WATER-RIGHT DOCKET

Badlands National Park

Docket No: 1

CEDAR PASS LODGE AREA WATER SYSTEM.

Preliminary Docket Information

12-00-1966: badlands national monument water rights #1: cedar pass water system; 1966

BADLANDS NATIONAL MONUMENT

WATER RIGHTS #1

CEDAR PASS WATER SYSTEM

This docket concerns an appropriation and diversion of water from the White River to the Cedar Pass Lodge area in Badlands National Monument. Two types of rights are substantiated: 1) a pipeline easement over Jackson County, railroad, and U. S. Soil Conservation Service land. 2) A right to appropriate water by pumping 50 gallons per minute through a four-inch pipe.

As to the easement over county land, docket correspondence says that South Dakota law did not provide for a donation by the state of an easement to the N.P.S. But this problem was solved by applying 43 U.S. Code 945, which states that the United States reserved a right of way for ditches and canals (which extends to pipelines) when it patented land to Jackson County. However, when rights of way were granted to railroads (U.S. Code 934-939), such a reservation was not made, so here it was necessary to obtain a grant of easement from the railroad. The easement over Soil Conservation Service land is based on a memorandum of understanding between the Department of Agriculture and the Department of Interior.

By William Cruzen
LWSSC
December, 1966

WATER RIGHT RECORD

Park: BADL

Docket Number: Federal #1

IDENTIFICATION NO: BADL W154339 AF01

DITCH/WATER SYSTEM: Cedar Pass System

SOURCE OF SUPPLY: Four Wells

LOCATION: NE¼ NE¼ Sec. 15, T43N, R39W, 6th PM

WATER RIGHT:

Appropriator: United States of America, National Park Service

Application/Permit Number: 1035-2

Certificate Record Number: 41743

Date of Priority: August 10, 1970 (March 5, 1940)

Quantity of Water: 0.228 c.f.s.

Purpose: Municipal

Irrigated Land Description:

SUMMARY OF STATUS: This water right started out as a pipe line from the White River. In 1965, a high water stage prevented drawing potable water from the river, so a ground water supply was sought.

The four wells are tied into a single water system including a reservoir and pumphouse for Headquarters, visitor center, concession facilities, employee housing and a campground.

The wells are immediately outside the park on land belonging to a Sioux tribe from whom the NPS has obtained a right of way.

06-10-1971: docket information sheet

DOCKET INFORMATION SHEET

Docket Identity	BADL W 1 S 43 39 A F 01
Region	ROCKY MOUNTAIN
Area	BADLANDS NATIONAL MONUMENT
Site	CEDAR PASS WATER SYSTEM
State	SOUTH DAKOTA
County	JACKSON
Docket	BADL WATER RIGHT DOCKET 1
Location	T43 R39W SEC 15 NE1/4 NE1/4
Acquired by	APPROPRIATION
Application	1035-2
Permit	1035-2
Certificate	1035-2
Priority	AUGUST 10 1970 0.22 CFS
Reservation	3 4 1929
Status	ACTIVE FEDERAL JUNE 10 1971
Source	GROUND WATER
Use	MUNICIPAL
Quantity	0.22 CFS
Hydrologic Unit	10140202
Remarks	WELLS OUTSIDE OF PARK ON LAND OF SIOUX TRIBE NPS OBTAINED RIGHT OF WAY

State Water Rights Documentation

1035-2

COMMISSION
John M. Garhart, Spearfish
Lester Brue, Parker
Carl Cronin, Gettysburg
Lauren A. Davis, Belle Fourche
Milton E. Fischer, Milbank
Richard Lommen, Harrisburg
Clarence D. Mortenson, Hayes
Dick Fisher, Cresbard

South Dakota
WATER RESOURCES COMMISSION
State Office Building #2
PIERRE, SOUTH DAKOTA 57501

J.W. GRIMES
Chief Engineer
and
Executive Officer

PHONE
224-3584
Area Code 605

September 21, 1970

Mr. Gerard S. Witucki
Chief, Water Resources Section
Office of Land Acquisition and Water Resources
National Park Service
450 Golden Gate Ave., Box 36025
San Francisco, California 44102

Dear Mr. Witucki:

Enclosed herewith is your Water Right Permit No. 1035-2 as approved by the Water Resources Commission, authorizing you to construct your water diversion system and apply the water to beneficial use, not exceeding the limits as specified in said Water Right Permit No. 1035-2.

The Commission will schedule an inspection of your water system as soon as we can arrange our schedule, so that your Certificate of Construction and/or your Water License may be issued to you, thus completing your acquisition of a water right.

Respectfully,

J.W. GRIMES

JWG/BFJ/bw
Encl: As stated

08-10-1970: letter to nps from water rights specialist regarding application for permit

1035-2

COMMISSION
John M. Garhart, Spearfish
Lester Brue, Parker
Carl Cronin, Gettysburg
Lauren A. Davis, Belle Fourche
Milton E. Fischer, Milbank
Richard Lommen, Harrisburg
Clarence D. Mortenson, Hayes
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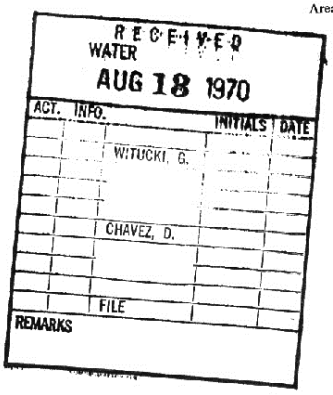
South Dakota
WATER RESOURCES COMMISSION

State Office Building #2
PIERRE, SOUTH DAKOTA 57501

J.W. GRIMES
Chief Engineer
and
Executive Officer

PHONE
224-3584
Area Code 605

August 10, 1970



Mr. Gerard S. Witucki
Chief, Water Resources Section
National Park Service
450 Golden Gate Ave., Box 36025
San Francisco, California 94102

Dear Mr. Witucki:

Your Application dated August 5,1970, for a permit to appropriate water from ground water through the Badland National Monument Wells was received August 10, 1970 and has been duly filed under the temporary number of 1035-2. The application will be examined in regular order as soon as practical, after which you will be notified as to further action on your part.

To expedite processing we are sending out the advertising notice today. The receipt for filing will be sent upon receipt of the $8.00 fee.

Sincerely,

BURTON F. JONES
Water Rights Specialist

BFJ/bw
cc: Superintendent, Badland National Monument,Box 72,Interior, S.D.57750

Form 17 - Transmittal of Water License

No. 1035-2

SOUTH DAKOTA

Water Resources Commission

STATE OFFICE BUILDING
PIERRE, SOUTH DAKOTA
57501

June 10, 1971

Gerard S. Witucki
Chief, Water Resources Section
Office of Land Acquisition and Water Resources
National Park Service
450 Golden Gate Ave., Box 36025
San Francisco, California 44102

Dear Mr. Witucki:

Enclosed herewith are, Water License No. 1035-2, Certificate of Construction, and Receipt No. 4 1743 in the amount of $12.00 for the fee which you have paid.

Water License No. 1035-2 is the final water right document completing your process of obtaining a water right.

As long as you use the water beneficially, as stated in the Water License, the State Water Laws provide that you have a continuing right to use the water.

Respectfully,

WATER RESOURCES COMMISSION

By: J.W. Grimes

J.W. GRIMES
Chief Engineer, Executive Officer

JWG/BFJ/bw
Encl: As stated

Form 15.

Permit No. 1035-2

Water Diversion No. 2 WHITE RIVER Water District

CERTIFICATE OF CONSTRUCTION

This is to Certify, That National Park Service (Badlands National Monument)

the holder ____ of Permit No. 1035-2, issued upon Application No. 1035-2, bearing date of priority of August 10, 1970 authorizing the diversion of .22 cu. ft. per second of the waters of ground water County of Jackson, State of South Dakota at four wells located in the NE¼ NE¼, Section 15, T43N, R39W

, for institutional

purposes, has complied with the provisions of the laws of the State of South Dakota relating to proof of completion of the works of diversion set out and described in said Permit; that said works are found in satisfactory condition for diverting and conveying to the place of intended use .22 cu. ft. per second of water.

Date June 10, 1971

WATER RESOURCES COMMISSION

By: J.W. Grimes

J.W. GRIMES, Executive Officer

1035-2

COMMISSION
John M. Garhart, Spearfish
Lester Brue, Parker
Carl Cronin, Gettysburg
Lauren A. Davis, Belle Fourche
Milton E. Fischer, Milbank
Richard Lommen, Harrisburg
Clarence D. Mortenson, Hayes
Dick Fisher, Cresbard

South Dakota
WATER RESOURCES COMMISSION

State Office Building #2
PIERRE, SOUTH DAKOTA 57501

J.W. GRIMES
Chief Engineer
and
Executive Officer

PHONE
224-3584
Area Code 605

May 7, 1971

RECEIVED
WATER RESOURCES SECTION
MAY 10 1971

INFO.		INITIALS	DATE
	WITUCKI G.		
	BARRETT, C.		
	[illegible]		
✓	CHAVEZ, D.		
	KENNEDY, M.		
	GOLD, S.		
	FILE		

REMARKS

Mr. Gerard S. Witucki
Chief, Water Resources Section
Office of Land Acquisition and Water Resources
National Park Service
450 Golden Gate Ave., Box 36025
San Francisco, California 44102

Dear Mr. Witucki:

The inspection of your water use system and inspection of the extent of your application of water to beneficial use, as developed under your Water Right Permit No. 1035-2 has been completed. Your final water right document, Water License No. 1035-2 can now be issued to you.

Statutes require that we charge a $12.00 fee for the inspection and issuing of the Water License. Upon receipt of this $12.00 fee from you, Water License No. 1035-2 will be sent to you.

You will also receive the Certificate of Construction No. 1035-2 as required by statute.

Sincerely,

WATER RESOURCES COMMISSION

BURTON F. JONES
Water Rights Specialist

BFJ/bw

WATER RIGHT APPLICATION APPROVAL

The Water Resources Commission hereby approves Water Right Application No. 1035-2

National Park Service, Badlands National Monument, Box 72., Interior
(Applicant) (Post Office Address)

South Dakota
(State) With the following modifications:

Date of first receipt of application August 10, 19 70

Date of return to applicant for correction, amendments or changes required ______, 19 ______

Date of receipt of corrected application ______ 19 ______

Approved September 9, 19 70, Recorded in Book 11 Page 185

WATER RIGHT PERMIT NO. 1035-2

The Water Resources Commission hereby grants and issues this Water Right Permit No. 1035-2 authorizing the construction of the water use system and the putting of water to beneficial use as stated in the Application and as modified in the Water Right Application approval, subject, however, to the following limitations and conditions:

1. The date from which applicant may claim right is August 10, 19 70
2. The equivalent of at least one-fifth of the work above specified is xxxx completed xxxxxxxxx xxxx
3. The whole of said work is xxxx completed xxxxxxxxxxx xxxxxx
4. The limit of time from proof of beneficial use of water appropriated in accordance herewith is completed xx19
5. The water appropriated shall be used for the purpose of institutional
6. The prior right of all persons who, by compliance with the laws of the State of South Dakota, have acquired a right to the use of water must not be injuriously affected by this appropriation.
7. The amount of the appropriation herein granted shall not exceed .22 cubic feet per second; neither shall it exceed the capacity of the above described water supply system, nor shall it exceed the amount of water needed for xxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx which water x was used for institutional purposes actually and beneficially xxxxxxxxxxxxxxx on or before this date xxx; said water to be used during the following described annual period: continuously.

Witness my hand this 21st day of September 19 70

WATER RESOURCES COMMISSION

By: [signature]

Chief Engineer, Executive Officer, J.W. GRIMES

Certificate of Construction Issued ______, 19 ______

Water License Issued ______ 19 ______

08-10-1970: water license no. 1035-2

Form 16.

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 1035-2

(1) WHEREAS, On the 10th day of August A. D. 19 70

National Park Service (Badlands National Monument)

made Water Right Application No. 1035-2 for a permit to use .22 cubic feet per second of the waters of ground water

County of Jackson, State of South Dakota, for institutional purposes; and

(2) WHEREAS, On the 21st day of September A. D. 19 70

Permit No. 1035-2, with a date of priority of August 10, 1970

was issued to said applicant ____ for the diversion of said water, and provided for the completion of construction of the water supply system therein described on or before the 21st day of September A. D. 19 70 and for the application to beneficial use of said water on or before the 21st day of September A. D. 19 70

and:

(3) WHEREAS, It is hereby certified that the applicant has complied with the provisions of the laws of the State of South Dakota relating to completion of the construction of the water supply system and is entitled to divert .22 cubic feet per second of water for beneficial use and,

(4) WHEREAS, It is hereby certified that the applicant has complied with the provisions of the laws of the State of South Dakota relating to the application of water to beneficial use of the following extent,

water is used in Monument headquarters and lodge, residences, camping areas.

06-10-1971: granted use of water under water right permit no. 1035-2.

(5) NOW, THEREFORE, By the virtue of the authority vested in us by the laws of the State of South Dakota, We hereby grant and confirm to National Park Service (Badlands National Monument)

of Interior, S.D.

the holder ____ and owner ____ of said permit No. 1035-2 a water right, dating from August 10,1970

to use of .22 cubic feet per second of the waters of ground water

in the County of Jackson and State of South Dakota, or so much thereof as may be necessary for the purposes hereinbelow mentioned, to be diverted at at four wells in the NE¼ NE¼, Section 15, T43N,R39W.

and conduct to ~~xxxxxxx~~ headquarters, lodge, residences and camping areas.

for the purpose of institutional use.

Subject to any limitations listed in Water Right Permit No. 1035-2 and subject to the laws of the State of South Dakota.

WITNESS, My hand and seal of our office at Pierre, South Dakota this 10th day of June A. D. Nineteen Hundred and Seventy-One

WATER RESOURCES COMMISSION

By:

Chief Engineer, Executive Officer , J.W. GRIMES

09-03-1970: note to the file regarding proof of publication for notice of intent to appropriate water

Intent to Appropriate Water

No.

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) ss.
County Jackson)

I, L. G. Parkinson hereby certify that the annexed printed copy of Notice of Intent to Appropriate Water was taken from the Kadoka Press

A newspaper which during the whole time of publication of said notice herein after stated, has been and is printed and published in the City of Kadoka, County of Jackson and State of South Dakota; that the said notice was published in said newspaper on the following four dates:

Thursday, August 13, 1970
Thursday, August 20, 1970
Thursday, August 27, 1970
Thursday, September 3, 1970

L. G. Parkinson
(Signature)

Publisher
(Title)

September 3, 1970
(Date Signed)

NOTICE
INTENT TO APPROPRIATE WATER

Pierre, South Dakota 57501
August 10, 1970

Notice is hereby given that National Park Service (Badlands National Monument) whose post office address is Interior, South Dakota, has made an application in accordance with the provisions of the water laws of South Dakota for a permit to appropriate for beneficial use .22 cubic feet of water per second of time from ground water through the Badlands National Monument Wells, the point of diversion of which is to be located in the NE¼ NE¼ of Section 15, Twp. 34N, Range 39W. Said water to be used for the purpose of providing supplies for operation of the Monument headquarters and related facilities.

This application No. 1035-2 will be considered by the Water Resources Commission at their office at Pierre upon the 9th, day of September, 1970, at 2:00 p.m. All interested persons may appear and be heard.

WATER RESOURCES COMMISSION
By:
Burton F. Jones,
Water Rights Specialist
Pub. Aug. 13-20-27 - Sept. 3

06-10-1971: water resources commission receipt of fees for services rendered

RECEIPT

WATER RESOURCES COMMISSION
State of South Dakota

№ 4 1743

PIERRE, June 10, 1971 ~~19~~

RECEIVED OF National Park Service

the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit to Appropriate Water No. _____ (examination, processing, recording and filing) _____	
Fee for inspecting Construction, and issuing Cert. of Construction No. 1035-2	12.00
Fee for inspecting Beneficial Use, and issuing Water License No. 1035-2	
Fee for issuing Location Certificate-Dry Draw, No. _____	
Fee for filing _____	
Fee for certified copy of _____	
Fee for Print copy of map _____	
Fee for Certifying _____	
Fee for _____ (any other work as provided by law)	
TOTAL	12.00

WATER RESOURCES COMMISSION

By Jw Grimes

Chief Engineer, Executive Officer

J.W. GRIMES bw

08-05-1970: application for permit, no. 1035-2

Form 2 - Application for Permit to Appropriate Water-Original (Includes Approval and Permit)

No. 1035-2

8:00 a.m.

Map No. 897-2 Water Division No. 2 WHITE RIVER District

(Blanks to be Filled by the Engineer for the W. R. C.)

APPLICATION FOR PERMIT

To Appropriate Water within the State of South Dakota

(NOTE--Draw a line through items not applicable)

1. Name of Applicant NATIONAL PARK SERVICE, WESTERN SERVICE CENTER, WATER RESOURCES SECTION

Postoffice address 450 Golden Gate Ave., P.O. Box 36025 State San Francisco, Calif. 94102

If a corporation show date and place of incorporation

2. Method of accomplishing work (contract, employment of others, or by direct labor) Contract

3. Name of diversion work White River Water System, Badlands National Monument

4. Amount of water claimed (cubic feet per second) 0.228 c.f.s. (100 GPM)

5. Source of water supply Four (4) wells

6. Location of point of diversion Section 15, T43N, R39W, 6th PM

County Washabaugh

7. Annual period or periods during which water is to be used January 1 to December 31

8. Use to be made of water, (irrigation, industrial, municipal, commercial, recreation, etc.) Municipal

9. For irrigation use. Total number of acres to be irrigated

List below each forty acre subdivision, or lot, or fraction thereof and show number of acres to be irrigated in each.

Land Description	No. Acres Irr.	Land Description	No. Acres Irr.

Attach sheet if more space is needed

10. Time required to complete construction of water supply system presently complete years. Additional time required to complete application of water to the proposed beneficial use - years.

11. Choice of newspaper for Notice of Intent to Appropriate Water publication Rapid City Daily Journal

12. Principal Features of the Proposed Water Supply System.

A. Works proposed to divert water from its natural source.

Four (4) wells were drilled to a depth of 30 feet; all four wells are tied into a single water system.

B. Works proposed to transport water to place of use.

Approximately 1000' of three inch pipeline was installed, which extends from the well area, to a reservoir, to a pumphouse located on the north side of the White River.

C. Works proposed to apply water to beneficial use.

From the pumphouse, the water is pumped to the various facilities within the Monument area which include the following Monument Headquarters, visitor center, concession facilities, employee housing and a campground.

Estimated Total Cost $ 35,000.00

Attachments: Attach Form 2A if diversion from a well or dugout, or if storage of water, is proposed. Attach map.

(See instructions concerning preparation.) Nothing herein constitutes a waiver of this right or any other right which may be vested in the name of the United States of America.

STATE OF SOUTH DAKOTA)
) ss.
County of)

I, the applicant, certify that I have read the foregoing application and have examined the attached map and that the matters therein stated are true and that I intend, and am able to complete the necessary construction.

Signed s/C. Cowne

Subscribed and sworn to before me this 5th day of August 19 70

(SEAL)

S/ Gerard S. Witucki
Notary Public (or other qualified officer)
Deputy Clerk U.S. District Court
Northern District of California

12. Principal Features of the proposed Water Supply System (continued.)

D. Well Information or Estimates

(1) Drill Hole, Diameter 30", Depth 33 FEET

(2) Casing, Type CONCRETE (wood, concrete, steel, etc), Diameter 24" Thickness ———

(3) Perforated Screen.

Type ———, Diameter ———, Length ———

(4) Gravel Pack. Thickness 8", Length of gravel pack 15 FEET

E. Dugout Information or Estimates.

(1) Surface dimensions ———, Depth ———

F. Fill out for Either a Well or a Dugout.

(1) Water Bearing Materials. (Please attach a copy to test well log if available.)

Character of Water bearing materials ALLUVIAL DEPOSITS CONSIST OF UNCONSOLIDATED GRAVEL, SAND, SILT AND CLAY. THE GRAVEL, WHICH OCCURS MOST ABUNDANTLY AT THE BASE OF THE ALLUVIAL IS A HIGHLY PERMEABLE AQUIFER; THE GRAVEL SEEMS TO BE ASSOCIATED WITH AN ELONGATED DEPRESSION IN THE BEDROCK THAT IS A FORMER CHANNEL OF THE WHITE RIVER.

Depth to top of water bearing material 15 FEET

Depth to bottom of water bearing material 30 FEET

Thickness of water bearing material 15 FEET

Depth to water (ground surface to water level) 5.7 FEET

(2) Distance to nearest existing household or livestock watering wells.

* On same owner's property 18.2 rds. On property owned by others ——— rds.

G. Water Storage Dams.

If the proposed water use system contains one or more water storage dams, please show in the space below, the height, maximum water depth, surface area and storage capacity of each storage dam. The location of each water storage dam should be shown on the water right map.

UNDERGROUND RESERVOIR--CAPACITY: 500,000 GALLONS

* THE WELLS ARE ON PRIVATE PROPERTY OWNED BY THE OGLALA SIOUX TRIBE FROM WHOM THE NATIONAL PARK SERVICE HAS OBTAINED A RIGHT OF WAY FOR THE WELLS; THE NEAREST EXISTING WELL IS USED FOR LIVESTOCK WATERING BY THE TRIBE.

GERARD S. WITUCKI
CHIEF, WATER RESOURCES SECTION
WESTERN SERVICE CENTER
NATIONAL PARK SERVICE

Gerard S. Witucki

Signature of Applicant

43-39-15acd
Well 1

Material	Thickness (feet)	Depth (feet)
Clay, silty	2	2
Sand, fine to coarse, gravelly	8	10
Sand, coarse, very gravelly	7	17
Clay, silty to sandy	2	19
Gravel, coarse to bouldery, well rounded (clay stringer approximately 6 inches thick at 21 and 24 feet)	6	25
Shale, grayish-blue-green	5	30

Note: Installed plug with 2 ft, blank casing then 10 ft. of perforated cone screen and 18 ft. of blank casing, gravel packed.

43-39-15adc1
Well 2

Clay, silty	4	4
Sand, fine to very fine, silty	6	10
Sand, coarse; gravel, medium to coarse	15	25
Shale, grayish-blue-green, 5 BG 6/6	5	30

Note: Installed plug with center hook, 2 ft. casing, 10 ft. of screen, 18 ft. of casing, gravel packed to top.

43-39-15adc2
Well 3

Clay, silty to sandy	5	5
Sand, fine to coarse, silty	6	11
Gravel, coarse; sand, well rounded	8	19
Sand, coarse	1	20
Gravel, coarse, sandy	4	24
Shale, grayish-blue-green	5	29

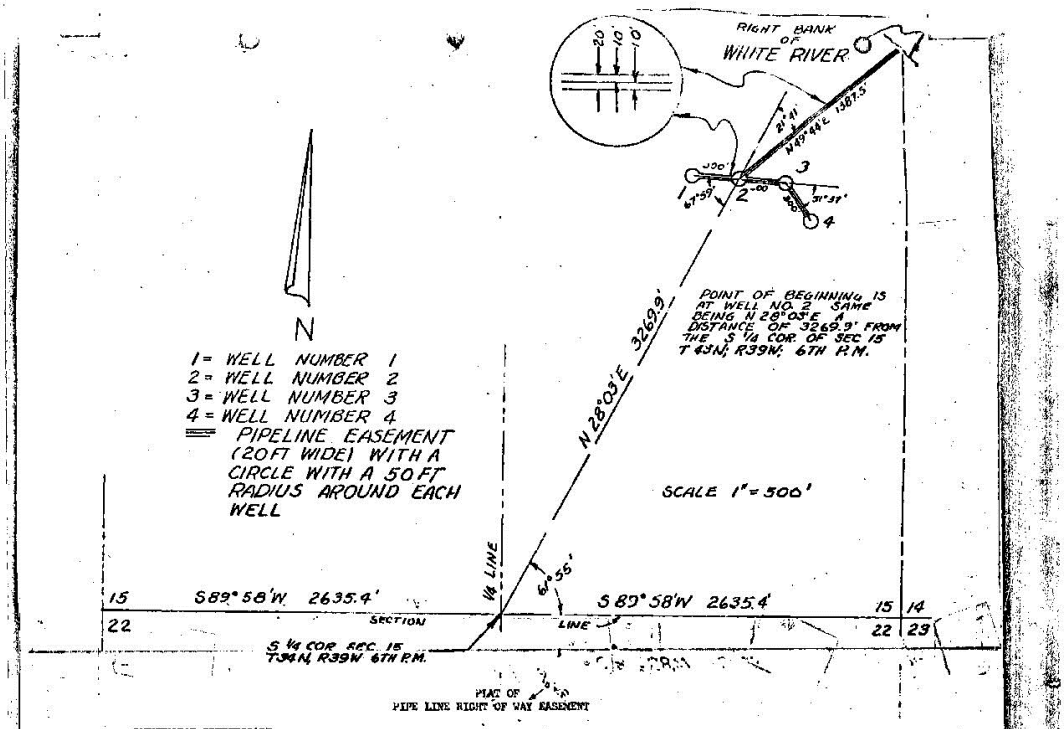
Note: Installed plug, 2 ft. of blank, 10 ft. screen, and 18 ft. of blank casing, gravel packed.

43-39-15dab2
Well 4

Clay, silty to sandy	3	3
Sand, medium, silty	4	7
Sand, medium to coarse	5	12
Sand, coarse, uniform, clayey	5	17
Gravel, medium to coarse, sandy, cemented in places	6	23
Shale, grayish-blue-green	7	30

Note: Installed plug, 2 ft. of blank, 10 ft. of perforated, and 18 ft. of blank lap joint concrete casing.

06-14-1968: surveyor's certificate, pipe line right of way easement



PLAT OF
PIPE LINE RIGHT OF WAY EASEMENT

SURVEYOR'S CERTIFICATE

I, Donald D. Hoffman, Registered Land Surveyor, do hereby certify that at the direction of the National Park Service, I have surveyed and platted the pipe-line right-of-way easement in the East half (E½) Section 15, T43N, R39W. 6th P M., as shown hereon. All dimensions, angles, and bearings as shown are true and correct.

Donald D. Hoffman
Registered Land Surveyor #670

ACKNOWLEDGMENT OF SURVEYOR

State of South Dakota, County of Lawrence

Be it remembered that on this 14 day of June, 1968, before me, the undersigned, a Notary Public, personally appeared Donald D. Hoffman, known to me to be the person described in and who executed the foregoing certificate

My commission Expires August 15, 1975

Notary Public

"Approved pursuant to the provisions of the Act of February 5, 1948 (62 Stat. 17) and Departmental regulations 25 C. F. R. 161, subject to any prior, valid, existing right or adverse claim.

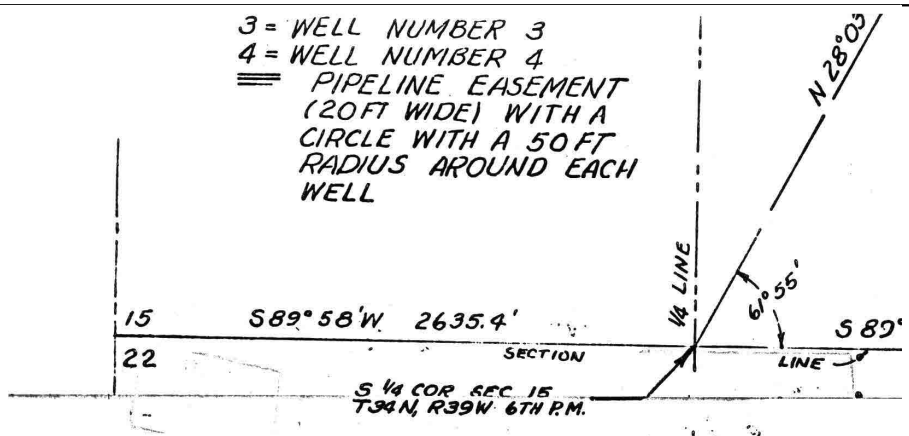
Date: July 30, 1968

Supt., Pine Ridge Agency"

OFFICE OF REGISTER OF DEEDS

STATE OF ... COUNTY OF ...

Filed for Record this ... day of ..., 19..., at ... o'clock ... M and recorded in Book A of Plats on Page 43 therein.



PLAT OF
PIPE LINE RIGHT OF WAY EASEMENT

SURVEYOR'S CERTIFICATE

I, Donald D. Hoffman, Registered Land Surveyor, do hereby certi
Park Service, I have surveyed and platted the pipe-line right-of-way easement in
6th P M., as shown hereon. All dimensions, angles, and bearings as shown are tru

Re

ACKNOWLEDGEMENT OF SURVEYOR

State of South Dakota, County of Lawrence

Be it remembered that on this 14 day of June, 1968, bef
personally appeared Donald D. Hoffman, known to me to be the
foregoing certificate

My commission Expires August 15, 1975

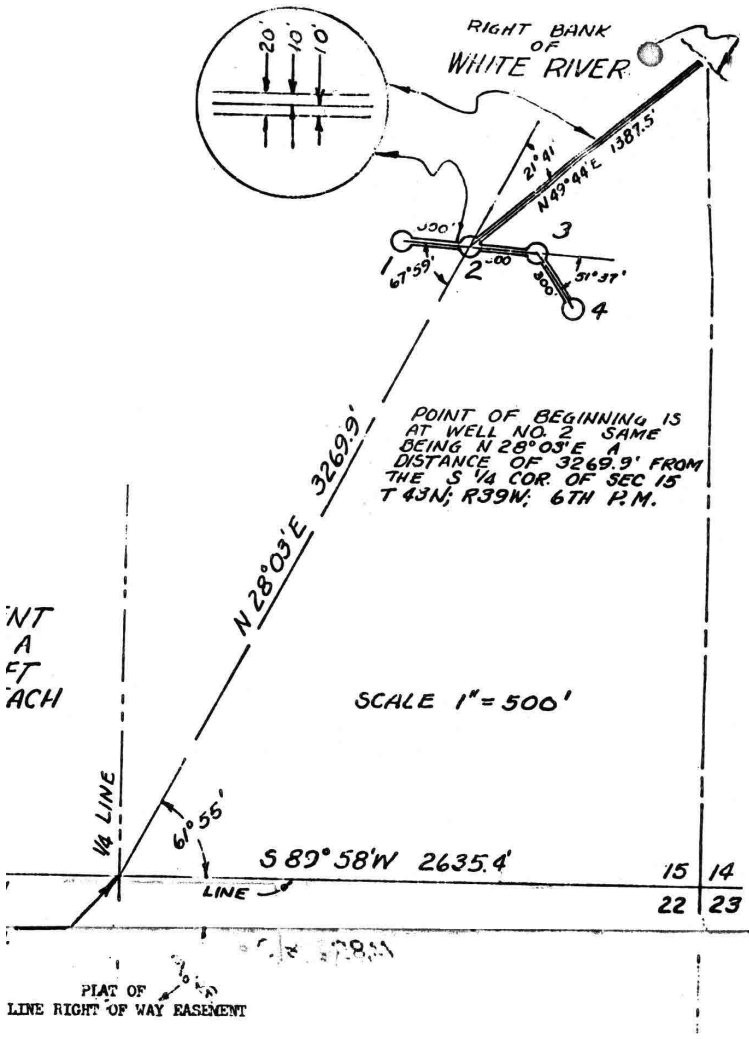
"Approved pursuant to the provisions of the Act of February 5, 1948 (62 Stat. 17) and Departmental regulations 25 C. F. R. 161, subject to any prior, valid, existing right or adverse claim.

Date: July 30, 1968

Supt., Pine Ridge Agency"

OFFICE OF REGISTER OF DEEDS

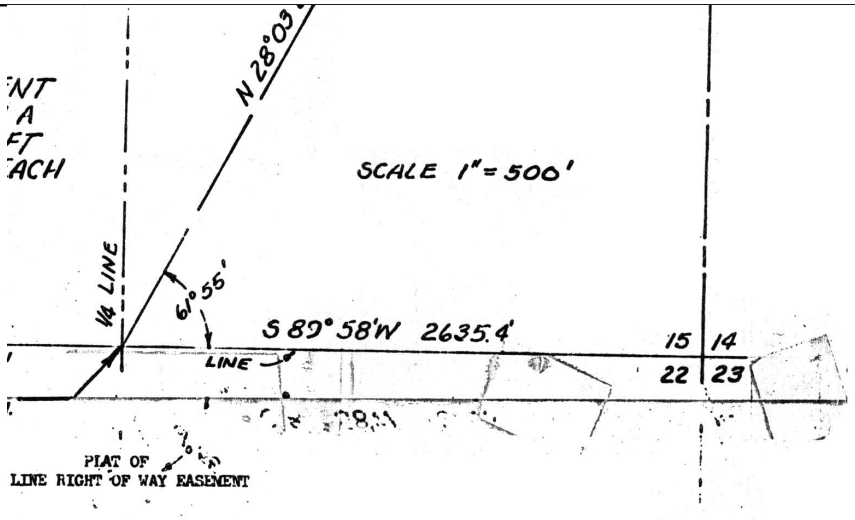
STATE OF [illegible] COUNTY OF [illegible]
Filed for Record this 31 day of [illegible], 19[illegible], at [illegible] o'cl
of Plats on Page 43 therein.



ered Land Surveyor, do hereby certify that at the direction of the National pipe-line right-of-way easement in the East half (E½) Section 15, T43N, R39W. gles, and bearings as shown are true and correct.

Donald D Hoffman
Registered Land Surveyor #670

June, 1968, before me, the undersigned, a Notary Public, non, known to me to be the person described in and who executed the



ered Land Surveyor, do hereby certify that at the direction of the National pipe-line right-of-way easement in the East half (E½) Section 15, T43N, R39W. gles, and bearings as shown are true and correct.

Donald D Hoffman
Registered Land Surveyor #670

June, 1968, before me, the undersigned, a Notary Public, mon, known to me to be the person described in and who executed the

75

Alta Schaipe
Notary Public

t of February 5, 1948 (62 . R. 161, subject to any

, Pine Ridge Agency"

, 19, at 10:10 o'clock A M and recorded in Book A

07-31-1968: office of register of deeds certification

STATE OF SOUTH DAKOTA }
COUNTY OF JACKSON } ss.

OFFICE OF REGISTER OF DEEDS

I hereby certify that I have compared the within instrument with the [illegible] now on file in this office and that it is a true and correct copy of the same, and the whole thereof and that the above is a true copy of the filing thereof.

Dated July 31 19 68

Edith R. Hogue

Register of Deeds

43-39-15acd
Well 1

Material	Thickness (feet)	Depth (feet)
Clay, silty	2	2
Sand, fine to coarse, gravelly	8	10
Sand, coarse, very gravelly	7	17
Clay, silty to sandy	2	19
Gravel, coarse to bouldery, well rounded (clay stringer approximately 6 inches thick at 21 and 24 feet)	6	25
Shale, grayish-blue-green	5	30

Note: Installed plug with 2 ft blank casing then 10 ft of perforated cone screen and 18 ft of blank casing, gravel packed.

43-39-15adc1
Well 2

Clay, silty	4	4
Sand, fine to very fine, silty	6	10
Sand, coarse; gravel, medium to coarse	15	25
Shale, grayish-blue-green, 5 BG 6/6	5	30

Note: Installed plug with center hook, 2 ft casing, 10 ft of screen, 18 ft of casing, gravel packed to top.

43-39-15adc2
Well 3

Clay, silty to sandy	5	5
Sand, fine to coarse, silty	6	11
Gravel, coarse; sandy, well rounded	8	19
Sand, coarse	1	20
Gravel, coarse, sandy	4	24
Shale, grayish-blue-green	5	29

Note: Installed plug, 2 ft of blank, 10 ft screen, and 18 ft of blank casing, gravel packed.

43-39-15dab2
Well 4

Clay, silty to sandy	3	3
Sand, medium, silty	4	7
Sand, medium to coarse	5	12
Sand, coarse, uniform, clayey	5	17
Gravel, medium to coarse, sandy, cemented in places	6	23
Shale, grayish-blue-green	7	30

Note: Installed plug, 2 ft of blank, 10 ft of perforated, and 18 ft of blank lap joint concrete casing.

Form 2 - Application for Permit to Appropriate Water Original (Includes Approval and Permit)

Received: Aug. 10, 1970
8:00 a.m.

No. 1035-2

Map No. 897-2 Water Division No. 2 WHITE RIVER District

(Blanks to be Filled by the Engineer for the W. R. C.)

APPLICATION FOR PERMIT

To Appropriate Water within the State of South Dakota

(NOTE--Draw a line through items not applicable)

1. Name of Applicant NATIONAL PARK SERVICE, WESTERN SERVICE CENTER, WATER RESOURCES SECTION

Postoffice address 450 Golden Gate Ave., P.O. Box 36025, State San Francisco, Calif. 94102

If a corporation show date and place of incorporation

2. Method of accomplishing work (contract, employment of others, or by direct labor) Contract

3. Name of diversion work White River Water System, Badlands National Monument

4. Amount of water claimed (cubic feet per second) 0.228 c.f.s. (100 GPM)

5. Source of water supply Four (4) wells

6. Location of point of diversion Section 15, T43N, R39W, 6th PM

County Washabaugh

7. Annual period or periods during which water is to be used January 1 to December 31

8. Use to be made of water, (irrigation, industrial, municipal, commercial, recreation, etc.) Municipal

9. For irrigation use. Total number of acres to be irrigated

List below each forty acre subdivision, or lot, or fraction thereof and show number of acres to be irrigated in each.

Land Description	No. Acres Irr.	Land Description	No. Acres Irr.

Attach sheet if more space is needed

10. Time required to complete construction of water supply system presently complete years. Additional time required to complete application of water to the proposed beneficial use - years.

11. Choice of newspaper for Notice of Intent to Appropriate Water publication Rapid City Daily Journal

12. Principal Features of the Proposed Water Supply System.

A. Works proposed to divert water from its natural source.

Four (4) wells were drilled to a depth of 30 feet; all four wells are tied into a single water system.

B. Works proposed to transport water to place of use.

Approximately 1000' of three inch pipeline was installed, which extends from the well area, to a reservoir, to a pumphouse located on the north side of the White River.

