



WATER-RIGHT DOCKET

Lake Mead National Recreation Area

Docket No: 21

EL DORADO CANYON.

Preliminary Docket Information

07-29-1976: water right/source docket information

WATER RESOURCES/WATER RIGHT

DATE: July 29, 1976

WATER RIGHT/SOURCE DOCKET INFORMATION

REGION Western AREA Lake Mead National Recreation Area
SITE El Dorado Canyon
STATE Nevada COUNTY Clark DOCKET NO WR# 21
LOCATION T26S, R65E, sec. 3, SE $\frac{1}{4}$, SW $\frac{1}{4}$
REGIONAL BASIN _____ LOCAL BASIN _____
ACQUIRED BY _____
APPLICATION _____ PERMIT _____ CERTIFICATE _____
ACTION DUE _____ PRIORITY _____ RESERVATION _____
QUANTITY _____ USE _____
STATUS Inactive SOURCE _____
REMARKS Hydrologic Unit #15030101

NARRATIVE:

In May of 1959, the Park Service drew up an irrigation study for the El Dorado Canyon area on the Nevada side of Lake Mohave in Lake Mead National Recreation Area in conjunction with the case of Arizona v. California. These plans showed an existing boat dock and restaurant located at the mouth of the canyon, and several contemplated features, including trailer courts, cabins, a campground area, and a store. Later development substantially paralleled the study, with water supplied by pump from Lake Mohave.

On August 18, 1967, a well was completed in the area to a depth of 350 feet. Due to the low permeability of the aquifer in which it was drilled, the well had a limited sustained yield. This well apparently served as a supplemental supply for the El Dorado Canyon area.

El Dorado Canyon was inundated by a huge flash flood on September 14, 1976, destroying the development. The well was not harmed; however, it was later capped, although the casing remains in place. Due to the flood hazard, the Park Service does not plan to rebuild in El Dorado Canyon. Rather, another boat launching area is being developed at Fire Mountain, on the Nevada side of Lake Mohave, several miles to the south of El Dorado Canyon.

Compiled by Kevin Kidder

Approved by W. Werrell

Page 1 of 1

DIVISION OF WATER RESOURCES

STATE OF NEVADA
DIVISION OF WATER RESOURCES

WELL DRILLERS REPORT

Please complete this form in its entirety

OFFICE USE ONLY

Log No. 6-49
Permit No.
Basin. 1. OWNER U.S. National Park Service ADDRESS Boulder City, Nevada2. LOCATION 1/4 1/4 Sec. T. N/S R. E. County
PERMIT NO. El Dorado Canyon3. TYPE OF WORK
New Well ☒ Recondition ☐
Deepen ☐ Other ☐
4. PROPOSED USE
Domestic ☐ Irrigation ☐ Test ☒
Municipal ☐ Industrial ☐ Stock ☐ Other ☐
5. TYPE WELL
Cable ☒ Rotary ☐
Other ☐

6. LITHOLOGIC LOG

Material	Water Strata	From	To	Thickness
Gravel & Sand		0	5	5
Gravel & Boulders		5	44	39
Cemented Gravel		44	105	61
Red Cemented Gravel		105	150	45
Cemented Gravel	yes	150	350	200

8. WELL CONSTRUCTION

Diameter hole 14" to 50" - 50" to 350" inches Total depth 350 feet
Casing record 10 3/4"
Weight per foot 40.44# Thickness .335

Diameter	From	To
<u>10 3/4</u> inches	<u>plus 1</u> feet	<u>350</u> feet
inches	feet	feet
inches	feet	feet
inches	feet	feet
inches	feet	feet
inches	feet	feet

Surface seal: Yes ☒ No ☐ Type Cement
Depth of seal 50 feet
Gravel packed: Yes ☐ No ☒
Gravel packed from feet to feet

Perforations:

Type perforation Machine cut
Size perforation 3/16 x 2 1/2 - 10 rows
From 195 feet to 350 feet
From feet to feet
From feet to feet
From feet to feet
From feet to feet

9. WATER LEVEL

Static water level 165 Feet below land surface
Flow G.P.M.
Water temperature cool ° F. Quality good

10. DRILLERS CERTIFICATION

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

Name PATRICK H. THOMPSONAddress 3215 Cinder LaneNevada contractor's license number 4286Nevada driller's license number 192Signed Patrick H. ThompsonDate August 21, 1967Date started July 12, 1967, 19
Date completed August 18, 1967, 19

7. WELL TEST DATA

Pump RPM	G.P.M.	Draw Down	After Hours Pump
	<u>10</u>	<u>350</u>	<u>8</u>

BAILER TEST

G.P.M. Draw down feet hours
G.P.M. Draw down feet hours
G.P.M. Draw down feet hours

