

1. Considered 4-6, 1960 574-2
2. Name of Applicant City of Philip
3. Post Office Address _____
4. Amount of water claimed 0.8
5. Source of water supply Ground water (Madison)
6. Water to be used for Municipal
Acres to be irrigated _____
7. Water to be diverted and used in Madison County about
0.8 miles _____ of _____
8. Proof of Publication Received ☒
Not Received _____
9. Application Approved ☒
Subject to _____
Not approved _____
Action deferred _____

10. Remarks:

No. 974-2Water Division No. 2

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

Bad River

District

FEB 15 1960

Rec'd

STATE WATER RESOURCES

PIERRE, SOUTH DAKOTA

APPLICATION FOR PERMIT

To Appropriate Water within the State of South Dakota

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

1. Name of applicant CITY OF PHILIP water dept
ph 859-2572
Postoffice address PHILIP, County HAAKON, State SOUTH DAKOTA

I. If a corporation

- (a) Name of same _____
(b) Date and place of incorporation _____
(c) Amount of capital stock _____
(d) Amount paid in _____
(e) Names and addresses of directors _____

(NOTE-A certified copy of articles of incorporation must accompany the application.)

II. Method of accomplishing the work and financial resources of the applicant:

- (a) Method of accomplishing work (Whether by contract, employment of others, or by direct labor)

TRACT

- (b) Cash on hand, \$ 30,357.31
(d) Bonds to be issued, \$ 45,000

- (c) Treasury stock, \$ _____
(e) Other resources, \$ _____

2. Name of diversion work PHILIP WELL No. 1
3. Amount of water claimed .3 cubic feet per second 360 GPM
4. Source of water supply NARISON FORMATION
5. Location of point of diversion IN TRACT "A" OF SW 1/4 SEC. 11, T1N, R20E, E.H.M., AND N86°32'W
1654 FT. FROM THE E.N. COR. OF SAID SEC. 11 bank _____ County.
6. Annual period or periods during which water is to be used ALL YEAR
7. To be used for: MUNICIPAL WATER SUPPLY FOR CITY OF PHILIP, SOUTH DAKOTA

I. Irrigation or domestic use: Gravity, overhead sprinkling or combination system?

- (a) Number of acres to be irrigated _____ acres.
(b) Legal subdivisions to be irrigated _____

(NOTE-7. List of lands to be irrigated, giving each subdivision and fraction with acreage thereof, should be written here, or may be appended as a part of this application. Same must also be shown on accompanying map.)

- (c) Statement as to domestic use (giving location, etc.) _____

II. Stockwatering, mining, milling, power, fish culture, fire protection and public recreation:

- (a) Nature of use _____
Name any of the above uses claimed
(b) Amount of power to be generated _____ horse power.
Amount claimed for engine cooling _____
(c) Location of plant _____
(d) Method of developing power _____
(e) Point where water will be returned to stream _____

Map No 542-2

8. Estimated cost of work: SEE ATTACHED ESTIMATE

(h) Head Gates, \$-----

(b) Pumping plant, \$-----

(c) Fluming, \$----- (d) Canal-earth, \$-----

Rock, \$-----

(e) Other structures ----- \$-----

Total, \$25,000/

9. Description of diversion works:

I. Nature of works: (Reservoir, dam, ditch, flume, pumping plant, etc.)

ARTESIAN WELL INTO MARLBOROUGH FORMATION

II. Dimensions of works:

(a) Dam: Height ----- feet; length at bottom ----- feet; length at top ----- feet; thickness at bottom ----- feet; thickness at top ----- feet; slope at front water face -----; slope at back face ----- material used in construction -----

(b) Reservoir: Capacity when filled ----- acre feet. Surface area at highwater mark ----- acres.

DEPTH AT OUTLET-Feet	SURFACE AREA AT EACH DEPTH AT OUTLET--ACRES	FEET	ACRE-Feet CAPACITY

(c)* Head gate: Width ----- feet; height ----- feet; Material -----

(d) Canal: Total length ----- miles.

LOCATION BELOW HEADGATE	DEPTH	BOTTOM WIDTH	WIDTH AT WATER-LINE	GRADE PER MILE
At ----- Mile	----- feet	----- feet	----- feet	----- feet
At ----- Mile	----- feet	----- feet	----- feet	----- feet
At ----- Mile	----- feet	----- feet	----- feet	----- feet
At ----- Mile	----- feet	----- feet	----- feet	----- feet
At ----- Mile	----- feet	----- feet	----- feet	----- feet
At ----- Mile	----- feet	----- feet	----- feet	----- feet

(Give dimensions where reductions in size are made.)

10. Time required for completion of work ----- 2 ----- years.

11. Time required for complete application of water to the proposed beneficial use ----- 2 ----- years.

12. Choice of newspaper for publication of notice of intention to appropriate -----
PIONEER REVIEW, PHILIP, SOUTH DAKOTA

STATE OF SOUTH DAKOTA

County of ----- HARRISON ----- } ss.

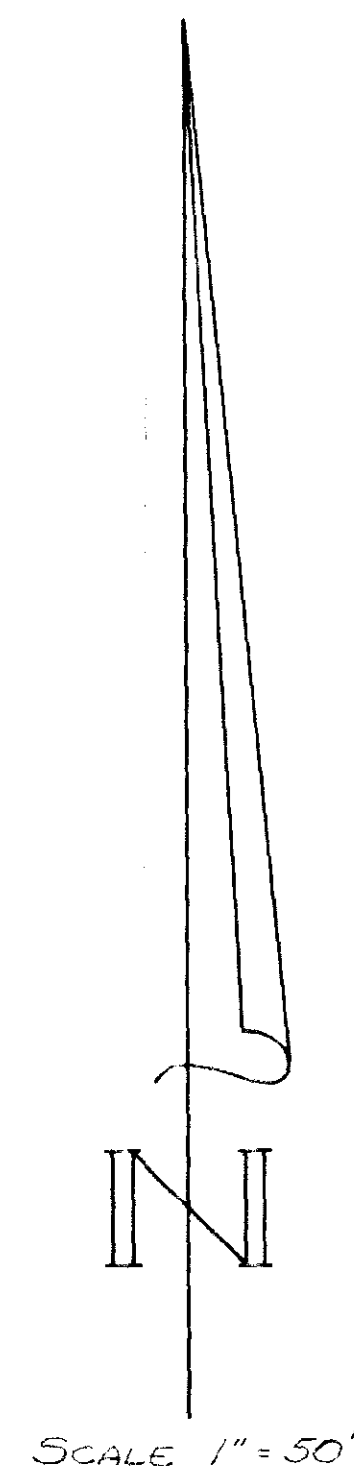
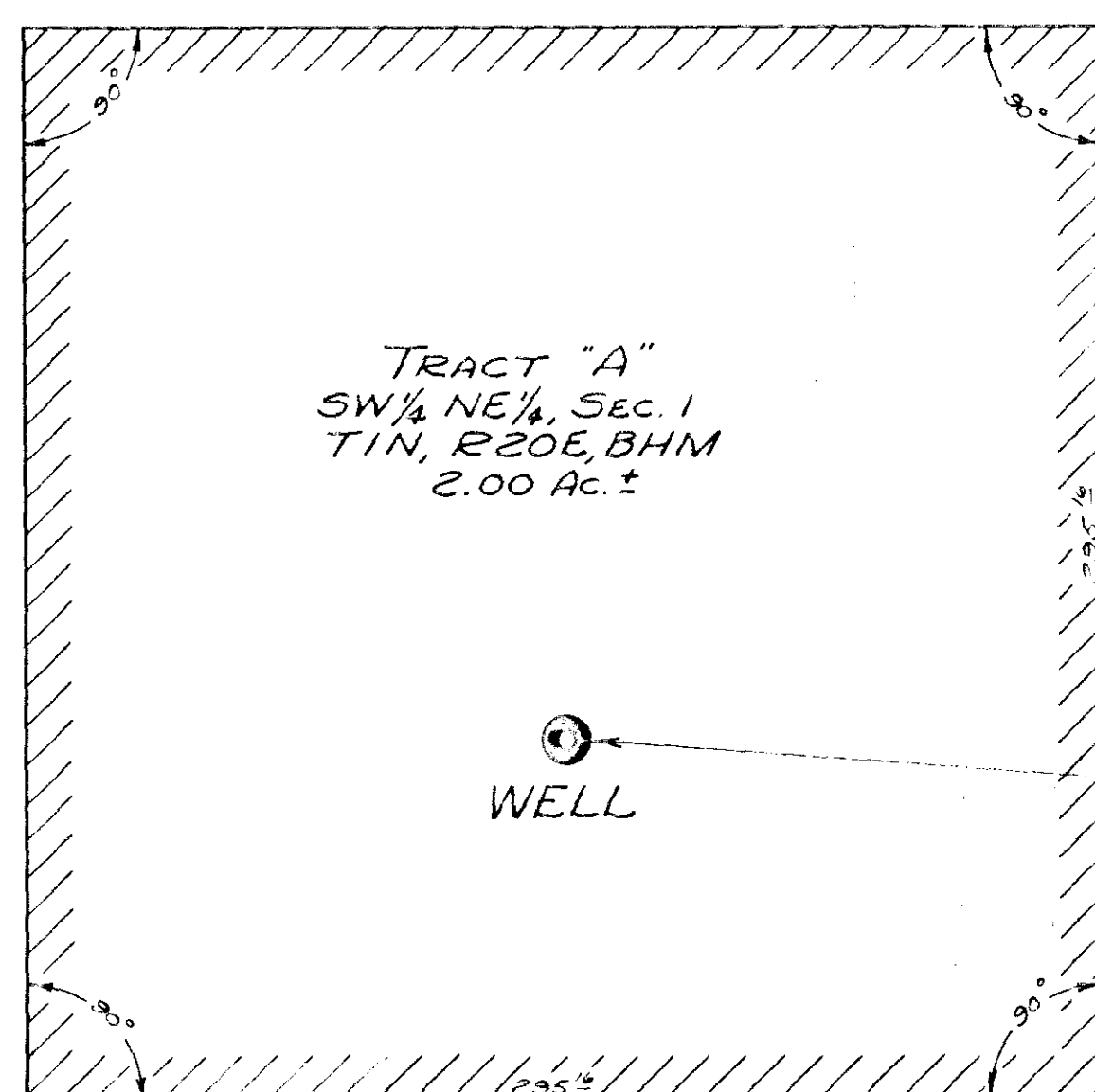
I, H. RUBEN THORNTON, FOR THE CITY OF PHILIP, being first duly sworn on my oath depose and say: That my relation to the above described undertaking is that of owner, that I have read the above foregoing statement, examined the map accompanying the same, and that I know of my own personal knowledge that the matters therein stated and shown are true.