C. Works proposed to apply water to beneficial use.

From the pumphouse, the water is pumped to the various facilities within the Monument area which include the following Monument Headquarters, visitor center, concession facilities, employee housing and a campground.

Estimated Total Cost $ 35,000.00

Attachments: Attach Form 2A if diversion from a well or dugout, or if storage of water, is proposed. Attach map.
(See instructions concerning preparation.) Nothing herein constitutes a waiver of this right or any other right which may be vested in the name of the United States of America.

STATE OF SOUTH DAKOTA)
)ss.
County of)

I, the applicant, certify that I have read the foregoing application and have examined the attached map and that the matters therein stated are true and that I intend, and am able to complete the necessary construction.

Signed s/C. Cowne

Subscribed and sworn to before me this 5th day of August 19 70

(SEAL)

S/ Gerard S. Witucki
Notary Public (or other qualified officer)
Deputy Clerk U.S. District Court
Northern District of California

09-21-1970: water right application approval with modifications, no. 1035-2

WATER RIGHT APPLICATION APPROVAL

The Water Resources Commission hereby approves Water Right Application No. 1035-2

National Park Service, Badlands National Monument, Box 72., Interior
(Applicant) (Post Office Address)

South Dakota
(State) With the following modifications:

Date of first receipt of application August 10, 19 70

Date of return to applicant for correction, amendments or changes required ____, 19 ____

Date of receipt of corrected application ____, 19 ____

Approved September 9, 19 70, Recorded in Book 11 Page 185

WATER RIGHT PERMIT NO. 1035-2

The Water Resources Commission hereby grants and issues this Water Right Permit No. 1035-2 authorizing the construction of the water use system and the putting of water to beneficial use as stated in the Application and as modified in the Water Right Application approval, subject, however, to the following limitations and conditions:

1. The date from which applicant may claim right is August 10, 19 70

2. The equivalent of at least one-fifth of the work above specified is completed on or before xxxx

3. The whole of said work is completed on or before xxxx

4. The limit of time from proof of beneficial use of water appropriated in accordance herewith is completed

5. The water appropriated shall be used for the purpose of institutional

6. The prior right of all persons who, by compliance with the laws of the State of South Dakota, have acquired a right to the use of water must not be injuriously affected by this appropriation.

7. The amount of the appropriation herein granted shall not exceed .22 cubic feet per second; neither shall it exceed the capacity of the above described water supply system, nor shall it exceed the amount of water needed for [illegible] which water is was used for institutional purposes actually and beneficially applied to said use on or before this date; said water to be used during the following described annual period: continuously

Witness my hand this 21st day of September, 19 70

WATER RESOURCES COMMISSION

By: [signature]
Chief Engineer, Executive Officer, J.W. GRIMES

Certificate of Construction Issued ____, 19 ____

Water License Issued ____, 19 ____

43-39-15acd
Well 1

Material	Thickness (feet)	Depth (feet)
Clay, silty	2	2
Sand, fine to coarse, gravelly	8	10
Sand, coarse, very gravelly	7	17
Clay, silty to sandy	2	19
Gravel, coarse to bouldery, well rounded (clay stringer approximately 6 inches thick at 21 and 24 feet)	6	25
Shale, grayish-blue-green	5	30

Note: Installed plug with 2 ft, blank casing then 10 ft. of perforated cone screen and 18 ft. of blank casing, gravel packed.

43-39-15adc1
Well 2

Clay, silty	4	4
Sand, fine to very fine, silty	6	10
Sand, coarse; gravel, medium to coarse	15	25
Shale, grayish-blue-green, 5 BG 6/6	5	30

Note: Installed plug with center hook, 2 ft. casing, 10 ft. of screen, 18 ft. of casing, gravel packed to top.

43-39-15adc2
Well 3

Clay, silty to sandy	5	5
Sand, fine to coarse, silty	6	11
Gravel, coarse; sand, well rounded	8	19
Sand, coarse	1	20
Gravel, coarse, sandy	4	24
Shale, grayish-blue-green	5	29

Note: Installed plug, 2 ft. of blank, 10 ft. screen, and 18 ft. of blank casing, gravel packed.

43-39-15dab2
Well 4

Clay, silty to sandy	3	3
Sand, medium, silty	4	7
Sand, medium to coarse	5	12
Sand, coarse, uniform, clayey	5	17
Gravel, medium to coarse, sandy, cemented in places	6	23
Shale, grayish-blue-green	7	30

Note: Installed plug, 2 ft. of blank, 10 ft. of perforated, and 18 ft. of blank lap joint concrete casing.

Form 2A - Wells, Dugouts or Water Storage Dams (Supplement to form 2)

12. Principal Features of the Proposed Water Supply System (continued.)

D. Well Information or Estimates

(1) Drill Hole, Diameter 30", Depth 33 FEET

(2) Casing, Type CONCRETE (wood, concrete, steel, etc), Diameter 24" Thickness ____

(3) Perforated Screen.

Type ____, Diameter ____, Length ____

(4) Gravel Pack. Thickness 8", Length of gravel pack 15 FEET

E. Dugout Information or Estimates.

(1) Surface dimensions ____, Depth ____

F. Fill out for Either a Well or a Dugout.

(1) Water Bearing Materials. (Please attach a copy to test well log if available.)

Character of Water bearing materials ALLUVIAL DEPOSITS CONSIST OF UNCONSOLIDATED GRAVEL, SAND, SILT AND CLAY. THE GRAVEL, WHICH OCCURS MOST ABUNDANTLY AT THE BASE OF THE ALLUVIAL IS A HIGHLY PERMEABLE AQUIFER; THE GRAVEL SEEMS TO BE ASSOCIATED WITH AN ELONGATED DEPRESSION IN THE BEDROCK THAT IS A FORMER CHANNEL OF THE WHITE RIVER.

Depth to top of water bearing material 15 FEET

Depth to bottom of water bearing material 30 FEET

Thickness of water bearing material 15 FEET

Depth to water (ground surface to water level) 5.7 FEET

(2) Distance to nearest existing household or livestock watering wells.

* On same owner's property 18.2 rds. On property owned by others ____ rds.

G. Water Storage Dams.

If the proposed water use system contains one or more water storage dams, please show in the space below, the height, maximum water depth, surface area and storage capacity of each storage dam. The location of each water storage dam should be shown on the water right map.

UNDERGROUND RESERVOIR--CAPACITY: 500,000 GALLONS

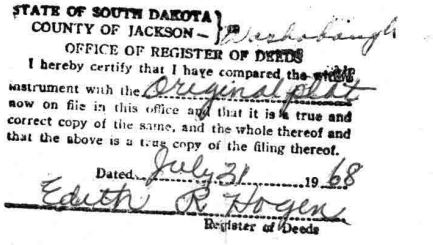
* THE WELLS ARE ON PRIVATE PROPERTY OWNED BY THE OGLALA SIOUX TRIBE FROM WHOM THE NATIONAL PARK SERVICE HAS OBTAINED A RIGHT OF WAY FOR THE WELLS; THE NEAREST EXISTING WELL IS USED FOR LIVESTOCK WATERING BY THE TRIBE.

GERARD S. WITUCKI
CHIEF, WATER RESOURCES SECTION
WESTERN SERVICE CENTER
NATIONAL PARK SERVICE

Gerard S. Witucki

Signature of Applicant

00-00-1970: office of registration of deeds; 1968



STATE OF SOUTH DAKOTA }
COUNTY OF JACKSON } ss

OFFICE OF REGISTER OF DEEDS

I hereby certify that I have compared the ~~within~~ instrument with the original plat now on file in this office and that it is a true and correct copy of the same, and the whole thereof and that the above is a true copy of the filing thereof.

Dated July 31 19 68

Edith R Hogen
Register of Deeds

05-15-1968: letter to mr. ernst, superintendent from pine ridge indian agency, agency realty officer regarding consent to water pipe

Realty-Rpts & Controls
372

COPY

Pine Ridge Indian Agency
Pine Ridge, South Dakota 57770

May 15, 1968

Mr. John Ernst, Superintendent
Badlands National Monument
Box 72
Interior, South Dakota 57750

By resolution dated May 10, 1968, the Executive Committee of the Oglala Sioux Tribe gave its consent to your water pipe line right of way on tribal land described as the E/2 of Section 15, Township 43, Range 39, Washabaugh County, and accepted your offer of $2,000, with the understanding that in the event the Badlands National Monument is ever transferred or abandoned, this right of way is automatically terminated.

The Original and two copies of the Acceptance of the $2,000 is enclosed.

We will appreciate your forwarding plats - one linen tracing and three copies; also payment of the $2,000 made payable to the Bureau of Indian Affairs which will be credited to the Oglala Sioux Tribe.

If other documents are required to perfect the right of way, we shall advise you promptly.

Sincerely,

egd/ John Lewis
Agency Realty Officer

Form 24A (C O P Y)

CERTIFICATE OF CONSTRUCTION OF WORKS

and

APPROPRIATION

Cedar Pass Water System
Badlands National Monument
Name of Project

U. S. Water Right No. 512

White River Water District

TO ALL WHOM IT MAY CONCERN:

This is to Certify, that the United States of America, Department of Interior, National Park Service, has complied with the State Laws and has been issued a withdrawal No. US 512 bearing date of April 23, 1940 withdrawing from further appropriation 0.10 cu. ft. per sec. of water for storage and direct use of the waters of White River Stream, County of Jackson, State of South Dakota, at a point on the N. bank of White River S. 20° 43' W. 254 feet from the N.E. Cor. of Sec. 15, T. 4 S., R. 18 E., B.H.M. for domestic, recreational and irrigation purposes; has fully complied with the provisions of the laws of the State of South Dakota relating to completion of the works set out and described in Section 61.0137, that said works are completed in accordance with information filed in the office of the State Engineer, except that domestic and stock watering and 0.10 cu.ft.per sec. have not started because, due to war conditions, accomodations are not yet complete and normal public travel is not expected until the close of the war, is thereby appropriated for the above purposes bearing date of priority of April 23 1940.

Witness my hand this 27th day of January 1943.

(Sgd) Dean W. Loucks
State Engineer.

(C O P Y)

Form 23 A WITHDRAWAL NO. 512 Form 23 A

Water Division No. ____ White River Water District

CERTIFICATE OF EXAMINATION OF WORKS

Report of Examining Engineer

Date January 18, 1943
By William E. Robertson, Regional Engr.

Cedar Pass Water System
Badlands National Monument, No. U.S.-512

White River
Source of Appropriation
(Stream)

To the State Engineer, Pierre, South Dakota:

Dear Sir: I hereby certify that in accordance with your letter of authorization dated January 6 1943, I have made a thorough examination of Cedar Pass Water System at Badlands National Monument, a pipe line constructed by the United States of America, Department of Interior, National Park Service, holder of withdrawal No. 512 issued upon Notice of Intention bearing date August 8, 1940, authorizing the withdrawal from further appropriation of ____ or 0.1 second-feet of the waters of White River - Jackson County, tributary of Missouri River for domestic, recreational and fire protection purposes.

I have to report on the condition of the same as follows:

The impounding and diversion works comprise:
Dam: None
Diversion is by 80 feet of 3" pipe buried in bed of White River. This pipe has 10 - 3" well points and drains to a circular collecting sump with a capacity varying from 10,000 to 15,000 gallons, depending on river stage. The water is pumped from the collecting sump by a Fairbanks-Morse deep well turbine type pump of 50 gpm capacity, driven by a gasoline motor.
Diversion Main is 4 inches in diameter and 15,780 feet in length, to a point in the Headquarters Area of Badlands National Monument. Thence the water is pumped an additional 4590 feet through 6-inch pipe, which is also used for distribution, to a distribution reservoir.
Distribution Reservoir is of concrete with a capacity of 100,000 gallons, and is located in the SE1/4-SW1/4 of Section 26, T. 3 S., R. 18 E., B.H.M., in Badlands National Monument.

The system is in the following condition: Very good, being practically new.

The point of diversion of the pipe line is located at the pump, on the left, or north, bank of White River and S 20°43' W 254 feet from the NE corner of Section 15, T. 4 S., R. 18 E., B.H.M.

The works are capable of utilizing 50 gpm or the claimed 0.1 second-feet of water.

The legal subdivisions to be irrigated are parts of SE1/4-SE1/4 Section 27, NE1/4 Section 34, and W1/2-W1/2 Section 35, T. 3S., R. 18 E., B.H.M., comprising a total of about 2 acres of land.

Received with letter from Region Two of 2/5/43.

Note: Irrigation is entirely incidental to domestic and recreational uses, by hose on small plots of shrubbery immediately adjacent to building developments. A duty of about 1 sec.-ft. to 70 acres will be needed until native vegetation around new and proposed buildings is established. It will then be reduced as more water becomes needed for direct human purposes.

The domestic and stock watering uses have not started because accommodations are not yet complete. There are to be 4 families with an estimated demand for 1200 gpd.

The utilization for public recreation, game and fish propagation, and fire protection comprises:

(1) Water service to a dining-room and cabin with accommodations for 100 guests in addition to employees. Including use by employees, overnight and hourly visitors, extra luncheon guests, operation of a laundry and rest rooms, this use is expected to reach a maximum of 35,000 gpd at the height of the travel season during normal times. (See note below for 1941 travel.*)

(2) Government Administration Building, Employees Residences, and Public Comfort Station are not yet built.

(3) From July 1941 to June 1942 approximately 11,100 gpd were used by a CCC camp in the area.

(4) Water used on CCC construction reached a maximum of 1,000 gpd.

(5) Fire protection and fluctuating water demands are provided by the 100,000 gallon reservoir.

The project was temporarily terminated on July 1, 1942, because of termination of all CCC activities. The accompanying map, NM-BL 6976, shows the status of the project at the present time, including the complete diversion system and distribution to lodge area. The CCC camp which was located on the pipe-line near the south monument boundary has now been abandoned.

*NOTE: The year 1941 was the last in which there was normal public travel. During that year the area was visited by the public as follows:

January	350 people	July	75,050 people
February	404 "	August	90,418 "
March	1,350 "	September	24,858 "
April	1,875 "	October	7,800 "
May	7,725 "	November	1,080 "
June	41,218 "	December	750 "

Development of the area was suspended, and public attendance and water use developed materially during 1942 and will be small until the close of the war.

WITNESS my hand, this 18th day of January, A. D. 1943.

(Sgd) William E. Robertson
Examining Engineer.

01-06-1943: letter to regional engineer, nps from state engineer regarding letter of authorization for inspection

19A - Authorizat' to make Inspection (Federal Pr ect) Form 19A

C O P Y

LETTER OF AUTHORIZATION
for
Inspection

January 6 19 43

Cedar Pass Water System
Name of Project

Mr. William E. Robertson, Regional Engr.
National Park Service
Keeline Building
Omaha, Nebraska

White River
Source of Appropriation
(Stream)

Dear Sir:

The United States of America, Department of Interior, National Park Service, San Francisco, California, having filed "Notice of Intention" to utilize certain specified waters of the State, and there having been issued a withdrawal from further appropriation as provided in Section 61.0137, 1939 Revised Code of South Dakota and identified as Withdrawal No. U.S. 512 . on White River (stream) County of Jackson , has informed this office that the construction for the diversion, storage, appropriation and application of water to beneficial use has been fully completed and is ready for examination.

You are, therefore, hereby authorized to arrange with the holder of said withdrawal for an examination of the Cedar Pass Water System, and reservoir, and pipe line constructed and owned by the United States of America, Department of Interior, National Park Service, and also an inspection to determine the amount of water stored and applied to beneficial use.

In this examination you will ascertain whether or not the constructed works comply fully with the plans submitted and are capable of using quantities of water as set forth in the "Notice of Intention", and give in complete form all the information which is suggested by the statements in the Certificate of Inspection which is herewith enclosed, in the attached instructions, and such other information as will enable the State Engineer to act intelligently and judicially in the matter of determining the status of completion of the project.

You should also arrange with the holder of the withdrawal for the payment of your fee for this service and such proper expenses as you incur in making this examination and report and taking the testimony.

Very truly yours,

/s/ Dean W. Loucks

State Engineer.

Form A

CERTIFICATE OF WITHDRAWAL
of
WATER FOR APPROPRIATION
to the
UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Withdrawal No. U.S.512

Cedar Pass Water System
Name of Project

Jackson
County

Water Division No. 2
White River Water District
White River
Source of Appropriation-Stream

The United States of America, Department of the Interior, National Park Service, having filed "Notice of Intention" to utilize certain heretofore unappropriated public waters of the State of South Dakota, in accordance with the requirements of the statutes of the State of South Dakota, such statutes and authority being contained in Section 61.0137 1939 Revised Code of South Dakota, now therefore;

This is to certify that there is hereby reserved, of the heretofore unappropriated waters of _____, the annual amount of _____ acre-feet of water to maintain storage in _____ reservoir created by damming said stream at a point _____ feet distant from the _____ Corner of Section _____, Township _____, Range _____. The purpose of such storage is _____

This is to certify that there is hereby reserved, of the heretofore unappropriated waters of White River a maximum of 0.1 cubic feet per second to be diverted through the Cedar Pass Water System ~~ditch, canal or~~ pipe line at a point located on the _____ bank of White River S.20 43'W., 254 feet distant from the NE Corner of Section 15 Township 4S., Range 18E. for the purpose of domestic, recreational, and fire protection use during the months of annually to a 100,000 gallon reservoir.

This certificate and withdrawal shall in no manner prejudice, alter, amend or affect the rights of any prior appropriator or prior appropriation of water, nor of any application for appropriation pending on the date of this certificate, but the rights and privileges of any and all such prior appropriators or applicants for appropriation of water shall remain inviolate and intact, the same as if the within withdrawal had not been made.

This certificate shall be and is subject to cancellation in accordance with the provisions of the statutes hereinbefore referred to and under the authority of which this certificate is issued.

In accordance with the provisions of the statutes hereinbefore referred to, this certificate is executed at the State Capitol at Pierre, South Dakota, this 23rd day of April 1940.

(Sgd) Dean W. Loucks.
Dean W. Loucks,
State Engineer

Water Rights

NOTICE OF INTENTION
to the
STATE ENGINEER
of the
STATE OF SOUTH DAKOTA

No. U. S. 512
dated April 23, 1940
See Supt. Leisis
memo of 8/27/40.

Cedar Pass Water System Project

Badlands National Monument
South Dakota

April 3, 1940.
Date

Notice of Intention to divert, store and appropriate water for beneficial uses from certain streams in South Dakota by the United States of America, Department of the Interior, National Park Service.

The United States of America, National Park Service through its officers duly appointed to administer the Badlands National Monument in South Dakota, hereby notifies the State Engineer of South Dakota of its intentions to appropriate, by construction, diversion, storage and beneficial use, the unappropriated public waters of South Dakota, under Section 61.0137 of the 1939 Revised Code of South Dakota. Application is hereby made for the withdrawal of certain unappropriated public waters of the State of South Dakota in an amount sufficient to maintain storage in ____ Reservoir, or to satisfy the requirements of the Cedar Pass Water System / ~~ditch~~, pipe line canal or pipe line, and the following information is furnished:

1. Representative of the United States of America authorized to act in procurement of water rights.

   Ans. Harry J. Liek, Coordinating Superintendent.

2. Name of intending appropriator.

   Ans. United States of America, National Park Service.

3. Name and address of agency representing intending appropriator.

   Ans. United States Department of Interior

4. Name of reservoir, ditch, canal or pipe line.

   Ans. Cedar Pass Water System.

Completed See Supt's memo 8/8
Forwarded to State Engineer at
Pierre, So. Dakota 4/8/40.

5. County in which water is to be diverted, stored and appropriated.

Ans. Jackson.

6. Name of stream from which water is to be diverted, stored and appropriated.

Ans. White River.

7. The outlet of the reservoir or the point of diversion of ditch, canal or pipe line is located S. 20° 43' W. 254 feet distant from the Northeast corner of Section 15, Township 4 South Range 18 East, Black Hills Meridian.

8. Use to which water directly diverted or diverted and stored, is to be put.

Ans. Domestic, recreational and fire protection.

9. The available capacity of reservoir in acre feet.

Ans. --

10. The carrying capacity of ditch, canal or pipe line in cubic feet per second.

Ans. Plan to pump 50 gallons per minute through 4-inch pipe.

11. Acre feet of water to be appropriated annually for diversion and storage in reservoir.

Ans. No storage - 100,000 gallon reservoir to be for regulation.

12. Cubic feet of water per second to be appropriated for direct diversion by ditch, canal, or pipe line.

Ans. 0.1 cubic foot per second.

13. Location of lands to be irrigated.

Ans. Irrigation, incidental to domestic and recreational use, in SE¼ Section 27, T. 3 S., R. 18 E., B.H.M.

14. Class of plans accompanying "Notice of Intention."

Ans. Tracing and blue print showing proposed plan. (Bearings based on assumption section lines are on cardinal bearings until more data obtained for final proof of completion and use.)

(Sgd) Harry J. Liek.

Coordinating Superintendent.

Pine Ridge, South Dakota 57770
January 2, 1968

Mr. John R. Earnst, Superintendent
Badlands National Monument
P.O. Box 72
Interior, South Dakota 57750

Dear Mr. Earnst:

Your offer of $2,000.00 for the perpetual water-pipeline right-of-way easement in the E½ Section 15, T43N, R39W, 6th P.M., being on lands owned by the Oglala Sioux Tribe in the Pine Ridge Indian Reservation, is accepted by me on behalf of the Tribe.

Please consider this notice of acceptance also as a request for payment of the $2,000.00. Thank you.

By [signature]
Title Vice-President OST
Address Pine Ridge SD 57770
May 10, 1968

PAID
JUN - 1968
EX. NO. 14561

00-00-0000: certification that st. paul and pacific railroad company has possession of the original of deed dated april 18, 1910

COPY

I, T. W. BURTNESS, Secretary of the Chicago, Milwaukee, St. Paul and Pacific Railroad Company, a corporation of the State of Wisconsin (successor to Chicago, Milwaukee and St. Paul Railway Company) and Secretary for Henry A. Scandrett, Walter J. Cummings and George I. Haight, Trustees of the Property of Chicago, Milwaukee, St. Paul and Pacific Railroad Company, do hereby certify that I have in my custody and possession, executed original of deed dated April 18, 1910, by which the White River Valley Railway Company conveyed to the Chicago, Milwaukee and St. Paul Railway Company all and singular its line of railroad, franchises, etc., in the State of South Dakota, which deed was filed for record in the office of the Secretary of State of South Dakota on April 28, 1910, and by him recorded in Volume 4 of Railway Deeds and Mortgages on Page 77.

AND, I DO FURTHER CERTIFY that the Chicago, Milwaukee and St. Paul Railway Company conveyed to the reorganized Chicago, Milwaukee, St. Paul and Pacific Railroad Company all of its railroad, franchises, etc., by deed by Herbert A. Lundahl, Special Master et al., bearing date of December 31, 1927, which Master's Deed, an executed original of which also is in my custody and possession, was filed for record with the Secretary of State of South Dakota on March 19, 1928, and by her recorded in Volume 8 of Deeds and Mortgages on Page 1.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal of said Chicago, Milwaukee, St. Paul and Pacific Railroad Company at my office in Chicago, Illinois, this 19th day of November, 1940.

(sgd.) T. W. Burtness
Secretary
Chicago, Milwaukee, St. Paul and Pacific
Railroad Company.

(sgd.) T. W. Burtness
Secretary
for Henry A. Scandrett, Walter J. Cummings and George I. Haight, Trustees of the Property of Chicago, Milwaukee, St. Paul and Pacific Railroad Company.

00-00-0000: in the united states district court for the district of illinois: in proceedings for the reorganization of a railroad, st. paul a

C O P Y

Order No._____

IN THE DISTRICT COURT OF THE UNITED STATES
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

IN PROCEEDINGS FOR THE REORGANIZATION OF A RAILROAD

In the Matter of	)	
	)	
CHICAGO, MILWAUKEE, ST. PAUL	)	
AND PACIFIC RAILROAD COMPANY,	)	No. 60463
	)	
Debtor.	)	
	)	

ORDER AUTHORIZING TRUSTEES TO GRANT A LICENSE TO UNITED STATES OF AMERICA, ACTING BY AND THROUGH THE DEPARTMENT OF INTERIOR, NATIONAL PARK SERVICE, AUTHORIZING THE INSTALLATION AND MAINTENANCE OF A FOUR-INCH CLASS 150 CEMENT-ASBESTOS WATER PIPE UNDERNEATH THE RIGHT OF WAY AND TRACK OF THE TRUST ESTATE IN JACKSON COUNTY, SOUTH DAKOTA.

This day coming on to be heard the oral motion of Counsel for Henry A. Scandrett, Walter J. Cummings and George I. Haight, Trustees of the property of Chicago, Milwaukee, St. Paul and Pacific Railroad Company, Debtor herein, for an order authorizing the Trustees to enter into a license agreement with the United States of America, acting by and through the Department of Interior, National Park Service, authorizing it to install and maintain a four-inch Class 150 cement-asbestos water pipe underneath the track of the Trust Estate in Jackson County, South Dakota, at a point hereinafter described approximately two miles east of Interior, South Dakota, and it being represented that the Licensee will bear and pay all the cost and expense in connection with the construction, laying down, maintaining, repairing, changing or altering said water pipe and the protection and support of the track of the Trust Estate while any such work is in progress and the removal of the track supports and restoration of said track and premises to their former condition of usefulness

when said work is completed; that the granting of such license will be consistent with the interest of the Trust Estate and creditors and stockholders concerned; and it appearing that due notice of said motion, together with a copy of the proposed license agreement, has been served on each party to this proceeding entitled to notice, and the Court having considered the motion, heard the statements of Counsel and being fully advised in the premises, it is

ORDERED, that Henry A. Scandrett, Walter J. Cummings and George I. Haight, Trustees of the property of Debtor herein, be, and they hereby are, authorized to enter into the aforesaid agreement with the United States of America, acting by and through the Department of Interior, National Park Service, authorizing it to install and maintain a four-inch Class 150 cement-asbestos water pipe underneath the track and right of way of the Trust Estate in the Northeast quarter (NE¼) of the Southeast quarter (SE¼) of Section Three (3), Township four (4) South, Range eighteen (18) East, Jackson County, South Dakota, at a point approximately two miles east of Interior, said license agreement to be substantially in the manner and form as set forth in the copy of the proposed license agreement attached to the notice of motion served and on file herein and made a part thereof.

ENTER:

(sgd.) Igoe
District Judge

d September 13, 1940.

09-13-1940: certification of a copy of an order made in court

C O P Y

IN THE DISTRICT COURT OF THE UNITED STATES OF AMERICA)
FOR THE NORTHERN DISTRICT OF ILLINOIS)
EASTERN DIVISION)

I, HOYT KING Clerk of the District Court of the United States of America for the Northern District of Illinois, do hereby certify the above and foregoing to be a true and correct copy of an order made and entered in said Court on the 13th day of September, A.D. 1940 as fully as the same appears of record in my office.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seal of said Court at my office in Chicago, in said District, this 6th day of November, A. D. 1940

(sgd.) Hoyt King
Clerk.

09-13-1940: memorandum to director, nps from chief, reclamation and land grant division regarding a memorandum on the status

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
GENERAL LAND OFFICE
WASHINGTON

OCT 25 1940

Memorandum for the Director, National Park Service:

Reference is had to your informal request for a memorandum from this office giving the status of the railroad right-of-way granted to the White River Valley Railroad Company over the NE¼ SE¼ Section 3, T. 4 S., R. 18 E., B. H. M., South Dakota.

As evidenced by the map of definite location approved by the Department February 28, 1906, on file in this office, a right-of-way was granted under the act of March 3, 1875 (18 Stat. 482), to the White River Valley Railroad Company for a line of railroad over the NE¼ SE¼ Section 3, T. 4 S., R. 18 E., B. H. M., South Dakota.

Proof of construction filed September 20, 1926, by the President of the Chicago Milwaukee and St. Paul Railway Company was accepted October 26, 1926, and the grant considered earned.

While it would appear that the Chicago Milwaukee St. Paul and Pacific Railroad Company is now owner of the right-of-way grant, this office has no documentary evidence of that fact.

(Sgd) Andrew Markhus

Chief, Reclamation and
Land Grant Division.

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON

ADDRESS ONLY
THE DIRECTOR, NATIONAL PARK SERVICE

September 7, 1940.

Memorandum for Associate Attorney Johnson:

This will acknowledge the receipt of your memorandum of August 22, referring to the memorandum for the Register, Pierre, South Dakota, from Commissioner Fred W. Johnson of the General Land Office, instructing that the right-of-way for the proposed water system for the Cedar Pass Headquarters Area be withdrawn from further entry insofar as it crosses public lands.

You now ask a verification as to whether the map transmitted by Commissioner Johnson is that prepared in your office for the water withdrawal in the State of South Dakota, drawing No. NM-NL-6975. The map transmitted by Commissioner Johnson was secured from Region II, and is drawing No. NM-NL-5321. Since the two drawing numbers do not correspond, it may be advisable that you write Region II and ask them to send a copy of the map that was furnished this Office upon our memorandum request of July 12.

The General Land Office township plats will not be revised to show the right-of-way for the pipeline. Appropriate notations have been made on the records of the General Land Office both in Washington and in the local land office showing the location of the right-of-way. Any patents that might issue covering land in the area involved would, of course, show that the patent is subject to the right-of-way. But, in this case, as lands are withdrawn for the Badlands National Monument, no patent should issue.

Chief Counsel.

cc- Regional Director, Region II
Supt. Lick
Acting Custodian, Badlands Nat. Mon.
(through Supt. Lick)

07-29-1940: memorandum to register from general land office regarding transmitting map with instructions

REC'D AUG 9 1940

in reply refer to
1686037 "F"

UNITED STATES
DEPARTMENT OF THE INTERIOR
General Land Office
Washington

C
O
P
Y

JUL 29 1940

: Transmitting map with
: instructions.

MEMORANDUM for the Register,
Pierre, South Dakota.

There is transmitted herewith a copy of a map showing the location of a right-of-way over the E½SE¼ Sec. 34, T. 3 S., R. 18 E., E½SE¼ Sec. 3, Lot 3 and NE¼NE¼ Sec. 10, NW¼NW¼ Sec. 11, and Lot 1, Sec. 15, T. 4 S., R. 18 E., B. H. M., South Dakota, for a water pipe line and water plant structures to be installed by the National Park Service for the purpose of supplying water for the "Badlands National Monument", under agreement approved by the Department of Agriculture and the Department of the Interior June 20, and July 3, 1940, respectively.

Of the land ^Above described, the E½SE¼ Sec. 34, T. 3 S., R. 18 E., is withdrawn and reserved under Executive Order No. 6909 of November 21, 1934, as amended by Executive Order No. 8361 of March 2, 1940, as a part of the "Badlands-Fall River Land Utilization Project" under the administration of the Department of Agriculture, pursuant to Title III of the Bankhead-Jones Farm Tenant Act of July 22, 1937 (50 Stat. 525). The rest of the lands above described are shown by the records to be patented.

Under Departmental instructions of August 31, 1915, and January 13, 1916 (44 L. D. 359, 513), reservations may be made of rights-of-way for the construction of roads, telephone lines, and other structures required by the Forest Service over public land for use in the administration of national forests. It is believed that these instructions are equally applicable to water pipe lines and other structures which may be constructed or installed upon unpatented public land and reservations of the United States by the National Park Service or other Government agency and required for the proper administration of the Government lands, and that similar exceptions for rights-of-way for such structures may be inserted in any final certificate or patent which may be issued for the land affected.

Accordingly, you are directed to make appropriate notation on your records of the right-of-way for the pipe line and water plant

structures as shown on the enclosed map and insert in any final certificate which may be issued for the unpatented land affected an exception clause similar to that quoted in the above-mentioned instructions.

The National Park Service and Soil Conservation Service will be advised by this office of the action taken.

(signed) Fred W. Johnson

Commissioner.

Approved: JUL 29 1940

Oscar L. Chapman

Assistant Secretary.

EASEMENT

WHEREAS the United States of America, through the National Park Service, is constructing a water line between the White River and the Badlands National Monument, and

WHEREAS in its construction it is necessary to cross an existing county highway in Jackson County, South Dakota, and

WHEREAS Jackson County is interested in the development of the Badlands National Monument

NOW THEREFORE the County of Jackson, State of South Dakota, hereby grants a perpetual easement and right-of-way to the United States of America to construct, operate, repair and maintain a pipe line under and across the existing county highway, the said county highway being sixty-six (66) feet in width and situated thirty-three (33) feet north of and south of the section line between Sections three (3) and ten (10), Township four (4) south, Range eighteen (18) east, Black Hills Meridian, Jackson County, South Dakota, the center line of said pipe line to be constructed parallel with the easterly lines of said Sections three (3) and ten (10), and westerly therefrom a distance of twenty-eight (28) feet, the said pipe line to be laid at a depth of approximately seven (7) feet below the surface of the existing highway.

Dated at Kadoka, South Dakota, this 2nd day of April, 1940.

F. Uhlir
J.B. Hight
James Simek
County Commissioners

I, J.V. Dribs certify that I am the County Auditor of Jackson County, South Dakota, and that the above named persons are the duly authorized and acting county commissioners of Jackson County, South Dakota, and that they are authorized to sign this easement.

J.V. Dribs
County Auditor

03-18-1940: memorandum to acting regional director, region ii from nps regarding memorandum of a right-of-way for a pipeline

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON

RECD MAR 23 1940

ADDRESS ONLY
THE DIRECTOR, NATIONAL PARK SERVICE

March 18, 1940.

Memorandum for the Acting Regional Director, Region II:

Reference is made to your memorandum of March 9, relating to the acquisition of a right-of-way for a pipeline from White River to the headquarters area of Badlands National Monument for the purpose of a water supply. There were enclosed a map of the proposed right-of-way from the river to the monument boundary, and a copy of a document conveying to the United States an easement over the lands owned by Jackson County.

We think that it is not necessary to secure a grant from Jackson County or from Clara Jennings before installing the pipeline on their lands. All patents for lands along the route chosen for the pipeline were issued between 1907 and 1936, and each patent contains a reservation in favor of the United States of rights-of-way for ditches and canals constructed by the authority of the United States, as required by the Act of August 30, 1890 (26 Stat. 391; 43 U. S. Code 945). Such reservations are still valid as to the lands held by the county, including the county road. In view of the fact that there is some doubt as to the authority of the county commissioners to grant such an easement, and in view of the probability that the Comptroller General would object to any payment for a right-of-way over the county lands, we think that the right to install the pipeline should be based upon the reservations in the patents. There has never been an authoritative ruling on the question whether the words "ditches and canals" as used in the Act of August 30, 1890 include pipelines by implication, but this Service, as well as the Bureau of Reclamation and the General Accounting Office, has taken that view in the past.

However, it will not be necessary to reject the grant already made by the county. It may be kept in the files to show that the commissioners intended to facilitate the installation of the pipeline and to make no objection, and to show their understanding as to the amount of land to be entered upon during the course of the work. It need not be submitted for formal acceptance. It necessarily follows that condemnation is entirely unnecessary.

For reasons similar to those stated above, the pipeline may be laid across the lands owned by Clara Jennings without a further grant from her, although there will be no objection if such a grant is included

with a grant of other interests which she may donate to the United States.

The lands purchased by the Soil Conservation Service are in a separate category. Since they are owned by the United States, it seems that a permit from that Service is all that is necessary. If there are owners who have not been paid by the Soil Conservation Service, and it is desired to begin construction of the pipeline before a complete title is acquired, the reservations in the original patents should be good as against any interest which the private owners still retain.

The necessity of crossing the right-of-way of the Chicago, Milwaukee, St. Paul & Pacific Railroad presents a different problem. In your memorandum of December 19, you stated that the railroad company had indicated its willingness to grant the necessary easement. We think the grant should be secured and submitted for formal acceptance. If any expense is involved, it may appear desirable to submit the matter to the General Accounting Office before payment is made.

The right-of-way for railroad purposes was originally granted to the White River Valley Railroad Company by approval of a map filed in accordance with the Act of March 3, 1875 (18 Stat. 482; 43 U. S. Code 934-939), and approved by the Secretary of the Interior February 28, 1906. In an opinion of the Secretary (36 L.D. 482), he held that a grant made under the Act of March 3, 1875 is subject to the reservations in favor of the United States which the Act of August 30, 1890 requires to be made in patents. However, in Minidoka & S. W. Railway Co. v. Wentworth, 113 Pac. 455, the Supreme Court of Idaho held the exact opposite. The question was before the District Court for the District of Idaho in U. S. v. Minidoka & S. W. Railway Co., 176 Fed. 762, but was not decided, and when the case was before the Supreme Court (235 U. S. 211), it was not noticed at all. It is for this reason that we think a grant from the railroad company should be accepted.

Notwithstanding our lack of technical dependence upon the grant made by the county, we appreciate the efforts of the commissioners to facilitate the pipeline project. Since no formal notice of intention to exercise the rights reserved in the patents is necessary, the determination to rely upon such reservations in this case need not be brought to the attention of the commissioners unless you think it advisable, or unless some inquiry is made.

(SGD) G. A. Moskey

Chief Counsel.

cc: Reg. Attorney Taylor ✓
Coordinating Supt. Lick
Mr. Allen - Washington Office
Mr. Vint
Mr. Taylor
Mr. Sanders
Mr. Barton

03-18-1940: memorandum to the files from merritt barton regarding notes on the south dakota code of 1939, relating to grants by

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON

March 18, 1940.

Memorandum for the Files:

Notes on the South Dakota Code of 1939, relating to grants by state or counties - to accompany Acting Regional Director's memorandum of March 9, 1940.

Sec. 55.0103. Consent given to the acquisition of lands for national forests, the production of timber, the preserving of the navigability of navigable streams, or to prevent soil erosion * * * * Any land in county ownership desired by the United States for any of the purposes herein referred to may be purchased from the county at the value appraised by the county commissioners (paraphrased).

Sec. 61.0147. There is hereby granted over all school and public lands owned or hereafter belonging to the state the right-of-way for ditches or canals and for tunnels, tramways, and telephone and electrical transmission lines, constructed by authority of the United States. There is also hereby granted to any person holding a valid water right under statutes of this state a right-of-way for the construction of dams, canals, water ditches, and laterals over all school and public lands now or hereafter belonging to the state, when constructed by authority of the commissioner of school and public lands shall contain a reservation of such right-of-way. Purchasers of school and public lands shall have the right to obtain water from any irrigation system, parts of which may be located on such school and public lands, provided such lands are purchased within five years after the construction of any such irrigation system.

