WATER-RIGHT DOCKET

Great Sand Dunes National Monument

Docket No: 1

WELL #1

State Water Rights Documentation

11-09-1990: letter to colorado division of water resources from chief, water rights branch regarding permit no. 036273-f, well no. 1

United States Department of the Interior
NATIONAL PARK SERVICE
WATER RESOURCES DIVISION
301 SOUTH HOWES ST., ROOM 335
FT. COLLINS, COLORADO 80521

IN REPLY REFER TO:
L54(479)
GRSA/Water Rights

November 9, 1990

State Engineer
Colorado Division of Water Resources
818 Centennial Bldg.
1313 Sherman St.
Denver, Colorado 80203

Re: Permit No. 036273-F, Well no. 1 at Great Sand Dunes National Monument

Dear Sir:

Attached is the completed, signed, and notarized "Statement of Beneficial Use of Ground Water" for the above-referenced permit and associated well. Should you have any questions, contact me at (303) 493-1441.

Sincerely,

Owen R. Williams
Chief, Water Rights Branch

Attachments

cc: RMR - Hermance
GRSA - Superintendent
479 - Williams, Pettee, Christensen

WRJ-25-75

COLORADO DIVISION OF WATER RESOURCES

818 Centennial Bldg., 1313 Sherman St.
Denver, Colorado 80203

TYPE OR PRINT IN BLACK INK. COPY OF ACCEPTED STATEMENT MAILED ON REQUEST.

STATE OF COLORADO } SS. COUNTY OF Larimer

AFFIDAVIT

__X__ STATEMENT OF BENEFICIAL USE OF GROUND WATER
_____ AMENDMENT OF EXISTING RECORD
_____ LATE REGISTRATION

PERMIT NUMBER 036273-F

LOCATION OF WELL

THE AFFIANT(S) United States National Park Service Water Resources Division whose mailing address is 301 South Howes St., Room 353

City Fort Collins (STATE) Colorado (ZIP) 80521

County Alamosa

SE ¼ of the SE ¼, Section 34

Twp. 26 S (N OR S), Rng. 73 W (E OR W), 6th P M

being duly sworn upon oath, deposes and says that he (they) is (are) the owner(s) of the well described hereon; the well is located as described above, at distances of 330 feet from the South (NORTH OR SOUTH) section line and 825 feet from the East (EAST OR WEST) section line; water from this well was first applied to a beneficial use for the purpose(s) described herein on the 23 day of April, 19 90; the maximum sustained pumping rate of the well is 80 gallons per minute, the pumping rate claimed hereby is 25 gallons per minute; the total depth of the well is 350 feet; the average annual amount of water to be diverted is 8.9 acre-feet; for which claim is hereby made for domestic and municipal purpose(s); the legal description of the land on which the water from this well is used is _____ of which _____ acres are irrigated and which is illustrated on the map on the reverse side of this form; that this well was completed in compliance with the permit approved therefor; this statement of beneficial use of ground water is filed in compliance with law; he (they) has (have) read the statements made hereon; knows the content thereof; and that the same are true of his (their) knowledge.

(COMPLETE REVERSE SIDE OF THIS FORM)

Signature(s) O R Willis

Subscribed and sworn to before me on this 2 day of November, 19 90

My Commission expires: My Commission Expires October 9, 1994 (SEAL)

Leslie A Meyers NOTARY PUBLIC

ACCEPTED FOR FILING BY THE STATE ENGINEER OF COLORADO PURSUANT TO THE FOLLOWING CONDITIONS:

FOR OFFICE USE ONLY

Court Case No. _____

Prior. _____ Mo. _____ Day _____ Yr. _____

Div. _____ Cty. _____

Sec. _____ _____ ¼. _____ ¼. _____ ¼.

Well Use _____ _____ _____ _____

Dist. _____ Basin _____ Man. Dis. _____

DATE _____ STATE ENGINEER _____ BY _____

Well drilled by Red Top Drilling Company Lic. No. 319

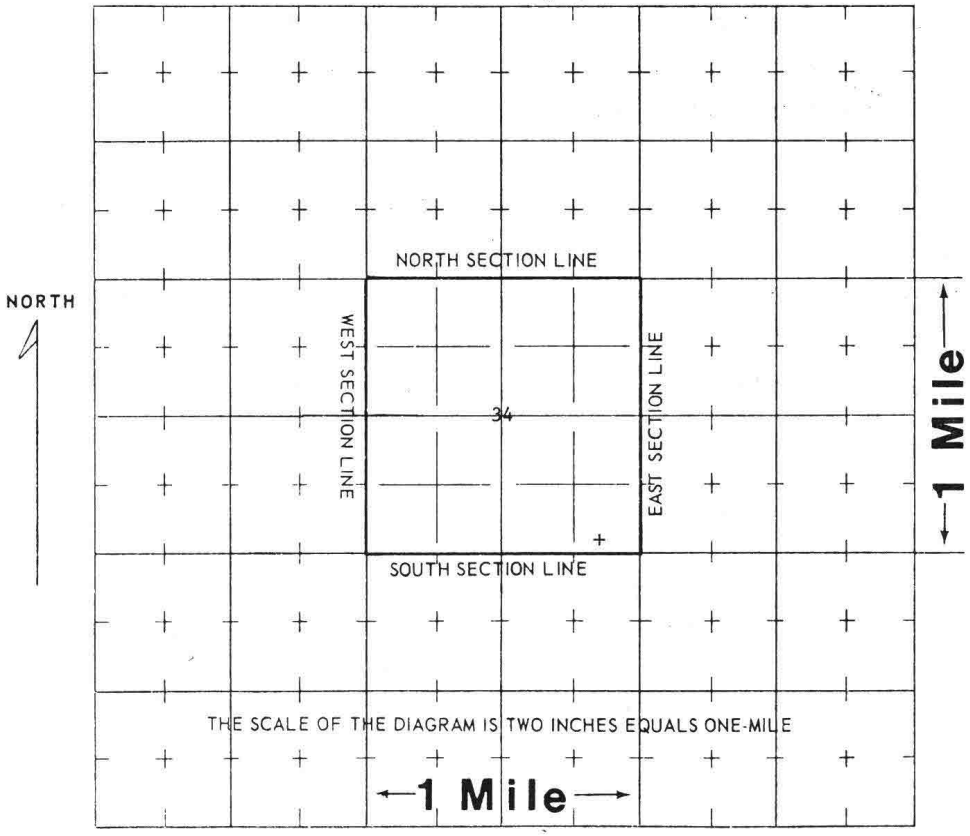
Permanent
Pump installed by Burk Drilling, Inc. Lic. No. 1137

Meter Serial No. 89355746 [X] Flow Meter Date Installed 09/26/89

Owner of land on which
water is being used United States of America (National Park Service

THE LOCATION OF THE WELL MUST BE SHOWN AND FOR LARGE CAPACITY IRRIGATION WELLS THE AREA ON WHICH THE WATER IS USED MUST BE SHADED OR CROSS-HATCHED ON THE DIAGRAM BELOW.

This diagram represents nine (9) sections. Use the **CENTER SQUARE** (one section) to indicate the location of the well, if possible.



WATER EQUIVALENTS TABLE (Rounded Figures)

An acre-foot covers 1 acre of land 1 foot deep.
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm).
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.
100 gpm pumped continuously for one year produces 160 acre-feet.

**(WHITE AND PINK COPY TO BE FILED WITH THE STATE ENGINEER
PINK COPY WILL BE RETURNED TO OWNER)**

ROY ROMER
Governor

JERIS A. DANIELSON
State Engineer

OFFICE OF THE STATE ENGINEER
DIVISION OF WATER RESOURCES

1313 Sherman Street-Room 818
Denver, Colorado 80203
(303) 866-3581

INFORMATION ABOUT YOUR WELL PERMIT

Please note that this permit is valid for only one year after the date issued unless extended for good cause shown by the issuing agency. This means that the well must be constructed, the water therefrom put to beneficial use, and then the enclosed Statement of Beneficial Use of Ground Water completed, signed, notarized, and received by the Division of Water Resources prior to the expiration date of the permit. Unless this is done, the permit shall expire and be of no force or effect at the expiration of that one year. The enclosed Statement of Beneficial Use of Ground Water should be filed as soon as possible after the water has been put to beneficial use; but, in any event, no later than the expiration date of the permit.

If you are unable to construct the well, put it to beneficial use, and submit the Statement of Beneficial Use prior to the expiration date of the permit, you may request an extension of time. The State Engineer may, with good cause shown, grant one (1) extension for a period not to exceed one (1) year. In order for such a request to be considered, it must be received, in writing, by the State Engineer prior to the expiration date of the permit and must be accompanied by a filing fee of sixty dollars ($60). The request must state the reasons why the well has not been completed and put to use and give an estimate of time necessary to complete it and put it to beneficial use.

"Beneficial Use" is generally defined as the use of that amount of water that is reasonable and appropriate under reasonably efficient practices to accomplish without waste the purpose for which the appropriation is lawfully made.

Your well must be constructed and the pump installed by a contractor or contractors licensed by the State of Colorado, or one or both can be done by you with equipment owned and operated by you.

Please note the "CONDITIONS OF APPROVAL" on your permit. These must be complied with for the permit to be valid.

The original of the well permit is on file in the Office of the State Engineer, and additional copies may be obtained therefrom if needed. A fee of fifty cents (50¢) per page must accompany requests for copies.

NON-EXEMPT WELL PERMIT REFERENCE C.R.S. 1973, 37-90-137 AND 37-80-110.

Form #0946

02-28-1990: permit application form

818 Centennial Bldg., 1313 Sherman St., Denver, Colorado

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WATER RESOURCES
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COLO.

RECEIVED
OCT 30 1989
WATER RESOURCES
STATE ENGINEER
COLO.

FEB 05 '90
WATER RESOURCES
STATE ENGINEER
COLO.

PERMIT APPLICATION FORM

Application must be complete where applicable. Type or print in BLACK INK. No overstrikes or erasures unless initialed.

FOR: ( ) A PERMIT TO USE GROUND WATER
( ) A PERMIT TO CONSTRUCT A WELL
( ) A PERMIT TO INSTALL A PUMP
( ) REPLACEMENT FOR NO. _____
(X) OTHER Alternate Point of Diversion for GRSA Well No. 3

Decreed In WATER COURT CASE NO. 81CW163

(1) APPLICANT - mailing address

NAME United States National Park Service
Water Resources Division

STREET 301 S. Howes St., Room 353

CITY Fort Collins, CO 80521
(State) (Zip)

TELEPHONE NO. (303) 221-8311

(2) LOCATION OF PROPOSED WELL

County Alamosa

SE ¼ of the SE ¼, Section 34

Twp. 26 S (N.S.), Rng. 73 W (E.W.), 6th P.M.

(3) WATER USE AND WELL DATA

Proposed maximum pumping rate (gpm) 25 gpm

Average annual amount of ground water to be appropriated (acre-feet): 8.9 acre feet

Number of acres to be irrigated: _____

Proposed total depth (feet): 350 feet

Aquifer ground water is to be obtained from:

_____

Owner's well designation GRSA Well No. 1

GROUND WATER TO BE USED FOR:

( ) HOUSEHOLD USE ONLY - no irrigation (0)
(X) DOMESTIC (1)
( ) LIVESTOCK (2)
( ) COMMERCIAL (4)
( ) INDUSTRIAL (5)
( ) IRRIGATION (6)
(X) MUNICIPAL (8)
( ) OTHER (9) _____

DETAIL THE USE ON BACK IN (11)

(4) DRILLER

Name _____

Street _____

City _____ (State) (Zip)

Telephone No. _____ Lic. No. _____

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN

Receipt No. 15562

OWNER'S COPY

Basin _____ Dist. _____

CONDITIONS OF APPROVAL

This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.

1) APPROVED FOR THE USE OF AN EXISTING STRUCTURE, A WELL REGISTERED UNDER NO. 16400. ISSUANCE OF THIS PERMIT HEREBY CANCELS PERMIT NO. 16400.
2) APPROVED PURSUANT TO CRS 37-90-137(2) AND THE ATTACHED FINDINGS OF THE STATE ENGINEER DATED FEBRUARY 26, 1990.
3) APPROVED AS A SUPPLEMENTAL WELL FOR THE PURPOSE OF OBTAINING THE ORIGINAL APPROPRIATION OF WELL NO. 36263-F (GRSA WELL NO. 3, 81-CW-163).
4) THE SIMULTANEOUS MAXIMUM PUMPING RATE OF THIS WELL AND WELL NO. 36263-F SHALL NOT EXCEED 25 GPM.
5) THE COMBINED AVERAGE ANNUAL AMOUNT OF GROUND WATER APPROPRIATED BY THIS WELL AND WELL NO. 36263-F SHALL NOT EXCEED 8.0 ACRE-FEET.
6) THIS WELL AND WELL NO. 36263-F ARE RESTRICTED TO SERVING DOMESTIC AND MUNICIPAL PURPOSES IN A NATIONAL PARK VISITOR CENTER, PICNIC GROUND, AND EMPLOYEE HOUSING AND WORK CENTER.
7) TOTALIZING FLOW METERS MUST BE INSTALLED ON THIS WELL AND WELL NO. 36263-F, AND BE MAINTAINED IN GOOD WORKING ORDER. PERMANENT RECORDS OF ALL DIVERSIONS MUST BE MAINTAINED BY THE WELL OWNER (RECORDED AT LEAST ANNUALLY) AND BE SUBMITTED TO THE DIVISION ENGINEER UPON REQUEST.
8) THE USE OF THIS WELL AS A SUPPLEMENTAL POINT OF DIVERSION IS A CHANGE IN WATER RIGHT. THIS WELL SHALL BE JUNIOR TO ALL VESTED WATER RIGHTS UNTIL SUCH TIME AS THE CHANGE IN WATER RIGHT HAS BEEN APPROVED BY THE DIVISION 3 WATER COURT AND THE WELL THEN MUST BE OPERATED PURSUANT TO THE TERMS AND CONDITIONS OF THAT DECREE.
9) THIS WELL SHALL BE LOCATED AT LEAST 600 FEET FROM ANY OTHER WELL (WELL NO. 36263-F) UNLESS PRIOR WRITTEN APPROVAL IS OBTAINED FROM THE DIVISION OF WATER RESOURCES.
10) THE OWNER SHALL MARK THE WELL IN A CONSPICUOUS PLACE WITH APPROPRIATE WELL PERMIT NUMBERS, NAME OF THE AQUIFER, AND COURT CASE NUMBERS. HE SHALL TAKE NECESSARY MEANS AND PRECAUTIONS TO PRESERVE THESE MARKINGS.

APPLICATION APPROVED

PERMIT NUMBER 036273 - F

DATE ISSUED FEB 28 1990

EXPIRATION DATE FEB 28 1991

Jim A. Lochhead
(STATE ENGINEER)

BY Bruce E. McCormick

ID 3-35 COUNTY 02

ROY ROMER
Governor

JERIS A. DANIELSON
State Engineer

OFFICE OF THE STATE ENGINEER
DIVISION OF WATER RESOURCES

1313 Sherman Street-Room 818
Denver, Colorado 80203
(303) 866-3581

March 2, 1990

MEMORANDUM

TO: NATIONAL PARK SERVICE, WATER RESOURCE DIVISION

FROM: GLENN GRAHAM

SUBJECT: Well Permit No. 36273-F

Please note that even though this well has been in existence for some time, this office has issued a new permit for this well to be used to supplement another well. As a new well permit has been issued, it will be necessary for you to submit a new Statement of Beneficial Use when the subject well is returned to service under the new permit number shown on the enclosed permit.

Please feel free to contact this office if you have any questions regarding the completion and submission of the required Statement of Beneficial Use.

Form WP/memo.txt
i

FINDINGS OF THE STATE ENGINEER

IN THE MATTER OF AN APPLICATION FOR A PERMIT TO CONSTRUCT (USE AN EXISTING STRUCTURE) A WELL IN WATER DIVISION NO. 3, ALAMOSA COUNTY, COLORADO.

APPLICANT: UNITED STATES DEPARTMENT OF INTERIOR, NATIONAL PARK SERVICE

PERMIT NO. 36273-F

In compliance with C.R.S. 37-90-137(1), United States Department of Interior, National Park Service, Water Resources Division, 301 South Howes Street, Room 353, Fort Collins, CO 80521 (hereinafter "applicant"), submitted an application for a permit to use an existing structure, registration No. 16400. Based on the information provided by the applicant and the records of the Division of Water Resources, the State Engineer finds as follows:

1. The application was last received complete by the State Engineer on February 5, 1990.

2. The existing well is located in the SE 1/4 of the SE 1/4 of Section 34, Township 26 South, Range 73 West, New Mexico Principal Meridian.

3. The existing location is outside the boundaries of a designated ground water basin.

4. The proposed maximum pumping rate for this well is 25 gallons per minute.

5. The proposed average annual amount of ground water to be appropriated is 8.9 acre-feet.

6. The registration for well No.16400, accepted December 8, 1961 states that well No. 16400 was constructed in May, 1957 to a depth of 350 feet and was perforated in the interval between 290 feet and 320 feet. The well produces from the fractured basement complex rocks. In a pump test conducted in May, 1957, this well produced 18 gpm.

7. The registration for well No. 16400 states that the well is used for domestic and irrigation purposes in the Great Sand Dunes National Monument.

8. Well No. 16400 was capped when its functions were replaced by GRSA well No. 3, late registered pursuant to the decree as well No.36263-F.

9. The applicant proposes to reopen well No. 16400 and to apply water diverted from the well to the following beneficial use: Domestic and municipal uses in a National Park visitor center, picnic ground, maintenance area and employee housing.

10. The applicant has proposed using this well to supplement well No. 36263-F (GRSA well No. 3 decreed in Case No. 81CW163) for the purpose of obtaining the original appropriation of such well which can no longer be obtained from the well.

11. Well NO. 36263-F was decreed as GRSA Well No. 3 on June 30, 1989 for 25 gpm for municipal and domestic purposes. The well was constructed on August 4, 1978 to a total depth of 375 feet, and is an open hole from 115 feet below land surface. The well produces from fractured granite. In a pump test conducted on August 9, 1978, this well produced up to 25.8 gpm in an 5 hour and 49 minute test with a drawdown of 55 feet. The depth to static water level was 117 feet.

12. A field inspection by Division of Water Resources personnel revealed that GRSA well No. 3 decreed in Case No. 81CW163 has been used to supply water to a picnic ground, visitor center, and work center.

No material injury to vested water rights would result from the issuance of the requested permit subject to the following conditions:

a. The use of this well as an supplemental point of diversion to the existing well is a change in water right. This well shall be junior to all vested water rights until such time as the change in water right has been approved by the Division Water Court and the well must then be operated pursuant to the terms and conditions of that decree.

b. The combined maximum pumping rate of this well and well No.36263-F (GRSA well No. 3, Case No. 81CW163) shall not exceed 25 gallons per minute.

c. The combined average annual amount of ground water to be appropriated by this well and well No. 36263-F (GRSA well No. 3) shall not exceed 8.9 acre feet.

d. This well and well No. 36263-F (GRSA well No.3) are restricted domestic and municipal use in a picnic ground, visitor center, and employee housing and work center in a National Park.

e. Totalizing flow meters must be installed on this well and well No. 36263-F (GRSA well No. 3) and be maintained in good working order. Permanent records of all diversions must be maintained by the well owner (recorded at least annually) and submitted to the Division Engineer upon request.

Applicant: United States Department of Interior, National Park Service page 3

Permit No. 36273-F

Dated this 26th day of February, 1990.

Jeris A. Danielson
State Engineer

By: Bruce E. DeBrine
Water Resource Engineer

Prepared by: GRG

6978I

02-28-1990: permit application form

WRJ-5-Rev. 76

CO RADO DIVISION OF WATER RESOU ES
818 C nnial Bldg., 1313 Sherman St., Denver, Colora 80203

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STATE ENGINEER
COLO.

RECEIVED
OCT 30 1989
WATER RESOURCES
STATE ENGINEER
COLO.

PERMIT APPLICATION FORM

Application must be complete where applicable. Type or print in BLACK INK. No overstrikes or erasures unless initialed.

FOR: ( ) A PERMIT TO USE GROUND WATER
( ) A PERMIT TO CONSTRUCT A WELL
( ) A PERMIT TO INSTALL A PUMP
( ) REPLACEMENT FOR NO. _____
(X) OTHER Alternate Point of Diversion for GRSA Well No. 3 Decreed In WATER COURT CASE NO. 81CW163

(1) APPLICANT - mailing address
United States National Park Service
NAME Water Resources Division
STREET 301 S. Howes St., Room 353
CITY Fort Collins, CO 80521
(State) (Zip)
TELEPHONE NO. (303) 221-8311

(2) LOCATION OF PROPOSED WELL
County Alamosa
SE ¼ of the SE ¼, Section 34
Twp. 26 S (N,S), Rng. 73 W (E,W), 6th P.M.

(3) WATER USE AND WELL DATA
Proposed maximum pumping rate (gpm) 25 gpm
Average annual amount of ground water to be appropriated (acre-feet): Opr 8.9 acre feet
Number of acres to be irrigated: _____
Proposed total depth (feet): 350 feet
Aquifer ground water is to be obtained from: _____
Owner's well designation GRSA Well No. 1

GROUND WATER TO BE USED FOR:
( ) HOUSEHOLD USE ONLY - no irrigation (0)
(X) DOMESTIC (1)
( ) LIVESTOCK (2)
( ) COMMERCIAL (4)
( ) INDUSTRIAL (5)
( ) IRRIGATION (6)
(X) MUNICIPAL (8)
( ) OTHER (9) _____
DETAIL THE USE ON BACK IN (11)

(4) DRILLER
Name _____
Street _____
City _____ (State) (Zip)
Telephone No. _____ Lic. No. _____

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN
Receipt No. 15562
Basin _____ Dist. _____

OWNER'S COPY

CONDITIONS OF APPROVAL

This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.

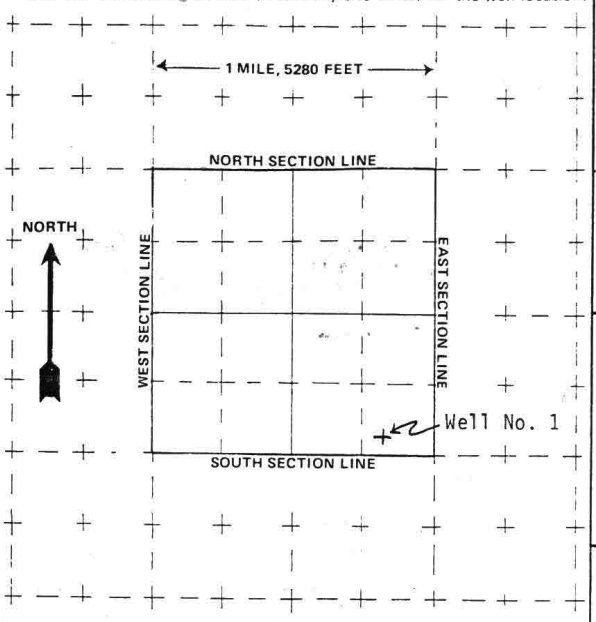
1) APPROVED FOR THE USE OF AN EXISTING STRUCTURE, A WELL REGISTERED UNDER NO. 16400. ISSUANCE OF THIS PERMIT HEREBY CANCELS PERMIT NO. 16400.
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9) THIS WELL SHALL BE LOCATED AT LEAST 600 FEET FROM ANY OTHER WELL (WELL NO. 36263-F) UNLESS PRIOR WRITTEN APPROVAL IS OBTAINED FROM THE DIVISION OF WATER RESOURCES.
10) THE OWNER SHALL MARK THE WELL IN A CONSPICUOUS PLACE WITH APPROPRIATE WELL PERMIT NUMBERS, NAME OF THE AQUIFER, AND COURT CASE NUMBERS. HE SHALL TAKE NECESSARY MEANS AND PRECAUTIONS TO PRESERVE THESE MARKINGS.

APPLICATION APPROVED

PERMIT NUMBER 036273 - F
DATE ISSUED FEB 28 1990
EXPIRATION DATE FEB 28 1991

Jim A. Danielson
(STATE ENGINEER)
BY Bruce E. DeBrine
I.D. 3-35 COUNTY 02

(5) THE LOCATION OF THE PROPOSED WELL and the area on which the water will be used must be indicated on the diagram below. Use the CENTER SECTION (1 section, 640 acres) for the well location.



The scale of the diagram is 2 inches = 1 mile
Each small square represents 40 acres.

WATER EQUIVALENTS TABLE (Rounded Figures)
An acre-foot covers 1 acre of land 1 foot deep
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm)
A family of 5 will require approximately 1 acre-foot of water per year.
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.

(6) THE WELL MUST BE LOCATED BELOW by distances from section lines.

330 ft. from south (north or south) sec. line

825 ft. from east (east or west) sec. line

LOT _____ BLOCK _____ FILING # _____

SUBDIVISION _____

(7) TRACT ON WHICH WELL WILL BE LOCATED Owner: National Park Service

No. of acres _____. Will this be the only well on this tract? _____

(8) PROPOSED CASING PROGRAM opw

Plain Casing

12-3/4 in. from 0 ft. to 146 ft.

8-5/8 in. from 0 ft. to 290 ft.

Perforated casing

_____ in. from 250 ft. to 280 ft.

_____ in. from _____ ft. to _____ ft.

(9) FOR REPLACEMENT WELLS give distance and direction from old well and plans for plugging it:

_____

_____

_____

_____

(10) LAND ON WHICH GROUND WATER WILL BE USED:

Owner(s): United States National Park Service No. of acres: _____

Legal description: _____

(11) DETAILED DESCRIPTION of the use of ground water: **Household use and domestic wells must indicate type of disposal system to be used.** Well water used to supply domestic water for employee housing, water for maintenance area, visitor center, and picnic ground. Well No. 1 to be used as an alternate source for Well No. 3 and will use same storage and distribution system.

(12) OTHER WATER RIGHTS used on this land, including wells. Give Registration and Water Court Case Numbers.

Type or right	Used for (purpose)	Description of land on which used

(13) THE APPLICANT(S) STATE(S) THAT THE INFORMATION SET FORTH HEREON IS TRUE TO THE BEST OF HIS KNOWLEDGE.

O. R. Williams Chief, Water Rights Branch 6 Oct 89

SIGNATURE OF APPLICANT(S)

Use additional sheets of paper if more space is required.

10-05-1989: letter to colorado division of water resources from nps regarding permit application form for an alternate point of diver

Beth Voelkel

Dave Williams
10/5/89

October 5, 1989

L54(479)
RMR/GRSA Water Rights

Colorado Division of Water Resources
818 Centennial Building
1313 Sherman Street
Denver, Colorado 80203

Dear Sir or Madam:

A Permit Application Form for an alternate point of diversion for GRSA Well No. 3, as decreed in Case No. 81CW163, is enclosed.

On December 20, 1979, the United States of America (USA) filed an application for water rights which was assigned Case No. 79CW85. Thereafter, on November 24, 1981, the USA filed amendments to Case No. 79CW85 for water rights at Great Sand Dunes National Monument (GRSA) which were assigned Case Nos. 81CW161, 81CW163, and 81CW164. In Case No. 81CW161, the USA claimed 30 gpm for domestic, public, and irrigation uses from GRSA Well No. 1.

GRSA Well No. 1 was used for domestic purposes in Government-owned quarters by National Park Service employees, for maintenance of Government-owned vehicles and equipment, and for domestic use by visitors in a picnic area. After the application was filed in Case No. 81CW161, the well was capped and its functions replaced by GRSA Well No. 3. Accordingly, the USA did not seek a decree for GRSA Well No. 1 in later proceedings.

On June 30, 1989, in Case No. 81CW163, GRSA Well No. 3 was decreed 25 gpm for municipal and domestic purposes with a priority date of August 4, 1978. Unexpectedly, soon after the decree was issued, flows from GRSA Well No. 3 became unreliable and the United States now desires to reopen GRSA Well No. 1 as an alternate point of diversion for decreed GRSA Well No. 3. My staff has been in contact with the Assistant Division Engineer, Bob Plaska. He and the Well Commissioner for Water Division No. 3, Dennis Felmlee, are, therefore, familiar with the situation at GRSA.

For your information, a copy of Well Registration No. 16400, issued for GRSA Well No. 1 on January 25, 1962, is enclosed as are copies of the original registration form, pump test record, and well drilling log. A new pump was recently installed at the well and a copy of the new pump test will be sent under separate cover when it becomes available. Well No. 1 will not be attached to the distribution system for Well No. 3 until chemical analysis

proves satisfactory (2 to 3 weeks) and pumping will commence only after a permit is issued. The park would like to complete the hookup by mid-November and begin pumping as soon as possible to ensure that a reliable water source is available for the busy visitor season next spring. Therefore, we would appreciate your prompt consideration of this application.

If you have any questions, please contact me at (303) 221-8301.

Thank you,

Owen Williams

Owen R. Williams
Chief, Water Rights Branch

Enclosures

bcc: RMR - Huff, Hermance (w/enclosures)
GRSA - Superintendent(w/o enclosures)
Colorado Water Division 3 - Plaska (w/enclosures)
DOJ - Hill (w/enclosures)

FNP:BVoelkel:bv:221-8323:10/2/89:#291

WRJ-5-Rev. 76

COLORADO DIVISION OF WATER RESOURCES
818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203

PERMIT APPLICATION FORM

Application must be complete where applicable. Type or print in BLACK INK. No overstrikes or erasures unless initialed.

FOR: ( ) A PERMIT TO USE GROUND WATER
( ) A PERMIT TO CONSTRUCT A WELL
( ) A PERMIT TO INSTALL A PUMP

( ) REPLACEMENT FOR NO. _____
(X) OTHER Alternate Point of Diversion for GRSA Well No. 3
Decreed In WATER COURT CASE NO. 81CW163

(1) APPLICANT - mailing address
United States National Park Service
NAME Water Resources Division
STREET 301 S. Howes St., Room 353
CITY Fort Collins, CO 80521
(State) (Zip)
TELEPHONE NO. (303) 221-8311

(2) LOCATION OF PROPOSED WELL

County Alamosa
SE ¼ of the SE ¼, Section 34
Twp. 26 S (N,S), Rng. 73 W (E,W), 6th P.M.

(3) WATER USE AND WELL DATA

Proposed maximum pumping rate (gpm) 25 gpm

Average annual amount of ground water to be appropriated (acre-feet): _____

Number of acres to be irrigated: _____

Proposed total depth (feet): 350 feet

Aquifer ground water is to be obtained from:

_____

Owner's well designation GRSA Well No. 1

GROUND WATER TO BE USED FOR:

( ) HOUSEHOLD USE ONLY - no irrigation (0)
(X) DOMESTIC (1)
( ) LIVESTOCK (2)
( ) COMMERCIAL (4)
( ) INDUSTRIAL (5)
( ) IRRIGATION (6)
(X) MUNICIPAL (8)
( ) OTHER (9) _____
DETAIL THE USE ON BACK IN (11)

(4) DRILLER

Name _____
Street _____
City _____
(State) (Zip)
Telephone No. _____ Lic. No. _____

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN

Receipt No. _____ / _____
Basin _____ Dist. _____

CONDITIONS OF APPROVAL

This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.

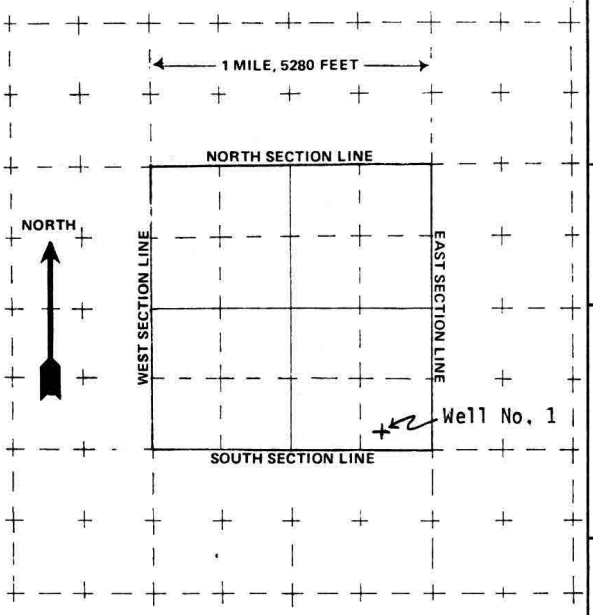
APPLICATION APPROVED

PERMIT NUMBER _____
DATE ISSUED _____
EXPIRATION DATE _____

_____
(STATE ENGINEER)

BY _____
I.D. _____ COUNTY _____

(5) THE LOCATION OF THE PROPOSED WELL and the area on which the water will be used must be indicated on the diagram below. Use the CENTER SECTION (1 section, 640 acres) for the well location.



The scale of the diagram is 2 inches = 1 mile
Each small square represents 40 acres.

WATER EQUIVALENTS TABLE (Rounded Figures)
An acre-foot covers 1 acre of land 1 foot deep
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm)
A family of 5 will require approximately 1 acre-foot of water per year.
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.

(6) THE WELL MUST BE LOCATED BELOW by distances from section lines.

330 ft. from south (north or south) sec. line

825 ft. from east (east or west) sec. line

LOT _____ BLOCK _____ FILING # _____

SUBDIVISION _____

(7) TRACT ON WHICH WELL WILL BE LOCATED Owner: National Park Service

No. of acres _____. Will this be the only well on this tract? _____

(8) PROPOSED CASING PROGRAM

Plain Casing

_____ in. from _____ ft. to _____ ft.

_____ in. from _____ ft. to _____ ft.

Perforated casing

_____ in. from _____ ft. to _____ ft.

_____ in. from _____ ft. to _____ ft.

(9) FOR REPLACEMENT WELLS give distance and direction from old well and plans for plugging it:

_____

_____

_____

_____

(10) LAND ON WHICH GROUND WATER WILL BE USED:

Owner(s): United States National Park Service No. of acres: _____

Legal description: _____

(11) DETAILED DESCRIPTION of the use of ground water: **Household use and domestic wells must indicate type of disposal system to be used.** Well water used to supply domestic water for employee housing, water for maintenance area, visitor center, and picnic ground. Well No. 1 to be used as an alternate source for Well No. 3 and will use same storage and distribution system.

(12) OTHER WATER RIGHTS used on this land, including wells. Give Registration and Water Court Case Numbers.

Type or right	Used for (purpose)	Description of land on which used

(13) THE APPLICANT(S) STATE(S) THAT THE INFORMATION SET FORTH HEREON IS TRUE TO THE BEST OF HIS KNOWLEDGE.

O R Williams Chief, Water Rights Branch 6 Oct 89

SIGNATURE OF APPLICANT(S)

Use additional sheets of paper if more space is required.

RECEIVED
DEC 4 1961
GROUND WATER SECT.
COLORADO
STATE ENGINEER

(Rev. 5-61/2M)

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF THE STATE ENGINEER, GROUND WATER SECTION

RECEIVED
DEC 1 1961
GROUND WATER SECT.
COLORADO
STATE ENGINEER

REGISTRATION NO. 16400 OF WELLS

Registrant United States of America, Department of the Interior Date Nov. 22, 1961
National Park Service

P.O. Address Box 1728, Santa Fe, New Mexico

WELL DATA

Depth 350 ft. Diameter 10 and 14 in.

Casing : 290 ft. Plain; 30 ft. Perfor.

Static Water Level 242 ft. from top

Yield 80 (gpm) from 260 ft.

Used for domestic & irrigation purposes at

Great Sand Dunes National Monument
(legal description of land or site)

Water conveyed by pipe, size 4 in. A.C.

PUMP DATA

Type Submersible Size 2 in.

Driven by 5 H.P. 230 V. at - RPM

Well was first used May, 1957

for domestic using 18 gpm

Well enlarged _____, 19__ to deepened

_____(gpm)(cfs)(ft)

LOG SHOULD BE GIVEN ON REVERSE SIDE IF AVAILABLE

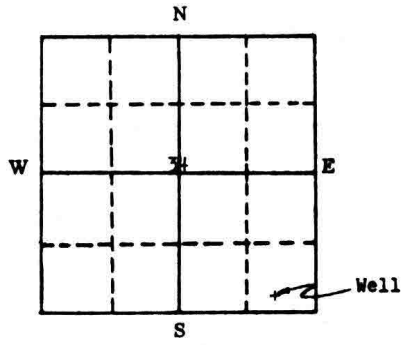
DUPLICATE

WELL LOCATION

County Alamosa

SE ¼ SE ¼ Section 34

Twp. 26 S., Rge. 73 W., 6th PM



WELL TO BE LOCATED AS ACCURATELY AS POSSIBLE WITHIN A SMALL SQUARE WHICH REPRESENTS 40 ACRES; OR IF IN A TOWN OR SUBDIVISION FILL IN THE FOLLOWING:

_____
Town or Subdivision

_____
Street address or Lot and Block

The above well (has not) been filed on in the Office of the State Engineer. If so give Filing No. _____.

A $10.00 filing fee must accompany this form.

The above statements are true and correct to the best of my knowledge and belief.

Subscribed and Sworn before me

this 6th day of December, 1961.

My commission expires Feb 24 - 1965

(SEAL) _____
Notary Public

United States of America
National Park Service

by _____
Registrant

Thomas J. Allen
Regional Director

FOR STATE ENGINEER'S USE

Located in _____ district, _____ County for _____

Registration No. _____ in _____, on _____, 19__.

RECORD OF TEST PUMPING

Well located at Great Sand Dunes

RED TOP DRILLING CO.
LAS VEGAS, NEW MEXICO

Perforation record:

From 250 to 280 Feet

Johnston Pump Set at 284 feet
Static water level before start of pumping 242 feet below top of casing.
5:00 P.M., May 17, 1957
Orifice Diameter 2½. Pipe Dia. 4"

TEST PUMPING DATA

Date	Time	Pumping Rate		Measured Water Level	REMARKS
		Orifice Reading	G.P.M.		
5/17	5 PM			242	Sandy - Full Capacity of Pump
5/17	5:30				Estimated Maximum 150 G.P.M.
5/17	6 PM				Flow Fell Off Rapidly. Time From
5/17	6:30				5:00 P.M. to 9:00 P.M. Irregular,
5/17	7 PM				Alternate Pumping and Surging to
5/17	7:30				Develop Well.
5/17	8 PM				(10 equals 10 inches of Mercury)
5/17	8:30				
5/17	9 PM	10	80	272½	Clear
5/17	9:30	"	"	274	"
5/17	10 PM	"	"	"	"
5/17	10:30	"	"	273	"
5/17	11 PM	"	"	275	"
5/17	11:30	"	"	"	"
5/17	12 M	"	"	"	"
5/18	12:30	"	"	"	"
5/18	1 AM	"	"	"	"
5/18	1:30	"	"	"	"
5/18	2 AM	"	"	"	"
5/18	2:30	"	"	"	"
5/18	3 AM	"	"	"	

Form G (Rev.)
6-58/2M

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF THE STATE ENGINEER
Ground Water Section

PERMIT TO USE GROUND WATER
AND NOTICE OF WELL REGISTRATION

To: United States of America, Dept. of Int.
Nat'l. Park Service of Santa Fe, New Mexico, Colorado.
Great Sand Dunes Nat'l. Monument

In accordance with the provisions of Section 2 of the

COLORADO GROUND WATER LAW

The well situated in SE¼,SE¼, T.26S.,R.73W.,Sect.34, of the 6th. P.M. -Alamosa County

Has been regularly registered in this office and assigned No. 16400
and this Permit is issued for the use described in the statement filed.

Signed and Sealed in Denver, Colorado

this 25th day of January, 1962.

DIVISION OF WATER RESOURCES
OFFICE OF THE STATE ENGINEER

J. E. Whitten
State Engineer

By Geo W. Colburn
Authorized Agent

KEEP THIS AS A PERMANENT RECORD

00-00-0000: colorado water conservation board: log and history

COLORADO WATER CONSERVATION BOARD
LOG AND HISTORY

(1) Location: Sec. 34 T. 26 S R. 73 W., P.M. 6th ¼ Sec. SE¼ (2) County Alamosa

(3) or Street Address Dept. of Interior City P.O. Box 1728, Santa Fe, New Mexico

(4) Owned by Dept. of Interior Nat'l Park Service Address

(5) Tenant Great Sand Dunes Nat'l Mon. Address P.O. box 60 Alamosa, Colorado

(6) Drilled by Red Top Drilling Co. Address Las Vegas, New Mexico

(7) Water Well Driller's License No. Colo. 319 (8) Name or No. of Well

(9) Type of Well: Domestic XX, Municipal ☐, Stock ☐, Irrigation ☐,

Industrial ☐, Drainage ☐, Other

(10) Cased: 0 ft. to 146 ft. Type Steel Size 12-3/4" Wt. of Casing: Lbs./Ft. 42.

Cased: 0 ft. to 290 ft. Type Steel Size 8- 5/8" Wt. of Casing: Lbs./Ft. 22.36

Cased: ft. to ft. Type Size Wt. of Casing: Lbs./Ft.

(11) Perforated or Screened: Ft. 250 to Ft. 280 ; Ft. to Ft.

(12) Type of Screen or Perforation 1/4" Torch Slotted

(13) Date Started April 26, 1957 (14) Date Completed May 18, 1957

(15) { Static Water Level 242 Ft.
or
Shut in Pressure lbs./sq. in. (16) Date

(17) Pumping Water Level 260 Ft. at (18) 80 G P M yield.

(19) How Tested: Turbine Pump (20) Length of Test 10 (Ten) Hours,

Put Formation Log on Reverse Side

(21) REMARKS: (Gravel Packing, Cementing, Packers, Type of Shut-off, Depth of Shut-off, Method Drilling, etc.)

TO BE MADE IN QUADRUPLICATE: *Original* to the Colorado Water Conservation Board. *White Copy* to the [illegible]

00-00-0000: log of well: description of material drilled - method of drilling

LOG OF WELL

DESCRIPTION OF MATERIAL DRILLED (ADD OTHER LINES AS NEEDED) — METHOD OF DRILLING

Feet			
00	to	70	Loose Sand and Boulders
70	to	140	Clay and Gravel
140	to	290	Sand and Gravel
	to		
	to		
	to		

COPY

JUL 5 -

Filed in District Court
Water Division 3, Colorado

DISTRICT COURT, WATER DIVISION NO. 3, STATE OF COLORADO

CASE NO. 81CW164

JUN 29

FINDINGS OF FACT, CONCLUSIONS OF LAW AND DECREE

Carol S. Rolling
Clerk Of The Water Court

CONCERNING THE APPLICATION FOR WATER RIGHTS OF THE UNITED STATES OF AMERICA IN ALAMOSA AND SAGUACHE COUNTIES

FINDINGS OF FACT

THIS MATTER comes before the court for entry of Findings of Fact, Conclusions of Law and Decree, the parties having consented thereto. The court, having examined the records and files herein, and being now fully and sufficiently advised in the premises, hereby makes the following Findings of Fact, Conclusions of Law and Decree:

1. The United States of America was joined as a party in Water Division No. 3 pursuant to the McCarran Amendment, 43 U.S.C. §666, in 1979.

2. The United States of America filed an application for water rights in December 20, 1979, styled a general application which was assigned Case No. 79CW85. Thereafter, on November 24, 1981, the United States filed this application for water rights at the Great Sand Dunes National Monument as an amendment to Case No. 79CW85 which was assigned Case No. 81CW164.

3. In this case, the United States claims reserved rights in the Great Sand Dunes National Monument "the sources of which are in, on, under, adjacent to, or otherwise appurtenant to the land described by Proclamation No. 1994 of March 17, 1932, 47 Stat. 2506, amended by Proclamation No. 2681 of March 12, 1946, 60 Stat. 1339 and Proclamation No. 3138 of June 7, 1956, 70 Stat. C31." Application, ¶2. The purposes for which the United States claims water are "to conserve the scenery and the natural and historic objects and wildlife therein." Id. at ¶3. The United States claims water for a multitude of specific uses including "preservation of objects of scenic, scientific and educational interest" and "preservation of educational, historic, scientific, scenic, aesthetic and other public values and habitat protection and management." Id.

4. The amount and source of the water claimed is "that quantity of surface, ground and underground waters, both tributary and non-tributary, which are located in, on, under, adjacent to, or otherwise appurtenant to the aforedescribed reservation, and which are, or will become necessary to fulfill the purposes for which the reservation was created." Id.

5. The United States also claims a reserved right to Denton Spring in the amount of 0.02 cfs for "maintenance of the ecosystem." Id. at ¶4.

6. The following Objectors filed Statements of Opposition in Case No. 79CW85 but failed to file Supplemental Statements of Opposition in the captioned case:

Seamster Farms, Inc.
Avis Neal Roemer Trust
Homestake Mining Co.
Fullenwider Ranches, Inc.
/LD Ranch
Neil F. Seitz
Blue Pond and Associates
City and County of Denver
Adolph Coors Company
AZL Resources, Inc.
Hans G. Hardt
Rosie Hardt
Walter Mundorf
SLV Municipalities
City of Alamosa
Conejos Water Conservancy District

7. The following Objectors filed timely Statements of Opposition and/or Supplemental Statements of Opposition in the captioned case:

State of Colorado
Rio Grande Water Conservation District
Rio Grande Water Users Association, et al.
Malcolm Stewart

8. By Order of the court dated August 5, 1988, Objector Otaka, International, Inc., was substituted for Objector Malcolm Stewart.