Signed H. Ruben Thornton Mayor
FOR THE CITY OF PHILIP

Subscribed and sworn to before me this 1st day of February 1960

Leonard Ellis
Notary Public (or other qualified officer.)

*Each diversion must have a headgate or measuring device.



MAP SHOWING LOCATION OF WELL
FOR THE CITY OF PHILIP, S. DAK.,
LOCATED IN THE SW $\frac{1}{4}$ NE $\frac{1}{4}$, SEC. 1,
T1N, R20E, B1M

SURVEYORS CERTIFICATE:

I, Frank R. Brady, Registered Land Surveyor, do hereby certify that at the direction of the Mayor and City Council of the City of Philip, South Dakota, I have platted the Well location. All dimensions shown are true and correct.

Date: 12 FEB. 1960

Frank R. Brady
Registered Land Surveyor

ACKNOWLEDGEMENT OF SURVEYOR:

On this 12 day of February, 1960, before me the undersigned appeared Frank R. Brady, known to me to be the person who is described in and who executed the foregoing certificate.

My Commission Expires: 8-19-66

H. J. Sullivan
Notary Public

MAP & APP 1858-2

Map # 542-2

App. # 1858-2

Remarks by State Water Resources Commission:

STATE OF SOUTH DAKOTA
County of Hughes

Pierre, South Dakota,

April 9, 1960

This is to certify that the foregoing application was received by the Commission at 9:00 o'clock

A m. upon the 15th day of February, 1960

State Water Resources Commission

By: [Signature]

Chief Engineer, Executive Officer

Number of permit 574-2

Date of first receipt of application February 15, 1960

Date of return to applicant for correction, amendments or changes required as follows: _____, 19____

Date of receipt of corrected application _____, 19____

Date from which applicant may claim right February 15, 1960

Approved April 6, 1960, Recorded in Book 6 Page 5

This is to certify that we have examined the foregoing application for a permit to appropriate water of the State of South Dakota, and we hereby grant the same as stated herein, subject, however, to the following limitations and conditions:

1st. The equivalent of at least one-fifth of the work above specified is to be completed on or before _____

October 6, 1962
April 6, 1961

2nd. The whole of said work is to be completed on or before April 6, 1965

3rd. The limit of time for proof of beneficial use of water appropriated in accordance herewith is _____

April 6, 1965 EXTENSION GRANTED 9-13-61

4th. The water appropriated shall be used for the purpose of municipal water

supply for city of Philip

5th. 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.

6th. The amount of the appropriation herein granted shall not exceed 0.8 cubic feet per second; neither shall it exceed the capacity of the above described system of diversion works, nor the least amount of water that experience may hereafter indicate as necessary for the production of crops in the exercise of the best husbandry; and further, said appropriation must be limited to not more than one-seventieth (1/70) of one cubic foot of water per second of time for each acre of land to which water is actually and beneficially applied for irrigation on or before April 6, 1964; said water to be used during the following described annual period:

Continuously

Witness my hand this 9th day of April, 1960

State Water Resources Commission

By: [Signature]

Chief Engineer, Executive Officer

Certificate of Construction Issued NOVEMBER 22, 1971

Water License Issued NOVEMBER 22, 1971

Form 2A — Wells (Supplement to Form 2)

9. (Continued)

III. Well Specifications SEE ATTACHED SKETCH.

(a) Hole and casing

Size of drill hole or excavation 12" AND 8" Depth 4050'

Type of casing // STEEL (wood, concrete, steel, etc.)

Size of casing 8" AND 6" Thickness of casing 0.322" AND 0.230"

Length of casing 4050' If collection gallery, length, size and depth of gallery

(b) Screens

Type of perforated screen 1/2" PERFORATIONS IN BOTTOM 100' ± OF CASING

Size of perforated screen (diameter) (length)

Thickness of gravel pack: NONE length of gravel pack NONE

(c) Water Bearing Materials

Distance to water 3950' ± Character of water bearing materials LIMESTONE

Thickness of water bearing material 500' ±

(d) Pump and Motor

Type of pump EXPECT ARTESIAN FLOW - NO PUMP PLANNED FOR PRESENT (centrifugal, propeller, mixed flow, etc.)

Name of pump size

Kind of motor (gasoline, electric, diesel, etc.)

Horsepower Name of Motor

(e) Complete well

Capacity 250 GPM at drawdown of 200' ± Estimated cost \$75,000

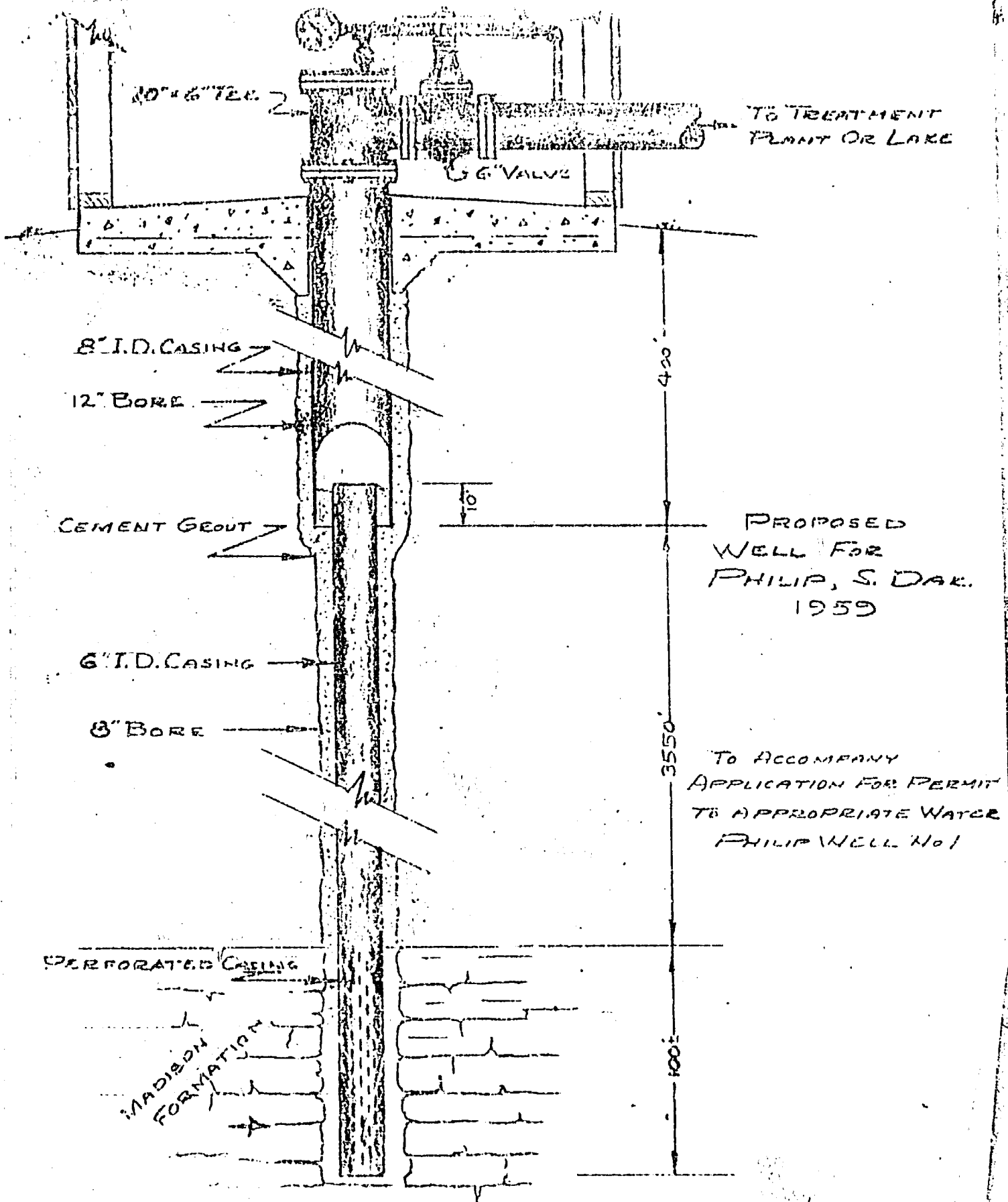
(f) Owner of land upon which well is located HAAKON COUNTY HAS GRANTED A Name

PERPETUAL EASEMENT TO CITY OF PHILIP. Address

(g) Distance to nearest existing wells

On same owner's property NONE rods. On property owned by others 180 rods TO

DE. FOR



WATER LICENSE NO. 574-3

(1) WHEREAS, On the 15th day of February A. D. 19 60
the City of Philip

made Water Right application No. 574-2 for a permit to use .8 cubic feet per second of the waters
 of ground water

County of Haakon, State of South Dakota, for Municipal

purpose; and
 (2) WHEREAS, On the 9th day of April A. D. 19 60

Permit No. 574-2 with a date of priority of February 15, 1960

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 6th day of April A. D. 19 65 and for the
 application to beneficial use of said water on or before the 6th day of April A. D. 19 65

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 .8 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 for municipal purposes by the City of Philip

(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 the City of Philip

~~xx~~
the holder _____ and owner _____ of said permit No. 574-2 a water right, dating from February 15, 1960
to use of .8 cubic feet per second of the waters
of ground water

in the County of Haskell and State of South Dakota, or so much thereof as may be necessary for the
purposes hereinbelow mentioned, to be diverted at a point North 86° 32' West, 165 1/4 feet from the E 1/4
corner, Section 1, T11N, R20E

and ~~xxxxxxxxxxxx~~ conducted through the City water distribution system

for the purpose of Municipal use

Subject to any limitations listed in Water Right Permit No. 574-2 and subject to the laws of the State of South Dakota.