Sec. 55.0203. All sales, leases, and conveyances of lands belonging to the State of South Dakota or to which it may now or hereafter be entitled, including all common schools, public buildings, and endowment lands, shall be subject to and contain a reservation to the State of South Dakota, of all deposits of coal, ores, metals, and other minerals * * * *.

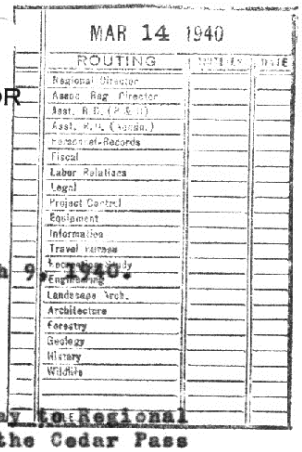
(Sgd) Merritt Barton

Merritt Barton.

No annotations on
these sections.
M.B.

03-09-1940: memorandum to the director from nps regarding easements for the cedar pass water system

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION TWO
OMAHA, NEBRASKA



March 9, 1940.

AIR MAIL

Memorandum for the Director:

We enclose copy of our letter of today to Regional Attorney Taylor regarding easements for the Cedar Pass water system, Badlands National Monument.

From our examination of the statutes we do not believe that the county commissioners of Jackson County have authority to give us the easements required and it would seem that the only way to secure proper title to these easements would be by condemnation.

While the Regional Engineer and Assistant Regional Attorney were on a trip to Badlands they contacted Special Attorney of the Department of Justice, M. A. Brown, and he states that if it were possible to get all the necessary information to him by the first of April, he would be able to complete this condemnation during the June session of court. We realize that this is a very short time and would like to know if you think this is at all possible, since we assume the following routine procedure will have to be followed: clearance by the Service, the Secretary's Office, Bureau of the Budget and the Attorney General.

You will note in the memorandum to Mr. Taylor that assurances were given by the county officials that there would be no objection to this condemnation and that a nominal consideration of $1.00 would suffice plus the cost of the abstract. Regional Attorney Taylor has indicated his willingness to pay these costs and has the authority and money available.

You will further note that we have secured purported easement duly signed by the Jackson County commissioners which indicates at least the friendly intentions of the county.

This office proposes to proceed with the completion of necessary plans and the purchase of materials on the strength of the purported easement and expected condemnation, unless other instructions are received from your office. Enclosed is copy of the purported easement.

(Sgd.) Paul V. Brown

Acting Regional Director.

cc - Taylor

March 9, 1940

AIR MAIL

Memorandum for Regional Attorney Taylor, Region Four:

Reference is made to previous correspondence concerning the water supply system for the Badlands National Monument, South Dakota. A search of the laws of South Dakota concerning the right of the county to grant easements necessary in the construction of this water line discloses that the county does not have the authority to grant easements to the Federal Government for the purpose desired. The only authority that the county has concerning the granting of easements is as follows:

"S.D.C. - 55-0205-06. The State of South Dakota through its several departments, agencies, and institutions, and counties through their boards of county commissioners, are authorized and empowered to grant perpetual easements on lands under their control, dedicating to the public permanent use of the same in the development of water conservation projects or public parks".

You will note that under this statute it would be necessary that the easement be dedicated to the public and, as we desire that the easement be granted to the Federal Government, we are of the opinion that the above cited statute does not give the county the right to do so. In the construction of this water line, it is necessary to cross a county road. We therefore checked into the matter as to whether the county had the authority to grant an easement across a county road. On this particular point we quote the following statute:

"S.D.C. - 12-0617. To grant the right of constructing, laying, maintaining, and operating on any highway, pipe lines and gas mains for the transportation of natural or artificial gas, subject to such reasonable conditions and regulations as may be prescribed by the State Highway Commission".

We are therefore of the opinion that the county would not have the right to grant us an easement across the highway for this water line. Under these circumstances it is our belief

that the only way in which this pipe line can be constructed is to condemn the land that will be necessary for a right of way.

Regional Engineer Robertson and Assistant Attorney Heaton contacted the county commissioners as well as the County Attorney, and learned that it was agreeable with them that condemnation proceedings be instituted. They stated that there will be no objections filed by the county if the petition stated a nominal fee of $1.00 as compensation. If condemnation proceedings are instituted of course it will be necessary to have an abstract compiled. A check of the records discloses that this will cost very little, as there are very few conveyances or mortgages affecting the title. However, it will be necessary that immediate action be taken. The matter has been discussed with Special Attorney M. A. Brown of Chamberlain, South Dakota, and we were advised that it would be necessary to have the abstract and complete information in his hands by April 1, if we expected to complete the condemnation in the June term of court.

As stated in our memorandum of February 23, we have received a special allocation for the purchase of materials for this job. This money of course must be encumbered by June 30. For this reason we had the county commissioners, with the approval of the county Attorney, sign the purported easement prepared by this office, a copy of which you received.

If the condemnation proceedings meet with your approval, we would like to receive radio authority to order the abstract so that the matter may be expedited as much as possible.

We are attaching a copy of a memorandum sent to the Director.

(Sgd) Paul V. Brown.

Acting Regional Director

cc: Inspector Dunham
Washington

Notes regarding patents issued for lands adjoining the proposed right-of-way for a pipeline for Badlands National Monument - to accompany the Acting Regional Director's memorandum of March 9, 1940.

Black Hills Meridian

T 3 S, R 18 E

Sec. 34, NE¼ NE¼, file No. 013572 Pierre, Pat. No. 814513, July 15, 1921, to Patrick R. Downes.

T 4 S, R 18 E

Sec. 2, NW¼, file No. 04748 Chamberlain, Pat. No. 170059, January 12, 1911, to Frederick Zimmerman.

SW¼, file No. cash 3460, patented April 15, 1907 to Enos Bryson.

Sec. 3, NE¼, file No. 01748 Chamberlain, Pat. No. 160432, November 7, 1910 to Russell V. Phillips.

SE¼, file No. cash 3461, patented April 15, 1907 to Fred P. Stone.

Sec. 10, NE¼ NE¼, file No. 05633 Chamberlain, Pat. No. 229531, November 2, 1911, to Peter S. Vane (Vann?)

SE¼ NE¼, NE¼ SE¼, file No. 05571 Chamberlain, Pat. No. 243986, January 28, 1912, to Wm. H. Coffie.

Sec. 11, SW¼ NW¼, (same as No. 05571, above)

NW¼ SW¼, NW¼ NW¼, (same as 05633, above)

SW¼ SW¼, file No. Chamberlain F. C. 651 (or H. E. 1377, Sioux Series), patented August 29, 1907.

(Sgd) M. B.

00-00-0000: easement constructing a water line between the white river and the badlands national monument

C O P Y

E A S E M E N T

WHEREAS the United States of America, through the National Park Service, is constructing a water line between the White River and the Badlands National Monument, and

WHEREAS in its construction it is necessary to cross land owned by Jackson County, South Dakota, and

WHEREAS Jackson County is interested in the development of the Badlands National Monument

NOW THEREFORE for and in consideration of the benefits derived therefrom, the county of Jackson, State of South Dakota, hereby grants a perpetual easement and right of way to the United States of America to construct, maintain and operate a pipe line, and to construct and maintain a usable dirt road which will be necessary in the construction, maintenance and operation of the said pipe line over and across the lands described as Parcels A, B, C and D, as shown on the map which is attached hereto and made a part hereto, and more particularly described as follows:

PARCEL A: The easterly thirty-three (33) feet of the Northeast one quarter (NE¼) of the Southeast one quarter (SE¼) of Section Ten (10), Township Four (4) South, Range Eighteen (18) East, Black Hills Meridian.

PARCEL B: All of that portion of Section Ten (10), Township Four (4) South, Range Eighteen (18) East, Black Hills Meridian, described as follows: Beginning at the one quarter (¼) section corner common to Sections Ten (10) and Eleven (11), Township Four (4) South, Range Eighteen (18) East, Black Hills Meridian; Thence North along the easterly line of said Section Ten (10), a distance of Four Hundred Eighty-seven and Sixty-three hundredths (487.63) feet; Thence South Twenty-three (23) Degrees, Zero (0) Minutes,

Thirty (30) Seconds West, a distance of Eighty-four and Forty-three hundredths (84.43) feet; Thence South, parallel to the East side of said Section Ten (10) and distant therefrom Thirty-three (33) feet, a distance of Four Hundred Nine and Ninety-two hundredths (409.92) feet, more or less, to the South line of the Northeast one quarter (NE¼) of said Section Ten (10); Thence East along the South line of the Northeast one quarter (NE¼) of said Section Ten (10), to the point of beginning.

PARCEL C: All of that portion of Section Eleven (11), Township Four (4) South, Range Eighteen (18) East, Black Hills Meridian, described as follows: Beginning at a point on the West line of said Section Eleven (11), Four Hundred Three and Twenty hundredths (403.20) feet North of the one quarter (¼) section corner common to Sections Ten (10) and Eleven (11); Thence North Twenty-three (23) Degrees, Zero (0) Minutes, Thirty (30) Seconds East, a distance of Five Hundred Seventeen and Ninety hundredths (517.90) feet; Thence North Seventeen (17) Degrees, Thirty-eight (38) Minutes, Twenty (20) Seconds West, a distance of Four Hundred Sixty-one and Thirty-five hundredths (461.35) feet, more or less to the North line of the Southwest one quarter (SW¼), of the Northwest one quarter (NW¼) of said Section Eleven (11); Thence West along the North line of the Southwest one quarter (SW¼) of the Northwest one quarter (NW¼) of said Section Eleven (11), a distance of Thirty-four and Sixty-three hundredths (34.63) feet;

Thence South Seventeen (17) Degrees, Thirty-eight (38) Minutes, Twenty (20) Seconds East, a distance of Four Hundred Sixty-one and Thirty-five hundredths (461.35) feet; Thence South Twenty-three (23) Degrees, Zero (0) Minutes, Thirty (30) Seconds West, a distance of four hundred twenty-six and eighteen hundredths (426.18) feet, more or less, to the Westerly line of said Section Eleven (11); Thence South along the West line of said Section Eleven (11), a distance of Eighty-four and Forty-three hundredths (84.43) feet, to the point of beginning.

PARCEL D: The Easterly Thirty-three (33) feet of the Northeast one quarter (NE¼) of Section Three (3), Township Four (4) South, Range Eighteen (18) East, Black Hills Meridian.

Dated at Kadoka S.D.,
This 5th day of March, 1940

E. Uhlir

James Smak

J.B. Hight

COUNTY COMMISSIONERS

Dated this _____ day of _____ _____

I, J.V. Dripps certify that I am the County Auditor of Jackson County, South Dakota, and that the above NAMED persons are the duly authorized and acting county commissioners of Jackson County, South Dakota, and that they are authorized to sign this easement.

J.V. Dripps
Title (County Auditor)

06-09-1966: memorandum to supervisory hydraulic engineer from acting area hydrologist, water resources division regarding assi

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
FEDERAL CENTER, DENVER, COLORADO 80225
Water Resources Division

June 9, 1966

Your reference:
L54-SSC (LW)

Memorandum

To: Manuel Morris, Supervisory Hydraulic Engineer
National Park Service, San Francisco, California

From: Acting Area Hydrologist, Water Resources Division
Rocky Mountain Area

Subject: Assistance with test wells at White River, Badlands
National Monument

Your memorandum of May 27, 1966, addressed to Mr. Delbert W. Brown, District Geologist, Bismarck, North Dakota, requests that the Geological Survey furnish assistance in connection with locating and developing a ground-water source for the headquarters area at Badlands National Monument, South Dakota. Our Bismarck office will do the work and will bill you on a reimbursable basis in an amount not to exceed $1,125.

This work is in addition to the test drilling and well-development activities at Badlands National Monument requested by Mr. Baggley's letter of January 26, 1966. Although the cost of this work was originally estimated as $400, it is our understanding that your Omaha office orally authorized an expenditure of $640. Total work requested at Badlands National Monument during the 1966 fiscal year should not exceed $1,765.

Francis M. Bell

C
O
P
Y

MEMORANDUM OF UNDERSTANDING

BETWEEN

UNITED STATES DEPARTMENT OF AGRICULTURE

AND

UNITED STATES DEPARTMENT OF THE INTERIOR

THIS MEMORANDUM OF UNDERSTANDING, entered into by and between the United States Department of Agriculture, acting by and through the Secretary of Agriculture, and the United States Department of the Interior, acting by and through the Secretary of the Interior;

WHEREAS, the Department of Agriculture is administering, pursuant to the provisions of Title III of the Bankhead-Jones Farm Tenant Act (50 Stat. 525), certain tracts of land in Jackson County, South Dakota, as part of the Bad Lands-South River Land Utilitization Project (LU-SD-38-1); and

WHEREAS, the Department of the Interior is administering, pursuant to the Act of Congress of March 4, 1929, c. 693 (45 Stat. 1553), certain lands in Jackson County, South Dakota, as part of the Bad Lands National Monument; and

WHEREAS, the Department of the Interior desires to construct, operate, and maintain a water supply system from the White River, across the land now being administered by the Department of Agriculture, to its field headquarters office, for the purpose of transporting water for domestic use, fire prevention, and development operations in the Cedar Pass Area of the Bad Lands National Monument; and

WHEREAS, the construction, operation, and maintenance of the proposed water supply system will not adversely affect the objectives of the Bad Lands-South River Land Utilization Project as planned and being administered by the Department of Agriculture.

NOW, THEREFORE, BE IT AGREED:

1. The Department of Agriculture does hereby permit and consent to the construction, operation, and maintenance of a water supply system, together with the necessary pumping machinery, pipe line, and all proper and usual accessories across, through, and under the following described parcels of land:

PARCEL 1

All of that portion of Lot One (1), Section Fifteen (15), Township Four (4) South, Range Eighteen (18) East, Black Hills Meridian, South Dakota, lying southerly of a line One Hundred Eighty (180) feet southerly from and parallel to the northerly line of said Section Fifteen (15).

PARCEL 2

The easterly Thirty-three (33) feet of the northerly One Hundred Eighty (180) feet of Lot One (1), Section Fifteen (15), Township Four (4) South, Range Eighteen (18) East, Black Hills Meridian, South Dakota.

PARCEL 3

The easterly Thirty-three (33) feet of Lot Three (3), Section Ten (10), Township Four (4) South, Range Eighteen (18) East, Black Hills Meridian, South Dakota.

PARCEL 4

All those portions of Section Ten (10) and Eleven (11), Township Four (4) South, Range Eighteen (18) East, Black Hills Meridian, South Dakota, described as follows:

Beginning at the corner common to Sections Two (2), Three (3), Ten (10) and Eleven (11), aforesaid Township and Range;

Thence South, along the section line between said Sections Ten (10) and Eleven (11), a distance of Eleven Hundred Twenty-five and Eighty-six hundredths (1125.86) feet;

Thence South Seventeen (17) Degrees, Thirty-eight (38) Minutes, Twenty (20) Seconds East, a distance of Two Hundred Three and Twenty-four hundredths (203.24) feet, more or less, to the southerly line of the Northwest One Quarter (¼) of the Northwest One Quarter (¼) of said Section Eleven (11);

Thence West, along the southerly line of the Northwest One Quarter (¼) of the Northwest One Quarter (¼) of said Section Eleven (11), a distance of Thirty-four and Sixty-three hundredths (34.63) feet;

Thence North Seventeen (17) Degrees, Thirty-eight (38) Minutes, Twenty (20) Seconds West, a distance of Eighty-eight and Ninety-seven hundredths (88.97) feet, more or less, to the westerly line of said Section Eleven (11);

Thence continuing North Seventeen (17) Degrees, Thirty-eight (38) Minutes, Twenty (20) Seconds West, a distance of One Hundred Eight and Ninety hundredths (108.90) feet;



Thence North, parallel to and distant Thirty-three (33) feet westerly from the easterly line of said Section Ten (10), a distance of Eleven Hundred Thirty and Ninety-eight hundredths (1130.98) feet, more or less, to the northerly line of said Section Ten (10);

Thence East, along the northerly line of said Section Ten (10), a distance of Thirty-three (33) feet, to the point of beginning.

PARCEL 5

The easterly Thirty-three (33) feet of the Southeast One Quarter (¼) of Section Three (3), Township Four (4) South, Range Eighteen (18) East, Black Hills Meridian, South Dakota; excepting that portion of said parcel occupied by the Right of Way and Easement of the Chicago, Milwaukee, St. Paul and Pacific R. R. Co.

PARCEL 6

All that portion of Section Thirty-four (34), Township Three (3) South, Range Eighteen (18) East, Black Hills Meridian, South Dakota, described as follows:

Beginning at the Southeast corner of said Section Thirty-four (34);

Thence North, along the easterly line of said Section Thirty-four (34), a distance of Thirteen Hundred One and Twenty-six hundredths (1301.26) feet;

Thence North Thirty-nine (39) Degrees, Five (5) Minutes, Forty (40) Seconds West, a distance of Five Hundred Forty-one and Three hundredths (541.03) feet;

Thence North Thirteen (13) Degrees, One (1) Minute, Forty (40) Seconds West, a distance of Two Hundred Seventy-nine and Thirty-four hundredths (279.34) feet;

Thence North Thirteen (13) Degrees, Three (3) Minutes, Ten (10) Seconds West, a distance of One Hundred Twelve and Sixty-two hundredths (112.62) feet;

Thence North Twelve (12) Degrees, Forty-five (45) Minutes, Ten (10) Seconds East, a distance of Three Hundred Forty-eight and

Eighty-two hundredths (348.82) feet;

Thence North Three (3) Degrees, Forty (40) Minutes, Thirty (30) Seconds East, a distance of One Hundred Ninety-seven and Sixty-six hundredths (197.66) feet, more or less, to the northerly line of the Southeast One Quarter (¼) of said Section Thirty-four (34), from which point the East One Quarter (¼) corner of said Section Thirty-four (34) bears North Eighty-nine (89) Degrees, Forty-four (44) Minutes, Fifty (50) Seconds East, a distance of Three Hundred Thirty-nine and Ninety-three hundredths (339.93) feet;

Thence from said point distant Three Hundred Thirty-nine and Ninety-three hundredths (339.93) feet from said One Quarter (¼) corner, South Eighty-nine (89) Degrees, Forty-four (44) Minutes, Fifty (50) Seconds West, along the northerly line of the Southeast One Quarter (¼) of said Section Thirty-four (34), a distance of Thirty-three and Eight hundredths (33.08) feet;

Thence South Three (3) Degrees, Forty (40) Minutes, Thirty (30) Seconds West, a distance of One Hundred Ninety-two and Seventy-seven hundredths (192.77) feet;

Thence South Twelve (12) Degrees, Forty-five (45) Minutes, Ten (10) Seconds West, a distance of Three Hundred Fifty-three and Seventy-six hundredths (353.76) feet;

Thence South Thirteen (13) Degrees, Three (3) Minutes, Ten (10) Seconds East, a distance of One Hundred Twenty and Seventeen hundredths (120.17) feet;

Thence South Thirteen (13) Degrees, One (1) Minute, Forty (40) Seconds East, a distance of Two Hundred Eighty-six and Ninety-seven hundredths (286.97) feet;

Thence South Thirty-nine (39) Degrees, Five (5) Minutes, Forty (40) Seconds East, a distance of Five Hundred Thirty-six and Ninety-five (536.95) feet, more or less, to a point Thirty-three (33) feet westerly from, measured at right angles, the easterly line of said Section Thirty-four (34);

Thence South, parallel to the easterly line of said Section Thirty-four (34), a distance of Twelve Hundred Eighty-nine and Sixty-three hundredths (1289.63) feet to the south line of said Section Thirty-four (34);

Thence North Eighty-nine (89) Degrees, Fifty (50) Minutes East, along the southerly line of said Section Thirty-four (34), a distance of Thirty-three (33) feet, to the point of beginning.

All of the above-described parcels are shown on Drawing No. NM-BL-5321, a print of which is attached hereto.

2. The pumping machinery and equipment shall be located upon Parcel 1, above-described, and enclosed in a suitable building, and the entire parcel enclosed by a fence from the adjoining land.

3. The pipe line from the pumping plant will be 4 inches in diameter and shall be buried below the surface of the ground to a minimum depth of 5 feet.

4. The Department of the Interior shall have a right of ingress and egress to and from the above-described parcels of land, across the adjoining land under control of the Department of Agriculture, for the purpose of constructing, operating, and maintaining the water supply system, and may for such purposes construct and maintain a roadway or roadways across and upon such land, Provided, that such right of ingress and egress over and to the above-described land and such roadway or roadways shall not be located, constructed, or maintained without the prior consent of the Soil Conservation Service or other administering agency of the Department of Agriculture, and only in such manner as will not interfere with any planned use of the land involved.

5. All machinery, building, fences, equipment, and facilities installed or placed upon the above-described parcels of land



by the Department of the Interior shall remain its property and may be removed by it upon the termination of the agreement, or within a reasonable time thereafter, as may be agreed upon by the duly authorized representatives of the respective Departments.

6. The construction of the proposed water supply system will not involve the exchange of any funds available to either of the two Departments.

7. This agreement shall remain in force and effect so long as is necessary or convenient for the operation and maintenance of the water supply system.

United States Department of Agriculture

--Henry A. Wallace----
Secretary of Agriculture

By (signed) Claude R. Wickard
Acting Secretary of Agriculture

Date June 20, 1940.

United States Department of the Interior

--Harold L. Ickes-----
-Secretary of the Interior--

By A. J. Wirtz
-Acting Under Secretary.

Date JUL 3 1940

04-08-1940: an indenture made between st. paul and pacific railroad company and the u.s. department of the interior

C O P Y

THIS INDENTURE, Made this 8th day of April A. D., 1940, by and between Henry A. Scandrett, Walter J. Cummings and George I. Haight, Trustees of the property of the CHICAGO, MILWAUKEE, ST. PAUL AND PACIFIC RAILROAD COMPANY, and UNITED STATES OF AMERICA, acting by and through THE DEPARTMENT OF THE INTERIOR, National Park Service.

hereinafter called respectively the "RAILROAD COMPANY" AND THE "LICENSEE,"

WITNESSETH: That the Railroad Company, in consideration of the sum of One and 00/100 Dollars to cover the expense of preparing this agreement, to it paid by the Licensee, the receipt whereof is hereby acknowledged, and in further consideration of the faithful performance by the Licensee of all its agreements herein contained hereby grants unto said Licensee, permission and license, to install and maintain a four (4) inch Class 150 cement-asbestos water pipe underneath the right of way and track of the Railroad Company in the Northeast quarter (NE¼) of the Southeast quarter (SE¼) of Section three (3), Township four (4) South, Range eighteen (18) East, Jackson County, South Dakota at a point approximately 2 miles east of Interior, in the location indicated by the line in yellow color extending between points "A" - "B" on the plat marked Exhibit "A", hereto attached and made a part hereof, said pipe where it passes underneath said track to be encased in thirty (30) inch corrugated iron pipe for a distance of ten (10) feet on each side of the center line of said track, said thirty (30) inch iron pipe to have well tamped backfill of selected earth around the water pipe.

SUBJECT ALWAYS to the observance and performance by the Licensee of all and singular the following conditions, covenants, and agreements to be by it observed, kept, and performed, as follows, to wit: and a default in or failure to perform any of said covenants, or a breach of any of said conditions, shall work an immediate and absolute forfeiture of said grant.

FIRST, It is a condition of the aforesaid grant that the licensee shall not, and it hereby agrees that it will not at any time enter upon the premises of the Railroad Company for the purpose of constructing, laying down, repairing, altering or changing said water pipe without first notifying the Chief Engineer of said Railroad Company of its desire and intention so to do; and that it will at all times prosecute all its work upon said premises with reasonable care, skill and diligence, and to the satisfaction of said Chief Engineer, and on the completion thereof will restore the surface of said premises to the same condition in which it was prior to the Licensee's entrance thereon.

SECOND. It is a further condition of the aforesaid grant, and the Licensee also agrees that if at any time the Railroad Company shall elect to raise or lower the grade of all or any part of its premises upon, along or under which said water pipe is constructed, then and in every such case the said Licensee shall at once alter and change the location of said water pipe so as to conform to the change of grade required by the Railroad Company.

THIRD. It is a further condition of the aforesaid grant that the Licensee shall, and it hereby agrees that it will, in carrying on any and all of the work hereinabove mentioned or referred to, strictly conform to the directions and requirements of said Chief Engineer in all matters relating to the safety of operating trains upon and over the Railroad

Company's track and will not in any manner interfere with such operation without his consent; and that said Chief Engineer may, if he deems necessary so to do, protect and support said track while said Licensee is doing any work under and about the same, and shall remove the supports and restore said track to its former condition of usefulness when said work is completed.

FOURTH. It is a further condition of the aforesaid grant that the said Licensee shall, and it hereby agrees that it will bear and pay all the cost and expense which may at any time or in anywise appertain to the construction, laying down, maintaining, repairing, changing or altering said water pipe, and to the protecting and supporting of the Railroad Company's track while any such work is in progress; and to the removing of the track supports and restoring said track and premises to their former condition of usefulness when said work is completed.

FIFTH. It is a further condition of the aforesaid grant that said Licensee shall, and it hereby covenants and agrees that it will and it does hereby assume all risk of damage or injury to said water pipe caused by the operation of trains upon and over the track now laid or which may hereafter be laid by the Railroad Company, or caused by any change which it may make in the grade of its track or in the grade or use of its premises, and will at all times save and keep the Railroad Company free, clear and harmless from any and all claims on account of any of the matters aforesaid; and that in case the Railroad Company shall suffer or become liable for any loss, cost or damage whatsoever, in any manner arising from or growing out of constructing, maintaining, repairing, altering, changing, or using said water pipe then, and in any and every such case, the Licensee shall and will reimburse the Railroad Company to the full amount of the loss or damage which said Company has sustained or for which it has become liable.

SIXTH. It is further condition of the aforesaid grant, and the Licensee also covenant and agree that the Railroad Company may revoke this license and permission at any time without liability to the Licensee therefor upon giving the sixty (60) days previous notice in writing to the effect, that upon the expiration of the time specified in such notice, the said Licensee shall remove said from the premises of the Railroad Company, under the direction and supervision of said Chief Engineer, and that in case of failure on the part of said Licensee to remove the same within the above mentioned time it shall be understood that said is abandoned, and said Railroad Company may remove the same from its premises at the expense of said Licensee, or may dispose said at the points where it enters and leaves said premises

SEVENTH. This agreement is executed by and shall be binding upon Henry A. Scandrett, Walter J. Cummings, and George I. Haight, not as individuals, but solely as Trustees of the property of the CHICAGO, MILWAUKEE, ST. PAUL AND PACIFIC RAILROAD COMPANY, under authority of the Court in certain proceedings under amended Section 77 of the Bankruptcy Act in the District Court of the United States for the Northern District of Illinois, Eastern Division, entitled "In the Matter of Chicago, Milwaukee, St. Paul and Pacific Railroad Company, Debtor," Docket No. 60463.

EIGHTH: It is mutually understood by and between the parties hereto that the obligation of the Licensee for the payment of any and all amounts under the provisions of this agreement which shall accrue subsequent to the present fiscal year shall be subject to the availability of

funds for such payments and the Railroad Company hereby releases the Licensee from any and all damages arising by reason of the failure of the Licensee to make any of said payments due to the absence of funds being available therefor.

NINTH: In the event the Licensee shall discontinue the use of said water pipe or shall abandon the same for a period of two (2) years, all rights hereby given shall forthwith cease and determine.

Should the Licensee fail to keep, observe and perform any covenant or condition on its part herein contained, all rights hereby given shall at the option of the Railroad Company forthwith cease and determine. Upon termination of the privilege contained herein or upon termination of this agreement as herein provided, the Licensee shall at its own cost and expense, immediately remove said water pipe and restore said premises as nearly as possible to the same state and condition they were in prior to the construction of said water pipe. Should the Licensee in such event fail, neglect, or refuse to remove such water pipe and restore said premises, such removal and restoration may be done at the expense of the Licensee, which expense the Licensee agrees to pay to the Railroad Company upon demand.

LASTLY, The grants, covenants, and stipulations hereof shall extend to and be binding upon the respective successors, legal representatives, and assigns of the parties hereto; provided, however, that all the rights and privileges hereinabove granted shall cease and become void unless the same are exercised by the said Licensee within six months from the date hereof.

IN WITNESS WHEREOF, the Railroad Company and the Licensee have duly executed this indenture, the day and year first above written.

Henry A. Scandrett, Walter J. Cummings, George I. Haight, Trustees
of the Property of
CHICAGO, MILWAUKEE, ST. PAUL AND PACIFIC RAILROAD COMPANY

By (Sgd) George I. Haight
Trustee

Attest:

(Sgd) T. W. Burtness
Their Secretary

By (Sgd) Henry A. Scandrett
Trustee

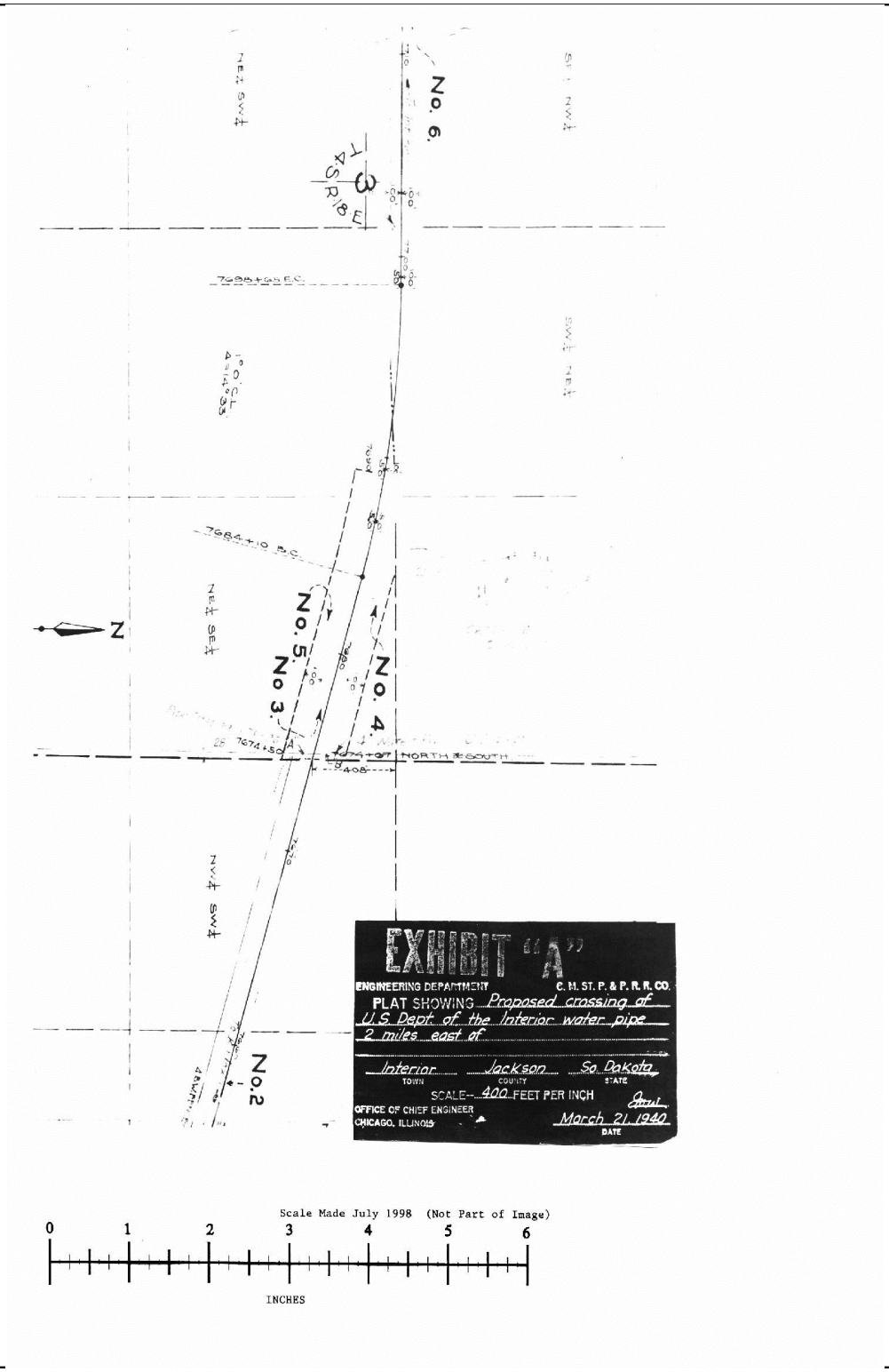
By (Sgd) Walter J. Cummings
Trustee

UNITED STATES OF AMERICA, Acting by and through THE DEPARTMENT OF THE INTERIOR, National Park Service.

By (Sgd) E. K. Burlew

First Assistant Secretary (Title)

03-21-1940: map, exhibit 'a', showing proposed crossing of u.s. department of the interior water pipe



Supporting Hydro Data

United States
Department of the Interior
Geological Survey
Water Resources Division

Development of a ground-water supply, Badlands National Monument, South Dakota

By
P. G. Randich

Administrative Use Only
~~OPEN-FILE REPORT~~

Prepared by the U.S. Geological Survey in
cooperation with the National Park Service

Bismarck, North Dakota
1967

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DEVELOPMENT OF A GROUND WATER SUPPLY, BADLANDS NATIONAL MONUMENT, SOUTH DAKOTA

By

P. G. Randich

INTRODUCTION

Purpose and Scope of the Investigation

The U.S. Geological Survey was requested by the National Park Service to locate a suitable water supply and to supervise construction of supply wells near the headquarters site of Badlands National Monument, South Dakota in the spring of 1966. About 100 gpm (gallons per minute) should be more than adequate to meet current and projected needs. The previous water supply, which was obtained from a collection gallery in the streambed of the White River (fig. 1) was unsatisfactory. During periods of turbulent flow bentonitic sediment in suspension from the stream infiltrated the supply, and the water became undesirable for public use.

FIG. 1 near here

The study included a brief reconnaissance of the geology in the immediate vicinity of the Badlands National Monument, with special reference to the hydrologic properties of the geologic units. This was followed by a program of test drilling, well construction, well testing, and water sampling.

Mr. Frank Hjort, Park Superintendent, Byron Hazelton, Mayo Zabriskie, and other members of the National Park Service staff provided assistance and information during this investigation.

Well Numbering System

FIG. 2 near here

The well-numbering system used in this report, illustrated in figure 2, is based upon the location of the wells in the federal system of rectangular surveys of the public lands. The first numeral denotes the township north of the base line, the second numeral denotes the range west of the fifth principal meridian, and the third numeral denotes the section in which the well is located. The letters a, b, c, and d, designate respectively, the northeast, northwest, southwest, and southeast quarter section, quarter-quarter sections, and quarter-quarter-quarter sections (10-acre tracts). For example well 43-39-15daa is in the NE¼NE¼SE¼ sec. 15, T. 43 N., R. 39 W.

GENERAL FEATURES AND GEOLOGIC SETTING OF THE AREA

The area is in the White River valley about 2 miles southeast of Interior, in south-central South Dakota. The valley is about 150 feet deep and ranges in width from half a mile to three-quarters of a mile. The floor is rather level and is occasionally flooded during the spring and summer.

Located near the interior of the continent, the area is subjected to extreme ranges in temperature and precipitation. Summer temperatures frequently exceed 100° F whereas winter temperatures of -20° F or lower are not uncommon. Precipitation averages about 16 inches per year but is unevenly distributed. June precipitation may exceed 6 inches, but only a few tenths of an inch ordinarily are received during each of the winter months (fig. 3).

FIG. 3 near here

Two main geologic units occur in the area of study (fig. 1). The oldest unit consists of sedimentary rocks of Cretaceous and Tertiary age into which the White River valley is carved, and the youngest consists of alluvial deposits of Quaternary age.

The sedimentary rocks of Cretaceous and Tertiary age consist mainly of consolidated pale gray-green bentonitic clay. For practical purposes these rocks are not considered water bearing. Although water often occurs in fractures in the more indurated clay, the yield and(or) quality would be inadequate for a water supply of the magnitude needed.

About 15 to 30 feet of alluvium has been deposited in the valley of the White River. The alluvial deposits consist of unconsolidated gravel, sand, silt, and clay. The gravel, which occurs most abundantly at the base of the alluvium (fig. 1), is a highly permeable aquifer. Within the area of study the gravel seems to be associated with an elongate depression in the bedrock that is a former channel of the White River.

TEST DRILLING

During the test drilling program 14 test holes were drilled, 4 with a rotary rig and 10 with an auger, to obtain information on the thickness and water-bearing properties of the alluvium. Locations of the test holes, which ranged from 17 to 33 feet in depth, are shown in figure 1. Logs of test holes are given in table 1.

CONSTRUCTION AND PUMPING OF TEST WELL

After completion of the test drilling, a test well (43-39-15adc3) was constructed to determine the quantity and quality of water available from the alluvial deposits. The well was constructed to a depth of 33 feet; it was cased with steel pipe that was slotted from 15 to 33 feet. A gravel pack was inserted in the annular space between the borehole, which was 26 inches in diameter, and the casing which was 16 inches in diameter. The well was equipped with a 15 gpm submersible pump for aquifer-test purposes. An observation well having approximately the same depth as the test well was installed about 200 feet west of the test well.

The test well was pumped for 12 hours at the rate of 15 gpm. Drawdown and recovery measurements were made in the pumped well and in the observation well. The aquifer test data were analyzed, using methods developed by Theis (1935) and others, to obtain the aquifer coefficients. Because the test conditions were poor the results were inconclusive. However, useful information was obtained concerning the productivity of the aquifer.

The test analysis suggested that four supply wells, tapping the thickest parts of the gravel in the buried channel, would be needed to provide a sustained withdrawal of 100 gpm or more. The analysis also indicated that the wells should be spaced about 300 feet apart in order to minimize drawdown interference between wells.

