

No. 216-2
 Water Division No. 3 Big Sioux River District
 (Blanks to be filled by the Engineer for the W. R. C.)
Cost of 15.19

STATE WATER RESOURCES COMM.
 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 Brookings
 Postoffice address City Hall, County Brookings, State S. Dak.

I. If a corporation

(a) Name of same City of Brookings, Municipal

(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)

completed

(b) Cash on hand, \$

(c) Treasury stock, \$

(d) Bonds to be issued, \$

(e) Other resources, \$

2. Name of diversion work City Wells, Municipal Water Plant

3. Amount of water claimed 2,500,000 gallon/day or 12 cubic feet per second maximum week

4. Source of water supply Ground water aquifer

5. Location of point of diversion See plat attached

on _____ han' _____ County.

6. Annual period or periods during which water is to be used 12 months.

7. To be used for:

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

(a) Number of acres to be irrigated _____

(b) Legal subdivisions to be irrigated _____

(NOTE—A 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.) All municipal purposes

II. Stockwatering, milling, power, fish culture, fire protection and public recreation; Industrial

(a) Nature of use All municipal purposes

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. 170-23

8. Estimated cost of work: **Completed**

(a) Head Gates, \$.....

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

(c) Fluming, \$.....

(d) Canal-earth, \$.....

Rock, \$.....

(e) Other structures \$.....

Total, \$.....

9. Description of diversion works:

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

Pumps, piping

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 filledacre 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; heightfeet; Material

(d) Canal: Total lengthmiles.

LOCATION BELOW HEADGATE	DEPTH	BOTTOM WIDTH	WIDTH AT WATERLINE	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 complete.....years.

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

12. Choice of newspaper for publication of notice of intention to appropriate

Brookings Register

STATE OF SOUTH DAKOTA

County of Brookings

53.

I, Homer Diggins, Mayor of the City of Brookings, 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.

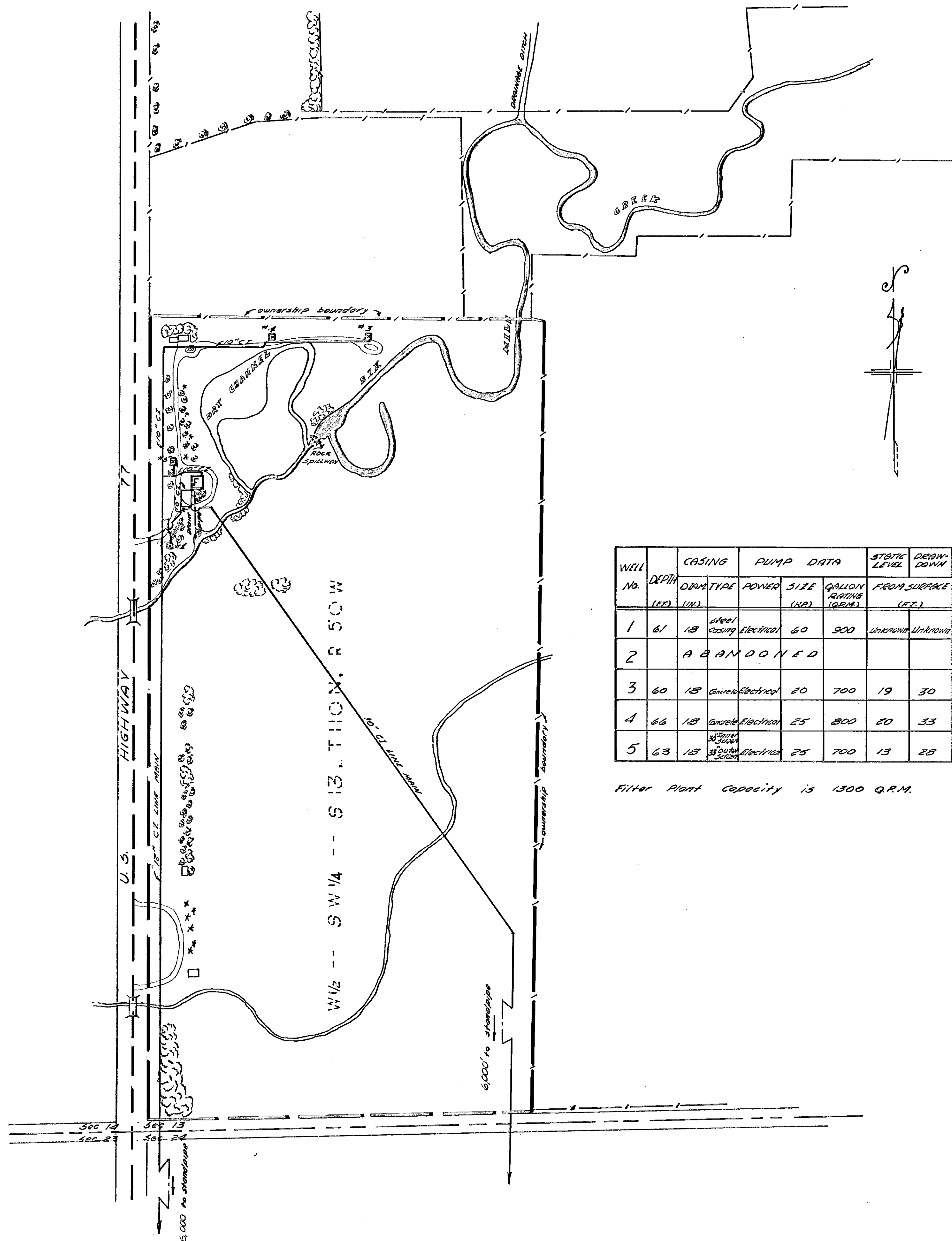
Signed

Homer Diggins

Subscribed and sworn to before me this 28th day of June 19 56

[Signature]

Notary Public (or other qualified officer.)



WELL NO.	DEPTH (FEET)	CASING		PUMP DATA			STATIC LEVEL (FEET)	DRAW-DOWN (FEET)	METERED	APPROXIMATE LOG. FOR ALL WELLS	COURSE AND BEARING	LEGAL CORNER TIE
		DIAM. (IN.)	TYPE	POWER (HP)	SIZE (IN.)	GALLON PER MIN. (G.P.M.)						
1	61	18	Steel Casing	Electrical	60	900	Unknown	Unknown	No	0-10' clay	1910' N 3°10' E	South West
2			ABANDONED									
3	60	18	Concrete	Electrical	20	700	19	30	No	10-63' sand gravel	2710' N 16°25' E	Sec. 13 T 110 N R 50 W
4	66	18	Concrete	Electrical	25	800	20	33	No	63-65' clay	2630' N 9°50' E	5th Principal Meridian
5	63	18	Concrete	Electrical	25	700	13	23	Yes		2180' N 2°55' E	

Filter Plant Capacity is 1300 G.P.M.

SURVEYOR'S CERTIFICATE

STATE OF SOUTH DAKOTA S.S.
COUNTY OF BROOKINGS

I, Calvin Vaudrey, a Registered Land Surveyor in the State of South Dakota, do hereby certify that at the request of City of Brookings, sole owner, did survey the tract of land within the City's ownership boundaries for which application for an appropriate water right to withdraw underground waters from under this tract for Municipal purposes is made and that this map is a true representation thereof.

In Witness Whereof, I have hereunto set my hand and seal this 2nd day of June A.D. 1956

Calvin Vaudrey Reg No 683
Registered Land Surveyor

STATE OF SOUTH DAKOTA S.S.
COUNTY OF BROOKINGS

On this day, before me, the undersigned, a Notary Public within and for said state and county, personally appeared Calvin Vaudrey, known to me to be the person who executed the foregoing Surveyor's Certificate and acknowledged to me that he executed the same.

Witness My Hand, I have hereunto set my hand and seal this 2nd day of June A.D. 1956

Hodlund
Notary Public

My Commission Expires March 8 1960

Map No. 170-3
(Appl's No. 216-3
217-3)

WATER RIGHT PLAT CITY OF BROOKINGS BROOKINGS, SOUTH DAKOTA	
PLOT PLAN	
SHOWING PRESENT WITHDRAWAL AREA SCALE: HORIZ. 1"=200'	
J.T.BANNER & ASSOCIATES, ENGINEERS, BROOKINGS, S.D.	
APPROVED _____ DATE _____	FOR _____
APPROVED <u>Calvin Vaudrey</u> DATE <u>June 2, 1956</u>	FOR J.T.BANNER & ASSOCIATES
CHECKED BY <u>CV</u>	DRAWN BY <u>CV</u>
DATE _____	SHEET _____ OF _____

Remarks by State Water Resources Commission:

"Vested Right" Claimed

STATE OF SOUTH DAKOTA

County of

Bugher

Pierre, South Dakota,

July 13

1956

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

a.m. upon the 29 day of June, 1956

State Water Resources Commission

By:

J. R. Rimes

Chief Engineer, Executive Officer

Number of permit

Vested Right
216-3

Date of first receipt of application June 29, 1956

Date of return to applicant for correction, amendments or changes required as follows: July 13, 1956

Date of receipt of corrected application July 21, 1956

Date from which applicant may claim right 1930, 1956

Approved August 8, 1956, Recorded in Book 3, Page 145

This is to certify that we have examined the foregoing application for 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

in 1930, 1956

2nd. The whole of said work is to be completed on or before in 1930, 1956

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

1930, 1956

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

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 3.85 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 1930, 1956; said water to be used during the following described annual period:

Continuous

Witness my hand this August day of August, 1956

State Water Resources Commission

By:

J. R. Rimes

Chief Engineer, Executive Officer

Certificate of Construction Issued August 8, 1956

Water License Issued August 8, 1956

Form 2A -- Wells (Supplement to Form 2)

9. (Continued)

III. Well Specifications

(a) Hole and casing

Well No. 1 - 30" 61
Well No. 2 - Sealed & abandoned
Well No. 3 - 30" 60
Well No. 4 - 30" 66
Well No. 5 - 30" , Depth 63

Size of drill hole or excavation

Type of casing All concrete
(wood, concrete, steel, etc.)

Size of casing 18" Thickness of casing 4"

Length of casing all approx. 60' If collection gallery, length, size and depth of gallery all approx. 30'

(b) Screens

Type of perforated screen Concrete

Size of perforated screen 18" 30'
(diameter) (length)

Thickness of gravel pack 6" , length of gravel pack approx. 50'

(c) Water Bearing Materials

Distance to water 13 to 20'. Character of water bearing materials Gravel & sand, Glacial aquifer.

Thickness of water bearing material approx. 53' ft. See attached Plat.

(d) Pump and Motor

Type of pump turbine propeller type
(centrifugal, propeller, mixed flow, etc.)
Name of pump Well No. 1 - Fairbanks Morse - rated at 900 gpm
Well No. 3 - Layne Minnesota - rated at 700 gpm
Well No. 4 - Johnson - rated at 800 gpm
Kind of motor Well No. 5 - Fairbanks Morse - rated at 700 gpm
#1 - 60
#3 - 20
#5 - 25
Horsepower #1 - 60
#3 - 20
#5 - 25
Name of Motor #1 Fairbanks Morse
#3 Fairbanks Morse
#5 "

(e) Complete well #1 - 400
#3 - 450
Capacity #4 - 500 at drawdown of approx. 11' to 15' Estimated cost - -
#5 - 400

(f) Owner of land upon which well is located City of Brookings
Name

Brookings, So. Dak.

Address

(g) Distance to nearest existing wells

On same owner's property See Plat rods. On property owned by others 100 rods

STATE OF SOUTH DAKOTA

WATER LICENSE No. 216-3

WHEREAS, On the 29th day of June A. D. 1956
the City of Brookings

of Brookings County of Brookings and State of
South Dakota duly made application (No. 216-3) to us for a permit to use 3.85
cubic feet per second of the waters of ground water
County of Brookings, State of South Dakota, for municipal
purposes; and

WHEREAS, On the 5th day of August A. D. 1956
Permit No. 216-3 was issued to said applicant for the diversion of said water, and recognizing
completion of the works of diversion therein described on ~~XXXXXX~~ in 1930 ~~XXXXXX~~
~~XXXXXX~~ and for the application to beneficial use of said
water ~~XXXXXX~~ in 1930 ~~XXXXXX~~
and,

WHEREAS, On the 21st day of July A. D. 1956
the holder Vested Right of said permit duly made proof of the completion of adequate works for the diversion of 3.88
cubic feet per second of said waters, as evidenced by our Certificate No. 216-3
dated August 8, 1956 confirming the completion of works of sufficient capacity for
diverting and conveying to the place of intended use 3.35 cubic feet per second of water, with date of
priority of 1930 ~~XXXX~~ ~~XXXX~~

WHEREAS, On the 21st day of July A. D. 1956
proof was duly made of the application to beneficial use of 3.55 cubic feet per second of said water;
in and for the City of Brookings municipal use

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 Brookings
of Brookings, South Dakota the holder and owner Vested Right of said permit No. 215-3
a water right, dating from 1920 to the use of 3.55
cubic feet per second of the waters of ground water
in the County of Brookings and State of South Dakota, or so much thereof as may be
necessary for the purposes hereinafter mentioned, to be diverted (through wells #1, 3, 4, and 5)
in the NW 1/4 SW 1/4, Sec. 13,
T. 11N., R. 50W
and conducted to ~~irrigation~~ the residents of Brookings

for the purpose of domestic, industrial, fire protection, and similar
municipal water uses.

subject, however, to the laws of the State of South Dakota applicable to a license for the use of the waters of the State, and subject, also to the local or community customs, rules and regulations which have been or may be adopted from time to time by a majority of the users from a common source of supply, canal or lateral from which such water may be taken, when such rules and regulations have for their object the economical use of such water.

WITNESS, My hand and seal of our office at Pierre, South Dakota,
this 8th day of August A. D. Nineteen
Hundred and Fifty-six

State Water Resources Commission

By:

J. W. Grimes, Chief Engineer, Executive Officer

STATE OF SOUTH DAKOTA

Water License No. _____

To _____

Source of Supply _____

County _____

Am't _____ c. f. s.

Point of Diversion _____

Place of Use _____

Purpose _____

Date of Priority _____

Recorded _____

In Book _____ of _____ Page _____

Permit No. 216-3

Water Division No. 3 Big Sioux River Water District

Certificate of Completion of Works

TO ALL WHOM IT MAY CONCERN:

This is to Certify, That the City of Brookings

of Brookings, County of Brookings, and State of South Dakota, the holder of Vested Right Permit No. 216-3, issued upon Application No. 216-3, bearing date of priority of 1930, authorizing the diversion of

3.85 cu. ft. per second of the waters of ground water County of Brookings, State of South Dakota, through wells #1, 3, 4, and 5 in the NW 1/4 SW 1/4, Sec. 13, T 110N, R 50W

for municipal water supply purposes, has fully 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 3.88 cu. ft. per second of water; and that the lands proposed to be irrigated by the use of said water are described as follows: in and for the City of Brookings municipal use.

Witness my hand this 8th day of August A. D. 1956

State Water Resources Commission

By:

J. W. Ormes, Chief Engineer, Executive Officer

RECEIVED
JUL 21 1956
8:30 AM

Location No. 2-16-57

RECEIVED
JUN 29 1956
9:00 AM

STATE WATER RESOURCES COMM.
PIERRE, SOUTH DAKOTA

Water Division No. 3 Big Sioux River Water District

STATE WATER RESOURCES COMM.
PIERRE, SOUTH DAKOTA

Proof of Application of Water to Beneficial Use

PETITION OF HOLDER

Ques. 1. State your name, residence, occupation and postoffice address.

Ans. City of Brookings, South Dakota

Ques. 2. If acting in behalf of a corporation, state its name, principal place of business (if a foreign corporation, give name and postoffice of statutory agent,) your position with reference to same, and your authority for appearing in its behalf.

Ans. City of Brookings, Municipal Corporation

Ques. 3. State date of posting and date of recording notice of appropriation.

Ans. _____

Ques. 4. State source of water supply and give exact location of point of diversion.

Ans. Ground water aquifer. see attached plat

Ques. 5. Describe your works of diversion giving length and height of each dam and state amount of water they are capable of conveying from point of diversion to place of use, and give name of canal or ditch or other works by which water is conducted to such place of use, and date of completion of same.

Ans. _____

Ques. 6. State for what purpose water is used and describe place of use. (If for irrigation, name each subdivision in which used, and number of acres in each subdivision that have ACTUALLY been irrigated with said water.)

Ans. All Municipal purposes.

Ques. 7. If for other than irrigation purpose, state how applied, amount of horse power generated, etc.

Ans. All municipal purposes.

Ques. 8. What is the minimum amount of water required for the use specified above?

Ans. 2,500,000 gallons/day during maximum week

Ques. 9. If you are not the person or representative of the corporation to whom above mentioned permit was originally issued, please state how ownership was acquired by present holder.

Ans. _____

Ques. 10. State when, how, in what amount and to what extent, the water diverted under above mentioned permit has been used.

Ans. Since about the year 1930 water has been diverted by pumping into to the Mains of the City of Brookings for general use of the residents of the City and for the use of S.D. State College. The extension has been for all the needs of the City.

(Sign) *Harold King*
Mayor, City of Brookings

I hereby certify that the foregoing testimony was read to the above subscriber before its signing, that I believe him to be the person he represents himself to be, and that said testimony was subscribed and sworn to before me, at my office in the City of Brookings, County of Brookings

State of South Dakota, on this 28th day of June A. D. 1956

Harold } Witnesses. *Harold*
Notary Public, Brookings County,
South Dakota

I, the undersigned, do hereby certify that I am a duly qualified elector residing in the immediate vicinity of the diversion works designated in the foregoing testimony, that I have no interest in the works, water or land above described, that I have read the foregoing testimony and that I know of my own personal knowledge that the matters therein stated are true.

