



WATER-RIGHT DOCKET

Rocky Mountain National Park

Docket No: 75

MORaine PARK WELL 0-924-N

Preliminary Docket Information

00-00-0000: Note to File

Case No. W-8791-77

Moraine Park Well No. 0-924-N

This well is located in the SE1/4 SW1/4 of S. 33, T5N, R73W, 6th P.M. (See attached map) and was first used in 1957. This 40 foot well was located on tract No. 244 and served three of the Moraine Park Cottages. The cottages were acquired by the NPS in about 1955. Historic use was for domestic and sanitation purposes.

A copy of the well registration No. N-924 and the permit to use ground water are enclosed.

DIV	WELL ID	Water Right Name	Water Source	Q10	Q40	Q150	Sect	Twship	Range	PR	County	Adj Date	Part Date
1	4	5611 BIGHORN RNGR ST W 155966	GRNDWTR-EXEMPT	NW	NE	NE	17	5N	73W	S	LAR	1977-12-31	
1	4	5632 BLACK CABIN WELL	GRNDWTR-EXEMPT	NW	NE	SW	32	5N	73W	S	LAR	1977-12-31	
1	4	5598 MORAINÉ PARK WELL 0-924N	GRNDWTR-EXEMPT	SE	SE	SW	33	5N	73W	S	LAR	1977-12-31	
1	4	5568 MORAINÉ PARK WELL 1-4019	GROUNDWATER	SE	SE	SW	33	5N	73W	S	LAR	1977-12-31	
1	4	5559 SPRAGUE LK REC WELL	GROUNDWATER	NW	SW	SE	7	4N	73W	S	LAR	1977-12-31	

Appr Date	Admin No.	Order No.	Priority #	Use Type	Adj Type	Structure Type	Rate Amount (CFS)
1982-05-31	48363.00000	0		8	0	2	0.0180
1937-12-31	32141.00000	0		8	0	2	0.0270
1957-08-31	39324.00000	0		8	0	2	0.0160
1959-07-01	39993.00000	0		1389	0	2	0.2200
1909-12-31	21914.00000	0		389	0	2	0.0110

Volume Amount (ACF)	Case No.	Last Due Diligence	Action	Comment	Action Update	Assoc. WD	Assoc. ID
	W8791				7/28/2009 9:53:17 AM		
	W8791				7/28/2009 9:54:07 AM		
	W8791				7/28/2009 9:52:10 AM		
	W8791				7/28/2009 9:49:31 AM		
	W8791				7/28/2009 9:50:19 AM		

Aug Role	Plan WD	Plan ID	Trans WD	Trans ID



U.S. Department of Justice

Environment and Natural Resources Division

WMC:JDDraper
90-1-2-892

Denver Field Office
Suite 945
999 18th Street
Denver, Colorado 80202

Commercial Number
(303) 294-1900
FTS/330-1900
Telex Number
(303) 294-1931
FTS/330-1931

April 12, 1993

Ralph O. Canaday, Esquire
U.S. DEPT. OF INTERIOR
Office of the Solicitor
Rocky Mtn. Region
P. O. Box 25007
Denver, CO 80225

Mr. Owen Williams
Chief, Water Resources Division
NATIONAL PARK SERVICE
1201 Oakridge Drive
Suite 250
Fort Collins, CO 80525

Mr. Kenneth Czarnowski, Hydrologist
NATIONAL PARK SERVICE
Division of Resources Management
Estes Park, CO 80517

Re: Water Division No. 1
Case No.: W-8791-77(A)

Gentlemen:

Enclosed please find copies of the REVISED FINDINGS AND RULING OF THE REFEREE . . . in the above-captioned case. Please let us know by **April 23, 1993**, whether these Rulings are acceptable. Please note that in paragraph 7, Sprague Lake Recreation Area Well, the reference to limitation of 1 acre foot annually should be eliminated.

Respectfully,

Julia D. Draper
Paralegal Specialist
General Litigation Section

enclosures

WATER DIVISION NO. 1
STATE OF COLORADO

COPY FOR YOUR
INFORMATION

APR 28 1993

Date

TO: Lynn A. Johnson, Esq.
999 - 18th St., #945
Denver, CO 80202

Cliff Seigneur, Esq.
1525 Sherman St., 5th Fl.
Denver, CO 80203



STATE/DIV

The Water Court Referee for Division 1 has instructed me to forward this copy of his Revised Ruling in Case No. W-8791-77(A).

Please check your Ruling very CAREFULLY! If any errors are found, notify the Water Clerk's Office IMMEDIATELY.

You have twenty (20) days after the above date of mailing to file with the Water Clerk, any pleading in protest to or in support of the Referee's Ruling. Any such pleading to the Referee's Ruling must be filed on or before APR 28 1993, plus any additional time allowed by Rule 6(e) CRCP. In the absence of any pleading being received, the Judge of the Water Court will incorporate the Referee's Ruling in the Decree which will be entered after APR 28 1993.



Mary Cressin
Water Clerk, Water Division 1
P O Box C
Greeley, CO 80632
(303) 356-4000, Ext. 4550

DISTRICT COURT, WATER DIVISION NO. 1, COLORADO

CASE NO. W-8791-77(A)

REVISED FINDINGS AND RULING OF THE REFEREE AND DECREE OF THE
WATER COURT

IN THE MATTER OF THE APPLICATION FOR WATER RIGHTS OF
UNITED STATES OF AMERICA, IN LARIMER COUNTY

THIS CLAIM was filed with the Water Clerk, Water
Division 1, on December 29, 1977 and amended on September 4, 1984
and October 4, 1984. The Referee being fully advised in the
premises, does hereby find:

All notices required by law of the filing of this
application were fulfilled, and the Referee has jurisdiction of
this application.

Numerous Statements of Opposition and Entries of
Appearance were filed in all the USA cases. Upon agreement of
all counsel, this case is to be ruled on as if no opposition had
been filed.

All matters contained in the application were reviewed,
and testimony was taken where such testimony was necessary and
such corrections made as were indicated by the evidence
presented.

Moraine Park Well No. 2 and Moraine Park Well No. 3
have been bifurcated and will be adjudicated in case No.
W-8791-77(B). The remaining 5 wells will be case No.
W-8791-77(A).

IT IS HEREBY THE RULING OF THE WATER REFEREE:

1. The name and address of the claimant:

United States of America
Department of Justice
Environment and Natural Resources Division
999 - 18th St., #945
Denver, CO 80202

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2. The name of the structures:

USA Rocky Mountain National Park:
Moraine Park Well 1-4019
Moraine Park Well 0-924-N
Bighorn Ranger Station Well 165966
Sprague Lake Recreation Area Well
Black Cabin Well

3. The legal description of the structure:

Moraine Park Well 1-4019: SE1/4 SW1/4, Section 33, Township 5 North, Range 73 West, 6th P.M., Larimer County, at a point approximately 500 feet from the South line and 2100 feet from the West line, Section 33.

Moraine Park Well 0-924-N: SE1/4 SW1/4, Section 33, Township 5 North, Range 73 West, 6th P.M., Larimer County, at a point approximately 520 feet North and 420 feet West of S1/4 Corner, Section 33.

Bighorn Ranger Station Well 165966: NE1/4 NE1/4, Section 17, Township 5 North, Range 73 West, 6th P.M., Larimer County, at a point approximately 625 feet from the North line and 750 feet from the East line, Section 17.

Sprague Lake Recreation Area Well: SW1/4 SE1/4, Section 7, Township 4 North, Range 73 West, 6th P.M., Larimer County, at a point approximately 750 feet from the South line and 2250 feet from the East line, Section 7.

Black Cabin Well: NE1/4 SW1/4, Section 32, Township 5 North, Range 73 West, 6th P.M., Larimer County, at a point approximately 2375 feet from the South line and 1875 feet from the West line, Section 32.

4. The source of the water:

Groundwater for all five wells

5. The date of appropriation:

Moraine Park Well 1-4019: July 1, 1959

Moraine Park Well 0-924-N: August 31, 1957

Bighorn Ranger Station Well 165966:
May 31, 1982

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Sprague Lake Recreation Area Well:
December 31, 1909

Black Cabin Well: December 31, 1937

6. The amount of water:

Moraine Park Well 1-4019: 0.22 cfs (99 gpm)

Moraine Park Well 0-924-N: 0.016 cfs (7 gpm)

Bighorn Ranger Station Well 165966:
0.018 cfs (8 gpm)

Sprague Lake Recreation Area Well:
0.011 cfs (5 gpm)

Black Cabin Well: 0.027 cfs (12 gpm)

7. The use of the water:

Moraine Park Well 1-4019: Livestock, domestic, limited irrigation of lawns and gardens, commercial in administrative and maintenance buildings, Visitor Center, museum and campground.

Moraine Park Well 0-924-N: Domestic for three single family dwelling.

Bighorn Ranger Station Well 165966: Domestic for two single family dwellings including irrigation of approximately 1000 square feet.

Sprague Lake Recreation Area Well: Domestic, commercial, drinking, sanitary and stockwater uses for livery/stable operation at Sprague Lake. Uses limited to less than 1 acre foot annually.

Black Cabin Well: Domestic for one single family dwelling.

8. Moraine Park Well 0-924N, Bighorn Ranger Station Well 165966 and Black Cabin Well - These water rights, so long as uses are limited to those decreed herein, is exempt from administration by the State Engineer pursuant to CRS, 37-92-602.

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9. The Court finds that this application, assigned case No. W-8791-77 (A), is a timely amendment to the United States' claims originally filed in 1976, designated W-8439-76.

The water rights for Moraine Park Well 1-4019 and Sprague Lake Recreation Area Well are entitled to antedation and shall be granted a priority date of July 1, 1959 and December 31, 1909 respectively, and shall be subject to prior vested rights. (Pursuant to 79 SA 99 and 79 SA 100 dated November 29, 1982, 656, P. 2d 1.)

Dated: APR - 8 1993


RAYMOND S. LIESMAN
Water Referee
Water Division No. 1

THE COURT FINDS: NO PROTEST WAS FILED IN THIS MATTER.

THE FOREGOING RULING IS CONFIRMED AND APPROVED, AND IS HEREBY MADE THE JUDGMENT AND DECREE OF THIS COURT.

Dated: _____

ROBERT A. BEHRMAN
Water Judge
Water Division No. 1
State of Colorado

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Page 3

Sprague Lake Recreation Area Well:
December 31, 1909

Black Cabin Well: December 31, 1937

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Sprague Lake Recreation Area Well:
0.011 cfs (5 gpm)

Black Cabin Well: 0.027 cfs (12 gpm)

7. The use of the water:

Moraine Park Well 1-4019: Livestock, domestic, limited irrigation of lawns and gardens, commercial in administrative and maintenance buildings, Visitor Center, museum and campground.

Moraine Park Well 0-924-N: Domestic for three single family dwellings.

Bighorn Ranger Station Well 165966: Domestic for two single family dwellings including irrigation of approximately 1000 square feet.

Sprague Lake Recreation Area Well: Domestic, commercial, drinking, sanitary and stockwater uses for livery/stable operation at Sprague Lake.

Black Cabin Well: Domestic for one single family dwelling.

8. Moraine Park Well 0-924N, Bighorn Ranger Station Well 165966 and Black Cabin Well - These water rights, so long as uses are limited to those decreed herein, are exempt from administration by the State Engineer pursuant to CRS, 37-92-602.

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USA
Page 4

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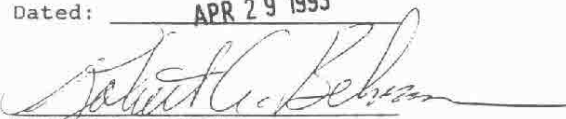
Dated: APR -8 1993


RAYMOND S. LIESMAN
Water Referee
Water Division No. 1

THE COURT FINDS: NO PROTEST WAS FILED IN THIS MATTER.

THE FOREGOING RULING IS CONFIRMED AND APPROVED, AND IS HEREBY MADE THE JUDGMENT AND DECREE OF THIS COURT.

Dated: APR 29 1993


ROBERT A. BEHRMAN
Water Judge
Water Division No. 1
State of Colorado



United States Department of the Interior

NATIONAL PARK SERVICE
Rocky Mountain National Park
Estes Park, Colorado 80517



IN REPLY REFER TO:

November 13, 1992

NOV 13 1992
Rocky Mountain National Park

Ms. Deirdre Hills
U.S. Department of Justice
Environment and Natural Resources Division
999 18th Street - Suite 945
Denver, CO 80202

Re: Water Division No. 1 - Case Nos. W-8789-77 and W-8791-77(A)

Dear Deirdre:

We have reviewed the above referenced cases and the findings and rulings of the water referee. They are acceptable as written.