9. The Great Sand Dunes National Monument was established pursuant to the Antiquities Act, 16 U.S.C. §431 by Proclamation No. 1994 of March 17, 1932, 47 Stat. 2506, "for the preservation of the great sand dunes and additional features of scenic, scientific, and educational interest." Two later proclamations

also pertain to the Great Sand Dunes National Monument. Proclamation No. 2681, dated March 12, 1946, 60 Stat. 1339 and Proclamation No. 3138, dated June 7, 1956, 70 Stat. C31 confirmed and redefined the boundaries of the Great Sand Dunes National Monument. For purposes of this decree, the only relevance of the later proclamations is that the Proclamation of June 17, 1956, reserved one additional section of land through which Little Medano Creek flows and a half-section of land through which Mosca Creek and Morris Gulch flow.

10. Medano Creek and its tributaries, Little Medano Creek, Horse Canyon Creek, Castle Creek, Sawmill Canyon Creek, Buck Creek, Garden Creek, an unnamed creek, Mosca Creek, and Morris Gulch, are identifiable and discrete watercourses within the Great Sand Dunes National Monument.

11. Sand Creek and its tributary, Cold Creek, are identifiable and discrete watercourses within the Great Sand Dunes National Monument.

12. Medano Creek enters the northeast part of the Great Sand Dunes National Monument in Section 11, T. 26 S., R. 73 W. of the 6th P.M., thence traversing Sections 11, 14, 23, 26, 35, and 34 (unsurveyed), T. 26 S., R. 73 W. of the 6th P.M. and Sections 3, 4, 8 and 7 of T. 27 S., R. 73 W. of the 6th P.M. Depending upon the season, Medano Creek infiltrates into the aeolian deposits in

the southern part of the Great Sand Dunes National Monument. All of the above-described sections were reserved by Proclamation No. 1994, 47 Stat. 2506, dated March 17, 1932.

13. Little Medano Creek enters the Great Sand Dunes National Monument in Section 2, T. 26 S., R. 73 W. of the 6th P.M. and traverses Section 11 of the same Township and Range, where it joins Medano Creek at or near the intersection of the South Section line of the aforesaid Section 11 and Medano Creek. Section 2, T. 26 S., R. 73 W. of the 6th P.M. was reserved by Proclamation No. 3138, dated June 7, 1956, 70 Stat. C31. Section 11 of the same Township and Range was reserved by Proclamation No. 1994, dated March 17, 1932, 47 Stat. 2506.

14. Horse Canyon Creek enters the Great Sand Dunes National Monument in Section 14, T. 26 S., R. 73 W. of the 6th P.M. and traverses that section to its confluence with Medano Creek in the aforesaid Section 14 of the same Township and Range. Section 14 was reserved by Proclamation No. 1994, dated March 17, 1932.

15. Castle Creek enters the Great Sand Dunes National Monument in Section 23, T. 26 S., R. 73 W. of the 6th P.M., traversing this section in a westerly direction to its confluence with Medano Creek in the aforesaid Section 23. Said Section 23 was reserved by Proclamation No. 1994, dated March 17, 1932.

16. Sawmill Canyon Creek enters the Great Sand Dunes National Monument in Section 26, T. 26 S., R. 73 W. of the 6th P.M., traversing this section in a westerly direction to its confluence with Medano Creek in the aforesaid Section 26. Said Section 26 was reserved by Proclamation No. 1994, dated March 17, 1932.

17. Buck Creek enters the Great Sand Dunes National Monument in Section 26, T. 26 S., R. 73 W. of the 6th P.M., traversing this section and section 35 of the same Township and Range in a westerly direction to its confluence with Medano Creek in the aforesaid Section 35. Said Sections 26 and 35 were reserved by Proclamation No. 1994, dated March 17, 1932.

18. Garden Creek enters the Great Sand Dunes National Monument in Section 35, T. 26 S., R. 73 W. of the 6th P.M., traversing this section in a westerly direction to its confluence with Medano Creek in the aforesaid Section 35. Said Section 35 was reserved by Proclamation No. 1994, dated March 17, 1932.

19. An unnamed creek enters the Great Sand Dunes National Monument in Section 23, T. 26 S., R. 73 W. of the 6th P.M., traversing this section in a westerly direction to its confluence with Medano Creek in the aforesaid Section 23. Said Section 23 was reserved by Proclamation No. 1994, dated March 17, 1932.

20. Mosca Creek enters the Great Sand Dunes National Monument in Section 2, T. 27 S., R. 73 W. of the 6th P.M., traversing this section, Sections 35 and 34 (unsurveyed) of T. 26 S., R. 73 W. and Section 3, T. 27 S. R. 73 W., to its confluence with Medano Creek in the aforesaid Section 3. Said Section 2 was reserved by Proclamation No. 3138 dated June 7, 1956; said sections 3, 34 and 35 were reserved by Proclamation No. 1994, dated March 17, 1932.

21. Morris Gulch enters the Great Sand Dunes National Monument in Section 2, T. 27 S., R. 73 W. of the 6th P.M., traversing this section and section 3 of the same Township and Range in a westerly direction to its confluence with Medano Creek in the aforesaid Section 3. Said Section 2 was reserved by Proclamation No. 3138 dated June 7, 1956; said Section 3 was reserved by Proclamation No. 1994, dated March 17, 1932.

22. Sand Creek flows southwesterly entering the Great Sand Dunes National Monument at its northern boundary in Section 31, T. 25 S., R. 73 W., 6th P. M., and exits the monument in the same section at a point where it crosses the west section line. Sand Creek reenters the Great Sand Dunes National Monument in Section 15, T. 41 N., R. 12 E. of the N.M.P.M., and exits the Monument in Section 22, T. 41 N., R. 12 E. of the N.M.P.M. All of the above-described sections were reserved by Proclamation No. 1994, 47 Stat. 2506, dated March 17, 1932.

23. Cold Creek enters the Great Sand Dunes National Monument in Section 32, T. 25 S., R. 73 W. of the 6th P.M. and traverses that section to its confluence with Sand Creek in Section 31 of the same Township and Range. Sections 32 and 31 were reserved by Proclamation No. 1994, dated March 17, 1932.

24. Medano Creek exhibits a rare phenomenon known as "pulsating" or "surge flow". This phenomenon is of scientific, educational and scenic interest. Medano Creek also arrests the eastward migration of the dune mass by eroding the base of its eastern margin. Medano Creek transports the eroded sand to the southern part of the Monument where it is picked up and transported by wind to the northeast. Thus, Medano Creek is an integral part of the continual natural process of dune formation, migration and renewal.

25. Pulsating flow has also been observed on Sand Creek and Castle Creek. Sand Creek also supplies water for a pond, or water hole, located in Section 23, T. 41 N., R. 12 E., N.M.P.M.

26. Little Medano Creek, Horse Canyon Creek, Castle Creek, Sawmill Canyon Creek, Buck Creek, Garden Creek, An unnamed creek, Mosca Creek, and Morris Gulch, all being tributary to Medano Creek, make surface or subsurface contributions to the flow of Medano Creek and, thereby, to the transport of dune sand and the unique pulsating flow phenomenon observed in Medano Creek.

27. Cold Creek contributes to the flow of Sand Creek and, thereby, to the unique pulsating flow phenomenon observed in Sand Creek and the maintenance of the pond, or water hole, located in Section 23, T. 41 N., R. 12 E., New Mexico P.M.

28. Maintenance of instream flows in Medano Creek and its tributaries, Little Medano Creek, Horse Canyon Creek, Castle Creek, Sawmill Canyon Creek, Buck Creek, Garden Creek, an unnamed creek, Mosca Creek, and Morris Gulch and Sand Creek and its tributary, Cold Creek in the Great Sand Dunes National Monument is necessary for the preservation of the great sand dunes and additional objects of scenic, scientific, and educational interest. The amounts necessary for the aforestated purpose are as stated in paragraph 2 of the decree, infra. The quantified flows recognized in this decree are based on currently existing flow conditions and therefore reflect the impact, if there is any, of existing groundwater withdrawals outside the monument. Existing lawful levels of groundwater withdrawals, therefore, will not affect the decreed flows at their quantification points.

29. Maintenance of the entire yield of Denton Spring for "ecosystem maintenance" is not necessary for preservation of the great sand dunes and additional objects of scenic, scientific, and educational interest. However, the flow of the spring has created wildlife habitat and provided drinking water for wildlife

since at least 1946 and has been managed since that time for wildlife purposes by the National Park Service.

30. In addition to the foregoing requirements for water, the National Park Service needs an additional 8.0 acre-feet per year to satisfy future requirements for staff and visitor domestic needs directly related to the administration and operation of the Great Sand Dunes National Monument for preservation of the great sand dunes and additional objects of scenic, scientific, and educational interest. This water is to be diverted through one or more wells to be located on land reserved by one of the proclamations and used on reserved land for the aforestated purpose.

31. In order to facilitate administration of the rights decreed in decretal paragraph 14 and described in paragraph 30 and to facilitate contracting for construction of wells, the United States agrees to provide the State Engineer all information that is required for a permit to construct a well. Upon receipt of such information, the State Engineer agrees to issue a well permit in accordance with the provisions of paragraph 30 above and of decretal paragraph 4.

32. The time for filing Supplemental Statements of Opposition to the captioned case expired Sept. 2, 1986, pursuant to the Referee's Order filed July 15, 1986.

CONCLUSIONS OF LAW

33. All notices required by law for filing and publication of the application in the Resume of Water Division No. 3 have been fulfilled and the court has jurisdiction over the subject matter and all parties whether or not they appeared.

34. The primary purpose of the Great Sand Dunes National Monument is as stated in the March 17, 1932, proclamation, to wit: "preservation of the great sand dunes and additional objects of scenic, scientific, and educational interest."

35. As found in paragraph 28, above, water, in the form of minimum stream flows in Medano Creek and its tributaries, Little Medano Creek, Horse Canyon Creek, Castle Creek, Sawmill Canyon Creek, Buck Creek, Garden Creek, an unnamed creek, Mosca Creek, and Morris Gulch, and in Sand Creek and its tributary, Cold Creek is necessary to fulfill the primary purpose of the Great Sand Dunes National Monument. Therefore, the United States reserved instream flows in Medano Creek and Sand Creek and their respective tributaries described above, with priority dates as of the dates the respective parts of the Monument were reserved. Cappaert v. United States, 426 U.S. 128, 138 (1976); United States v. Denver, 656 P.2d 1, 20 (Colo. 1982).

36. The flow of Denton Spring for "ecosystem maintenance" is not necessary for the primary purpose of the Great Sand Dunes National Monument, therefore the claimed flow of Denton Spring is not reserved. United States v. New Mexico, 438 U.S. 696 (1978).

37. Denton Spring has been beneficially used by the United States for the purpose of wildlife habitat and wildlife drinking since 1946. Therefore, the United States has appropriated 0.02 cfs of the flow of Denton Spring for the aforestated purposes.

38. The federal reserved rights doctrine applies to quantified present and future needs for water necessary to achieve the purpose of federal reservations, Arizona v. California, 373 U.S. 546, 600 (1963); United States v. Denver, 656 P.2d 1, 34-35 (Colo. 1982). Therefore, the United States has reserved 8.0 acre-feet of water per year for future use for the operation and administration of the Great Sand Dunes National Monument for staff and visitor use for purposes directly related to preservation of the great sand dunes and additional objects of scenic, scientific, and educational interest.

39. In its application, the United States made very broad claims for a multitude of uses. The only water necessary for the primary purpose of the Great Sand Dunes National Monument is that required for Medano Creek and Sand Creek and their respective tributaries as found and described in paragraphs 10 through 28

above and the 8.0 acre-feet per year for future use described in paragraph 30, above. Therefore, no reserved rights were created by the proclamations pertaining to Great Sand Dunes National Monument except those decreed herein. Id.

40. This court has previously ruled that applications filed as amendments to Case No. 79CW85 prior to March 31, 1982, relate back to Case No. 79CW85. See, this court's Orders dated December 31, 1981, and June 9, 1988, Case No. 79CW85. The application in this case is within the terms of those Orders and is a clarifying amendment to the application filed by the United States in Case No. 79CW85, and the United States is, therefore, entitled to antedate priorities subsequent to March 17, 1932. United States v. Bell, 724 P.2d 631, 645 (Colo. 1986).

41. The United States has demonstrated its entitlement to this decree as a matter of law.

DECREE

IT IS HEREBY ORDERED, ADJUDGED AND DECREED:

1. The Findings of Fact and Conclusions of Law contained herein are incorporated by reference and made a part of this Decree.

2. That the United States has reserved rights to continuous minimum stream flows for the purpose of preservation of the great sand dunes and additional features of scenic, scientific and educational interest with priority of March 17, 1932, except as provided in subparagraph 2b, 2i and 2j, infra, in the following water courses, which drain into the Closed Basin area of the San Luis Valley and are "natural surface streams" within the meaning of §37-82-101(2), C.R.S. The United States has such reserved right at the point where each stream enters the Great Sand Dunes National Monument, except as further provided in paragraphs 2b, 2i, and 2j below, in the quantities listed:

a. Medano Creek, at a point where Medano Creek crosses the east section line of Section 11, T. 26 S., R. 73 W. of the 6th P.M., as follows:

i. From October 1 until November 1. 4.09 c.f.s. or the natural flow, whichever is less.

ii. From November 1 until December 1. 3.05 c.f.s. or the natural flow, whichever is less.

iii. From December 1 until January 1. 2.09 c.f.s. or the natural flow, whichever is less.

iv. From January 1 until February 1. 2.25 c.f.s. or the natural flow, whichever is less.

v. From February 1 until March 1. 2.17 c.f.s. or the natural flow, whichever is less.

vi. From March 1 until April 1. 2.17 c.f.s. or the natural flow, whichever is less.

vii. From April 1 until May 1. 3.69 c.f.s. or the natural flow, whichever is less.

viii. From May 1 until June 1. 19.66 c.f.s. or the natural flow, whichever is less.

ix. From June 1 until July 1. 20.94 c.f.s. or the natural flow, whichever is less.

x. From July 1 until August 1. 15.73 c.f.s. or the natural flow, whichever is less.

xi. From August 1 until September 1. 12.20 c.f.s. or the natural flow, whichever is less.

xii. From September 1 until October 1. 7.70 c.f.s. or the natural flow, whichever is less.

xiii. Provided however that the right to the above-described flows shall not include the amount of water taken and historically used by the Medano and Hudson Ditches under the decree entered by the Alamosa County District Court on July 21, 1914, in the case of Charles Wolf and John Meyer v. the Medano Springs Ranch Co.

b. Little Medano Creek, with priority date of June 17, 1956, at a point where Little Medano Creek enters the Great Sand Dunes National Monument in Section 2, T. 26 S., R. 73 W. of the 6th P.M., and with priority date of March 17, 1932, at a point where Little Medano Creek enters Section 11 of the same township and range as follows:

i. From October 1 until November 1. 0.89 c.f.s. or the natural flow, whichever is less.

ii. From November 1 until December 1. 0.66 c.f.s. or the natural flow, whichever is less.

iii. From December 1 until January 1. 0.45 c.f.s. or the natural flow, whichever is less.

iv. From January 1 until February 1. 0.49 c.f.s. or the natural flow, whichever is less.

v. From February 1 until March 1. 0.47 c.f.s. or the natural flow, whichever is less.

vi. From March 1 until April 1. 0.47 c.f.s. or the natural flow, whichever is less.

vii. From April 1 until May 1. 0.80 c.f.s. or the natural flow, whichever is less.

viii. From May 1 until June 1. 4.26 c.f.s. or the natural flow, whichever is less.

ix. From June 1 until July 1. 4.54 c.f.s. or the natural flow, whichever is less.

x. From July 1 until August 1. 3.41 c.f.s. or the natural flow, whichever is less.

xi. From August 1 until September 1. 2.64 c.f.s. or the natural flow, whichever is less.

xii. From September 1 until October 1. 1.67 c.f.s. or the natural flow, whichever is less.

c. Horse Canyon Creek, at a point where Horse Canyon Creek enters the Great Sand Dunes National Monument in Section 14, T. 26 S., R. 73 W. of the 6th P.M., as follows:

i. From October 1 until November 1. 0.08 c.f.s. or the natural flow, whichever is less.

ii. From November 1 until December 1. 0.08 c.f.s. or the natural flow, whichever is less.

iii. From December 1 until January 1. 0.05 c.f.s. or the natural flow, whichever is less.

iv. From January 1 until February 1. 0.06 c.f.s. or the natural flow, whichever is less.

v. From February 1 until March 1. 0.06 c.f.s. or the natural flow, whichever is less.

vi. From March 1 until April 1. 0.06 c.f.s. or the natural flow, whichever is less.

vii. From April 1 until May 1. 0.12 c.f.s. or the natural flow, whichever is less.

viii. From May 1 until June 1. 0.57 c.f.s. or the natural flow, whichever is less.

ix. From June 1 until July 1. 0.40 c.f.s. or the natural flow, whichever is less.

x. From July 1 until August 1. 0.29 c.f.s. or the natural flow, whichever is less.

xi. From August 1 until September 1. 0.17 c.f.s. or the natural flow, whichever is less.

xii. From September 1 until October 1. 0.11 c.f.s. or the natural flow, whichever is less.

d. Castle Creek, at a point where Castle Creek enters the Great Sand Dunes National Monument in Section 23, T. 26 S., R. 73 W. of the 6th P.M., as follows:

i. From October 1 until November 1. 0.14 c.f.s. or the natural flow, whichever is less.

ii. From November 1 until December 1. 0.14 c.f.s. or the natural flow, whichever is less.

iii. From December 1 until January 1. 0.09 c.f.s. or the natural flow, whichever is less.

iv. From January 1 until February 1. 0.12 c.f.s. or the natural flow, whichever is less.

v. From February 1 until March 1. 0.12 c.f.s. or the natural flow, whichever is less.

vi. From March 1 until April 1. 0.11 c.f.s. or the natural flow, whichever is less.

vii. From April 1 until May 1. 0.21 c.f.s. or the natural flow, whichever is less.

viii. From May 1 until June 1. 1.04 c.f.s. or the natural flow, whichever is less.

ix. From June 1 until July 1. 0.73 c.f.s. or the natural flow, whichever is less.

x. From July 1 until August 1. 0.52 c.f.s. or the natural flow, whichever is less.

xi. From August 1 until September 1. 0.31 c.f.s. or the natural flow, whichever is less.

xii. From September 1 until October 1. 0.19 c.f.s. or the natural flow, whichever is less.

e. Sawmill Canyon Creek, at a point where Sawmill Canyon Creek enters the Great Sand Dunes National Monument in Section 26, T. 26 S., R. 73 W. of the 6th P.M., as follows:

i. From October 1 until November 1. 0.11 c.f.s. or the natural flow, whichever is less.

ii. From November 1 until December 1. 0.11 c.f.s. or the natural flow, whichever is less.

iii. From December 1 until January 1. 0.07 c.f.s. or the natural flow, whichever is less.

iv. From January 1 until February 1. 0.09 c.f.s. or the natural flow, whichever is less.

v. From February 1 until March 1. 0.09 c.f.s. or the natural flow, whichever is less.

vi. From March 1 until April 1. 0.09 c.f.s. or the natural flow, whichever is less.

vii. From April 1 until May 1. 0.16 c.f.s. or the natural flow, whichever is less.

viii. From May 1 until June 1. 0.81 c.f.s. or the natural flow, whichever is less.

ix. From June 1 until July 1. 0.57 c.f.s. or the natural flow, whichever is less.

x. From July 1 until August 1. 0.41 c.f.s. or the natural flow, whichever is less.

xi. From August 1 until September 1. 0.24 c.f.s. or the natural flow, whichever is less.

xii. From September 1 until October 1. 0.15 c.f.s. or the natural flow, whichever is less.

f. Buck Creek, at a point where Buck Creek enters the Great Sand Dunes National Monument in Section 26, T. 26 S., R. 73 W. of the 6th P.M., as follows:

i. From October 1 until November 1. 0.10 c.f.s. or the natural flow, whichever is less.

ii. From November 1 until December 1. 0.09 c.f.s. or the natural flow, whichever is less.

iii. From December 1 until January 1. 0.06 c.f.s. or the natural flow, whichever is less.

iv. From January 1 until February 1. 0.08 c.f.s. or the natural flow, whichever is less.

v. From February 1 until March 1. 0.08 c.f.s. or the natural flow, whichever is less.

vi. From March 1 until April 1. 0.08 c.f.s. or the natural flow, whichever is less.

vii. From April 1 until May 1. 0.14 c.f.s. or the natural flow, whichever is less.

viii. From May 1 until June 1. 0.70 c.f.s. or the natural flow, whichever is less.

ix. From June 1 until July 1. 0.49 c.f.s. or the natural flow, whichever is less.

x. From July 1 until August 1. 0.35 c.f.s. or the natural flow, whichever is less.

xi. From August 1 until September 1. 0.21 c.f.s. or the natural flow, whichever is less.

xii. From September 1 until October 1. 0.13 c.f.s. or the natural flow, whichever is less.

g. Garden Creek, at a point where Garden Creek enters the Great Sand Dunes National Monument in Section 35, T. 26 S., R. 73 W. of the 6th P.M., as follows:

i. From October 1 until November 1. 0.08 c.f.s. or the natural flow, whichever is less.

ii. From November 1 until December 1. 0.08 c.f.s. or the natural flow, whichever is less.

iii. From December 1 until January 1. 0.05 c.f.s. or the natural flow, whichever is less.

iv. From January 1 until February 1. 0.06 c.f.s. or the natural flow, whichever is less.

v. From February 1 until March 1. 0.06 c.f.s. or the natural flow, whichever is less.

vi. From March 1 until April 1. 0.06 c.f.s. or the natural flow, whichever is less.

vii. From April 1 until May 1. 0.11 c.f.s. or the natural flow, whichever is less.

viii. From May 1 until June 1. 0.56 c.f.s. or the natural flow, whichever is less.

ix. From June 1 until July 1. 0.40 c.f.s. or the natural flow, whichever is less.

x. From July 1 until August 1. 0.28 c.f.s. or the natural flow, whichever is less.

xi. From August 1 until September 1. 0.17 c.f.s. or the natural flow, whichever is less.

xii. From September 1 until October 1. 0.10 c.f.s. or the natural flow, whichever is less.

h. An unnamed creek, at a point where the unnamed creek enters the Great Sand Dunes National Monument in Section 23, T. 26 S., R. 73 W. of the 6th P.M., as follows:

i. From October 1 until November 1. 0.08 c.f.s. or the natural flow, whichever is less.

ii. From November 1 until December 1. 0.08 c.f.s. or the natural flow, whichever is less.

iii. From December 1 until January 1. 0.06 c.f.s. or the natural flow, whichever is less.

iv. From January 1 until February 1. 0.07 c.f.s. or the natural flow, whichever is less.

v. From February 1 until March 1. 0.07 c.f.s. or the natural flow, whichever is less.

vi. From March 1 until April 1. 0.07 c.f.s. or the natural flow, whichever is less.

vii. From April 1 until May 1. 0.12 c.f.s. or the natural flow, whichever is less.

viii. From May 1 until June 1. 0.61 c.f.s. or the natural flow, whichever is less.

ix. From June 1 until July 1. 0.43 c.f.s. or the natural flow, whichever is less.

x. From July 1 until August 1. 0.31 c.f.s. or the natural flow, whichever is less.

xi. From August 1 until September 1. 0.18 c.f.s. or the natural flow, whichever is less.

xii. From September 1 until October 1. 0.11 c.f.s. or the natural flow, whichever is less.

i. Mosca Creek, with priority date of June 17, 1956, at a point where Mosca Creek enters the Great Sand Dunes National Monument in Section 2, T. 27 S., R. 73 W. of the 6th P.M., and with priority date of March 17, 1932, at a point where Mosca Creek enters Section 3 of the same township and range, as follows:

i. From October 1 until November 1. 0.32 c.f.s. or the natural flow, whichever is less.

ii. From November 1 until December 1. 0.31 c.f.s. or the natural flow, whichever is less.

iii. From December 1 until January 1. 0.21 c.f.s. or the natural flow, whichever is less.

iv. From January 1 until February 1. 0.26 c.f.s. or the natural flow, whichever is less.

v. From February 1 until March 1. 0.26 c.f.s. or the natural flow, whichever is less.

vi. From March 1 until April 1. 0.25 c.f.s. or the natural flow, whichever is less.

vii. From April 1 until May 1. 0.47 c.f.s. or the natural flow, whichever is less.

viii. From May 1 until June 1. 2.32 c.f.s. or the natural flow, whichever is less.

ix. From June 1 until July 1. 1.63 c.f.s. or the natural flow, whichever is less.

x. From July 1 until August 1. 1.16 c.f.s. or the natural flow, whichever is less.

xi. From August 1 until September 1. 0.69 c.f.s. or the natural flow, whichever is less.

xii. From September 1 until October 1. 0.43 c.f.s. or the natural flow, whichever is less.

j. Morris Gulch, with priority date of June 17, 1956, at a point where Morris Gulch enters the Great Sand Dunes National Monument in Section 2, T. 27 S., R. 73 W. of the 6th P.M., and with priority date of March 17, 1932, at a point where Morris Gulch enters Section 3 of the same township and range, as follows:

i. From October 1 until November 1. 0.15 c.f.s. or the natural flow, whichever is less.

ii. From November 1 until December 1. 0.15 c.f.s. or the natural flow, whichever is less.

iii. From December 1 until January 1. 0.10 c.f.s. or the natural flow, whichever is less.

iv. From January 1 until February 1. 0.12 c.f.s. or the natural flow, whichever is less.

v. From February 1 until March 1. 0.12 c.f.s. or the natural flow, whichever is less.

vi. From March 1 until April 1. 0.12 c.f.s. or the natural flow, whichever is less.

vii. From April 1 until May 1. 0.22 c.f.s. or the natural flow, whichever is less.

viii. From May 1 until June 1. 1.08 c.f.s. or the natural flow, whichever is less.

ix. From June 1 until July 1. 0.76 c.f.s. or the natural flow, whichever is less.

x. From July 1 until August 1. 0.54 c.f.s. or the natural flow, whichever is less.

xi. From August 1 until September 1. 0.32 c.f.s. or the natural flow, whichever is less.

xii. From September 1 until October 1. 0.20 c.f.s. or the natural flow, whichever is less.

k. Sand Creek at a point where Sand Creek crosses the north section line of Section 31, T. 25 S., R. 73 W. of the 6th P.M. as follows:

i. From October 1 until November 1. 11.70 c.f.s. or the natural flow, whichever is less.

ii. From November 1 until December 1. 6.36 c.f.s. or the natural flow, whichever is less.

iii. From December 1 until January 1. 4.72 c.f.s. or the natural flow, whichever is less.

iv. From January 1 until February 1. 4.11 c.f.s. or the natural flow, whichever is less.

v. From February 1 until March 1. 3.49 c.f.s. or the natural flow, whichever is less.

vi. From March 1 until April 1. 3.49 c.f.s. or the natural flow, whichever is less.

vii. From April 1 until May 1. 5.34 c.f.s. or the natural flow, whichever is less.

viii. From May 1 until June 1. 32.24 c.f.s. or the natural flow, whichever is less.

ix. From June 1 until July 1. 58.93 c.f.s. or the natural flow, whichever is less.

x. From July 1 until August 1. 46.40 c.f.s. or the natural flow, whichever is less.

xi. From August 1 until September 1. 42.09 c.f.s. or the natural flow, whichever is less.

xii. From September 1 until October 1. 26.49 c.f.s. or the natural flow, whichever is less.

l. Cold Creek at a point where Cold Creek enters the Great Sand Dunes National Monument in Section 32, T. 25 S., R. 73 W. of the 6th P.M., as follows:

i. From October 1 until November 1. 1.14 c.f.s. or the natural flow, whichever is less.

ii. From November 1 until December 1. 0.85 c.f.s. or the natural flow, whichever is less.

iii. From December 1 until January 1. 0.58 c.f.s. or the natural flow, whichever is less.

iv. From January 1 until February 1. 0.62 c.f.s. or the natural flow, whichever is less.

v. From February 1 until March 1. 0.60 c.f.s. or the natural flow, whichever is less.

vi. From March 1 until April 1. 0.60 c.f.s. or the natural flow, whichever is less.

vii. From April 1 until May 1. 1.02 c.f.s. or the natural flow, whichever is less.

viii. From May 1 until June 1. 5.45 c.f.s. or the natural flow, whichever is less.

ix. From June 1 until July 1. 5.81 c.f.s. or the natural flow, whichever is less.

x. From July 1 until August 1. 4.36 c.f.s. or the natural flow, whichever is less.

xi. From August 1 until September 1. 3.38 c.f.s. or the natural flow, whichever is less.

xii. From September 1 until October 1. 2.14 c.f.s. or the natural flow, whichever is less.

3. The reserved right to continuous minimum stream flows decreed herein is solely for instream purposes. No consumptive use shall be made by the United States of these waters other than through naturally occurring stream losses, nor shall these waters be diverted from their natural channels or applied to any other use.

4. The United States is entitled to a reserved right to 8.0 acre-feet of water per year to be withdrawn from one or more wells to be constructed in the future in the Alamosa Formation in Section 26, 27 (unsurveyed), 34 or 35 of T. 26 S., R. 73 W. or Section 3 or 10 of T. 27 S., R. 73 W. all with respect to the 6th P.M. The priority of this right is March 17, 1932.

5. The United States appropriated 0.02 cfs of the waters of Denton Spring located approximately 3140 feet from the west section line and approximately 2850 feet from the north section line which point is in the NW1/4 SE1/4 Section 15, T. 27 S., R. 73 W. of the 6th P.M., as of December 31, 1946, for wildlife purposes.

6. The priorities of the reserved rights confirmed in this decree antedate priorities subsequent to March 17, 1932, or June 17, 1956, as appropriate.

7. This judgment and decree constitutes the final adjudication of all claims of the United States for reserved rights for Great Sand Dunes National Monument pursuant to Proclamation No. 1994, 47 Stat. 2506; Proclamation No. 2681, 60 Stat. 1339; Proclamation No. 3138, 70 Stat. C31, and any act or acts of Congress approved prior to March 31, 1982.

8. The reserved and appropriative rights decreed herein are subject to administration by the State Engineer as is any other decree for the purposes decreed herein with their respective priorities.

9. Prior to construction of any well for future use decreed in paragraph 4 hereof, the United States shall provide the State Engineer all information that is required for an application for a permit to construct a well. Whereupon, the State Engineer shall issue a permit subject only to the conditions of said paragraph.

10. The Applicant shall install and maintain such water measurement devices, recording devices, content gauges and inlet and outlet measurement and recording devices, as the case may be, as are deemed essential by the Office of the State Engineer, and the same shall be installed and operated in accordance with instructions from said office. Provided, however, that such devices shall not be located so as to interfere with the purposes of the Great Sand Dunes National Monument.

11. This Decree was entered pursuant to agreement of the parties, the issues decided herein have not been litigated between the parties, and therefore, the parties shall not be collaterally estopped or barred in any way by these proceedings or this Decree from asserting any factual and/or legal issues in

any other action not involving these water rights. This Decree shall not be used, considered, or cited as precedent in any other case except and only to the extent that the rights decreed herein are at issue.

12. Nothing in this decree is intended to interfere with or be used to curtail the operation of the Closed Basin Division, San Luis Valley Project, as authorized by Congress in Pub L. 92-514, 86 Stat. 964; Pub. L. 96-375, 94 Stat. 1507; Pub. L. 98-570, 98 Stat. 2941.

13. The water clerk shall serve a copy of this Decree upon the parties, the Division Engineer, Water Division No. 3, and the State Engineer.

DATED this 30th day of June, 1989 ~~1988~~.

BY THE COURT:

ROBERT W. OGBURN, Judge
Water Division No. 3
State of Colorado

The undersigned consent to the entry of this Decree.

DATED: 7 June 1989

MICHAEL J. NORTON
United States Attorney

By _____
JOHN R. HILL, JR. #10214
Attorney
U. S. Department of Justice
Land and Natural Resources Div.
1961 Stout Street, Drawer 3607
Denver, CO 80294
(303) 844-2892

ATTORNEYS FOR APPLICANT
UNITED STATES OF AMERICA

DATED: 11-8-88

FOR THE ATTORNEY GENERAL

By _____
CAROL D. ANGEL #13123
Assistant Attorney General
Natural Resources Section
1525 Sherman Street, 3rd Floor
Denver, CO 80203
(303) 866-5114

DATED: 11-3-88

FOR OBJECTOR RIO GRANDE WATER
USERS ASSOCIATION

By _____
PAULA C. PHILLIPS #8029
Carlson, Hammond & Paddock
2750 One United Bank Center
1700 Lincoln Street
Denver, CO 80203
(303) 861-9000

DATED: 10-31-88

FOR OBJECTOR RIO GRANDE WATER CONSERVATION DISTRICT

By _____

DAVID W. ROBBINS #6112
Hill & Robbins
1441 Eighteenth Street, Suite 100
Denver, CO 80202
(303) 296-8100

DATED: 1-3-88

FOR OBJECTOR OTAKA INTERNATIONAL, INC.

By Richard A Kadinger

RICHARD A. KADINGER #9788
Lucero, Kadinger & Lester
P. O. Box 1270
Alamosa, CO 81101
(719) 589-6626

DISTRICT COURT, WATER DIVISION 3, STATE OF COLORADO

CASE NO. 81CW164

CERTIFICATE OF MAILING

I do hereby certify that on the 30th day of June, 1989, I personally deposited in the United States Mail, a signed copy of the foregoing Findings of Fact, Conclusions of Law, Judgment and Decree in a sealed envelope bearing sufficient postage properly addressed to:

Jeris A. Danielson
State Engineer
1313 Sherman Street
Denver, CO 80203

Steven E. Vandiver
Division Engineer
Water Division 3
P.O. Box 269
Alamosa, CO 81101

United States of America
c/o John R. Hill, Jr.
Dept. of Justice
Land & Natural Resources Sec.
1961 Stout St., Drawer 3607
Denver, CO 80294

John R. Hill, Jr.
Attorney, U.S. Dept. of Justice
Land & Natural Resources Div.
1961 Stout St., Drawer 3607
Denver, CO 80294

Carol D. Angel
Assistant Attorney General
1525 Sherman St., 3rd Floor
Denver, CO 80203

State of Colorado
Dept. of Natural Resources
1525 Sherman St., 3rd Floor
Denver, CO 80203

Rio Grande Water Conservation District
10900 E. Hwy. 160
Alamosa, CO 81101

David W. Robbins
HILL & ROBBINS
1441 Eighteenth St, #100
Denver, CO 80202

Rio Grande Water Users Association
c/o John U. Carlson
CARLSON, HAMMOND & PADDOCK
1700 Lincoln St., Suite 3900
Denver, CO 80203

Paula D. Phillips
CARLSON, HAMMOND & PADDOCK
1700 Lincoln St., Suite 3900
Denver, CO 80203

Otaka International, Inc.
3655 Paces Ferry Road
Atlanta, Georgia 30327

Richard A. Kadinger
LUCERO, KADINGER & LESTER
P.O. Box 1270
Alamosa, CO 81101

by: [signature], Deputy
Carol S. Redding
Clerk of the Water Court
Water Division 3

To be Filed in Quadruplicate 5-25-72

IN THE DISTRICT COURT IN AND FOR

WATER DIVISION NO. 3

STATE OF COLORADO

IN THE MATTER OF THE APPLICATION FOR WATER RIGHT OF

United States of America

IN Alamosa COUNTY.

APPLICATION FOR UNDERGROUND WATER RIGHT (Domestic and Other Small Wells) as defined by Sec. 148-21-45, as amended.

The undersigned applicant applies for adjudication of the following described domestic or other small well, and states:

1. Name of applicant: United States of America, c/o John R. Hill, Jr.
   Mailing Address: 1961 Stout St., Drawer 3607 Denver, Colorado 80294 Tel No. 303-837-2065

2. Legal description of location of well: SE¼ SE¼ Sec. 34, T26S, R73W.
   About 4,500 feet from west section line and about 330 feet from south section line.
   (Locate as closely as possible, without survey, showing number of feet from north-south and east-west section line. If in town, city or subdivision, also furnish lot and block number and name of town, city or subdivision and give number of feet from end and side of lot.)

3. (a) Applicant's well name or number, if any: Well #1

   (b) Registration number, if any: 16400

4. The well is located in the watershed of Medano

   _____ Creek ~~or River~~.

5. Depth of well: 290 Pump: submersible Artesian: no

6. Date when well dug or drilled: Started April 26, 1957 and completed May 18, 1957

7. Amount of water claimed in gallons per minute: 30

8. Use or proposed use of water: domestic, public, and irrigation

   If domestic well, number of single family dwellings served: 15
   (House trailers are considered dwellings.)

9. (a) There are hereto attached copies of documents from State Engineer's Office showing permit and registration with pertinent details of well.

   (b) If well is registered in name of permittee other than present owner of the land on which well is situated, attach statement containing information as to conveyances so that chain of title in applicant is established, or copies of conveyances or abstract entries.

   (c) If well is unregistered, or is registered on forms not containing all necessary details of well, attach affidavit giving same information as nearly as possible as is shown for wells registered on form requiring such details.

Remarks: (a) The United States seeks to antedate the adjudication dates of earlier decrees insofar as they, in conjunction with applicable statutes, appear or purport to preclude this Court from awarding to the United States its water rights bearing their true priority dates.

(b) The filing fees which accompany this application are paid under protest. The United States hereby claims reimbursement thereof on the grounds that filing fees constitute "costs" within the meaning of 43 U.S.C.A., Section 666(a), and as such are not properly taxed against the government in water adjudication proceedings.

JOSEPH DOLAN, UNITED STATES ATTORNEY

HANK MESHORER, Senior Trial Attorney, Dept. of Justice

By _____
JOHN R. HILL, JR., Trial Attorney
Department of Justice, Land and Natural Resources Div
Federal Building, 1961 Stout Street
Drawer 3607, Denver, Colorado 80294

(303-837-2065)

00-00-0000: in the district court in and for water division no. 3 state of colorado: in the matter of the application for water right of u

STATE OF COLORADO)
) ss.
COUNTY OF JEFFERSON)

Kenneth R. Ashley, being first duly sworn, upon oath, deposes and says that (s)he has read the foregoing application, knows the contents thereof, and that the same are true.

Kenneth R. Ashley
APPLICANT

Subscribed and sworn to before me this 27th day of June, 1980.

Mary Esther Greenholt
Notary Public

Form G (Rev.)
6-58/2M

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF THE STATE ENGINEER
Ground Water Section

PERMIT TO USE GROUND WATER
AND NOTICE OF WELL REGISTRATION

To: United States of America, Dept. of Int.
Nat'l. Park Service of Santa Fe, New Mexico, Colorado.
Great Sand Dunes Nat'l. Monument

In accordance with the provisions of Section 2 of the

COLORADO GROUND WATER LAW

The well situated in SE¼,SE¼, T.26S.,R.73W.,Sect.34, of the 6th. P.M. -Alamosa County

Has been regularly registered in this office and assigned No. 16400
and this Permit is issued for the use described in the statement filed.

Signed and Sealed in Denver, Colorado

this 25th day of January, 1962.

DIVISION OF WATER RESOURCES
OFFICE OF THE STATE ENGINEER

J. E. Whitten
State Engineer

By Geo. W. Colburn
Authorized Agent

KEEP THIS AS A PERMANENT RECORD

11-22-1961: well registration no. 16400

Form F
(Rev. 5-61/2M)

RECEIVED
DEC 4 1961
GROUND WATER SECT.
COLORADO
STATE ENGINEER

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF THE STATE ENGINEER, GROUND WATER SECTION

REGISTRATION NO. 16400 OF WELL

Registrant United States of America, Department of the Interior, National Park Service Date Nov. 22, 1961

P.O. Address Box 1728, Santa Fe, New Mexico, ~~Colo.~~

WELL DATA

Depth 350 ft. Diameter 10 and 14 in.

Casing : 290 ft. Plain; 30 ft. Perfor.

Static Water Level 242 ft. from top

Yield 80 (gpm)~~(cfs)~~ from 260 ft.

Used for domestic & irrigation purposes at Great Sand Dunes National Monument
(legal description of land or site)

Water conveyed by pipe, size 4 in. A.C.

PUMP DATA

Type Submersible Size 2 in.

Driven by 5 H.P. 230 V. at - RPM

Well was first used May, 1957

for domestic using 18 gpm

Well enlarged ____, 19__ to deepened ____ (gpm)(cfs)(ft)

LOG SHOULD BE GIVEN ON REVERSE SIDE IF AVAILABLE

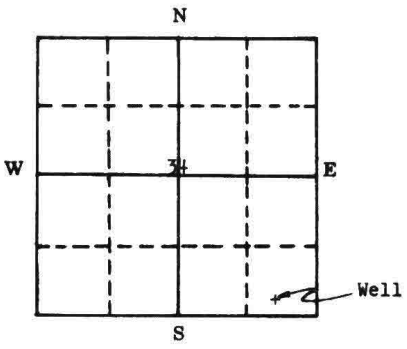
DUPLICATE

WELL LOCATION

County Alamosa

SE ¼, SE ¼ Section 34

Twp. 26 S., Rge. 73 W., 6th PM



WELL TO BE LOCATED AS ACCURATELY AS POSSIBLE WITHIN A SMALL SQUARE WHICH REPRESENTS 40 ACRES; OR IF IN A TOWN OR SUBDIVISION FILL IN THE FOLLOWING:

Town or Subdivision

Street address or Lot and Block

The above well ~~(has)~~ (has not) been filed on in the Office of the State Engineer. If so give Filing No. ____.

A $10.00 filing fee must accompany this form.

The above statements are true and correct to the best of my knowledge and belief.

Subscribed and Sworn before me this 6th day of December, 1961.

My commission expires Feb 24 - 1963

(SEAL) ____ Notary Public

United States of America
National Park Service

by Thomas J. Allen Registrant

Thomas J. Allen
Regional Director

FOR STATE ENGINEER'S USE

Located in ____ district, ____ County for ____

Registration No. ____ in ____, on ____, 19__.

COPY

Form No. 3
(Revised 6/55)

COLORADO WATER CONSERVATION BOARD

NOTIFICATION OF INTENTION TO DRILL XXX REDRILL ☐, RECASE ☐, OR DEEPEN ☐ A WATER WELL

(1) District No. ..... (2) Name or Number of Well .....

(3) Name of Driller Red Top Drilling Co. Dan Laughlin (4) Phone No. 138-J (Las Vegas)

(5) Address Las Vegas, New Mexico

(6) Well Driller's License No. Colo. 319 (7) Approximate Date Start of Work April 26, 1957

(8) Land Owner's Name U.S. Government, Dept. of Interior, Nat'l Park Service

(9) Address National Park Service, Region Three Office, P.O. Box 1728, Santa Fe, N.M.

(10) Estimated Depth of Well 350 Ft.

(11) Location of Well

(12) Diameter of Well 10 and 14 In.

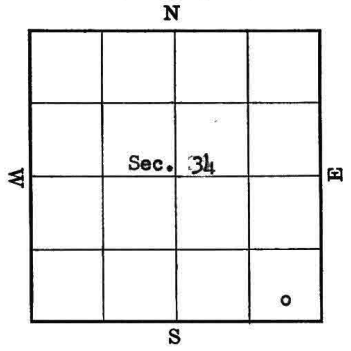
Section No. 34 County [redacted]

(13) Diameter of Casing 8 and 12 In.

Twp. 26S., Range 73 W. P.M. 6th P.M.

(14) Weight of Casing ..... Lbs./Ft.

(15) Please mark well location to nearest 40 acres (small square) below.



(16) Type of Well: Domestic XXX
Irrigation ☐
Municipal ☐
Stock ☐
Other .....

(17) Method to be used in drilling: Cable Tool

.....

(18) If above location is unknown, complete the following:

County .....

(19) Estimated Depth of Bottom and Top of Shutoff None

City, Town or Subdivision .....

.....

(20) Type of Shutoff None

Street Address of Well Location .....

.....

TO BE MADE IN DUPLICATE: *Original White Copy* to Colorado Water Conservation Board. *Pink Duplicate* to Driller.

Supporting Hydro Data

United States Department of the Interior
NATIONAL PARK SERVICE
GREAT SAND DUNES NATIONAL MONUMENT
MOSCA, COLORADO 81146

IN REPLY REFER TO:
L54

September 24, 1993

Memorandum

To: Denise Newberry, Water Rights Branch

From: Superintendent, Great Sand Dunes National Monument

Subject: Water Rights at Well 1 & 3

As we discussed on phone the other day, well 1 and 3 are both pumped into the same 50,000 gal. storage tank. The reason for using both wells is that well 3 is not capable of producing 25 gal/min during dry conditions, in fact, production may fall as low as 8 gal/min. Since this system serves the residences, shop, visitor center, picnic area and dunes restroom it is essential to the operation of the park that consistent water supplies be maintained. In addition, this system supplies all of our fire hydrants.

By utilizing both wells, we are able to insure a sufficient supply of water. We would like to split the existing well 3 water right between wells 1 and 3. We anticipate almost equal use of the two wells during the summer operating season and perhaps heavier reliance on well 3 during the off season.