Harold

Location No. -----	PROOF OF APPLICATION OF WATER TO BENEFICIAL USE	PETITION OF HOLDER	Amount of Water ----- c. f. s.	Source -----	County -----	Purpose -----	Place of Use -----	Date of recording -----	Received and filed -----
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May 14, 1956

Mayor
City of Brookings
Brookings, South Dakota

Dear Sir:

I understand from Mr. James B. Biggar, State Water Resources Commissioner, that your city desires information regarding water rights for municipal purposes, as provided by the new State Water Laws.

As it relates to municipalities, the new State Water Laws provide for the following:

- (1) Recognition of "vested rights" to the use of water for municipal purposes in the amount of water that was developed and used, or in the process of development and use, on the effective date of the Act, July 1, 1955. When wells are used to develop these water supplies, the "vested right" user is required by the Water Laws to establish a water right record with the Water Resources Commission. Special procedures have been set up by the Water Resources Commission for water users to establish their water right record. For this purpose I am enclosing two blank Form 2, Application for Permit to Appropriate Water, two blank Form 2A, Wells, Beneficial Use. Completion of two copies of Form 2 and Form 2A, together with one copy of Form 24 and a \$5 examination fee, when sent to the Water Resources Commission, will provide for the establishment of the Water Right record for the City of Brookings as specified by the new Water Laws.
- (2) A special and unique privilege is extended to South Dakota municipalities by the new Water Laws. By application, a town or city may arrange for withdrawal of water from further appropriation by others and reserve a reasonable amount of such water for the future needs of the municipality. As you know, city growth and well being depends many times upon the assurance of adequate municipal water supplies. Our water law, very wisely, provides opportunity for this assurance.

Mayor, City of Brookings
May 14, 1956
Page 2

Should the City of Brookings desire to obtain a future use withdrawal of water, please complete and send in the two enclosed copies of Form 2, Application for Permit to Appropriate Water, together with the other items listed on the attached check sheet for a complete water right application. A copy of Instructions to Applicant is enclosed, also, for your information.

- (3) This third provision of our Water Laws, as affects municipalities, is concerned with acquisition of new water rights for use of water, either from a reservation of water the City has established under (2) above or separately. This case concerns an application for a water right from works to be constructed by the City in the near future for water which the City needs right away. For these specific requests the same procedure as listed under (2) is to be followed, namely submission of two copies of Form 2 and the other items listed on the check sheet for a complete water right application. Forms and instructions are enclosed for this case, also, if you have use for them.

Should you have difficulty in your City's water right problems, I will be pleased to help.

Sincerely,

J. W. GRIMES
Chief Engineer

JWG:rs

Enc: Form 2 (6)
Form 2A (6)
Form 24 (1)
Instructions to Applicants
Check sheet

cc: James B. Biggar
Brookings
South Dakota

Hold File

November 27, 1956

Mr. Calvin Vaudrey
J. T. Banner & Associates
1104 Fifth Street
Brookings, South Dakota

Dear Mr. Vaudrey:

The copy of specifications for a well that the City of Brookings proposes to construct was received October 30, 1956.

When a well is constructed for all or any part of the water claimed under the withdrawal for future use Permit No. 217-3, which the City of Brookings now holds, a specific application for a permit must be submitted, which will follow basically the same processes as that for a new permit.

The necessary blank forms and instruction material are enclosed herewith.

Sincerely,

J. W. GRIMES
Chief Engineer

LW:rs

Enc: Form 2 (2)
Form 2A (2)
Instructions to Applicants
Check sheet for complete application

October 9, 1959

Mr. Homer Dwiggins, Mayor
and City Commission
City of Brookings
Brookings, South Dakota

Subject: Proposed Sanitary Landfill

Honorable Gentlemen:

In response to a letter from residents in the vicinity of the proposed sanitary landfill, an investigation of the matter was conducted on September 30, 1959. The matter was discussed with Mayor Dwiggins, and Robert Brodsky, City Engineer, accompanied the writer during the investigation. Copies of our letters to the persons requesting the investigation are attached.

Inasmuch as it is possible that further action will be taken by residents in the area, we wish to provide you with some information which concerns the operation of the proposed sanitary landfill. Only a limited number of studies have been made with respect to pollution of ground water in the vicinity of a sanitary landfill. One of the more comprehensive studies was carried out in California in an area somewhat similar to that proposed for your landfill. The study is entitled "Report on the Investigation of Leaching of a Sanitary Landfill" and is available from the State of California Water Pollution Control Board; Room 610; 721 Capitol Avenue; Sacramento 14, California. The article is also known as Publication No. 10. The studies resulted in a number of conclusions which can be summarized as follows:

1. There is no evidence of serious pollution to the ground water of a bacterial nature from the operation of a sanitary landfill.
2. The dissolved mineral content of the ground water will be increased in the immediate vicinity of the sanitary landfill, and this increase in dissolved mineral content will decrease as the distance away from the landfill increases.

Homer Dwiggins, Mayor
Brookings, South Dakota

October 9, 1959

It is extremely difficult to evaluate whether or not your operation will have a serious effect on the ground water quality in the area. The only basis which we have of evaluating such possibilities is from previous studies. The studies noted above appear to be best applicable to your situation. Should you be unable to obtain a copy of the Report, we would be glad to lend you our office copy.

The information which we have provided you in this letter is not intended to result in a conclusive answer to the potential pollution problem associated with your landfill operation. The available data indicates there is a possibility that the chemical quality of the groundwater in the immediate vicinity of the landfill could be impaired. The extent of this change in mineral content would be very difficult to predict. We would be glad to discuss this matter with you further if you so desire.

FOR THE DIVISION OF SANITARY ENGINEERING

Yours very truly,

Don C. Kalda, Chief
Water Pollution Control Section

DCK:mp

cc: District No. 2
District No. 3

COPY

COPY

October 9, 1959

Mr. C. B. Christie
Brookings, South Dakota

Dear Mr. Christie:

In response to your letter of September 4, 1959, a survey of the proposed sanitary landfill for the City of Brookings was made on September 30, 1959. The Brookings municipal officials were also contacted, and Mr. Robert Brodsky, City Engineer, was present during the survey.

A question was raised in your letter as to whether the operation of the sanitary landfill in an area approximately two miles south of Brookings would be detrimental to your groundwater supply. The proposed landfill is to be located in an area of abandoned gravel pits. Groundwater in the area is reported to be at a level of approximately 12 feet below the surface.

The well on your property is located approximately 1.5 miles from the proposed landfill area. In our opinion, there is little possibility that contamination of this well would result from the operation of the proposed sanitary landfill.

A copy of this letter is being provided to the City of Brookings since the matter was discussed with them during our investigation. Please feel free to contact us further if we might be of assistance or provide you with additional information.

FOR THE DIVISION OF SANITARY ENGINEERING

Yours very truly,

Don C. Kalda, Chief
Water Pollution Control Section

DCK:mp

cc: Homer Dwiggins, Mayor
District No. 2
District No. 3

COPY

COPY

October 9, 1959

Mr. George Cabbage
Brookings, South Dakota

Dear Mr. Cabbage:

In response to your letter of September 4, 1959, a survey of the proposed sanitary landfill for the City of Brookings was made on September 30, 1959. The Brookings municipal officials were also contacted, and Mr. Robert Brodsky, City Engineer, was present during the survey.

A question was raised in your letter as to whether the operation of the sanitary landfill in an area approximately two miles south of Brookings would be detrimental to your groundwater supply. The proposed landfill is to be located in an area of abandoned gravel pits. Groundwater in the area is reported to be at a level of approximately 12 feet below the surface.

The well on your property is located approximately 1.5 miles from the proposed landfill area. In our opinion, there is little possibility that contamination of this well would result from the operation of the proposed sanitary landfill.

A copy of this letter is being provided to the City of Brookings since the matter was discussed with them during our investigation. Please feel free to contact us further if we might be of assistance or provide you with additional information.

FOR THE DIVISION OF SANITARY ENGINEERING

Yours very truly,

Don C. Kalda, Chief
Water Pollution Control Section

DCK:mp

cc: Homer Dwiggin, Mayor
District No. 2
District No. 3

COPY

COPY

Brookings, South Dakota

September 4, 1959

State Department of Health
Attn: G. J. Van Heuvelen, M.D.

Dear Sir:

This is to advise you that the City of Brookings, South Dakota, has just purchased 160 acres of land in Medary Township, Brookings County, South Dakota, about 2 1/2 miles from the city, and that on this land is located numerous gravel pits filled with water, and that at least 25 homes will be affected by this new dump ground for the reason that all of them have the same water table and thus will be injurious to the health of said people living within the close proximity of the city dump. We feel that this matter should be investigated by your office and hence we would appreciate very much if you would look into this matter at once. Thanking you very kindly, we are

C. B. Christie Brookings, S.D.

George Cabbage Brookings, S.D.

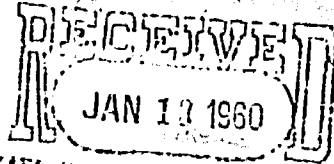
P. S. Will you please let us know how soon you can be here? We might also state that we can also secure a petition from all interested parties.

[illegible]

46-77

Rural Route #1
Brookings, S. Dak.
January 12, 1960

*Quoted
1-22-60*



STATE WATER RESOURCES COMMISSION
PIERRE, SOUTH DAKOTA

Water Resources Commission
Pierre, South Dakota

Gentlemen:

The City of Brookings has purchased 160 acres of land, the SE $\frac{1}{4}$ of Section 1, Medary Township 109, Range 50, which land has several abandoned gravel pits, ranging in depth to as deep as 18 feet. They have announced that these pits will be back filled with city garbage and usual dump ground rubbish.

This land, as well as several sections in that area, is underlaid with water saturated sand and gravel, which has been described to us as an underground lake that rises and falls if and when the river and creeks do so.

We feel it would be highly dangerous to the 30 or more shallow wells in this area to use these abandoned gravel pits as sanitary landfills. We were advised by the S.C.S. office to contact your office for advice.

We will appreciate any information you may be able to give us.

Very truly yours,

E. B. Christie

IV
Water Pollution
19

City Brookings

January 22, 1960

216-3

Mr. C.B. Christie
Rural Route 1
Brookings, South Dakota

Dear Mr. Christie:

Your letter of January 12, 1960 expressed concern about contamination of domestic water supplies in the area of the proposed sanitary landfill by the City of Brookings.

This is primarily a public health matter. Upon inquiry to the State Department of Health, I understand that they investigated the possibility of contamination and in their opinion the sanitary landfill would not be injurious to domestic water supplies in your well or other wells located 1.5 miles from the proposed Brookings landfill area. I understand, also, that this was explained in a letter to you dated October 9, 1959 from the Department of Health.

I appreciate your worries about the domestic water supply situation. However, according to the Health Department officials, there seems to be little likelihood that harm will come.

Sincerely,

J.W. GRIMES,
Chief Engineer

JWG:pp

ADDENDUM TO SPECIFICATIONS
FOR MUNICIPAL WATER WELL
Brookings, South Dakota

ADDENDUM NO. 1

Alternate Proposal; To be alternate to Proposal No. 1 contained in the body of the specifications.

Item No.	Work or Material	Quantity & Unit Price	Total Cost
1	Drilling 48 inch Hole (Rotary method)	60 lin. ft. at _____ words (\$ _____) per lin.ft. \$ _____	_____
2	32 inch concrete screen in place	30 lin. ft. at _____ words (\$ _____) per lin.ft. \$ _____	_____
3	32 inch Concrete casing in place	34 lin. ft. at _____ words (\$ _____) per lin.ft. \$ _____	_____
4	Gravel pack in place	50 cu. yds. at _____ words (\$ _____) per cu.yd. \$ _____	_____
5	40 inch Wrought iron Casing in place	15 lin. ft. at _____ words (\$ _____) per lin.ft. \$ _____	_____
6	Concrete (3000#) in place	5 cu. yds. at _____ words (\$ _____) per cu.yd. \$ _____	_____
TOTAL COST			\$ _____
If additional test holes and reports are required, add per test hole and report, the lump sum of \$ _____			

ADDENDUM NO. 2 --"A"--Materials & Work

Section A-5.3 OUTER CASING

Since completion time is a factor to be considered in this Contract and if this item should be the contributing factor to the anticipated time of completion the bidder may substitute metal culvert pipe, not to exceed 16 gauge, for this provided that the change is clearly stipulated in his proposal.

ADDENDUM NO. 3 --"A"--Materials & Work

Section A-3 PERMANENT WELL CONSTRUCTION

Alternate methods of constructing the well may be considered in lieu of the "Blind Casing" method provided the method is thoroughly explained and clearly set forth in the proposal and guaranteed to be equivalent in every respect.

ADDENDUM NO. 4 -- INNER SCREEN AND CASING

Throughout the Specifications where the words and numbers read "thirty six (36) inches outside diameter" should be changed to read thirty two (32) inches outside diameter.

CITY OF BROOKINGS

SPECIFICATIONS

FOR

MUNICIPAL WATER WELL

BROOKINGS, SOUTH DAKOTA

CITY COMMISSION

HOMER DWIGGINS, MAYOR

WILLIAM GOSBLE

LEO H. MONTEITH

LEO J. WEISE

W. J. BURDITT

C. D. HERREMAN, CITY AUDITOR

V. T. BANNER & ASSOCIATES

1104 FIFTH STREET

BROOKINGS, SOUTH DAKOTA

OCTOBER 1966

NOTICE TO BIDDERS

Notice is hereby given that the City of Brookings, South Dakota (hereinafter referred to as the City) will receive sealed competitive bids for the drilling and casing of a municipal water well. The proposed well will be 60" in diameter and about 60 feet deep and will include approximately 30 feet of 36" concrete screen, 30 feet of 36" concrete casing, 15 feet 60" wrought iron casing, gravel pack and concrete.

The bids must be prepared on forms supplied by the City of Brookings and filed with the City Auditor at the City Hall in Brookings, South Dakota not later than 8:00 P.M. October 29, 1966 at which time and place all bids will be publicly opened and read aloud in the presence of bidders and their representatives. No bids will be received after the specified hour and date set for opening.

All bids must be accompanied either by certified check, cashier's check or draft payable to the City of Brookings, South Dakota, in the amount of five percent (5%) of the total sum of the bid, such check or draft to be issued either by a state or national bank domiciled within the State of South Dakota. The check will be retained by the City of Brookings as liquidating damages if the successful bidder refuses or fails to enter into a Contract and Performance bond in record with his bid, when notified of the award.

The proposed construction contract together with the plans and specifications for the construction work are available at the office of the City Auditor, Brookings, South Dakota, and may be obtained by depositing the sum of ten dollars (\$10.00), which deposit will be returned to bonafide bidders upon return of the plans and specifications in good condition, within ten days (10) after the bids are received.

By virtue of statutory authority preference will be given to materials, products and supplies found or produced within the State of South Dakota.

Bids may not be withdrawn after the time fixed for opening them. The City of Brookings reserves the right to waive irregularities and to reject any or all bids.

Dated this 9th day of October 1966.

C. H. HARTMAN
CITY AUDITOR

INSTRUCTIONS TO BIDDERS

Bidders will observe the following instructions together with those contained in the "Notice to Bidders".

IB-1 CONTRACT DOCUMENTS

The following are part and parcel of the Contract and whenever the word "Contract" appears herein the same shall be held to include all of these items:

Notice to Bidders
Instructions to Bidders
Proposal Form
Specifications
Contract Form
Contractor's Performance Bond Form
Drawings

IB-2 DEFINITIONS

Wherever the words "Owner" or "City" are used herein, it shall mean the City of Brookings. Wherever the word "Bidder" is used in the documents, it shall mean each or any of the persons, partnerships, or corporations submitting proposals for the performance of the work covered by these specifications. Wherever the word "Contractor" is used herein, it shall mean the person, firm or corporation entering into the Contract for the performance of the work covered by these specifications. Wherever the term "Engineer" is used, it shall mean the Engineer employed by the Owner to supervise the construction of the Sewer Improvements covered by these specifications.

IB-3 PROPOSALS

Bids shall be made upon the form furnished herein with all items properly filled out; numerals shall be written in ink, and the signature of all persons signing shall be in longhand. The completed form shall be without interlinings, alterations or erasures.

Bids shall not contain any recapitulation of the work to be done, and alternative proposals will not be considered unless called for. No oral, telephonic or telegraphic proposals or modifications will be considered.

Before submitting a bid, bidders shall carefully examine the drawings, read the specifications, and form and terms of the Contract, shall visit the site of the work, and shall fully inform themselves as to all existing conditions and limitations, and shall include in the bid a sum to cover the cost of all items included in the Contract. Making a bid creates a conclusive presumption that these things have been done.

All bids must be sealed, addressed to and deposited with the City Auditor, Brookings, South Dakota on or before the day and hour set for opening of bids in the advertised "Notice to Bidders". The bids must be endorsed on the outside with the title of the work and the name of the bidder.

IB-4 PROPOSAL GUARANTEE

Each proposal shall, as a guarantee of good faith on the part of the bidder, be accompanied by a certified check drawn on an acceptable bank domiciled in South Dakota in an amount of not less than five percent (5%) of the total bid.

IB-5 WITHDRAWAL OF BID

Bids may be withdrawn by the bidder prior to, but not after, the time set for the opening of bids.

IB-6 INTERPRETATION OF DRAWINGS AND DOCUMENTS

Should a bidder find discrepancies in or omission from the Drawings or Specifications or should he be in doubt as to their meaning, he shall, at once notify the Engineer; and if, the point in question is not clearly and fully set forth, a written addendum or bulletin of instructions will be mailed or delivered to each person obtaining a set of Contract Documents as provided for in the "Notice to Bidders". Each person requesting an interpretation will be responsible for the delivery of his request to the Engineer. The Owner will not be bound by, nor responsible for, any other explanation or interpretations of the proposed documents than those given in writing as set forth in this paragraph. No oral instructions, interpretations or representations shall be binding upon the Owner.