WITNESS, My hand and seal of our office at Pierre, South Dakota
this 22nd day of November A. D.
Nineteen Hundred and Seventy-one

WATER RESOURCES COMMISSION

By:

Chief Engineer, Executive Officer, J.W. GRIBBS

Form 15.

Permit No. 574-2

Water Diversion No. 2 BAD RIVER Water District

CERTIFICATE OF CONSTRUCTION

This is to Certify, That the City of Philip

_____ the holder _____ of
Permit No. 574-2, issued upon Application No. 574-2, bearing date of priority of February 15,
1960 authorizing the diversion of 0.8 cu. ft. per second of the waters of _____
ground water County of Haukon, State of South Dakota at _____
a point North 86° 32' West, 1694 feet from the E.L. Corner, Section 1, T1N, R20E
_____, for municipal

purposes, he 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 2.0 cu. ft. per second of water.

Date November 22, 1971

WATER RESOURCES COMMISSION

By:

J.W. GRIMES, Executive Officer

(First Publication on or before March 13 19 60)**APPROPRIATION OF WATER**

Office of State Water Resources Commission,

Pierre, S. Dak., February 17 19 60

Notice is hereby given that the City of Philip whose postoffice address is Philip, S. Dak., has made an application in accordance with the provisions of the water laws of South Dakota for a permit to appropriate for beneficial use .8 cubic feet of water per second of time from the ground water through the Philip Well #1, the point of diversion of which is to be located on the NE 1/4 of the SW 1/4 of Section 1 tract A. SW 1/4 of the NE 1/4 of Section 1 in Range 20E. Said water to be used for the purpose of providing municipal supplies for the city of Philip

and for PHASE

This application will be taken up by the State Water Resources Commission at their office at Pierre for consideration upon the 6th day of April, 19 60, at 2 P. M. All interested persons may appear and be heard.

Appropriate action will be taken by the Water Resources Commission after suitable time has elapsed for the consideration of any or all information presented.

cc: **O.H. Satsinger-Manager**
Pioneer Review
Philip, South Dakota

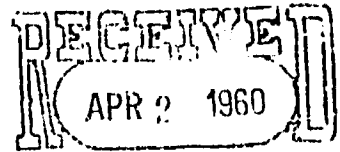
State Water Resources Commission

By:

~~State Water Resources Commission~~
Burton F. Jones
Water Right Specialist

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA }
 County Haakon } ss.



STATE WATER RESOURCES COMM
 PIERRE SOUTH DAKOTA

Lu Euler being duly sworn, deposes and says the annexed printed copy of Notice of Intention to Appropriate Water was taken from the -----

Pioneer-Review a newspaper which during the whole itme of publication of said notice herein after stated, has been and is printed and published in the

City of Philip County of

Haakon and State of South Dakota; that the said notice was published in said newspaper on the following dates:

March 3, 1960

March 10, 1960

March 17, 1960

March 24, 1960

in each and every issue of the full number thereof, the first publication being made on the 3rd day of March

1960 and the last publication on the 24th day of

March 1960, upon which days or times of publication aforesaid the newspaper was regularly published, and that during the whole time of said publication he was assistant editor the printer and publisher of the said newspaper.

Lu Euler

Subscribed and sworn to before me this 25th day of March A. D. 1960

Notary Public Haakon County, S. D.

APPROPRIATION OF WATER

No. 5742

Office of State Water Resources
 Commission,
 Pierre, S. Dak., February 7,
 1960.

Notice is hereby given that the City of Philip, whose postoffice is Philip, S. Dak., has made an application in accordance with the provisions of the water laws of South Dakota for a permit to appropriate for beneficial use 8 cubic feet of water per second of time from ground water through the Philip Well No. 1, the point of diversion of which is to be located in tract A, the SW 1/4 of the NE 1/4 of Section 1 Twp. 1N Range

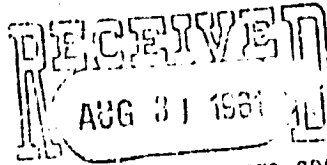
20E. Said water to be used for the purpose of providing municipal supplies for the city of Philip.

This application will be taken up by the State Water Resources Commission at their office at Pierre for consideration upon the 8th day of April 1960, at 2 P.M. All interested persons may appear and be heard.

Appropriate action will be taken by the Water Resources Commission after suitable time has elapsed for the consideration of any or all information presented.

State Water Resources Commission.

By: Burton F. Jones,
 Water Right Specialist.
 (Publish: March 3, 10, 17 & 24)



STATE WATER RESOURCES COMM.

APPLICATION FOR EXTENSION OF TIME FOR COMPLETING WORKS

To the State Water Resources Commission
Pierre, South Dakota

August 30, 1961

(date)

Dear Sirs:

I hereby request that an extension of time from April 6, 1962
to April 6, 1965 be granted me for the completion of works to be done under Permit No.
574-2 and that the time for proof of beneficial use of water be extended to April 5, 1965

Said works are located in Haakon County and are described
as follows:

Location of headworks: In the Treat A SW 1/4 ND 1 1/4 of the _____
of Section 1 Township 1 Range 20E B. H. M.
E., B.H.M.

The water is to be used for the purpose of City of Philip municipal use

The extension of time for the completion of these works is requested for the following reasons:

Well was not necessary after permit was issued but now appears that it
will be necessary to put down a well within the very near future to supply
water for the City of Philip.

APPROVED:

State Water Resources Commission

By:

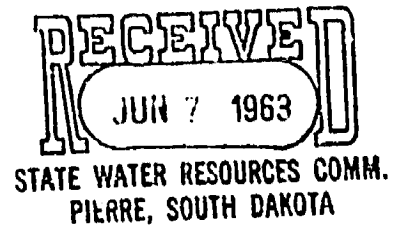
for Chief Engineer, Executive Officer

Holder of Permit No. 574-2

574-2

SOUTH DAKOTA
STATE DEPARTMENT OF HEALTH
PIERRE

June 5, 1963



C Ray Baker, Mayor
and Members of the City Council
City of Philip
Philip, South Dakota

In reply refer
to: Philip 5.2

Honorable Gentlemen:

O Please refer to March 11 and May 27, 1963 letters from Chief Engineer J. W. Grimes of the State Water Resources Commission in regard to recommended partial closure of the municipal flowing well.

P We are writing to advise you of water quality and water treatment plant problems now occurring, or to be expected, because of continuous well artesian flow in excess of 1000 gallons per minute to Lake Waggner - your raw water source for the purification and softening plant.

Y The well water has a total chemical content at least 50% higher than lake water when the level has been low, a hardness more than twice that of previous maximum lake water hardness, a high content of objectionable sulfates and an extremely high temperature of 158°F. Our chemical analysis report on a sample collected in July, 1962 is enclosed.

The high raw water hardness, mostly sulfate or permanent hardness, requires you to spend almost 9 cents per thousand gallons for soda ash alone (at your recent low price) and still your treated water hardness is three times higher than treated water hardness for over 10 years in the past.

The high well water temperature has increased lake water temperature to the point where serious taste and odor problems can be expected for many months of the year. Algae blooms in Lake Waggner were only a problem in the past when lake water temperatures rose above 60°F. At 100°F. or more under present conditions, increased algae blooms of more objectionable types can be expected. We were advised by Mr. Keller on May 29 that a recent application of copper sulfate for algae control equal in strength to dosages that were successful in the past had little effect on the new warm water algae blooms. You can therefore expect an increase in copper sulfate dosage or objectionable tastes and odors - or both - for several months.

Ray Baker, Mayor
and Members of the City Council

- 2 -

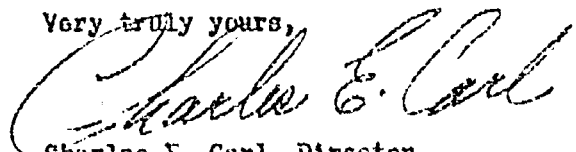
June 5, 1963

Considerable reduction of the well flow and bypassing of the remaining flow to the emergency spillway instead of to the lake will allow you to take full advantage of surface runoff into the lake. Had the well flow been removed from the lake in March, spring runoff water and the recent rains would have greatly reduced both chemical content and temperature - and minimized chemical costs as well as taste and odor potential.

It is therefore recommended that the artesian well only be directed to the lake when the level is quite low because of drouth and/or extreme water use. Continued unrestricted artesian well flow to the lake places a heavy burden on the chemical portion of the water treatment plant, results in unnecessary increased chemical costs even though treated water hardness is allowed to remain 3 times higher than previous, and will cause objectionable tastes and odors that will be expensive and/or difficult to prevent or remove.

Your consulting engineer has furnished written instructions on the correct method of valving down the artesian well flow to the reasonable amount recommended by the Water Resources Commission.