CONSTRUCTION AND TESTING OF SUPPLY WELLS

The four supply wells, spaced 300 feet apart, were constructed in a somewhat east-west arrangement along the axis of the buried, gravel-filled channel as shown in figure 1. Each well was drilled to a depth of about 30 feet and was constructed in the following manner. A 48-inch diameter hole was bored to a depth of 8 feet. Blind steel casing was set to this depth. A 30-inch diameter hole was bored from 8 to about 30 feet and blind steel casing was set to the bottom of the hole. Concrete casing of 24-inch diameter and in 2-foot sections was then installed inside of the steel casing. A gravel pack was placed in the annular space between the casings, and the steel casing was pulled from the hole. A diagram of a typical installation is given in figure 4.

FIG. 4 near here

Each well was cleaned and developed with intermittent bailing and surging. Well 2 (43-39-15adc1) was test pumped at the rate of 35 gpm for a period of 20 hours. The test data are given in figure 5. The test analysis indicated an aquifer coefficient of transmissibility[1] of 20,000 gpd per foot (gallons per day per foot).

FIG. 5 near here

1/ Defined as the quantity of water in gallons per day that moves through a section of the aquifer 1 mile wide under a hydraulic gradient of 1 foot per mile.

In order to evaluate the efficiency of the wells and to determine the specific capacities[2/] for different rates of pumping, a 3-hour step-drawdown test was made on each well. This information determined whether more development work was needed in a well and at what pumping rate the well eventually could be put into service. Figure 6 shows the specific capacities of wells 1-4 obtained during the step-drawdown tests. Wells 1 and 2, which have the highest specific capacities, penetrate the most permeable deposits.

FIG. 6 near here

QUALITY OF WATER

The suitability of water for various uses is dependent on its quality. Concentrations of calcium, sodium, sulfate, chloride, nitrate, fluoride, dissolved solids, and hardness affect its use. The quality of water for public supply and domestic use commonly is evaluated in relation to standards of the U.S. Public Health Service (1962). The standards are, in part, as follows:

Constituent	Maximum Concentration (ppm)
Iron (Fe)	0.3
Manganese (Mn)	.05
Sulfate (SO_4)	250
Chloride (Cl)	250
Nitrate (NO_3)	45
Total dissolved solids	500

2/ The specific capacity of a well is a useful index with which to compare well performances. It is obtained by dividing the pumping rate, in gallons per minute, by the drawdown, in feet.

Analyses (table 2) indicate that the water from the wells is of the sodium bicarbonate sulfate type. The water generally exceeds the recommended limits for dissolved solids and is moderately hard. The concentration of iron, manganese, and fluoride is not excessive.

Excessive concentrations of iron and manganese may affect the taste of water and may discolor food products during cooking. Also, they stain porcelain, enamelware, and fabrics. Iron and manganese in water, upon being exposed to air, are readily oxidized and form precipitates that cause the water to become cloudy. Iron and manganese can be removed from water economically.

Sodium in drinking water may be harmful to persons suffering from cardiac renal and circulatory diseases. However, the concentration in the samples analyzed do not appear excessive.

No specific standards for hardness have been established, but the following graduations are generally recognized:

Hardness (ppm)	Rating	Suitability
0-60	Soft	Suitable for most uses without softening
61-120	Moderately hard	Usable except in some industrial applications
121-180	Hard	Softening required by laundries and some industries
181+	Very hard	Requires softening for many uses

According to this classification the water from all wells is moderately hard, and the reason the sample taken at the test well was soft (table 1) is because it was collected during a period of flooding, and it is not truly representative of the aquifer.

Water samples were collected periodically from each well during the step-drawdown tests and analyzed for specific conductance. The results are as follows:

Well	Field measured specific conductance	Time in minutes since pumping began
1	940	40
1	925	65
1	900	150
1	900	180
2	800	30
2	850	55
2	860	120
2	850	360
2	850	500
2	860	1,200
3	890	45
3	870	150
3	850	180
3	850	250
4	940	50
4	925	70
4	900	150
4	900	240

The determination of conductivity is a quick method of measuring the ion concentration of water. Conductivity results were used during this study to aid in development and establish pumping rates.

CONCLUSIONS AND RECOMMENDATIONS

Test drilling revealed the presence of a sand and gravel aquifer associated with a buried channel in White River valley. Pumping tests showed that at least 100 gpm could be obtained from a field of four wells. Wells 1 and 2 are the best producers and the recommended pumping rates are:

Well	Rate in gpm
1	30-45
2	25-40
3	15-30
4	15-25

If rates of 70 gpm or less are required, wells 1 and 3 or 2 and 4 should be pumped simultaneously to obtain maximum aquifer and well efficiency. Only during emergencies should drawdown in the wells exceed 20 feet below land surface.

Sustained pumpage will cause well interference, thus accelerating the rate of water-level decline in the well field. This is illustrated in figure 7. The predicted levels would be exceeded if discharge from the well field exceeds recharge. However, as the cone of depression expands, the rate of water-level decline in the wells should decrease, unless boundary conditions are more pronounced than present data indicates.

It is recommended that a continuous recorder be maintained on the test well located between wells 2 and 3. These records will indicate when overdrafts of water are being made, and will aid in detecting well inefficiency. Also, these can be compared with precipitation records for future hydrologic interpretations.

If expansion of facilities should require more than 130 gpm, which probably is the combined maximum yield of the four wells, one or more additional wells can be installed in the aquifer. The most desirable location for an expansion of the well field is southwest of well 1 along the trend of the buried channel and using 300-foot spacings (fig. 1).

It would be desirable to obtain water rights (if needed) for the present well field development and for future expansions (if any are contemplated) in order to insure a permanent supply for the Badlands National Monument Headquarters.

Should dewatering occur and water-levels decline due to lack of natural recharge or heavy pumpage, artificial recharge could economically sustain the water supply. One or more infiltration ditches, 5-6 feet wide, 6-8 feet deep, and 100 feet long constructed along the right of way between the wells, but not closer than about 100 feet to any production well, should act as an effective recharge device. During selected periods water could be pumped or diverted from the White River or local runoff to the infiltration ditch or ditches, thus recharging the aquifer.

During periods of high runoff most of the valley floor may be inundated. Much of the water infiltrates into the alluvial deposits in the channel causing pressure releases that appear as geysers. These are believed to be caused by rapid recharge of the formerly dry oxidized zone in the alluvium. As the water recedes a veneer of gentonitic clay is deposited on most of the valley floor.

Ground water in the alluvium is principally of the sodium bicarbonate sulfate type. The water is moderately hard and generally high in dissolved solids. However, it is of better quality than many presently used public supplies in the area. It may be advantageous to post a copy of the chemical constituents of the water for the benefit of the general public. Also, an analysis of water from well 2 collected at least annually would aid in future hydrologic interpretations of the aquifer.

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Brown, R. H., 1953, Selected procedures for analyzing aquifer test data: Jour. Am. Water Works Assoc., Vol. 45, No. 8, p. 844-866.

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Gries, J. P., 1964, Mineral resources and their potential on Indian lands: Pine Ridge Reservation, South Dakota: U.S. Bureau of Mines Preliminary Report 153, 65 p.

Theis, C. V., 1935, The relation between the lowering of the piezometric surface and the rate and duration of a well using ground-water storage: Am. Geophys., Union Trans., 1935, Pt. 2, p. 519-524.

U.S. Department of Health, Education, and Welfare, 1962, Public Health Service drinking water standards: Public Health Service Pub. 956, Washington, Govt. Printing Office.

TABLE 1.--Logs of auger holes and wells

Auger hole
43-39-15aca1

Material	Thickness (feet)	Depth (feet)
Clay, very silty----------	5	5
Sand, very fine to fine (slightly moist)----------	8	13
Sand, medium; gravel, silty----------	7	20
Gravel (water-bearing), rounded to subangular-----	4	24
Gravel, alternating layers with clay or silt(?)---	3	27
Shale, grayish-blue-green, 5 BG 6/6----------	1	28

Auger hole
43-39-15aca2

Clay, silty----------	4	4
Sand, fine to medium----------	4	8
Sand and gravel (very little moisture)----------	7	15
Gravel and sand (water saturated)----------	2	17
Sand, silty to clayey(?)----------	5	22
Shale, grayish-blue-green, 5 BG 6/6----------	1	23

Note: Hole dry upon completion.

Auger hole
43-39-15acb

Clay, silty----------	3	3
Sand, medium to coarse, gravelly----------	6	9
Sand, very coarse, some gravel----------	12	21
Gravel, coarse, very sandy----------	2	23
Gravel and sandy, dense (drills hard)----------	4	27
Shale, grayish-blue-green, 5 BG 6/6----------	6	33

43-39-15acd
Well 1

Material	Thickness (feet)	Depth (feet)
Clay, silty	2	2
Sand, fine to coarse, gravelly	8	10
Sand, coarse, very gravelly	7	17
Clay, silty to sandy	2	19
Gravel, coarse to bouldery, well rounded (clay stringer approximately 6 inches thick at 21 and 24 feet)	6	25
Shale, grayish-blue-green	5	30

Note: Installed plug with 2 ft blank casing then 10 ft of perforated cone screen and 18 ft of blank casing, gravel packed.

43-39-15adc1
Well 2

Clay, silty	4	4
Sand, fine to very fine, silty	6	10
Sand, coarse; gravel, medium to coarse	15	25
Shale, grayish-blue-green, 5 BG 6/6	5	30

Note: Installed plug with center hook, 2 ft casing, 10 ft of screen, 18 ft of casing, gravel packed to top.

43-39-15adc2
Well 3

Clay, silty to sandy	5	5
Sand, fine to coarse, silty	6	11
Gravel, coarse; sandy, well rounded	8	19
Sand, coarse	1	20
Gravel, coarse, sandy	4	24
Shale, grayish-blue-green	5	29

Note: Installed plug, 2 ft of blank, 10 ft screen, and 18 ft of blank casing, gravel packed.

Auger hole
43-39-15adc3

Material	Thickness (feet)	Depth (feet)
Clay, silty	4	4
Sand, very fine, silty	3	7
Sand, coarse, (gravel becoming more abundant from 11 feet)	18	25
Shale, grayish-blue-green, 5 BG 6/6	8	33

Note: Pilot hole for production test well (T).

Auger hole
43-39-15add1

Clay, very silty	11	11
Sand, fine to medium, gravelly	10	21
Gravel, sandy (saturated)	3	24
Shale, grayish-blue-green, 5 BG 6/6	4	28

Auger hole
43-39-15add2

Clay, silty	5	5
Sand, very fine to coarse	7	12
Sand and gravel (saturated)	2	14
Shale, grayish-blue-green, 5 BG 6/6	3	17

Auger hole
43-39-15add3

Clay, silty	8	8
Sand, very fine to medium, silty	5	13
Gravel and sandy	6	19
Gravel, sandy	4	23
Clay(?), drilled tight	2	25
Gravel, medium, sandy (saturated)	4	29
Shale, pale-red, 5 R 6/2	4	33

Auger hole
43-39-15bdd

Material	Thickness (feet)	Depth (feet)
Clay, silty to sandy	8	8
Sand, fine to medium, some gravel	9	17
Sand and gravel (saturated)	9	26
Shale, grayish-blue-green, 5 BG 6/6	2	28

Auger hole
43-39-15dab1

Clay, silty	6	6
Sand, fine to coarse	5	11
Sand and gravel	5	16
Shale, grayish-blue-green, 5 BG 6/6	2	18

43-39-15dab2
Well 4

Clay, silty to sandy	3	3
Sand, medium, silty	4	7
Sand, medium to coarse	5	12
Sand, coarse, uniform, clayey	5	17
Gravel, medium to coarse, sandy, cemented in places	6	23
Shale, grayish-blue-green	7	30

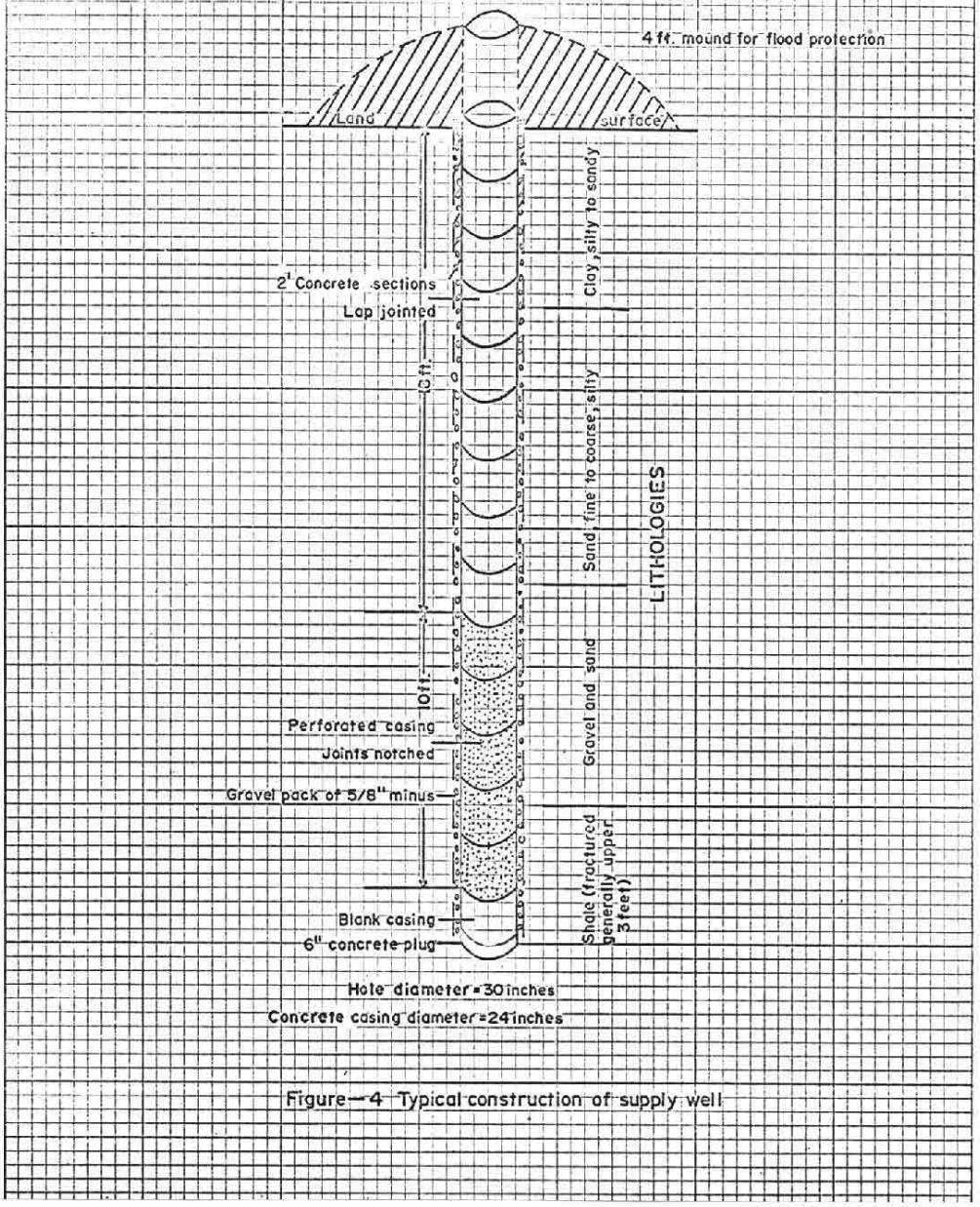
Note: Installed plug, 2 ft of blank, 10 ft of perforated, and 18 ft of blank lap joint concrete casing.

Auger hole
43-39-15dbb

Clay, very silty	6	6
Sand, very fine to fine	3	9
Gravel, medium; sandy	5	14
Alternating layers of silt and gravel	5	19
Shale, grayish-blue-green, 5 BG 6/6	2	21

Auger hole
43-39-15dda

Material	Thickness (feet)	Depth (feet)
Clay, silty----------	5	5
Sand, fine to medium----------	5	10
Sand and gravel----------	12	22
Shale, grayish-blue-green----------	5	27



Figure—4 Typical construction of supply well

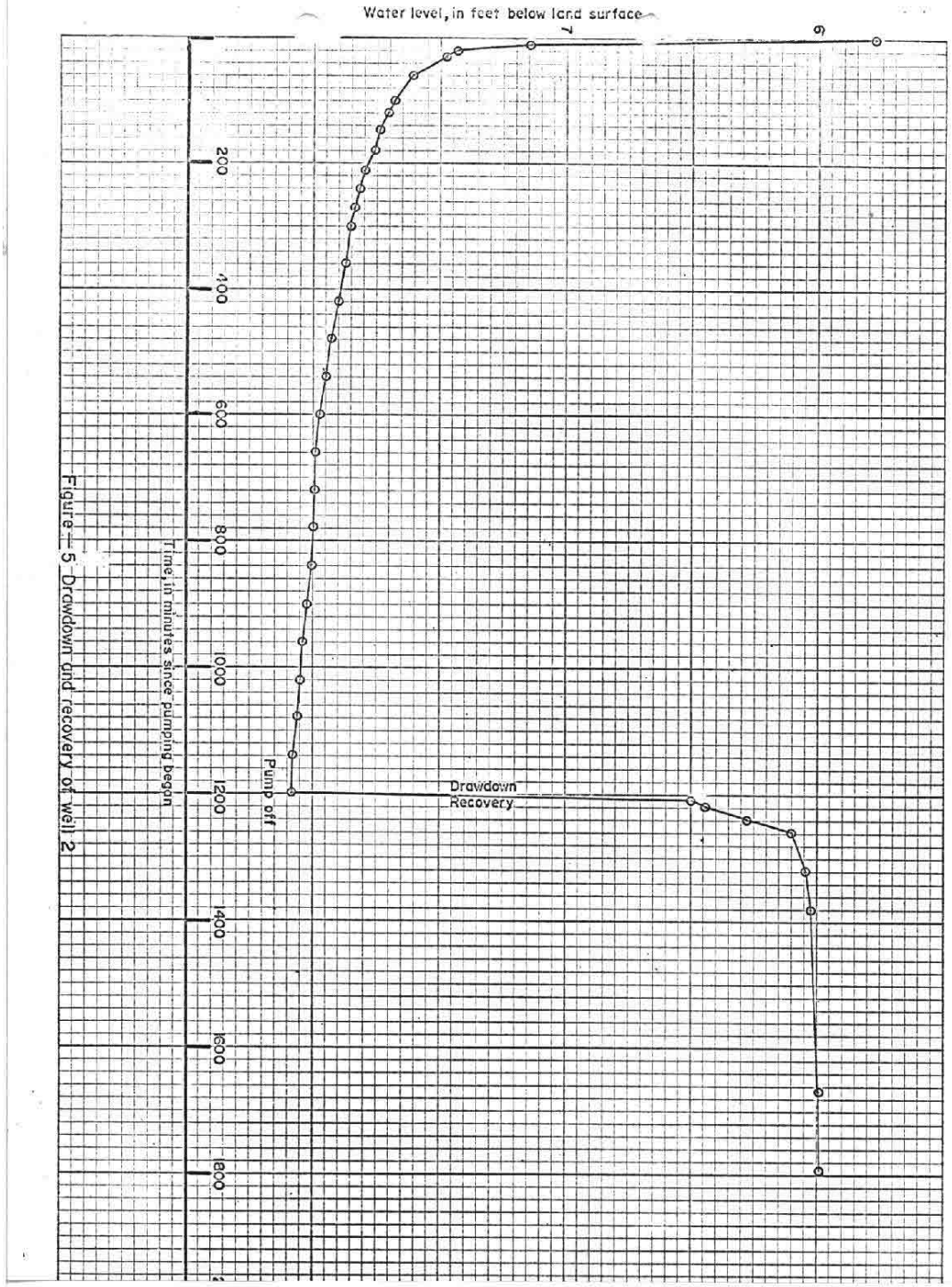


Figure 5. Drawdown and recovery of well 2

00-00-0000: specific capacity, in gpm/ft (for one hour of pumping)

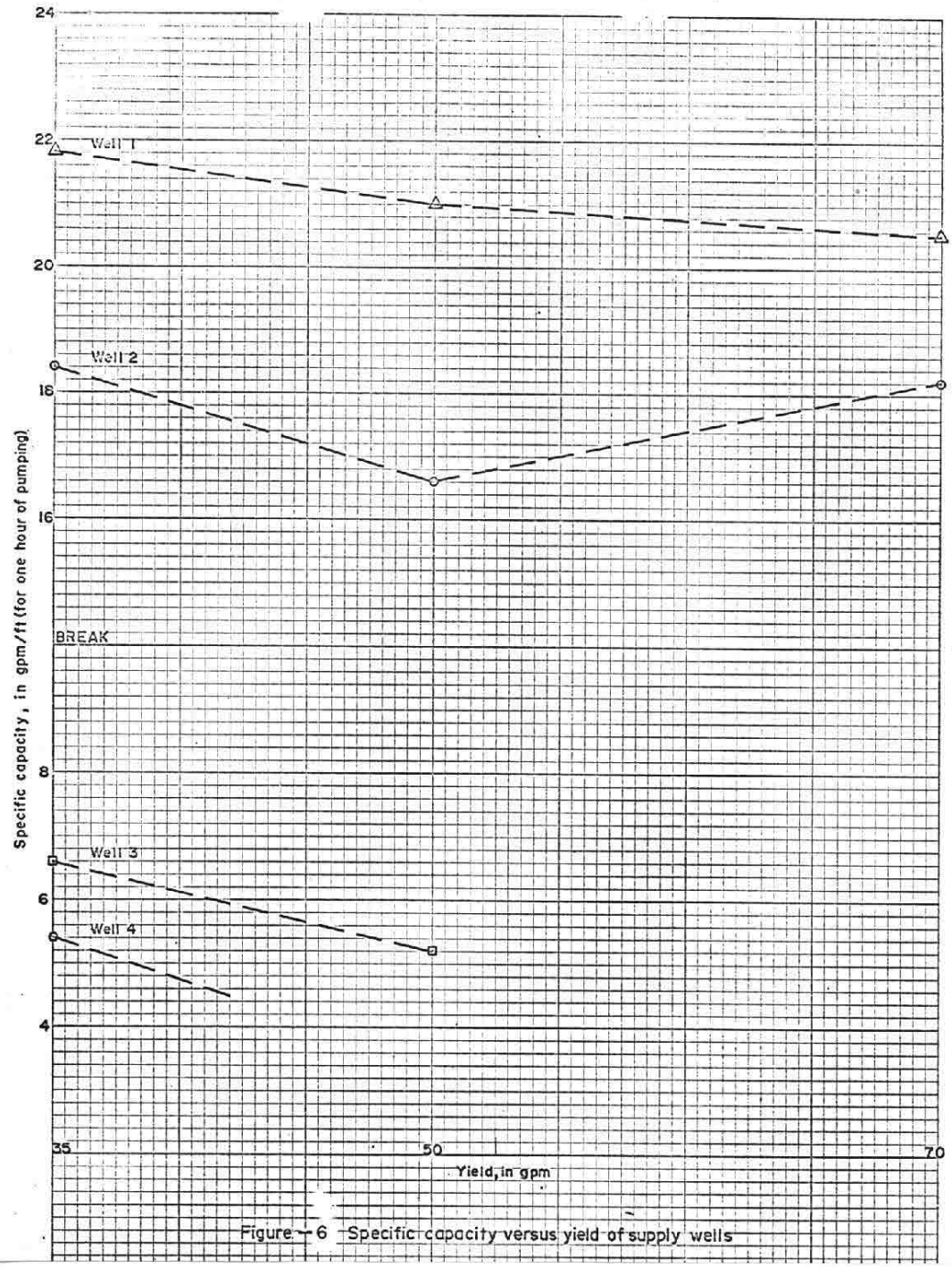


Figure 6 Specific capacity versus yield of supply wells

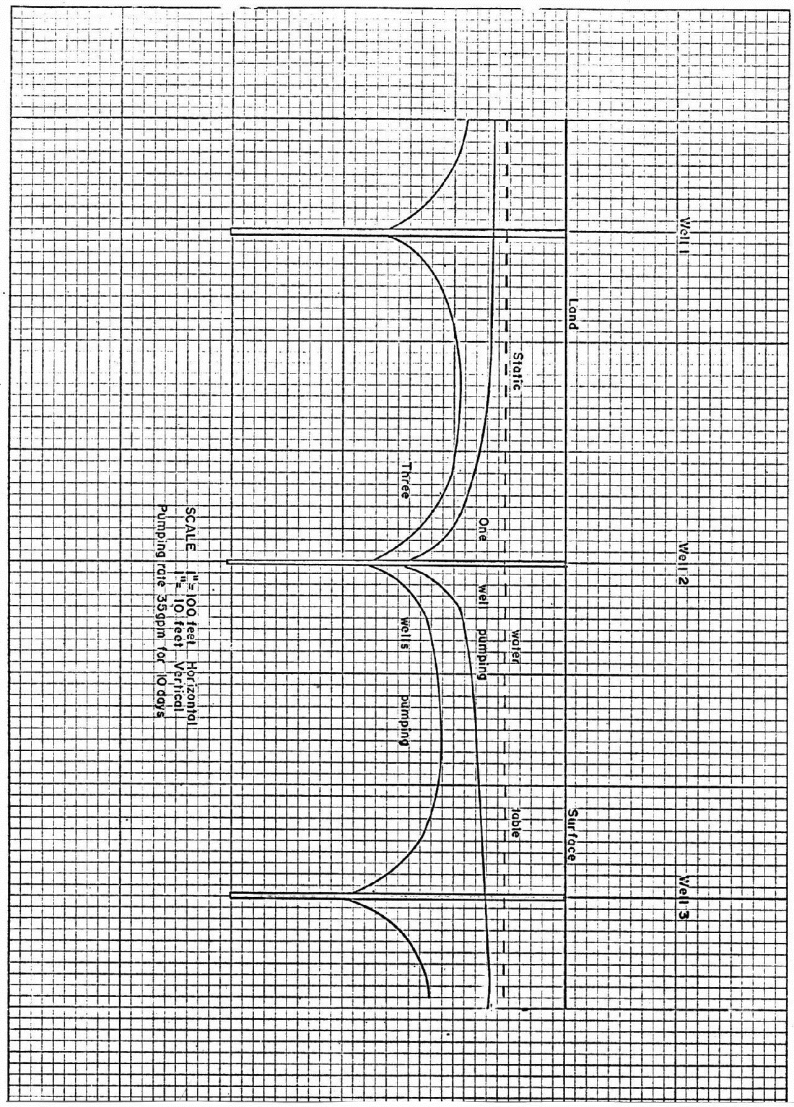
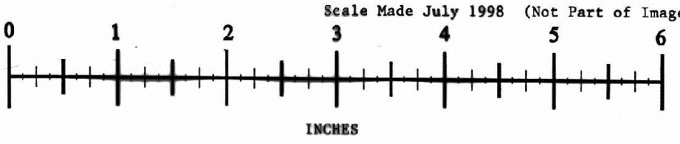
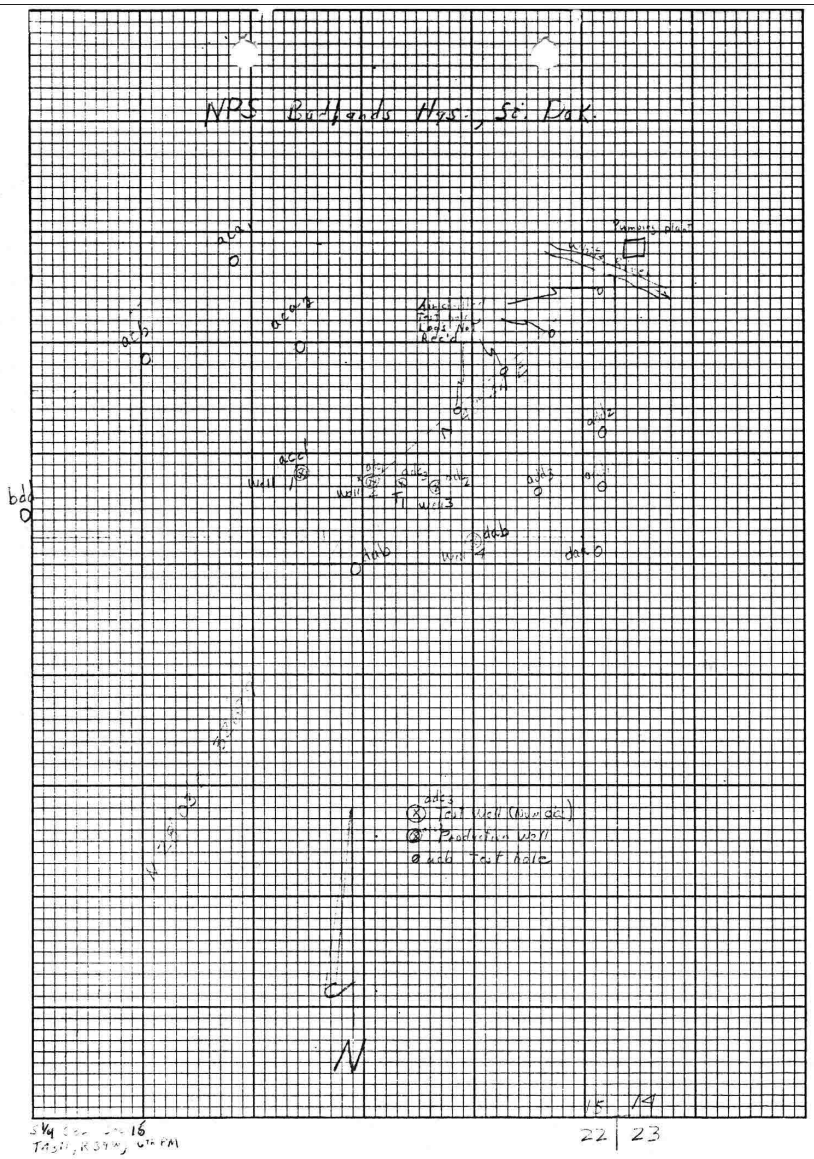


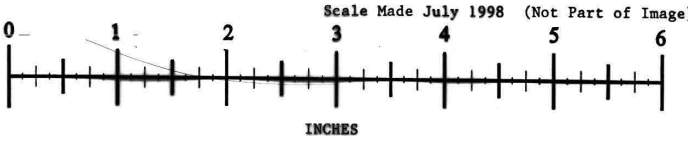
Figure — 7 Predicted drawdowns in the vicinity of wells 1-3

Scale Made July 1998 (Not Part of Image)

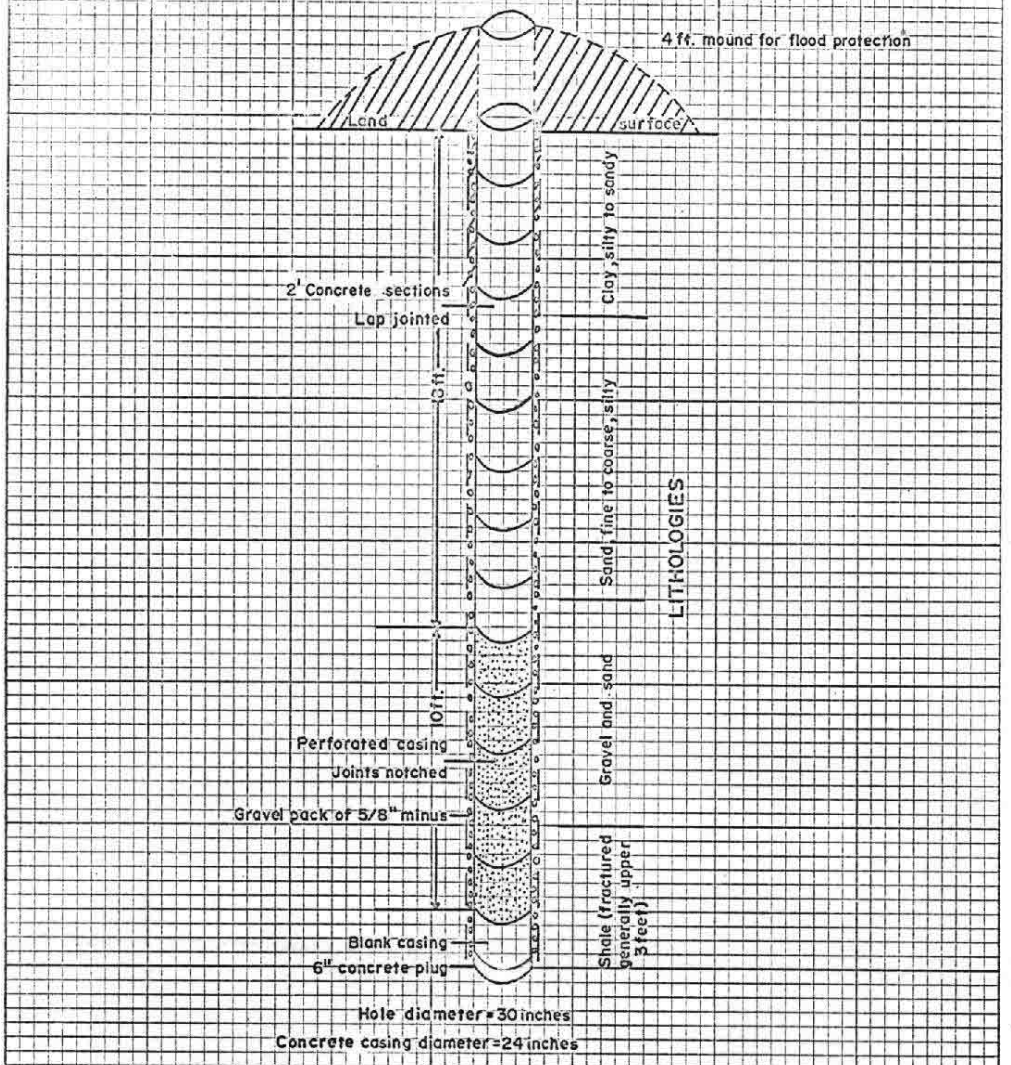




Scale Made July 1998 (Not Part of Image)