Well pump logs for the past two years will be forwarded by mail. Thanks for your help with this matter. Please let me know if you need more detailed information.

William E. Wellman

Year of the Visitor

00-00-0000: water use and pumping information sheet: well 1

WATER USE AND PUMPING INFORMATION SHEET — WELL (1)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC INFORMATION	SIGNATURE
8/5/91	1557	8-6-91 0650	727500 706600	727500	20900		Lonnie
8/9/91	0743	1627	739880 727500	739800	12300		Lonnie
8/12/91	0838	1244	745600 739800	745606	5800		Lonnie
8/19/91	0824	1804	759100 745600	759100	13500		Lonnie
8/22/91	0724	1750	773800 759100	773800	14700		Lonnie
8/26/91	0750	1500	783700 773800	783700	9900		Joey n Dave
8/27/91	0720	1410	787700 783700	787700	4000		"
8/28/91	0715	1450	787900 787700	787900	200		"
8/29/91	—	—	—	—	—	Tank full	
8/30/91	0720	1345	787900	796500			Joey n Dave
8/31/91	0812	1345	796500	805400	8900		Toby
9-1-91	800	1400	805400	813600	10,000		Toby
9-2-91	0800	1450	813600	822500	8900		Toby
9-3-91	0720	1500	822500	822700	200		David - Joey
9-04-91			822700				
9-5-91	0720	1500	831000 822700	831000	8300		
9-6-91	0815		831000	831250	250		
9-9-91	0800	1500	840100 831250	840100	8950		
9-10-91			~~840100~~			Chlorinated Dave	
9-12-91	0755		840100				
9-13-91							
9-14-91	8:30		850700 840100	850700 ~~853~~	10660		
9-16-91	8:15	15:10	851100 850700	851100	400		
9/20/91	8:05	9300	856000 851100	856060	4900		
9/22/91	8:00	1510	870000 856000	870000	14000		
9/23/91			870000	870700	700		
9/30/91	0730		904360 870700		33600		
			30				

20 START 9/3 — START AT 30 [illegible]

WATER USE AND PUMPING INFORMATION SHEET — WELL (1)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC INFORMATION	SIGNATURE
9/1/91		0800	870700	904300	33600		
10/2/91	0830		904300				
10/3/91		0730		933700	29400		
10/7/91	1505		933700				
10/15/91				934700			
10/15/91	834		934700				
10/16/91		0800		967400	32500		
~~5/14/92~~	~~0800~~	~~1210~~	~~968100~~	~~968200~~			
5/19/92	0800	1210	967400 968100	968200	800		
6/4/92	0820	1445	968200	976800	8600	Connected CI	
6/8/92	0815	1500	98 5900	985900	9100	Treated Tanks	
6/9/92	0815	1300	985900 90200	990200	4300		CL (10)
6/15/92	~~1300~~ 1300		990200	990600	400		
6/18/92	0745		990600	1000600			
6/19/92	0730	1315	1000600	1008000	7400		
6/25/92	0730	1030	1008000	1016300	8300		
6/26/92	0830	1345	1009100	1016300	7400		
6/29/92	0735	1450	1016300	1026300	10000		
7/2/92	0725	1505	1026300	1036900 44600	10600		
7/3/92	0845	1440	1036900	1044600	7700	Replaced check with	
7/6/92	0750	1500	1044600	1054600	10000		
7/7/92	0734	1500	1054600	1064600	10000		
7/8/92	0730	1500	1065000 75000	1075000	10400		
~~7/9/92~~			~~1075000~~		5		
7/10/92	0845	1040	1075000				
7/10/92	0750		1077900	0108 7600			
7/11/92	0820	1450	0108 7600	1096 1100	8500		
7/14/92	0820		1096 1100	0110 5200			

WATER USE AND PUMPING INFORMATION SHEET — WELL (1)

DATE	START TIME	STOP TIME	STA METER	STOP METER	GALLONS PUMPED	MIS INFORMATION	SIGNATURE
7/3/92	0905	1340	12100 1105800	1300 1112100	7300		
7/16/92	0810	1430	[illegible]	25100 1117300	5200	replaced Cl	
7/17/92	0830	1330	1117300	1125100	7800	Tank full	rate - 11
7/[illegible]	[illegible]	1000	[illegible]	1140600	15000		
7/20/92	[illegible]	0830	1140600	49300 [illegible]	[illegible]	234.38 ft	WATER level
7/23/92	0825	1415	1140700	1149000	8300		
[illegible]	[illegible]	[illegible]	1149000	[illegible]	4000		OK.
7/28/92	0800	1430	1155[illegible]	1162500	7500		OK
[illegible]			~~1162800~~				
7/30/92	0845		1162800	0 1171400			
7/31/92	0845	[illegible]	0 1171400	83000 1177000	6400		David
8-03-92	0830	1245	1177000	91800 1183000	6000		
8-04-92	0810	1430	1183000	1191800	8800		
8/10/92	0835	1455	1191800	1200800	9000		OK
8/11/92	0800	1510	1200800	1210800	10000		OK
8/12/92	0807	1345	1210800	1220100 1210900	100	? talk to Dave	
8/17/92	0740	1455	1210900	9300 1220100	9200		
8/18/92	0810	1445	1220100	1229300	9200		
8/22/92	0730	1300	1229300	1238100			
8/27/92	~~0715~~	~~1305~~	1238100	1248900	10800		
			1248900				
9/9/92	0755	1615	1248900	1249000		Cl_2 TANK 175/8 START 175/8 STOP	BLH
9/14/92	0800					COLLECT RAW SAMPLE BACT	BLH
10/4/92	1705	2000	1249000	1249100		STORAGE TANK LOW	BLH
10/20/92	0920	0925	—	—	—	BACT SAMPLE TAKEN & METER HEAD REMOVED	BLH
11/3/92			1249100	1249400	300	REINSTALLED METER HEAD	BLH
11/16/92	0945		1249400	1249564	164	BAC-T SAMPLE TAKEN	BLH
12/14/92	0815	0825	1249564	1249773	209	BAC-T SAMPLE TAKEN	BLH
1/19/93	0820	0825	1249773	1249958	185	BAC-T SAMPLE TAKEN	BLH

WATER USE AND PUMPING INFORMATION SHEET — WELL (1)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC INFORMATION		SIGNATURE
3/10/93	0850	0910	1249958	1250015	57	NO_3 SAMPLE TAKEN		BLH
5/3/93	0745	0935	1250015	METER NOT WORKING		NO_3 SAMPLE TAKEN		BLH
5/19/93	1300	1345	0000	0663	663	FLUSHED SYSTEM NEW METER INSTALL		BLH
5/25/93	1450	1550	0663	01602	939	NEW CL_2 SYSTEM INSTALLED CT TANK FILLED WITH 50mg/L		BLH
5/26/93	1445	1520	01602	02103	501	FLUSHED 50mg/L FROM CT TANKS		22½ BLH
5/27/93	1310	1510	02103	04772	2669		2 7/16	23 BLH
5/29/93	1910	1500	14110	14110			A	16 3/4 OR
5/30/93	0830	1450	23020	23020			17	
5/3/93	0830	1500		32470			13 3/4	TR
6/1/93	0750	1550	32447	43261	10814	0.36 DOSAGE	13 5/8	10 1/8 BLH
6/2/93	0930	1545	43261	51683	8422	0.46 DOSAGE	6 5/8	BLH
6/3/93	0810	1355	51683	59410	7727	0.46 DOSAGE	3 7/16	BLH
6/4/93	0805	0815	59410	59494	84	MIXED NEW CL_2 SOLUTION	23	BLH
6/5/93	0800	1410	59494	66470	6976	N/A	20¼	T.R
6/6/93	0830	1400	66470	73400	7030	N/A	17½	T.R
6/7/93	0745	73400	1540	83808	10408		15 3/4	
6/11/93	1055	1515	83808	89679	5871	FILLED CL_2 TANK 0.41mg/L	15	12 13/16 BLH
6/11/93	1520	2115	89679	97541	7862	0.48 DOSAGE	23	19 5/8 BLH
6/12/93	0940	1915	97541	110334	12793	0.46 DOSAGE	14 5/16	BLH
6/14/93	0735			140490	30156		0	BLH
6/14/93	0940	1300	140490	144658	4168	0.50 DOSAGE	23	21 1/8 BLH
6/15/93	0750	1515	144658	154353	9695	0.47 DOSAGE	17 1/16	BLH
6/16/93	0815	1515	154353	163645	9292	0.32 DOSAGE	14 3/8	BLH
6/17/93	0745	1355	163645	171808	8163	0.32 DOSAGE	12	BLH
6/18/93	0740	1445	171808	181193	9385	0.34 DOSAGE	9 1/8	23 BLH
6/19/93	0800	1445	181193	189380	8197			21 T.K
6/20/93	0845	1500	189380	197670	8290	N/A		18 TR
6/21/93	0850	1530	197670	206646	8976	0.33 DOSAGE	15 5/16	BLH
6/22/93	0740	1610	206646	217844	11198	0.34 DOSAGE	11 7/8	BLH

WATER USE AND PUMPING INFORMATION SHEET — WELL (1)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	SIGNATURE
6/23/93	0800	1520	217844	227535	9691	0.35 DOSAGE 11 7/8	8 13/16 BLH
6/24/93	0905	2130	227535	244088	16553	0.34 DOSAGE 3	11/16 BLH
6/24/93	2145	—	244088	—	13909	0.34 DOSAGE 23	BLH
6/25/93	0810	1430	257997	266451	8454	0.36 DOSAGE 18 4/16	15 15/16 BLH
6/26/93	0845	1505	266451	274730	8279	N/A 28	1/4 TR
6/27/93	0830	1455	274730	283190	8460	N/A 17	3/4 TR
6/28/93	0800	—	283190	—			BLH
6/29/93	—	1500	—	324280	41161	0.36 DOSAGE 4 5/16	23 BLH
6/29/93	1515	2210	324280	333385	9105	0.37 DOSAGE	20 BLH
6/30/93	0810	2040	333385	349809	16424	0.36 DOSAGE 14	5/8 BLH
7/1/93	0810	2025	349809	365932	16123	0.36 DOSAGE 9	3/8 BLH
7/2/93	0815	2035	365932	382142	16210	22.5 22.0 0.37mg/L 3 15/16	23 BLH
7/3/93	0845	1500	382140	389360	7308	N/A 20	3/4 TR
7/4/93	0900	1455	389360	395800	6440	N/A 19	3/4 TR
7/5/93	0725	—	395800	—	—	24.5 22.0 8AM 7-6	BLH
7/6/93	—	1516	—	438347	42547	22.0 315PM 7-6 0.40 DOSAGE 4 9/16	23 BLH
7/6/93	1524	—	438347	—	—	21.75 315PM 7-7	
7/7/93	—	2010	—	476273	37926	22.0 0.37mg/L 10 7/16	BLH
7/7/93	2020	—	476273	—	—	22.0 22.0 0815 7-8 23	BLH
7/8/93	—	1517	—	501184	24911	21.5 0.37 mg/L 0815 17 3/4	14 5/8 BLH
7/9/93	0724	1516	501184	511604	10420	22.5 0725 22.0 1516 0.35mg/L	11 5/16 BLH
7/9/93	1525	—	511604	—	—		23 BLH
7/10/93	1828	—	547600	—	35996	22.0 0.37mg/L 11 1/8	23 BLH
7/11/93	1950	—	580949	—	33349	22.0 0.37mg/L 11 7/8	23 BLH
7/12/93	~~0835~~	0835	—	597514	16565	21.5 0.37mg/L 17 7/16	BLH
7/13/93	0804	1606	597514	607993	10479	22.5 21.75 0.36mg/L 14	BLH
7/14/93	0820	1526	607993	617274	9281	22.5 21.5 0.36mg/L 11	BLH
7/15/93	0802	1542	617274	627261	9987	22.25 21.5 0.37mg/L 7 11/16	23 BLH
7/16/93	0830		627261	—	—	8 3/4	
7/17/93	—	1731	—	670203	42942	21.5 0.37mg/L TANK FULL & OVERFLOW	

WATER USE AND PUMPING INFORMATION SHEET — WELL (1)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	SIGNATURE
7/18/93	0845	1435	670203	677070	6867	Shutoff at the end	T. R
7/19/93	0756	1539	677070	687143	10073	22.0 21.75 0.37mg/L 20 3/4	17 7/16 BLH
7/20/93	0744	1528	687143	697211	10068	21.5 21.75 0.37mg/L 14 1/8	BLH
7/21/93	0752	1523	697211	707003	9792	22.0 21.5 0.37mg/L 10 7/8	BLH
7/22/93	0746	2045	707003	724068	17065	22.0 21.5 0.37mg/L 5 3/16	23 BLH
7/23/93	0900	1460	724068	730660	6592	N/A	01 TR
7/24/93	0900	1430	730660	737870	7210	N/A	18 3/4 TR
7/25/93	0900	1435	737870	744790	6920	N/A	16 1/2 TR
7/26/93	0802	—	744790	—	31888	22.25 21.50 0.37mg/L 16 5/16	BLH
7/27/93	0824	1516	776678	785540	8862	21.50 0.37mg/L 2 5/8	BLH
7/28/93	0828	—	785540		—	21.50 21.50 1500 23	BLH
7/29/93	—	1447	—	824805	39265	21.50 0.37mg/L 10	BLH
7/30/93	0759	1547	824805	834921	10116	21.75 21.5 0.36mg/L 6 11/16	23 BLH
7/31/93	0830	1455	834921	842710	7799	N/A	20 1/2 TR
8-1-93	0900	1440	842710	849810	7000	N/A	18 1/4 TR
8-2-93	0803	—	849810	—	—	22.0 21.5 @ 1500	18 1/8 BLH
8/3/93	—	1531	—	890715	40905	21.5 @ 0815 21.5 0.37mg/L 4 7/16	BLH
8/4/93	0757	1526	890715	900351	9636	21.75 21.25 0.36mg/L 23	19 7/8 BLH
8/5/93	0814	1500	900351	909100	8749		17 TR
8/6/93	0803	1517	909100	918461	9361	0.37mg/L 13 7/8	23 BLH
8/7/93	0830	1500	918461	926540	8089	N/A	20 1/4 TR
8/8/93	0900	1445	926340	933850	7510	N/A	18 17 15/16 TR
8/9/93	0757	2217	933850	952473	18623	0.37mg/L	11 3/4 TR
8/10/93	1316	—	952473	—	—	22.0	23 BLH
8/11/93	—	0800	—	977043	24570	21.75 0.36mg/L	15 BLH
8/12/93	0815	1505	977043	985598	8555	0.36mg/L	12 3/16 BLH
8/13/93	0858	1457	985598	993352	7754	0.37mg/L	9 5/8 23 BLH
8/14/93	0930		993352	1029860			TR
8/15/93		1330	1029		26490	N/A	11 TR
8/16/93		1330	1029860				

WATER USE AND PUMPING INFORMATION SHEET WELL (1)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION		SIGNATURE
8/16/93	0815	1508	1029460	1038688	9228	0.35mg/L	10 13/16	7 7/8 BH
8/17/93	0725	1503	1038688	1048657	9969	0.36mg/L		4 5/8 BLH
8/18/93	0750	1536	1048657	1058683	10026	0.36mg/L	23	19 3/4 BLH
8/19/93	0751	1725	1058683	1071010	12327	0.37mg/L	15 1/16	BLH
8/20/93	0757	1502	1071010	1080127	9117	0.37mg/L	12 11/16	23 BLH
8/21/93	0745	1430	1080127	1087960	7680	N/A	20 1/2	TR
8/22/93	0745	1500	1087960	1096420	8460	N/A	8	TR
8/23/93	0746	1445	1096420	1105408	8988	0.37mg/L	17 5/8	14 5/8 BLH
8/24/93	0750	1553	1105408	1115752	10344	0.36mg/L	11 1/4	BLH
8/25/93	0817	1056	1115752	1119189	3437	0.38mg/L	10 1/16	BLH
8/26/93	0813	1515	1119189	1128235	9046	0.36mg/L	7 1/8	BLH
8/27/93	0751	1503	1128235	1137495	9260	0.37mg/L	4 1/16	23 BLH
8/28/93	0930	—	1137495	—				VR
8/30/93	—	0755	—	1198177	60682	21.5 0.37mg/L	2 5/16	BLH
8/31/93	0803	1529	1198177	1207801	9624	0.36mg/L	23	19 7/8 BLH
9/1/93	0754	1526	1207801	1217543	9742	0.36mg/L	16 1/16	BLH
9/2/93	0753	1454	1217543	1226603	9060	0.36mg/L	13 3/4	BLH
9/3/93	0838	1519	1226603	1235231	8628	0.36mg/L	10 15/16	BLH
9/4/93	1216	1936	1235231	1244663	9432	0.36mg/L	7 7/8	BLH
9/5/93	0817	1827	1244663	1257755	13092	0.37mg/L	3 9/16	BLH
9/6/93	1132	1710	1257755	1264996	7241	0.36mg/L	23	20 5/8 BLH
9/7/93	0803	1605	1264996	1275329	10333	0.36mg/L	17 1/4	BLH
9/8/93	0752	1414	1275329	1283507	8178	0.36mg/L	14 5/8	BLH
9/10/93	0745	1549	1283507	1293977	10470	0.36mg/L	11 3/16	23 BLH
9/12/93	1003	—	1293977	—	—	21.75 @ 1830		19 7/16 BLH
9/13/93	—	1834	—	1336254	42277	0.41mg/L		9 1/8 BLH
[illegible]3	0757	1534	1336254	1346061	9807	0.36mg/L		5 15/16 BLH
[illegible]28		1522	1346061	1355019	8958	0.36mg/L		3 1/16 BLH
[illegible]15		1507	1355019	1363892	8873	0.35mg/L	23	20 3/16 BLH

WATER USE AND PUMPING INFORMATION SHEET WELL (1)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	SIGNATURE
9/17/93	0800	1549	1363892	1374146	10 254	0.36mg/L 20 3/16	16 7/8 BLH
9/19/93	0854	1923	1374146	1387760	13 614	0.36mg/L	12 7/16 BLH
9/20/93	0841	1635	1387760	1397997	10 237	0.37mg/L	9 1/16 BLH
9/21/93	0738	1600	1397997	1408801	10 804	0.37mg/L	5 1/2 BLH
9/22/93	0834	1546	1408801	1418098	9297	0.36mg/L 22 15/16	19 15/16 BLH
9/23/93	0803	1539	1418098	1427885	9787	0.36mg/L	16 3/4 BLH
9/24/93	0758	1329	1427885	1434996	7111	0.36mg/L	14 7/16 BLH
9/25/93	0951	1748	1434996	1445323	10 327	0.36mg/L 23	19 5/8 BLH
9/26/93	1113	—	1445323				
9/27/93	—		—			21.25 @ 0800	

WATER USE AND PUMPING INFORMATION SHEET WELL (3)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC INFORMATION	SIGNATURE
8/7/91	0721	8-8-91 0710	7177160 7153180	7177160	23980		Lonnie
8/9/91	0646	1638	7187420 7177160	7187420	10260	TANK FULL	Lonnie
8/11/91	0827	8-12-91 0713	7211300 7187420	7211300	23880		Lonnie
8/12/91	0713	1229	7215780 7211300	7215780	4480	Tank Full	Lonnie
8/13/91	1436	8/14 0617	7232110 7215780	7232110	16330	Worked on chlorinator	Lonnie
8/14/91	0617	1741	7239620 7232110	7239620	7510	Batched Tank	Lonnie
8/14/91	1741	1918	7240530 7239620	7240550	930		Lonnie
8/15/91	0636	8-16 0655	7257520 7240550	7257520 [illegible]0	16970		Lonnie
8/16/91	1705	8-19 0729	7290850 7257520	7290850	33330	cut Back on Chlorinator	Lonnie
8/20/91	0645	8-21 0733	7309300 7290850	7309300	18450	Filled CL2 TANK	Lonnie
~~8/21/91~~	~~0733~~		~~7309300~~				Lonnie
8/22/91	0716	1732	7319870 7309300	7319870	10570		Lonnie
8/23/91	1245	8-25 1945	7354410 7319870	7354410	34540		Lonnie
8-26-91			7354410			Pump on Auto	David
8-31-91	0745	1200	7354410	7354410			Toby
9-1-91	0745	1245	7355740	7365120		Pump on Auto	Toby
9-2-91	0700	12:50	7361120	737,470			Toby
9-3-91	1510 [illegible]		7371480				Everyone
9-4-91		7:10		7388910	17430		Jay. Rose
9-5-91	7:10	12:30	7394760 7388910	7394760	5850		"
9-6-91	7:20		7402670 7394760	7402670	7910		
9-9-91	7:20		7429100 7402670				
9-10-91		~~7:15~~		~~7429100~~	26430	full	Sue
9-11-91	[illegible]	1330	7429100	7436050	6950		
9-12-91	7:15		7436050				
9-13-91		7:15		7461710	25660	full	
9-14-91			7461710				
9-16-91	7:20		7487760 7461710				
9-17-91		720		7487760	26050		

00-00-0000: water use and pumping information sheet: well 3

WATER USE AND PUMPING INFORMATION SHEET — WELL (3)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	SIGNATURE
9/17/91	1500		7487760				
9/18/91		715	7504990		17230	Tank full	
9/19	0720	1510	7530430				
9-20	1745		7530430 7513310	7530430	17120		
9-23-91	0700		7556240 7530430				
9-24-91		0715		7556240	25810		
10-16-91	2050		7560710		37145	All [illegible] Durings	
17 Oct 91		0915		7557850		During weekend [illegible] idea what is being pumped	
18 Oct 91	0720	1420	7557850	7605640			
19 Oct 91	655	1500	7605640	7614780	9120		
21 Oct 91	0710	1445	7614780	7623530	8750	8500150 8499120 1030	
22 Oct 91	0720	1425	[illegible]	7631490	7960		
23 Oct 91	0710	1430	7631490	7639480	8490		
24 Oct 91	0735	1500	[illegible]	7648520	8540	Tank full	
25 Oct 91	0715	1500	7656920 7643520	7656920	8400	mixed ch 4 gal ch 20 [illegible]	
26 Oct 91	0700	1500	7665880 7656920	7665880	8960		
28 Oct 91	0720	1430	73800 7665880	7673800	7920		
30 Oct 91	0715	1440	7673800	7682040	8240		
1 NOV	0715	1430	7689650 7682040	7689650	7610	full	
4 NOV	0720	1510	98490 7689650	7698690	9040		
5 NOV	0715	1430	7698690	7706640	9950		
6 NOV	0720	1430	7714630 7706640	7714630	7990		
7 NOV	0720	1445	7714630	7722850	8220		
8 NOV	0720	1530	7722850	7729630	6780	Tank full	
12 NOV	0725	1500	7729630	7738380	8750		
13 NOV	0720	1415	46230 7738380	7746230	7850		
14 NOV	0715	1430	54250 7746230	7754250	8020		
16 NOV	0715	1445	7754250	7762850	8700		
19 NOV	0705		7762850	7771740	8890	Tank full	

WATER USE AND PUMPING INFORMATION SHEET WELL (3)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC INFORMATION	SIGNATURE
21 NOV	0720	1330	7771740	7779020	8280	fill mix 2 gal ch	
25 NOV	0715	1520	7779020	7788470	9450		
26 NOV	0716		7788470	7797260	8790	Tank Full	
27 NOV			7797260	-			
28 NOV	Holiday						
29 NOV	0530	1430	7797260	7803360	6100		
2 Dec	0830	1430	7803360	7810180	6920		
3 Dec	0715	1445	7810180	7818790	8610		
5 Dec	0715	1445	7818790	7827440	8650		
9 Dec	0715	1505	7827440	7836600	9220		
10 Dec	0715	1410	7836600	7844500	7900		
11 Dec	0710	1445	7844500	7853150	8650		
13 Dec	0720	1445	7853150	7861600	8450		
16 Dec	0720	1505	7861600	7870530	8930		
18 Dec	0720	1500	7870530	7879220	8690		
20 Dec	0720	1450	7879220	7883850	4630		
23 Dec	0715	1440	7883850	7892670	8820		
26 Dec	0720	1500	7892670	7901600	8930		
27 Dec	0715	1155	7901600	7906920	5320	Tank Full	
30 Dec	0720	1500	7906920	7915760	8840		
2 Jan 92	0720	1505	7915760	7924720	8960		
3 Jan 92	0725	1200	7924720	7930020	5500	Tank Full	
6 Jan 92	0715	1500	7930020	7939100	9080	mixed 2 gal ch	
8 Jan 92	0715	1505	7939100	7948140	9140		
13 Jan 92	0815	1450	7948140	7956980	7840		
15 Jan 92	0715	1505	7956980	7965080	9100		
16 Jan 92	0710	1300	7965080	7971540	6460		
17 Jan 92	0715	1100	7971540	7975870	4330		

WATER USE AND PUMPING INFORMATION SHEET

WELL (3)

DATE	START TIME	STOP TIME	ST. METER	STOP METER	GALLONS PUMPED	MI: INFORMATION	SIGNATURE
21 Jan	0715	1504	7975870	7985070	9200		
22 Jan	0820	1240	7985070	7990130	5060		
23 Jan	0730	1350	7990130	7997460	7330	mixed 2 gal CL	
27 Jan	0715	1500	8006450	8015440	8990		
28 Jan	0725	1230	12380 8006450	8012380	5930		1200
30 Jan	0720	1300	8012380	8018830	6450		1850
31 Jan	0720	1305	8018830	8025390	6560		
3 Feb	0730	1505	8025390	8034150	8760		
4 Feb	0730	1500	8034150	8042860	8710		
6 Feb	0730	1430	8042860	8050900	8640		
9 Feb	0720	1500	8050900	8059820	8920		
12 Feb	0715	1440	8059820	8068500	8680		
14 Feb	0715	1400	8068500	8076410	7910		911
18 Feb	0720	1430	8076410	8084780	8370		
20 Feb	0720	1230	8084780	8088600	3820		
21 Feb	0720	1400	8088600	8096810	8210		
24 Feb	0710	1510	8096810	8106250	9440		
25 Feb	0715	1100	8106250	8109090	2840		
27 Feb	0720	1310	8109090	8115770	5670		
28 Feb	0720	1230	8115770	8121890	6120		
2 Mar 92	0725	1500	8121890	8130720	8730		
5 Mar 92	0725	1440	8130720	8139220	8500		
6 Mar	0715	1430	8139220	8147710	8490	-4	
9 Mar	0720		8147710				
10 Mar		0710		8175120	27410		
11 Mar	0715	1510	8175120	8184070	8950		
13 Mar	1230	0720	8184070	8188720	5850		
16 Mar	0720	1605	8188920	8198780	8860		
			8198780				

WATER USE AND PUMPING INFORMATION SHEET WELL (3)

DATE	START TIME	STOP TIME	ST. METER	STOP METER	GALLONS PUMPED	MI: INFORMATION	SIGNATURE
3-18	0730	1500	8208590 8198780	16590 8207590	8810		
3-20	0725	1515	8207590	8216590	9000		
3-23	0720	1510	25840 8216590	8225840	9250		
3-24	0725	1230	32270 8225840	41280 8232270	6430	Tank full	
3-26	0720	1445	8232270	8241280	9010		
3-30	0720	1510	8241280	8250950	8670		
04-01	0715	1230	8250950	8257450	6500		
04-03	0715	1420	8257450	8266140	8590		
04-06	0720	1500	8266140	8275740	9600		
04-08	0720	1310	8275740	8283130	6390		
04-10	0715	1430	8283130	8292060	8430		
04-13	0713	1515	8302070 8292060	8302070	10010		
04-15	0700	1515	8302070	8312270	10200		
04-15	0705	1500	8322150 8312270	8322150	9880	Tank full	
04-20	0710	1505	33231 8322150	8332310	11081		
04-23	0710	1540	42950 8332310	8341295 0	10640		
04-24	0720	1510	8341295 0	8352630	9720	Full Tank	
04-27	0730	1525	8352630	8362580	9950		
04-28	1500		8362580				
04-29		0730		8383140	20560	Tank full	
04-30	0715	1455	8383140	8392610	9470		
5-1	0930		8392610	8399270	6660	Tank full	
5-4	0715	1500	8408960 8399270	8408960	9690	6%	
5/5/92	0715	1500	18550 8408960	8418550	9590	6%	
5/6/92	0720	1500	27610 8418550	8427610	9060	mixed 10 gal Cal.	
5/7/92	1500		8427610	841			
5-8-92		7:25	8447520		19910	Tank full	
5-11-92	0720		8447520 56870	8456870	9350		
5-12-92	0715	1515	8456870	8466470	9600	gb	

WATER USE AND PUMPING INFORMATION SHEET WELL(3)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	SIGNATURE
5-13-92	0715	1505	8466170	8475950	9480		
5-14-92	0720	1505	8475950	8484860	8910		
5/15/92	10:30	1430	8484860	8491240	6380	Tank full	
5/17/92	8:30AM	1450	8491240	8500150	8910		
5/18/92	7:30	1515	8500150	8509210	9060		
5/19/92	0720	1450	8509210	8518320	9120		
5/20/92	0720	1515	8518320	8528000	9680	-1 ft	
5/21/92	0740	1505	8528000	8537020	9020	Mix Cl	
5/22/92	0720	1455	8537020	8545830	8810		Full
5/23/92	0815	1420	8545830	8552740			
5/24/92	0815	1425	8560060	8560060			
5/25/92	810	1410	<	8567110			
5/26/92	0730	1515	8567160	8576290	9130		
5/27/92	0715	1430	8576290	8586000	9800		
5/28/92	0730	1510	8586006	8594950	8950		
5/29/92	0720	1500	8594950	8603800	8850	Mix Cl Tank full	
5/30/92	0650		8603800	8613100			
5/31/92	0830	1425	8613100	8620150	7050		
6/1/92	0730	1345	8620150	8627350	7200		
6/3/92	0715	1500	8627350	8636740	8390	mixed Cl	
6/4/92	0715	0910	8636740	8638920	2180		
6/5/92	0745	1345	8638920	8646060		Tank full	
6/6/92	1000	1440	8646060	8650630			
6/7/92	1000	1500	8650630	8654710			
6/8/92	0720	1450	8654710	8663660	8950		
6/9/92	0720	0930	8663660	8665800	2200	Tank full	
6/11/92	0720	1500	8665800	8674940	7140		
6/12/92	1215	1450	8674940	8679250	86792		
6/13/92	630	1455	8679250	8689010			

WATER USE AND PUMPING INFORMATION SHEET — WELL (3)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC INFORMATION	SIGNATURE
6/14/92	6350	1450	868940	8698810			
6/15/92	0715	1520	8698810	8708060	9170		
6/16/92	0725	1500	8708060	8717160	9100		
6/17/92	0725	1505	8717160	8726150	8950		
6/18/92	0720	1524	8726150	8735510	9360		
6/19/92	0715		8735510	8744480			
6/20/92	0630	1610	8744480	8755660			
6/21/92	0640	1430	8755660	8764700		Visual alignment	
6/22/92	0710	1430	8764700	8773190	8490		
6/23/92	0715	1530	8773190	8782720	9530		
6/24/92	0725	1505	8782720	8791320	8600		
6/25/92	0715	1520	8791320	8800440	9120		
6/26/92	0715	1330	8800440	8807670	7230		
6/27/92	0630	1445	8807670	8816750	9080		
6/28	0630	1430	8816750	8825740	8990		
6/29/92	0720	0815	8825740	8826780	1040		
6/30/92	0720	1510	8826780	8835690	8910		
7/1/92	0715	1500	8835690	8844590	8900		
7/2/92	0710	1440	8844590	8853100	8510		
7/3/92	0710		8853100	8862430	9330		
7/4/92	0640	1455	8862430	8871870	9440		
7/5/92	0635	1400	8871870	8880230	8360		
7/6/92	0730	1435	8880230	8888840	8610		
7/7/92	0715	1508	8888840	8893400	8500		
7/8/92	0715	1435	8893400	8905660	12260		
7/9/92	0800	1500	8905660	8912200	5730		
7/10/92	0730	1515	8912200	8921770	8870		
7/11/92	0630	1426	8921770	8931140	10370		
	0630	1430	8931140	8940190	9050		

WATER USE AND PUMPING INFORMATION SHEET — WELL (3)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC INFORMATION	SIGNATURE
7/13/92	0800	1420	8940190	8948500	8310		J. R.
7/14/92	0725	1430	8948500	8956720 (65250)	8270		
7/15/92	0720	1450	8956720	8965280 (73880)	8560		
7/16/92	0725	1500	8965280	8973880 (79080)	8600	Tank full	Nijce
7/17/92	0715	1150	8973880	8979080	5200	Tank full	
7/18/92	630	1430	8979080	8987610	8530		J. L
7/19/92	645	1450	8987610	8996820	9210		
7/20/92	0715	1510	8996820	9005720	8900		
7/21/92	0730	1450	9005720	9013890 (8170)	8120		
7/22/92	0700	1500	9018890	9021750 (29170)	7960		
7/23/92	0755	1425	9021750	9029170 (37460)	7420		
7/24/92	0730	1500	9029170	9037460	8290		- 2
7/25/92	0635	1400	9037460	9045750	7290		
7/26/92	0640	1500	9045750	9053980	8230	Tank overfull	JR
7/27/92	0725	1300	9053980 (60240)	9060240 (69240)	6260	Tank full	
7/28/92	0730	1515	9060240	9069080	8840		
7/29/92	0740	1445	9069080	9077130	8050		
7/30/92	0750	1502	9077130	9085240			
7/31/92	705	1145	9085240	9094300	5060	Tank full	
8-1-92	630	1445	9094300	9099350	9050	Tank Full	Toby
8-2-92	625		9099350	9108020 (16820)			
8-3-92	0715	1500	9108020	9116820 (125330)	8800		
8/4/92	0715	1500	9116820	9125330	8510	TANK FULL	
8/5/92	0730	1430	9125330	9133220 (29850)	7890		
8/6/92	0800	1400	9133220	9139850	6630		
8/7/92	0715	1515	9139850	9148910	9060		
8/8/92	630	1420	9148910	9157690			
8/9/92	630	1520	9157690	9162510			
8/10/92	0720	1510	9162510	9176290			

WATER USE AND PUMPING INFORMATION SHEET — WELL (3)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC INFORMATION	SIGNATURE
8/13/92	0700	1430	9176290	9183880			
8/14/92	0720	1430	9183880	9192080			
8/15/92	0730	1430	9201160	9212080			
8/16/92	0630	1400	9201160	9209270			
8/17/92	0730	1505	9209270	9217130	7860		
8/18/92	0727	1500	9217130	9225540	8410		
8/19/92	0715	1455	9225540	9239270			
8/20/92	0720	1500	9239270	9247830	8560		
8/21/92	0655	1430	9247830	9251280	3430	Full	J.K
8/22/92	0600	1330	9251280	9259590	7	Full	
8/23/92	0630	1420	9259590	9268300			
8/24/92	0720	1300	9268300	9274410	6110	Tank full	
8/25/92	0720	1515	9274410	9283120	8710		
8/28/92	0720	1510	9283120	9291990	8870	Tank full	
8/29/92		1515	9291990	9300710			
8/30/92							
8-31-92	0730		9309850		4310		
9/1/92	0730		9314190	9314220			
9/2/92			9314220	9324580	10360	TANK FULL	BRUCE
9/3/92	0730	1545	9324580	9333850	9270		BRUCE
9/4/92	0730	1535	9333850	9342970	9120	MIXED NEW BATCH OF CL_2 (10 GAL)	BRUCE/JOEY
9/5/92	0703	1519	9342970	9352230	9260		
9/6/92	0702	1519	9352230	9361490	9260		
9/7/92	0704	1518	9361490	9370640	9150		RJW
9/8/92	0740	1535	9370640	9379380	8740	TANK 4' FROM TOP MIXED 5GAL OF CL_2	BRUCE
9/9/92	0725	1630	9379380	9389330	9950		BLH
9/11/92	0730	1815	9389330	9401170	11840	MIXED 5GAL CL_2 TANK START 18" STOP 17"	BLH
9/12/92	0720	1540	9410130	9401170	8018		RJW
9/13	0721	1620	9410810	9419970	9160		RJW

WATER USE AND PUMPING INFORMATION SHEET WELL(3)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	SIGNATURE
9/14/92	0730	9255	9419970	9425900	5930	14¾ INCREASED 14¼ FEED PUMP TO 30	BLH
9/15/92	0735	1230	9425900	9431370	5470	14¼ 13½	BLH
9/17/92	0730	1530	9431370	9440350	8980	13½ 16½ MIXED 13 15¾ 6GAL CL_2	BLH
9/18/92	0745	1630	9440350	9450030	9680	19 TANK 2' FROM TOP 18 MIXED 6GAL CL_2	BLH
9/19/92	0719	9431310	9450020	9456490	6460		KJW
9/20/92	0723	1542	9456490	9465660	9170		KJW
9/21/92	0730	1530	9465660	9474440	8780	16 TANK OVERFLOWING 15¼ @ 1530	BLH
9/23/92	0700	1430	9474440	9481450	7010	14 TANK 3 FT FROM TOP	KJW
9/25/92	0735		9481450			17½ MIXED 6GAL CL_2	BLH
9/26/92		0814		9508690	27240		KJW
9/27/92	0826	~~0818~~	9508690	9516280	7590	13¼	KJW
9/28/92	0725	1555	9516280	9525550	9270	16 TANK 1½' FROM TOP 15 MIXED 6GAL CL_2	BLH
9/30/92	0745	1555	9525550	9534720	9170	17¾ TANK 2½' FROM TOP 16¾ MIXED 6GAL CL_2	BLH
10/1/92	0725	1610	9534720	9544370	9650	16¾ TANK OVERFLOWING 15¾ @ 1610	BLH
10/3/92	0720	1313	9544370	9551020	6650	18½	KJW
10/4/92	0845	1320	9551020	9556170	5150	16½	KJW
10/4/92	1640	2240	9556170	9562820	6650	BOTH WELL RUNNING SPIKED TANK W/500ml	BLH
10/5/92	0735	1840	9562820	9575140	12320	TANK ½ FULL 18¾ MIXED 6GAL CL_2 17½	BLH
10/6/92	0735	1535	9575140	9583970	8830	17½ 16¾	BLH
10/7/92	0735	1540	9583970	9592740	8770	TANK 3FT FROM TOP MIXED 6GAL CL_2 19½ 18½	BLH
10/8/92	0755	1510	9592740	9600610	7870	18½ 17¾	BLH
10/9/92	0745	1150	9600610	9605220	4610	TANK 1½' FROM TOP MIXED 6GAL CL_2 20½ 20	BLH
10/10/92	1210	1950	9605220	9613590	8370	20 19	BLH
10/11/92	0940	1603	9613590	9620580	6990		KJW
10/12/92	0831	1311	9620580	9625590	5010	TANK 1' FROM TOP	KJW
10/14/92	0735	1510	9625590	9633980	8390	20¼ 19¼	BLH
10/15/92	0735	1245	9633980	9639790	5810	MIXED 6GAL CL_2 21¾ 21	BLH
10/15/92	1750	1930	9639790	9646950	7160	TANK full	
10/16/92	0725	1430	9641950	9649810	7860		

WATER USE AND PUMPING INFORMATION SHEET WELL (3)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	SIGNATURE
10/20/92	0735	1550	9654840	9664010	9170	MIXED 6 GAL CL_2	22 21 BLH
10/21/92	0735	1500	9664010	9672220	8210		21 20 BLH
10/22/92	0730	1715	9672220	9682940	10720	TANK OVERFLOWING AT 1715	20 18 3/4 BLH
10/25/92	1320	2010	9682940	9690630	7690		18 3/4 18 BLH
10/26/92	0735	1630	9690630	9700780	10150	MIXED 6 GAL CL_2	20 3/4 19 3/4 BLH
10/27/92	0735	1540	9700780	9709630	8850	RAN PUMP WITHOUT CL_2 FEED, HIGH RES TANK	19 3/4 19 3/4 BLH
10/29/92	0725	1535	9709640	9718650	9010	LOWERED CHLORINATOR FROM 3 TO 2.5	19 3/4 18 3/4 BLH
11/2/92	0735	1540	9718650	9727780	9130		18 3/4 18 BLH
11/3/92	0945	1450	9727780	9733600	5820	MIXED 6 GAL CL_2	20 1/4 19 3/4 BLH
11/4/92	0735	1100	9733600	9737470	3870		19 3/4 19 1/2 BLH
11/5/92	0740	1520	9737470	9746090	8620		19 1/2 18 1/2 BLH
11/6/92	0745	1520	9746090	9754540	8450	TANK FILLED TO OVERFLOWING @ 1520	18 1/2 17 1/2 BLH
11/9/92	0730	1530	9754540	9763550	9010		17 1/2 16 1/2 BLH
11/10/92	0730	1320	9763550	9770260	6710	MIXED 6 GAL CL_2	19 18 1/2 BLH
11/11/92	0730	1520	9770260	9778940	8680	TANK OVERFLOWING @ 1520	18 1/2 17 5/8 BLH
11/16/92	0740	1600	9778940	9788530	9590	TANK DOWN 4 FT	17 5/8 16 1/2 BLH
11/17/92	0725	1545	9788530	9798200	9670	MIXED 6 GAL CL_2	19 3/8 18 1/4 BLH
11/18/92	0735	1600	9798200	9807660	9460		18 1/4 17 1/4 BLH
11/20/92	0730	1530	9807660	9816660	9000	TANK 2' FROM TOP TANK OVERFLOW @ 1530	17 1/4 16 3/8 BLH
11/23/92	0745	1510	9816660	9825130	8470	TANK 2 1/2' FROM TOP	16 3/8 15 3/8 BLH
11/24/92	0750	1450	9825130	9833020	7890	TANK OVERFLOWING @ 1450	15 3/8 14 1/2 BLH
11/27/92	0730	1500	9833020	9841600	8580		14 1/2 13 1/2 BLH
11/30/92	0805	1300	9841600	9847310	5710		13 1/2 12 7/8 BLH
12/01/92	0740	1550	9847310	9856640	9330		12 7/8 11 7/8 BLH
12/02/92	0750	1545	9856640	9865650	9010	TANK FILLED AND OVERFLOWING @ 1545	11 7/8 11 BLH
12/04/92	0740	1445	9865650	9873690	8040		11 10 BLH
12/07/92	0730	1545	9873690	9883200	9510		10 1/16 9 1/16 BLH
12/09/92	0740	1245	9883200	9889060	5860		9 1/16 8 5/8 BLH
12/11/92	0735	1440	9889060	9897270	8210		8 5/8 7 7/8 BLH

WATER USE AND PUMPING INFORMATION SHEET WELL (3)

DATE	START TIME	STOP TIME	STA METER	STOP METER	GALLONS PUMPED	MIS INFORMATION	SIGNATURE
12/14/92	0730	1500	9897270	9905960	8690		7½ BLH
12/15/92	0735	1600	9905960	9915620	9660	RAN OUT OF C_aOHCL SOLUTION TODAY	BLH
12/18/92	0835	1550	9915620	9923980	8360	CHLORINATOR OUT OF SERV. SPIKED W 300ml	BLH
12/21/92	0735	1735	9923980	9935830	11850	FEED ≈ 500ml CL_2 5.25% WITH CHLORINATOR	BLH
12/22/92	0735	1600	9935830	9945350	9520	FEED ≈ 300ml CL_2 5.25% TANK FILLED	BLH
12/24/92	0725	1040	9945350	9949340	3990	FED ≈ 200ml CL_2 5.25%	BLH
12/28/92	0725	1610	9949340	9959540	10200	FED ≈ 400ml 5.25% CL_2	BLH
12/29/92	1135	1550	9959540	9964330	4790	FED ≈ 250ml 5.25% CL_2	BLH
12/30/92	0725	1530	9964330	9972960	8630	FED ≈ 350ml 5.25% CL_2	BLH
12/31/92	0725	1530	9972960	9982050	9090	FED ≈ 400ml CL_2 TANK IS FULL	BLH
1/4/93	0755	1605	9982050	9991330	9280	FED ≈ 325ml CL_2	BLH
1/5/93	0735	1500	9991330	9999710	8380	FED 300ml CL_2 TANK IS FULL	BLH
1/7/93	0730	1505	9999710	10007920	8210	FED 300ml CL_2 TANK IS FULL	BLH
1/8/93	0725	1130	0007930	0012550	4630	FED 150ml CL_2 TANK IS FULL	BLH
1/11/93	0730	1610	0012550	0022490	9940	NaOCL SYSTEM ON LINE @ 5.0 (PUMP)	20¼ BLH
1/12/93	0720	1230	0022490	0028450	5960	SOLUTION 16 5/8 START 14 1/8 STOP	15 13/16 15 1/16 BLH
1/14/93	0810	1555	0028450	0037320	8870		15 1/16 11 1/16 BLH
1/15/93	0730	1205	0037320	0042550	5230		11 1/16 8 5/8 BLH
1/19/93	0730	1550	0042550	0052243	9693		8 5/8 4 1/8 BLH
1/20/93	0730	1215	0052243	0057675	5432	3¾	4 1/8 — BLH
1/20/93	1220	1300	0057675	0058224	549	SPIKED WITH 160ml 5.25% CL_2	BLH
1/21/93	1125	1505	0058224	0063260	5036	SPIKED WITH 60ml 5.25 NaOCL	21 9/16 20 5/16 BLH
1/22/93	0730	1435	0063260	0071273	8013		17 7/16 BLH
1/25/93	0735	1550	0071273	0080672	9399	0.58mg/L DOSAGE	14 3/16 BLH
1/27/93	0735	1600	0080672	0090216	9544	0.59mg/L DOSAGE	10 13/16 BLH
1/29/93	0730	1150	0090216	0095139	4923	0.53mg/L DOSAGE	9¼ BLH
2/1/93	0720	1610	0095139	0105257	10118	0.58mg/L DOSAGE	5¾ BLH
2/2/93	0735	1250	0105257	0111192	5935	0.60mg/L DOSAGE	3 5/8 BLH
2/3/93	0800	1345	0111192	0118065	6873	0.48mg/L DOSAGE	21 5/16 / 19 15/16 BLH