Very truly yours,



Charles E. Carl, Director
Division of Sanitary Engineering

JDB:mp

cc: Leonard Ellis, City Auditor
Stanley Couch, Alderman
Oscar Keller, Supt. of Water Works
State Water Resources Commission
Brady Engineering Co., Spearfish
H. O. Nelson, Dist. P. H. Engr.

TO THE SOUTH DAKOTA WATER RESOURCES COMMISSION:

We, the undersigned ranchers along lower Grindstone Creek and Bad River in Haakon County, below Lake Waggoner, respectfully request and petition that a continuous and full flow be permitted from from the City of Philip deep well. The overflow from the well provides a steady running stream in Grindstone Creek below the Lake Waggoner and in Bad River from the mouth of Grindstone Creek on down stream, which is of great benefit in our ranching operations because it provides a steady and dependable stream for watering our cattle throughout the year. Without the flow from this well the above name creek and river are without water on an average of more than ten months per year. The number of cattle we are now watering along these streams is indicated following our names.

NAME	POSTOFFICE	NO. CATTLE WATERED
7/8/63 Oscar Markward	Philip S.D.	150 head.
7/9/63 Earl R. Mielage	Philip S.D.	300 head
7/9/63 Anna Mielage	Philip S. Dak	50 head
7/9/63 James Mielage	Philip S. Dak	25 head
7/9/63 Mrs Bertha Goldsint	Philip S. Dak	20 head
7/9/63 George Michael	Philip S.D.	300 head
7/9/63 Anderson Michael	Philip S. D	150 head
7/9/63 Paul Nord	Philip S.D	400 head
7/9/63 Oscar J. Larsen	Midland S.D	75 head
7/10/63 Raymond Peterson	Midland S. D	70 head
7/10/63 Alex B. Kewick	Philip, S. Dak	98
7/10/63 Leota Kewick	" "	" "
7/10/63 Mark Jarman	Nowata	400
Dale Jarman	" "	100
7/10/63 Bevent Dale	Midland	" "
7/10/63 Ouyus Dale	Midland	75
7/10/63 Kenneth Berry	Philip	200
7/10/63 A. E. Schofield	Philip	300 head
7/10/63 Louis Coach	Kadoka,	" "
7/12/63 James Peterson	Philip	250 head 250 head

1070 g p M.

[illegible]

Permit No. 572-2Water Division Red River Water District

REPORT OF EXAMINATION OF WORKS AND/OR APPLICATION OF WATER TO BENEFICIAL USE

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

I have this day made a thorough examination of the water use system constructed by City of Philipof Philip S.D. holderof Permit No. 572-2, bearing date of priority of Feb 15, 1966authorizing the diversion of 0.5 cu. ft. per second of the waters of ground waterfor municipal purposes, in Hughes County.

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

The Water Use System consists of,

A. Works used to divert the water:

well 5700' deep, flowing at depth of 15' -
well flowing Lake Wagner when lake water lower or is bypassed
into Grand River creek when water is not desired in lake,
bypass flow approx. 500 GPM

B. Works used to transport water to place of use,

Main line into city of Philip
city distribution city

C. Works used to apply water to beneficial use.

Municipal service collection

The system is in the following condition: good conditionThe point of diversion is located N 34° 52' W 1653' from East corner Sec 1T1N R20E B4MThe works are capable of diverting and conveying to the place of use 0.5 cfscu. ft. per second of water which is to be used for municipal purposesWater has been put to beneficial use to the maximum extent as follows: used in water

system as water treatment Lake Wagner water

comprising a total of _____ acres of land.

Date 6-7-66

(Signature)

July 18 - Thursday

The Commission was called to order at 9:00 AM by Chairman Davis. Commissioners Stanley Johnson and Carl Cronin were absent.

Redwater Water Rights Determination

Mr. Grimes reported that a start has been made in the determinations as to the rights to use water from Redwater River and the streams tributary thereto. A large part of the summary as to priority dates, etc. of these water rights has already been accomplished.

For aid in making the determinations, guide lines have been set-up by which an evaluation of the documentary materials and other evidence may be made. The proposed guide line factors were read and briefly explained by Mr. Grimes.

The Commission approved the method for determining the rights to use water as set forth in the guide lines.

10:00 AM

M. E. Bierwagen, Philip; Stanley Couch, Water Manager for the City of Philip and Frank M. Hall, Alderman for the City of Philip met with the Commission concerning the over-flow of the City of Philip's deep artesian well (W. R. 574-2).

On March 11, 1963 the City had been notified by letter of the concern of the Water Resources Commission and the Department of Public Health in the waste of artesian water and also the quality of water in Waggoner Lake into which the water from the deep well is diverted for the city's water supply. Suggestions to remedy the situation were also contained in the letter.

Mr. Bierwagen presented a petition signed by ranchers along the lower Grindstone Creek and Bad River below Lake Waggoner requesting that a continuous and full flow be permitted from the City of Philip deep well and stating that the overflow from the well provided a steady running stream in Grindstone Creek below Lake Waggoner and in Bad River from the mouth of Grindstone Creek on downstream which was of great benefit in their ranching operations by providing a steady and dependable stream for watering their cattle throughout the year.

This petition, Mr. Bierwagen said, represents over 3200 head

of cattle. He further stated that because of the pressure (140 pounds at the outlet) and great flow of water from the well (1000 gallons per minute as measured by the USGS), it was felt that it would be dangerous to shut the well off. The City of Philip proposed to by-pass the flow past the dam and over the spillway thus allowing the water to run into Grindstone Creek and Bad River for stockwater use downstream. Mr. Bierwagen asked the opinion of this Commission on the proposed remedy.

After discussion, Mr. Fischer moved that the minutes show that it was the determination of the Commission that the flows from the well into those streams are of beneficial use for stock-watering downstream and that they are not detrimental to the artesian supply. Mr. Ayres seconded the motion and motion unanimously carried.

At the request of the representatives from Philip, an attempt to measure the flow from the well will be made by the Water Resources Commission staff.

Mr. Grimes reported that an audit of the accounts of the Water Resources Commission had been made covering the period April 1, 1958 to April 30, 1963 and a very favorable report had been received from Mr. Penne's office.

11:00 AM

Meeting with Bureau of Reclamation Officials - Deerfield and Pactola Reservoirs operation

Present from the Bureau of Reclamation for this meeting were Martin Oleson, Huron; K. K. Kober, Billings, Montana and W. H. Mendell, Billings, Montana.

Mr. Kober, Regional Supervisor of Irrigation for the Bureau of Reclamation, addressed the Commission as follows: "We are here to talk with you about our operations around Rapid City and get your views on our operations out there so that we will be operating in compliance with your wishes as well as our own desires. We have some questions in regard to the Pactola and Deerfield reservoirs contracts by the Bureau which provides water for municipal purposes for Rapid City and Ellsworth Air Force Base, water for irrigation in Rapid Valley Conservancy District and for flood control. In our operations we find that there is a difference

Called July 31st

running 600 G.P.M.
(estimate) told him
to shut down to 15 G.P.M.
said he couldn't it would
blow the well. Said
he would turn it
down some.

Daily Westland

OVERSIZE

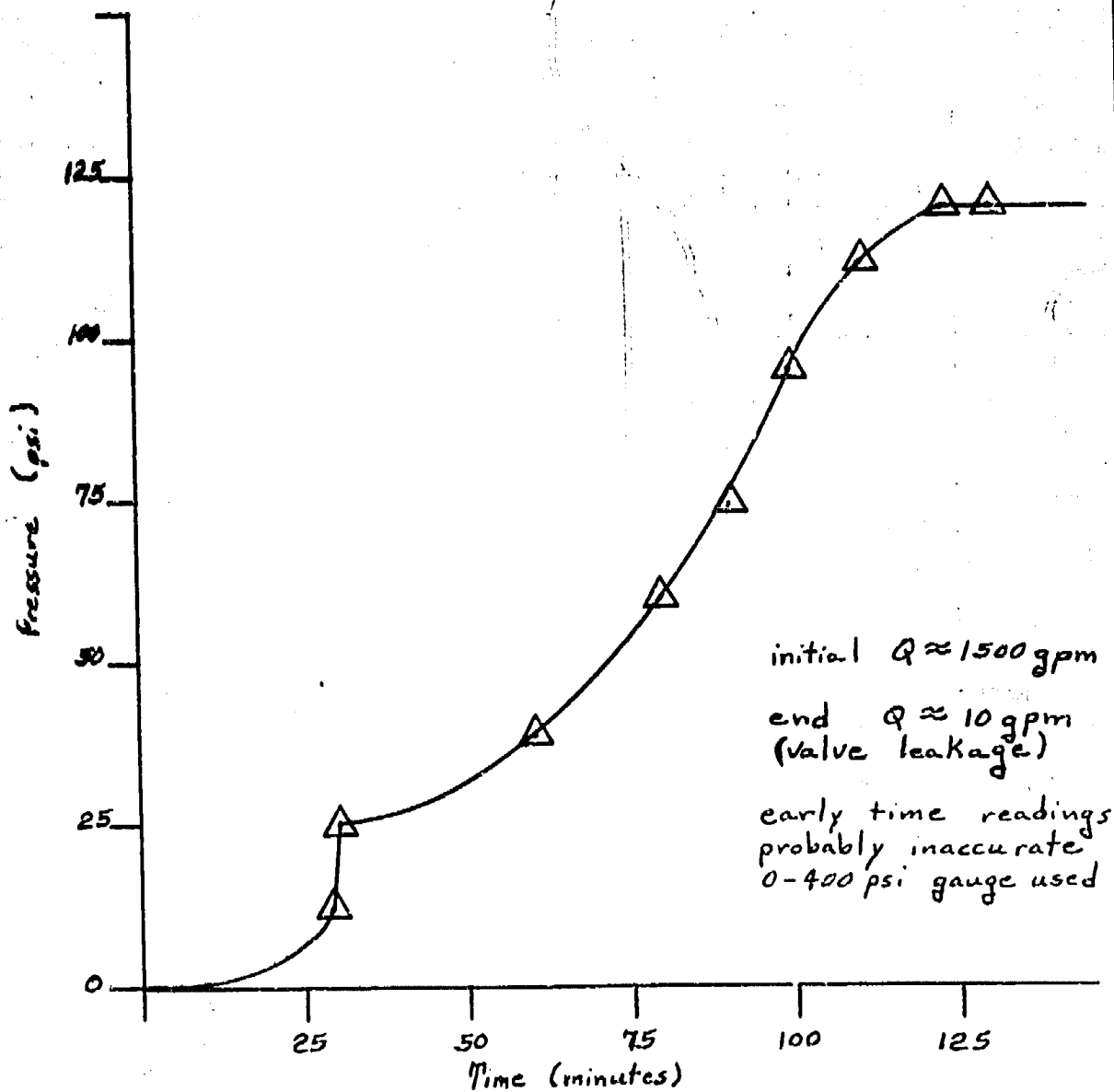
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SUPPLEMENTARY

TO MICROFILM FILE

5742

City of Phillip Wall Shut-in
27 June 1983
Julie N. Selken



Alliance of Architects and Engineers

Sheet

Job No. _____ Date 27 June 83 By Selken1 of 1

ARTESIAN WELL

PHILIP, S.D.

