1946	8	DI	72	

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S–20–61) 14ddd2	488	.....	J. D. Tate	.....	.....	6	.....	.....	.....
(S–20–61) 15dca1	312	.....	Taylor Estate	Floyd Francis	.....	....	.....	.....	.....
(S–20–61) 15dcb1	311	.....	Taylor Estate	Floyd Francis	1925	6	805	.....	.....
(S–20–61) 15dcb2	313	.....	Taylor Estate	Floyd Francis	1925	6	935	.....	.....
(S–20–61) 15dcc1	310	.....	Taylor Estate	Floyd Francis	1925	8	500	.....	.....
(S–20–61) 16bdb1	208	.....	E. C. Osborne	.....	1930	8	386	.....	.....
(S–20–61) 17aac1	248	.....	Pickwick Oil Co.	.....	1931	....	500	.....	.....
(S–20–61) 17cdb1	307	.....	Town of Vegas Heights	Floyd Francis	1928	8	.....	.....	.....
(S–20–61) 17cdc1	308	.....	Town of Vegas Heights	Floyd Francis	1928	8	.....	.....	.....
(S–20–61) 18bcc1	505	.....	Sky Haven Airport	O. G. Hairgrove	1944	6	412	.....	.....
(S–20–61) 19adb1	5	.....	Splane Estate	.....	1914	10	260	.....	.....
(S–20–61) 19bcb1	44	.....	Splane Estate	Floyd Francis	1913	9	300	.....	.....
(S–20–61) 19bcb2	3	.....	Splane Estate	.....	1914	....	234	.....	.....
(S–20–61) 19bcc1	4	.....	R. S. Hicks	Floyd Francis	1914	12	244	.....	.....
(S–20–61) 19bdb1	45	.....	Splane Estate	.....	1914	12	.....	.....	.....
(S–20–61) 19cdc1	80	7930	B. V. Provenzano	Floyd Francis	1926	8	275	240–265	151
(S–20–61) 19cdd1	406	10930	J. F. and F. Haakie	O. G. Hairgrove	1943	8	262	200–262	.....
(S–20–61) 19cdd2	471	11380	J. F. and F. Haakie	A. W. House	1946	8	325	.....	.....
(S–20–61) 19dab1	396	10858	Southern Nevada Industries Ltd.	J. L. Filby	1942	8	286	230–286	.....
(S–20–61) 19ddc1	354	10630	E. B. Coram	Pat Thompson	1941	8	280	255–280	.....
(S–20–61) 20bcc1	435	11101	R. J. Kaltenborn	Bert Hairgrove	1944	8	283	258–283	110–130
(S–20–61) 20bdb1	421	10952	M. C. Oglesby	Joe Evans	1944	8	450	365–377	417–420

Measuring Point			Pressure Head or Water Level					
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
.....	+0.8	Top of 4-in. welded cap	+4.2	4–19–1946	10	DI	71	
.....	.....	.....	.....	.....	15	DI		
.....	.....	Top of casing	.....	.....	15	DI	....	Log.
.....	—6.0	Top ½-in. nipple on 6-in. cap	—9.15	8–23–1944	.....	N	....	Log.
.....	+0.8	Top of casing	—4.35	8–23–1944	.....	N	....	Log.
.....	+1.8	Top of casing	—1.17	8–23–1944	.....	DI,O	....	10 G. M. pumped during 1944.
.....	.....	.....	.....	.....	.....	N	....	Well not found in 1946.
.....	.....	Cannot measure water level	.....	1–31–1944	50	P	74	
.....	+1.5	Top of casing	+18.2	1–31–1944	50	P	74	
.....	+0.7	Top of casing	—3.22	11–27–1944	.....	DI,O	....	Analysis; 10 G. M. pumped during 1944.
2,175.96	+0.5	½-inch. plug in casing	+13.3	8–22–1944	75	DI,O	....	Analysis.
2,201.91	+3.25	Top of casing	—2.03	3– 3–1944	.....	N,O	....	Log.
2,203.16	+1.8	Top of tee	+0.93	8–26–1938	.....	N		
2,201.66	+1.75	Top of 8-in. tee	—1.56	3–17–1944	.....	N,O		
2,189.96	+0.7	Top of casing	+9.24	3– 3–1944	15	N	69	
2,193.50	+1.3	Top of collar on 8-in. casing	+2.84	8–15–1944	.....	DI	....	20 G.M. pumped during 1944.
2,180.66	+1.9	Top of welded cap on casing	+0.55	3– 3–1944	.....	DI	....	Log; 20 G. M. pumped during 1944.
.....	+2.1	Top of 8-in. tee	+9.1	3–23–1946	160	DI	....	Log.
2,154.26	+1.0	Top of 8-in. tee	+32.34	2–24–1944	60	Ind	71	Log.
2,161.64	+2.0	⅛-in. plug in casing	+24.9	3–28–1944	.....	DI,O	72	Analysis; log.
2,129.42	+1.0	Top of 10-in. casing	+28.87	9–20–1944	162	DI	70	Log.
2,116.70	+1.8	Top of 6-in. reducer	+14.5	3–16–1944	40	DI	69	Log.

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-20-61) 20bdd1	475	11309	J. A. Griffin	Claude Shell and E. Bowman	1945	10	325	292-303	275-283
(S-20-61) 20bdd2	.....	.....	J. A. Griffin	Claude Shell and E. Bowman	1945	8	50	.....	.....
(S-20-61) 20caa1	8	11165	J. W. and Mae Cook	John Frewalt	1937	10	300	.....	.....
(S-20-61) 20cab1	116	10241	C. Richardson	.....	.....	6	386	.....	.....
(S-20-61) 20cac1	166	11158	E. O. Underhill	.....	1932	9	347	.....	.....
(S-20-61) 20cba1	381	10784	Louis Pisetta Estate	John Frewalt	1942	7	300	.....	.....
(S-20-61) 20cbb1	6	.....	Brundy	.....	.....	8	268	.....	.....
(S-20-61) 20cbb2	433	10970	J. W. and Mae Cook	John Frewalt	1944	6	255	175-180	180-245
(S-20-61) 20cbc1	7	9389	Oppedyk Estate	Diskin	1930	6	278	.....	.....
(S-20-61) 20cbc2	43	9389	Oppedyk Estate	Diskin	1930	7⅝	318	.....	.....
(S-20-61) 20cca1	412	10990	T. W. Allen and D. Campbell	Joe Evans	1942	9	358	300-358	285-300
(S-20-61) 20ccb1	113	10066	W. R. Smith	.....	1926	6	300	.....	.....
(S-20-61) 20ccb2	343	10066	W. R. Smith	Joe Evans	1940	9	300	260-295	.....
(S-20-61) 20ccc1	439	11155	S. P. James	John Frewalt	1945	8	350	315-325	285-290
(S-20-61) 20cdb1	411	11144	M. D. and F. Butler	Bert Hairgrove	1941	8	340	300-340	.....
(S-20-61) 20cdc1	360	10679	M. D. Butler	Bert Hairgrove	1942	8	325	300-325	.....
(S-20-61) 20dba1	323	.....	J. Masek	.....	1936	.....	325	.....	.....
(S-20-61) 20dba2	324	.....	J. Masek	.....	.....	.....	.....	.....	.....
(S-20-61) 21aba1	364	10958	L. W. Noblett	John Frewalt	1945	8	346	280-300	.....
(S-20-61) 21abb1	184	.....	C. Gratz	.....	1912	12	316	.....	.....
(S-20-61) 21bdb1	305	.....	B. Owens	Floyd Francis	1925	8	525	.....	.....
(S-20-61) 21bdc1	306	.....	Floyd Francis	Floyd Francis	1925	8	500	.....	.....

Measuring Point			Pressure Head or Water Level					
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
.....	+1.1	Top of 8-in. welded cap	+5.55	1–23–1946	15	DI	....	Log.
.....	+2.5	Top of casing	—10.96	1–14–1946	.....	N,O		
2,110.58	+2.0	Top of casing	+3.1	4–17–1944	5	N	70	Log.
2,116.22	+2.0	Top of 6-in. tee	+15.0	2–23–1944	50	DI	72	
2,114.49	+1.3	Top of casing	+13.0	8–11–1944	75	DI	71	Analysis.
2,122.69	+1.6	Top of welded cap on casing	+8.2	8–11–1944	21	DI	70	
2,128.84	+2.0	Top of casing	+25.6	4–27–1944	93	DI	71	
2,127.07	+2.0	Top of casing	+11.5	5–25–1944	15	N	66	Log.
2,128.66	+1.0	⅛-in. plug in casing	+27.0	8–11–1944	185	N,O	72	Analysis.
2,126.72	+2.0	⅛-in. plug in casing	+9.9	8–11–1944	46	N,O	72	
2,119.16	+1.3	Top of casing	+37.5	3–22–1944	150	DI	70	Log.
2,126.88	+2.5	⅛-in. plug in casing	+16.17	2–25–1944	.....	DI	71	20 G. M. pumped during 1944.
2,127.64	+0.87	⅛-in. plug in casing	+30.1	8–11–1944	170	DI	71	Log.
.....	+1.8	Top of welded cap on casing	+26.9	5–28–1945	130	DI	71	Log.
2,110.77	+1.6	Top of 8-in. casing	.....	2– 7–1945	75	N	72	Log; well leaks around casing.
2,109.42	+1.0	⅛-in. plug in casing	+27.8	8–24–1944	120	N,O	71	Analysis; log.
.....	.....	.....	.....	9——1945	10	DI		
.....	.....	.....	.....	9——1945	10	DI		
.....	+1.5	Top of casing	—8.22	2– 9–1945	.....	N	....	Log.
.....	.....	.....	.....	.....	1	N	63	Log; well cleaned out and deepened to 316 feet in 1946 by John Frewalt.
.....	+1.75	Top of lower flange on pump	+2.55	3–30–1944	5	DI	68	
.....	.....	.....	.....	.....	.....	DI		

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-20-61) 21dbc1	9	.....	Las Vegas Building and Loan Co.	.....	1913	10	.....	.....	.....
(S-20-61) 21ddb1	185	.....	Oppedyk Estate	.....	1912	8	490	.....	.....
(S-20-61) 21ddb2	186	.....	Oppedyk Estate	.....	1912	6	410	.....	.....
(S-20-61) 22aaa1	309	.....	Taylor Estate	Floyd Francis	1912	8	418	.....	.....
(S-20-61) 22acd1	156	11131	City of North Las Vegas	Joe Evans and O. G. Hairgrove	1931	6	752	.....	.....
(S-20-61) 22acd2	479	11437	City of North Las Vegas	Las Vegas Drilling Co.	1946	10	828	.....	.....
(S-20-61) 22cbc1	461	10985	Jack Moore and C. E. Bell	John Frewalt	1944	8	385	.....	.....
(S-20-61) 22ccb1	483	.....	L. A. and F. C. Malone	.....	1938	10	812	.....	.....
(S-20-61) 22cdb1	192	.....	L. A. and F. C. Malone	J. L. Filby	1923	6	320	.....	.....
(S-20-61) 22cdd1	212	.....	M. Mankiewicz	.....	.....	6	.....	.....	.....
(S-20-61) 22dab1	153	.....	M. N. Martin	.....	.....	6	425	.....	.....
(S-20-61) 22dac1	187	.....	Russell	.....	1931	.....	.....	.....	.....
(S-20-61) 22dca1	193	.....	City of North Las Vegas	Joe Evans	1939	8	.....	.....	.....
(S-20-61) 22dca2	194	11130	City of North Las Vegas	Joe Evans	1939	8	.....	.....	.....
(S-20-61) 22dcb1	46	10181	City of North Las Vegas	Joe Evans	1936	12	740	.....	.....
(S-20-61) 22dcb2	191	.....	H. Sakai	Anderson	1918	8	450	.....	.....
(S-20-61) 22dcc1	147	.....	C. Stocker	.....	.....	5	169	.....	.....
(S-20-61) 22dcc2	.....	.....	G. Lopez	.....	.....	6	400	.....	.....
(S-20-61) 22dcd1	10	9992	City of North Las Vegas	Joe Evans	1936	8	600	.....	.....
(S-20-61) 22dcd2	11	9992	City of North Las Vegas	Joe Evans	1933	8	250	.....	.....
(S-20-61) 22dda1	358	10670	Arthur Arnold	Bert Hairgrove	1944	8	300	280–290	.....
(S-20-61) 22ddc1	165	.....	Dimmick	.....	.....	4	210	.....	.....

Measuring Point			Pressure Head or Water Level					
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
.....	+1.3	Top of casing	—1.65	3–30–1944	.....	N	....	Log; well bridged at 2.0 feet.
.....	+0.35	Top of cement block around well	—5.35	3–30–1944	.....	N		
.....	+1.0	Top of casing	—8.00	3–30–1944	.....	DI	....	20 G. M. pumped during 1944.
.....	.....	.....	.....	.....	.....	....	....	Log; well destroyed.
1,938.00	+0.6	⅛-in. plug in casing	+45.00	2–19–1944	43	P	69	Log; 150 G. M. pumped during 1944.
.....	.....	.....	.....	.....	.....	P	....	Log.
.....	—0.5	Bottom of 3-in. outlet pipe	—5.00	7–30–1944	.....	N,O	....	Log.
.....	+1.8	Top of 8-in. casing	+11.4	4–13–1944	18	DI	78	10-in. casing to unknown depth. 8-in. casing to unknown depth.
.....	+1.8	Opening in pump base	—9.10	4– 8–1946	.....	DI	....	5 G. M. pumped during 1946.
.....	+0.46	Top of casing	—1.77	4–13–1944	.....	DI	....	5 G. M. pumped during 1944.
.....	.....	.....	.....	.....	.....	N	....	Capped in 1946.
.....	+2.4	.....	.....	.....	.....	DI		
.....	.....	Top of 4-in. valve flange	+16.3	4–24–1943	.....	P	72	
.....	+0.7	Top of 8-in. tee	+17.7	4–10–1946	.....	P	72	
.....	+1.8	Top of 6-in. valve flange	+1.9	4–24–1943	.....	P		
.....	.....	.....	.....	.....	.....	DI	....	Well inaccessible in 1946.
.....	0.0	Top of 4-in. tee	+7.4	4–10–1946	27	DI	71	
.....	.....	.....	.....	.....	5	DI		
.....	+2.0	Top of 4-in. tee	.....	.....	.....	P		
.....	+0.5	Top of center of tee	+34.6	1–28–1939	.....	P,O	74	
.....	0.0	Land surface	—2.1	5–31–1944	.....	DI	....	Log.
.....	.....	.....	.....	.....	.....	DI	72	

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-20-61) 22ddd1	161	.....	Mayer	.....	.....	8	361	.....	.....
(S-20-61) 22ddd2	152	.....	J. W. Woodard	.....	.....	10	4	.....	.....
(S-20-61) 22ddd3	170	.....	Harry Miller	Floyd Francis	1925	6	525	245-248	.....
(S-20-61) 22ddd4	154	.....	Harry Miller	.....	1931	4	415	.....	.....
(S-20-61) 22ddd5	162	.....	M. E. Barker	.....	.....	8	415	.....	.....
(S-20-61) 22ddd6	167	.....	The Five Point Service Station	.....	1940	....	165	.....	.....
(S-20-61) 23bdc1	188	.....	Cox	.....	1934	4	.....	.....	.....
(S-20-61) 23cba1	96	*9522	Patio Court	Joe Evans	.....	....	310	.....	.....
(S-20-61) 23cba2	97	*9522	G. R. Wait and S. M. Pahor	Joe Evans	.....	6	265	.....	.....
(S-20-61) 23cbc1	98	*9522	Tom Williams	Joe Evans	.....	8	417	.....	.....
(S-20-61) 23cbc2	190	.....	Tony Bruno	Joe Evans	1936	8	210	.....	.....
(S-20-61) 23cbd1	119	10260	R. F. Watson	Joe Evans	1938	5§	210	200-210	.....
(S-20-61) 23ccb1	164	.....	Paris Auto Court	.....	.....	2	180	.....	.....
(S-20-61) 23cad1	189	.....	Coleman	.....	1937	12	440	.....	.....
(S-20-61) 23ddb1	391	10823	Mary Gaddis	John Frewalt	1943	8	420	318-324	370
(S-20-61) 23ddb2	.....	.....	John Frewalt	John Frewalt	1944	8	50	.....	.....
(S-20-61) 25cca1	441	11233	O. A. Effinger	Bert Hairgrove	.....	6	.....	.....	.....
(S-20-61) 25ccb1	278	.....	Hampton	.....	1932	....	530	.....	.....
(S-20-61) 25ccc1	279	.....	Hampton, Davis and Dial	.....	1940	8	330	.....	.....
(S-20-61) 26bbb1	102	9614	City of Las Vegas	Joe Evans	1936	8	812	808-812	.....
(S-20-61) 26bbb2	103	9614	City of Las Vegas	.....	.....	8	490	.....	.....

*Canceled.

Measuring Point			Pressure Head or Water Level						
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
.....	.....	.....	.....	.....	.....	DI	....	2 G. M. pumped in 1945.
.....	+1.25	Top of casing	+9.2	4–11–1944	.....	DI		
.....	.....	.....	.....	.....	.....	N	....	Log; well plugged with concrete in 1946.
.....	+0.1	Top of 6-in. bushing	+6.3	4–10–1944	.....	DI		
.....	+0.4	Top of 8-in. casing	+0.19	4–10–1946	.....	N		
.....	.....	.....	.....	.....	.....	DI		
.....	.....	Cannot measure water level	.....	.....	.....	DI	....	2 G. M. pumped in 1945.
.....	.....	.....	.....	.....	.....	DI	....	10 G. M. pumped in 1945; well inaccessible in 1946.
.....	.....	.....	.....	.....	.....	DI	72	
.....	+0.35	Top of 8-in. plug	—2.03	4–12–1946	.....	DI		
.....	.....	.....	.....	.....	.....	DI	73	
.....	.....	.....	.....	.....	.....	DI	....	Log.
.....	.....	.....	.....	.....	.....	DI		
.....	+1.2	Top of 6-in. to 2-in. bushing	+19.3	4–12–1946	.....	DI	71	12-in. casing to unknown depth; 6-in. casing to unknown depth.
.....	+2.0	Top of welded 8-in. cap	+17.4	4– 6–1944	15	DI,O	....	Log.
.....	+0.8	Top of casing	—16.61	9– 5–1944	.....	DI,O		
.....	.....	.....	.....	.....	.....	DI	....	Well not finished in 1946.
.....	+2.5	Top of 4-in. tee	+25.41	3–10–1944	30	DI		
.....	.....	.....	.....	.....	.....	DI		
.....	+1.2	Top of cement block	+19.3	4–10–1944	.....	DI		Log.
.....	+1.3	Top of cement block	+24.25	4–10–1944	.....	DI		

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-20-61) 26cad1	100	9601	City of Las Vegas	.....	1932	8	352	.....	.....
(S-20-61) 27aaa1	107	9914	Elmer Baxter	.....	1932	6	198	.....	.....
(S-20-61) 27aaa2	181	.....	R. B. Saunders	J. L. Filby	1940	4	200	190-200	114-118
(S-20-61) 27abb1	319	.....	P. A. Simons	.....	1930	4	310	.....	.....
(S-20-61) 27abc1	169	10612	U. S. Department of Interior, Bureau of Indian Affairs	.....	1931	8	553	.....	.....
(S-20-61) 27acc1	105	9653	Wilson and Mikkelsen	.....	1928	6	900	.....	.....
(S-20-61) 27acc2	320	.....	P. P. Young	.....	.....	....	320	.....	.....
(S-20-61) 27acd1	209	.....	Oppedyk Dairy	Joe Evans	1937	....	1000	.....	.....
(S-20-61) 27ada1	173	.....	Harold Case	.....	1933	8	280	.....	.....
(S-20-61) 27adb1	213	.....	State of Nevada, Department of Highways	.....	1912	....	.....	.....	.....
(S-20-61) 27adb2	351	.....	Gay Myers	.....	1940	....	265	.....	.....
(S-20-61) 27adc1	158	.....	State of Nevada, Department of Highways	.....	.....	6	270	.....	.....
(S-20-61) 27add1	157	.....	Mina Stewart	Anderson	.....	8	265	.....	.....
(S-20-61) 27add2	211	.....	V. Richardson	.....	.....	4	.....	.....	.....
(S-20-61) 27bad1	321	.....	Fred Remick	.....	.....	6	.....	.....	.....
(S-20-61) 27bbb1	.....	.....	Cal Henry	.....	.....	6	.....	.....	.....
(S-20-61) 27caa1	322	.....	Matt Kelly	Floyd Francis	1924	6	283	.....	.....
(S-20-61) 27caa2	.....	.....	Jack Reynolds Estate	.....	1923	10	300	.....	.....
(S-20-61) 27cac1	334	.....	Steve Tibbitts	.....	1922	6	385	.....	.....
(S-20-61) 27cba1	335	.....	Baldwin	.....	1923	8	.....	.....	.....
(S-20-61) 27cbc1	336	.....	Clyde Caskey	.....	1923	8	.....	.....	.....
(S-20-61) 27cbd1	333	.....	M. E. Ward	.....	1924	4	472	.....	.....

Measuring Point			Pressure Head or Water Level					
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
.....	+0.2	Top of 4-in. to 8-in. bushing	+43.8	4–26–1944	.....	DI		
.....	+0.8	Top of concrete pump base	+8.0	4–12–1944	.....	DI	72	122 feet of 6-in. casing.
.....	+1.0	Top of 4-in. collar	+4.7	4–13–1944	.....	DI	----	Log.
.....	.....	.....	.....	.....	.....	DI		
.....	.....	.....	.....	.....	13	DI	76	No flow in summer.
.....	+0.0	Top of 6-in. casing	+71.61	4–10–1944	.....	P		
.....	.....	.....	.....	.....	.....	----	----	Well destroyed.
.....	.....	.....	.....	.....	.....	DI		
.....	+1.4	Top of 8-in. welded cap	+7.4	5–29–1944	.....	DI		
.....	.....	.....	.....	.....	.....	----	----	Analysis; well destroyed.
.....	.....	.....	.....	.....	.....	DI		
.....	.....	.....	.....	.....	.....	----		Well destroyed.
.....	+1.1	Top of 8-in. casing	+18.7	4–12–1946	46	DI	71	
.....	.....	.....	.....	.....	.....	DI		
.....	.....	.....	.....	.....	.....	DI		
.....	+0.5	Top of cap on casing	+26.8	4–13–1946	17	DI		
.....	+2.0	Top of 1-in. pipe	—7.54	4– 8–1946	.....	N		
.....	+1.0	Top of 1-in. pipe in cap	—7.40	4– 8–1946	.....	N		
.....	.....	.....	.....	.....	.....	N		
.....	+1.0	Top of 8-in. collar on casing	—9.00	4– 8–1946	.....	N		
.....	+1.1	Inside of valve seat	—9.51	4–19–1944	.....	N,O		
.....	.....	Top of 4-in. casing	.....	.....	.....	N		

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-20-61) 27cdd1	276	.....	William Goodwin	Floyd Francis	1924	6	357	.....	.....
(S-20-61) 27daa1	180	10439	Las Vegas Land and Water Co.	John Frewalt	1939	8	323	.....	.....
(S-20-61) 27dcc1	108	939	City of Las Vegas	Joe Evans	1936	8	925	.....	.....
(S-20-61) 27dcd1	101	9602	City of Las Vegas	.....	1932	8	626	.....	.....
(S-20-61) 28aba1	.....	.....	.....	.....	.....	60	10	.....	.....
(S-20-61) 28bbd1	303	.....	E. H. Thomas and H. W. Polk	Floyd Francis	1912	8	690	.....	.....
(S-20-61) 28bca1	304	.....	E. H. Thomas and H. W. Polk	.....	.....	4	.....	.....	.....
(S-20-61) 28bca2	477	11421	E. H. Thomas and H. W. Polk	Las Vegas Drilling Co.	1946	10	710	.....	.....
(S-20-61) 28cac1	195	10474	Robert Bunker	.....	1932	8	820	.....	.....
(S-20-61) 28cad1	118	10245	E. A. Honrath	Bert Hairgrove	1940	6	650	636–650	320–385 404–450 540–550
(S-20-61) 28cbd1	12	10293	T. J. Thebo	John Frewalt	1938	8	650	635–650	284–332
(S-20-61) 28cda1	403	10951	V. K., M. G., L. V. Clement and Lee Waite	Joe Evans	1944	8	690	685–690	440–455 508–509 634–635
(S-20-61) 28cdb1	359	10675	E. and J. Bunker	Bert Hairgrove	1941	8	350	.....	.....
(S-20-61) 28cdb2	410	.....	E. and J. Bunker	Bert Hairgrove	1942	6	350	.....	.....
(S-20-61) 28dac1	199	.....	J. A. Haggard	Floyd Francis	1916	6	805	600–685	.....
					1916	8	368?	.....	?–368
(S-20-61) 28dac2	200	.....	J. A. Haggard	.....	1928	6	320	.....	.....
(S-20-61) 28dac3	.....	.....	J. A. Haggard	J. A. Haggard	1928	60	18	.....	.....
(S-20-61) 28dbc1	197	.....	Hutchinson	.....	1924	8	323	.....	.....

Measuring Point: Altitude	Measuring Point: Above (+) or Below (—) Land Surface (feet)	Measuring Point: Description	Pressure Head or Water Level: Above (+) or Below (—) Measuring Point (feet)	Pressure Head or Water Level: Date of Measurement	Yield (gallons a minute): Flow	Use	Temperature (°F)	Remarks
.....	+1.2	Hole in well cap	—5.00	4– 9–1946	.....	N	....	Analysis.
.....	.....	.....	.....	.....	80	DI	73	Log.
.....	+1.8	2-in. to 1-in. reducer	+61.21	2–29–1944	.....	DI		
.....	+1.4	Top of 6-in. tee	+27.2	5– 5–1944	.....	DI		
.....	0.0	Top of plank well cover	—8.95	2– 8–1945	.....	S,O		
.....	+1.25	Top of 8-in. tee	+25.3	4–19–1944	54	DI	74	
.....	+1.5	Top of 4-in. tee	—3.85	4–19–1944	.....	....	....	Plugged in 1946 and replaced by (S–20–61) 28bca2.
.....	+2.35	Top of 10-in. tee	+26.8	2–26–1946	70	P	....	Log.
2,065.56	+1.1	Top of collar on casing	+43.0	3–28–1944	150	DI	76	
2,059.19	+2.3	Top of 2-in. cap on line 16.2 feet south of well	+50.82	2–29–1944	.....	DI	74	Log.
2,068.13	+1.65	⅛-in. plug in casing	+24.1	7–20–1944	50	DI,O	74	Analysis; log.
2,057.04	+1.12	Top of 8-in. collar on casing	+23.8	8– 8–1944	50	N	76	Analysis; log.
2,062.02	+3.1	Top of 8-in. welded cap	+11.6	2–24–1944	8	DI	72	
2,061.43	+2.5	Top of 6-in. welded cap	+12.7	2–29–1944	8	DI	72	
2,047.07	+3.8	⅛-in. plug in casing	+46.2	1–17–1944	75	DI,O	....	Analysis.
2,045.16	+1.0	⅛-in. plug in 1-in. line 10 ft. from well	+20.8	1–17–1944	30	N,O	72	Analysis.
2,043.74	+1.0	Top of bolt on 6-in. pump flange	+5.9	5–29–1944	30	DI	74	
2,043.74	+1.0	Top of bolt on 6-in. pump flange	—4.94	4–23–1945	.....	N,O		
2,056.20	+1.4	Top of 6-in. to 8-in. bushing	+6.93	2–25–1944	10	DI	70	Cleaned out by O. G. Hairgrove, June 17, 1943.

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-20-61) 28dbd1	196	.....	A. Hermenget	.....	1924	10	390	.....	.....
(S-20-61) 28dbd2	198	11143	Lola Buck	.....	1920	6	420	.....	.....
(S-20-61) 29ada1	332	.....	Arthur Lyon	.....	.....	8	.....	.....	.....
(S-20-61) 29cbb1	81	10720	T. E. Sharp	.....	.....	8	375	.....	.....
(S-20-61) 29cbc1	82	10721	T. E. Sharp	Floyd Francis	1921	7⅝	495	.....	.....
(S-20-61) 29cbc2	83	10722	T. E. Sharp	Floyd Francis	1928	8	.....	.....	.....
(S-20-61) 29ccc1	77	7201	Las Vegas Land and Water Co.	.....	1924	12	.....	.....	.....
(S-20-61) 29dab1	171	.....	Masek and Hennon	.....	1932	8	.....	.....	.....
(S-20-61) 29dac1	99	9525	Julia Russell	Floyd Francis	1915	8	780	.....	.....
(S-20-61) 29dad1	357	10669	Louis Perozzi	John Frewalt	1941	9	430	.....	.....
(S-20-61) 29dbb1	380	10781	John Papus	Joe Evans	1942	7⅝	475	.....	.....
(S-20-61) 29dca1	52	10434	Julia Russell	John Frewalt	1938	8	664	.....	.....
(S-20-61) 29dca2	.....	.....	Geological Survey Test Well	Geological Survey	1946	2	30	.....	.....
(S-20-61) 29ddb1	369	11051	Joe S. Ronnow	John Frewalt	1944	6	.....	.....	385-390
					1944	4	442	421-431	.....
(S-20-61) 30adb1	438	11103	L. H. Tritle	Bert Hairgrove	1945	10	322	264-318	180-200
(S-20-61) 30baa1	115	10182	City of Las Vegas	Joe Evans	1937	9⅝	680	380	200 670
(S-20-61) 30bbb1	109	8173	City of Las Vegas	Joe Evans	1927	8	322	.....	.....
(S-20-61) 30bbb2	110	9940	City of Las Vegas	Joe Evans	1937	7⅝	830	750	250 440 470 665

Measuring Point			Pressure Head or Water Level					
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
2,050.56	.....	Top of 6-in. to 4-in. reducer on casing	.....	.....	.....	DI	72	No flow in summer.
2,047.81	+1.5	Top of 6-in. valve connection	+5.25	4–28–1944	5	DI	72	
.....	0.0	Top of 8-in. casing	+6.4	4–19–1944	47	DI		
2,140.68	0.0	Top of 4-in. tee	+6.4	4–19–1944	30	DI	72	Cleaned out by Floyd Francis in 1921.
2,139.07	+1.0	Top of 6-in. plug on 4-way tee	+7.9	4–19–1944	108	DI	72	Log.
2,119.96	+1.0	Top of 8-in. valve connection	+33.2	4–19–1944	340	DI	73	Analysis.
.....	.....	.....	.....	1–15–1944	1252	P	....	Composite analyses; table 4.
2,086.39	+0.8	Top of welded cap on 8-in. casing	+20.8	2–29–1944	75	DI	69	
2,083.29	+1.4	Top of hose bib 40-ft. north of well	+34.7	2–21–1944	160	DI	....	Log.
2,078.86	+1.25	Top of 6-in. tee	+40.0	3–22–1944	.....	DI	72	Log.
2,095.26	+1.6	⅛-in. plug in casing	+21.8	8– 8–1944	160	N,O	....	Analysis; log.
2,083.87	+0.5	⅛-in. plug in casing	+42.8	1–31–1945	170	DI,O	....	Analysis; log.
.....	+0.9	Top of casing	—6.34	4–23–1946	.....	O		
2,079.38	+0.9	Top of 6-in. collar on casing	+8.5	10–18–1944	15	DI	....	Log.
2,079.38	+0.9	Top of 6-in. collar on casing	+16.3	10–18–1944	15	DI	....	Log.
.....	+2.5	Top of welded cap	+17.6	6–22–1945	175	DI	72	Log.
2,182.79	+2.9	Top of 12-in. tee	+9.5	4–18–1944	.....	P,DI		
2,202.51	—1.0	Top of 2-in. tee	—5.19	2–20–1945	.....	P,DI	....	Analysis.
2,199.00	+2.0	Top 8-in. casing	.....	.....	.....	N,O		

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-20-61) 30bcc1	.....	.....	Geological Survey Test Well	Geological Survey	1946	2	33	.....	.....
(S-20-61) 30dda1	179	10458	Las Vegas Land and Water Co.	Hall-Baker Exploration Co.	1940	16	800	650–734	290–360 770–790
(S-20-61) 30dda2	366	10706	Las Vegas Land and Water Co.	Hall-Baker Exploration Co.	1941	13⅜	489	300–383	445–477
(S-20-61) 31aad1	114	10127	Las Vegas Land and Water Co.	Roscoe Moss Co.	1936	12	802	575–802	325–407
(S-20-61) 31aad2	367	10707	Las Vegas Land and Water Co.	Hall-Baker Exploration Co.	1942	13⅜	500	280–490	.....
(S-20-61) 31ada1	277	10508	Las Vegas Land and Water Co.	Hall-Baker Exploration Co.	1940	16	801	535–801	285–475
(S-20-61) 31add1	398	10867	Las Vegas Land and Water Co.	Hall-Baker Exploration Co.	1942	13⅜	485	360–400	270–320
(S-20-61) 31dab1	399	10868	Las Vegas Land and Water Co.	Hall-Baker Exploration Co.	1942	13⅜	766	560–680	320–380 730–750
(S-20-61) 31dac1	457	11249	Las Vegas Land and Water Co.	Hall-Baker Exploration Co.	1945	10¾	940	550–750	230–365 800–904
(S-20-61) 31ddb1	400	10869	Las Vegas Land and Water Co.	Hall-Baker Exploration Co.	1942	13⅜	472	280–350	.....
(S-20-61) 31ddc1	401	10870	Las Vegas Land and Water Co.	Hall-Baker Exploration Co.	1942	13⅜	1250	500–800	290–390 840–920 1100–115
(S-20-61) 32acb1	16	.....	R. B. Griffith	J. L. Filby	1930	8	363	.....	.....
(S-20-61) 32acb2	390	10791	R. B. Griffith	Joe Evans	1942	8	660	640–660	400
(S-20-61) 32acc1	456	11246	R. B. Griffith	Las Vegas Drilling Co.	1946	10	695	.....	.....
(S-20-61) 32cdc1	465	11323	Kenneth Searles	Joe Irwin	1946	10	585	.....	.....
(S-20-61) 32cdd1	464	11306	E. W. and L. Cragin	Tommy Miller	1946	10	575	.....	.....
(S-20-61) 32dab1	510	.....	J. L. Filby	J. L. Filby	1946	8	100	.....	.....

Measuring Point			Pressure Head or Water Level					
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
.....	+0.5	Top of casing	—14.85	4–19–1946	.....	O	....	Log.
2,123.67	+3.0	Top of ½-in. valve on check valve	+64.7	2–18–1944	650	P	....	Composite analysis, table 4; log.
2,124.50	+4.2	Top of ¼-in. tee on air line	+31.2	2–18–1944	225	P	....	Composite analysis, Table 4; log. 840 G. M. pumped during 1944.
2,149.02	0.0	Top of 12-in. discharge pipe	+38.2	2–18–1946	844	P	....	Composite analysis, Table 4.
2,140.42	+3.22	Top of ¼-in. ell on air line	+30.0	2–18–1946	388	P	....	Composite analysis, Table 4; log. 840 G. M. pumped during 1946.
2,137.61	+3.2	Top of ⅛-in. plug on air line	+49.7	2–18–1946	264	P	....	Composite analysis, Table 4; log. 480 G. M. pumped during 1946.
2,128.88	+3.5	Top of upper flange on 12-in. 4-way tee	+50.8	2–18–1946	480	P	....	Composite analysis, Table 4; log. 809 G. M. pumped during 1946.
2,132.18	+3.2	Top of 12-in. flange on 4-way tee	+54.9	2–18–1946	575	P	....	Composite analysis, Table 4; log.
2,131.90	0.0	Top of concrete platform at NW corner of sump	+56.3	2–18–1946	1800	P	....	Log.
2,135.47	+2.9	Top of 12-in. flange on 4-way tee	+50.8	2–18–1944	786	P	....	Composite analysis, Table 4; log.
2,140.92	+3.85	Top of 8-in. to 12-in. flange	+48.3	2–18–1944	2023	P	....	Composite analysis, Table 4; log.
.....	+4.5	Top of casing	—1.10	12–21–1940	.....	N,O	....	Plugged in 1944.
.....	+1.8	⅛-in. plug in casing	+71.5	8–22–1944	340	DI,O	77	Analysis; log.
2,096.02	+3.1	Top of cap on 12-in. casing	.....	2–27–1946	150	P	76	Log.
2,102.14	+1.5	Top of 10-in. tee	+79.8	2–27–1946	360	DI		
2,094.46	+1.4	Top of 10-in. welded cap	+68.8	3–25–1946	.....	DI	....	Log.
.....	+1.2	Top of casing	—8.11	4–18–1946	.....	DI		

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S–20–61) 32dab2	511	.....	J. L. Filby	J. L. Filby	1946	8	100	.....	.....
(S–20–61) 32dac1	508	.....	J. L. Filby	J. L. Filby	1946	8	100	.....	.....
(S–20–61) 32dac2	509	.....	J. L. Filby	J. L. Filby	1946	8	.....	.....	.....
(S–20–61) 32dbd1	507	.....	J. L. Filby	J. L. Filby	1946	8	100	.....	.....
(S–20–61) 32dcb1	17	11166	R. H. Morrison	J. L. Filby	1928	8	616	.....	.....
(S–20–61) 32dda1	346	10574	Adrian Kuffer	J. L. Filby	1940	5§	418	370–408	.....
(S–20–61) 32ddb1	201	11271	M. R. Russell	.....	1932	8	.....	.....	.....
(S–20–61) 32ddb2	394	10847	M. R. Russell	Joe Evans	1943	10	644	500–644	400–410 496–500
(S–20–61) 32ddd1	120	10301	H. D. Gerken	J. L. Filby	1939	5§	407	345–410	332–342
(S–20–61) 33bcb1	.....	.....	Freeman Rogers	.....	.....	8	75	.....	.....
(S–20–61) 33bcc1	91	10797	H. A. Studwell	J. L. Filby	1925	6	525	375–400	330–335
(S–20–61) 33bcc2	.....	.....	.....	.....	.....	6	75	.....	.....
(S–20–61) 33cba1	204	.....	J. L. Filby	J. L. Filby	1938	8	426	.....	.....
(S–20–61) 33cbc1	203	.....	J. L. Filby	Floyd Francis	1913	8	400	338–376	.....
(S–20–61) 33cca1	205	10471	E. H. Allen	E. H. Allen	1938 1938	3 1	400 200	390–400 200–210	320–340 .....
(S–20–61) 33cca2	206	.....	Ed Strong	Ed Strong	1938	4	226	.....	.....
(S–20–61) 33cca3	383	10786	Margaret Folsom	J. L. Filby	1942	5§	400	390–400	280–290
(S–20–61) 33ccb1	14	10035	A. W. Blackman	.....	1936	6	400	.....	.....
(S–20–61) 33ccb2	15	.....	Myrtle Tate	.....	1912	8	425	.....	.....
(S–20–61) 33ccc1	183	.....	Woodland Park	.....	1912	8	360	.....	.....
(S–20–61) 33ccd1	202	.....	Clark County Hospital	Diskin	1926	8	386	.....	.....

Measuring Point			Pressure Head or Water Level					
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
.....	+0.3	Top of casing	—7.93	4–18–1946	.....	DI		
.....	+1.2	Top of casing	—8.56	4–18–1946	.....	DI		
.....	.....	.....	.....	.....	.....	....	....	Well not finished in April, 1946.
.....	+0.4	Top of casing	—4.05	4–18–1946	.....	DI		
.....	0.0	Top of casing	+70.5	8– 4–1944	.....	DI	72	
2,071.29	+1.9	Top of 6-in. tee	+18.5	3– 9–1944	120	DI	72	Log.
2,075.62	+0.8	Top of 4-in. ell	+27.7	2–19–1946	.....	DI		
2,075.02	+0.3	Top of 12-in. casing	+32.7	8– 4–1944	75	DI	72	Log.
.....	+1.9	Top of 6-in. valve	+19.6	3– 6–1944	.....	DI	....	Log.
.....	.....	Cannot measure water level				N		
2,068.51	+2.0	Top of 6-in. ell	+13.3	8–12–1944	44	DI	72	Log; 375 feet of casing.
.....	+0.2	Top of casing	—4.61	4–18–1946	.....	N		
2,061.91	.....	Top of 8-in. casing leading from ell	.....	.....	.....	DI		
2,068.27	0.0	End of ¾-in. line 20 feet south of well	+18.5	3– 6–1944	.....	DI	72	Log.
2,059.59	+1.0	¾-in. hose bib	+17.2	10–30–1945	15	DI,O	71	Analysis; log.
.....	+1.0	¾-in. hose bib	+6.4	10–30–1945	.....	DI,O	70	Analysis; log.
2,055.97	+1.7	Top of 1-in. tee on suction pipe of pump	—0.2	5–12–1944	.....	DI	....	Analysis.
2,056.04	+2.5	1-in. line by garage	+32.3	2–21–1944	.....	DI	....	Log.
2,062.97	+2.4	Top of 6-in. tee	+23.1	3– 3–1944	60	DI	72	
.....	+2.4	Top of 8-in. to 4-in. reducer	+13.9	3– 3–1944	25	DI	72	Analysis; well leaks around casing.
2,063.85	0.0	4-in. pump flange	+23.1	3– 3–1944	.....	P		
.....	+0.8	Top of 8-in. welded cap	+7.8	6– 6–1944	12	N	....	Tools lost in well when drilled.

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S–20–61) 33cdb1	207	.....	John Ullom	.....	1912	8	401	.....	.....
(S–20–61) 33cdc1	328	10580	G. C. Blaine and Clifford A. Jones	Pat Thompson	1940	5⅝	492	432–450	.....
(S–20–61) 33dad1	13	.....	Mrs. Frank Beam	J. L. Filby	1938	8	600	.....	.....
(S–20–61) 34aaa1	230	.....	Tom Keeler	.....	1926	6	600	.....	.....
(S–20–61) 34aab1	163	.....	Ralph Stone	.....	1925	8	.....	.....	.....
(S–20–61) 34aab2	388	10725	J. Sigurdson	Pat Thompson	1941	6	480	.....	.....
(S–20–61) 34acd1	174	10391	Richard Clough	Joe Evans	1940	6⅝	290	.....	.....
(S–20–61) 34adb1	229	.....	W. B. Mundy	.....	1913 1913	8 4	160 814	 530	....
(S–20–61) 34adc1	47	.....	S. W. Craner	Floyd Francis	1913	8	354	.....	.....
(S–20–61) 34adc2	326	.....	S. W. Craner	.....	1913	8	.....	.....	.....
(S–20–61) 34adc3	327	.....	S. W. Craner	.....	1926	8	.....	.....	.....
(S–20–61) 34add1	232	.....	J. H. Ladd Estate	.....	1912	....	370	.....	.....
(S–20–61) 34add2	497	.....	Sam Mikulich						
(S–20–61) 34bcb1	159	.....	Union Pacific Railroad	.....	.....	....	.....	.....	.....
(S–20–61) 34dbb1	182	10466	P. J. Goumond	Joe Evans	1940	5⅝	638	.....	.....
(S–20–61) 34dbb2	353	*10717	Max Tenesch	Pat Thompson	1941	....	350	.....	.....
(S–20–61) 34ddb1	498	.....	Unknown						
(S–20–61) 35bcb1	231	.....	Jake Garehime	Floyd Francis	1926	4	820	.....	.....
(S–20–61) 35cac1	362	*10697	E. A. Clark	Pat Thompson	1941	8	470	407–438	146–150 258–263
(S–20–61) 35cbb1	233	.....	J. H. Ladd Estate	O. G. Hairgrove	1940 1940	6 4	410 795	410–420 600–650	....
(S–20–61) 35cbb2	363	10702	H. & G. Stocker	Pat Thompson	1941	8	460	400–460	.....

*Canceled.

Measuring Point			Pressure Head or Water Level		Yield (gallons a minute)			
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Flow	Use	Temperature (°F)	Remarks
2,057.37	+3.0	Top of pump	.....	.....	.....	DI		
.....	+0.9	Top of 2-inch welded outlet	+30.0	3– 6–1944	20	DI	69	Log.
.....	+1.0	Top of casing	+27.7	3–27–1944	.....	DI	....	Log.
.....	+2.4	Top of collar on casing	+17.6	4–12–1946	.....	N	73	
.....	+1.3	Top of casing	+20.9	4–12–1946	.....	N	72	
.....	+1.0	Top of pump base	+5.03	4–12–1946	.....	DI	75	
.....	.....	.....	.....	.....	.....	DI		
.....	+1.0	Top of 4-in. tee	+6.0	3– 7–1944	.....	N		
.....	.....	.....	+5.5	3– 7–1944	.....	N		
.....	+1.0	Top of 8-inch cap on casing	+32.3	3–19–1944	.....	DI,O	69	Analysis; log.
.....	+1.5	Top of 8-in. to 4-in. bushing	+20.8	4–29–1944	.....	N		
.....	+1.3	Top of 8-in. to 2-in. bushing	+4.05	4–29–1944	.....	N		
.....	+2.0	Top of 4-in. ell	+18.8	5–29–1944	.....	DI		
.....	.....	.....	.....	.....	.....	DI	....	Analysis.
.....	.....	Land surface	+42.0±	4– 2–1940	66	DI	....	Log.
.....	.....	.....	.....	.....	.....	DI		
.....	+3.45	Top of 2-in. tee	+24.0	3–25–1944	30	DI	72	Sanded up to 430 ft.; 4-in. casing to unknown depth; 3-in. casing to unknown depth.
.....	.....	.....	.....	.....	.....	DI	68	Log.
.....	+2.72	⅛-in. plug in casing	+27.7	3–10–1944	.....	N,O	....	Log.
.....	+2.72	⅛-in. plug in casing	+49.7	3–10–1944	.....	N,O	....	Log.
.....	+1.7	Top of 8-in. collar on casing	+9.6	9–19–1945	12	DI	....	Analysis.