WATER USE AND PUMPING INFORMATION SHEET WELL (3)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MI. INFORMATION	SIGNATURE
2/5/93	0735	1605	0118065	0127639	9574	0.52mg/L DOSAGE	16 15/16 BLH
2/8/93	0730	1550	0127639	0137117	9478	0.53mg/L DOSAGE	13 15/16 BLH
2/9/93	0745	1205	0137117	0142091	4974	0.50mg/L DOSAGE	12 7/16 BLH
2/11/93	0745	1610	0142091	0151676	9585	0.52mg/L DOSAGE	9 7/16 BLH
2/16/93	1240	1610	0151676	0155858	4182	0.52mg/L DOSAGE	8 1/8 BLH
2/17/93	0730	1730	0155858	0167414	11556	0.52mg/L DOSAGE	7 1/2/22 BLH
2/19/93	0720		0167414	0175794	8380	0.55mg/L DOSAGE	19/16 1/4 BLH
2/20/93	0830	1610	0175794	0184576	8782	0.52mg/L DOSAGE	13 1/2 BLH
2/22/93	0735	1600	0184576	0194126	9550	0.50mg/L DOSAGE	10 5/8 BLH
2/25/93	0735	1500	0194126	0202635	8509	0.54mg/L DOSAGE	7 7/8 BLH
2/26/93	0730	1225	0202635	0208230	5595	0.54mg/L DOSAGE	6 1/16 BLH
3/2/93	0740	1500	0208230	0216810	8580		23/ BLH
3/3/93	0730	1505	0216810	0225570	8760		
3/4/93	0730	1310	0225570	0232037	6467	Tankfull	15 1/2
3/8/93	0730	1530	0232037	0241185	9148	0.52mg/L DOSAGE	12 5/8 BLH
3/9/93	0735	1545	0241185	0250416	9231	0.54mg/L DOSAGE	9 5/8 BLH
3/10/93	0920	0945	0250416	0250487	71	NO_3 SAMPLE TAKEN	- BLH
3/11/93	0745	1250	0250487	0256326	5839	0.53 DOSAGE	7 3/4 BLH
3/12/93	0900	1405	0256326	0264403	8077	0.54 DOSAGE	5 1/8 BLH
3/15/93	0730	1545	0264403	0273873	9470	0.52 DOSAGE	23/20 1/16 BLH
3/16/93	0745	1240	0273873	0279381	5508	0.53 DOSAGE	18 5/16 BLH
3/18/93	0730	1430	0279381	0287439	8058	0.52 DOSAGE	15 13/16 BLH
3/22/93	0730	1545	0287439	0297012	9573	0.52 DOSAGE	12 13/16 BLH
3/23/93	0745	1730	0297012	0308152	11140	0.52 DOSAGE	9 5/16 BLH
3/24/93	0730	1745	0308152	0319624	11472	0.53 DOSAGE	5 5/8 BLH
3/26/93	0730	1555	0319624	0329262	9638	0.50 DOSAGE	23/20 1/8 BLH
3/29/93	0730	1749	0329262	0340878	11616	0.50 DOSAGE	16 9/16 BLH
3/31/93	0740	1740	0340878	0352191	11313	0.53 DOSAGE	12 5/16 BLH
4/2/92	1105	1550	0352191	0357533	5342	0.51 DOSAGE	11 5/16 BLH

WATER USE AND PUMPING INFORMATION SHEET — WELL (3)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION		SIGNATURE
							11 5/16	
4/5/93	0740	1610	0357533	0367321	9788	0.51 DOSAGE	8 5/16	BLH
4/6/93	0745	1540	0367321	0376333	9012	0.53 DOSAGE	5 7/16	BLH
4/8/93	0735	1555	0376333	0386100	9767	0.49 DOSAGE	23	20 1/4 BLH
4/12/93	0730	1555	0386100	0396026	9926	0.49 DOSAGE	17 5/16	BLH
4/13/93	0735	1620	0396026	0406338	10312	0.48 DOSAGE	14 5/16	BLH
4/15/93	0730	1750	0406338	0418665	12327	0.43 DOSAGE	11 1/8	BLH
4/19/93	0730	1735	0418665	0430861	12196	0.41 DOSAGE	8 1/8	BLH
4/20/93	0725	1540	0430861	0439313	8452	0.48 DOSAGE	5 11/16	BLH
4/22/93	0730	1800	0439313	0452088	12775	0.50 DOSAGE	22 15/16	19 1/16 BLH
4/24/93	0720	1545	0452088	0462280	10192	0.49 DOSAGE	16 1/16	
4/27/93	0735	1745	0462280	0474489	12209	0.46 DOSAGE	12 11/16	BLH
4/29/93	0915	1010	0474489	0475561	1072	SPIKED TANK WITH 270 ml 5.25% NaOCL	12 7/16	BLH
4/30/93	0750	1550	0475561	0484423	8862	0.60 DOSAGE		9 1/4 BLH
5/2/93	1510	1900	0484423	0489196	4773	0.61 DOSAGE		7 1/2 BLH
5/3/93	0730	1550	0489196	0499340	10144	≈ 0.61 DOSAGE		3 3/4+ BLH
5/4/93	0740	1600	0499340	0509542	10202	0.57 DOSAGE	23	19 1/2 BLH
5/5/93	0740	1550	0509542	0519217	9675	0.54 DOSAGE	16 3/8	BLH
5/6/93	0735	1455	0519217	0527918	8701	0.63 DOSAGE	13 1/16	BLH
5/7/93	0735	1630	0527918	0538296	10378	0.62 DOSAGE	9 3/16	BLH
5/10/93	0730	—	0538296	—	29269	0.53 DOSAGE	22 7/8	BLH
5/11/93	0740	1710	0567565	0578336	10771	0.58 DOSAGE	13 9/16	9 13/16 BLH
5/12/93	0730	1745	0578336	0589954	11618	0.62 DOSAGE	5 1/2	BLH
5/13/93	0810	1715	0589954	0600747	10793	0.56 DOSAGE	22 5/8	19 BLH
5/14/93	0715	1715	0600747	0612053	11306	0.65 DOSAGE	14 9/16	BLH
5/15/93	1200	2220	0612053	0623673	11620	0.56 DOSAGE	10 5/8	BLH
5/17/93	0720	2045	0623673	0638875	15202	0.52 DOSAGE	5 7/8	BLH
5/18/93	0730	2105	0638875	0653986	15111	0.53 DOSAGE	23	18 3/16 BLH
5/19/93	0735	1655	0653986	0664255	10269	0.57 DOSAGE	14 11/16	BLH
5/20/93	0740	1615	0664255	0673755	9500	0.54 DOSAGE	11 5/8	BLH

WATER USE A PUMPING INFORMATION SHEE. WELL (3)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	SIGNATURE
5/22/93	1100	2010	0673755	0684127	10372	0.57 DOSAGE 11 5/8	8 1/16 BLH
5/23/93	0645	2225	0684127	0701922	17795	0.55 DOSAGE 23	17 1/8 BLH
5/24/93	0730	2050	0701922	0716426	14504	0.57 DOSAGE 12 3/16	BLH
5/25/93	0725	1630	0716426	0726138	9712	0.59 DOSAGE 8 3/4	BLH
5/26/93	0730	2040	0726138	0740978	14840	0.59 DOSAGE 23	17 3/4 BLH
5/27/93	0730	1550	0740978	0749998	9020	0.59 DOSAGE 14 9/16	23 BLH
5/29/93	0720	1500	0746998	0758490	17512	22 3/4	
5/30/93	0920	1530	0758490	767510	9020	19 3/4	
5/31/93	0720	1455	767510	775880	8370	18.0	
6/1/93	0725	1630	775880	785888	10008	0.38 DOSAGE 18 3/16	15 7/8 BLH
6/2/93	0845	1615	785888	794326	8438	0.55 DOSAGE 16 3/16	13 3/8 BLH
6/3/93	0735	1335	794326	800884	6558	0.56 DOSAGE 11 3/16	BLH
6/4/93	0715	1945	800804	814729	13925	0.49 DOSAGE 7 1/8	23 BLH
6/5/93	0715	1512	814729	823390	8661	water tank full	22 1/2 BLH
6/6/93	0715	1455	823390	831715	8325	N/A	21 1/2
6/7/93	1120	1205	831715	832509	794	SPIKED TANK w/600 ml 5.25% NaOCL	
6/7/93	1340	1645	832509	835960	3451	0.54 DOSAGE 23	21 7/8 BLH
6/8/93	0740	1650	835960	846024	10064	0.53 DOSAGE 18 11/16	BLH
6/9/93	0725	2040	846024	860702	14678	0.51 DOSAGE 14 3/16	BLH
6/10/93	0740	2110	860702	875457	14755	0.54 DOSAGE 9 7/16	BLH
6/11/93	0745	1545	875457	884100	8643	FILLED Cl_2 TANK 0.53 DOSAGE 6 11/16	BLH
6/11/93	1550	2130	884100	890339	6239	0.47 DOSAGE 23	21 1/4 BLH
6/12/93	0920	1935	890339	901301	10962	0.47 DOSAGE 18 1/8	BLH
6/13/93	0850	1640	901301	909732	8431	0.56 DOSAGE 15 5/16	BLH
6/14/93	0755	0910	909732	911086	1354	SPIKED TANK w/ 1000 ml NaOCL	15 1/4 BLH
6/15/93	0720	1540	911086	920109	9023	0.47 DOSAGE 12 11/16	BLH
6/16/93	0735	1710	920109	930561	10452	0.50 DOSAGE 9 9/16	BLH
6/17/93	0715	1545	930561	939842	9281	0.52 DOSAGE 6 11/16	BLH
6/18/93	0715	1530	939842	948789	8947	0.53 DOSAGE 3	13/16 23 BLH

WATER USE AND PUMPING INFORMATION SHEET — WELL (3)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	SIGNATURE
6/18/93	1530	1540	948789	948810	21	MIXED FRESH BATCH OF Cl_2 23	BLH
6/19/93	0700	1430	948810	956690	7880	23	T.R.
6/20/93	0715	–	956690		25903	0.14 DOSAGE, SPIKED TANK WITH 650ml 14	BLH
6/21/93	0715	1608	982093	991411	9318	0.56 DOSAGE 18½ 15⅜	BLH
6/22/93	0715	1625	991411	1001101	9690	0.60 DOSAGE 11⅞	BLH
6/23/93	0725	2210	1001101	1016664	15563	0.47 DOSAGE 7 7/16	BLH
6/24/93	1115	2110	1016664	1027154	10490	0.53 DOSAGE 4⅛	BLH
6/25/93	0735		1027154	1060340	33186	23	BLH
6/26	~~1500~~	1520		1060340	—		
6/26/93	1855		1060340		—	16 9/16	BLH
6/28/93	~~0700~~	0740		1093352	33012	10½	BLH
6/28/93	1420	2120	1093352	1100512	7160	0.55 DOSAGE 8⅛	BLH
6/29/93	0720	1545	1100512	1108951	8439	0.49 DOSAGE 5⅝ 23	BLH
6/30/93	0730	1635	1108951	1118281	9330	0.50 DOSAGE 20 3/16	BLH
7/1/93	0745	2040	1118281	1131421	13140	0.69 DOSAGE 14¾	BLH
7/2/93	0740	2125	1131421	1145358	13937	17.5 17.0 0.63mg/L 9 7/16 23	BLH
7/3/93	0705	1450	1145358	1152550	8192	20½	TR
7/4/93		1152550					
7/5/93	0715	1152550	1730	1163425	10875	16 5/16	BLH
7/6/93	0650	1735	1163425	1174706	11281	18.0 17.0 0.62mg/L 12 ~~13~~	BLH
7/7/93	0653	1954	1174706	1188147	13441	18.0 17.0 0.63mg/L 7 1/16 23	BLH
7/8/93	0729	1532	1188147	1196667	8520	18.0 17.5 0.49mg/L 20½	BLH
7/9/93	0710	2154	1196667	1211910	15243	18.0 17.0 17.25 1535 0.50mg/L 15⅞ 23	BLH
7/10/93	23	2349	12/1910	1229122	17212	16.34 0.51mg/L 17 1/16	TR
7/11	0715	1937	1229122	1241416	12294	16.0 0.53mg/L 13¾	TR
7/12/93	0735	1928	1241416	1253342	11926	17.25 16.0 0.52mg/L 10	BLH
7/13/93	0737	2153	1253342	1266982	13640	17.5 16.5 0.55mg/L 5½	BLH
7/14/93	0734	2010	1266982	1278462	11480	17.75 10.75 0.61mg/L 23 18 13/16	BLH
7/15/93	0743	1642	1278462	1287440	8978	17.5 15.5 0.52mg/L 16	BLH

WATER USE AND PUMPING INFORMATION SHEET — WELL (3)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	SIGNATURE
7/16/93	0720	1505	1287440	1295190	7750	16	TR
7/17/93	0710	1505	1295190	1302990	7800	13½	TR
7/18/93	0730	1445	1302990	1310540	7550	(Full Tank) 11½	23 TR
7/19/93	0723	1857	1310540	1322403	11863	17.75 17.0 0.53mg/L	20¾ 17
7/20/93	0649	1542	1322403	1331497	9094	17.75 17.0 0.51mg/L	14 3/16 BLH
7/21/93	0738	1546	1331497	1339812	8315	17.75 17.0 0.50mg/L	11 11/16 BLH
7/22/93	0733	1604	1339812	1348543	8731	17.75 – 0.52mg/L	8 15/16 23
7/23/93	0720	1430	1348543	1355940	7197	N/A	20¾ TR
7/24/93	0630	1445	1355940	1364340	9400	N/A	18 TR
7/25/93	0630	1455	1364340	1372900	8560	N/A	15½ TR
7/26/93	0747	1853	1372900	1384412	11512	18.0 17.0 0.51mg/L	12 BLH
7/27/93	0743	1615	1384412	1393180	8768	17.75 16.75 0.52mg/L	9¼ BLH
7/28/93	0747	2008	1393180	1406033	12853	18.0 17.75 17.75@1535 0.49mg/L	23 19 3/16 BLH
7/29/93	0757	1421	1406033	1412570	6537	17.5 16.75 0.54mg/L	17 1/16 BLH
7/30/93	0740	1515	1412570	1420358	7788	17.75 0.52mg/L	14 5/8 23 BLH
7/31/93	0730	1505	1420358	1428190	8822	N/A	26½ TR
8-1-93	0730	1455	1428190	1435920	7730	N/A	18 TR
8-2-93	0744	1856	1435920	1447559	11639	18.0 17.25 17.0@1525 0.55mg/L	17 15/16 14 1/8 BLH
8/3/93	0730	1544	1447559	1456042	8483	17.75 17.0 0.53mg/L	11 7/16 BLH
8/4/93	0720	2303	1456042	1469084	13042	17.75 17.0 0.52mg/L	7 3/8 BLH
8/5/93	0750	1520	1469084	1476880	7796	0.48mg/L	23 20¾ TR
8/6/93	0750	2037	1476880	1489902	13022	16.75 0.53mg/L	16 9/16 23 BLH
8/7/93	0730	1510	1489902	1497880	7986	N/A	26½ TR
8/8/93	0730	1440	1497880	1504740	6852	N/A	8¾ TR
8/9/93	0741	1811	1504740	1515513	10773	0.55mg/L	14 11/16 BLH
8/10/93	0935	1630	1515513	1522613	7100	0.53mg/L	12 7/16 BLH
8/12/93	0800	1540	1522613	1530675	8062	0.54mg/L	9 13/16 BLH
8/13/93	0848	1827	1530675	1540739	10064	0.52mg/L	6 11/16 23 BLH
8/14/93	1020	1400	1540739	1544100	3451		29 19 TR

WATER USE AND PUMPING INFORMATION SHEET — WELL (3)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION		SIGNATURE
8/15/93	0715	1450	1544100	1551720	7620	N/A		T.R.
8/16/93	0759	1600	1551720	1560103	8383	0.53 mg/L	19 9/16	16 7/8 BH
8/17/93	0710	1858	1560103	1572303	12200	0.54 mg/L	12 15/16	BLH
8/18/93	0728	1829	1572303	1583670	11367	0.54 mg/L	9 1/4	BLH
8/19/93	0739	1700	1583670	1593256	9586	0.53 mg/L	6 3/16	BLH
8/20/93	0732	1438	1593256	1600723	7467	0.50 mg/L	23	20 3/4 BLH
8/21/93	0930	1450	1600723	1608170	7447	N/A	18 1/2	TR
8/22/93	0730	1510	1608170	1616260	8090	N/A	15 3/4	TR
8/23/93	0729	1900	1616260	1628133	11873	0.53 mg/L	11 15/16	BLH
8/24/93	0733	1453	1628133	1635661	7528	0.55 mg/L	9 7/16	BLH
8/25/93	0738	1819	1635661	1646637	10976	0.54 mg/L	5 7/8	BLH
8/26/93	0744	1454	1646637	1654170	7533	0.51 mg/L	23	20 11/16 BLH
8/27/93	0736	1552	1654170	1662656	8486	0.54 mg/L	17 15/16	23 BLH
8/28/93	0728	1500	1662656	1670570	7914	W/H	20 1/2	TR
8/29/93			1670578				20 7/16	BLH
8/31/93	0732	1542	1670570	1679176	8606	0.53 mg/L	17	11/16 BLH
9/1/93	0730	1539	1679176	1687698	8522	0.52 mg/L	15	BLH
9/2/93	0739	1505	1687698	1695495	7797	0.52 mg/L	12 9/16	BLH
9/3/93	0749	1501	1695495	1703043	7548	0.52 mg/L	10 3/16	BLH
9/4/93	1157	1924	1703043	1710860	7817	0.53 mg/L	7	11/16 BLH
9/5/93	0807	1806	1710860	1721290	10430	0.55 mg/L	4 1/4	BLH
9/6/93	1025	1652	1721290	1728115	6825	0.49 mg/L	16	14 BLH
9/7/93	0751	1617	1728115	1736909	8794	0.54 mg/L	11 1/8	BLH
9/8/93	0738	1425	1736909	1743995	7086	0.51 mg/L	8 15/16	BLH
9/10/93	0735	1618	1743995	1753218	9223	0.52 mg/L	6 1/16	23 BLH
9/12/93	0953	1805	1753218	1762042	8824	0.51 mg/L	20 5/16	BLH
9/13/93	0743	1552	1762042	1770810	8768	0.51 mg/L	17 5/8	BLH
9/15/93	0733	1547	1770810	1779631	8821	0.52 mg/L	14 7/8	BLH
9/14/93	0735	1548	1779631	1788414	8783	0.52 mg/L	12 1/8	BLH

WATER USE AND PUMPING INFORMATION SHEET

WELL (3)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	SIGNATURE
9/17/93	0732	1604	1788414	1797474	9060	0.53mg/L 12 1/8	9 1/4 BLH
9/19/93	0845	1912	1797474	1808726	11252	0.52mg/L 5 3/4	BLH
9/20/93	0730	1707	1808726	1819048	10322	0.50mg/L 20 5/8	17 1/2 BLH
9/21/93	0720	1649	1819048	1829109	10061	0.54mg/L	14 1/4 BLH
9/22/93	0722	1603	1829109	1838301	9192	0.52mg/L	11 3/8 BLH
9/23/93	0739	1856	1838301	1850177	11876	0.55mg/L	7 9/16 BLH
9/24/93	0722	1346	1850177	1856925	6748	0.52mg/L 5 7/16	23 BLH

10-15-1990: letter to water resources branch from nps regarding original invoice documenting installation and set date of pump at

United States Department of the Interior
NATIONAL PARK SERVICE
GREAT SAND DUNES NATIONAL MONUMENT
MOSCA, COLORADO 81146

IN REPLY REFER TO:

L54

October 15, 1990

Paul Christensen
Water Resources Division
Water Rights Branch
301 South Howes
Ft. Collins, Colorado 80521

Dear Paul:

Enclosed please find a copy of the original invoice documenting installation and set date of pump at Well #1 as well as Burk Drilling's state license number.

The electrical meter was installed on June 1, 1990. The cap number on the meter is #89355746. Also enclosed is a copy of the pump log from June 1 through the present time.

If you have any questions or require any more information please call.

Sincerely,

William E. Wellman
Superintendent

Enclosures

Year of the Visitor

1990

WATER USE & PUMPING INFORMATION (RESIDENTS)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	INITIALS
06/06	1245	1345	33,000	34200	1200 (on ground)	1st Time Pumped since pipe were Tightened in stalled new chlorine setting on 4. Pumped on ground	Doug
06/06	1345	1520	36500 / 34200	36500	2300	Turned water into main line	Doug
06/07	0735	1520	47500 / 36500	47500	11000	Nitrate Test .6	Doug
06/08	0950	1550	56000 / 47500	56000	8500		Doug
06/11	0830	1515	65500 / 56000	65500	9500		Doug
06/12	0800	1515	75700 / 65500	75700	10200		Doug
06/13	0810	1455	85200 / 75700	85200	9500	Installed pressure gauge 3:15 130 lbs.	Doug
06/14	0735	1523	96100 / 85200	96100	10900		Doug
06/15	0810	1505	105800 / 96100	105800	9700	Tank full pressure gauge Reading 100 lbs.	Doug
06/18	0740	1625	116700 / 105800	11670	10900	2:10	Doug
06/20	0720	1707	130400 / 116700	130400	13700		Doug
06/21	0740	1540	141600 / 130400	141600	11200	06/22/90 2:10	Doug
06/26	0723	1454	152100 / 141600	152100	10500		Doug
06/27	0723	1512	163100 / 152100	163100	11000	1:5 / 1:5	Doug
06/28	0726	1455	173500 / 163100	173500	10400		Doug
06/29	0730	1418	183000 / 173500	183000	9500	1:5	Doug
07/05	0800	1505	190700 / 183000	190700	7700	Meter was not Turning 1:5	Doug
07/06	0725	1507	201500 / 190700	201500	10800	1:5	Doug
07/09	0740	1445	211300 / 201500	211300	9800	Handle on Breaker Panel on outside of building was turned to off	Doug
07/10	0735	1410	220500 / 211300	220500	9200	Set chlorine feeder at 1.5 3.5	Doug
07/11	0725	1420	230000 / 220500	230000	9500		Doug
07/12	0715	1445	241000 / 230000	250700	9700	1:5	Doug
07/13	0735	1435	250700 / 241000			1:5	Doug
07/16	0800	1520	260900 / 250700	260900	10200		Doug
07/17	0735	1525	271900 / 260900	271900	11000	1:5	Doug

WATER USE & PUMPING INFORMATION (RESIDENTS)

1990

	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	INITIALS
07/18	0725	1455	282300 271900	282300	10400	Reset Chlorine pump to 1:5 3	Doug
07/19	0715	1450	292900 282300	292900	10600		Doug
07/20	0720	1510	303900 292900	303900	11000	1:5	Doug
07/21	0750	1640	316300 303900	316300	12400		Doug
07/23	0750	[illegible]	326600 316300	326500	10200	1:5	Doug
07/24	0725	1450	336900 326600	336900	10400	1:5	Doug
07/25	0705	1630	350000 336900	350000	13100		Doug
07/26	0745	1450	359900 350000	359900	9900	1:5 1:5	Doug
07/27	0725	1525	371000 359900	371000	11100		Doug
07/30	0815	1600	380400 371000	380400	9400		Doug
07/31	0718	1525	391700 380400	391700	11300	1:5	Doug
08/01	0740	1455	401800 391700	401800	10100		Doug
08/02	0730	1453	411800 401800	411800	10000	1:5	Doug
08/03	0707	1452	422700 411800	422700	10900	1:5	Doug
08/06	0706	1623	435700 422700	435700	13000		Doug
08/07	0750	1505	445800 435700	445800	10100	1:5	Doug
08/08	0727	1645	458900 445800	458900	13100		Doug
08/09	0722	1710	472700 458900	472700	13800	1:5	Doug
08/10	0810	1620	484100 472700	484100 ~~484400~~	11400	1:5	Doug
08/13	0745	?	[illegible] 484100	492300	8200		Kay [redacted]
8/19	0838	1950	492300	507900	15600		Lonnie
08/27	0740	1515	518500 507900	518500	10600	1:5	Doug
08/28	0740	1455	528600 518500	528600	10100		Doug
08/29	0726	1507	539400 528600	539400	10800	1:5	Doug
08/30	0910	1510	547800 539400	547800	8400		Doug

WATER USE & PUMPING INFORMATION (RESIDENTS)

ATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	INITIALS
08/30/90	0730	1618	560100 547800	5 560100	12300		Doug
09/04/90	0750	1533	571000 560100	571000	10900	1:5	Doug
09/05	0755	1540	588800 571000	581800	11800	1:5	Doug
09/06	0740	1450	592000 581800	592000	10200		Doug
09/07	0727	1300	599800 592000	597800	7800	1:5	Doug
09/11	0712	1500	610700 599800	610700	10900		Doug
09/12	0800	1510	620800 610700	620800	10100	1:5	Doug
09/13	0740	1530	631800 620800	631800	11000		Doug
09/14	0727	1450	642000 631800	642000	10200	1:5	Doug
09/18	0745	1437	651600 642000	651600	9600		Doug
09/20	0736	1507	662100 651600	662100	10500	1:5	Doug
09/23	0930	1740	673600 662100	673600	11500	1:5	Doug
9/27	0930	1518	681700 673600	681700	8,100		Jonnie
10/07	0930	1453	689200 681700	689200	7500		Doug
10/	0735	1625	704300 689200	704300	15100	1:5	Doug
10/11	1626	10/12/90 0730	725500 704300	725500	21200		Doug
			725500				

12-14-1989: memorandum to water rights branch from superintendent grsa regarding pump records grsa well #3

United States Department of the Interior
NATIONAL PARK SERVICE
GREAT SAND DUNES NATIONAL MONUMENT
MOSCA, COLORADO 81146

IN REPLY REFER TO:
L54

December 14, 1989

Memorandum

To: Beth Voelkel, Water Rights Branch, Water Resources Division

From: Superintendent, Great Sand Dunes National Monument

Subject: Pump Records GRSA Well #3

Enclosed are records dating from July of 1988. Unfortunately that is the date we began to have trouble with this well. At first we thought it was a pump problem, and, in fact, replaced the pump this spring. Give me a call if you have trouble figuring this out.

Bill Wellman

William E. Wellman

Enclosure

Year of the Visitor

WATER USE & PUMPING INFORMATION (RESIDENTS)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	INITIALS
9/26	12:30		2363370			on the state sheet	
9/28						✓ cannot anything since 25,189	
						pumped 18,000 since 9-26-89 - 123	
10-3-89	0700		2402250				
10-3-89	0700	1800	2410980 2402250	2410980	8730	13.2 GPM 3:30 Pump rested For 3 days 1:10	
10-4-89	0700		2425020 2410980		14040		
10-6-89	0730	10-10-89 0715	2455400 2425020	2455400	30380		
10-10-89	0715	1855	2467600 2455400	2467600	12200	Pumped Manually - Auto	
10-11-89		1600	2478100 2467600	2478100	10500	Pumped manually & Auto	
10-16-89	[redacted]	800	2499700 2478100	2499700	21600	3:30	
10-16-89	0500	10-17-89 0715	2523910 2499700	2523910	24210		
10-19-89	0745	10-21-89 1835	2541110 2523910	2541110	17200	Pumped manually	
10-23-89	0735	1700	2551270 2541110	2551270	19.0 GPM 10160	Pumped manually	
10-24-89	0730		2560550 2551270	2560550	9280	Pumped manually	
10-25-89	0830	1720	2569700 2560550	2569700	9150	Pumped manually	
10-26-89	0750	1655	2577780 2569700	2577780	8080	Pumped manually	
10-27-89	0900	1810	2587700 2577780	2587700	9920	Pumped manually	
10-28-89	0810	2045	2601040 2587700	2601040	13340	Pumped manually	
10-30	0715	1610	2610450 2601040	2610450	9410	Pumped manually	
10-31	0825	1450	2617300 2610450	2617300	6850	pumped manually	
11-02-89	0720	1540	2626320 2617300	2626320	18.0 GPM 9020	pumped manually	
11-06-89	0715	11/07/89 0655	2652120 2622320	2652120	21.0 GPM 29800	pumped manually	
11-8-89	0715	1710	2662900 2652120	2662900	10780	pumped manually	
11-08-89	0730	1750	2674100 2662900	2674100	14.1 GPM 11200	pumped manually	
11-9-89	0715	1830	2685150 2674100	2685150	11050	pumped manually 2:20	
11-10-89	0715	1830	2696350 2685150	2696350	16.6 GPM 11200	pumped manually	

WATER USE & PUMPING INFORMATION (RESIDENTS)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	INITIALS
07-25		1510	1740950 1728500	1740750	12260	Pumped Manually	Doug
07-27		1550	1755650 1740750	1755650	14900		Doug
07-28		1540	1768370 1755650	1768370	12720	3:30	Doug
07-31-89		0745	1785600 1768370	1785600	17230		Doug
07-31-89	0755	08-01-89 1535	1906160 1785600	1806160	10.46PM 20560	Pumped Manually	Doug
08-03-89		1550	1825350 1806160	1825350	19190	" "	Doug
08-03-89	1600		1825350	184574	20,390	2:20	Doug
08/07			184574	1869580	23840		Lonnie
08/08			1869580	1875930	6350		Lonnie
08/08	6:30 P.M.		1875930	1907600	31,670	176 P.M.	Lonnie
08/11	7:30 P.M.		1907600	1938990	31,390		Lonnie
08/14	0700		1938990	1949250	10,260		Lonnie
08/15	0850		1969150 1949250	1969150	19900		
08/17	0740	7:00	1970280 1969750	1970280	1130	3:30 Mixed chlorine Solution	Doug
8/17	2200		2008000 1970280		37720		Doug
8/21	0720		2008000		29810		Doug
8-24	0645		2049810 2037810	2041810	4000		Doug
8-25	0725		2041810	2065480	23670	3:30 Mixed chlorine Solution	Doug
8-27	0655		2165480 2065480				Doug
09-02					08-30-89 100000	Mixed Chlorine Solution 3:30	Doug
09-06	0700		2165480	9-13 2234130	68,650		Doug
9/13	0715		2234130	2244590	10760	Pumping @ 176 GPM.	Lonnie
9/14	0730		2244590	2254450	9860	Pumping @ 176 GPM	Lonnie
9/17	0730					Pumping @ 176 GPM	Lonnie
9/18	1235		2254460	2286340	31860		Carlos

1 Gallon Chlorine Solution (in Gal. sys.) =
10 " Water.

WATER USE & PUMPING INFORMATION (RESIDENTS)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	INITIALS
06-28-89			1507120 1498900	1507120	8220	6-28- 0645 93" 6-29 - 0725 93"	Doug
06-29-89	0725	1530	1509120 1507120	1509120	HIGPM 2000	6-29 - 1530 100"	Doug
06-30-89	0645		1513020	1518530	5510		Doug
07-01-89	0700		1526280 1518530	1526280	7750		Doug
07-02-89	0800	07-04-89 0650	1526280	1552770	26490	Set pump to start on cycle Pump 45 minutes OFF 2 hours + 15 minutes.	Doug
07-04-89	0700		1558850 1552770	1558850	6080	Tank ½ Full	Doug
07-05-89	0640	1647	1568610 1558850	1568610	9760	Started pump on manual & let run	Doug
07-06-89	0700	07-07-89 1700	1581210 1568610	1581210	12600	Put pump back on cycle 45min. on. 2hr. 15 min. OFF 3:30	Doug
07-08-89	0800		1585160 1581210	1585160	3950		Doug
07-09-89	0800	0700	1591280 1585160	1591280	6120		Doug
07-09-89	0700	0850	1610980 1591280	1610980	11700		Doug
07-12-89	1000		1610980		5810		Doug
07-13-89	0715		1616790		6860		Doug
07-14-89	0735		1623650		13090		Doug
07-16-89	1000		1646300 1636744	1646300	9756		Doug
07-17-89	1825	07-18-89 0715	1659900 1646300	1659900 [redacted]	13600		Doug
07-18-89	0715	07-19-89 0715	1659900	1666300	6400		Doug
07-19-89	0715	1715	1676850 1666300	1676850	7.3GPM 10550	Pumped manually all Day	Doug
07-20-89	0830	1500	1683650 1676850	1683650	6800	Pumped manually 3:30	Doug
07-21-89			1687750 1683650		4100		Doug
07-22-89		1715	1698250 1687750	1678250	10500	Pumped manually	Doug
07-23-89	0725	1530	1706760 1698250	1706760	8510	Pumped manually	Doug
07-23-89	0705	1645	1706760	1716850	10090	" "	Doug
07-24-89	0745		1720850 1716850	1720850	4000	" "	Doug
07-24-89	0746		1728500 1720850	1728500	7650	" "	Doug

22,741,180
22,445,760

WATER USE & PUMPING INFORMATION (RESIDENTS)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	INITIALS
05-11-89	0715		1020730 984480		36250	Mixed more chlorine solution 10:1	Doug
05-15-89	0755		1038350 1020730		17620		Doug
05-17-89	0723		1057150 1038350		18800		Doug
05-22-89	0725		1066880 1057150		9730	Mixed chlorine solution 20:2	Doug
05-23-89	0715		1076740 1066880		9660		Doug
05-24-89	0740		1115340 1076740		26.6 GPM 38600	Reset Time clock to pump 2 hrs. on + 1 hr. off 24 hrs a day	Doug
05-26-89	0750		1163600 1115340		25.5 GPM 48260	mixed chlorine solution 20:2	Doug
05-29-89	0655		1211050 1163600		16.8 47450	06-01-89 Tank full shut pump off Main	Doug
06-01-89					11500	mixed chlorine solution 30:3	Doug
06-05-89	0722		1222550 1211050		11,500		Doug
06-06-89	0930		1241830 1222550		19280	Reset time clock to Pump 2 hrs. 5 times per day.	Lonnie
06-07-89	10:16 ←		1257190 1241830		15360		Lonnie
6-7-89	10:16 →		1290470 1257190		33240	Turned Pump on manual to fill tank	Lonnie
6-9-89	8:10	1543	1295190 1290430		4760	Reset time clock	Lonnie
6-9-89			1318630 1295190		23440		Lonnie
6-12-89	7:14	1445	1334150 1318630		15520	added Chlorine to tanks - added 2 hrs. to time Clock 3:30 6-16-89	Lonnie
6-13-89	1445		1334150			Mixed Chlorine Solution	Lonnie
6-20-89	0835	6-21-89 0635	1425150 1414360	1429360 1425150	8.1 GPM 10790	Reset Time clock 2½ hrs ON 06-21-89 ½ hr. OFF	Doug
			1436350 1425150		9.3 GPM 11200		Doug
6-22-89	0720		1447180 1436350	1447180	9.0 GPM 10830		Doug
6-23-89	0635		1458380 1447180	1458380	11200	6-23-3:00 40" 30:36-24-7:30 54"	Doug
6-24-89	0720		1468990 1458380	1468990	10610	6-24-1645 60" 6-25-0658 76" 6-25-1620 80"	Doug
6-25-89	0657		1479870 1468990	1479870	10880	6-26-0640 93" 6-27-0650 96"	Doug
6-26-89	0640		1490010 1479870	1490010	4.45 GPM 10140	6-27-0800 90"	Doug
6-27-89	0652		1498900 1490010		7.46 GPM 8890		Doug

1462680 − 1458380 = 4100

1452380 − 1447180 = 5200

WATER USE & PUMPING INFORMATION (RESIDENTS)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	INITIALS
04/10	1143	ON AUTO	0734450	735760	1310	Well not moving H_2O.? Set well TO AUTO PumP	Lonnie
04/11	1247	11	Well	TO Be	SCRUKed	04/12/89 PULL PUMP	Lonnie
~~04/12~~	Pulled Pumps. Rebuilt & Put one pump down well.					+ TEST SYSTEM. Removed Gaulds Pump	
	15GPM	Pumping				Ran a draw down and	
04/13	1:00PM		736950	752240	15,290	Recovery test.	Lonnie
04/14	~~8:00~~ 12:00 Noon	752240	~~818460~~	801160	48,920	Pump down 04/17/89	Lonnie
04/19	3:34PM		~~818460~~ 801160 17300		17300	Pumps 19.5GPM	Lonnie
04-20			~~818460~~		12700	Mixed chlorine solution 4#/1 Tank 3/4 Full Set Chlorinator 45	Doug
04-21	0715		831160	840560	9400	Well Pumping STABile AT 18 G.P.M.	Doug
04-23	~~1100~~		840560	841000	440	Pumped for horses	Doug
04-24	0718	1558	841000	850850	9850		Doug
			~~851240~~ 850850		390	Pumped for horses	
04-25	0715	1630	~~861700~~ 851240		10460 ~~11160~~		Doug
04-26	0720		~~874090~~ 862820		11270		Doug
04-27	0630		874090		59910		Doug
05-01-89	0735		914000		6850	Filled chlorine Tank. 1gal. chlorine to 10 galhs water	Doug
05-03-89			928660 920850		7810		Doug
05-04-89			936490 928660		7810	120 20	Doug
05-05-89			944290 936470		7810	240	Doug
05-08-89			959900 944280		15620		Doug
05-10-89			975540 959900		15640		Doug
			975540				
5/11	Changed time clock to shut off at 4:00 instead of 3:00 P.M						JCP

WATER USE & PUMPING INFORMATION (RESIDENTS)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	INITIALS
01-24-89	0712	1645	349750	361250	11500	Started pump manually Added Chlorine	Doug
01-26-89	0715	1700	361250	373000	11750 (20.1 GPM)	Started pump manually Added Chlorine	Doug
01-30-89	0720	1700	373000	384850	11850	Started pump manually	Doug
02-02-89	0715	1650	384850	396600	11750	Started pump manually Added Chlorine	Doug
02-03-89	0715	1534	396600	406750	10150	Started pump manually Added Chlorine	Doug
02-07-89	0750	1650	406750	417850	11100 (20.5 GPM)	Started pump manually	Doug
02-08-89	0725	1700	417850	429450	11600	Started pump manually Added Chlorine	Doug
02-10-89	0720	1655	429450	441050	11600	Started pump manually	Doug
02-13-89	0712	1545	441050	454150	13100	Started pump manually Added Chloride	Doug
02-14-89	0714	1530	454150	464350	10200	Started pump manually	Doug
02-17-89	0723	1555	464350	474650	10300	Started pump manually Added Chlorine	Doug
02-22-89	0730	1705	474650	486550	11900	Started pump manually	Doug
02-23-89	0710	1705	486550	498600	12050	Started pump manually Added Chlorine	Doug
02-24-89	0730	1535	498600	508300	9700	Started pump manually	Doug
02-27-89	0710	1700	508300	520300	12000 (20 GPM)	started pump manually Added Chlorine	Doug
03-01-89	0715	1700	520300	532150	11850	Started pump manually	Doug
03-03-89	0715	1550	532150	542500	10350	Started pump manually Added Chlorine	Doug
03-06-89	0720	1645	542500	554000	11500	Started pump manually	Doug
03-08-89	0745	1715	554000	565600	11600 (20.35 GPM)	Started pump manually Added Chlorine	Doug
03-10-89	0910	[illegible]	565600	570100	4500	Started pump manually Started adding chlorine with chemical feed pump. Set at #3	Doug
03-13-89	0715	1520	570100	580400	10300	Started pump manually 1 gal chlorine solution to 10 gallons water	Doug
03-14-89	0720	1540	580400	590500	10100 (20.24 GPM)	Started pump manually	Doug
03-16-89	0720	1535	590900	600600	10100	Started pump manually	Doug
03-17-89	0725	1555	600600	610850	10250	Started pump manually	Doug
03-20-89	0645	1530	610850	621500	10650	Increased chlorine feed to #4 Started pump manually	Doug

WATER USE & PUMPING INFORMATION (RESIDENTS)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	INITIALS
11-29-88	0715	1545	90900	101200	10300	Started pump manually	Doug
11-30-88	0722	1545	101200	111300	10100	Added chlorine Started pump manually	Doug
12-2-88	0720	1600	111300	121610	10310	Added chlorine Started pump manually	Doug
12-5-88	0710	1545	121610	132030	10420	Started pump manually	Doug
12-7-88	0720	1625	132030	142780	10750	Added chlorine Started pump manually	Doug
12-09-88	0710	1630	142780	154200	11220	20.0GPM Started pump manually	Doug
12-12-88	0725	1540	154200	164250	10080	Added chlorine Started pump manually	Doug
12-14-88	0710	1540	164250	174590	10340	Started pump manually	Doug
12-16-88	0930	1535	174590	182090	7500	Started pump manually	Doug
12-19-88	0715	1620	182090	192590	10500	Added chlorine Started pump manually	Doug
12-21-88	0715	1540	192590	202900	10310	Started pump manually	Doug
12-23-88	0730	1600	202900	213300	10400	Added chlorine Started pump manually	Doug
12-27-88	0715	1635	213300	224940	11640	Started pump manually	Doug
12-28-88	0730	1635	224940	235960	11020	Added chlorine Started pump manually	Doug
12-29-88	0710	1610	235960	246760	10800	Started pump manually	Doug
01-03-89	0730	1635	246760	258000	11240	Added chlorine Started pump manually	Doug
01-04-89	0710	1640	258000	269470	11470	Started pump manually	Doug
01-05-89	0810	1450	269470	277500	8030	Added chlorine Started pump manually	Doug
01-07-89	0715	1655	277500	287900	10400	Started pump manually	Doug
01-09-89	1032	1655	287900	295900	8000	Added chlorine Started pump manually	Doug
01-10-89	0905	730	295900	306250	10350	Started pump manually	Doug
01-12-89	0810	1712	306250	317300	11050	Started pump manually	Doug
01-14-89	0720	1455	317300	326450	9150	Added chlorine Started pump manually	Doug
01-16-89	0710	1647	326450	337900	11450	Started pump manually	Doug
01-23-89	0730	1700	337900	349750	11850	Added Chlorine Started pump manually	Doug

349750
90 | 15570
90
670

1514590
1513020
1570

WATER USE & PUMPING INFORMATION (RESIDENTS)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	INITIALS
2nd Sunday OCT		10:15 am				Tank full [illegible] Tank put on manual	Doug
10-17-88	0710	1540	9822870	9832450	9580	Chlorinated both Tanks. Pumping manually	Doug
10-17-88	0710	1545	9832450	9842480	10030	Chlorinated both Tanks Pumping manually	Doug
10-18-88	0740	1540	9842480	9863700	21220	Tank half full AT 1425 set to Automatic Pumping manually both Tanks	Doug
10-20-88	0730		9863700			Chlorinated Res. Tank. Pumping Automatic	Doug
10-21-88		0720	[illegible]	9890830	27130	Tank Full Shut Pump off	Doug
10-24-88	0720		9890830			Tank ½ full Added Chlorine	Doug
10-25-88		0720	9918220	9918220	27390	Tank full + running over	Doug
10-26-88	0750	1740	9918220	9929420	11200	Tank full Added Chlorine - Started pump Auto	Doug
10-28-88	0730	1530	9929420	9938530	9110		Doug
10-31-88	0740	1540	9938530	9947890	9360	Added chlorine Started pump Manually	Doug
11-1-88	0725	1545	9947890	9957590	9700	Started pump manually	Doug
11-3-88	0720	1540	9957590	9967390	9800	Added Chlorine Started pump manually	Doug
11-4-88	0750	1800	9967390	9979200	11810	Started pump manually Tank full	Doug
			9979200			Found pumps Running	Doug
11-7-88	0715	[illegible]	0001840		32640	Tank full + running over	Doug
11-9-88	0720	1545	0001840	11570	10730	Added chlorine started pump manually	Doug
11-10-88	0740	1535	11570	20860	9290	Started pump manually	Doug
11-14-88	0825	1800	20860	32310	11450	Added Chlorine Started pump manually	Doug
11-16-88	0725	1540	32310	42130	9820	Added chlorine Started pump manually	Doug
11-17-88	0730	1330	42130	50000	7870	Started pump manually	Doug
11-21-88	0715	1615	50000	60700	9700	Added Chlorine Started pump Manually	Doug
11-22-88	0720	1640	60700	70700	10000	Started pump manually	Doug
11-23-88	0720	1540	70700	80600	9900	Started pump manually Added Chlorine.	Doug
11-28-88	0715	1540	80600	90900	10300	Started pump manually	Doug

WATER USE & PUMPING INFORMATION (RESIDENTS)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	INITIALS
9/06	~~0700~~ 1000		9492760	9503360	10,600	Reset clock-WRONG DAY showing Day 2-7 last program.	Lonnie
9/07	0700		9503360	9514560	11,200		Lonnie
9/08	0700		9514560	9525650	11,090		Lonnie
9/9	0700		9525650	9537460	11,810		Lonnie
9/10	0700		9537460	9548060	10,600		Lonnie
9/11	0700	2000	9548060	9553430	5370	Shut down	Lonnie
9/13	0700		9553430	9571630	18,200	Start up little over 1/2 tank 14,20	Lonnie
9/14	0700		9571630	9584930	13,300		Lonnie
9/15	0700		9584930	9596510	11,580		Lonnie
9/16	0700	0706	9596510	Did NOT Pump		Set controls to manual. Added 1/4 cup KTH (Batch)	Lonnie
9/19	0700		9596510	9614950	18,440		Lonnie
9/20	0700		9614950		1750		Lonnie
9/21	0715		9632700		15390		Doug
9/22	0715		9648090		12320 ~~15390~~	Tank Full Shut OFF Time clock	Doug
9/23	0730		9660410			Tank Full Turned Time clock to Manual	Doug
9/24	0805	1640	9660410	9683480	23070	Turned pump on	Doug
9/26	0725		9683480				Doug
9/27	0725		9700360			Tank Full	Doug
9/28	1540		9700360			Started Pump	Doug
9/29		0955	9719200			Stopped Pump	Doug
10-5	0900		9743500			Tank less than 1/4 full 10 used was passed on in conditions of water status.	Mark
10-6	0800				25190 1/2 full	checked tank 0800 gallons 24 hrs.	Dave
10-7		14:30			9790150	Tank full Added chlorine	
10-9	1600		9790170			Set on Auto.	Doug

1988

WATER USE & PUMPING INFORMATION (RESIDENTS)

DATE	START TIME	STOP TIME	START METER	STOP METER	GALLONS PUMPED	MISC. INFORMATION	INITIALS
8/19	0547	8/20 0720	9294040	9309900	15860		Doug
8/20	1335	1700	9309900	9313460	3560		Doug
8/20	2100	8/21 0700	9313460	9320660	7200		Doug
8/21	1805	8/22 0600	9320660	9330370	9710		Doug
8/22	1950	8/23 0650	9330370	9341900	11530		Doug
8/23	1910	8/24 0650	9341900	9353420	11520		Doug
8/24	1600	8/25 0650	9353420	9364080	10660		Doug
8/25	1530	8/26 0650	9364080	9374910	10830		Doug
8/26	1542	—	9374910	—	—		Doug
8/28	1100	8/29 0730		9408760	33,850		Lonnie
8/29	0730	8/30 0720	9408760	9419170	10,410	Rewired system. Install Time clock. Paint "ON Time Clock"	Lonnie
8/30	1200	1527	9419170	9422350	3180	Set points	Lonnie
Timer Sequence for Seven day week						1:00 AM ON / 9:00 AM OFF / 11:59 AM ON / 9:00 P.M. OFF — delete 08/30/88	Lonnie
ON 1:00AM	OFF 3:00 AM	ON	OFF	ON 4:00 P.M	OFF 6:00 P.M		Lonnie
4:00AM	6.00 AM	10:00AM	11:59 A.M	7:00 P.M	9.00 P.M	Check water @ 9 AM + 12 NOON	Lonnie
7:00AM	9:00AM	1:00P.M	3:00P.M	10:00P.M	11:59 P.M	Reset Time Clock	Lonnie
8/30	1600		9422350				
8/31		0730		9429700	7350	Shut down system - pump will not restart	Lonnie
9/1	0730		9429700			Start cap not making contact - install + Reset	Lonnie
							Lonnie
9/1	0800			9441080	11,380		Lonnie
9/1	0800	9/2 0800	9441080	9452110	11,030	Dare tank with CO2	Lonnie
9/2	0800		9452110	9463640			Lonnie
				9492760	29,360	Tank a little over 1/2 full.	