Thank you for the opportunity to review these cases.

Sincerely,

[Signature]
for Kenneth Czarnowski
Hydrologist

cc: WRD - Williams
SOL - Canaday
RMR - Wise

DISTRICT COURT, WATER DIVISION NO. 1, COLORADO

CASE NO. W-8791-77(A)

FINDINGS AND RULING OF THE REFEREE AND DECREE OF THE WATER COURT

IN THE MATTER OF THE APPLICATION FOR WATER RIGHTS OF
UNITED STATES OF AMERICA, IN LARIMER COUNTY

THIS CLAIM was filed with the Water Clerk, Water Division 1, on December 29, 1977 and amended on September 4, 1984 and October 4, 1984. The Referee being fully advised in the premises, does hereby find:

All notices required by law of the filing of this application were fulfilled, and the Referee has jurisdiction of this application.

Numerous Statements of Opposition and Entries of Appearance were filed in all the USA cases. Upon agreement of all counsel, this case is to be ruled on as if no opposition had been filed.

All matters contained in the application were reviewed, and testimony was taken where such testimony was necessary and such corrections made as were indicated by the evidence presented.

Moraine Park Well No. 2 and Moraine Park Well No. 3 have been bifurcated and will be adjudicated in case No. W-8791-77(B). The remaining 5 wells will be case No. W-8791-77(A).

IT IS HEREBY THE RULING OF THE WATER REFEREE:

1. The name and address of the claimant:

United States of America
Department of Justice
Environment and Natural Resources Division
999 - 18th St., #945
Denver, CO 80202

USA
W-8791-77(A)
Page 2

2. The name of the structures:

USA Rocky Mountain National Park:
Moraine Park Well 1-4019
Moraine Park Well 0-924-N
Bighorn Ranger Station Well 165966
Sprague Lake Recreation Area Well
Black Cabin Well

3. The legal description of the structure:

Moraine Park Well 1-4019: SE1/4 SW1/4, Section 33, Township 5 North, Range 73 West, 6th P.M., Larimer County, at a point approximately 500 feet from the South line and 2100 feet from the West line, Section 33.

Moraine Park Well 0-924-N: SE1/4 SW1/4, Section 33, Township 5 North, Range 73 West, 6th P.M., Larimer County, at a point approximately 520 feet North and 420 feet West of S1/4 Corner, Section 33.

Bighorn Ranger Station Well 165966: NE1/4 NE1/4, Section 17, Township 5 North, Range 73 West, 6th P.M., Larimer County, at a point approximately 625 feet from the North line and 750 feet from the East line, Section 17.

Sprague Lake Recreation Area Well: SW1/4 SE1/4, Section 7, Township 4 North, Range 73 West, 6th P.M., Larimer County, at a point approximately 750 feet from the South line and 2250 feet from the East line, Section 7.

Black Cabin Well: NE1/4 SW1/4, Section 32, Township 5 North, Range 73 West, 6th P.M., Larimer County, at a point approximately 2375 feet from the South line and 1875 feet from the West line, Section 32.

4. The source of the water:

Groundwater for all five wells

5. The date of appropriation:

Moraine Park Well 1-4019: July 1, 1959

Moraine Park Well 0-924-N: August 31, 1957

Bighorn Ranger Station Well 165966:
May 31, 1982

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December 31, 1909

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6. The amount of water:

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Moraine Park Well 0-924-N: 0.016 cfs (7 gpm)

Bighorn Ranger Station Well 165966:
0.018 cfs (8 gpm)

Sprague Lake Recreation Area Well:
0.011 cfs (5 gpm)

Black Cabin Well: 0.027 cfs (12 gpm)

7. The use of the water:

Moraine Park Well 1-4019: Municipal,
including but not limited to domestic, limited irrigation of
lawns, commercial in administrative and maintenance buildings,
Visitor Center, museum and campground.

Moraine Park Well 0-924-N: Domestic for
three single family dwelling.

Bighorn Ranger Station Well 165966: Domestic
for two single family dwellings including irrigation of
approximately 1000 square feet.

Sprague Lake Recreation Area Well:
Commercial, drinking and sanitary uses at Sprague Lake. Uses
limited to less than 1 acre foot annually.

Black Cabin Well: Domestic for one single
family dwelling.

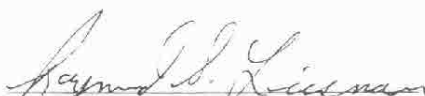
8. Moraine Park Well 0-924N, Bighorn Ranger
Station Well 165966, Sprague Lake Recreation Area Well and Black
Cabin Well - This water right, so long as uses are limited to
those decreed herein, is exempt from administration by the State
Engineer pursuant to CRS, 37-92-602.

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9. The Court finds that this application, assigned case No. W-8791-77 (A), is a timely amendment to the United States' claims originally filed in 1976, designated W-8439-76.

The water right for Moraine Park Well 1-4019 is entitled to antedation and shall be granted a priority date of July 1, 1959, and shall be subject to prior vested rights. (Pursuant to 79 SA 99 and 79 SA 100 dated November 29, 1982, 656, P. 2d 1.)

Dated: OCT 30 1992


RAYMOND S. LIESMAN
Water Referee
Water Division No. 1

THE COURT FINDS: NO PROTEST WAS FILED IN THIS MATTER.

THE FOREGOING RULING IS CONFIRMED AND APPROVED, AND IS HEREBY MADE THE JUDGMENT AND DECREE OF THIS COURT.

Dated: _____

ROBERT A. BEHRMAN
Water Judge
Water Division No. 1
State of Colorado

DISTRICT COURT, WATER DIVISION NO. 1, COLORADO

Case No. W-8439-76 (W-8789-77 through W-8794-77)

8 Copies delivered to BOS
9/28/84 ARJ
Docket #3

AMENDED APPLICATION FOR SURFACE AND UNDERGROUND
WATER RIGHTS

IN THE MATTER OF THE APPLICATION OF THE UNITED STATES OF AMERICA FOR
APPROPRIATIVE WATER RIGHTS IN ROCKY MOUNTAIN NATIONAL PARK IN
LARIMER AND BOULDER COUNTIES.

1. Name and address of Applicant:

United States of America
c/o John E. Lindsfold
Attorney, Department of Justice
Land and Natural Resources Division
1961 Stout Street, Drawer 3607
Denver, Colorado 80294

2. The United States of America claims a total of ten water rights including four additional surface and underground water rights (diversions, pipelines and wells) situated on lands acquired for and located in Rocky Mountain National Park in Larimer County.
3. The use of the water claimed in this amended application is domestic water for use in picnic areas, campgrounds, ranger stations, cabins under permit from the National Park Service in the Rocky Mountain National Park.
4. Legal descriptions and data pertaining to each well or diversion (all descriptions refer to 6th P.M.):

Larimer County

Name of Structure: Bighorn Ranger Station Well
Legal description: In the NE 1/4 NE 1/14, Section 17, T. 5 N., R. 73 W.
Source: Bighorn Creek, tributary to Big Thompson River
Depth of Well: 128 feet
Date of appropriation: June, 1982
Date water applied to beneficial use: August, 1982
How appropriation was initiated: Drilling well
Amount claimed: 20 gpm Absolute
Use: Domestic, recreation, fire fighting

Name of Structure: Moraine Park Well No. 0 AKA ~~Moraine Park Cottages~~
Legal description: In the SE 1/4 SW 1/4, Section 33, T. 5 N., R. 73 W.,
whence the northeast corner of Section 5, T. 4 N., R.
73 W., bears S. 50° 50' E 666.46 feet.

Source: Big Thompson River
Depth of Well: 40 feet
Date of appropriation: August, 1957
Date water applied to beneficial use: June, 1958
How appropriation was initiated: Drilling of well
Amount claimed: 7 gpm Absolute
Use: Domestic, recreation, fire fighting

Name of Structure: Moraine Park Well No. 1
Legal Description: In the SE 1/4 SW 1/4 of Section 33, T. 5 N., R. 73 W.,
whence the NE corner of Section 5, T5N, R73W, bears S
36° 33' E-1463.29 feet.

Source: Big Thompson River
Depth of Well: 15 feet
Date of appropriation: July, 1959
Date water applied to beneficial use: September, 1959
How appropriation was initiated: Drilling of well
Amount claimed: 79 gpm Absolute
Use: Domestic, recreation, fire fighting

Name of Structure: Moraine Park Well No. 2
Legal Description: In the SE 1/4 SW 1/4 of Section 33, T. 5 N., R. 73 W.,
whence the NE corner of Section 5, T5N, R73W, bears S
45° 21' E 1600 feet.

Source: Big Thompson River
Depth of Well: 100 feet
Date of appropriation: September, 1970
Date water applied to beneficial use: June, 1971
How appropriation was initiated: Drilling of well
Amount claimed: 185 gpm Absolute
Use: Domestic, recreation, fire fighting

Name of Structure: Moraine Park Well No. 3
Legal Description: In the SE 1/4 SW 1/4 of Section 33, T. 5 N., R. 73 W.,
whence the NE corner of Section 5, T4N, R73W, bears S
47° 21' E 1600 feet.

Source: Big Thompson River
Depth of Well: 50 feet
Date of appropriation: August, 1984
Date water applied to beneficial use: September, 1984
How appropriation was initiated: Developing well
Amount claimed: 80 gpm Absolute
Use: Domestic, recreation, fire fighting

Name of Structure: Sprague Lake Picnic Area Well
 Legal description: In the SW 1/4 SE 1/4, Section 7, T. 4 N., R. 73 W.,
 whence the SW corner of Section 7, T. 4 N., R. 73 W.,
 bears S. 74° 30' W, 3100 feet.
 Source: Glacier Creek, tributary to Big Thompson River
 Depth of Well: 63 feet
 Date of appropriation: August, 1982
 Date water applied to beneficial use: September, 1982
 How appropriation was initiated: Drilling of well
 Amount claimed: 13 gpm Absolute
 Use: Domestic, recreation, fire fighting

Name of Structure: Black Cabin Well
 Legal description: In the NW 1/4 SE 1/4, Section 32, T. 4 N., R. 73 W.
 Source: Big Thompson River
 Depth of well: Alluvium
 Date of initiation of appropriation: October, 1964
 Date water applied to beneficial use: October, 1964 ¹⁹⁶⁵
 How appropriation was initiated: Drilling of well
 Amount claimed: 10 gpm Absolute
 Use: Domestic, recreation, fire fighting

Name of Structure: Hallowell Park Well
 Legal description: In the SE 1/4 NW 1/4 of Section 6, T. 4 N., R. 73 W.,
 whence the monumented corner common to lots 6, 7, 10, 8
 and 11, of said Section 6 bears N 2° 24' E, 1335.60
 feet.
 Source: Glacier Creek, tributary to Big Thompson River
 Depth of well: 122 feet
 Date of appropriation: April, 1965
 Date water applied to beneficial use: June, 1965
 How appropriation was initiated: Drilling of well
 Amount claimed: 50 gpm Absolute
 Use: Domestic, recreation, fire fighting

Name of Structure: Aspenglen Campground Well
 Legal description: In the SE 1/4 NE 1/4 of Section 17, T. 5 N., R. 73 W.,
 at a point whence the N. 1/16 corner of Sections 16 and
 17, T5N, R73W, bears N 67° 39' E., 1056.36 feet.
 Source: Fall River, tributary to Big Thompson River
 Depth of well: 101 feet
 Date of appropriation: June, 1965
 Date water applied to beneficial use: August, 1965
 How appropriation was initiated: Drilling of well
 Amount claimed: 55 gpm Absolute
 Use: Domestic, recreation, fire fighting

Boulder County

Name of Structure: Deer Haven Well

Legal description: In the SE 1/4 NW 1/4 of Section 22, T. 3 N., R. 73 W.,
whence the NE corner of Sections 22, bears N51° 15' E
3700 feet.

Source: North Saint Vrain Creek

Depth of well: 150 feet

Date of appropriation: May, 1977

Date water applied to beneficial use: July, 1977

Amount claimed: 10 gpm Absolute

Use: Domestic, recreation, fire fighting

5. This is a partial amendment of the application filed by the United States of America in Case No. W-8439-76, as amended W-8789-77 through W-8794-77. This amendment is in lieu of the amendment filed on September 4, 1984.
6. The United States of America 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 date.

