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UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Ground Water Branch

AQUIFER-TEST COMPILATION FOR THE
MOJAVE DESERT REGION, CALIFORNIA

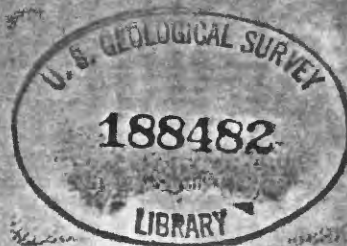
By
✓
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Prepared in cooperation with the
California Department of Water Resources

OPEN-FILE DATA REPORT

63-90

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AQUIFER-TEST COMPILATION FOR THE
MOJAVE DESERT REGION, CALIFORNIA

By E. J. McClelland

PURPOSE AND SCOPE OF THIS REPORT

This report is the second of a series the purpose of which is to make available in standard tabular form the results of aquifer tests that have been made by various private and public agencies in California. The scope of the compilation is to describe systematically, in a form agreed upon by the California Department of Water Resources and the Geological Survey, the (1) test location, (2) pumping data, (3) well data and (4) summary of results. The results of these tests sometimes have been published but most frequently have been used only as a step in obtaining other information, consequently the results and even the location of aquifer tests have not been readily available.

This report has been prepared by the Geological Survey under the immediate supervision of Fred Kunkel, district geologist for California, in cooperation with the California Department of Water Resources, and tabulates through November 1962 all tests analyzed by the Geological Survey for the Mojave Desert region (figs. 1-3). The report is designed to be expanded when additional tests are analyzed or new tests are made.

DESCRIPTION OF AQUIFER-TEST COMPILATION FORM

Location

Well number.--The test is identified by the number assigned to the pumped well by the California Department of Water Resources and the Geological Survey. The well-numbering system identifies wells according to the rectangular system for the subdivision of public land. That part of the number preceding the slash (as in 19S/18E-35E1) indicates the township (T. 19 S.); the number following the slash is the range (R. 18 E.); the digit following the hyphen is the section (sec. 35); and the letter following the section number indicates the 40-acre subdivision of the section according to the accompanying diagram.

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

Within each 40-acre tract the wells are numbered serially, as indicated by the final digit. Following the well number, the appropriate base and meridian are indicated as follows: H - Humboldt; M - Mt. Diablo; S - San Bernardino.

Quadrangle.--Shows the name of the published U.S. Geological Survey topographic map that includes the area of the test, the map scale, and the date it was issued.

Location.--The site of the test is referenced by street names, streams and rivers, cities and county. In some cases, the landowner's name or name of tenant is included. The site of each test is shown on figure 2 and figure 3.

Ground-water basin.--The ground-water basin in which the test was run is identified by name and number of basin and subbasin as assigned by the California Department of Water Resources.

Geologic formation.--Geologic formation, formation members, and named aquifers are identified.

Date of test.--Shows the date at start of test followed by duration of pumping in minutes, or hours as indicated.

Agency conducting test.--The agency, and person in charge of field test are identified.

Source of test data.--Shows physical location of the basic data and name of offices or published report containing data or results of test. In all cases, copies of the basic data are on file with the U.S. Geological Survey, Ground Water Branch, 650 Capitol Mall, Sacramento 14, California.

Pumping Data

Pump type, power source and rating.--Shows type or name of pump, source of power, and horsepower rating.

Use.--Use of well at time tested.

Discharge.--Average discharge of pumped well in gallons per minute during the test.

Maximum drawdown.--Total maximum drawdown in feet after indicated pumping time.

Other data.--Any conditions which might affect the accuracy of the pumping data test, such as: changes in pumping rates, changes in methods of measuring discharge, influence by other pumping wells, barometric or recharge effects, or other pertinent items.

Well Data

Well number.--The pumped well is shown on the first line, with observation wells shown on subsequent lines.

Depth.--Depth of well in feet.

Perforations.-- Depth of casing perforations in feet, below land surface.

r.--Distance from pumped well to observation well in feet.

Log.-- Types of logs, i.e., driller's, electric, etc.

Analysis.--Availability of chemical analysis of well water indicated by "yes," or "no."

Water-level measurements.--Availability of water-level measurements during, prior to, or subsequent to the test is indicated as "yes," or "no."

Other data and remarks.--Physical factors that might affect test results and other information not included in the data table.

Summary

Purpose of test.-- Purpose as related to determination of aquifer coefficients, ground-water movement, storage capacity, underflow conditions, foundation design, and related items.

Aquifer thickness.--Thickness in feet.

Aquifer saturated thickness.--Thickness in feet.

Specific capacity.--Rate of yield of the pumped well in gallons per minute per foot of drawdown.

U.S. Geological Survey formation yield factor.--

Formation yield factor = $\frac{\text{Specific capacity} \times 100}{\text{Aquifer saturated thickness}}$

Method of analysis.--Indicates solution utilized such as: equilibrium, nonequilibrium, leaky aquifer, etc.

Coefficient of transmissibility.--Expressed as the rate of flow of water, in gallons per day, at the prevailing water temperature through each vertical strip of the aquifer one foot wide, having a height equal to the saturated thickness of the aquifer and under a unit hydraulic gradient.

Coefficient of permeability.--Expressed as the rate of flow of water in gallons per day through a vertical cross section of one square foot under a unit hydraulic gradient.

Coefficient of storage.--The volume of water an aquifer releases from or takes into storage per unit of surface area of the aquifer per unit change in the component of head normal to that surface is called the coefficient of storage.