DATE	TIME STARTED	TIME STOPPED	METER READING	GALLONS PUMPED	INITIALS
7/27/88	0600	2000	9044490 9032410	12080	Doug
7/28/88	0600	1930	9055610 9044490	11120	Doug
7/29/88	0550	2020	9067830 9055610	12220	Doug
7/30/88	0600	2010	9079420 9067830	11590	Doug
7/31/88	0640	2010	9090780 9079420	11360	Doug
8/1/88	0555	2005	9102330 9090780	11560	Doug
8/2/88	0555	2000	9113770 9102330	11440	Doug
8/3/88	0550	2100	9125680 9113770	11910	Doug
8/4/88	0555	2040	9137060 9125680	11380	Doug
8/5/88	0550	2035	9148460 9137060	11400	Doug
8/6/88	0600	2035	9159810 9148460	11350	Doug
8/7/88	0625	2030	9170930 9159810	11120	Doug
8/8/88	0555	2035	9182280 9170930	11350	Doug
8/9/88	0555	2030	9193490 9182280	11210	Doug
8/10/88	0555	2100	9204990 9193490	11500	Doug 9423720 9422350 1370
8/11/88	0550	2055	9216250 9204990	11260	Doug 10960
8/12/88	0545	2300	9228550 9216250	12300	Doug
8/13/88	0550	2100	9239000 9228550	10450	Doug
8/14/88	0600	2100	9250900 9239000	10900	Doug
8/15/88	0550	2200	9261460 9250900	11500	Doug
8/16/88	0547	2115	9272390 9261460	10910	Doug
8/17/88	0550	2100	9283220 9272390	10830	Doug
8/18/88	0550	2045	9294080 9283220	10820	Doug

GREAT SAND DUNES WELL #2
(Res. entries supplement Well #3)

DATE	TIME STARTED	TIME STOPPED	METER READING	GALLONS PUMPED	INITIALS
06-26-89	0830		1441100	5890	Doug
06-27-89	0900	1710	1453850 1446990	6860	Doug
06-28-89	0750	1800	1465300 1453850	11450	Doug
06-29-89	1130		1465300	22200	Doug
06-30-89	0725	1130	1491900 1487500	4400	Doug
07-01-89	0715	1650	1502550 1491900	Res. 10650	Doug
07-03-89	0715		1502550	Res. 27750	Doug
07-04-89	18½ gal/per/min. 0725	1657	1540900 1530300	Res. 10600	Doug
07-05-89	0740	1706	1551400 1540900	Res. 10500	Doug
07-06-89	0833	1250	1556130 1551400	Pumped to Campg 4730	Doug
07-06-89	1250	1740	1561430 1556130	Pump to Res. Tank 5300	Doug
07-07-89	0745	1200	1566100 1561430	Pumped to Campg 4670	Doug
07-07-89	1200	1715	1571950 1566100	5850	Doug
07-08-89	0750	1122	1575850 1571950	Campground 3900	Doug
07-08-89	1122	1717	1582350 1575850	Res. 6500	Doug
07-09-89	0740	1705	1592700 1582350	Res. 10350	Doug
07-10-89	0745	1455	1600570 1592700	Res. 7870	Doug
07-10-89	1455	1835	1604670 1600570	Campground 4100	Doug
07-12-89	0810	1700	1614350 1604670	Res. 9680	Doug
07-13-89	0740	1650	1624450 1614350	Res. 10100	Doug
07-14-89	0725		1636150 1624450	Res. 11700	Doug
07-17-89	0625	1820	1650250 1636150	Res. 14100	Doug
07-17-89	0740		1664100 1650250	Res. 13850	Doug
07-19-89	0755	1735	1674800 1664100	Res. 10700	Doug

DATE	TIME STARTED	TIME STOPPED	METER READING	GALLONS PUMPED	INITIALS
07-19-89	1736	07-20-89 0725	1690100 1674800	Campground 15300	Doug
07-21-89	0735	1125	1694300 1690100	Campground 4200	Doug
7-21-89	1125	1700	1700550 1694300	Res. 6250	Doug
07-24-89	0735	1520	1709200 1700550	Campground 8650	Doug
07-27-89	0720	1540	1718450 1709200	Campground 7250	Doug
07-28-89	0720	1530	1727450 1718450	Campground 9000	Doug
07-30-89	0820	1610	1736150 1727450	Campground 8700	Doug
07-31-89	0725	1530	1745100 1736150	Campground 8950	Doug
08-02-89	0740	1722	1755750 1745100	Campground 10650	Doug
08-04-89	0745	-	1755750	Campground	Doug
08-04-89		3:00 pm	176369		Jay
8-8-89	8:00				
08-17-89	0925	1944	1876350 1865000	Res. 11350	3:30 Doug
08-18-89	0750	1540	1884900 1876350	Res. 8550	Doug
08-19-89	0720	1650	1895350 1884900	Campground 10450	Doug
08-20-89	0800	1810	1906600 1895350	Campground 11250	Doug
08-21-89	0915	1730	1916750 1906600	Res. 10350	Doug
08-22-89	0800	-	1924450 1916950	Campground 7500	Doug
08-23-89	0730	0650	1950000 1924450	Res. 25550	Doug
08-24-89	0650	1600	1960100 1950000	Campground 10100	Doug
08-25-89	0725	1658	1970600 1960100	Campground 10500	Doug
08-28-89	0730	1540	1979600 1970600	Campground 9000	Doug
08-31-89	0710	1453	1988150 1977600	Campground 7550	Doug

TOTAL ANNUAL DIVERSION

$(9{,}999{,}999 - 9{,}055{,}610) + 1{,}768{,}370 = 2{,}712{,}759$ gal

(9,999,999: maximum reading; 9,055,610: July 29, 1988 Reading; 1,768,370: July 28, 1989 Reading)

2,712,759 gal
+ 160,600 gal from well #2, 7/1 - 7/28/89
+ 15,000 gal reduced usage from closed facilities
2,888,359 gal

2,888,359 gal ÷ 325,850 gal/acre ft = 8.9 acre ft

8.9 acre feet

10-06-1989: routing and transmittal slip

ROUTING AND TRANSMITTAL SLIP Date 10/06/89

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. Beth Voekel - Water Rights		
2.		
3.		
4.		
5.		

Action	File	Note and Return
Approval	For Clearance	Per Conversation
As Requested	For Correction	Prepare Reply
Circulate	For Your Information	See Me
Comment	Investigate	Signature
Coordination	Justify	

REMARKS

Please find attached copy of well test information from Great Sand Dunes Nat'l. Mon.

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
Bill Wellman, Supt. Great Sand Dunes N.M.	Headquarters
	Phone No. 719-378-2312

5041-102

GPO : 1987 O - 196-409

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

Beth Vockel

Burk Drilling & Irrigation, Inc.
0128 West Road 3 North
Monte Vista, Colorado 81144
(303) 852-4845

Received OCT 10 1989
Water Resources Branch

Information on well test made 8/7/89

Pump set 290'6"
Static Water level 232'6"
Pumping Water level 250'
Well yield 21.3 GPM
Length of test 24 hrs.
Well was pumped with 13EM 3-HP Gould submersible.

This information was presented by Ken C. Burk of Burk Drilling Inc.
8/10/89

08-31-1989: order description by burk drilling inc.

BURK DRILLING INC.
0128 West Road 3 North
MONTE VISTA, COLORADO 81144
(719) 852-4845

8521
5218

CUSTOMER'S ORDER NO. PX1470-9-0012 PHONE DATE 8-31-89

NAME Great Sand Dunes National Monument

ADDRESS 11500 Hwy 150

Mosca, Co 81146

SOLD BY	CASH	C.O.D.	CHARGE	ON ACCT	MDSE. RET'D.	PAID OUT
	/					

QTY.	DESCRIPTION	PRICE	AMOUNT
1-	5HP Submersible 25EL		1300.00
*	Set pump on 9/26/89		
*	State of Colorado Drillers License #1137		

TAX

RECEIVED BY

TOTAL 1300.00

1762

All claims and returned goods MUST be accompanied by this bill.

Thank You

08-25-1989: memorandum to water rights branch from superintendent, grsa regarding grsa well #1

United States Department of the Interior
NATIONAL PARK SERVICE
GREAT SAND DUNES NATIONAL MONUMENT
MOSCA, COLORADO 81146

IN REPLY REFER TO:
D5039

August 25, 1989

Memorandum

To: Beth Voelkel, Water Rights Branch

From: Superintendent, Great Sand Dunes National Monument

Subject: GRSA Well #1

The results from the initial pump test on GRSA well #1 are:

Well depth - 293'6"
Static water level - 232'6"
24 hour draw down - 18'
Pump time - 23½ hrs.
Gallons pumped - 30,100
Pump rate - 21.3 GPM

The pump test was set up by Burk Drilling, Monte Vista, Colorado with assistance from the park maintenance staff.

The initial bacteriological tests showed some bacteria in the water. However, after sterilizing the well with a heavy dose of chlorine, multitube tests taken after pumping four and eight hours are clean.

We will be conducting more extensive pump tests prior to permanent installation of the well. If you need specific data, let us know. We will send you a copy of the pump test when everything is complete.

Thanks for your help.

Bill Wellman
William E. Wellman

Year of the Visitor

Form No. 4
(Revised 6/55)

COLORADO WATER CONSERVATION BOARD
LOG AND HISTORY

(1) Location: Sec. 34 T. 26 S R. 73 W. P.M. 6th ¼ Sec. SE¼ (2) County Alamosa

(3) or Street Address Dept. of Interior City

(4) Owned by Dept. of Interior Nat'l Park Service Address P.O. Box 1728, Santa Fe, New Mexico

(5) Tenant Great Sand Dunes Nat'l Mon. Address P.O. box 60 Alamosa, Colorado

(6) Drilled by Red Top Drilling Co. Address Las Vegas, New Mexico

(7) Water Well Driller's License No. Colo. 319 (8) Name or No. of Well

(9) Type of Well: Domestic ☒ Municipal ☐, Stock ☐, Irrigation ☐,

Industrial ☐, Drainage ☐, Other

(10) Cased: 0 ft. to 146 ft. Type Steel Size 12-3/4" Wt. of Casing: Lbs./Ft. 42.

Cased: 0 ft. to 290 ft. Type Steel Size 8- 5/8" Wt. of Casing: Lbs./Ft. 22.36

Cased: ft. to ft. Type Size Wt. of Casing: Lbs./Ft.

(11) Perforated or Screened: Ft. 250 to Ft. 280 ; Ft. to Ft.

(12) Type of Screen or Perforation 1/4" Torch Slotted

(13) Date Started April 26, 1957 (14) Date Completed May 18, 1957

(15) Static Water Level 242 Ft.
or
Shut in Pressure lbs./sq. in. (16) Date

(17) Pumping Water Level 260 Ft. at (18) 80 G P M yield.

(19) How Tested: Turbine Pump (20) Length of Test 10 (Ten) Hours,

Put Formation Log on Reverse Side

(21) REMARKS: (Gravel Packing, Cementing, Packers, Type of Shut-off, Depth of Shut-off, Method Drilling, etc.)

TO BE MADE IN QUADRUPLICATE: *Original Blue* and *Green Duplicate* to Colorado Water Conservation Board. *White Copy* to Owner and *Yellow Copy* to Driller.

LOG OF WELL

DESCRIPTION OF MATERIAL DRILLED (ADD OTHER LINES AS NEEDED) | METHOD OF DRILLING

Feet			
00	to	70	Loose Sand and Boulders .
70	to	140	Clay and Gravel
140	to	290	Sand and Gravel
	to		
	to		
	to		

Geological Sur
Experimental form qw-gw (1966)

UNITED STATES DEPARTMENT OF THE INTERIOR
Ground Water Analysis

Water Resources Division

State Colo 05 (1 2) County Alamosa (3 4) Latitude (5 10 11 N, S) Longitude (12 18) Seq. No. (19) Date coll. 01412616 (20 25)

Local well No. a Great Sand Dunes Spring
Date Drilled. 1940
Owner b NPS Box 60, Alamosa
Collected by Harold Schaffstrom
Lab. Anal. A-1 + Tot Fe
Project No. NPS

SW¼ sec. 2 T 27 SR 73 W

WBF Spring
Appearance Wc clear Wa
Lab. No. C59205.
Sampling depth (26 29)
Type c (30)

Kx10⁶ 23.7 T 347 R KCl 1285 (27) (31 35)

pH 7.8 (7.8) (36 38)
Temperature °F (39 41)

Si f 5.2 15 ml (14) Abs .268 (42 44)

	ppm	epm
Ca 4.07 0.00 4.07 — 50 ml (41) (45 49)	41.	2.05
Mg — ml (6.9) (50 53)	6.9	0.57
Subtotal cations (Ca, Mg)		2.62
Na 1-20 0.87 15.2 — ml (5.2) (54 58)	5.2	0.23
K 1-10 8.8 odil ml (0.9) (59 61)	0.9	0.02
Subtotal cations (Ca, Mg, Na, K)		2.87

HCO₃ 27.20 19.70 7.50 — 50 ml (150) 74 (62 65) 2.46
CO₃ — 50 ml 0 (66 67) 0.00

	ppm	epm
SO₄ odil. — ml (17) (68 72)	17.	0.35
f — ml 0.54 0.00 0.94 −.07 0.87		
Cl 100 ml (1.0) — .5 mg (73 78)	1.0	
Mg · AgNO₃ — 3.20 0.27 −.06 0.21		0.03
Source of data d (79) Card Q (80) Q		
F .10 ml Abs .1461 (0.1) (26 28)	0.1	0.01
NO₃ 11.6 10 ml Abs .003 (0.0) (29 32)	0.0	0.001
PO₄ — f Abs — Abs — % (33 35)		
HPO₄ — % H₂PO₄ —		
Total anions		2.85
B .129 f — ml Abs .026 (0.03) (36 38)	0.03	
Al — ml (39 41) Abs (Al + Fe) —		

Remarks and explanation on other side

	ppm	epm
Fe f .190 — 2.5 ml (0.06)	0.06	
Total — ml Abs .032 (42 45)		
Dissol. — ml Abs —		
Mn 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 48.9542 (164) (58 63)
Residue at 180° 48.9213 2.00 ml 0.0329
Dish No. K-15
Calculated (160) (64 69)

Hardness 36.45
Ca, Mg 29.96 6.55 — 50 ml (131) (70 73)
Noncarbonate (5) (74 77)

Color (5) (78-79) Card R (80 R)

Provisional records, subject to revision.

59205

State	County	Lat.	Long.	Seq. No.	Date	Samp. depth	c

Remarks:

Br ____ ml	26 . 28	
I ____ ml	29 . 31	
Alk. as $CaCO_3$	32 35	
Free CO_2	36 . 38	
SAR (0.2)	39 . 41	0.2
RSC	42 44	
Organics		
MBAS (ABS) ____ ml	45 . 47	
	48 . 50	
	51 54	

Radiochemical		
Alpha (pc/l)	55 . 57	
Beta (pc/l)	58 60	
Ra (pc/l)	61 . 63	
U (ug/l)	64 . 66	

Other data (67-79)[e]

a Master card A (21-34)
b Master card A (52-66)
c Type:
1. Pumped
2. Bucket
3. Forest
4. Spigot
5. Bailer
6. Special
d Source of data:
1. USGS
2. UPHS
3. State Health
4. State
5. Industrial
6. Private
7. Educational

e Indicate constituent and card columns.

Card S 80 S

MAY 2 6 1966

JOE O'NEILL — E. F. WILLIAMS

Chemist _____ Checked by _____

Date began _____ Date transmitted _____

Punched by _____ Verified _____

Geological Sur — UNITED STATES DEPAI ENT OF THE INTERIOR — Wat sources Division

Experimental form: qw-gw (1966) — Ground Water Analysis

State Colo. 05 (1 2) County Alamosa (3 4) Latitude ° ' " N,S (5 10 11) Longitude ° ' " (12 18) Seq. No. (19) Date coll. M D Y 04 06 66 (20 25)

Mosca Spring, Great Sand Dunes Nat'l. Mon. NE¼ sec.2 T27S R73W

Local well No.[a] 27.73.2.200 Owner[b] NPS, Great Sand Dunes Natl Mon. Box 60, Alamosa 81101 Collected by Warren H. Hill Park Naturalist Lab. Anal. A-1-Fe soln Project No. NPS

WBF Alluvium Appearance Wc Clear Wa ____ Lab. No. C59203 Sampling depth (26 29) Type[c] (30)

Kx10⁶ 23.5 T 3481 R KC1 960 (362) (31 35)

pH 7.6 7.6 (36 38) Temperature °F 40° (39 41)

Si f 51.2 ____ ml (22) Abs .421 (42 44)

	ppm	epm
Ca 4.86 0.00 4.86 — 50 ml (49) (45 49)	49.	2.45
Mg ____ ml (6.9) (50 53)	6.9	0.57
Subtotal cations (Ca, Mg)		3.02
Na 0-50 odi ml 43.8 (18) (54 58)	18.	0.78
K 0-10 odi ml 12.7 (13) (59 61)	1.3	
Subtotal cations (Ca, Mg, Na, K)		3.83
HCO_3 14.50 5.60 8.90 — 50 ml (178) (62 65)	178	2.92
CO_3 50 ml (0) (66 67)	0	0.00

	ppm	epm
SO_4 0 dil. ml (28) f ____ ml 1.45 0.00 1.45 −.07 1.38 (68 72)	28.	0.58
Cl 50 ml (9.0) .5 mg (73 78)	9.0	
Mg · $AgNO_3$ 3.06 2.10 0.96 −.06 0.90		0.25
Source of data d (79) Card Q (80) Q		
F 10 ml .0031 Abs 1.408 (0.3) (26 28)	0.3	0.02
NO_3 11.6 10 ml Abs .140 (1.6) (29 32)	1.6	0.03
PO_4 ____ f Abs ____ (33 35)		
Abs ____ %		
HPO_4 ____ % H_2PO_4 ____		
Total anions		3.80
B 1.29 f ____ ml Abs .059 (0.08) (36 38)	0.08	
Al ____ ml (39 41)		
Abs (Al + Fe) ____		
Remarks and explanation on other side		

	ppm	epm
Fe f 1.90 25 ml (0.09) Total ____ ml Abs .049 (42 45)	0.09	
Dissol. ____ ml Abs ____		
Mn 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 472159 (224) Residue at 180° 471711.200 ml 0.0448 (58 63)	224	
Dish No. N-11 Calculated (224) (64 69)	224	
Hardness 24.55 Ca, Mg 17.00 7.55 — 50 ml (151) (70 73)	151	
Noncarbonate (5) (74 77)	5	
Color (0) (78-79)	0	Card R (80) R

Provisional records, subject to revision.

C 59203

State | County | Lat. | Long. | Seq. No. | Date | Samp. depth | c

Remarks:

Source: Spring
Date: 1962
Depth: 6'
Yield: 2 GM flow meas.
PC: overflow
Use: Dom., Ps, Irr.

Br _____ ml (26-28)

I _____ ml (29-31)

Alk. as $CaCO_3$ (32-35)

Free CO_2 (36-38)

SAR 0.0 (39-41)

RSC (42-44)

Organics

MBAS (ABS) _____ ml (45-47)

(48-50)

(51-54)

Radiochemical

Alpha (pc/l) (55-57)

Beta (pc/l) (58-60)

Ra (pc/l) (61-63)

U (ug/l) (64-66)

Other data (67-79)[e]

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 80 S

MAY 2 6 1966
JOE O'NEILL Chemist _____ E. F. WILLIAMS Checked by _____
Date began _____ Date transmitted _____
Punched by _____ Verified _____

Geological Sur — UNITED STATES DEPA[illegible]ENT OF THE INTERIOR — Wat[illegible] sources Division
Experimental form: qw-gw (1966) — Ground Water Analysis

State Colo. 05 (1 2) — County Alamosa (3 4) — Latitude (5 10 11 N, S) — Longitude (12 18) — Seq. No. (19) — Date coll. M D Y 04 06 66 (20 25)

Well No. 1 Great Sand Dunes N.Mon. NE¼ sec.3 T27S R73W

Local well No.[a] 27.73.3.200 — Owner[b] NPS, Great Sand Dunes Natl Mon. Box 60, Alamosa 81101 — Collected by Warren H. Hill Pk Naturalist — Lab. Anal. A-1 + Tab -Fe soln — Project No. NPS

WBF Alluvium — Appearance Wc Clear — Wa ____ — Lab. No. C59202 — Sampling depth (26 29) — Type[c] (30)

Kx10⁶ 23.5 T 3481 R — KC1 1610 (21) 2.16 (31 35)

	ppm	epm
pH 7.0 7.0 (36 38) — Temperature °F 50° (39 41)		
Si f 21.0 ml Abs .332 (42 44)	17.	
Ca 2.60 0.00 2.60 — 50 ml (26) (45 49)	2.6	1.30
Mg ml (6.1) (50 53)	6.1	0.50
Subtotal cations (Ca, Mg)		1.80
Na 0-50 24.3R — 0.01 ml (8.9) (54 58)	8.9	0.39
K 0-10 — 6dil ml (0.7) (59 61)	0.7	
Subtotal cations (Ca, Mg, Na, K)		2.21
HCO_3 5.55 0.00 5.55 — 50 ml (111) (62 65)	111	1.82
CO_3 50 ml 0 (66 67)	0	0.00

	ppm	epm
SO_4 6dil. ml (14) (68 72)	14.	0.29
f ml 0.79 0.00 0.79 −.07 0.72		
Cl 100 ml (28) (73 78)	2.8	
.5 mg 2.09 1.48 0.61 −.06 0.55		
Mg · $AgNO_3$		0.08
Source of data d 79 — Card Q 80 Q		
F .10 .0037 ml Abs .389 (0.4) (26 28)	0.4	0.02
NO_3 11.61 10 ml Abs .010 (0.1) (29 32)	0.1	0.00
PO_4 f Abs (33 35)		
Abs %		
HPO_4 % H_2PO_4		
Total anions		2.21
B 1.39 f 1 ml Abs .036 (0.05) (36 38)	0.05	
Al ml (39 41)		
Abs (Al + Fe)		
Remarks and explanation on other side		

	ppm	epm
Fe f 1.80 25 ml (0.07) Total ml Abs .035 (42 45)	0.07	
Dissol. ml Abs		
Mn 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 47.3357 (128)	128	
Residue at 180° 47.3101.200 ml 0.0257 (58 63)		
Dish No. N-21 Calculated (131)	131	
Hardness 17.00 Ca, Mg 12.50 4.50 — 50 ml (90) (64 69)	90	
Noncarbonate 0 (70 73)	0	
Color (74 77) — Card R 78-79 5 — 80 R		

Provisional records, subject to revision.

State	County	Lat.	Long.	Seq. No.	Date	Samp. depth	c
	59203 4						

Remarks:

Source: Domestic well, pump & water line
DD: April 1957
Depth: 290'
WL: static 240'
Yield: 18 GM pump meas.
PC: Visitor Center
Use: Dom., Ps, Irr.

Br ____ ml	.	26 28
I ____ ml	.	29 31
Alk. as $CaCO_3$		32 35
Free CO_2	.	36 38
SAR (C.A.) ✓	0.4	39 41
RSC		42 44
Organics		
MBAS (ABS) ____ ml	.	45 47
	.	48 50
		51 54

Radiochemical		
Alpha (pc/l)		55 57
Beta (pc/l)		58 60
Ra (pc/l)	.	61 63
U (ug/l)	.	64 66

Other data (67-79)[e]

a Master card A (21-34)
b Master card A (52-66)
c Type:
1. Pumped
2. Bucket
3. Forest
4. Spigot
5. Bailer
6. Special

d Source of data:
1. USGS
2. UPHS
3. State Health
4. State
5. Industrial
6. Private
7. Educational

e Indicate constituent and card columns.

Card S 80 S

MAY 2 6 1966
JOE O'NEILL
Chemist _____ E. F. WILLIAMS
Checked by _____
Date began _____ Date transmitted _____
Punched by _____ Verified _____

GRSA. WELL #1

G.W. Type Analysis A-1 **U.S. GEOLOGICAL SURVEY ANALYTICAL NOTES** Project NPS Collector H.W. NORTA

State COLORADO County ALAMOSA City (at or near) 3.7 MI NE OF ALAMOSA, SE¼ SEC 34 T 26 R 73, 16400 - VISITOR CENTER

Latitude - Longitude _____ Well No. ~~16400 - VISITOR CENTER~~ 26.73.34.400 Date Collected MAY 15, 1965

Owner NAT. PARK SERVICE, GREAT SAND DUNES NAT. MON. Date Drilled 5-18-57 Cased to _____ Depth (ft.) 350 Diam. (in.) _____

pH 7.4 7.4 Temp. (°F) _____

Hardness as $CaCO_3$ Total 156

Noncarbonate 10

Color 0 0 S.A.R. 0.6

%Na 20 T/af 0.32

Density (g/ml) _____

W.B.F. GRAVEL

Producing Intervals _____

W.L. 242 Ft.

Sampled after Pumping (Time) _____

Yield _____

Point of Collection RESERVIOR

Appearance CLEAR

Use Dom., P.S.

Remarks:

Chemist JOE O'NEILL Checked By E. F. WILLIAMS

Date Completed AUG 5 - 1965

Date Transmitted _____

Laboratory No. C57101

Spec. Cond. (micromhos at 25°C): T 26.8 R KCl 3.0 R Sample 887 (36) 368

	PPM	EPM
Silica f 2.3 vol 10 o.d. .421	(23) 22	
Calcium 4.37 0.33 EPM TH _____ vol 50	(50) 50	3.12
Magnesium 12.20 vol _____ 7.83	(7.5) 7.5	1.62
Sodium vol _____ range 43.1 15.3	(18) 18	0.78
Potassium vol _____ C-10 range 15.1	(1.5) 1.5	0.04
Na+K (Calculated)		
Iron f 1.23 vol 25 In sol.: o.d. 0.000	(0.03) 0.00	
Total: o.d. 0.010	(0.03) 0.02	
TOTAL CATIONS		3.94

	PPM	EPM
Bicarbonate 22.75 12.80 8.951 vol 50	(179) 88 179	2.93
Carbonate	0	0
Sulfate 1.55 0.62 1.551 1.241 vol 10	(30) 30	0.62
Chloride 2.67 0.60 1.17 .06 1.911 vol 10 $AgNO_3$ .5	(9.6) 9.6	0.27
Fluoride vol 10 o.d. 1.387 .0040	(.4) 0.4	0.02
Nitrate f 11.3 vol 10 o.d. .081	(.9) 0.9	
Boron f 1.3 vol 1 o.d. 0.005	(.01) 0.01	
Sum of Constituents	(228) 228	
(Residue) on Evaporation at 180°C vol 200 dish N-15	(233) 233	
TOTAL ANIONS		3.85

Provisional records, subject to revision.

GRSA WELL #1

FORM 9-1367 (9-1960)
U. S. DEPT. OF INTERIOR
GEOLOGICAL SURVEY

ANALYTICAL STATEMENT. GW

26S.73W.34.400 NPS

COUNTY Alamosa (Colo) 34.83

LAB NO. 54201

Location: Great Sand Dunes, Natl.Mon. - 37 miles NE of Alamosa, Colo.(Well No. 1)
Source (type of well): Drilled
Owner: NPS - Box 728, Santa Fe, N.Mex.
Date drld: 5/18/57 Cased to ft
Depth: 350' Diam
WS#
Water level: 242 ft
Sampled after pumping hrs
Yield: 80 GPM (meas or est) 18
Pt of coll: Visitor Center
Appearance: Clear
Temp (°F) Use: Ps
Collector: H.Wayne Norton
Chemist: JON
Date completed: May 19, 1964
Checked by: LJA
Date transmitted:

Date of collection: Apr. 19, 1964
Ignition Loss Color: 0
Dissolved Solids:
Residue at 180°C: 230
Calculated (Sum): 230
Tons per Acre Foot: 0.31
Hardness as $CaCO_3$: 158
Non-carbonate Hardness: 6
% Na: 20 SAR: 0.6 pH: 8.0
Specific Conductance (micromhos at 25°C): 373

$SE\frac{1}{4}$ sec.34 T26S R73W

	epm	ppm
SiO_2		21
Fe (total)		0.04
Ca	2.50	50
Mg	0.66	8.0
Na	0.78	18
K	0.04	1.7
Na + K	3.98	
HCO_3	3.05	186
CO_3	0.00	0
SO_4	0.58	28
Cl	0.28	9.8
F	0.02	0.4
NO_3	0.04	2.2
	3.97	B 0.05

Provisional records, subject to revision.

FORM 9-1367 (9-1960)
U. S. DEPT. OF INTERIOR
GEOLOGICAL SURVEY

ANALYTICAL STATEMENT. GW

$NW\frac{1}{4}$ sec.2 T27S R73W NPS

COUNTY Alamosa (Colo) 37.83

LAB NO. 54351

Location: Mosca Spring, 38 mi. NE of Alamosa, Colo.
Source (type of well): Spring
Owner: NPS, Box 60, Alamosa, Colo.
Date drld: N/A Cased to ft
Depth: N/A Diam
WS#: Surface
Water level: ft
Sampled after flow for 5 min.
Yield: 5 GPM (MEAS or est)
Pt of coll: Drinking fountain
Appearance: Clear
Temp (°F) Use: Ps
Collector: H. Wayne Norton
Chemist: JON
Date completed: June 11, 1964
Checked by: EFW
Date transmitted:

Date of collection: May 11, 1964
Ignition Loss Color: 0
Dissolved Solids:
Residue at 180°C: 143
Calculated (Sum): 134
Tons per Acre Foot: 0.18
Hardness as $CaCO_3$: 90
Non-carbonate Hardness: 0
% Na: 18 SAR: 0.4 pH: 7.0
Specific Conductance (micromhos at 25°C): 222

Rmks: This source used only during summer months.

	epm	ppm
SiO_2		17
Fe (total)		0.02
Ca	1.35	27
Mg	0.45	5.5
Na	0.41	9.5
K	0.02	0.8
Na + K	2.23	
HCO_3	1.85	113
CO_3	0.00	0
SO_4	0.31	15
Cl	0.07	2.6
F	0.03	0.5
NO_3	0.00	0.1
	2.26	B 0.00

Provisional records, subject to revision.

FORM 9-1367 (9-1960)
U. S. DEPT. OF INTERIOR
GEOLOGICAL SURVEY

ANALYTICAL STATEMENT. GW

$SW\frac{1}{4}$ sec.2 T27S R73W NPS

COUNTY Alamosa (Colo) 37.83

LAB NO. 54352

Location: Morris Gulch Spring 38 Mi. NE of Alamosa, Colo. Great Sand Dune Nat. Mon.
Source (type of well): Spring
Owner: NPS, Box 60, Alamosa, Colo
Date drld: N/A Cased to ft
Depth: N/A Diam
WS#: Surface
Water level: ft
Sampled after flow for 5 min.
Yield: 2 GPM (MEAS or est)
Pt of coll: Near Quarter No.4 stand pipe
Appearance: Clear
Temp (°F) Use: Irr.
Collector: H.W. Norton
Chemist: JON
Date completed: June 11, 1964
Checked by: EFW
Date transmitted:

Date of collection: May 11, 1964
Ignition Loss Color: 5
Dissolved Solids:
Residue at 180°C: 180
Calculated (Sum): 173
Tons per Acre Foot: 0.24
Hardness as $CaCO_3$: 134
Non-carbonate Hardness: 28
% Na: 9 SAR: 0.2 pH: 7.6
Specific Conductance (micromhos at 25°C): 283

	epm	ppm
SiO_2		14
Fe (total)		0.02
Ca	2.15	43
Mg	0.53	6.4
Na	0.27	6.1
K	0.03	1.0
Na + K	2.98	
HCO_3	2.13	130
CO_3	0.00	0
SO_4	0.77	37
Cl	0.04	1.4
F	0.01	0.1
NO_3	0.00	0.2
	2.95	B 0.00

Provisional records, subject to revision.

FORM 9-1367 (9.1960)
U. S. DEPT. OF INTERIOR
GEOLOGICAL SURVEY

ANALYTICAL STATEMENT. GW

26S.73W.34.400 NPS

COUNTY Alamosa (Colo.) 783

LAB NO. 54201

Location: Great Sand Dunes, Natl.Mon. - 37 miles NE of Alamosa, Colo.(Well No. 1)
Source (type of well): Drilled
Owner: NPS - Box 728, Santa Fe, N.Mex.
Date drld: 5/18/57 Cased to ft
Depth: 350' Diam
WS#
Water level: 242 ft
Sampled after pumping hrs
Yield: 80 GPM (meas or est) 18
Ft of coll: Visitor Center
Appearance: Clear
Temp (°F) Use: Ps
Collector: H.Wayne Norton
Chemist: JON
Date completed: May 19, 1964
Checked by: LJA
Date transmitted:

Date of collection: Apr. 19, 1964
Ignition Loss Color: 0
Dissolved Solids:
Residue at 180°C: 230
Calculated (Sum): 230
Tons per Acre Foot: 0.31
Hardness as $CaCO_3$: 158
Non-carbonate Hardness: 6
% Na 20 SAR 0.6 pH 8.0
Specific Conductance (micromhos at 25°C): 373

SE¼ sec.34 T26S R73W

	epm	ppm
SiO_2		21
Fe (total)		0.04
Ca	2.50	50
Mg	0.66	8.0
Na	0.78	18
K	0.04	1.7
Na+K	3.98	
HCO_3	3.05	186
CO_3	0.00	0
SO_4	0.58	28
Cl	0.28	9.8
F	0.02	0.4
NO_3	0.04	2.2
	3.97	B 0.05

Provisional records, subject to revision.

FORM 9-1367 (9.1960)
U. S. DEPT. OF INTERIOR
GEOLOGICAL SURVEY

ANALYTICAL STATEMENT. GW

NW¼ sec.2 T27S R73W NPS

COUNTY Alamosa (Colo.) 783

LAB NO. 54351

Location: Mosca Spring, 38 mi. NE of Alamosa, Colo.
Source (type of well): Spring
Owner: NPS, Box 60, Alamosa, Colo.
Date drld: N/A Cased to ft
Depth: N/A Diam
WS#: Surface
Water Level ft
Sampled after flow for 5 min.
Yield: 5 GPM (XXXX est)
Ft of coll: Drinking fountain
Appearance: Clear
Temp (°F) Use: Ps
Collector: H. Wayne Norton
Chemist: JON
Date completed: June 11, 1964
Checked by: EFW
Date transmitted:

Date of collection: May 11, 1964
Ignition Loss Color: 0
Dissolved Solids:
Residue at 180°C: 143
Calculated (Sum): 134
Tons per Acre Foot: 0.18
Hardness as $CaCO_3$: 90
Non-carbonate Hardness: 0
% Na 18 SAR 0.4 pH 7.0
Specific Conductance (micromhos at 25°C): 222

Rmks: This source used only during summer months.

	epm	ppm
SiO_2		17
Fe (total)		0.02
Ca	1.35	27
Mg	0.45	5.5
Na	0.41	9.5
K	0.02	0.8
Na+K	2.23	
HCO_3	1.85	113
CO_3	0.00	0
SO_4	0.31	15
Cl	0.07	2.6
F	0.03	0.5
NO_3	0.00	0.1
	2.26	B 0.00

Provisional records, subject to revision.

FORM 9-1367 (9.1960)
U. S. DEPT. OF INTERIOR
GEOLOGICAL SURVEY

ANALYTICAL STATEMENT. GW

SW¼ sec.2 T27S R73W NPS

COUNTY Alamosa (Colo.) 783

LAB NO. 54352

Location: Morris Gulch Spring 38 Mi. NE of Alamosa, Colo. Great Sand Dune Nat. Mon.
Source (type of well): Spring
Owner: NPS, Box 60, Alamosa, Colo
Date drld: N/A Cased to ft
Depth: N/A Diam
WS#: Surface
Water level ft
Sampled after flow for 5 min.
Yield: 2 GPM (XXXX est)
Ft of coll: Near Quarter No.4 stand pipe
Appearance: Clear
Temp (°F) Use: Irr.
Collector: H.W. Norton
Chemist: JON
Date completed: June 11, 1964
Checked by: EFW
Date transmitted:

Date of collection: May 11, 1964
Ignition Loss Color: 5
Dissolved Solids:
Residue at 180°C: 180
Calculated (Sum): 173
Tons per Acre Foot: 0.24
Hardness as $CaCO_3$: 134
Non-carbonate Hardness: 28
% Na 9 SAR 0.2 pH 7.6
Specific Conductance (micromhos at 25°C): 283

	epm	ppm
SiO_2		14
Fe (total)		0.02
Ca	2.15	43
Mg	0.53	6.4
Na	0.27	6.1
K	0.03	1.0
Na+K	2.98	
HCO_3	2.13	130
CO_3	0.00	0
SO_4	0.77	37
Cl	0.04	1.4
F	0.01	0.1
NO_3	0.00	0.2
	2.95	B 0.00

Provisional records, subject to revision.

RECORD OF TEST PUMPING

Wa Well located at Great Sanc unes

RED TOP DRILLING CO.
LAS VEGAS, NEW MEXICO

Perforation record:

From 250 to 280 Feet

Johnston Pump Set at 284.feet
Static water level before start of pumping 242 feet below top of casing.
5:00 P.M., May 17, 1957
Orifice Diameter 2½. Pipe Dia. 4"

TEST PUMPING DATA

Date	Time	Pumping Rate		Measured Water Level	REMARKS
		Orifice Reading	G. P. M.		
5/17	5 PM			242	Sandy - Full Capacity of Pump
5/17	5:30				Estimated Maximum 150 G.P.M.
5/17	6 PM				Flow Fell Off Rapidly. Time From
5/17	6:30				5:00 P.M. to 9:00 P.M. Irregular,
5/17	7 PM				Alternate Pumping and Surging to
5/17	7:30				Develop Well.
5/17	8 PM				(10 equals 10 inches of Mercury)
5/17	8:30				
5/17	9 PM	10	80	272½	Clear
5/17	9:30	"	"	274	"
5/17	10 PM	"	"	"	"
5/17	10:30	"	"	273	"
5/17	11 PM	"	"	275	"
5/17	11:30	"	"	"	"
5/17	12 M	"	"	"	"
5/18	12:30	"	"	"	"
5/18	1 AM	"	"	"	"
5/18	1:30	"	"	"	"
5/18	2 AM	"	"	"	"
5/18	2:30	"	"	"	"
5/18	3 AM	"	"	"	"

Other Supporting Information

December 1, 1993

L54(479)
GRSA/Water Rights

Memorandum

To: Regional Solicitor, Rocky Mountain Region
Attn: Ralph Canaday

Through: Dan B. Kimball, Chief, Water Resources Division

From: Owen R. Williams, Chief, Water Rights Branch

Subject: Preparation of a Litigation Report For Water Rights at Great Sand Dunes National Monument

Water rights at Great Sand Dunes National Monument (GRSA) need to be changed to provide an adequate amount of water for domestic and municipal purposes. The change is for an additional point of diversion (GRSA Well #1) to supplement the water supplied from GRSA Well #3. The application for water rights must be submitted, by the Department of Justice (DoJ), to the Colorado District Court for Water Division 3.

The attached materials, listed below, are provided to assist in the preparation of a litigation report:

- --Summary report
- --Draft application (hard copy and electronic file copy, wordperfect 5.1)
- --Copies of selected permit applications, decrees, and correspondence applicable to the draft application
- --US Geological Survey 1:24,000 scale map with well locations plotted

If there are any questions, please contact Denise Newberry of my staff at (303) 225-3525.

Owen R. Williams

Attachments
cc: (all w/o attachments)
GRSA - Superintendent
RMR - Wise
DoJ - Dubois
479 - Williams, Johns, Flora, Jackson, Newberry

bcc: Docket 1 and 3

Summary Report

Prepared by
Denise Newberry
Water Rights Branch, Water Resources Division
October 6, 1993

Summary of Facts Relating to Application For Change of Water Right at Great Sand Dunes National Monument (GRSA)

On June 30, 1989, in Case No. 81CW163, GRSA Well No. 3 was decreed an appropriative water right for 25 gpm for municipal and domestic purposes with a priority date of August 4, 1978. Unexpectedly, soon after the decree was issued, flows from GRSA Well No. 3 became unreliable and the United States now desires to modify the existing water right to include supplemental Well No. 36273-F (GRSA Well No. 1) for the purpose of obtaining the original appropriation of GRSA Well No. 3.

Application for a permit for an Alternate Point of Diversion for GRSA Well No. 3, decreed in Water Court Case No. 81CW163, was filed with the State Engineer October 30, 1989, approved on February 28, 1990, and assigned Permit No. 36273-F.

The Statement of Beneficial Use of Ground Water for GRSA Well No. 1 was filed with the State Engineer on November 9, 1990, and accepted on January 25, 1993.

As stated in Permit No. 36273-F, the simultaneous maximum pumping rate of GRSA Well No. 1 (Permit No. 36273-F) and GRSA Well No. 3 (Permit No. 36263-F) shall not exceed 25 gpm. The combined average annual amount of groundwater appropriated by both wells shall not exceed 8.9 A-ft/yr. The wells shall be used for domestic and municipal purposes in Great Sand Dunes National Monument at the visitor center, picnic ground, park headquarters, employee housing and work center.

Background Information:

On December 20, 1979, the United States of America (USA) filed an application for water rights at Great Sand Dunes National Monument (GRSA) which was assigned Case No. 79CW85. Thereafter, on November 24, 1981, the USA filed amendments to Case No. 79CW85, which were assigned Case Nos. 81CW161, 81CW163, and 81CW164. In Case No. 81CW161, the USA claimed a Federal Reserved water right for 30 gpm to be used for domestic, public, and irrigation purposes from GRSA Well No. 1.