SHUT-IN-PRESSURE INFORMATION

DATE - 27 June 83

TIME PRES. REMARKS

MST

10 min

1:00 PM

wide open valve?

1:10

1 turn

2

3

4

5

6

12

1:12

7

18

1:18

8

22

1:22

9

26

1:26

10

29

1:29

12 1/2

10 3/4

30

1:30

11

31

1:31

25

11 1/4

5 psi vibration

62

2:02

38

11 3/4

" "

79

2:19

60

12

" "

90

2:30

74

12 1/4

Steady

99

2:39

95

12 1/2

112

2:52

112

12 3/4

123

3:03

120

13

138

3:10

120

13 1/4

well off

ARTESIAN WELL
Philip, South Dakota
Shut-In Pressure Information

Date: June 27, 1983

Time	Pressure	Remarks
		Attendants: William D. Cook, Alliance of Architects & Engineers Gale Selken, Water Rights Eddie Hanson, City of Philip Shelly Seager, City of Philip Joe Millage, City of Philip
1:05	----	Start
1:10		1 Turn
1:12		7 Turns
1:18		8
1:22		9
1:26		10
1:29	12½	10 3/4
1:30		11
1:31	25	11 1/4 5 PSI fluctuation
2:02	38	11 3/4 5 PSI fluctuation
2:19	60	12 5 PSI fluctuation
2:30	74	12 1/4 Steady - turn wheel slowly
2:39	95	12 1/2 Steady
2:52	112	12 3/4 Steady
3:03	120	13
3:10	120	13 1/4 Well shut off

The valve must not have been wide open to start. Although I checked it, it must have been 7 turns from wide open - it takes 20½ to close a 6 inch valve. I recommend that the well be shut in as follows:

1 through 10 turns - 15 sec./¼ turn
10 through 17 turns - 1 min./¼ turn
17 through open - 5 - 10 min./¼ turn

Watch pressure gauge carefully for fluctuation.

Always turn valve very slowly - do not jerk the operating wheel.

With the valve open, the flow was measured at 1,500 gpm.



Division of Water Rights
605 773-3352

August 17, 1983

Kent J. Horne
Horne Farms LTD
Phillip SD 57567

Dear Mr. Horne:

This letter is in response to your request for information on the City of Phillip's Madison Formation Well. The City of Phillip has a valid Water Right No. 574-2 for water from this Madison Formation Well located in NE $\frac{1}{4}$ Section 1, T1N, R20E. The City can contract with Horne Farms LTD for delivery of water from this well for geothermal heating purposes. As long as the water is placed to beneficial use, the City's water right is valid and the right to the continued use of the water can not be denied.

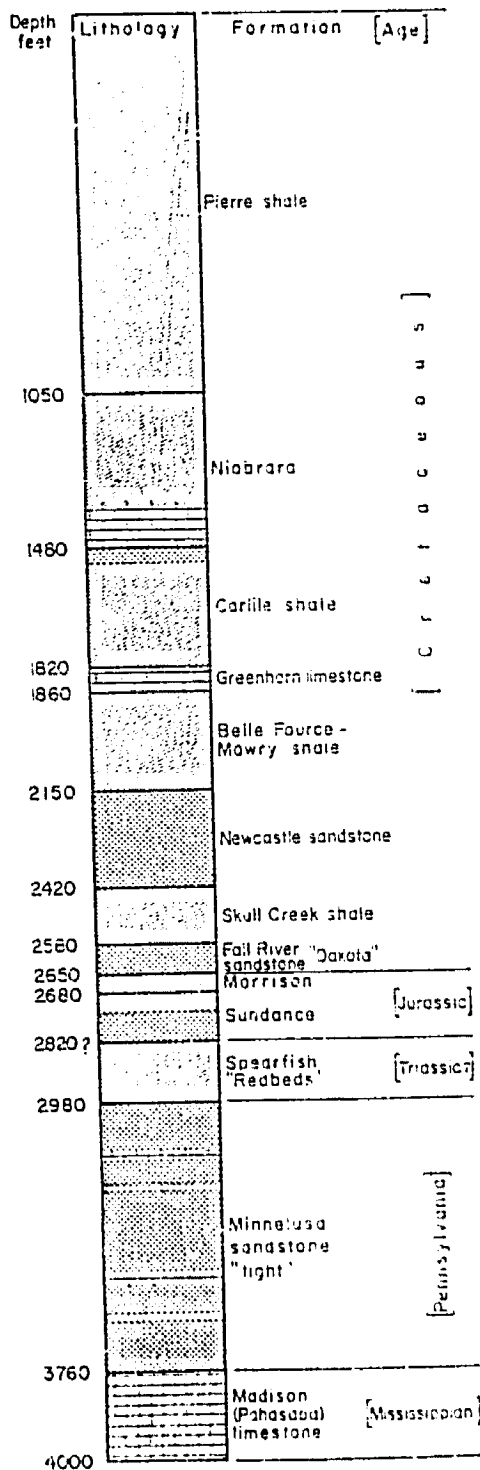
Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Division

JH:ks

Philip, S. D., no longer fears a water shortage

Water Problem Solved with Deep Well



What does a town of 1,100 do when it has a chronic water shortage? In the case of Philip, South Dakota, the townspeople voted overwhelmingly (80%) in favor of drilling a 1,000 foot well and doubling the capacity of their water treatment plant.

Philip is located about 100 miles east of the Black Hills and formerly depended on an 80 acre reservoir and small treatment plant to supply the municipal water. Inasmuch as the climate is semi-arid, several times the reservoir was dangerously low, but it rained in time to prevent the town from being completely out of water.

At times, when the reservoir was overflowing, the citizens considered building a larger treatment plant, but when the reservoir was low, there was talk of drilling a well. The reservoir nearly dried up in the summer and fall of 1961, so it was decided to make both improvements at the same time.

The town employed Brady Engineering, consulting engineers of Spearfish, South Dakota, to prepare the plans and specifications. A study of the geology of the area indicated there were no shallow water-bearing formations adequate to supply the town, as shown in the geologic section, Figure 1. The chemical analysis of water from a nearby well completed in the Fall River sandstone showed that it would be difficult and expensive to treat, since the sulphate content was more than 1,000 ppm. (Table 1 gives a comparison of the chemical quality of the water.) It was decided, therefore, to drill the well about 1,200 feet deeper to the Madison (Pahasapa) limestone. Although the deeper well would cost more initially, and the water would have a higher temperature, it was expected to have better quality water and it would have a greater artesian flow than a well completed in the Fall River sandstone.

United Exploration Corporation, Scottsbluff, Nebraska, was awarded the construction contract and the well was

drilled from April 30 to June 10, 1962. The contract called for 95½-inch OD surface casing to a depth of 400 feet, pressure grouted in a 13-inch borehole. A 9-inch hole was drilled into the top of the Madison limestone, and 7-inch OD casing was installed to 3,775 feet. The 7-inch casing was also grouted.

A 10-inch valve with a rating of 500 psi working pressure was connected to the top of the 95½-inch casing so as to control the high artesian pressure expected in the Madison limestone. After drilling about 40 feet of the limestone, the well was allowed to flow while it was deepened to 4,000 feet. (See Figure 2.) This procedure saved the town approximately \$1,000 which would be the cost of maintaining a drilling mud heavy enough to offset the artesian pressure in the Madison.

It was planned to complete the new well as a 61¼-inch open hole in the limestone, but the behavior of the well as it flowed for six hours altered this plan.

Fig. 2. Note steam from well flowing prior to installation of screen. Drilling rig is Lee C. Moore with Brewster drawworks and 7¼ x 14 Gardner Denver mud pump driven by GMC diesels.



Fig. 1. Geologic section, Philip, South Dakota. Based on electric log and information from consulting engineer, drilling contractor and South Dakota Geological Survey.

The well flowed rocks weighing as much as five pounds and as large as 6 inches in diameter. At times the volume of rocks was tremendous and several hundred pounds were discharged in a few minutes.

The volume of rocks would probably decrease with time if the well were allowed to flow continuously, but the City Council decided to be on the safe side and install a well screen. The strength requirements for the job were great. It would be necessary to install a 231-ft long screen to a depth of 4,000 feet in a well estimated to be flowing 700 gpm with a water temperature of 153 degrees Fahrenheit and a shut-in-head calculated to be 235 psi. The job also required the use of a metal which would resist corrosion by the highly mineralized ground water. At the same time, maximum open area was required so that there would be practically no reduction in flow after the screen was installed. Accordingly, a 6-inch Johnson continuous slot welded screen constructed of type 301 stainless steel was used.