Test evaluation.--Indicates overall validity of test, i.e., excellent, good fair, or poor, along with summary of reasons. In general, the criteria used by the author for judging is: poor tests are all test for which the pumping cycle was 100 minutes or less, or tests in which the response of observation wells was small or erratic. A poor test does not necessarily imply poor field technique. Fair tests are tests for which the pumping cycle was 100 to 500 minutes and test results are judged better than poor. All tests involving a pumped well only are graded poor or fair unless the pumped-well data are exceptionally detailed, and involve both the drawdown and recovery cycle. Good tests are tests for which the pumping cycle was 500 minutes or more and pumped-well data as referred to above. Excellent tests are tests for which the pumping cycle was 500 minutes or more, with two or more properly spaced observation wells, detailed and accurate observation well and pumped-well data were obtained and results of wells support each other.

Some tests shown in the "Contents" are not included in the compilation because the results were considered to be unsatisfactory. They are listed to indicate that data exist and are available in the files for examination.

U.S. GEOLOGICAL SURVEY
GROUND WATER BRANCH
AQUIFER-TEST COMPILATION

LOCATION
Well no. 25S/39E-4R1 M Quadrangle Little Lake, 15 min., 1954

Location About 4 miles east of Brown, Kern County

Ground Water Basin Indian Wells Valley 6-54.00

Geologic Formation Alluvium

Date of Test Oct. 22, 1953 67 hr. Agency Conducting Test USGS, Fred Kunkel

Source of Test Data USGS, Sacramento

PUMPING DATA
Pump Type, Power Source and Rating Electric Motor, 7½ hp

Use Public Supply Discharge 145 gpm Maximum Drawdown 1.97 ft. after 2870 min.

Other data _____

WELL DATA

Well No.	Depth	Perforations	r*	Log	Analysis	Water-level measurements		
						Drawdown	Recovery	Historical
25/39- 4R1	200	--	--	Drillers	yes	yes	yes	yes

r* = distance from pumped well to observation well in feet.

Other Data and Remarks _____

SUMMARY

Purpose of Test Determination of Aquifer coefficients

Aquifer Thickness 143 ft Aquifer Saturated Thickness 143 ft

Specific Capacity 73 GCS Formation Yield Factor 51

Method of Analysis Nonequilibrium

Coefficient of Transmissibility 87,000 Permeability 610 gpd/ft Coefficient of Storage --

Test Evaluation Fair, drawdown data not usable

U.S. GEOLOGICAL SURVEY
GROUND WATER BRANCH
AQUIFER-TEST COMPILATION

LOCATION 25S/39E-12R1 M Quadrangle Mountain Springs Canyon, 15 min., 1953

Location About 10 miles northeast of Inyokern, Kern County

Ground Water Basin Indian Wells Valley, 6-54.00

Geologic Formation Alluvium

Date of Test Oct. 19, 1953 76 hr Agency Conducting Test USGS, Fred Kunkel

Source of Test Data USGS, Sacramento

PUMPING DATA

Pump Type, Power Source and Rating Average 3 hp

Use Public Supply Discharge 30.4 gpm Maximum Drawdown 0.92 ft. after 1435 min.

Other data 1. Discharge averaged 34.0 gpm for first 1470 min. then reduced to an average of 28.3 gpm for an additional 2480 min. Pumping stopped after 3950 min.

WELL DATA

Well No.	Depth	Perforations	r*	Loc	Analysis	water-level measurements		
						Drawdown	Recovery	Historical
25/39-12R1	180.5	--	--	--	yes	yes	yes	yes

r* = distance from pumped well to observation well in feet

Other Data and Remarks

SUMMARY

Purpose of Test Determination of aquifer coefficients

Aquifer Thickness 163.5 ft Aquifer Saturated Thickness 163.5 ft

Specific Capacity 37 Specific Formation Yield Factor 23

Method of Analysis Nonequilibrium

Efficient of Transmissibility 62,000 gpd/ft Permeability 380 gpd/ft Coefficient of Storage --

Remarks Poor, drawdown data are not reliable.

U.S. GEOLOGICAL SURVEY
GROUND WATER BRANCH
AQUIFER-TEST COMPILATION

LOCATION
Well no. 25S/39E-35N1 M Quadrangle Inyokern, 15 min., 1943

Location About 5 $\frac{1}{2}$ miles northeast of Inyokern, Kern County

Ground Water Basin Indian Wells Valley, 6-54.00

Geologic Formation Alluvium

Date of Test July 29, 1953 105 hr Agency Conducting Test USGS, Fred Kunkel

Source of Test Data USGS (GW), Sacramento

PUMPING DATA
Pump Type, Power Source and Rating Internal combustion engine, horsepower unknown
Average

Use Public Supply Discharge 275 gpm Maximum Drawdown 13.24 ft. after 2810 min.

Other data 1. Discharge varied from about 225 gpm to about 300 gpm, in
general increasing with pumping time

WELL DATA

Well No.	Depth	Perforations	r*	Log	Analysis	Water-level measurements		
						Drawdown	Recovery	Historical
<u>25/39-35N1</u>	<u>152</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>yes</u>	<u>yes</u>	<u>yes</u>	<u>yes</u>
<u>25/39-35N2</u>	<u>95</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>no</u>	<u>yes</u>	<u>yes</u>	<u>yes</u>
<u>26/39-2D1</u>	<u>97.8</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>no</u>	<u>yes</u>	<u>yes</u>	<u>yes</u>

r* = distance from pumped well to observation well in feet.