ROBERT N. MILLER
UNITED STATES ATTORNEY

By _____
JOHN E. LINDSKOLD
Attorney, Dept. of Justice
Land and Natural Resources Div.
1961 Stout Street, Drawer 3607
Denver, Colorado 80294

Telephone: (303) 844-3627

STATE OF COLORADO)
) ss:
CITY AND COUNTY OF Denver)

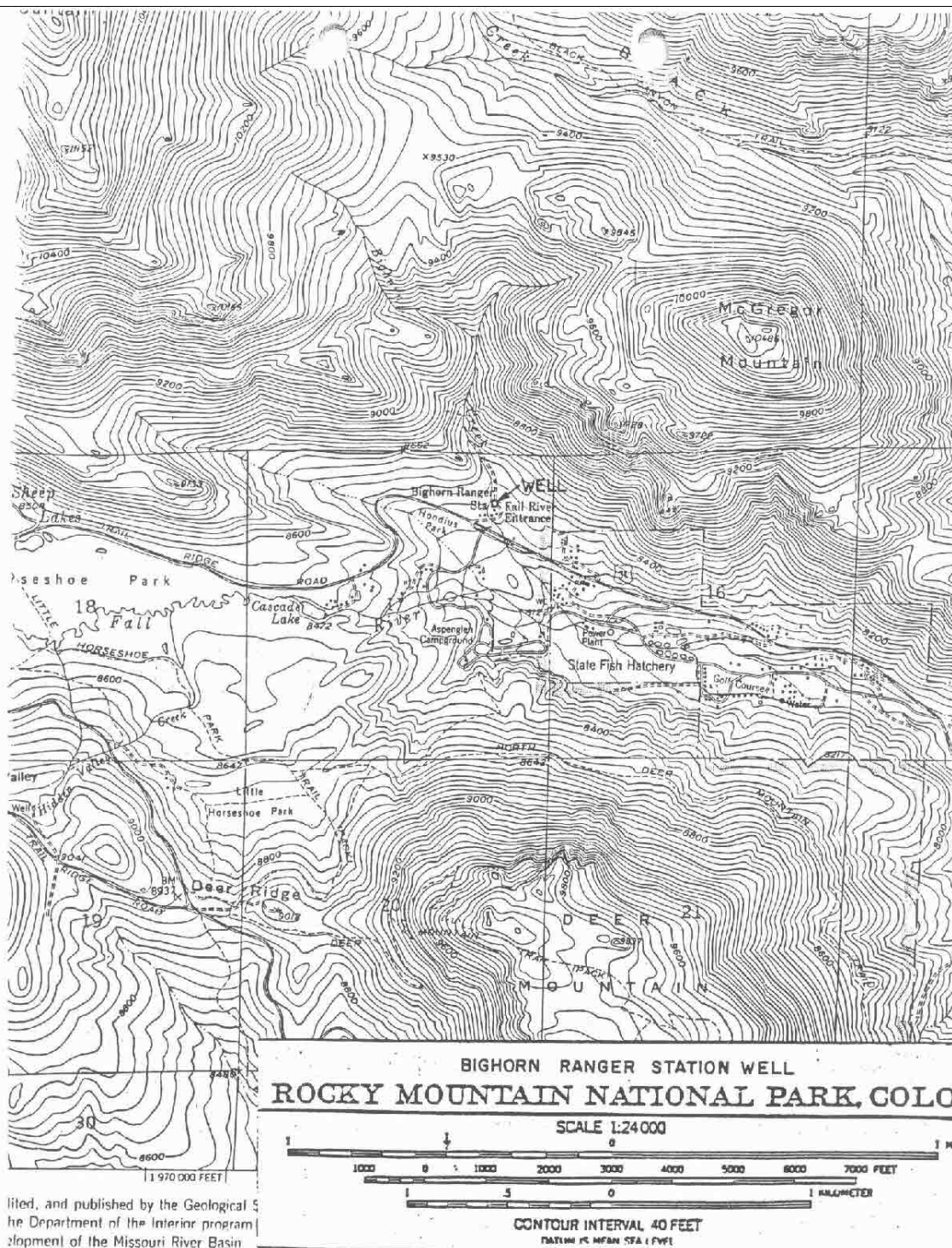
I, Stanley L. Ponce, state under oath that I have read this amended application, and verify its content.

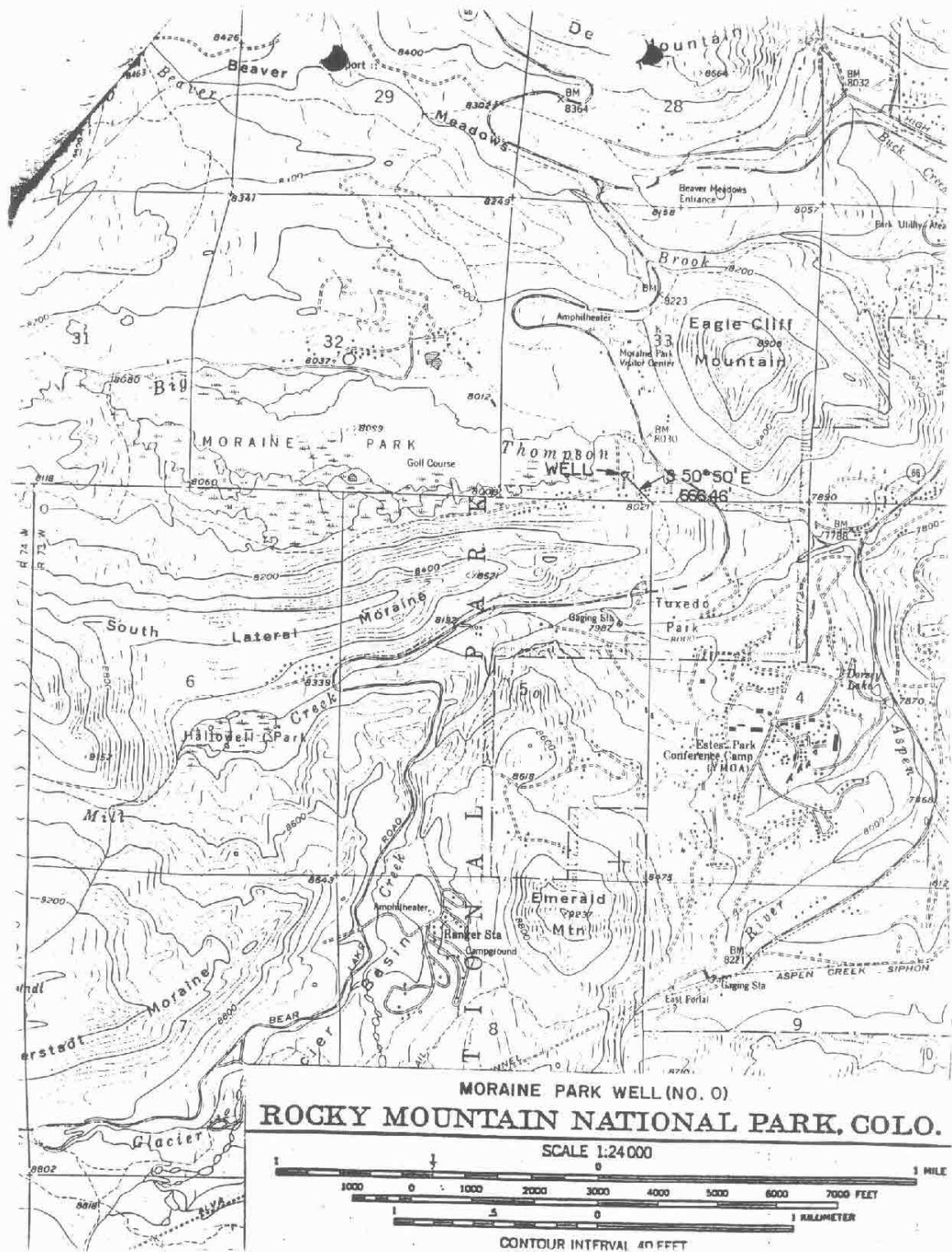
STANLEY L. PONCE

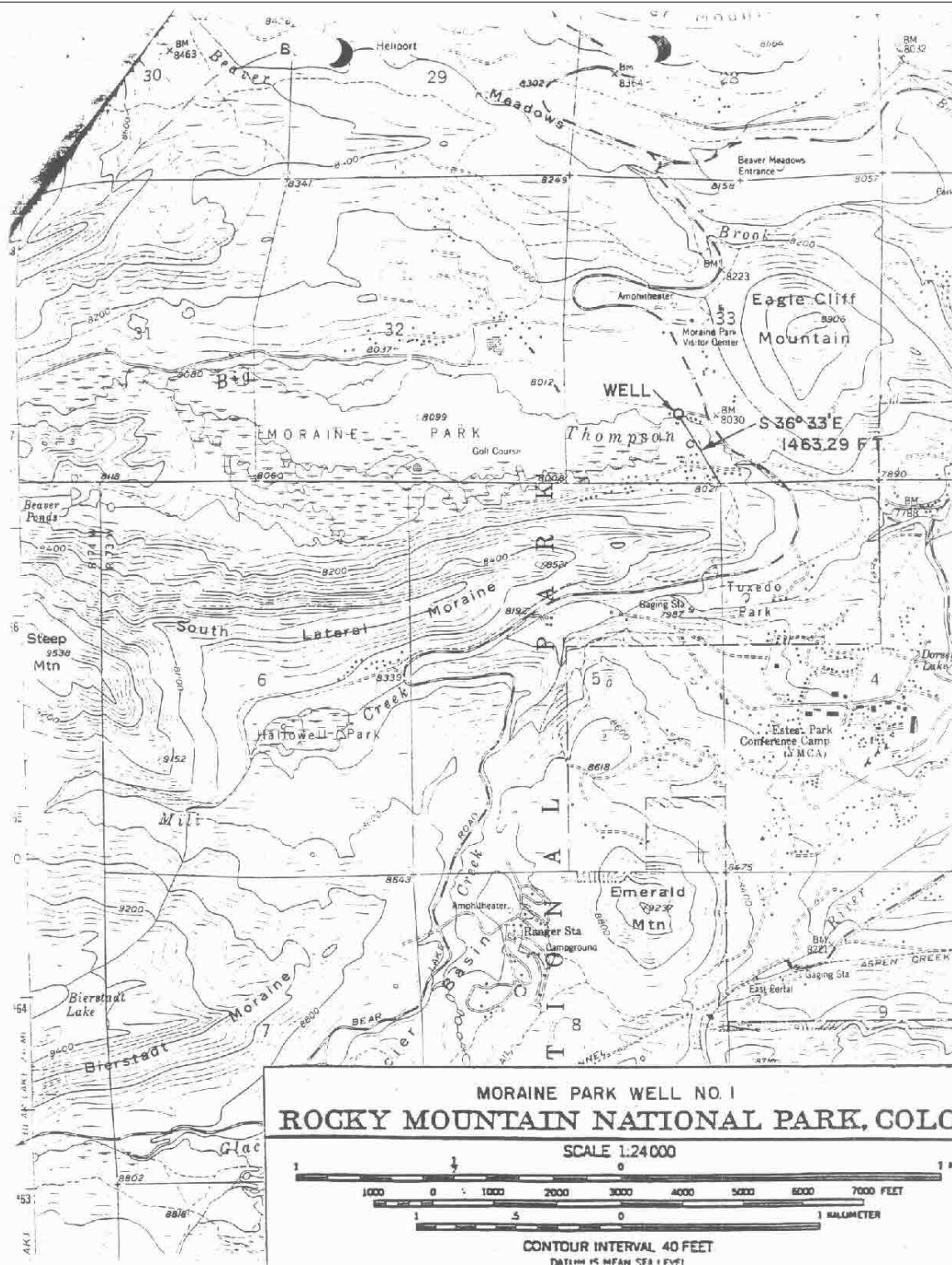
Subscribed and sworn to before me this ____ day of _____, 1984.