00-00-0000: figure 4 - typical construction of supply well



Figure—4 Typical construction of supply well

00-00-0000: figure 5 - drawdown and recovery of well 2

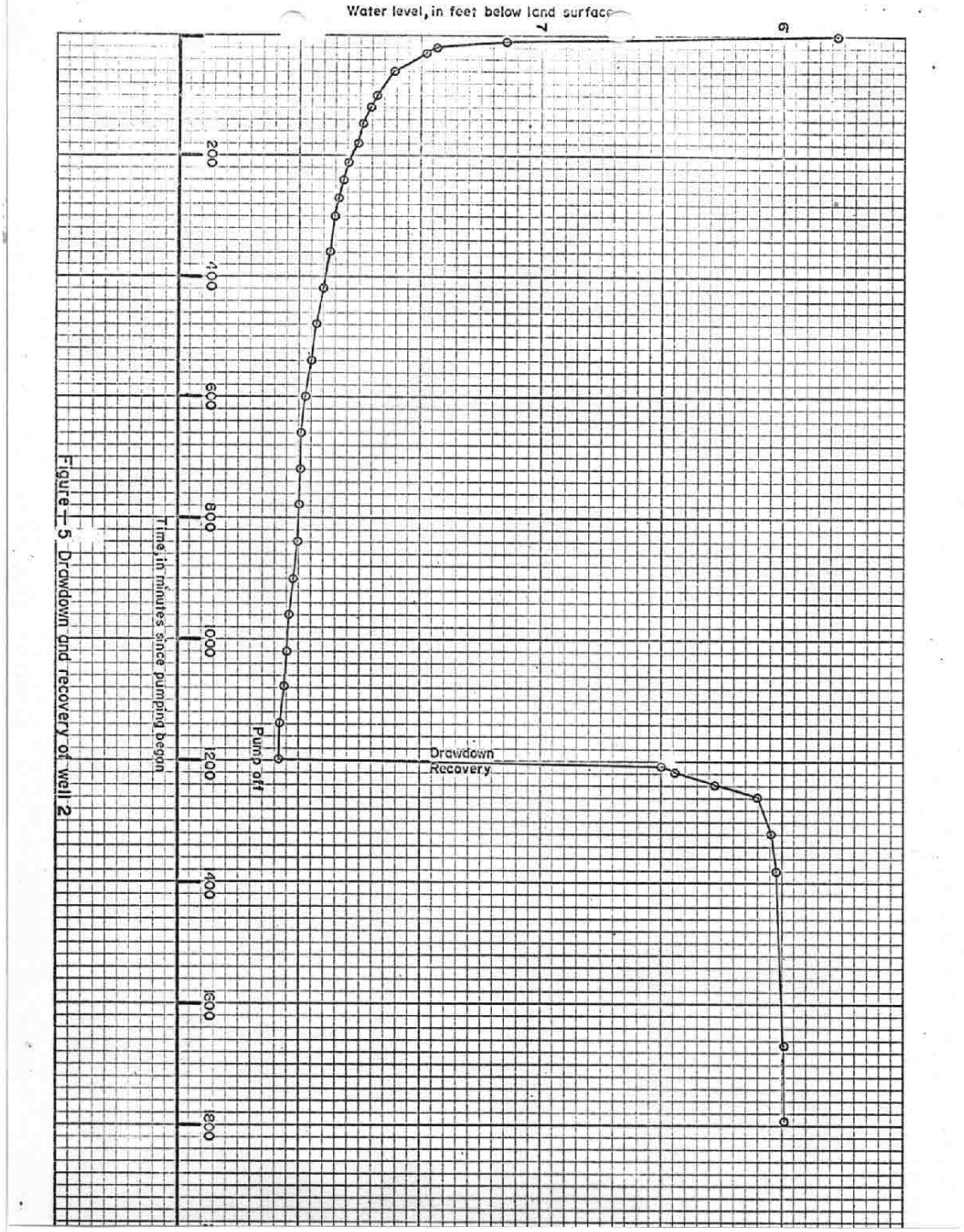


Figure 5 Drawdown and recovery of well 2

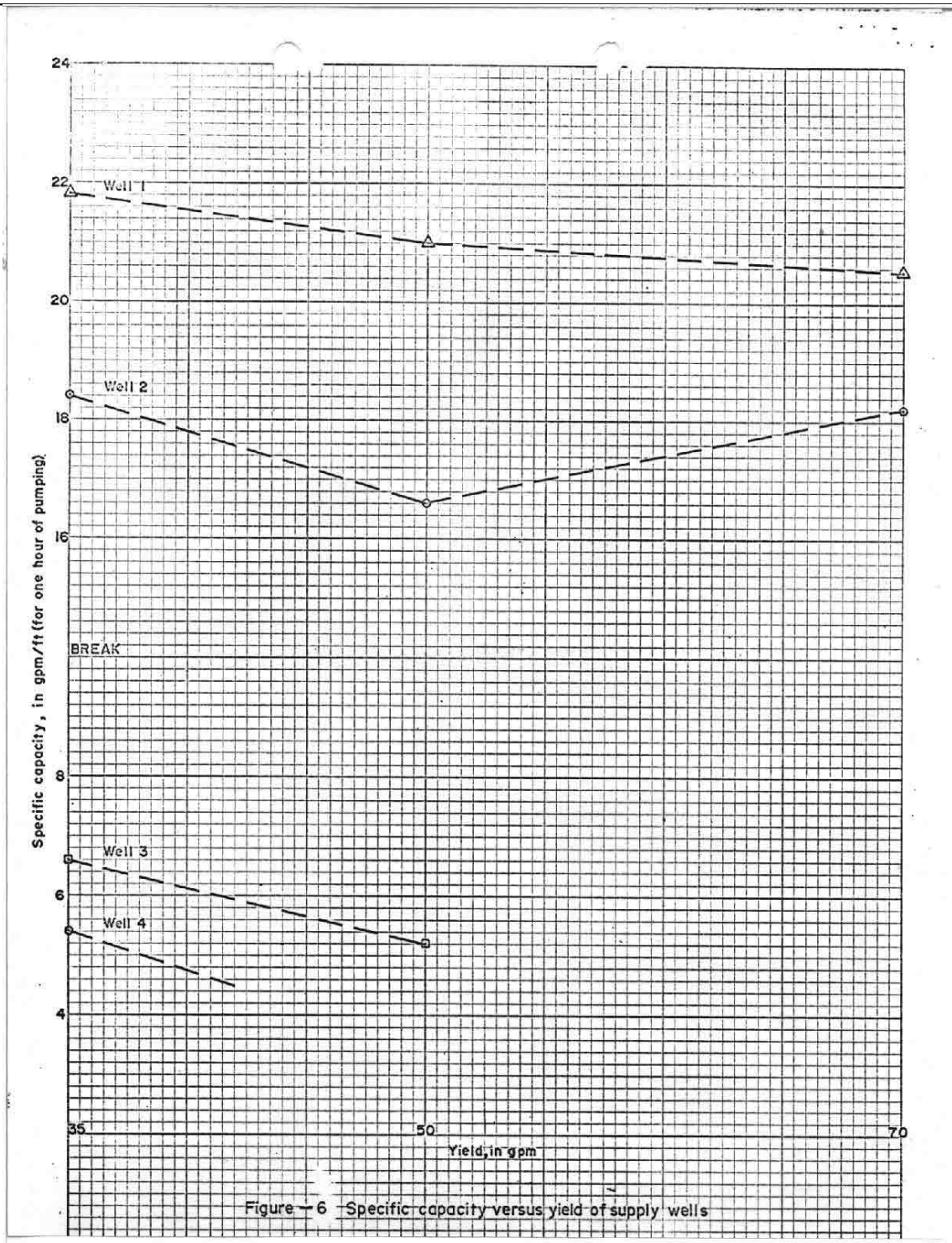


Figure — 6 Specific capacity versus yield of supply wells

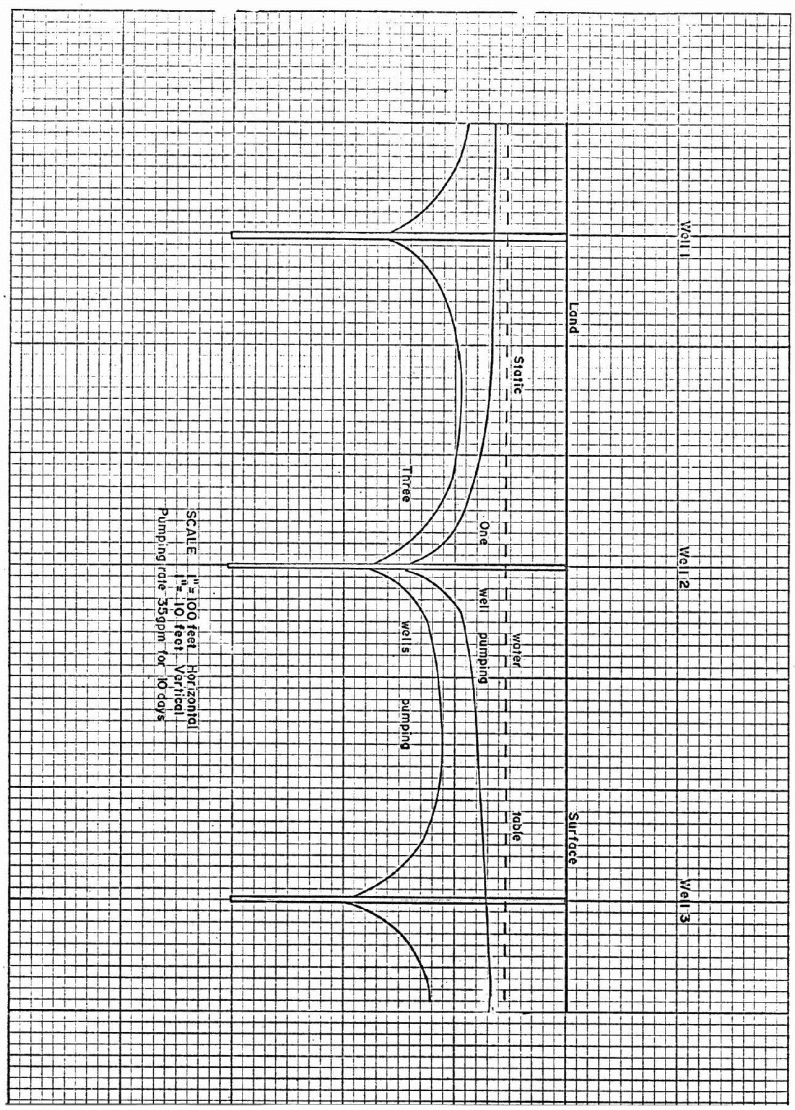
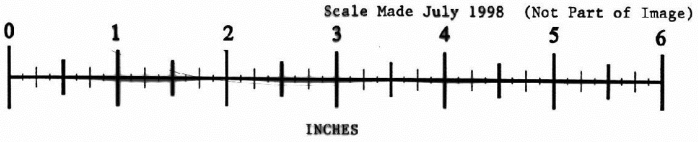
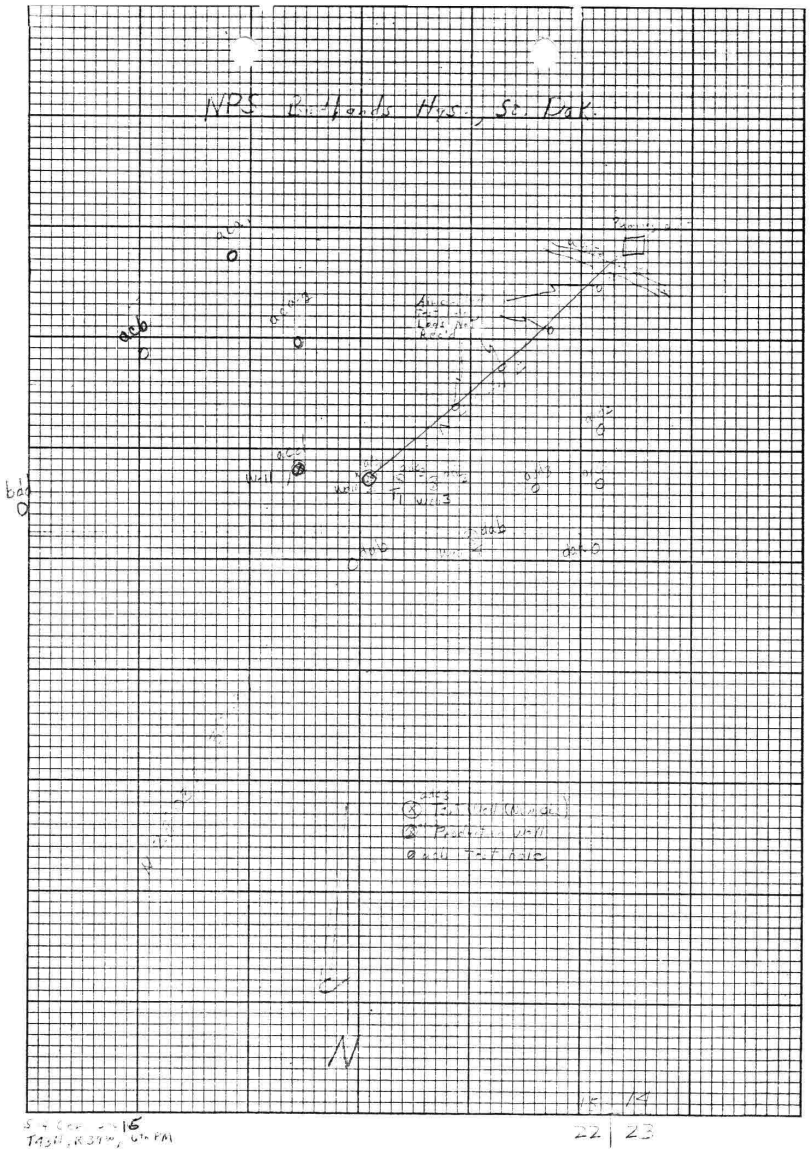


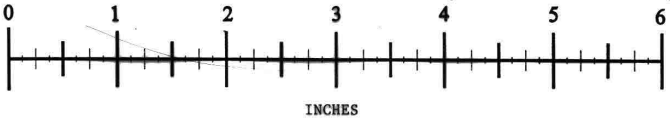
Figure — 7 Predicted drawdowns in the vicinity of wells 1-3

Scale Made July 1998 (Not Part of Image)





Scale Made July 1998 (Not Part of Image)



Other Supporting Information

2

Ed Read
Bring to Jerry's attn —
I don't think a water right
is required - this is water from the
Sioux Reservation for use on
Badlands(?) Lands as PARK
All rights are federal —
why can't we just say to
whom it may concern ?

L54(WSC)LWW
BADL

June 16, 1970

M W

Memorandum

To: Director, Midwest Region

From: Director, Western Service Center

Subject: Water Rights Application, White River Wells, Badlands

This is in response to Acting Director Leroy R. Brown's June 1 memorandum, Item 2, concerning the subject water right matter. Upon reviewing the files and following a telephone conversation between Superintendent Earnst, and Mr. D. Chavez, on May 13, the following information was verified.

The four wells are immediately outside of the park on land belonging to a Sioux tribe; the wells are tied into a water systems which provides water for the entire monument consisting of the headquarters, the visitor center, concession facilities, employee housing, and a campground. A right-of-way was obtained from the Sioux tribe for the purpose of developing the water system, however, the Service never filed applications for the water rights, as the necessity for application was never clearly established. It appears that the definition of the usage of the water from the subject wells is relevant to the issue; the usage was presumed to be domestic (as defined by the South Dakota State Water Code), and thus did not require application (see December 12, 1967, letter from Superintendent J. R. Earnst to South Dakota State Engineer, and a December 18, 1967, subsequent reply). However, it appears that the usage of the water is more accurately defined as municipal and therefore may be subject to application.

This office contacted the South Dakota State Water Resources Division and discussed our intention to make application for the water rights on the wells. As soon as the forms are properly completed, distribution of copies will be made and proper water docket documentation will be made.

(Sgd.) William L. Bowen

cc:
Superintendent, Badlands
MW-WASO w/inc.

L54(WSC)LWW
BADL-WR #3 September 14, 1970

AIRMAIL

State Water Resources Commission
State Office Building No. 2
Pierre, South Dakota 57501

Dear Sirs:

Enclosed is Proof of Publication of Notice of Intent to Appropriate Water, Application No. 1035-2, Badlands National Monument.

As discussed in a telephone conversation between Mr. D. Chavez of this office and Mr. B. F. Jones of your office, we anticipate the issuance of a permit for this water right, as we were informed that our application was approved at the September 9, 1970, hearing.

Thank you for your cooperation in this matter.

Sincerely yours,

(Sgd)

Gerard S. Witucki
Chief, Water Resources Section
Office of Land Acquisition and
Water Resources

Enclosure

cc:
MW-WASO
Director, Midwest Region
Superintendent, Badlands

09-03-1970: statement of the kadoka press

STATEMENT

The Kadoka Press

GATE WAY TO THE BAD LANDS PUBLISHED WEEKLY ON THURSDAY AT KADOKA - SOUTH DAKOTA

PRINTERS and PUBLISHERS KADOKA, SOUTH DAKOTA

9-3, 1970

Badlands Natl. Monument

Interior, S.D.

Sept	3	Water Legal 4 weeks	#16	87		

00-00-0000: memorandum to superintendent from chief, office of land and water rights regarding payment for pipeline easement;

File
L54
LWSSC
BADL
White River

JUN 20 1968

LWSSC
L1425 BADL
General

AIR MAIL - CERTIFIED - RETURN RECEIPT REQUESTED

Memorandum

To: Superintendent, Badlands

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

Subject: Payment for pipeline easement

Reference is made to your letter B5030, dated May 23, 1968.

Enclosed is United States Treasurer's check No. 58,500,375 dated June 17, 1968, in the amount of $2,000.00 as payment for the water pipeline easement granted to the United States of America for use of the National Park Service by the Tribal Executive Committee of the Oglala Sioux Tribe.

You are authorized to deliver the enclosed check in exchange for the easement plat, containing the necessary properly acknowledged Owner's Certificate and approval of the Bureau of Indian Affairs, together with any other pertinent documents relating to the transaction which must include a Land Status Report of the property showing title to the fee vested in the United States for the benefit of the Oglala Sioux Tribe. The above mentioned plat should be recorded in Lawrence County.

It is also requested that you obtain a letter from the appropriate Area Office of the Bureau of Indian Affairs that the Superintendent,

00-00-0000: memorandum to superintendent from chief, office of land and water rights regarding payment for pipeline easement;

Pine Ridge Indian Agency had the authority to endorse the plat on behalf of the Bureau of Indian Affairs. Said authority may be withdrawn under Section 161.30 of Title 43 C.F.R., thus necessitating this inquiry.

Your assistance in this matter is appreciated. Please return all documents to this office.

(Sgd) THOMAS KORNELIS

cc:
Regional Director, M/W Region
Water Rights, SSC
Attn: William E. Fields

COPY

Badlands National Monument
P. O. Box 72
Interior, South Dakota 57750

D5039

May 23, 1968

Memorandum

To: Chief, Office of Land and Water Rights, SSC
Attention: Mr. A. W. Gray

From: Superintendent, Badlands

Subject: Acceptance of offer and request for payment, White River wells easement, Badlands

Enclosed is a notification of acceptance of our offer and request for payment of $2,000 for a perpetual water-pipeline right of way easement on Oglala Sioux Tribal lands. We are enclosing both the bill from Lloyd Eaglebull, Vice President of the Tribe, and the cover letter signed by BIA Agency Realty Officer, John Lewis. Please note in Mr. Lewis' letter that payment should be made payable to the Bureau of Indian Affairs.

The Owner's Certificate of the easement plat is being modified in accordance with the recommendations of Mr. Gray's April 16 memorandum. Mr. Lewis of BIA has assured us that the modifications are acceptable. A copy of the modified easement plat will be forwarded after it has been recorded.

John R. Earnst
Superintendent

Enclosures

cc:
Reg. Dir., MW w/c encl
Filbaum

COPY

05-13-1968: face sheet for completion report; 1968

Form 10-174
(June 1962)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

FACE SHEET FOR COMPLETION REPORT

Park: Badlands National Monument	Region: Midwest	Work Order No.: 137-211707
Location in Park: White River wellfield of the Headquarters water system	State(s): South Dakota	Fund Symbol: 14X1035 - 210000
	County or Counties: Washabaugh and Jackson	Year Programmed: 1966
		PCP No.: U-50-1
		Master Plan No.:
		Master Plan Corrected By:
(X) Contract and/or (X) Day Labor		As Built Drawings By:
Work Order Title: Emergency Water Supply		Date Started: June 1966
		Date Completed: December 7, 1967

DESCRIPTION OF FIXED ASSETS (For completion by employee in charge of project)	TOTAL COSTS (For completion by FFO)
ACCOUNT 230.1 - WATER SYSTEMS	34,553.08
Expansion of Cedar Pass water system to include four 30-foot wells with 2-hp pumps and a new 12' x 9 1/3' cinderblock pumphouse south of the White River in Washabaugh County.	
Contract 24,332.92 Day Labor 5,454.22 PS&S 4,765.94 34,553.08	
Contract # 14-10-7-971-94 M.A. Garland Const., Rapid City,S.D.	
Contract # 14-10-0232-1573 Bice Drilling Co.,Rapid City, S.D.	
TOTAL	$ 34,553.08

DISTRIBUTION No.	To
1	WASO ✓
1	SSC
2	MWRO
1	PADL

THE FIXED ASSET DESCRIBED ABOVE HAS BEEN COMPLETED IN ACCORDANCE WITH APPROVED DRAWINGS, SPECIFICATIONS, AND AUTHORIZED CHANGES

Submitted By: George A. Fisher, Jr. — Title: Administrative Officer — Date: May 13, 1968

Approved By: John R. Earnst — Title: Superintendent — Date: May 13, 1968

COSTS VERIFIED BY Bruce E. Heiser — Title: Regional Accountant — Date: JUN 24 1968

11360

05-13-1968: composition of cost for completion report; 1968

Form 10-174A (June 1962)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

COMPOSITION OF COST FOR COMPLETION REPORT

Work Order Number: 137-211707

Fund Symbol: 14X1035

Park: Badlands National Monument

Region: Midwest

Year Programmed: 1966

Location in Park: White River wellfield of the Headquarters Water System

Work Order Title: Emergency Water Supply

COMPOSITION OF COST

COSTS CHARGED TO FUNDS ALLOTTED TO FIELD FINANCE OFFICE		
(1) Personal Services	$ 210.28	
(2) Travel		
(3) Contract Work #14-10-7-971-94 19,788.42 #14-10-0232-1573 4,544.50	24,332.92	
(4) Supplies and Materials	1,615.20	
(5) Other Direct Expenses	3,628.74	
(6) Operation of Equipment		
(7) Depreciation of Equipment		
(8) Purchase of Construction Equipment		
(9) Purchase of Other Accountable Equipment		
(10) Other Costs:		
(11) TOTAL COST CHARGED TO FFO FUNDS	xxxxxxxxxx	$ 29,787.14
OTHER COSTS:		
(12) PS&S, AP, and/or Facilitating Services @ 16 %	$ 4,765.94	
(13) Inventory and Other Non-Fund Costs		4,765.94
(14) GROSS WORK ORDER COSTS	xxxxxxxxxx	$ 34,553.08
LESS:		
(15) Residual Value of Construction Equipment on Line 8	$	
(16) Other Credits		
(17) NET COST OF FIXED ASSETS	xxxxxxxxxx	$ 34,553.08

Identify other costs and other credits by line item entry, on an attached schedule, or explain in narrative.

25543

NATIONAL PARK SERVICE

Badlands National Monument
(Park)

Check One:
Monthly Estimate [ ]
Final Estimate [X]

UNIT PRICE CONTRACT

ESTIMATE NO. 2	FOR (Period) November 1 through December 7, 1967	DATE February 23, 1968
CONTRACT NO. 14-10-7-971-94	COMPLETION DATE November 3, 1967	EXTENDED DATE December 7, 1967
CONTRACTOR M. A. GARLAND CONSTRUCTION, P. O. Box 1471, Rapid City, S. Dak.		ORIGINAL CONTRACT $ 19,754.00
PROJECT Supplemental Water System, Cedar Pass, Badlands Nat'l. Mon.		CHANGE ORDERS* $
LOCATION Badlands National Monument, South Dakota		TOTAL CONTRACT $ 19,754.00

ITEM NO.	CONTRACT QUANTITY	DESCRIPTION	QUANTITY TO DATE	UNIT PRICE	AMOUNT TO DATE
		SCHEDULE I WATER SYSTEM - PCP U-50			
1	200	cu. yds. Imported Borrow	200	10.00	2,000.00
2	900	Lin. Ft. Installation of Plastic Pipe	909	1.50	1,363.50
3	2	Ea. Type "A" Drains	2	200.00	400.00
4		L.S. Pumphouse and Appurtenances	100%	3,500.00	3,500.00
5	360	Lin. Ft. Electric Float Control Cable	389	2.15	836.35
6		L.S. Float Switch at Sump	100%	500.00	500.00
7		L.S. 1½ HP Pump and Appurtenances at Well No. 2	100%	800.00	800.00
8		L.S. 1½ HP Pump and Appurtenances at Well No. 1	100%	1,200.00	1,200.00
9		L.S. 1 HP Pump and Appurtenances at Well No. 3	100%	1,100.00	1,100.00
10		L.S. 1 HP Pump and Appurtenances at Well No. 4	100%	1,100.00	1,100.00

RECOMMENDED (Project Supervisor) Donald H. Bayliss

APPROVED (Contracting Officer) P. E. Smith

DATE FEB 29 1968

SUMMARY

TOTAL TO DATE	$ 19,788.42
LESS RETAINED AMOUNT	- -
NET	19,788.42
LESS PREVIOUS PAYMENTS	6,097.50
LESS LIQUIDATED DAMAGES	- -
DUE THIS ESTIMATE	13,690.92
% COMPLETED TO DATE:	100%

*Show Breakdown on Reverse

(See Reverse for Distribution)

00-00-0000: unit price contract continuation sheet; 1968

TED STATES DEPARTMENT OF THE INTERIO
NATIONAL PARK SERVICE

UNIT PRICE CONTRACT CONTINUATION SHEET

Contract No. 14-10-7-971-94 | Contractor M. A. GARLAND CONSTRUCTION, P. O. Box 1471, Rapid City, S.Dak.

ITEM NO.	CONTRACT QUANTITY	DESCRIPTION	QUANTITY TO DATE	UNIT PRICE	AMOUNT TO DATE
		SCHEDULE I			
		WATER SYSTEM (CONT.)			
11		L.S. Electrical Equipment and Wiring for Pumphouse and Wells 1, 2, 3, 4	100%	3,200.00	3,200.00
12	900	Lin. Ft. Direct Burial, Low Level and Power	875	2.75	2,406.25
13	3	Ea. 3" in. Gate Valves and plastic boxes	3	125.00	375.00
14	Contingent Sum	Force Account		500.00	527.32
					19,308.42
		SCHEDULE II - SURVEY CREW			
	16	Hrs. Furnish Survey Crew	16	30.00	480.00
		TOTAL - SCHEDULE II (Item 1)			480.00
		BID SUMMARY			
		TOTAL - SCHEDULE I			19,308.42
		TOTAL - SCHEDULE II			480.00
		TOTAL - SCHEDULES I and II			19,788.42

CONTRACT TIME SUMMARY

Document	Period (Calendar Days)	Completion Date(s) Original	Extended	Final (Actual)
Notice of Beginning Date - 1st day; Sept. 5, 1967	60	11/3/67		
Change Order No. 1	34		12/7/67	
Letter of Acceptance				12/7/67

Since all work under the contract was completed within the contract time, as extended, the question of liquidated damages does not apply.

GSA DC 65-19586

07-13-1966: unit price contract; 1966

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Badlands National Monument
(Park)

UNIT PRICE CONTRACT

Check One:
Monthly Estimate [ ]
Final Estimate [X]

ESTIMATE NO.	FOR (Period)	DATE
1 and Final	June 8, 1966 through July 22, 1966	July 13, 1966

CONTRACT NO.	COMPLETION DATE	EXTENDED DATE
14-10-0232-1573	July 22, 1966	---

CONTRACTOR: Bice Drilling Company, Rapid City, South Dakota
ORIGINAL CONTRACT: $ 9,764.00

PROJECT: Drilling and Developing four water wells at Badlands NMonument
CHANGE ORDERS*: $ --

LOCATION: Badlands National Monument, Interior, South Dakota
TOTAL CONTRACT: $ 9,764.00

ITEM NO.	CONTRACT QUANTITY	DESCRIPTION	QUANTITY TO DATE	UNIT PRICE	AMOUNT TO DATE
1	1	Job, move in and move out, lump sum	100%	100.00	100.00
2	50	Lin. Ft. of 30" bore from surface to 50 feet deep	120	13.50	1,620.00
3	54	Lin. Ft. of 22" Standard Permeable Wall Concrete Pipe furnished and installed from the surface to 50' and protruding 5' above ground	136	7.50	1,020.00
4	23	Hours, Development and Experimental Work as directed	8	9.50	76.00
5	1	Lump Sum, furnish and set test pump and equipment	4	50.00	200.00
6	48	Hours, Test Pumping of the well	39	7.50	292.50
7	50	Lin. Ft. Perforating Casing	-0-	-0-	-0-
8	5	Days, Standby of Equipment and Crew	3	72.00	216.00
9	1	Lump Sum, Reaming and Grouting Upper 10 feet of well	4	120.00	480.00
10	10	Cubic Yards ½" gravel for gravel packing	30	18.00	540.00

RECOMMENDED (Project ~~Manager~~ Inspector)
Byron A. Hazeltine
Byron A. Hazeltine, Chief Park Ranger

APPROVED (Contracting Officer)
Frank A. Hjort
Frank A. Hjort, Superintendent
DATE: 7-13-66

SUMMARY

TOTAL TO DATE	$ 4,544.50
LESS RETAINED AMOUNT	-0-
NET	4,544.50
LESS PREVIOUS PAYMENTS	-0-
LESS LIQUIDATED DAMAGES	-0-
DUE THIS ESTIMATE	4,544.50
% COMPLETED TO DATE:	100

*Show Breakdown on Reverse
(See Reverse for Distribution)

COMPLETION REPORT NARRATIVE

WORK ORDER 137-211707

EMERGENCY WATER SUPPLY

The need for this project was crystallized in the spring and summer of 1965 when a several-month-long high-water stage on the White River prevented the monument from drawing potable water from the collection gallery in the river bed. The river in high water carries "considerable geological flower (colloidal suspension)," and offers "difficulty in supplying potable water for the headquarters water system."[1] New facilities completed at the monument shortly before this time greatly increased the demand for water so that the 600,000-gallon storage facilities could not hold enough water to last through a prolonged muddy-water situation. As a stop-gap measure water was bought from a local rancher and hauled to the Cedar Pass reservoir by tank truck.

As a result of the prolonged period of muddy water, refundable Work Order No. 2-WR-66B of November 24, 1965, which was titled "Investigation of ground water supply to supplement the present Headquarters water supply, including a geological study of the area by a private geologist," was issued in the amount of $1,150. The only revision of this old work order--on March 2, 1966--increased the amount to $2,650, and extended the title by adding the words "and reimbursement to U.S. Geological Survey for hydrological survey and report."

With these preliminaries duly completed, the present project (PCP U-50-1) was undertaken under a new work order, with the new-style number 137-211707. This was issued on June 14, 1966, in the amount of $22,500 to cover the estimated costs of two proposed contracts for well drilling and equipping the wells, along with geological studies and compensable property damage. The title of this work order was "Emergency Water Supply."

The "compensable property damage" amounted to $1,500, and was paid to the lessee of the Oglala Sioux Indian tribal land in which the wells were dug. Agreement of the lessee and the tribe had been procured in late 1965 during the term of the earlier work order previously cited. The property-damage payment was made to the lessee by purchase order primarily for loss of hay crop during the remaining six-year life of the lease. (An additional payment of about $2,000 for a perpetual easement for the wells and connecting pipeline rights-of-way is currently under negotiation with the tribe. The cost, however, will be paid from water-rights monies and not from construction funds.)

1.Memo. 9/1/65, L54MWR(OL), to Dir. from Assoc. Reg. Dir., Subj: "Report on Water Problems at Badlands National Monument."

Contract number 14-10-0232-1573 was awarded on May 24, 1966, to Bice Drilling Company, Rapid City, S.D., the lower of two bidders, for drilling and developing (but not equipping) four 30-foot wells in the former bed of the White River a short distance south of the existing collection galleries in the active riverbed. (This company had previously drilled a test well at this location under the earlier work order.) The contract amount was $4,544.50, and the work was accepted on July 6, 1966. Bice's work was supervised by the U.S. Geological Survey, which was paid $1,125 for the service. Some of the work covered by this payment was actually performed under the earlier work order but delays in processing payment claims by the U.S.G.S. precluded their being paid from the earlier project's funds.

In the meantime, several purchase orders totaling $1,615.20 were issued for supplies and materials, and another was issued for trenching in the amount of $260. These went toward installing the three-inch trunk pipeline from the area of the new wells to the river bank and then under the river bed in the existing perforated collection-gallery pipe to the existing pumphouse on the left (north) bank. This work was accomplished by park forces. A purchased Reda pump was installed in one of the four new wells in midsummer 1966; this pump was replaced by contract work in late 1967 (see below) and is now being held as a standby.

The final phase of this project consisted of contract work in the original amount of $19,754, which was $7,655 above the engineer's estimate of $12,110. Only one of 48 bidders solicited returned a bid, and this was qualified by a stipulation that the required 30-day completion period would have to be extended since certain electrical equipment would require 120 days for delivery. The bid and its qualification were accepted and the award was made on June 30, 1967, to the M.A. Garland Construction Co. of Rapid City, S.D. The contract number was 14-10-7-971-94, and the first revision of the work order was issued this same date to cover the increased funds needed. The title of the contract was "Supplemental Water System, Badlands National Monument."

The contractor supplied and installed a two-horsepower Barnes pump in, and a concrete seal on, each of the four wells, and he connected the four wells to the trunk pipeline by installing park-supplied three-inch plastic pipe. He constructed an 11-foot by 9 1/3-foot cinderblock building (called the "new pumphouse") above well No. 2 to house electrical controls, and he supplied and installed the controls. Installation of electrical cable between the new pumphouse and the old pumphouse across the river from the new wells was completed (about two-thirds was installed earlier by park forces). The contractor also provided and installed various electrical controls in the old pumphouse. Four signal lights were placed in the new pumphouse to indicate which pair of wells is pumping, and they are visible to an observer across the river at the old pumphouse. The contractor also backfilled excavations around the four wellheads, and built up fill several feet above normal ground level to the top of each well casing.

The contract work was accepted by the Government on December 7, 1967, at the final inspection. This date was designated the completion date of the contract by Change Order No. 1, which did nothing more than advance the completion date from November 3, 1967, because of delay in delivery of electrical supplies.

Execution of the Garland contract was supervised by the San Francisco Service Center's construction representative. At the end, an overrun of $34.42 on the contract amount was incurred, which was covered by the third (and final) revision to the work order on March 14, 1968. (The second revision, dated September 24, 1967, was a bookkeeping one which merely adjusted amounts for day labor and contract work.) The final project construction amount thus came to $29,787.14.

Water right applications, permits, and license numbers, if needed, are being sought by SSC. Any costs that may be incurred in this connection will be borne by that office.

Since the White River in this area is the county line, most of the work in this project was performed in Washabaugh County (south of the river), although a very small portion was done in Jackson County (work in the old pumphouse on the north bank of the river).

All work under this project resulted in usable facilities.

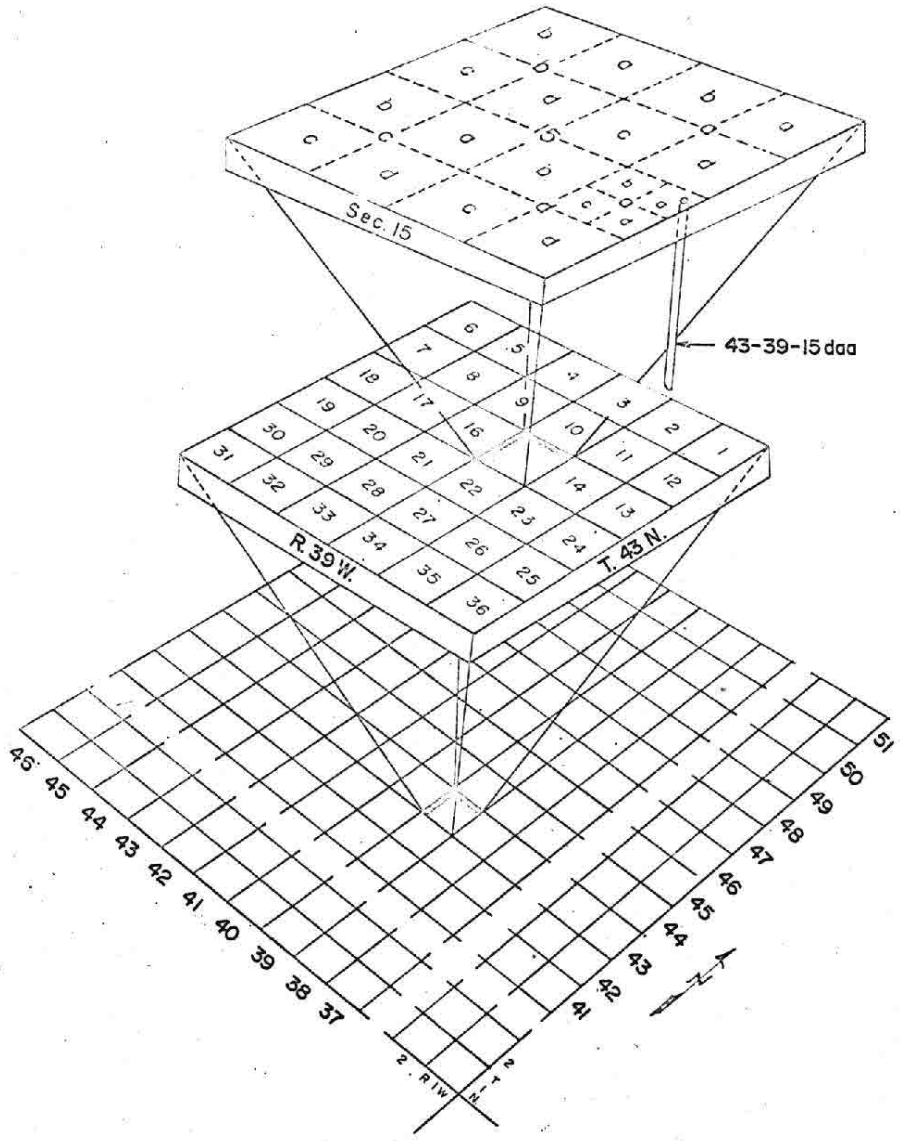


FIGURE 2--SYSTEM OF NUMBERING WELLS AND TEST HOLES.

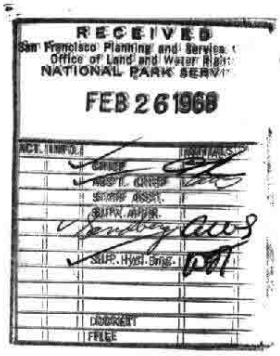
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Badlands National Monument
Interior, South Dakota
57750

IN REPLY REFER TO:

D5039

February 23, 1968



Memorandum

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

From: Superintendent, Badlands

Subject: White River Wells

In response to Mr. Robertson's telephone request for information on the White River Wells we are sending the enclosed USGS report Development of a Ground Water Supply, Badlands National Monument, South Dakota. We have no driller's log or well logs, as such. If information in the report is insufficient, additional information is probably available from USGS.

A plat of pipeline right-of-way and a topo sheet showing location of the wells and access road was included with other materials mailed to your office on February 20.

In addition to the list of rights asked for in our memorandum of February 20, we also desire the right to construct one or more infiltration ditches within the pipeline ROW for the purpose of recharging the wells should periods of low water levels occur.

This office has requested water rights forms from the State Water Resources Commission. They will be forwarded to you for completion as soon as we receive them.

After reviewing the enclosed report and other materials mailed to your office February 20, please let me know if you require additional information to file our water rights claim.

John R. Earnst
Superintendent

CC:
MWRO, Att: Fred Meyer
Keith Fellbaum

report returned to Park Superintendent
3-4-68

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Badlands National Monument
Interior, South Dakota 57750

IN REPLY REFER TO:

D5039

February 19, 1968

RECEIVED
San Francisco Planning and Service Center
Office of Land and Water Rights
NATIONAL PARK SERVICE
FEB 21 1968

ACT.	INFO.		INITIALS	DATE
	✓	CHIEF		
	✓	ASS'T. CHIEF		
		STAFF ASST.		
		SUPV. AV. R.		2/28
	✓	SUP. Hyd. Eng.		
		BOOKER		
		FILE		

Memorandum

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

From: Superintendent, Badlands

Subject: White River wells

Enclosed is this office's complete file D 5039, White River wells, pertinent correspondence with the State of South Dakota Water Resources Commission regarding water rights, a topo sheet showing the location of and vehicular access to the White River wells, and copies of farming and residence leases to Lloyd O'Rourke from the Bureau of Indian Affairs and the Oglala Sioux Tribe.

This office wishes to acquire the following rights regarding the subject wells:

1. A perpetual utility easement as described in the Owners Certificate of the Plat of Pipeline Right of Way Easement.

2. Exclusive use of the water produced by the wells.

3. Right to construct, maintain and operate overhead or underground powerlines, etc., within the above described easement.

4. Right to place protective fences within the 50' radius around each well.

5. Protection from inundation by future water control projects.

Please return our File D 5039 immediately when you are finished with it.

If you require further information or clarification of any of the enclosed materials please let me know.