Other Data and Remarks

SUMMARY
Purpose of Test Determination of aquifer coefficients

Aquifer Thickness 95 ft Aquifer Saturated Thickness 95 ft

Specific Capacity 21 Specific Formation Yield Factor 22

Method of Analysis Nonequilibrium

Coefficient of Transmissibility Average 56,000 gpd/ft Coefficient of Storage 0.01-0.0006

Test Evaluation Good, pumping conditions may have progressed from semiconfined to water table during the test.

U.S. GEOLOGICAL SURVEY
GROUND WATER BRANCH
AQUIFER-TEST COMPILATION

LOCATION
Well no. 26S/39E-11E1 M Quadrangle Inyokern, 15 min., 1943

Location About 3½ miles northeast of Inyokern, Kern County

Ground Water Basin Indian Wells Valley, 6-54.00

Geologic Formation Alluvium

Date of Test July 29, 1953 114 hr Agency Conducting Test USGS, Fred Kunkel

Source of Test Data USGS (GW), Sacramento

PUMPING DATA
Pump Type, Power Source and Rating 25 hp

Use Public Supply Average Discharge 218 gpm Maximum Drawdown 6.65 ft. after 3590 min.

Other data 1. Pump speed slow during first 24 hrs of test, discharge 291 gpm at end of test.

WELL DATA

Well No.	Depth	Perforations	r*	Log	Analysis	Water-level measurements		
						Drawdown	Recovery	Historical
<u>26/39-11E1</u>	<u>250</u>	<u>--</u>	<u>--</u>	<u>Drillers</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>Yes</u>

r* = distance from pumped well to observation well in feet.

Other Data and Remarks

SUMMARY

Purpose of Test Determination of aquifer coefficients

Aquifer Thickness 148 ft Aquifer Saturated Thickness 148 ft

Specific Capacity 33 USGS Formation Yield Factor 22

Method of Analysis Nonequilibrium

Coefficient of Transmissibility 116,000 gpd/ft Permeability 780 gpd/ft² Coefficient of Storage --

Test Evaluation Poor, no drawdown data available.

U.S. GEOLOGICAL SURVEY
GROUND WATER BRANCH
AQUIFER-TEST COMPILATION

LOCATION
Well no. 26S/39E-24R1 M Quadrangle Ridgecrest, 15 min., 1953

Location 4 miles west of China Lake, Kern County

Ground Water Basin Indian Wells Valley, 6-54.00

Geologic Formation Alluvium

Date of Test Mar. 2, 1953 98 hr Agency Conducting Test USGS, Fred Kunkel

Source of Test Data USGS (GW), Sacramento

PUMPING DATA
Pump Type, Power Source and Rating Turbine pump, make unknown, electric motor, 25 hp

Use Public Supply Discharge 370 gpm Maximum Drawdown 25.94 ft. after 3840 min.

Other data _____

WELL DATA

Well No.	Depth	Perforations	r*	LOG	Analysis	Water-level measurements		
						Drawdown	Recovery	Historical
26/39-24R1	480	160-281 412-460	--	Drillers	yes	yes	yes	yes
26/39-24K1	323	190-197 230-301	1515	Drillers	yes	yes	yes	yes
26/39-24Q1	361	18-285 325-345	1072	Drillers	yes	yes	yes	yes
26/40-19N1	306		1180	Drillers	yes	yes	yes	yes
26/40-19P1	261	192-220 253-259	1998	Drillers	yes	yes	yes	yes

r* = distance from pumped well to observation well in feet.

Other Data and Remarks 26/39-25D2 (r = 4250 ft) also observed but too far from pumped well.

SUMMARY
Purpose of Test Determination of aquifer coefficients

Aquifer Thickness 328 ft Aquifer Saturated Thickness 328 ft

Specific Capacity 12.6 USGS Formation Yield Factor 3.8

Method of Analysis nonequilibrium

Coefficient of Transmissibility Average 147,000 gpd/ft Permeability Average 450 gpd/ft² Coefficient of Storage Average 0.007

Test Evaluation Good, pumped well data do not correlate with that from observation wells, probably because of leaky aquifer conditions.

Specific Capacity Tests in Indian Wells Valley Area

Well number:	Well depth:	Date tested:	Discharge:	Drawdown:	Specific capacity
:	(feet)	:	(gpm)	(feet)	:(gpm/ft of dd)
24/40-20J1	28.3	5-22-53	5	9.5	0.5
25/39- 4R1	200	10-21-53	145	2.0	73
12R1	180.5	10-20-53	34	0.9	37
35N1	152.0	7-29-53	275	13.2	21
25/40-20F1	182.6	10-21-52	96	4.4	22
26/39- 1E1	250	1920	450	20	22
5F1	200	8- 7-52	450	9	50
		8- 7-52	650	13	50
		8- 8-52	910	20	46
		8- 9-52	830	18	46
11E1	250	7-29-53	218	6.65	33
19K1	803	10- 6-60	3,500	74	47
19P1	446	8-16-44	2,500	7	358(?)
		9- 7-45	1,980	6.7	296(?)
19Q1	367.5	3-14-44	750	13	58
		9- 7-45	295	2.7	105(?)
		3-19-53	1,670	18.96	84
		3-20-53	785	7.91	99
20F1	333	10-17-58	818	18	45
23J1	800	10-17-60	3,560	79	45
24K1	323.1	6-20-44	1,000	7	143(?)
		9- 7-45	350	12.4	28
24M1	--	10-26-60	3,800	63	63
24P1	825.0	3- 6-58	2,750	33.4	82
24Q1	361	11- 8-44	800	30	28