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S–20–61) 35dbd1	78	.....	Mrs. Frank Beam	.....	.....	6	475	.....	.....
(S–20–61) 35dca1	210	.....	Pat's Patio	.....	1931	8	412	.....	.....
(S–20–61) 35dcb1	95	*9520	E. A. Clark Estate	.....	1925	4	290	.....	.....
(S–20–61) 35ddc1	50	10152	Marie O. Lawton	Joe Evans	1937	8	350	.....	.....
(S–20–61) 35ddc2	368	10713	Estella Beam	John Frewalt	1941	8	418	.....	.....
(S–20–61) 36bac1	473	11241	C. K. and A. M. Ryerse	John Frewalt	1946	8	470	.....	.....
(S–20–61) 36bbb1	393	10844	A. C. Delkin	Bert Hairgrove	1942	7⅞	325	300–325	.....
(S–20–61) 36bbb2	280	.....	Charles Haller	.....	1934	4	340	320–340	.....
(S–20–61) 36bbc1	422	10996	W. M. Metzer	John Frewalt	1944	6	365	265–271	171–175 340–344 354–365
(S–20–61) 36bcb1	405	10919	K. G. Speirs	John Frewalt	1943	7	340	330–340	170–180
(S–20–61) 36bdb1	281	11095	Odd Johnson	Jennings	1929	6	235	.....	.....
(S–20–61) 36bdc1	282	.....	Thomas M. and Anne Metcalf	.....	1929	6	.....	.....	.....
(S–20–61) 36cbc1	.....	.....	Geological Survey Test Well	Geological Survey	1945	1	25	.....	.....
(S–20–61) 36cca1	325	10503	E. A. Clark Estate	Bert Hairgrove	1940	5⅝	637	220–225	.....
(S–20–61) 36cca2	462	11284	Sunrise Acres Water Association	Bert Hairgrove	1946	8	500	.....	.....
(S–20–61) 36ccb1	459	11263	L. G. and M. C. Biel	J. E. Metz	1945	10	346	270–282	135–145 158–167 341–342
(S–20–61) 36ccc1	104	9652	E. A. Clark Estate	.....	1932	8	465	.....	.....
(S–20–61) 36ccd1	463	11207	William Clark	A. W. House	1945	10	200	.....	.....
(S–20–62) 3bbd1	.....	.....	Las Vegas Army Air Field	Joe Evans	1941	8	242	120–260	.....
(S–20–62) 4acb1	371	10734	Aeroville Corporation	.....	1942	6	680	.....	.....

*Canceled.

Measuring Point			Pressure Head or Water Level		Yield (gallons a minute)				
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Flow	Use	Temperature (°F)	Remarks
.....	+1.2	Top of 6-in. well cap	+50.5	3-30-1944	.....	DI		
.....	+1.0	Top of 8-in. welded tee	+41.6	3-10-1944	.....	DI		
.....	+1.88	Top of 4-in. tee	+37.0	3-10-1944	.....	DI		
.....	0.0	⅛-in. plug in casing	+38.1	3-21-1943	.....	DI,O	68	
.....	+1.7	Top of 8-in. tee	+29.7	9-19-1945	46	N,O	71	Analysis; log.
.....	+1.3	Top of 8-in. welded cap	+13.0	3- 6-1946	11	DI	....	Log.
.....	+2.5	Top of 8-in. welded cap	+24.3	3-27-1945	35	DI,O	69	Analysis; log.
.....	+3.0	¾-in. stand pipe 45 feet east of well	+27.7	3-10-1944	.....	DI		
.....	+1.6	Top of 6-in. welded cap	+8.3	3-25-1944	37	DI	68	Log.
.....	+2.1	Top of 6-in. welded cap	+34.7	3-10-1944	35	DI	69	Log.
.....	0.0	Top of 1-in. ell	+7.2	3-28-1944	7	DI	....	225 feet of 6-in. casing
.....	+2.5	Top of 6-in. bushing	+18.5	3-28-1944	.....	DI		
.....	+1.0	Top of casing	—7.84	4-25-1946	.....	O	....	Log.
.....	+2.0	Middle point of 6-in. tee	+27.7	3-16-1944	32	P	....	Log.
.....	+2.0	Top of 2-in. valve east side of well	+19.8	1-24-1946	23	P	72	Log.
.....	+0.3	Top of 10-in. casing collar	+15.0	9——1945	34	P	....	Log.
.....	+2.6	Top of 8-in. to 4-in. welded reducer	+32.3	2-16-1944	.....	DI	70	
.....	+2.3	Top of 8-in. welded cap	+11.35	1-24-1946	4	P	....	Log.
.....	+1.35	Top of casing	—61.35	7-27-1945	.....	N	....	Log.
.....	+0.80	Top of casing	—65.80	4-25-1946	.....	DI		

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-20-62) 4add1	416	.....	Las Vegas Army Air Field	Joe Evans	1942	16	800	.....	.....
(S-20-62) 4dca1	417	.....	Las Vegas Army Airfield	Brockman Drilling Co.	1942	16	795	.....	.....
(S-20-62) 18bbc1	514	.....	A. L. Simpson	A. L. Simpson and O. G. Hairgrove	1944	8	700	.....	.....
(S-20-62) 18bbc2	460	11340	G. W. and Inez Rittenhouse	John Frewalt	1946	8	203	180-203	.....
(S-20-62) 19ab	.....	.....	William Hardin	.....	.....	60	32	.....	.....
(S-20-62) 19acc1	.....	.....	J. E. Metz	J. E. Metz	1944	8	125	.....	.....
(S-20-62) 19bab1	445	.....	Joe Hannig	J. E. Metz	1944	8	140	.....	.....
(S-20-62) 19bbb1	444	.....	C. C. Maracci	Joe Evans	1940	12	289	.....	.....
(S-20-62) 19bcc1	443	.....	Byron Thornton	J. E. Metz	1945	8	150	.....	.....
(S-20-62) 19bdd1	446	.....	J. E. Hardin	J. E. Metz	1944	....	125	.....	.....
(S-20-62) 19cab1	442	11277	W. E. Sayler	J. E. Metz	1944	6	200	.....	.....
(S-20-62) 19dba1	447	.....	I. H. Ault	J. E. Metz	1944	9	128	.....	.....
(S-20-62) 19dbb1	448	.....	William Hardin	J. E. Metz	1944	8	120	.....	.....
(S-20-62) 20cb	.....	.....	.....	.....	.....	60	35	.....	.....
(S-20-62) 32bba1	.....	.....	Walter Mansfield	.....	.....	60	23	.....	.....
(S-20-62) 32bbb1	489	.....	E. B. and Margie Grubb	A. W. House	1944	8	500	.....	.....

Measuring Point: Altitude	Measuring Point: Above (+) or Below (−) Land Surface (feet)	Measuring Point: Description	Pressure Head or Water Level: Above (+) or Below (−) Measuring Point (feet)	Pressure Head or Water Level: Date of Measurement	Yield (gallons a minute): Flow	Use	Temperature (°F)	Remarks
.....	0.0	Land surface	—20.0	4–19–1942	.....	P	....	Analysis; log. 400 G. M. pumped with 180 ft. of drawdown in 1942.
.....	0.0	Land surface	—51.0	8——1942	.....	P	....	Log; 200 G. M. pumped with 80 feet of drawdown in 1942.
.....	+1.0	Top of 6-in. by 6-in. timber across well	—41.05	8–23–1944	.....	N,O		
.....	0.0	Land surface	—42.0	8– 9–1945	.....	P	....	Log.
.....	0.0	Top of 2-in. by 6-in. timber across well	—30.5	3–29–1946	.....	N,O		
.....	+3.0	Metal pump base	—27.03	5– 5–1945	.....	DI	....	2 G. M. pumped during 1945.
.....	.....	.....	.....	.....	.....	DI	....	Log; 2 G. M. pumped during 1945.
.....	+0.5	Top of cement block	—28.38	11–24–1945	.....	DI	....	Analysis; 22 G. M. pumped during 1945; 8 feet of drawdown when pumping 22 G. M. 60 ft. of 12-in. casing.
.....	+1.0	Top of casing	—31.12	3–29–1946	.....	DI,O	....	Log; 2 G. M. pumped during 1946.
.....	+0.5	Top of wooden platform	—27.28	5– 5–1945	.....	DI,O	....	Log; 2 G. M. pumped during 1945.
.....	+0.5	Top of metal pump base	—30.34	3–29–1946	.....	DI,O	....	Log; 2 G. M. pumped during 1946.
.....	+1.0	Top of metal pump base	—26.23	5– 5–1945	.....	DI,O	....	Log; 2 G. M. pumped during 1945.
.....	+0.8	Top of pump base	—27.18	3–29–1946	.....	N,O	....	2 G. M. pumped during 1946.
.....	0.0	Top of wooden stake south-side of well	—31.00	3–29–1946	.....	N,O		
.....	0.0	Top of plank well cover	—13.48	3–29–1946	.....	N,O		
.....	+1.7	Top of casing	—16.97	3–29–1946	.....	S, DI,O	67	Log; 2 G. M. pumped during 1946.

4

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S–20–62) 33ccc1	.....	.....	Geological Survey Test Well	Geological Survey	1946	1	32	.....	.....
(S–21–61) 1aab1	234	10623	H. J. Scott, Trustee, Meadows Addition	.....	1930	8	510	.....	.....
(S–21–61) 1aab2	376	*10753	C. B. Henderson	.....	1935	....	.....	.....	.....
(S–21–61) 1aba1	395	10848	R. J. Kaltenborn	Joe Evans	1942	10	810	.....	.....
(S–21–61) 1bba1	414	.....	Colony Club	Bert Hairgrove	1942	6	345	.....	.....
(S–21–61) 1bbb1	219	.....	J. C. Fisher	.....	.....	8	.....	.....	.....
(S–21–61) 1bda1	415	.....	R. J. Kaltenborn	Joe Evans	1942	8	760	.....	.....
(S–21–61) 1cdc1	84	.....	S. Whitehead	.....	1926	6	.....	.....	.....
(S–21–61) 2cbb1	51	.....	Henry Hunt	Floyd Francis	1926	6	1120	.....	.....
(S–21–61) 2cbb2	.....	.....	Geological Survey Test Well	Geological Survey	1946	1½	20	.....	.....
(S–21–61) 2dcc1	90	*10830	R. J. Kaltenborn	Floyd Francis	1913	8	398	.....	.....
(S–21–61) 2ddc1	106	9885	B. Dennison	Joe Evans	1828	8	260	.....	.....
(S–21–61) 3abb1	54	.....	.....	.....	1907	....	442	.....	.....
(S–21–61) 3abb2	238	.....	W. S. Sparks	.....	1912	12–8	.....	Shallow	.....
					1912	4	807	Deep	.....
(S–21–61) 3abb3	239	.....	Dutton	.....	1924	6	.....	.....	.....
(S–21–61) 3baa1	237	.....	S. J. Lawson	Floyd Francis	1925	4	403	365–400	.....
(S–21–61) 3baa2	349	.....	Al Corradetti	.....	1923	6	.....	.....	.....
(S–21–61) 3bab1	236	.....	James Fulcher	.....	1927	6	400	.....	.....
(S–21–61) 3bac1	235	.....	Home Auto Court	.....	1926	6	400	.....	.....
(S–21–61) 3bcc1	67	10392	Michael Paps	.....	1912	6	725	.....	.....
(S–21–61) 3bcc2	172	10392	Michael Paps	Mizer	1933	10	810	.....	.....

*Canceled.

Measuring Point			Pressure Head or Water Level					
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
.....	+0.6	Top of casing	—23.82	4–25–1946	.....	O	....	Log.
.....	+2.0	Top of 4-in. tee 4-ft. from well house	+4.0	4– 3–1944	12	DI		
.....	.....	.....	.....	.....	.....	DI		
.....	.....	.....	.....	.....	.....	DI	....	Log.
.....	.....	.....	.....	.....	.....	DI	....	Log.
.....	+1.0	Top of 8-in. to 4-in. bushing	+32.3	3– 7–1944	.....	DI		
.....	.....	.....	.....	.....	.....	DI	....	Log; leak on outside of casing.
.....	0.9	Top of 6-in. to 3-in. bushing	+3.6	4– 3–1944	14	DI	70	
1,997.15	+1.0	Top of 6-in. to 4-in. bushing	+38.4	8–21–1944	75	N,O	83	Analysis; log.
.....	+1.0	Top of casing	—10.27	4–24–1946	.....	O	....	Log.
.....	+1.0	Top of 4-in. to 8-in. bushing	—50.7	4– 3–1944	.....	DI	74	Log.
.....	.....	.....	.....	5–31–1943	20	DI	72	Log; leak on outside of casing.
.....	.....	.....	.....	.....	.....	N	....	Well not located in 1945.
.....	+2.3	Top of 4-way tee	+8.9	3–26–1946	.....	DI,O	70	Analysis.
.....	+2.3	.....	+32.9	3–26–1946	.....	....	....	Analysis.
.....	+1.4	Top of 4-in. tee	+0.6	4–25–1944	.....	N	70	
.....	+0.7	Top of 1½-in. valve 39 feet south of well	+13.9	3– 6–1944	10	DI	73	Log.
.....	+3.0	Top of 4-inch 4-way tee	—2.10	9–17–1945	.....	N,O	70	
.....	.....	Cannot measure water level.....				DI	73	10 G. M. pumped during 1946.
.....	.....	.....	.....	.....	.....	DI		
.....	.....	.....	.....	.....	.....	DI	74	
.....	.....	.....	.....	.....	.....	DI	74	Analysis.

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-21-61) 3cbb1	178	10643	Otto and Loriene Underhill	Joe Evans	1939	4	512	.....	.....
(S-21-61) 3cbb2	356	10660	Wilson-Mikkelsen	Pat Thompson	1931	5⅝	666	430-432	390-398 562-582
(S-21-61) 4aab1	.....	.....	State of Nevada, Department of Highways	.....	.....	8	20	.....	.....
(S-21-61) 4aad1	386	10818	Opaco Lumber Co.	Pierce-Anderson	1942	10	793	550-780	300-310
(S-21-61) 4aba1	216	.....	Peter Clos	.....	.....	8	.....	.....	.....
(S-21-61) 4abb1	49	.....	T. L. Roberts	.....	1910	6	403	.....	.....
(S-21-61) 4abc1	75	.....	Art Harris	.....	1910	8	480	.....	.....
(S-21-61) 4abd1	215	.....	Peter Clos	.....	1913	8	750	.....	.....
(S-21-61) 4abd2	470	11091	Stoner and Myers	Joe Irvin	1946	10	400	.....	.....
(S-21-61) 4aca1	469	11302	E. F. and M. Nelson	Joe Irvin	1946	10	900	882-890	550-560 595-615
(S-21-61) 4acb1	27	.....	J. South	.....	1936	8	341	.....	.....
(S-21-61) 4acc1	425	.....	David Stearns	Joe Evans	1941	8	740	.....	.....
(S-21-61) 4baa1	48	.....	William Ellis	.....	1911	8	381	.....	.....
(S-21-61) 4bab1	397	10860	Nick Pahor and Martin	John Frewalt	1942	8	.....	.....	.....
(S-21-61) 4bad1	76	.....	Art Harris	.....	1911	8	750	.....	.....
(S-21-61) 4bbb1	217	.....	G. Heffner	.....	1926	6	.....	.....	.....
(S-21-61) 4bbb2	218	.....	G. Heffner	.....	1926	8	710	.....	.....
(S-21-61) 4bbb3	452	11198	E. A. Honrath	O. G. Hairgrove	1945	8	492	380-385	295-297
(S-21-61) 4bca1	66	10988	L. G. McNeil	.....	1911	8	372	.....	.....
(S-21-61) 4bcb1	26	10988	L. G. McNeil	.....	1914	7	354	.....	.....
(S-21-61) 4bcc1	64	10988	L. G. McNeil	.....	1911	8	378	.....	.....
(S-21-61) 4bda1	65	10986	L. G. McNeil	.....	1913	.....	430	.....	.....

Measuring Point			Pressure Head or Water Level					
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
.....	+1.7	Top of 2-inch tee	+41.6	3- 2-1944	.....	N	....	Log.
.....	+1.25	¾-in. tee 2 ft. west of well	+20.8	3- 2-1944	.....	DI	....	Log.
.....	0.0	Top of spike at edge of well southside	—5.64	3-27-1945	.....	N,O	....	Well uncased.
.....	+3.0	Top of plug in casing	+14.2	8-19-1944	50	N,O	74	Analysis; log.
.....	.....	.....	.....	.....	.....	DI		
.....	.....	Cannot measure pressure	.....	4- 9-1946	4	DI,S	71	
.....	+1.35	Top of 8-in. to 4-in. bushing	+12.2	4- 9-1946	20	DI	71	
.....	+3.12	Top of ⅛-in. plug in casing	+41.6	3- 2-1944	.....	DI		
.....	.....	.....	.....	.....	.....	DI	....	Well unfinished in 1946.
.....	+3.0	Top of 8-in. nipple	+33.3	1- 3-1946	184	P	77	Log.
.....	0.0	Top of 8-in collar on casing	+15.6	4-18-1944	120	DI	72	
.....	+1.4	Top of 8-in. welded cap	+16.2	9-18-1945	75	DI	74	Small leak in valve during measurement.
.....	+1.0	Top of 8-in. casing	+26.4	1-17-1944	260	DI,O	72	Analysis.
.....	+1.0	Top of 8-in. to 4-in. ell	+25.4	3- 3-1944	.....	DI		
.....	+1.6	Top of 8-in. valve	+34.7	3- 2-1944	190	DI	74	
2,071.37	+0.9	Top of 4-in. tee	+18.5	3- 7-1944	130	DI	74	
2,068.75	+2.15	Top of 4-in. tee	+17.1	8- 4-1944	90	DI	74	
2,070.13	+1.3	Top of 8-in. welded cap	+18.5	12-29-1945	250	DI,S	70	Log.
.....	+1.25	Top of 6-in. valve	+14.5	4-18-1944	.....	DI		
.....	+1.65	Top of 7-in. casing	+9.5	4-18-1944	.....	DI	....	Log.
.....	0.0	Top of 4-in. valve flange	+7.1	4-18-1944	75	DI	70	
.....	.....	.....	.....	.....	.....	DI	....	10 G. M. pumped during 1945.

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-21-61) 4dac1	347	10582	Theodore Michelas	Joe Evans	1940	7⅝	810	.....	.....
(S-21-61) 4dac2	420	10942	Theodore Michelas	A. W. House	1944	7	650	370-391	643-647
(S-21-61) 4dcc1	214	.....	W. McLellen	.....	1912	6	382	.....	.....
(S-21-61) 4ddb1	88	9323	Boulder Dam Insurance Co.	.....	.....	8	400	.....	.....
(S-21-61) 4ddc1	240	.....	Dr. Stevenson	John Frewalt	1939	....	350	.....	.....
(S-21-61) 4ddd1	241	.....	Tower Auto Court	.....	.....	8	.....	.....	.....
(S-21-61) 5bac1	24	10987	L. G. McNeil	.....	1934	8	555	.....	.....
(S-21-61) 5caa1	25	.....	Splane Estate	Floyd Francis	1914	8	585	.....	.....
(S-21-61) 6aca1	361	10680	J. and A. Edmonds	Pat Thompson	1941	8	288	255-288	.....
(S-21-61) 6aca2	379	10761	Sebastian Mikulich	Pat Thompson and John Frewalt	1942	9	329	.....	.....
(S-21-61) 6acb1	19	11283	G. D. Corey	John Frewalt	1937	6	326	.....	.....
(S-21-61) 6acb2	20	10757	L. M. Pinjuv	.....	1938	6	292	.....	.....
(S-21-61) 6acb3	151	.....	Artesian Acres	.....	1931	....	259	.....	.....
(S-21-61) 6acb4	.....	.....	G. D. Corey	.....	.....	60	31	.....	.....
(S-21-61) 6acc1	21	10409	J. D. Porter	.....	1937	10	394	.....	.....
(S-21-61) 6acc2	22	10409	J. D. Porter	.....	1934	6	224	.....	.....
(S-21-61) 6acc3	148	10409	J. D. Porter	.....	.....	4	274	.....	.....
(S-21-61) 6adc1	23	.....	Fred Gobeli	.....	1928	6	229	.....	.....
(S-21-61) 6adc2	389	10787	Leo Pahor	John Frewalt	1942	6	318	292-318	.....
(S-21-61) 6adc3	480	11175	E. M. and A. M. Ladd	O. G. Hairgrove	1946	8	360	348-360	.....
(S-21-61) 6bdb1	409	.....	J. R. Lewis	Pat Thompson	1942	8	350	305	.....
(S-21-61) 7acc1	155	.....	Kimball-Williams	.....	.....	8	.....	.....	.....
					.....	6	355	355	.....

Measuring Point			Pressure Head or Water Level		Yield (gallons a minute)			
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Flow	Use	Temperature (°F)	Remarks
.....	+3.0	Top of 4-in. ell	+46.2	3– 2–1944	66	DI		
.....	+1.5	Top of welded cap	+6.9	6–19–1944	43	DI	74	Analysis; log.
.....	.....	.....	.....	Spring, 1945	2	DI	....	Casing rusted off at surface.
.....	+1.75	Top of west 2-in. valve	+11.6	3– 2–1944	.....	N	....	Analysis.
.....	.....	.....	.....	.....	.....	DI	....	10 G. M. pumped during 1945.
.....	0.0	Top of casing	+24.2	3–31–1944	37	DI	72	
2,113.13	+2.0	Top of valve	+54.6	8– 4–1944	576	DI,O	72	Well leaks 100 G. M. throughout year.
.....	.....	.....	.....	8–30–1944	260	DI	72	Log; well leaks 225 G. M. throughout year.
2,170.65	+1.5	Top of 6-in. to 2-in. bushing	+13.2	8–31–1944	43	DI	72	Log.
2,175.00	+1.5	Top of 8-in. casing	+10.4	8–30–1944	120	DI	74	Log.
2,178.04	+1.0	⅛-in. plug in casing	+16.2	11–18–1942	40	DI,O	72	20 G. M. pumped during 1942.
2,176.94	+0.5	Top of 4-in. valve	+16.2 +8.0	3– 2–1944 8–21–1944	47	DI	72	
2,176.94	0.0	Top of 1-in. line 6 feet south of well	+16.2	3– 2–1944	.....	DI		
.....	0.0	Top of board well cover	—19.36	3–10–1945	.....	N,O		
2,179.87	+1.25	Top of 10-in. welded cap	+12.7 +5.8	3– 7–1944 8–23–1944	133	DI	73	
2,176.92	+2.5	Top of 4-in. tee	+16.2 +8.6	3– 7–1944 8–23–1944	50	DI	73	
2,178.63	+3.0	Top of 3-in. welded ell	..... +13.9	3– 7–1944 8–23–1944	20	DI	73	
2,170.03	+4.0	Top of 6-in. welded ell	..... +13.9	3– 7–1944 8–30–1944	20 12	DI	72	
2,166.16	+2.6	Top of 6-in. welded cap	..... +23.1	3– 7–1944 8–30–1944	36	DI	72	Log.
.....	+1.0	Top of 8-in. casing collar	+18.8	4– 2–1946	62	DI	72	Log.
2,196.21	+5.0	Top of casing	—8.37	3–22–1946	.....	N,O	....	260 feet of 8-in. casing.
2,180.41	+1.0	⅛-in. plug in casing	+8.9	3–18–1944	15	DI,O	72	Analysis.
2,180.41	+1.0	.....	11.2	3–18–1944	10	DI,O	73	Analysis.

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-21-61) 7dda1	.....	11218	Robert and Josie Russell	A. W. House	1946	8	400	.....	.....
(S-21-61) 7ddb1	474	11138	F. T. Roberts	.....	1946	.....	400	.....	.....
(S-21-61) 7ddd1	28	.....	W. M. Sweet	.....	.....	8	360	.....	.....
(S-21-61) 9aab1	370	10718	T. E. Hull	Joe Evans	1941	8	.....	.....	.....
(S-21-61) 9aac1	341	10553	T. E. Hull	.....	1940	8	550	.....	.....
(S-21-61) 9aad1	402	10885	M. D. Close	Joe Evans	1942	10	555	.....	.....
(S-21-61) 9acd1	377	10754	Vegas Valley Development Co., Ltd.	Joe Evans	1942	7⅝	550	540–550	.....
(S-21-61) 9cdc1	451	11156	Hotel El Rancho, Inc.	Joe Irvin	1945	10	585	.....	.....
(S-21-61) 9dcb1	472	11300	L. M. and L. L. Woods	Joe Irvin	1946	10	688	.....	.....
(S-21-61) 9dcc1	437	11215 11227	Pacific States Theatres	O. G. Hairgrove	1945	10	600	540–580	310–315
(S-21-61) 9dcd1	138	10813	Thomas A. Campbell	.....	1928	8	530	.....	.....
(S-21-61) 10cdc1	329	.....	Ridgeview Estate	.....	1912	.....	.....	.....	.....
(S-21-61) 11bbb1	330	10520	Nevada Hotel Co.	J. L. Filby	1940	8	650	480–582	.....
(S-21-61) 12cdb1	436	11102	C. R. Martin	Bert Hairgrove	1944	8	333	.....	.....
(S-21-61) 12cdc1	455	11244	C. M. and D. M. Martin	Bert Hairgrove	1945	6	.....	.....	.....
(S-21-61) 12dac1	289	11432	H. C. and N. M. Harris	Joe Evans	1939	8	310	.....	.....
(S-21-61) 12dca1	290	.....	W. B. Brown	John Frewalt	1937	6	284	.....	.....
(S-21-61) 12dcd1	291	.....	F. C. Creighton	John Frewalt	1937	8	284	.....	.....
(S-21-61) 13bdb1	292	.....	John Lisle	Joe Evans	1939	8	260	.....	.....
(S-21-61) 14cdd1	.....	.....	Geological Survey Test Well	Geological Survey	1946	1½	35	.....	.....
(S-21-61) 15bb	.....	.....	T. T. Schofield	.....	.....	60	9	.....	.....

Measuring Point			Pressure Head or Water Level		Yield (gallons a minute)			
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Flow	Use	Temperature (°F)	Remarks
.....	+1.0	Top of 8-in. welded cap	+9.2	3- 1-1946	16	DI		
.....	.....	.....	.....	.....	16	....	....	Log.
.....	+2.5	Top of 4-in. valve	+20.6	9- 1-1938	35	DI	72	6-in. casing inside.
.....	.....	.....	.....	10-10-1944	.....	DI	....	210 G. M. pumped during 1944.
.....	+2.8	Top of 8-in. tee	+18.4	10-10-1944	160	DI		
.....	+2.6	Top of 10-in. tee	+30.4	3-31-1944	20	N	70	Cleaned out by Joe Irvin in 1946.
.....	+2.1	Top of 4-in. ell	+25.3	8-15-1944	75	N,O	70	Analysis; log.
.....	+4.1	Top of welded pump base	+15.3	7-16-1945	50	P	....	Log.
.....	+0.5	Top of 10-in. casing	+26.3	3-27-1946	10	P	74	Log.
.....	+1.0	Top of 10-in. casing	+10.0	2-14-1945	50	DI	74	Log.
.....	+0.3	Top of 8-in. casing	+31.8	3-31-1944	30	DI		
.....	.....	.....	.....	.....	.....	DI		
.....	+2.3	Top of 8-in. welded cap	+16.0	8- 7-1944	25	N,O	76	Log.
.....	+1.3	Top of casing	+32.0	12- 7-1944	66	DI	73	
.....	.....	.....	.....	.....	.....	DI	73	
.....	.....	.....	.....	9-17-1945	15	N	71	
.....	.....	.....	.....	9-17-1945	20	DI	71	
.....	.....	.....	.....	9-17-1945	66	DI	69	
.....	.....	.....	.....	9-17-1945	72	DI	71	
.....	+1.0	Top of casing	.....	.....	.....	O	....	Log.
.....	+1.0	Top of 2-in. frame set in cement block	—7.42	3-26-1945	.....	DI,O	....	2 G. M. pumped during 1945.

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-21-61) 15bcc1	478	11327	T. A. Wells	O. G. Hairgrove	1946	10	892	485–495	310–333 362–370 390–400 550–555 666–685
(S-21-61) 15bdc1	33	.....	L. H. Rockwell	.....	1924	8	386	.....	.....
(S-21-61) 16bab1	242	10497	Hotel Last Frontier	.....	1930	8	600	.....	.....
(S-21-61) 16bab2	387	11039	Hotel Last Frontier	.....	.....	.....	.....	.....	.....
(S-21-61) 16bac1	344	10528	F. Dio Date	Joe Evans	1940	8	550	.....	.....
(S-21-61) 16bbd1	481	11157	Hotel El Rancho, Inc.	Joe Irvin	1946	10	972	.....	.....
(S-21-61) 16bcc1	32	9832	State of Nevada, Department of Highways	Joe Evans	1935	10	900	460–470	544–547 764–?
(S-21-61) 16bcc2	372	*10740	R. A. Coffman	.....	1941	8	.....	.....	.....
(S-21-61) 16bcd1	378	10758	F. W. Somerville	.....	1942	6	535	.....	.....
(S-21-61) 16bda1	112	10019	Burton Weller	Joe Evans and Bert Hairgrove	1929	6	565	.....	.....
(S-21-61) 16bdb1	111	10013	John Stafford	Joe Evans	1936	5⅝	559	.....	.....
(S-21-61) 16cbb1	243	.....	Miller and Smith	.....	.....	.....	700	.....	.....
(S-21-61) 16cbb2	244	.....	T. A. Wells	Joe Evans	.....	.....	.....	.....	.....
(S-21-61) 16cbb3	245	.....	T. A. Wells	Joe Evans	.....	.....	700	.....	.....
(S-21-61) 16cbc1	246	10792	Jack Weisberger	.....	1936	8	700	.....	.....
(S-21-61) 17aca1	.....	.....	Geological Survey Test Well	Geological Survey	1946	2	35	.....	.....
(S-21-61) 17cab1	487	.....	O. T. and M. I. Edgell	.....	.....	6	.....	.....	.....
(S-21-61) 17cac1	392	11325	F. V. and W. L. Somerville	Pat Thompson	1942	10	325	300–325	.....

*Canceled.

Measuring Point			Pressure Head or Water Level		Yield (gallons a minute)			
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Flow	Use	Temperature (°F)	Remarks
.....	+1.0	Top of 10-in. collar on casing	+6.9	3–20–1946	133	P	....	Log.
.....	0.0	Top of 8-in. casing	+24.2 +9.5	3–30–1944 8– 7–1944	75	N	72	
.....	.....	.....	.....	.....	.....	P		
.....	.....	.....	.....	.....	.....	P		
.....	+2.1	Top of 6-in. well	+38.2	3–31–1944	.....	DI	72	
.....	+2.5	Top of casing	+47.4	2– 6–1946	46	P	....	10-in. casing to 610 ft.; 803 ft. of 8-in. casing from 169 to 972 ft.
.....	+1.7	Top of 10-in. cap on casing	+36.4	4– 5–1944	.....	DI	....	Log.
.....	.....	.....	.....	.....	.....	N		
.....	.....	.....	.....	.....	.....	DI		
.....	+0.9	Top of casing	+19.5	4–24–1944	26	DI	72	6-in. casing to unknown depth; 4-in. casing from surface to 565 ft., perforated from 465 to 565 ft.
.....	+1.18	Top of 6-in. collar on casing	+37.2	3–31–1944	.....	DI	72	Log.
.....	.....	.....	.....	.....	.....	DI		
.....	.....	.....	.....	.....	.....	N		
.....	.....	.....	.....	.....	.....	N		
.....	+1.3	Top of 8-in. tee	+16.9	3–31–1944	.....	DI		
.....	.....	.....	.....	.....	.....	O	....	Log.
.....	+1.2	Top of 6-in. collar on casing	+9.5	4– 6–1944	.....	DI		
.....	+2.35	Top of cement pump base	+27.6	4– 6–1944	.....	Ind.		

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-21-61) 17dad1	222	.....	Woodward	Woodward	.....	....	.....	.....	.....
(S-21-61) 17dbc1	31	10183	City of Las Vegas	Woodward	1928	6	400	.....	.....
(S-21-61) 17dbc2	220	.....	City of Las Vegas	Woodward	.....	2	.....	.....	.....
(S-21-61) 17dcb	247	.....	F. Munson	.....	1937	....	540	.....	.....
(S-21-61) 18bbc1	29	.....	Henry Deadrich	.....	1912	8	292	.....	.....
(S-21-61) 18dbc1	221	.....	C. A. Bryant	.....	1930	....	.....	.....	.....
(S-21-61) 18dbd1	30	.....	C. A. Bryant	Floyd Francis	1925	6	225	.....	.....
(S-21-61) 20aaa1	453	11226	Murray and Agnes Wollman	O. G. Hairgrove	1945	10	710	705–710	440–447 560–570
(S-21-61) 21aaa1	124	10821	Murray Wollman and H. Mack	O. G. Hairgrove	Repaired 1944	6	784	.....	.....
(S-21-61) 21bbb1	123	10820	Moe Sedway	.....	1930	6	850	.....	.....
(S-21-61) 21cbb1	160	.....	Morris Rose	.....	.....	8	520	.....	.....
(S-21-61) 21dcd1	.....	.....	.....	.....	.....	60	22	.....	.....
(S-21-61) 22bca1	34	10624	E. C. Wilbourne	.....	1930	6	690	.....	.....
(S-21-61) 22ccc1	117	10243	A. P. Baker	.....	1933	6	500	.....	.....
(S-21-61) 23ccb1	126	10608	Murray Wollman	.....	1929	6	.....	.....	.....
(S-21-61) 25cab1	149	.....	C. Beckwith	.....	.....	6	.....	.....	.....
(S-21-61) 26bba1	86	9239	V. O. Eastland	.....	.....	6	500	.....	.....
(S-21-61) 26bbb1	85	9239	A. J. and L. C. Wood	.....	.....	....	610	.....	.....
(S-21-61) 26bbb2	458	11255	A. J. and L. C. Wood	J. E. Metz	1945	10	595	565–595	197–215 277–280 309–310

Measuring Point			Pressure Head or Water Level						
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
.....	+2.0	Top of ⅛-in. plug	+20.9	4- 5-1944	25	N	74	
.....	+3.0	Top of 6-in. cap	+18.7	3-31-1944	.....	Ind.	74	
.....	+0.9	Top of cement block around well	+19.5	3-31-1944	25	N	74	2-in. casing to 2 ft.; 8-in. casing to unknown depth.
.....	.....	.....	.....	.....	.....	Ind.	74	
.....	+0.65	Top of casing	—30.35	3-22-1942	.....	N,O	....	Well bridged at 29 feet.
.....	.....	.....	.....	.....	.....	DI		
.....	+1.0	Top of casing	—6.16	9- 1-1938	.....	N	....	Analysis; well not located since 1938; 6-in. casing to 80 ft.; 4-in. casing to 275 feet.
.....	+1.0	Top of casing	+27.8	7-20-1945	25	DI	78	Log.
.....	+2.0	Top of 6-in. tee	+27.5	11-10-1944	65	P		
.....	0.0	Top of ⅛-in. plug in casing	+49.7	3-18-1944	25	DI,O	74	Analysis; 600 feet of 6-inch casing.
.....	+1.4	Top of 8-in. cap	+14.3	3-25-1944	5	N	72	
.....	0.0	Head of nail in south 6x6-in. timber across well	—19.2	3-16-1945	.....	N,O		
.....	+1.0	⅛-in. plug in casing	+31.2	2-24-1945	37	DI,O	77	
.....	+1.0	⅛-in. plug in casing	+27.8	8-21-1944	46	N,O	72	
.....	+6.0	Top of 6-in. ell	+67.0	4-13-1944	.....	DI		
.....	+3.7	Top of 6-in. plug	+17.3	12- 8-1944	55	N	75	
.....	+1.0	Top of 6-in. welded cap	+27.7	3- 9-1944	.....	N		
.....	+1.7	¼-in. plug 4.5 ft. from well	+37.0	3- 9-1944	.....	DI		
.....	+0.8	Top of 10-in. casing	+49.9	11-13-1945	135	P	78	Log.

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-21-61) 26bbc1	345	10573	J. L. and Rena Hunter	Joe Evans	1940	6	290	.....	.....
(S-21-61) 27acc1	176	.....	Martin Kisiwor	.....	1912	2	230	.....	.....
(S-21-61) 27baa1	87	9243	Bell Telephone Co.	.....	1930	6	625	.....	.....
(S-21-61) 27baa2	413	10969	Lawrence Henz	Joe Evans	1943	8	338	140-145	.....
(S-21-61) 27baa3	454	11231	Bell Telephone Co.	O. G. Hairgrove	1945	10	605	604-605	300-330
(S-21-61) 27bbb1	223	.....	Walter Butterly	.....	1931	6	360	.....	.....
(S-21-61) 27bbb2	.....	.....	Walter Butterly	.....	.....	60	17	.....	.....
(S-21-61) 27cbb1	35	.....	Armstrong	.....	1912	8	400	.....	.....
(S-21-61) 27cbb2	36	.....	Armstrong	.....	1912	8	346	.....	.....
(S-21-61) 27ccc1	38	11324	W. L. and B. Jenison	.....	.....	6	263	.....	.....
(S-21-61) 27dcb1	224	.....	Bell	.....	.....	....	.....	.....	.....
(S-21-61) 28bcc1	53	10854	Public Service Commission of Nev.	.....	.....	6	176	.....	.....
(S-21-61) 28ccc1	40	.....	W. E. Ferron	.....	.....	8	103	.....	.....
(S-21-61) 29dac1	94	9516	F. M. Ferguson	.....	1931	6	280	.....	.....
(S-21-61) 29dda1	93	9516	F. M. Ferguson	.....	1931	6	260	.....	.....
(S-21-61) 33bac1	39	.....	F. R. Mildren	.....	1927	6	222	.....	.....
(S-21-61) 33bbc1	142	.....	McIntyre	.....	1931	4	351	.....	.....
(S-21-61) 33bca1	249	.....	C. R. Mildren	.....	.....	8	.....	.....	.....
(S-21-61) 33ccc1	177	.....	Las Vegas Irrigation, F. L. Co.	.....	1912	....	550	.....	.....
(S-21-61) 34abc1	37	.....	Tallackson	.....	.....	6	246	.....	.....
(S-21-61) 34ccc1	.....	.....	.....	.....	.....	60	25	.....	.....
(S-21-61) 34dbc1	72	.....	Fred Nagamatsu	.....	1912	8	.....	.....	.....

Measuring Point			Pressure Head or Water Level					
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
.....	+2.0	Top of 3-in. tee 3.0 ft. north of well	+27.7	3– 9–1944	40	DI	68	
.....	+0.5	Top of 2-in. casing	+1.15	4–12–1944	.....	DI		
.....	.....	.....	.....	.....	.....	....	....	Well plugged.
.....	+0.5	Top of 8-in. welded cap	+7.0	4–12–1944	5	DI	....	Log.
.....	+1.0	Top of 8-in. by 8-in. by 4-in. tee	+40.7	9–18–1945	52	DI	78	Log.
.....	+2.8	Top of 4-in. tee	+25.5	2–22–1945	15	DI		
.....	0.0	Top of wood door across well	—14.93	3–22–1945	.....	N,O		
.....	+0.9	Top of casing	+20.5	4–17–1945	12	DI	....	Analysis.
.....	+0.9	Top of casing in well (S–21–61) 27cbb1	+26.3	4–17–1945	12	DI		
.....	+1.5	Top of ⅛-in. plug in casing	+28.2	8–21–1944	30	N,O	74	Analysis.
.....	+4.0	Top of 4-in. ell on pump flange	+16.5	4–12–1944	.....	DI	75	
2,140.70	+1.0	Top of casing	—22.42	3–22–1942	.....	DI,O		
2,158.15	—0.5	Top of casing	—21.42	3–18–1944	.....	N,O		
.....	+3.2	Top of casing	+0.09	4– 6–1944	1	N,O		
.....	+2.1	Top of tee	+0.45	4– 6–1944	5	N,O	70	Analysis.
.....	+1.0	Top of casing	—0.37	3–22–1945	.....	N,O	....	Analysis.
.....	0.0	Top of casing	—12.67	4– 6–1944	.....	N		
.....	+0.4	Top of casing	—4.67	4– 4–1944	.....	DI		
.....	.....	.....	.....	.....	.....	....	....	Well never found.
.....	+1.0	Top of 4-in. valve flange	+8.6	4–12–1944	.....	DI	75	
.....	0.0	Top of wood well cover	—23.06	3–26–1945	.....	N,O		
.....	+2.0	Top of cement block	+4.44	4–28–1944	5	N		

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-21-61) 34dcb1	73	.....	Fred Nagamatsu	.....	1912	8	.....	.....	.....
(S-21-61) 34dcc1	74	.....	Fred Nagamatsu	.....	1912	6	.....	.....	.....
(S-21-61) 35ccb1	92	9198	Roy Wood Martin Estate	.....	1931	8	300	.....	.....
(S-21-61) 35dcc1	125	.....	Vail Pittman	Floyd Francis	1925	6	465	.....	.....
(S-21-61) 36abb1	71	.....	A. F. McCarter	.....	.....	8	.....	.....	.....
(S-21-61) 36adc1	484	.....	Unknown	.....	.....	4	.....	.....	.....
(S-21-61) 36adc2	.....	.....	Geological Survey Test Well	Geological Survey	1946	1½	20	.....	.....
(S-21-61) 36cdc1	135	.....	Bailey	.....	.....	.....	.....	.....	.....
(S-21-62) 3bac1	339	.....	Winterwood Ranch	.....	1912	8	.....	.....	.....
(S-21-62) 3bac2	340	.....	Winterwood Ranch	.....	1912	8	.....	.....	.....
(S-21-62) 3bac3	490	.....	Winterwood Ranch	.....	.....	10	.....	.....	.....
(S-21-62) 3ccc1	.....	.....	Geological Survey Test Well	Geological Survey	1946	1	30	.....	.....
(S-21-62) 4aaa1	338	.....	Winterwood Ranch	.....	.....	12	.....	.....	.....
(S-21-62) 4aaa2	337	.....	Winterwood Ranch	.....	1912	12	.....	.....	.....
(S-21-62) 7baa1	485	.....	Unknown	.....	.....	4	.....	.....	.....
(S-21-62) 7bab1	288	.....	Mabel Finlayson	.....	.....	6	325	.....	.....
(S-21-62) 7bab2	287	.....	Jack Carter	.....	1926	6	.....	.....	.....
(S-21-62) 7bac1	284	.....	G. H. Murphy	.....	.....	6	183	.....	.....
(S-21-62) 7bac2	286	10709	S. Barbee	John Frewalt	1929	8	225	.....	.....
(S-21-62) 7bad1	283	.....	S. Barbee	.....	.....	6	.....	.....	.....
(S-21-62) 7bad2	285	.....	Bernard Clark	.....	.....	6	700	.....	.....
(S-21-62) 8cca1	331	.....	Gladys L. Splane	.....	.....	8	.....	.....	.....

Measuring Point: Altitude	Measuring Point: Above (+) or Below (—) Land Surface (feet)	Measuring Point: Description	Pressure Head or Water Level: Above (+) or Below (—) Measuring Point (feet)	Pressure Head or Water Level: Date of Measurement	Yield (gallons a minute): Flow	Use	Temperature (°F)	Remarks
.....	+1.0	Top of casing	—0.57	2–11–1946	.....	DI		
.....	0.0	Top of casing	—3.73	4–28–1944	.....	N,O		
.....	+0.8	Top of casing	+10.4	4–28–1944	.....	N	77	
.....	+4.65	Top of 4-in. tee	+13.6	4–13–1944	12	DI	76	Analysis; log.
.....	+4.0	Top of casing	+8.7	12– 8–1944	9	N	76	
.....	+3.0	Top of 3-in. globe valve	+23.2	3–28–1945	.....	N,O		
.....	+1.1	Top of 1½-in. pipe	—11.71	4–24–1946	.....	O		
.....	.....	.....	.....	.....	.....	DI	....	Well inaccessible.
.....	+0.7	Top of cement block around casing	—19.76	4–26–1944	.....	N,O	....	Analysis.
.....	+1.5	Top of casing	—9.48	3–27–1945	.....	N,O		
.....	0.0	Top of casing	—19.78	3–27–1945	.....	N,O		
.....	+1.1	Top of casing	—22.19	4–25–1946	.....	O	....	Log.
.....	+0.7	Top of cement base around casing	—24.40	4–26–1944	.....	N,O		
.....	.....	Cannot measure water level.....				N,O	....	Analysis.
.....	.....	.....	.....	.....	.....	DI	65	2 G. M. pumped during 1946.
.....	+2.4	Top of 2-in. tee	—4.19	4–11–1946	.....	DI	....	5 G. M. pumped during 1946.
.....	.....	.....	.....	.....	.....	DI	67	
.....	.....	Cannot measure water level.....			3	DI	68	
.....	+0.95	Top of welded cap	+2.42	3–27–1946	.....	DI,O	....	10 G. M. pumped during 1946.
.....	.....	.....	.....	.....	2	DI	71	
.....	+1.5	Top of 6-in. tee	—8.74	.....	.....	DI	....	20 G. M. pumped during 1946.
.....	.....	Cannot measure water level.....			3	S	71	Log.