One of the most interesting aspects of the job was the method of installing the screen. A bit was attached to the bottom of the screen in case it would be necessary to rotate it to dislodge any rocks that might become wedged between the screen and casing. A relief tube was connected to the ports of the bit. By taking into consideration the weight of the screen, diameter of the screen and the well, and the size of the relief port, it was estimated the screen would fall about

This view shows the well screen being pushed down into the flowing well, viewed from the same position as Fig. 2.

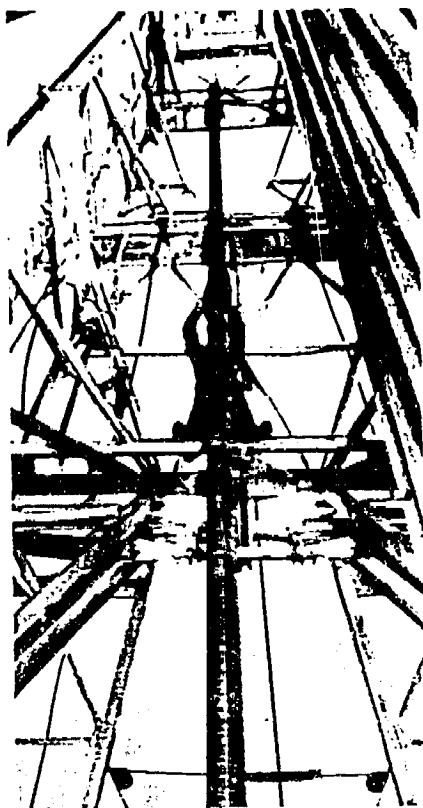


Fig. 3. Aligning section of screen for welding in 105 foot derrick.

100 feet per minute. The screen sections were welded together on the catwalk to make 421.5-ft lengths. These were in turn welded together in the derrick as they were going into the hole. Figure 3 shows the screen sections being aligned before welding.

The well was flowing during the screen installation, since the valve had to be open to permit the screen to be lowered into the well. The force of the flow exceeded the weight of the screen, so it was necessary to push it into the well by tying a rope to the top of the screen, running it through a sheave down to the rotary table and over to the cat head on the draw works, as shown in Figure 4. When the screen and flush tube were installed, the contractor sat on top, and the force of the flowing water lifted him and the screen assembly which weighed more than 11.2 tons.

The screen was pushed about 60 feet into the flowing well by using the weight of a stand of drill collars. Men were stationed at the master valve hand-wheel and quickly closed it when the drill collars were jerked from the well—thus permitting the screen assembly to sink to the bottom of the 4,000-ft well after stopping the flow. The installation was an unequal-

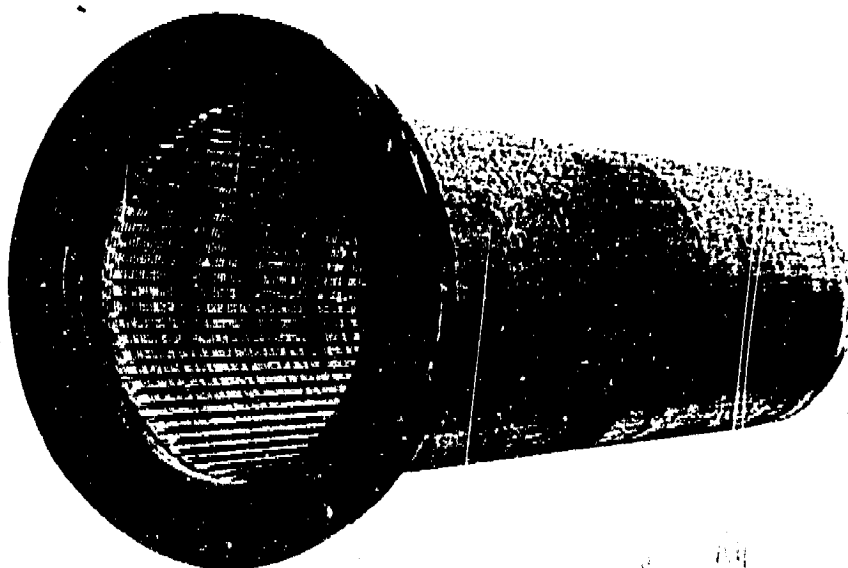
led success in that everything went as planned. After the screen was dropped, the drill rods were run into the well and the top of the screen assembly was found to be within a foot of its calculated depth. The well was then allowed to flow and the water was soon free of rock debris and dirt.

The well is now piped so that it can
(Continued on page 13)

Fig. 4. After pushing the screen down by means of block and tackle rigging, a log chain was used to prevent the screen from rising out of the hole while additional sections of screen were welded. Note weight indicator which is a necessity on a rig of this size.



Fig. 5. Screen sections on catwalk. Lake in background used to store and cool water.



Johnson Offers New Intake Screen

A new economical solution to the problem of building and maintaining intake structures in rivers, lakes and reservoirs has been developed by Edward E. Johnson, Inc., which is now offering a new intake screen to municipalities, industries and power plants. The screens have wide applications for surface water intakes, and may be installed either horizontally or vertically. With their use the usual crib structure can be completely eliminated. The photograph shows one of a pair of 16-inch Johnson Intake Screens installed for the municipal water system at Cavalier, North Dakota. Only 4-ft in length, this screen will admit 450,000 gal per day at an inlet velocity of 0.5 ft per sec. Screen openings are 1/10-inch wide. The screens are installed as a horizontal intake in the Tongue River. (North Central Engineers, Jamestown, North Dakota, are consulting engineers for Cavalier's municipal water department.)

The Johnson intake screen is available in diameters up to 3 feet and of any length. It offers greater hydraulic efficiency and more economical and flexible design. It can be used for many difficult intake problems requiring free expression of the design engineer's ingenuity and judgment.

Efficient back-washing, a needed feature usually impractical with conventional intake cribs, is perfectly feasible with the Johnson intake screen. Installing screens in pairs allows back-washing of one screen while continuing to admit water through the other. Cleaning, therefore, need not interrupt continuous flow into the intake pipe line.

Also solved is the problem of admitting large volumes of water with mini-

mum head loss while at the same time excluding suspended particles of any size. Screen openings from 0.010-inch to 5/8-inch are available.

The screen has the same rugged, all-welded construction used in Johnson water well screens and can be relied upon for years of service without any maintenance or repair work. It is available in any of several types of metals including Everdur bronze and type 301 stainless steel.

Engineering tests in the Johnson laboratory have shown that a 10-ft length of Johnson welded intake screen, 24-inches in diameter, with 1/4-inch slot openings will handle 12 mil gal per day at an inlet velocity of less than 0.5 ft per sec. This screen provides 37.1 sq ft of total open area.

Technical information on the new screen is available by writing Edward E. Johnson, Inc., Industrial Applications Dept., 315 North Pierce Street, Saint Paul 4, Minnesota.

WATER PROBLEM

(Continued from page 9)

either flow into the reservoir to allow for cooling before treatment, or directly into the transmission pipe line. The cooling reservoir or lake is shown in Figure 5. In an emergency, such as a fire or a prolonged power failure, the artesian pressure is sufficient to force the water into town. In case of excessive radioactive fallout, the surface reservoir would be subject to considerable contamination from rain water and run-off while the ground water would be safe. At one time last summer, the treated water storage was dry, and the old treatment plant was

unable to "keep up;" so the town was supplied and the elevated storage filled in a short time by allowing the well to flow directly into the pipe line.

Through sound engineering and skillful well construction, the city has a good water supply for the first time in its history, thus justifying the faith of the city fathers and citizens in authorizing the large expenditure required for this improvement in the water supply of Philip, South Dakota.



The control valves shown in this picture can be used to cut off the water completely or allow the flow to go either into the reservoir for cooling or directly into the distribution system.

TABLE 1
WATER ANALYSIS

Constituent (ppm)	Fall River sandstone	Madison limestone
SiO ₂		38
Fe	1.2	0.97
Mn	0.3	0.03
Ca	63	232
Mg	11	53
Na	513	21
K	13.7	6.9
HCO ₃	237	153
CO ₃		0
SO ₄	1019	650
Cl	69	22
Fl	1.4	2.2
NO ₃		0.2
Boron (B)		0.1
Dissolved solids	1315	1110
Hardness as CaCO ₃	219	319
Non carbonate hardness as CaCO ₃		639
pH	7.7	7.1

The quality of water from the Madison limestone is not good by some standards but it is more palatable than the water from the Fall River sandstone. In this area of scarce water it is a blessing so long as the water is "wet" and safe from a health standpoint. The treated water will meet the U.S. Public Health standards.

MEMORANDUM

TO. City of Philip Water Right Files No. 574-2 and 1858-2
FROM: John Hatch *John Hatch*
SUBJECT: Results of Meeting November 20, 1986

John Smith, Secretary, DWNR, and John Hatch, Chief Engineer, Water Rights Division, DWNR, met in Philip November 20, 1986 with Kent Horne of Horne Farms, Art Kroetch, Mike West, Mayor and representatives of the City Council and County Commission. The purpose of the meeting was to discuss the water requirements for Horne Farms and the City of Philip's Water Rights for a flowing Madison Formation Well.

The City holds Water Rights No. 574-2 (0.8 cfs) and 1858-2 (0.42 cfs), a total of 1.22 cfs (550 gpm) for the Madison well. The City has an August 1, 1983 agreement to supply Horne Farms up to 500 gpm for heating purposes. After August 1983, Horne Farms also began to use a portion of the water for watering plants in its greenhouse. The minimum temperature required within the greenhouse is about 65°F. If the temperature drops below 55°F, the tomato plants go dormant and will not produce additional tomatoes. During the past two years, there has only been 15-20 days each year when heat was not required.