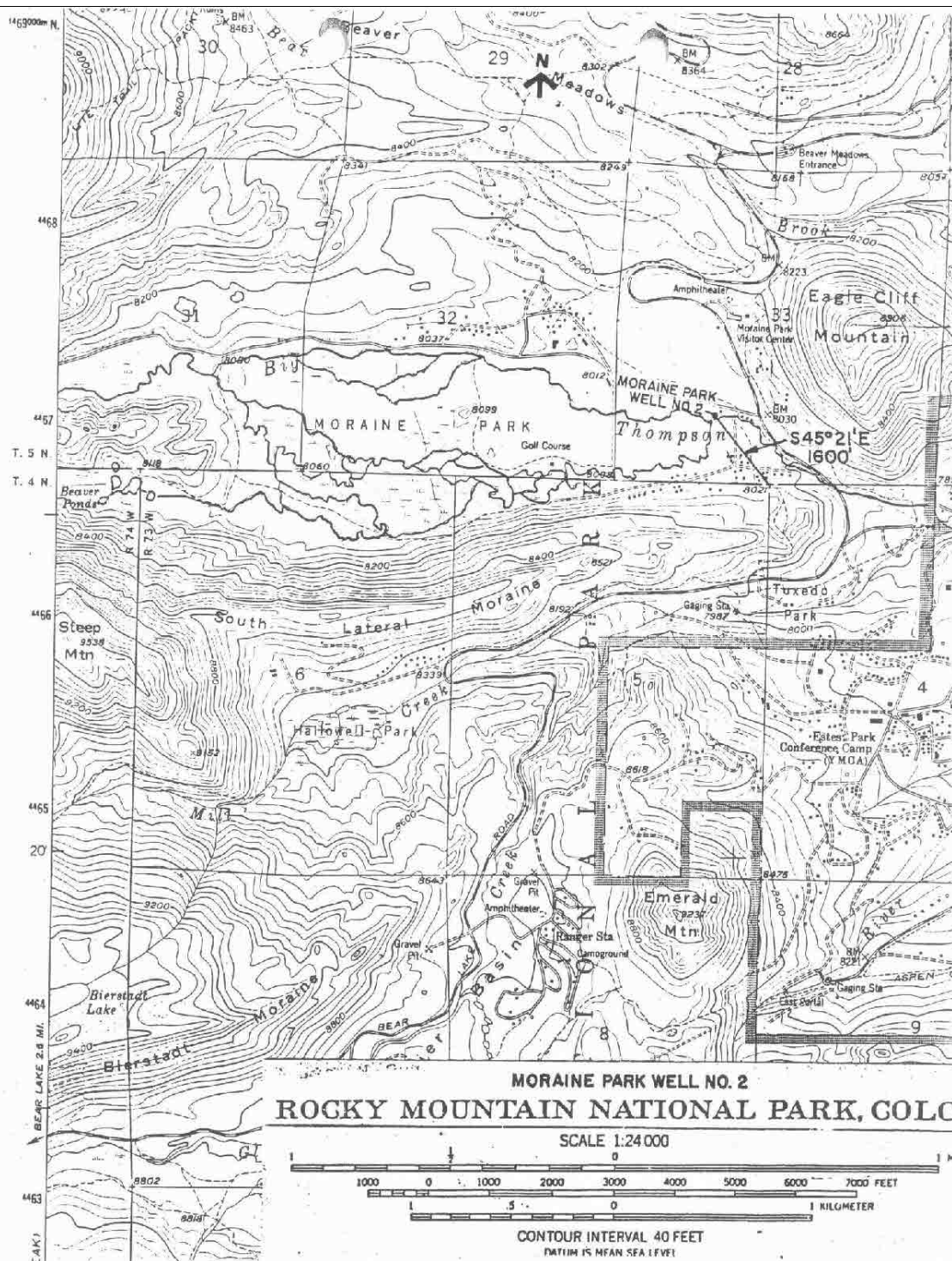
My commission expires:

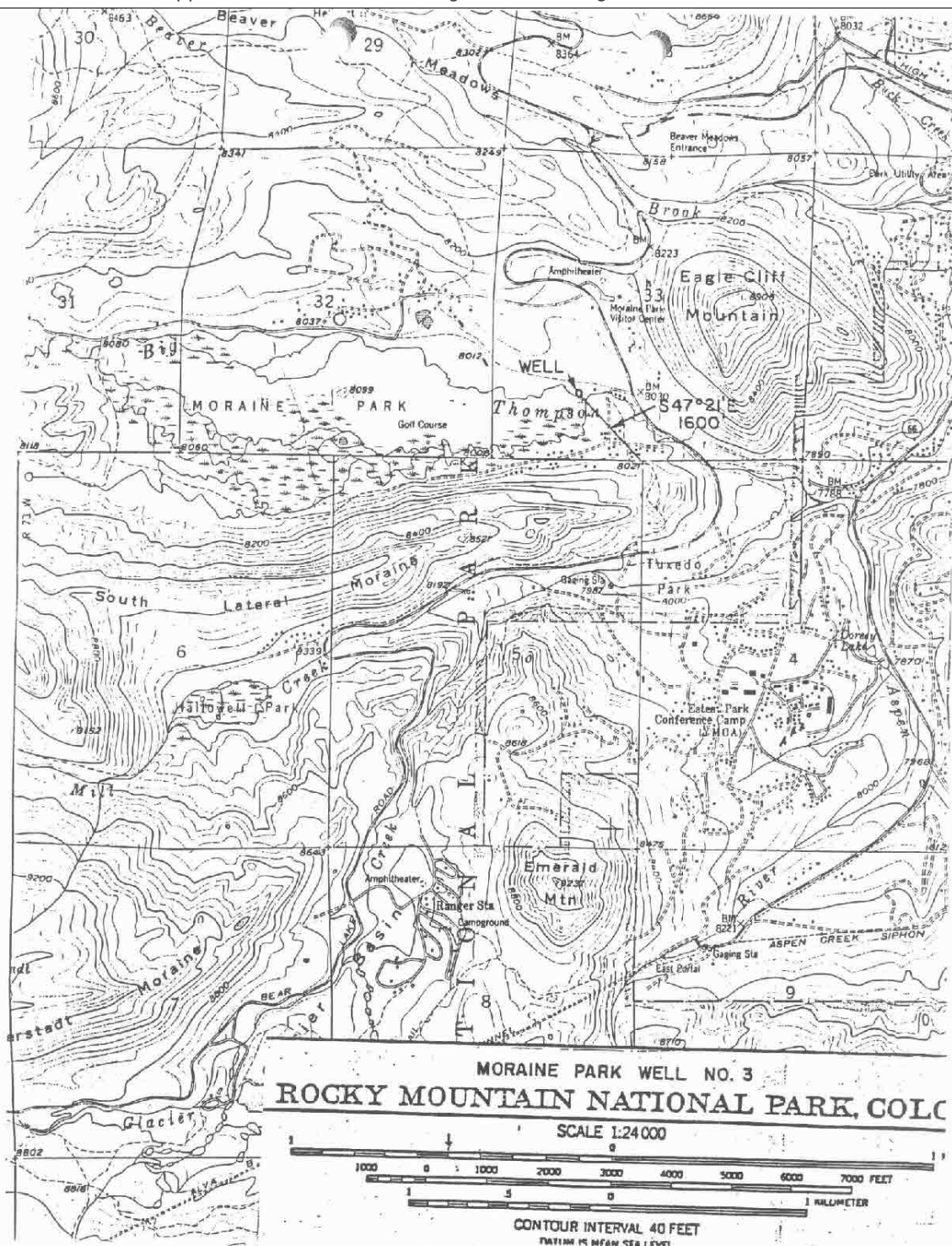
NOTARY PUBLIC

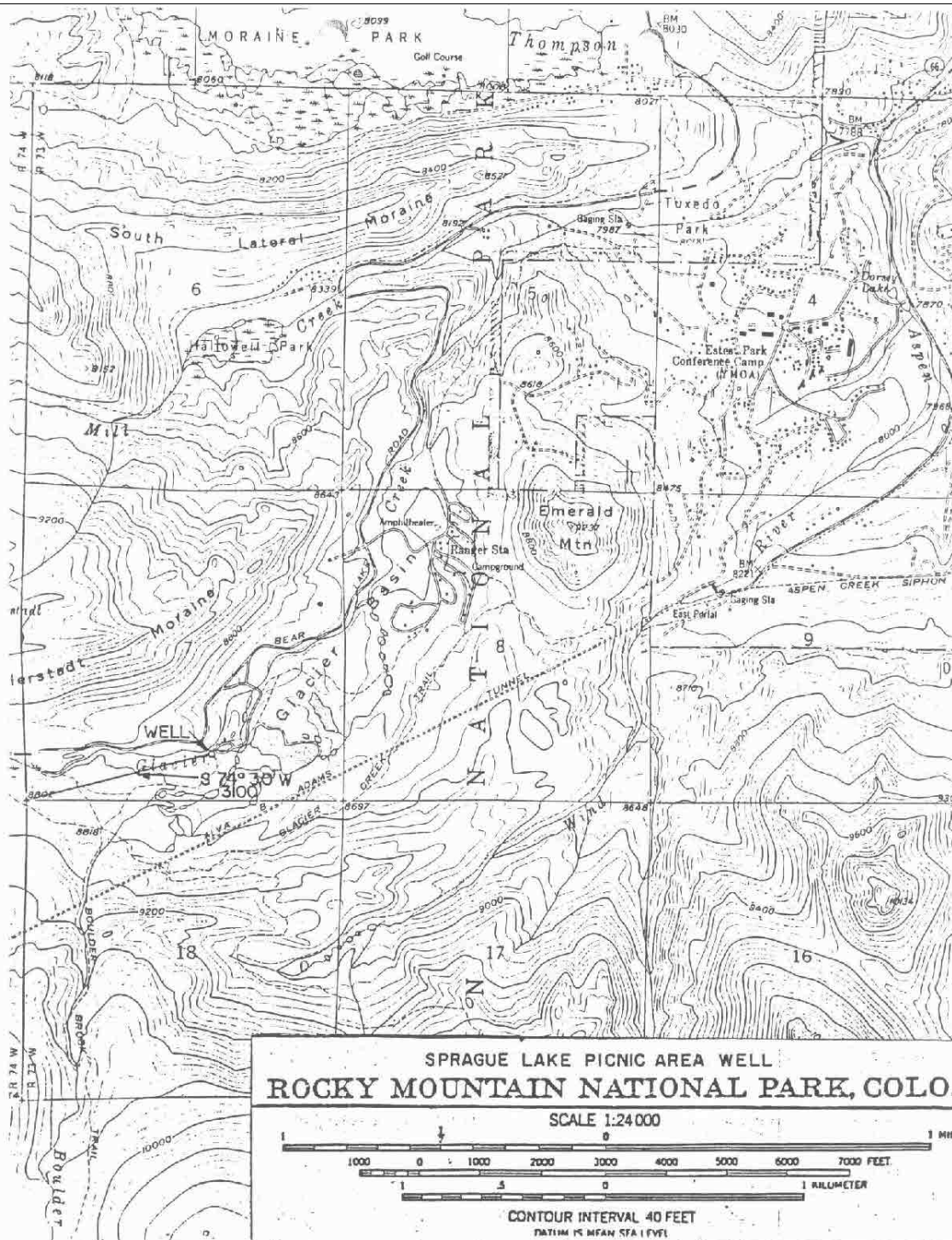




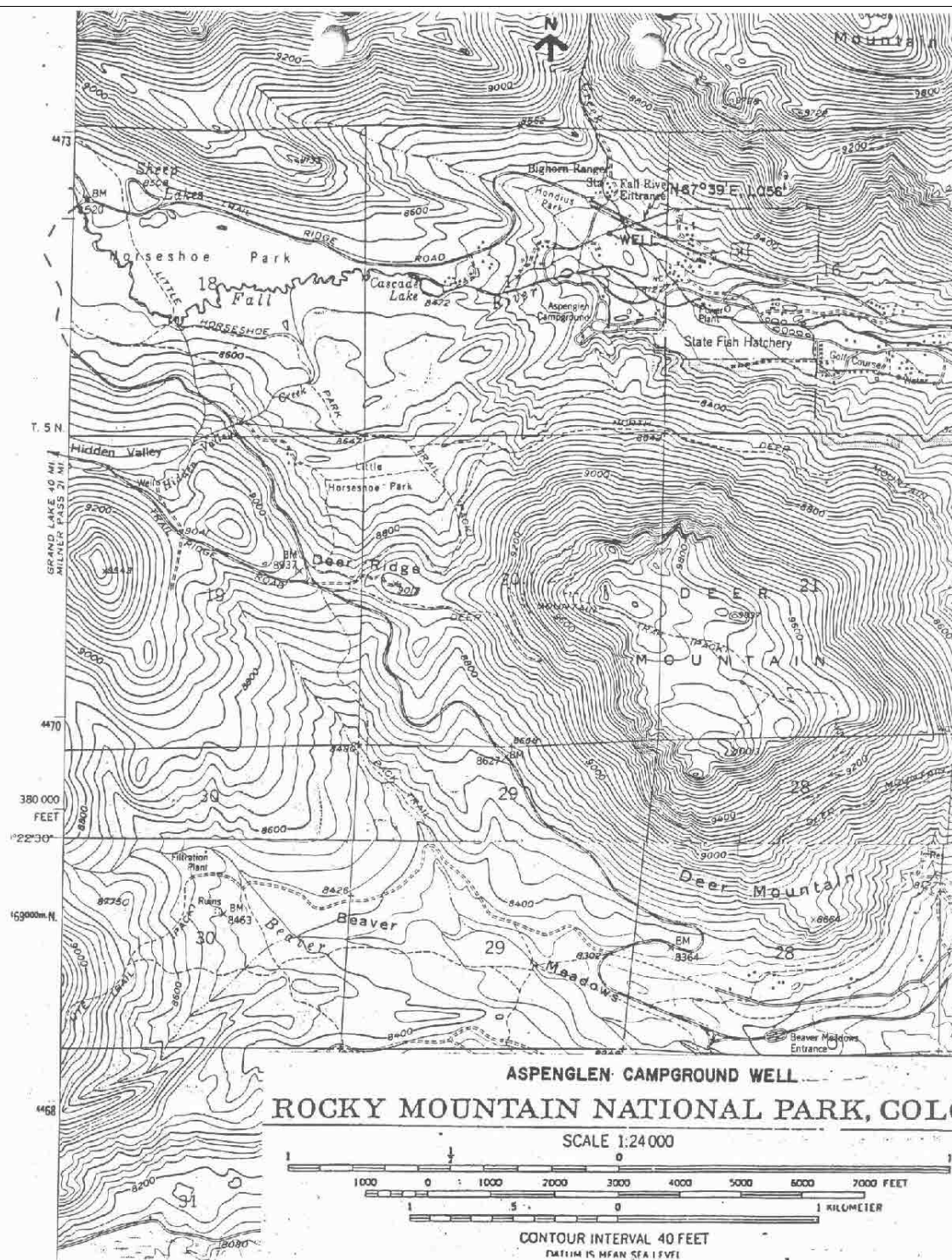


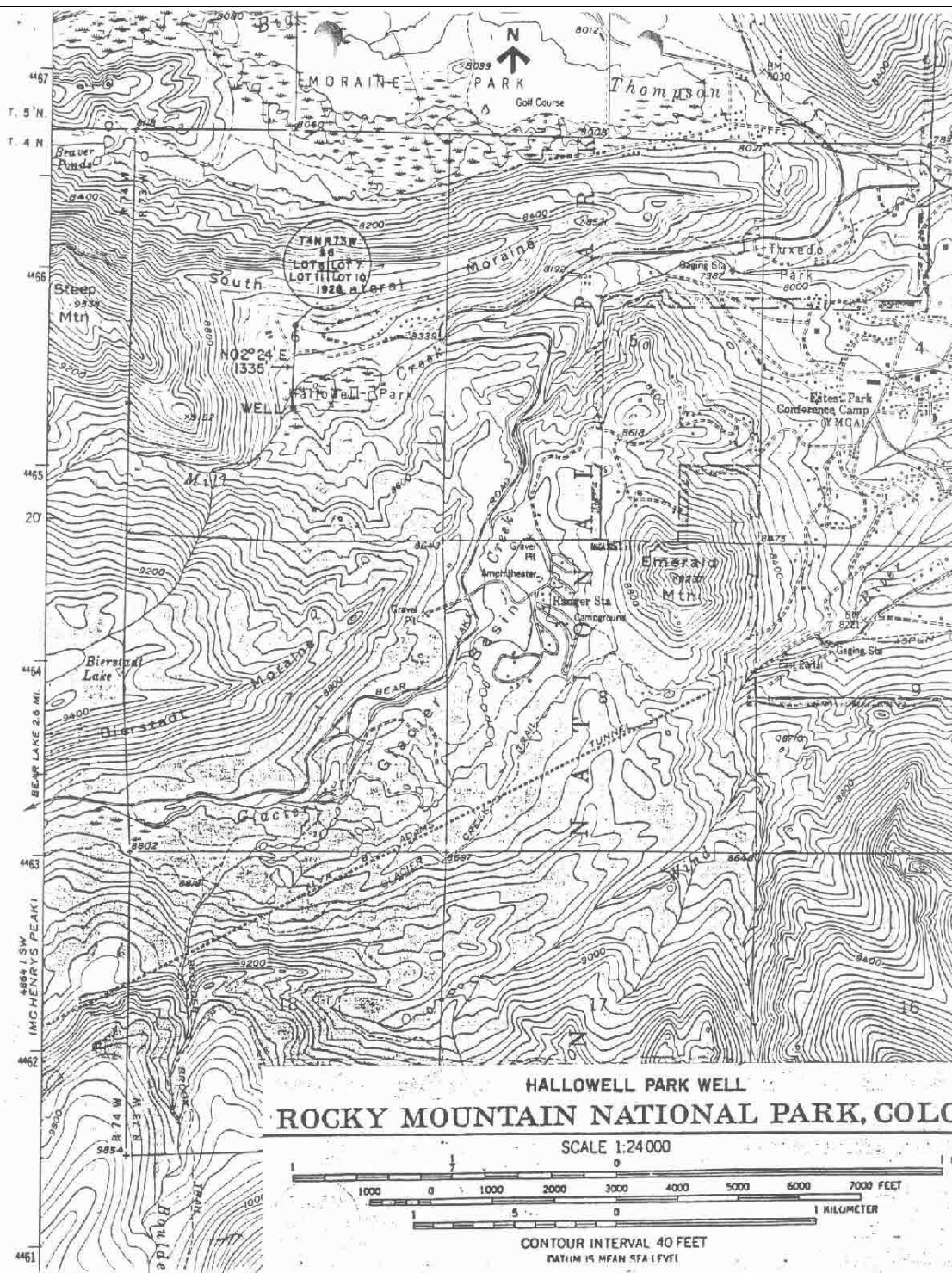


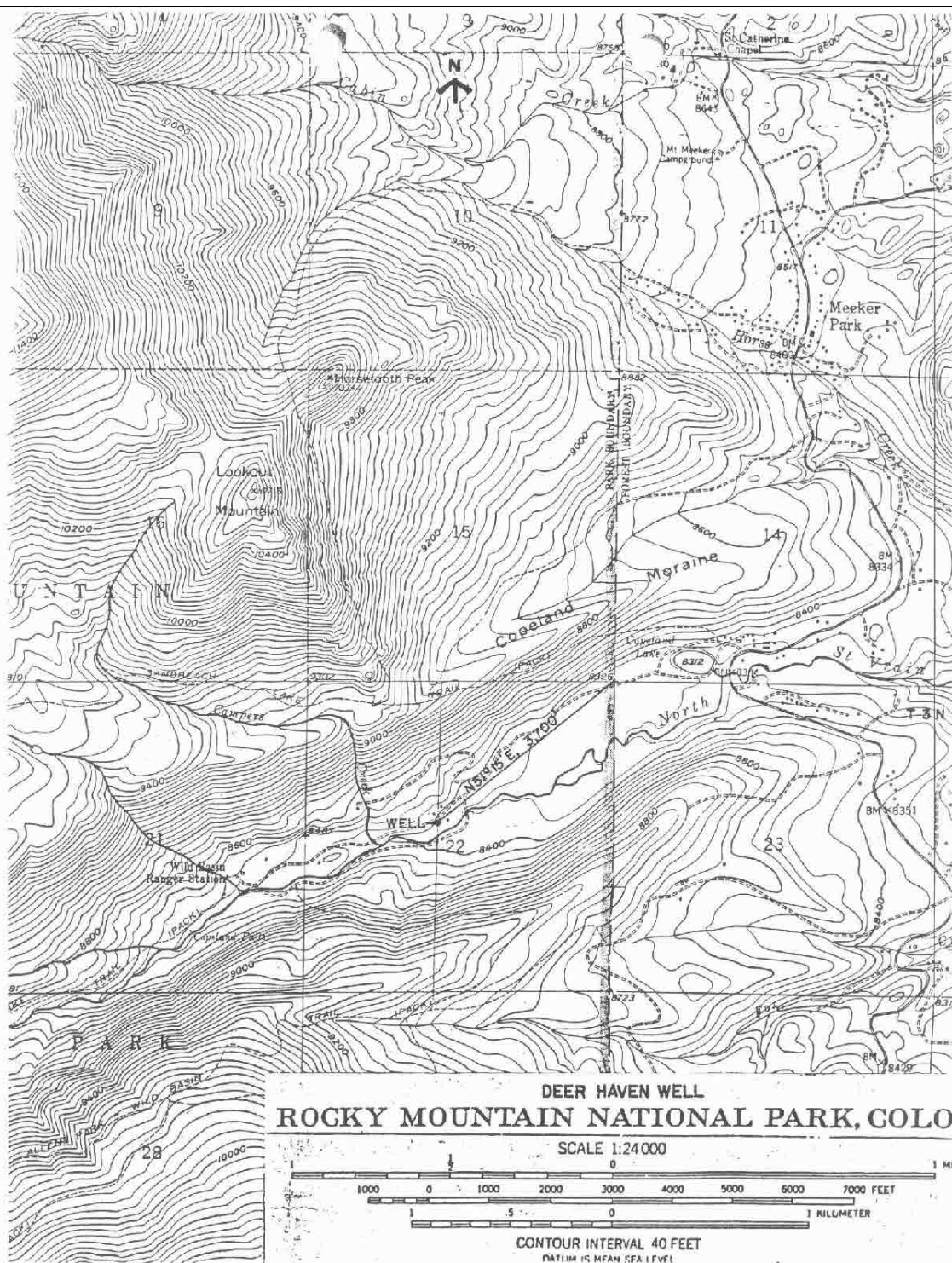












REGISTER OF ACTIONS, DISTRICT COURT WATER DIVISION NO. 1 STATE OF COLORADO

CAPTION

CASE NUMBER

IN THE MATTER OF THE APPLICATION FOR WATER RIGHTS OF
UNITED STATES OF AMERICA

W-8791-77

IN LARIMER COUNTY

ATTORNEYS:

HANK MESHORER
P. O. Box 1656
Denver, CO 80201

NATURE OF ACTION:

APPLICATION FOR UNDERGROUND WATER RIGHT - 7 WELLS

DATE	MICRO. NO. OR BOOK/PAGE	FILINGS AND ORDERS
12-29-77		Application filed
12-29-77		Order of Referral to Water Referee
12-29-77		Order Extending Time for Referee's Ruling to 6-30-79
2-24-78		Motion and Order entered allowing objectors in W-8439 to be objectors in this case.
2/28/78	*	Statement of Opposition filed in behalf of Northern Colorado Water Conservancy District, City & County of Denver, City of Westminster, Central Colorado Water Conservancy District, City of Greeley, St. Vrain and Left Hand Water Conservancy District, City of Fort Collins, City of Longmont, City of Broomfield and City of Thornton by Messrs. John M. Sayre, Robert V. Trout, Wayne D. Williams, John U. Carlson, Alvin L. Steinmark, William E. Bohlender, Kim R. Lawrence, Ward H. Fischer, David F. Jankowski and Kenneth L. Broadhurst. Copy sent to Hank Meshorer on 3/15/78.
2/28/78	*	Statement of Opposition filed in behalf of the State of Colorado, its departments and agencies, and on behalf of its citizens by David W. Robbins, Deputy Attorney General. Copy sent to Meshorer on 3/15/78.
2-28-78		Statement of Opposition filed in behalf of City of Longmont by David F. Jankowski.
2/28/78		*Statement of Opposition filed by Michael White and David Jankowski of Yegge, Hall, Evans for the City of Longmont. Certificate of mailing attached to the Statement.
4/11/78		Objection to and Motion to Strike or Dismiss all Untimely Filings of Statements of Opposition filed.
4/17/78		Notice of Hearing filed (May 8, 1978, 8:30 a.m.)
4/19/78		Subpoena filed - Mac V. Danford.
		Certificate of Mailing filed.