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-21-62) 15bca1	.....	.....	Geological Survey Test Well	Geological Survey	1946	1	22	.....	.....
(S-21-62) 17ddc1	374	.....	Whitney Taxpayer's Association	P. Conn	1942	8	540	.....	.....
(S-21-62) 19acd1	130	.....	A. Parks	.....	1934	6	.....	.....	.....
(S-21-62) 20ddd1	407	10948	J. Bunch, L. Netherton and L. Thurman	P. Conn	1942	6	458	412-415	430-458
(S-21-62) 20ddd2	408	10949	J. Bunch, L. Netherton and L. Thurman	Bert Hairgrove	1943	6	500	.....	.....
(S-21-62) 21cbc1	385	10802	L. E. Billman	P. Conn	1942	8	650	.....	.....
(S-21-62) 21cbc2	430	10971	L. E. Billman	Bert Hairgrove	1944	8	500	.....	.....
(S-21-62) 21dcd1	.....	.....	Frank Fairhurst	.....	.....	60	23	.....	.....
(S-21-62) 21ddd1	295	.....	George Dolan	.....	.....	6	.....	.....	.....
(S-21-62) 27aad1	.....	.....	Geological Survey Test Well	Geological Survey	1945	4	12	.....	.....
(S-21-62) 27bcb1	342	*10559	J. H. Bunch	.....	1940	6	.....	383	407 420 525
(S-21-62) 27bcd1	355	10635	R. R. Stadelman	Pat Thompson	1941	7⅝	450	.....	.....
(S-21-62) 27cba1	296	.....	R. M. Snider	.....	1933	....	400	.....	.....
(S-21-62) 27ccc1	491	.....	Unknown	Floyd Francis	.....	8	375	.....	.....
(S-21-62) 28aad1	293	.....	C. Gribble	.....	.....	....	420	.....	.....
(S-21-62) 28acd1	297	.....	Clark and Ronnow	.....	.....	8	.....	.....	.....
(S-21-62) 28ada1	294	.....	J. H. Bunch	.....	1931	8	570	.....	.....
(S-21-62) 29bcc1	301	.....	J. R. Bond	.....	1935	8	.....	.....	.....
(S-21-62) 29ccb1	133	.....	J. R. Bond	Floyd Francis	1912	2	1165	.....	.....
(S-21-62) 29ccc1	134	.....	J. R. Bond	.....	1912	6	404	.....	.....

*Canceled.

Measuring Point			Pressure Head or Water Level					
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
.....	+1.3	Top of casing	—21.06	4–25–1946	.....	O	....	Log.
.....	+0.85	Top of casing	+52.0	3–28–1945	5	N,O	....	Analysis; log.
.....	.....	.....	.....	.....	5	DI	76	
.....	+1.6	Top of 4-in. to 3-in. bushing	+30.0	2– 5–1944	30	P	76	Analysis; log.
.....	+1.0	⅛-in. plug in casing	+40.4	3– 7–1944	30	P	76	Log.
.....	+2.2	Top of 8-in. tee	+47.4	3– 7–1944	85	N	76	Log.
.....	+2.36	Top of 8-in. tee	+58.8	12–22–1944	44	N,O	....	Log.
.....	+0.5	Top of wood well cover	—21.82	3–28–1945	.....	N,O		
.....	+1.0	Top of casing	+14.6	3–28–1945	1	S,O	....	Analysis.
.....	+1.0	Top of casing	—4.25	4– 2–1946	.....	O		
.....	.....	.....	.....	.....	.....	DI	....	Analysis.
.....	.....	.....	.....	.....	.....	DI	....	Log.
.....	.....	Cannot measure water level.....				DI	....	Analysis.
.....	0.0	Top of collar on casing	—23.13	4– 9–1946	.....	N	....	Equipped with pump; formerly known as the "Anna Taugher well;" analysis.
.....	.....	.....	.....	.....	.....	....	....	Analysis; well destroyed.
.....	.....	Cannot measure water level	.....	4– 9–1946	1	DI	72	Analysis.
.....	+1.0	Top of casing	—18.67	5–10–1944	.....	DI,O	....	Analysis.
.....	.....	.....	.....	.....	10	DI	74	Analysis.
.....	+0.8	Top of cement block	+25.3	3–28–1945	10	DI,O	....	Analysis; log; 6-in. casing below surface.
.....	+3.2	Top of cement block	+9.9	3–28–1945	1	DI,O	80	Analysis.

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-21-62) 30bd	467	11347	L. H. Hamp	A. W. House	1946	8	400	.....	.....
(S-21-62) 30dbb1	128	.....	U. G. Campbell	Floyd Francis	1926	4	390	.....	.....
(S-21-62) 30dbb2	129	.....	U. G. Campbell	Floyd Francis	1926	4	405	.....	.....
(S-21-62) 30dbb3	298	.....	U. G. Campbell	.....	.....	.....	.....	.....	.....
(S-21-62) 30dbb4	299	.....	U. G. Campbell	.....	.....	4	.....	.....	.....
(S-21-62) 30dbb5	300	.....	U. G. Campbell	.....	.....	1¼	.....	.....	.....
(S-21-62) 30dcb1	466	11341	C. A. and Una Stewart	A. W. House	1946	8	400	.....	.....
(S-21-62) 30dcc1	302	.....	Una Stevens	.....	1910	6	415	.....	.....
(S-21-62) 31bdb1	127	.....	Ed Waite	.....	1931	6	.....	.....	.....
(S-21-62) 31bdc1	131	.....	J. Sheppard	.....	1911	6	250	.....	.....
(S-21-62) 31bdc2	132	.....	J. Sheppard	.....	.....	8	600	.....	.....
(S-21-63) 30cdb1	.....	.....	Geological Survey Test Well	Geological Survey	1945	4	10	.....	.....
(S-22-61) 1bca1	499	.....	J. K. Houssels	.....	.....	6	.....	.....	.....
(S-22-61) 1bca2	500	.....	J. K. Houssels	.....	.....	6	.....	.....	.....
(S-22-61) 1bca3	501	.....	J. K. Houssels	.....	.....	6	.....	.....	.....
(S-22-61) 1bca4	502	.....	J. K. Houssels	.....	.....	2	.....	.....	.....
(S-22-61) 1bcb1	269	.....	J. K. Houssels	.....	1938	6	225	.....	.....
(S-22-61) 1bcb2	270	.....	J. K. Houssels	.....	1912	6	455	.....	.....
(S-22-61) 1bcb3	271	.....	J. K. Houssels	.....	1912	10	340	.....	.....
(S-22-61) 1bcb4	272	.....	J. K. Houssels	.....	1912	4	.....	.....	.....
(S-22-61) 1bcb5	504	.....	J. K. Houssels	Bert Hairgrove	1943	6	340	.....	.....
(S-22-61) 1bdb1	62	.....	J. K. Houssels	.....	1912	2	.....	.....	.....

Measuring Point			Pressure Head or Water Level					
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
.....	+2.3	Top of 8-in. welded cap	+33.2	12–21–1945	170	DI	74	Log.
.....	.....	.....	.....	8–24–1944	40	DI	77	Analysis.
.....	.....	.....	.....	8–24–1944	20	S	77	
.....	.....	.....	.....	.....	.....	....	....	Well not found in 1946.
.....	.....	Cannot measure water level or flow.....				DI	73	
.....	.....	.....	.....	.....	.....	DI	75	1½-in. casing to unknown depth; 4-in. casing to unknown depth.
.....	+2.0	Top of cap on 8-in. casing	+79.8	1–29–1946	150	DI	....	Log.
.....	—2.0	Top of 1½-in. ell	+16.0	8–24–1944	20	DI,O		
.....	.....	Top of 6-in. welded ell	+12.5	8–29–1944	32	DI,O	76	Analysis.
.....	+1.0	Top of 4-in. tee	+6.7	8–29–1944	12	DI		
.....	.....	Cannot measure water level	.....	4– 9–1946	2	DI	74	Analysis.
.....	+0.4	Top of casing	—4.64	4– 2–1946	.....	O		
.....	.....	Cannot measure water level.....				DI	72	
.....	.....	Cannot measure water level.....				DI	74	
.....	.....	Cannot measure water level.....				DI	74	
.....	.....	Cannot measure water level.....				DI		
.....	.....	Cannot measure water level.....				DI	78	
.....	.....	Cannot measure water level.....				DI	78	Log.
.....	.....	.....	.....	.....	.....	DI	78	10-in. casing to unknown depth; 8-in. casing to unknown depth.
.....	.....	Cannot measure water level.....				DI	....	Analysis.
.....	.....	Cannot measure water level	.....	12– 5–1943	15	DI,S	78	
.....	.....	Cannot measure water level.....				DI	....	Analysis; well cemented over at surface.

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-22-61) 1bdb2	63	.....	J. K. Houssels	.....	1912	2	.....	.....	.....
(S-22-61) 1cad1	59	.....	John Graham and Tip Rowe	Floyd Francis	1910	10	505	.....	.....
(S-22-61) 1cbb1	273	.....	J. K. Houssels	Floyd Francis	1912	8	700	.....	.....
(S-22-61) 1cbb2	274	.....	J. K. Houssels	Floyd Francis and Bert Hairgrove	1912	6	340	225-230	.....
(S-22-61) 1cbb3	275	.....	J. K. Houssels	.....	1912	8	.....	.....	.....
(S-22-61) 1ccb1	503	.....	J. K. Houssels	.....	.....	12	.....	.....	.....
(S-22-61) 1cda1	60	.....	John Graham and Tip Rowe	Floyd Francis	1912	8	230	.....	.....
(S-22-61) 1cdc1	168	.....	John Graham and Tip Rowe	.....	1936	10	.....	.....	.....
(S-22-61) 1cdc2	61	.....	John Graham and Tip Rowe	.....	1912	....	335	.....	.....
(S-22-61) 1cdd1	267	.....	John Graham and Tip Rowe	.....	1914	8	536	.....	.....
(S-22-61) 1dab1	58	2303	Y. Tomiyasu	Floyd Francis	1911	8	.....	.....	.....
(S-22-61) 1dac1	57	2303	Y. Tomiyasu	Floyd Francis	1911	8	203	.....	.....
(S-22-61) 1dcb1	268	.....	John Graham and Tip Rowe	.....	1911	2	503	.....	.....
(S-22-61) 2aba1	226	.....	L. H. Irvin	.....	1924	4	200	.....	.....
(S-22-61) 2aba2	225	.....	Nate Mack	.....	.....	4	200	.....	.....
(S-22-61) 2abd1	175	.....	Lawrence Warden	.....	1912	8	290	.....	.....
(S-22-61) 2aca1	150	10367	L. P. Leavitt	.....	1940	8	.....	.....	.....
(S-22-61) 2bab1	227	.....	M. M. Sweeney	.....	.....	4	350	.....	.....
(S-22-61) 2bbc1	228	.....	Smythe	.....	1910	....	.....	.....	.....
(S-22-61) 2cbc1	139	10579	H. F. Reed	.....	.....	8	600	.....	.....
(S-22-61) 2ccc1	404	10894	Henry Wick	Joe Evans	1943	10	600	.....	.....
(S-22-61) 2cdd1	260	.....	F. W. Leadbetter	.....	1912	8	.....	.....	.....

Measuring Point			Pressure Head or Water Level		Yield (gallons a minute)			
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Flow	Use	Temperature (°F)	Remarks
.....	.....	Cannot measure water level.....				DI	74	Well leaks near surface.
.....	.....	Cannot measure water level	.....	4– 9–1946	3	DI	78	
.....	.....	Cannot measure water level.....				DI	79	Log.
.....	.....	Cannot measure water level.....				DI	78	Log; well deepened in 1944 by Bert Hairgrove.
.....	.....	Cannot measure water level.....				DI	78	8-inch casing to unknown depth; 6-inch casing to unknown depth.
.....	+1.7	Top of casing	—1.90	4– 9–1946	.....	N		
.....	.....	Cannot measure water level	.....	4– 9–1946	20	DI	78	
.....	.....	Cannot measure water level	.....	4– 9–1946	25	DI	80	
.....	.....	.....	.....	.....	.....	....	....	Well destroyed.
.....	.....	Cannot measure water level	.....	4– 9–1946	3	DI	77	
.....	.....	.....	.....	.....	.....	....	....	Well filled to surface.
.....	.....	Cannot measure water level	.....	9– 2–1945	429	DI	....	Analysis; log.
.....	.....	Cannot measure water level	.....	4– 9–1946	15	DI	78	2-inch casing to unknown depth; 6-inch casing to unknown depth.
.....	+2.5	Top of casing	+18.4	4–13–1944	35	S,O	74	Analysis; log.
.....	+2.75	Top of 4-in. collar	+15.7	4–13–1944	30	N	74	
.....	+5.6	Top of 8-in. terra cotta pipe	—2.86	4– 9–1946	15	DI	77	
.....	+1.7	Top of casing	—0.9	4–13–1944	10	DI		
.....	+3.7	Top of 3-in. to 2-in. reducer	+1.2	4–13–1944	10	DI	76	
.....	.....	.....	.....	.....	.....	DI	....	Inaccessible.
.....	+3.1	Top of 6-in. ell	+36.6	8–15–1944	52	DI	79	
.....	+0.0	Top of casing	+12.5	2– 7–1946	10	DI,S	84	Log.
.....	.....	Cannot measure water level or flow.....				N	80	

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-22-61) 2daa1	486	.....	Painton	.....	.....	4	.....	.....	.....
(S-22-61) 2ddc1	265	.....	R. R. Stadelman	.....	.....	5	.....	.....	.....
(S-22-61) 3acc1	122	10321	H. Nickerson	.....	1912	6	.....	.....	.....
(S-22-61) 3adb1	250	11338	T. P. and G. G. Walker	.....	.....	6	565	.....	.....
(S-22-61) 3bda1	79	7593	H. H. Hair	Floyd Francis	1925	8	374	.....	.....
(S-22-61) 3caa1	121	10321	H. Nickerson	.....	1924	6	395	.....	.....
(S-22-61) 3cab1	.....	.....	N. L. White	.....	.....	60	32	.....	.....
(S-22-61) 3cab2	482	11388	N. L. and M. S. White	.....	1946	6	435	380–382	.....
(S-22-61) 3ccb1	145	.....	Dewey Williams	Joe Evans	1935	10	575	.....	.....
(S-22-61) 3dcb1	251	.....	Rufus Johnson	.....	.....	4	.....	.....	.....
(S-22-61) 3dcc1	.....	.....	Geological Survey Test Well	Geological Survey	1946	1¼	30	.....	.....
(S-22-61) 3dda1	434	11054	Henry Wick	N. Tomiyasu and Henry Smith	1945	10	335	335	.....
(S-22-61) 3ddb1	373	10745	Henry Wick	Pat Thompson	1942	6	.....	.....	.....
(S-22-61) 4bcc1	41	.....	Fitzpatrick	.....	1926	8	355	.....	.....
(S-22-61) 5ad	.....	.....	.....	.....	.....	8	.....	.....	.....
(S-22-61) 8aba1	143	.....	Mrs. Frank Beam	.....	1931	.....	115	.....	.....
(S-22-61) 8dad1	.....	.....	William Strable	.....	.....	.....	.....	.....	.....
(S-22-61) 9bbb1	.....	.....	F. W. Leadbetter	.....	.....	8	.....	.....	.....
(S-22-61) 9cbb1	42	.....	Daisy Bell	.....	1925	10	127	.....	.....
(S-22-61) 10aab1	252	.....	J. Fox	.....	1912	6	.....	.....	.....
(S-22-61) 10aac1	253	.....	J. Fox	.....	1912	60	.....	.....	.....
(S-22-61) 10acc1	70	4374	Gladstone Corporation	Floyd Francis	1926	12	715	.....	.....

Measuring Point			Pressure Head or Water Level					
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
.....	.....	Cannot measure water level	.....	4– 9–1946	15	DI	72	
.....	+1.8	Top of casing	+16.3	6–22–1944	12	DI	84	
.....	.....	.....	.....	.....	.....	DI	....	Analysis; inaccessible.
.....	+0.2	Top of 6-in. casing	+50.5	2–11–1946	30	DI	84	Well cleaned out and repaired by O. G. Hairgrove in 1946.
.....	+1.9	Top of 4-in. tee	+18.5	8–15–1944	109	DI	82	Log.
.....	.....	Cannot measure water level	.....	1–15–1944	170	DI	84	Analysis; log.
.....	—5.0	Top of 2-in. by 4-in. timber frame	—17.21	3–20–1946	.....	DI,O		
.....	+0.8	Top of 6-in. casing	—3.0	5– 1–1946	.....	DI	....	Log.
2,154.30	+1.0	Top of 10-in. casing	—16.48	3–20–1946	.....	N,O	....	Log.
.....	0.0	Top of 4-in. valve	+9.6	2– 7–1946	.....	DI		
.....	+1.0	Top of casing						
.....	+3.5	Top of 10-in. cap on tee	+59.9	2–11–1946	.....	DI	84	Analysis; log.
.....	+1.4	Top of welded 6-in. cap	+34.2	2–11–1946	40	DI	86	
.....	+3.8	Top of casing	—81.88	3–20–1946	.....	N,O		
.....	.....	.....	.....	.....	.....	....	....	Well filled to 18 feet in 1946.
.....	.....	.....	.....	.....	.....	....	....	Well filled to 37 feet in 1944.
.....	.....	.....	.....	.....	.....	DI		
.....	0.0	Top of casing	—96.0	4–10–1944	.....	DI		
.....	+0.6	Top of casing	—94.44	3–20–1946	.....	N,O		
.....	+0.5	Top of 4-in. valve	+32.0	2–11–1946	.....	N,O	86	
.....	—3.0	Top of wooden frame	—11.5	4– 8–1944	.....	....	....	Well caved and filled in.
.....	.....	.....	.....	.....	.....	N	....	Log.

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-22-61) 10adc1	254		Arnold Zaugg			8			
(S-22-61) 10adc2	255		Arnold Zaugg			8			
(S-22-61) 10add1	256		Arnold Zaugg			8			
(S-22-61) 10bda1	69	4374	Gladstone Corporation		1909	8	325		
(S-22-61) 10dab1	257		R. E. Whitney		1924	12			
(S-22-61) 10dad1	258		R. E. Whitney		1924	8			
(S-22-61) 10dad2	259		R. E. Whitney		1924	8			
(S-22-61) 11aab1						60	18		
(S-22-61) 11aad1				John Frewalt	1945	8	98		
(S-22-61) 11bac1	55		F. W. Leadbetter		1909	8	208		
(S-22-61) 11bac2	352		F. W. Leadbetter		1940	8	175		
(S-22-61) 11bac3	261		F. W. Leadbetter		1912				
(S-22-61) 11bdb1	262		F. W. Leadbetter		1912	8			
(S-22-61) 11bdb2	263		F. W. Leadbetter			10			
(S-22-61) 11bdc1	264		F. W. Leadbetter		1912	8			
(S-22-61) 12bbb1	266		T. Sakai			6			
(S-22-61) 15abc1				Horace Taylor	1926	8	33		
(S-22-61) 16ccc1	365	10705	Buck Dalton			10			
(S-22-62) 1bcc1	492		T. A. Wells	Joe Evans		6	800		
(S-22-62) 1bdc1	432	10825	M. E. Ward and Johnson			60			
(S-22-62) 1cab1	493		T. A. Wells			6			

TABLE 2—*Continued.*

Measuring Point			Pressure Head or Water Level					
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
.....	.....	.....	.....	.....	.....	....	....	Filled in.
.....	.....	.....	.....	.....	.....	....	....	Filled in.
.....	.....	.....	.....	.....	.....	N	....	Well leaks at 6.0 feet below surface.
.....	.....	Cannot measure water level	.....	2–13–1944	425	DI	92	Analysis.
.....	.....	Cannot measure water level	.....	4– 8–1946	15	DI	82	12-in. casing to unknown depth; 8-inch casing to unknown depth.
.....	.....	.....	.....	.....	.....	DI	81	
.....	.....	.....	.....	.....	.....	DI	82	
.....	+2.0	Top of 2-in. by 6-in. timber across well	—14.83	3–27–1946	.....	N,O		
.....	+1.0	Top of casing	—16.82	4– 9–1946	.....	N		
.....	.....	Cannot measure water level or flow			.....	N		
.....	+0.5	Top of casing	+7.12	3–27–1946	.....	DI	....	Analysis.
.....	.....	.....	.....	.....	.....	....	....	Analysis; well destroyed.
.....	.....	.....	.....	.....	.....	DI	80	
.....	.....	.....	.....	.....	.....	DI	83	
.....	+0.5	Top of collar on casing	+7.0	6–22–1944	.....	DI	83	
.....	+2.0	Top of ell	+38.8	3–28–1945	15	N,O	82	Analysis; 6-inch casing to unknown depth; 8-inch casing to unknown depth.
.....	.....	.....	Dry	4– 8–1946	.....	....	....	Dry in 1946.
.....	+0.65	Bottom of lowest bullet hole in casing	—84.55	3–26–1945	.....	N,O		
.....	.....	Cannot measure water level			10	DI	....	Log.
.....	+1.5	Top of tin well cover at southwest corner of manhole	—6.28	3–15–1945	.....	N		
.....	.....	.....	.....	.....	.....	N		

TABLE 2—*Continued.*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-22-62) 1cba1	350	*10602	Carl A. Foster	.....	.....	48	.....	.....	.....
(S-22-62) 1cbc1	494	.....	T. A. Wells	Joe Evans	1942	8	1135	.....	.....
(S-22-62) 1cbc2	.....	.....	White Courts	.....	.....	60	.....	.....	.....
(S-22-62) 1cbd1	495	.....	T. A. Wells	Joe Evans	1942	8	910	.....	.....
(S-22-62) 1cbd2	.....	.....	Pittman Recreation Center	.....	.....	4	.....	.....	.....
(S-22-62) 1ccc1	431	10826	M. E. Ward and Johnson	Joe Evans	1941	....	300	.....	.....
(S-22-62) 6bac1	137	.....	C. A. Heaton	.....	1912	8	790	.....	.....
(S-22-62) 6bbc1	136	.....	C. A. Heaton	.....	.....	8	.....	.....	.....
(S-22-62) 9cdb1	424	10961	A. G. Klinger	Bert Hairgrove	1943	8	125	.....	.....
(S-22-62) 9cdb2	423	10961	A. G. Klinger	Bert Hairgrove	1943	12	125	.....	.....
(S-22-62) 9dcc1	382	10785	Roy Cram	Joe Evans	1942	10	180	.....	.....
(S-22-62) 12abc1	496	.....	T. A. Wells	Bert Hairgrove	1944	6	440	.....	.....
(S-22-62) 12abd1	.....	.....	Fred Clemore	.....	.....	6	250+	.....	.....
(S-22-62) 12aac1	.....	.....	James Brown	.....	.....	6	200+	.....	.....
(S-22-62) 12aac2	.....	.....	Pittman Court	.....	.....	6	.....	.....	.....
(S-22-62) 12aad1	.....	.....	Silver Slipper	.....	.....	6	.....	.....	.....
(S-22-62) 12aad2	.....	.....	Swanky Club	.....	.....	8	.....	.....	.....

*Canceled.

Measuring Point			Pressure Head or Water Level						
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
.....	0.0	Top of 2-in. plank cover	—13.87	3–17–1946	.....	N,O	75	Analysis.
.....	+1.3	Top of 8-in. plug	+30.2	3–27–1946	.....	DI,O	91	Analysis; log.
.....	0.0	Top of 1-in. by 6-in. board well cover	—5.95	3–15–1945	.....	DI	....	Analysis.
.....	.....	.....	.....	.....	.....	DI	....	Log; well filled to 850 feet in 1942.
.....	+1.8	Top of 4-in. to 2-in. bushing	+35.8	11–30–1944	.....	DI,P		
.....	.....	.....	.....	.....	.....	P	....	Analysis; drilled to 815 feet in 1941; filled to 300 feet in 1946.
.....	.....	.....	.....	.....	.....	....	....	Well destroyed in 1945.
.....	.....	Cannot measure water level	.....	4– 9–1946	2	S	73	
.....	+2.5	Top of 5-in. to 2½-in. welded reducer	+2.45	8–30–1944	27	DI	75	Log.
.....	+1.6	Top of casing	+12.1	8–30–1944	22	DI	74	Log.
.....	+0.8	Top of casing	—17.61	3–17–1946	.....	N,O	....	Analysis; log.
.....	+5.8	Top of casing	—15.80	3–21–1945	.....	N,O	....	Well cleaned out and deepened to 810 ft. by O. G. Hairgrove, 1946; well flowing in 1946.
.....	.....	Cannot measure water level				DI	....	5 G. M. pumped during 1945.
.....	.....	Cannot measure water level				DI	....	5 G. M. pumped during 1945.
.....	.....	Cannot measure water level				DI	....	5 G. M. pumped during 1945.
.....	.....	Cannot measure water level				DI	....	5 G. M. pumped during 1945.
.....	.....	Cannot measure water level				DI	....	5 G. M. pumped during 1945.

TABLE 3

Logs and Casing Records of Wells in Las Vegas and Indian Spring Valleys, Nevada

INDIAN SPRING VALLEY

(S-16-56)8ab. Las Vegas Army Airfield—Indian Springs, sub-base. Land surface altitude 3,132 feet; diameter 6 inches; 6-inch casing to 322 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	1	1
Cemented gravel	19	20
"Loose" gravel	4	24
Cemented gravel	16	40
Broken rock and gravel	20	60
Cemented rock and sand	24	84
Cemented gravel	18	102
Cemented rock and gravel	42	144
Cemented gravel	8	152
Cemented rock and gravel	20	172
Cemented rock	22	194
Cemented gravel	50	244
Clay and gravel	4	248
Cemented gravel	22	270
Sand and gravel	34	304
Clay	2	306
Cemented gravel	4	310
"Limerock and shale"	266	576
Total depth	----	576

LAS VEGAS VALLEY

(S-19-60) 4dab1. P. J. Goumond. Diameter 18 inches, 18-inch casing to 200 feet, 16-inch casing from 143 to 780 feet, perforated 311 to 606 feet with 4 slots every 18 inches.

Material	Thickness (feet)	Depth (feet)
Light tan clay	10	10
Dark and medium tan clay	70	80
Light greenish tan clay	10	90
Dark and medium tan clay, water level 210 feet below surface	210	300
Pebble and granule-gravel, water level 13 feet below surface	10	310
Granules and coarse sand (Underlain by thin layer greenish clay)	10	320
Light tan clay with few pebbles, water flowing at surface	32	352
Light green clay with few small pebbles	8	360
Light tan clay some caliche pebbles or nodules	40	400
Light green clay with some light tan clay layers	30	430
Light and medium tan clay	30	460
Very light tan clay, nodular with some caliche	6	466
White marly clay nodules with little light tan clay	4	470
Medium tan clay	40	510
Medium tan clay with some medium sand and pebbles	5	515
Light tan clay, few pebbles	45	560
Pebble gravel, little sand, few clay balls	6	566
Fine sand, few pebbles and granules, water	4	570
Clay with few granules and little fine sand	22	592
Fine and medium grained sand, water	8	600
Coarse sand and granules with some medium and fine sand, little clay, water	10	610
Light to medium tan clay	170	780
Total depth	----	780

TABLE 3—*Continued*

(S-19-60) 9aba1. P. J. Goumond. Diameter 14 inches, 14-inch casing to 12 feet, 8-inch casing to 700 feet perforated with ¼-by-4-inch slots from 231 to 257 feet, 309 to 335 feet, 534 to 631 feet, and 656 to 681 feet.

Material	Thickness (feet)	Depth (feet)
Gravel	7	7
Greenish tan clay	33	40
Pink silty clay	30	70
Caliche	2	72
Granule gravel, some pink silty clay	10	82
Tan silty clay	18	100
Cemented gravel	15	115
Tan silty clay	5	120
Cemented gravel	16	136
Tan silty clay, some granular gravel	36	172
Tan silty clay	44	216
Coarse - grained sand, much silt, little clay	4	220
Cemented gravel	5	225
Tan silty clay	15	240
Tan fine-grained sand, little pink silt	3	243
Granule gravel and coarse-grained sand, silty with some clay	15	258
Tan silty fine-grained sand	8	266
Pink silty sandy clay	34	300
Granule gravel, few pebbles, some tan silty clay	10	310
Medium - to - coarse-grained gray sand, little silt, flow of water	7	317
Caliche	4	321
Medium - grained gray sand, little silt, flow of water	2	323
Tan silty clay, few pebbles and granules	4	327
Fine-grained gray sand, flow of water	2	329
Tan silty clay, few pebbles and granules	3	332
Fine to medium-grained silty sand	3	335
Tan silty clay, few pebbles and granules	5	340
Fine to coarse-grained gray sand, flow of water	6	346
Tan silty clay	14	360
Tan silty clay, few pebbles and granules	8	368
Tan clay, little silt, few granules	35	403
Caliche	2	405
Granule gravel, fine-to medium - grained sand, few pebbles, little clay and silt	7	412
Tan silty clay, few granules	82	494
Granule gravel, little sand, some silt and clay	4	498
Granule gravel, fine-to medium - grained sand, flow of water	10	508
Granule gravel, some sand and silt	4	512
Tan silty clay, some gravel and sand	23	535
Fine-grained pink silty sand	4	539
Fine to medium-grained gray sand, little silt, flow of water	7	546
Tan silty clay, much gravel	3	549
Fine to medium-grained sand, some granule and pebble gravel, flow of water	37	586
Tan silty clay few granules and pebbles	3	589
Fine - grained gray sand, flow of water	2	591
Tan silty clay, some gravel	9	607
Fine-grained sand, few granules, flow of water	3	610
Tan silty clay, some gravel	16	626
Tan silty clay, few granules	47	673
Coarse to fine-grained gray sand, flow of water	3	676
Tan silty clay, some gravel	11	687
Fine-grained silty tan sand	18	705
Plastic pink clay, little silt	11	716
Total depth	....	716

TABLE 3—*Continued*

(S–19–60) 9abb1. P. J. Goumond. Diameter 16 inches, 16-inch casing to 21 feet, 14-inch casing to 68 feet, 12-inch casing to 631 feet, perforated with ¼-by-4-inch slots from 531 to 631 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	6	6
Brown clay	9	15
"Near-surface" water level	....	15
Brown clay	55	70
Brown clay, few gravel strata	125	195
Caliche	3	198
Clay	21	219
Caliche	16	235
Gravel	63	298
Cemented gravel	12	310
Sand, flow of water	2	312
Cemented gravel	9	321
Sand, flow of water	3	324
Cemented gravel	4	328
Sand, flow of water	7	335
Cemented gravel	4	339
Sand, flow of water	7	346
Brown clay	2	348
Sand, flow of water	2	350
Brown clay, few gravel strata	51	401
Sticky clay	43	444
Clay, few gravel strata	20	464
Clay	12	476
Cemented gravel	20	496
Sand, flow of water	9	505
Cemented gravel	12	517
White clay	3	520
Sand, flow of water	3	523
Cemented gravel	35	558
Sand, flow of water	7	565
Cemented gravel	12	577
White clay	3	580
Cemented gravel	11	591
Sand, flow of water	2	593
Cemented gravel	1	594
Sand, flow of water	2	596
Cemented gravel	24	620
Sand, flow of water	5	625
Brown clay	20	645
Clay and sand	5	650
Sand, flow of water	2	652
Brown clay	26	678
Sand, flow of water	17	695
Brown clay	11	706
Total depth	....	706

(S–19–60) 9bcc1. P. J. Goumond. Diameter 10 inches, 10-inch casing to 140 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Hard cemented gravel	95	95
Brown clay, water-100	10	105
Cemented gravel	6	111
Brown clay	74	185
Hard cemented gravel	5	190
More water 80 ft. of top		
Water gravel, water, 34 ft. of top	10	200
Cemented gravel	66	266
Water gravel	9	275
Cemented gravel	180	455
Brown clay	20	475
Cemented gravel	95	570
Brown clay	14	584
Cemented gravel	6	590
Clay	25	615
Hard cemented gravel	30	645
White clay	23	668
Yellow clay	2	670
Hard white clay	21	691
Hard cemented gravel	24	715
White clay	15	730
Cemented gravel	100	830
Total depth	....	830

(S–19–60) 9bdd1. P. J. Goumond. Diameter 8 inches, 8-inch casing to 1,001 feet, perforated 110 to 1,000 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Yellow and brown clay	77	77
White clay, small streaks gravel	18	95
Brown clay, streaks of gravel. Hit first water 110. More 130	60	155
Brown clay, streaks of gravel	31	186
Brown clay and shales	29	215
Brown clay	49	264
Hard cemented gravel	6	270
Water sand. Water up 25 ft. of top	17	287
Cemented gravel	15	302
Yellow clay	8	310
Cemented gravel	23	333
Yellow clay	13	346
Cemented gravel	19	365
Sticky brown clay	60	425
Hard cemented gravel	10	435
More water 433–435.		
Cemented gravel	10	445
Lime, cemented gravel	24	469
Water sand	3	472
Lime, cemented gravel	28	500
More water.		
Cemented gravel	18	518
Water gravel	2	520
Water running over top of casing.		
Cemented gravel	13	533
Water sand	19	552
Lime, cemented gravel	13	565
Water gravel	5	570
Hard cemented gravel	23	593
More water 587–593.		
Sticky brown clay	88	681
Cemented gravel, water	6	687
Brown clay	3	690
Cemented gravel, more water	15	705
Brown and red clay	10	715
Cemented gravel, more water 745–750	35	750
Cemented gravel, more water	7	757
Cemented gravel	10	767
Lime, cemented gravel	30	797
Water sand	13	810
Cemented gravel	191	1,001
Total depth	....	1,001

TABLE 3—*Continued*

(S–19–60) 9cda1. E. A. and J. T. Gilcrease. Diameter 8 inches, 8-inch casing to unknown depth. Driller's log.

Material	Thickness (feet)	Depth (feet)
Yellow clay	65	65
Brown shale	26	91
Gravel, water level raised in casing	4	95
Brown clay	20	115
"Hard shell"	4	119
Brown clay	71	190
"Hard shell"	4	194
Brown clay	7	201
"Hard shell"	3	204
Brown clay	11	215
"Hard shell"	4	219
Brown clay	26	245
Red clay	13	258
"Hard shell"	2	260
Hard cemented gravel	25	285
Gravel, water level raised in casing	2	287
Hard cement gravel	8	295
Hard sand "rock"	9	304
Hard cemented gravel	16	320
Cemented gravel	5	325
Gravel, flow of water	5	330
Hard cemented gravel	8	338
Brown shale	4	342
Brown clay	19	361
Gravel, flow of water	4	365
Brown clay	8	373
Gravel	2	375
Brown and black clay	2	377
Brown clay	34	411
Hard cemented gravel	10	421
Gravel, flow of water	7	433
Hard cemented gravel	10	443
Cemented gravel	5	426
Gravel, flow of water	4	447
White clay	1	448
Cemented gravel	17	465
Sand, flow of water	10	475
Gravel, increased flow of water	15	490
Shale	2	492
Clay	13	505
Cemented gravel	7	512
Sand, flow of water (732 G. M.)	18	530
Brown clay	3	533
Cemented gravel	7	540
Brown clay	60	600
Blue and brown clay	12	612
Total depth	....	612

(S–19–60) 23bbc1. E. A. and J. T. Gilcrease. Diameter 12 inches, 12-inch casing to unknown depth.

Material	Thickness (feet)	Depth (feet)
No record	280	280
Light tan clay	5	285
Light tan clay, nodular	55	340
Light tan clay	140	480
Light tan clay, nodular	20	500
Light tan clay	50	550
Light tan clay with numerous granules and few caliche pebbles, water	20	570
White clay	30	600
Light gray clay	12	612
Dark gray clay	8	620
Gray clay, few granules	7	627
Gray silt and clay, with carbonaceous material	13	640
White clay	10	650
Light pink clay	5	655
Bluish gray clay and silt with carbonaceous material	35	690
Light tan clay	20	710
Light tan clay with caliche	10	720
White silty clay	10	730
Gray clay, sticky and plastic	10	740
Light gray marly clay	7	747
Gray clay with carbonaceous material	43	790
Gray clay	10	800
White marly clay	7	807
Brown, gypsiferous silty clay	12	819
Light pink clay	38	857
Light green gray and pink mottled clay	23	880
Tan clay with granules	20	900
Tan and light green mottled clay	10	910
Total depth	....	910

(S–20–60) 36dbb1. M. D. Kidder. Land surface altitude 2,228 feet; diameter 8 inches, 8-inch casing to 262 feet, 6-inch casing to 345 feet, 4-inch casing to 381 feet. Driller's log, also reported in U. S. Geological Survey Water Supply Paper 849-D, 1941.

Material	Thickness (feet)	Depth (feet)
Clay and lime conglomerate	2	2
White clay	13	15
Caliche	4	19
Clay with caliche fragments and nodules	5	24
Yellow sandy clay	86	110
Red sand	8	118
Sandy clay	30	148
Cemented gravel, water-bearing	72	220
Uncemented gravel, water-bearing	2	222
Cemented gravel, water-bearing	54	276
Uncemented gravel, water-bearing	4	280
Cemented gravel, water-bearing	27	307
Loosely cemented gravel, water-bearing	63	370
"Limerock, bad to wash into well," water-bearing	1	371
Uncemented gravel, water-bearing	14	385
Cemented gravel, water-bearing	....	385
Total depth	....	385

TABLE 3—*Continued*

(S-20-61) 3adc3. Las Vegas Army Air Field. Diameter 12 inches, 12-inch casing to 425 feet, perforated from 203 to 239 feet.

Material	Thickness (feet)	Depth (feet)
Top soil	5	5
"Hard pan"	5	10
Sandy clay	27	37
Clay and caliche, first water surface at 40 feet	156	193
Red clay and caliche	20	213
Sand, gravel, and caliche, first flow 23 G. M.	16	229
Clay and caliche	12	241
Clay	52	293
Clay and caliche	53	346
Hard brown shale	44	390
Clay and caliche	24	414
Sand and clay	2	416
Clay and caliche	54	470
Blue clay	31	501
Total depth	----	501

(S-20-61) 13adc1. L. and M. Van Der Meer. Diameter 8 inches, 8-inch casing to 375 feet, perforated with 3/16 by 2½-inch slots from 315 to 375 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	17	17
Caliche	8	25
Caliche "boulders"	2	27
White clay	20	47
Red clay	29	76
White clay, little gravel	2	78
Gravel	3	81
White clay and caliche, little gravel	58	139
Red and white clay	23	162
Red clay	18	180
Red clay, "hard streaks"	40	220
Caliche	4	224
White clay, "hard lime streaks"	46	270
"Boulders"	19	289
Red clay, little gravel	124	413
Red clay, "gritty"	23	436
Red clay, "hard streaks"	48	484
Brown and white clay, sand	21	505
Red clay "streaks of white lime"	98	603
Blue clay	16	619
"Gritty" blue clay	33	652
Black sandy clay, gravel "streaks"	30	682
Caliche	5	687
Blue clay, sand	23	710
Black clay, "white lime"	30	740
Blue clay, little white clay	46	786
Red sandy clay	9	795
Blue clay	2	797
Red clay, "hard streaks"	33	830
White clay, sandy, "hard streaks of lime"	56	886
Red clay, "hard streaks of lime"	44	930
Total depth	----	930

(S-20-61) 15dcb1. Taylor Estate. Diameter 6 inches. Driller's log.

Material	Thickness (feet)	Depth (feet)
Clay and "marl"	34	34
Caliche	2	36
Clay	4	40
Caliche and "marl"	40	80
Gravel	3	83
Soft "marl"	4	87
Caliche	6	93
Clay	5	98
Caliche	2	100
Clay	22	122
Caliche	2	124
Clay	6	130
Caliche	2	132
Clay	14	146
Caliche	4	150
Clay	3	153
Caliche	8	161
Clay	44	205
Blue "shale"	22	227
Gray and white (clay), water	11	238
Red sandy clay, water every few feet in sand lenses	212	450
Red sandy clay	35	485
White clay	20	505
Red clay, sandy	35	540
Sandy red clay, water	10	550
Red clay, sandy	75	625
Conglomerate	13	638
Sand and gravel	4	642
Silt and fine sand	163	805
Total depth	----	805

TABLE 3—*Continued*

(S–20–61) 15dcb2. Taylor Estate. Diameter 6 inches. Driller's log.

Material	Thickness (feet)	Depth (feet)
Clay and caliche	32	32
Caliche	2	*34
Clay and caliche	16	50
Caliche, water	2	52
Clay and caliche	8	60
Caliche	10	70
Clay and caliche	6	76
Caliche "conglomerate"	20	96
Red clay	5	101
Caliche "conglomerate"	2	103
Clay	2	105
Gravel and boulders	3	108
Caliche "conglomerate"	12	120
Clay	5	125
"Conglomerate"	5	130
Clay	66	196
Caliche	3	199
Clay	34	233
Caliche	1	234
Sandy clay	4	238
Red sand	5	243
"Conglomerate"	7	250
Red clay	8	258
Brown "shale"	4	262
Gray "shale"	11	273
Blue "shale"	37	310
Gray "shale"	15	325
Sandy clay	5	330
Red clay with sand and gravel lenses, water	110	440
Red clay	85	525
Sandy clay with sand and gravel lenses, water	15	540
Red clay	65	605
Gray "talc" and sand	11	616
Caliche, water	2	618
Clay with lenses of "talc" and sandy clay	47	665
Cemented sand, water	3	668
Red clay with lenses of "talc" and brown clay	92	760
Caliche "conglomerate"	15	775
Clay	60	835
Cemented sand, water	7	842
Clay, lenses of cemented sand, water	18	860
Clay	75	935
Total depth	----	935

*Water level at 22 feet.

(S–20–61) 15dcc1. Taylor Estate. Diameter 8 inches, 8-inch casing to 298 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
No record	45	45
Caliche	5	50
Clay	5	55
Caliche	12	67
Clay	6	73
Caliche	18	92
Clay	12	104
"Conglomerate"	19	123
Clay	60	183
Caliche	2	185
Clay	45	230
Caliche	3	233
Clay	3	236
Caliche	2	238
Sandy clay	22	260
"Shale"	30	290
Sandy clay	90	380
Sticky clay	100	480
Sandy clay	8	488
Sticky clay	12	500
Total depth	----	500

(S–20–61) 19bcb1. Splane Estate. Land surface altitude 2,199 feet; diameter 9 inches, 9-inch casing to 162 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Caliche	20	20
White clay	12	32
Yellow clay	4	36
Caliche	9	45
"Rock"	3	48
Clay	4	52
"Rock"	5	57
Clay	8	65
"Rock"	2	67
Clay	15	82
"Rock"	3	85
Clay	80	165
"Cement" gravel	135	300
Total depth	----	300

(S–20–61) 19cdc1. B. V. Provenzano. Land surface altitude 2,192 feet; diameter 8 inches, 8-inch casing to 151 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soft clay and caliche	40	40
Clay	30	70
Clay and caliche	81	151
Flowing water	----	151
Clay and caliche	41	192
"Conglomerate"	48	240
Flowing water	25	265
"Conglomerate"	10	275
Total depth	----	275

(S–20–61) 19cdd1. J. F. and F. Haake. Land surface altitude 2,179 feet; diameter 8 inches, 8-inch casing to 227 feet, 6-inch casing to 262 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	10	10
Clay and caliche	15	25
Clay and caliche	45	70
Yellow clay	35	105
Clay and caliche	35	140
"Rock"	10	150
Sand and clay	50	200
Sand, water	5	205
Sand and gravel, water	57	262
Total depth	----	262

TABLE 3—*Continued*

(S–20–61) 19cdd2. J. F. and F. Haake. Land surface altitude 2,181 feet; diameter 8 inches, 8-inch casing to unknown depth.

Material	Thickness (feet)	Depth (feet)
No record	35	35
Light tan sandy silt, little clay	10	45
White sandy, calcareous silt	10	55
Tan and pink sandy silt, little clay	30	85
No record	105	190
Pink sandy silt	30	220
Granule gravel, much silt, little fine-grained sand, flow of water	10	230
Pink silty clay, little gravel	40	270
No record	20	290
Pink silty clay, few granules	10	300
Granule gravel, few pebbles, little sand and silt, flow of water	20	320
Pink silty clay	5	325
Total depth	----	325

(S–20–61) 19dab1. Southern Nevada Industries, Ltd. Land surface altitude 2,153 feet; diameter 8 inches, 8-inch casing to 286 feet, perforated 230 to 286 feet, slots ⅜-inch wide and 6 inches long. Driller's log.

Material	Thickness (feet)	Depth (feet)
Sandy loam	3	3
Caliche	4	7
White clay	15	22
Caliche	35	57
White clay	17	74
Caliche	5	79
White clay	51	130
Caliche	6	136
White clay	38	174
"Broken lime rock"	26	200
Red clay	9	209
Caliche, "broken"	21	230
Blue gravel, water	56	286
Total depth	----	286

(S–20–61) 19ddc1. E. B. Coram. Land surface altitude 2,160 feet; diameter 8 inches, 8-inch casing to 280 feet, perforated 255 to 280 feet with slots 3/16-inch wide and 3 inches long. Driller's log.

Material	Thickness (feet)	Depth (feet)
Surface soil	10	10
Caliche	10	20
"Quicksand"	24	44
Red clay	106	150
Caliche	10	160
Red clay	80	240
Caliche	15	255
Gravel, water	25	280
Total depth	----	280

(S–20–61) 20bcc1. R. J. Kaltenborn. Land surface altitude 2,128 feet; diameter 8 inches, 10-inch casing to 68 feet, 8-inch casing to 279 feet, perforated 110 to 239 feet with slots ¼-inch wide and 4 inches long.

Material	Thickness (feet)	Depth (feet)
Soil	3	3
Caliche	8	11
Clay	11	22
Gravel, "near-surface water"	2	24
Pink silty sand	16	40
Pink silty sand, many granules	10	50
Pink silty sand, red clay lenses	10	60
Very light tan nodular clay, some silt	20	80
Very light tan silty clay	30	110
Small flow of water	----	110
Very light tan silty clay, some granules and caliche nodules	20	130
Very light tan silty clay, few granules	40	170
Very light tan silty clay, dark tan clay nodules	30	200
Very light tan silty clay, many caliche nodules	10	210
Pink silty clay, few granules and caliche nodules	47	257
Pink sandy silt, many granules, flow of water	3	260
Clean, fine pink sand, water	1	261
Granule gravel, some fine pink sand, water	22	283
Total depth	----	283

TABLE 3—*Continued*

(S–20–61) 20bdb1. J. A. Griffin and M. C. Oglesby. Land surface altitude 2,115 feet; diameter 8 inches, 8-inch casing to 281 feet, 82 feet of 6-inch casing to 360 feet, 120 feet of 4-inch casing to 450 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Surface soil	2	2
Caliche	6	8
Clay, "near - surface" water at 27 feet	19	27
White clay	106	133
White clay with caliche layers	87	220
Red clay with few boulders	40	260
Red clay, layers of caliche, small flow of water cased off	105	365
Cemented gravel, flow of water	12	377
Red clay with gravel lenses	39	416
"Quicksand"	1	417
Gravel, flow of water	3	420
"Sand rock"	8	428
"Broken sand rock"	7	435
Fine sand with clay layers	15	450
Total depth	....	450

(S–20–61) 20bdd1. J. A. Griffin. Diameter 10 inches, 10-inch casing to 41 feet, 8-inch casing to 152, 197 feet of 6-inch casing from 128 to 325 feet perforated with ¼ by 2-inch slots from 270 to 317 feet.