IB-7 SUBSTITUTION FOR PATENTED AND SPECIFIED ARTICLES

Wherever in the Drawings or Specifications any material or process is indicated or specified by patent or proprietary name and/or by name of manufacturer, such specifications shall be deemed to be used for the purpose of facilitating description of the material and/or process desired, and shall be deemed to be followed by the words "or equivalent", and the contractor may offer any material or process which shall be equal in every respect to that so indicated or specified; provided, however, that if the material, process or article offered by the Contractor is not, in the opinion of the Engineer, equal in every respect, then the Contractor must furnish the material, process or article specified or one that, in the opinion of the Engineer, is the equal thereof in every respect.

IB-8 AWARD OR REJECTION OF BIDS

The Owner reserves the right to reject any part or all of any and all bids and to waive any informalities in bids received.

IB-9 CONSIDERATION OF THE PROPOSALS IN AWARDED OF CONTRACT

Promptly after the opening of the proposals a compilation of them will be prepared, and the certified checks of those bidders, who in the judgment of the Owner, should not be considered in making the award, will be returned. The other checks, except that of the successful bidder, will be returned as soon as a Contract is awarded or after a lapse of thirty (30) days of time from the opening of bids. Check of the successful bidder will be returned as soon as contract and bond are executed. The Contract will be awarded within thirty (30) days after the opening of bids unless all bids are rejected. The successful bidder will be required to execute the Contract and furnish the bond required within ten (10) days of receipt of the Notice of Award to him. Failure to do so shall be just cause for the annulment of the award and in the event of such annulment, the certified check of the bidder shall become the property of the City of Brookings. Award may then be made to another bidder or the Owner may call for other bids.

IB-10 - COMPARISON OF BIDS

Proposals will be compared on the basis of the Engineer's Estimate of Quantities, which are included in the Proposal Form. The basis of payment will be actual quantities of work performed and accepted. If upon completion of the project, the actual quantities show either increase or decrease from the quantities shown in the Proposal, the unit prices submitted in the Proposal shall still prevail.

PROPOSAL

TO THE CITY OF BROOKINGS

The undersigned hereby proposes and agrees that he will enter into and perform the Contract attached hereto, and of which this Proposal forms a part, and will do the work therein described on the terms and conditions therein set forth; and furnish all the labor, materials, tools, equipment, transportation and services for said work in strict conformity with the Specifications, forming a part of the Contract Documents for the prices shown in the following schedule.

(Bids will not be considered for a part of the Schedule)

Item No.	Work or Material	Quantity & Unit Price	Total Cost
1	Drilling (8 inch Hole - Blind casing method)	60 lin. ft. at words (\$) per lin. ft. \$	
2	36 inch Concrete screen in place	30 lin. ft. at words (\$) per lin. ft. \$	
3	36 inch Concrete casing in place	36 lin. ft. at words (\$) per lin. ft. \$	
4	Gravel pack in place	24 cu. yd. at words (\$) per cu. yd. \$	
5	30 inch wrought iron casing in place	16 lin. ft. at words (\$) per lin. ft. \$	
6	Concrete (5000%) in place	8 cu. yd. at words (\$) per cu. yd. \$	

TOTAL COST

If additional test holes and reports are required, add per test hole and report, the sum of \$

The undersigned has examined the location of the proposed work, and is familiar with the Drawings and Specifications and all Contract Documents related thereto, and the local conditions at the place where the work is to be done.

The undersigned understands and agrees that the estimated quantities submitted herewith are approximate only, and that the basis of payment will be the actual quantities.

If awarded the Contract the undersigned hereby agrees to sign said Contract and furnish the necessary bonds within ten (10) days of receipt of the notice of award of said Contract, and to begin work within _____ ()

days from date of receipt of Notice to Proceed, and agrees to complete the work _____ () working days from date of receipt of Notice to

Proceed.

The undersigned further agrees, that if awarded the Contract for the work included in this Proposal, to complete and deliver the work contemplated in accordance with the conditions set forth in the Contract Documents.

The undersigned has checked carefully all the above figures, and understands that the City of Brookings will not be responsible for any errors or omissions on the part of the undersigned in making up this bid.

Enclosed is a certified check in the sum of _____

WORDS

Said check is made payable to the City of Brookings and is given as a guarantee that the Bidder will enter into the Contract and Performance Bond in the forms attached hereto, if awarded the work, and the amount thereof represents the agreed liquidated damages that the City of Brookings will sustain if the Bidder fails or refuses to enter into said Contract in which event said check shall be immediately paid to the City of Brookings and retained by it as payment of said liquidated damages and not as a penalty.

Unless otherwise required by law, the undersigned agrees that the City of Brookings has the right to hold all bids received for a period of thirty (30) days after date of opening thereof.

NAME

BY

TITLE

ADDRESS

TELEPHONE

DATED THIS _____ DAY OF _____ 196 _____

S P E C I F I C A T I O N S

GC - GENERAL CONDITIONS

GC-1. SCOPE OF WORK

The work to be performed under this contract consists of furnishing all materials, equipment, supplies, labor and transportation, and performing all work in accordance with the Specifications and Drawings. The work shall be complete and all work, material, and services not expressly called for in the Specifications or not shown on the Drawings, which may be necessary for complete and proper construction to carry out the contract in good faith shall be performed, furnished and installed by the Contractor at no increase in cost to the Owner.

GC-2. CONTRACTOR'S PERFORMANCE BOND

The Contractor shall furnish a bond acceptable to the Owner in amount not less than 100 percent of the aggregate payments to be made under the contract.

GC-3. SITE INVESTIGATION

The Contractor acknowledges that he has satisfied himself as to the nature and location of the work, the general and local conditions, particularly those bearing on transportation, handling and storage of materials, the character of the equipment and facilities needed during the prosecution of the work and all other matters which can in any way affect the work or the cost thereof under this Contract. Any failure of the Contractor to acquaint himself with the available information concerning these conditions will not relieve him from responsibility for estimating properly the difficulties or cost of successfully performing the work.

GC-4. STAKING OUT WORK

The work to be done will be staked by the Engineer for the Contractor. The Contractor shall, without cost to the Owner, provide such material and give such assistance as may be required by the Engineer.

GC-5. BENCH MARKS AND SURVEY STAKES

Bench marks and survey stakes shall be preserved by the Contractor and in case of their destruction or removal by him or his employees, they will be replaced by the Engineer at the Contractor's expense, and his sureties shall be liable therefor.

GC-6. LINES AND GRADES

All work done under this Contract shall be done to the lines and grades shown on the Plans. The Contractor shall keep the Engineer informed, a reasonable time in advance of the times and places at which he wishes to do work, in order that lines and grades may be furnished and necessary measurements for record and payment may be made with the minimum of inconvenience to the Engineer and of delay to the Contractor.

GC-7. WORK DONE WITHOUT LINES OR GRADES

Any work done without being properly located and established by bench lines, offset stakes, bench marks, or other basic reference points located, established or checked by the Engineer, or done without the supervision of an Inspector or other representative of the Engineer, may be ordered removed and replaced at the Contractor's cost and expense.

GC-8. FIGURED DIMENSIONS TO GOVERN

Indicated dimensions, when given on the plans, shall be accurately followed, even though they differ from scaled measurements. No work shown on the plans, the dimensions of which are not indicated, shall be executed until the instructions have been obtained from the Engineer as to the dimensions to be used.

GC-9. CONTRACTOR TO CHECK PLANS AND SCHEDULES

The Contractor is required to check all dimensions and quantities on the Plans and schedules given to him by the Engineer and shall notify the Engineer of any discrepancy between the Plans and the conditions on the ground, or any error or omission in plans, or in the layout as given by stakes, points, or instructions, which he may discover in the course of the work. The Contractor will not be allowed to take advantage of any error or omission in the Plans or Contract Documents, as full instructions will be furnished by the Engineer should such error or omission be discovered, and the Contractor shall carry out such instructions as if originally specified.

GC-10. DRAWINGS TO BE FURNISHED BY CONTRACTOR

The Contractor shall supply such working drawings and drawings of devices to be furnished under this Contract as are called for herein or as required by the Engineer, to make clear the details of construction and of devices. Unless otherwise herein specified, such Drawings shall be submitted to the Engineer for his approval upon his request. Should any drawings furnished by the Contractor not be approved by the Engineer, the Contractor shall make the revisions required and again submit them to the Engineer for approval. After due approval by the Engineer, these drawings shall become a part of this Contract and the work shall be done in conformity therewith. No such work shall be begun or devices purchased until the drawings covering it or them have been approved.

The approval by the Engineer of any drawing or any method of work proposed by the Contractor shall not relieve the Contractor of any of his responsibility for any errors therein, and shall not be regarded as any assumption of risk or liability by the Owner or any officer or employee thereof, and the Contractor shall have no claim under this Contract on account of the failure or inefficiency of any plan or method so approved. Such approval shall be considered to mean merely that the Engineer has no objection to the Contractor's using, upon his own full responsibility, the plan or method the Contractor proposes.

GC-11. AUTHORITY OF INSPECTORS

Inspectors shall be authorized by the Engineer to inspect all work done and all materials furnished. The Inspector shall have full authority to reject materials or suspend work until any questions at issue can be referred to the Engineer. The Engineer and his inspectors shall have unrestricted access to all parts of the work at all times.

GC-12. DRAWINGS AND SPECIFICATIONS CO-OPERATIVE

The Drawings and Specifications shall be considered as co-operative and work and materials called for by one and not shown or mentioned on the other shall be done or furnished in as faithful and thorough a manner as though fully covered by both.

GC-13. CHARACTER OF WORK

The work shall be executed in the best and most workmanlike manner by qualified, careful and efficient mechanics, in strict accordance with the Drawings and Specifications.

GC-14. QUALITY OF MATERIALS

Except as otherwise specified all materials shall be of the best quality of their respective kinds.

GC-15. PROTECTION OF MATERIALS AND WORK

The Contractor shall, at all times carefully and properly protect all materials, both before and after being used on the job, and all work performed by him and provide any special protection from weather deemed necessary without additional cost to the Owner.

GC-16. SUSPENSIONS FOR CLIMATIC CONDITIONS

The Engineer may order the Contractor to suspend any work that may be subject to damage due to climatic conditions. In such case an extension of time may be granted at the discretion of the Engineer.

GC-17. TESTS OF MATERIALS

All specified and required tests for approval of source of materials shall be made at the expense of the Contractor by a properly equipped laboratory of established reputation, whose work and testing facilities shall be approved by the Owner. Approval of materials based on acceptable tests will apply only while such materials as furnished equal or exceed the tested samples or test specimens in quality and minimum requirements. Any change in origin, method of preparation, or manufacture of such materials will require new tests and approval thereof. Reports of all tests shall be furnished to the Owner in as many certified counterparts as may be required by the said Owner.

GC-18. REMOVAL OF CONDEMNED MATERIALS OR WORK

The Contractor shall remove from the site of the work, without delay, all rejected and condemned materials or structures of any kind brought to or incorporated in the work, and upon his failure to do so, or to make satisfactory progress in so doing, within forty-eight (48) hours after the service of a written notice from the Engineer ordering such removal, the condemned materials or structures may be removed by the Owner and the cost of such removal be taken out of the money that may be due or may become due the Contractor on account of or by virtue of this Contract. No such rejected or condemned material shall again be offered for use by the Contractor under this or any other Contract under this project.

GC-19. DEDUCTIONS FOR UNCORRECTED WORK

If the Engineer deems it inexpedient to correct work injured or done not in accordance with the Contract, an equitable deduction from the contract price shall be made therefor.

GC-20. STORAGE OF MATERIALS

Materials shall be stored so as to insure the preservation of their quality and fitness for the work. Space needed for storage shall be provided by the Contractor at his expense.

GC-21. CLEANING UP

The Contractor shall not allow the site of the work to become littered with trash and waste materials, but shall maintain the same in a neat and orderly condition throughout the construction period. The Engineer shall have the right to determine what is or is not waste material or rubbish and manner and place of disposal. On or before the completion of the work the Contractor shall, without charge therefor, carefully clean out of all pits, pipes, chambers or conduits and structures, and shall tear down and remove all temporary structures built by him, and shall remove all rubbish of all kinds from any of the tracts or grounds which he has occupied and shall leave them in first-class condition.

GC-22. PUBLIC CONVENIENCE AND SAFETY

Prosecution of the work and storage of materials shall be handled so as to cause as little obstruction to public and private travel as is necessary.

GC-23. BARRICADES, WARNING SIGNS, ETC.

Highways, drives and streets closed to traffic shall be protected by effective barricades. All barricades and obstructions shall be illuminated at night. No direct payment shall be made for the construction and maintenance of barricades, directional signs and lights. The cost of these items shall be included in the prices bid for the various items of work included in the proposal.

GC-24. PRESERVATION AND RESTORATION OF PROPERTY

The Contractor shall be responsible for the preservation of all public and private property, trees, fences and other property in an adjacent to the work to be done under this Contract; shall exert every precaution to prevent damage or injury thereto; and shall exercise the precautions necessary to prevent damage to pipes, conduits and other underground structures. When any damage or injury is done to public or private property by or on account of any act, omission, neglect or misconduct in the execution of the work, or in consequence of the non-execution thereof on the part of the Contractor, such damage or injury will be corrected by the Contractor and at the Contractor's expense.

GC-25. PATENTED DEVICES, MATERIALS AND PROCESSES

The Contractor shall hold and save the Owner harmless from liability of any patented article or appliance manufactured or used in the performance of this Contract.

GC-26. SUB-LETTING OF CONTRACT

No part of this Contract, except for the manufacture of materials, may be sub-let without the approval of the Owner.

GC-27. PAYMENT FOR LABOR AND MATERIALS

The Contractor agrees that he will pay promptly for work, services, and labor and for sub-contractors and equipment employed on the work, and for all labor and materials incidental to the completion of the work. The showing of receipts for payment of labor and materials and payment of sub-contractors may be required by the Owner before any partial or final payment is allowed or made.

GC-28. INSURANCE

The Contractor shall maintain during the life of this Contract, adequate Workmen's Compensation Insurance for all his employees on the work, and in

case any work is sub-let, the Contractor shall require the sub-contractor similarly to provide Workmen's Compensation Insurance for the latter's employees, unless such employees are covered by the protection accorded by the Contractor.

The Contractor shall maintain during the life of this Contract such Public Liability and Property Damage Insurance as shall protect him and any sub-contractor performing work covered by this Contract, and the Owner for claims for damages for personal injury, including wrongful death, as well as for claims of property damages, which may arise from operations under this Contract, whether such operations be by himself or by any sub-contractor or anyone directly or indirectly employed by either of them.

GC-29. ACCIDENT PREVENTION

Federal and State laws relating to the public must be observed, and the Contractor shall at all times, whether or not so specifically directed by the Engineer, take necessary precautions to insure the protection of the public.

GC-30. DAMAGES

The Contractor hereby expressly binds himself to indemnify and save harmless the Owner against all suits or actions of every kind and nature brought or which may be brought against the Owner for and on account of any injuries or damages received or sustained by any person, firm or corporation, or persons, firms or corporations, in connection with or on account of the construction of the work under this Contract or by or in consequence of, any negligence in connection with same or on account of the use of any improper or defective materials or on account of any poor workmanship or on account of any act of commission or omission of the Contractor or his, its or their sub-contractors, agents, servants, or employees, or for any cause arising out of the performance of this Contract.

GC-31. EXTRA WORK

The Contractor shall do any work, not herein provided for, which may be found necessary to carry out and complete the construction. The value of any such extra work shall be determined in one of the following ways: (a) By estimate and acceptance in a lump sum; (b) By unit prices agreed upon; (c) By actual cost plus 15%. In computing such actual cost, no interest, depreciation of plant overhead cost, or contingencies shall be included, but shall be taken to be allowed for in the said 15%, which allowance shall include all profit.

GC-32. TESTING COMPLETED WORK

Before final acceptance, all parts of the work shall be tested and each part shall be in good condition, and working order or shall be placed in such condition and order at the expense of the Contractor. All tests of completed work required under this Contract shall be made under the direction of the Engineer by and at the expense of the Contractor, who shall repair at his own expense all damage resulting therefrom.

GC-33. PLACING WORK IN SERVICE

If desired by the Owner, portion of the work, as completed, may be placed in service, the Contractor to give proper access to the work for this purpose; but such use and operation shall not constitute an acceptance of the work, and the Contractor shall be liable for defects due to faulty construction until the entire work under this Contract is finally accepted.

GC-34. DEFECTIVE WORKMANSHIP AND MATERIALS

During a period of one year from and after the date of the final acceptance by the Owner of the work embraced by this contract, the Contractor shall make all needed repairs arising out of defective workmanship or materials, or both, which, in the judgment of the Owner, shall become necessary, during such period. If within ten days after the mailing of a notice in writing to the Contractor, or his agent, the said Contractor shall neglect to make, or undertake with due diligence to make, the aforesaid repairs the Owner is hereby authorized to make such repairs at the Contractor's expense; providing, however, that in case of an emergency where, in the judgment of the Owner, delay would cause serious loss or damage, repairs may be made without notice being sent to the Contractor and the Contractor shall pay the cost thereof.

GC-35. MONTHLY ESTIMATES AND PAYMENTS

On or about the first day of each month, the Engineer will make an approximate estimate of the value of work done and unused materials delivered for, and stored on the site of, the work during the previous calendar month. After each such estimate shall have been approved by the Owner, the Owner shall pay the Contractor ninety (90%) percent of the amount of such estimated sum on or before the twentieth day of said month.