John R. Earnst

John R. Earnst

Enclosures
cc:
Reg. Dir., MW
Attn: Fred Meyer

02-19-1968: memorandum to regional director from assistant director, operations regarding payment to oglala sioux tribe for utility

Badlands

L+W

RECEIVED
San Francisco Office Planning and Service Center
Land and Water Rights
NATIONAL PARK SERVICE
FEB 5 - 1968

ACT.	INFO.		INITIALS	DATE
	✓	CHIEF		
		ASS'T. CHIEF		
		STAFF ASST.		
		SUPV. APPR.		
			LWS	
		SUP. Hyd. Eng.		
		DOCKET		
		FILE		

FEB 1 1968

D22-OLW

Memorandum

To: Regional Director, Midwest Region

From: Assistant Director, Operations

Subject: Payment to Oglala Sioux Tribe for utility easements

Please refer to Acting Regional Director Reynolds' memorandum of November 30, 1967, on the above subject, the enclosures with that memorandum, and Assistant Director Bean's reply of December 15, 1967.

This correspondence has called to our attention the fact that the National Park Service has ample congressional authorization for acquiring an easement for a water line or other utilities under the Act of August 7, 1946 (60 Stat. 885; 16 U.S.C., sec. 17J-2(g)), as stated in the enclosed copy of a memorandum dated March 9, 1960, from Assistant Solicitor, National Parks, to Field Solicitor, Omaha, under quite similar circumstances. This is itemized in the annual appropriation requests under "Acquisition of Water Rights."

Water rights funds have been used in the past for purchase of easements for water supply lines, and the cost of the easement from the Oglala Sioux property should be financed similarly. Although this purchase has not been programmed, if the quoted figure of $2,000 is approximately correct, water rights construction funds can be made available by this office.

However, whatever the final price is, it must be justified. By copy of this memorandum, we are asking the Chief, Office of Land and Water Rights, San Francisco Planning and Service Center, to assist your office in determining whether the $2,000 figure as derived from the crop damage payment to the lessee of the land is sufficiently justified, or whether some additional appraisal is necessary. If such work is necessary, this should be started as promptly as possible.

(Sgd) Edward A. Hummel

Enclosure

cc:
Regional Solicitor, Denver, Colorado, w/c enc.
Chief, Office of Land and Water Rights, SSC, w/c enc.
Superintendent, Badlands, w/c enc.

EWReed:ljc 1-5-68

cc: Mr. B. Meyer - SOL, w/c enc.
Mr. Reed - OLWW-WSC, Room 103
Mr. G. Gowans - PA, w/c enc.

12-18-1967: letter to superintendent from chief engineer regarding application for a water right for the four wells recently added to

COMMISSION
John W. Hoyt III, Spearfish
Lester Beck, Parker
C. C. Cash, Gettysburg
Lauren A. Dick, Belle Fourche
Melvin E. Hodges, Mobridge
Robert Lounsberry, Harrisburg
Clarence D. Martenson, Hayes
Dick Kneip, Pierre

South Dakota
WATER RESOURCES COMMISSION

J. W. GRIMES
Chief Engineer and Executive Officer

State Office Building
PIERRE, SOUTH DAKOTA 57501

PHONE
224-3411 Ext. 343
Area Code 605

CHIEF RGR.		
ADM ASST.		
RECD DEC 19 1967 BAD'L		
MTCE. SUPVR.		
CHIEF NAT.		
CLERK		

December 18, 1967

Mr. John R. Earnst
Superintendent
Badlands National Monument
Interior, South Dakota 57750

Dear Mr. Earnst:

From the information contained in your letter of December 12, 1967. I believe that it will not be necessary to make an application for a water right for the four wells which have recently been added to the Badlands National Monument water system.

Enclosed for your information is a copy of the water laws of South Dakota. Please note paragraph 4, section 61.0102, page 4 and section 61.0107, page 5.

Sincerely,

J. W. Grimes
Chief Engineer

JWG/DD/sjb
Enclosure

61.0102 Definitions. Terms . in. ' unless the context otherwise . ily requires, shall mean:

(1) "Person," a natural person, a partnership, an association, a corporation, a municipality, the state of South Dakota and any political subdivision thereof, and agency of the federal government.

(2) "Commission," the Water Resources Commission of the state of South Dakota.

(3) "Dry Draw," any ravine or watercourse not having an average daily flow of at least 0.4 cubic feet per second (twenty miner's inches) of water during the period May first to September thirtieth, inclusive. This shall not, however, apply to a body of water such as a natural or publicly owned lake.

(4) "Domestic Use," the use of water by an individual, or by a family unit or household, for drinking, washing, sanitary, culinary purposes, and other ordinary household purposes: and irrigation of a family garden, trees, shrubbery or orchard not greater in area than one half acre. Stockwatering shall be considered a domestic use.

(5) "Municipal use," the use of water by the state through its institutions, facilities and properties or a municipality, and the inhabitants thereof, whether supplied by the government or by a privately owned public utility or other agency, primarily to promote the life, safety, health, comfort and business pursuits of the state, municipality and inhabitants thereof. It does not include the irrigation of crops on a commercial scale, even within the limits of the state institution, facility, property or municipality. Nor does it include large recreational uses such as lakes.

Source: Ch. 259, 1966.

(6) "Beneficial Use," any use of water that is reasonable and useful and beneficial to the appropriator, and at the same time is consistent with the interests of the public in the best utilization of water supplies. Beneficial use is the basis, the measure and the limit of the right to the use of waters described in this chapter.

(7) "Vested Rights":

(a) The right of a riparian, owner to continue the use of water having actually been applied to any beneficial use at the time of the passage of this chapter or within three years immediately prior thereto to the extent of the existing beneficial use made thereof.

(b) Use for domestic purposes as that term is herein defined.

(c) The right to take and use water for beneficial purposes where a riparian owner is engaged in the construction of works for the actual application of water to a beneficial use at the time of the passage of this chapter, provided such works shall be completed and water is actually applied for such use within a reasonable time thereafter.

(d) Rights heretofore granted by court decree.

(e) Uses of water under diversions and applications of water prior to the passage of the 1907 water law and not subsequently abandoned or forfeited.

61.0103 Water Resources Commission: creation. There is hereby created a Water Resources Commission consisting of eight members to be appointed by the Governor by and with the advice and consent of the Senate, with terms of office so arranged that two shall expire in one year, two in two years, two in three years, and two in four years; the succeeding terms shall be for a period of four years and until a successor is appointed and qualified. Vacancies shall be filled by appointment of the Governor for the balance of the unexpired term. All members must be electors of the state. One member shall be appointed to represent each of the following: dry land farmers, range livestock producers, municipalities, mining and timber industries, soil conservation districts, drainage districts, irrigation districts, and fish and wild life and recreation.

Source: SB - 173, Enacted 1967 Session.

The Governor shall call a meeting of the Commission within thirty days after appointment. At such first meeting and annually thereafter, the Commission shall elect one of its members as chairman and one as secretary. The Commission shall meet quarterly and at such other times as the chairman may request. The Commission may adopt and enact all rules, regulations and bylaws deemed suitable and necessary in the conduct of its business and the performance of its duties. It shall keep accurate minutes and records of all its actions which at all reasonable times shall be open for public inspection.

61.0104 Water Resources Commission: powers and duties. The Commission shall possess all of the powers, perform all of the duties, and carry out all of the functions assigned by law to the State Engineer as set forth in SDC 55.1806 through SDC 55.1813, inclusive, including all acts amendatory thereof, and as set forth in SDC 61, including all acts amendatory thereof and shall have general supervision of the waters of the state, including the measurement, appropriation and distribution thereof, and shall have all other powers, functions and duties as the Legislature may, from time to time, require. The full control of all waters in the definite streams of this state is vested in the Commission. The Commission shall regulate and control the development, conservation and allotment of waters of the state according to the principles of beneficial use and priority of appropriation established by this chapter. The Commission may require such reports and other information as it may deem advisable from all claimants of any water rights. This Commission, within its discretion, shall review and make recommendations in all state and federal water projects, from time to time review the present water laws and make suggestions as to possible revisions in order to effectuate the better use of water within the state. The Commission may from time to time as it deems necessary hold hearings for the purpose of obtaining information and gathering opinions from interested parties for consideration and recommendation to the appropriate state or federal department.

The Commission is authorized to employ a licensed engineer, trained or experienced in hydraulics, and such other personnel as may be necessary, all of whom shall serve at the pleasure of the Commission, at such salary as shall be set by the Commission. The water engineer shall act as executive officer and advisor to the Commission in all matters pertaining to the distribution and conservation of waters of the state as provided by this chapter. The Attorney General and the state's attorney of the county in which legal questions arise shall be the legal advisers of the Commission, and shall perform any and all legal duties necessary in connection with its work, without other compensation than their salaries as fixed by law except when otherwise specially provided. The Commission may also employ other legal counsel.

61.0105 Commission: expenses and per diem. Each member of the Commission shall receive actual and necessary traveling and subsistence expense in such limitations as shall be specified by the State Board of Finance, and in addition thereto a per diem of fifteen dollars for each day's attendance at or traveling to or from the meetings of said Commission and, upon approval of the Commission, for each day's attendance at other meetings or while engaged in special assignments on behalf of the Commission to be paid out on vouchers duly verified and approved by the chairmen or executive officer of the Commission provided that the total per diem payments to any member of the Commission shall not exceed one hundred dollars ($100.00) in any one month.

Source: Ch. 454, 1963.

61.0106 Determination of vested rights. All vested rights as hereinbefore defined acquired before the effective date of this chapter are hereby in all respects validated.

61.0107 Domestic use. Any person or persons desiring to make reasonable use of water from any source for domestic purposes may do so without obtaining a permit from the Commission for such use.

61.0108 Prior statutory appropriations. Appropriative rights granted since March 7, 1907, shall be in full force and effect and their priority retained according to valid legal records.

61.0109 Appropriation: method. Subject to vested rights and prior appropriations, all waters flowing in definite streams of the state may be appropriated as

RECEIVED
San Francisco Planning and Service Center
Office of Land and Water Rights
NATIONAL PARK SERVICE
JAN 2 9 1968
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CHIEF
DOCKET
FILE

Badlands National Monument
Interior, South Dakota 57750

L54 MWR (P)
xD52

January 26, 1968

Memorandum

To: Regional Director, Midwest Region

From: Superintendent, Badlands

Subject: Water Rights for new wells, Badlands

Enclosed is a copy of a letter sent to Mr. Joe Grimes, State Engineer, Water Resources Commission, State of South Dakota, together with his reply, and copies of pertinent sections of South Dakota Water Laws, 1967.

Enclosed information will have a bearing on Mr. Reynolds' memorandum to Chief, Office of Land and Water Rights, SSC, dated January 25, 1968.

(Signed) John R. Earnst

John R. Earnst
Superintendent

Enclosures

cc:
Chief, L&WR,SSC w/encls

UNITED STATES
DEPARTMENT OF THE INTERIO
NATIONAL PARK SERVICE

D52
IN REPLY REFER TO:
x454

Mount Rushmore National Memorial
Keystone, South Dakota 57751

December 13, 1967

Memorandum

To: Mr. Jim Dunning, Regional Chief of Mainte.....

From: Keith Fellbaum, Engineer

Subject: Final Inspection, BADL Water Well Development

A final inspection of the water well development at BADL was held on December 4, 1967. The inspection team included the following:

John Earnst, Superintendent
Byron Hazeltine, Chief Ranger
Mayo Zabreiski, Chief of Maintenance
Don Bottles, SSC-DC Project Supervisor
Keith Fellbaum, Area Engineer

The prime Contractor, W. A. Garland Construction Co. was represented by Bob Wyman, Project Superintendent. The plumbing and electrical subcontractors were also represented.

Previous pre-final inspections had reveled a number of deficiencies which had all been corrected prior to this final inspection.

A discrepency between the plans and specifications resulted in plastic bodied, rather than bronze, flow control valves being installed below ground at wells 1, 3 & 4. It is not anticipated that this error will cause any operating problems.

The electrical subcontractor was questioned concerning installation of indicator lights in the pump house window which would show which pumps were operating. If such lights were installed the operator would not have to make a trip across the white river to see if the system is functioning. Access to the area will be by foot during a great portion of the year because of the fact that the wells are located in a cultivated field. It is assumed that the electrical sub will be able to do this work and that payment can be made from force account funds.

A water rights claim must be filed on the new wells, if this has not already been done by the Service Center.

The Park is anticipating that money will be made available through the construction account to make payment to the Indian Tribe for easements for the system.

Keith Fellbaum

Keith Fellbaum

Badlands National Monument
Interior, South Dakota
57750

D52

December 12, 1967

Mr. Joe Grimes, State Engineer
Water Resources Commission
Pierre, South Dakota 57501

Dear Mr. Grimes:

An addition to the Badlands National Monument water system consisting of four wells with pumps and appurtenances has recently been completed. The wells are located outside the Monument boundary on Indian Reservation land for which easements will be obtained. The water will be used almost exclusively for domestic consumption.

No one on the staff here is familiar with South Dakota Water Rights Law and we would like to know if it will be necessary to file a water rights claim. If it is necessary, would you please send the necessary forms and instructions.

Sincerely yours,

John R. Earnst
Superintendent

Bc - Falebaum

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

MEMORANDUM

TO: Manuel Morris, NPS
Office of Land and Water Rights
Supervisory Hydraulic Engineer
San Francisco, California

DATE: July 26, 1966

FROM: District Chief, WRD
Bismarck, North Dakota

SUBJECT: Preliminary report on the well field development of a ground-water reservoir at the Badlands National Monument, South Dakota

In response to your telephone request of July 19, 1966, concerning development data of the water supply for NPS, Monument Hqs, Badlands, South Dakota, our Mr. Randich has prepared the enclosed location map and comments on the development characteristics as follows:

1. Recommended well yields for sustained pumpage are--
   (a) Well 1 - - 30 gallons per minute
   (b) Well 2 - - 30 gallons per minute
   (c) Well 3 - - 20 gallons per minute
   (d) Well 4 - - 20 gallons per minute

   If the wells are pumped in pairs, numbers 1 and 3 should be used simultaneously and 2 and 4 simultaneously to minimize long term interference, and maintain a uniform withdrawal from the well field.

2. Static water level in the well field stands at approximately 5.7 feet below the land surface.

3. To minimize future maintenance water levels in wells 1-4 they should not be drawn lower than 20 feet below land surface.

4. Normal drawdowns resulting from pumpage are expected to range from 10 to 16 feet below land surface.

5. Water samples were taken after developing each well, however, the results are not available to us at this time. A field specific conductance was run on each well several times, the results range from 850-950 micromohs at 25° C increasing toward and in well 4.

6. The well construction is the same for all wells 1-4, and consists of--
   (a) 6-inch concrete plug at the bottom
   (b) 2 feet of concrete casing
   (c) 10 feet of permeable concrete, perforated
   (d) 18 feet of casing bringing it to land surface, then adding 4 feet above land surface with a well cap.
   (e) Casing specifications are:
   ID = 1 foot 8 inches
   OD = 1 foot 11 inches

   Section length = 2 foot lap jointed

   (f) Screen specifications are:
   ID = 1 foot 8 inches
   OD = 1 foot 11 inches

   Section length = 2 feet, lap jointed, w/joints perforated and holes horizontally each 9 inches, vertical spacing 6 inches diam. ½ inch each in permeable concrete.

   (f) Gravel pack continuous from bottom up consisting of 5/8 minus.

7. All wells were sampled at 5 foot intervals or change in lithology.

Other data showing the lithologic logs, hydrologic and chemical interpretations, and recommendation for future development will be included in the open-file report. Should you need additional information concerning this or any of our other studies we shall be glad to furnish it.

H. M. Erskine
District Chief

PGR/HME/jew

07-14-1966: memorandum to chief, land and water rights from superintendent regarding inventory of reports on water resources in

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL PARK SERVICE 1916 1966 50TH ANNIVERSARY

Badlands National Monument
Interior, South Dakota
57750

IN REPLY REFER TO:
L54 LWSSC

July 14, 1966

AIR MAIL

Memorandum

To: Chief, Land and Water Rights, SSC

From: Superintendent, Badlands

Subject: Inventory of reports on water resources investigations

The following reports on water resource investigations have been prepared for Badlands.

No. 1 - White River Water System: Prepared by J. R. Jones, Geological Survey, in 1955, in letter form for open file. Conclusions reached were that sufficient water could be obtained by enlarging existing collection facilities under the White River. Recommended that existing facilities be enlarged.

Filtration system was enlarged to produce adequate quantity of water, but the quality of the water was unsatisfactory during periods of high water.

No. 2 - Water Supply at Badlands National Monument: Prepared in 1956 by John D. Eye, United States Public Health Service, in manuscript form for open file. Conclusions reached were that the White River infiltration system would supply Monument water needs if supplemented by adequate storage. Recommended that a 500,000 gallon reservoir be built. A 500,000 gallon reservoir was constructed. It was adequate as to volume of water, but due to turbidity during periods of high water, it became impossible to fill it with potable water.

No. 3 - Ground Water Conditions at Pinnacles Entrance: Prepared in 1962 by John Paul Gries, South Dakota School of Mines as a letter report for open file. Conclusions reached were that an adequate supply of water could be found in the Fall River sandstone at a depth of 3,465 feet with a static level about 650 feet below the surface. Recommended a six inch ID casing to a point 100 to 150 feet below static level, with open hole through the sandstone.

The well was drilled to 3,572 foot depth, 9-7/8 inch hole, 6.625 inch casing. Hot, heavily mineralized, water was encountered. The hole was plugged at the 3,430 foot depth, where cooler, less mineralized, water was present. The casing was grouted for its entire length except at the 90 feet of stainless stell screen at the bottom. This water can be used by the permanent residents, provided an electrically opeated still is used to furnish drinking water because of the high fluoride content. It is unsatisfactory for campers because of the sulfides to which continuous users become accustomed.

No. 4 - Ground Water Possibilities, White River: Prepared in 1965 by John Paul Gries, South Dakota School of Mines, in manuscript form for open files.

Conclusions reached were that a supply of ground water was available at four sites along the White River.

Recommended that the National Park Service develop a field of three to five shallow wells at the best of the four sites; site to be selected by test drilling or by earth resistivity surveys.

Site Number Three was selected by test drilling; four exploratory shallow wells were drilled and the field produced a water supply of 100 gallons a minute.

Frank A. Hjort
Superintendent

Form 10-411
(July 1965)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

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PROJECT CONSTRUCTION PROPOSAL

1. STATEMENT OF MANAGEMENT'S REQUIREMENTS, PROPOSED WORK, AND ITS RELATIONSHIP TO OTHER FACETS OF THE PARK PROGRAM. *(Provide detail data for "Management Information" on Form 10-411a. Supplemental Sheet and attach.)*

Locate, test and develop 4 or less shallow wells on Indian Tribal Land (Oglala Sioux) across the White River (south) of the existing White River pumphouse.

Drill, case, screen, gravel pack 4 or less wells with 18" inside diameter casings and install electric pumps with controls in each. Install 3" pipe from the wells to the NPS White River Pumphouse reservoir. Install electric relay circuit to be operated from the pumphouse for starting electric pumps.

JUSTIFICATION - (see attached sheet)

2. ADVANCE REQUIREMENTS DATA

LAND STATUS
Indian owned

MASTER PLAN NO.: NM-BL-2017
APPROVAL DATE:

PCP NUMBERS OF PREVIOUS COMPLETE PROPOSALS
U-21, U-26, U-32

INTERRELATED & DEPENDENT PROJECT PCP NUMBERS
U-50, in lieu of U-29

INTERPRETIVE PROSPECTUS APPROVAL DATA
DATE

WATER RIGHT NEEDS & STATUS
Testing rights already obtained - water rights necessary

RESEARCH NEEDS & STATUS
Geological survey completed - testing in process

OTHER

3. RECOMMENDED BY SUPERINTENDENT *(Signature & Date)*
Frank A. Hart, Superintendent

4. APPROVED BY REGIONAL DIRECTOR *(Signature & Date)*

5. LOCATION WITHIN AREA OR TERMINI
south of White River Pumphouse

6. BLDG. OR RT. # AND SEC.

7. REGION
Midwest

8. PARK
Badlands National Monument

9. PROJECT
Shallow wells - along White River

Jackson (County)
South Dakota (State)

10. PCP INDEX NO.
U-50-1

Form 10-411a
(July 1965)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Page of pages

SUPPLEMENTAL INFORMATION FOR PROJECT CONSTRUCTION PROPOSAL

PARK	FACILITY	P.C.P. NO.
Badlands National Monument	Shallow wells - along White River	U-50-1

1. MANAGEMENT INFORMATION

This project is an addition to the existing water system and in lieu of an expensive 2,000,000 gallon storage system which would serve the same purpose but cost many times more, as well as being subject to loss in the event of a line breakage.

Permission to test drill has been obtained from the Oglala Sioux Tribal Council and indications have been given of favorable action on water rights and right of way easement for the actual wells.

The local power cooperative handles its own right of way with the landowner.

2. TECHNICAL INFORMATION

The pump at the White River pumphouse will deliver a maximum of 35 gallons per minute of water to the gravity feed storage reservoir above Cedar Pass Headquarters area. Therefore, the principal pump at the shallow well must have a capacity of at least 35 g.p.m. through 3,000' of 3" pipe with a 30 foot head in order to keep the above pump supplied.

The auxilliary wells need 3 or less pumps to supply the principal well and can be of a much less than 35 gallons per minute.

All pipe should be buried at least 5'.

Each pump must be equipped with automatic low water cut-off.

Pipe line to go through existing 18" concrete filtration collection gallery under the White River, come out in botto of sump outside White River pumphouse, continue through side of sump wall at least 5' underground to open discharge into main reservoir.

Electric power will be furnished at the site of the pumps by the local power cooperative with no charge for installation. Power is available at the White River pumphouse for the relay switch controls.

Each well casing to be grouted around upper portion with concrete and well he to be covered with water tight cover to prevent damage in case of high water.

JUSTIFICATION - U-90-1

The capacity of the present water system, which consists of a filtration gallery under the White River and two storage tanks, would be adequate if the water was always potable. Unfortunately, clear useable water can be pumped from the river only during times when the river is extremely low, allowing sediment to settle out in the quiet pools.

For a number of years, suitable water was available to supply Cedar Pass Headquarters area including the maintenance buildings, Cedar Pass Lodge and the campground which had pit toilets. In 1962, a modern comfort station with 4 flush toilets, 2 urinals, 1 service sink, and 4 lavatories were added to the campground. This additional use of water taxed the amount of useable water to the point where occasionally muddy water had to be pumped from the White River gallery.

In 1965, two additional modern comfort stations were added to the campground with 4 lavatories, 4 urinals, 10 flush toilets, 2 service sinks, and 4 outside service taps. Besides this additional load of actual water-consuming devices the capacity of the campground was doubled in 1965, which, of course, doubled the amount of water use. The day to day use of the campground is also increasing rapidly. During 1965, we ran out of stored water before the river fell to a point where we could collect useable water. It became necessary to pump muddy water for over a month and this situation was relieved only by some frantic efforts to get the use of a temporary well on adjacent private land late in August.

We also had to haul drinking water to Cedar Pass Lodge during this entire time. Several campers refused to stay in the campground because of the muddy water. A considerable amount of maintenance money was expended to flush out all water heaters, air conditioners, the entire water system and clean the storage tanks as a result of these sediments. Abrasive damage to valves and pumps was another loss as a result of this situation. Besides the bad taste and repulsive appearance of the water it became difficult to even wash clothes in it, and Park Service wives became quite short tempered.

This situation will be repeated this season if an additional useable water source is not developed and connected into the system before the visitor season starts. We have located a series of adequate wells across the White River for which we must make a river crossing for the pipe line. In order to provide water for this season, this crossing has to be made before the frost goes out of the ground and the river channel becomes a quagmire.

From a public health standpoint alone, we cannot serve the public at the concession, Visitor Center, or campground unless this situation is corrected.

00-00-1965: letter: consent from sioux to test drill

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS
PINE RIDGE INDIAN AGENCY
PINE RIDGE, SOUTH DAKOTA 57770

Realty-Pine Ridge
A06-372

SUPT.		
CHIEF BGR.		
ADM. ASS'T.		
REC. DEC 18 1965		BAD'L
MTCE. SUPVR.		
CHIEF NAT.		
CLERK		

1965

Mr. Frank Hjort
Superintendent
Badlands National Monument
Interior, South Dakota

Dear Mr. Hjort:

Since receiving your letter of December 1, 1965, we have obtained from the Oglala Sioux Tribe their consent for the National Park Service to test drill for water on tribally-owned land situated in Section 15 of Township 43 North, Range 39 West, Sixth Principal Meridian.

Pursuant to authority granted in C. F. R. 161.4 and 161.5, you are hereby authorized to survey and commence construction of such test wells as will be necessary to determine the existence of domestic water in sufficient supply to warrant construction of a pipeline across Indian owned land to the facilities of the Badlands National Monument.

Should sufficient water be discovered, you will be expected to formalize the location of a pipeline by requesting a right of way easement for this purpose across the Indian-owned lands. Will you please keep us informed as to the results of your testing and future plans?

Sincerely yours,

Superintendent

U.S. MAILED TO

DATE

BADL

L54 MWR(OL)

Anton 11/26
mc
Jacobs 11/26

Memorandum

To: Superintendent, Badlands

From: Acting Assistant Regional Director

Subject: Work Order 2-WR-66B, Water Investigations, Cedar Pass Water System

Enclosed is a copy of the subject work order authorizing water resources funds for the investigation of ground water supply to supplement the Cedar Pass Water System.

The amount has been considerably increased over the $400 proposed in your memorandum of November 19, 1965, as it includes more work of test pumping and development than included in your estimate. The investigation of ground water potentials can be accomplished under a purchase order; however, it is necessary to include in the purchase order a sufficient description to outline the work to be accomplished, including materials and services necessary to complete the project. We included in our estimate funds for a water well screen, in case the formation requires a screen to provide proper completion of the well.

Before we proceed with the drilling of a test well, we must have authority from the Bureau of Indian Affairs for the well site and pipe line right of way across their lands.

If the development of a supplemental supply is to be accomplished in time to be used next season, this work should be finished this winter, during low flows in the White River to facilitate the installation of the pipe across the River.

Please advise this office in advance of the date when you plan to analyze the yield from the test well so we may assist and obtain data necessary to determine the characteristics of the acquifer.

(Sgd) Duane D Jacobs

Acting Assistant Regional Director

Enclosure

WAMott:fh

BADL

L54 MWR(OL)

NOV 4 1965

Memorandum

To: Superintendent, Badlands

From: Acting Assistant Regional Director

Subject: Investigations for Supplemental Water Supply, Cedar Pass Water System

It is necessary we have a documented agreement with the Bureau of Indian Affairs, permitting the Service to proceed with investigations of ground water potential for a satisfactory supply; also, authority from the Bureau of Indian Affairs for the necessary land and right of way for development.

This is quite a sizable project, and since it has not been programmed, we suggest you submit a PCP covering the entire project development of a supplemental supply and submit complete justification so we may attempt to arrange for the necessary B&U funds to cover the project.

We have prepared a rough estimate of costs involved in drilling test wells and installation of pump, and a supply line from new well to the existing pump house near the White River.

Our estimate of cost for drilling, test pumping, and analysis of the potential of the water supply is slightly over $1,500. This includes possible requirements for the 6" casing, a well screen and 18 hours of test pumping.

An estimate on the installation of the pump and pipe line to connect to the present water system is approximately $19,500. This was based on 3500 feet of pipe line. The final location of the well will affect the estimate accordingly.

The drilling of a test well can be accomplished with Water Resources funds this fiscal year. However, it is essential a PCP is submitted and approved, and that B&U funds are available to cover the entire project before the Service can complete the project and derive any benefit from the investigations.

File BADL

Copy BADL

Mott 8/27
Cotton 8/27
mo
Cooper 8/31
Reynolds 8/31
Boyd 8/31

L54
MWR (OL)

SEP 1 1965

Memorandum

To: The Director

From: Associate Regional Director, Midwest Region

Subject: Report on Water Problems at Badlands National Monument, South Dakota

During the spring run off and local weather precipitation, the White River became in flood stage, and as reported, continued until the middle of August. When the White River comes into flood stage, it carries considerable geological flower, (colloidal suspension), and offers considerable difficulty in supplying potable water for the Headquarters water system.

Sometime during the first part of July, the Superintendent employed a well driller to drill a number of test holes on Federal lands to investigate the potential of obtaining a ground water supply. About the middle of August when Mr. Mott was in Rocky Mountain National Park on a field trip, he was contacted regarding the drilling of test wells on private land approximately 1500' from the present Headquarters water supply pump. At that time Mr. Robert G. Cooper, Regional Chief of Maintenance, advised a well could be bored at a cost slightly less than $300. Mr. Mott advised that it would be necessary to take an option on private land before test well investigations could be conducted.

The water supply from the White River carries so much glacial flower that it was an emergency that supplemental water be obtained. The Superintendent discussed with an adjoining rancher the problem of drilling a well for a supplemental supply on his land. Finally the rancher proposed that he will drill the well on his land and supply the Service with the necessary emergency water. Subsequently the rancher drilled a well at his own expense and this supply was delivered to the Headquarters water system. The Superintendent subsequently discussed acquisition of the well and water supply with the rancher. The rancher indicated that he would want $10,000 for

the water rights should we buy the well and use it as a source of permanent supply. At the present time the Service is paying 25¢ per 1,000 gallons to the rancher for the required supply needed to carry the Monument requirements past the state of emergency.

Present plans of the Regional Office are to obtain a geological study of the ground water potentials within an area along the White River. This study will be made by John Paul Gries at a cost of approximately $150. Dependent upon his report, test wells will be drilled to determine the available supply of ground water in locations of former river bed formations. It is believed there exists deposits of coarse gravel from which a good supply of water may be obtained. It is reported some wells exist along the White River Basin which produce as high as 75 gallons per minute.

In the event test well drilling sites are located on Forest Service land, we shall obtain the necessary agreements from the Forest Service for investigation and development of water supplies and rights-of-way on and across Forest Service land.

(Sgd) George H. Baggley

Associate Regional Director

In duplicate

WAMott:fh

cc:
Superintendent, Badlands

00-00-1965: letter to consulting geologist from associate regional director regarding appreciation of field study

Mott 8/25
E.H. 8/25

BADL

L54 MWR (OL)

AUG 2 5 1965

John Paul Gries
Consulting Geologist
238 St. Charles Street
Rapid City, South Dakota

Dear Mr. Gries:

Mr. Mott of this office talked with you by telephone on August 25, 1965, regarding a geological study and letter report on the potential water supply available along the White River upstream from the present water supply to the Headquarters Area at Badlands National Monument.

We shall appreciate your making a field study concerning a potential supply of ground water and proposing locations for drilling test wells to investigate the amount of available supply.

Your suggestion of employing your new resistivity instrument for locating deposits of larger size gravel, sounds interesting and if you believe the use of this instrument would result in economy of the investigation, please advise us the estimated cost involved.

We would like to accomplish the test well drilling this fall. We will ask the Superintendent to contact you and arrange for a time to make the field study. According to your estimated cost involved in your field study and associated expenditures, we will program $150 to cover these costs according to your estimate made to Mr. Mott during your telephone conversation.

Sincerely yours,

(Sgd) George F. Baggley

George F. Baggley
Associate Regional Director

cc:
Chief, WODC (2)
Superintendent, Badlands

WAMott:fh

NOTE TO SUPT:

Please contact Mr. Gries and arrange date for a field study.

TELEPHONE CALL FROM BILL MOTT ON BADLANDS WATER SITUATION
August 25, 1965

Mr. Mott had discussed Badlands water problem with Superintendent. The rancher (who had offered to drill well and supply water to Monument free), was now selling water at 25¢ per 1,000 gallons to the Monument and offered to sell well for $10,000. The well water is taking care of the emergency but the well yields only 35 gpm, just about enough to take care of summer demands and Superintendent wants to drill a well or wells in the White River Valley about 1½ miles upstream from the present pumping station where some gravel outcrops are located. Drilling was estimated to cost about $2,000 to $3,000.

I suggested that a reconnaissance be made of the area by the U.S.G.S. or a consulting hydrologist before any test drilling was done. Mr. Mott said that Dr. Gries, who has prepared reports on other National Park Service areas, was in Rapid City and was acquainted with the Superintendent. We agreed that Dr. Gries should be asked to make a study and prepare a short report. The emergency is now being taken care of by purchasing water from the rancher's well and, although visitation is expected to reach 1,000,000 this year the peak summer load would be past before any crash program could be developed. Hence it appears more reasonable to have Dr. Gries make a study and base any necessary test drilling on the recommendations of his report. Mr. Mott will telephone Superintendent informing him of this.

E. W. Reed

E. W. Reed
Chief, Branch of Water Resources

D5039 MWR (OM)
(X)-L54 BADL

July 23, 1965

Memorandum

To: Field Solicitor

From: Acting Assistant Regional Director

Subject: Development of water supply, Badlands

As a follow-up to our telephone conversation of July 22 with Superintendent Hjort, Badlands, concerning his emergency need for a water supply, your opinion is requested on the following points:

1. In view of Mr. Hjort's statement that the local investigation for a water supply indicates the supply, in the form of a well to be drilled, is approximately 1,500 feet from the right-of-way for our existing water supply, can a right-of-way to the well site from our existing right-of-way be considered as being adjacent to the Monument? In other words, is our present right-of-way down to the White River considered as a part of the Monument?

2. Will we have to have title to the area needed for the pumphouse and well?

3. Can we construct the connecting pipeline over a right-of-way between the new well and our existing waterline that is constructed within the present right-of-way between the Monument and the waterworks at the River, or will we need title to this also?

4. What type of document might be suitable which would allow us to expend funds because of the emergent nature of this situation prior to the acquisition of land for the well site or the acquisition of the right-of-way for drilling of a test well?

Your cooperation and assistance in this problem are much appreciated.

Duane D. Jacobs

Duane D. Jacobs
Acting Assistant Regional Director

RGCooper:wla

COMPLETION REPORT NARRATIVE

WELL TESTING

WORK ORDER BADL-1-WR-61

This project was initiated to determine the quantity and quality of water available for the proposed Sage Creek Development from the "Quinn Table Well".

Two wells were originally drilled in the late 1930's to provide water for a CCC Camp on Quinn Table. Supposedly, these wells provided water at a steady rate even when others in the vicinity had dried completely. At the present time, precipitation has been below normal for a period of two to three years and the water table is probably as low as it has been, at least during recent times. On June 13, 1961, Purchase Order BADL-655 was written authorizing Lyle Jerred of Wasta, South Dakota to proceed with the testing for a lump-sum price of $280.00. The well to be pumped (and proposed for use for the Sage Creek Development Supply) is the East Well which measures 47 feet deep with 6 feet 6 inches of water.

The remains of the old buildings and water tower were removed on June 13 and 14, 1961 to allow easy access to the well. Mr. Jerred moved in his equipment and began the work on June 15. Removal of the silt from the bottom was accomplished with a sludge bucket. After 2 to 3 cubic feet of silt were removed, blue shale began to appear indicating the 60" casing was still in place and in good condition.

A bail bucket was then used, removing 30 gallons per minute for one hour. This lowered the level of the water 24 inches. The water returned to normal level in 70 minutes and another bailing of 25 gallons per minute was then run for one hour. This lowered the water level 16 inches. A submersible pump was then installed which pumped at the rate of 10 gallons per minute. At this rate of pumping, the water level dropped a total of 11½ inches but after 10 hours of continuous pumping at this rate, no further drop was noted.

A sample of water was collected from this well and submitted to the South Dakota School of Mines and Technology for a complete analysis under authority of Purchase Order BADL-658 dated June 21, 1961. Copies of this analysis (Certificate No. A-458-G) are attached to this report. In a memorandum dated August 18 (File D5039 X D5031) Acting Regional Chief of Operations Weldon W. Gratton states the analysis ".... is quite satisfactory as compared to the P.H.S. recommended analysis values. This report shows a little high content of 'Total Dissolved Solids' but not enough to be of any particular concern. The water is slightly alkaline as shown by the Ph and Alkalinity-Methyl Orange Tests.

"We believe the quality of this water supply will be satisfactory

for use. As the well has not been used for quite some time, the analysis content of the water might change, after a year or so of continued pumping."

An analysis of the tests pumping information by Regional Hydraulic Engineer Mott indicates that when pumping at the rate of 10 gallons per minute, the specific yield is 7.95 gallons per minute per foot of drawdown. Because the step-test method was not able to be used, this figure may be somewhat high. However, it is believed the yield from this source will supply the developments of the Sage Creek area.

It should be stated it was not possible to follow the specific instructions for test pumping as contained in Acting Region al Chief of Operations Aiton's memorandum to the Superintendent, Badlands, of April 27, 1961, (File L-54). The contractor attemped to locate equipment for this more elaborate step-pumping, but it was not available.

The preliminary drawing (NM:BL 3149, January 1959) of Water and Sewer Systems, Sage Creek Area, shows the exact location of the well discussed in this report.

06-30-1961: original certificate of analysis

ENGINEERING & MINING EXPERIMENT STATION
of the
SOUTH DAKOTA SCHOOL OF MINES & TECHNOLOGY

ORIGINAL CERTIFICATE OF ANALYSIS

Rapid City, S. D. June 30 1961

Mr. Badlands National Monument
Interior, South Dakota

The sample of water from Quinn Table Well received from you has been analyzed and the results obtained are as follows:

Certificate No. A-458-B

Your sample No. Water from Quinn Table Well

SUBSTANCE	PPM	SUBSTANCE	PPM
Total Dissolved Solids	589	Fluoride (None found)	0
Loss on Ignition at 500°C	31	Nitrate Nitrogen	0.86
Total Hardness as CaCO3	144	Nitrite Nitrogen	0.05
Sodium	133	Alkalinity-Phenolphthalein	18 (19)
Potassium	19	Alkalinity- Methyl Orange	319
Calcium	41	Turbidity Raw Water = 6	
Magnesium	11	pH = 7.9	
Iron	0.14		
Manganese	<0.06		
Silica	41		
Chloride	20.5		
Sulfate	135		
Bicarbonate	172		
Carbonate	22		

REMARKS:

FILE
Consistent

The Engineering and Mining Experiment Station assumes no responsibility as to the source of the above samples.

A copy of this analysis is on file in the office of the president of the South Dakota School of Mines & Technology.

Analyst.
M. O. Williman

Director of the Engineering and Mining Experiment Station.