Material	Thickness (feet)	Depth (feet)
Soil	5	5
Pink clay and caliche	13	18
"Near-surface" water level	....	18
Pink silty clay	24	42
Sand and gravel, much pink silty clay	6	48
Light pink silty clay	72	120
Sand and gravel, much pink silty clay	6	126
Light pink silty clay	24	150
Sand and gravel, some pink silty clay, water level rose in casing	8	158
Pink plastic clay, little silt	47	205
Sand and gravel, much pink silty clay	10	215
Pink silty clay	25	240
Pink clay, caliche nodules	16	265
Pink silty clay	10	275
Granule gravel and sand, some pink silty clay, flow of water	8	283
Caliche	9	292
Small pebble and granule gravel, little pink silt, flow of water	11	303
Coarse-to fine-grained pink sand, few granules	16	319
Fine-grained silty pink sand	6	325
Total depth	....	325

(S–20–61) 20cbb2. J. W. and Mae Cook. Land surface altitude 2,125 feet; diameter 6 inches, 6-inch casing to 122 feet.

Material	Thickness (feet)	Depth (feet)
Surface soil	4	4
Caliche	18	22
Gravel, "near-surface" water	1	23
Granules with much pinkish white clay	72	95
Light tan silty clay	40	135
Very light tan pink silt, numerous pebbles and little clay	10	145
Light tan silty clay	30	175
Light pink caliche, flow of water	5	180
Light pink silty clay	15	195
Light tan pink silt, few granules, some clay, increase in flow of water	50	245
Medium tan pink silty fine sand with few granules	10	255
Total depth	....	255

(S–20–61) 20cca1. T. W. Allen and D. Campbell. Land surface altitude 2,118 feet; diameter 9 inches, 9-inch casing to 80 feet, 5-inch casing to 351 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	4	4
Caliche	6	10
Clay with caliche layers, "near - surface" water	6	16
Clay with caliche layers	269	285
"Quicksand," small flow of water	15	300
Gravel with "lime shells," flow of water	58	358
Total depth	....	358

TABLE 3—*Continued*

(S–20–61) 20ccb2. W. R. Smith. Land surface altitude 2,127 feet; diameter 9 inches, 130 feet of 9-inch casing to 130 feet, 190 feet of 7-inch casing to 300 feet, perforated between 260 and 295 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	5	5
"Rock"	5	10
Sand	110	120
"Rock and clay"	140	260
Sand and gravel, flow of water	40	300
Total depth	----	300

(S–20–61) 20ccc1. S. P. James. Land surface altitude 2,115 feet; diameter 8 inches, 8-inch casing to 86 feet, 6-inch casing to 315 feet.

Material	Thickness (feet)	Depth (feet)
Soil	5	5
"Gravel" and "near-surface" water	17	22
White calcareous clay	23	45
Pink silty limey clay	10	55
White calcareous clay, and caliche nodules	60	115
Buff silty calcareous clay	90	205
Tan silty calcareous clay, little very fine sand	60	265
Pink silty fine sand, few granules	20	285
Pink, very fine sand, few granules, flow of water	5	290
Pink silty fine sand, few granules	25	315
Silty granular gravel and medium-grained orange sand, flow of water	10	325
Pink silty fine sand and granular gravel grading into pink silty clay and fine sand, some granules	25	350
Total depth	----	350

(S–20–61) 20cdb1. M. D. and F. Butler. Land surface altitude 2,109 feet; diameter 8 inches, 8-inch casing to 320 feet, perforated from 300 to 320 feet with slots ⅛-inch wide and 6 inches long. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	10	10
Caliche	10	20
Gravel and "near-surface" water	5	25
Clay with caliche layers	55	80
Brown clay	220	300
Cemented gravel, flow of water	40	340
Total depth	----	340

(S–20–61) 20cdc1. M. D. Butler. Land surface altitude 2,108 feet; diameter 8 inches, 8-inch casing to 310 feet, perforated from 260 to 310 with slots ⅛-inch wide and 6 inches long. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	10	10
Caliche	10	20
Gravel and "near-surface" water	5	25
Clay with caliche layers	55	80
Brown clay	220	300
Cemented gravel, flow of water	25	325
Total depth	----	325

(S–20–61) 21aba1. L. W. Noblett. Diameter 8 inches, 8-inch casing to 80 feet.

Material	Thickness (feet)	Depth (feet)
Soil	4	4
Caliche	3	7
White clay, caliche granules, "near-surface" water	8	15
Tan clay, caliche granules	10	25
Tan clay	50	75
Tan clay, caliche nodules	20	95
Tan clay	100	195
Dark tan clay	10	205
Tan clay	20	225
Dark tan clay, few granules	55	280
Fine gravel and sand, flow of water	20	300
Reddish tan clay	46	346
Total depth	----	346

TABLE 3—*Continued*

(S–20–61) 21abb1. C. Gratz. Diameter 12 inches, 12-inch casing to 194 feet, 6-inch casing to 200 feet. Well reconditioned by John Frewalt in 1946, drilled to 316 feet in April 1946. Driller's log published in U. S. Geological Survey Water-Supply Paper 365, p. 34, 1915, and erroneously reported as log of well 4 (S–20–61—19bcc1) in U. S. Geological Survey Water-Supply Paper 849-D, p. 149, 1941.

Material	Thickness (feet)	Depth (feet)
Lime	28	28
"Near-surface" water	....	28
Lime and clay	12	40
Hard cemented lime	10	50
Lime and clay mixed	20	70
Hard cemented lime	15	85
Clay mixed with lime	20	105
Very hard material	5	110
Clay and lime mixed	20	130
Lime rock	15	145
Clay and soft lime, (flowing water at 174 feet)	34	179
Hard streak	6	185
Lime and clay	4	189
Hard rock	10	199
Clay and limerock	4	203
Hard limerock, porous	8	211
Clay with rock	2	213
Hard streak	12	225
Rock	5	230
Sand and pebbles	6	236
Total depth	....	236

(S–20–61) 21dbc1. Las Vegas Building and Loan Company. Diameter 10 inches, 10-inch casing to 27 feet. Driller's log reported in U. S. Geological Survey Water-Supply Paper 365, p. 34, 1915.

Material	Thickness (feet)	Depth (feet)
Soil	12	12
White clay	10	22
Limerock	6	28
"Near-surface" water	....	28
White clay ("talc")	52	80
Sand and clay	5	85
White clay	15	100
Yellow sand and clay	5	105
White clay	3	108
Red clay and sand	7	115
White clay	5	120
Yellow clay	10	130
White clay	5	135
Yellow clay and sand	50	185
Limerock	5	190
Yellow to red clay	40	230
Sandrock	5	235
Red clay	33	268
Total depth	....	268

(S–20–61) 22aaa1. Taylor Estate. Diameter 8 inches, 8-inch casing to 99 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
No record	180	180
"Rock"	3	183
Clay	13	196
Caliche	12	208
Clay	20	228
Cemented sand and gravel	17	245
Red clay	35	280
Caliche, flow of water	6	286
Red clay	11	297
Caliche	2	299
Red clay	6	305
Gravel, flow of water	1	306
Sand and clay	99	405
Sand and gravel	13	418
Total depth	....	418

(S–20–61) 22acd1. City of North Las Vegas. Land surface altitude 1,937 feet; diameter 8 inches, 8-inch casing to 160 feet, 548 feet of 6-inch casing, 207 feet of 4-inch casing, perforated with slots ¼-inch wide and 4 inches long from 628 to 712 feet.

Material	Thickness (feet)	Depth (feet)
No record	245	245
Gravel, flow of water	7	252
Clay and gravel	18	270
Pink, silty, coarse and medium-grained sand	40	310
Pink silt with little fine-grained sand, some clay and granules	40	350
Pink sandy silt	10	360
Pink silty clay with granules and caliche nodules	20	380
Pink sandy silt	14	394
Granular gravel, water	2	396
Plastic blue clay	34	430
Red fine-grained sand with few granules	15	445
Granular gravel and red fine-grained sand, water	3	448
Red sand, little clay, some granular gravel	42	490
Fine-grained red sand, some silt	10	500
Light gray clay	10	510
Red clay	30	540
Fine-grained red sand, some silt	30	570
Red clay, little sand and silt	20	590
Red silty clay	50	640
White sand, water	4	644
White clay	5	649
Red clay, few sand lenses	101	750
Red sand, water	2	752
Total depth	....	752

TABLE 3—*Continued*

(S-20-61) 22acd2. City of North Las Vegas. Land surface altitude 1,938 feet; diameter 10 inches, 10-inch casing.

Material	Thickness (feet)	Depth (feet)
Soil, no record	23	23
Red silty clay, few thin caliche layers	67	90
No record	24	114
Caliche, little clay	23	137
Red clay	23	160
No record	23	183
Caliche	13	196
White clay, thin caliche layers	10	206
Caliche	14	220
Pink silty clay, caliche layers	56	276
Pink silty clay, much granule gravel	39	315
Red silty clay, little gravel	30	345
Red silty clay, much gravel	24	369
Red silty clay, little gravel	21	390
Plastic blue clay	47	437
Plastic blue clay, much caliche	34	471
Red sandy and silty clay	149	620
Sandy red clay, few granules	92	712
Red silty fine-grained sand, some clay	46	758
Silty red clay, little sand and gravel	48	806
Sandy silty red clay, much fine gravel	22	828
Total depth	....	828

(S-20-61) 22cbc1. Jack Moore and C. E. Bell. Diameter 8 inches, 8-inch casing to 75 feet.

Material	Thickness (feet)	Depth (feet)
Buff silty clay with few granules	15	15
Very light pink clay	60	75
Light buff silty clay with granules	30	105
Very light pink clay	40	145
Dark brown clay with few granules of caliche	10	155
Tan clay and silt	20	175
Very light pink silty clay	30	215
Light pink clay	10	225
Black sand, water level raised to within five feet of surface	30	255
Very light pink clay	40	295
Light pink clay, few caliche granules	20	315
Light pink clay	70	385
Total depth	....	385

(S-20-61) 22dda1. Arthur Arnold. Diameter 8 inches, 8-inch casing to 240 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Light pink sandy clay, few granules	15	15
"Near-surface" water	....	15
Light pink sandy clay	40	55
Light pink and tan mottled sandy clay	5	60
Light pink sandy clay	60	120
Dark tan clay	10	130
Light pink clay	20	150
Light pink and tan mottled clay	10	160
Light pink clay	40	200
Light tan clay	10	210
Light pink clay	20	230
Light tan clay	10	240
Light pink clay	5	245
Slightly sandy granules and pebble gravel, little clay	10	255
Red clay, plastic	35	280
Cement gravel, water	10	290
Yellow and light pink clay	10	300
Total depth	....	300

TABLE 3—*Continued*

(S-20-61) 22ddd3. Harry Miller. Diameter 6 inches. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	9	9
"Near-surface" water	....	9
Soil	1	10
Caliche and white clay	5	15
Red clay	39	54
"Hard lime"	86	140
Caliche	7	147
"Hard lime"	11	158
Clay with "lime"	3	161
Red clay and 'talc"	5	166
Caliche	3	169
Clay	6	175
Caliche	8	183
"Lime and gyp"	7	190
"Lime"	18	208
Sand, water	2	210
Cemented gravel, flow of water	5	215
Clay	3	218
Cemented gravel	4	222
Clay	5	227
Cemented gravel	3	230
Sandy clay	15	245
Cemented gravel, water	3	248
Sandy clay	5	253
Cemented gravel	4	257
Red clay	5	262
Cemented gravel	5	267
Red sandy clay	19	286
Red clay	24	310
Cemented gravel, water	3	313
Red clay	19	332
"Mucky" sand	2	334
Sandy clay	66	400
White sand	3	403
Red, sandy clay	26	429
Cemented gravel	4	433
"Shale" and sand	2	435
Gray clay	12	447
Blue clay	33	480
Gray clay	7	487
Red clay	38	525
Total depth	....	525

(S-20-61) 23cbd1. R. F. Watson. Diameter 5⅝ inches, 108 feet of 5⅝-inch casing. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	10	10
Caliche and clay	48	58
Red clay, "rock," caliche	72	130
Clay, caliche	70	200
Gravel, water	10	210
Total depth	....	210

(S-20-61) 23ddb1. Mary Gaddis. Diameter 8 inches, 8-inch casing to 84 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	....	10
"Near-surface" water	....	20
Dry hard clay	to	318
Gravel, flow of water	6	324
No record	46	370
Gravel, water	....	370
No record	....	420
Total depth	....	420

(S-20-61) 26bbb1. City of Las Vegas. Diameter 8 inches, depth of 8-inch casing unknown, 6-inch casing from 263 to 502 feet, 5-inch casing from 332 to 570 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
No record	258	258
"Cavey" red sand, flow of water	15	273
Red sandy clay	13	286
Gravel	2	288
Red sandy clay	41	329
"Quicksand"	10	339
White clay	24	363
Yellow clay	74	437
Sand	1	438
Sandy clay	12	450
Blue clay	2	492
Yellow clay	120	612
"Soapstone"	2	614
Yellow clay	150	764
Gray clay	26	790
Gray clay and red sand	8	798
Sand, water	4	802
Yellow clay	6	808
Sand, water	4	812
Total depth	....	812

(S-20-61) 27aaa2. R. B. Saunders. Diameter 4 inches, 4-inch casing to 90 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Sandy loam	4	4
Gravel and sand	4	8
"Limestone"	7	15
Clay and broken limestone	10	25
Gravel	2	27
"Near-surface" water level	....	27
Clay and "limestone"	23	50
Red clay	40	90
Green clay	2	92
Red clay	22	114
"Broken limestone," flow of water	4	118
Red clay	7	125
Red clay and "limestone"	25	150
"Broken limestone"	25	175
"Limerock" and red clay	10	185
Red clay	5	190
Sand and gravel, flow of water	10	200
Total depth	....	200

TABLE 3—*Continued*

(S–20–61) 27daa1. Las Vegas Land and Water Co. Diameter 8 inches, 8-inch casing to 41 feet; 6⅝-inch casing to 270 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	12	12
Caliche	3	15
"Near-surface" water	----	15
Clay, sand, and "lime"	60	75
White clay	72	147
Caliche	3	150
Clay and sand, water	5	155
Caliche	59	214
Sand, gravel, and clay	50	264
Caliche	9	273
Sand, flow of water	50	323
Total depth	----	323

(S–20–61) 28bca2. E. H. Thomas and H. W. Polk. Diameter 10 inches, 10-inch casing to 519 feet, perforated with one-eighth by 3-inch slots from 345 to 369 feet, 203 feet of 8-inch casing from 507 to 710 feet, perforated with ⅛ by 3-inch slots from 650 to 710 feet.

Material	Thickness (feet)	Depth (feet)
Tan sandy silt, some caliche nodules	7	7
Tan sandy silt cemented with caliche	8	15
Light pink silty clay, caliche nodules	10	25
Greenish white clay, much caliche	7	32
Caliche	9	41
Greenish white clay, silty, some caliche	16	57
Caliche	5	62
Silty white clay, caliche nodules	38	100
Caliche	2	102
Light pink clay, thin layers of caliche	52	154
Caliche	1	155
Light pink clay, thin layers of caliche	74	229
Pink clay, caliche nodules	29	258
Caliche	11	269
Pink silty clay, some granule gravel	87	356
Silty and sandy granular gravel, flow of water	7	363
Pink silty clay, some granule gravel	16	379
Caliche-cemented pink silt	10	389
Pink silty clay, some granule gravel, few layers well cemented with caliche	202	591
Caliche	4	595
Fine-grained pink sand, few granules, some clay	45	640
Red silty clay, flow of water	70	710
Total depth	----	710

(S–20–61) 28cad1. E. A. Honrath. Land surface altitude 2,057 feet; diameter 6 inches, 6-inch casing to 402 feet, 294 feet of 4-inch casing from 340 feet to 634 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	10	10
Caliche	20	30
White clay and caliche	120	150
Yellow clay and caliche	60	210
Yellow sandy clay	28	238
Caliche	3	241
Yellow sandy clay	11	252
"Quick" sand	5	257
Yellow clay	29	286
Gravel	12	298
Caliche	2	300
Red sandy clay	15	315
Red sandy clay and "quick" sand	5	320
Gravel, flow of water	65	385
Gravel	12	397
"Rock"	7	404
Sand, flow of water	46	450
Red sandy clay	18	468
Blue clay	9	477
Blue "quick" sand	63	540
White sand	10	550
Red sandy clay	30	580
"Quick" sand and clay	56	636
White sand and gravel, flow of water	14	650
Total depth	----	650

(S–20–61) 28cbd1. T. J. Thebo. Land surface altitude 2,066 feet; diameter 8 inches, 8-inch casing to 120 feet, 6-inch casing to 550 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
No record	20	20
Clay	----	20
"Near-surface" water level	----	20
No record	8	28
Clay	10	38
Clay and caliche	52	90
Clay	16	106
Caliche	5	111
Clay	24	135
Caliche	50	185
Clay and sand	35	220
Clay	10	230
Clay and caliche	54	284
Caliche and gravel	16	300
Sand and gravel, flow of water	32	332
Sand	13	345
Clay	25	370
"White sand"	135	505
Red sand	40	545
Red sand and gravel	39	584
Red sand	26	610
"Shattered sandstone"	25	635
Sand and gravel, flow of water	15	650
Total depth	----	650

TABLE 3—*Continued*

(S–20–61) 28cda1. V. K., M. G., L. V. Clement and Lee Waite. Land surface altitude 2,056 feet; diameter 8 inches, 8-inch casing to 400 feet, 200 feet of 7-inch (O. D.) casing, and 533 feet of 4-inch casing, perforated with slots 1/16-inch wide and 4 inches long from 453–533 feet.

Material	Thickness (feet)	Depth (feet)
Soil	5	5
White clay and caliche layers	5	10
"Near-surface" water level	----	10
White clay and layers of caliche	35	45
Light gray clay	20	65
Very light pink clay	53	118
Caliche nodules and light pink clay	12	130
Dark tan clay, caliche nodules	10	140
Light tan clay, few nodules	10	150
Very light pink clay, silty	50	200
Light tan clay, few granules	40	240
Very light pink clay, few granules	10	250
Light pink clay, granules	30	280
Pink silty clay	10	290
Pink silty clay, many pebbles and granules	10	300
Pink silty clay	30	330
Pink silty clay, little sand, numerous granules	20	350
Pink silty clay and fine sand	5	355
Loosely cemented granular gravel, few pebbles, some silt and fine sand, flow of water	35	390
Light pink silty clay	50	440
Light pink fine-grained sand and silt, few granules	17	457
Light greenish blue clay	7	464
Very light pink clean medium-grained sand	6	470
Light tan fine-grained sand and silt	38	508
Light pink sand and gravel, flow of water	1	509
Light tan fine-grained sand and silt	26	535
Light pink silty fine-grained sand	40	575
Light tan silty fine-grained sand	5	580
Light pink silty fine-grained sand	54	634
Fine gravel and coarse-grained sand, flow of water	1	635
Light pink silty fine-grained sand	50	685
Cement gravel, flow of water	5	690
Total depth	----	690

(S–20–61) 29cbc1. T. E. Sharp. Land surface altitude 2,138 feet; diameter 7⅝ inches, 7⅝-inch casing to 149 feet, 402 feet of 5⅝-inch casing. Driller's log.

Material	Thickness (feet)	Depth (feet)
No record	160	160
Flow of water	----	160
No record	170	330
Cemented gravel	10	340
Sand and gravel	10	350
Clay and "muck"	7	357
Cemented gravel	13	370
Gravel	28	398
Clay	2	400
Gravel, flow of water	33	433
Sand, clay, and "broken lime"	57	490
Dry sand and boulders	5	495
Total depth	----	495

(S–20–61) 29dac1. Julia Russell. Land surface altitude 2,082 feet; diameter 8 inches, 8-inch casing to unknown depth, 6-inch casing to 453 feet, 4-inch casing to 780 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
No record	125	125
First flow of water	----	125
No record	183	308
Red sand	9	317
Sand and caliche	17	334
Red sand	14	348
Gravel	22	370
Sand and gravel	15	385
Clay	13	398
Sand and gravel	12	410
Clay	10	420
Sand and gravel	13	433
Cement gravel	10	443
Sand and caliche	9	452
Clay	37	489
White sand	27	516
White clay	4	520
Red sand	10	530
Clay and sand	42	572
Sand	----	----
No record	208	780
Total depth	----	780

TABLE 3—*Continued*

(S–20–61) 29dad1. Louis Perozzi. Land surface altitude 2,077 feet; diameter 9 inches, 9-inch casing to 61 feet, 6-inch casing to unknown depth. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	6	6
Caliche	20	26
"Near-surface" water	----	26
Caliche (broken up)	4	30
Clay	10	40
Brown clay	30	70
Sand	30	100
Brown clay	6	106
Clay and sand	58	164
Caliche	36	200
Clay and sand	64	264
White sand, flow of water	6	270
Sand	30	300
Caliche	10	310
Sand, flow of water	50	360
Caliche and clay	41	401
Sand, flow of water	29	430
Total depth	----	430

(S–20–61) 29dbb1. John Papus. Land surface elevation 2,094 feet; diameter 7⅝ inches, 7⅝-inch casing to 400 feet, 80 feet of 6-inch casing from 395 to 475 feet, perforated with slots ¼-inch wide and 4 inches long from 400 feet to 475 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Caliche and clay	100	100
Red clay and "rock"	300	400
Red sand and clay	50	450
Sand and gravel	25	475
Total depth	----	475

(S–20–61) 29dca1. Julia Russell. Land surface altitude 2,083 feet; diameter 8 inches, 8-inch casing to 120 feet, 6-inch casing to 650 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
No record	----	17
"Near-surface" water level	----	17
Clay and caliche	?	130±
Gravel, flow of water	?	130
No record	20	150
Sand and caliche	50	200
No record	50	250
Cement gravel, clay and sand	100	350
Flow of water	----	350
No record	300	650
Gravel, flow of water	14	664
Total depth	----	664

(S–20–61) 29dca2. U. S. Geological Survey. Land surface altitude 2,083 feet; diameter 2 inches, 2-inch casing to 22 feet.

Material	Thickness (feet)	Depth (feet)
White silty clay	20	20
White silty clay, few granules, little sand	5	25
Total depth	----	25

(S–20–61) 29ddb1. J. S. Ronnow. Land surface altitude 2,078 feet; diameter 6 inches, 6-inch casing to 72 feet, 4-inch casing to 401 feet.

Material	Thickness (feet)	Depth (feet)
Soil	4	4
White marly clay, caliche nodules	5	9
"Near-surface" water level	----	9
White marly clay, caliche nodules	86	95
Light pink silty clay, caliche nodules	60	155
Light tan silty clay, caliche pebbles, little fine-grained sand	65	220
Pink silty clay little sand and few granules	40	260
Tan silty very fine-grained sand with caliche nodules and granules	125	385
Pink sand, few granules, flow of water	5	390
Pink silty very fine-grained sand	31	421
Tan sand and caliche, much clay and silt, flow of water	10	431
Tan silty fine sand with granules of caliche	11	442
Total depth	----	442

TABLE 3—*Continued*

(S–20–61) 30adb1. L. H. Tritle. Diameter 10 inches, 10-inch casing to 322 feet, perforated with slots ⅛-inch wide from 282 to 322 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Very fine-grained light brown sand with some silt and caliche	10	10
Light gray clay with caliche and very fine-grained sand, some granules	10	20
Fine - grained light brown sand with little silt	20	40
Fine-grained tan sand, little clay	10	50
Medium brown very fine - grained sand, little silt and caliche	10	60
Fine-grained tan sand, some silt and little calcareous material	50	110
Fine-grained brownish white sand, some caliche, little silt	20	130
Fine-grained brown sand	20	150
Fine - grained light brown sand, some calcareous material	30	180
Fine - grained light brown sand, some silt, some caliche nodules, and little gravel, water	20	200
Fine - grained light brown sand, little silt and caliche	10	210
Blue clay	54	264
Gravel and sand, flow of water	54	318
Gray clay	4	322
Total depth	----	322

(S–20–61) 30bcc1. U. S. Geological Survey. Land surface altitude 2,210 feet; diameter 2 inches, 2-inch casing to 20 feet.

Material	Thickness (feet)	Depth (feet)
Soil	1	1
Caliche, pink silty clay	9	10
Granule gravel	5	15
Tan silty clay	5	20
Tan silty clay, granule gravel	10	30
Total depth	----	30

(S–20–61) 30dda1. Las Vegas Land and Water Co. Land surface altitude 2,121 feet; diameter 16 inches, 16-inch casing to 82 feet, 10¾-inch casing to 525 feet, 311 feet of 8⅝-inch casing from 489 to 800 feet, perforated from 541 to 800 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Sandy clay "shell"	51	51
Yellow clay, "shell," sand	46	97
Gravel	13	110
Yellow sandy clay, "shells"	76	186
Sandy clay, "limestone"	57	243
Sandy clay	47	290
Coarse gravel	70	360
Coarse gravel, little clay	23	383
Coarse gravel, much clay	60	443
"Hard shell"	2	445
Gravel, clay, few small boulders	37	482
Yellow clay, gravel	18	500
Sandy gravel and clay	34	534
Sandy clay	16	550
Sandy clay, gravel	20	570
Gravel, little clay	19	589
Sandy clay, gravel	61	650
Gravel	84	734
Gravel, some clay	36	770
Gravel	20	790
Clay and gravel	10	800
Total depth	----	800

(S–20–61) 30dda2. Las Vegas Land and Water Co. Land surface altitude 2,120 feet; diameter 10¾ inches, 13⅜-inch casing to 280 feet, 231 feet of 10¾-inch casing, perforated with ½-inch slots from 266 to 477 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Sand and clay	25	25
"Limestone" and clay	50	75
Clay and gravel	105	180
Sandy clay and gravel	120	300
Coarse gravel, flow of water	83	383
Gravel and clay	62	445
Sand and small gravel, flow of water	32	477
Total depth	----	477

TABLE 3—*Continued*

(S–20–61) 31aad2. Las Vegas Land and Water Co. Land surface altitude 2,137 feet; diameter 13⅜ inches, 13⅜-inch casing to 290 feet, 241 feet of 10¾-inch casing from 259 to 500 feet, perforated with ½-inch slots from 280 to 497.5 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)	Material	Thickness (feet)	Depth (feet)
"Limestone" and clay	150	150	Gravel, water-bearing	90	420
Sandy clay and "limestone"	100	250	Sand and gravel, water bearing	70	490
Sandy red clay	30	280	Gravel and red clay	10	500
Fine sand and small gravel, flow of water	50	330	Total depth	....	500

(S–20–61) 31ada1. Las Vegas Land and Water Co. Land surface altitude 2,134 feet; diameter 16 inches, 16-inch casing to 40 feet, 10¾-inch casing to 506 feet, 315 feet of 7-inch casing from 480 to 795 feet, perforated from 495 to 795 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)	Material	Thickness (feet)	Depth (feet)
Soil	4	4	Medium to coarse gravel	190	475
"Limestone"	5	9	Red sandy clay and gravel	10	485
Gravel, clay	36	45	Red sandy clay	30	515
Clay and sand	20	65	"Lime," clay and thin layers of gravel	20	535
"Lime" and sandy clay	40	105	Medium to coarse gravel	266	801
"Lime" and limey clay	150	255	Total depth	....	801
"Lime" and limey clay with thin layers of gravel	30	285			

(S–20–61) 31add1. Las Vegas Land and Water Co. Land surface altitude 2,125 feet; diameter 13⅜ inches, 13⅜-inch casing to 275 feet, 255 feet of 10¾-inch casing from 297 to 462 feet, perforated with ½-inch slots from 244 to 462 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)	Material	Thickness (feet)	Depth (feet)
Caliche and clay	45	45	Gravel and clay	30	350
Gravel and clay	45	90	Gravel	40	390
Clay	70	160	Gravel, little clay	70	460
Sand, gravel and caliche	50	210	Sand and clay	10	470
Gravel, some clay	35	245	Gravel, clay, caliche	15	485
Clay, some gravel	30	275			
Gravel	45	320	Total depth	....	485

(S–20–61) 31dab1. Las Vegas Land and Water Co. Land surface altitude 2,129 feet; diameter 13⅜ inches, 13⅜-inch casing to 510.6 feet, 283.8 feet of 10¾-inch casing from 476.7 to 760.5 feet, perforated with ½-inch slots. Driller's log.

Material	Thickness (feet)	Depth (feet)	Material	Thickness (feet)	Depth (feet)
Caliche and clay	25	25	Gravel, little clay	20	400
Caliche and sand	10	35	Clay, little sand and gravel	15	415
Caliche and gravel	15	50	Clay and gravel	75	490
Gravel, caliche, and clay	20	70	Clay	15	505
Caliche and clay	20	90	Gravel, clay and little sand	45	550
Caliche and gravel	35	125	Gravel	25	575
Caliche	20	145	Gravel and sand	50	625
Clay and caliche	55	200	Gravel	50	675
Clay, gravel, and caliche	15	215	Sand	35	710
Clay and caliche	20	235	Gravel, some clay	15	725
Clay and gravel	30	265	Sand	25	750
Clay	20	285	Gravel and clay, little sand	16	766
Sand and clay	15	300			
Gravel, sand, and clay	15	315			
Gravel, little sand	65	380	Total depth	....	766

TABLE 3—*Continued*

(S–20–61) 31dac1. Las Vegas Land and Water Co. Land surface altitude 2,132 feet; 10¾-inch casing to 904 feet, perforated with slots 3/16-inch wide and 2 inches long from 548 to 750 feet and 800 to 904 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Clay, caliche, and gravel	230	230
Gravel	130	360
Pink silty clay, granule gravel, few caliche nodules	70	430
Granule and small-pebble gravel, some pink silty clay	25	455
Pink silty clay, few granules	80	535
Granule and small-pebble gravel, some pink silty clay	35	570
Granule, small-pebble gravel, fine-to-coarse-grained sand, little pink silty clay	175	745
Pink silty clay, few granules	20	765
Granule and pebble gravel, some sand, much pink silty clay	20	785
Pink silty clay, few granules	20	805
Granule and pebble gravel, some sand and little silt	110	915
Coarse to medium-grained sand	7	922
Pink silty clay, little sand	18	940
Total depth	....	940

(S–20–61) 31ddb1. Las Vegas Land and Water Co. Land surface altitude 2,133 feet; diameter 13⅜ inches, 13⅜-inch casing to 280.2 feet, 216.6 feet of 10¾-inch casing from 193.4 to 410 feet, perforated with ½-inch slots from 193.4 to 410 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Caliche and clay	50	50
Caliche, little gravel	15	65
Clay	13	78
Caliche and clay	122	200
Gravel, caliche, and clay	20	220
Gravel and clay	55	275
Gravel	35	310
Gravel and sand	15	325
Gravel, little clay	10	335
Gravel	20	355
Clay and gravel	100	455
Clay	17	472
Total depth	....	472

TABLE 3—*Continued*

(S–20–61) 31ddc1. Las Vegas Land and Water Company. Land surface altitude 2,137 feet; diameter 13⅜ inches, 13⅜-inch casing to 494.3 feet, 376.8 feet of 10¾-inch casing from 443.2 to 820 feet, 358.9 feet of 7-inch casing from 798.6 to 1,157.5 feet, perforated with ½-inch slots from 798.6 to 1,019.9 feet and from 1,096 feet to 1,157.5 feet. Following completion of the well the 10¾-inch casing was shot-perforated between 500 and 800 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Caliche, small amounts of clay, sand, and gravel	80	80
Clay, little caliche	30	110
Caliche, some clay	75	185
Clay, some caliche	15	200
Caliche, little clay and sand	10	210
Clay, little sand and gravel	30	240
Caliche, some gravel	20	260
Clay, little caliche and gravel	30	290
Gravel, some sand and little clay, flow of water	100	390
Clay, some gravel and little sand	90	480
Clay	20	500
Gravel	30	530
Clay, little gravel	10	540
Gravel and sand	10	550
Clay, some sand and gravel	20	570
Sand, some gravel and little clay	40	610
Gravel, some clay	10	620
Gravel, flow of water	20	640
Gravel and sand, increased flow of water	10	650
Gravel, increased flow of water	20	670
Gravel and sand, increased flow of water	30	700
Gravel, increased flow of water	10	710
Sand and gravel, increased flow of water	60	770
Sand, increased flow of water	10	780
Gravel, increased flow of water	10	790
Sand and gravel, increased flow of water	10	800
Clay	5	805
Clay, little sand and gravel	5	810
Clay, some gravel	10	820
Gravel, little clay	10	830
Gravel, increased flow of water	10	840
Clay and sand, little gravel	10	850
Gravel, increased flow of water	70	920
Clay and gravel	20	940
Gravel, sand, some clay	10	950
Clay and gravel	20	970
Clay	40	1,010
Clay, little sand	10	1,020
Clay	10	1,030
Sand, increased flow of water	20	1,050
Clay, little sand	40	1,090
Gravel and sand	10	1,100
Gravel, increased flow of water	50	1,150
Clay, little gravel	40	1,190
Clay	60	1,250
Total depth	----	1,250

(S–20–61) 32acb2. R. B. Griffith. Diameter 8 inches, 8-inch casing to 338 feet, 200 feet of 6-inch casing from 300 to 500 feet, 220 feet of 5-inch casing from 440 to 660 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil and "gyp"	50	50
"Clay and rock"	250	300
Cement gravel	100	400
Gravel and sand, flow of water	10	410
Clay	50	460
"Rock"	20	480
Clay and sand	160	640
Coarse sand and gravel, flow of water	20	660
Total depth	----	660

TABLE 3—*Continued*

(S–20–61) 32acc1. R. B. Griffith. Land surface altitude 2,093 feet; diameter 10 inches, 10-inch casing to 446 feet, perforated with ¼-by-4-inch slots from 386 to 446 feet, 208 feet of 8-inch casing from 426 to 634 feet, perforated with 3/16-by-2½-inch slots from 574 to 634 feet.

Material	Thickness (feet)	Depth (feet)
Red sandy silt	6	6
Caliche	34	40
White silty clay, few thin strata of caliche	80	120
Tan silty clay, few thin strata of caliche	144	264
Pink silty clay, many granules, little sand	22	286
Small - pebble gravel, few granules, some sand and pink silty clay	19	305
Pink silty clay	2	307
Caliche	3	310
Small - pebble gravel, few granules, some sand and pink silty clay	79	389
Red silty clay, some sandy pebble and granule gravel, flow of water	66	455
Red silty clay, caliche	26	481
Red silty clay, few granules, few thin caliche strata	129	610
Small-pebble and granule gravel, little sand and silt, flow of water	24	634
Red silty clay, much granule gravel and sand	26	660
Red silty hard clay	2	662
Red silty clay, little granule gravel and sand	33	695
Total depth	----	695

(S–20–61) 32cdc1. Kenneth Searles. Land surface altitude 2,101 feet; diameter 10 inches, 10-inch casing to 585 feet, perforated with ⅛-by-2-inch slots from 530 to 565 feet.

Material	Thickness (feet)	Depth (feet)
Soil	10	10
White silty clay, few granules and little sand, few thin caliche layers	30	40
Granule and small-pebble-gravel, many caliche nodules, little white silty clay	10	50
Pink silt, few granules, some clay	10	60
Tan silty clay	30	90
Tan silty clay, few granules, caliche nodules	30	120
Tan silty clay	110	230
Dark tan silty clay, few caliche nodules	20	250
Dark tan silt, few small pebbles and granules, some clay	30	280
Tan silty clay, some granules	50	330
Small pebble and granule gravel, much tan silty clay	10	340
Tan silty clay, some granules	10	350
Pebble and granule gravel, some tan silty clay	10	360
Tan silty clay	60	420
Blue clay	15	435
Tan silt, little clay and very fine - grained sand	5	440
Light tan silt, few granules	50	488
Light tan silt and greenish blue clay, much caliche and few large pebbles	2	490
Red clay, caliche nodules	10	500
Dark tan silt, few granules, little fine sand	20	520
Tan silt	10	530
Red silt	10	540
Red silty clay	10	550
Fine to medium-grained pink sand, flow of water	15	565
Small pebble and granule gravel, little pink silty sand, increased flow of water	20	585
Total depth	----	585

TABLE 3—*Continued*

(S–20–61) 32cdd1. E. W. and L. Cragin. Land surface altitude 2,093 feet; diameter 10 inches, 10-inch casing to 100 feet; 8-inch casing to 440 feet, perforated with ¼-by-4-inch slots from 360 to 420 feet. 154 feet of 6-inch casing from 390 to 544 feet, perforated with ¼-by-4-inch slots from 445 to 485 feet. 40 feet of 5-inch casing from 535 to 575 feet, perforated with ¼-by-4-inch slots from 555 to 575 feet.

Material	Thickness (feet)	Depth (feet)
Soil	3	3
Caliche	2	5
Red silty clay	11	16
"Near-surface" water level	----	16
Red silty clay	11	27
Light pink silty clay	18	45
Tan clay	7	52
Brown silty clay	23	75
Caliche	2	77
Brown silty clay	15	92
Caliche	1	93
Brown silty clay	5	98
Caliche	1	99
Cemented pebble gravel	3	102
Pink silty clay	7	109
Light greenish blue clay	1	110
Pink silty clay	15	125
Pink silty clay, much gravel	11	136
Brown silty clay	20	156
Pink silty clay, thin layers of caliche	14	170
Pink silty clay	60	230
Pink silty clay, little gravel	20	250
Caliche	5	255
Pink silty clay	10	265
Caliche, little gravel	14	279
Caliche	9	288
Light pink clay, many granules, some sand	82	370
Red sandy silt, layers of pebble gravel, flow of water	30	400
Red silty clay	15	415
Red fine-grained sand	10	425
Red silty clay	70	495
Gravel, some silt and sand, flow of water	5	500
Red fine-grained sand	35	535
Pink silty clay	10	545
Red fine-grained sand	10	555
Gray, medium-grained sand	15	570
Caliche	2	572
Sandy silty gravel, flow of water	3	575
Total depth	----	575

(S–20–61) 32dda1. Adrian Kuffer. Land surface altitude 2,069 feet; diameter 5⅝ inches, 5⅝-inch casing to 380 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Sandy loam	8	8
"Broken lime rock"	15	23
White clay	14	37
"Rock"	3	40
White clay	13	53
"Broken lime rock"	2	55
White clay	14	69
"Broken lime rock"	4	73
Clay	62	135
"Broken lime rock"	3	138
Clay and "broken lime rock"	121	259
"Broken lime rock" and sand	21	280
Red clay	52	332
Gravel and clay	3	335
Clay	15	350
Clay and gravel	20	370
Gravel, flow of water	38	408
Sand and clay	10	418
Total depth	----	418

(S–20–61) 32ddb2. M. R. Russell. Land surface altitude 2,075 feet; diameter 10 inches, 10-inch casing to 181 feet, 8-inch casing to 215 feet, 200 feet of 7-inch casing, perforated and set at unknown depth, 108 feet of 5-inch casing, perforated and set at unknown depth. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	7	7
Hard lime with streaks of gypsum	16	23
Near-surface water level	----	23
Hard lime with streaks of gypsum	177	200
Hard gravel with thin layers of clay	100	300
"Cement gravel"	61	361
Loose gravel	4	365
Cement gravel, small flow of water at 400 feet	45	410
Clay	5	415
"Cement gravel"	40	455
Red clay	5	460
Blue clay	8	468
"Quicksand"	12	480
"Cement gravel," flow of water at 496 ft.	20	500
Yellow clay and quicksand with thin layers of gravel, flow of water	144	644
Total depth	----	644

TABLE 3—*Continued*

(S–20–61) 32ddd1. H. D. Gerken. Diameter 5⅝ inches, 5⅝-inch casing to 342 feet, 85 feet of 4-inch casing from 322 to 407 feet, perforated from 322 to 392 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Sandy loam	7	7
"Lime rock"	8	15
White clay	3	18
"Broken limerock"	7	25
Gravel and clay	2	27
Red clay	1	28
"Broken limerock"	45	73
White clay	5	78
"Limerock"	1	79
White clay	34	113
"Broken limerock" and clay	153	266
Gravel and clay	13	279
Red clay	48	327
Gravel, flow of water	5	332
Clay and gravel, increased flow of water	3	335
Gravel	7	342
Red clay	3	345
Gravel, flow of water	10	355
Cement gravel, increased flow of water	55	410
Total depth	....	410

(S–20–61) 33bcc1. H. A. Studwell. Land surface altitude 2,067 feet; diameter 6 inches, 6-inch casing to 375 feet, perforated from 330 feet to 375 feet with slots ¼-inch wide and 2 inches long. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	12	12
"Limestone"	2	14
Near-surface water level	....	14
"Limestone"	2	16
Layers of clay and "limestone"	284	300
Clay	30	330
Sand, flow of water	5	335
Clay	20	355
Clay and gravel	20	375
Gravel and sand, flow of water	25	400
Clay	100	500
Clay and "caving sand"	20	520
Total depth	....	520

(S–20–61) 33cbc1. J. L. Filby. Land surface altitude 2,068 feet; diameter 8 inches, 8-inch casing to 133 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	12	12
White clay	7	19
"Limerock"	2	21
White clay	19	40
"Rock"	2	42
White clay	7	49
"Limerock"	2	51
Clay	26	77
"Limerock"	3	80
Clay	159	239
"Rock"	5	244
Clay	17	261
"Rock"	6	267
Clay	6	273
"Cement gravel"	57	330
Red sand and clay	8	338
"Cement" and loose gravel, flow of water	52	390
Total depth	....	390

(S–20–61) 33cca1. E. H. Allen. Land surface altitude 2,059 feet; diameter 3 inches, 3-inch casing to 312 feet. 1½-inch casing (inside of 3-inch casing) to 400 feet. A 1-inch pipe (outside of 3-inch casing) to 200 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
"Limestone" and clay	15	15
Near-surface water level	....	15
"Limestone"	55	70
Sand and clay	130	200
Sand, flow of water	10	210
"Limestone" and clay	110	320
Sand and "limestone," small flow of water	10	330
Clay and "limestone"	60	390
Gravel, flow of water	10	400
Total depth	....	400

(S–20–61) 33cca3. Margaret Folsom. Land surface altitude 2,054 feet; diameter 5⅝ inches, 5⅝-inch casing to 400 feet, perforated from 360 to 400 feet with slots ⅜-by-6-inches. Driller's log.

Material	Thickness (feet)	Depth (feet)
Sandy loam	7	7
Broken "lime rock"	4	11
White clay	8	19
"Lime rock" and clay	12	31
White clay	12	43
Broken "lime rock"	7	50
White clay	20	70
Broken "lime rock"	5	75
White clay	35	110
Broken "lime rock"	10	120
White clay	24	144
Broken "limerock"	6	150
Broken "lime in layers"	115	265
Red clay	15	280
"Blue" gravel, flow of water	10	290
Red clay	10	300
Broken "limestone"	10	310
Red clay	30	340
Clay and gravel	20	360
Red clay	30	390
"Blue" gravel, flow of water	10	400
Total depth	....	400

TABLE 3—*Continued*

(S–20–61) 33cdc1. G. C. Blaine and Clifford A. Jones. Diameter 5⅝ inches, 5⅝-inch casing to 432 feet unperforated. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil and clay	12	12
White clay	38	50
Red sandy clay	50	100
Red clay with streaks of red sand	182	282
White sand	18	300
Red clay	50	350
Gravel	10	360
Red clay	40	400
Red sand	32	432
White sand, flow of water	18	450
Red clay	42	492
Blue clay	----	492
Total depth	----	492

(S–20–61) 33dad1. Mrs. Frank Beam. Diameter 8 inches, 8-inch casing to 90 feet, 6-inch casing to 595 feet. Driller's log reported in U. S. Geological Survey Water-Supply Paper, 849-D, 1941.

Material	Thickness (feet)	Depth (feet)
Sandy loam	6	6
"Lime rock"	22	28
Blue clay	17	45
"Lime rock"	7	52
Blue clay	28	80
White clay	35	115
Red clay	12	127
Pink clay	32	159
Clay	61	220
"Lime rock"	1	221
Clay, small flow of water	32	253
"Lime rock"	4	257
Red clay	30	287
"Lime rock"	5	292
Red clay	43	335
"Lime rock"	7	342
Clay	28	370
"Sandstone"	10	380
Clay	31	411
"Sandstone," flow of water	9	420
Red clay	5	425
Sandstone	12	437
Red clay	51	488
Sand and clay	14	502
Sand	48	550
Sand and gravel, flow of water	50	600
Total depth	----	600

(S–20–61) 34adc1. S. W. Craner. Diameter 8 inches, 8-inch casing to 178 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	6	6
Rock	2	8
Clay	11	19
Rock	6	25
Clay	162	187
"Lime rock," flow of water	2	189
Clay	12	201
"Lime rock," flow of water	2	203
Red clay	42	245
Sand, flow of water	2	247
Clay	3	250
"Cement" gravel	18	268
Clay	86	354
"Cement" gravel	----	354
Total depth	----	354

(S–20–61) 34dbb1. P. J. Goumond. Diameter 5⅝ inches, 5⅝-inch casing to 475 feet, 163 feet of 4-inch perforated casing from 450 feet to 613 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil, clay, and caliche	30	30
Yellow clay	130	160
Sand, flow of water	10	170
Clay	100	270
Clay and gravel	20	290
Clay and rock	150	440
Blue clay	25	465
Red clay	85	550
Sand	10	560
Red clay	40	600
Sand, flow of water	10	610
Red clay	28	638
Total depth	----	638

TABLE 3—*Continued*

(S–20–61) 35cac1. E. A. Clark. Diameter 8 inches, 8-inch casing to 370 feet, perforated with ⅜-by-6-inch slots from 146 to 150 feet and 255 to 263 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	8	8
Caliche	10	18
White clay	30	48
Caliche	2	50
Red clay	7	57
Caliche conglomerate	7	64
White clay	41	105
Red clay	5	110
Red sand	1	111
Red clay	19	130
Red sand	2	132
Red clay	14	146
Caliche, flow of water	4	150
White sand	10	160
Caliche	4	164
Red clay	3	167
Caliche	4	171
Red clay	6	177
"Gravelly clay"	18	195
Sand and gravel	45	240
Red clay	15	255
Gravel, flow of water	3	258
Red sand, gravel	5	263
Red sand	61	324
Blue mud	58	382
Red clay	10	392
Red sandy clay	15	407
White sand, flow of water	31	438
Sandy red clay	32	470
Sand	----	470
Total depth	----	470

(S–20–61) 35cbb1. J. H. Ladd Estate. Diameter 6 inches, 6-inch casing to 410 feet, 4-inch casing to 710 feet, perforated between 410 and 420 feet and 600 and 650 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	20	20
White clay and caliche	30	50
Clay	100	150
Gravel	10	160
Clay	230	390
Blue clay	20	410
Gravel, flow of water	10	420
Clay	180	600
"Quick" sand, flow of water	50	650
Clay with some sand layers	145	795
Total depth	----	795

(S–20–61) 35ddc2. Estella C. Beam. Diameter 8 inches, 8-inch casing to 81 feet, 6-inch casing to 310 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	7	7
Caliche	3	10
"Near-surface" water level	----	10
Clay	10	20
Sand	10	30
Clay	51	81
Brown clay	9	90
Caliche, artesian water	10	100
Clay and sand	35	135
Sand and gravel, flow of water	65	200
Brown clay	20	220
Clay	30	250
Sand, flow of water	50	300
Clay	118	418
Total depth	----	418

(S–20–61) 36bbb1. A. C. Delkin. Diameter 7⅞ inches, 7⅞-inch casing to 300 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	10	10
"Near-surface" water level	----	10
Gravel	5	15
Yellow clay	235	250
Sandy clay	50	300
"Quick" sand, flow of water	25	325
Total depth	----	325

TABLE 3—*Continued*

(S–20–61) 36bbc1. W. M. Metzer. Diameter 6 inches, 6-inch casing to 130 feet.