Specific Capacity Tests in Indian Wells Valley Area--Continued

Well number:	Well depth:	Date tested:	Discharge:	Drawdown:	Specific capacity
:	(feet)	:	(gpm)	(feet)	:
:	:	:	:	:	:(gpm/ft of dd)
26/39-24R1	480	4-20-44	900	22	41
		9- 7-45	328	11.5	28
		3- 5-53	370	25.94	12.6
25D2	330	5- -50	180	4	45
		9- -50	355	10.5	34
25E1	387	5- -51	230	5	46
		7- -51	320	7	46
		3- -52	150	4	38
28C2	364	2-11-58	419	6.3	66
30C1	--	9- 7-45	126	2.3	55
30F1	619	9- 7-45	2,200	27	81
26/40- 1A2	--	3-17-54	35	27	1.3
19N1	306	9- 7-45	450	31.7	14
19P1	261.0	11- 8-44	700	39	18
20N1	190.1	9- 7-45	127	13	10
28J1	--	12-30-48	152	32	4.8
30E2	402	1954	1,680	50	34
33A1	400	1950	850	53	16
		1950	250	8	31
			269	8	34
33P2	130	8- 6-59	385	21	18
34M1	232	9- 7-44	1,020	21.9	47
36A1	270.0	2- 8-54	75	6.3	12
27/40- 4L1	252	7- -50	1,400	30	47
		4- 2-53	950	22	43
28/38-18F1	930	3- 2-53	50	150	0.3

U.S. GEOLOGICAL SURVEY
GROUND WATER BRANCH
AQUIFER-TEST COMPILATION

LOCATION
Well no. 11N/9W-(well 1) S quadrangle Castle Butte SE, 7.5 min., 1947

Location About 6 $\frac{1}{2}$ miles west of Boron, Kern County, exact location not identified by owner.

Ground Water Basin Antelope Valley, North Muroc Basin, 6-44.08

Geologic Formation Alluvium

Date of Test Aug. 14, 1955 262 hr Agency Conducting Test Owner

Source of Test Data USGS (GW) Sacramento

PUMPING DATA

Pump Type, Power Source and Rating Average

Use Unused Discharge 1000 gpm Maximum Drawdown 30.2 ft. after 13,135 $\frac{1}{2}$ min.

Other data 1. Total pumping time 219 hr, recovery measured for 43 hr.

WELL DATA All wells are in T. 11 N., R. 9 W., serial numbers for convenience

Well No.	Depth	Perforations	r*	Log	Analysis	Water-level measurements		
						Drawdown	Recovery	Historical
Well 1	407	96-407	--	Drillers	yes	yes	yes	yes
Well 2	372	110-336 ^{2/}	504	--	no	yes	yes	yes
Well 3	382	---	1012	--	no	yes	yes	no
<u>3/</u>								

r* = distance from pumped well to observation well in feet.

Other Data and Remarks 2. Cased to 348 ft. 3. Well 4 (r = 2463), well 5 (r = 2230), well 6 (r = 3404) measured but not analyzed because of small water-level changes and barometric fluctuations.

SUMMARY

Purpose of Test Determination of aquifer coefficients

Aquifer Thickness 311 Aquifer Saturated Thickness 300

Specific Capacity 33.1 Formation Yield Factor 10

Flow Condition Nonequilibrium

Approx. 90,000 gpd/ft

Good, leak aquifer analysis indicates T = 200,000 gpd/ft. Because of possible leakage, coefficient of storage omitted.

U.S. GEOLOGICAL SURVEY
GROUND WATER BRANCH
AQUIFER-TEST COMPILATION

LOCATION

Well no. 32S/36E-35R1 M Quadrangle Mojave, 15 min., 1956

Location About 7 miles northeast of Mojave, Kern County

Ground Water Basin Antelope Valley, Chaffee Basin, 6-44.04

Geologic Formation Alluvium

Date of Test Dec. 26, 1956 114 hr Agency Conducting Test USGS, L. C. Dutcher

Source of Test Data USGS (GW), Sacramento

PUMPING DATA

Pump Type, Power Source and Rating _____

Use Unused* Discharge 1,000 gpm Maximum Drawdown _____ ft. after _____ min.

Other data _____

WELL DATA

Well No.	Depth	Perforations	r*	LOG	Analysis	Water-level measurements		
						Drawdown	Recovery	Historical
32/36-35R1	800	333-694	-	Drillers	Yes	No	No	
32/36-35R2	720	220-720	300	Drillers	No	Yes	Yes	

r* = distance from pumped well to observation well in feet.

Other Data and Remarks Depth to water before pumping 211.76 ft below measuring point in 35R2

SUMMARY

Purpose of Test Determination of aquifer coefficients

Aquifer Thickness _____ Aquifer Saturated Thickness _____

Specific Capacity _____ Formation Yield Factor _____

Method of Analysis nonequilibrium

Efficient of Transmissibility Approx. 1,500,000 gpd/ft

Efficient of Storage _____

Notes: Poor, test may not be valid, the observed well probably is not developed completely and is very sluggish in its response to pumping.