11-14-1958: completion report of construction project; 1958

Form 10-174
(Rev. 8-56)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

COMPLETION REPORT OF CONSTRUCTION PROJECT

REGION	AREA	COUNTY	STATE
II	Badlands National Monument	Jackson	South Dakota

PROJECT OR JOB TITLE: Water and Sewer Extension (a) Water System Improvement — PCP NO.: U-26

LOCATION IN AREA: Cedar Pass Area - White River — MASTER PLAN NO.: NM-BL 3140 — BUILDING NO.:

WORKING DRAWING NO. AND TITLE: NM:BL 3140 Water Collection System - Cedar Pass Area

APPROPRIATION TITLE AND SYMBOL: 14X1035 — WORK ORDER NO.: 332.2A

CONTRACT NO.: (1) Anchor Construction Co. 14-10-232-222 Contract Number and Day Labor — DATE WORK STARTED: 6-9-58 — DATE WORK COMPLETED: 10-27-58

NAME OF CONTRACTOR: (2) 14-10-232-292 Taylor Brothers Ditching — ADDRESS: (1) Omaha, Nebraska (2) 308 East Denver Street, Rapid City, S.D.

COST ANALYSIS

CONSTRUCTION ITEMS		QTY.	UNIT COST IN PLACE	TOTAL COST IN PLACE
Water System				
Contract Payments (1)	$ 60,287.78			
(2)	15,099.00			75,386.78
Facilitating Services				599.53
PL+D				11,656.30
			TOTAL	87,642.61 75,986.31

COST AGREES WITH FFO RECORDS
C. D. VAN KIRK, SUPERVISORY ACCT.
REGION TWO OFFICE FFO
DATE NOV 26 1958

SUMMARY OF EXPENDITURES

PERSONAL SERVICES	EQUIPMENT	MATERIALS AND SUPPLIES

OTHER: Facilitating Services $ 599.53 PL+D 11,656.30

CHANGE ORDERS

ORIGINAL CONTRACT AMOUNT	FIRST	SECOND	THIRD
70,784.50	(1) 7,358.64		
FINAL CONTRACT AMOUNT	FOURTH	FIFTH	SIXTH
75,386.78			

THIS PROJECT OR JOB HAS BEEN COMPLETED IN ACCORDANCE WITH APPROVED DRAWINGS, SPECIFICATIONS, AUTHORIZED CHANGES

SUBMITTED BY (Name and title): — DATE:

APPROVED BY (Name and title): George H. Sholly, Superintendent — DATE: 11-14-58

(ATTACH NARRATIVE STATEMENT, PHOTOGRAPHS, AND "AS BUILT" DRAWINGS TO THIS FORM)

Red with WASO 4/13/60 Memo.

GPO 914178

Badlands National Monument
Interior, South Dakota
October 22, 1958

COMPLETION REPORT
WATER COLLECTION SYSTEM - PCP 0-26 (Portion)
CONTRACT NO. 14-10-232-292
Taylor Brothers
308 East Denver Street
Rapid City, South Dakota

CONTRACTUAL DATA

The Invitation to Bid for the construction of this project was dated April 21, 1958, with the stipulation that low bid was to be accepted within 30 calendar days. The bids were opened in the office of the Regional Director, Region Two, National Park Service, 307 Federal Building, Omaha 2, Nebraska, at 3:00 p.m., Central Standard Time, May 20, 1958.

Two bids were received of which Taylor Brothers Ditching, 308 East Denver Street, Rapid City, South Dakota was the apparent low bidder. Thus the contract was awarded to Taylor Brothers Ditching on May 20, 1958, for the amount of $14,737.00.

The contractor acknowledged the Notice to Proceed on June 18, 1958, thus September 16, 1958, was determined as the allowable date of completion under the contract.

Actual work on the project was started on June 27, 1958. The work consisted of setting some steel fence posts in concrete for the chain-link fence around the pumphouse area. On July 7, 1958, the contractor was notified to suspend all work on the project until further notice due to abnormally high water in the White River where most of the work was to be accomplished.

On August 26, 1958, the contractor was notified to resume work on September 1, 1958, thus extending the completion date for the project to November 11, 1958.

All work was completed and accepted on October 1958, and the contractor was so notified.

CONSTRUCTION

The contractor's equipment consisted of a small bulldozer; truck mounted dragline and clamshell; small portable compressor; two flat-bed trucks; one gas pump (100 gpm); one small electric sump-pump; one large gas pump; and various small hand tools necessary for this work.

Please refer to the "as built" drawing No. NM-Bl 3140 B for details not described herein.

The contractor started the major operations by excavating for and installing the concrete manhole base and 3-4 foot sections of precast concrete manhole. The excavation down to the shale strata was accomplished with the clamshell bucket. Most of this material consisted of fine silty clay to within about 3 feet of the shale where fine sand with some gravel was encountered on down to the shale. There was a little water coming through the sand causing considerable sluff of the banks. The excavation was continued and extended until the banks dried and held their natural angle of repose and safe working conditions existed.

About 2½ vertical feet of shale had to be excavated to construct the manhole base. The shale was of a hard blue formation that required a paving breaker with spade bit to loosen it for removal. However, the shale would slack and crumble when dried and exposed to the air for a short time. The contractor elected to form both the inside and out of the base so that considerable excavation in the shale was required. A sump for dewatering was also necessary.

A peculiar situation was encountered when the earth was removed from the 3" G.I. pipe that connects the in-place well points with well. The pipe was badly corroded where it laid on the shale. It was leaking badly in several places. Twenty feet of this pipe was replaced with a sand and gravel bedding. Now we know definitely that the blue shale contains chemicals that are corrosive to iron. It is known that other formations in this area are corrosive to iron also, but they have not been postively identified.

The excavation for the 18" vitrified clay tile, extra strength, was accomplished with the sameequipment as used for the manhole base. The surface flow of water was diverted to the opposite bank during the excavation. Only sand, gravel, and a few clay stratas were encountered in this digging. The sand and gravel contained considerable clay thus the ditch banks held reasonably well. The back slopes of the ditch were carried back as far as necessary for safety. Some of the stratas of sand were course, but it also had fine silt in it.

The shale strata was fairly level in the bottom of the trench, it only varied from 0 to 6" above the established grade for bedding the tile in the shale. The tile was bedded in impervious clay placed in a trench excavated in the shale. The trench in the shale was at such a depth that in no place was the shale strata below the lower ¼ line of the tile. The clay tile thus formed an impervious dike about 12" high across the river above the shale.

The contractor fabricated a steel frame with plywood sides, that when placed over the tile and resting on the shale, could be filled with washed gravel to the required dimensions. He then placed properly, 2 - 4x8' sheets of plywood on each side of the gravel, framed and backfilled some to hold the washed sand. However, to place the sand on the sides of the gravel a roof form of plywood was placed over the gravel to direct the sand to its proper place when released from the clamshell bucket. All washed sand and gravel was hauled in the contractor's flat-bed trucks from Wasta, South Dakota, and placed with the clam-shell bucket. After the washed sand and gravel had been placed to a certain height, the gravel frame was pulled ahead along the pipe by means of a tractor and cable. Any deficient places were filled with gravel first then sand and backfilled with adjacent river material. This method produced satisfactory results and gave the dimensions of washed sand and gravel required.

The perforated clay tile was extended as near the west bank of the White River as possible. About one-half the water collected was from this area. The balance was from on top of the shale entirely across the river. Very little water seemed to filter into the trench from the surface when the diversion was near the trench, however, later the water level in the manhole was abouth the same as in the river. Tests showed we had added 70 to 75 gallons per minute to the present supply over a sustained pumping period. We also added 3700 gallons to the storage of the pump sump by installing 18" diameter tile. To show the outer end of the collection tile a piece of 3" salvaged pipe was installed as a marker. We have found that this method is very valuable to others in the future who may wish information on this pipe line location.

The contractor has made his own installation of the required chlorinator. The chlorinator furnished was a Wallace and Tiernan Model 741-2-1, wall mounted, that would supply the required amount chlorine for the electric pump with a capacity of 50 g.p.m. The water supply to the manually controlled chlorinator is a Type K copper tube with about 200 p.s.i.,, the breather pipe was plastic and conducted to the outside of the pumphouse, and the chlorine discharge hose was conducted through the pumphouse floor to a point well down on the pump intake screen. The plastic tube was threaded in electrical rigid conduit through the pumphouse wall, also the rubber chlorine tube was threaded in the same type conduit through the pumphouse floor, then clamped with copper straps and bolts to the pump column. A short run of the pump showed that the chlorine gauge on the chlorinator did not show the correct rate of feed as checked with a colorimeter. This is to be checked with the manufacturer and corrected by the contractor if necessary. However, further checking is to be done on a longer pumping period, say 5 to 8 hours.

The specifications required the new chain-link fence to be identical to the chain-link fence in place with the provision that minor variations would be acceptable upon approval by the Contracting Officer. The present chain-link fence is quite old and it was found that some of the new parts for the fence could not be obtained identical, so substitutes were necessary. All substitute parts were carefully observed for quality. There was no difficulty or unusual happening during the installation of the chain-link fence.

All work on this project was constructed in accordance with the plans and specifications, however, some minor changes in the plans were made and approved as the work progressed. Please refer to the plan as built for this project. All of the changes were dimensional for the various items in the Bid Schedule and no "Orders for Change" were required.

E. J. Axline
Project Supervisor

IN REPLY REFER TO

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Badlands National Monument
Interior, South Dakota

COMPLETION REPORT
WATER AND SEWER EXTENSION
CONTRACT NO. 14-10-232-222
CEDAR PASS AREA
BADLANDS NATIONAL MONUMENT, SOUTH DAKOTA

This contract included several Project Proposals, namely; U-32 Extend water and sewer in Residential Area, U-26 (Portion) 500,000 gallon storage reservoir, U-24-1, Extend sewer to Visitor Center, and U-23-1 Extend water to Visitor Center. These proposals were combined into one contract for economy and since the work was similar. In isolated areas such as Badlands National Monument, it is evident that a large contract of similar work saves the cost of several contractors moving in and out.

The estimated cost of this work on the Project Proposals for construction was $92,600.

This Contract No. 14-10-232-222 was awarded to Anchor Construction Company of Omaha, Nebraska, on July 10, 1957 for $74,985.50. The allotted time for completion of the work was 120 calendar days.

Notice to Proceed was acknowledged by the contractor on July 22, 1957. Thus the completion date was determined as of November 19, 1957.

After certain studies in field, it deemed necessary to change the location of the proposed lagoons, add base gravel under the storage reservoir along with other items. Change Order No. 1 was issued and signed by the contractor on September 10, 1957. The estimated amount of increased cost was $7,358.64 and it also provided for an additional 30 calendar days in allotted time for completion, making December 19, 1957 as the final day of completion.

Before the actual construction work started several important changes in the plans were found advisable from an economical standpoint and for other reasons; first, the location of the new Visitor Center was moved about 30 feet east which allowed sewer line "B" to be relocated thus saving considerable in the length of the sewer and two manholes.

Then, it was determined that the proposed location of the sewage lagoons was too close to the Cedar Pass campground, so they were relocated as near the south boundary of the Park as possible. This increased the length of sewer line. It was also determined that the proposed sewage load required an 8" sewer on the main outfall from

Cedar Pass Lodge to the lagoons. Therefore all new sewer on the main outfall was installed as 8" vitrified clay tile.

The other main item of change was protection of the storage reservoir, which included one foot of washed gravel under all footings and the floor to equalize hydrostatic pressure. Four hydrostatic relief valves were also placed in the reservoir floor to relieve any hydrostatic pressure from outside when the tank is empty. A copy of the Change Order will give other minor items.

Due to the local shortage of housing and labor the contractor chose to complete the storage reservoir first then complete the work on the water and sewer extensions. He did subcontract the excavation of the lagoons to Robert Olson of Philip, South Dakota. With this program of work he used up all of his allotted time for completion.

The contractor brought in about 5 men and employed the balance locally. The locals were entirely in the labor class and required much supervision on this type of work. The men brought in included; a shovel operator, a tractor operator, an old carpenter, a pipe layer, and a foreman. All things considered, the quality of labor retarded progress a great deal on the entire project.

On work of this type some consideration should be allowed officially for receipt of materials from the suppliers. We have had the following instances where materials more or less common to construction have been delayed in transit or lost. The receipt of the rubber water stop could have delayed us about 12 days. A wall sleeve for the reservoir got lost entirely so one had to be improvised, a $1\frac{1}{2}$" saddle for the 6" A.C. pipe broke due to a flow in the casting and would have required three weeks to replace, so two 1" were substituted, the supplier shipped the wrong drawdown gage for the pump, and etc. Most of these delays occur when the contractor can least afford it as time is concerned.

The excavation for the reservoir caused very little trouble but excavation for pipe trenches was more difficult than anticipated by the contractor. He has admitted testing the ground prior to bidding. A 3/4 yard Northwest backhoe was used for this work yet several places had to be blasted. This of course delayed the progress considerably.

The weather during the entire work period was normal or better than normal. Only a few days of rain and very little snow was experienced. There was no delay due to weather.

The unusual features of the project seemed to be: (1) economy steel panels 30" x 30" with various size fillers were used for the circular walls of the reservoir. These forms are rented and the company sends a skilled man to supervise their erection. They were

satisfactory. (2) The 8" V. C. tile came in 4 foot lengths to reduce the number of joints. (3) 90 lineal feet of 8" cast iron sewer was laid in the inlet to each lagoon since it would be under 0 to 4 feet of head. (4) The diversion gate in the manhole to each lagoon was designed to shut off either lagoon or regulate the amount of sewage to each lagoon. It was made of stainless steel. (5) The asbestos cement water mains broke three times after the test had been on for 24 hours or longer.

The plans and specifications were followed as closely as possible and in all cases the work was equal or better than specified. No heavy maintenance is anticipated except in the asbestos cement water mains. These may give trouble from settlement as the trenches fill with surface water. We found most of the old pipe trenches we crossed contained considerable moisture even to the extent that a leak in the pipe was evident, but the dirt soon dried when it was opened up.

Respectfully submitted

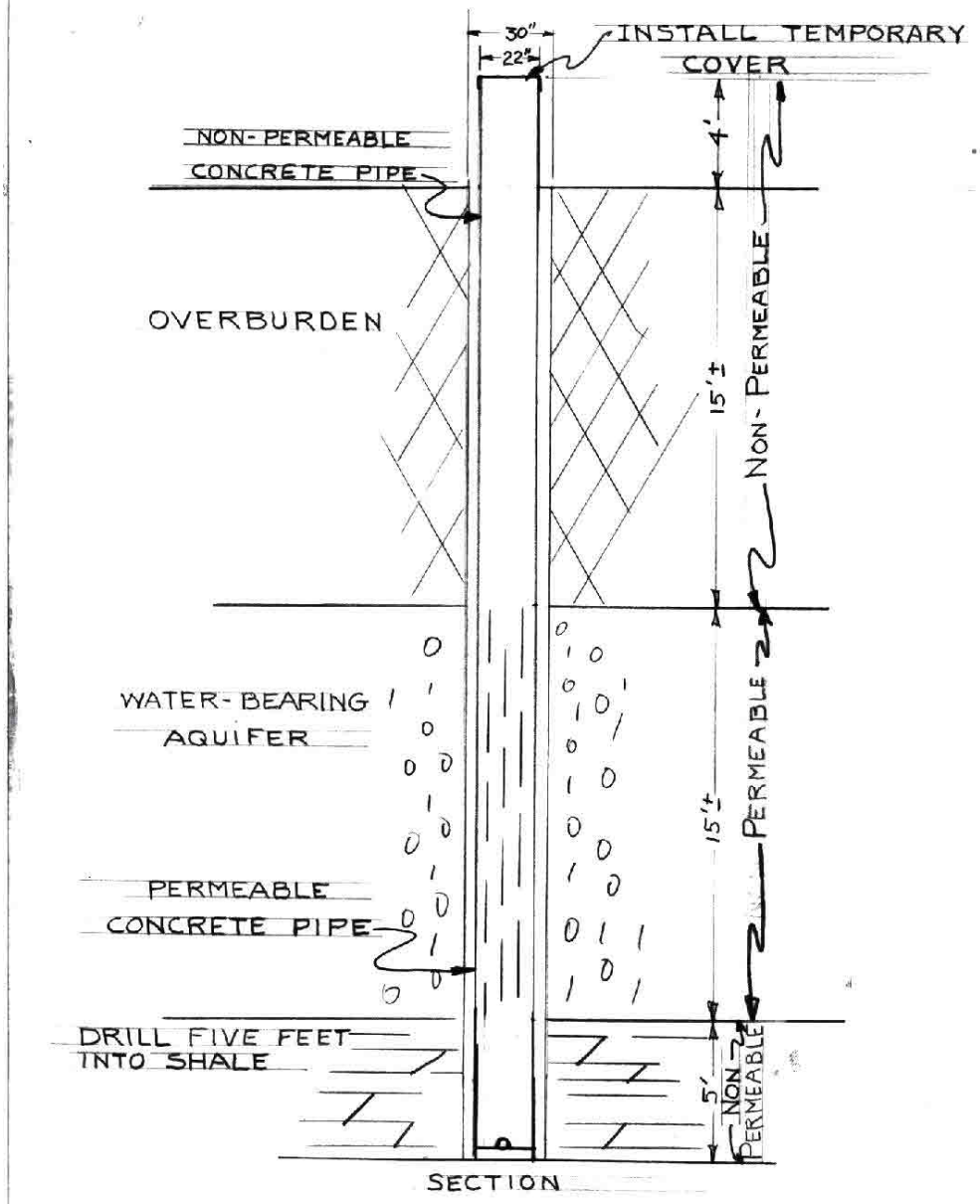
E. J. Axline
Project Supervisor

TABLE 2.--Chemical analyses of ground water from the alluvium, National Monument Headquarters, South Dakota

[Analytical results in parts per million except as indicated]

Location	Well number	Color	Date of collection	Temperature (°F)	Silica (SiO_2)	Total iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids: Sum	Dissolved solids: Residue on evaporation at 180°C	Hardness as $CaCO_3$: Calcium, magnesium	Hardness as $CaCO_3$: Noncarbonate	Percent sodium	Sodium-adsorption-ratio	Specific conductance (micromhos at 25°C)	pH	Remarks
43-39-15acd	1	2	6-29-66	50	29	....	34.0	3.9	185	7.0	361	0	187	12	0.7	1.8	0.25	639	657	101	0	..	8.0	971	8.2	
43-39-15adc1	2	3	6-28-66	50	29	....	34.0	1.4	176	6.6	304	7	129	7.8	.6	.0	.24	586	504	91	0	..	8.0	897	8.4	
43-39-15adc2	3	2	6-30-66	49	29	....	35	2.1	181	7.0	409	7	135	9.0	.5	.4	.26	607	615	96	0	..	8.0	926	8.4	
43-39-15adc3	Test site	..	4-5-66	38	19	0.25	10	1.0	82	3.5	191	0	49	2.3	.7	.6	.10	263	299	29	0	..	6.6	403	8.1	PO_4 = 6.0, Li = 0.030, Sr = 0.10 Mn = 0.05
-39-15dab	4	1	6-30-66	49	30	....	30	6.8	200	7.2	252	26	146	11	.5	.4	.29	662	672	103	0	..	8.6	1,020	8.4	

00-00-0000: typical test well badl

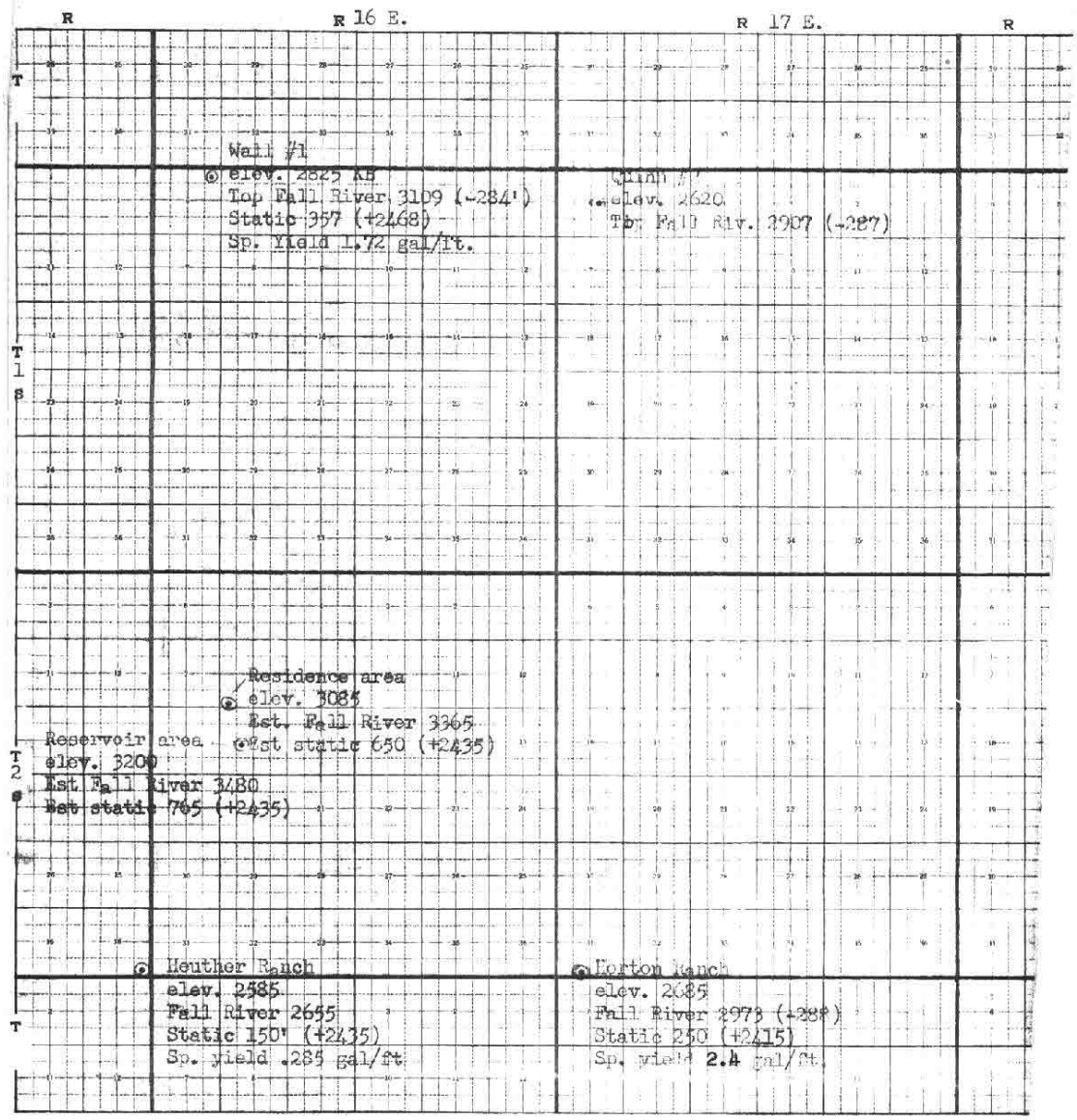


TYPICAL TEST WELL

BADLANDS NATIONAL MONUMENT
SOUTH DAKOTA

NORTH ENTRANCE AREA, BADLANDS NATIONAL MONUMENT

County Pennington, State South Dakota



KANSAS BLUE PRINT CO.

Four Township Island plat (1½" to the mile)

FILE COPY

54

December 12, 1945.

MEMORANDUM for the Regional Director, Region Two.

Enclosed are three partially completed assemblies of Badlands National Monument Deed 165, covering Federal Water Right No. 512 for the Cedar Pass Water System, together with a summary which has been inserted at the front of each assembly listing all the items which should be included. It is believed that each office file now contains the additional documents to be inserted in the assembly as indicated by yellow tabs.

The assembly for the Coordinating Superintendent includes a copy of the Certificate of Construction of Works and Appropriation, and he is believed to have the original of this instrument in his files now. This original should be sent to the Director to complete the original deed.

We have a draft of the instrument granting an easement across the county road, but it is neither signed nor dated. Our records also show that the Coordinating Superintendent is supposed to have the original, which should be sent to this Office for insertion as item 11 in Part I of the original deed. It will be necessary to make four exact copies for the Custodian, Coordinating Superintendent, Regional Director, and Water Rights Division. Mr. Liek may make these copies and distribute them, or leave it for us to make them, but there really should be a copy showing who signed and when before the original is sent out in the mail.

We already have the signed license from the Railroad Company and a signed carbon copy of the Memorandum of Agreement with the Department of Agriculture.

Our records do not show who signed the Notice of Intention to Appropriate (item 2, Part II), or whether it was signed on April 3, 1940, as dated at the top. If Mr. Liek has this information on his copy, please send the information to the other holders of assemblies, or advise if we should obtain it from the State Engineer.

As item 4, Part II, we have listed the letter from the State Engineer authorizing Mr. Robertson to make the engineering examination. The letter was a personal authorization, so it is optional with Mr. Robertson whether the original goes into his files or those of the Service, but copies should be made for all five assemblies. Also, if the original is to be placed in Federal files, it should be in the Director's assembly of the deed.

On each copy of the L-1 form for Deed 163, which have already been distributed, it is suggested that "Improvements on Land at Time of Acquisition" be struck out and replaced by "Right-of-Way for Pipe Line". Thereunder add:

"This deed assembly includes:

"1. Memorandum of Agreement with Department of Agriculture for right-of-way across lands of Soil Conservation Service.

"2. Memorandum from General Land Office to effect that said right-of-way has been recorded with that Office.

"3. License from Chicago, Milwaukee, St. Paul and Pacific Railroad Company for right-of-way across its tracks.

"4. Grant of easement from Jackson County to cross county road.

"5. Memorandum from Chief Counsel advising that right-of-way across other county land is claimed under the act of August 30, 1890 (26 Stat. 391)".

(SGD.) A. VAN V. DUNN

Chief, Water Rights Division.

AvVD:sh.
Enclosure 366.
In triplicate.

cc: Mr. Simmers.

Badlands National Monument Deed 163

Water Right for Cedar Pass Water System

Outline of Assembly

Part I - Rights-of-Way.

1. Drawing NM-BL-5321.

2. Memorandum of Understanding between the United States Department of Agriculture and the United States Department of the Interior, regarding use of lands of Soil Conservation Service, signed by Claude R. Wickard, Acting Secretary of Agriculture, on June 20, 1940, and by A. J. Wirtz, Under Secretary of the Interior, on July 3, 1940.

3. Memorandum of July 29, 1940, from Commissioner of General Land Office to Register, Pierre, South Dakota, instructing him to record right-of-way across public land according to accompanying map.

4. Memorandum of September 7, 1940, from Chief Counsel to Attorney Johnson, advising that map recorded with General Land Office was No. NM-BL-5321, which was also map which accompanied Memorandum of Understanding (item 2).

5. Order of Court authorizing Trustees of Chicago, Milwaukee, St. Paul and Pacific Railroad Company to grant a license for pipe line right-of-way across railroad tracks.

6. Certificate of T. W. Burtness, Secretary of the Chicago, Milwaukee, St. Paul and Pacific Railroad Company, that he had in his possession a deed from White River Valley Railway Company to the Chicago, Milwaukee, St. Paul and Pacific Railroad Company for said railroad.

7. Map (Exhibit "A" with right-of-way deed).

8. License of right-of-way across Chicago, Milwaukee, St. Paul and Pacific Railroad Company right-of-way to the United States.

9. Memorandum of October 25, 1940, from Chief, Reclamation and Land Grant Division, General Land Office, to Director, National Park Service, stating that railroad right-of-way was duly recorded.

10. Memorandum of December 6, 1940, from Acting Director A. E. Demaray for the First Assistant Secretary, requesting approval of railroad license, with approval of December 13, 1940, by E. K. Burlew, First Assistant Secretary.

11. Easement across County Road, Jackson County. (When and by whom signed?)

12. Tentative easement from Jackson County to United States for use of County lands.

13. Table showing dates said land was patented.

14. Memorandum of March 9, 1940, from Acting Regional Director Paul V. Brown for Regional Attorney Taylor, relating to easements for Cedar Pass Water System.

15. Memorandum of March 9, 1940, from Acting Regional Director Paul V. Brown for the Director, relating to easements for Cedar Pass Water System.

16. Memorandum for the Files of March 18, 1940, from Merritt Barton, regarding State Code.

17. Memorandum of March 18, 1940, from Chief Counsel G. A. Moskey for the Acting Regional Director, Region Two, stating that this Service will rely on right-of-way authorized by act of August 30, 1890.

Part II - Water Right.

1. Drawing NM-BL-6975.

2. Notice of Intention to appropriate water, dated April 3, 1940. (Who signed?)

3. Drawing NM-BL-6976.

4. Letter of Authorization for Mr. Robertson to make examination, from State Engineer. (None in this Office.)

5. Certificate of Examination of Works, dated Jan. 18, 1943.

6. Certificate of Construction of Works and Appropriation, dated Jan. 27, 1943.

June 5, 1943.

MEMORANDUM for the Director.

Reference is made to Mr. Merriam's memorandum of June 1 with regard to distribution of waters of the Belle Fourche and Cheyenne Rivers in accordance with S. 1057 and H.R. 2580.

Apparently any water supplies for Badlands, other than the existing Cedar Pass Water System with its perfected right, will come from wells. The Rules and Regulations for Appropriation of Water in South Dakota state that "Subject to the provisions of the State Code relating to water, the owner of the land owns water standing thereon, or flowing over or under its surface, but not forming a definite stream." Wells derive their water supply from such sources.

It is apparent, therefore, that we are at liberty to develop wells without formal appropriation, so long as the source is normal ground water, in South Dakota just as in Wyoming, Nebraska, New Mexico and California. Further, if this water is not subject to appropriation in either Wyoming or South Dakota it is not covered by the interstate compact.

I gather that proposed well supplies for badlands can be constructed without regard to water rights or S. 1057 and H.R. 2580 provided these wells do not tap a natural stream channel either on the surface or below ground.

A. van V. Dunn,
Hydraulic Engineer.

AVVD:sh

cc: Regional Director, Region Two.
Coord. Supt., Wind Cave Nat. Park.

FILE COPY

19A - Authorizatic to make Inspection (Federal Proc ct) Form 19A

C O P Y

LETTER OF AUTHORIZATION
for
Inspection

January 6 19 43

Cedar Pass Water System
Name of Project

Mr. William E. Robertson, Regional Engr.
National Park Service
Keeline Building
Omaha, Nebraska

White River
Source of Appropriation
(Stream)

Dear Sir:

The United States of America, Department of Interior, National Park Service, San Francisco, California, having filed "Notice of Intention" to utilize certain specified waters of the State, and there having been issued a withdrawal from further appropriation as provided in Section 61.0137, 1939 Revised Code of South Dakota and identified as Withdrawal No. U.S. 512, on White River (stream) County of Jackson, has informed this office that the construction for the diversion, storage, appropriation and application of water to beneficial use has been fully completed and is ready for examination.

You are, therefore, hereby authorized to arrange with the holder of said withdrawal for an examination of the Cedar Pass Water System, and reservoir, and ~~ditchxxx~~ pipe line constructed and owned by the United States of America, Department of Interior, National Park Service, and also an inspection to determine the amount of water stored and applied to beneficial use.

In this examination you will ascertain whether or not the constructed works comply fully with the plans submitted and are capable of using quantities of water as set forth in the "Notice of Intention", and give in complete form all the information which is suggested by the statements in the Certificate of Inspection which is herewith enclosed, in the attached instructions, and such other information as will enable the State Engineer to act intelligently and judicially in the matter of determining the status of completion of the project.

You should also arrange with the holder of the withdrawal for the payment of your fee for this service and such proper expenses as you incur in making this examination and report and taking the testimony.

Very truly yours,

/s/ Dean W. Loucks

State Engineer.

12-29-1942: memorandum to regional director, region two from nps regarding final reports on the cedar pass water system

601 Sheldon Building

December 29, 1942.

MEMORANDUM for the Regional Director, Region Two.

We enclose a copy of a letter to the State Engineer of South Dakota in which we have just requested that Mr. Robertson be appointed to make the final reports on the Cedar Pass Water System at Badlands National Monument under Withdrawal No. 512. We also enclose a tentative report copied from the one I used for Wind Cave and Jewel Cave except that I have added a map in order to clarify present and proposed developments and minor changes in alignment. We also omitted certain statements about dams and substituted the items on "Diversion" and "Diversion Main."

As Mr. Robertson's report, he may modify it as he sees fit, but we have prepared it so that he could sign it as it is, after he receives his authorization, if it is satisfactory. In preparing the older reports, State Engineer Loucks was only able to provide mimeographed forms for one right, so we used typed ones like the present one for the others. They were accepted.

The main question is whether 35,000 gpd were used at the Lodge. As the Lodge had the only facilities for the visitors, which seem to have averaged 2916 per day in August 1941, the amount is low. But if the Lodge supply was curtailed by a high price for metered supply it may be high. If you have actual meter readings they might be substituted.

If the Lodge use has to be reduced, the only apparent places to increase quantities are for irrigation and construction. The original report form definitely reads: "The legal subdivisions to be irrigated are_____". Therefore, if more use is needed we should consider that a larger area or higher duty is "to be" involved during further development in order that the State Engineer can arrive at a total use of 64,632 gpd.

Although claiming CCC use in 1941 we have not shown the camp on the map because the SE corner of Section 34 was not covered as a place of use in the withdrawal. As a matter of fact, no use was contemplated in Section 28, but by use of the map this area is seen to be so small that it is worth the attempted expansion, particularly since South Dakota does not seem to have such a strict code as most States.

On the map we show the Lodge to be on private land. This is perfectly satisfactory for water right purposes, but it may be that the status has changed since our last report was received.

We enclose the tracing as well as prints in order that you may make changes if you wish, but we feel that a print is all that you need send the State Engineer with your report.

You will note that neither report nor map statement need a notary's statement unless the code has been changed since 1939.

We are at your service to rewrite the report or change the map if your staff is low, but all that we request is that copies be provided for the Director, Coordinating Superintendent, Custodian, and this office.

AvVD:SH

Hydraulic Engineer.

Enclosure 2122098.

cc: Director.
Supt., Wind Cave.
Act. Custodian, Badlands N.M.,
through Supt., Wind Cave.

12-29-1942: letter to state engineer from hydraulic engineer regarding completion of diversion system, distribution reservoir, and di

601 Sheldon Building

December 29, 1942.

State Engineer,

Pierre, South Dakota.

Dear Sir:

Reference is made to our water withdrawal, U. S. No. 512, for the Cedar Pass Water System at Badlands National Monument.

We have completed the diversion system, distribution reservoir, and distribution system to serve an operator's lodge. Although the administrative and operating units are not complete, we had the system sufficiently advanced in 1941 to permit full use of the water that year. In 1942, as part of the war effort, the United States suspended further construction in the area. In this latter year, too, public attendance took a decided drop and will probably continue so until after the war. We feel that we should prove up on our right on the basis of 1941, although we recognize that the same quantity of water may not be distributed among the various uses in the same way after the war.

In the case of our former claims for Wind Cave National Park and Jewel Cave National Monument, withdrawals U. S. Nos. 32-2, 33-2, and 508-2, you appointed me to make the necessary inspections. We assume that you will wish to appoint one of our engineers to make the present inspection. We suggest Mr. William E. Robertson, Regional Engineer, National Park Service, Keeline Building, Omaha, Nebraska. Mr. Robertson is familiar with the general water laws as well as with the project, and due to his close proximity can make the report with a minimum of cost and travel.

Yours very truly,

A. van V. Dunn,
Hydraulic Engineer.

AvVD:SH

cc: Director.
Region Two.
Supt., Wind Cave.
Act. Custodian, Badlands N.M.,
through Supt., Wind Cave.

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION TWO
OMAHA, NEBRASKA

DEC 7 1942
Date
12/7
12/28
FILE

December 2, 1942.

MEMORANDUM for the Regional Attorney, Region Four.

Reference is made to Hydraulic Engineer Dunn's memorandum of October 13 regarding the completion of the Federal Right in connection with the Cedar Pass Water System, Badlands National Monument.

Some time ago while the Regional Engineer was at Pierre, South Dakota he visited the State Engineer's office and made some inquiries regarding final proof on this system. Apparently the State Engineer has had but few Federal Rights filed in his office and they have never had forms printed. However, the Forest Service has made some filings and the State Engineer and Forest Service officials had worked up a form for use with their filings. These had been mimeographed but apparently only in sufficient amount to cover the filings that had been made so we were unable to secure a copy at that time. The State Engineer also stated that he had in these cases asked Forest Service engineers to make the inspection reports. So you can ask to have the Regional Engineer make this report if you wish.

The system has been constructed in accordance with the plans enclosed with Mr. Dunn's memorandum, Drawing No. NM-BL 6975, except for some changes in the Headquarters Development Area.

We are enclosing a print of our Drawing No. NM-BL 5334 A, which shows the proposed development at the Cedar Pass Area. This shows the water lines that have been built up to the present time, and also the lines that remain to be built. We believe Mr. Dunn will have no difficulty in correcting his map from this drawing. The constructed lines smaller than 4" have been built by the operator at the Cedar Pass Area.

We are enclosing a copy of Coordinating Superintendent Liek's memorandum of November 17, which we believe will give him the travel figures he has asked for. This is total travel past the Cedar Pass Area and not necessarily use of the Cedar Pass Area. The monument itself has no present use of water at the Cedar Pass Area except for fire protection of temporary buildings in the utility area.

From July 1941 to July 1942 we had a CCC camp located near the S. E. corner of Sec. 34, T 3 S., R. 18 E. using water from this system. Their usage can safely be estimated as from 5000 to 10,000 gallons per day, although we do not have exact figures.

The following is the information to be used in connection with the engineer's report:

Diversion: - 80' of 3" pipe buried in bed of White River. Water collects through 10 - 3" well points connected with this 3" line. Line drains to circular collecting tank with capacity of from 10,000 to 15,000 gallons depending on river stage. Water is to be chlorinated but chlorinator not yet connected.

Pump is deep well turbine, Fairbanks Morse, with a capacity for delivery of 50 g.p.m. to reservoir, driven by gasoline motor. The pump delivers through 15,780 ft. of 4", and 4590 ft. of 6" pipe to 100,000 gallon underground concrete reservoir. The loop line to operator's area is not included in pipe length figures, although you may want to include length of this line as well as fire hydrant lines.