GRSA Well No. 1 was used for domestic purposes in Government-owned quarters by National Park Service employees, for maintenance of Government-owned vehicles and equipment, and for domestic use by visitors in a picnic area. After the application was filed, the well was capped and its functions replaced by GRSA Well No. 3, decreed as an appropriative right in Case No. 81CW163. Accordingly, the USA did not seek a decree for GRSA Well No. 1 in Case No. 81CW161. Case No. 81CW161 and Case No. 81CW164 constitute the final adjudication of all claims of the United States for reserved rights for GRSA.

DISTRICT COURT, WATER DIVISION NO. 3, STATE OF COLORADO

CASE NO. _____

APPLICATION FOR CHANGE OF WATER RIGHT

CONCERNING THE APPLICATION FOR WATER RIGHTS OF: The United States Of America, National Park Service, in Alamosa County.

---

1. Names, Addresses and Telephone Numbers of Applicants:

   The U.S. Department of the Interior
   Mr. Owen R. Williams, on behalf of the National Park Service
   Water Resources Division
   1201 Oak Ridge Drive, Suite 250
   Fort Collins, Colorado 80525
   (303) 225-3506

2. Decreed name of structure for which change is sought:

   Well No. 36263F (GRSA Well No. 3 decreed in Case No. 81CW163)

3. From previous Decree:

   A. Date Entered: June 30, 1989 Case No. 81CW163
   Court Water Division 3

   B. Decreed point of diversion SE 1/4, SW 1/4, Section 2, Township 27S, Range 73W, 6th P.M (see attached map)

   C. Source: groundwater

   D. Appropriation Date: August 4, 1978 Amount: 25 gpm

   E. Historic use: (Include a description of all water rights to be changed, a map showing the approximate location of historic use of the rights and records or summaries of records of actual diversions of each right the applicant intends to rely on to the extent such records exist.)

   Used for domestic and municipal purposes in Great Sand Dunes National Monument at the visitor center, picnic ground, park headquarters, employee housing and work center.

4. Proposed change: (a) describe change requested: alternate point of diversion/replacement/change of use;(if well, please list pertinent information from well permit) (b)location; (c)use; (d)amount; (e)give proposed plan for operation (if (b) thru (e) applicable, please give full descriptions).

A - Modification of existing water right to include supplemental well No. 36273-F (GRSA well No. 1) for the purpose of obtaining the original appropriation of well No. 36263-F (GRSA Well No. 3).

B - The legal description of Supplemental Well No. 36273-F is SE 1/4, SE 1/4, Sec. 34, Township 26S, Range 73W, 6th P.M.

C - The wells shall be used for domestic and municipal purposes in Great Sand Dunes National Monument at the visitor center, picnic ground, park headquarters, employee housing and work center.

D - The simultaneous maximum pumping rate of wells No. 36273-F and 36263-F shall not exceed 25 gpm. The combined average annual amount of groundwater appropriated by both wells shall not exceed 8.9 A-ft/yr.

5. Name(s) and address(es) of owner(s) of land on which structure(s) is (are) located:

United States of America
Great Sand Dunes National Monument
Mosca, Colorado 81146

11-09-1990: letter to state engineer from nps regarding permit no. 036273-f, well no. 1 at grsa

United States Department of the Interior
NATIONAL PARK SERVICE
WATER RESOURCES DIVISION
301 SOUTH HOWES ST., ROOM 335
FT. COLLINS, COLORADO 80521

IN REPLY REFER TO:
L54(479)
GRSA/Water Rights

November 9, 1990

State Engineer
Colorado Division of Water Resources
818 Centennial Bldg.
1313 Sherman St.
Denver, Colorado 80203

Re: Permit No. 036273-F, Well no. 1 at Great Sand Dunes National Monument

Dear Sir:

Attached is the completed, signed, and notarized "Statement of Beneficial Use of Ground Water" for the above-referenced permit and associated well. Should you have any questions, contact me at (303) 493-1441.

Sincerely,

Owen R. Williams
Chief, Water Rights Branch

Attachments

cc: RMR - Hermance
GRSA - Superintendent
479 - Williams, Pettee, Christensen

01-25-1993: colorado division of water resources: affidavit; statement of beneficial use of ground water

SE CP

WRJ-25-75

RECEIVED
NOV 14 '90
WATER RESOURCES
STATE ENGINEER
COLO.

TYPE OR PRINT IN BLACK INK. COPY OF ACCEPTED STATEMENT MAILED ON REQUEST.

COLORADO DIVISION OF WATER RESOURCES

818 Centennial Bldg., 1313 Sherman St.
Denver, Colorado 80203

STATE OF COLORADO } SS. AFFIDAVIT
COUNTY OF Larimer }

X STATEMENT OF BENEFICIAL USE OF GROUND WATER
_____ AMENDMENT OF EXISTING RECORD
_____ LATE REGISTRATION

PERMIT NUMBER 036273-F

LOCATION OF WELL

THE AFFIANT(S) United States National Park Service Water Resources Division whose mailing address is 301 South Howes St., Room 353

City Fort Collins (STATE) Colorado 80521 (ZIP)

County Alamosa

SE ¼ of the SE ¼, Section 34

Twp. 26 S (N OR S), Rng. 73 W (E OR W), 6th P M

being duly sworn upon oath, deposes and says that he (they) is (are) the owner(s) of the well described hereon; the well is located as described above, at distances of 330 feet from the South (NORTH OR SOUTH) section line and 825 feet from the East (EAST OR WEST) section line; water from this well was first applied to a beneficial use for the purpose(s) described herein on the 23 day of April, 1990; the maximum sustained pumping rate of the well is 80 gallons per minute, the pumping rate claimed hereby is 25 gallons per minute; the total depth of the well is 350 feet; the average annual amount of water to be diverted is 8.9 acre-feet; for which claim is hereby made for domestic and municipal purpose(s); the legal description of the land on which the water from this well is used is _____ of which _____ acres are irrigated and which is illustrated on the map on the reverse side of this form; that this well was completed in compliance with the permit approved therefor; this statement of beneficial use of ground water is filed in compliance with law; he (they) has (have) read the statements made hereon; knows the content thereof; and that the same are true of his (their) knowledge.

(COMPLETE REVERSE SIDE OF THIS FORM)

Signature(s) O R Williams 12-3-90

Subscribed and sworn to before me on this 2 day of November, 1990

My Commission expires: My Commission Expires October 9, 1994 (SEAL)

Leslie A Mowers NOTARY PUBLIC

ACCEPTED FOR FILING BY THE STATE ENGINEER OF COLORADO PURSUANT TO THE FOLLOWING CONDITIONS:

Accepted that those conditions of approval as stated on the permit are complied with. 1-25-93

JAN 25 1993 DATE

Hal D. Simpson STATE ENGINEER

BY

FOR OFFICE USE ONLY

Court Case No. _____

Prior. _____ Mo. ____ Day ____ Yr. ____

Div. 3 Cty. 35

Sec. ____ ____ ¼. ____ ¼. ____ ¼.

Well Use 2 8 ____ ____

Dist. 02 Basin ____ Man. Dis ____

02-26-1990: registration of decreed existing well

FORM NO. GWS-12N 10/89

STATE OF COLORADO
OFFICE OF THE STATE ENGINEER
818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203
(303) 866-3581

For Office Use only
PERMIT NUMBER 036263-F

REGISTRATION OF DECREED EXISTING WELL

PURSUANT TO C.R.S.37-92-304(8)

OWNER'S COPY

15845

1. WELL OWNER
NAME(S): U. S. Dept. of Interior, Nat'l Park Service
Mailing Address: 301 South Howes St., Room 353
City, St. Zip: Fort Collins CO 80521
Phone (303) 221-8311

2. WELL LOCATION: COUNTY: Alamosa OWNER'S WELL DESIGNATION GRSA well No. 3

(Address) (City) (State) (Zip)

SE 1/4 of the SW 1/4, Sec. 2 Twp. 27 ☐ N. or ☒ S., Range 73 ☐ E. or ☒ W. 6th P.M.

Distances from Section Lines: 1,300 Ft. from ☐ N. or ☒ S. Line, 2,150 Ft. from ☐ E. or ☒ W. Line.

3. The well has historically been used for the following purpose(s):
Municipal purposes in a National Park, including visitor center & work center

4. Water from the well was first used beneficially by the original owner for the above described purpose(s) on August 4 1978.

5. The total depth of this well is 375 feet.

6. The pumping rate is 25 gallons per minute.

7. The average annual amount of water diverted is 8.9 acre feet.

8. The land area irrigated from this well is: N/A Acres
described as: _____ (Legal Description)
or as _____ Subdivision Lot(s)_____ Block_____ Filing/Unit _____

FOR OFFICE USE ONLY

IN ACCORDANCE WITH THE PROVISIONS OF SECTION 37-92-304(8), CRS THE STATE ENGINEER HAS ENTERED INTO HIS RECORDS, UNDER THE ABOVE ASSIGNED WELL PERMIT NUMBER, THE DETERMINATIONS MADE BY THE DIVISION 3 WATER COURT IN CASE NO. 81CW163 FOR WELL NO. GRSA well No. 3

MAR 1990
RECEIVED
WRD - FT COLLINS

Jim A. Danielson
State Engineer

Bruce E. DeBrine
By

2-26-90
Date

Court Case No. Div. 3 Co. 02 WD 35 Basin MD Use

02-28-1990: permit application form

811 ...ntennial Bldg., 1313 Sherman St., Denver, Col... RECEIVED OCT 30 1989 WATER RESOURCES STATE ENGINEER COLO.

RECEIVED OCT 10 1989 WATER RESOURCES STATE ENGINEER COLO.

FEB 05 '90 WATER RESOURCES STATE ENGINEER COLO.

PERMIT APPLICATION FORM

Application must be complete where applicable. Type or print in BLACK INK. No overstrikes or erasures unless initialed.

FOR: ( ) A PERMIT TO USE GROUND WATER
( ) A PERMIT TO CONSTRUCT A WELL
( ) A PERMIT TO INSTALL A PUMP
( ) REPLACEMENT FOR NO. _____
(X) OTHER Alternate Point of Diversion for GRSA Well No. 3

Decreed In WATER COURT CASE NO. 81CW163

(1) APPLICANT - mailing address

NAME United States National Park Service
Water Resources Division

STREET 301 S. Howes St., Room 353

CITY Fort Collins, CO 80521
(State) (Zip)

TELEPHONE NO. (303) 221-8311

(2) LOCATION OF PROPOSED WELL

County Alamosa

SE ¼ of the SE ¼, Section 34

Twp. 26 S (N,S), Rng. 73 W (E,W), 6th P.M.

(3) WATER USE AND WELL DATA

Proposed maximum pumping rate (gpm) 25 gpm

Average annual amount of ground water to be appropriated (acre-feet): 8.9 acre feet Opc

Number of acres to be irrigated: _____

Proposed total depth (feet): 350 feet

Aquifer ground water is to be obtained from:

_____

Owner's well designation GRSA Well No. 1

GROUND WATER TO BE USED FOR:

( ) HOUSEHOLD USE ONLY - no irrigation (0)
(X) DOMESTIC (1)
( ) LIVESTOCK (2)
( ) COMMERCIAL (4)
( ) INDUSTRIAL (5)
( ) IRRIGATION (6)
(X) MUNICIPAL (8)

( ) OTHER (9) _____

DETAIL THE USE ON BACK IN (11)

(4) DRILLER

Name _____

Street _____

City _____
(State) (Zip)

Telephone No. _____ Lic. No. _____

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN

Receipt No. 15562

Basin _____ Dist. _____

OWNER'S COPY

CONDITIONS OF APPROVAL

This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.

1) APPROVED FOR THE USE OF AN EXISTING STRUCTURE, A WELL REGISTERED UNDER NO. 16400. ISSUANCE OF THIS PERMIT HEREBY CANCELS PERMIT NO. 16400.
2) APPROVED PURSUANT TO CRS 37-90-137(2) AND THE ATTACHED FINDINGS OF THE STATE ENGINEER DATED FEBRUARY 26, 1990.
3) APPROVED AS A SUPPLEMENTAL WELL FOR THE PURPOSE OF OBTAINING THE ORIGINAL APPROPRIATION OF WELL NO. 36263-F (GRSA WELL NO. 3, 81-CW-163).
4) THE SIMULTANEOUS MAXIMUM PUMPING RATE OF THIS WELL AND WELL NO. 36263-F SHALL NOT EXCEED 25 GPM.
5) THE COMBINED AVERAGE ANNUAL AMOUNT OF GROUND WATER APPROPRIATED BY THIS WELL AND WELL NO. 36263-F SHALL NOT EXCEED 8.0 ACRE-FEET.
6) THIS WELL AND WELL NO. 36263-F ARE RESTRICTED TO SERVING DOMESTIC AND MUNICIPAL PURPOSES IN A NATIONAL PARK VISITOR CENTER, PICNIC GROUND, AND EMPLOYEE HOUSING AND WORK CENTER.
7) TOTALIZING FLOW METERS MUST BE INSTALLED ON THIS WELL AND WELL NO. 36263-F, AND BE MAINTAINED IN GOOD WORKING ORDER. PERMANENT RECORDS OF ALL DIVERSIONS MUST BE MAINTAINED BY THE WELL OWNER (RECORDED AT LEAST ANNUALLY) AND BE SUBMITTED TO THE DIVISION ENGINEER UPON REQUEST.
8) THE USE OF THIS WELL AS A SUPPLEMENTAL POINT OF DIVERSION IS A CHANGE IN WATER RIGHT. THIS WELL SHALL BE JUNIOR TO ALL VESTED WATER RIGHTS UNTIL SUCH TIME AS THE CHANGE IN WATER RIGHT HAS BEEN APPROVED BY THE DIVISION 3 WATER COURT AND THE WELL THEN MUST BE OPERATED PURSUANT TO THE TERMS AND CONDITIONS OF THAT DECREE.
9) THIS WELL SHALL BE LOCATED AT LEAST 600 FEET FROM ANY OTHER WELL (WELL NO. 36263-F) UNLESS PRIOR WRITTEN APPROVAL IS OBTAINED FROM THE DIVISION OF WATER RESOURCES.
10) THE OWNER SHALL MARK THE WELL IN A CONSPICUOUS PLACE WITH APPROPRIATE WELL PERMIT NUMBERS, NAME OF THE AQUIFER, AND COURT CASE NUMBERS. HE SHALL TAKE NECESSARY MEANS AND PRECAUTIONS TO PRESERVE THESE MARKINGS.

APPLICATION APPROVED

PERMIT NUMBER 036273 - F

DATE ISSUED FEB 28 1990

EXPIRATION DATE FEB 28 1991

Jim A. Lochhead
(STATE ENGINEER)

BY Bruce E. McBride

I.D. 3-35 COUNTY 02

FINDINGS OF THE STATE ENGINEER

IN THE MATTER OF AN APPLICATION FOR A PERMIT TO CONSTRUCT (USE AN EXISTING STRUCTURE) A WELL IN WATER DIVISION NO. 3, ALAMOSA COUNTY, COLORADO.

APPLICANT: UNITED STATES DEPARTMENT OF INTERIOR, NATIONAL PARK SERVICE

PERMIT NO. 36273-F

In compliance with C.R.S. 37-90-137(1), United States Department of Interior, National Park Service, Water Resources Division, 301 South Howes Street, Room 353, Fort Collins, CO 80521 (hereinafter "applicant"), submitted an application for a permit to use an existing structure, registration No. 16400. Based on the information provided by the applicant and the records of the Division of Water Resources, the State Engineer finds as follows:

1. The application was last received complete by the State Engineer on February 5, 1990.

2. The existing well is located in the SE 1/4 of the SE 1/4 of Section 34, Township 26 South, Range 73 West, New Mexico Principal Meridian.

3. The existing location is outside the boundaries of a designated ground water basin.

4. The proposed maximum pumping rate for this well is 25 gallons per minute.

5. The proposed average annual amount of ground water to be appropriated is 8.9 acre-feet.

6. The registration for well No.16400, accepted December 8, 1961 states that well No. 16400 was constructed in May, 1957 to a depth of 350 feet and was perforated in the interval between 290 feet and 320 feet. The well produces from the fractured basement complex rocks. In a pump test conducted in May, 1957, this well produced 18 gpm.

7. The registration for well No. 16400 states that the well is used for domestic and irrigation purposes in the Great Sand Dunes National Monument.

8. Well No. 16400 was capped when its functions were replaced by GRSA well No. 3, late registered pursuant to the decree as well No.36263-F.

9. The applicant proposes to reopen well No. 16400 and to apply water diverted from the well to the following beneficial use: Domestic and municipal uses in a National Park visitor center, picnic ground, maintenance area and employee housing.

10. The applicant has proposed using this well to supplement well No. 36263-F (GRSA well No. 3 decreed in Case No. 81CW163) for the purpose of obtaining the original appropriation of such well which can no longer be obtained from the well.

11. Well NO. 36263-F was decreed as GRSA Well No. 3 on June 30, 1989 for 25 gpm for municipal and domestic purposes. The well was constructed on August 4, 1978 to a total depth of 375 feet, and is an open hole from 115 feet below land surface. The well produces from fractured granite. In a pump test conducted on August 9, 1978, this well produced up to 25.8 gpm in an 5 hour and 49 minute test with a drawdown of 55 feet. The depth to static water level was 117 feet.

12. A field inspection by Division of Water Resources personnel revealed that GRSA well No. 3 decreed in Case No. 81CW163 has been used to supply water to a picnic ground, visitor center, and work center.

No material injury to vested water rights would result from the issuance of the requested permit subject to the following conditions:

a. The use of this well as an supplemental point of diversion to the existing well is a change in water right. This well shall be junior to all vested water rights until such time as the change in water right has been approved by the Division Water Court and the well must then be operated pursuant to the terms and conditions of that decree.

b. The combined maximum pumping rate of this well and well No.36263-F (GRSA well No. 3, Case No. 81CW163) shall not exceed 25 gallons per minute.

c. The combined average annual amount of ground water to be appropriated by this well and well No. 36263-F (GRSA well No. 3) shall not exceed 8.9 acre feet.

d. This well and well No. 36263-F (GRSA well No.3) are restricted domestic and municipal use in a picnic ground, visitor center, and employee housing and work center in a National Park.

e. Totalizing flow meters must be installed on this well and well No. 36263-F (GRSA well No. 3) and be maintained in good working order. Permanent records of all diversions must be maintained by the well owner (recorded at least annually) and submitted to the Division Engineer upon request.

Permit No. 36273-F

Dated this 26th day of February, 1990.

Jeris A. Danielson
State Engineer

By: Bruce E. DeBrine
Water Resource Engineer

Prepared by: GRG

6978I

ROY ROMER
Governor

JERIS A. DANIELSON
State Engineer

OFFICE OF THE STATE ENGINEER
DIVISION OF WATER RESOURCES

1313 Sherman Street-Room 818
Denver, Colorado 80203
(303) 866-3581

March 2, 1990

MEMORANDUM

TO: NATIONAL PARK SERVICE, WATER RESOURCE DIVISION

FROM: GLENN GRAHAM

SUBJECT: Well Permit No. 36273-F

Please note that even though this well has been in existence for some time, this office has issued a new permit for this well to be used to supplement another well. As a new well permit has been issued, it will be necessary for you to submit a new Statement of Beneficial Use when the subject well is returned to service under the new permit number shown on the enclosed permit.

Please feel free to contact this office if you have any questions regarding the completion and submission of the required Statement of Beneficial Use.

Form WP/memo.txt
i

FORM NO. GWS-9 7/89

STATE OF CO RADO
OFFICE OF TH_ STATE ENGINEER
818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203
(303) 866-3581

For Office Use only

TYPE OR PRINT IN BLACK INK

WELL ABANDONMENT REPORT

ABANDONED WELL NUMBER IF REGISTERED _____

1. INDIVIDUAL/COMPANY RESPONSIBLE FOR PLUGGING

NAME(S) _____
Mailing Address _____
City, St. Zip _____
Phone (____)_____

2. ACTUAL WELL LOCATION: COUNTY_____

PROPERTY ADDRESS _____
(Address) (City) (State) (Zip)

____1/4 ____1/4, Sec.____ Twp.____ ☐ N. ☐ S., Range____ ☐ E. ☐ W. ____P.M.

Distances from Section Lines _____Ft. from ☐ N. ☐ S. Line, _____Ft. from ☐ E. or ☐ W. Line.

3. I (we), report that an existing well was plugged and abandoned for the following reason(s):

☐ The well was plugged and abandoned as required under the conditions of approval of Well Permit No. _____.

☐ The well was not in use and was abandoned.

☐ Other (please explain) _____

4. The well was plugged and abandoned according to the Water Well Construction and Pump Installation Rules on_____, 19____.

5. The well was plugged with the following materials placed at the indicated intervals:

AMOUNT AND TYPE OF MATERIAL	METHOD OF PLACEMENT	INTERVAL
_____	_____	from____feet to ____feet
_____	_____	from____feet to ____feet
_____	_____	from____feet to ____feet
_____	_____	from____feet to ____feet
INTERVALS OF CASING REMOVED/RIPPED IN FEET		from____feet to ____feet
		from____feet to ____feet

6. I (we) have read the statements made herein and know the contents thereof, and that they are true to my (our) knowledge. [Pursuant to Section 24-4-104 (13)(a) C.R.S., the making of false statements herein constitutes perjury in the second degree and is punishable as a class 1 misdemeanor.]

Name/Title (Please type or print)	Signature	Date

–INFORMATION– It is the responsibility of the well owner to have the well properly plugged and abandoned. The well construction contractor is responsible for notifying the well owner of the plugging and abandonment requirements.

This form may be reproduced by photocopy or word processing means.

ROY ROMER
Governor

JERIS A. DANIELSON
State Engineer

OFFICE OF THE STATE ENGINEER
DIVISION OF WATER RESOURCES

1313 Sherman Street-Room 818
Denver, Colorado 80203
(303) 866-3581

INFORMATION ABOUT YOUR WELL PERMIT

Please note that this permit is valid for only one year after the date issued unless extended for good cause shown by the issuing agency. This means that the well must be constructed, the water therefrom put to beneficial use, and then the enclosed Statement of Beneficial Use of Ground Water completed, signed, notarized, and received by the Division of Water Resources prior to the expiration date of the permit. Unless this is done, the permit shall expire and be of no force or effect at the expiration of that one year. The enclosed Statement of Beneficial Use of Ground Water should be filed as soon as possible after the water has been put to beneficial use; but, in any event, no later than the expiration date of the permit.

If you are unable to construct the well, put it to beneficial use, and submit the Statement of Beneficial Use prior to the expiration date of the permit, you may request an extension of time. The State Engineer may, with good cause shown, grant one (1) extension for a period not to exceed one (1) year. In order for such a request to be considered, it must be received, in writing, by the State Engineer prior to the expiration date of the permit and must be accompanied by a filing fee of sixty dollars ($60). The request must state the reasons why the well has not been completed and put to use and give an estimate of time necessary to complete it and put it to beneficial use.

"Beneficial Use" is generally defined as the use of that amount of water that is reasonable and appropriate under reasonably efficient practices to accomplish without waste the purpose for which the appropriation is lawfully made.

Your well must be constructed and the pump installed by a contractor or contractors licensed by the State of Colorado, or one or both can be done by you with equipment owned and operated by you.

Please note the "CONDITIONS OF APPROVAL" on your permit. These must be complied with for the permit to be valid.

The original of the well permit is on file in the Office of the State Engineer, and additional copies may be obtained therefrom if needed. A fee of fifty cents (50¢) per page must accompany requests for copies.

NON-EXEMPT WELL PERMIT REFERENCE C.R.S. 1973, 37-90-137 AND 37-80-110.

Form #0946

GREAT SAND DUNES WELL #2
(Res. entries supply at well #3)

DATE	TIME STARTED	TIME STOPPED	METER READING	GALLONS PUMPED	INITIALS
06-26-89	0830		1441100	5890	Doug
06-27-89	0900	1710	1453850 1446990	6860	Doug
06-28-89	0750	1800	1465300 1453850	11450	Doug
6-29-89	1130		1465300	22200	Doug
6-30-89	0725	1130	1491900 1487500	4400	Doug
7-01-89	0715	1650	1502550 1491900	Res. 10650	Doug
7-02-89	0715		1502550	Res. 27750	Doug
7-04-89	18½ gal/per/min 0725	1657	1540900 1530300	Res. 10600	Doug
7-05-89	0740	1706	1551400 1540900	Res. 10500	Doug
7-06-89	0833	1250	1556130 1551400	Pumped to Campg 4730	Doug
7-06-89	1252	1740	1561430 1556130	Pump to Res. Tank 5300	Doug
7-07-89	0745	1200	1566100 1561430	Pumped to Campg 4670	Doug
7-07-89	1200	1715	1571950 1566100	5850	Doug
7-08-89	0750	1122	1575850 1571950	Campground 3900	Doug
7-08-89	1122	1717	1582350 1575850	Res. 6500	Doug
7-09-89	0740	1705	1592700 1582350	Res. 10350	Doug
7-09-89	0745	1455	1600570 1592700	Res. 7870	Doug
7-10-89	1455	1835	1604670 1600570	Campground 4100	Doug
7-12-89	0810	1700	1614350 1604670	Res. 9680	Doug
7-13-89	0740	1650	1624450 1614350	Res 10100	Doug
7-14-89	0725		1636150 1624450	Res. 11700	Doug
7-15-89	0825	1820	1650250 1636150	Res. 14100	Doug
7-16-89	0740		1664100 1650250	Res. 13850	Doug
7-17-89	0755	1735	1674800	Res.	Doug

DATE	TIME STARTED	TIME STOPPED	METER READING	GALLONS PUMPED	INITIALS
07-19-89	1736	07-20-89 0725	1690100 1674800	Campground 15300	Doug
07-21-89	0735	1125	1694300 1690100	Campground 4200	Doug
7-21-89	1125	1700	1700550 1694300	Res. 6250	Doug
07-24-89	0735	1520	1709200 1700550	Campground 8650	Doug
07-27-89	0720	1540	1718450 1709200	Campground 9250	Doug
07-29-89	0720	1530	1727450 1718450	Campground 9000	Doug
07-31-89	0720	1610	1736150 1727450	Campground 8700	Doug
07-31-89	0725	1530	1745100 1736150	Campground 8950	Doug
08-02-89	0740	1722	1755750 1745100	Campground 10650	Doug
08-04-89	0745	-	1755750	Campground	Doug
08-04-89		3:00 pm	1763 69		Doug
8-7-89	8:00				
08-17-89	0925	1944	1876350 1865000	Res. 11350	Doug 3:30
08-18-89	0750	1540	1884900 1876350	Res. 8550	Doug
08-19-89	0720	1650	1895350 1884900	Campground 10450	Doug
08-20-89	0800	1810	1906600 1895350	Campground 11250	Doug
08-21-89	0915	1730	1916950 1906600	Res. 10350	Doug
08-22-89	0800	-	1924450 1916950	Campground 7500	Doug
08-23-89	1730	0650	1934450 1924450	Res 25550	Doug
08-24-89	0650	1600	1944600 1935000	Campground 10100	Doug
08-25-89	0725	1258	1953500 1944600	Campground 10500	Doug
08-26-89	0720	1540	1963300 1953500	Campground 9800	Doug
08-27-89	0710	1453	1973150 1963300	Campground 9850	Doug

DISTRICT COURT, WATER DIVISION 3, STATE OF COLORADO

CASE NO. 81CW163

CERTIFICATE OF MAILING

I do hereby certify that on the 30th day of June, 1989, I personally deposited in the United States Mail, a signed copy of the foregoing Findings of Fact, Conclusions of Law & Decree in a sealed envelope bearing sufficient postage properly addressed to:

Jeris A. Danielson
State Engineer
1313 Sherman Street
Denver, CO 80203

Steven E. Vandiver
Division Engineer
Water Division 3
P.O. Box 269
Alamosa, CO 81101

United States of America
c/o John R. Hill, Jr.
Dept. of Justice
Land & Natural Resources Section
1961 Stout St., Drawer 3607
Denver, CO 80294

John R. Hill, Jr., Attorney
U.S. Department of Justice
Land & Natural Resources Section
1961 Stout St., Drawer 3607
Denver, CO 80294

State of Colorado
Dept. of Natural Resources
1525 Sherman St., 3rd Floor
Denver, CO 80203

Carol D. Angel
Assistant Attorney General
Natural Resources Section
1525 Sherman St., 3rd Floor
Denver, CO 80203

Rio Grande Water Conservation District
10900 E. Hwy. 160
Alamosa, CO 81101

David W. Robbins
HILL & ROBBINS
1441 Eighteenth St., #100
Denver, CO 80202

Rio Grande Water Users Association
c/o John U. Carlson
CARLSON, HAMMOND & PADDOCK
1700 Lincoln, Suite 3900
Denver, CO 80203

Paula C. Phillips
CARLSON, HAMMOND & PADDOCK
1700 Lincoln St., Suite 3900
Denver, CO 80203

BY: _____, Deputy
Carol S. Redding
Clerk of the Water Court
Water Division 3

COPY

Filed in District Court
Water Division 3, Colorado
Carol S. Redding
Clerk Of The Water Court

DISTRICT COURT, WATER DIVISION NO. 3, STATE OF COLORADO

CASE NO. 81CW163

FINDINGS OF FACT, CONCLUSIONS OF LAW AND DECREE

CONCERNING THE APPLICATION FOR WATER RIGHTS OF THE UNITED STATES OF AMERICA IN ALAMOSA COUNTY.

THIS MATTER comes before the court for entry of Findings of Fact, Conclusions of Law and Decree, the parties having consented thereto. The court, having examined the records and files herein, and being now fully and sufficiently advised in the premises, hereby makes the following Findings of Fact, Conclusions of Law and Decree:

FINDINGS OF FACT

1. The United States of America was joined as a party in Water Division No. 3 pursuant to the McCarran Amendment, 43 U.S.C. §666, in 1979.

2. The United States of America filed an application for water rights in December 20, 1979, styled a general application which was assigned Case No. 79CW85. Thereafter, on November 24, 1981, the United States filed this application for water rights at the Great Sand Dunes National Monument as an amendment to Case No. 79CW85 which was assigned Case No. 81CW163.

3. In this case, the Applicant claimed rights in GRSA Well No. 2 to 30 gpm, for municipal use and in GRSA Well No. 3 to 25 gpm, for municipal and domestic use. The wells are located on reserved lands in the Great Sand Dunes National Monument, in Alamosa County, Colorado, within the watershed of Medano Creek. The priority date claimed for GRSA Well No. 2 is August 1, 1963, and the priority date for GRSA Well No. 3 is August 4, 1978.

4. The following Objectors filed Statements of Opposition in Case No. 79CW85 but failed to file Supplemental Statements of Opposition in the captioned case:

Seamster Farms, Inc.
Avis Neal Roemer Trust
Homestake Mining Co.
Fullenwider Ranches, Inc.
/LD Ranch
Neil F. Seitz
Blue Pond and Associates
City and County of Denver
Adolph Coors Company
AZL Resources, Inc.
Hans G. Hardt
Rosie Hardt
Walter Mundorf
SLV Municipalities
City of Alamosa
Conejos Water Conservancy District

5. The following Objectors filed timely Statements of Opposition and/or Supplemental Statements of Opposition in the captioned case:

State of Colorado
Rio Grande Water Conservation District
Rio Grande Water Users Association, et al.

The time for filing Supplemental Statements of Opposition to the captioned case expired May 8, 1987, pursuant to the Referee's Order filed March 4, 1987.

6. The appropriations were initiated by drilling the respective wells on the dates claimed and water therefrom applied to municipal uses.

7. All legal descriptions in this Findings of Fact, Conclusions of Law and Decree are with reference to the 6th Principal Meridian.

CONCLUSIONS OF LAW

8. All notices required by law for filing and publication of the application in the Resume of Water Division No. 3 have been fulfilled, and the court has jurisdiction over the subject matter and all parties whether or not they have appeared.

9. This court has previously ruled that applications filed as amendments to Case No. 79CW85 prior to March 31, 1982, relate back to Case No. 79CW85. See, this court's Orders dated December 31, 1981, and June 9, 1988, Case No. 79CW85. The application in this case is within the terms of those Orders and is a clarifying amendment to the application filed by the United States in Case No. 79CW85, and the United States is, therefore,

entitled to antedate priorities subsequent to March 17, 1932. United States v. Bell, 724 P.2d 631, 645 (Colo. 1986).

10. Applicant, United States of America, is entitled to this Decree as a matter of law.

DECREE

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED THAT:

1. The Findings of Fact and Conclusions of Law contained herein are incorporated by reference and made a part of this Decree.

2. The United States of America is entitled to water rights in two wells in Alamosa County, State of Colorado, as set forth below:

SIXTH PRINCIPAL MERIDIAN

Legal description:	SW1/4 NE1/4 Sec. 35, T. 26 S, R. 73 W
Name of well:	GRSA Well No. 2
Well Permit No.:	04331-F
Depth: 180 ft.	Pump: Submersible
Priority Date:	August 1, 1963
Amount:	30 gpm absolute
Uses:	Municipal

Legal description:	SE1/4 SW1/4, Sec. 2, T. 27 S, R. 73 W
Name of well:	GRSA Well No. 3
Well Permit No.	~~None~~ 036263-F
Depth: 375 ft.	Pump: Submersible
Priority Date:	August 4, 1978
Amount:	25 gpm absolute
Uses:	Municipal

3. The right decreed herein is subject to administration by the State Engineer as is any other decree for the purposes decreed herein with the priority date as stated.

4. The Applicant shall install and maintain such water measurement devices, recording devices, content gauges and inlet and outlet measurement and recording devices, as the case may be, as are deemed essential by the Office of the State Engineer, and the same shall be installed and operated in accordance with instructions from said Office.

5. IT IS FURTHER ORDERED that the Water Clerk shall mail copies of this Findings of Fact, Conclusions of Law and Decree as required by statute.

DATED AND ENTERED OF RECORD this 30th day of June, ~~1988~~. 1989

BY THE COURT:

ROBERT W. OGBURN, Judge
Water Division No. 3
State of Colorado

The undersigned agree to the entry of this decree.

DATE: 7 June 1988

MICHAEL J. NORTON
United States Attorney

By _____
JOHN R. HILL, JR. #10214
Attorney
U. S. Department of Justice
Land and Natural Resources Div.
1961 Stout Street, Drawer 3607
Denver, CO 80294
(303) 844-2892

ATTORNEYS FOR APPLICANT
UNITED STATES OF AMERICA

DATED: 11-8-88

FOR THE ATTORNEY GENERAL

By _____
CAROL D. ANGEL #13123
Assistant Attorney General
Natural Resources Section
1525 Sherman Street, 3rd Floor
Denver, CO 80203
(303) 866-5114

DATED: 11-3-88

FOR OBJECTOR RIO GRANDE WATER
USERS ASSOCIATION

By _____
PAULA C. PHILLIPS #8029
Carlson, Hammond & Paddock
2750 One United Bank Center
1700 Lincoln Street
Denver, CO 80203
(303) 861-9000

DATED: 10-31-88

FOR OBJECTOR RIO GRANDE WATER CONSERVATION DISTRICT

By _____

DAVID W. ROBBINS #6112
Hill & Robbins
1441 Eighteenth Street, Suite 100
Denver, CO 80202
(303) 296-8100

IN THE DISTRICT COURT IN AND FOR
WATER DIVISION NO. 3
STATE OF COLORADO

FILED IN DISTRICT COURT
WATER DIVISION 3, COLORADO
CAROL S. REDDING, CLERK

NOV 24 1981

Case No. 5120-141

IN THE MATTER OF THE APPLICATION OF THE UNITED STATES OF AMERICA FOR WATER RIGHTS IN THE RIO GRANDE RIVER DRAINAGE, IN ALAMOSA COUNTY.	)	APPLICATION FOR CONFIRMATION OF RESERVED UNDERGROUND WATER RIGHTS

1. Name and address of applicant: United States of America, c/o John R. Hill, Jr., Attorney, Department of Justice, Land and Natural Resources Division, 1961 Stout Street, Drawer 3607, Denver, Colorado 80294. Telephone 303/837-2892.

2. The United States of America claims reserved rights in 2 wells totalling 40 gpm, located on reserved lands in the Great Sand Dunes National Monument, in Alamosa County, Colorado, within the watershed of the Rio Grande River. The priority date claimed for both wells is March 17, 1932, the date the land upon which the wells are located was reserved by Proclamation No. 1994, 47 Stat. 2506. Copy attached.

SIXTH PRINCIPAL MERIDAN

Legal description: SE1/4 SE1/4, Section 34, T. 26 S, R. 73 W
Name of well: GRSA Well No. 1
Reg. No.: 16400
Depth: 290 ft. Pump Submersible Artesian No
Amount claimed: 30 gpm absolute
Uses: Domestic, public, and irrigation

Legal description: SE1/4 NE1/4, Section 35, T. 26 S, R. 73 W
Name of well: GRSA Well No. 4
Reg. No.: None
Depth: 250 ft. Pump Submersible Artesian No
Amount claimed: 10 gpm absolute
Uses: Municipal, domestic, and irrigation

5. This application is a partial amendment of the application filed by the United States in Case No. 79CW85.

6. The United States seeks to antedate the adjudication dates of earlier decrees insofar as they, in conjunction with applicable statutes, appear or purport to preclude this court from awarding to the United States its water rights bearing their true priority dates.

Respectfully submitted,

JOSEPH DOLAN
United States Attorney

By _____
JOHN R. HILL, JR., (Reg. #10214)
Attorney, Department of Justice
Land and Natural Resources Division
1961 Stout Street, Drawer 3607
Denver, Colorado 80294 (837-2892)

STATE OF COLORADO)
) ss.
JEFFERSON COUNTY)

WILLIAM L. MEKEEL, being first duly sworn upon oath, deposes and says that he has read the foregoing Application, that he knows the contents thereof, and that the same are true.

William L. Mekeel
WILLIAM L. MEKEEL

Subscribed and sworn to before me this 13th day of November, 1981.

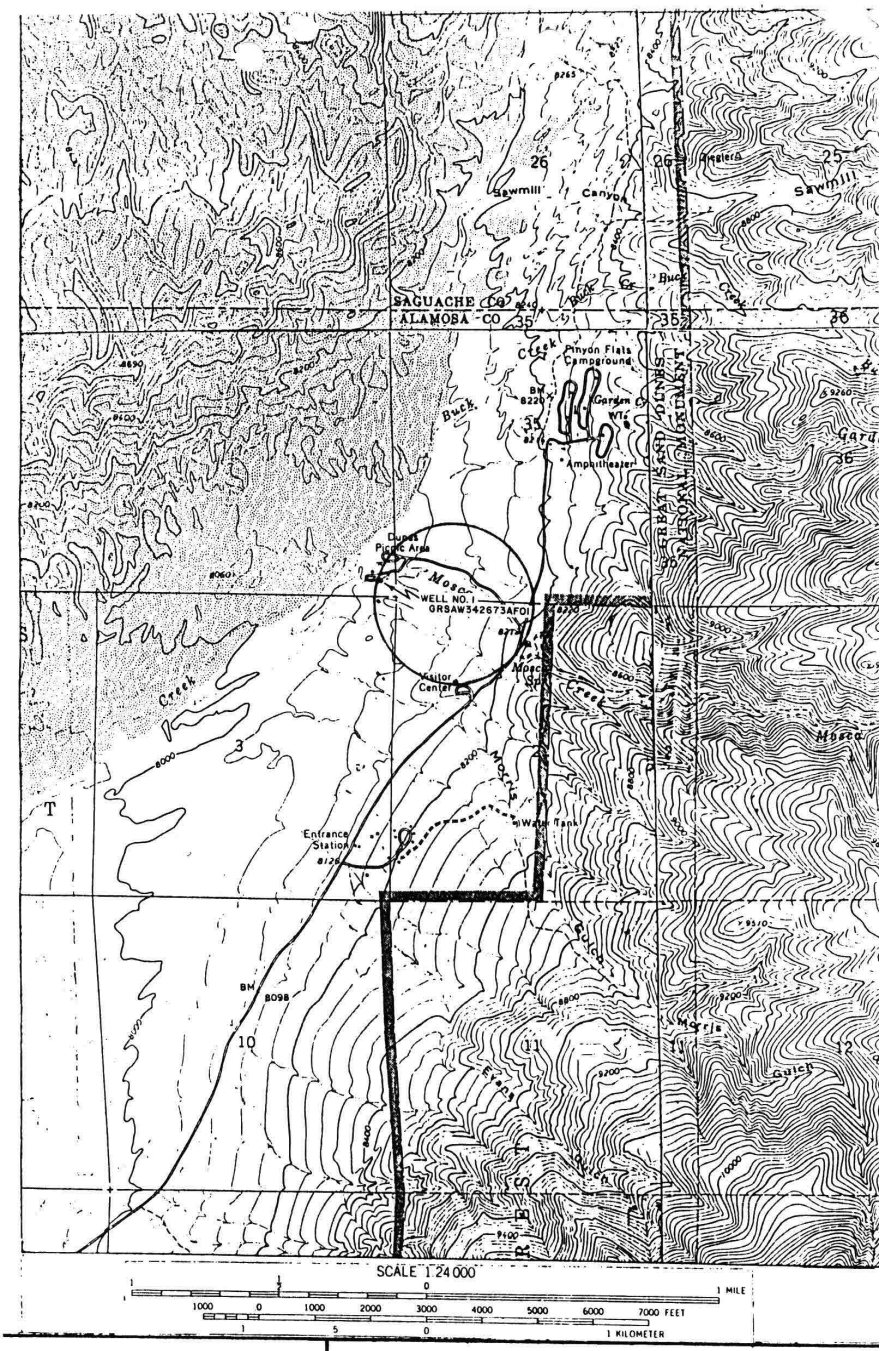
Witness my hand and official seal.

Mary Esther Greenwood
NOTARY PUBLIC

My commission expires: November 11, 1984.

My address: 538 South Dudley Street
Lakewood, CO 80226.

00-00-0000: topographic map of grsa



UNITED STATES
DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

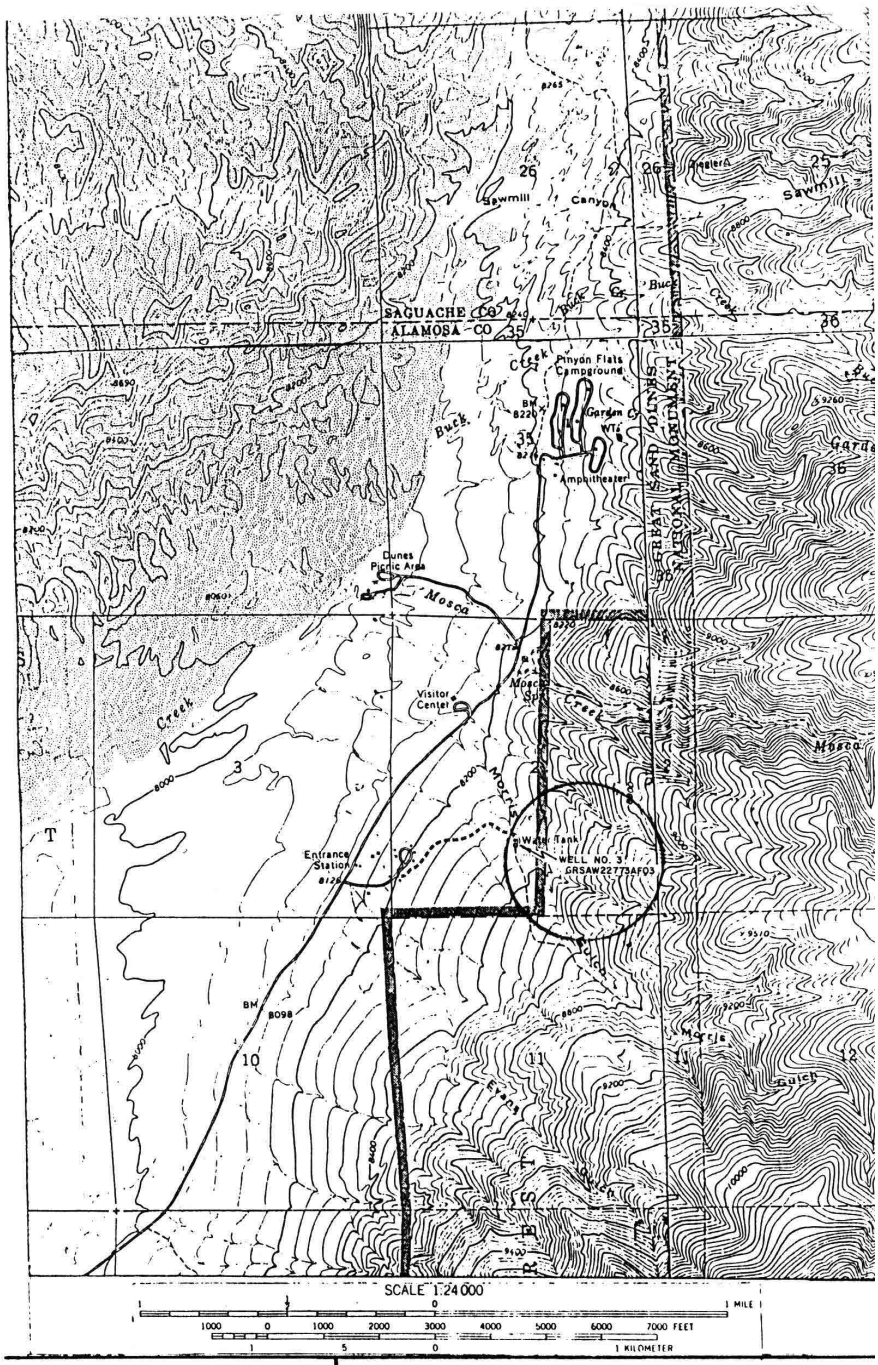
ROCKY MOUNTAIN REGION
DIVISION OF WATER RESOURCES

NPS-GRSA-1-80-JUNE 2, 1930 W.L.M.