Specific Capacity Tests in Antelope Valley Area

Well number:	Well depth: (feet)	Date tested*:	Discharge: (gpm)	Drawdown: (feet)	Specific capacity (gpm/ft of dd)
9/8- 6H1	467		1,340	10	134
6H2	354		1,000	6	166
9/9- 6A1	199		330	12	28
6E1	112		254	59	4.3
6L1	147		149	10	15
6M1	126		75	23	3.3
18C1	360		230	24	10
24H1	315		300	95	3.2
9/10-24G1	750		1,350	101.6	13
10/9- 7A1	200		50	9	5.6
7A2	200		100	8	12
10/12-12K1	249		270	60(?)	4
20C1	161		73	27	2.7
26F1	140		225	80	2.8
10/13-14Q1	463		360	90	4.0
11/9-36C1	407		1,000	30.2	33
11/10-36H1	320		206	68	3.0
11/12-26J2	361		1,200	60	20
32/36-21Q1	805		263	2.3	114

*Dates tested unknown.

U.S. GEOLOGICAL SURVEY
GROUND WATER BRANCH
AQUIFER-TEST COMPILATION

LOCATION
Well no. 1N/9E-4N1 S quadrangle Twentynine Palms, 7.5 min., 1955

Location About 4 miles north of Twentynine Palms, San Bernardino County

Ground Water Basin Colorado River Basin, 7-

Geologic Formation Alluvium

Date of Test Apr. 7, 1952 1/ Agency Conducting Test Neptune & Gregory
Architects & Engineers
W. O. Wagner

Source of Test Data USGS (GW), Sacramento

PUMPING DATA
Pump Type, Power Source and Rating Layne & Bowler, gasoline engine

Use Public Supply Discharge 1/ Maximum Drawdown 41.00 ft. after 1982 min.

Other data 1. Pumped for about 33 hr at discharge rates starting at 51 gpm
and increased in five steps to 256 gpm.

WELL DATA

Well No.	Depth	Perforations	r*	Log	Analysis	Water-level measurements		
						Drawdown	Recovery	Historical
<u>1N/9E-4N1</u>	<u>136</u>	<u>--</u>	<u>--</u>	<u>Drillers^{2/}</u>	<u>no</u>	<u>yes</u>	<u>yes</u>	<u>yes</u>

r* = distance from pumped well to observation well in feet.

Other Data and Remarks 2. Available from Mogle Bros., drillers, Chino, Calif.

Prepumping water level in 4N1, 12.0 ft below land surface.

SUMMARY

Purpose of Test Test measurements were a secondary product of pumping to
develop the well.

Aquifer Thickness _____ Aquifer Saturated Thickness _____

Specific Capacity 6.2^{3/} _____ EGS Formation Yield Factor _____

Method of Analysis Nonequilibrium

Coefficient of Transmissibility Approx.
100,000 gpd/ft Permeability _____ Coefficient of Storage _____

Test Evaluation No evaluation because of varied discharge

3. At maximum discharge. 20

U.S. GEOLOGICAL SURVEY
GROUND WATER BRANCH
AQUIFER-TEST COMPILATION

LOCATION
Well no. 1N/9E-5G1 S Quadrangle Twentynine Palms, 7.5 min., 1955

Location About 4 miles north of Twentynine Palms, San Bernardino County

Ground Water Basin Colorado River Basin, 7-

Geologic Formation Alluvium

Date of Test Apr. 8, 1952 1/ Agency Conducting Test Neptune & Gregory
Architects & Engineers
W. O. Wagner

Source of Test Data USGS (GW), Sacramento

PUMPING DATA
Pump Type, Power Source and Rating Layne & Bowler, electric motor, 25 hp

Use Public Supply Discharge 1/ Maximum Drawdown 11.44 ft. after 480 min.

Other data 1. Pumped for 482 min. at discharge rates starting at 80 gpm

and increased in four steps to about 275 gpm.

WELL DATA

Well No.	Depth	Perforations	r*	Log	Analysis	Water-level measurements		
						Drawdown	Recovery	Historical
1N/9E-5G1	500	--	-	Drillers ^{2/}	no	yes	yes	yes

r* = distance from pumped well to observation well in feet.

Other Data and Remarks 2. Available from Mogle Bros., drillers, Chino, Calif.

Prepumping water level in 5G1, 5.11 ft below land surface.

SUMMARY -

Purpose of Test Test measurements were a secondary product of pumping to
develop well.

Aquifer Thickness _____ Aquifer Saturated Thickness _____

Specific Capacity 27.5^{3/} USGS Formation Yield Factor _____

Method of Analysis Nonequilibrium

Coefficient of Transmissibility Approx. 230,000 gpd/ft Coefficient of Storage _____

Final Evaluation No evaluation because of varied discharge.

3. At maximum discharge 21

U.S. GEOLOGICAL SURVEY
GROUND-WATER BRANCH
AQUIFER-TEST COMPILATION

LOCATION
Well no. 2N/7E-3A1 Quadrangle Deadman Lake SW, 7.5 min., 1955
Location About 15 miles northwest of Twentynine Palms, San Bernardino County

Ground Water Basin Colorado River Basin, 7-
Geologic Formation Alluvium
Date of Test Jan. 31, 1953 1/ Agency Conducting Test USGS, F. S. Riley
Source of Test Data USGS (GW), Sacramento

PUMPING DATA

Pump Type, Power Source and Rating _____
Use Public Supply Discharge 1/ Maximum Drawdown 50.72 ft. after 1064 min.

Other data 1. Pumped for about 27 hr at discharge rates varying from about 900 gpm to about 1900 gpm. Rechecked July 23 (985 gpm) and Aug. 6, 1953 (870 gpm).

