



WATER-RIGHT DOCKET

Lake Mead National Recreation Area

Docket No: 38

COTTONWOOD COVE WELL #4.

Supporting Hydro Data

06-09-1969: memorandum to regional director from acting superintendent regarding cottonwood cove well

LAME
Docket No. 16
D5039

File Copy

COPY TO	WASS	DATE	6/13/69
FOR YOUR	☒ INFORMATION	☐ ACTION	
OFFICE OF LAND & WATER RIGHTS, SSC			

June 9, 1969

RECEIVED	
San Francisco Planning and Service Center	
Office of Land and Water Rights	
NATIONAL PARK SERVICE	
JUN 10 1969	
ACT. INFO.	DATE
1 CHIEF	
2 ASST. CHIEF	
Coord & Conin	
APPRAISAL	
ACQUISITION	
EXCHANGE	
WATER RIGHTS	
FILE	

Handwritten notes:
D. Johnson
#16 copy for H2 O
from this well (to you)
per script.

Memorandum

To: Regional Director, Southwest Region
From: Acting Superintendent, Lake Mead
Subject: Cottonwood Cove Well

Enclosed for your information is a copy of a well log and report to the State Engineer of Nevada and a copy of the well driller's report of the well recently completed at Cottonwood Cove. The information for the test pumping shows 650 gallons per minute with a draw down to 47 feet from the top of the casing. However, it should be noted that at the beginning of the test the draw down was to 50 feet from the top of the casing. After about 36 hours pumping the water level rose to 47 feet from the top. The maximum capacity of the pump used for pump testing was 650 gallons per minute.

The contractor was of the strong opinion that the well would produce at least 1,000 gallons per minute.

(Sgd) C. E. Johnson

C. E. Johnson

Enclosures

cc:
Chief, SSC-OLW w/enclosures ✓
Regional Director, Western Region w/enclosures
DCSSC w/enclosures

WELL LOG AND REPORT TO THE STATE ENGINEER OF NEVADA

PLEASE COMPLETE THIS FORM IN ITS ENTIRETY

Log No.
 Rec. 19
 Well No.
 Permit No.
Do not fill in

Owner National Park Service Driller Effinger Drilling & Pump Servi
 Address Box 127 Boulder City, Nev. 89005 Address Box 579 City City Lic. No. 21
 Location of well: $\frac{1}{4}$ Sec. 24, T. 28 N/S, R. 65 E, in Clark Coun
 or Cottonwood Cove. Nevada
 Water will be used for Quasi-Municipal Total depth of well 200 feet
 Size of drilled hole 10 inch Weight of casing per linear foot ~~33.65~~ 40.48
 Thickness of casing .365 Temp. of water
 Diameter and length of casing 10" ID 200 feet
 (Casing 12" in diameter and under give inside diameter; casing 12" in diameter give outside diameter)
 If flowing well give flow in c.f.s. or g.p.m. and pressure
 If nonflowing well give depth of standing water from surface 7 feet
 If flowing well describe control works (Type and size of valve, etc.)
 Date of commencement of well May 1, 1969 Date of completion of well May 23, 1969
 Type of well rig " Stumdrill 72"

LOG OF FORMATIONS

From feet	To feet	Thickness feet	Type of material	Water-bearing Formation, Casing Perforations, Etc.
0	30	30	Sand & Gravel (Water 19')	Chief aquifer (water-bearing formation)
30	120	90	Fine Sand (Water)	from <u>19</u> to <u>150</u> ft.
120	125	5	Gravel (Water)	Other aquifers <u>175-200</u>
125	150	50	Red Sand (Water)	
150	175	25	Clay	
175	194	19	Gravel & Boulders (Water)	
194	200	6	Cemented Gravel	
				First water at <u>19</u> feet.
				Casing perforated from <u>178</u> to <u>200</u> ft.
				Size of perforations <u>1/8" x 6"</u> <u>Torch</u>

(OVER)

219

LOG OF FORMATIONS—Continued

From feet	To feet	Thickness	Type of material

CASING RECORD

Diam. casing	From feet	To feet	Length	"Remarks"—Seals, Grouting, Etc.
40" ID	0	200	200	Cemented from 0 to 10 feet 3/4 yard of cement Casing perforated from 178' to 200' Blank casing from 158 to 178' Perforated casing from 141.5 to 158'

GENERAL INFORMATION—Pumping Test, Quality of Water, Etc.