GC-36. OWNER'S RIGHT TO DO WORK

If the Contractor should neglect to prosecute the work properly or fail to perform any provision of the contract, the Owner, after three days' written notice to the Contractor, may, without prejudice to any other remedy it may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor.

GC-37. CONTRACTOR'S RESPONSIBILITY FOR WORK

Until the final acceptance of the work by the Engineer as evidenced in writing, the Contractor shall have charge and care thereof, and shall take every necessary precaution against injury or damage to any part thereof by action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore and make good all injuries or damages to any portion of the work or materials occasioned by any of the above causes before its completion and acceptance, and shall bear the expense thereof.

SC - SPECIAL CONDITIONS

SC-1. DESCRIPTION OF WORK

The work to be performed under these specifications consists of furnishing of all materials, equipment, tools and plant and the performance of all necessary skill and labor for the drilling and casing of a Municipal Water Well for the City of Brookings. The well will be about 60 feet deep. A 36" diameter concrete screen approximately 30 feet long shall be installed at the bottom with 34 feet of concrete casing extending from the screen to the surface along with other appurtenances.

SC-2. LOCATION OF WELL.

The well will be located on property owned by the City of Brookings adjacent to U. S. Highway No. 77 about one (1) mile north of Brookings. A more exact location of the well is shown on the attached map.

SC-3. CONTRACTOR'S QUALIFICATIONS

Experience, qualifications, responsibility and past performance are of major importance in this portion of the contemplated work.

Therefore, the Bidders must submit to the Engineer at the time set for opening bids the following information:

A list of wells of similar nature and magnitude in similar anticipated formations.

A statement of five years a continuous operation.

A statement of year, model, make, and condition of equipment to be used.

A statement of experience and name of driller to be used on this project.

A statement that bidder has necessary raw materials in stock or have them readily available without delay.

A statement of responsibility that Contractor has not been irresponsible or negligent in providing immediate attention to any request for services, information or data on work completed for any owner.

SC-4. LIQUIDATED DAMAGES

The damages that may result from any delay in completion of the work by the time agreed upon will be difficult of ascertainment. If the work, or any part thereof, is not completed on or before the date fixed for its completion by the terms of the Contract, the Contractor shall pay the City of Brookings the sum of fifteen (\$15.00) dollars per day for each calendar day's delay until the work is satisfactorily completed. Extension of the date of completion may be made by the City due to delays which are no fault of the Contractor.

SC-5. COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK

The Contractor shall begin work within the time after receipt of Notice to Proceed and shall complete all work within the time stated in his proposal. The capacity of the Contractor's plant and the force employed shall be such as to insure the completion of the work within the specified period of time.

A - MATERIALS AND WORK

A-1. SCOPE

The work shall include drilling the well, furnishing and installing all well screen and casing, sampling, testing and furnishing all plant and equipment and the performance of all labor necessary to complete the item in accordance with these specifications. The casing shall extend from four feet above the ground surface to the top of the screen. The screen shall extend to the depth of the hole. Furnishing and installation of pumping equipment and pump house construction is not included as part of this contract.

A-2. TEST WELLS

The Contractor shall first drill a test hole to log the ground and secure samples of the formation and definitely locate the depth to static water level and depth to shale. Upon completion of the test hole he shall report to the Engineer and provide him with samples of all water bearing formations and a comprehensive written report, together with an estimate of the probable yield of a well built at test site. If this report is satisfactory to the City Commission and the Engineer, a permanent well shall be built. If the report is not satisfactory, then further tests shall be made under direction of the City Commission and the Engineer until a satisfactory site is selected.

A-3. PERMANENT WELL CONSTRUCTION

The permanent well shall be constructed by the "blind casing" or pullback method completely penetrating the water bearing formation to a depth of approximately sixty (60) feet with minimum 60 inch diameter casing.

The Contractor shall begin the excavation with a casing of sufficient size to insure the completion with the minimum casing at the bottom. This minimum casing shall run the entire depth of the well.

After sinking the temporary minimum casing, the Contractor shall then set and also carefully center the permanent well screen and casing. The annular space around the screen and casing to the top of the water bearing formation shall be filled with a selected gravel pack. This gravel pack shall be graded fine or coarse as conditions may require. It shall be coarser than the water bearing formations encountered to insure the free entrance into the well of all available ground water, but fine enough to completely stabilize the strata and furnish sand free water to the full capacity of the well.

As the annular space above referred to is being filled with the gravel pack, the minimum temporary casing shall be gradually withdrawn. Care shall be exercised in withdrawing it so as to keep the level of the gravel at least two (2) feet above the bottom of the temporary casing. This is to insure that all of the annular space will be filled with gravel.

The permanent outer casing shall be placed concentrically with the inner casing and extend from the water bearing formation to the height of the inner casing.

The annular space between the permanent outer casing and the drill hole shall be filled with concrete not less than six (6) inches thick up to within six (6) inches of the top of the casing. Dowels shall be placed into the top of the concrete so that it may be tied to the pump house floor at a later date.

The well when completed shall be true to line and shall vary not more than 0.3 of one percent (1%) from a plumb line.

A-4. PROTECTION OF QUALITY OF WATER

During construction of the well care shall be exercised by the Contractor to maintain the premises in a sanitary condition and to avoid as much as practicable the entrance of contaminated water into safe water-bearing formations. Any water or materials used in actual construction operations shall be reasonably free of contamination. The Contractor shall be required to maintain formations above the aquifer in their natural state and shall exercise extreme care in the performance of the work in order to prevent the breakdown or caving-in of strata overlying that from which water is to be drawn. In the event the well becomes contaminated or that water having undesirable physical or chemical characteristics enters the well due to the negligence of the Contractor, such labor and materials including casings, seals, sterilizing agents or other materials that are required to eliminate the contamination or to shut off the undesirable water shall be furnished by the Contractor at no additional expense to the City.

A-5. MATERIALS

A-5.1 Inner Casing

The well shall have a permanent inner casing not less than thirty-six (36) inches in outside diameter and constructed of reinforced centrifugal cast concrete. It shall be cast in four (4) foot lengths. The ends of the sections shall be smooth and true and sealed water tight. The permanent inner casing shall extend from top of screen to a point four (4) feet above ground level.

A-5.2 Screen

The well screen shall be constructed of reinforced centrifugal cast concrete and shall be at least thirty (30) feet in length as installed in the well. "Kelly" concrete screen or an approved equal shall be used.

The screen openings must enlarge inwardly and must be cut straight through the tube from the outside to the inside to provide easily cleanable inlets. The inlet openings must be uniform in size and shape and spacing. The water inlet shall be at least $1/8"$ and not over $3/16"$ in width on the outside and at least $3/8"$ on the inside of the tube. The concrete shall be composed of three parts clean sand to one part of Portland Cement, it shall be steam cured and seasoned at least thirty (30) days before using.

A-5.3 Outer Casing

The permanent outer casing shall be not less than 60 inches outside diameter No. 6 gauge genuine wrought iron.

A-5.4 Gravel Pack

Gravel for gravel pack shall be clean quartz filter gravel, properly graded and containing not more than two (2) per cent calcium. The Contractor shall submit to the Engineer for approval certified analysis both as to size and character of the gravel he proposes to use.

A-5.5 Concrete

All concrete poured at the site shall have a minimum compressive strength of 5000 psi and shall contain an air entraining admixture.

A-6. TESTING COMPLETED WELL

Upon completion of the well the Contractor shall furnish, set and operate a temporary pump having a capacity of at least 1,000 GPM. He shall operate the pump for a continuous period of at least ten (10) hours and as much longer as may be necessary to develop clean the well and furnish clear and sand free water. During the period of pumping the Contractor will furnish satisfactory measuring devices to record the rate of flow and to record drawdown, a record at half hour intervals shall be made and delivered to the Engineer on completion of the test. The test shall run continuous with not more than one (1) hour shut down for adjustments.

The work shall be done by competent workmen in a neat and orderly manner and the well left in a serviceable condition and ready for the use intended.

A-7. WARRANTY

The Contractor shall warrant all workmanship, material, and machinery entering into the construction of the well herein set forth against inherent defects and to replace any part or parts which may prove defective within one year from completion and acceptance of said well by the Commissioners and Engineer.

A-8. METHOD OF MEASUREMENT & BASIS OF PAYMENT

A-8.1 Drilling

The drilling of permanent well will be measured in lineal feet of depth. The unit prices for drilling as shown in the Proposal includes the drilling of the test hole and permanent well, taking drilling samples, sampling water, testing draw-down and discharge capacity and furnishing all equipment and labor necessary to complete the items in accordance with these Specifications.

A-8.2 Casing

The casing will be measured in lineal feet. The unit prices for the various sizes and types of casing shown in the Proposal shall include furnishing and installing the casing in accordance with these Specifications.

A-8.3 Concrete Screen

The screen shall be measured in lineal feet. The unit price for the concrete screen shown in the Proposal shall include furnishing and installing the screen in accordance with these Specifications.

A-8.4 Gravel Pack

The gravel pack shall be measured in cubic yards. The unit price for the gravel pack in place as called for in the Proposal shall include furnishing and placing the material in its final position in accordance with these Specifications.

A-8.5 Concrete

Concrete shall be measured in cubic yards. The unit prices for the concrete in place as called for in the Proposal shall include furnishing and placing of the concrete in accordance with these Specifications.

A-8.6 Test Holes and Reports

The payments for the items above for the permanent well construction shall include one test hole prior to its construction. No additional payment will be allowed for drilling this test hole or preparing the report. If additional test holes are found to be necessary or desirable the lump sum item for payment of test hole and report as shown in the Proposal shall become a pay item.

CONTRACT

THIS AGREEMENT made and entered into this _____ day
of _____, 195____, between the City of Brookings, South Dakota
and _____
_____ of _____ in the State of _____
hereinafter called the Contractor.

WITNESSETH that for and in consideration of the payments, covenants and agreements hereinafter mentioned to be made and performed by the parties hereto, the said parties hereby covenant and agree as follows:

That the Contractor at his own proper cost and expense, shall do all the work and furnish all labor, materials, equipment and tools necessary to construct in good workmanlike and substantial manner and to the satisfaction of the Engineer, the Municipal Water Well as shown in the Proposal. The Contractor shall perform the work in strict conformity with the Specifications attached hereto, and the plans on file in the City Auditor's office, all of which Plans and Specifications are hereby made a part hereof with the same force and effect as if attached hereto or spread at length herein.

In consideration of the covenants and agreements to be kept and performed by the Contractor and for his faithful performance of this contract and the completion of the work embraced herein according to the Plans and Specifications and conditions herein contained and referred to, the City of Brookings shall pay and the Contractor shall receive and accept as full compensation for everything furnished and done by the Contractor under this Contract and also for all loss or damage arising out of the nature of the work, the action of the elements or from any unforeseen contingencies or difficulties encountered in the prosecution of the work, the unit or lump sum prices stipulated in the Proposal.

Time shall be of the essence of this Contract on the part of the Contractor and it is hereby agreed by the parties hereto that in case all of the work called for under said Contract, in all parts and circumstances, is not completed by and at the time herein mentioned or by and at such other time to which the period of completion may be extended, damages will be sustained by the City of Brookings, South Dakota, and that it is and will be difficult or impossible to ascertain and determine the actual damage which the City will sustain in the event of and by reason of such delay and it is therefore agreed that said Contractor shall pay to the City of Brookings, as liquidated damages and not as penalty, fifteen dollars (\$15.00) per day for each and every calendar day of the additional time in excess of the Contract time limit and any granted extension thereof, which said sum is hereby agreed upon as the damage that will be suffered by the City of Brookings, South Dakota, by such failure to complete the work within the time named; and the same shall be deducted from the amount due or to become due to the Contractor and such payments or deductions shall not in any degree release the Contractor from further obligations and penalties in respect to the fulfillment of the entire Contract, or

any right which the City may have to claim, sue for and recover as compensation and damages for non-performance of this Contract. No charge will be made by the Contractor for hindrances or delays from any cause whatsoever in the progress of the work.

Said work shall be commenced within _____ (_____) days after Notice of Award and shall be completed within _____

(_____) calendar days after Notice of Award, PROVIDED, however, that should the Contractor be delayed in the prosecution of the work by any act, neglect, or fault of the City of Brookings or by any damage caused by fire, flood, or other casualty over which the Contractor has no control, then the time herein set for the completion of the work may be extended. There is hereby reserved the right to accept and make use of any portion of said work before the completion of the entire work without invalidating the Contract, or binding said City of Brookings to accept the remainder of the work or any portion thereof whether completed or not, and without in any way thereby releasing the surety on the bond of said Contractor.

Monthly payments based upon approximate estimates of the amount of and value to the City of expenses incurred during the preceding month, as computed by the Engineer and approved by the City Commission shall be made to the Contractor during the progress of the work on or before the 20th day of each calendar month, provided that fifteen per cent (15%) of the amount of the estimated value of the work done shall be retained until the work is fully completed and accepted by the City of Brookings and this Contract in all respects fully performed by said Contractor. The making of said monthly payments by the City of Brookings shall not be construed as an acceptance on the part of the City of any part of the work done or materials furnished under this Contract but simply as payments on account, provided, also that such monthly estimates need not be paid unless the Contractor shall furnish the City of Brookings an affidavit showing a complete list of all just debts incurred, the amount paid thereon and the amount owing by the Contractor on such debts, including labor, sub-contractors, materials, food and fuel bills, board and grocery bills contracted or incurred in the performance of this Contract. Within a reasonable time after the acceptance of the work according to the Contract, the City of Brookings shall certify a final estimate based upon the quantities measured by the Engineer and accepted according to the unit prices hereto attached, showing the total work done or required and the amount due the Contractor therefor. After deducting therefrom all provisions of this Contract, or as required by law, payment in full shall be made to the Contractor; provided, that before such final payment is made the City of Brookings may require the Contractor to show to its satisfaction that all just debts due to all laborers, mechanics, materialmen and other persons who have supplied said Contractor, or any sub-contractor working under this Contract, with materials or goods of any kind for this work, including labor, materials, food and fuel bills, board and grocery bills, have been paid. All prior, partial estimates and payments shall be subject to correction in the final estimate and payment.

It is understood and agreed that the Notice to Bidders, Instructions to Bidders, all included requirements of the Proposal, Bond, Specifications and Plans, as hereto attached and/or referred to in said documents, form essential parts of this Contract, and whether the same are attached hereto or are on file with the City Auditor of Brookings, they shall have the same force and effect as if spread at length herein.

Payment of the final estimate under this Contract, including the fifteen percent (15%) of partial estimate retained, as herein provided, shall not be due or payable until the Notice of Completion and Acceptance of the work under this Contract shall have been given by publication and in the manner required by the laws of the State of South Dakota.

IN WITNESS WHEREOF, the City Commission of the City of Brookings, South Dakota has caused this agreement to be executed by its Mayor and sealed and attested by its Auditor in its behalf, and the Contractor has signed the same, the day and the year in this Contract first above written.

CITY OF BROOKINGS

By _____
Mayor

Attest:

City Auditor

Contractor

By _____

CONTRACTOR'S PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we

as Principal, and

as Surety, for valuable consideration, are held and firmly bound unto the
City of Brookings, hereinafter called the Obligor, in the penal sum of

(\$)

Dollars, lawful money of the United States, well and truly to be paid unto
said Obligor, for the payment of which we bind ourselves, our heirs, executors,
and assigns, jointly and severally and firmly by these presents.

This obligation is made for the use of said Obligor and also for the
use and benefit of all persons who may perform any work or labor or furnish
any material in the execution of the Contract hereinafter mentioned.

The conditions of the foregoing obligation are such that, whereas,
on the _____ day of _____, 1935, the said
Principal signed and executed a written contract with said Obligor for the
construction of the Water Supply Improvements included in the Proposal,
as set forth in detail in the Notice to Contractors, Proposal, Plans and
Specifications referred to in said Contract, all of which are hereby made
a part hereof as if written herein at length.

NOW THEREFORE, if the said Principal shall well and truly perform and
complete said Contract in accordance with the terms of said Contract, Notice
to Bidders, Instructions to Bidders, Proposal, Plans and Specifications, and
comply with all requirements of law, and pay, as they become due and payable
all just claims for work or labor performed, and material furnish in the
execution of said Contract, then this obligation shall be null and void,
otherwise it shall remain in full force and effect.

IN TESTIMONY WHEREOF we have hereunto subscribed our names and affixed
our seals this _____ day of _____ A. D., 195 _____.