WELL DATA

Well No.	Depth	Perforations	r*	Log	Analysis	Water-level measurements		
						Drawdown	Recovery	Historical
<u>2/7- 3A1</u>	<u>560</u>	<u>200-560</u>	<u>-</u>	<u>Drillers</u>	<u>yes</u>	<u>yes</u>	<u>yes</u>	<u>yes</u>
<u>2/7- 2C1</u>	<u>400</u>	<u>2/</u>	<u>-</u>	<u>Drillers</u>	<u>yes</u>	<u>yes</u>	<u>yes</u>	<u>yes</u>

r* = distance from pumped well to observation well in feet.

Other Data and Remarks 2. Perforations, 149-152, 189-192, 239-259, 261-268, 271-305, 325-330, 356-377 ft. Prepumping water level in 3A1, 25.45 ft below measuring point.

SUMMARY

Purpose of Test Test measurements are a secondary product of pumping to develop well.

Aquifer Thickness _____ Aquifer Saturated Thickness _____
Specific Capacity 35.8^{3/} _____ Formation Yield Factor _____

Method of Analysis Nonequilibrium

Coefficient of Transmissibility Estimated, 200,000 gpd/ft _____ Coefficient of Storage _____

Test Evaluation Not evaluated because of varying discharge.

3. Discharge 1818 gpm at 1064 min. after pumping started.

U.S. GEOLOGICAL SURVEY
GROUND WATER BRANCH
AQUIFER-TEST COMPILATION

LOCATION
Well no. 2N/7E-3B1 S Quadrangle Deadman Lake SW, 7.5 min., 1955
Location About 15 miles northwest of Twentynine Palms, San Bernardino County

Ground Water Basin Colorado River Basin, 7-

Geologic Formation Alluvium

Date of Test Jan. 12, 1953 1/ Agency Conducting Test USGS, F. S. Riley

Source of Test Data USGS (GW), Sacramento

PUMPING DATA
Pump Type, Power Source and Rating _____

Use _____ Discharge 1/ Maximum Drawdown _____ ft. after _____ min.

Other data 1. Pumped for 2400 min. at discharge rates varying from about 900 gpm to about 1500 gpm.

WELL DATA

Well No.	Depth	Perforations	r*	Log	Analysis	Water-level measurements		
						Drawdown	Recovery	Historical
2/7- 3B1	700	260-690	--	Drillers	yes	yes	yes	yes

r* = distance from pumped well to observation well in feet.

Other Data and Remarks Prepumping water level in 3B1, 105.66 ft below measuring point.

SUMMARY
Purpose of Test Test measurements were a secondary product of pumping to develop well

Aquifer Thickness _____ Aquifer Saturated Thickness _____

Specific Capacity _____ USGS Formation Yield Factor _____

Method of Analysis Nonequilibrium

Coefficient of Transmissibility 25,000 gpd/ft permeability _____ Coefficient of Storage _____

Test Evaluation Not evaluated because of varied discharge.

U.S. GEOLOGICAL SURVEY
GROUND WATER BRANCH
AQUIFER-TEST COMPILATION

LOCATION
Well no. 3N/8E-29L1 Quadrangle Deadman Lake SW, 7.5 min., 1955

Location About 14 $\frac{1}{2}$ miles northwest of Twentynine Palms, San Bernardino County

Ground Water Basin Colorado River Basin, 7-

Geologic Formation Alluvium

Date of Test Dec. 8, 1952 1/ Agency Conducting Test USGS, F. S. Riley

Source of Test Data USGS (GW), Sacramento

PUMPING DATA

Pump Type, Power Source and Rating _____

Use Public Supply Discharge 1/ Maximum Drawdown _____ ft. after _____ min.

Other data 1. Pumped for about 1200 min. at discharge rates varying from

100 gpm to 2,000 gpm.

WELL DATA

Well No.	Depth	Perforations	r*	Log	Analysis	Water-level measurements		
						Drawdown	Recovery	Historical
3/8-29L1	600	270-590	--	Drillers	yes	yes	yes	yes
3/8-29C1	800	2/	2397	Drillers	yes	yes	no	yes

r* = distance from pumped well to observation well in feet.

Other Data and Remarks 2. Perforated 500-523, 540-565, 584-605, 640-646,

660-684 ft. Prepumping water level in 29L1, 103.39 ft below measuring point.

SUMMARY

Purpose of Test Test measurements were a secondary product of pumping to develop well.

Aquifer Thickness Average Aquifer Saturated Thickness _____

Specific Capacity 35.7 USGS Formation Yield Factor _____

Method of Analysis nonequilibrium

Coefficient of Transmissibility 280,000 gpd/ft³ Coefficient of Storage _____

Test Evaluation Not evaluated because of varied discharge.

3. Estimated on step drawdown.

[Duplicate data from Dec. 8
form except as noted]

U.S. GEOLOGICAL SURVEY
GROUND WATER BRANCH
AQUIFER-TEST COMPILATION

LOCATION

Well no. 3N/8E-29L1 S Quadrangle

Location _____

Ground Water Basin _____

Geologic Formation _____

Date of Test Aug. 6, 1953 735 min Agency Conducting Test USGS, F. S. Riley

Source of Test Data _____

PUMPING DATA

Pump Type, Power Source and Rating _____

Use _____ Discharge Average
890 gpm Maximum Drawdown _____ ft. after _____ min.

Other data _____

WELL DATA

Well No.	Depth	Perforations	r*	Log	Analysis	Water-level measurements		
						Drawdown	Recovery	Historical
<u>3/8-29L1</u>	<u>--</u>	<u>--</u>	<u>-</u>	<u>--</u>	<u>--</u>	<u>No</u>	<u>Yes</u>	<u>No</u>

r* = distance from pumped well to observation well in feet.