Material	Thickness (feet)	Depth (feet)
Soil	2	2
White clay	3	5
Light tan clay	17	22
"Near-surface" water level	....	22
Light tan clay	63	85
White marly clay	5	90
Very sandy pink silt, little clay	25	115
White silty clay, little sand	10	125
Light pink silty clay, few granules, little sand	46	171
Brown sand, flow of water	4	175
Light pink silty clay	70	245
Silt and fine sand, many granules, flow of water	10	255
Sandy granule and pebble subangular gravel, little clay, flow of water	16	271
Sandy silt, little pink clay	4	275
Pink silty clay, few granules	30	305
Pink sandy silt	35	340
Sand, flow of water	4	344
Pink silt and clay	6	350
Fine- and medium-grained sand, numerous granules, some clay, flow of water	15	365
Total depth	....	365

(S–20–61) 36bcb1. K. G. Speirs. Diameter 7 inches, 7-inch casing to 130 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	10	10
"Near-surface" water level	....	10
Caliche	10	20
"Hard" clay	160	180
Sand and gravel, flow of water	10	190
Caliche	10	200
"Hard" clay	130	330
Gravel, flow of water	10	340
Total depth	....	340

(S–20–61) 36cbc1. U. S. Geological Survey. Diameter 1 inch, 1-inch casing to 22 feet.

Material	Thickness (feet)	Depth (feet)
Pink silty clay	25	25
Total depth	....	25

(S–20–61) 36cca1. E. A. Clark Estate. Diameter 5⅝ inches, 5⅝-inch casing to 437 feet, perforated with ½-by-2-inch slots from 220 to 225 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Clay and caliche	25	25
Clay	55	80
Gravel	5	85
"Rock"	5	90
Clay	6	96
"Rock"	5	101
"Rock" and clay	19	120
"Rock"	6	126
Clay	4	130
"Rock"	10	140
Clay	10	150
"Rock"	5	155
Red sandy clay	65	220
"Quick" sand, flow of water	5	225
Red sandy clay	170	395
Sand	5	400
Yellow clay	3	403
Blue clay	17	420
Red sandy sticky clay, small flows of water at various levels	217	637
Total depth	....	637

TABLE 3—*Continued*

(S–20–61) 36cca2. Sunrise Acres Water Association. Diameter 8 inches, 8-inch casing to 467 feet, perforated from 223 to 231 feet with 16 evenly spaced slots, from 273 to 277 feet with 12 evenly spaced slots, from 353 to 358 feet, with 12 evenly spaced slots, from 372 to 376 feet with 12 evenly spaced slots, at 400 feet with 4 evenly spaced slots, and from 417 to 419 feet with 8 evenly spaced slots; all slots ⅜-inch wide and 4 inches long.

Material	Thickness (feet)	Depth (feet)
Tan silt and sand, little clay	15	15
"Near-surface" water level	....	15
Tan silty clay, little sand	35	50
Tan silty clay, little sand, few granules	20	70
Light green silty clay	3	73
Pink silty clay, little fine-grained sand	27	100
Gray silty fine-grained sand	10	110
Pink silty clay, few granules	25	135
Tan clay, caliche nodules	5	140
Tan silty fine-grained sand, little pebble gravel	12	152
Pink silty clay, caliche nodules	3	155
Fine-grained pink silty sand, flow (1 G.M.) of water	7	162
Fine-grained pink sand and clay, few granules	3	165
Fine-grained pink silty sand	1	166
Pink silty clay, few granules and pebbles	14	180
Pink silty clay	7	187
Pink silty clay, few granules	3	190
Pink silty clay, large nodules of caliche and white clay	9	199
Pink silty fine-grained sand, granule gravel, flow (4 G.M.)* of water	11	217
Pink plastic silty clay, some sand	20	237
Pink silty sand, few granules	3	240
Pink silty clay	15	255
Pink sandy clay	10	265
Pink silty clay	11	276
Pink silty sand, flow (7 G.M.)* of water	1	277
Pink plastic clay	13	290
Pink fine-grained sand, some clay, flow (12 G.M.)* of water	10	300
Pink silty clay, sandy	60	360
Pink silty sand, little clay, flow (20 G.M.)* of water	10	370
Pink sandy clay, much silt	20	390
Pink silty clay, caliche nodules	5	395
Pink sandy, silty clay	35	430
Pink, fine-grained sand, little clay (26 G.M.)* of water	15	445
Greenish blue clay	15	460
Pink silty clay	40	500
Total depth	....	500

*Total flow of water from well—includes flow from upper aquifers.

TABLE 3—*Continued*

(S–20–61) 36ccb1. L. G. and M. C. Biel. Diameter 10 inches, 10-inch casing to 42 feet, 8-inch casing to 290 feet, perforated between 266 and 290 feet with slots ⅜-inch wide and 2 feet long.

Material	Thickness (feet)	Depth (feet)
Soil	1	1
White clay	9	10
Caliche	1	11
"Near-surface" water level	....	11
Caliche	1	12
Gray clay	3	15
Gravel, some coarse-to medium-grained sand	3	18
Gray clay, pink silt and little sand	22	40
Sand	2	42
Pinkish buff clay	8	50
Pinkish brown silty clay, some gravel, little sand	9	59
Pinkish buff silty clay, little sand	11	70
Caliche	13	83
Light pink clay, little silt, few pebbles	6	89
Brownish gray silt, little clay and sand	16	105
Light buff clay, caliche	2	107
Buff clay, some silt and pebbles	16	123
Pinkish brown silt and clay	12	135
Caliche, flow of water	10	145
Pink calcareous clay	13	158
Light pink nodular silty clay	2	160
Caliche, some brownish silt, flow of water	7	167
Reddish silt, some clay	8	175
Fine-grained pink sand, some silt	5	180
Red clay, some fine-grained sand and silt	30	210
Pink silt, little fine-grained sand	20	230
Fine-grained red sand, little gravel	5	235
Red clay, little fine-grained sand; silt, some gravel	10	245
Red fine-grained sand, few granules	7	252
Red silty clay	6	258
Red fine-grained sand, silty	9	267
Light pink very fine-grained sand	5	272
Red fine-grained sand, some silt and clay, flow of water	20	292
Light pink silty very fine-grained sand	23	315
Light greenish white silt	6	321
Red silty, fine-grained sand, some clay	19	340
Red silty, fine-grained sand, flow of water	6	346
Total depth	....	346

(S–20–61) 36ccd1. William Clark. Diameter 10 inches, 10-inch casing to 40 feet, 8-inch casing to 103 feet.

Material	Thickness (feet)	Depth (feet)
No record	50	50
Pink silty clay, few granules and caliche nodules	125	175
Pink silty clay	20	195
No record, flow of water	5	200
Total depth	....	200

(S–20–62) 3bbd1. Las Vegas Army Air Field. Diameter 8 inches, 8-inch casing to 200 feet, perforated with ¼-by-4-inch slots between 120 and 200 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Clay and gravel	120	120
"Lime rock," clay and some red clay	130	250
Sand, silt, little gravel	10	260
Total depth	....	*260

*Measured depth of well in 1946 was 242 feet.

(S–20–62) 4add1. Las Vegas Army Air Field. Diameter 16 inches, 16-inch casing to 800 feet, perforated from 90 to 784 feet with eight ⅝-by-3½-inch slots every 10 inches. Driller's log.

Material	Thickness (feet)	Depth (feet)
Yellow clay and caliche	90	90
First aquifer; water level rose to 73 ft	....	90
Yellow clay and caliche	182	272
Second aquifer; water level rose to 20 ft	....	272
Yellow clay and caliche	428	700
Sandy gray clay	100	800
Total depth	....	800

TABLE 3—*Continued*

(S–20–62) 4dca1. Las Vegas Army Air Field. Land surface altitude 1,866 feet; diameter 16 inches, 16-inch casing to 786 feet, perforated from 150 to 740 feet with four ¾-by-3½-inch slots every 18 inches. Driller's log.

Material	Thickness (feet)	Depth (feet)
Caliche	102	102
Gravel, sand, and broken caliche, water	8	110
Caliche, clay, and sand	74	184
Caliche and clay	188	372
Sand and fine gravel, water	44	416
Caliche and clay	184	600
Blue clay	55	655
Caliche	53	708
"Strange formation"	2	710
"Soapstone"	2	712
Fine-grained sand, water level at 51 feet	26	738
Caliche	2	740
"Quick" sand	12	752
Clay and caliche	26	778
"Quick" sand, "small pieces of wood turning to coal"	17	795
Total depth	....	795

(S–20–62) 18bbc2. G. W. and Inez Rittenhouse. Diameter 8 inches, 8-inch casing to 63 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	20	20
Brown clay	22	42
"Near-surface" water level	....	42
White clay and gravel	5	47
Brown clay, thin gravel layers	103	150
Gravel, water level rose in casing	10	160
Brown clay	20	180
Gravel, caliche, water level rose in casing	23	203
Total depth	....	203

(S–20–62) 19bab1. Joe Hannig. Diameter 8 inches, 8-inch casing to unknown depth. Driller's log.

Material	Thickness (feet)	Depth (feet)
Silt	29	29
White clay	2	31
Sand, water	4	35
Sand, hard	9	44
Pebbles	1	45
Clay	50	95
Silt	12	107
Hard sand	1	108
Clay	32	140
Total depth	....	140

(S–20–62) 19bcc1. Byron Thornton. Diameter 8 inches, 8-inch casing to unknown depth. Driller's log.

Material	Thickness (feet)	Depth (feet)
Sand	1	1
Silt	22	23
Gravel	1	24
Caliche	6	30
"Near-surface" water level	....	30
Caliche	2	32
Gravel	3	35
Hard sand	4	39
Clay	46	85
Caliche	10	95
Clay	5	100
Caliche	2	102
Clay	3	105
Caliche	2	107
Clay	13	120
Caliche	5	125
Clay	25	150
White clay	1	151
Total depth	....	151

(S–20–62) 19bdd1. J. E. Hardin. Diameter and casing record unknown. Driller's log.

Material	Thickness (feet)	Depth (feet)
Silt	29	29
White clay	6	35
Caliche	5	40
Clay	40	80
Caliche	5	85
Hard sand	10	95
Red clay	19	114
Hard sand, water	6	120
Red clay	....	120
Total depth	....	120

TABLE 3—*Continued*

(S–20–62) 19cab1. W. E. Sayler. Diameter 6 inches, 6-inch casing to unknown depth. Driller's log.

Material	Thickness (feet)	Depth (feet)
White clay	27	27
Gravel	1	28
"Near-surface" water level	----	28
White clay	6	34
"Rock"	7	41
Red clay	1	42
Hard sand	35	77
Red clay	41	118
Gravel	3	121
Caliche	1	122
Red clay	3	125
Sand	1	126
Gravel	4	130
"Red rock"	2	132
Red clay	1	133
Sand	28	161
Red clay	1	162
Sand	2	164
Gravel	1	165
"Rock"	1	166
Hard sand	9	175
Blue clay	1	176
Hard sand	9	185
Red clay	11	196
Total depth	----	196

(S–20–62) 19dba1. I. H. Ault. Diameter 9 inches, 9-inch casing to 55 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Silt	----	3
Gravel	5	8
Silt	22	30
Hard sand	1	31
"Near-surface" water; water level rose to 27 feet	----	31
Hard sand	4	35
"Rock"	8	43
"Rock" and clay	11	54
"Rock"	14	68
Clay	12	80
Caliche	2	82
Clay	16	98
Blue clay	7	105
Clay	5	110
Caliche	1	111
Blue clay	2	113
"Rock"	2	115
Blue clay	2	117
"Rock"	5	122
Sand	6	128
Hard sand	7	135
Total depth	----	135

(S–20–62) 32bbb1. E. B. and Margie Grubb. Diameter 8 inches, 8-inch casing to 200 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
"Top soil"	15	15
"Near-surface" water level	----	15
"Top soil"	3	18
Clay	50	68
Sandy gravel, water	6	74
Clay	26	100
White "talc"	5	105
Sandy gravel, water	13	118
Clay	12	130
White "talc"	20	150
Clay	150	300
"Gyp"	5	305
Sandy clay	20	325
Red clay	37	362
Red, green, light tan, blue, and black clay	138	500
Total depth	----	500

(S–20–62) 33ccc1. U. S. Geological Survey. Diameter 1 inch, 1-inch casing to 42 feet.

Material	Thickness (feet)	Depth (feet)
Tan silty clay	15	15
Tan silty clay, caliche nodules	10	25
Tan silty clay	17	42
Total depth	----	42

(S–21–61) 1aba1. R. J. Kaltenborn. Diameter 10 inches, 10-inch casing to 60 feet, 8-inch casing to 482 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	20	20
"Near-surface" water level	----	20
Clay	140	160
Caliche	10	170
Clay	50	220
Caliche	10	230
Red clay	50	280
Caliche	10	290
Red clay	40	330
Caliche	20	350
Red clay and "shale"	90	440
Blue clay	30	470
Red clay and gravel	30	500
Gravel, flow of water	18	518
Red clay and sand	132	650
Gravel and clay flow of water	50	700
Clay and sand	30	730
Gravel and "quick" sand	80	810
Total depth	----	810

TABLE 3—*Continued*

(S–21–61) 1bba1. Colony Club. Diameter 6 inches, 6-inch casing to 345 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	10	10
"Near-surface" water	....	10
Gravel	10	20
Yellow clay	30	50
Gravel	10	60
Yellow clay	50	110
Sandy clay	140	250
Yellow clay	80	330
"Quick" sand, flow of water	15	345
Total depth	....	345

(S–21–61) 1bda1. R. J. Kaltenborn. Diameter 8 inches, 8-inch casing to 140 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Clay with "rock ledges"	100	100
Red clay	145	245
Small gravel, flow of water	5	250
Clay with "boulders"	500	750
Gravel, flow of water	10	760
Total depth	....	760

(S–21–61) 2cbb1. Henry Hunt. Land surface elevation 1,996 feet; diameter 6 inches, 6-inch casing to 410 feet, 774 feet of 4-inch casing from 226 to 1,000 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	12	12
Sandy clay	28	40
Silty sand and gravel	5	45
Clay	20	65
Sandy clay	5	70
Clay and gravel	9	79
Caliche	5	84
Sandy clay	35	119
Caliche	2	121
Clay	24	145
Caliche	4	149
Clay	65	214
Caliche	7	221
Clay	24	245
Caliche	6	251
Clay	4	255
Caliche	3	258
Clay	17	275
Sand and clay	105	380
"Gray shale"	25	405
Sandy clay	40	445
Red sand	10	455
Sandy clay	5	460
Sand	15	475
Clay	15	490
Alternating clay and sand stratas	483	973
Broken caliche, sand layers, flow of water	52	1,025
Red sandy clay, few fine-grained sand layers every few feet, flow of water	95	1,120
Total depth	....	1,120

(S–21–61) 2cbb2. U. S. Geological Survey. Land surface altitude 1,996 feet; diameter 1½ inches, 1½-inch casing to 20 feet.

Material	Thickness (feet)	Depth (feet)
Brown silt, little clay	15	15
Light tan sandy silt	5	20
Total depth	....	20

(S–21–61) 2dcc1. R. J. Kaltenborn. Diameter 8 inches, 8-inch casing to unknown depth. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	2	2
Caliche	54	56
Clay	12	68
Clay and caliche	5	73
Clay	45	118
Cemented gravel	68	186
"Loose boulders"	14	200
Cemented gravel	198	398
Total depth	....	398

(S–21–61) 2ddc1. B. Dennison. Diameter 8 inches, 8-inch casing to 50 feet.

Material	Thickness (feet)	Depth (feet)
Clay and caliche	230	230
Sand and gravel	10	240
Total depth	....	240

TABLE 3—*Continued*

(S–21–61) 3baa1. S. J. Lawson. Diameter 4 inches, 4-inch casing to 370 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	7	7
"Gypsum"	11	18
"Gyp" and gravel	2	20
"Gyp" and caliche	160	180
Clay	60	240
Caliche, flow of water	5	245
"Gyp"	4	249
Caliche, flow of water	7	256
Red clay	14	270
Cemented gravel, flow of water	20	290
Red sandy clay	60	350
Fine gravel and sand, flow of water	5	355
Red sand and clay	10	365
Cemented gravel, some loose gravel, flow of water	33	398
Red sand, flow of water	4	402
Clay	1	403
Total depth	....	403

(S–21–61) 3cbb1. Otto and Loriene Underhill. Diameter 4 inches, 9-inch casing to 80 feet, 4-inch casing to 434 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil and gravel	15	15
White clay	85	100
Tan clay	200	300
Coarse sand, flow of water	10	310
Light brown clay	160	470
Blue clay	15	485
Red gravel, flow. of water	10	495
Red clay	17	512
Total depth	....	512

(S–21–61) 3cbb2. Wilson-Mikkelsen. Diameter 5⅝ inches, 5⅝-inch casing to 395 feet, 200 feet of 4-inch casing from 370 to 570 feet, perforated from 550 to 570 feet with ¼-by-4-inch slots. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	6	6
"Gyp rock"	20	26
White clay	158	184
Caliche	2	186
White clay	114	300
Red sand	88	388
Red "shale"	2	390
Red sand, flow of water	8	398
Brown "shale"	5	403
Brown sand	7	410
White sand	20	430
Gravel, flow of water	2	432
White sand	6	438
Blue clay	44	482
White sand	5	487
Red sand	75	562
Gravel, flow of water	20	582
Red sand	84	666
Total depth	....	666

(S–21–61) 4aad1. Opaco Lumber Co. Diameter 10 inches, 5-foot length of 10-inch casing welded to top of 30-foot length of 18-inch casing which extends to 32 feet, 458 feet of 13-inch casing from 2 to 460 feet, perforated from 338 to 438 feet with slots, 408 feet of 10-inch casing from 362 to 770 feet, perforated from 642 to 770 feet with slots. All perforations made with welding torch. Driller's log.

Material	Thickness (feet)	Depth (feet)
Top soil	7	7
Sand, water-bearing	3	10
Yellow clay	30	40
Caliche	30	70
Cemented gravel	5	75
Caliche	15	90
Yellow silt	60	150
Caliche	40	190
Cemented gravel	5	195
Caliche	20	215
Red clay	35	250
"Brown hardpan"	5	255
Red clay	45	300
Red sand, flow of water	10	310
Red clay	50	360
"Red hardpan"	20	380
Red silty clay	50	430
"Red hardpan"	10	440
Red sand	5	445
"Red hardpan"	15	460
Blue clay	50	510
Caliche	10	520
Red silty clay	30	550
Red sand, flow of water	10	560
Red silty clay	10	570
Red sand and gravel, flow of water	30	600
Red sand, flow of water	70	670
Sand and clay strata, flow of water	40	710
Sticky red clay	10	720
Red sand, flow of water	10	730
Sticky red clay	20	750
Red sand, flow of water	10	760
Sticky red clay	20	780
Red sand, flow of water	5	785
1-foot-thick layers of "red water sand" and sticky red clay	8	793
Total depth	....	793

TABLE 3—*Continued*

(S-21-61) 4aca1. E. F. and M. Nelson. Diameter 10 inches, 10-inch casing to 470 feet, 450 feet of 8-inch casing from 450 to 900 feet, perforated with ¼-by-2-inch slots from 550 to 560 feet and 595 to 615 feet.

Material	Thickness (feet)	Depth (feet)
Buff silty clay	50	50
Tan silty clay	30	80
Pink silty clay, few caliche nodules	35	115
Pebble gravel, much pink clay	2	117
Pink silty clay, little sand and few granules	183	300
Pink silty sandy clay, many granules	30	330
Pink clay, little silt	20	350
Pink silt, many granules	10	360
Pink sandy silt	15	375
Granule gravel, many pebbles, little sand and silt	20	395
Pink silty clay, little sand	45	440
Pink sandy silt, few pebbles and granules, little clay	10	450
Pink silty sand, few pebbles and granules, little clay	20	470
Light greenish blue plastic clay, few caliche nodules	30	500
Light tan silt, little clay	10	510
Pink silt	10	520
Pebble gravel, few granules, some pink silt, little clay, flow of water	1	521
Pink silty fine-grained sand, flow of water	19	540
Pink plastic clay	10	550
Pink sandy silty clay, many granules and pebbles, flow of water	30	580
Pink silty clay	15	595
Pink silty sand, few granules, flow of water	25	620
Pink sandy silt and clay	125	745
Pink silty sand, little clay, few granules, flow of water	25	770
Pink sandy silt, few granules, much clay	20	790
Fine-grained pink sand, little silt, flow of water	10	800
Plastic red clay	10	810
Pink silty clay, few granules	35	845
Plastic red clay	5	850
Pink silty sand, many granules, flow of water	20	870
Pink silty clay	10	880
Pink sandy silt, some gravel, flow of water	10	890
Pink plastic silty clay	10	900
Total depth	....	900

(S-21-61) 4bbb3. E. A. Honrath. Land surface altitude 2,069 feet; diameter 8 inches, 8-inch casing to 300 feet, 341 feet of 6-inch casing from 80 to 421 feet, perforated with ¼-by-1-inch slots from 221 to 241 feet, 281 to 301 feet, and 341 to 421 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	7	7
Pink silty clay, few caliche strata	5	12
"Near-surface" water level	....	12
Pink silty clay, few caliche strata	20	32
Pink silty clay, few caliche strata and few gravelly strata	228	260
Red plastic silty clay	20	280
Red plastic silty clay, some granules and sand	15	295
Gray granule gravel and some sand, flow of water	2	297
Red silty clay some sand and fine gravel	43	340
"Cemented gravel"	40	380
Gray granule and small pebble gravel, some sand, flow of water	5	385
"Cemented gravel"	67	452
Greenish blue plastic clay	4	456
Light red silty clay, little gravel	36	492
Total depth	....	492

(S-21-61) 4bcb1. L. G. McNeil. Diameter 7 inches, 7-inch casing to 238 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Surface formation	260	260
"Rock," flow of water	60	320
Cemented gravel, flow of water	7	327
No record	21	348
Flow of water	....	348
"Caving material"	6	354
Total depth	....	354

TABLE 3—*Continued*

(S-21-61) 4dac1. Theodore Michelas. Diameter 7⅝ inches, 7⅝-inch casing to 548 feet, 300 feet of 7-inch casing from 500 to 800 feet, perforated from 500 to 800 feet with ¼-by-4-inch slots. Driller's log.

Material	Thickness (feet)	Depth (feet)
White clay	22	22
"Rock" and clay	436	458
Blue clay	32	490
Red clay, sand	320	810
Total depth	....	810

(S-21-61) 4dac2. Theodore Michelas. Diameter 7 inches, 7-inch casing to 527 feet, perforated with ½-by-2-inch slots from 374 to 386 feet, 175 feet of 6-inch casing from 475 to 650 feet, perforated with 1/16-by-6-inch slots from 620 to 650 feet.

Material	Thickness (feet)	Depth (feet)
Soil	3	3
Light pink clay	4	7
Sand and gravel	5	12
"Near-surface" water level	....	12
Light tan clay	3	15
Caliche	6	21
Light tan clay	9	30
Light pink clay	15	45
White clay	6	51
Sandy clay	9	60
White clay	5	65
Light pink silty clay	20	85
Sand	5	90
Caliche	6	96
Light pink silty clay	69	165
Tan clay, caliche	15	180
Light pink silty clay	105	285
Medium tan silty clay	2	287
Light pink silty clay	13	300
Caliche	14	314
Medium tan silty clay	56	370
Pebble-gravel, granules, some medium-grained and fine-grained sand, little clay, flow of water	21	391
Caliche	6	397
Pink fine-grained sand and silt	28	425
Light pink silty clay	5	430
Sand and sandy clay	60	490
Light greenish blue clay	29	519
Red sand and silt	31	550
"Quick" sand	20	570
Pink fine-grained sand and silt, little clay	73	643
Gravel and sand, flow of water	4	647
Pink silt and clay	3	650
Total depth	....	650

(S-21-61) 5caa1. Splane Estate. Diameter 8 inches, 8-inch casing to 136 feet, 341 feet of 6-inch casing from 61 to 402 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Surface "rock," clay and "talc"	130	130
"Rock"	5	135
Sandy clay and "talc"	52	187
"Lime rock"	3	190
Clay and "lime rock"	10	200
"Lime rock"	3	203
Sandy clay and "talc"	65	268
"Conglomerate"	59	327
Red sand	8	335
Sand and gravel	61	396
"Sand rock"	2	398
Sandy clay	16	414
Sand	6	420
Clay	4	424
"Cemented sand"	2	426
Clay	4	430
"Cemented sand"	2	432
Sand, flow of water	17	449
"Cemented sand"	3	452
Clay	28	480
Sand, "sand rock," and clay, flow of water	66	546
"Cemented sand"	39	585
Total depth	....	585

(S-21-61) 6aca1. J. and A. Edmonds. Land surface altitude 2,169 feet; diameter 8 inches, 8-inch casing to 30 feet, 6-inch casing to 287 feet, perforated with 3/16-by-3-inch slots from 255 to 287 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Caliche	30	30
White clay	20	50
Caliche	10	60
Red clay	40	100
Caliche	5	105
Red clay	40	145
Caliche	15	160
Red sandy clay	90	250
Hard sand	5	255
Sand and gravel, flow of water	33	288
Total depth	....	288

TABLE 3—*Continued*

(S–21–61) 6aca2. Sebastian Mikulich. Land surface altitude 2,174 feet; diameter 9 inches, 9-inch casing to 40 feet, 7-inch casing to unknown depth. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	2	2
Caliche	10	12
"Near-surface" water level	....	12
Caliche	17	29
Clay	10	39
Caliche	5	44
Clay	104	148
Caliche	6	154
Caliche and gravel	4	158
"Sandstone" gravel	5	163
Caliche and gravel, flow of water	77	240
Caliche and gravel, flow of water	89	329
Total depth	....	329

(S–21–61) 6adc2. Leo Pahor. Land surface altitude 2,164 feet; diameter 6 inches, 41 feet of 8-inch casing from 1 to 42 feet, 6-inch casing to 288 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	3	3
"Loose" gravel	13	16
"Near-surface" water level	....	16
"Loose" gravel	24	40
Brown clay	98	138
"Conglomerate" gravel	10	148
Brown clay	139	287
Caliche	5	292
"Lime conglomerate," flow of water	26	318
Total depth	....	318

(S–21–61) 6adc3. E. M. and A. M. Ladd. Land surface altitude 2,165 feet; diameter 8 inches, 8-inch casing to 80 feet, 334 feet of 6-inch casing from 26 to 360 feet, perforated with ¼-by-8-inch slots from 315 to 360 feet.

Material	Thickness (feet)	Depth (feet)
Soil	2	2
Gravel	4	6
Clay	6	12
Gravel	2	14
"Near-surface" water level	....	14
Tan silty clay, some granules and pebbles	27	41
Caliche	9	50
Tan silty clay, few thin layers of caliche	220	270
Caliche	10	280
Granule gravel, some sand, much pink silt and clay	10	290
Granule gravel, much sand, little pink silt and clay	10	300
Sandy and silty pink clay	10	310
Silty pink clay	8	318
Sandy pink silt, much sand, many granules	12	330
Gray coarse-to medium-grained sand, little silt and few granules	18	348
Fine-to medium-grained gray sand, some granular gravel, flow of water	12	360
Total depth	....	360

(S–21–61) 7ddb1. F. T. Roberts. Diameter 8 inches. Driller's log.

Material	Thickness (feet)	Depth (feet)
No record	50	50
Light pink silty clay, few granules	120	170
Pink silty clay	215	385
Red silty sand, flow of water	15	400
Total depth	....	400

(S–21–61) 9acd1. Vegas Valley Development Co., Ltd. Diameter 7⅝ inches, 7⅝-inch casing to 500 feet, 60 feet of perforated 6-inch casing from 490 to 550 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Clay and "rock"	300	300
Yellow clay, some "rock"	150	450
Blue clay	20	470
Red clay	60	530
Sand, flow of water	20	550
Total depth	....	550

TABLE 3—*Continued*

(S–21–61) 9cdc1. Hotel El Rancho, Inc. Diameter 10 inches, 10-inch casing to 200 feet, 389 feet of 6-inch perforated casing from 196 to 585 feet.

Material	Thickness (feet)	Depth (feet)
Soil	2	2
Light pink silt, some clay and few granules	18	20
Caliche	5	25
Light pink silt, some clay	27	52
"Near-surface" water	....	52
Small pebble gravel, little sand and clay	4	56
Pink sandy silt, little clay	14	70
Pink silty clay, few granules	30	100
Cemented small gravel and caliche	5	105
Pink silty clay	20	125
Pink silt, little clay and granules	5	130
Pink silty clay	50	180
Red clay	10	190
Pink silty clay	15	205
Granular gravel, few pebbles, some fine-to-coarse-grained sand	15	220
Pink sandy silt, little clay, few granules and pebbles	115	335
Granular gravel, coarse sand, silty clay, some pebbles	15	350
Pink silty clay, few granules, little sand	110	460
Pink silty clay, pebbles and granules	10	470
Pink silty clay	16	486
Plastic bluish green clay	9	495
Pink silty clay, few sandy layers	55	550
Pink sandy silt, many granules, flow of water	10	560
Pink sandy silt and fine-grained sand, increased flow of water	10	570
Fine-grained sand, few granules, little silt, increased flow of water	15	585
Total depth	....	585

(S–21–61) 9dcc1. Pacific States Theatres. Diameter 10 inches, 10-inch casing to 92 feet, 8-inch casing to 505 feet, perforated with ¼-by-4-inch slots from 470 to 505 feet, 92 feet of 6-inch casing from unknown depth to approximately 585 feet, perforated with ¼-by-4-inch slots from 545 to 585 feet.

Material	Thickness (feet)	Depth (feet)
Soil	2	2
White clay and caliche	16	18
Clay	4	22
"Near-surface" water level	....	22
Light pink clay, thin layers of caliche	158	180
Pink silty clay, few granules, some sand	20	200
Sandy gravel, some silt and clay, flow of water	10	210
Pink clay	10	220
Red clay, few granules and pebbles	10	230
Pink silty clay, few granules and pebbles, little sand	80	310
Caliche and gravel, flow of water	5	315
Pink silty clay, few granules and little sand	90	405
Granular gravel and sand, flow of water	5	410
Pink silty clay, little sand and few granules	15	425
White clay	5	430
Pink silt and sandy clay	7	437
Bluish green plastic clay, few thin red clay layers	48	485
Pink silty and sandy clay, thin layers of red clay	55	540
Granular and pebble gravel, some fine-grained sand; flow of water	5	545
Red sandy silt, increased flow of water	35	580
Pink silty and sandy clay	20	600
Total depth	....	600

(S–21–61) 11bbb1. Nevada Hotel Co. Diameter 8 inches, 8-inch casing to 532 feet, perforated with slots from 480 to 532 feet, 130 feet of 6-inch casing from 520 to 650 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
"Chalky lime"	40	40
"Hard lime"	10	50
"Broken lime"	200	250
"Lime," flow of water	10	260
No record	130	390
"Gray shale"	20	410
No record	70	480
"Conglomerate," sandy, flow of water	52	532
"Lime"	68	600
"Sandy"	50	650
Total depth	....	650

TABLE 3—*Continued*

(S-21-61) 14cdd1. U. S. Geological Survey. Diameter 1½ inches, 1½-inch casing to 30 feet.

Material	Thickness (feet)	Depth (feet)
Pink silty clay, gypsum crystals	5	5
Pink silty clay, caliche, many granules	5	10
Pink sandy silt, little clay	10	20
Pink sandy silt, few granules, some clay	15	35
Total depth	....	35

(S-21-61) 15bcc1. T. A. Wells. Diameter 10 inches, 10-inch casing to 64 feet, 8-inch casing to 395 feet, perforated with ¼-by-4-inch slots from 255 to 275 feet, from 295 to 315 feet, and from 335 to 395 feet, 182 feet of 6-inch casing from 358 to 540 feet, perforated with ¼-by-4-inch slots from 483 to 540 feet.

Material	Thickness (feet)	Depth (feet)
Soil	3	3
Light pink sandy silt, little clay	15	18
"Near-surface" water level	....	18
Silty gravel	2	20
Light pink silt, few granules	7	27
Medium-grained silty sand	3	30
White silty clay	28	58
Pink silty clay	80	138
Pink silty clay, many granules	2	140
Dark pink silty clay	25	165
Pink silty clay, sandy, many granules	5	170
Pink silty clay	6	176
Pink silty clay, sandy, many pebbles	3	179
Pink silty clay	36	215
Granule gravel, much pink silt and sand	12	227
Pink silt, some fine sand, little clay	10	237
Pink silty clay	36	273
Granule gravel, much pink silt, few pebbles	7	280
Pink silty clay	30	310
Granules, gravel, much silty sand, little clay, flow of water	23	333
Pink silty clay, much gravel	29	362
Coarse- to fine-grained sand, little silt, flow of water	8	370
Red silt and clay, much sand	20	390
Sandy granule gravel, flow of water	10	400
Pink silt, little clay	10	410
Pink silty clay, little fine-grained gravel	15	425
Plastic red clay	6	431
Greenish blue plastic clay	18	449
Plastic red clay	32	481
Red medium - grained sand, few granules, flow of water	14	495
Red sandy silt, few granules	35	529
Plastic red clay	11	540
Red sandy silt	10	550
Sand and fine gravel, flow of water	5	555
Red silt, little sand and clay	111	666
Fine-to medium-grained red silty sand, flow of water	19	685
Red sandy silt, little clay	76	761
Fine-to medium-grained pink sand, some silt	64	825
White fine-grained sand, little silt	35	860
Red and pink sand, much silt, little clay	22	882
Pink silty medium-grained sand, flow of water	8	890
Red silty sand, some clay	2	892
Total depth	....	892

(S-21-61) 16bcc1. State of Nevada, Department of Highways. Diameter 10 inches, 10-inch casing to 151 feet, 201 feet of 8-inch casing from 151 to 352 feet, 200 feet of 6-inch casing from 352 to 552 feet. Casing perforation record unknown. Driller's log.

Material	Thickness (feet)	Depth (feet)
Gravel	6	6
Caliche	2	8
"Layers of rock and clay"	416	424
Blue clay	36	460
"Quick" sand, flow of water	10	470
Sandy red clay	74	544
Gravel, flow of water	3	547
Sandy red clay	217	764
Cemented gravel, flow of water	106	870
Red clay	30	900
Total depth	....	900

TABLE 3—*Continued*

(S-21-61) 16bdb1. John Stafford. Diameter 5⅝ inches, 5⅝-inch casing to 497 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Equal amounts of caliche and white clay	150	150
Caliche and clay	265	415
"Squeezing clay"	15	430
Red clay	28	458
"Quick" sand, flow of water	10	468
Red clay	57	525
"River" gravel, flow of water	2	527
No record	32	559
Total depth	....	559

(S-21-61) 17aca1. U. S. Geological Survey. Diameter 2 inches, 2-inch pipe to 30 feet.

Material	Thickness (feet)	Depth (feet)
Tan sandy silt	5	5
Granule gravel, much tan silty clay	10	15
Tan silt, little sand	5	20
Pink silty clay	20	40
Total depth	....	40

(S-21-61) 20aaa1. Murray and Agnes Wollman. Diameter 10 inches, 10-inch casing to 98 feet, 8-inch casing to 412 feet, 205 feet of 6-inch casing from 400 to 605 feet, perforated with ¼-by-4-inch slots from 545 to 605 feet.

Material	Thickness (feet)	Depth (feet)
Light pink silty clay, many granules	20	20
White, calcareous, silty clay, some sand	6	26
"Near-surface" water level	....	26
White, calcareous, silty clay, some sand	24	50
Pink clay, few granules	20	70
Pink sandy silt, few granules	10	80
Red silty clay	40	120
Pink silt, little clay	60	180
Light pink silty clay, little caliche	10	190
Pink silt, some clay and granules, little sand	30	220
Pink silty clay	10	230
Pink silt, little sand and clay and few granules	180	410
Blue clay	10	420
Red clay	10	430
Red sandy silt	17	447
Red silty medium-grained sand, flow of water	5	452
Red sandy silt	28	480
Light greenish blue clay	10	490
Red sandy silt	70	560
Red silty medium-grained sand, flow of water	10	570
Red sandy silt	135	705
Pink silty sand, few granules, flow of water	5	710
Total depth	....	710

TABLE 3—*Continued*

(S–21–61) 26bbb2. A. J. and L. C. Wood. Diameter 10 inches, 10-inch casing to 101 feet, 8-inch casing to 397 feet, perforated with ⅜-by-7-inch slots 2 feet apart from 250 to 290 feet, 198 feet of 6-inch casing from 397 to 595 feet perforated with ⅜-by-7-inch slots 2 feet apart from 555 to 595 feet.

Material	Thickness (feet)	Depth (feet)
Soil	3	3
White calcareous silty clay	7	10
Pink silty clay	10	20
"Near-surface" water level	....	20
Pink silty clay, few granules	10	30
Granule gravel, and fine to medium-grained sand, some silt	1	31
Pink silty clay	9	40
Pink silty clay, caliche nodules	45	85
Caliche, pink silty clay	10	95
Pink silty clay, few granules	34	129
Granule gravel, silty and sandy, water level rose in casing	1	130
Pink silty clay, many granules, few pebbles	45	175
Granule and pebble gravel, much pink silt and clay, water level rose in casing	15	190
Pink silty clay, few caliche nodules	7	197
Granule gravel, little sand, much pink silt, flow of water	18	215
Pink silty clay	9	224
Pink silty clay, many granules, and few pebbles, and little sand	21	245
Pink silty clay, caliche	10	255
Pink silty clay	4	259
Granular gravel and sand, much pink silty clay	18	277
Granular gravel and sand, little pink silt, flow of water	3	280
Pink silty clay, many granules, some sand	20	300
Pink, fine-grained silty sand	9	309
Pink, fine-to-medium-grained sand, flow of water	1	310
Pink, fine-to-medium-grained silty sand	10	320
Granule gravel, little sand, much pink silty clay	21	341
Red plastic clay	19	360
Pink clay, some silt	205	565
Fine-to-medium-grained sand, few granules flow of water	30	595
Total depth	....	595

(S–21–61) 27baa2. Lawrence Henz. Diameter 8 inches, 8-inch casing to 41 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	4	4
"Gyp"	14	18
Clay	122	140
Gravel, flow of water	5	145
Clay with "gravel streaks"	193	338
Total depth	....	338

(S–21–61) 27baa3. Bell Telephone Co. Diameter 10 inches, 10-inch casing to 100 feet, 8-inch casing to 603 feet, perforated with ⅜-by-8-inch slots every 2 feet from 512 to 603 feet.

Material	Thickness (feet)	Depth (feet)
Soil	3	3
Caliche	16	19
Red silty clay, some small gravel and caliche nodules	81	100
White clay, caliche nodules	10	110
Red silty clay, few pebbles, granules, and caliche nodules	100	210
Red silty clay, few granules and caliche nodules	40	250
Red silt and fine-grained sand, few granules, some clay	50	300
Granule gravel, some sand, much pink silt, flow of water	30	330
Pink silty clay, much granular gravel, little sand	40	370
Red clay	10	380
Red silty clay, little gravel	80	460
Red clay	20	480
Pink silty clay, little fine-grained sand	10	490
Pink silty clay, little gravel	110	600
Silty medium- and coarse-grained sand, flow of water	5	605
Total depth	....	605

TABLE 3—*Continued*

(S–21–61) 35dcc1. Vail Pittman. Diameter 6 inches, 6-inch casing to 150 feet, 4-inch (inside diameter) casing to 398 feet, 31 feet of 4-inch (standard) casing from 398 to 429 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
"Gyp blow sand"	3	3
"Conglomerate"	4	7
"Gyp"	2	9
"Conglomerate"	4	13
"Gyp"	9	22
"Lime rock"	2	24
"Near-surface" water level	----	24
"Gyp" and clay	51	75
"Lime rock"	1	76
Red clay	24	100
"Lime rock"	1	101
Red clay	55	156
"Conglomerate," flow of water	4	160
Red clay	2	162
"Conglomerate"	6	168
Red clay	21	189
"Conglomerate"	1	190
Red clay	22	212
"Conglomerate"	88	300
"Gray shale"	15	315
Red clay	107	422
"Lime reefs" and clay	6	428
"Conglomerate"	1	429
Red clay	2	431
"Conglomerate"	31	462
Red clay	3	465
Total depth	----	465

(S–21–61) 36adc2. U. S. Geological Survey. Diameter 1½ inches, 1½-inch casing to 20 feet.

Material	Thickness (feet)	Depth (feet)
Tan silty clay	15	15
Tan silty clay	5	20
Total depth	----	20

(S–21–62) 3ccc1. U. S. Geological Survey. Diameter 1 inch, 1-inch casing to 25 feet.

Material	Thickness (feet)	Depth (feet)
Tan silt, some clay	30	30
Total depth	----	30

(S–21–62) 8cca1. Gladys L. Splane. Diameter 8 inches, 8-inch casing to unknown depth. Driller's log.

Material	Thickness (feet)	Depth (feet)
Caliche	10	10
Silt	2	12
Gravel	3	15
Sand and gravel	15	30
"Near-surface" water level	----	30
Sand and gravel	5	35
Sand and clay	15	50
"Rock"	2	52
Clay	11	63
"Near-surface" water level rose noticeably	----	63
"Rock"	3	66
Sandy clay, some gravel and boulders	39	105
"Rock"	4	109
"Rock," clay, and sand	17	126
"Rock"	3	129
"Rock," sandy clay, and "talc"	25	154
"Limestone"	2	156
Clay and "talc"	4	160
"Limestone"	10	170
Clay and "talc"	20	190
Sandy clay	10	200
"Limestone"	15	215
Clay	10	225
"Limestone"	5	230
Sandy clay	22	252
"Limestone"	13	265
Sandy clay	15	280
Gravel	10	290
Red sand, flow of water	8	298
"Clean" sand, increased flow of water	30	328
"Hard" sand, increased flow of water	2	330
Gravel, increased flow of water	20	350
Sandy clay	30	380
Red clay	5	385
"Gypsite"	10	395
Sand	30	425
"Limestone"	1	426
Clay	2	428
Sand	7	435
"Limestone"	3	438
Clay and sand	7	445
"Limestone"	5	450
Clay	5	455
"Limestone"	4	459
Clay, some fine-grained sand and silt	91	550
Sand and gravel, flow of water	15	565
Total depth	----	565

(S–21–62) 15bca1. U. S. Geological Survey. Diameter 1 inch, 1-inch casing to 22 feet.