(Seal)

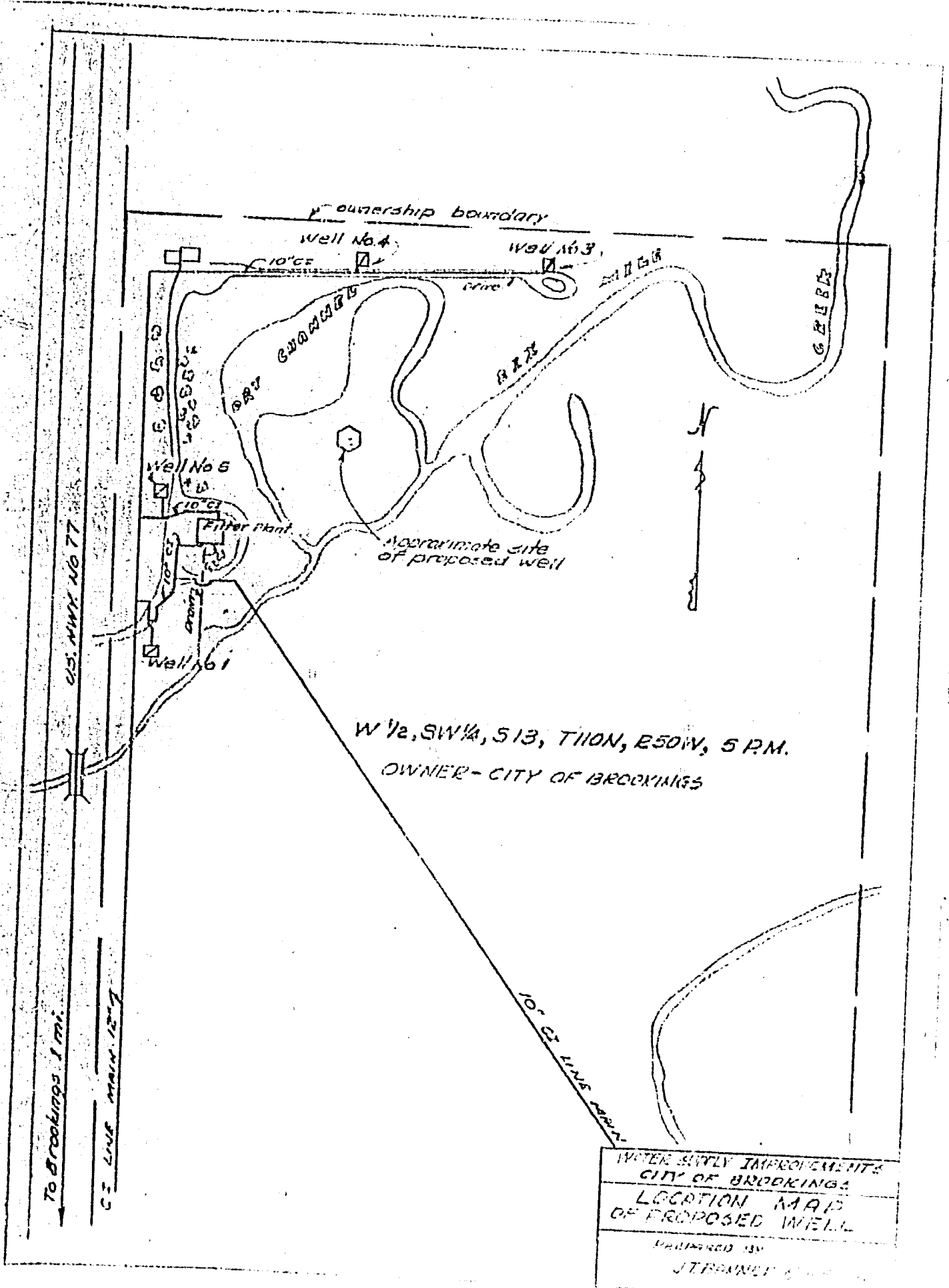
WITNESS:

(Seal)

Approved _____ 195 _____

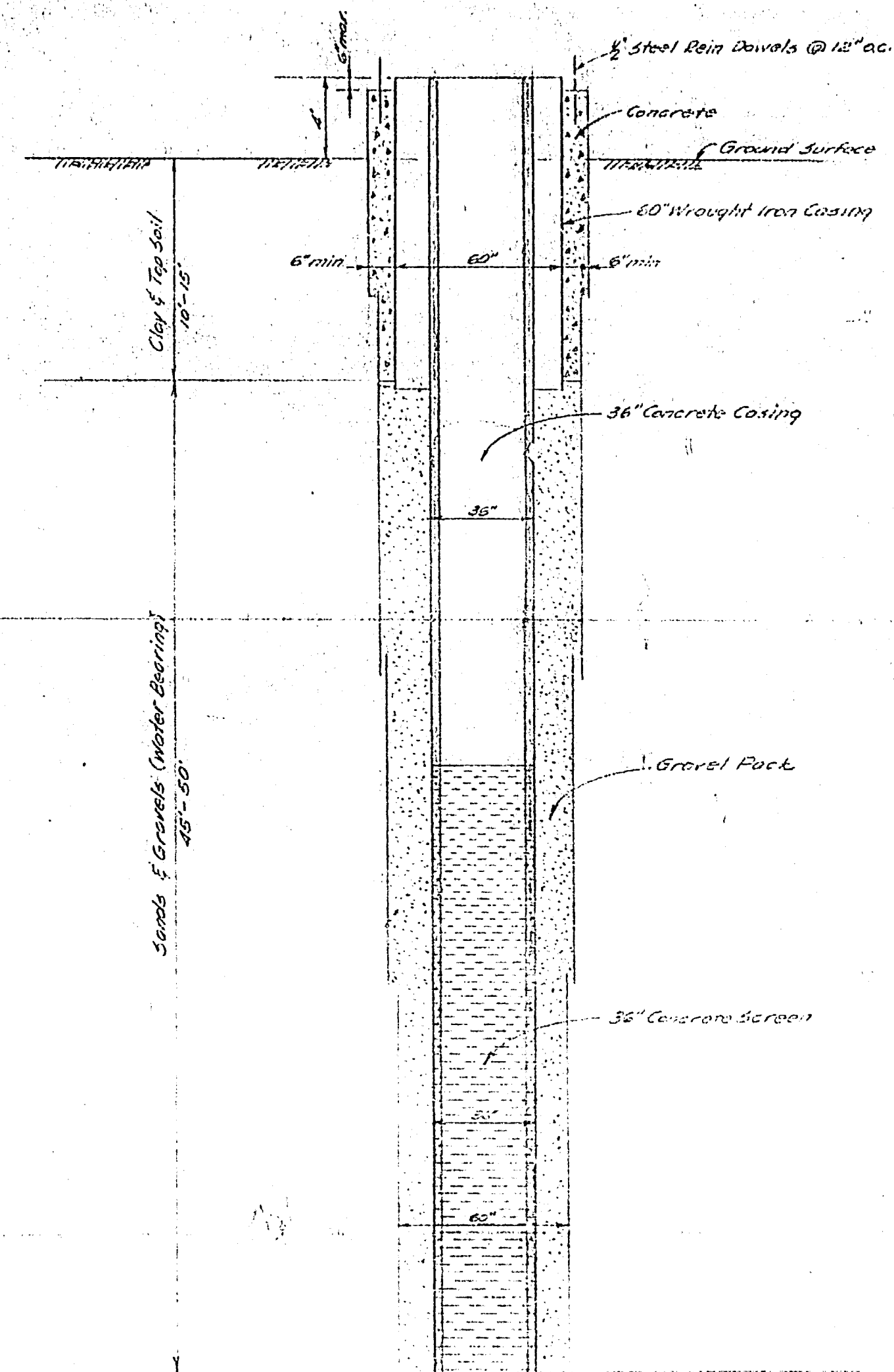
City of Brookings, South Dakota

By _____ License South Dakota agent



W 1/2, SW 1/4, S 13, T 110N, R 50W, S 13 P.M.
OWNER - CITY OF BROOKINGS

WATER SUPPLY IMPROVEMENTS
CITY OF BROOKINGS
LOCATION MAP
OF PROPOSED WELL
DRAWN BY
J. STANLEY



Scale: Vert. 1" = 5'
 Horiz. 1" = 5'

DEPARTMENT OF WATER & NATURAL RESOURCES

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

GREAT FACES. GREAT PLACES

March 22, 1991

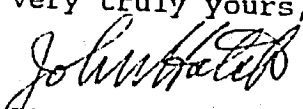
Orrin P Juel, Mayor
City of Brookings
PO Box 270
Brookings SD 57006

Dear Mayor Juel:

The Water Management Board has validated the enclosed Vested Water Right No. 216-3. This validation gives legal status to the claim and is the final document for your vested right.

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

Very truly yours,



JOHN HATCH, Chief Engineer
Water Rights Division
605 773-3352

enclosure

SOUTH DAKOTA

VALIDATION OF VESTED WATER RIGHT CLAIM NO. 216-3

Date Claim Accepted For Filing June 29, 1956.

Date of Validation September 27, 1989.

Pursuant to SDCL 46-2A-17 the Water Management Board validated Vested Water Right Claim No. 216-3 for the City of Brookings, PO Box 270, Brookings SD 57006 with the following limitations, conditions and qualification.:

1. Vested Water Right No. 216-3 appropriates 3.85 cubic feet of water per second from 4 wells approximately 61 to 66 feet deep. All four wells are located in the NW 1/4 SW 1/4, Section 13, T110N, R50W.
2. The appropriated water is used for supplying water for the City of Brookings and may not exceed the amount of water needed for beneficial use for municipal purposes.

The water is to be used during the following annual period:
January 1 - December 31

3. The priority date of the Vested Water Right is: January 1, 1930.
4. The water use system has been constructed and water has been applied to beneficial use.
5. Water Rights obtained in compliance with the laws of the State of South Dakota must not be unlawfully impaired by this appropriation.

WATER MANAGEMENT BOARD

By: _____

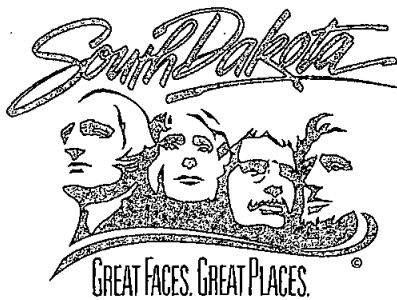
John Hatels
Chief Engineer

Division of Water Rights

Dept. of Water and Natural Resources

MAR 22 1991

date



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

216-3

February 16, 2017

Delvin DeBoer
AE2S
1300 W 57th St, Suite 200
Sioux Falls SD 57107

Dear Mr. DeBoer:

As requested, the following table provides a list of water rights held by the City of Brookings. These tables do not include the irrigation rights, the flood control permit or the permit authorizing the relocation of Six Mile Creek for airport expansion held by the city. Please review the list to see how it compares with the numbers you compiled. If there are discrepancies, please contact me so we can determine the correct amount.

Future Use Permits (reserved water for future development)

No.	Source & Future Use Area	Next Review	Amount Remaining in Reserve
1598-3	Big Sioux:Aurora Aquifer (BS:A) N 1/2 Sec 13-T110N-R50W	Spring, 2019	2,426 acre-feet annually
217-3	Big Sioux:Six Mile Creek Aquifer (BS:SMC) W 1/2 Sec 4, E 1/2 Sec 5, all in T109N-R49W; E 1/2 Sec 32, S 1/2 Sec 33, W 1/2 Sec 28; SE 1/4 Sec 29; all in T110N-R49W	Spring, 2019	1,612 acre-feet annually

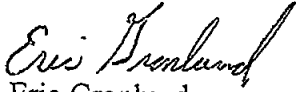
Water Rights

No.	Sources	Diversion Rate	Annual Volume
216-3	BS:SMC	3.85 cfs	2,784 acre-feet annually
674-3	BS:SMC	1.33 cfs	963 acre-feet annually
675-3	BS:SMC	1.33 cfs	963 acre-feet annually
1117-3	BS:SMC	1.44 cfs	1043 acre-feet annually
1296-3	BS:SMC	1.33 cfs	963 acre-feet annually
3979-3	BS:A	6.69 cfs	4,844 acre-feet annually
6048-3	BS:A	2.90 cfs	2,100 acre-feet annually

Please be aware that the table depicts the water rights the city of Brookings holds for municipal use. It does not represent the validity of the water rights. In South Dakota, the right to the use of water can become subject to cancellation due to abandonment and/or forfeiture for nonuse. The review of the city's water rights is to provide a list of the water rights on file and not a review of the past or present capabilities of the wells to produce the amount listed on the water rights. The Water Management Board is the entity entrusted to determine the validity of a water right if the question arises.

If you have any questions, do not hesitate to contact me.

Sincerely,

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

Eric Gronlund

Water Rights Program, DENR

605 773-3352

eric.gronlund@state.sd.us



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

October 27, 2023

Eric Witt
Brookings Municipal Utilities
525 Western Avenue
Brookings SD 57006

Dear Mr. Witt:

I am writing in regard to the request submitted by Brookings Municipal Utilities for two replacement wells to what is currently authorized by Vested Water Right No. 216-3. Vested Water Right No. 216-3 authorizes a maximum instantaneous diversion rate of 3.85 cubic feet of water per second (cfs) from four existing wells completed into the Big Sioux: Six Mile Creek aquifer located in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 13-T110N-R50W for municipal use.

The replacement wells are requested due to the aging infrastructure and routine maintenance required for the existing wells authorized by Vested Water Right No. 216-3.

The replacement wells (designated as Well Nos. 10 and 11) are to be completed into the Big Sioux: Six Mile Creek aquifer (approximately 60 to 75 feet deep) and located in the SE $\frac{1}{4}$ NW $\frac{1}{4}$ and SW $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 13-T110N-R50W, approximately 1,000 to 3,000 feet northeast of the two wells being replaced.

Upon review of the request and pursuant to SDCL 46-5-13.1, the replacement wells to be located in the SE $\frac{1}{4}$ NW $\frac{1}{4}$ and SW $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 13-T110N-R50W are authorized without application or publication of a notice of hearing pursuant to SDCL 46-2A-4. No increase in the maximum instantaneous diversion rate of 3.85 cfs from the four wells is authorized.

If upon completion of the replacement wells, the City of Brookings will divert at a rate greater than 3.85 cfs, it will require the city to apply to construct and place to beneficial use the water reserved by Future Use Permit 217-3. At that time, the standard water right permit application process, including a public notice period, would occur.

If you have any questions, please contact me at (605) 773-3352.

Sincerely,

Eric Gronlund, Chief Engineer
Water Rights Program

Approval of Location Change for Replacement Wells

NAME: City of Brookings c/o Eric Witt

ADDRESS: 525 Western Avenue, Brookings, SD 57006

DATE: October 17, 2023

COUNTY: Brookings

TELEPHONE: 605-692-6325

BACKGROUND:

Vested Water Right No. 216-3 authorizes a maximum instantaneous diversion rate of 3.85 cubic feet of water per second (cfs) from four existing wells completed into the Big Sioux: Six Mile Creek aquifer located in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 13-T110N-R50W for municipal use.

Mr. Eric Witt submitted a letter on behalf of Brookings Municipal Utilities requesting to replace and change the location of two wells authorized by Vested Water Right No. 216-3. The replacement wells (designated as Well Nos. 10 and 11) are to be completed into the Big Sioux: Six Mile Creek aquifer (approximately 60 to 75 feet deep) and located in the SE $\frac{1}{4}$ NW $\frac{1}{4}$ and SW $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 13-T110N-R50W, approximately 1,000 to 3,000 feet northeast of the two wells being replaced. Mr. Witt indicated no other conditions or parameters of the original permit will be changed other than the replacement well locations.

AUTHORITY:

Pursuant to SDCL 46-5-13.1, the location of a diversion point may be changed, or additional diversion points may be licensed provided the following conditions are met and the potential for interference with other existing diversions is not increased:

- **Developed water source same as permitted source and no additional water appropriated**

The water source remains Big Sioux: Six Mile Creek aquifer for the two replacement wells.

- **If irrigation, no new land is irrigated**

Vested Water Right No. 216-3 is authorized for municipal use.

- **Review of Existing Diversions**

The replacement wells are to be located in the SE $\frac{1}{4}$ NW $\frac{1}{4}$ and SW $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 13-T110N-R50W which is approximately 1.5 miles northeast of the nearest well (not held by the applicant) which is authorized by Water Right No. 8018-3 and held by GCC Ready Mix. Given the distance, drawdown from pumping should not increase the potential for unlawful impairment of neighboring wells.

RECOMENNDED ACTION:

Based on the above criteria, it is recommended that the replacement well locations be authorized under Vested Water Right No. 216-3.

Nakaila Steen

Nakaila Steen, Natural Resources Engineer II
Water Rights Program

The Chief Engineer makes a finding pursuant SDCL 46-5-13.1 and ARSD 74:02:01:14.01 that:

The replacement wells and changes in location do not increase the potential for adverse effects to existing diversions.



Eric Gronlund, Chief Engineer
Water Rights Program

Gronlund, Eric

From: Stump, Phillip <Phillip.Stump@hdrinc.com>
Sent: Tuesday, October 17, 2023 11:24 AM
To: Gronlund, Eric
Cc: Honner, Joe; Duvall, Ron
Subject: RE: [EXT] City of Brookings water permit applications

Eric,

Thanks for your email reminder. We are making progress coordinating with Brookings Municipal Utilities (BMU) with their plans for replacement of two wells in the North Wellfield. We can provide you an update based a recent discussion with BMU.

The following answers correlate with the questions you raised in your email.

- In response to your first 3 questions, BMU does plan to abandon wells. We have inserted a map of North Wellfield below.
The abandoned wells will be plugged and taken completely out of service. BMU will be requesting change of points of diversion from the abandoned wells to the new wells.
- With your last question, we understand that the two new wells can be handled administratively if the two new wells and any remaining operational wells under Permit no. 216-3 produce within the 3.85 cfs appropriation. At this stage of the process, we think either Well no. 3 or Well no. 4 will be plugged and abandoned under Permit no. 216-3.
- For wells under Permit no. 217-3, we may be plugging and abandoning one well. Well nos. 6, 7, and 8 are potential candidates for abandonment and plugging. We can provide more information as the coordination with BMU progresses.

We wanted to check with you on the three applications from the Aurora Unit of the Big Sioux Aquifer for the East Wellfield. Could you provide a status of the application process?

Thanks for your time and consideration.