DATE	MICRO. NO. OR BOOK/PAGE	FILINGS AND ORDERS	PAID IN	PAID OUT
5/19/78		Written order entered re: Clerk to prepare mailing list.		
5/19/78		Written order entered re: hearing before the Court upon the "Objection to Proceedings" and upon the "Objection to and Motion to Strike or Dismiss all Untimely Filings of Statements of Opposition".		
6/23/78		Notice to Set Hearing for Petition for Declaratory Judgment filed.		
6/23/78		Notice of Hearing on Petition for Declaratory Judgment filed.		
6/29/78		Entry of Appearance filed by Thomas E. Hellerich as co-counsel for Central Colorado Water Conservancy District.		
7/13/78		Objection of Applicant, United States of America, to the Setting of Time within which Briefs in Support and Opposition to Petition for Declaratory Judgment may be filed.		
7/16/78		Interrogatory filed.		
7/19/78		Alternative Motion for Judgment on the Pleadings or Summary Judgment filed by City of Longmont.		
7/18/78		Alternative Motion for Judgment on the Pleadings or Summary Judgment filed by City of Broomfield.		
7/18/78		Alternative Motion for Judgment on the Pleadings or Summary Judgment filed by City of Idaho Springs.		
7/18/78		Motion for Extension of Time within which to Respond to Interrogatory filed by USA.		
7/20/78		Written order entered re: extension of time.		
7/28/78		Brief re: Statement of Opposition, Supplement to Statement of Opposition, and Brief re: Petition for Declaratory Judgment of Denver, et al filed.		
7/28/78		First Interrogatories and Request for Production by the City of Longmont, Colorado, to the United States filed.		
7/28/78		Written order entered re: briefing schedule.		
7/31/78		Brief in Support of Petition for Declaratory Judgment filed.		
8/3/78		Notice of Hearing filed. (City of Idaho Springs)		
8/3/78		Notice of Hearing filed. (City of Broomfield)		
8/3/78		Notice of Hearing filed. (City of Longmont)		
8/3/78		CLERK'S FEES AND OTHER RECEIPTS		
12-29-77		Box fee	26.00	
9-4-84		AMENDED APPLICATION FOR SURFACE AND UNDERGROUND WATER RIGHTS filed by JELindskold.		
10-4-84		Order Granting United States' Motion for Leave to file Amended Applications filed by JELindskold.		
10-4-84		AMENDED APPLICATION FOR SURFACE AND UNDERGROUND WATER RIGHTS filed by JELindskold.		
12-17-84		S.O. filed by David Jankowski, 511 16th Street, #300, Denver, CO 80202; on behalf of the City of Longmont, w/cert mlg.	\$3810	
12-28-84		SUMMARY OF CONSULTATION FILED, mailed	\$20.00	
1-31-85		SUMMARY OF CONSULTATION FILED, mailed		
9/2/86		CONTINUED TD-RSL		
9/1/87		CONTINUED TD-RSL		
3-1-88		TD(RSL) ORDER OF CONTINUANCE set September 6, 1988 Term day.		
3-7-89		TD(RSL) Cont.		
10/5/89		TD(RSL) Cont.		
3/6/90		TD RSL cont.		
9/4/90		TD RSL Cont. to 3/91		
3-13-91		E.A. AND NOTICE OF CHANGE OF ADDRESS filed by Cliff Seigneur on behalf of the State, 110 16th St., 10th Fl., Denver, CO 80202 w/cert mlg.		
RESUME BOOK		SHERIFF FEES, WITNESS FEES, MILEAGE, ETC.	AMOUNT	
BOOK	PAGE			
3/5/91	TD RSL	Cont. to 9/91		
7/3/91	TD RSL	Cont. to 3/92		
10-3-91		Letter to Lynn Johnson from RSL requesting info.		
1-13-92		Letter to RSL from Lynn Johnson in response to letter of 10-3-91		
3/7/92		TD RSL Cont. to 9/92		
9/1/92		TD RSL Cont. to 3/93		

"CARD" NO. W-8791-77

DATE	MICRO. NO. OR BOOK/PAGE	FILINGS AND ORDERS
9-28-92		NOTICE OF CHANGE OF ADDRESS filed by Cliff Seigneur atty for the State New address: 1525 Sherman St., 5th Fl., Denver, CO 80203
10-23-92		Letter to RSL from Deirdre Hills with copy of well permit
10-30-92		RULING SIGNED BY RSL. MAILED BY CERT. MAIL.
11-19-92		PROTEST TO THE RULING OF THE REFEREE faxed by Cliff Seigneur atty for the State w/ cert mlg.
3/2/93	TD RAB	Cont. to 9/93
4-8-93		REVISED RULING SIGNED BY RSL. MAILED BY CERT. MAIL.
4-29-93		DECREE ENTERED BY RAB. Copies mailed to all parties

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

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

Rec 415 and 416

P. O. Box 1086, Estes Park, Colorado

PERMIT TO USE GROUND WATER
AND NOTICE OF WELL REGISTRATION Domestic

To: National Park Service
Rocky Mountain National Park of P.O. Box 1086, Estes Park, Colorado.

In accordance with the provisions of Section 2 of the

COLORADO GROUND WATER LAW

As amended by SB -233 - 1961

The well situated SE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 33, Twp. 5 N., Rge. 73 W., 6 PM, Larimer County

Has been regularly registered in this office and assigned No. R71-924
and this Permit is issued for the use described in the statement filed.

Signed and Sealed in Denver, Colorado

this 4 day of January, 19 62.

DIVISION OF WATER RESOURCES
OFFICE OF THE STATE ENGINEER

J. C. Whitten
State Engineer

By Geo W. Colburn
Authorized Agent

KEEP THIS AS A PERMANENT RECORD

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

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

REGISTRATION NO. N-924 OF WELL

Registrant National Park Service
Rocky Mountain National Park Date Dec. 28 19 61
Box 1086
P.O. Address Estes Park, Colorado, Colo.

WELL DATA
Depth 40 ft. Diameter 6 in.
Casing : 30 ft. Plain; 10 ft. Perfor.
Static Water Level _____ ft. from top
Yield 7 (gpm)(cfs) from _____ ft.

Used for Domestic purposes on/at

Moraine Park Cottages
(legal description of land or site)

Water conveyed by _____, size _____

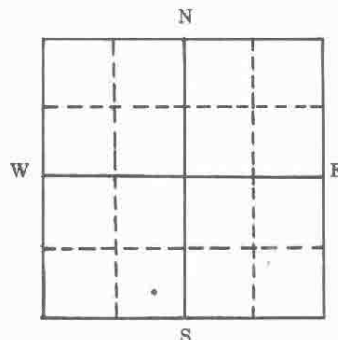
PUMP DATA
Type Reda Pump Size 1/2 H.P.
Centrifugal submersible.
Driven by Electric at 1760 RPM

Well was first used October, 19 57
cfs
for _____ using _____ gpm

Well enlarged _____, 19 _____ to
deepened _____
(gpm)(cfs)(ft)

LOG SHOULD BE GIVEN ON REVERSE
SIDE IF AVAILABLE

WELL LOCATION
County Larimer
S.E. 1/4, S.W. 1/4 Section 33,
Twp. 5 N., Rge. 73 W., 6th PM



WELL TO BE LOCATED AS ACCUR-
ATELY AS POSSIBLE WITHIN A
SMALL SQUARE WHICH REPRESENTS
40 ACRES; OR IF IN A TOWN OR
SUBDIVISION FILL IN THE FOLLOW-
ING:

Moraine Park Area
Town or Subdivision
Rocky Mountain National Park
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. Not registered

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 28th day of December, 1961.

My commission expires U.S.C. Title 28, 637. Thomas E. Whitcraft, Acting Superintendent.
Registrant

(SEAL) Wayne H. Hackett, U.S. Commissioner.
Notary Public

Rocky Mountain National Park

FOR STATE ENGINEER'S USE

Located in _____ district, _____ County for _____

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

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

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

Moraine Park No. 67

REGISTRATION NO. N-924 OF WELL

Registrant National Park Service
Rocky Mountain National Park Date Dec. 28 19 61
Box 1086
P.O. Address Estes Park, Colorado, Colo.

WELL DATA
Depth 40 ft. Diameter 6 in.
Casing : 30 ft. Plain; 10 ft. Perfor.
Static Water Level _____ ft. from top
Yield 7 (gpm)(cfs) from _____ ft.

WELL LOCATION
County Larimer
S.E. $\frac{1}{4}$, S.W. $\frac{1}{4}$ Section 33,
Twp. 5 N., Rge. 73 W., 6th PM

Used for Domestic purposes on/at
Moraine Park Cottages
(legal description of land or site)

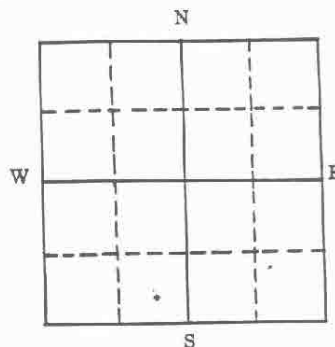
Water conveyed by _____, size _____

PUMP DATA
Type Reda Pump Size $\frac{1}{2}$ H.P.
Centrifugal submersible.
Driven by Electric at 1760 RPM

Well was first used October, 19 57
for _____ using _____ gpm

Well enlarged _____, 19 _____ to
deepened _____ (gpm)(cfs)(ft)

LOG SHOULD BE GIVEN ON REVERSE
SIDE IF AVAILABLE



WELL TO BE LOCATED AS ACCUR-
ATELY AS POSSIBLE WITHIN A
SMALL SQUARE WHICH REPRESENTS
40 ACRES; OR IF IN A TOWN OR
SUBDIVISION FILL IN THE FOLLOW-
ING:

Moraine Park Area
Town or Subdivision
Rocky Mountain National Park
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. Not registered

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 28th day of December, 1961.

My commission expires U.S.C. Title 28, 637.

Thomas E. Whitcraft, Acting Superintendent,
Registrant
Rocky Mountain National Park

(SEAL) Wayne H. Hackett, U.S. Commissioner,
Notary Public

FOR STATE ENGINEER'S USE

Located in _____ district, _____ County for _____

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

Supporting Hydro Data

FORM NO GWS-31 04/2005		WELL CONSTRUCTION AND TEST REPORT		For Office Use Only	
STATE OF COLORADO, OFFICE OF THE STATE ENGINEER 1513 Sherman St., Room 818, Denver, CO 80203 Phone - Info (303) 866-3587 Main (303) 866-3581 Fax (303) 866-3589 http://www.water.state.co.us					
1. WELL PERMIT NUMBER: 45796 F R					
2. WELL OWNER INFORMATION					
NAME OF WELL OWNER: NATIONAL PARK SERVICE / ROCKY MTN NATIONAL					
MAILING ADDRESS: 1000 US HWY 36					
CITY: ESTES PARK STATE: CO ZIP CODE: 80517					
TELEPHONE NUMBER: (970) 586-1285					
3. WELL LOCATION AS DRILLED: SE 1/4, SW 1/4, Sec. 33, Twp. 5, Range 73, E or W					
DISTANCES FROM SEC. LINES: 1299 ft. from N or S section line and 1460 ft. from E or W section line					
SUBDIVISION: LOT BLOCK FILING (UNIT)					
Optional GPS Location: GPS Unit must use the following settings: Format must be UTM, Units must be meters, Datum must be NAD83, Unit must be set to true N, Zone 12 or Zone 13					
Owner's Well Designation: Easting:					
STREET ADDRESS AT WELL LOCATION: Northing:					
4. GROUND SURFACE ELEVATION UNKNW feet					
DATE COMPLETED 11/11/11 TOTAL DEPTH 105 feet					
5. GEOLOGIC LOG					
Depth	Type	Grain Size	Color	Water Loc.	
0-35	SILTY SAND	MED		X	
	GRAVEL/COBBLE				
35-55	SAND/GRAVEL	COARSE		X	
55-105	GRANITE				
93-100				X	
6. HOLE DIAM (in.)					
12	0	20			
10	20	58			
6	58	105			
7. PLAIN CASING:					
OD (in)	Kind	Wall Size (in)	From (ft)	To (ft)	
10.5/8	STEEL	250	12	27	
8	PLASTIC	SCH 40	17	37	
PERFORATED CASING: Screen Slot Size (in): 30					
8	S STEEL	STANDARD	37	57	
8. FILTER PACK:					
Material	Size	Interval			
9. PACKER PLACEMENT:					
Type	Depth				
10. GROUTING RECORD					
Material	Amount	Density	Interval	Placement	
CEMENT	28 BAGS	7-1	3-20	PUMPED	
CEMENT	16 BAGS	7-1	57-105	TREMMIE	
Remarks					
11. DISINFECTION Type HTH					
12. WELL TEST DATA					
Check box if Test Data is submitted on Form Number GWS 39 Supplemental Well Test					
TESTING METHOD AIR/PUMPED					
Static Level 9 ft. Date/Time measured: 12/14/11 8:49 AM					
Pumping Level 25.43 ft. Date/Time measured: 12/15/11 8:45 AM					
Production Rate 88 gpm					
Remarks: AIR TESTED FOR 6 HRS					
Test Length (hrs) 24					
13. I have read the statements made herein and know the contents thereof, and they are true to my knowledge. This document is signed and certified in accordance with Rule 17.4 of the Water Well Construction Rules, 2 CCR 402-2. [The filing of a document that contains false statements is a violation of section 37-91-108(1)(e), C.R.S., and is punishable by fines up to \$5000 and/or revocation of the contracting license.]					
Company Name: WILLIAMS DRILLING CO					
Phone: (970) 641-1084					
License Number: 648					
Mailing Address: 307 N MAIN ST SUITE 2 GUNNISON CO 81230					
Signature: Franklin L. Roper					
Print Name and Title: FRANKLIN L. ROPER / VICE PRESIDENT					
Date: 1/5/2012					

Water Resources Division

National Park Service
U.S. Department of the Interior



1201 Oak Ridge Dr., Suite 250
Ft. Collins, CO 80525

December 2011

Larry Martin
Hydrogeologist
970-225-3515

Construction of Two Water-Supply Wells at Moraine Park, Rocky Mountain National Park

Water for the Headquarters East water system at Rocky Mountain National Park has been provided by shallow wells in Moraine Park for many years; since about 1960. The Headquarters East water system provides water to NPS facilities in Moraine Park, including the campground and visitor center, the Beaver Meadows entrance station and visitor center, and the headquarters area, including park offices, maintenance and housing areas. The existing wells are so close to the Big Thompson River that the source would probably be classified as "groundwater under the direct influence of surface water", which would require the water to be treated as if it were from a surface-water source.