Material	Thickness (feet)	Depth (feet)
Tan silty clay	5	5
Pink silty clay	10	15
Tan silty clay	10	25
Total depth	----	25

TABLE 3—*Continued*

(S–21–62) 17ddc1. Whitney Taxpayer's Association. Diameter 8 inches, 8-inch casing to 60 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	5	5
Red sandy clay	15	20
"Near-surface" water level	....	20
Red sandy clay	155	175
Brown sandy clay	90	265
"Sandstone"	4	269
Brown clay	81	350
Red clay and small gravel	10	360
Red clay	90	450
Sand	25	475
"Sandstone" and gravel, flow of water	8	483
Sand	22	505
Hard "sandstone"	2	507
Sandy clay	8	515
Sand	24	539
Brown sandy clay	1	540
Total depth	....	540

(S–21–62) 20ddd1. J. Bunch, L. Netherton, and L. Thurman. Diameter 6 inches, 6-inch casing to 230 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	5	5
Cemented gravel and rock	10	15
Red clay	77	92
Yellow clay and gravel	6	98
Red clay	42	140
Brown sandy clay	30	170
Brown and red clay	15	185
Brown and gray clay	19	204
"Limestone"	1	205
Brown clay	195	400
Hard "sandstone"	12	412
Sand, flow of water	3	415
Hard "sandstone"	15	430
"Cemented sand," increased flow of water	28	458
Total depth	....	458

(S–21–62) 20ddd2. J. Bunch, L. Netherton, L. Thurman. Diameter 6 inches, 6-inch casing to 212 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	10	10
"Limestone rock"	20	30
Yellow clay	20	50
"Near-surface" water level	....	50
Yellow clay	150	200
Gravel	10	210
Sticky yellow clay	210	420
Gravel	5	425
"Sandstone," flow of water	75	500
Total depth	....	500

(S–21–62) 21cbc1. L. E. Billman. Diameter 8 inches, 8-inch casing to 370 feet, 230 feet of 6-inch casing to 600 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	5	5
Red clay, "streaks of lime"	1	6
Red clay	214	220
Sand, flow of water	2	222
Red clay	136	358
Sand, flow of water	9	367
"Limestone"	2	369
Sand and gravel, flow of water	12	381
Cemented gravel, flow of water	65	446
Red sandy clay	19	465
"Bentonite" (blue clay)	13	478
Red clay	12	490
Sand, flow of water	8	498
Red clay, "streaks of bentonite"	20	518
"Bentonite," "streaks" of red clay	38	556
Brown sandy clay	7	563
Hard brown "sandstone"	15	578
Sand, flow of water	52	630
Red clay	10	640
Brown clay	5	645
Hard "sandstone"	5	650
Total depth	....	650

(S–21–62) 21cbc2. L. E. Billman. Diameter 8 inches, 8-inch casing to 440 feet, unknown length of 6-inch casing to 500 feet, perforated with slots ¼-inch wide from 440 to 500 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Surface clay	40	40
"Near-surface" water, water level rose to 12 feet	....	40
Sticky yellow clay	390	430
Quicksilver and gravel, flow of water	12	442
Yellow clay	58	500
Total depth	....	500

TABLE 3—*Continued*

(S–21–62) 27bcd1. R. R. Stadelman. 7⅝-inch casing to 58 feet, 5⅝-inch casing to 332 feet, perforated with ⅛-by-2-inch slots from 323 to 332 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)	Material	Thickness (feet)	Depth (feet)
Soil	25	25	Gray "slate"	10	260
"Gypsum"	5	30	Yellow clay	125	385
"Near-surface" water level	....	30	Sand, flow of water	3	388
White clay	20	50	Yellow clay	9	397
Gravel	8	58	Sand	2	399
Sandy clay	42	100	Yellow clay	18	417
Red clay with "crystals"	98	198	Sand	3	420
Brown "shale"	52	250	Yellow clay	30	450
			Total depth	....	450

(S–21–62) 29ccb1. J. R. Bond. Diameter 2 inches, 2-inch casing to unknown depth, 6-inch casing from end of 2-inch casing to unknown depth. Driller's log.

Material	Thickness (feet)	Depth (feet)	Material	Thickness (feet)	Depth (feet)
No record	387	387	Clay with "sand pockets"	310	1,145
"Conglomerate"	13	400	"Hard lava rock or basalt"	20	1,165
Clay with "sand seams"	430	830			
"Hard lime"	5	835	Total depth	....	1,165

(S–21–62) 30bd. L. H. Hamp. Diameter 8 inches, 8-inch casing to 235 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)	Material	Thickness (feet)	Depth (feet)
No record	40	40	Pink silty clay	45	385
Pink silty clay	18	58	Silty fine-to-medium-grained sand, few granules, flow of water	15	400
Pink silty clay, caliche nodules	49	107	Pink silty clay	25	425
Pink silty clay	94	201			
Pink silty clay, few granules and little sand	25	226			
Tan silty clay	114	340	Total depth	....	425

(S–21–62) 30dcb1. C. A. and Una Stewart. Diameter 8 inches, 8-inch casing to 100 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)	Material	Thickness (feet)	Depth (feet)
Tan clay, caliche nodules	15	15	No record	163	358
Pink silty clay, few thin layers of caliche	180	195	Medium-grained silty sand, flow of water	42	400
			Total depth	....	400

(S–22–61) 1bcb2. J. K. Houssels. Diameter 6 inches, 6-inch casing to 124 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)	Material	Thickness (feet)	Depth (feet)
"Soil"	90	90	Clay	82	380
Gravel	20	110	"Conglomerate," flow of water	70	450
Clay	70	180	Clay	5	455
"Conglomerate," flow of water	118	298			
			Total depth	....	455

(S–22–61) 1cbb1. J. K. Houssels. Diameter 8 inches, 8-inch casing to unknown depth. Driller's log.

Material	Thickness (feet)	Depth (feet)	Material	Thickness (feet)	Depth (feet)
No record	220	220	"Hard lime," flow of water	60	448
Cemented gravel	18	238	Red clay	602	1,050
Gravel, flow of water	1	239	Red clay, flow of water	1	1,051
White clay	57	296	Red clay	65	1,116
"Mixed" clay	59	355			
Red sandy clay, flow of water	25	380	Total depth	....	1,116

TABLE 3—*Continued*

(S–22–61) 1cbb2. J. K. Houssels. Diameter 6 inches, 6-inch casing to unknown depth. Driller's log.

Material	Thickness (feet)	Depth (feet)
No record	110	110
Cemented gravel	4	114
Clay	65	179
Gravel, flow of water	2	181
Clay	5	186
Cemented gravel	109	295
Clay	45	340
Total depth	....	340

(S–22–61) 1dac1. Y. Tomiyasu. Diameter 8 inches, 8-inch casing to 103 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
"Conglomerate"	40	40
Clay	94	134
Gravel and sand, flow of water	14	148
Gravel and clay	15	163
"Cemented rock"		No record
Gravel and sand, flow of water	....	203
Total depth	....	203

(S–22–61) 2aba1. L. H. Irvin. Diameter 4 inches, 4-inch casing to 337 feet, 153 feet of 6-inch casing from 2 to 155 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
No record	140	140
"Conglomerate," flow of water	50	190
"Conglomerate"	100	290
"Shale"	47	337
"Soft conglomerate"	51	388
"Hard conglomerate," flow of water	....	388
Total depth	....	388

(S–22–61) 2ccc1. Henry Wick. Land surface altitude 2,073 feet; diameter 10 inches, 10-inch casing to unknown depth, 8-inch casing to 200 feet, 235 feet of 7-inch casing from 190 to 425 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	4	4
"Gravel and clay"	19	23
"Near-surface" water level	....	23
"Gravel and clay"	177	200
Cemented gravel with thin layers of clay	40	240
Sand and gravel, flow of water	5	245
Cemented gravel with thin layers of clay	235	480
Sand and gravel, flow of water	5	485
Cemented gravel with thin layers of clay	115	600
Total depth	....	600

(S–22–61) 3bda1. H. H. Hair. Land surface altitude 2,116 feet; diameter 8 inches, 8-inch casing to 366 feet, 4-inch casing to unknown depth. Driller's log.

Material	Thickness (feet)	Depth (feet)
Sandy soil	8	8
Caliche	1	9
"Gyp" and clay, "lime reefs"	14	23
Caliche	5	28
White "marl," "gyp," and "lime"	20	48
Red clay	53	101
Caliche	4	105
Clay and "gyp"	9	114
Caliche	1	115
Clay	63	178
Caliche	2	180
Clay	10	190
Caliche	5	195
Clay	5	200
"Conglomerate"	20	220
Clay and "gyp"	30	250
"Conglomerate"	77	327
Gray "shale"	13	340
Red "shale"	12	352
Red clay	18	370
Flow of water	4	374
Total depth	....	374

(S–22–61) 3caa1. H. Nickerson. Land surface altitude 2,102 feet; diameter 6 inches, 6-inch casing to unknown depth, 4¼-inch casing to 353 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
No record	190	190
"Conglomerate"	130	320
Sandy "shale"	30	350
Red clay	23	373
"Conglomerate," flow of water	22	395
Total depth	....	395

TABLE 3—*Continued*

(S–22–61) 3cab2. N. L. and M. S. White. Diameter 8 inches, 8-inch casing to 84 feet, 6-inch casing to 395 feet, perforated with ¼-by-6-inch slots from 333 to 395 feet.

Material	Thickness (feet)	Depth (feet)
Soil	4	4
Light tan silty clay	16	20
"Near-surface" water level	....	20
Light tan silty sand	10	30
Pink silty sand, little gravel and clay, water level rose in casing	10	40
Pink silty clay	28	68
Small-pebble-and-granule - gravel, some sand, much pink silty clay	12	80
Pink plastic silty clay	5	85
Granule gravel, coarse-to-medium - grained sand, some silt	10	95
Pink silty clay	65	160
Coarse - grained sand, much pink silty clay	5	165
Pink silty clay	40	205
Granule-gravel and sand, pink silty clay	20	225
Pink silty clay	80	305
Coarse-to-fine-grained sand, much silt	5	310
Pink silty clay	30	340
Pink silty coarse-to-fine - grained sand, little clay	5	345
Pink silt, little clay and caliche nodules	25	370
Light greenish blue clay	5	375
Pink silty clay	5	380
Granule gravel and sand, some pink silt, water level rose in casing	2	382
Light tan silt, caliche	3	385
Pink silty clay, few sand and caliche strata	15	400
Granule gravel, coarse-grained sand and pink silty clay, few pebbles	15	415
Tan silt	5	420
Pink silty clay, much sand, many granules	10	430
Very fine-grained, uniform tan sand, flow of water	5	435
Total depth	....	435

(S–22–61) 3ccb1. Dewey Williams. Land surface altitude 2,153 feet; diameter 10 inches, 10-inch casing to 246 feet, 164 feet of 5⅝-inch casing from 246 to 410 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Layers of "rock" and clay	14	14
"Near-surface" water level	....	14
Layers of "rock" and clay	201	215
Cemented gravel	101	316
"Caving" red clay	56	372
Cemented gravel	56	428
Layers of cemented gravel and clay	97	525
"Limestone"	50	575
Total depth	....	575

(S–21–61) 3dda1. Henry Wick. Land surface altitude 2,077 feet; diameter 10 inches, 10-inch casing to 220 feet, 8-inch casing to 335 feet.

Material	Thickness (feet)	Depth (feet)
Dark gray clay	15	15
Pink silty clay, few granules	1	16
Granules, some gray clay	2	18
Pink silty clay, few granules	25	43
Granule and pebble-gravel, much pink silty clay	2	45
Pink silty clay, few granules	123	168
Caliche, much pink clay	19	187
Sand and gravel, flow of water	13	200
Pink silty clay	5	205
Light pink, silty, fine-grained sand, little medium-grained sand	20	225
Light pink, silty, fine-grained sand, some clay	5	230
Fine and medium-grained light pink sand, little clay	30	260
Light pink fine-grained silty sand	15	275
Sandy pink silt and clay	5	280
Medium - grained sand, few granules, much silt and some clay	5	285
Tan clay and silt, some medium-grained sand	5	290
Light tan clay	30	320
Fine-grained sand, few granules, little silt	10	330
Tan medium-grained sand, little silt	2	332
Tan fine - to - coarse-grained sand, few granules, little gray plastic clay	3	335
Pebble - gravel, few granules, much sand, little tan clay	....	335
Total depth	....	335

TABLE 3—*Continued*

(S–22–61) 10acc1. Gladstone Corporation. Diameter 12 inches, 12-inch casing to unknown depth, 130 feet of 6-inch casing to unknown depth. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	27	27
Gravel	5	32
Clay	8	40
"Conglomerate"	20	60
Clay	7	67
"Conglomerate"	5	72
Clay	8	80
"Conglomerate"	4	84
Clay	6	90
"Conglomerate"	6	96
Clay	9	105
"Conglomerate"	5	110
Clay	15	125
"Conglomerate (basalt)"	215	340
Hard red clay, gravel	11	351
Boulders, clay, "conglomerate"	232	583
"Conglomerate," water level rose to 18 ft	....	583
No record	102	685
Gray "lime"	30	715
Total depth	....	715

(S–22–62) 1bcc1. T. A. Wells. Diameter 6 inches, 6-inch casing to 451 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
No record	435	435
Blue clay	16	451
Gray and white "lime"	49	500
Clay with "lime shells"	100	600
Brown clay	100	700
Brown and red clay	105	805
Gray and black sand, flow of water	55	860
Total depth	....	860

(S–22–62) 1cbc1. T. A. Wells. Diameter 8 inches, 8-inch casing to 400 feet. 200 feet of 5⅝-inch casing from 400 to 600 feet, perforated with ¼-by-4-inch slots from 550 to 600 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Gravel	35	35
"Near-surface" water level	....	35
Gravel	45	80
Clay	305	385
Sand, flow of water	15	400
"Bentonite" (blue clay)	20	420
Clay	130	550
Sand, flow of water	10	560
"Hard sand," flow of water	110	670
"Shale"	465	1,135
Total depth	....	1,135

(S–22–62) 1cbd1. T. A. Wells. Diameter 8 inches, 8-inch casing to 500 feet. 300 feet of 6-inch casing to unknown depth. Driller's log.

Material	Thickness (feet)	Depth (feet)
Gravel	32	32
"Near-surface" water level	....	32
Gravel	8	40
Yellow and red clay with loose boulders	735	775
Gray and black sand, flow of water	75	850
Gray and black sand, flow of water	....	910
Total depth	....	910

(S–22–62) 9cdb2. A. G. Klinger. Diameter 12 inches, 12-inch casing to 55 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Gravel, sand, clay	75	75
Gravel, flow of water	35	110
Gravel, sand, clay	15	125
Total depth	....	125

(S–22–62) 9dcc1. Roy Cram. Diameter 10 inches, 10-inch casing to 100 feet, perforated with ¼-by-1-inch slots from 20 to 80 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Gravel and some large boulders	180	180
Total depth	....	180

TABLE 4

Analyses of Water from Wells and Springs in Las Vegas and Indian Spring Valleys, Nevada

(Analyses by M. R. Miller, University of Nevada, Agricultural Experiment Station, or W. B. Adams, Public Service Division, University of Nevada, Department of Food and Drugs, except as noted. See tables 2 and 3 for descriptive data for wells.)

Well No. and location	State Engineer's local field No.	Depth (feet)	Temperature (°F.)	Date of collection	Specific electrical conductance ($K \times 10^5$ at 25°C)	Parts Per Million: Dissolved solids	Silica (SiO_2)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na and K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulphate (SO_4)	Chloride (Cl)	Alkalinity (as $CaCO_3$)	Hardness (as $CaCO_3$)
INDIAN SPRING VALLEY																
(S-16-56) 5dd	....	600	....	6-20-42	.....	340	25	87	23	6	0	239	98	20	196	312
(S-16-56) 9bb2	....	50	....	3-18-42	.....	415	22	86	20	42	tr	329	95	14	270	297
LAS VEGAS VALLEY																
(S-19-60) 9abb1	428	631	....	9-13-45	40.7	338	....	38	28	5	0	240	22	3.9	.....	211
(S-19-60) 9cda1	429	612	70	10-23-44	.....	350	....	46	26	4	....	250	19	5	.....	221
(S-19-60) 21ccc1	....	8	....	9-13-45	46.7	394	....	55	29	3	0	274	31	2.8	.....	256
(S-19-60) 23bbc1	449	560	70	10-25-44	44.2	350	....	46	26	4	....	250	19	5	.....	222
(S-19-60) 27aab1	384	605	70	10-23-44	42	358	....	44	27	8.9	0	247	23	8.8	.....	219
(S-20-60) 21adb1 [12]	2	385	....	9-14-12	35	251	7	52	3	43	0	235	34	4	.....	141
(S-20-61) 3dab1 [3]	314	242	71	5- 1-41	.....	245	13	54	15	24	tr	237	45	7	194	196

(S-20-61) 4add1 [1]	318	850	71	10-12-31	73	200	17	12	19	71	0	220	72	7.1	.....	108
(S-20-61) 18bcc1	505	412	....	2-16-45	43.4	352	....	46	26	12	21	212	30	5.3	.....	222
(S-20-61) 19abd1	5	260	70	10-23-44	42.8	357	....	49	26	4.8	0	238	32	7.1	.....	228
(S-20-61) 19ddc1	354	280	70	.....	43.2	364	....	48	26	8.7	0	242	34	6	.....	224
(S-20-61) 20cac1	166	347	70	9-15-34	.....	240	9	44	14	33	0	237	30	10	194	167
(S-20-61) 20cbc1	7	278	71	10-18-44	42.7	361	....	49	26	5.9	0	242	33	6.2	.....	227
(S-20-61) 20cdc1	360	325	71	10-18-44	42.8	359	....	49	26	4.6	0	238	36	5.3	.....	230
(S-20-61) 27adb1	213	.....	....	.....	.....	323	18	78	21	9	0	249	61	22	204	281
(S-20-61) 27cdd1	276	357	....	6-14-35	.....	335	37	57	9	33	0	232	22	28	190	179
(S-20-61) 28cbd1	12	660	74	1-19-45	40.2	334	....	43	23	10	0	221	31	6	.....	200
(S-20-61) 28cda1	403	440*	76	10-25-44	37.5	312	....	38	22	10	0	210	27	5	.....	185
(S-20-61) 28cda1	403	690†	76	10-25-44	38.4	310	....	38	24	11	6	192	33	6	.....	193
(S-20-61) 28dac1	199	640*	....	1-19-45	33.5	280	....	46	22	6.7	0	171	24	11	.....	203
(S-20-61) 28dac1	199	805†	....	1-19-45	40.8	317	....	40	22	9.2	0	210	30	5.3	.....	192
(S-20-61) 29cbc2[1]	83	600	75	2- 5-32	298	235	17	64	20	7.9	0	233	58	5.5	.....	242
(S-20-61) 29ccc1	77	.....	....	10- 2-42	.....	265	10	60	19	11	0	220	45	13	180	228
(S-20-61) 29dbb1	380	475	72	10-18-44	42.9	354	....	48	25	5.7	0	236	33	5.3	.....	224
(S-20-61) 29dca1	52	664	74	10-24-44	42.3	343	....	46	25	6.2	0	227	32	7.1	.....	216

TABLE 4—*Continued*

Well No. and location	State Engineer's local field No.	Depth (feet)	Temperature (°F.)	Date of collection	Specific electrical conductance (K×10⁶ at 25°C)	Parts per million: Dissolved solids	Silica (SiO_2)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na and K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulphate (SO_4)	Chloride (Cl)	Alkalinity (as $CaCO_3$)	Hardness (as $CaCO_3$)
(S-20-61) 30bbb1[1]	109	350	72	3-27-31	870	246	18	51	24	7.6	0	249	38	tr	.....	227
(S-20-61) 32acb2	390	660	77	2-16-45	44.1	365	....	46	25	11	0	235	40	7.1	.....	220
(S-20-61) 33cca1	205	200*	71	.....	44.7	369	....	46	28	9.2	0	233	44	8.8	.....	229
(S-20-61) 33cca1	205	400†	72	.....	44.6	373	....	47	26	12	0	233	46	8.8	.....	225
(S-20-61) 33cca2	206	226	....	2-21-38	.....	280	22	84	tr	32	0	270	47	7	221	210
(S-20-61) 33ccb2	15	425	....	.....	42.3	357	....	49	13	26	3.6	231	25	7.8	.....	177
(S-20-61) 34adc1	47	354	69	1-19-45	32.6	255	....	28	19	11	0	162	26	8.8	.....	148
(S-20-61) 34bcb1	159	.....	....	6-14-41	.....	460	25	84	25	50	0	305	144	16	250	312
(S-20-61) 35cbb2	363	460	....	9-14-45	33.9	256	....	31	22	4	tr	162	32	6	.....	166
(S-20-61) 35ddc2	368	418	....	9-14-45	37.7	319	....	39	26	5	tr	206	40	3.2	.....	205
(S-20-61) 36bbb1	393	325	69	1-19-45	42.4	356	....	44	26	10	0	233	36	7.1	.....	216
(S-20-62) 4add1	416	800	71	5- 5-41	.....	255	15	60	17	15	0	244	34	12	200	220

(S-20-62) 19bbb1	444	.....	....	12-17-45	.....	294	51	25	10	56	0	204	35	15	28	102
(S-20-62) 19cab1	442	.....	....	12-17-45	.....	408	30	39	15	84	0	221	110	32	181	159
(S-21-61) 2cbb1	51	1120	83	1-19-45	50.8	382	....	32	18	50	0	152	124	6.2	.....	154
(S-21-61) 3abb2	238	(*)	70	9-14-45	42.3	337	....	45	26	4.1	tr	218	41	2.8	.....	219
(S-21-61) 3abb2[3,4]	238	807†	....	9-14-45	39.8	310	....	40	23	5.5	0	199	39	3.2	.....	196
(S-21-61) 3bcc2	172	800	72	10-10-35	.....	225	22	51	13	26	0	210	50	10	172	181
(S-21-61) 4aad1	386	793	74	1-19-45	41.8	351	....	41	23	17	0	223	37	9.6	.....	197
(S-21-61) 4baa1	48	381	72	1-19-45	44.8	376	....	31	27	29	0	236	46	7.1	.....	188
(S-21-61) 4dac2	420	650	70	10-25-44	40.4	309	....	36	26	10	16	174	42	5	.....	197
(S-21-61) 4ddb1	88	400	....	10- 9-45	.....	265	20	60	17	2	0	195	44	10	160	220
(S-21-61) 7acc1	155	(*)	72	3-15-45	45.8	372	....	49	28	7.1	0	232	51	5.3	.....	236
(S-21-61) 7acc1	155	355†	72	3-15-45	45.8	376	....	48	27	10	0	232	52	7.1	.....	232
(S-21-61) 9acd1	377	550	72	10-17-44	42.4	350	....	45	24	11	0	223	39	8.8	.....	212
(S-21-61) 18dbd1[1]	30	300	....	9-10-30	65	329	16	68	32	12	0	243	109	10	.....	301
(S-21-61) 21bbb1	123	325	70	10-17-44	39.9	322	....	40	24	9.2	0	204	40	5.3	.....	197
(S-21-61) 27cbb1[1,2]	35	400	....	9-18-12	184	430	21	85	31	10	0	210	165	10	.....	340
(S-21-61) 27ccc1[3,4]	38	263	75	10-17-44	54.4	478	....	61	31	20	0	253	101	11	.....	282

TABLE 4—*Continued*

Well No. and location	State Engineer's local field No.	Depth (feet)	Temperature (°F.)	Date of collection	Specific electrical conductance (K×10⁶ at 25°C)	Parts per Million: Dissolved solids	Silica (SiO_2)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na and K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulphate (SO_4)	Chloride (Cl)	Alkalinity (as $CaCO_3$)	Hardness (as $CaCO_3$)
(S-21-61) 29dda1	93	260	70	10-17-44	57.4	462	....	67	34	7.3	0	227	118	8.8	.....	306
(S-21-61) 33bac1	39	224	78.5	10-27-30	105	410	19	81	25	31	0	245	148	12	.....	304
(S-21-61) 35dcc1	125	300*	....	8- 5-27	49	912	....	151	52	35	0	219	418	38	.....	590
(S-21-61) 35dcc1	125	485†	....	8- 5-27	66	745	....	116	39	42	0	168	358	22	.....	451
(S-21-62) 3bac1 [1,2]	339	546	....	12-24-12	2.1	7355	15	500	150	1509	tr	51	4008	658	.....	1865
(S-21-62) 4aaa2 [1]	337	180	....	4-19-29	.....	1306	....	142	94	120	0	254	681	60	.....	741
(S-21-62) 17ddc1	374	540	....	3-18-42	.....	3113	74	228	68	678	0	154	1599	378	126	849
(S-21-62) 20ddd1	407	458	76	12-21-42	118	371	46	66	20	25	0	144	134	15	118	247
(S-21-62) 21ddd1	295	.....	....	7-13-42	.....	3705	48	246	98	765	0	78	2252	192	64	1017
(S-21-62) 27bcb1	342	525	....	7-13-42	.....	2360	37	148	46	511	0	81	1356	136	66	559
(S-21-62) 27bcd1	355	450	....	7-13-42	.....	3050	48	240	119	544	0	107	1678	308	88	1088
(S-21-62) 27cba1	296	420	....	7-13-42	.....	2388	37	158	45	504	0	81	1372	128	66	580
(S-21-62) 27ccc1 [1]	....	375	....	9-27-26	1.75	6378	82	610	358	805	0	204	2855	1140	.....	2993

(S-21-62) 28aad1	293	420	....	7-13-42	.....	2820	35	162	63	573	0	81	1600	161	66	663
(S-21-62) 28acd1[2]	297	18	....	9-20-12	.....	2827	71	295	164	297	12	197	1233	417	.....	1410
(S-21-62) 28ada1	294	570	....	7-13-42	.....	3250	70	282	188	474	0	181	1641	460	148	1476
(S-21-62) 29bcc1	301	.....	....	8- 4-42	.....	420	22	64	34	11	tr	181	147	16	148	299
(S-21-62) 29ccb1	133	700	....	7-13-42	.....	580	36	79	39	33	tr	195	232	20	160	357
(S-21-62) 29ccc1	134	404	....	7-13-42	.....	715	25	110	50	29	tr	215	327	20	176	480
(S-21-62) 30dbb1	128	390	77	8- 4-42	.....	602	12	110	42	18	0	160	315	20	131	447
(S-21-62) 31bdc2	132	600	74	7-13-42	.....	805	21	147	50	8	0	158	392	37	130	572
(S-22-61) 1bcb4[1,2]	272	.....	....	9-17-12	15	1380	36	193	73	104	0	191	587	168	.....	782
(S-22-61) 1bdb1[1]	62	.....	....	9-25-30	.....	1546	34	229	94	128	0	182	901	107	.....	959
(S-22-61) 1dac1[3,4]	57	209	....	7-13-42	.....	1018	25	177	56	44	0	207	448	94	170	672
(S-22-61) 2aba1	226	200	76	10-17-44	109	775	....	134	57	2.3	0	198	353	30	.....	568
(S-22-61) 3acc1	122	.....	....	7- 3-41	.....	882	....	148	40	55	0	207	452	10	170	534
(S-22-61) 3caa1	121	395	84	7- 3-41	.....	863	21	150	44	40	0	171	453	22	140	555
(S-22-61) 3dda1	434	335	84	6-15-45	113.8	838	....	158	53	.7	9.0	176	441	.5	.....	613
(S-22-61) 10bda1[1,2]	69	305	90	9-18-12	60	857	30	155	50	15	0	205	405	35	.....	592
(S-22-61) 11bac2	352	175	....	3-28-45	106.9	848	....	140	52	25	tr	202	404	24	.....	566
(S-22-61) 11bac3[1,2]	261	.....	....	9-17-12	30	1044	35	177	56	47	0	215	483	67	.....	672
(S-22-61) 12bbb1	266	.....	82	10-17-44	100.1	851	....	120	51	58	0	157	414	52	.....	508

TABLE 4—*Continued*

Well No. and location	State Engineer's local field No.	Depth (feet)	Temperature (°F.)	Date of collection	Specific electrical conductance (K x 10⁶ at 25°C)	Parts per million: Dissolved solids	Silica (SiO_2)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na and K)	Carbonate (CO_3)	Bicarbonate (HCO_3)	Sulphate (SO_4)	Chloride (Cl)	Alkalinity (as $CaCO_3$)	Hardness (as $CaCO_3$)
(S-22-62) 1cba1	350	465	75	7-13-42	.....	1800	62	210	50	253	0	117	753	284	96	730
(S-22-62) 1cbc1	494	1135	....	3-15-45	248	1785	....	106	20	436	0	84	1027	112	.....	347
(S-22-62) 1cbc2	....	.....	....	3-15-45	277	2196	....	120	31	536	0	323	932	254	.....	427
(S-22-62) 1cbd2	....	850	....	7-13-42	.....	2555	63	76	9	743	0	160	1296	256	131	227
(S-22-62) 1ccc1	431	300	....	9-24-45	316	1953	....	174	85	378	tr	102	513	700	.....	782
(S-22-62) 9dcc1	382	180	....	11- 9-42	.....	943	35	98	56	124	tr	176	279	218	144	475
(S-20-61) Composite sample of wells and springs used for Las Vegas City Water Supply. 10-2-42					.....	265	10	60	19	11	....	220	45	13	.....	228
Composite sample of Las Vegas Springs and Well. (S-20-61) 29ccc1, Las Vegas City Water Supply. 1927						291	12	58	25	17	0	259	48	18	.....	248

[1]Taken from Hardman, George and Miller, M. R., Quality of the Waters of Southeastern Nevada, Drainage Basins and Water Resources, pp. 24-29; University of Nevada Agricultural Experiment Station, Bulletin No. 136, July 1934.

[2]Taken from Carpenter, Everett, Ground Water in Southeastern Nevada, table facing p. 30, U. S. Geological Water-Supply Paper 365, 1915.

[3]Earlier analysis available from Hardman, George and Miller, M. R., Quality of the Waters of Southeastern Nevada, Drainage Basins and Water Resources, pp. 24-29; University of Nevada Agricultural Experiment Station, Bulletin No. 136, July, 1934.

[4]Earlier Analysis available from Carpenter, Everett, Ground Water in Southeastern Nevada, table facing p. 30, U. S. Geological Survey Water-Supply Paper 365, 1915.

*Shallow flow.

†Deep flow.

TABLE 1

Index for State Engineer's Local Field Numbers, Permit Numbers, and U. S. Geological Survey Numbers of Wells in Las Vegas and Pahrump Valleys, Nevada.

(State Engineer's local field numbers are arranged in consecutive order)

LAS VEGAS VALLEY

State Engineer's local field No.	Well No.	Permit No.	State Engineer's local field No.	Well No.	Permit No.
515	(S-21-61) 4acd1	.....	537	(S-21-61) 21abb1	11559
516	(S-21-61) 16bac2	11197	538	(S-21-61) 16ccd1	11579
517	(S-21-61) 20daa1	11253	539	(S-19-60) 16dd	11196
518	(S-20-61) 28cbc1	11409	540	(S-19-60) 9abc1	11342
519	(S-21-61) 16bcd2	11414			
520	(S-20-61) 28bdc1	11422	542	(S-20-61) 19dcd1	11210
521	(S-20-61) 28bac1	11423	543	(S-22-61) 5a	11320
522	(S-21-61) 4bba1	11431	544	(S-20-61) 13dbb1	11357
523	(S-20-61) 36ccc2	11472			
524	(S-21-61) 2bdc1	11480	546	(S-20-61) 25ccd1	11500
525	(S-22-61) 12bbb2	11494	547	(S-21-61) 26bbd1	11512
526	(S-21-62) 30bcd1	11495	548	(S-20-61) 17cdb2	11549
527	(S-21-61) 16bcd3	11497	549	(S-20-61) 20dab1	11584
528	(S-21-61) 1aab3	11503	550	(S-22-61) 9bba1	11591
529	(S-21-61) 16ccc2	11520	551	(S-21-61) 15bac1	11658
530	(S-20-61) 12aca1	11550	552	(S-22-61) 2bba1	11722
531	.....	11487	553	(S-20-60) 2ddd1	10977
532	(S-22-61) 2ddc2	11554	554	(S-19-60) 27bdc1	
533	(S-21-61) 15cbb1	11556	555	(S-19-60) 33baa1	
534	(S-21-61) 29aaa1	11560	556	(S-20-61) 23bdc2	11596
535	(S-20-61) 29cbb2	11567			
536	(S-21-61) 6abc1	10794			

PAHRUMP VALLEY

1	(S-20-53) 14dcc1	6100	24	(S-21-54) 3acc1	10599
2	(S-20-53) 14dcd1	6100	25	(S-21-54) 3dcb1	10600
3	(S-20-53) 23aba1	6101	26	(S-20-53) 24cdd2	
4	(S-20-53) 23bc	10492	27	(N-24-8)* 26b	

*San Bernardino Base and Meridian.

PAHRUMP VALLEY—*Continued*

State Engineer's local field No.	Well No.	Permit No.
5	(S-20-53) 24cbb1	10491
6	(S-20-53) 14dcc2	10489
7	(S-20-53) 24cdd1	10998
8	(S-20-53) 22bcd1	
9	(S-20-53) 15da1	
10	(S-20-53) 15da2	
11	(S-20-53) 15da3	
12	(S-20-53) 14cbc1	
13	(S-20-53) 15add1	
14	(S-20-53) 15adc2	
15	(S-20-53) 15adc1	
16	(S-20-53) 15bdd1	11001
17	(S-20-53) 15bdc1	11092
18	(S-21-54) 3bda2	10571
19	(S-21-54) 3cad1	10572
20	(S-20-53) 10cdd1	11038
21	(S-21-54) 3dc	10472
22	(S-21-54) 10aac1	
23	(S-21-54) 15aca1	
28	(S-19-53) 10cb1	11185
29	(S-19-53) 15bd1	11184
30	(S-19-53) 16da1	11181
31	(S-19-53) 22ab1	11183
32	(S-19-53) 22da1	
33	(S-19-53) 27ac1	11180
34	(S-20-53) 6ad1	
35	(S-20-53) 14dcc3	
36	(S-20-53) 14dcc4	
37	(S-20-53) 15acd1	
38	(S-20-53) 15acd2	
39	(S-20-53) 15bdd2	
40	(S-20-53) 24caa1	
41	(S-21-53) 1add1	
42	(S-21-53) 24aa1	
43	(S-21-53) 24aa2	
44	(S-21-54) 3bda1	
45	(S-21-54) 19dd1	
46	(S-21-54) 19dd2	
47	(S-21-54) 19dd3	
48	(S-21-54) 19dd4	
49	(S-21-54) 21cd1	
50	(S-21-54) 28bd1	
51	(S-21-54) 28ca1	
52	(S-21-54) 31dd1	
53	(S-21-54) 31dd2	
54	(S-22-54) 25a1	
55	(S-22-54) 25b1	
56	(S-22-54) 25c1	

TABLE 2

Record of wells in Las Vegas, Pahrump, and Indian Spring Valleys, Nevada. (Use of Water—DI, Domestic and irrigation; Ind., Industrial; N, Unused; O, Observation; P, Public supply; S, Stock.)

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
			INDIAN SPRING VALLEY						
(S-16-56) 8aa1	----	----	Tim Harnedy	Rodgers & Smith	1946	10	165	----	----
(S-16-56) 9ca1	----	----	Tim Harnedy	Rodgers & Smith	1946	12	200	----	----
			LAS VEGAS VALLEY						
(S-19-60) 9ab	540	11342	P. J. Goumand	Thomas C. Miller	1946	14	826	----	----
(S-19-60) 16dda1	539	11196	E. A., J. T., and W. O. Gilcrease	Las Vegas Drilling Co.	1946	10	709	----	----
(S-19-60) 27bdc1	554	----	Geological Survey (Test Well)	Geological Survey	1946	5	905	----	----
(S-19-60) 33baa1	555	----	Geological Survey (Test Well)	Geological Survey	1946	8	1008	----	----
(S-20-60) 1ccc1	----	----	F. E. Gowen	Las Vegas Drilling Co.	1946	8	156	----	----
(S-20-60) 2ddd1	553	10977	Arthur E. Gray	Canemona Drilling Co.	1946	10	707		
(S-20-60) 12aca1	530	11550	Frank E. and Olga Gowen	Las Vegas Drilling Co.	1946	8	665	----	----
(S-20-61) 13dbb1	544	11357	Joe Cardinal	John Frewalt	1946	8	293	----	----
(S-20-61) 19dcd1	542	11210 11711	V. O. Eastland and E. B. Coram	Rogers & Smith	1946	10	480	250–280	462–480
(S-20-61) 20dab1	549	11584	Emil M. Pahor	Leveritt Drilling Co.	1946	8	306	220–240	285–295
(S-20-61) 23bdc2	556	11596	R. J. Kaltenborn	Bert Hairgrove	1946	8	200	----	----
(S-20-61) 25ccd1	546	11500	Ebbie H. Davis	John Frewalt	1946	8	348	----	----
(S-20-61) 28bac1	521	11423	Waale, Camplan, and Thomas, Inc.	Las Vegas Drilling Co.	1946	10	711	----	----
(S-20-61) 28bdc1	520	11422	Waale, Camplan, and Thomas, Inc.	Las Vegas Drilling Co.	1946	10	700	----	----
(S-20-61) 28cbc1	518	11409	Theodore Werner and Kenneth Searles	Las Vegas Drilling Co.	1946	8	845	----	----
(S-20-61) 29cbb2	535	11567	Thomas E. Sharp	Las Vegas Drilling Co.	1946	10	967	----	----

Measuring Point			Pressure Head or Water Level					
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
.....	+0.7	Top of 8-in. casing	—27.25	11- 1-46	....	DI	....	Log.
.....	+1.3	Top of 8-in. casing	—19.26	11- 1-46	....	DI	....	Log.
2479	.....	.....	.....	.....	340	DI	....	Log.
.....	.....	.....	.....	.....	....	....	68	Log.
2361.3	+0.5	Top of 5-in. collar	+36.1	12-18-46	40	....	70	Log.
2107.60	+0.4	Top of collar of 8-in. casing	+22.0	12-18-46	70	....	70	Log.
2268.29	+1.1	Top of 8-in. casing	—44.02	12-24-46	....	N	....	Log.
2245.88	+1.0	Top of 8-in. casing	—31.24	12-24-46	....	N	....	Log.
1851.81	+2.2	Top of casing	—41.18	12-28-46	....	DI	....	Log.
.....	+1.0	Top of 10-in. casing	+17.1	10-31-46	264	DI	70	Log.
.....	+1.0	Top of casing	+25.1	11-27-46	70	DI	70	Log.
1888.92	+0.8	Top of 8-in. casing	+8.4	1- 9-47	10	DI	....	Log.
1850.73	+0.5	Top of 8-in. casing	+10.4	12-16-46	3	DI	....	Log.
.....	+0.3	Top of 10-inch welded cap	+22.8	7-16-46	30	P	....	Log.
.....	0.0	Top of 10-in. casing	+50.0	11-21-46	20	P	....	Log.
.....	+2.0	Top of 8-in. tee	+45.3	7-24-46	53	DI	....	Log.
2147.11	+2.3	Top of lower flange of 10-in. gate valve	+39.7	10-19-46	1200	DI	76	Log.

TABLE 2—*Continued*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-20-61) 36ccc2	523	11472	M. E. Ward	Bert Hairgrove	1946	8	429	.....	.....
(S-21-61) 1aabc	528	11503	Nate Mack	O. G. Hairgrove	1946	8	490	.....	.....
(S-21-61) 2bdc1	524	11480	H. J., G. M., and M. V. Stocker	Rodgers & Smith	1946	10	490	.....	.....
(S-21-61) 4acd1	515	.....	C. L. Ronnow and C. W. Wengert	.....	.....	8	.....	.....	.....
(S-21-61) 4bba1	522	11431	Nick Pahor	Rodgers & Smith	1946	8	450	.....	.....
(S-21-61) 6abc1	536	10794	William Hinson	Bert Hairgrove	1946	10	272	.....	.....
(S-21-61) 7ddb2	.....	.....	J. V. Karns	J. V. Karns	.....	60	25	.....	.....
(S-21-61) 15bac1	551	11658	John N. and Helen Beville	D. G. Arnall	1946	12	379	.....	.....
(S-21-61) 15cbb1	533	11556	T. A. Wells	Joe Metz	1946	10	925	483–492	340–390 755–760 912–923
(S-21-61) 16bac2	516	11197	John P. Hughes	Las Vegas Drilling Co.	1946	6	456	.....	.....
(S-21-61) 16bcd2	519	11414	James S. Fulcher	North Las Vegas Drilling Co.	1946	10	540	.....	.....
(S-21-61) 16bcd3	527	11497	Otilla Techow	Las Vegas Drilling Co.	1946	6¼	312	.....	.....
(S-21-61) 16cbd4	.....	.....	Frank E. Gowen	Las Vegas Drilling Co.	1946	8	85	.....	.....
(S-21-61) 16ccc1	440	11519	Nevada Projects Corporation	Canemona Drilling Co.	1946	10	605	.....	.....
(S-21-61) 16ccc2	529	11520	Nevada Projects Corporation	Canemona Drilling Co.	1946	10	977	.....	.....
(S-21-61) 16ccd1	538	11579	Nevada Projects Corporation	Canemona Drilling Co.	1946	10	1255	.....	.....
(S-21-61) 20daa1	517	11253	A. F. Winter	Canemona Drilling Co.	1946	8	920	.....	.....
(S-21-61) 21abb1	537	11559	Murray Woolman	North Las Vegas Drilling Co.	1946	8	737	.....	.....
(S-21-61) 26bbd1	547	11512	Evelyn S. Potter	North Las Vegas Drilling Co.	1946	8	325	.....	.....
(S-21-61) 28ccb1	.....	.....	Roland Wiley	Bert Hairgrove	.....	6	185	.....	.....

Measuring Point			Pressure Head or Water Level					
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
1852.65	+0.7	Top of 8-in. casing	+13.9	7-31-46	22	P	—	Log.
1824.88	—	Cannot measure water level	—	—	5	DI	—	Log. Pumped 25 G. M. in 1946.
1989.39	+1.0	Top of 8-in. casing	—	5-31-46	—	DI	74	Log.
—	+0.5	Top of casing	+22.9	2-17-47	—	DI		
—	+1.2	Top of 6-in. casing	—	6-21-46	—	DI	—	Log.
—	+0.3	Top of 8-in. casing	+2.5	6- 3-46	2	DI	72	Log. Pumped 100 G. M. in December 1946.
—	+1.0	Top of board well-cover	—22.95	9- 4-46	2	DI		
—	+1.0	Top of 12-in. casing	+9.5	11-22-46	125	DI	—	Log.
2050.53	+1.0	Top of 8-in. casing	+6.85	10-29-46	70	DI	75	Log.
—	+0.7	Top of 6-in. casing	—15.38	8- 3-46	—	DI	—	Log.
—	—	Not possible to measure water level	—	7- -46	5	—	—	Log. Pumped 20 G. M. in 1946.
—	+1.3	Top of 6-in. casing	—15.07	8-20-46	—	DI	—	Log.
—	+1.4	Top of 8-in. casing	—20.74	8- 8-46	—	DI	—	Log.
—	+2.4	Top of 10-in. welded cap	+31.8	5-14-46	38	DI	77	Log.
—	+0.95	Top of 10-in. welded cap	+40.6	10-24-46	57	DI	78	Log.
—	+1.5	Top of 10-in. casing	+34.5	12-18-46	46	DI	—	Log.
—	+3.1	Top of 8-in. welded cap	+25.0	7-18-46	40	DI	80	Log.
—	+1.1	Top of 8-in. casing	+24.3	10-29-46	31	DI	76	Log.
—	+0.8	Top of 8-in. casing	+24.9	1- 6-47	45	DI	74	Log.
—	+0.7	Top of casing	—21.30	12-12-46	—	DI		

TABLE 2—*Continued*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-21-61) 29aaa1	534	11560	Murray Woolman	Bert Hairgrove	1946	8	540	330–345	500–510
(S-21-62) 30bcd1	526	11495	Chris Wilson	Canemona Drilling Co.	1946	8	455	.....	.....
(S-22-61) 5a	543	11320	G. Giesler	Canemona Drilling Co.	1946	10	905	900–905	145–155 600–650 800–850
(S-22-61) 9bba2	550	11591	Opaco Lumber Co.	Canemona Drilling Co.	1946	8	603	480–603	195–240 125–140
(S-22-61) 12bbb2	525	11494	Nat Wolff	Rodgers & Smith	1946	8	460	.....	.....
PAHRUMP VALLEY									
(N-24-8) 26b*	27	.....	Bureau of Land Management	W. P. A.	.....	72	22	.....	.....
(S-19-53) 10cb1	28	11185	Elmer Bowman	Elmer Bowman	1946	18	250	.....	.....
(S-19-53) 15bd1	29	11184	Ray Van Horn	Elmer Bowman	1945	16	64	.....	.....
(S-19-53) 16da1	30	11181	Ray Van Horn	Frank Buol	1913	8	700 ±	.....	.....
(S-19-53) 22ab1	31	11183	Ray Van Horn	Art and Harry House	1946	16	540	.....	.....
(S-19-53) 22da1	32	.....	Norman and Lester Shurtliff	Pounder Bros.	.....	20	.....	.....	.....
(S-19-53) 27ac1	33	11179	J. P. Cayton	Murphy	1946	16	480	.....	.....
(S-20-53) 6ad1	34	.....	.....	.....	.....	6	471	.....	.....
(S-20-53) 10cdd1	20	11038	George A. Fink	H. D. Martin	1944	12	715 ±	.....	.....
(S-20-53) 14cbc1	12	.....	Raycraft	.....	1915	10	360	.....	.....
(S-20-53) 14dcc1	1	6100	Ray Thomas	.....	1915	8	254	.....	.....
(S-20-53) 14dcc2	6	10489	Ray Thomas	Joe Evans	1937	10	302	.....	.....
(S-20-53) 14dcc3	35	.....	Ray Thomas	Barber & Bridge	1944	16	460	.....	.....
(S-20-53) 14dcc4	36	.....	Ray Thomas	Barber & Bridge	1946	16	495	.....	.....

*San Bernardino Base and Meridian.

Measuring Point			Pressure Head or Water Level					
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
.....	+3.0	Top of 6-in. tee	+14.4	9- 6-46	60	DI	72	Log.
.....	+1.4	Top of 8-in. casing	+80.2	6-26-46	150	DI	78	Log.
.....	0.0	Land surface	—78.23	10-21-46	—	P	—	Log. Well unfinished in 1946.
.....	+1.0	Top of 8-in. casing	—86.03	2- 3-47	—	DI	—	Log.
.....	+1.0	Top of 6-in. casing	+39.9	11-19-46	27	DI	—	Log.
.....	+0.2	Top of plank well-cover	—17.82	3-19-46	—	S,O	64	Pumped 10 G.M. in 1946.
.....	+0.5	Top of tie	—90.42	9- 9-46	—	N	—	Well casing pulled, 1946.
.....	+0.3	Top of board well-cover	—58.03	3-23-46	—	DI	—	Pumped 5 G. M. in 1946; no casing in well.
.....	0.0	Top of casing	—38.93	3-17-45	—	DI	—	Pumped 300 G. M. on March 17, 1945.
.....	0.0	Top of pump base	—41.34	2- 7-47	—	DI	72	Log; pumped 700 G. M. on Feb. 7, 1947.
.....	0.0	Land surface	—47.0	2- 7-47	—	—	—	Log; well not completed Feb. 7, 1947.
.....	.....	Cannot measure water level	.....	9- 9-46	85	N	76	Log; well not completed Feb. 7, 1947.
.....	+0.5	Top of Casing	—5.42	9- 9-46	—	N,O		
.....	.....	Cannot measure water level	.....	9- 9-46	50	N	77	Log.
.....	.....	Cannot measure water level	.....	9- 9-46	56	DI	80	Log; 10-in. casing to unknown depth; 8-in. casing to unknown depth.
.....	+2.0	Top of casing	+3.2	3- 6-45	20	DI	78	Log; well cleaned out by Thomas C. Miller in 1944.
.....	.....	Cannot measure water level	.....	9- 9-46	Tr	N	78	Log.
.....	0.0	Top of 16-in. cap on casing	+4.05	3- 6-45	745	DI	—	Log.
.....	—11.8	3-in. outlet on casing	+14.0	9-10-46	—	DI	78	Log.