Pumped tested 48 hours. Pumping 650 GPM. Drawdown to 47 feet from top of casing.

WELL DRILLER'S STATEMENT

This well was drilled under my jurisdiction and the above information is true to my best information and belief.

Effinger Drilling & Pump

Signed.....
Well Driller

By.....

License No. **212**

Dated **June 3,** 19**69**

(Not to be filled in by Driller)

WELL DRILLER'S REPORT **NATIONAL PARK SERVICE - LWSSC**

1 WELL OWNER <u>PARK</u> Name <u>National Park Service</u> Address <u>B. C., Nevada</u> Owners Well No. _____ Local Site Name _____		Permit No. _____
2 LOCATION OF WELL STATE <u>Nevada</u> County <u>Clark</u> Ground Water Basin <u>Las Vegas</u> N/S _____ Ft., E/W _____ Ft. From _____ Corner _____ of Sec. _____, T. _____ N/S, R. _____ E/W, _____ M Distance from cities, roads, railroads etc. _____		10 CONSTRUCTION Gravel Packed? Yes ☐ No ☒ Washed gravel? Yes ☐ No ☒ Gravel Size _____ in. Gravel placed from _____ ft. To _____ ft. " " " " " " " " " " " " Surface seal provided? Yes ☒ No ☐ Casing Seal? Yes ☐ No ☒ To what depth? <u>10</u> ft. Size or Diam. _____ Seal material <u>Grout</u> Did any strata contain unpotable water? Yes ☐ No ☒ Type of contam. _____ Strata depth _____ Sealing method _____ From _____ ft. To _____ ft. " " " " " " " " " " " "
3 TYPE OF WORK (check) New Well ☒ Replacement Well ☐ Deepening ☐ Repair ☐ Destroying ☐ If destroying, describe material & procedure _____		11 WATER LEVELS (feet below ground surface) Depth water first found <u>19</u> ft. date <u>May 1, 1969</u> Static water level before perforating " " " " " " after " " " " " " developing <u>7</u> " " <u>May 23, 1969</u>
4 NATURE OF USE (check) Testwell ☐ Domestic ☒ Industrial ☐ Municipal ☒ Stockwater ☐ Irrigation ☒ Mining ☐ Others ☐ _____		12 FLOWING WELL (check) No control ☐ Controlled by? Valve ☐ Cap ☐ Plug ☐ Does well leak around casing? Yes ☐ No ☐ Artesian pressure _____ ft. above ground surface, Artesian flow _____ g.p.m., date _____
5 DRILLING METHOD (check) Rotary ☐ Cable Tool ☒ Other ☐		13 WELL TESTS Dd - Drawdown is the distance in feet the water level is lowered below the static level Developed? Yes ☒ No ☐ Bailed _____ hrs., rate _____ gpm Pumped <u>48</u> " " <u>450 GPM</u> " Surged _____ hrs. method _____ rate _____ Pump test? Yes ☒ No ☐ By whom? <u>Driller</u> Pump type _____ H.P. _____ Outlet size _____ Depth pumped from _____ ft., date _____ Yield <u>650</u> gpm w/ <u>50</u> ft. Dd., after <u>1</u> hrs " <u>650</u> " " <u>47</u> " " " <u>36</u> " " " " " " " " " " " Bailer test " " " " " " " " " " Recovery _____ ft. in _____ (Time) Electric log? Yes ☐ No ☒ Chemical analysis? Yes ☒ No ☐ Water temp. <u>68</u> °F Quality <u>Good</u>
6 BORE DIAMETER & DEPTHS <u>16</u> in. from <u>0</u> ft. to <u>10</u> ft. <u>10</u> " " <u>10</u> " " <u>200</u> " " " " " " " " " " " " " " " " " " "		14 PUMP Installed? Yes ☐ No ☒ Mfr's name _____ Cap. _____ Type _____ H.P. _____ Model No. _____ Outlet size _____ in. Driven by _____ Depth to pump or bowels _____ ft. date _____
7 CASING SCHEDULE <u>365</u> None ☐ Steel ☒ Welded ☒ Threaded ☐ Other ☐ New ☒ Used ☐ <u>10</u> in. I.D. from <u>0</u> ft. to <u>200</u> ft. Gage <u>365</u> " Casing extends above ground level <u>1</u> ft.		15 WELL DRILLER'S STATEMENT Date started <u>5/1/69</u> Date completed <u>5/23/69</u> State log filed? Yes ☒ No ☐ This well was drilled under my supervision and this report is true to the best of my knowledge and belief. Co. Name <u>Effinger Drilling & Pump Service</u> Name _____ Address <u>P. O. Box 579 Las Vegas, Nev.</u> License No. <u>212</u> Date <u>June 2, 1969</u>
8 PERFORATIONS Perforated? Yes ☒ No ☐ Type of perforator used <u>Torch</u> Size of perforations <u>1/8</u> in. by <u>6</u> in. Perforation per row _____ Rows per ft. <u>6</u> _____ perforations from <u>178</u> ft. to <u>200</u> ft. " " " <u>141.5</u> " <u>158</u> " " " " " " " " " " " " " " " " " " "		
9 SCREENS Well screen installed? Yes ☐ No ☒ Mfr's name _____ Type _____ Model No. _____ Diam.(in.) Slot size(in. x in.) Placed from (ft.) To (ft.) _____ x _____ to _____ _____ x _____ to _____ _____ x _____ to _____		