WELL NO. 1
GREAT SAND DUNES NATIONAL MONUMEI

IN THE DISTRICT COURT IN AND FOR WATER DIVISION 3
STATE OF COLORADO

IN THE MATTER OF THE APPLICATION FOR WATER RIGHTS
BY THE UNITED STATES



UNITED STATES
DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

ROCKY MOUNTAIN REGION
DIVISION OF WATER RESOURCES

NPS - GRSA - 3 - 80 - JUNE 2, 1920 W.L.M.

WELL NO. 3
GREAT SAND DUNES NATIONAL MONUME

IN THE DISTRICT COURT IN AND FOR WATER DIVISION 3
STATE OF COLORADO

IN THE MATTER OF THE APPLICATION FOR WATER RIGHTS
BY THE UNITED STATES

June 14, 1993

L54(479)
FLFO/Water Rights

Memorandum

To: Regional Solicitor, Rocky Mountain Region
Attn: Ralph Canaday

From: Chief, Water Resources Division

Subject: Materials for Preparation of a Litigation Report Concerning an Application for Underground Water Rights, and Approval of a Plan For Augmentation and Change of Water Rights, Including Exchanges, at Florissant Fossil Beds National Monument

The Acting Associate Regional Director, Operations and Resource Management, Rocky Mountain Region, requested your assistance to prepare a litigation report for submission to the Department of Justice in the above-cited matter (See Memorandum of May 24, 1993).

Attached are the following materials to assist you in preparation of a litigation report:

1. Draft water rights application in hard copy.

2. Draft water rights application in electronic copy (Wordperfect 5.1).

3. Temporary Substitute Water Supply Plan and Plan for Augmentation, prepared by Blatchley Associates, Inc. (Additional copies are available from the Water Rights Branch upon request.)

4. Copies of memorandum of April 29, 1993 from Chief, Division of Land Resources with attachments (Including executed Water Rights Purchase Agreement with North Fork Associates).

5. Selected correspondence between Blatchley Associates, Inc. and the National Park Service's Water Rights Branch.

6. Documentation of state permits and existing water rights for Sawmill Trail Well and Visitor Center Well No. 12.

7. Documentation related to a plan to increase the depth of the "A-frame" well used for domestic purposes at the "A-frame". (Note: This is not a part of the Plan for Augmentation. It is included for information only.)

8. List of possible witnesses and their areas of expertise.

Please contact Alice Johns at (303) 225-3506 if you wish further assistance in preparing the litigation report.

Owen Williams

Attachments

cc: FLFO - Superintendent
RMR - Wise
Blatchley Associates, Inc. - Blatchley (w/attachments 1, 7, and 8)
DOJ - Johnson

FNP:AJOHNS:kt:(303)225-3506:06/10/93:S:\FLFOLIT.SOL

United States Department of the Interior

OFFICE OF THE SOLICITOR
Rocky Mountain Region
P.O. Box 25007
Denver Federal Center
Denver, Colorado 80225

December 21, 1992

FWS.RM.9950

Memorandum

To: Regional Director, Fish and Wildlife Service, Region 6
Attention: Cheryl Willis

From: Regional Solicitor, Rocky Mountain Region

Subject: Filing of Water Rights Applications by the Department of Justice

Our office has been informed by the Department of Justice (DOJ) Field Office that we must submit a litigation report along with all requests to file water rights applications. In order to do this, the agencies will need to supply our office, in addition to the applications, the information that will be used in our litigation report.

Each application should include a memorandum containing sufficient information or evidence to support the application, including the legal and factual basis for the filing. This would include copies of such documents as location maps, diversion records, well-pumping records, records of how the water has been beneficially used, and any other evidence that would demonstrate that the water right should be decreed by the court as indicated in the application. In addition, persons should be identified who may be relied upon to demonstrate in court the basis for the filing through testimony and exhibits. This should include their address and telephone number and what they can testify to.

It has been brought to our attention that DOJ attorneys do not and cannot verify applications and therefore someone in the agency will have to verify the applications. Also apparently the request should just be made to the DOJ office and not to the individual attorney as the attorneys are not assigned to a specific water division.

Ms. Lynn Johnson has requested our office submit a litigation report for the application submitted to our office on December 7, 1992, for surface and storage rights to benefit

endangered fishes for the Horsethief Canyon State Wildlife Area below the Cameo gage. In order to do so we will need the information listed in paragraph two.

Thank you for your cooperation in this matter.

Ralph O. Canaday
Attorney

cc: Bureau of Reclamation, P.O. Box 60340, Grand Junction, CO 81506-8747
Attention: Ron Johnston

Ken Czarnowski, National Park Service, Rocky Mountain National Park, Division of Resources Management, Estes Park, CO 80517

Owen R. Williams, Chief, Water Resources Division, National Park Service, 1201 Oakridge Drive, Suite 250, Fort Collins, CO 80225

10/12/90

Telephone call from Paul Christensen to Beth Voelkel concerning the location of Well GRSA #1.

Called Beth to ask her about an apparent discrepancy in the location of well #1. The well location on the original well registration and the well permit application ~~are~~ is ~~not the same~~ not the same as the ~~to~~ plotted location on the map in the file. She stated that as long as the well is located in the proper quarter ~~section~~ quarter section and within 200 yards of the actual location ~~no change is needed~~ we do not need to file a change in location. ~~She~~.

United States Department of the Interior
NATIONAL PARK SERVICE
WATER RESOURCES DIVISION
301 SOUTH HOWES ST., ROOM 335
FT. COLLINS, COLORADO 80521

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:
L54(479)
GRSA/Water Rights

November 9, 1990

State Engineer
Colorado Division of Water Resources
818 Centennial Bldg.
1313 Sherman St.
Denver, Colorado 80203

Re: Permit No. 036273-F, Well no. 1 at Great Sand Dunes National Monument

Dear Sir:

Attached is the completed, signed, and notarized "Statement of Beneficial Use of Ground Water" for the above-referenced permit and associated well. Should you have any questions, contact me at (303) 493-1441.

Sincerely,

Owen R. Williams
Chief, Water Rights Branch

Attachments

cc: RMR - Hermance
GRSA - Superintendent
479 - Williams, Pettee, Christensen

12-03-1990: colorado division of water resources: affidavit; statement of beneficial use of ground water

WRJ-25-75

SPE CP

RECEIVED
NOV 14 '90
WATER RESOURCES
STATE ENGINEER
COLO.

TYPE OR PRINT IN BLACK INK. COPY OF ACCEPTED STATEMENT MAILED ON REQUEST.

COLORADO DIVISION OF WATER RESOURCES

818 Centennial Bldg., 1313 Sherman St.
Denver, Colorado 80203

STATE OF COLORADO } SS. AFFIDAVIT
COUNTY OF Larimer }

__X__ STATEMENT OF BENEFICIAL USE OF GROUND WATER
_____ AMENDMENT OF EXISTING RECORD
_____ LATE REGISTRATION

PERMIT NUMBER 036273-F

THE AFFIANT(S) United States National Park Service Water Resources Division whose mailing address is 301 South Howes St., Room 353 City Fort Collins (STATE) Colorado 80521 (ZIP)

LOCATION OF WELL
County Alamosa
SE ¼ of the SE ¼, Section 34
Twp. 26 S (N OR S), Rng. 73 W (E OR W), 6th P M

being duly sworn upon oath, deposes and says that he (they) is (are) the owner(s) of the well described hereon; the well is located as described above, at distances of 330 feet from the South (NORTH OR SOUTH) section line and 825 feet from the East (EAST OR WEST) section line; water from this well was first applied to a beneficial use for the purpose(s) described herein on the 23 day of April, 19 90; the maximum sustained pumping rate of the well is 80 gallons per minute, the pumping rate claimed hereby is 25 gallons per minute; the total depth of the well is 350 feet; the average annual amount of water to be diverted is 8.9 acre-feet; for which claim is hereby made for domestic and municipal purpose(s); the legal description of the land on which the water from this well is used is _____ of which _____ acres are irrigated and which is illustrated on the map on the reverse side of this form; that this well was completed in compliance with the permit approved therefor; this statement of beneficial use of ground water is filed in compliance with law; he (they) has (have) read the statements made hereon; knows the content thereof; and that the same are true of his (their) knowledge.

(COMPLETE REVERSE SIDE OF THIS FORM)

Signature(s) O R Willis 12-3-90

Subscribed and sworn to before me on this 2 day of November, 19 90

My Commission expires: My Commission Expires October 9, 1994 (SEAL)

Leslie A Mowers
NOTARY PUBLIC

ACCEPTED FOR FILING BY THE STATE ENGINEER OF COLORADO PURSUANT TO THE FOLLOWING CONDITIONS:

Accepted that those conditions of approval as stated on the permit are complied with. 1-25-93 JJ

JAN 25 1993
DATE

Hal D. Simpson
STATE ENGINEER

R. J. Russ
BY

FOR OFFICE USE ONLY

Court Case No. _____
Prior. _____ Mo. _____ Day _____ Yr. _____
Div. 3 Cty. 35
Sec. _____ _____ ¼, _____ ¼, _____ ¼,
Well Use 2 8 _____ _____
Dist. 02 Basin _____ Man. Dis. _____

United States Department of the Interior
NATIONAL PARK SERVICE
GREAT SAND DUNES NATIONAL MONUMENT
MOSCA, COLORADO 81146

APR 1990
RECEIVED
WRD - FT COLLINS

IN REPLY REFER TO:

L54 (479)

April 23, 1990

Memorandum

To: Chief, Water Rights Branch, Water Resources Division

From: Acting Superintendent, Great Sand Dunes National Monument

Subject: Registration of GRSA Well #1, Well Permit No. 36273-F

This is to confirm our telephone conversation on April 23, 1990 stating that Great Sand Dunes National Monument started using Well #1 on April 23, 1990. We understand that the Water Resources Division will complete the Statement of Beneficial Use form and submit it to the State Engineer's office.

Well #1 will be used periodically to supplement flows from Well #3.

Please contact this office at (719) 378-2312 if you have any questions.

William K. Haviland

William K. Haviland

Year of the Visitor

February 1, 1990

1.54(479)
GRSA/Water Rights

Mr. Glenn Graham
Ground Water Section
Office of the State Engineer
Division of Water Resources
1313 Sherman Street - Room 818
Denver, CO 80203

Re: Permit Application, Receipt No. 15562 (Well GRSA No. 1)

Dear Mr. Graham:

A Permit Application for GRSA Well No. 1, which you returned for clarification, is enclosed. Information from the original well drilling record was obtained to complete Block No. 8.

Although the information from July 1988 through October 1989 showed an annual diversion of approximately 8.3 acre feet, a better estimate is 8.9 acre feet. During the late spring and summer of 1989 the flow from GRSA Well No. 3 was inadequate, therefore, water use at the facilities served was somewhat restricted and, for two to three weeks in June, water use at the campground and picnic area was curtailed.

I have made these additions to the application and initialed the changes as you requested. If you have any further questions please contact me or Beth Voelkel of my staff, at (303) 221-8301 and (303) 221-8323, respectively.

Sincerely,

Owen R. Williams
Chief, Water Rights Branch

Attachment

FNP:BVOELKEL:jt:02/01/90:303-221-8323:WANG #146

bcc: GRSA - Superintendent

00-00-0000: permit application form: alternate point of diversion for grsa well no. 3

COLORADO DIVISION OF WATER RESOURCES
818 Centennial Bldg., 1313 Sherman St., Denver, Colorado

RECEIVED
OCT 10 1989
WATER RESOURCES
STATE ENGINEER
COLO.

RECEIVED
OCT 30 1989
WATER RESOURCES
STATE ENGINEER
COLO.

PERMIT APPLICATION FORM

Application must be complete where applicable. Type or print in BLACK INK. No overstrikes or erasures unless initialed.

FOR: ( ) A PERMIT TO USE GROUND WATER
( ) A PERMIT TO CONSTRUCT A WELL
( ) A PERMIT TO INSTALL A PUMP
( ) REPLACEMENT FOR NO. _____
(X) OTHER Alternate Point of Diversion for GRSA Well No. 3
Decreed In WATER COURT CASE NO. 81CW163

(1) APPLICANT - mailing address

NAME United States National Park Service
Water Resources Division
STREET 301 S. Howes St., Room 353
CITY Fort Collins, CO 80521
(State) (Zip)
TELEPHONE NO. (303) 221-8311

(2) LOCATION OF PROPOSED WELL

County Alamosa
SE ¼ of the SE ¼, Section 34
Twp. 26 S (N,S), Rng. 73 W (E,W), 6th P.M.

(3) WATER USE AND WELL DATA

Proposed maximum pumping rate (gpm) 25 gpm
Average annual amount of ground water to be appropriated (acre-feet): 8.9 acre feet
Number of acres to be irrigated: _____
Proposed total depth (feet): 350 feet
Aquifer ground water is to be obtained from:

Owner's well designation GRSA Well No. 1

GROUND WATER TO BE USED FOR:

( ) HOUSEHOLD USE ONLY - no irrigation (0)
(X) DOMESTIC (1)
( ) LIVESTOCK (2)
( ) COMMERCIAL (4)
( ) INDUSTRIAL (5)
( ) IRRIGATION (6)
(X) MUNICIPAL (8)
( ) OTHER (9) _____
DETAIL THE USE ON BACK IN (11)

(4) DRILLER

Name _____
Street _____
City _____
(State) (Zip)
Telephone No. _____ Lic. No. _____

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN
15562
Receipt No. _____ / _____
Basin _____ Dist. _____

CONDITIONS OF APPROVAL

This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.

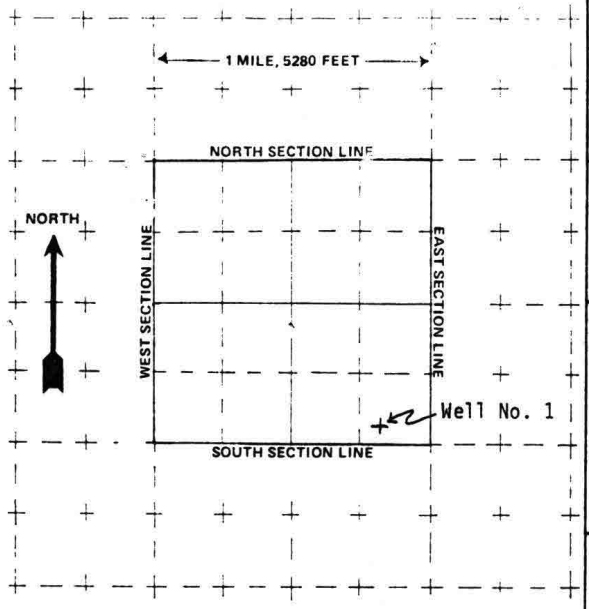
APPLICATION APPROVED

PERMIT NUMBER _____
DATE ISSUED _____
EXPIRATION DATE _____

_____
(STATE ENGINEER)

BY _____
I.D. 3-35 COUNTY 02

(5) THE LOCATION OF THE PROPOSED WELL and the area on which the water will be used must be indicated on the diagram below. Use the CENTER SECTION (1 section, 640 acres) for the well location.



The scale of the diagram is 2 inches = 1 mile
Each small square represents 40 acres.

WATER EQUIVALENTS TABLE (Rounded Figures)
An acre-foot covers 1 acre of land 1 foot deep
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm)
A family of 5 will require approximately 1 acre-foot of water per year.
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.

(6) THE WELL MUST BE LOCATED BELOW by distances from section lines.

330 ft. from south (north or south) sec. line

825 ft. from east (east or west) sec. line

LOT _____ BLOCK _____ FILING # _____

SUBDIVISION _____

(7) TRACT ON WHICH WELL WILL BE LOCATED Owner: National Park Serv

No. of acres _____. Will this be the only well on this tract? _____

(8) PROPOSED CASING PROGRAM ofw

Plain Casing

12-3/4 in. from 0 ft. to 146 ft.

8-5/8 in. from 0 ft. to 290 ft.

Perforated casing

_____ in. from 250 ft. to 280 ft.

_____ in. from _____ ft. to _____ ft.

(9) FOR REPLACEMENT WELLS give distance and direction from old well and plans for plugging it:

_____

_____

_____

_____

(10) LAND ON WHICH GROUND WATER WILL BE USED:

Owner(s): United States National Park Service No. of acres: _____

Legal description: _____

(11) DETAILED DESCRIPTION of the use of ground water: **Household use and domestic wells must indicate type of disposal system to be used.** Well water used to supply domestic water for employee housing, water for maintenance area, visitor center, and picnic ground. Well No. 1 to be used as an alternate source for Well No. 3 and will use same storage and distribution system.

(12) OTHER WATER RIGHTS used on this land, including wells. Give Registration and Water Court Case Numbers.

Type or right	Used for (purpose)	Description of land on which used

(13) THE APPLICANT(S) STATE(S) THAT THE INFORMATION SET FORTH HEREON IS TRUE TO THE BEST OF HIS KNOWLEDGE.

O R Williams Chief, Water Rights Branch 6 Oct 89

SIGNATURE OF APPLICANT(S)

Use additional sheets of paper if more space is required.

January 31, 1990

L54(479)
GRSA/Water Rights

Mr. Glenn Graham
Ground Water Section
Office of the State Engineer
Division of Water Resources
1313 Sherman Street - Room 818
Denver, Colorado 80203

Re: Permit Application, Receipt No. 15562 (Well GRSA No. 1)

Dear Mr. Graham:

A Permit Application for GRSA Well No. 1, which you returned for clarification, is enclosed. Information from the original well drilling record was obtained to complete Block No. 8.

Although the information from July 1988 through October 1989 showed an annual diversion of approximately 8.3 acre feet, a better estimate is 8.9 acre feet. This is because in June 1989, when the failure of GRSA Well No. 3 became severe, water use for the campground and picnic area were curtailed for two to three weeks. Beginning July 1, 1989, additional water from another source was obtained to supply these facilities. Approximately 0.1 acre foot was conserved by not allowing water use at the campground and picnic area for two weeks and 0.5 acre foot was brought from another source during July.

I have made these additions to the application and initialed the changes as you requested. Thank you for your help. If you have any further questions please contact me or Beth Voelkel, of my staff, at (303) 221-8301 and (303) 221-8323, respecively.

Sincerely,

Owen R. Williams
Chief, Water Rights Branch

01-25-1990: report of telephone conversation to nps from bill wellman regarding cross-connect from well #2 to well #3

REPORT OF TELEPHONE CONVERSATION

DATE 1/25/90 TIME 4:00 AM/PM

PROJECT GRSA Well #1

NPS PERSON ON CALL Beth Voelkel ☐ I CALLED ☒ S/HE CALLED

PERSON Bill Wellman

ORGANIZATION Supt. GRSA

ADDRESS

TELEPHONE NUMBER

DISCUSSION He located the logs and they had marked when well #2 was pumped to #3 storage area. From July 1 through Sept 30, 1989 pumped 331,050 gal to Well #3 area. For year July 29, '88 through July 28, '89 they pumped from July 1 – July 28, 1989 totalling 160,600 gal to well #3 area. Previous to July 1, however, they used pit toilets and shut down the campground/picnic area for 2 or 3 weeks so need to estimate another 10,000 gallons (at least) to cover those 2 weeks.

REPORT OF TELEPHONE CONVERSATION

DATE 1/25/90 TIME 3:20 AM/PM

PROJECT GRSA Well #1

NPS PERSON ON CALL Beth Voelkel ☒ I CALLED ☐ S/HE CALLED

PERSON Bill Wellman

ORGANIZATION

ADDRESS

TELEPHONE NUMBER (719) 378-2312

DISCUSSION He says last summer they had a cross-connect from well #2 to Well #3 to supply the campground. He will look at previous #2 withdrawals and subtract average from what was used last summer. Anything over that, we'll add to last year's 8.3 af from Well #1 to get an estimated annual usage from wells #1 and #3 combined.

01-18-1990: letter to nps from division of water resources regarding permit application, receipt no. 015562 (well grsa no. 1)

ROY ROMER
Governor

JERIS A. DANIELSON
State Engineer

OFFICE OF THE STATE ENGINEER
DIVISION OF WATER RESOURCES

1313 Sherman Street-Room 818
Denver, Colorado 80203
(303) 866-3581



January 18, 1990

Mr. Owen R. williams
National Park Service
301 South Howes Street, Room 353
Fort Collins, CO 80521

RE: Permit Application, Receipt No. 015562 (Well GRSA No. 1)

Dear Mr. Williams:

The subject application is being returned for clarification and additional information. You have indicated that you wish to use the existing well, GRSA No. 1 as an alternate point of diversion for GRSA Well No. 3, which is no longer capable of yielding the decreed 25 gpm. A well of the type you are requesting on your application is actually considered a supplemental well, and has a statutory definition that is distinct from an alternate point of diversion. A supplemental well is a well constructed and used for the purpose of obtaining the quantity of the original appropriation of the original well, which quantity can no longer be obtained from the original well. An alternate point of diversion is a well constructed and used, in addition to the original well, for the purpose of obtaining the present appropriation of that original well from more than one point of diversion. This statutory distinction does not require any action on your part.

However, in Block No. 2 on the application form, WATER USE AND WELL DATA, the item "Average annual amount of ground water to be appropriated (acre-feet):" has been left blank. This information must be provided. A review of the pump reports that your office provided indicates that during the period of 29 July 1988 to 29 July 1989, GRSA No. 3 diverted approximately 8.3 acre-feet of ground water. If this appears to have been a representative year, then that is the amount that should be entered in the appropriate blank.

If you have any construction details on GRSA Well No. 1, that information should be entered in Block No. 8.

Please make sure to initial and date all additions and/or corrections you make to the application form.

Feel free to contact this office if you have any questions or require additional information.

Sincerely,

Glenn Graham

Glenn Graham
Geologist
Ground Water Section

Enclosure

12-19-1989: letter to colorado division of water resources from chief, water rights branch regarding well pumping records

December 19, 1989

L54 (479)
GRSA/Water Rights

Mr. Glenn Graham
Colorado Division of Water Resources
818 Centennial Building
1313 Sherman Street
Denver, CO 80203

Dear Mr. Graham:

As you discussed with Beth Voelkel, of my staff, on December 7 and 18, 1989, copies of well pumping records dating from July, 1988 to November, 1989 for GRSA Well #3 at Great Sand Dunes National Monument (GRSA) are attached. Earlier pumping records are available but they provide data sufficient only to determine total diversion rather than flow rate. During the spring of 1988, prior to the availability of flow rate information, monument staff noticed that yield from the well had begun to drop. Therefore, flow rates calculated from recent data are probably lower than rates sustained by this well in previous years.

Although lower than historical yield, the well produced up to 26 gallons per minute in May, 1989. A supplemental source is needed to provide the decreed 30 gallons per minute to supply the campground and other facilities at GRSA.

If earlier pump records or other information are necessary or if you have any questions, please contact Beth Voelkel or me at 221-8323 or 221-8301, respectively.

Sincerely,

Owen Williams

Owen R. Williams
Chief, Water Rights Branch

Enclosure

bcc: GRSA - Superintendent (w/o enclosure)

FNP:BVoelkel:bv:221-8323:12/18/89:grsawell.let

12-18-1989: report of telephone conversation to nps from supt. grsa regarding received information and asked if there were record

REPORT OF TELEPHONE CONVERSATION

DATE Dec. 18, 1989 TIME 1:45 AM/PM

PROJECT

NPS PERSON ON CALL Beth Voelkel [X] I CALLED [ ] S/HE CALLED

PERSON Bill Wellman

ORGANIZATION Supt. GRSA

ADDRESS

TELEPHONE NUMBER (719) 378-2312

DISCUSSION ~~Expl~~ Told him we got the information and asked if there were records going further back. He said there were but because they don't have the pumping schedule, there is no way to calculate flow rate, only total diversion.

I said I'd contact the state and get back to him if we need the older records.

12-07-1989: report of telephone conversation to nps from supt. grsa regarding flow records form well #3

REPORT OF TELEPHONE CONVERSATION

DATE Dec. 7, 1989 TIME 8:30 AM/PM

PROJECT GRSA Well #1

NPS PERSON ON CALL Beth Voelkel [X] I CALLED [ ] S/HE CALLED

PERSON Bill Wellman

ORGANIZATION GRSA - Supt.

ADDRESS

TELEPHONE NUMBER (719) 378-2312

DISCUSSION They do have flow records from Well #3. There is only a 3 hp pump in this well and he thinks maximum flow was only around 20 gpm. He will get with the guy who had pump records and will send us a page or two of the maximum use. He will also send us some more recent records (only about 8 gpm now).

He doesn't think being limited to 20 gpm will be a problem. They've installed a 5 hp pump in #1 but it is a mile further (and downhill) from the storage tank.

I also told him there will be a yearly maximum amount but, again, he doesn't see a problem.

He thinks Well #1 was drilled in the late 1950's or early 1960's (about the same time as Well #2) but they don't have flow records on this well. He has heard that it was actually a better producer than #2 (their best well) but there are no records to verify this.

The resource person is out of the office today and Bill is out tomorrow but he will get together with him and get the stuff in the mail on Monday. I said I thought that would be fine.

12-07-1989: report of telephone conversation to nps from supt. grsa regarding alternative point of diversion

REPORT OF TELEPHONE CONVERSATION

DATE Dec. 7, 1989 TIME 8:10 (AM)/PM

PROJECT GRSA Well #1

NPS PERSON ON CALL Beth Voelkel [X] I CALLED [ ] S/HE CALLED

PERSON Glenn Graham

ORGANIZATION Colorado Water Resources

ADDRESS 1313 Sherman Street, Room 818

TELEPHONE NUMBER 1-866-3581

DISCUSSION To establish alternate point of diversion they first need to determine the maximum production of Well #3. They will make permit for Well #1 conditioned such that total use from #1 and #3 does not exceed the amout #3 produced at its maximum. We need information to support historical flow from well #3.

I told him I'd get what info was available from the park and forward it to him. He said we could also send flow info on Well #1 if we have historical records from before it was capped.

NOTES

Glen Graham from the State Engineer's Office in Denver called Owen yesterday about Well #1 at GRSA. To approve the alternate point of diversion for well #3 they first need flow records of Well #3.

I told Owen I thought the park had those readily available. He asked that I take care of it.

Glen Graham
1-866-3581

Glen Graham
~~Colo Eng. Dept.~~

1866-3581 8:00 - 4:30
Denver

Water use @ GRSA well
to approve alt pt. of
diversion.

MEETING AGEND..

Date 12/7/89 Time 7:30 am

Type or Topic of Meeting _____

Purpose _____

Objectives _____

Location _____ Length (Scheduled/Actual) _____/_____

Persons Attending	
1	Owen
2	Beth
3	
4	
5	
6	
7	
8	
9	
10	

Items To Be Discussed		Order
1		
2		
3		
4		
5		
6		
7		
8		2
9		6
10		

Action Items		Due Date	Responsible Person
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

10-26-1989: letter to colorado division of water resources from chief, water resources regarding permit application form and suppo

October 26, 1989

L54(479)
CRSA Water Rights

Colorado Division of Water Resources
818 Centennial Building
1313 Sherman Street
Denver, Colorado 80203

Dear Sir or Madam:

A Permit Application Form and supporting materials for an alternate point of diversion for CRSA Well No. 3 are enclosed.

This material is being returned and, as requested, a purchase order for payment will arrive under separate cover from the National Park Service's Rocky Mountain Regional Office (RONO). For your information, a copy of the DI-1 (requisition for a purchase order sent to RONO) is also enclosed. Questions regarding payment should be directed to Debi Cox at (303) 221-8332.

If you have any other questions please contact me at (303) 221-8301.

Thank you for your timely consideration of this application.

Charles W. Pettee
Acting For
Owen Williams

Owen R. Williams
Chief, Water Rights Branch

Enclosures

bcc: RMR - Huff, Hermance (w/o enclosures)
CRSA - Superintendent (w/o enclosures)
Colorado Water Division No. 3 - Plaska (w/o enclosures)

FMP:BVoelkel:bv:221-8323:10/16/89:WANG #293

P 044 251 275

RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

Sent to	Colorado Div. of Wtr. Res. 818 Centennial Building 1313 Sherman Street
P.O., State and ZIP Code	Denver, CO 80203
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date	OCT 27 1989 11:55

PS Form 3800, June 1985

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. (Extra charge)
2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to:
Colorado Div. of Water Resources
818 Centennial Building
1313 Sherman Street
Denver, CO 80203

4. Article Number

Type of Service:
☐ Registered ☐ Insured
☐ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Address
X

6. Signature — Agent
X Carol Powell

7. Date of Delivery
OCT 28 1989

8. Addressee's Address (ONLY if requested and fee paid)

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

00-00-0000: postage invoice

STICK POSTAGE STAMPS TO ARTICLE TO COVER FIRST CLASS POSTAGE, CERTIFIED MAIL FEE, AND CHARGES FOR ANY SELECTED OPTIONAL SERVICES. (see front)

1. If you want this receipt postmarked, stick the gummed stub to the right of the return address l the receipt attached and present the article at a post office service window or hand it to your rural c (no extra charge)

2. If you do not want this receipt postmarked, stick the gummed stub to the right of the return address o the article, date, detach and retain the receipt, and mail the article.

3. If you want a return receipt, write the certified mail number and your name and address on a "return receipt card, Form 3811, and attach it to the front of the article by means of the gummed ends if space per mits. Otherwise, affix to back of article. Endorse front of article RETURN RECEIPT REQUESTED adjacent to the number.

4. If you want delivery restricted to the addressee, or to an authorized agent of the addressee, endorse RESTRICTED DELIVERY on the front of the article.

5. Enter fees for the services requested in the appropriate spaces on the front of this receipt. If return receipt is requested, check the applicable blocks in Item 1 of Form 3811.

6. Save this receipt and present it if you make inquiry.

U.S.G.P.O. 1983-21

UNITED STATES POSTAL SERVICE

OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address and ZIP Code in the space below.

- **Complete items 1, 2, 3, and 4 on the rse.**
- **ch to front of article if space permits, otherwise affix to back of article.**
- **Endorse article "Return Receipt Requested" adjacent to number.**

U.S. MAIL

PENALTY FOR PRIVATE USE, $300

RETURN TO

Print Sender's name, address, and ZIP Code in the space below.

Owen Williams
National Park Service
301 S. Howes, Room 353
Fort Collins, CO 80521

10-25-1989: report of telephone conversation to nps from doj regarding fee for grsa well and for utah adjudication

REPORT OF TELEPHONE CONVERSATION

DATE October 25, 1989 TIME 4:00 AM/(PM)

PROJECT

NPS PERSON ON CALL Beth Voelkel ☐ I CALLED ☐ S/HE CALLED

PERSON John Hill

ORGANIZATION DOJ

ADDRESS

TELEPHONE NUMBER 844-3627

DISCUSSION

(1) GRSA Well – go ahead and pay the fee. Provided it is an appropriative water right there is no need for a "protest" paragraph.

(2) Utah Adjudication – he really doesn't have time to look at it if its not urgent. Since it doesn't affect us and since protest/comment period has passed, forget it. But watch for similar things cropping up in other cases that do affect us. Remember – as long as we've already filed they can't keep us from doing so, it can't be retroactive so no need to worry. The State cannot keep us from filing on our water rights.

10-16-1989: report of telephone conversation to nps from well commissioner regarding hook up of well

REPORT OF TELEPHONE CONVERSATION

DATE Oct 16, 1989 TIME 8:15 (AM)/PM

PROJECT GRSA Well No. 1

NPS PERSON ON CALL Beth Voelkel [X] I CALLED [ ] S/HE CALLED

PERSON Dennis Felmlee

ORGANIZATION Well Commissioner - Water Division 3, Colorado

ADDRESS

TELEPHONE NUMBER (719) 589-6683

DISCUSSION He says we're okay to hook up the well, etc. provided we don't pump from it without a permit. As far as WD3 is concerned we've filed for an application so they're happy. He sees no great hurry to get $$ to Denver so he suggests going with a P.O. for our sake.

Form DI-1
(Rev. April 1985)

UNITED STATES
DEPARTMENT OF THE INTERIOR

REQUISITION

Requisition No.: 90-28

To: Procurement & Contracts
P.O. Box 25287
Denver, CO 80225

Bureau/Office: Water Resources Division
Ft. Collins, CO 80521

Date: October 16, 1989

Appropriation/Allotment No.: 1292-2004-414

Charge shipping costs to:

Vendor: Colorado Division of Water Resources
818 Centennial Building
1313 Sherman Street
Denver, CO 80203

Deliver to: Water Resources Division
National Park Service
301 S. Howes St., Rm. 353
Ft. Collins, CO 80521

ITEM OR FORM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1	Application Well Permit (GRSA Well No. 1)	1	ea	60.00	$60.00

To Be Completed by Fiscal Authority Only

FUND CERTIFICATION: Funds in the amounts shown are available and chargeable to the cost authorities shown above.

Signature: _____ Date: _____
Title: _____

Approved by (Signature): O. R. Williams Date: 16 Oct 89
Title: Chief, Water Rights Branch

Requisitioned by (Signature): O. R. Williams Date: 16 Oct 89
Title: Owen Williams, Chief, WRB

Bureau Officer (Signature): S. Pence Date: 10-24-89
Title: Chief, Water Resources Division

Prepare in single space typing. Use double space between items. Fill out top of requisition completely, showing complete shipping instructions and appropriation if different from that to which requisition is chargeable.

10-10-1989: office of the state engineer: application for well permit $60.00 each

ROY ROMER
Governor

JERIS A. DANIELSON
State Engineer

Received
Water Resources Branch
OCT 12 1989

OFFICE OF THE STATE ENGINEER
DIVISION OF WATER RESOURCES

1313 Sherman Street-Room 818
Denver, Colorado 80203
(303) 866-3581

FEE REQUEST FOR WELL PERMIT APPLICATIONS AND RELATED DOCUMENTS

The enclosed document(s) are being returned to you since the required fee was not submitted or is the incorrect amount. We are returning the attached document(s) and your remittance, if included, since the material(s) cannot be processed without first receiving the correct fee.

To avoid additional delays, please review the materials submitted to assure completeness and correctness.

[X]	APPLICATION FOR WELL PERMIT $60.00 EACH.	TOTAL DUE = $ 60
[ ]	APPLICATIONS TO LATE RECORD AND REPLACE AN EXISTING EXEMPT (DOMESTIC) WELL PERMIT $60.00 EACH.	TOTAL DUE = $
[ ]	APPLICATION TO REPLACE AN EXISTING PERMITTED EXEMPT (DOMESTIC) WELL $20.00 EACH.	TOTAL DUE = $
[ ]	APPLICATION TO REPLACE AN EXISTING REGISTERED NON-EXEMPT WELL $60.00 EACH.	TOTAL DUE = $
[ ]	EXTENSION OF PERMIT EXPIRATION DATE, NON-EXEMPT WELL $60.00 EACH.	TOTAL DUE = $
[ ]	AMENDMENT OF EXISTING RECORD (NAME/ADDRESS CHANGE) $1.00 EACH.	TOTAL DUE = $
[ ]	APPLICATION TO AMEND HOUSEHOLD USE ONLY PERMIT PURSUANT TO HB1111 TO INCLUDE WATERING NONCOMMERCIAL DOMESTIC ANIMALS $25.00 EACH.	TOTAL DUE = $
[ ]	LATE STATEMENT OF BENEFICIAL USE $30.00 EACH.	TOTAL DUE = $
[X]	OTHER: APPLICATION MAY BE SUBMITTED WITH A CHECK OR PURCHASE ORDER	TOTAL DUE = $

TOTAL FEE = $ 60

Please make your check payable to the State Engineer and resubmit these documents with the required filing fee.

By: [signature]

Date: 10/10/89

00-00-0000: memorandum to regional director from chief, water resources division regarding request for assistance from the field

Memorandum

To: Regional Director, Rocky Mountain Region, Attn: Janet Wise

From: Chief, Water Resources Division

Subject: Request For Assistance From the Field Solicitor For Preparation of a Litigation Report For Water Rights at Florissant Fossil Beds National Monument

Florissant Fossil Beds National Monument needs to obtain additional water rights to operate the monument under current conditions and to provide for a planned visitor center. The application for water rights must be submitted, by the Department of Justice (DoJ), to the Colorado District Court for Water Division 1. To process water applications, DoJ requires a litigation report from the Field Solicitor. Therefore, I recommend that you request the Field Solicitor's assistance in the preparation of a litigation report.

Attached please find the following materials to be forwarded to the Field Solicitor to aid in the preparation of the litigation report.

--Draft application (hard copy and electronic file copy, wordperfect 5.1)
--Plan For Augmentation
--Temporary Water Supply Plan
--Copies of selected permit applications, decrees, and correspondence applicable to the draft application

If there are any questions, please contact ~~Alice Johns of my office~~ Owen Williams at (303)225-~~3506~~ 3505.

cc: (w/o attachments)
FLFO - Superintendent
SOL - Canaday
RMR - Young
DoJ - Johnson

10-05-1989: letter to colorado division of water resources from nps regarding permit application form for an alternate point of diver

October 5, 1989

L54(479)
RMR/GRSA Water Rights

Colorado Division of Water Resources
818 Centennial Building
1313 Sherman Street
Denver, Colorado 80203

Dear Sir or Madam:

A Permit Application Form for an alternate point of diversion for GRSA Well No. 3, as decreed in Case No. 81CW163, is enclosed.

On December 20, 1979, the United States of America (USA) filed an application for water rights which was assigned Case No. 79CW85. Thereafter, on November 24, 1981, the USA filed amendments to Case No. 79CW85 for water rights at Great Sand Dunes National Monument (GRSA) which were assigned Case Nos. 81CW161, 81CW163, and 81CW164. In Case No. 81CW161, the USA claimed 30 gpm for domestic, public, and irrigation uses from GRSA Well No. 1.

GRSA Well No. 1 was used for domestic purposes in Government-owned quarters by National Park Service employees, for maintenance of Government-owned vehicles and equipment, and for domestic use by visitors in a picnic area. After the application was filed in Case No. 81CW161, the well was capped and its functions replaced by GRSA Well No. 3. Accordingly, the USA did not seek a decree for GRSA Well No. 1 in later proceedings.

On June 30, 1989, in Case No. 81CW163, GRSA Well No. 3 was decreed 25 gpm for municipal and domestic purposes with a priority date of August 4, 1978. Unexpectedly, soon after the decree was issued, flows from GRSA Well No. 3 became unreliable and the United States now desires to reopen GRSA Well No. 1 as an alternate point of diversion for decreed GRSA Well No. 3. My staff has been in contact with the Assistant Division Engineer, Bob Plasha. He and the Well Commissioner for Water Division No. 3, Dennis Felmlee, are, therefore, familiar with the situation at GRSA.

For your information, a copy of Well Registration No. 16400, issued for GRSA Well No. 1 on January 25, 1962, is enclosed as are copies of the original registration form, pump test record, and well drilling log. A new pump was recently installed at the well and a copy of the new pump test will be sent under separate cover when it becomes available. Well No. 1 will not be attached to the distribution system for Well No. 3 until chemical analysis

proves satisfactory (2 to 3 weeks) and pumping will commence only after a permit is issued. The park would like to complete the hookup by mid-November and begin pumping as soon as possible to ensure that a reliable water source is available for the busy visitor season next spring. Therefore, we would appreciate your prompt consideration of this application.

If you have any questions, please contact me at (303) 221-8301.

Thank you,

Owen Williams

Owen R. Williams
Chief, Water Rights Branch

Enclosures

bcc: RMR - Ruff, Hermance (w/enclosures)
GRSA - Superintendent(w/o enclosures)
Colorado Water Division 3 - Plaska (w/enclosures)
DOJ - Hill (w/enclosures)

FNP:BVoelkel:bv:221-8323:10/2/89:#291

WRJ-5-Rev. 76

COLORADO DIVISION OF WATER RESOURCES
818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203

PERMIT APPLICATION FORM

Application must be complete where applicable. Type or print in BLACK INK. No overstrikes or erasures unless initialed.

FOR: ( ) A PERMIT TO USE GROUND WATER
( ) A PERMIT TO CONSTRUCT A WELL
( ) A PERMIT TO INSTALL A PUMP
( ) REPLACEMENT FOR NO. _____
(X) OTHER Alternate Point of Diversion for GRSA Well No. 3
Decreed In WATER COURT CASE NO. 81CW163

(1) APPLICANT - mailing address
United States National Park Service
NAME Water Resources Division
STREET 301 S. Howes St., Room 353
CITY Fort Collins, CO (State) 80521 (Zip)
TELEPHONE NO. (303) 221-8311

(2) LOCATION OF PROPOSED WELL

County Alamosa
SE ¼ of the SE ¼, Section 34
Twp. 26 S (N,S), Rng. 73 W (E,W), 6th P.M.

(3) WATER USE AND WELL DATA

Proposed maximum pumping rate (gpm) 25 gpm
Average annual amount of ground water to be appropriated (acre-feet): _____
Number of acres to be irrigated: _____
Proposed total depth (feet): 350 feet
Aquifer ground water is to be obtained from:
_____
Owner's well designation GRSA Well No. 1

GROUND WATER TO BE USED FOR:

( ) HOUSEHOLD USE ONLY - no irrigation (0)
(X) DOMESTIC (1)
( ) LIVESTOCK (2)
( ) COMMERCIAL (4)
( ) INDUSTRIAL (5)
( ) IRRIGATION (6)
(X) MUNICIPAL (8)
( ) OTHER (9) _____
DETAIL THE USE ON BACK IN (11)

(4) DRILLER

Name _____
Street _____
City _____ (State) (Zip)
Telephone No. _____ Lic. No. _____

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN

Receipt No. _____ / _____
Basin _____ Dist. _____

CONDITIONS OF APPROVAL

This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.

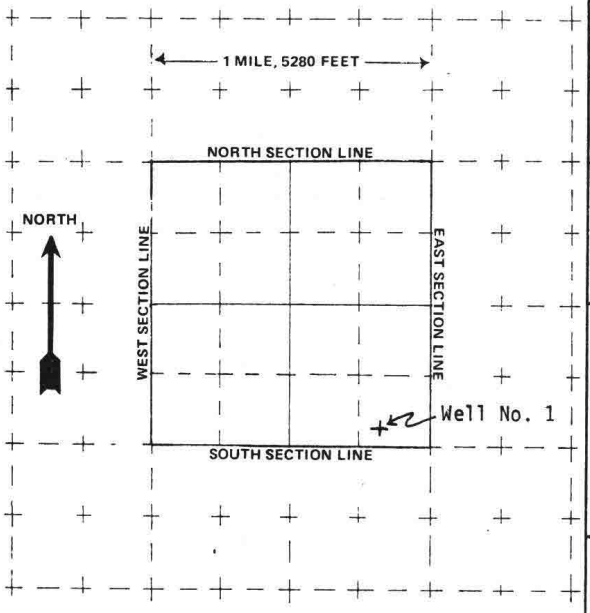
APPLICATION APPROVED

PERMIT NUMBER _____
DATE ISSUED _____
EXPIRATION DATE _____

_____
(STATE ENGINEER)

BY _____
I.D. _____ COUNTY _____

(5) THE LOCATION OF THE PROPOSED WELL and the area on which the water will be used must be indicated on the diagram below. Use the CENTER SECTION (1 section, 640 acres) for the well location.



The scale of the diagram is 2 inches = 1 mile
Each small square represents 40 acres.

WATER EQUIVALENTS TABLE (Rounded Figures)
An acre-foot covers 1 acre of land 1 foot deep
1 cubic foot per second (cfs) . . . 449 gallons per minute (gpm)
A family of 5 will require approximately 1 acre-foot of water per year.
1 acre-foot . . . 43,560 cubic feet . . . 325,900 gallons.
1,000 gpm pumped continuously for one day produces 4.42 acre-feet.

(6) THE WELL MUST BE LOCATED BELOW by distances from section lines.

330 ft. from south (north or south) sec. line

825 ft. from east (east or west) sec. line

LOT _____ BLOCK _____ FILING # _____

SUBDIVISION _____

(7) TRACT ON WHICH WELL WILL BE LOCATED Owner: National Park Service

No. of acres _____. Will this be the only well on this tract? _____

(8) PROPOSED CASING PROGRAM

Plain Casing

_____ in. from _____ ft. to _____ ft.

_____ in. from _____ ft. to _____ ft.

Perforated casing

_____ in. from _____ ft. to _____ ft.

_____ in. from _____ ft. to _____ ft.

(9) FOR REPLACEMENT WELLS give distance and direction from old well and plans for plugging it:

_____

_____

_____

_____

(10) LAND ON WHICH GROUND WATER WILL BE USED:

Owner(s): United States National Park Service No. of acres: _____

Legal description: _____

(11) DETAILED DESCRIPTION of the use of ground water: **Household use and domestic wells must indicate type of disposal system to be used.** Well water used to supply domestic water for employee housing, water for maintenance area, visitor center, and picnic ground. Well No. 1 to be used as an alternate source for Well No. 3 and will use same storage and distribution system.