TABLE 2—*Continued*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-20-53) 14dcd1	2	6100	Ray Thomas		1915		322		
(S-20-53) 15acd1	37		Frank Buol			8			
(S-20-53) 15acd2	38		Frank Buol			10			
(S-20-53) 15adc1	15		Frank Buol	Frank Buol	1915	8	520		
(S-20-53) 15adc2	14		Frank Buol	Frank Buol	1913	8	316		
(S-20-53) 15add1	13		George P. Brooks	Frank Buol	1913	4	301		
(S-20-53) 15bdc1	17	11092	A. F. Cayton	H. D. Martin	1943	10	212		
(S-20-53) 15bdd1	16	11001	J. P. Cayton	H. D. Martin	1943	8	400		
(S-20-53) 15bdd2	39		A. F. Cayton	Frank Buol	1913	4			
(S-20-53) 15da1	9		Raycraft		1915	8	354		
(S-20-53) 15da2	10		Raycraft		1915	10	176		
(S-20-53) 15da3	11		Raycraft		1915	10	350		
(S-20-53) 22bcd1	8		Ray Thomas		1910				
(S-20-53) 23aba1	3	6101	Ray Thomas		1915	14	516		
(S-20-53) 23bc1	4	10492	Ray Thomas	Joe Evans	1937	14	400		
(S-20-53) 24caa1	40		Ray Thomas			10	570		
(S-20-53) 24cbb1	5	10491	Ray Thomas			10			
(S-20-53) 24cdd1	7	10998	Ray Thomas	Barber & Bridge	1944	16	897		
(S-20-53) 24cdd2	26		Ray Thomas			12			
(S-21-53) 1add1	41			F.E.R.A.		10			
(S-21-53) 24aa1	42		Townsend			10	120		
(S-21-53) 24aa1	43		Townsend			72	73		

Measuring Point			Pressure Head or Water Level					
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Yield (gallons a minute) Flow	Use	Temperature (°F)	Remarks
----	----	----	----	----	----	----	----	Log; well near small spring.
----	+0.4	Top of casing	—12.47	9–10–46	1	DI		
----	+0.3	Top of casing	.00	9–10–46	----	N	78	
----	+2.2	Top of 8-in. welded cap	+33.0	4– 4–44	25	DI	----	Main supply well for Buol ranch.
----	0.0	Top of 8-in. casing	—1.44	9–10–46	----	DI	----	Pumped 2 G. M. through 1946.
----	----	----	----	9–10–46	2	----	82	
----	----	----	----	9–10–46	25	----	74	Log.
----	+1.1	Top of collar on 8-in. casing	+30.9	9–10–46	27	----	78	Log.
----	+0.8	Top of 2-in. tee	+8.0	9– 9–46	9	DI	77	Well on west side of reservoir.
----	----	----	----	9– 9–46	10	DI	80	
----	----	----	----	9– 9–46	150	DI	80	
----	----	----	----	9– 9–46	10	DI	80	
----	----	----	----	9– 9–46	270	DI	78	Log.
----	----	----	----	9–10–46	400	DI	----	Log.
----	----	Top of 10-in. casing	—25.10	3–17–45	----	N,O		
----	----	----	----	9–10–46	10	N	76	Bridged at 21 feet.
----	----	----	----	9–10–46	122	S	74	Log; 1000 G. M. pumped July 1944.
----	+0.5	Top of welded plate on casing	+2.17	4– 4–44	5	N	74	Bridged at 84 feet.
----	—1.5	Top of casing	—25.50	9–12–45	----	N		
----	+1.3	Top of casing	—23.44	3–19–46	----	N		
----	0.0	Top of 6-in. by 6-in. cribbings, east side	—22.54	9–11–46	----	N	----	Well in pit about 100 feet N.E. of (S-20-53) 24aa1.

TABLE 2—*Continued*

Well No. and Location	State Engineer's Local Field No.	State Permit No.	Owner	Driller	Year Completed	Diameter (inches at land surface)	Depth (feet)	Principal Aquifer (depth, feet)	Other Aquifers (depth, feet)
(S-21-54) 3acc1	24	10599	H. D. Cornell	Roscoe Moss Co.	1941	18	737	----	----
(S-21-54) 3bda1	44	----	H. D. Cornell	Joe Evans	1937	8	----	----	----
(S-21-54) 3bda2	18	10571	H. D. Cornell	Roscoe Moss Co.	1940	16	720	----	----
(S-21-54) 3cad1	19	10572	H. D. Cornell	Roscoe Moss Co.	1941	16	730	----	----
(S-21-54) 3dc1	21	10472	H. D. Cornell	Roscoe Moss Co.	1941	14	720	----	----
(S-21-54) 3dcb1	25	10600	H. D. Cornell	Roscoe Moss Co.	1939	16	970	----	----
(S-21-54) 10aac1	22	----	H. D. Cornell	Roscoe Moss Co.	1940	14	800	----	----
(S-21-54) 15aca1	23	----	Rooker	Roscoe Moss Co.	1940	20	506	----	----
(S-21-54) 19dd1	45	----	Churchill	Churchill	1944	10.5	72	----	----
(S-21-54) 19dd2	46	----	Churchill	Churchill	1944	10.5	76	----	----
(S-21-54) 19dd3	47	----	Churchill	Churchill	1944	10.5	----	----	----
(S-21-54) 19dd4	48	----	Churchill	Churchill	1944	10.5	80	----	----
(S-21-54) 21cd1	49	----	Louis Sharp	----	----	9	164	----	----
(S-21-54) 28bd1	50	----	Kellogg Estate	----	----	10	140	----	----
(S-21-54) 28ca1	51	----	Kellogg Estate	----	----	6	300+	----	----
(S-21-54) 31dd1	52	----	Spanker (?)	----	----	10	102	----	----
(S-21-54) 31dd2	53	----	Spanker (?)	----	----	72	21	----	----
(S-22-54) 25a1	----	----	Roland Wiley	Art House	1946	24	888	----	----
(S-22-54) 25b1	----	----	Roland Wiley	----	----	12	26	----	----
(S-22-54) 25C1	----	----	Roland Wiley	----	----	10	93	----	----

Measuring Point			Pressure Head or Water Level		Yield (gallons a minute)			
Altitude	Above (+) or Below (—) Land Surface (feet)	Description	Above (+) or Below (—) Measuring Point (feet)	Date of Measurement	Flow	Use	Temperature (°F)	Remarks
----	----	----	----	9–11–46	900	DI	---	Log.
----	—3.5	Top of clamp on 8-in. casing	+16.9	10–13–44	---	N,O		
----	—4.0	Top of 16-in. casing	+15.5	9–11–46	907	DI	---	Log.
----	0.0	Top of 20-in. casing	+17.0	4– 4–44	2025	DI	75	Log.
----	—18.0	Top of 12-in. valve wheel	+12.5	9–11–46	900	DI	75	Log.
----	+1.8	Top of 18-in. casing	+10.5	9–11–46	900	DI	75	Log.
----	+0.3	Top of 14-in. casing	—28.34	10–13–44	---	N,O	---	Log.
----	0.0	Top of casing	—31.00	9–11–46	---	N	---	Log.
----	+1.0	Top of can casing	—35.30	3–19–46	---	N		
----	+1.0	Top of 4-in. wooden clamp	—34.71	9–11–46	---	N		
----	----	----	----	----	---	N		
----	----	----	----	----	---	N		
----	+2.8	Top of casing	—20.00	3–19–46	---	N		
----	+1.0	Top of casing	—19.74	3–19–46	---	N		
----	+1.5	Top of 6-in. welded cap on casing	+20.8	9–11–46	5	S		
----	0.0	Top of casing	—70.22	3–19–46	---	N		
----	0.0	Top of casing of adjacent cased well	—19.85	3–19–46	---	N		
----	0.0	Land surface	—17.17	9–11–46	---	N,O	---	Casing pulled.
----	0.0	Top of casing	—17.57	9–11–46	---	DI		
----	+0.4	Top of wooden platform over well	—35.78	9–11–46	---	N		

TABLE 3
Logs and Casing Records of Wells in Las Vegas, Pahrump, and Indian Spring Valleys, Nevada

INDIAN SPRING VALLEY

(S-16-56) 8aa1. Tim Harnedy. Diameter 10 inches, 10-inch casing to 50 feet, 165 feet of 8-inch casing from surface.

Material	Thickness (feet)	Depth (feet)
Light tan silty clay, a few granules and pebbles	35	35
First water encountered	----	35
Gravel and sand, much light tan silty clay	5	40
Light tan silty clay with a few thin interbedded lenses of water-bearing gravel and sand	70	110
Tan silty clay, a few lenses of water-bearing sand and gravel	55	165
Total depth	----	165

(S-16-56) 9ca1. Tim Harnedy. Diameter 12 inches, 12-inch casing to 10 feet, 133 feet of 8-inch casing from surface to 133 feet.

Material	Thickness (feet)	Depth (feet)
Tan silty clay, a few pebbles and some sand	22	22
Pebble and granule gravel, a little sand, water at 22 feet	2	24
Tan silty clay, a few pebbles and granules	6	30
Tan silty clay	10	40
Light greenish - blue plastic clay	5	45
Gravel, sand and clay, water	1	46
Light greenish - blue plastic clay, a few pebbles and granules	14	60
Tan silty clay, a few pebbles and some sand	85	145
Granule gravel and some sand, a few pebbles, some tan silty clay, water	5	150
Light tan silty clay, few granules, a little sand	35	185
Gravel and sand, some tan silty clay, water	2	187
Tan silty clay, a few pebbles, a little sand	13	200
Total depth	----	200

TABLE 3—*Continued*

(S-19-60) 9ab. P. J. Goumand. Land surface altitude 2,479 feet; diameter 14 inches, 14-inch casing to 142 feet, 8-inch casing to 546 feet.

Material	Thickness (feet)	Depth (feet)
Gravel	6	6
Tan clay	24	30
Tan clay, some gravel	12	42
Tan clay	8	50
Reddish-brown, silty clay	40	90
"Near-surface" water level	----	90
Reddish-brown silty clay	6	96
Tan clay	24	120
Pebble and granule gravel, a little tan silty clay, water	7	127
Tan silty clay	56	183
Tan silty clay, some gravel	17	200
Tan silty clay	30	230
Tan silty clay, some gravel	10	240
Tan silty clay, a few granules	40	280
Fine- to medium-grained sand, some gravel cemented with caliche	6	286
Granule and pebble gravel, much fine- to coarse-grained sand, flow of water	24	310
Gravel and sand cemented with caliche, some silt and clay	15	325
Granule to pebble gravel, some sand, flow of water	20	345
Gravel and sand cemented with caliche, a little clay and silt	6	351
Tan plastic clay, some gravel	44	395
Tan silty clay, some gravel	41	436
Tan plastic clay	4	440
Gravel and sand cemented with caliche	2	442
Plastic tan clay	11	453
Tan silty clay	5	458
Gravel and sand cemented with caliche, much silt and clay	22	480
Gravel and sand cemented with caliche	13	493
Granule gravel and sand, flow of water	7	500
Gravel and sand cemented with caliche	9	509
Granule gravel and sand, flow of water	3	512
Coarse- to fine-grained sand a few granules, cemented with caliche	4	516
Sand, some pebbles and granules, flow of water	4	520
Sand and granules cemented with caliche	6	526
Sand, flow of water	33	559
Sand and gravel cemented with caliche	10	569
Sand and gravel, flow of water	26	595
Sand and gravel cemented with caliche	10	605
Sand, flow of water	9	614
Sand and gravel cemented with caliche	7	621
Coarse pebble gravel	10	631
Sand, flow of water	3	634
Coarse pebble gravel, flow of water	1	635
Tan silty clay	65	700
Cemented gravel	2	702
Tan silty clay, a few pebbles and boulders	108	810
Sand, many granules	8	818
Tan silty clay	8	826
Total depth	----	826

TABLE 3—*Continued*

(S-19-60) 16dda1. E. A., J. T., and W. O. Gilcrease. Diameter 10 inches, 10-inch casing to 210 feet, perforated with ¼ by 8-inch slots from 190 to 210 feet.

Material	Thickness (feet)	Depth (feet)
Pebble gravel, some fine- to coarse-grained sand, a little silt	11	11
White silty clay	15	26
Caliche, a little clay and gravel	6	32
Tan silty clay	9	41
Caliche, a little clay and gravel	5	46
Tan silty clay, a few caliche layers	108	154
Tan silty clay, a few caliche layers, a few pebbles	64	218
Pebble and granule gravel, much tan silty clay, some caliche	4	222
Pebble gravel, a few granules, some sand, some tan silty clay and caliche	29	251
Caliche, a little tan clay	2	253
Tan silty clay, many caliche layers	127	380
Pebble gravel, some sand, a little silt	16	396
Tan silty clay	6	402
Pebble gravel, a little sand, much tan silty clay, cemented with caliche	37	439
White clay layers interbedded with thin gravel strata	34	473
Granule and pebble gravel, caliche, some sand	25	498
White silty clay	18	516
Pink silty clay, a little gravel and caliche	99	615
Pebble gravel, some sand, a little tan silty clay	22	637
Red clay, caliche nodules	14	651
Granule gravel, some sand, a little silt and clay	22	673
Tan silty clay, some cemented gravel strata	36	709
Total depth	---	709

TABLE 3—*Continued*

(8-19-60) 27bdc1. U. S. Geological Survey. Land surface altitude 2,361 feet; diameter 5 inches, 5-inch casing to 83.5 feet.

Material	Thickness (feet)	Depth (feet)
Light tan silty clay and pebble gravel, some caliche	10	10
Light tan silty clay, a little caliche, some snail shells	20	30
Light tan coarse-grained sand, a little silty clay	10	40
Light pink silty clay, a few pebbles, a little caliche	5	45
Light pink silty clay, much caliche, a little coarse sand	10	55
Pink clay, a little caliche	20	75
Thin caliche layers interbedded with pebble gravel and sand	15	90
Light pink silty clay, some caliche, a few pebbles	45	135
Brown clay, a little silt, some caliche	15	150
Light pink silty clay, some caliche nodules	10	160
Light brown silty clay and caliche, some pebble gravel	10	170
Light brown silty clay and caliche	10	180
Light brown clay	17	197
Light brown silty clay, some caliche	13	210
Light brown silty clay, a little caliche, a few pebbles	5	215
Silty light brown clay, a little fine sand, a few caliche layers	15	230
Light brown silty clay, a few caliche layers	60	290
Light brown silty clay, a few thin hard brown caliche layers	10	300
Light brown silty clay, a few caliche layers and a few pebbles	8	308
Hard brown caliche	1	309
Light brown silty clay, a few nodules and layers of caliche	103	412
Caliche and coarse-grained sand, flow of water	8	420
Black fine - grained sand, flow of water	5	425
Light brown silty clay, hard caliche layers	5	430
Light brown silty clay, a little fine-grained sand, and a few pebbles	10	440
Light brown silty clay and some caliche, a few pebble and a little sand	45	485
Light brown silty clay, a few caliche nodules	5	490
Hard brown caliche layers, a little clay	5	495
Light brown silty clay, much caliche	65	560
Light brown silty clay, some caliche, a little fine-grained sand	30	590
Light brown silty clay, a few layers of caliche, a few small granules and pebbles	20	610
Light brown silty clay, a little caliche	40	650
Fine- to coarse-grained sand, many granules, much light brown silty clay, flow of water	20	670
Brown silty clay, a few caliche nodules, a few pebbles and granules	15	685
Light green plastic clay layers interbedded with a few thin layers of white plastic clay and brown clay, a few caliche nodules, a little coarse- to fine-grained sand, a few pebbles	25	710
Slate-gray plastic clay	5	715
Brown and green clay layers, some coarse- to fine-grained sand	20	735
Some thin brown clay layers, interbedded with thin coarse-grained sand and pebble-gravel lenses, water-bearing(?)	30	765
Light brown silty clay, few caliche nodules, some medium- to fine-grained sand	30	795
Coarse - grained sand and granules, some light brown silty clay	5	800
Light brown silty clay, some medium- to fine-grained sand, a little light green clay	20	820
Medium- to coarse-grained gray sand, a few granules, some light brown silty clay, water - bearing(?)	30	850
Medium- to coarse-grained gray sand, few granules much light brown silty clay	5	855
Light brown silty clay, much medium- to coarse-grained gray sand, some caliche layers	10	865
Light brown silty clay, some fine- to coarse-grained sand, some pebbles	40	905
Total depth		905

TABLE 3—*Continued*

(S-19-60) 33baa1. U. S. Geological Survey. Land surface altitude 2,407 feet; diameter 8 inches, 8-inch casing from surface to 92.5 feet.

Material	Thickness (feet)	Depth (feet)
Granule to pebble gravel, some light brown silty clay	6	6
Boulders, some sand and light brown silty clay	6	12
Brown silty clay, a few caliche nodules	10	22
Boulders, a little tan silty clay	13	35
Brown caliche	5	40
Caliche, a few pebbles, some tan silty clay	5	45
Brown caliche, a few pebbles and a few light tan silty clay layers	45	90
Fine- to coarse-grained gray sand and light tan silty clay, some caliche	7	97
Coarse - grained sand, a little light tan silty clay	2	99
Brown caliche, hard gray sand, and a little light tan silt	4	103
Cobble pebble and granule gravel, some tan silty clay	2	105
Light tan silty clay, some white caliche, a little sand	5	110
Cobble and granule gravel, a few small boulders, some tan silty clay	5	115
Tan silty "mealy" clay, a little coarse-grained sand, much caliche	8	123
Gray silty clay, a little sand	5	128
Green and brown clay, some caliche, a few rocks, a little sand	5	133
Light tan silty clay, caliche nodules, a little sand	17	150
Tan silty clay, some coarse-grained sand, a few pebbles, a little caliche	10	160
Fine- to coarse-grained sand, much caliche, some tan silty clay	20	180
Tan silty clay, a little sand, some hard brown caliche layers and some caliche nodules	215	395
Tan silty clay, a few pebbles and boulders, some coarse-grained sand	10	405
Coarse - grained sand and pebble gravel, a few cobbles, a little silt and clay	8	413
Coarse- to fine-grained sand and granules, some tan silty clay	2	415
Medium- to fine-grained sand (grain size grades downward in section) cemented with some caliche, a little tan silty clay	70	485
Fine- to coarse-grained sand, pebble to granule gravel, a little silt and one thin layer of tan clay	5	490
Coarse - grained sand, granules, and small pebbles	10	500
Tan medium- to fine-grained silty sand, some caliche cement	17	517
Tan silty clay, a little fine - grained sand, some caliche	23	540
Tan fine-grained silty sand, a little medium sand	5	545
Tan silty clay, a few caliche layers	15	560
Tan silty clay, some caliche and a little sand, a few granules	40	600
Granular gravel, much tan silty clay and some sand	5	605
Light tan clay, a little caliche, much medium- to fine-grained sand	10	615
Tan clay, a little sand and caliche	10	625
Tan clay, a few caliche layers	20	645
Granule and pebble gravel, coarse- to medium - grained sand, a few clay layers and caliche cement	10	655
Coarse- to medium-grained gray sand, a few pebbles and and boulders, a few thin clay layers cemented with caliche	175	830
Medium-grained sand, much silt, some coarse-grained sand, a little caliche cement and a little clay	45	875
Light tan silty clay and some fine- to medium - grained sand, cemented caliche layers	15	890
Light tan silty clay, a little sand and caliche	25	915
Medium- and fine-grained gray sand, much tan silty clay	35	950
Medium- and fine-grained gray sand, a little tan silty clay	10	960
Light tan clay, a little sand	10	970
Medium- and fine-grained sand, some tan silty clay, a few pebbles	38	1,008
Total depth	----	1,008

TABLE 3—*Continued*

(8-20-60) 1ccc1. Frank E. Gowen. Land surface altitude 2,267 feet; diameter 8 inches, 8-inch casing to 84 feet.

Material	Thickness (feet)	Depth (feet)
Surface sand	0	2
Lime, hardpan	31	33
White clay and lime	5	38
Gravel	2	40
White clay and gravel streaks	21	61
Caliche	1	62
Red clay and gravel streaks	16	78
Caliche	8	86
White clay	32	118
Caliche	1	119
Red clay and hard streaks	37	156
Total depth	----	156

(8-20-60) 2ddd1. Arthur E. Gray. Diameter 10 inches, 10-inch casing to 92 feet, 700 feet of 8-inch casing to 700 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	3	3
Caliche and clay	37	40
"Near-surface" water level	----	40
Caliche and clay	5	45
Yellow clay	175	220
Clay and gravel	23	243
Gravel, water-bearing	17	260
Gravel and clay	25	285
Cemented gravel	127	412
Gravel and clay	56	468
Cemented gravel	58	526
Clay	2	528
Cemented gravel	4	532
Sand	3	535
Gravel	4	539
Clay	42	581
Cemented gravel	9	590
"Loose" gravel, water	3	593
Cemented gravel	2	595
"Loose" gravel, water	2	597
Cemented gravel	17	614
Clay	5	619
Blue clay	26	645
Clay	19	664
Cemented gravel	24	688
Fine-grained, cemented gray sand	19	707
Total depth	----	707

(8-20-60) 12aca1. Frank E. and Olga Gowen. Land surface altitude 2,245 feet; diameter 8 inches, 654 feet of 8-inch casing, perforated from 482 feet to 611 feet, 325 feet to 360 feet, and 631 feet to 654 feet with ¼- by 6-inch slots.

Material	Thickness (feet)	Depth (feet)
Tan silty fine-grained sand	6	6
Tan silty clay, many hard caliche layers	17	23
Tan silty clay, a little caliche	23	46
Tan silty clay, some gravel lenses, and layers of caliche	44	90
Tan silty clay, caliche nodules, a few caliche layers	161	251
Red silty medium-grained sand	5	256
Tan silty clay, caliche layers	10	266
Tan silty clay, a few thin lenses of granule gravel	9	275
Pebble to granule gravel, much coarse- to fine-grained gray sand, a little silt and clay	68	343
Tan silty clay, a few pebbles and caliche nodules	47	390
Tan silty clay, much hard caliche and a little gravel	148	438
Tan silty clay, some caliche	39	477
Granule gravel, much sand and a little tan silty clay	48	525
Red silty clay, a few pebbles	24	549
Granule and pebble gravel, a little sand and silt	11	560
Granule and pebble gravel, much tan silty clay and fine sand	37	597
Granule gravel, much fine- to medium-grained tan sand	13	610
Red silty clay, some granule gravel and sand	38	648
Granule gravel and sand, some silty clay	6	654
Greenish-blue and red plastic clay	11	665
Total depth	----	665

TABLE 3—*Continued*

(S–20–61) 4add1. George Craig. Land surface altitude 2,058 feet; diameter 10 inches, 10-inch casing to unknown depth.

Material	Thickness (feet)	Depth (feet)
Clay, gypsum, and lime	80	80
Lime and clay	220	300
Sand, flow of water	15	315
"Sandstone"	20	335
Blue and brown clay	90	425
Small gravel, increased flow of water	20	445
Blue clay, some thin lenses of gravel and shale	55	500
Clay and shale	118	618
Sand, increased flow of water	3	621
Clay	182	803
Gravel, increased flow of water	4	807
Clay	30	837
No record	63	900
Total depth	----	900

(S–20–61) 13dbb1. Joe Cardinal. Land surface altitude 1,850 feet; diameter 8 inches, 8-inch casing to 89 feet.

Material	Thickness (feet)	Depth (feet)
Light pink silty clay, a little caliche	48	48
Near-surface water level	----	48
Pink silty clay	32	80
Brown silty clay, a few thin layers of fine-grained sand	20	100
White clay	20	120
Light tan silty clay	10	130
Tan silty clay	10	140
Fine-grained silty sand, water	10	150
Pink silty clay, caliche nodules and a few thin layers of jointed caliche	143	293
Total depth	----	293

(S–20–61) 19dcd1. Van O. Eastland and Ezra B. Coram. Diameter 10 inches, 10-inch casing to 160 feet, 80 feet of 12-inch casing from 160 feet to 240 feet, 340 feet of 8-inch casing from surface to 340 feet, 133 feet of 6-inch casing from 247 to 380 feet, perforated with slots 3/16-inch wide from 260 to 380 feet.

Material	Thickness (feet)	Depth (feet)
White silty clay, caliche, a little gravel and sand	20	20
Light tan silty clay, a little caliche	5	25
Greenish-tan silty clay, caliche nodules	5	30
Light tan silty clay, a little fine-grained sand, a few hard caliche layers, a few thin lenses of plastic brown clay	75	105
Greenish-tan silty clay, caliche nodules	5	110
Tan silty clay, caliche nodules	40	150
Cemented gravel, much tan silty clay	8	158
Tan silty clay, caliche nodules, a little fine-grained sand	57	215
Cemented gravel, much tan silty clay	15	230
Tan silty clay	20	250
Pink silty clay, a little fine-grained to coarse-grained sand, a few granules, flow of water	10	260
Fine- to coarse-grained red and gray sand, a few pebbles and granules, increased flow of water	16	276
Tan silty clay, some sand and granules	34	310
Granules and coarse- to fine-grained gray sand, much pink silty clay, increased flow of water	10	320
Tan silty clay, some sand and granules	40	360
Granules and coarse- to fine-grained gray sand, some tan silty clay, increased flow of water	20	380
Tan silty clay, much sand and some fine gravel	20	400
Tan silty clay, some fine-grained sand	60	460
Fine- to medium-grained tan and gray sand, increased flow of water	20	480
Total depth	----	480

TABLE 3—*Continued*

(8-20-61) 20dab1. Emil M. Pahor. Diameter 8 inches, 8-inch casing to 306 feet, perforated with 3/16-inch slots.

Material	Thickness (feet)	Depth (feet)
Light pink silty clay	15	15
White clay and caliche	3	18
Near-surface water level	----	18
White silty clay, caliche	12	30
Pink silty clay	125	155
Pink silty clay, caliche	65	220
White, fine-grained sand, flow of water	2	222
Caliche, a little pink silty clay	4	226
Pink silty clay	12	238
Caliche, pink silty clay	3	241
Pink silty clay	37	278
Caliche, pink silty clay	2	280
Pink silty clay, some small pebble gravel and sand	5	285
Pebble and granule gravel, much coarse to medium-grained gray sand, flow of water	20	305
Pink silty clay	1	306
Total depth	----	306

(8-20-61) 23bdc2. R. J. Kaltenborn. Land surface altitude 1,888 feet; diameter 8 inches, 8-inch casing to 200 feet.

Material	Thickness (feet)	Depth (feet)
Tan silty clay	140	140
Caliche, a few lenses of sand and gravel, many lenses of tan silty clay, flow of water	25	165
Pebble and granule gravel, some tan silty clay, some fine- to coarse-grained sand, increased flow of water	35	200
Total depth	----	200

(8-20-61) 25cca1. O. A. Effinger. Diameter 4 inches, 4-inch casing to 44 feet, 291 feet of 6-inch casing from 44 feet to 335 feet, perforated from 295 to 335 feet.

Material	Thickness (feet)	Depth (feet)
Light gray silty clay	30	30
Tan silty sand, a few granules, some caliche nodules	10	40
Light pink clay	20	60
Silty and sandy pink clay	90	150
Limy white clay	30	180
Pink silty clay, caliche nodules	80	260
Light pink silty clay, a little fine-grained sand	20	280
Pink silty clay, some sand	20	300
Pink sandy silt	18	318
Orange silty sand, flow of water	4	322
Pink sandy silt	43	365
Total depth	----	365

(8-20-61) 25ccd1. Ebbie H. Davis. Land surface altitude 1,830 feet; diameter 8 inches, 8-inch casing from surface to 82 feet, 317 feet of 4-inch casing from surface to 317 feet.

Material	Thickness (feet)	Depth (feet)
White silty clay, little sand and gravel	12	12
Near-surface water level	----	12
White silty clay	28	40
Tan silty clay	20	60
Light tan silty clay	15	75
Tan silty clay	35	110
Light tan silty clay	30	140
White silty clay, calcareous	30	170
Light tan silty clay	20	190
White calcareous clay	10	200
White calcareous clay, caliche nodules	10	210
Light tan silty clay	90	300
Light tan and tan, fine- to medium-grained sand, much silt, a few granules, flow of water	48	348
Total depth	----	348

TABLE 3—*Continued*

(S–20–61) 28bac1. Waale, Camplan, and Thomas, Inc. Diameter 10 inches, 10-inch casing to 397 feet, perforated with slots ¼-inch wide from 388 feet to 397 feet, 307 feet of 8-inch casing from 397 feet to 704 feet, upper end welded to lower end of 10-inch casing, perforated from 617 feet to 700 feet with ¼-inch slots.

Material	Thickness (feet)	Depth (feet)
Light tan silty clay	6	6
Caliche layers and tan silty clay	27	33
Light tan silty clay, some caliche	72	105
Tan silty clay, many caliche layers	81	186
Tan silty clay, a few gravel lenses	14	200
Granule and pebble gravel	14	214
Tan silty clay, a little gravel, some caliche	50	264
Granule to pebble gravel, some medium- to coarse-grained gray sand, some red silty clay	8	272
Granule and pebble gravel, a little sand and clay	3	275
Granule to pebble gravel, coarse- to medium-grained sand, much tan silty clay	19	294
Tan silty clay, some sand and gravel	54	348
Tan silty clay, some caliche	40	388
Granule to pebble gravel, some sand, much tan silty clay	12	400
Tan silty clay, a little gravel and sand	64	464
Coarse- to medium-grained sand, some granule and pebble gravel, a little tan silty clay	14	478
Silty tan clay, a little caliche, a few very thin gravel lenses	139	617
Granule gravel and fine- to medium grained sand, some tan silty clay	68	685
Tan silty clay	26	711
Total depth	—	711

(S–20–61) 28bdc1. Waale, Camplan, and Thomas, Inc. Diameter 10 inches, 10-inch casing to 397 feet, perforated with slots ¼-inch wide from 270 to 295 feet and from 350 to 395 feet, 303 feet of 6-inch casing from 388 feet to 691 feet, perforated with ¼-inch wide slots from 620 to 691 feet.

Material	Thickness (feet)	Depth (feet)
Tan silty clay, a little sand	5	5
Tan silty clay, hard caliche layers	13	18
Light tan calcareous clay, some caliche layers	58	76
Tan silty clay, caliche nodules	70	146
Tan silty clay, some caliche layers	3	149
Tan silty clay, few caliche layers	124	273
Granule gravel, medium- to coarse-grained sand, some tan silty clay	16	289
Granule gravel, much tan silty clay, little sand	6	295
Tan silty clay, little caliche	15	310
Granule to pebble gravel, coarse- to medium-grained sand, some tan silty clay	20	330
Tan silty clay, little caliche	15	345
Granule to pebble gravel, fine to coarse sand	42	387
Tan silty and sandy clay	85	472
Granule gravel, coarse- to medium-grained sand, much tan silty clay	15	487
Interbedded layers of light greenish-blue plastic clay and tan silty clay	43	530
Tan silty clay	102	632
Fine- to medium-grained sand, little gravel, much tan silty clay	68	700
Total depth	—	700

TABLE 3—*Continued*

(S-20-61) 28cbc1. Theodore Werner and Kenneth Searles. Diameter 8 inches, 684 feet of 8-inch casing from surface to 684 feet, perforated with ¼- by 6-inch slots from 570 to 684 feet, 161 feet of 6-inch casing from 684 feet to 845 feet, perforated with ¼- by 6-inch slots from 684 to 690 feet and from 695 feet to 845 feet.

Material	Thickness (feet)	Depth (feet)
Tan silty clay	7	7
Tan silty clay, layers of caliche	7	14
Caliche layers, tan silty clay, a few thin lenses of gravel	30	44
Tan silty clay, a little caliche	25	69
Tan silty clay, a few caliche layers	25	94
Light tan clay, some caliche	11	105
Tan silty clay, a little caliche	145	250
Tan silty clay, many caliche layers, a little gravel	40	290
Granule to pebble gravel, a little sand and silt	8	298
Tan silty clay, much caliche	17	315
Granule gravel, much medium- to coarse-grained sand, a few pebbles and a little tan silty clay	46	361
Red clay, a little silt	7	368
Red silty clay, a few pebble- to granule-gravel and sand lenses	61	429
Red silty clay	10	439
Light bluish - green clay, a few thin layers of red clay	15	454
Red silty clay, some sand	71	525
Red silty clay, caliche layers	41	566
Red silty clay, a few thin layers of fine gravel, little sand	48	614
Fine granule gravel, coarse- to medium-grained sand, some red silty clay	51	665
Sandy red clay and silt	7	672
Granule gravel, coarse- to medium - grained sand, a little silt	8	680
Sandy red clay, a little fine gravel	140	820
Red silty clay, a little granule gravel	25	845
Total depth	—	845

TABLE 3—*Continued*

(S–20–61) 29ebb2. Thomas E. Sharp. Land surface altitude 2,141 feet; diameter 10 inches, 10-inch casing from surface to 581 feet, perforated with 32 ¼-inch by 2-inch slots per foot from 136 feet to 581 feet; cemented, surface to 150 feet around casing; bottom of casing open.

Material	Thickness (feet)	Depth (feet)
Soil	1	1
Caliche, a few boulders	21	22
Tan silty clay, a little sand, much caliche	27	49
Tan silty clay, a little sand	19	68
Red silty clay, a little caliche	4	72
Tan silty clay, a little caliche	14	86
Caliche and light tan silty clay	5	91
Tan silty clay, caliche, a little gravel	27	118
Tan silty clay, a little caliche	44	162
Tan silty clay, much caliche	23	185
Tan silty clay, some caliche	109	294
Pebble gravel, caliche, some light tan silty clay	6	300
Red silty clay, some caliche	23	323
Granule to pebble gravel, a little sand and tan silty clay, some caliche	125	448
Red silty clay, a little caliche and gravel lenses	8	456
Pebble and granule gravel, a little sand and silt	6	462
Tan silty clay	10	472
Gray medium- to coarse-grained sand, some granule gravel, some pink silty clay	13	485
Red plastic clay, a little silt and a few pebbles	7	492
Granule gravel, a little sand, some pink silty clay	16	508
Red silty clay, a few gravel and sand lenses	71	579
Granule gravel, a few pebbles, some sand, much red silty clay	33	612
Red silty clay	3	615
Granule to pebble gravel, some sand, and a little silt	105	720
Light tan silty clay, a little gravel and sand	8	728
Fine- to coarse-grained sand, some granule gravel, some tan silty clay	41	769
Tan silty clay	8	777
Fine- to coarse-grained gray sand, much granule gravel, a few pebbles, some tan silty clay	29	806
Tan silty clay, a little gravel	6	812
Fine- to coarse-grained gray sand, much granule gravel, some tan silty clay, a little gravel	96	908
Light tan silty clay, a little gravel	8	916
Red silty clay, a few sand and gravel lenses	51	967
Total depth	----	967

(S–20–61) 29ccc1. Las Vegas Land and Water Co. Land surface altitude 2,120 feet, diameter 16 inches, 16-inch casing to 22 feet, 12-inch casing to 572 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Caliche	23	23
Clay and caliche	7	30
Caliche	2	32
Clay	23	55
Caliche	3	58
Clay	37	95
Caliche	3	98
Clay	27	125
Caliche	5	130
Clay	18	148
Lime boulders	6	154
Clay	81	235
Caliche	3	238
Clay and "lime"	14	252
Caliche	10	262
Clay	28	290
Gravel and boulders, flow of water	128	418
Clay	21	439
Gravel, flow of water (about 460 g.p.m.)	13	452
Caliche	22	474
Clay	86	560
Cemented gravel, flow increased to 1,900 g.p.m.	75	635
Total depth	----	635

TABLE 3—*Continued*

(8-20-61) 36bac1. C. K. and A. M. Ryerse. Land surface altitude 1,822 feet, diameter 8 inches, 8-inch casing to 84 feet.

Material	Thickness (feet)	Depth (feet)
Pink silty clay	100	100
Very fine - grained silty white sand	10	110
White calcareous clay, a little silt	10	120
Pink silty clay	20	140
Red plastic clay	10	150
Light pink silty clay	20	170
White calcareous clay, a little silt	40	210
Gray plastic, and white, calcareous, silty clay	60	270
Red silty clay	10	280
Silty red sand, a little gravel, flow of water	40	320
Pink plastic clay, a little silt	5	325
Pink silty clay	35	360
Pink fine-grained silty sand, flow of water	20	380
Pink sandy silt and clay	90	470
Total depth		470

(8-20-61) 36ccc2. M. E. Ward. Land surface altitude 1,852 feet, diameter 8 inches, 8-inch casing to 80 feet, 351 feet of 6-inch casing from 30 feet to 381 feet, perforated with slots from 301 to 381 feet.

Material	Thickness (feet)	Depth (feet)
Tan silty clay	3	3
Granules, pebbles, and some sand and clay	7	10
Tan silty clay	5	15
Near-surface water level		15
Granules, pebbles, some sand and clay, near-surface water	1	16
Tan silty clay, some caliche	72	88
Granules, pebbles, some sand and a little tan silty clay, flow of water	2	90
Tan silty clay, a few granules, a little sand, some caliche nodules	60	150
Tan silty clay, a few thin lenses of gravel and sand, flow reportedly increased through this interval	210	360
Fine- to medium-grained gray sand, a few granules and pebbles, increased flow of water	4	364
Bluish-green plastic clay	6	370
Tan silty clay, a few thin gravel and sand lenses with much clay	59	429
Total depth		429

(8-21-61) 1aab3. Nate Mack. Land surface altitude 1,824 feet, diameter 8 inches, 8-inch casing to 124 feet.

Material	Thickness (feet)	Depth (feet)
Light tan clay	10	10
Near-surface water level		10
Light tan clay	4	14
First water encountered		14
Gravel, sand, a little clay	2	16
Tan silty clay	44	60
Tan silty clay, a few thin gravel lenses, caliche nodules	160	220
Tan silty clay, some fine-grained sand	120	340
White plastic clay	10	350
Tan silty clay	5	355
Fine- to medium-grained red sand, much tan silty clay, flow of water	5	360
Red plastic clay layers interbedded with white plastic clay	5	365
Tan silty clay	25	390
Thin granule gravel and sand lenses interbedded with tan silty clay, increased flow of water	10	400
Tan silty clay	90	490
Total depth		490

TABLE 3—*Continued*

(S-21-61) 2bdc1. H. J., G. M., and M. V. Stocker. Land surface altitude 1,988 feet, diameter 10 inches, 135 feet of 10-inch casing from surface to 135 feet, 455 feet of 8-inch casing from surface to 455 feet, 41 feet of 6-inch casing from 440 feet to 481 feet, perforated with ¼- by 4-inch slots.

Material	Thickness (feet)	Depth (feet)
Tan silty clay, a little sand	35	35
Tan silty clay, a few lenses of granule gravel	5	40
Light tan silty clay	20	60
Tan silty clay, a few caliche layers	50	110
Tan silty clay, much granule gravel, water	5	115
Tan silty clay	50	165
Tan silty clay	110	280
Tan silty clay, caliche layers	20	300
Tan fine- to coarse-grained sand, a few granules, flow of water	30	330
Tan silty clay, caliche	35	365
Tan silty clay	35	400
Caliche layers, a little clay	5	405
Red silty clay	40	445
Red silty clay, a little fine-grained sand	10	455
Red silty clay	7	462
Fine- to medium-grained red sand, flow of water	12	474
Red silty clay	16	490
Total depth	—	490

(S-21-61) 4bba1. Nick Pahor. Diameter 8 inches, 8-inch casing from surface to 115 feet, 6-inch casing from surface to 420 feet, perforated between 400 and 420 feet.

Material	Thickness (feet)	Depth (feet)
Tan silt, a little clay	10	10
White silty clay, some caliche	5	15
Near-surface water level	—	15
White silty clay, a little fine gravel and sand	5	20
Pink silty clay	150	170
Pink silty sand, a little gravel, flow of water	5	175
Pink silty clay	125	300
Fine-grained gravel and medium-grained sand, flow of water	10	310
Pink silty clay	55	365
Large gravel, pink silty clay	5	370
Pink silty clay	20	390
Medium- and fine-grained sand, a little gravel, flow of water	10	400
Pink silty sand, a little clay	15	415
Pink silty clay, a little fine-grained sand	35	450
Total depth	—	450

(S-21-61) 6abc1. William Hinson. Diameter 10 inches, 10-inch casing to 39 feet, 117 feet of 8-inch casing from surface to 187 feet, 192 feet of 6-inch casing from 20 to 212 feet, perforated with ⅜- by 6-inch slots from 124 to 212 feet.

Material	Thickness (feet)	Depth (feet)
Tan silty clay, a little sand and gravel	2	2
Tan silty clay, a little sand and gravel, much caliche	22	24
Near-surface water level	—	24
Granule gravel, fine- to medium-grained sand, a few pebbles, much tan silty clay	14	38
Tan silty clay, a few thin sand and gravel lenses	102	140
Tan silty clay, many layers of caliche	20	160
Tan silty clay, a little fine- to medium-grained red sand	70	230
Granule to pebble gravel, much fine- to coarse-grained sand, little tan silty clay, flow of water	20	250
Tan silty clay	22	272
Total depth	—	272

TABLE 3—*Continued*

(S-21-61) 9dcb1. Leland M. and Lillian L. Woods. Diameter 10 inches. 10-inch casing from surface to 430 feet, 388 feet of 8-inch casing from 300 feet to 688 feet, perforated with ¼-inch by 2-inch slots from 625 feet to 640 feet.

Material	Thickness (feet)	Depth (feet)
Tan silty clay, a few layers of caliche and a few lenses of sand and gravel	70	70
Tan silty clay, a little fine sand	140	210
Tan silty clay, much sand and granule gravel, a few caliche nodules	10	220
Tan silty clay	15	235
Tan silty clay, much sand and granule gravel	10	245
Tan silty clay	75	320
Red fine- to medium-grained sand, a few granules and pebbles, a little tan silty clay	10	330
Granule gravel, a little sand, a few pebbles, much tan silty clay	8	338
Tan silty clay	127	465
Tan silty clay, a few pebbles and granules	10	475
Bluish-green plastic clay	15	490
Tan silty clay	35	525
Red medium- to fine-grained sand, a few granules and pebbles, flow of water	5	530
Tan silty clay	5	535
Pebble gravel, some sand and granules, much tan silty clay	5	540
Tan silty clay	30	570
Tan silty clay, a few granules, a little sand	10	580
Tan silty clay	10	590
Tan silty clay, much gravel and sand	35	625
Granule and pebble gravel, some sand, some tan silty clay, flow of water	30	655
Tan silty clay	33	688
Total depth	—	688

(S-21-61) 15bac1. John N. and Helen Beville. Diameter 12 inches. 120 feet of 12-inch casing from surface to 120 feet, 375 feet of 8-inch casing from surface to 375 feet, 8-inch casing perforated with ¼-inch by 4-inch slots from 210 feet to 230 feet and 325 feet to 375 feet.

Material	Thickness (feet)	Depth (feet)
Surface sand and soil	5	5
Tan silty sand, a few boulders	2	7
Tan silty sand	3	10
Near-surface water level	—	10
Pebble and granule gravel, some silt and sand	11	21
Light pink silty clay	21	42
Pink silty clay	7	49
Pink silty clay and caliche	8	57
Pink silty clay, caliche nodules, a few pebbles	16	73
Red silty clay (hard)	3	76
Light pink silty clay, a few caliche nodules	10	86
Red silty clay, a few caliche layers and nodules	19	105
Caliche nodules, a few pebbles, pink silty clay	3	108
Pink silty clay, a few caliche nodules	42	150
Light red silty clay, caliche nodules	19	169
Light red silty clay	41	210
Pebble and granule gravel, coarse- to fine-grained sand, some silt, water	10	220
Light red silty clay, a few pebbles, a little caliche	25	245
Light red silty clay, a little sand, a few caliche layers	51	296
Red plastic clay, a little silt	7	303
Red silty clay, a few pebbles	23	326
Red fine- to medium grained sand, many large pebbles, flow of water	25	351
Granule and pebble gravel, flow of water	25	376
Red plastic clay, a little silt	3	379
Total depth	—	379

TABLE 3—*Continued*

(S-21-61) 15cbb1. T. A. Wells. Diameter 10 inches, 10-inch casing to 105 feet, 380 feet of 8-inch casing to 380 feet, 180 feet of 6-inch casing from 350 feet to 530 feet, perforated from 432 to 453 feet, and from 472 to 512 feet with ¼- by 4-inch slots.

Material	Thickness (feet)	Depth (feet)
Sandy and silty soil	5	5
Light pink silty clay, many granules, some sand	5	10
Caliche, small pebble- and granule-gravel, a little silty clay	5	15
Near-surface water level	---	15
Light pink silty clay, a few granules, a little sand	45	60
Tan silty clay	26	86
Pink silty clay, caliche nodules	44	130
Pink silty clay, and caliche	50	180
Pink silty clay, some fine gravel, a little caliche	65	245
Pink silty clay	8	253
Granule gravel, some sand, much pink silty clay	5	258
Pink silty clay, some caliche	32	290
Red fine-grained sand interbedded with pink and red clay, a little gravel, flow of water	30	320
Red plastic clay	20	340
Fine-grained gray sand, interbedded with thin bed of red clay, a little fine gravel, flow of water	50	390
Plastic red clay	3	393
Pink silty clay, some caliche	32	425
Light greenish-blue plastic clay	15	440
Red clay	5	445
Red, fine-grained sand interbedded with thin layers of red clay, a little fine gravel, flow of water	33	478
Red clay	5	483
Granule gravel and fine-grained sand lenses interbedded with little clay	9	492
Red clay, a little sand and silt	16	508
Red silty clay, much granule gravel, a little sand	2	510
Pink silty clay, a few thin lenses of fine-grained red sand	245	755
Tan fine-grained sand, flow of water	5	760
Pink silty clay, many granules	10	770
Red silty clay, a few thin fine-grained sand lenses	90	860
Red fine- and medium-grained sand, flow of water	52	912
Red silty clay	13	925
Total depth	---	925

(S-21-61) 16bac2. John P. Hughes. Diameter 6 inches, 446 feet of 6-inch casing from surface to 446 feet, perforated with ¼- by 6-inch slots from 224 to 266 feet and from 403 to 446 feet.