Best Regards,

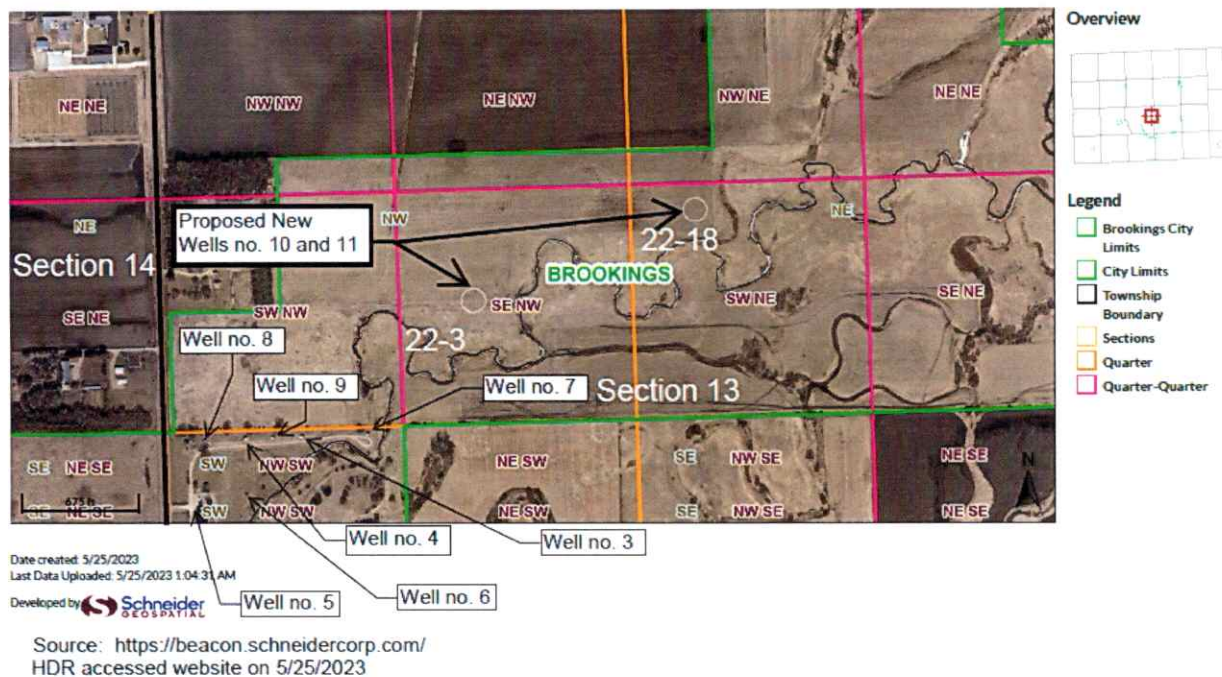
Phil

Phil Stump, PE

D 307.757.9003 **M** 307.256.1620

hdrinc.com/follow-us

North Wellfield - 2 Proposed Wells
Township 110N, Range 50W, Section 13



From: Gronlund, Eric <Eric.Gronlund@state.sd.us>
Sent: Monday, October 16, 2023 12:37 PM
To: Stump, Phillip <Phillip.Stump@hdrinc.com>
Cc: Honner, Joe <Joseph.Honner@hdrinc.com>; Duvall, Ron <Ron.Duvall@state.sd.us>
Subject: RE: City of Brookings water permit applications

CAUTION: [EXTERNAL] This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Phil

Still awaiting a response to my September 12th email regarding the replacement wells for Vested Water Right No. 216-3. It is entirely possible the a response was provided and I lost it. Eric

From: Stump, Phillip <Phillip.Stump@hdrinc.com>
Sent: Tuesday, September 12, 2023 2:29 PM
To: Gronlund, Eric <Eric.Gronlund@state.sd.us>
Cc: Honner, Joe <Joseph.Honner@hdrinc.com>; Duvall, Ron <Ron.Duvall@state.sd.us>
Subject: RE: [EXT] City of Brookings water permit applications

Eric,

Thanks for reviewing the Brookings Municipal Utility (BMU) July 28, 2023 letter about the replacement of the two wells in the North Wellfield completed into the Six Mile Creek Management Unit of the Big Sioux aquifer. We need to consult with BMU and then will be providing responses to your questions.

Best Regards,

Phil
Phil Stump, PE

From: Gronlund, Eric <Eric.Gronlund@state.sd.us>
Sent: Tuesday, September 12, 2023 10:30 AM
To: Stump, Phillip <phillip.stump@hdrinc.com>
Cc: Honner, Joe <Joseph.Honner@hdrinc.com>; Duvall, Ron <Ron.Duvall@state.sd.us>
Subject: City of Brookings water permit applications

CAUTION: [EXTERNAL] This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Mr. Stump:

The Water Rights Program is processing three applications for the city of Brookings (two applications for new wells and one application to reserve water for future use – all from the Aurora Management Unit of the Big Sioux aquifer.

This email is in regards to the City of Brookings request to replace two of the wells authorized by Vested Water Right No. 216-3 which are completed into the Six Mile Creek Management Unit of the Big Sioux aquifer. The vested right authorizes 3.85 cfs from four wells (Nos. 1, 3, 4 & 5) located in the NW ¼ SW ¼ Section 13, T110N, R50W. According to the map submitted the proposed new wells, designated as Well No. 10 and 11, they will be located in the SE ¼ NW ¼ and SW ¼ NE ¼ Section 13, T110N, R50W.

A few questions arise in this request to replace two of the wells under No. 216-3.

1. Which wells are being replaced and taken out of service? Provide the well designation number and a map of those wells.
2. Will the wells be entirely taken out of service and abandoned? This makes a difference on whether the request is for a change of diversion points or additional diversion points.
3. If the plan is to abandon, is it the city's intention to plug the old wells?
4. Your letter indicates that the newly drilled wells would fall under production of the city's vested water right (No. 216-3) and under the licensed capacity of existing beneficial use under city's Future Use Permit No. 217-3. I am not certain what is meant by the reference to the existing beneficial uses under FU Permit No. 217-3. The wells authorized by No. 216-3 are limited to 3.85 cfs. If upon completion of the new wells the city will divert at a rate greater than the 3.85 cfs authorized by No. 216-3 it will require the city to apply to construct and place to beneficial use water reserved by Future Use Permit No. 217-3. If the city will stay within the 3.85 cfs, the request for the two new wells can likely be handled administratively in-house. If the city seeks a diversion rate greater than 3.85 cfs, then the standard water right permit application process including public notice is necessary.

Please let me know if you have questions. If so, maybe a phone conversation would be beneficial. Eric



Eric Gronlund, PE
Chief Engineer, Water Rights Program
Department of Agriculture and Natural Resources
523 E. Capitol Ave. Pierre SD, 57501
605.773.3352
danr.sd.gov

Gronlund, Eric

From: Gronlund, Eric
Sent: Tuesday, September 12, 2023 11:30 AM
To: Stump, Phillip
Cc: Honner, Joe; Duvall, Ron
Subject: City of Brookings water permit applications

Mr. Stump:

The Water Rights Program is processing three applications for the city of Brookings (two applications for new wells and one application to reserve water for future use – all from the Aurora Management Unit of the Big Sioux aquifer.

This email is in regards to the City of Brookings request to replace two of the wells authorized by Vested Water Right No. 216-3 which are completed into the Six Mile Creek Management Unit of the Big Sioux aquifer. The vested right authorizes 3.85 cfs from four wells (Nos. 1, 3, 4 & 5) located in the NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 13, T110N, R50W. According to the map submitted the proposed new wells, designated as Well No. 10 and 11, they will be located in the SE $\frac{1}{4}$ NW $\frac{1}{4}$ and SW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 13, T110N, R50W.

A few questions arise in this request to replace two of the wells under No. 216-3.

1. Which wells are being replaced and taken out of service? Provide the well designation number and a map of those wells.
2. Will the wells be entirely taken out of service and abandoned? This makes a difference on whether the request is for a change of diversion points or additional diversion points.
3. If the plan is to abandon, is it the city's intention to plug the old wells?
4. Your letter indicates that the newly drilled wells would fall under production of the city's vested water right (No. 216-3) and under the licensed capacity of existing beneficial use under city's Future Use Permit No. 217-3. I am not certain what is meant by the reference to the existing beneficial uses under FU Permit No. 217-3. The wells authorized by No. 216-3 are limited to 3.85 cfs. If upon completion of the new wells the city will divert at a rate greater than the 3.85 cfs authorized by No. 216-3 it will require the city to apply to construct and place to beneficial use water reserved by Future Use Permit No. 217-3. If the city will stay within the 3.85 cfs, the request for the two new wells can likely be handled administratively in-house. If the city seeks a diversion rate greater than 3.85 cfs, then the standard water right permit application process including public notice is necessary.

Please let me know if you have questions. If so, maybe a phone conversation would be beneficial. Eric



Eric Gronlund, PE
Chief Engineer, Water Rights Program
Department of Agriculture and Natural Resources
523 E. Capitol Ave. Pierre SD, 57501
605.773.3352
danr.sd.gov

Rodriguez, Rachel

From: Duvall, Ron
Sent: Thursday, August 3, 2023 8:32 AM
To: Rodriguez, Rachel
Subject: FW: [EXT] Brookings Municipal Utilities - Water Well Applications - East Wellfield
Attachments: EW 3Well_East_WellfieldAPP_ALL_Sign_R1.pdf; EW East_Wellfield_Futures_APP_ALL_Sign_R1.pdf; EW 1Well_East_Wellfield_APP_ALL_Sign.pdf

New permit applications for your review. I figured out the fee for each one – let's see if we both come up with the same amounts 😊.

From: Stump, Phillip <Phillip.Stump@hdrinc.com>
Sent: Wednesday, August 2, 2023 10:58 AM
To: Duvall, Ron <Ron.Duvall@state.sd.us>
Cc: Honner, Joe <Joseph.Honner@hdrinc.com>
Subject: RE: [EXT] Brookings Municipal Utilities - Water Well Applications - East Wellfield

Ron,

Please see attached the three applications that I referred to in my email below. All are signed by Eric Witt. Thanks for you offering to complete an initial review so that an invoice can be worked up so we can officially submit the three applications with payment.

Please contact me with any questions about this. We will also be mailing you a letter about BMU's water well rehabilitation plans for their North Wellfield.

Best Regards,

Phil
Phil Stump, PE
D 307.757.9003 M 307.256.1620

hdrinc.com/follow-us

From: Duvall, Ron <Ron.Duvall@state.sd.us>
Sent: Tuesday, July 11, 2023 2:07 PM
To: Stump, Phillip <Phillip.Stump@hdrinc.com>
Subject: RE: Brookings Municipal Utilities - Water Well Applications - East Wellfield

CAUTION: [EXTERNAL] This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Phil,

The signed applications can be submitted digitally and I can take a look before your officially submit them. Also, we can work up an invoice once the fee amount is determined.

Thank you,



525 Western Avenue | PO Box 588
Brookings, SD 57006



415 4th Street | PO Box 588
Brookings, SD 57006

July 28, 2023

SD DANR, Water Rights
523 E Capital Ave
Pierre, SD 57501-3352

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OFFICE OF
WATER

Dear Sirs,

I am writing you about the groundwater rights of one of our wellfields that serves as a groundwater source to the Brookings Municipal Utility (BMU). As we move forward with construction of a new municipal water treatment plant we are completing designs for improvements to our wellfields which divert from the Six Mile Creek Unit of the Big Sioux Aquifer. I am writing to you about the water supply well improvements to be performed at the North Wellfield.

To summarize existing water rights, the North Wellfield holds a vested water right (Permit no. 216-3) for 3.85 cubic feet per second (CFS) under Well no. 1 through Well no. 5. In addition, the futures use reserved under Permit no. 217-3 in 1956 was 7.70 CFS from the Six Mile Creek Unit of the Big Sioux Aquifer. Water right nos. 674-3, 675-3, 1117-3, and 1296-3 placed into beneficial use 5.43 CFS under Permit no. 217-3. The remaining reserved quantity of water rights was quantified from CFS to a volume of 1,612 acre feet.

Our water wells in the North Wellfield are getting older and require routine maintenance. We are proposing to drill two Big Sioux aquifer replacement water wells within the Six Mile Creek Unit at the locations illustrated in the attached Figure (see Well nos. 10 and 11 at Boring nos. 22-3 and 22-18, respectively). The borehole logs of the recently drilled test holes are also attached. Our anticipated and target maximum production rate is approximately 900 to 1,000 gallons per minute (GPM) per well. Following well drilling and well completion and testing we will submit a well completion report to your office within 30 days. We plan to measure maximum well capacities during pump testing. All required forms will be signed by BMU and submitted with the well completion records.

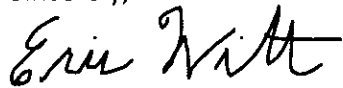
We propose to have the new wells replace the production capacity of our older wells that suffer the most problems and require routine maintenance. We anticipate the newly drilled wells would fall under the production of our vested water right (Permit no. 216-3) and under the licensed capacity of existing beneficial use under our Futures Use Permit no. 217-3. The actual existing water wells to be abandoned and plugged will be determined following the pump

testing of our new wells. As BMU water service grows and expands to serve more customers in the future we need to continue to reserve groundwater for long-term needs with the 1,612 acre feet remaining available under Permit no. 217-3.

I look forward to corresponding with you further regarding our drilling plans for the North Wellfield. We are completing our designs and anticipate going out to bid to secure drilling services for the new wells in the near future.

Please contact me directly with questions at 605-697-8410 or ewitt@swiftel-bmu.com

Sincerely,

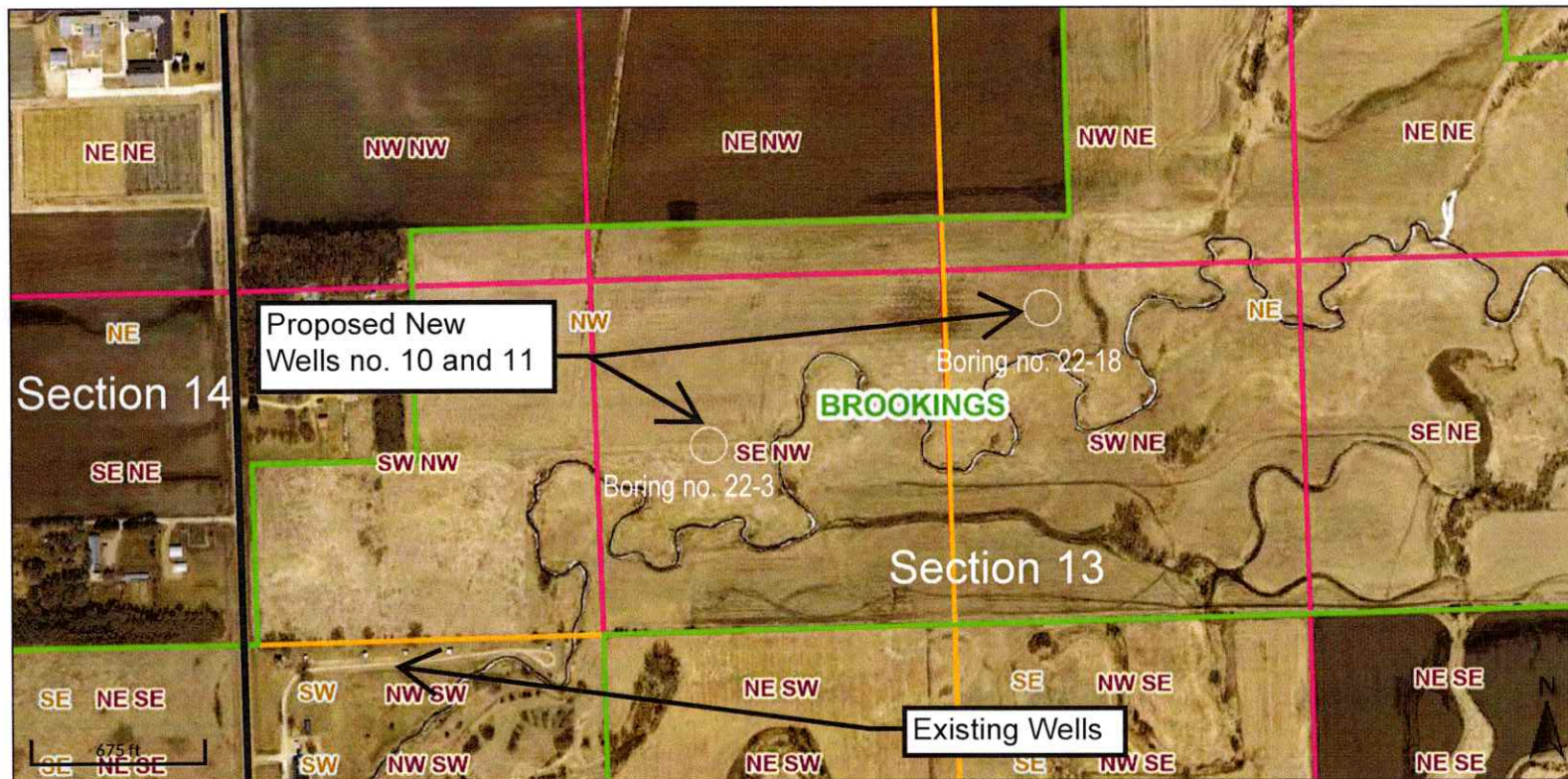
A handwritten signature in black ink, appearing to read "Eric Witt". The signature is fluid and cursive, with the first name "Eric" and last name "Witt" clearly distinguishable.

Eric Witt, P.E.