(12) OTHER WATER RIGHTS used on this land, including wells. Give Registration and Water Court Case Numbers.

Type or right	Used for (purpose)	Description of land on which used

(13) THE APPLICANT(S) STATE(S) THAT THE INFORMATION SET FORTH HEREON IS TRUE TO THE BEST OF HIS KNOWLEDGE.

O. R. Williams Chief, Water Rights Branch 6 Oct 89

SIGNATURE OF APPLICANT(S)

Use additional sheets of paper if more space is required.

01-25-1962: permit to use ground water and notice of well registration

Form G (Rev.)
6-58/2M

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF THE STATE ENGINEER
Ground Water Section

PERMIT TO USE GROUND WATER AND NOTICE OF WELL REGISTRATION

To: United States of America, Dept. of Int.
Nat'l. Park Service of Santa Fe, New Mexico, Colorado.
Great Sand Dunes Nat'l. Monument

In accordance with the provisions of Section 2 of the

COLORADO GROUND WATER LAW

The well situated in SE¼,SE¼, T.26S.,R.73W.,Sect.34, of the 6th. P.M. -Alamosa County

Has been regularly registered in this office and assigned No. 16400
and this Permit is issued for the use described in the statement filed.

Signed and Sealed in Denver, Colorado

this 25th day of January, 1962.

DIVISION OF WATER RESOURCES
OFFICE OF THE STATE ENGINEER

J. E. Whitten
State Engineer

By Geo W. Colburn
Authorized Agent

KEEP THIS AS A PERMANENT RECORD

(Rev. 5-61/2M)

STATE OF COLORADO
DIVISION OF WATER RESOURCES
OFFICE OF THE STATE ENGINEER, GROUND WATER SECTION

RECEIVED DEC 4 1961 GROUND WATER SECT. COLORADO STATE ENGINEER

REGISTRATION NO. 16400 OF WELL

Registrant United States of America, Department of the Interior, National Park Service Date Nov. 22, 1961

P.O. Address Box 1728, Santa Fe, New Mexico

WELL DATA

Depth 350 ft. Diameter 10 and 14 in.

Casing : 290 ft. Plain; 30 ft. Perfor.

Static Water Level 242 ft. from top

Yield 80 (gpm) from 260 ft.

Used for domestic & irrigation purposes at Great Sand Dunes National Monument
(legal description of land or site)

Water conveyed by pipe, size 4 in. A.C.

PUMP DATA

Type Submersible, Size 2 in.

Driven by 5 H.P. 230 V. at - RPM

Well was first used May, 1957

for domestic using 18 gpm

Well enlarged ____, 19__ to deepened

____(gpm)(cfs)(ft)

LOG SHOULD BE GIVEN ON REVERSE SIDE IF AVAILABLE

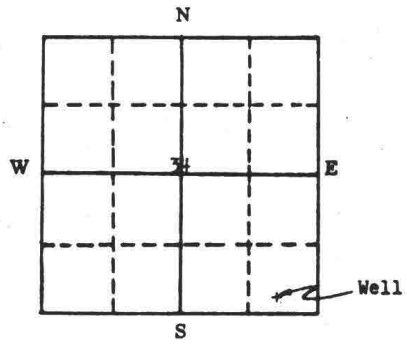
DUPLICATE

WELL LOCATION

County Alamosa

SE ¼, SE ¼ Section 34

Twp. 26 S., Rge. 73 W., 6th PM



WELL TO BE LOCATED AS ACCURATELY AS POSSIBLE WITHIN A SMALL SQUARE WHICH REPRESENTS 40 ACRES; OR IF IN A TOWN OR SUBDIVISION FILL IN THE FOLLOWING:

Town or Subdivision

Street address or Lot and Block

The above well (has not) been filed on in the Office of the State Engineer. If so give Filing No. ____.

A $10.00 filing fee must accompany this form.

The above statements are true and correct to the best of my knowledge and belief.

Subscribed and Sworn before me this 4th day of December, 1961.

My commission expires Feb 24 - 1962

(SEAL) ____ Notary Public

United States of America
National Park Service
by ____ Registrant
Thomas J. Allen
Regional Director

FOR STATE ENGINEER'S USE

Located in ____ district, ____ County for ____

Registration No. ____ in ____, on ____, 19__.

RECORD OF TEST PUMPING

Well located at Great Sand Dunes

RED TOP DRILLING CO.
LAS VEGAS, NEW MEXICO

Perforation record:

From 250 to 280 Feet

Johnston Pump Set at 284 feet
Static water level before start of pumping 242 feet below top of casing.
5:00 P.M., May 17, 1957
Orifice Diameter 2½ Pipe Dia. 4"

TEST PUMPING DATA

Date	Time	Pumping Rate		Measured Water Level	REMARKS
		Orifice Reading	G. P. M.		
5/17	5 PM			242	Sandy - Full Capacity of Pump
5/17	5:30				Estimated Maximum 150 G.P.M.
5/17	6 PM				Flow Fell Off Rapidly. Time From
5/17	6:30				5:00 P.M. to 9:00 P.M. Irregular,
5/17	7 PM				Alternate Pumping and Surging to
5/17	7:30				Develop Well.
5/17	8 PM				(10 equals 10 inches of Mercury)
5/17	8:30				
5/17	9 PM	10	80	272½	Clear
5/17	9:30	"	"	274	"
5/17	10 PM	"	"	"	"
5/17	10:30	"	"	273	"
5/17	11 PM	"	"	275	"
5/17	11:30	"	"	"	"
5/17	12 M	"	"	"	"
5/18	12:30	"	"	"	"
5/18	1 AM	"	"	"	"
5/18	1:30	"	"	"	"
5/18	2 AM	"	"	"	"
5/18	2:30	"	"	"	"
5/18	3 AM	"	"	"	

COLORADO WATER CONSERVATION BOARD
LOG AND HISTORY

(1) Location: Sec. 34 T. 26 S R. 73 W., 6th P.M. SE¼ Sec. (2) County Alamosa

(3) or Street Address Dept. of Interior City P.O. Box 1728, Santa Fe, New Mexico

(4) Owned by Dept. of Interior Nat'l Park Service Address

(5) Tenant Great Sand Dunes Nat'l Mon. Address P.O. box 60 Alamosa, Colorado

(6) Drilled by Red Top Drilling Co. Address Las Vegas, New Mexico

(7) Water Well Driller's License No. Colo. 319 (8) Name or No. of Well

(9) Type of Well: Domestic [X], Municipal [ ], Stock [ ], Irrigation [ ],

Industrial [ ], Drainage [ ], Other

(10) Cased: 0 ft. to 146 ft. Type Steel Size 12-3/4" Wt. of Casing: Lbs./Ft. 42.

Cased: 0 ft. to 290 ft. Type Steel Size 8- 5/8" Wt. of Casing: Lbs./Ft. 22.36

Cased: ft. to ft. Type Size Wt. of Casing: Lbs./Ft.

(11) Perforated or Screened: Ft. 250 to Ft. 280 : Ft. to Ft.

(12) Type of Screen or Perforation 1/4" Torch Slotted

(13) Date Started April 26, 1957 (14) Date Completed May 18, 1957

(15) Static Water Level 242 Ft.
or
Shut in Pressure lbs./sq. in. (16) Date

(17) Pumping Water Level 260 Ft. at (18) 80 G P M yield.

(19) How Tested: Turbine Pump (20) Length of Test 10 (Ten) Hours,

Put Formation Log on Reverse Side

(21) REMARKS: (Gravel Packing, Cementing, Packers, Type of Shut-off, Depth of Shut-off, Method Drilling, etc.)

TO BE MADE IN QUADRUPLICATE: *Original* to Colorado Water Conservation Board. *White Copy* to [illegible]

LOG OF WELL

DESCRIPTION OF MATERIAL DRILLED (ADD OTHER LINES AS NEEDED) | METHOD OF DRILLING

Feet			
00	to	70	Loose Sand and Boulders
70	to	140	Clay and Gravel
140	to	290	Sand and Gravel
	to		
	to		
	to		

10-04-1989: report of telephone conversation to nps form bill wellman regarding chemical analysis

REPORT OF TELEPHONE CONVERSATION

DATE Oct 4, 1989 TIME 11:30 (AM)/PM

PROJECT GRSA Well #1

NPS PERSON ON CALL _____ [X] I CALLED [ ] S/HE CALLED

PERSON Bill Wellman

ORGANIZATION _____

ADDRESS _____

TELEPHONE NUMBER _____

DISCUSSION Still doesn't have all chemical analysis back yet. They'll wait until that is okay before hooking to system. Could get through as early as one-month but they won't complete hookup until a permit is issued.

Bill wants to fill Owen in on some of the personal details of what prompted complaint from the State last week – Water Commissioner, Wayne Williams, probably started ball rolling.

Bill will find out if they've received copy of pump test yet. If so, he'll send it – otherwise we'll send to State later under separate cover.

He called back at 2:00. They don't have pump test yet so asked that we send info to State without it. He'll send us a copy when he gets it.

10-02-1989: report of telephone conversation to nps form bill wellman regarding alternate point of diversion

REPORT OF TELEPHONE CONVERSATION

DATE October 2, 1989 TIME 8:30 (AM/PM)

PROJECT GRSA Well #3

NPS PERSON ON CALL Beth Voelkel [X] I CALLED [ ] S/HE CALLED

PERSON Bob Plaska

ORGANIZATION Assistant Division Engineer

ADDRESS

TELEPHONE NUMBER (719) 589-6683

DISCUSSION ① He suggests going with alternate point of diversion rather than supplemental. This way the amount from Well #1 will not be limited by the amount used from #3. If 15 gpm is still available from #3, they may limit #1 to the additional 15gpm. With Alternate Point either can pump 30 gpm, just not at the same time.

② Denver may not go for depth of 293' on Well #1. There is a "Blue Clay" layer creating 2 aquifers. Since Well #3 is shallower it is in the upper, unconfined aquifer. Denver folks may argue that #1 is in lower, artesian, aquifer. He says this is arguable – we could make a good case that GRSA is outside the Blue Clay boundaries and it is all a single unconfined aquifer.

③ Write a detailed cover letter with application to Denver. Explain history and attach information such as new pump test, old well log, etc. Include whatever we've got available.

④ In cover letter tell them to talk to folks in Alamosa. Bob has talked a little with Dennis Felmlee, the Well Commissioner, so he is also aware of what's going on. Wayne Williams is the water Commissioner in Alamosa – he used to work at GRSA and his wife still does. So – they know the problem and are very willing to help.

Notes From Field Review - August 3, 1989
Bill Wellman and Beth Voelkel

Well #3 - This well is drying up and is currently used as a major water supply

Well #1 - This well is decreed as capped. It was a productive well but was capped due to threat from a nearby leachfield although water quality problems were never detected. The leachfield was removed in 1983 or 1984 and the park would like to reopen Well #1 and use it in conjunction with Well #3.

If Well #1 is on reserved land may use water from Well #1 as part of the 8 afy of future uses as decreed. If the well is on acquired land, probably best to use Well #1 as a "supplemental well" to Well #3. This option would also be available if Well #1 is on reserved land. The Superintendent would prefer to use the "supplemental well" approach because the total use from both wells would not exceed that amount decreed for Well #3 alone.

Well #1 and Well #3 share the same storage tank and distribution system. Well #2 and Well #4 are in the same situation.

Well #2 is their very best well, easily pumped at greater than 30 gpm. Well #4 is used only occasionally and uses same tank and distribution as Well #2.

The park plans to conduct a 24 hour pump test on Well #1 next week. They'll pump at 30 gpm. If everything works well and water quality tests are okay, they'll install a permanent pump shortly.

IN THE DISTRICT COURT IN AND FOR
WATER DIVISION NO. 3
STATE OF COLORADO

FILED IN DISTRICT COURT
WATER DIVISION 3, COLORADO
CAROL S. REDDING, CLERK

NOV 24 1981

Case No. 5120-141

IN THE MATTER OF THE APPLICATION OF THE UNITED STATES OF AMERICA FOR WATER RIGHTS IN THE RIO GRANDE RIVER DRAINAGE, IN ALAMOSA COUNTY.	APPLICATION FOR CONFIRMATION OF RESERVED UNDERGROUND WATER RIGHTS

1. Name and address of applicant: United States of America, c/o John R. Hill, Jr., Attorney, Department of Justice, Land and Natural Resources Division, 1961 Stout Street, Drawer 3607, Denver, Colorado 80294. Telephone 303/837-2892.

2. The United States of America claims reserved rights in 2 wells totalling 40 gpm, located on reserved lands in the Great Sand Dunes National Monument, in Alamosa County, Colorado, within the watershed of the Rio Grande River. The priority date claimed for both wells is March 17, 1932, the date the land upon which the wells are located was reserved by Proclamation No. 1994, 47 Stat. 2506. Copy attached.

SIXTH PRINCIPAL MERIDAN

Legal description: SE1/4 SE1/4, Section 34, T. 26 S, R. 73 W
Name of well: GRSA Well No. 1
Reg. No.: 16400
Depth: 290 ft. Pump Submersible Artesian No
Amount claimed: 30 gpm absolute
Uses: Domestic, public, and irrigation

Legal description: SE1/4 NE1/4, Section 35, T. 26 S, R. 73 W
Name of well: GRSA Well No. 4
Reg. No.: None
Depth: 250 ft. Pump Submersible Artesian No
Amount claimed: 10 gpm absolute
Uses: Municipal, domestic, and irrigation

5. This application is a partial amendment of the application filed by the United States in Case No. 79CW85.

6. The United States seeks to antedate the adjudication dates of earlier decrees insofar as they, in conjunction with applicable statutes, appear or purport to preclude this court from awarding to the United States its water rights bearing their true priority dates.

Respectfully submitted,

JOSEPH DOLAN
United States Attorney

By _____
JOHN R. HILL, JR., (Reg. #10214)
Attorney, Department of Justice
Land and Natural Resources Division
1961 Stout Street, Drawer 3607
Denver, Colorado 80294 (837-2892)

STATE OF COLORADO)
) ss.
JEFFERSON COUNTY)

WILLIAM L. MEKEEL, being first duly sworn upon oath, deposes and says that he has read the foregoing Application, that he knows the contents thereof, and that the same are true.

William L. Mekeel
WILLIAM L. MEKEEL

Subscribed and sworn to before me this 13th day of November, 1981.

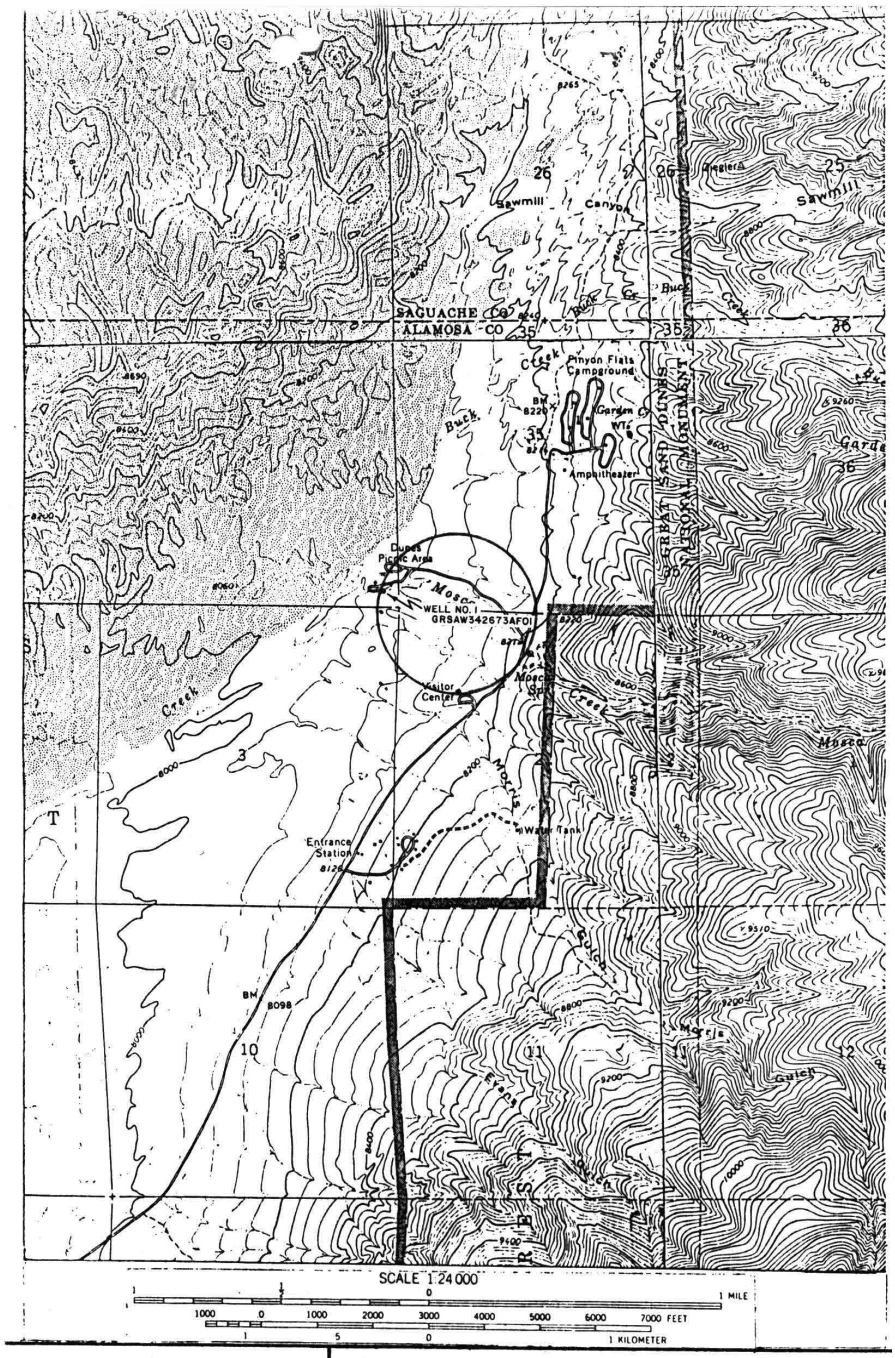
Witness my hand and official seal.

Mary Esther Greenwald
NOTARY PUBLIC

My commission expires: November 11, 1984.

My address: 538 South Dudley Street
Lakewood, CO 80226.

08-03-1989: topographic map of grsa



UNITED STATES
DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

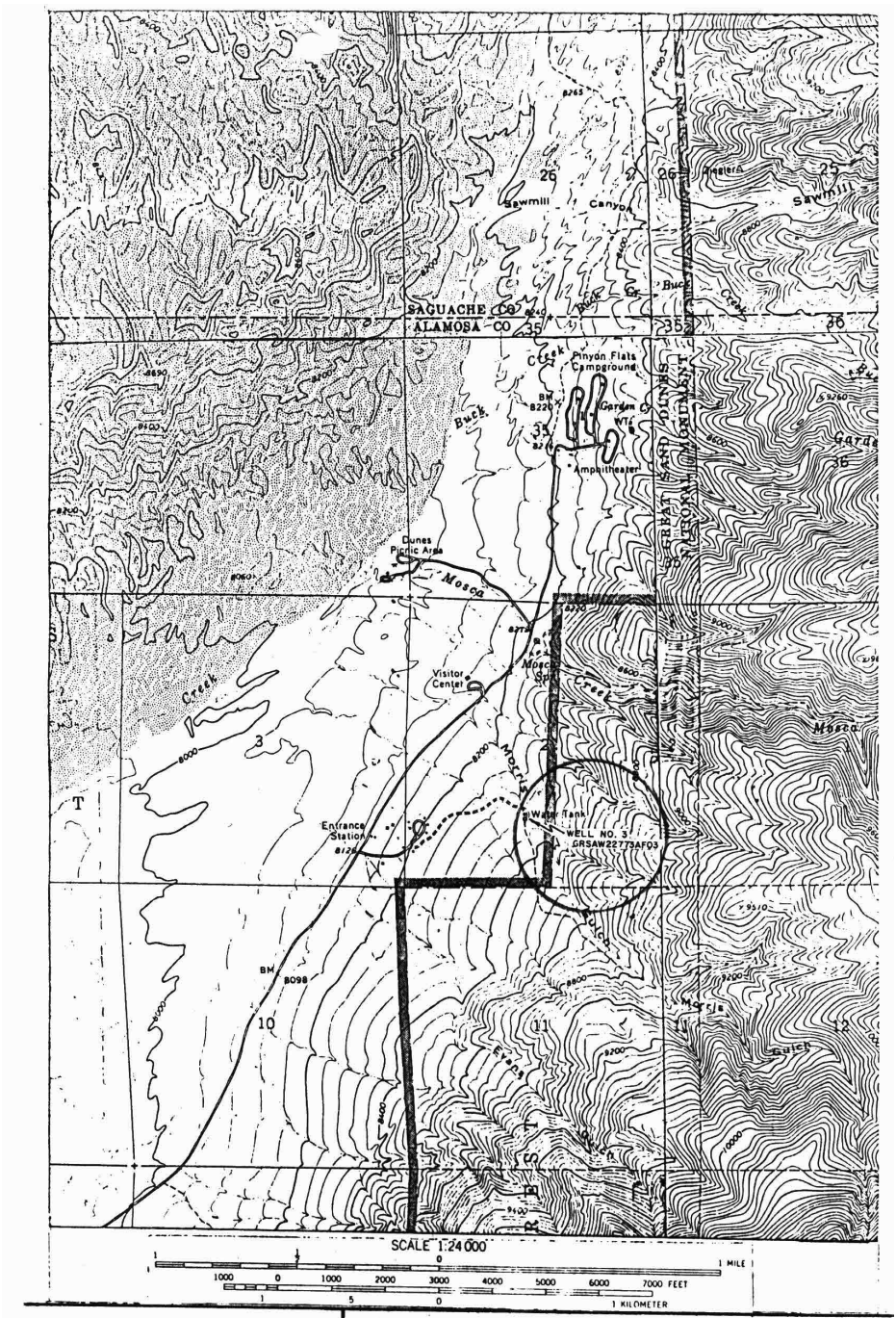
ROCKY MOUNTAIN REGION
DIVISION OF WATER RESOURCES

NPS- GRSA- 1 -80 - JUNE2 , 1930 W.L.M.

WELL NO. 1
GREAT SAND DUNES NATIONAL MONUMEN

IN THE DISTRICT COURT IN AND FOR WATER DIVISION 3
STATE OF COLORADO

IN THE MATTER OF THE APPLICATION FOR WATER RIGHTS
BY THE UNITED STATES



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
ROCKY MOUNTAIN REGION
DIVISION OF WATER RESOURCES

NPS - GRSA - 3 - 80 - JUNE 2, 1980 W.L.M.

WELL NO. 3
GREAT SAND DUNES NATIONAL MONUMENT

IN THE DISTRICT COURT IN AND FOR WATER DIVISION 3
STATE OF COLORADO

IN THE MATTER OF THE APPLICATION FOR WATER RIGHTS
BY THE UNITED STATES

02-16-1982: memorandum to director from assistant regional director regarding permit to use ground water and notice of well regi

Region Three
Santa Fe, New Mexico

L54

FEB 16 1982

Memorandum

To: Director

From: Assistant Regional Director

Subject: Permit to Use Ground Water and Notice of Well Registration No. 16400, and Application for Registration, Mosca Creek Well, Great Sand Dunes National Monument

Attached are copies of Permit to Use Ground Water and Notice of Well Registration, No. 16400, for the Mosca Creek Well at Great Sand Dunes National Monument. We have also attached reproduced copies of our application of the same number received in the office of the State Engineer on December 8, 1961. It will be noticed there are two received dates on the application. This resulted because in our first transmittal of December 4 we neglected to send the proper remittance fee and it was necessary to transmit the application a second time.

We have placed these documents in our Docket No. 1 for Great Sand Dunes and by copies of this memorandum are sending them to WODC and the Superintendent, Great Sand Dunes for insertion in their dockets.

Our records show that the log and history and pump test were placed in our docket and forwarded to all concerned on June 12, 1957; therefore we are not forwarding these to you.

(SIGNED)
George W. Miller
Assistant Regional Director

In duplicate

Attachments (1 set)

Copy to: Chief, WODC (2) w/1 set attachments
Supt., Great Sand Dunes w/attachments

09-11-1959: memorandum to regional director, region three from acting chief, water resources section regarding pump data and d

L54-GBL

September 11, 1959

Memorandum

To: Regional Director, Region Three

From: Acting Chief, Water Resources Section

Subject: Pump Data and Drawing 5309-A, Water System, Docket 1, Great Sand Dunes

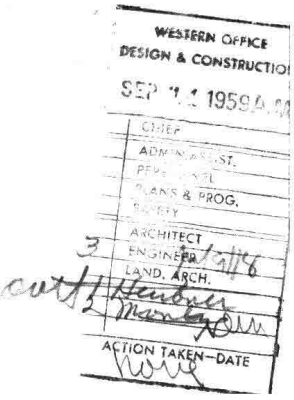
Having received your memorandum of August 28, we are filing it with the well log in the docket to indicate there probably is no artesian pressure. It is unfortunate that a more detailed log is not available, but water rights should under the circumstances be assumed to be to percolating water.

SIGNED

Gordon W. Robertson
Acting Chief, Water Resources Section

Copy to: Superintendent, Great Sand Dunes
Chief, WCDC

NO COPY MADE IN MAIL ROOM



L-54

Region Three
Santa Fe, New Mexico

AUG 28 1959

Memorandum

To: Director

From: Regional Director

Subject: Pump Data and Drawing 5309A, Water System, Docket 1, Great Sand Dunes

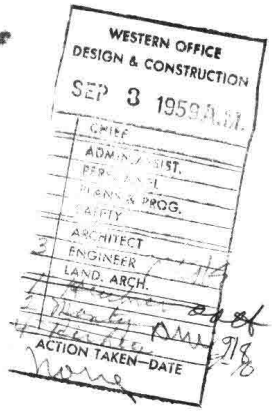
In Mr. Dunn's memorandum of August 21, 1959 to this office pertaining to the well log for the Mosca Creek well, he posed the question whether the water was intercepted at a depth of 260 feet and rose to 242 foot depth or was found throughout the 18 feet which was the drawdown when pumping.

The log of the well which we have in our docket is probably the same as the one which you have and does not answer the above question. However, upon conversing with Mr. Phil Wohlbrandt, Regional Engineer who made the final inspection of the well, he advised Mr. Fields that water was encountered at the 242 foot depth which is given as the static water level in the log.

As far as we can ascertain, there is not a more adequate log.

(SIGNED)

Hugh M. Miller
Regional Director



In duplicate

Copy to: Supt., Great Sand Dunes
Chief, WCDC (2)

08-11-1959: memorandum to director from regional director regarding pump data, water system, docket no. 1

L-54

Region Three
Santa Fe, New Mexico

AUG 11 1959

Memorandum

To: Director

From: Regional Director

Subject: Pump Data, Water System, Docket No. 1, Mosca and Morris Gulch Springs, Great Sand Dunes

In accordance with Mr. Dunn's memorandum of July 17, there is attached a copy of Drawing NM-GSD-5309A to be filed as Item 6 under Part VI. Apparently there has been a transposition error in the drawing pertaining to Morris Gulch Springs for the drawing number is 5309A instead of 5039A.

A copy of the well pump data was furnished you with Mr. Hill's memorandum of August 4. We have filed a copy of the well pump data as Item 7 under Part VI in Docket No. 1. By copy of this memorandum we are sending Western Office of Design and Construction a copy of the well pump data for insertion in their Docket No. 1.

(SIGNED)
Hugh N. Miller
Regional Director

WESTERN OFFICE
DESIGN & CONSTRUCTION
AUG 18 1959
ADM.
ENG.
SECT.
LAND. ARCH.
ACTION TAKEN—DATE

In duplicate

Attachment

Copy to: Supt., Great Sand Dunes w/o of drawing
Chief, WODC (2) w/o of well pump data

cty 1 2 Richey

07-17-1959: memorandum to regional director, region three from chief, water resources section regarding pump data, water syste

L54-OEL

July 17, 1959

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Section

Subject: Pump Data, Water System, Docket No. 1, Mosca and Morris Gulch Springs, Great Sand Dunes

In reviewing past correspondence, we note that in your memorandum of March 3, to the Superintendent, you requested pump data for inclusion in Docket 1. If this information has been supplied, we should include it as item 7 under Part VI.

Incidently, we are still awaiting a copy of Drawing NM-GSD-5039A which should be filed as item 6 under Part VI.

SIGNED

A. van V. Dunn
Chief, Water Resources Section

Copy to: Superintendent, Great Sand Dunes
Chief, WODC (2)



03-14-1959: memorandum to acting regional chief of operations from superintendent regarding pump data, water system

Great Sand Dunes National Monument
Alamosa, Colorado

March 14, 1959

Memorandum

To: Acting Regional Chief of Operations

From: Superintendent, Great Sand Dunes

Subject: Pump Data, Water System, Great Sand Dunes

As per your request for the following data required to add to our Water Rights Docket, is furnished:

1. Name of manufacturer - Reda Pump Co. Bartlesville, Okla.
2. Type of pump - Reda submersible pump 51A18E, 5HP 1ø 230 volt
3. Intake pipe diameter in inches - 1¼"
4. Outlet pipe diameter in inches - 2"
5. Power unit rating - 5HP 230 volt 1ø 60 cycle.
6. Serial number - Motor # L7231 Pump # E1962
7. Installed head in feet - Approx. 240'
8. Rating of pump in gallons per minute - 18 gpm @ 600'
   (factory rating is 21.5 gpm @600' 0 Pressure)

(SIGNED)

Harold F. Schaafsma
Superintendent

C O P Y

C O P Y

L-54

Region Three
Santa Fe, New Mexico

MAR 3 - 1959

Memorandum

To: Superintendent, Great Sand Dunes

From: Acting Regional Chief of Operations

Subject: Pump Data, Water System, Great Sand Dunes

In your monthly narrative report of January 27, Acting Superintendent Dempsey reported final tests on the new water system were completed January 9.

In order to obtain information for the Water Rights Docket, we should have information regarding the new pump.

The following information should be supplied:

1. Name of manufacturer
2. Type of pump
3. Intake pipe diameter in inches
4. Outlet pipe diameter in inches
5. Power unit rating
6. Serial number
7. Installed head in feet
8. Rating of pump in gallons per minute

We also need the rate of the pump as it operates under the present or existing head. The monthly report shows the pump to be operating at the rate of 18 g.p.m., and we assume we can use these figures for the production rate of the pump in the docket.

(SIGNED)

Jerome C. Miller
Acting Regional Chief of Operations

Copy to: Director (2)
WODC

WESTERN OFFICE
DESIGN & CONSTRUCT
MAR 5 1959A.
CHIEF
ADMIN.ASSIST.
PERSONNEL
PLANS & PROG.
SAFETY
ARCHITECT
3 ENGINEER
LAND. ARCH.
ACTION TAKEN—DATE

L54-L

WESTERN OFFICE
DESIGN & CONSTRUCTIC
JUN 24 '958A.M
CHIEF
ADMIN ASSIST.
PERSONNEL
PLANS & PROG.
SAFETY
ARCHITECT
ENGINEER
LAND. ARCH.
ACTION TAKEN—DATE

June 18, 1958

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Section

Subject: Mosca Creek Well, Part VI, Docket 1, Great Sand Dunes

Attached copy of the State Engineer's letter of June 9, which is largely in answer to questions arising at Rocky Mountain, should be reviewed with Mr. Koehler's memorandum of June 12, 1957, the contents of Part VI of Docket 1, and my memorandum of June 4.

One pair of the attached forms "C" and "F" is for your records. Please return the other pair, or thermofax copies, with all data filled in for my use in preparing final copies for filing and for the dockets.

Mr. Koehler implied that Mr. Kell may have filed Form C, or its equivalent, prior to June 12, 1957. In that case, copies of that request for well number, and the State Engineer's reply should be provided for the four docket assemblies in lieu of preparing new ones.

In addition to the copy of the Colorado Ground Water Law, we now have copies of the following forms.

1. Form 3--Notification of Intention to Drill, Redrill, Recase, or Deepen Well, dated 6/55, as completed and filed in docket.

2. Form 4--Log and History, dated 6/55, as completed and filed in docket.

3. Form C--Application for Permit to Use Ground Water, dated 5/57, copy sent with my memorandum of June 4.

Form C--Revised 1/58 - two copies attached.

4. Form F--Registration of Well, dated 5/57, of which I believe you have copy.

5. Form F--Revised 7/57 - two copies attached.

The State Engineer's letter of June 9 does not answer all questions I now have in my mind, because I expected the answers to be in a manual which was due for publication on January 1, but does not yet appear to be available. Several questions of further procedure also arise from the lack of data in the records in Part VI of the docket. I recommend that any form, or the draft of answers for it, be dated in the upper right corner whether the form calls for a date, or not. Completion Reports on water systems should also include make, type, and capacity or power of any pumps and motors even though they are purchased under separate contract. With the lack of a manual and the date when Mr. Kell requested the well number, there is also a question of the need for filing all forms - particularly the Application for Use of Ground Water, since the well was started, and the Notice of Intent to Drill seem to have been filed before May 1, 1957.

I intend to file all applicable forms from the data herein requested. However, in doing so, I wish to make it clear that no other Federal right to the water is jeopardized, and to request clarification of certain questions of procedure which are also applicable at Dinosaur and Rocky Mountain.

SIGNED

A. van V. Dunn
Chief, Water Resources Section

Attachments 3

Copy to: Superintendent, Great Sand Dunes, with 2 attachments
Chief, WODC, with 2 attachments

Director

Form 10-174
(Rev. 1/56)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

REPORT 7 SPL

COMPLETION REPORT OF CONSTRUCTION PROJECT

REGION	AREA	COUNTY	STATE
Three	Great Sand Dunes Nat'l Mon.	Mosca	Colorado

PROJECT OR JOB TITLE: Well, Pump and Water Line
PCP NO.: U-5-4 (Por.)

LOCATION IN AREA: Near campground on Meadow Creek
MASTER PLAN NO.: --
BUILDING NO.: --

WORKING DRAWING NO. AND TITLE:

1957

APPROPRIATION TITLE AND SYMBOL: 14X1035 Construction
ACCOUNT NO.: 332.2

CONTRACT NO.	DATE WORK STARTED	DATE WORK COMPLETED
14-10-333-201	April, 1957	May 1957

NAME OF CONTRACTOR: Red Top Drilling Company
ADDRESS: Las Vegas, New Mexico

COST ANALYSIS

CONSTRUCTION ITEMS	QTY.	UNIT COST IN PLACE	TOTAL COST IN PLACE
1. Drilling Hole for 12-inch Casing	146'	20.50	$2,993.00
2. Furnish and install 12-inch Casing	146'	5.45	795.70
3. Drilling Hole for 8-inch Casing	144'	8.25	1,188.00
4. Furnish and Install 8-inch Casing	291'	4.15	1,207.65
5. Perforating 8-inch Casing	30'	5.00	150.00
6. Placing Temporary Cap on Well	1 job	50.00	50.00
7. Running Test on Well	8 hrs.	150.00	1,200.00
8. Facilitating Services			88.00
		TOTAL	$7,672.35

Field ~~Finance~~ Office Clearance February 6, 1958

Robert L. Giles

Robert L. Giles, Regional Accountant

SUMMARY OF EXPENDITURES

PERSONAL SERVICES	EQUIPMENT	MATERIALS AND SUPPLIES

OTHER: $7,672.35

CHANGE ORDERS

ORIGINAL CONTRACT AMOUNT	FIRST	SECOND	THIRD
8,825.00			
FINAL CONTRACT AMOUNT	**FOURTH**	**FIFTH**	**SIXTH**
7,584.35			

THIS PROJECT OR JOB HAS BEEN COMPLETED IN ACCORDANCE WITH APPROVED DRAWINGS, SPECIFICATIONS, AUTHORIZED CHANGES

SUBMITTED BY (Name and title)		DATE
Theis Hohlbrandt	Regional Engineer	January 31, 1958
APPROVED BY (Name and title)		DATE
Harold F. Schaafsma	Superintendent	Feb. 3, 1958

(ATTACH NARRATIVE STATEMENT, PHOTOGRAPHS, AND "AS BUILT" DRAWINGS TO THIS FORM)

3

U. S. GOVERNMENT PRINTING OFFICE: 1956—O-374085

During the 1956 season the water from the springs that furnish water for both the headquarters and campground areas nearly dried up.

The U.S.G.S. was brought in to make a survey of possible water sources, and recommended drilling a well near the confluence of ~~Meadow~~ Medano and ~~Mason~~ Mosca Creeks.

Bids for the actual drilling were opened on March 26, 1957 and the successful bidder was the Red Top Drilling Company of Las Vegas, New Mexico.

Drilling of the well was started on April 24, 1957 and completed to a depth of 290 feet. Regional Engineer Wohlbrandt made the final inspection and accepted the work on May 16.

The well was drilled to a depth of 290 feet; the first 146 feet was cased with 12-inch casing. The 8-inch casing extended from the bottom of the well to the top of the ground a distance of 290 feet. The 8-inch casing was perforated between the 250-foot and 280-foot levels.

Water stood at the 242-foot level and has varied but little since the well was drilled even though the past season has been especially wet. At the time of the pump installation the water level was 225 feet.

The well was drilled through very fine sand with occasional gravel streaks.

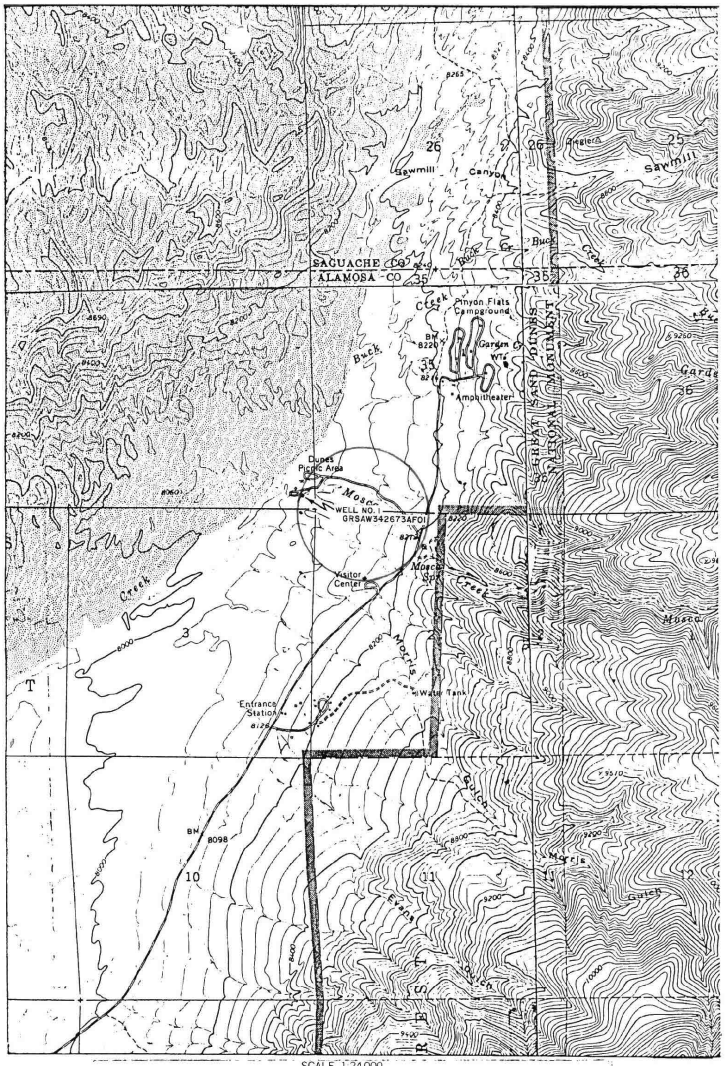
A 10-hour pumping test was made with a deep well turbine pump. At first the well was pumped in surges to clean out all loose material. The last six hours the pumping was held at 80 gallons per minute and the water level held steady at the 275-foot level.

Water samples were collected and submitted to the Adams State College. Their report indicated a very good water and very pure - much more so than wells farther down in the valley.

The contractor, Mr. Isabell, had a practically new drilling rig and was very cooperative, leaving the area cleaned up and in good shape.

4

00-00-0000: topographic map of grsa

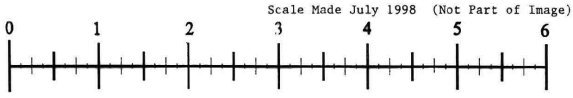


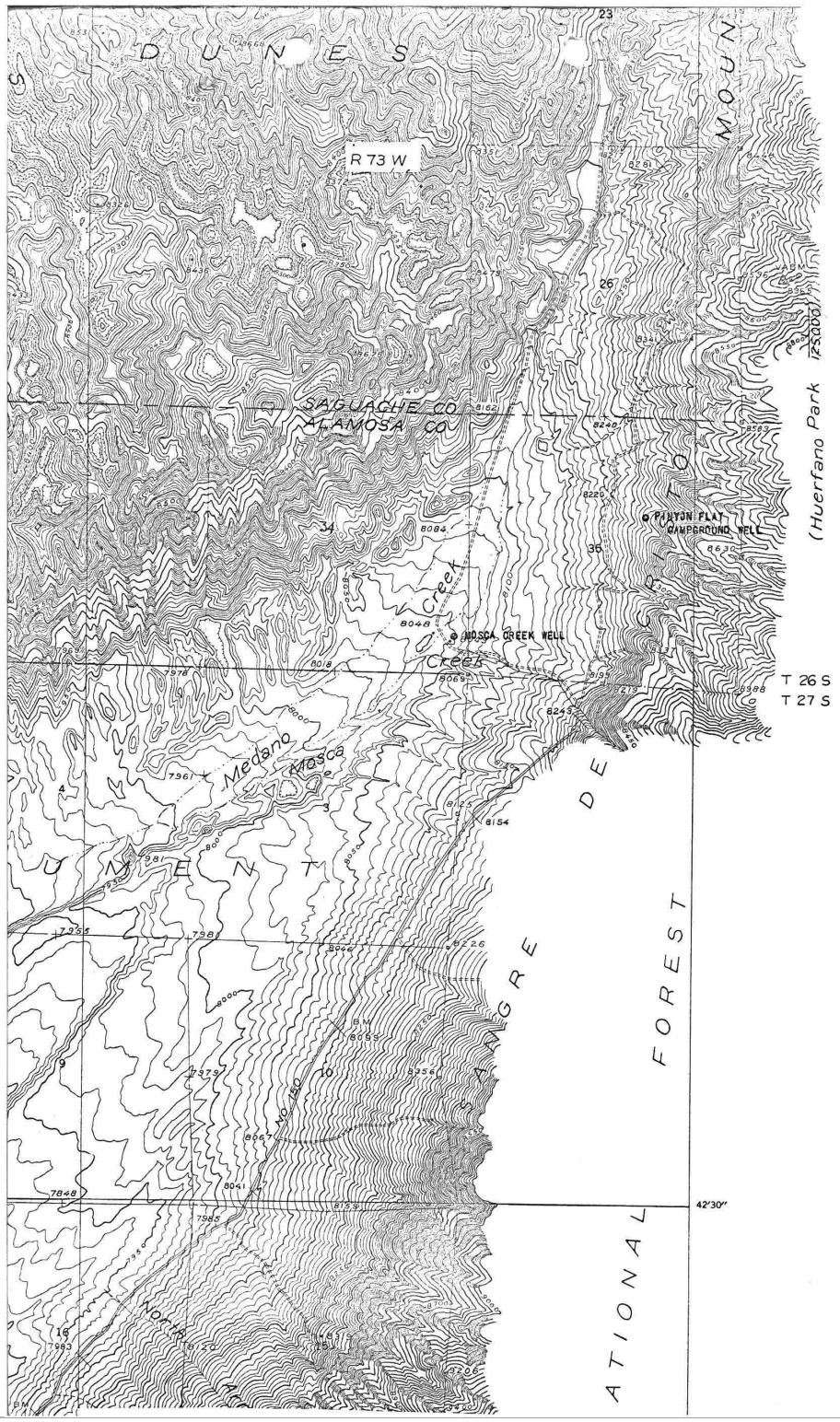
SCALE 1:24000

1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 KILOMETER

UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE *ROCKY MOUNTAIN REGION* *DIVISION OF WATER RESOURCES* *NPS-GRSA-1-80-JUNE?, 1930* WLM	WELL NO. 1 GREAT SAND DUNES NATIONAL MONUMENT IN THE DISTRICT COURT IN AND FOR WATER DIVISION 3 STATE OF COLORADO IN THE MATTER OF THE APPLICATION FOR WATER RIGHTS BY THE UNITED STATES

Scale Made July 1998 (Not Part of Image)





Docket Information

Number of Documents in Docket 214

Documents Dated from 2/3/1958 to 12/1/1993

Docket Compiled: 3/29/2011