Other Data and Remarks _____

SUMMARY

Purpose of Test Determination of aquifer coefficients

Aquifer Thickness _____ Aquifer Saturated Thickness _____

Specific Capacity _____ ISGS Formation Yield Factor _____

Method of Analysis Nonequilibrium

Coefficient of Transmissibility 270,000 gpd/ft Permeability _____ Coefficient of Storage _____

Test Evaluation Poor, some evidence of a boundary situation or other source of interference.

Specific Capacity Tests in the Twentynine Palms area

Well number:	Well depth: (feet)	Date tested:	Discharge: (gpm)	Drawdown: (feet)	Specific capacity (gpm/ft of dd)
1/9- 4H1	136	4- 7-52	256		6.2
5C1	500	8- 4-61	780	44	17.8
2/7- 2C1	400		346		42.7
3A1	560	5-23-61	920	14	67.7
3B1	700	5-23-61	910	37	24.7
4H1	500		267		12.2
14K1	644		76		1.4
2/8-24H1	320		190		1.9
3/7-13H1	188.5		282		11.2
18D1	384.5		263		13.7
31E1	430		262		30.5
35P2		5-23-61	1,700	20	82.9
3/8-17L1	512		216		1.6
29C1	800		250		8.6
29L1	600	6- 6-61	1,060	12	86.8
33B1	526		350		21.6
34D1	400		256		13.5

REFERENCE LIST

- A. McClelland, E. J., 1962, Aquifer-test compilation for the San Joaquin Valley, Calif.: U.S. Geological Survey, Sacramento, Calif., open-file dupl. rept., 38 p., 2 figs.
- B. _____ 1963, Aquifer-test compilation for the Mojave Desert region, Calif.: U.S. Geological Survey, Sacramento, Calif., open-file dupl. rept., 29 p., 3 figs.
- C. _____ 1963, Aquifer-test compilation for the upper Santa Ana Valley area, San Bernardino County, Calif.: U.S. Geological Survey, Sacramento, Calif., open-file dupl. rept., 29 p., 2 figs.
- D. _____ 1963, Aquifer-test compilation for northern California: U.S. Geological Survey, Sacramento, Calif., open-file dupl. rept., 24 p., 4 figs.
- E. _____ 1963, Aquifer-test compilation for the Central Coastal Region, California: U.S. Geological Survey, Sacramento, Calif., open-file dupl. rept., 53 p., 2 figs.
- F. _____ 1963, Aquifer-test compilation for San Diego Region, California: U.S. Geological Survey, Sacramento, Calif., open-file dupl. rept., 19 p., 2 figs.

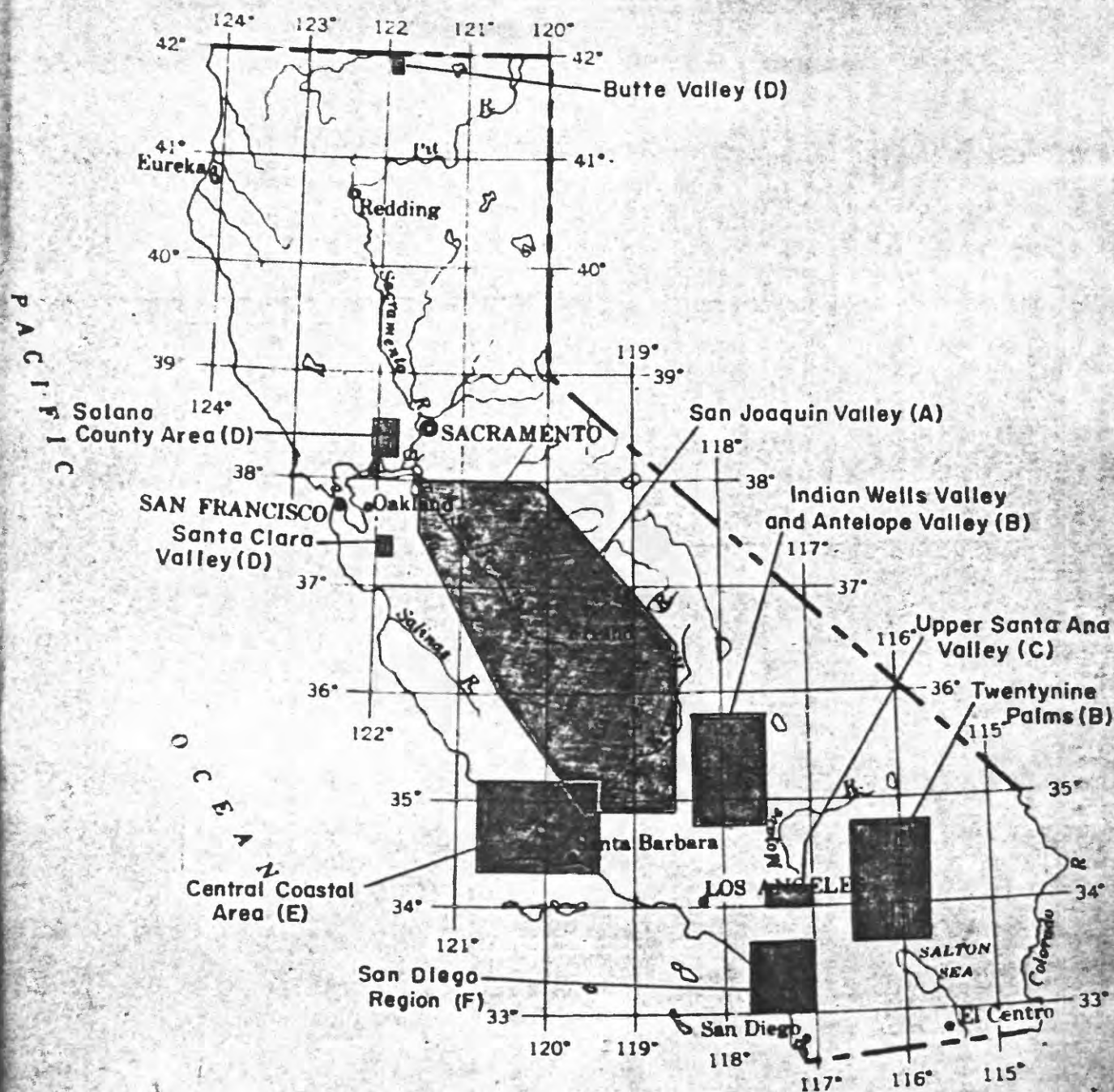
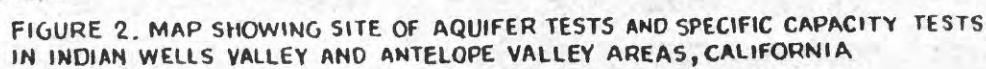