Two new wells were constructed at Moraine Park with the goal of obtaining a water supply that would be classified as a "groundwater" source. The new wells needed to be located within 200 feet of the existing wells to transfer the water right. If the new wells were farther than 200 feet from the existing wells, it would be necessary to go through the water court to get a new water right. The goals of moving farther from the river and staying within 200 feet of the existing wells greatly limited the options for locating the new wells.

Hydrogeology

Moraine Park is a broad valley that was scoured by glaciers and subsequently refilled with sediments and glacial deposits. Moraine Park is approximately a half mile wide and two miles long. The Big Thompson River meanders across the valley.

The east-west trending ridges to the north and south of Moraine Park are lateral moraines; material deposited along the sides of a glacier. The lateral moraines contain an unsorted mix of sediments, including a large amount of clay and silt. The clay and silt cause the moraine deposits to have low permeability and will not yield much groundwater to wells.

The valley-fill sediments in Moraine Park are primarily alluvium that has been reworked by running water. Sediments are constantly reworked as the river meanders back and forth across the valley. Running water carries away the silt and clay fraction of the sediments, leaving behind sand and gravel which are very permeable and will yield large quantities of groundwater to wells.

Granitic bedrock underlies the alluvium. The granite is essentially impermeable. Small amounts of groundwater may be obtained from fractures in the granite.

Existing Wells

There were two existing wells at Moraine Park (No. 2 and No. 3). Both wells are located within about 20-30 feet of the Big Thompson River (Figure 1).

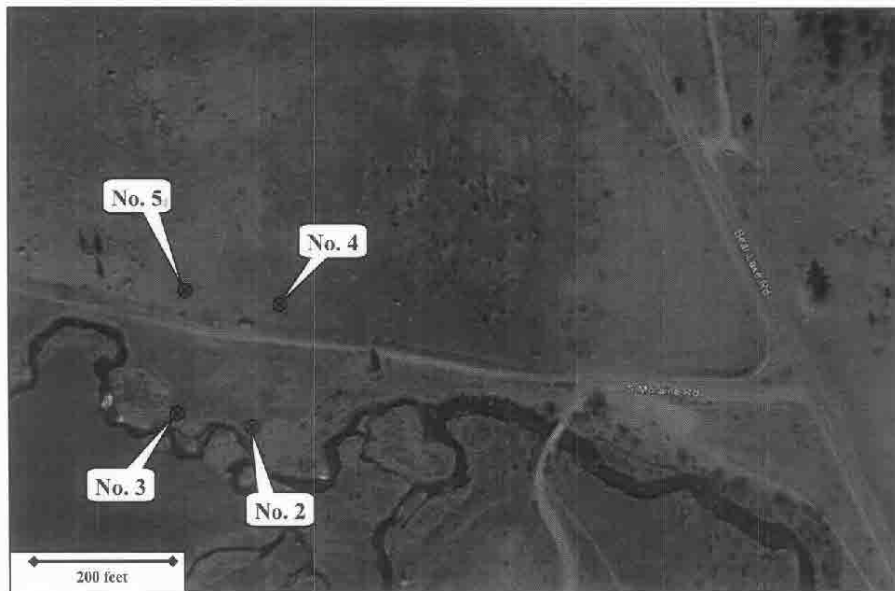


Figure 1. Locations of wells at Moraine Park. Wells No. 2 & 3 were existing wells. Wells No. 4 & 5 were constructed in October-December 2011.

Well No. 2 was constructed in 1970. It was drilled to a depth of 87 feet. There is no mention of encountering bedrock (granite). The drillers' log lists only sand and gravel sediments. The well was completed with Johnson-type well screen which would allow development of a natural gravel filter around the screen and even flow of groundwater to the entire screened area, reducing the potential for continual pumping of fine-grained sediments. Well No. 2 has been the primary water source for the Headquarters East system for many years.

Well No. 3 was constructed in 1984. It was drilled to a depth of 50 feet. There is no mention of encountering bedrock (granite). The drillers' log lists only sand and gravel sediments. The well was completed with perforated steel casing. The openings in perforated casing are too large to allow development of an effective sediment filter around the perforations. Groundwater flow is funneled to the few large openings in the casing, resulting in high velocity flow into the well and a large potential for continual pumping of fine-grained sediments. Well No. 3 has been the backup source for the water system because it does not produce as much water as Well No. 2 and the water tends to have a higher turbidity, both of these drawbacks can be attributed directly to completing the well with perforated casing rather than well screen.

New Wells Constructed in 2011

The alluvial sediments comprising the valley-fill aquifer are the only target zone for a high-capacity well in the Moraine Park area. Since there was no mention of encountering granitic bedrock in the previous wells, it was hoped that the new wells could be screened more than 100 feet below ground surface. Screening the well below 100 feet would help meet the Colorado Dept. of Public Health requirements for separation from surface-water sources. The new wells needed to be located within 200 feet of the existing wells to meet the Colorado Dept. of Water Resources requirements for transferring the existing water rights from the old wells to the new wells. A new water right would be required if the new wells were more than 200 feet distant.

Well No. 4 was drilled in October 2011. It encountered granite at 55 feet, but drilling continued to 105 feet to make certain that it wasn't just a large boulder and because of the desire to have a well that was more than 100 feet deep. About 5 gpm were available from a fracture zone in the granite at about 95 feet below ground surface. The state water well inspector would not allow the well to be completed in two different aquifers (alluvium and granite), so the bottom part of the borehole had to be plugged with cement grout to seal off water from the granite. The log for the well follows:

0-35 feet	Silty-sand, medium sand, gravel, cobbles
35-55 feet	Medium-to-coarse sand and gravel
55-105 feet	Granite (bedrock)

Well No. 4 was completed with 20 feet of Johnson well screen from 35-55 feet. The well screen has 0.040" openings (No. 40 slot size). A schematic drawing of Well No. 4 is shown in Figure 2.

Well No. 5 was drilled in November 2011. Granite was encountered at a depth of 60 feet and drilling continued to the end of that piece of drilling pipe at a depth of 67 feet. The 10 feet of sediments immediately overlying the granite were very dense, containing a lot of clay. These sediments would not be permeable because of the amount of clay. Ten feet of well screen was placed in what appeared to be the most permeable strata from 38-48 feet below ground surface. The log for the well follows:

0-8 feet	Brown, medium sand
8-11 feet	Brown, medium sand and gravel
11-20 feet	Brown, medium sand and boulders
20-45 feet	Brown, medium-to-coarse sand and gravel
45-50 feet	Color changed from orange-brown to gray, medium-to-coarse sand and gravel
50-60 feet	Gray, clay, silt, and gravel, densely compacted sediments
60-67 feet	Granite (bedrock)

Well No. 5 was completed with 10 feet of Johnson well screen from 38-48 feet. The well screen has 0.040" openings (No. 40 slot size). A schematic drawing of Well No. 5 is shown in Figure 3.

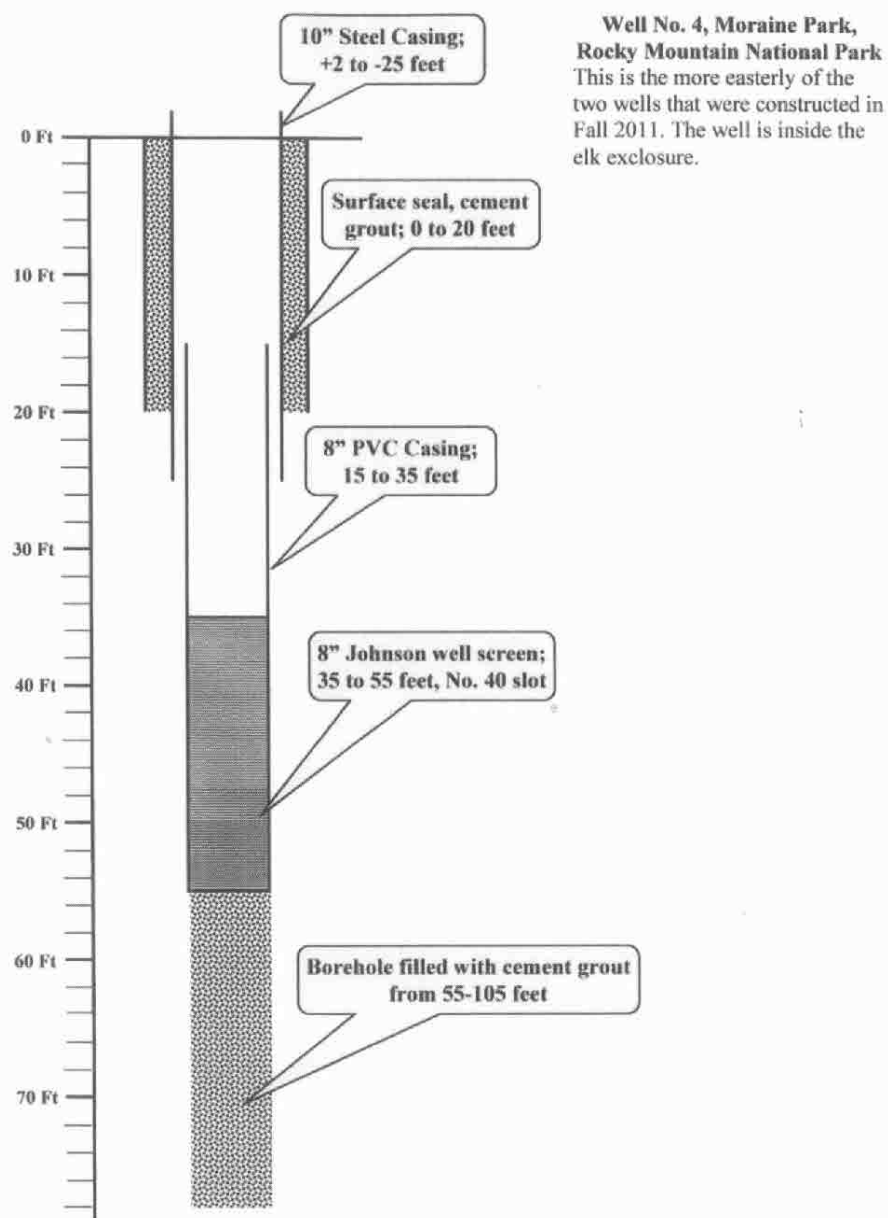


Figure 2. Schematic drawing of Well No. 4.