It was agreed at the meeting that DWNR will not require the City to reduce the flow of the well below the 300-500 gpm flow at which the City operates the well. The agreement remains in effect unless DWNR receives complaints that flows are exceeding 550 gpm or the Horne Farms operation changes.

The City of Philip is limited by its water rights to a maximum flow of 550 gpm. Flows above 550 gpm will require a new water permit application.



April 26, 2004

574-2
**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

Tom Lesselyoung
Public Works Director
City of Philip
PO Box 408
Philip SD 57567

Dear Mr. Lesselyoung:

You contacted me at the urging of the Drinking Water Program to discuss the city of Philip's water rights. The city of Philip is connected to the West River Lyman Jones rural water system. You indicated that city no longer intends to divert from Lake Waggoner but does plan to use the well for geothermal heating, the fish farm and at the golf course.

The following summarizes the city of Philip's municipal water rights

- Water Right Nos. 574-2 and 1858-2, combined, appropriate 1.22 cubic feet of water per second (550 gpm) from the well.
- Vested Water Right No. 430-2 appropriates 0.43 cubic feet of water per second (193 gpm) from Grindstone Creek and Lake Waggoner.

The historic practice has been for water from the well to be discharged to the lake and then water was diverted from the lake to meet municipal use demands. After being used for geothermal heating, water from the well is returned to a cooling pond or two ponds on the golf course. Water from the well has also been diverted directly to Grindstone Creek below the lake to provide livestock water.

The city can continue to provide water under their water rights from the well for municipal uses such as providing geothermal heating, fish farming and use at the golf course. The well is to be valved and the flow reduced to the amount needed or to a minimum when not being used.

It is my understanding that the physical diversion of water from Lake Waggoner will no longer take place. If that is the case, Vested Water Right No. 430-2 should be cancelled since the diversion of water from the lake has been abandoned. Please let me know if you concur and I will schedule this water right for cancellation.

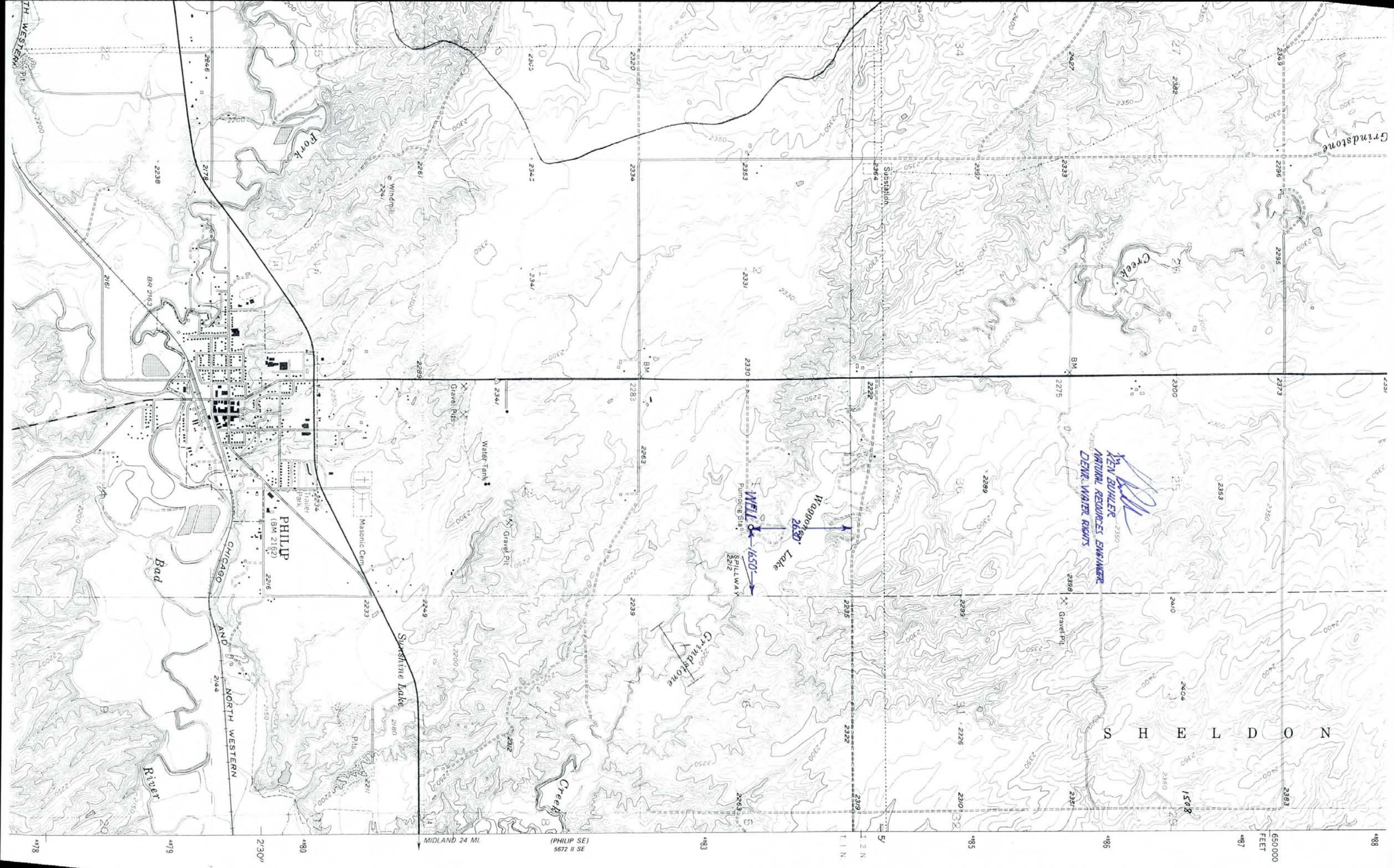
Finally, the Bad River Rural Water System also holds a water permit from Lake Waggoner. I understand that this system has been served by the city and is now also connected to the West River Lyman Jones system. You indicated that the city's diversion works to the lake have been severed. Logically, this would mean that the Bad River RWS's water permit is also likely subject to cancellation. I have been unable to reach the contact person for them to discuss this issue. Certainly you do not speak for them but I'd appreciate any knowledge you can provide regarding whether my understanding of the status of Bad River's water permit is correct.

Please feel free to contact me and we'll work to get the water rights to accurately reflect the water use taking place.

Sincerely,

A handwritten signature in cursive script, appearing to read "Eric Gronlund".

Eric Gronlund
Water Rights Program, DENR
(605) 773-3352



Grindstone

K. B.
KEN BUHLER
NATURAL RESOURCES ENGINEER
OWNER WATER RIGHTS

WELL 1650
SPILLWAY 1212
PUMPING STATION

Wagon Lake

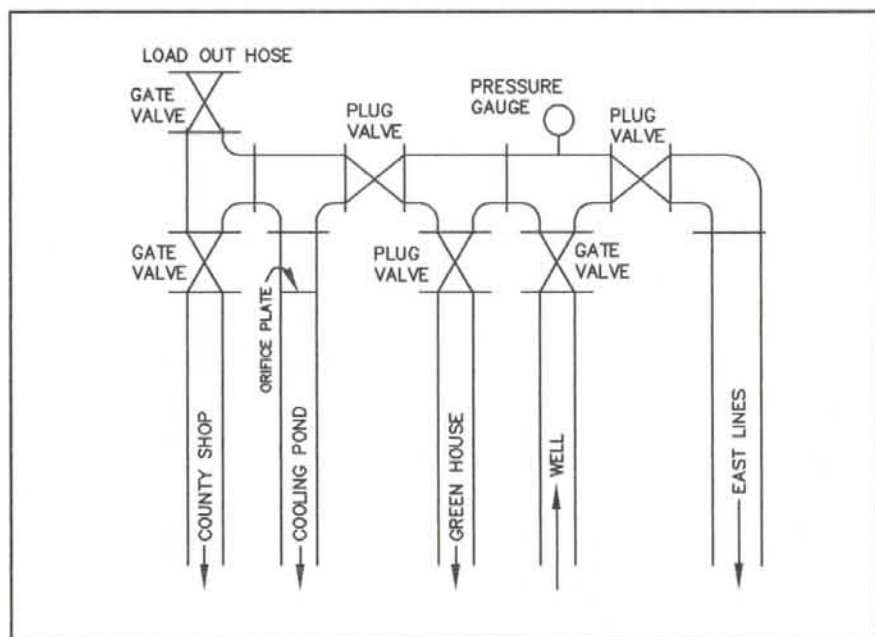
PHILIP
(BM 2162)