NEVADA STATE HEALTH DIVISION
LABORATORY AND RESEARCH SECTION
ENVIRONMENTAL SERVICES BRANCH
790 Sutro Street
Reno
625 Shadow Lane
Las Vegas

CLARK
COUNTY
T. R. Sec.
Area
Cottonwood Cove, Searchlight

WATER ANALYSIS REPORT

Laboratory No. 1939
Submitted by Mr. Pearson
Source
Reason for analysis Drinking
Use Domestic
Owner Lake Mead National Rec.
Submit report to Lake Mead National Rec.
Street P. O. Box 127
City Boulder City, Nevada
Special requests
Date sample taken 6/11/69
Date sample analyzed 6/11/69
If well: Depth of well
Depth of casing
Diam. of casing
Construction method
How many served
LOCATION:
Shallow or Other: New Well

Chemical Content

RESULT OF TESTING

Color 0
Turbidity 0
Sediment 5
pH value 9.00
Total dissolved solids 707.0 1000 ppm
Alkalinity 34.0 ppm
Bicarbonate 41.0 ppm
Carbonate 0 ppm
Total iron 0.44 0.3 ppm
Total hardness (CaCO₃) 220.0 ppm
Calcium 83.2 250 ppm
Magnesium 2.92 125 ppm
Sulfate 336.0 250 ppm
Chloride 116.0 250 ppm
Nitrate 1.00 45 ppm
Sodium and Potassium 150.08 ppm
Arsenic 0 0.05 ppm
Fluoride 1.35 2.4 ppm

alt. source: C. Cove

Chemist Cornelius J. Pelaccio

THE MAXIMUM LIMITS FOR PUBLIC SUPPLIES AND THE RECOMMENDED LIMITS FOR PRIVATE SUPPLY ARE AS FOLLOWS:

Total solids should not exceed 500 ppm for a water of good chemical quality. However, if such water is not available, a total solids content of not more than 1,000 ppm may be permitted.

Nitrate should not exceed 45 ppm.

Iron and manganese together should not exceed 0.3 ppm.

Magnesium should not exceed 125 ppm.

Neither calcium, sulfate, nor chloride should exceed 250 ppm.

Arsenic shall not exceed 0.05 ppm.

Fluoride shall not exceed 2.4 ppm.

If you have any questions regarding the above standards, or questions involving the quality of your water supply, please direct them to your county health department, if available. If none is available in your county, direct your questions to the Environmental Health section of the State Health Division at one of the above addresses. You are advised to submit a sample for bacterial testing if you have not already done so.