USE ADDITIONAL SHEETS IF NECESSARY

5471

Supporting Hydro Data

UNITED STATES DEPARTMENT OF THE INTERIOR
Ground Water Analysis

Water Resources Division

late Nevada ☐ ☐ County ☐ ☐ Latitude ☐ ☐ ☐ ☐ ☐ ☐ Longitude ☐ ☐ ☐ ☐ ☐ ☐ Seq. No. ☐ ☐ Date coll. 08 17 67
20 20 20

Local well No. 2-26-1-3C40 Owner Natl. Park Service Collected by C. Berth & Denis Lab. Anal. Tucson, Ariz. Project No. Natl. Park Service

Appearance Wc _____ Wa Sed Lab. No. 1169 Sampling depth

04			09

 Type C Pumped

			30

x 10 ⁶		ppm		epm	
T 24.2	R KC1 364	112	110	40.4	8.41
R Sample 300		31	35		
Temperature °F		7.2	81.7		
f 22.2		X 100 ml	2.2		
Abs 0.800		42	44		
ppm		epm			
a 41.05		25.0 ml	f 16		
36.75					
4.30		6.8	3.39		
4.25		45	49		
g		ml	2.2	1.85	
calculated		50	53		
Subtotal cations (Ca, Mg).....		5.24			
a + K		ml			
calculated		114.2	6.16		
ml		54	58		
Subtotal cations (Ca, Mg, Na, K).....					
CO ₂		25.0 ml	f 40		
12.45		32			
10.50		6.6	1.08		
1.65		62	65		
CO ₂		ml			
		10	0		
26		67			
SO ₄		0.2 Bach	5.0 ml	40.4	8.41
f 20.40		28.05 ⁵⁸	17.85	72	
		10.20	3.40		
		11.10			
Cl		25.0 ml	6.6	1.86	
f 20		mg	17.00	73	78
Mg · AgNO ₃		0.5	13.60		
			3.40		
			3.30		
Source of data d		79	Card Q	80	Q
F		10.0 ml	Abs 1105	1.0	0.05
		26	28		
NO ₃		ml	Abs	29	32
PO ₄		f	Abs	33	35
Abs		%			
HPO ₄		%	H ₂ PO ₄		
Total anions		11.40			
B		f	ml	36	38
Abs					
Al		ml		39	41
Abs (Al + Fe)					
Remarks and explanation on other side					
Fe		f 1.76	25.0 ml		
Total		ml	Abs	42	45
Dissol.		25.0 ml	Abs 0.005	0.01	0.00
Ma		f	ml		
Total		ml	Abs	46	49
Dissol.		ml	Abs		
Cu		ml		50	52
Pb		ml		53	54
Zn		ml		55	57
Subtotal cations (Al, Fe, Mn, Cu, Pb, Zn).....					
Subtotal cations (Ca, Mg, Na, K)					
Total cations					
Dissolved solids					
Residue at 180°		ml		58	
Dish No.					
Calculated		7.57			
Hardness					
Ca, Mg		25.0 ml	21.85	15.30	12.61
f 40		5.24	6.55	70	
Noncarbonate		1.09	2.0		
A.16				74	
Color		78-79	Card R	80	

State	County	Lat.	Long.	Seq. No.	Date	Samp. depth
					08/17/67	
Remarks: Yield: 20 gpm Field Sp. Con. 1,200 mm Time: 1100				Br _____ ml 26 28		
				I _____ ml 29 31		
Alk. as CaCO₃ _____ 32 35				Radiochemical Alpha (pc/l) _____ 55		
Free CO₂ _____ 36 38				Beta (pc/l) _____ 58		
SAR _____ 39 41				Ra (pc/l) _____ 61		
RSC _____ 42 44				U (ug/l) _____ 64		
Organics MBAS (ABS) _____ ml 45 47				Other data (67-79)^e		
				48 50		
				51 54		
a Master card A (21-34) b Master card A (52-66) c Type: 1. Pumped 4. Spigot 2. Bucket 5. Bailer 3. Forest 6. Special d Source of data: 1. USGS 5. Industrial 2. UPHS 6. Private 3. State Health 7. Educational 4. State				e Indicate constituent and card columns. Card S		
Chemist <u>NBC</u> Checked by _____ Date began _____ Date transmitted <u>9-27-67</u> Processed by _____ Verified _____						

Other Supporting Information



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Water Resources Division
P.O. Box 4070
Tucson, Arizona 85717

7-11	CHIEF	INFORMALLY REFER TO
	Mgt. Asst.	
	Asst.	
	CRO	
	CNO	
	Recd Sp.	
2	E. B. C. 1/20	
3	Pro. Sur.	DP

August 25, 1967

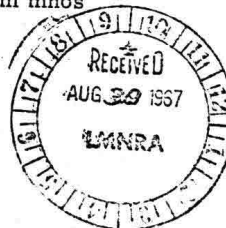
Mr. Charles A. Richey, Superintendent
Lake Mead National Recreation Area
National Park Service
Boulder City, Nevada 89005

Re: Eldorado (Lake Mohave) well site

Dear Mr. Richey:

Craig Bentley and Edward Denis, of our Phoenix subdistrict office, conducted an aquifer test on August 17, 1967, on the Eldorado well in the Lake Mead National Recreation Area. The well is in the SE $\frac{1}{4}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 3, T. 26 S., R. 65 E., Clark County, Nevada. The test data are as follows:

Depth of well	350 feet
Casing	10 in. diameter to 350 feet
Perforations	10 rows/round, 2x3/8 in. machine-cut, 195-350 feet; no gravel pack
Test pump setting	340 feet
Duration of test	14 hours
Maximum sustained yield	13 gpm
Static water level below land surface	167 feet
Maximum drawdown at 13 gpm	110 feet
Pumping water level below land surface	277 feet
Specific capacity	.05 gpm/ft drawdown
Coefficient of transmissibility	68 gpd/ft.
Water temperature	87°F.
Specific conductivity	1200 m mhos



August 25, 1967

The well is one-half mile west of Lake Mohave and about 150 feet above the mean lake level. The well was tested initially at a discharge of 20 gpm for a period of $6\frac{1}{2}$ hours until it became apparent that the well would break suction if allowed to continue pumping an additional five to ten minutes. During the remainder of the test, the driller pumped the well at varying discharges in an attempt to determine the maximum yield that could be sustained by the well. The discharge of 13 gpm and corresponding drawdown of 110 feet as stated above were determined in this manner. The results of the test indicate that the permeability of the aquifer is extremely low, and probably is not sufficient to sustain more than a 10 gpm well over a period of several years. A sample of the water was collected for chemical analysis, the results of which will be sent to you when available.

This completes our work on the Eldorado well.

Sincerely yours,



H. M. Babcock
District Chief

cc: Phoenix Subdistrict
Ralph Stratton, San Francisco
Col. Curtis Richey, San Francisco

water rights

August 24, 1962

Memorandum

To: Regional Director, Southwest Region
From: Superintendent, Lake Mead
Subject: Test Well at Eldorado Canyon.

This refers to my long distance telephone conversation with Mr. Kell of your office last week at which time the desirability of constructing a test well for domestic water was discussed with Mr. Kell.

At the present time the United States has no water or other utilities at Eldorado Canyon for the visiting public. The water facility is inadequate and does not reach to a location that would serve the camp and picnic grounds.

We are very anxious to attempt to locate water in Eldorado Canyon just above the developed area which would serve the limited government facilities. This canyon drains many miles of semi-mountainous country some of which contains springs and seeps. The canyon is very constricted at the mouth in the location of the concession development and government parking area and we believe there is a very good possibility that this restriction may close off the ground water in sufficient quantity to provide a source for our use. It is requested that funds for a 175 - 200 foot well be made available for investigation of water resources. Informal quotes indicate that the cost of drilling and casing a six or eight inch well would be approximately ten to twelve dollars a foot in average material, the cost to be reduced by \$2.00 a foot if casing is not undertaken.

If a well is unsuccessful in the canyon area then we would like to put in a test of approximately 75 - 100 feet at some location close to Lake Mohave below the concession development.

I will be in the Regional Office next week and look forward to the opportunity of discussing this matter with you and Mr. Kell.

Charles A. Richey
Superintendent

CARICHEY:dem

Copy to: Blair

154-CHL

September 17, 1959

Memorandum

To: Regional Director, Region Three
From: Chief, Water Resources Section
Subject: Water Right Dockets 19, 20, 21 and 22, Lake Mead

With copies of this memorandum we are distributing folders for the subject dockets as follows:

Docket No. 19	Stewart Point Vacation Cabin Homesites
Docket No. 20	Katherine Vacation Cabin Sites
Docket No. 21	Eldorado Canyon
Docket No. 22	Fire Mountain

Also attached are three extra prints of Drawing 6990, 6991, 6992 and 6993 for use as outlined in my memoranda of October 22, 1958, and April 10.

SIGNED

A. van V. Dunn
Chief, Water Resources Section

Attachments 4

Copy to: Superintendent, Lake Mead, with 4 attachments
Chief, WODC, with 4 attachments

WESTERN OFFICE DESIGN & CONSTRUCTION	
SEP 27 1959 A.M.	
CHIEF	
ADMIN. ASSIST.	
PERSONNEL	
PLANS & PROG.	
SUPPLY	
ARCHITECT	
CIVIL ENGINEER	
LAND ARCH.	
ACTION TAKEN-DATE	
9/21	

September 1959

LAKE MEAD - ELDORADO CANYON IRRIGATION STUDY				
	Net Irrigation Area	% of Gross Area to be Irrigated	@ 5 AF/A/AN	@ 8 AF/A/AN
*Gross Area				
18.27 acres	9.09 acres	50%	45.45 AF	72.72 AF

*Note: Proposed tool shed and yard area, proposed Picnic Shelter area and total campground area not included due to insufficient data.

Derived from Drawing NRA-LM-6992.