CHICAGO AND NORTH WESTERN

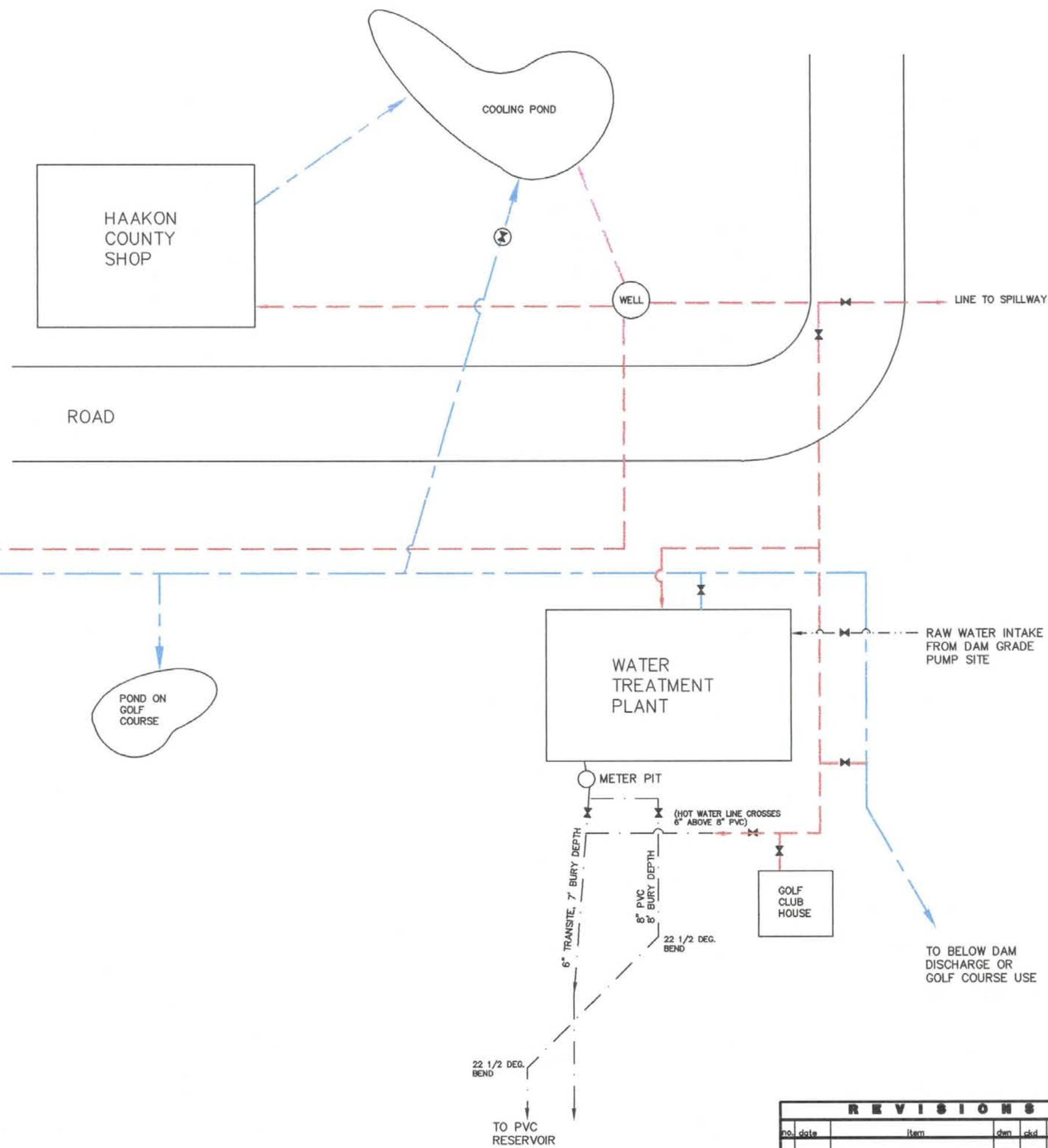
(PHILIP SE)
5672 II SE

MIDLAND 24 MI.

650 000
FEET



SCHEMATIC OF WELL SITE



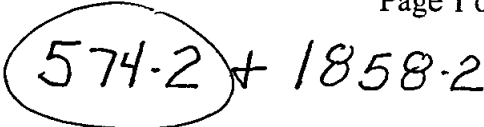
LEGEND

- RAW HOT WATER
- COOLED RETURN WATER
- RAW WATER
- TREATED WATER



NOT TO SCALE

REVISIONS					WELL SITE PIPING	
no.	date	item	des.	chkd.	CITY OF PHILIP	
					PHILIP, SOUTH DAKOTA	
					7089	file name: WELL SITE
					11/94	sheet 1
					CSM	of 1

574-2 + 1858-2**Gronlund, Eric**

From: Gronlund, Eric
Sent: Friday, June 02, 2006 9:37 AM
To: 'jfhart@scotchman.com'
Subject: city of Philip / Min-Kota resolution regarding the well

Mayor Hart

I received a copy of your email which asked for DENR's input regarding the city of Philip's lease of the well to Min-kota. A proposed resolution accompanied your email.

As I understand the proposal, the city will retain ownership of the well and lease the well to Min-Kota for 99 years. I believe this constitutes an assignment of the water right to Min-Kota, therefore the water right should then be transferred to Min-Kota. They would then need to amend the water right for their intended commercial use and the other incidental uses (ie. domestic, irrigation).

As owner of the well, the city is responsible for the well should problems occur. This could include plugging in the event of a well failure. This would be costly and very likely exceed the amount of money accrued in the reserve account. Also does the fact that the city is responsible for well repairs and set up this reserve account somehow require the city to ensure a functioning well? This is likely a question for an attorney. Again, if the well fails the city could find itself responsible for providing water. Whether that would be drilling a new well or obtaining another water source.

When I met with representatives of Min-kota a few months back there was also discussion of them needing more water than the 550 gpm authorized by the existing water right. A new water right permit will need to be obtained for any diversion rate greater than 550 gpm.

Mayor Hart, I am not an attorney nor do I have any knowledge of the city's contract negotiations with Min-kota. I just want to make you aware of these potential issues so that the city is fully informed. DENR is supportive of the economic development potential this aquaculture project can bring to the city.

I tried contacting you through city hall so we could talk personally but since I'm unsure whether you got the message I am sending you this email. Please feel free to contact me so we can discuss this further.

Eric Gronlund
Water Rights Program, DENR
605 773-3352
eric.gronlund@state.sd.us

06/02/2006

Gronlund, Eric

From: Perkovich, Mike
Sent: Thursday, May 18, 2006 9:09 AM
To: Gronlund, Eric
Subject: FW: Help

Could this be a Water Rights issue? It's not a WRAP issue.

-----Original Message-----

From: Harding, Steve
Sent: Wednesday, May 17, 2006 4:48 PM
To: Perkovich, Mike
Subject: FW: Help

Mike, I received this e-mail. I am assuming you are the Mike he is referring to. If not, could you forward to whomever? This is a value added subfund project in our office, so I have forwarded it to the person responsible in our office. Thanks. STEve.

-----Original Message-----

From: John Hart [mailto:jfhart@scotchman.com]
Sent: Wednesday, May 17, 2006 1:49 PM
To: Harding, Steve
Cc: Monna Van Lint
Subject: Help

Hello Steve,

I need the help of GOED & DENR on a matter concerning the City of Philip. Min-Kota is a business that is proposing building a 6 million dollar plus factory in Philip that will raise and process tilapia fish. The main resource that Min-Kota requires is the hot artesian water from the City of Philip's well. To help with economic development, the City has offered to lease the well to Min-Kota for 99 years in the amount of \$ 600.00 per year. The monies received would be put into a restricted account to help defray maintenance on the well. There are other users/consumers around the well head that use the water for free right now. The City has contemplated entering into the 99 years lease with Min-Kota, while the other users/consumers would enter into a separate contract with Min-Kota at a yearly fee of \$ 600.00, again all monies being put into the restricted account.

I need to know what are your thoughts/concerns are? I also need DENR's input, so if you would forward this email to Mike I would appreciate it.

Here is how resolution 2006-10 reads:

RESOLUTION #2006-10

INTENT TO LEASE PUBLIC PROPERTY

GEO-THERMAL HOT WATER WELL

WHEREAS, the City of Philip, South Dakota, owns a geo-thermal/artesian hot water well located near

05/18/2006

Lake Waggoner in Tract A, a portion of the SW¼NE¼, Section One, Township One North (T 1 N), Range Twenty (R 20); and,

WHEREAS, the City of Philip, South Dakota, intends to enter into a long-term, ninety-nine (99) year lease with Min-Kota Fisheries, Inc. for the purpose of insuring Min-Kota's proposed six million dollar (\$6,000,000) plus expansion plans that will have a very positive economic impact on the community and surrounding areas; and,

WHEREAS, the City's geo-thermal/artesian hot water well currently supplies the City of Philip- Lake Waggoner and City Water Plant Building, Haakon County, Karla Kroetch for Steve Kroetch, Lake Waggoner Golf Course, Gene and Sheryl Michaels and Min-Kota Fisheries, Inc.; and,

WHEREAS, the City's geo-thermal/artesian hot water well provides the above named users' with hot water for the purpose of heating, irrigation, recreation and/or livestock consumption purposes; and,

WHEREAS, Min-Kota Fisheries, Inc. will enter into a contractual agreement with all of the current well water users/consumers to insure and guarantee that they will also be provided their fair and equitable use of the geo-thermal/artesian well water; and,

WHEREAS, the City of Philip, South Dakota, will establish a depreciation reserve account for geo-thermal/artesian water well repairs and maintenance and collect an annual fee of not less than \$600.00 per contracted user via Min-Kota Fisheries, Inc. (an estimated \$3,600.00 per year); and,

WHEREAS, Min-Kota Fisheries, Inc., will in turn, collect an annual payment of \$600.00 from each entity named above with the exception of Haakon County, as Easement #97-254 was entered into on the 29th day of December 1983 for the land that encompasses the well and exempts them from fees; and,

WHEREAS, the City of Philip, South Dakota, will maintain ownership and water rights under water license #574-2 (0.8 cfs) and #1858-2 (0.42 cfs) with a total appropriation of 1.22 cfs (550 gpm) to the geo-thermal/artesian hot water well;

NOW THEREFORE BE IT RESOLVED, by the City Council of the City of Philip, South Dakota, that it is the City of Philip's intent, to assist in the promotion of economic development within the community and surrounding areas through Min-Kota Fisheries, Inc.'s proposed expansion, to enter into a ninety-nine (99) year lease for the use of the Geo-Thermal Hot Water Well and its water with Min-Kota Fisheries, Inc., and to insure the existing users will also be provided their fair and equitable use of this natural resource.

Dated this 1st day of May 2006.

/s/John F. Hart, Mayor

Thank you very much.

John F. Hart
Mayor
City of Philip

05/18/2006