WR# 16

FORM 9-1642B
(DEC. 68)Well No. (D-28-65) 24 CBC 23

WELL SCHEDULE

U. S. DEPT. OF THE INTERIOR

GEOLOGICAL SURVEY

WATER RESOURCES DIVISION

MASTER CARD

Record by C. Bentley Source of data OUHCO (Mentimeter) Date 2-25-70 Map Sp111+Mm, 1:62500

State Nevada County Clark

Latitude: 35 29 25 N Longitude: 114 41 04 W Sequential number: 1

Lat-long accuracy: 0 2 5 6 5 24 Other number: NPS no. 4

Local well number: _____ Other number: _____

Local use: _____ Owner or name: National Park Service

Ownership: County, Adm Govt, City, Corp or Co, Private, State Agency, Water Dist _____

Use of: Air cond, Bottling, Comm, Dewater, Power, Fire, Dom, Irr, Med, Ind, Rec, _____

Use of well: Anode, Drain, Seismic, Heat Res, Obs, Oil-gas, Recharge, Test, Unused, Withdraw, Waste, Destroyed _____

DATA AVAILABLE: Well date _____ Freq. W/L meas.: _____ Field aquifer char. _____

Hyd. Lab. data: _____

Qual. water date: type: Complete

Freq. sampling: Original Pumpage inventory: yes _____ no _____ period: _____

Aperture cards: _____

Log data: Driller's log

WELL-DESCRIPTION CARD

SAME AS ON MASTER CARD Depth well: 200 ft. 200 Meas. accuracy _____

Depth cased: _____ ft. _____ Casings type: _____ Diam. _____ in _____

Finish: porous gravel w. concrete, (perf.), (screen), gallery, end, _____

Method: (A) (B) (C) (D) (H) (J) (P) (R) (T) (V) (W) (X) (Y) (Z) _____

Drilled: air bored, cable, dug, hyd jetted, air reverse trenching, driven, drive wash, _____

Date Drilled: Aug. 1969 9:6:9 Pump intake setting: _____ ft. _____

Driller: name _____ address _____

Lift: (A) (B) (C) (J) multiple, multiple, none, piston, rot, submerg, turb, other _____ Deep _____ Shallow _____

Power: (type) diesel, elec, gas, gasoline, hand, gas, wind; H.P. _____ Trans. or meter no. _____

Descrip. MP _____ ft. below LSD, Alt. MP _____

Alt. LSD: 660 6:6:0 Accuracy: DPD mlp 200 to 20 ft _____

Water Level: 6 ft. above MP; Ft. below LSD 6 Accuracy: Reported _____

Date meas: Aug. 69 8:6:9 Yield: 600 6:0:0 Method determined _____

Drawdown: 39 ft. 3:9 Accuracy: Rpt. 6 Pumping period 48 hrs. 4:8

QUALITY OF WATER DATA: Iron _____ Sulfate _____ Chloride _____ Hard. _____

Sp. Conduct _____ K x 10⁶ _____ Temp. 70 °F 70 °C Date sampled 2-25-70

Taste, color, etc. None

Well No. (D-28-65) 24 CBC 23 - Nevada



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
SAN FRANCISCO PLANNING AND SERVICE CENTER
450 GOLDEN GATE AVENUE, BOX 36025
SAN FRANCISCO, CALIFORNIA 94102

H. R. Cogg
7/21
WN

IN REPLY REFER TO:

L54
LWSSC - LAME
(Cottonwood Cove well No. 4
WR Docket No. 16)

16 JUL 1969

MW

Memorandum

To: Chief, Division of Water Resources, WASO
Attention: Supervisory Hydraulic Engineer

From: Chief, Office of Land and Water Rights, SSC

Subject: Cottonwood Cove well, Lake Mead

In reply to your June 18 memorandum, Supervisory Hydrologist G. Witucki confirms the identification of the subject well as Cottonwood Cove well No. 4, WR Docket No. 16.