There has been no irrigation use in the area and probably will be little except for watering of plants and shrubs around proposed residences. Cost of water will probably keep operator from much irrigation around his cabins.

We trust this will give Mr. Dunn the information he desires.

Acting Regional Director.

Enclosure
cc: Coord. Supt., Wind Cave
Actg. Cust., Badlands.

11-17-1943: memorandum to regional director from nps regarding information about cedar pass ledge water use

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

WIND CAVE NATIONAL PARK
HOT SPRINGS, S. DAKOTA.

November 17, 1942.

MEMORANDUM for the Regional Director, Region Two.

Reference is made to your memorandum of October 19, with which a copy of Hydraulic Engineer Dunn's memorandum of October 13 was enclosed in which he desired certain information regarding about water use at the Badlands National Monument.

In accordance with the last paragraph on page 1 we wish to advise as follows:

Cabin capacity at Cedar Pass Lodge: 100 people
NPS Personnel & Families proposed: 4 families (12 persons)
1941 calendar year travel by months:

January	150 cars	350 people
February	162	404
March	450	1350
April	750	1875
May	2669	7725
June	13187	41818
July	23057	75050
August	26592	90418
September	8272	24850
October	2600	7800
November	360	1080
December	250	750
Totals	78499	252878

It is hoped that the above information will serve the purpose desired.

Coordinating Superintendent.

10-13-1942: memorandum to regional director from hydraulic engineer regarding facts about the cedar pass water system

601 Sheldon Building

October 13, 1942.

MEMORANDUM for the Regional Director, Region Two.

Reference is made to my memorandum of September 10, 1942, regarding the Cedar Pass Water System at Badlands National Monument, and to Mr. Liek's reply of September 18, 1942.

Provided the construction to date has been in nominal agreement with the plan shown on drawing NM-BL-6975, of which a print is enclosed, we should be able to complete the right by converting the Withdrawal to a Federal Right at this time. To do this, it is necessary to have an inspection and report by an engineer appointed by the State Engineer. Regional Attorney Taylor was able to have me appointed to make that inspection in connection with the Wind Cave and Jewel Cave systems so that it seems quite probable that we can now arrange to have a report by Mr. Robertson, or some other engineer of your region who is familiar with the system, accepted in that capacity. Before suggesting this to the State Engineer, however, we should like to check on certain essential facts.

On the enclosed map we should like to have you indicate wherein the pipe sizes and other structures may differ from the design previously filed. We should also like a plan of the distribution system which is now complete and showing the 500 ft. of laterals which Mr. Liek says are still needed. Perhaps the master plan sheet of the developed area will answer this need. We need the map of developed area as well as water system to figure irrigation needs.

Further, we note that in 1940, the last year we have, there were about 182,000 visitors at the monument. This suggests that there may have been between 55,000 and 64,000 in August or more than 1800 per day as an average. We should like to have the annual attendance at the headquarters area for the year 1940 or 1941 broken down by months, and we should also like the peak day's attendance if possible. We should also like the room or cabin capacity provided by the operator, and the number of the NPS personnel and families provided for if war had not intervened.

FILE

The following statement is prepared from the standard form used in making the engineer's report. Please correct and complete it approximately as the NPS engineer from your region would care to sign it:

The diversion works consist of 80' of ____ inch perforated iron pipe buried in the bed of White River and draining into a 10,000 gallon collecting tank where the water is chlorinated.

Diversion is by _____ turbine pump of 50 gpm capacity driven by a _____ motor. The intake pipe is 6" in diameter. The pump delivers through 14,000 feet of 4" and 3000 ft. of 6" _____ pipe to a 100,000 gallon distribution reservoir at the monument headquarters area.

The area of proposed use is NE¼ Sect. 34 and SE¼ Sect. 27, T. 3 S., R. 18 E., B.H.M., all in Badlands National Monument.

Water demand of 1941 (?) (type of statement proposed, but not actual figures)

Lodge of 50 guest capacity at 225 gpd	11,250 gpd
500 campers at 25 gpc	12,500 gpd
NPS personnel 25 at 110 gpc	2,750 gpd
4.2 acres of irrigation at 1 sec. ft. to 70 acres	38,132 gpd
Total claim 0.10 sec. ft. or	64,632 gpd

The system was (or was not) completed in time to provide above demand and war conditions will prevent equal demands for several years to come.

Construction was started May 17, 1940, and temporarily terminated July 1, 1942, because of termination of the CCC and federal economy in non-war activities. The present status and proposed extensions are shown on the accompanying map, NM-BL-6976 (we will prepare). The system is now capable of diverting and delivering 0.1 sec. ft. in accordance with claim.

Our plan is to be frank about not being able to make full use during the war, but show capability in normal times, which is all required for federal claims in that State. We may, however, put attendance curves of Rocky Mountain, Wind Cave, and Yellowstone or Glacier on the map, along with the two recorded years for Badlands, in order to show the trend.

This report does not have to be made until next April and we can ask for extension until after the war, but we feel that with such near completion now it will be fine to complete the right rather than ask for extension of time. Due to the uncertainty as to our own futures in the war effort it would also be desirable to complete it at once while this Section has personnel to prepare the report and you have an engineer who could sign it. Hence we should appreciate such data as you can provide at once.

Hydraulic Engineer.

Enclosure 2l22028.

AvVD:SH

cc: Director.
Supt. Liek.
Acting Custodian, Badlands N.M.
(through Supt. Liek).

09-18-1942: memorandum to regional director from nps regarding water withdrawal no. 512 for the cedar pass water system

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WIND CAVE NATIONAL PARK
HOT SPRINGS, S. DAK.

SEP 21 1942
FILE

September 18, 1942.

MEMORANDUM for the Regional Director, Region Four.

Attention: A. Van V. Dunn,
Hydraulic Engineer.

Reference is made to Mr.Dunn's memorandum of September 10 to the Regional Director, Region Two, a copy of which was forwarded to this office, in which he requested information regarding Water Withdrawal No. 512 for the Cedar Pass Water System at Badlands National Monument.

This system was practically completed by CCC before the abandonment of camps on July 1 and has been in beneficial use since that date in supplying the operator of the Cedar Pass Lodge with water service. The job was started May 17, 1940 and was 98 per cent complete when construction activities necessarilly ceased. There is still 500 feet of pipe to be laid in the loop area but this uncompleted work does not interfere with the beneficial use.

Harry J. Lick
Coordinating Superintendent.

cc - Region Two.

601 Sheldon Building

September 10, 1942.

MEMORANDUM for the Regional Director, Region Two.

Reference is made to our Water Withdrawal No. 512 for the Cedar Pass Water System at Badlands National Monument.

Our records show that we should report completion of construction and application of the water to beneficial use by April 23, 1943, or request an extension of time. We assume that due to the war there will be no further construction or increase in water use between now and that date. We should like to know the present status of the project including as far as possible the dates construction was started and finished and whether, if constructed, we are in a position to prove full use of 0.1 sec. ft. of water.

AvVD:SH

Hydraulic Engineer.

cc: Director.
Supt., Wind Cave National Park.

FILE COPY

08-27-1940: memorandum to regional attorney from nps regarding number assignment for water withdrawal to the cedar pass wat

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WIND CAVE NATIONAL PARK
HOT SPRINGS, S. DAK.

REC'D AUG 30 1940

August 27, 1940.

Memorandum for Regional Attorney, Region IV:

In accordance with your memorandum of August 22, please be advised that the number assigned to the State Engineer's notice of federal water withdrawal relating to the Cedar Pass Water System, Badlands National Monument, is U. S. 512 dated April 23, 1940.

Harry J. Tick
Superintendent.

cc - Director
Regional Director, Reg. II.

08-08-1940: memorandum to regional attorney from nps regarding notice of intention and one print of drawing no. nm-bl-6975

REC'D AUG 12 1940

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WIND CAVE NATIONAL PARK
HOT SPRINGS, S. DAK.

August 8, 1940.

Memorandum for Regional Attorney Joseph E. Taylor:

Reference is made to your memorandum of August 2, in regard to Notice of Intention and one print of drawing No. NM-BL-6975, covering the Cedar Pass Water System, Badlands National Monument, which were forwarded to the State Engineer of South Dakota along with our letter of April 8, 1940.

Please be advised that the notice was received from the State Engineer on April 24, noting the completion of this water withdrawal.

Harry J. Lick
Superintendent.

cc - Region II
Badlands

601 Sheldon Building,
San Francisco, Calif.,
May 22, 1940.

Memorandum for Regional Attorney Taylor:

Re: Badlands Water System Right of Way.

Reference is made to Acting Regional Director Brewer's memorandum of May 16, 1940, to the Director, with enclosed letter from the Soil Conservation Service, regarding the pipe line right of way for the Cedar Pass Water System.

You have suggested the possibility that the patents to the land already reserve rights of way for federal water systems. The General Land Office has further advised Regional Engineer Robertson of their method of recording rights of way approved by the Secretary in order that they become reservations when the land is later conveyed to individuals. Several questions come to my mind.

1. Were the lands patented late enough to include the ditch reservation applicable west of the 100th meridian?

2. Does the General Land Office have the authority over federal lands which have been patented and regained by purchase, by government agencies?

3. Would the 100th meridian law still apply to the former patented land if it acquired the public land status suggested in question 2?

4. If the General Land Office can take jurisdiction suggested under question 2, what should be our procedure:

   A. For Park Service water systems across park land?

   B. For Park Service water systems with rights of way across private lands in parks and monuments where we have so far merely recorded these rights of way in the pertinent counties?

   C. For Park Service water systems crossing lands of other agencies in which cases permits have been granted but not yet recorded with the General Land Office?

The whole question of the status of agreements between various agencies of the Government has been uncertain to me for some time. In a way, after our previous procedure with permits, I feel that the Solicitor and Soil Conservation Service are leaning over backward. At the same time, because of the possibility of future land conveyance, by almost any federal agency, both the Solicitor and General Land Office have brought up an important group of questions.

You also asked me why the Soil Conservation Service required a metes and bounds description. Frankly, I consider a center line description adequate, but I do favor adequate definition by specific reference to width. I think the Soil Conservation Service specified metes and bounds on the assumption that the width would vary, or intended it to apply where needed and would have accepted center line for regular pipe line strips.

In this connection I think the act of March 3, 1891, with later revisions of 1917 and 1926 is rather interesting. That act applies to private use of the land rather than federal, but it defines a conduit right of way as 50 feet either side of the wetted surface, provided it does not interfere with further federal use of that area. This indicates federal acceptance of the less expensive center line descriptions, but also permits restrictive measures which cannot always be described without the use of metes and bounds.

A. van V. Dunn,
Hydraulic Engineer.

REC'D APR 5 1940

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION TWO
OMAHA, NEBRASKA

April 3, 1940.

Memorandum for the Superintendent, Wind Cave National Park:

In accordance with Regional Attorney Taylor's memorandum of March 27, we are enclosing original tracing and one print of Drawing No. NM-BL 6975, Cedar Pass Water System, Badlands National Monument.

We are also enclosing original and one copy of Notice of Intention. After you have signed the original of this notice it, together with the tracing, and blue print, should be forwarded to the State Engineer of South Dakota in order to start the proper filing on the water system for the Cedar Pass Area in Badlands National Monument.

We have made several corrections in the map that was submitted by the Regional Attorney's office, due to later information as to pipe sizes and pipe locations, and we are sending a Van Dyke negative to him for his files. He will secure the necessary prints for proper distribution to the Director, yourself, and our office.

(Sgd.) Paul M. Brown

Acting Regional Director.

Encl. 4

cc Reg. Atty Taylor with Van Dyke
Director with copy Notice

03-25-1940: memorandum to regional attorney from hydraulic engineer regarding land withdrawal described under executive order

601 Sheldon Bldg.,
San Francisco, Calif.,
March 25, 1940.

Memorandum for Regional Attorney Taylor:

Re: Cedar Pass Water System,
Badlands National Monument.

Reference is made to my memo of March 13, 1940, regarding the land withdrawal described under Executive Order #6909 on page 951 of Federal Register of March 6, 1940.

To answer your question more specifically than I could at that time, I have shown, by arrows in pencil on the attached print of NM-BL-6975, the portions of the proposed Cedar Pass Water System at Badlands which crosses land covered by the withdrawal. A little more than 1½ miles of the pipe line will be on the land withdrawn from entry. The Region is now arranging for permits from the Soil Conservation Service for such rights of way.

A. van V. Dunn,
Hydraulic Engineer.

Encl.

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON

March 18, 1940.

Memorandum for the Files:

Notes on the South Dakota Code of 1939, relating to grants by state or counties - to accompany Acting Regional Director's memorandum of March 9, 1940.

Sec. 55.0103. Consent given to the acquisition of lands for national forests, the production of timber, the preserving of the navigability of navigable streams, or to prevent soil erosion * * * ; Any land in county ownership desired by the United States for any of the purposes herein referred to may be purchased from the county at the value appraised by the county commissioners (paraphrased).

Sec. 61.0147. There is hereby granted over all school and public lands owned or hereafter belonging to the state the right-of-way for ditches or canals and for tunnels, tramways, and telephone and electrical transmission lines, constructed by authority of the United States. There is also hereby granted to any person holding a valid water right under statutes of this state a right-of-way for the construction of dams, canals, water ditches, and laterals over all school and public lands now or hereafter belonging to the state, when constructed by authority of the commissioner of school and public lands shall contain a reservation of such right-of-way. Purchasers of school and public lands shall have the right to obtain water from any irrigation system, parts of which may be located on such school and public lands, provided such lands are purchased within five years after the construction of any such irrigation system.

Sec. 55.0203. All sales, leases, and conveyances of lands belonging to the State of South Dakota or to which it may now or hereafter be entitled, including all common schools, public buildings, and endowment lands, shall be subject to and contain a reservation to the State of South Dakota, of all deposits of coal, ores, metals, and other minerals * * * *.

(Sgd) Merritt Barton

Merritt Barton.

No annotations on
these sections.
M.B.

02-26-1940: memorandum to regional attorney from nps regarding the establishing of monument headquarters at cedar pass

REC'D FEB 26 1940

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION TWO
OMAHA, NEBRASKA

Ans by radiogram 2/26/40 - J.E.T

February 23, 1940.

Memorandum for Regional Attorney Taylor:

For some time we have been making surveys and carrying on studies in connection with water supply for the Badlands National Monument in South Dakota.

Up until a short time ago we had been working with the idea of establishing the monument headquarters at the Pinnacles but it has recently been decided to establish headquarters at Cedar Pass in the eastern part of the monument.

In order to obtain a satisfactory water supply for this area it will be necessary to go to White River for water, about 3⅜ miles from Cedar Pass. During some of the summer months this stream does not flow above ground but does have a dependable sub-surface flow in its sandy bed.

We propose to collect water in perforated pipes laid on hard clay and shale about 8 feet below the bed of the river. This pipe will be led to a sump on the bank of the river from where it will be pumped to a 100,000 gallon storage tank above the headquarters area. As the pump line will pass through the headquarters area this storage reservoir will "float" on the pump line.

As the source of supply and the greater part of the pipe line will be outside the monument boundaries it will be necessary that we secure easements in order to permit construction of the system.

The various owners of the lands over which we will have to pass are as follows:

United States - Soil Conservation Service
Jackson County, South Dakota
Chicago, Milwaukee, St. Paul & Pacific R. R.
Clara Jennings (Millard).

We have contacted all of these owners and all have signified their willingness to grant us the necessary easements. While the Regional Engineer was in the Washington office a few days ago he discussed the matter of securing these easements with Messrs. Knox, Mulady and Barton,

of Mr. Moskey's office. They stated that such easements, except in the case of Clara Jennings, could not be accepted by the monument as the Service had no authority to accept lands lying outside park or monument boundaries, nor could such lands be acquired by CCC authority. They agreed, however, that your appropriation did allow the securing of such rights of way or easements in connection with water supply and that you would have the necessary funds to secure such easements, which in this case we feel sure will be a small item. We are therefore asking that your office undertake this work.

We are particularly anxious to expedite this work as much as possible as we have just received an allotment of $22,000 of CCC funds to be used in connection with the purchase of materials for this system. This must be expended before July 1, 1940, but we are very anxious to get the work under way at as early a date as possible.

We are enclosing a print of Drawing No. NM-BL-5323, layout of the proposed system, and have indicated thereon the owners of the various lands over which the pipe line will pass.

The Soil Conservation Service has asked that we furnish them with five copies of the map of our proposed pipe line and also five copies of a metes and bounds description of our proposed easement over their lands. As this is Government owned land we see no reason to question acceptance authority and we will proceed directly, through our attorney, in securing the necessary easements with this service, sending you copies of all correspondence, land descriptions, etc. The Soil Conservation Service has stipulated that we do not fence our pipe line easement but they have no objection to our fencing the pump site.

We have already forwarded an easement to Jackson County, South Dakota, a copy of which we are enclosing. No action has as yet been on this matter by the county and their regular meetings are infrequent. You will note that there is no consideration involved in this easement and the county officials have indicated that they are willing to grant these easements without consideration. Mr. Heaton, our attorney, feels that there should be some consideration in connection with these easements. He also points out that we do not know whether the county has the right to give such an easement. The lands that they own have been acquired by tax title. For the most part the easements we are asking for from the county lie within the roadway strip that the county has along all section lines. We do deviate somewhat in Sec. 11, T. 4 S., R. 18 E., to avoid some very rought land, but if necessary could stay within the 33 foot strip by doing some rather heavy grading and excavating.

In our planning for this water line we knew of no funds that were available for the acquisition of easements. We questioned the right of the county to grant easements without consideration of lands acquired by tax title. However, as the statutes of South Dakota are not available at this office no research was made. An abstract was not available and therefore no check of the title was made.

We realize, of course, the doubtfulness of the consideration as stated; that is, "the benefits derived therefrom." However, we proceeded in this manner owing to the urgency of immediate action.

The Commissioners of the County of Jackson are very cooperative and are willing to grant any right of way that we might need.

The land owned by Clara Jennings, within the monument boundary, is really under the control of Mr. Millard, her brother, who is the existing operator of the public conveniences at Cedar Pass. He has told us that we may have any necessary easements for sewer and water without cost. However, he will wish to use such facilities in connection with his own buildings and we feel that any operator in this area should have this privilege. The matter of rates for such services has not as yet been discussed but will undoubtedly have to be taken up at an early date.

It would seem that the only cash outlay involved would be for nominal sums in connection with these easements to care for a "valuable consideration" and to care for recording of such easements.

You will no doubt wish to make a filing in connection with this water supply system and if you will indicate just what information you want we believe we can furnish it from our present field data. If additional data is needed we have a field party in the area that can secure such information in a short time. We are planning on a pump of 50 gallons per minute capacity and a reservoir of 100,000 gallons capacity. We estimate future water consumption in the area at 30,000 gallons per day.

This memorandum has been somewhat lengthy but we have attempted to cover all points as well as possible. As we would like to push construction on this job we will appreciate anything that you can do to speed up this work.

We have a copy of a memorandum from the Chief Counsel, G. A. Moskey, addressed to the Superintendent of Rocky Mountain National Park with reference to rights of way for trail construction over privately owned lands within the park in which he states:

"It will be agreeable to obtain an easement or easements over the lands proposed for trail construction. Instead of requiring the owners to furnish an abstract of title, you are requested to search the county records and submit a separate report covering the property showing the names of the record owners and whether any liens, taxes, mortgages, encumbrances, etc., affect the land in question. In addition, a plat or sketch showing the location of the proposed easement must be submitted. You should also make a personal inspection of the property and report as follows:

"1. The name of anyone now occupying the premises and whether such occupancy is with the consent of or adverse to the record owners.

"2. If the occupancy is adverse to the record owners, the nature of the occupancy should be explained.

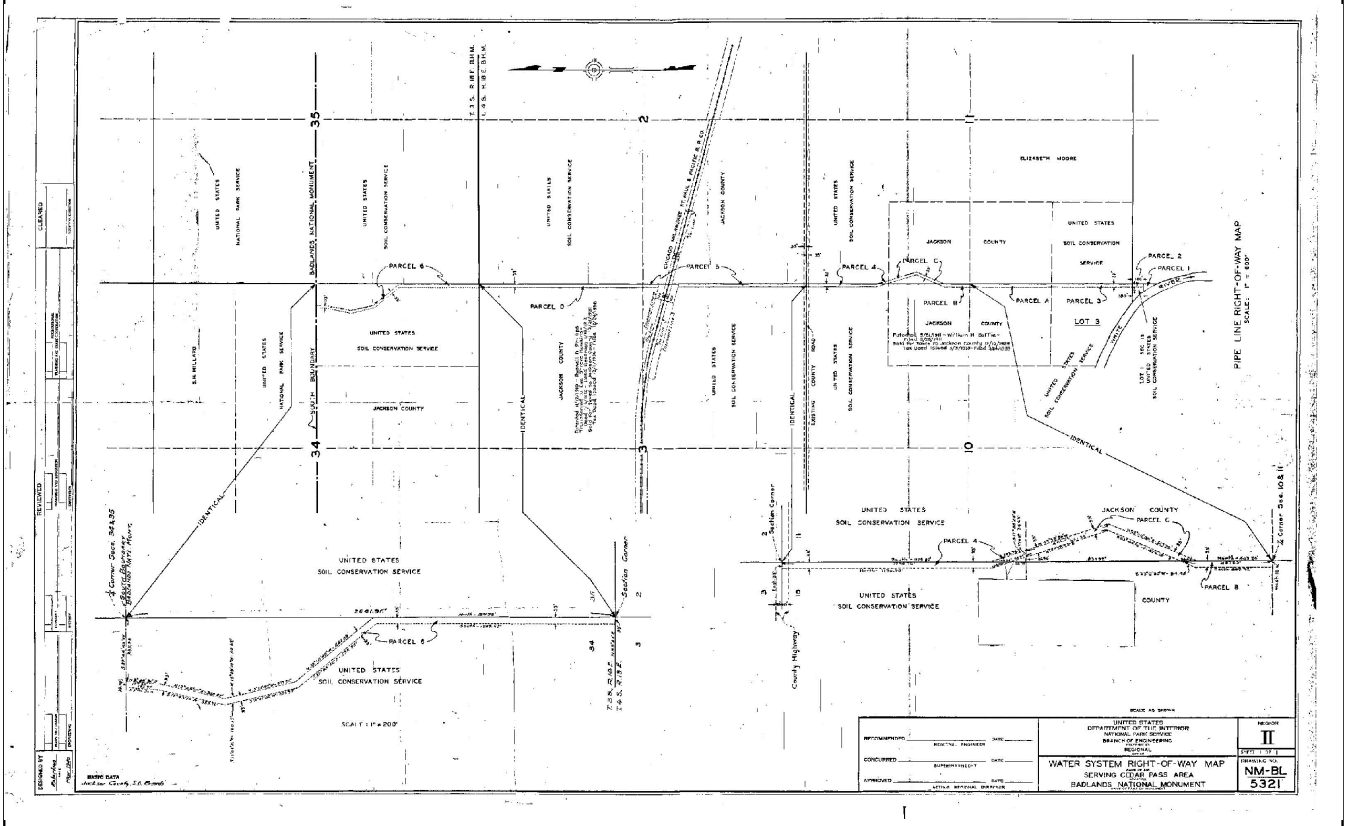
"3. Any reason why the United States should not accept the deed for the purpose proposed."

It would therefore seem that we might follow the same procedure in connection with our easements in the Badlands area.

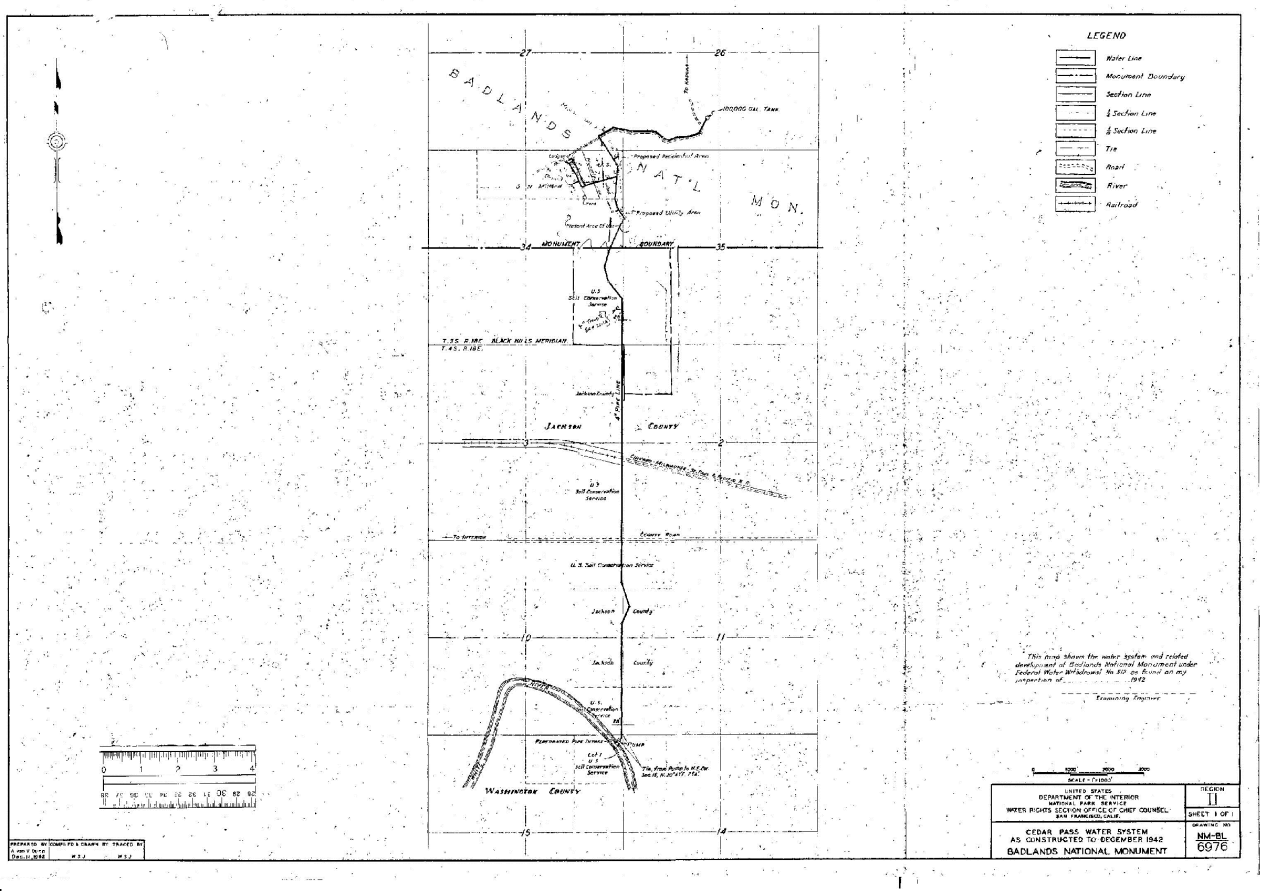
Acting Regional Director.

Encl. 2
cc Director with map
Supt. Wind Cave with map
Heaton

00-00-0000: map of water system right-of-way map



00-00-0000: map of cedar pass water system



00-00-0000: map of badlands national monument

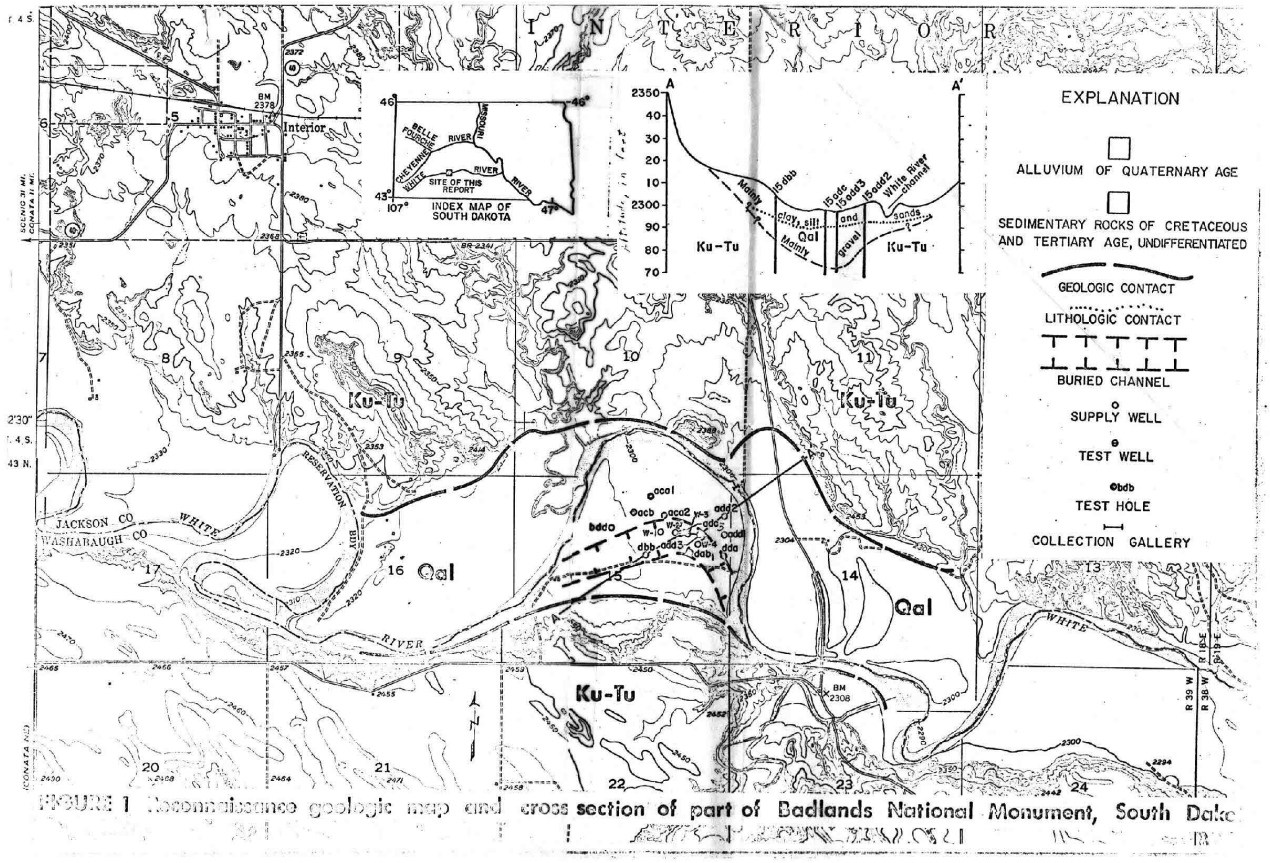
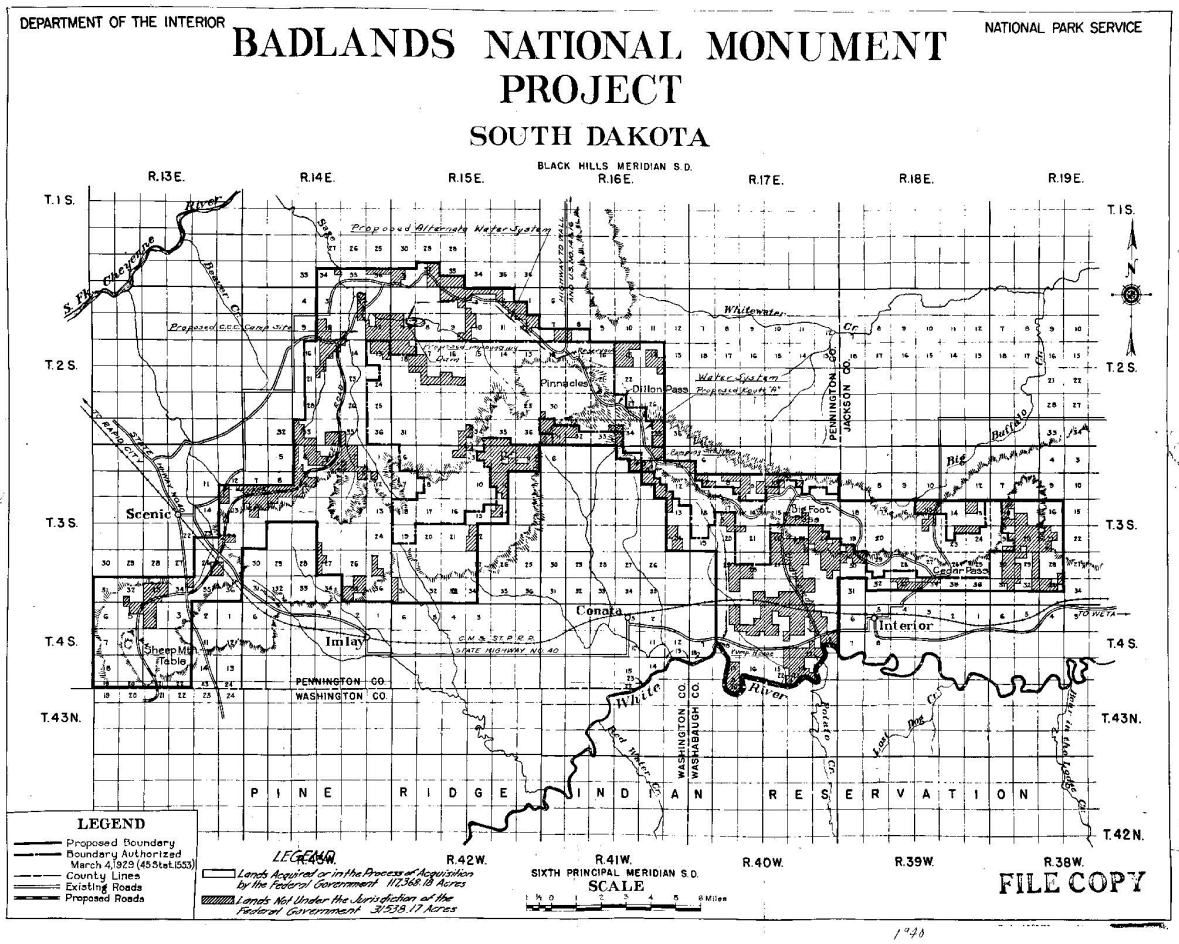
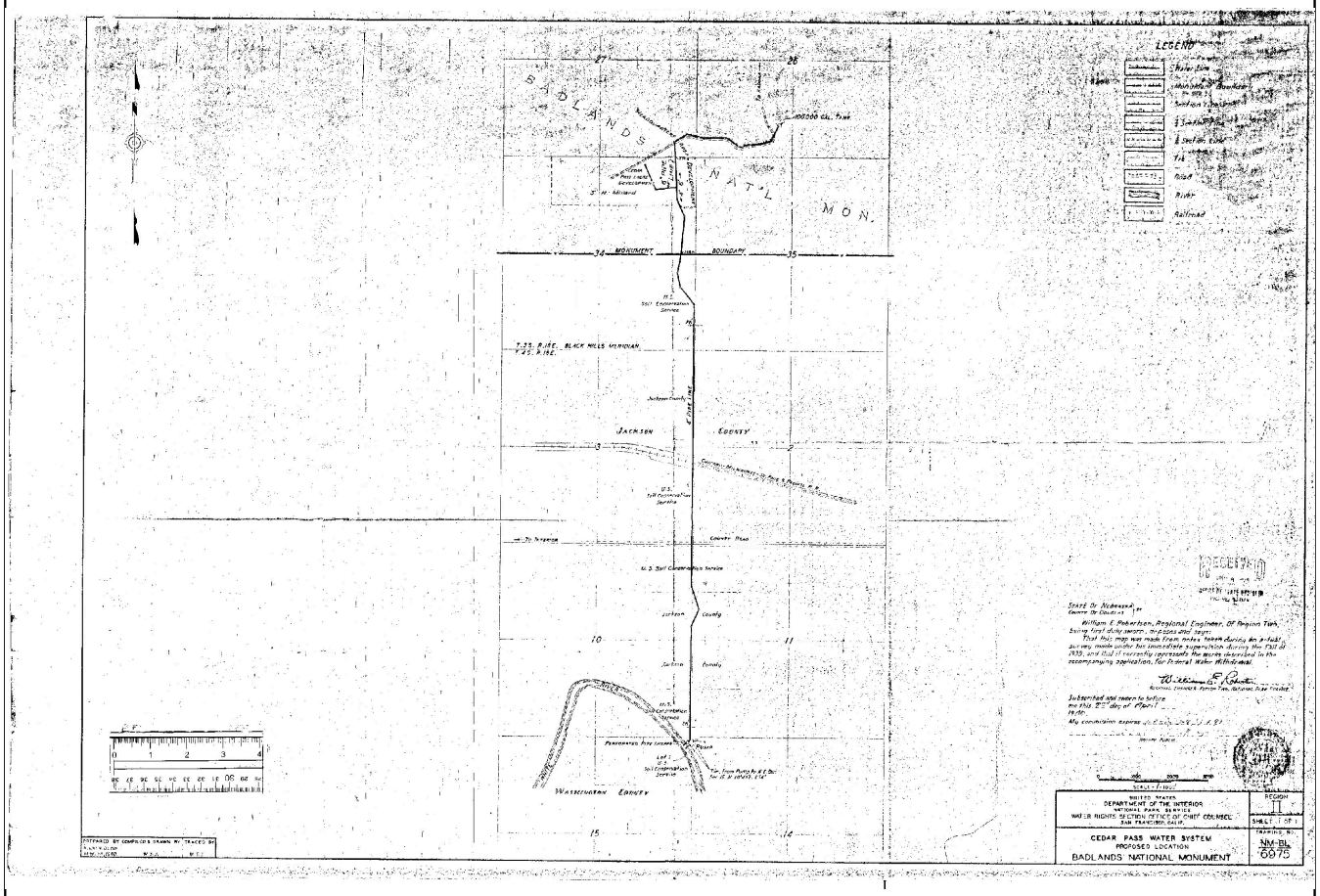


FIGURE 1 Reconnaissance geologic map and cross section of part of Badlands National Monument, South Dako

00-00-0000: map of badlands national monument project



00-00-0000: map of proposed cedar pass water system



Docket Information

Number of Documents in Docket 185

Documents Dated from 2/26/1940 to 6/10/1971

Docket Compiled: 6/13/2016