FIGURE 1.-INDEX MAP OF CALIFORNIA SHOWING
LOCATION OF TEST AREAS

20 0 20 100 Miles

Letter in parenthesis indicates report in reference list



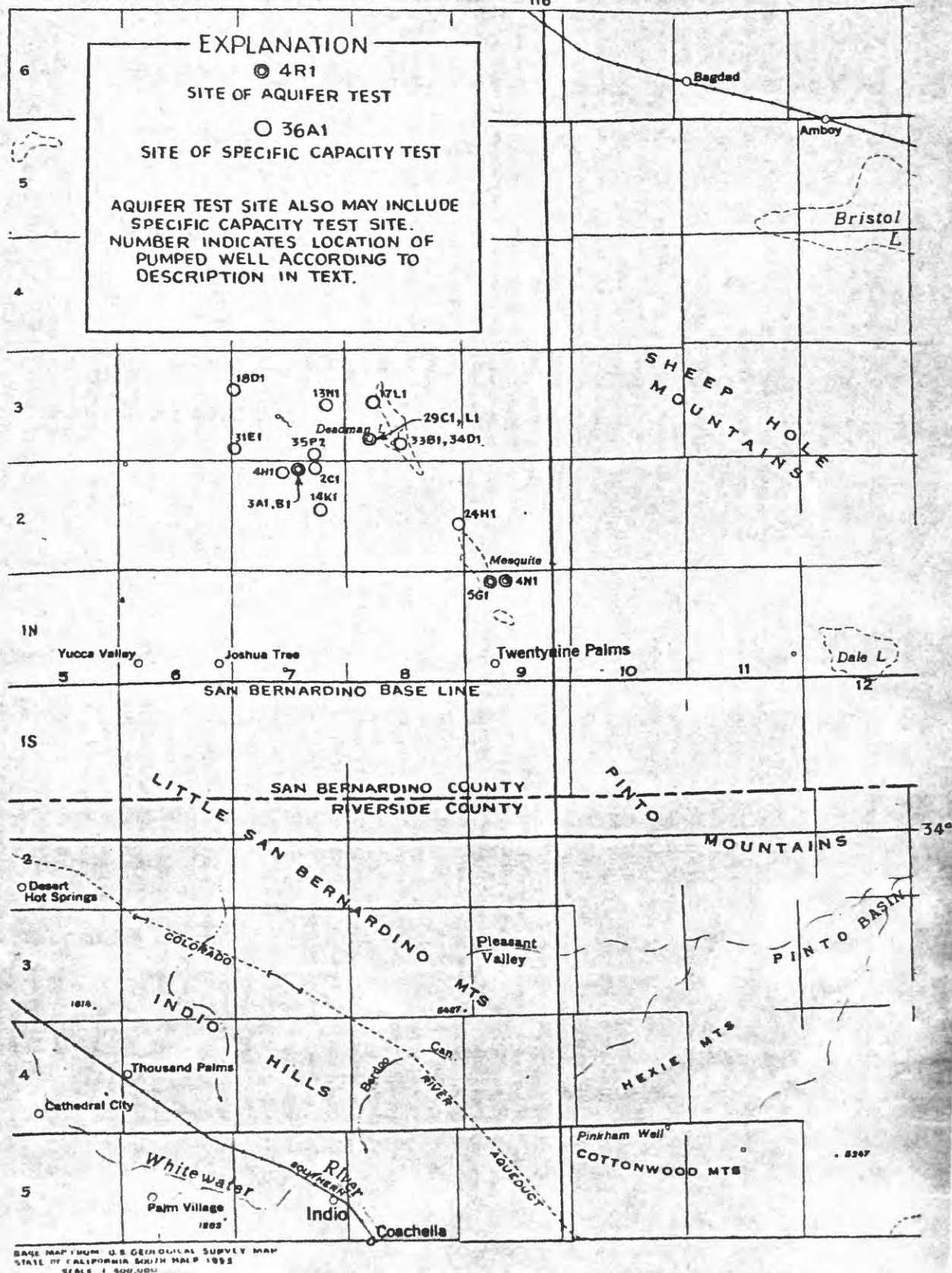


FIGURE 3. MAP SHOWING SITE OF AQUIFER TESTS AND SPECIFIC CAPACITY TESTS IN THE TWENTYNINE PALMS AREA, CALIFORNIA