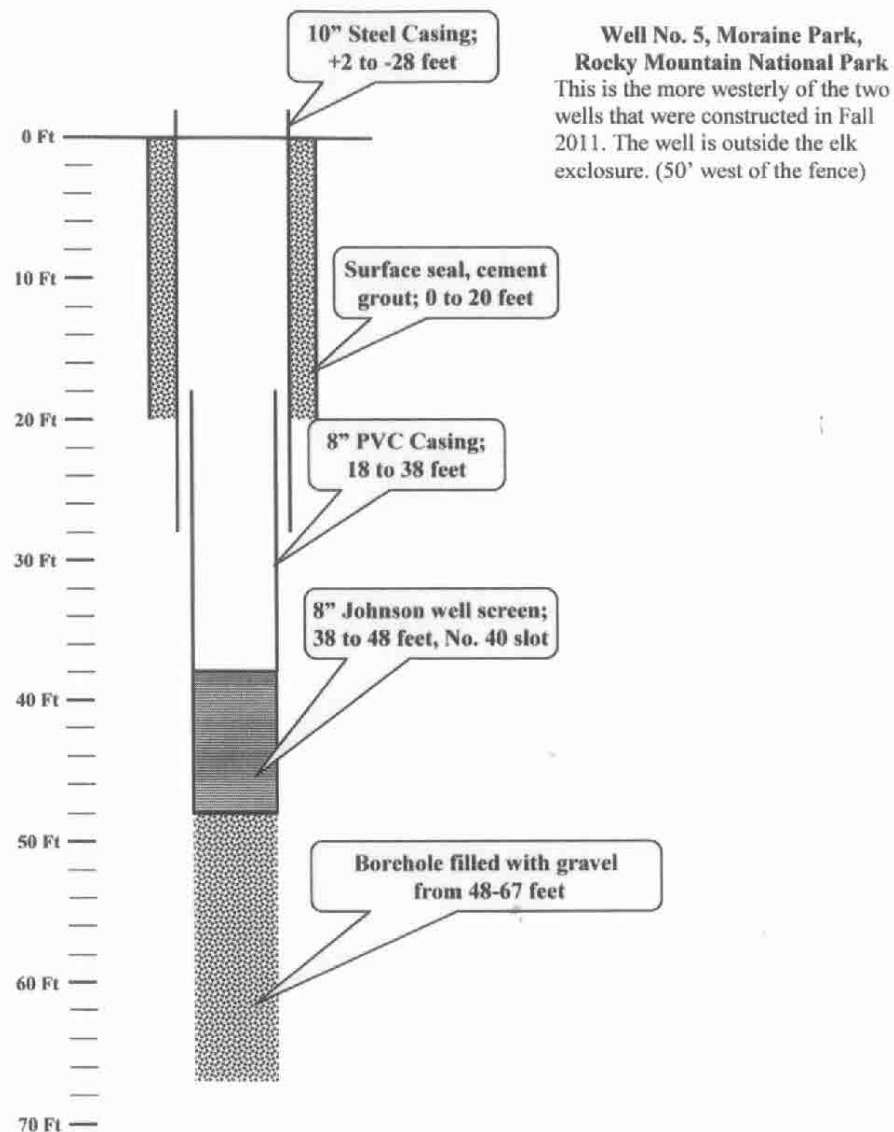


Figure 3. Schematic drawing of Well No. 5.

Both wells were developed by blowing high volumes of air through the drill stem to create turbulent conditions in the well, flushing the fine-grained sediments from the screened area and creating a natural gravel filter. The drill pipe was moved up and down throughout the screened interval to develop the gravel filter. Development of the 20-foot interval in Well No. 4 lasted 6 hours. Development of the 10-foot interval in Well No. 5 lasted 4 hours.

Pumping Tests

Pumping tests were conducted on the two new wells in December 2011.

The static water level in Well No. 4 was 8.7 feet below ground surface. Well No. 4 was pumped for 24 hours. The initial pumping rate was 38 gpm for 1 hour, resulting in drawdown of the water level to 14½ feet below ground surface. The pumping rate was increased to 58 gpm for 2 hours, resulting in drawdown of the water level to 17½ feet below ground surface. The pumping rate was then increased to 88 gpm for 21 hours, resulting in drawdown of the water level to 23 feet below ground surface. The top of the well screen is 35 feet below ground surface. At the maximum sustained pumping rate for this test (88 gpm) the water level remained 12 feet above the top of the screened interval.

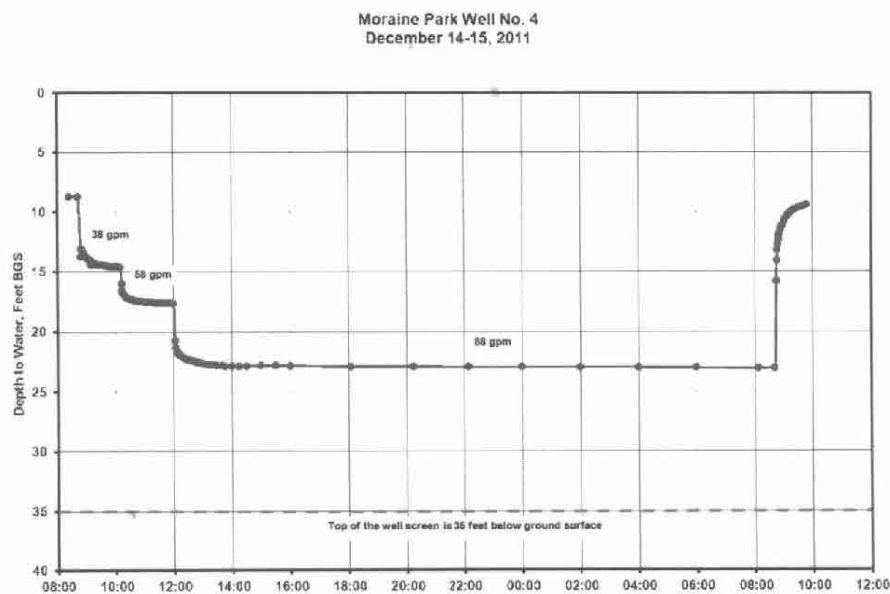
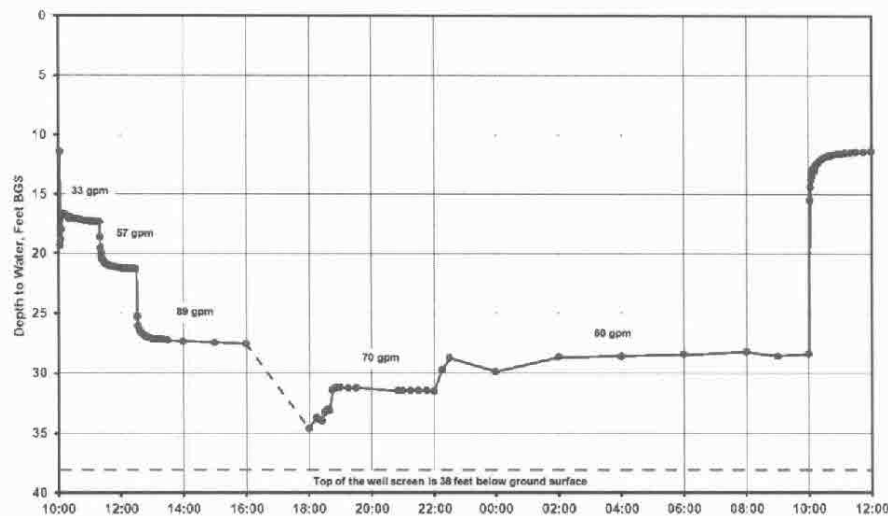


Figure 4. Water level during pumping test of Well No. 4

The static water level in Well No. 5 was 11½ feet below ground surface. Well No. 5 was pumped for 24 hours. The initial pumping rate was 33 gpm for 1 hour, resulting in drawdown of the water level to 17¼ feet below ground surface. The pumping rate was increased to 57 gpm for 1 hour, resulting in drawdown of the water level to 21¼ feet below ground surface. The pumping rate was then increased to 89 gpm, resulting in drawdown of the water level to 27½ feet below ground surface. It appeared that the water level would be stable, as it was during the pumping of Well No. 4, but there was a sudden precipitous drop between 4:00 and 6:00 pm. When the well was checked at 18:00, the pump was sucking air and the water level had probably been drawn down to the screened interval. Water and air surging into the well near the top of the screened interval caused movement of some fine-grained sediment into the well, as observed on the MPA filter. The pumping rate was reduced to find a pumping rate that would allow continuous pumping without drawing the water level down to the screened interval. There was still a slight downward trend in the water level at 70 gpm. At 60 gpm, the water level trend was slightly upward. It would appear that the maximum sustained yield for this well is at least 60 gpm, but probably less than 70 gpm.

Moraine Park Well No. 5
December 15-16, 2011



Conclusions

Two new wells were constructed at Moraine Park. Both wells are more than 200 feet from the Big Thompson River. Further testing will probably be required to determine whether these wells will be classified as a "groundwater" source or as "groundwater under the direct influence of surface water."

An microparticulate test (MPA) was conducted during the pumping test of each well. Water chemistry samples were collected in the last hour of the pumping test at each well. Analytical results will be available in a couple of weeks.

Well No. 4 will probably provide a sustained yield of 100 gpm. Well No. 5 will probably provide a sustained yield of 60-70 gpm. These estimates of sustained yield are only valid if only one well is pumping. If the wells are pumped simultaneously, the pumping rates will need to be reduced because the drawdown from the two wells is additive. Further testing and analyses will be required if operations will require pumping from both wells at the same time.

FORM NO GWS-31 04/2005		WELL CONSTRUCTION AND TEST REPORT		For Office Use Only	
		STATE OF COLORADO, OFFICE OF THE STATE ENGINEER 1313 Sherman St., Room 818 Denver, CO 80203 Phone - Info (303) 866-3587 Main (303) 866-3581 Fax (303) 866-3589 http://www.water.state.co.us			
		1. WELL PERMIT NUMBER: 45795 F R			
		2. WELL OWNER INFORMATION			
		NAME OF WELL OWNER: NATIONAL PARK SERVICE / ROCKY MTN. NATIONAL			
		MAILING ADDRESS 1000 US HWY 36			
		CITY ESTES PARK		STATE CO	ZIP CODE: 80517
		TELEPHONE NUMBER: (970) 586-1285			
3. WELL LOCATION AS DRILLED SE 1/4, SW 1/4, Sec. 33, Twp. 5		☒ N or ☐ S, Range 73 ☐ E or ☒ W			
DISTANCES FROM SEC. LINES: 1323 ft. from ☐ N or ☒ S section line and 1502 ft. from ☐ E or ☒ W section line.		SUBDIVISION _____ LOT _____ BLOCK _____ FILING (UNIT) _____			
Optional GPS Location: GPS Unit must use the following settings: Format must be UTM, Units must be meters, Datum must be NAD83 Unit must be set to true N. ☐ Zone 12 or ☐ Zone 13		Owner's Well Designation _____ Easting: _____			
STREET ADDRESS AT WELL LOCATION _____		Northing: _____			
4. GROUND SURFACE ELEVATION UNKWN _____ feet		DRILLING METHOD AIR ROTARY			
DATE COMPLETED 12/9/11		TOTAL DEPTH 67		DEPTH COMPLETED 47	
5. GEOLOGIC LOG		6. HOLE DIAM (in.)			
Depth	Type	Grain Size	Color	Water Loc.	From (ft) To (ft)
0-8	SAND	MED	BROWN		12 0 20
8-11	SAND/GRAVEL	MED	BROWN		10 20 67
11-20	SAND/BOULDERS	MED	BROWN	X	
20-45	SAND/GRAVEL	MED/COARS	BROWN	X	
45-50	SAND/GRAVEL	MED/COARS	OR BR/GRAX		
50-60	CLAY/SILT	COMPACT	GRAY		
60-67	GRANITE		WHITE		
Remarks FILLED WITH 3/4" GRAVEL FROM 47" TO 67"		7. PLAIN CASING:			
		OD (in) Kind Wall Size (in) From (ft) To (ft)			
		10 5/8 STEEL 250 +2 27			
		8 PVC SCH 40 17 37			
		PERFORATED CASING: Screen Slot Size (in) .40			
		8 S STEEL STANDARD 37 47			
		8. FILTER PACK:		9. PACKER PLACEMENT:	
		Material _____		Type _____	
		Size _____		Depth _____	
		Interval _____			
		10. GROUTING RECORD			
		Material Amount Density Interval Placement			
		CEMENT 47 BAGS 7.1 0-20 PUMPED			
11. DISINFECTION Type HTH		Amt. Used 3/4 CUP			
12. WELL TEST DATA ☐ Check box if Test Data is submitted on Form Number GWS 39 Supplemental Well Test.					
TESTING METHOD AIR AND PUMPED					
Static Level 9 ft		Date/Time measured: 12/15/11 - 10:05 AM		Production Rate 60 gpm	
Pumping Level 28.4 ft		Date/Time measured 12/16/11 - 10:02 AM		Test Length (hrs) 24	
Remarks PUMPED 4 HRS W/AIR					
13. I have read the statements made herein and know the contents thereof, and they are true to my knowledge. This document is signed and certified in accordance with Rule 17.4 of the Water Well Construction Rules, 2 CCR 402-2. [The filing of a document that contains false statements is a violation of section 37-91-108(1)(c) C.R.S., and is punishable by fines up to \$5000 and/or revocation of the contracting license.]					
Company Name		Phone:		License Number:	
WILLIAMS DRILLING CO		(970) 641-1084		648	
Mailing Address: 307 N MAIN ST SUITE 21 GUNNISON CO 81230					
Signature <i>Franklin L. Roper</i>		Print Name and Title		Date	
		FRANKLIN L. ROPER / VICE PRESIDENT		1/6/2011	

Maps and Miscellaneous Information

Docket Information

Number of Documents in Docket 50

Documents Dated from 1/4/1962 to 1/6/2012

Docket Compiled: 6/25/2012