Material	Thickness (feet)	Depth (feet)
Granule and pebble gravel, some tan silty clay	18	18
Light tan silty clay, caliche layers	4	22
Granule and pebble gravel, caliche, a little clay	13	35
Light tan silty clay	6	41
Granule and pebble gravel, a little clay	8	49
Light tan clay, a little gravel	8	57
Tan silty clay, a little caliche	32	89
Tan silty clay, much caliche, a little gravel	66	155
Caliche layers, a little clay	9	164
Tan silty clay, much pebble gravel and granules	46	210
Granule and pebble gravel, a little tan clay	31	241
Tan silty clay, some gravel	46	287
Gravel, caliche, a little clay	16	303
Tan silty clay, a little gravel	107	410
Plastic red clay	22	432
Tan silty clay, many caliche layers	8	440
Plastic red clay	2	442
Caliche, a little tan silty clay	3	445
Pebble and granule gravel, a little sand and clay	11	456
Total depth	---	456

TABLE 3—*Continued*

(S-21-61) 16bbd1. Hotel El Rancho, Inc. Diameter 10 inches, 10-inch casing to 610 feet, 802 feet of 8-inch casing from 169 to 972 feet.

Material	Thickness (feet)	Depth (feet)
Pink silty clay, a few thin layers of caliche	200	200
Fine-grained pink sand, much pink silty clay	10	210
Small pebble- and granule-gravel, caliche, much pink silty clay	10	220
Pink silty clay, little sand, many caliche layers	70	290
Pebble and granule gravel, some sand, much pink silty clay, caliche	40	330
Pink silty clay, caliche, a little sand and gravel in a few thin lenses	130	460
Light greenish - blue plastic clay, a little sand and gravel in thin lenses	28	488
Light pink silty clay, a little fine-grained sand	52	540
Pebble to granule gravel, caliche, pink silty clay	10	550
Pink silty clay with thin layers of fine-grained red sand	60	610
Red silty clay	15	625
Red plastic clay	10	635
Red sandy clay	5	640
Red plastic clay	30	670
Brown fine-grained sand	3	673
Red plastic clay, a little sand	32	705
Red fine-grained sand	3	708
Red silty clay	87	795
White fine - grained sand, thin layers of caliche, flow of water	70	865
Red silty clay	95	960
Caliche	3	963
Red fine-grained sand, flow of water	3	966
Red silty clay	6	972
Total depth	—	972

(S-21-61) 16bcd2. James S. Fulcher. Diameter 10 inches, 10-inch casing to 102 feet, 8-inch casing to 540 feet, perforated from 460 to 540 feet.

Material	Thickness (feet)	Depth (feet)
White silty clay, some coarse sand, some caliche layers	17	17
Near-surface water level	—	17
Pink silty clay, some granules and coarse-grained sand	12	29
Fine- to coarse-grained sand and gravel, a little pink silty clay	3	32
Pink and tan silty clay, numerous layers of caliche	60	92
Fine- to coarse-grained sand, some pebble and granule gravel, much pink silty clay	4	96
Alternating layers of pink silty clay and hard caliche, a few caliche nodules, a few layers of white marly clay, a few pebbles, a little sand	114	210
Gravel reported by driller	5	215
Pink silty clay and a little gravel and sand	5	220
Pink silty clay, a little sand and some granules, a few caliche nodules, a few pebbles, water	40	260
Clay and gravel	20	280
Gravel	20	300
Clay	30	330
Gravel and clay	91	421
Pink silty clay, some layers of sand and gravel	7	428
Granule gravel, some medium- to coarse-grained sand	4	432
Red plastic clay	28	460
Fine-grained light pink sand, a little silt, a few granules, water	12	472
Pink silty clay, a little fine-grained red sand	48	520
Pink fine- to medium-grained sand, flow of water	13	533
Pink medium- to fine-grained sand, a few granules, flow of water	7	540
Total depth	—	540

TABLE 3—*Continued*

(S-21-61) 16bcd3. Otilla Techow. Diameter 6¼ inches, 6¼-inch casing to 302 feet, perforated with ¼- by 4-inch slots from 202 feet to 222 feet and from 282 feet to 302 feet.

Material	Thickness (feet)	Depth (feet)
Tan silty clay, much sand and gravel, a few boulders	14	14
Light tan silty clay, a little caliche	28	42
Tan silty clay, a few caliche layers, a few thin sand and gravel lenses	82	124
Light tan silty clay, caliche nodules	26	150
Tan silty clay, caliche layers	76	226
Granule and pebble gravel, a little sand, some tan silty clay	19	245
Caliche	2	247
Tan silty clay, a few thin gravel lenses	28	275
Pebble and granule gravel, a little sand, some tan silty clay	23	298
Tan silty clay, a few caliche layers	14	312
Total depth	—	312

(S-21-61) 16cbb4. Frank E. Gowen. Diameter 8 inches, 8-inch casing to 61 feet.

Material	Thickness (feet)	Depth (feet)
Gravel and rock	3	3
Boulders	9	12
Boulders	4	16
White clay and gravel	5	21
Lime, hardpan	3	24
White clay and gravel	7	31
Hard lime and gravel	19	50
White clay	9	59
Red clay	15	74
Hard brown lime	4	78
Red clay and a little gravel	1	79
Hard brown lime	1	80
Red clay	5	85
Total depth	—	85

(S-21-61) 16ccc1. Nevada Projects Corporation. Diameter 10 inches, 10-inch casing to 564 feet.

Material	Thickness (feet)	Depth (feet)
Light tan to white calcareous silty clay, a few caliche layers	65	65
Tan silty clay, a few caliche layers and thin lenses of sand gravel	323	388
Tan silty clay, much gravel	14	402
Tan silty clay	8	410
Light bluish - green plastic clay	20	430
Tan silty clay	10	440
Plastic red clay	10	450
Tan silty clay	75	525
Granule and pebble gravel, some sand, and tan silty clay, flow of water	30	555
Tan silty clay and a few layers of red plastic clay	50	605
Total depth	—	605

TABLE 3—*Continued*

(S-21-61) 16ccc2. Nevada Projects Corporation. Diameter 10 inches, 10-inch casing from surface to 490+ feet. 327 feet of 8-inch casing from 490 to 817+ feet. No record of perforations.

Material	Thickness (feet)	Depth (feet)
White silty clay, a little sand, a few granules	45	45
Pebble gravel, granules, a little sand and silty clay	5	50
Tan silty clay, a few granules and pebbles	55	105
Tan silty clay, caliche nodules, many granules and pebbles	5	110
Tan silty clay, a few granules and pebbles, a little caliche	50	160
Tan silty clay, a few granules, a little sand	131	291
Granule gravel, much tan silty clay	19	310
Tan silty clay, granules, a little sand	80	390
Plastic red clay	31	421
Light greenish - blue plastic clay	9	430
Plastic red clay	11	441
Fine- to medium-grained red sand, a few granules, flow of water	15	456
Sandy red silty clay, caliche nodules	24	480
Plastic red clay	10	490
Tan silty clay	25	515
Granule and pebble gravel, much tan silty clay	15	530
Tan silty clay	15	545
Tan silty clay, some gravel	4	549
Tan silty clay	141	690
Fine- to medium-grained red sand, a little gravel, flow of water	1	691
Tan silty clay	14	705
Granule to pebble gravel, fine- to coarse-sand, a little tan silty clay, flow of water	60	765
Tan silty clay, gravel and sand	15	780
Fine- to medium-grained sand, a few pebbles	10	790
Pink silty clay, much gravel and sand	60	850
Pink silty clay	40	890
Fine- to medium grained sand, granules, some pink silty clay	10	900
Pink silty clay	20	920
Plastic red clay, a few granules and little sand	57	977
Total depth	—	977

TABLE 3—*Continued*

(8-21-61) 16ccd1. Nevada Projects Corporation. Diameter 10 inches, 10-inch casing to 697 feet, perforated from 520 to 540 feet with ¼- by 6-inch slots, 785 feet of 8-inch casing from 350 to 1,135 feet, perforated from 740 to 765 feet with ¼- by 6-inch slots.

Material	Thickness (feet)	Depth (feet)
White silty clay and caliche	50	50
Pink silty clay, a little gravel and sand	40	90
Pink silty clay and caliche	35	125
Pink silty clay, a little caliche, a little gravel and sand	75	200
Pink silty clay	35	235
Pink silty clay, a little gravel and caliche	11	246
Sand, a little granule gravel, some silty clay	6	252
Pink silty clay, some gravel	23	275
Plastic red clay	20	295
Pink silty clay, some gravel	20	315
Granule gravel, some sand, some caliche	5	320
Gray fine- to medium grained sand	15	335
Pink silty clay	3	338
Small pebble and granule gravel, some sand	22	260
Plastic red clay	10	370
Tan fine-grained sand, a few granules	8	378
Pink silty clay	32	410
Pink silty clay, some gravel and sand	5	415
Light greenish - blue plastic clay	20	435
Red plastic clay, a few caliche nodules	15	450
Granule and small pebble gravel, much pink silty clay	2	452
Pink silty clay, a little fine-grained sand in thin lenses	68	520
Red fine-grained sand, a little granule gravel, flow of water	18	538
Pink silty clay	84	622
Red fine-grained silty sand	4	626
Pink silty clay	20	646
Granule gravel, a little sand, much clay	2	648
Pink silty clay	49	697
Granule gravel, fine- to coarse-grained sand, much pink silty clay	18	715
Granule gravel, fine- to coarse-grained sand, a little silt and clay, flow of water	50	765
Gravel and sand, much pink silty clay	10	775
Pink silty clay, some fine - grained gravel and sand	15	790
Plastic red clay	2	792
Pink silty clay, some fine-grained gravel and sand	42	834
Plastic red clay	60	894
Plastic red clay, a few thin silty sand lenses	9	903
Plastic red clay	22	925
Fine- to medium-grained sand, a few granules, some silt and clay, flow of water	15	940
Pink silty clay	50	990
Coarse- to fine-grained sand, a little silt and clay	10	1,000
Pink silty clay	30	1,030
Plastic red clay	20	1,050
Pink silty clay, a little fine-grained sand	10	1,060
Plastic red clay	10	1,070
Coarse - grained sand and granules, some silt and clay, flow of water	25	1,095
Pink silty clay	35	1,130
Coarse - grained sand, some granules, a few pebbles, and some silt and clay	40	1,170
Red silty clay	30	1,200
Granule gravel, some sand, a little silt and clay	45	1,245
Plastic red clay	6	1,251
Granule gravel, some sand, much silt and clay	4	1,255
Total depth	----	1,255

TABLE 3—*Continued*

(S-21-61) 20daa1. A. F. Winter. Diameter 8 inches, 8-inch casing to 620 feet, well filled with pea gravel from 715 to 920 feet.

Material	Thickness (feet)	Depth (feet)
Tan silty clay, a few layers of caliche, a few thin gravel and sand lenses	265	265
Tan sandy clay, a few thin gravel lenses, water	27	292
Tan silty clay, a little fine-grained sand	98	390
Light greenish - blue plastic clay	25	415
Tan silty clay, a few thin lenses of gravel and sand	110	525
Pebble gravel, much coarse- to fine-grained gray sand, a few granules	15	540
Tan silty clay	70	610
Granule gravel, some fine- to coarse-grained sand, a few pebbles, a little tan silty clay, flow of water	50	660
Fine- to coarse-grained gray sand, increased flow of water	20	680
Tan silty clay, much granule gravel, a little sand	15	695
Granule gravel, a little sand, some tan silty clay, increased flow of water	15	710
Tan silty clay, a few pebbles, a little sand	50	760
Granule gravel, some sand, some tan silty clay	20	780
Tan silty clay, some gravel and sand	10	790
Granule gravel, some sand, some tan silty clay	20	810
Tan silty clay, a few granules, a little sand	30	840
Granule gravel, a little sand, a little clay, increased flow of water	10	850
Tan silty clay, some granule gravel and sand	40	890
Granule and pebble gravel, fine- to coarse-grained sand a little tan silty clay	20	910
Tan silty clay, some gravel and sand	10	920
Total depth	—	920

(S-21-61) 21abb1. Murray Wollman. Diameter 8 inches, 8-inch casing to 417 feet, 132 feet of 6-inch casing from 408 feet to 540 feet, perforated with ¼- by 6-inch slots from 440 to 540 feet.

Material	Thickness (feet)	Depth (feet)
Light tan to white silty clay, a little sand, a few granules	2	2
Granule and pebble gravel, much light tan silty clay	3	5
Caliche	2	7
Granule and pebble gravel, much light tan silty clay	17	24
Near-surface water level	—	24
Tan silty clay, much granule and pebble gravel	11	35
Tan silty clay	165	200
Tan silty clay, a few thin sand and gravel lenses	50	250
Tan silty clay	60	310
Cemented gravel	60	370
Plastic red clay	5	375
Cemented gravel	10	385
Plastic red clay	5	390
Cemented gravel	30	420
Light greenish - blue plastic clay	14	434
Red plastic clay	6	440
Tan silty clay	35	475
Sand, flow of water	5	480
Tan silty clay	80	560
Gravel, much tan silty clay	10	570
Tan silty clay, many thin sandy lenses	65	635
Gravel and sand in thin lenses interbedded with tan silty clay	60	695
Sand, flow of water	42	737
Total depth	—	737

TABLE 3—*Continued*

(S-21-61) 26bbd1. Evelyn S. Potter. Diameter 8 inches, 8-inch casing to 143 feet.

Material	Thickness (feet)	Depth (feet)
White silty clay	20	20
Tan silty clay	190	210
Gravel, some tan silty clay and sand, some flow of water	5	215
Tan silty clay	40	255
Gravel, a little sand, some clay, increased flow of water	5	260
Tan silty clay	15	275
Gravel and sand, some clay, increased flow of water	5	280
Tan silty clay	40	320
Gravel and sand, some clay, increased flow of water	5	325
Total depth	----	325

(S-21-61) 29aaa1. Murray Woolman. Diameter 8 inches, 8-inch casing to 407 feet, perforated with ¼- by 4-inch slots from 330 to 350 feet, 132 feet of 6-inch casing from 378 feet to 510 feet, perforated from 470 feet to 510 feet.

Material	Thickness (feet)	Depth (feet)
White clay and caliche	20	20
Pink silty clay, a little sand and gravel	20	40
Pink silty clay	290	330
Sand and gravel, flow of water	15	345
Pink silty clay	45	390
Plastic red clay, few pebbles and caliche	10	400
Plastic red clay	100	500
Sand, little gravel, flow of water	10	510
Pink silty clay	30	540
Total depth	----	540

(S-21-62) 30bcd1. Chris Wilson. Diameter 8 inches, 8-inch casing to 302 feet.

Material	Thickness (feet)	Depth (feet)
Tan silty clay, a few caliche layers	35	35
Gravel, some water	5	40
Tan silty clay, white caliche nodules	20	60
Tan silty clay	50	110
Tan silty clay	10	120
Tan silty clay	20	140
Pebble and granule gravel, some sand and tan silty clay, flow of water	15	155
Tan silty clay	20	175
Gravel	5	180
Tan silty clay	45	225
Gravel	5	230
Tan silty clay	150	380
Milk-white clay	11	391
Tan silty clay	19	410
Pebble and granule gravel, much sand, and tan silty clay interbedded with gray fine- to medium-grained sand, flow of water	15	425
Gray fine- to coarse-grained sand, few granules, much red silty clay, increased flow of water	30	455
Total depth	----	455

(S-22-61) 5a. G. Giesler. Diameter 10 inches, 600 feet of 10-inch casing.

Material	Thickness (feet)	Depth (feet)
Soil and gravel	25	25
Caliche and gravel	120	145
Water struck, level rose to within 90 feet of surface	----	145
Hard red clay and caliche	205	350
Hard red clay and red sand layers	250	600
Interlayered red clay, caliche, and sand, water	250	850
Red clay	50	900
Gravel, water	5	905
Total depth	----	905

TABLE 3—*Continued*

(8-22-61) 9bba2. Opaco Lumber Co. Diameter 8 inches, 240 feet of 8-inch casing from surface, 498 feet of 6-inch casing, perforated with ⅛- by 6-inch slots from 460 to 480 feet.

Material	Thickness (feet)	Depth (feet)
Soil, sand, and gravel	5	5
Clay and gravel	115	120
Sandy clay	5	125
Gravel, water	15	140
Sand and clay	55	195
Gravel, water	45	240
Brown and white "lime"	170	410
Cemented gravel	70	480
"Lime and chert," little water	123	603
Total depth	—	603

(8-22-61) 12bbb2. Nat Wolff. Diameter 8 inches, 80 feet of 8-inch casing, 348 feet of 6-inch casing.

Material	Thickness (feet)	Depth (feet)
Pink silty clay	25	25
Near-surface water level	—	25
Pink silty clay, a few gravel lenses	5	30
Pink silty clay, some caliche	5	35
Pink silty clay	10	45
Pink silty clay, caliche layers	5	50
Pink silty clay	15	65
Sandy pink silt, a little water	7	72
Pink silty clay	83	155
Fine gravel, a little pink silty clay	15	170
Gray sandy silt and clay	15	185
Silty red clay and fine gravel	5	190
Gray sandy silt and clay	10	200
Silty sand, a little water	2	202
Pink sandy silt and clay	18	220
Pink silty clay, a little sand	75	295
Pink silty clay	35	330
Pink silty clay, some sand	10	340
Pink sandy silt	5	345
Pink fine-grained silty sand, flow of water	10	355
Pink fine-grained sand	5	360
Pink and gray medium-grained sand, a little gravel, increase in flow	50	410
Medium-grained sand, some fine gravel, increase in flow	20	430
Silty fine-grained sand	20	450
Pink silty clay	10	460
Total depth	—	460

PAHRUMP VALLEY

(8-19-53) 22ab1. Ray Van Horn. Diameter 16 inches, 16-inch casing to 280 feet, perforated from 112 feet to 124 feet, and cemented at 280 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Tan silty clay, pebbles	57	57
Near-surface water level	—	57
Tan silty clay, pebbles	63	120
Pebble gravel, coarse-grained sand, some silty clay, water level rose to 42 feet	4	124
Tan silty clay, much gravel and sand	116	240
"Loose" sand and gravel, silty clay	10	250
Tan silty clay, gravel	30	280
Cemented gravel, a few strata of "loose" sand and gravel	260	540
Total depth	—	540

(8-19-53) 22da1. Norman and Lester Shurtliff. Diameter 20 inches, 20-inch casing to unknown depth. Driller's log.

Material	Thickness (feet)	Depth (feet)
Top soil	17	17
"Hardpan"	23	40
Gravel	17	57
Struck first water, level rose to within 40 feet of surface	—	57
Gravel	35	92
Clay	115	207
Cemented gravel	—	207
Total depth (2-7-47)	—	207

TABLE 3—*Continued*

(S-19-53) 27ac1. J. P. Cayton. Diameter 16 inches, 16-inch casing to unknown depth. Driller's log.

Material	Thickness (feet)	Depth (feet)
No record	58	58
Struck first water, water level rose to within 40 feet of surface	---	58
No record	40	98
Water-bearing gravel	---	98
No record	67	165
Water-bearing gravel	---	165
No record	120	285
Water-bearing gravel, water level rose to within 11 feet of surface	---	285
No record	75	360
Water-bearing gravel, water level rose to within 3 feet of surface	---	360
No record	30	390
Water-bearing sand and gravel, water flowed over top of casing at surface	26	416
No record	64	480
Total depth (12-31-46)	---	480

(S-20-53) 10cdd1. George A. Fink. Diameter 12 inches, 12-inch casing to unknown depth, 8-inch casing to unknown depth. Driller's log.

Material	Thickness (feet)	Depth (feet)
No record	50	50
Surface water	8	58
No record	392	450
Flow of water	50	500
No record	215	715
Total depth	---	715±

(S-20-53) 14cbc1. Raycraft. Diameter 10 inches, 10-inch casing to unknown depth. Well reconditioned in 1945 by Paul Cayton. Driller's log published in U. S. Geological Survey Water Supply Paper 450, p. 65, 1919.

Material	Thickness (feet)	Depth (feet)
No record	82	82
"Hard limestone"	3	85
Clay	5	90
Coarse cemented gravel	3	93
Clay	43	136
Cemented gravel	3	139
No record	147	286
"Hard blue limestone (bedrock)"	36	322
No record	38	360
Total depth	---	360

(S-20-53) 14dcc1. Ray Thomas. Diameter 8 inches, 8-inch casing to unknown depth. Well reconditioned by Thomas Miller in 1944. Driller's log published by U. S. Geological Survey Water Supply Paper 450, Plate XI, 1919.

Material	Thickness (feet)	Depth (feet)
Soil	2	2
Cemented gravel	24	26
Near-surface water level	---	26
Coarse cemented gravel	5	31
"Running" sand and fine gravel	11	42
"Quicksand"	7	49
Clay and fine gravel	11	60
"Stones"	11	71
"Smooth" yellow clay	3	74
Tough dry clay and coarse gravel	65	139
"Smooth" yellow clay	4	143
Cemented gravel	33	176
Clay	3	179
Cemented gravel	7	186
Clay	4	190
Coarse gravel, flow of water	14	204
Sand and fine gravel	5	209
"Stones"	4	213
Clay	1	214
"Quicksand"	3	217
Clay	4	221
Sand and fine gravel, flow of water	3	224
Coarse gravel	2	226
"Stones"	23	249
Dry clay	5	254
Total depth	---	254

(S-20-53) 14dcc2. Ray Thomas. Diameter 10 inches, 10-inch casing to unknown depth, 6-inch casing to 302 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Clay and gravel	200	200
Black sand, flow of water	102	302
Total depth	---	302

TABLE 3—*Continued*

(S–20–53) 14dcc3. Ray Thomas. Diameter 16 inches, 16-inch casing to unknown depth. Driller's log.

Material	Thickness (feet)	Depth (feet)
Tan clay with some coarse sand	50	50
Tan clay, caliche nodules	10	60
Tan silty clay	10	70
Tan silty clay, a little gravel	20	90
Tan silty clay	10	100
Tan silty clay, a little gravel	10	110
Tan silty clay	120	230
Medium-grained sand, some tan clay, a few granules	10	240
Sandy tan silty clay, a few granules	10	250
Very fine-grained gray sand	10	260
Tan silty clay	10	270
Fine- to medium-grained gray sand	10	280
Very fine-grained light gray sand, a little gravel	16	296
Pebble gravel, some sand	14	310
Small pebble gravel, some clay and sand	10	320
Pebble gravel, sand	10	330
Medium- to fine-grained sand, a few pebbles	10	340
Pebble gravel, some sand	40	380
Medium-grained sand, a little clay	23	403
Coarse- to medium-grained sand	27	430
Coarse- to medium-grained sand, some clay	30	460
Total depth	—	460

(S–20–53) 14dcc4. Ray Thomas. Diameter 16 inches, 16-inch casing to 94 feet, 13-inch casing to 422 feet, perforated from 127 to 319 feet, with three ½-inch by 3-inch slots for each foot of casing, and from 319 to 339 feet with four ½-inch by 2-inch slots for each foot of casing. Driller's log.

Material	Thickness (feet)	Depth (feet)
No record	332	332
Cemented gravel with layers of "loose" gravel, flow of water	163	495
Total depth	—	495

(S–20–53) 14dcd1. Ray Thomas. Driller's log published in U. S. Geological Survey Water Supply Paper 450, Plate XI, 1919.

Material	Thickness (feet)	Depth (feet)
Soil	5	5
Clay and gravel	26	31
Near surface water level	—	31
Clay	10	41
Fine gravel	2	43
Clay	3	46
Clay and gravel	5	51
Gravel with some clay	5	56
Gravel	11	67
Cemented gravel	1	68
Coarse cemented gravel	2	70
"Tough" clay and gravel	1	71
Clay and fine gravel	2	73
"Tough" clay and fine gravel	5	78
Hard cemented "stones"	16	94
"Smooth" clay and fine gravel	7	101
Medium gravel	39	140
Clay and gravel	3	143
Clay and fine gravel	12.5	155.5
Hard blue limestone (boulder?)	3.5	159
"Tough" clay and fine gravel	11	170
Hard rock (boulder)	2.5	172.5
Clay and fine gravel, with cemented "stones"	21	193.5
"Loose stones," flow of water	1.5	195
Sand and fine gravel	7.5	202.5
Cemented gravel	3.5	206
"Stones," flow of water	10	216
Sand and gravel	3	219
Clay	7	226
Sand and gravel, flow of water	9	235
Brown clay	14	249
Dark sand, flow of water at about 320 feet	73	322
Total depth	—	322

TABLE 3—*Continued*

(S-20-53) 15bdc1. A. F. Cayton. Diameter 10 inches, 10-inch casing to 105 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
No record	27	27
"Surface" water	---	27
Clay	33	60
"Surface" water	---	60
Clay and grit	40	100
"Concrete clay"	85	185
"Quicksand," flow of water	15	200
Clay	12	212
Total depth	---	212

(S-20-53) 15bdd1. J. P. Cayton. Diameter 8 inches, 8-inch casing to 138 feet, 191 feet of 6-inch casing from 131 to 322 feet, perforated with 2- by 4-inch slots from 305 to 322 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
No record	27	27
Surface-water level	---	27
No record	13	40
Near-surface water struck	---	40
No record	110	150
Flow of water	5	155
No record	150	305
Flow of water	50	355
No record	45	400
Total depth	---	400

(S-20-53) 23aba1. Ray Thomas. Diameter 14 inches, cased to unknown depth. Driller's log published in U. S. Geological Survey Water Supply Paper 450, Plate XI, 1919.

Material	Thickness (feet)	Depth (feet)
Soil	3	3
Yellow clay	9	12
Blue clay, water	12	24
"Cement" with lime nodules	3	27
Clay and gravel	9	36
Cemented gravel	5	41
Coarse gravel, water rose to 10 feet	5	46
Clay and cemented gravel	4	50
Cemented gravel	8	58
Blue clay with lime streaks and cemented layers	63	121
Yellow clay with lime nodules	19	140
Cemented gravel	12	152
Yellow clay	2	154
Cemented gravel	12	166
Yellow clay with "stones"	29	195
Gravel	5	200
"Tough" yellow clay	10	210
Cemented gravel	6	216
Clay	1	217
Cemented gravel	6	223
Clay	2	225
Cemented gravel	1.5	226.5
Clay	1.5	228
Cemented gravel	10	238
"Tough" yellow clay	4	242
Cemented gravel	4.5	246.5
Clay	3	249.5
Cemented gravel	9.5	259
Clay	5	264
Cemented gravel	10	274
Yellow clay	1	275
Cemented gravel	1	276
Gray clay	3	279
Cemented gravel	8	287
Clay	2	289
Cemented gravel	1	290
Clay	1	291
Cemented gravel	2.5	293.5
Sand and fine gravel, flow of water	1	294.5
Cemented gravel	9.5	304
Yellow clay	2	306
Cemented gravel	7	313
Clay	2	315
Cemented gravel	2	317
Yellow clay	3	320
Clay and fine gravel	15	335
Cemented gravel	5	340
Clay	2	342
Cemented gravel	4	346
Clay	2	348
Cemented gravel	9	357
Gravel with clay, flow of water	3	360
Cemented gravel	5	365
Clay with cemented streaks	11	376
Cemented gravel	12	388
Clay	2	390
Very sticky clay	5.5	395.5
Cemented gravel and clay	7.5	403
Cemented gravel	1	404
Yellow clay	6	410
Cemented gravel	14	424
Clay	1	425
Sand and cemented gravel	4	429
Clay and gravel, small flow of water at 436 feet	15	444
Blue clay	4	448
Brown sandy clay	12	460
Clay and gravel	6	466
"Smooth" yellow clay	6	472
Cemented sand	3	475
"Tough" sandy clay	6	481
Clay and gravel	13	494
Sand and clay	5	499
Clay	17	516
Total depth	---	516

TABLE 3—*Continued*

(8-20-53) 23bc1. Ray Thomas. Diameter 14 inches, 14-inch casing to unknown depth, 370 feet of 7⅝-inch casing, perforated from 200 feet to 365 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Clay	200	200
Cemented gravel, flow of water	160	360
Clay	40	400
Total depth		400

(8-20-53) 24cdd1. Ray Thomas. Diameter 16 inches, 16-inch casing to 416 feet, perforated from 288 to 379 feet, 384 to 392 feet, and 395 to 402 feet with ½-inch by 3½-inch slots (8 slots for each foot of casing); 320 feet of 14-inch casing from 390 feet to 710 feet, perforated from 430 to 440 feet with six ½-inch by 3½-inch slots for each foot of casing, and perforated from 451 to 460 feet, 496 to 568 feet, 578 to 660 feet, and 675 to 692 feet with four ½-inch by 3½-inch slots for each foot of casing, open hole to 897 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)
Loose boulders	22	22
Cemented gravel, a few boulders	28	50
Blue clay and boulders	6	56
Soft blue clay	4	60
Hard white "rock"	5	65
Hard black "rock"	5	70
Cemented boulders	40	110
Cemented boulders and hard black streak	5	115
Small pea gravel	3	118
Brown hard "stuff"	12	130
Brown clay	6	136
White and brown hard streak	7	143
Brown clay	48	191
Brown hard streak	3	194
Soft brown clay	22	216
Brown hard streak	5	221
Brown clay	17	238
White hard streak, water level 16 feet below surface in casing	8	246
Soft white clay	10	256
White hard "stuff"	6	262
White clay	8	270
Clay, some gravel	9	279
Gray clay	9	288
Loose gravel	16	304
Cemented boulders	40	344
Coarse sand and gravel	6	350
Boulders and tight clay	18	368
Cemented gravel and boulders	11	379
"Black ledge of rock"	5	384
"¾-inch gravel" to "8-inch rock," flow of water	8	392
Tight clay with boulders and gravel	3	395
Tight "6-inch by 8-inch boulders"	7	402
Hard cemented gravel	7	409
Tight clay and boulders	13	422
"Rocks and boulders"	8	430
"Rocks and gravel," flow of water	10	440
Yellow clay	11	451
"Rocks and gravel"	9	460
Clay and rocks	8	468
Rocky yellow clay	28	496
"Boulders and gravel"	34	530
Cemented gravel	2	532
"Rocks and boulders"	3	535
"Boulders, rock, and gravel"	12	547
Cemented "boulders and rock"	8	555
"Boulders and rock," cemented streaks	13	568
Yellow clay	5	573
Hard-packed gravel and sand	5	578
Cemented "boulders and gravel"	82	660
Cemented "boulders and gravel" with brown clay streaks	15	675
Cemented "boulders and gravel"	75	750
Gravel, brown clay streaks	13	763
Hard "boulders and gravel"	82	845
Brown clay	9	854
"Rocks and gravel"	24	878
Clay and "rock"	19	897
Total depth		897

(8-21-54) 3acc1. H. D. Cornell. Diameter 18 inches, 18-inch casing to 100 feet, 574 feet of 14-inch casing from 80 feet to 654 feet, perforated from 300 to 630 feet with six ½-inch by 3-inch slots in each foot of casing. Driller's log.

Material	Thickness (feet)	Depth (feet)
Clay and gravel	40	40
Near-surface water level		40
Clay and gravel	148	188
Gravel	10	198
Clay	18	216
Gravel	22	238
Clay	6	244
Gravel with cemented streak	166	410
Cemented gravel	190	600
Gravel with "loose streaks"	50	650
Cemented gravel	87	737
Total depth		737

TABLE 3—*Continued*

(S-21-54) 3bda2. H. D. Cornell. Diameter 16 inches, 16-inch casing to 80 feet, 12-inch casing to 586 feet, perforated from 520 feet to 600 feet with six ½-inch by 2½-inch slots for each foot of casing. Driller's log.

Material	Thickness (feet)	Depth (feet)
Gravel	13	13
Clay	6	19
Gravel	8	27
Clay	12	39
Gravel	30	69
Clay	6	75
Cemented gravel	4	79
Clay	43	122
Gravel	12	134
Clay	24	158
Clay and gravel	44	202
Gravel	20	222
Started flowing over casing	---	222
Gravel	128	350
Black sand, increased flow of water	18	368
Cemented gravel	32	400
"Loose" gravel, increased flow of water	40	440
Cemented gravel	246	686
Clay	1	687
Cemented gravel	29	716
White clay	4	720
Total depth	---	720

(S-21-54) 3cad1. H. D. Cornell. Diameter 16 inches, 16-inch casing to unknown depth, perforated from 500 feet to 560 feet with eight ½-inch by 3-inch slots for each foot of casing. Driller's log.

Material	Thickness (feet)	Depth (feet)
Clay and sand	100	100
Clay and sand, water-bearing	185	285
Clay and gravel, water flowed over top of casing	---	285
Clay and gravel	40	325
Cemented boulders	125	450
"Loose" boulders	35	485
Increase in flow of water	---	485
Cemented gravel	80	565
Cemented gravel with "loose" streaks, large flow of water	155	720
White clay	10	730
Total depth	---	730

(S-21-54) 3dc1. H. D. Cornell. Diameter 14 inches, 14-inch casing to 462 feet, perforated from 420 feet to 440 feet with six ½-inch by 3-inch slots in each foot of casing.

Material	Thickness (feet)	Depth (feet)
Clay and gravel	24	24
Gravel	16	40
Near-surface water level	---	40
Gravel	20	60
Clay	18	78
Clay and gravel	104	182
Cemented gravel	10	192
Clay and gravel	120	312
Cemented gravel	12	324
Clay and gravel	16	340
Cemented gravel	140	480
"Loose" gravel	22	502
Cemented gravel	218	720
Total depth	---	720

(S-21-54) 3dcb1. H. D. Cornell. Diameter 16 inches, 16-inch casing to 96 feet, 660 feet of 12-inch casing from 70 feet to 730 feet, perforated from 345 feet to 680 feet with eight ½-inch by 3½-inch slots for each foot of casing. Driller's log.

Material	Thickness (feet)	Depth (feet)
Soil	1	1
Sandy clay	7	8
Cemented gravel	4	12
Clay and gravel	68	80
Struck first water	---	80
Clay and gravel	165	245
Cemented gravel, flow of water	81	326
Cemented boulders	74	400
Cemented gravel	35	435
Cemented boulders, large flow of water	205	640
Cemented gravel	310	950
Clay and gravel	20	970
Total depth	---	970

TABLE 3—*Continued*

(S–21–54) 10aac1. H. D. Cornell. Diameter 14 inches, 18-inch casing to 80 feet, 472 feet of 14-inch casing from surface to 472 feet, perforated from 100 to 450 feet with six ½-inch by 3-inch slots for each foot of casing. Driller's log.

Material	Thickness (feet)	Depth (feet)	Material	Thickness (feet)	Depth (feet)
Clay and gravel	20	20	Cemented gravel	121	260
Gravel and clay	60	80	"Loose" gravel	14	274
Struck first water	...	80	Cemented gravel	526	800
Gravel and clay	55	135			
Clay	4	139	Total depth	...	800

(S–21–54) 15aca1. Rooker. Diameter 20 inches, 20-inch casing to unknown depth, 14-inch casing to 130 feet. Driller's log.

Material	Thickness (feet)	Depth (feet)	Material	Thickness (feet)	Depth (feet)
Caliche	9	9	Clay	190	300
Clay and gravel	21	30	Cemented gravel	206	506
Near-surface water level	...	30			
Clay and gravel	80	110	Total depth	...	506

TABLE 4

Analyses of Water from Wells and Springs in Las Vegas, Pahrump, and Indian Spring Valleys, Nevada

(Analyses by M. R. Miller, University of Nevada, Agricultural Experiment Station, or W. B. Adams, Public Service Division, University of Nevada, Department of Food and Drugs, except as noted. Carbonate 0.00 when determined. See tables 2 and 3 for descriptive data for wells.)

Well or spring number and location	Owner or name of well or spring	Depth (feet)	Temperature (°F)	Date of collection	Parts per million: Dissolved solids	Silica (SiO_2)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium and Potassium (Na and K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Nitrate (NO_3)	Hardness (as $CaCO_3$)
INDIAN SPRING VALLEY															
(S-16-56) 16b1	Indian Springs	—	78	12–15–12	330	17	0.16	48	15	31	239	28	5	0.0	181
LAS VEGAS VALLEY															
(S-17-59) 34a1[1]	Corn Creek Spring	—	—	12– 8–12	287	18	.03	54	28	17	292	26	12	4	250
(S-19-60) 9c1[2]	Tule Springs	—	69.5	4–20–29	207	—	—	52	28	1.9	255	27	8.6	—	—
(S-20-61) 15dc1[1]	Kyle Spring	—	76	9–16–12	258	8	.01	53	27	26	251	33	55	2	243
(S-20-61) 19abd1[3]	Splane Estate	260	69	1– 6–47	238	—	—	51	25	4.6	242	33	4	1.2	230
(S-20-61) 30ddc1; (S-20-61) 30ddd1[1]; (S-20-61) 31aab1	Las Vegas Springs	—	73	9–23–12	267	13	Tr.	56	23	17	239	43	2	6	234
(S-21-61) 6acc1[1]	J. D. Porter	394	72	1– 6–47	290	—	—	54	29	11	231	74	5	3.5	254

(S-21-61) 22ccc1[5]	A. P. Baker	500	72	1- 6-47	334	----	----	65	32	7.8	227	106	7	4.3	294
(S-21-61) 34abc1[6]	Tollackson	246	74	1- 6-47	332	----	----	64	30	11	223	107	6	3.9	283
(S-21-62) 29db1[1]	Grapevine Spring	----	----	12-24-12	2012	55	.3	275	130	99	239	959	172	.3	1220
(S-22-59) 7c1[1]	Cottonwood Spring	----	----	9-18-12	563	19	.4	102	43	46	290	146	11	.45	431
				PAHRUMP VALLEY											
(S-20-52) 1c1[2]	Buol Sixmile Spring	----	----	8- 5-27	538	----	----	73	18	40	365	36	6.2	----	----
(S-20-53) 14dc1[2]	Bennetts Springs	----	76.5	8- 5-27	358	----	----	50	22	8.2	244	33	.7	----	----
(S-20-53) 14dcc1[7]	Ray Thomas	254	78	8-29-16	383	8	Tr.	51	25	42	242	32	63	Tr.	230
(S-20-53) 15adc1[2]	Frank Buol	520	----	8- 5-27	391	----	----	54	17	21	268	30	.7	----	----
(S-20-56) 31d1[7]	Intermittent Spring	----	57	8-24-16	251	10	.0	59	24	4.3	273	22	5	1.5	246
(S-21-54) 3bc1[7]	Manse Spring	----	75	8-27-16	268	18	Tr.	55	29	Tr.	239	42	4.9	.0	256
(S-21-54) 3bc1[2]	Manse Spring	----	75	8- 5-27	375	----	----	52	11	30	239	42	.7	----	----
(S-22-54) 14d1[2]	Steve Brown Spring	----	----	8- 5-27	406	----	----	73	13	.0	269	51	.5	----	----
(S-22-54) 25b1[7]	Roland Wiley	26	----	8-27-16	338	13	.45	58	30	20	266	58	24	.0	----

[1]Taken from Carpenter, Everett, Ground water in southeastern Nevada: U. S. Geol. Survey Water-Supply Paper 365, table facing p. 30, 1915.

[2]Taken from Hardman, George, and Miller, M. R., Quality of the waters of southeastern Nevada, drainage basins and water resources: Univ. of Nevada Agri. Exper. Sta. Bull. No. 136, pp. 24–32, July 1934.

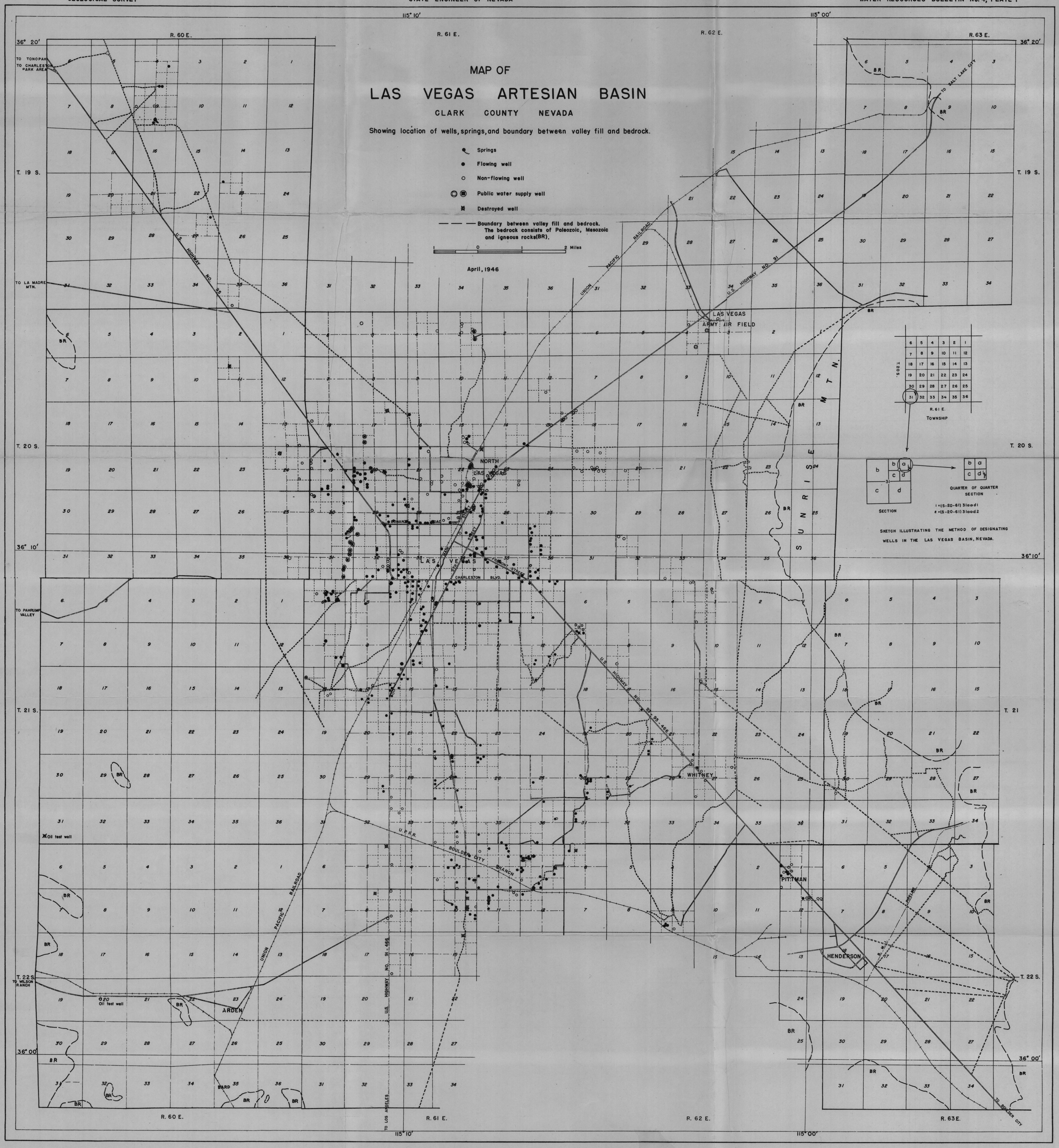
[3]By C. S. Howard, U. S. Geol. Survey, specific conductance 43.5, carbonate not determined, fluoride 0.2.

[4]By C. S. Howard, U. S. Geol. Survey, specific conductance 50.1, carbonate not determined, fluoride 0.2.

[5]By C. S. Howard, U. S. Geol. Survey, specific conductance 56.0, carbonate not determined, fluoride 0.1.

[6]By C. S. Howard, U. S. Geol. Survey, specific conductance 56.4, carbonate not determined, fluoride 0.3.

[7]Taken from Waring, G. A., Ground water in Pahrump, Mesquite, and Ivanpah Valleys, Nevada and California: U. S. Geol. Survey Water-Supply Paper 450C, table facing p. 80, 1921.


MAP OF
LAS VEGAS ARTESIAN BASIN
CLARK COUNTY NEVADA
Showing location of wells, springs, and boundary between valley fill and bedrock.
Springs
Flowing well
Non-flowing well
Public water supply well
Destroyed well
Boundary between valley fill and bedrock. The bedrock consists of Paleozoic, Mesozoic and igneous rocks(BR).
0
2 Miles
April, 1946
R. 60 E.
R. 61 E.
R. 62 E.
R. 63 E.
36° 20′
36° 10′
36° 00′
115° 10′
115° 00′
T. 19 S.
T. 20 S.
T. 21 S.
T. 22 S.
TO TONOPAH
TO CHARLESTON PARK AREA
TO LA MADRE MTN.
TO PAHRUMP VALLEY
TO WILSON RANCH
TO LOS ANGELES
TO SALT LAKE CITY
TO BOULDER CITY
U.S. HIGHWAY NO. 95
U.S. HIGHWAY NO. 91
U.S. HIGHWAY NO. 91-466
UNION PACIFIC RAILROAD
U.P.R.R. BOULDER CITY BRANCH
LAS VEGAS ARMY AIR FIELD
NORTH LAS VEGAS
LAS VEGAS
CHARLESTON BLVD.
FREMONT STREET
BONANZA ROAD
LAS VEGAS STREET
4TH STREET
SUNRISE MTN.
WHITNEY
PITTMAN
HENDERSON
ARDEN
BARD
BR
Oil test well
T. 20 S.
R. 61 E.
TOWNSHIP
SECTION
QUARTER OF QUARTER SECTION
1 = (S-20-61) 31aad1
2 = (S-20-61) 31aad2
SKETCH ILLUSTRATING THE METHOD OF DESIGNATING WELLS IN THE LAS VEGAS BASIN, NEVADA.