Based on telephone conversations between Mr. D. Chavez of this office and Mr. W.M. Loftis, Chief of Maintenance, Lake Mead, we are able to define the location of well No. 4 as follows: Approximately 200 feet east of well No. 3; SW $\frac{1}{4}$, NW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 24, T 28N, R 65E. Enclosed is a map which gives an indication of all the well locations at Cottonwood Cove. Also enclosed is a copy of the chemical analysis of the subject well for your docket assembly.

Enclosures

E Filed

W. M. Loftis

cc:
Regional Director, Western (2)
Chief, DCSSC

June 18, 1969

L54-OLW

OLW
6/19
WR

Memorandum

To: Chief, Office of Land and Water Rights, SSC
Attention: Mr. Witucki

From: Chief, Branch of Water Resources

Subject: Cottonwood Cove well, Lake Mead

We acknowledge receipt of copy of Acting Superintendent Johnson's June 9 memorandum to the Regional Director, Southwest Region enclosing copies of Well Log and Report to the State Engineer of Nevada and Well Drillers Report.

We are filing our copies in Docket No. 16 and suggest that other docket holders do likewise.

As time permits, we would appreciate being advised of the exact location of the well in Sec. 24 so that we may plot its location on the application map in the docket. If or when available, a copy of the chemical analysis should be furnished all docket holders. Also, from the information contained in the docket on the earlier wells drilled, the subject well should probably be identified as Cottonwood Cove Well No. 4.

(Signed)

E. W. Reed

cc:
Regional Director, Southwest (2)
Chief, DC-SSC
OLWW-Mr. Reed, 801 Bg., Room 718

VABerté:ljc

5/12
ocw
L54 LWSSC
LAME

8 MAY 1969

Memorandum

To: Regional Director, Southwest Region
From: Chief, Office of Land and Water Rights, SSC
Subject: Pump test - Proposed Cottonwood Cove well at Lake Mead

During recent telephone conversations between this office and the Southwest Region, regarding the drilling of a new well at Cottonwood Cove, it was pointed out that the administration of the contract would be accomplished by the park with the assistance of the Southwest Region. Further, it is our understanding that the Southwest Region has provided the drilling specifications which contain instructions for the pump testing of this well. This test was to be accomplished by the contractor and perhaps with the help of the park.

It is requested that this office be provided with a copy of the results from this test, so as to maintain current files concerning this aquifer.

We appreciate your cooperation in these matters.

(Sgd) JOHN E. BENTON

cc:
Chief, Br. of Water Resources, WASO
Superintendent, Lake Mead

LAME

FILE CODEMESSAGE MEMO**154 LWSGC LANE**Date **1/21/69**

Time _____

Phone Number Used **8660**

Phone Number Called _____

☒ CHIEF _____
☒ ASST. CHIEF _____
 _____ STAFF ASSISTANT _____
 _____ CHIEF APPRAISER _____
 _____ CADASTRAL _____
 _____ ACQUISITION _____
 _____ SPECIAL PROJECT _____
 _____ EXCHANGE _____
 _____ HYDR. ENGINEER _____
☒ FILE _____
☒ OTHER **Supv. Hydrologist**

☒ INFORMATION _____
 _____ TAKE ACTION _____
 _____ PREPARE REPLY _____
 _____ PLEASE PHONE _____

PHONE (☒)

VISIT ()

CORRESPONDENCE ()

 FROM: **Asst Supt Johnson, Lake Mead**
& Chief of Maint. Bill Loftis
TO: **WEFields, LWSGC**

SUBJECT:

Asst Supt Johnson and Bill Loftis called concerning a test well at Cottonwood Cove, Lake Mead.

Informed them that we would need additional justification and would have to get approval from the Washington Office. Mr. Johnson stated that he was in Washington during December and had received permission from Mr. Manuel Morris to drill this well. We told him we would be glad to drill it but that we thought we would have to get something in writing from Mr. Morris. Meanwhile, we would proceed with writing the specifications.

cc:

 ➤ **Chief, OLWW, WSC**

RECOMMENDED ACTION:

(Sgd) William E. Fields

BY: _____

Docket Information

Number of Documents in Docket 12

Documents Dated from 1/21/1969 to 2/25/1970

Docket Compiled: 4/21/2011