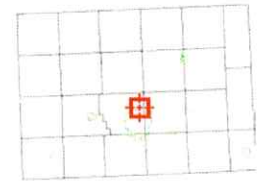
Water/Wastewater & Engineering Manager

North Wellfield - 2 Proposed Wells

Township 110N, Range 50W, Section 13



Overview



Legend

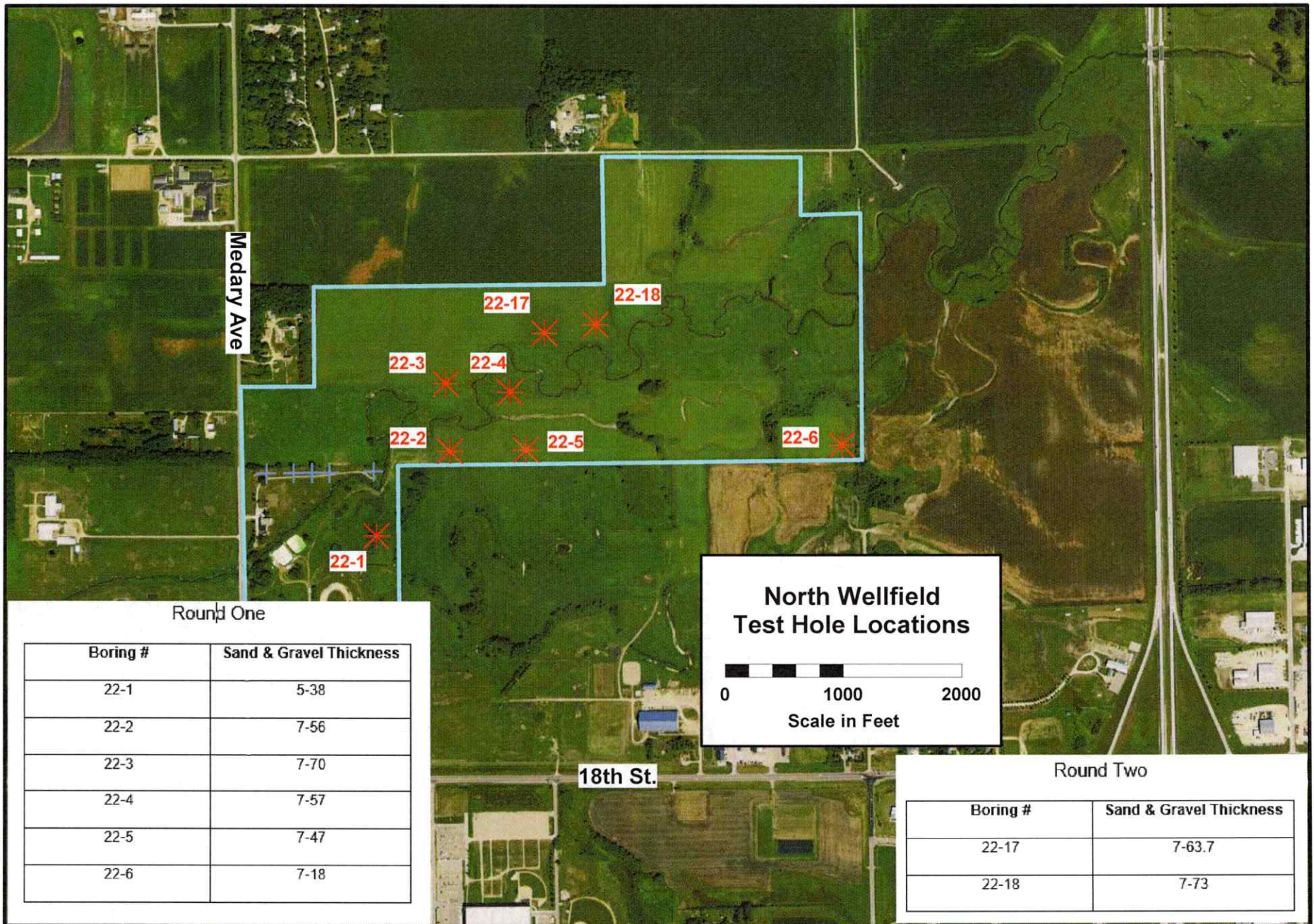
-  Brookings City Limits
-  City Limits
-  Township Boundary
-  Sections
-  Quarter
-  Quarter-Quarter

Date created: 5/25/2023

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909 E 50th St N
SIOUX FALLS, SD 57104
(605) 335-5512 Fax (605) 335-0773
info@geotekeng.com

GEOTECHNICAL TEST BORING LOG

AUG 07 2023

OFFICE OF
WATER

GEOTEK # 22-226

BORING NO. 22-1 (1 of 2)

PROJECT North & East Well Fields, Brookings, SD

DEPTH in FEET	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	WL	SAMPLE		LABORATORY TESTS				
					NO.	TYPE	WC	D	LL	PL	QU
4 1/2	<u>LEAN CLAY</u> : dark brown, frozen to moist, a 7" layer of topsoil at the surface (CL)	FINE ALLUVIUM (POSSIBLE TOPSOIL)			1	FA					
	<u>LEAN CLAY</u> : brown, moist, (CL)	FINE ALLUVIUM			2	BAG					
8 1/2	<u>SAND</u> : with gravel, fine to coarse grained, brown, (SP)	COARSE ALLUVIUM			3	BAG					
					4	BAG					
					5	BAG					
					6	BAG					
					7	BAG					
WATER LEVEL MEASUREMENTS						START 3-1-22 COMPLETE 3-1-22 10:35 am					
DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	WATER LEVEL	METHOD Rotary Mud Drilling					
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--	--	--	--	--	--	CREW CHIEF Roy Hanson					

GEOTECHNICAL TEST BORING 22-226 GPJ GEOTEKENG.GDT 3/21/22



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GEOTECHNICAL TEST BORING LOG

GEOTEK # 22-226

BORING NO. 22-1 (2 of 2)

PROJECT North & East Well Fields, Brookings, SD

DEPTH in FEET	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	WL	SAMPLE		LABORATORY TESTS				
					NO.	TYPE	WC	D	LL	PL	QU
34½	SAND WITH SILT: a little gravel, fine to coarse grained, brown, (SP-SM)	COARSE ALLUVIUM			8	BAG					
38½	SANDY LEAN CLAY: dark gray, (CL)	GLACIAL TILL			9	BAG					
44½	Bottom of borehole at 44½ feet.										
WATER LEVEL MEASUREMENTS						START 3-1-22 COMPLETE 3-1-22 10:35 am					
DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	WATER LEVEL	METHOD Rotary Mud Drilling					
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--	--	--	--	--	--	CREW CHIEF Roy Hanson					

GEOTECHNICAL TEST BORING 22-226.GPJ GEOTEKENG.GDT 3/21/22



AUG 07 2023

GEOTEK # 22-226

BORING NO. 22-2 (1 of 2)

PROJECT **North & East Well Fields, Brookings, SD**

PROJECT North & East Well Fields, Brookings, SD

DEPTH in FEET	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	WL	SAMPLE		LABORATORY TESTS				
					NO.	TYPE	WC	D	LL	PL	QU
	<u>LEAN CLAY</u> : black, frozen, (CL)	TOPSOIL			1	FA					
3½	<u>LEAN CLAY</u> : brown, moist, (CL)	FINE ALLUVIUM			2	FA					
7	<u>SAND</u> : a little gravel, fine to coarse grained, brown, (SP)	COARSE ALLUVIUM			3	BAG					
					4	BAG					
					5	BAG					
					6	BAG					
24½	<u>SAND</u> : with gravel, fine to coarse grained, brown, (SP)	COARSE ALLUVIUM			7	BAG					
					8	BAG					
WATER LEVEL MEASUREMENTS			START 3-1-22 COMPLETE 3-1-22 2:20 pm								
DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	WATER LEVEL	METHOD Rotary Mud Drilling					
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--	--	--	--	--	--	CREW CHIEF Roy Hanson					

GEOTECHNICAL TEST BORING 22-226.GPJ GEOTEKENG.GDT 3/21/22



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GEOTECHNICAL TEST BORING LOG

GEOTEK # **22-226**

BORING NO. **22-2 (2 of 2)**

PROJECT **North & East Well Fields, Brookings, SD**

DEPTH in FEET	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	WL	SAMPLE		LABORATORY TESTS				
					NO.	TYPE	WC	D	LL	PL	QU
34½	GRAVEL: with sand, fine to coarse grained, brown, a lens of clay above 36' (GP)	COARSE ALLUVIUM			9	BAG					
39½	SAND: with gravel, fine to coarse grained, brown, (SP)				10	BAG					
44	SAND WITH SILT: with gravel, fine to coarse grained, brown, dense, (SP-SM)	COARSE ALLUVIUM	25		11	SPT					
49½	SAND WITH SILT: a trace of gravel, fine to medium grained, brown, dense, (SP-SM)	COARSE ALLUVIUM	27		12	SPT					
					13	BAG					
55	LEAN CLAY WITH SAND: a little gravel, dark gray, (CL)	GLACIAL TILL			14	BAG					
59½	Bottom of borehole at 59½ feet.										
WATER LEVEL MEASUREMENTS						START <u>3-1-22</u> COMPLETE <u>3-1-22 2:20 pm</u>					
DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	WATER LEVEL	METHOD Rotary Mud Drilling					
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--	--	--	--	--	--	CREW CHIEF Roy Hanson					

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~~OFFICE OF
WATER~~

BORING NO. 22-3 (1 of 3)

DEPTH in FEET	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	WL	SAMPLE		LABORATORY TESTS				
					NO.	TYPE	WC	D	LL	PL	QU
	LEAN CLAY: dark brown, frozen to moist, (CL)	FINE ALLUVIUM			1	FA					
7	SAND: a little gravel, fine to coarse grained, brown, (SP)	COARSE ALLUVIUM			2	BAG					
					3	BAG					
					4	BAG					
					5	BAG					
24½	SAND: a trace of gravel, fine to coarse grained, brown, (SP)	COARSE ALLUVIUM			6	BAG					
29½	SAND: fine to medium grained, brown, (SP)	COARSE ALLUVIUM			7	BAG					
WATER LEVEL MEASUREMENTS						START 3-2-22 COMPLETE 3-2-22 6:15 pm					
DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	WATER LEVEL	METHOD Rotary Mud Drilling					
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--	--	--	--	--	--	CREW CHIEF Roy Hanson					

GEOTECHNICAL TEST BORING 22-226.GPJ GEOTEKENG.GDT 3/21/22



**GEOTEK ENGINEERING
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info@geotekeng.com

GEOTECHNICAL TEST BORING LOG

GEOTEK # **22-226**

BORING NO. **22-3 (2 of 3)**

PROJECT **North & East Well Fields, Brookings, SD**

DEPTH in FEET	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	WL	SAMPLE		LABORATORY TESTS				
					NO.	TYPE	WC	D	LL	PL	QU
	SAND: fine to medium grained, brown, (SP) <i>(Continued from previous page)</i>	COARSE ALLUVIUM	41		8	BAG					
39½	SAND WITH SILT: a little gravel, fine to coarse grained, brown, very dense, (SP-SM)	COARSE ALLUVIUM		9	X	SPT					
				10		BAG					
44½	SAND WITH SILT: with gravel, fine to coarse grained, brown, very dense, (SP-SM)	COARSE ALLUVIUM	43		11	X	SPT				
				12		BAG					
49½	SAND: fine to medium grained, brown, (SP)	COARSE ALLUVIUM		13		BAG					
					14	BAG					
59½	SAND WITH SILT: fine to medium grained, brown, (SP-SM)	COARSE ALLUVIUM			15	BAG					
					16	BAG					
WATER LEVEL MEASUREMENTS						START	3-2-22	COMPLETE	3-2-22 6:15 pm		
DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	WATER LEVEL	METHOD Rotary Mud Drilling					
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--	--	--	--	--	--	CREW CHIEF Roy Hanson					

GEOTECHNICAL TEST BORING 22-226.GPJ GEOTEKENG.GDT 3/21/22

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GEOTEK # 22-226						BORING NO. 22-3 (3 of 3)								
PROJECT North & East Well Fields, Brookings, SD														
DEPTH in FEET	DESCRIPTION OF MATERIAL				GEOLOGIC ORIGIN	N	WL	SAMPLE		LABORATORY TESTS				
								NO.	TYPE	WC	D	LL	PL	QU
70	<													



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GEOTECHNICAL TEST BORING LOG

GEOTEK # **22-226**

BORING NO. **22-4 (1 of 2)**

PROJECT **North & East Well Fields, Brookings, SD**

DEPTH in FEET	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	WL	SAMPLE		LABORATORY TESTS				
					NO.	TYPE	WC	D	LL	PL	QU
	LEAN CLAY: dark brown, frozen, a 13" layer of topsoil at the surface (CL)	FINE ALLUVIUM			1	FA					
5	LEAN CLAY: brown, moist, (CL)	FINE ALLUVIUM			2	FA					
6½	SAND: a trace of gravel, fine to coarse grained, brown, (SP)	COARSE ALLUVIUM			3	BAG					
					4	BAG					
					5	BAG					
					6	BAG					
					7	BAG					
					8	BAG					

WATER LEVEL MEASUREMENTS

START **3-2-22** COMPLETE **3-2-22 1:50 pm**

DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	WATER LEVEL	METHOD
--	--	--	--	--	--	Rotary Mud Drilling
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--	--	--	--	--	--	CREW CHIEF Roy Hanson

GEOTECHNICAL TEST BORING 22-226.GPJ GEOTEKENG.GDT 3/21/22



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GEOTEK # 22-226						BORING NO. _____						OFFICE OF WATER 22-4 (2 of 2)	
PROJECT North & East Well Fields, Brookings, SD													
DEPTH in FEET	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	WL	SAMPLE		LABORATORY TESTS						
					NO.	TYPE	WC	D	LL	PL	QU		
39½	<u>SAND</u> : a trace of gravel, fine to coarse grained, brown, (SP) (Continued from previous page)	COARSE ALLUVIUM			9	NSR							
			34		10								
	<u>SAND WITH SILT</u> : a little gravel, fine to coarse grained, brown, very dense, (SP-SM)	COARSE ALLUVIUM			11	BAG							
			35		12	SPT							
					13	BAG							
49½	<u>SAND</u> : fine to medium grained, brown, (SP)	COARSE ALLUVIUM			14	BAG							
54½	<u>SAND WITH SILT</u> : fine to medium grained, brown, (SP-SM)	COARSE ALLUVIUM			15	BAG							
57½	<u>LEAN CLAY WITH SAND</u> : a little gravel, dark tan, (CL)	GLACIAL TILL			16	BAG							
61			23		17	SPT							
	Bottom of borehole at 61 feet.												
WATER LEVEL MEASUREMENTS						START 3-2-22 COMPLETE 3-2-22 1:50 pm							
DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	WATER LEVEL	METHOD Rotary Mud Drilling							
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--	--	--	--	--	--	CREW CHIEF Roy Hanson							

GEOTECHNICAL TEST BORING 22-226.GPJ GEOTEKENG GDT 3/21/22



**GEOTEK ENGINEERING
& TESTING SERVICES, INC.**
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SIOUX FALLS, SD 57104
(605) 335-5512 Fax (605) 335-0773
info@geotekeng.com

GEOTECHNICAL TEST BORING LOG

GEOTEK # **22-226**

BORING NO. **22-5 (1 of 2)**

PROJECT **North & East Well Fields, Brookings, SD**

DEPTH in FEET	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	WL	SAMPLE		LABORATORY TESTS				
					NO.	TYPE	WC	D	LL	PL	QU
4	LEAN CLAY: black, dry, (CL)	FINE ALLUVIUM (POSSIBLE TOPSOIL)			1	FA					
7	LEAN CLAY: dark brown, moist, (CL)	FINE ALLUVIUM			2	FA					
	SAND: a little gravel, fine to coarse grained, brown, (SP)	COARSE ALLUVIUM			3	BAG					
					4	BAG					
					5	BAG					
					6	BAG					
					7	BAG					
29½	SAND WITH SILT: fine to medium grained, brown, (SP-SM)	COARSE ALLUVIUM			8	BAG					
WATER LEVEL MEASUREMENTS						START <u>3-1-22</u> COMPLETE <u>3-1-22 5:10 pm</u>					
DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	WATER LEVEL	METHOD Rotary Mud Drilling					
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--	--	--	--	--	--						
--	--	--	--	--	--	CREW CHIEF Roy Hanson					

GEOTECHNICAL TEST BORING 22-226.GPJ GEOTEKENG.GDT 3/21/22



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& TESTING SERVICES, INC.
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WATER

BORING NO. 22-5 (2 of 2)

GEOTEK # 22-226

PROJECT North & East Well Fields, Brookings, SD

DEPTH in FEET	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	WL	SAMPLE		LABORATORY TESTS				
					NO.	TYPE	WC	D	LL	PL	QU
	SAND WITH SILT: fine to medium grained, brown, (SP-SM) <i>(Continued from previous page)</i>	COARSE ALLUVIUM			9	BAG					
					10	BAG					
44½	SAND WITH SILT: gravel, fine to coarse grained, brown, very dense, (SP-SM)	COARSE ALLUVIUM	51		11	SPT					
46	LEAN CLAY WITH SAND: a little gravel, dark gray, (CL)	GLACIAL TILL			12	BAG					
49½	Bottom of borehole at 49½ feet.										
WATER LEVEL MEASUREMENTS											
START 3-1-22 COMPLETE 3-1-22 5:10 pm											
DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	WATER LEVEL	METHOD					
--	--	--	--	--	--	Rotary Mud Drilling					
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--	--	--	--	--	--	CREW CHIEF Roy Hanson					

GEOTECHNICAL TEST BORING 22-226.GPJ GEOTEKENG.GDT 3/21/22



**GEOTEK ENGINEERING
& TESTING SERVICES, INC.**
909 E 50th St N
SIOUX FALLS, SD 57104
(605) 335-5512 Fax (605) 335-0773
info@geotekeng.com

GEOTECHNICAL TEST BORING LOG

GEOTEK # **22-226**

BORING NO. **22-6 (1 of 1)**

PROJECT **North & East Well Fields, Brookings, SD**

DEPTH in FEET	DESCRIPTION OF MATERIAL					GEOLOGIC ORIGIN	N	WL	SAMPLE		LABORATORY TESTS					
									NO.	TYPE	WC	D	LL	PL	QU	
																
4	<u>LEAN CLAY</u> : black, frozen, (CL)						FINE ALLUVIUM (POSSIBLE TOPSOIL)			1		FA				
	<u>LEAN CLAY</u> : brown, moist, (CL)						FINE ALLUVIUM			2		FA				
8	<u>SAND</u> : a little gravel, fine to coarse grained, brown, (SP)						COARSE ALLUVIUM			3		BAG				
										4		BAG				
18½	<u>LEAN CLAY WITH SAND</u> : a little gravel, brown, very stiff, (CL)						GLACIAL TILL									
26								17		5		SPT				
	Bottom of borehole at 26 feet.															
WATER LEVEL MEASUREMENTS								START	3-2-22		COMPLETE	3-2-22 10:10 am				
DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	WATER LEVEL	METHOD Rotary Mud Drilling										
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--	--	--	--	--	--	CREW CHIEF Roy Hanson										

GEOTECHNICAL TEST BORING 22-226.GPJ GEOTEKENG.GDT 3/21/22



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GEOTECHNICAL TEST BORING LOG

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OFFICE OF
WATER

GEOTEK # 22-226

BORING NO. 22-17 (1 of 2)

PROJECT North & East Well Fields, Brookings, SD

DEPTH in FEET	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	WL	SAMPLE		LABORATORY TESTS					
					NO.	TYPE	WC	D	LL	PL	QU	
	↓ SURFACE ELEVATION <u>1615.96 ft</u>											
7	FAT CLAY: very dark brown, a 8" layer of topsoil at the surface (CH)	FINE ALLUVIUM			1	BAG						
	SAND: a trace of gravel, fine to coarse grained, brown, (SP)	COARSE ALLUVIUM			2	BAG						
					3	BAG						
20	SAND: a little gravel, fine to coarse grained, brown, (SP)	COARSE ALLUVIUM			4	BAG						
25	SAND WITH SILT: a little gravel, fine to coarse grained, brown, (SP-SM)	COARSE ALLUVIUM			5	BAG						
30	SAND WITH SILT: a trace of gravel, fine to coarse grained, brown, (SP-SM)	COARSE ALLUVIUM			6	BAG						
WATER LEVEL MEASUREMENTS					START	5-25-22		COMPLETE	5-25-22 11:50 am			
DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	WATER LEVEL	METHOD Rotary Mud Drilling						
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--	--	--	--	--	--	CREW CHIEF Roy Hanson						

GEOTECHNICAL TEST BORING 22-226.GPJ GEOTEKENG.GDT 6/18/22



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GEOTECHNICAL TEST BORING LOG

GEOTEK # 22-226

BORING NO. 22-17 (2 of 2)

PROJECT North & East Well Fields, Brookings, SD

DEPTH in FEET	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	WL	SAMPLE		LABORATORY TESTS					
					NO.	TYPE	WC	D	LL	PL	QU	
	↓ SURFACE ELEVATION 1615.96 ft											
35	SAND WITH SILT: fine to coarse grained, brown, a few layers of coarse gravel above 45' (SP-SM)	COARSE ALLUVIUM			7	BAG						
					8	BAG						
45					SAND WITH SILT: with gravel, fine to coarse grained, brown, (SP-SM)	COARSE ALLUVIUM	34	9	SPT			
47	SAND WITH SILT: fine to coarse grained, brown, (SP-SM)	COARSE ALLUVIUM		10			BAG					
50	SAND WITH SILT: a little gravel, fine to coarse grained, brown, (SP-SM)	COARSE ALLUVIUM	41		11	SPT						
52					SAND: fine to coarse grained, brown, (SP)	COARSE ALLUVIUM	12	BAG				
55	SAND WITH SILT: fine to coarse grained, brown, (SP-SM)	COARSE ALLUVIUM			13	BAG						
60					SAND WITH SILT: fine to coarse grained, brown, a layer of coarse gravel or/ cobbles between 61' and 63.7' (SP-SM)	COARSE ALLUVIUM	14	BAG				
63.7	Refusal at 63.7 feet. Bottom of borehole at 63.7 feet.											
WATER LEVEL MEASUREMENTS			START 5-25-22 COMPLETE 5-25-22 11:50 am									
DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	WATER LEVEL	METHOD Rotary Mud Drilling						
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--	--	--	--	--	--	CREW CHIEF Roy Hanson						

GEOTECHNICAL TEST BORING 22-226.GPJ GEOTEKENG.GDT 6/18/22



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GEOTECHNICAL TEST BORING LOG

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GEOTEK # 22-226

BORING NO. 22-18 (1 of 3)

PROJECT North & East Well Fields, Brookings, SD

DEPTH in FEET	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	WL	SAMPLE		LABORATORY TESTS					
					NO.	TYPE	WC	D	LL	PL	QU	
	↓ SURFACE ELEVATION 1616.53 ft											
7	LEAN CLAY WITH SAND: dark brown, a 8" layer of topsoil at the surface (CL)	FINE ALLUVIUM			1	BAG						
	SAND: a little gravel, fine to coarse grained, brown, very dense, a few layers of coarse gravel or/ cobbles above 65' (SP)	COARSE ALLUVIUM			2	BAG						
					3	BAG						
					4	BAG						
25	SAND: a little gravel, fine to coarse grained, brown, (SP)	COARSE ALLUVIUM			5	BAG						
30	SAND: fine to coarse grained, brown, (SP)	COARSE ALLUVIUM			6	BAG						
WATER LEVEL MEASUREMENTS					START	5-25-22	COMPLETE	5-25-22 4:25 pm				
DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	WATER LEVEL	METHOD Rotary Mud Drilling						
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--	--	--	--	--	--	CREW CHIEF Roy Hanson						

GEOTECHNICAL TEST BORING 22-226.GPJ GEOTEKENG.GDT 8/18/22



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GEOTECHNICAL TEST BORING LOG

GEOTEK # **22-226**

BORING NO. **22-18 (2 of 3)**

PROJECT **North & East Well Fields, Brookings, SD**

DEPTH in FEET	DESCRIPTION OF MATERIAL	GEOLOGIC ORIGIN	N	WL	SAMPLE		LABORATORY TESTS										
					NO.	TYPE	WC	D	LL	PL	QU						
	↓ SURFACE ELEVATION <u>1616.53 ft</u>																
	SAND: fine to coarse grained, brown, (SP) (Continued from previous page)	COARSE ALLUVIUM			7	BAG											
40	SAND WITH SILT: with gravel, fine to coarse grained, brown, (SP-SM)	COARSE ALLUVIUM	35		8	SPT											
42	SAND: fine to coarse grained, brown, (SP)	COARSE ALLUVIUM			9	BAG											
45	SAND WITH SILT: with gravel, fine to coarse grained, brown, (SP-SM)	COARSE ALLUVIUM	37		10	SPT											
47	SAND: fine to coarse grained, brown, (SP)	COARSE ALLUVIUM			11	BAG											
50	SAND: fine to coarse grained, brown, (SP)	COARSE ALLUVIUM			12	BAG											
					13	BAG											
60	SAND WITH SILT: fine to coarse grained, brown, (SP-SM)	COARSE ALLUVIUM			14	BAG											
					15	BAG											
WATER LEVEL MEASUREMENTS				START	5-25-22	COMPLETE	5-25-22 4:25 pm										
DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	WATER LEVEL	METHOD	Rotary Mud Drilling										
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--	--	--	--	--	--	CREW CHIEF	Roy Hanson										

GEOTECHNICAL TEST BORING 22-226.GPJ GEOTEKENG.GDT 6/18/22

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GEOTECHNICAL TEST BORING LOG

AUG 07 2023

OFFICE OF
WATER

GEOTEK # 22-226						BORING NO. 22-18 (3 of 3)						
PROJECT North & East Well Fields, Brookings, SD												
DEPTH in FEET	DESCRIPTION OF MATERIAL		GEOLOGIC ORIGIN	N	WL	SAMPLE		LABORATORY TESTS				
						NO.	TYPE	WC	D	LL	PL	QU
	SURFACE ELEVATION 1616.53 ft											
	SAND WITH SILT: fine to coarse grained, brown, (SP-SM) (Continued from previous page)		COARSE ALLUVIUM			16	BAG					
73	LEAN CLAY WITH SAND: a little gravel, dark gray, (CL)		GLACIAL TILL			17	BAG					
75	Bottom of borehole at 75 feet.											
WATER LEVEL MEASUREMENTS						START 5-25-22 COMPLETE 5-25-22 4:25 pm						
DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	WATER LEVEL	METHOD Rotary Mud Drilling						
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--	--	--	--	--	--	CREW CHIEF Roy Hanson						

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50			ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50			MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
		HIGHLY ORGANIC SOILS			PT

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

Transmittal

Date: Wednesday, August 02, 2023

Project: Brookings Municipal Utility

To: Ron Duvall, SD DANR

From: Phil Stump, HDR

PL

Subject: BMU's North Wellfield Rehabilitation Plans – Water Rights

We are sending you: ☒ Attached ☐ Under separate cover via the following items:

☐ Shop drawings ☐ Prints ☐ Plans

☐ Samples ☐ Specifications ☐ Copy of letter

☐ Change Order ☐ Other: Enter Other Item

Copies	Date	No.	Description
1	8/2/2023		SD DANR Letter for North Wellfield Water Rights

These are transmitted as checked below:

☐ For your approval ☐ Approved as submitted ☐ Resubmit

☒ For your use ☐ Approved as noted ☐ Submit

☐ As requested ☐ Returned for corrections ☐ Return

☐ For review/comment ☐ Other: Enter Other Item

Remarks: Please see enclosed BMU letter.

HDR Engineering is assisting BMU on water right matter. We appreciate receiving a carbon copy of any responses.

Copy to: Joe Honner

Signed: PHIL STUMP

RECEIVED

AUG 07 2023

OFFICE OF
WATER

Approval of Location Change and/or Additional Diversion Point(s)

Name/Address: City of Brookings, 520 3rd St #230, Brookings SD 57006

County: Brookings

Date: January 20, 2026

General Description of Authorized Project:

In October 2023, the Chief Engineer approved the plugging and replacement of wells completed into the BS:SMC (Big Sioux: Six Mile Creek Aquifer), authorized under Vested Water Right No. 216-3 (Well Nos. 3, 4, and 7). The City of Brookings determined that it would be more efficient to proceed with abandonment/replacement of Well Nos. 6, 8, and 9, respectively authorized under Water Right Nos. 674-3, 1117-3, and 1296-3; all completed into the BS:SMC.

Water Right No. 674-3 authorizes the appropriation of up to 963 acre-feet of water annually, with a maximum diversion rate of 1.33 cfs (approx. 600 gpm) from one well (#6) located in NW ¼ SW ¼ Section 13-T110N-R50W, with water used for municipal purposes.

Water Right No. 1117-3 authorized the appropriation of up to 1,043 acre-feet of water annually, with a maximum diversion rate of 1.44 cfs (approx. 650 gpm) from one well (#8) located in the NW ¼ SW ¼ Section 13-T110N-R50W, with water used for municipal purposes.

Water Right No. 1296-3 authorizes the appropriation of up to 963 acre-feet of water annually, with a maximum diversion rate of 1.33 cfs (approx. 600 gpm) from one well (#9) located in the NW ¼ SW ¼ Section 13-T110N-R50W, with water used for municipal purposes.

Well Nos. 10 & 11 are located in the SE ¼ NW ¼ & SW ¼ NE ¼ Section 13-T110N-R50W, respectively. Both wells are completed into the BS:SMC, with the wells capable of producing a combined maximum rate of approx. 1,840 gpm, which is consistent with the combined rates produced from Well Nos. 6, 8, & 9.

Authority:

Pursuant to SDCL 46-5-13.1, the location of a diversion point may be changed and/or additional diversion points may be added, provided the following conditions are met and the potential for interference with other existing diversions is not increased:

- 1) **The developed water source is the same as permitted and no additional water is appropriated.** The City of Brookings requests to relocate the diversion authority of Water Right Nos. 674-3, 117-3, and 1296-3 from their corresponding wells, which will be plugged, to the City's new Well Nos. 10 & 11 (both BS:SMC). An increase to the combined volume (2,969 ac-ft) of water or combined maximum diversion rate (4.1 cfs) under Water Right Nos. 674-3, 1117-3, and 1296-3 is NOT authorized.
- 2) **If the use is for irrigation, no new lands are irrigated.** N/A

Review of Existing Diversions:

The City of Brookings is the only user appropriating from the BS:SMC in an approximate three-mile radius of Well Nos. 10& 11. It has been determined that there is reasonable probability that interference due to pumping from the developed location will not adversely or unlawfully impair existing permits/rights held by other users, and that any potential interference would first be noticed by the City. The closest domestic well (likely completed into the BS:SMC), is located in the SE ¼ Section 13, T110N, R50W, and was drilled in 2009 for the SD Board of Regents. The location of domestic wells in the well completion report database maintained by the Water Rights Program is based on the location listed by the driller on the Well Completion Report.

Recommended Action:

Based on the above criteria, it is recommended that the change in diversion points, and additional diversion points be approved.

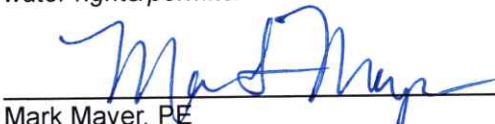


Amanda Dewell, Permitting Administrator
DANR, Water Rights Program

1/21/26
date

The acting Chief Engineer makes a finding, pursuant to SDCL 46-5-13.1 and ARSD 74:02:01:14.01 that:

This change in location and/or additional diversion point(s) does not increase the potential for adverse effects to existing water rights/permits.



Mark Mayer, PE
DANR, Director of the Office of Water

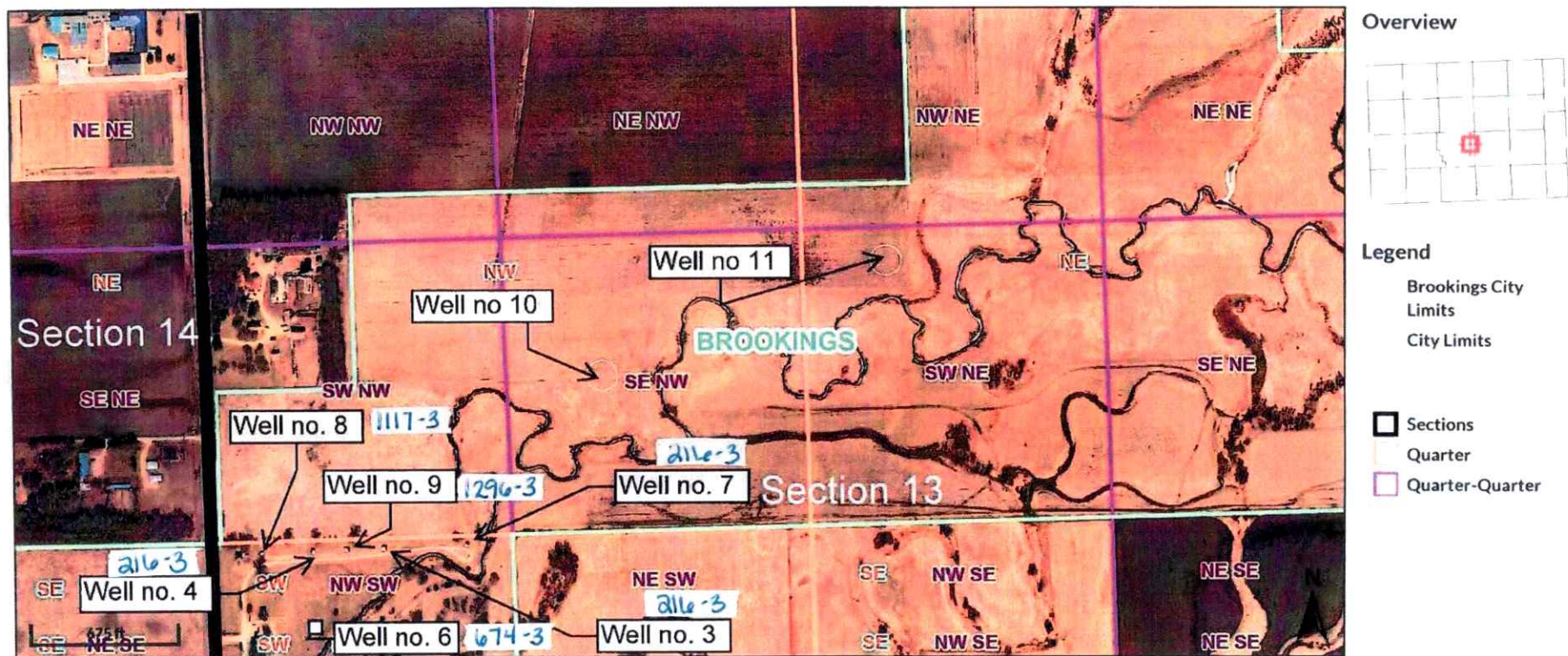
1/22/26
date



Brookings Municipal Utility

North Wellfield - Existing and New Wells

Township 110N, Range 50W, Section 13



Date created: 5/25/2023

Last Data Uploaded: 5/25/2023 1:04:31 AM

Developed by Schneider
GEOSPATIAL

Source: <https://beacon.schneidercorp.com/>
HDR accessed website on 5/25/2023

#10 (44.33509/-96.78090)

#11 (44.33623/-96.77642)

10 + 11 = BS:SMC

216-3 = BS:SMC

674-3 = BS:SMC

1117-3 = BS:SMC

1296-3 = BS:SMC