

1647-2

1. Considered NOVEMBER 15 1978

2. Name of Applicant TOWN OF QUINN

3. Post Office Address SOUTH DAKOTA

4. Amount of Water claimed .20

5. Source of Water supply 3030' DEEP WELL

6. Water to be used for MUNICIPAL USE

Acres to be irrigated —

7. Water to be diverted and used in PENNINGTON Coun.

~~about~~ IN CITY LIMITS ~~within~~ of

8. Proof of Publication

Received 10-13-78

Not Received

9. Application

Approved 11-15-78

Subject to Domestic well clause

Not Approved

Action Deferred

10. Remarks:

Map No. 1411-2 Water Division No. 2 BAD RIVER District

(blank to be filled by the Engineer for the W. R. C.)

APPLICATION FOR PERMIT

To Appropriate Water within the State of South Dakota

(NOTE - Draw a line through items not applicable)

1. Name of Applicant TOWN OF QUINN
 Postoffice address QUINN State S. D. 57775
 If a corporation show date and place of incorporation 1908 Quinn, S. D.
 2. Method of accomplishing work (contract, employment of others, or by direct labor) Contract
 3. Name of diversion work QUINN WATER WELL
 4. Amount of water claimed (cubic feet per second) 20
 5. Source of water supply Deep Well
 6. Location of point of diversion SW 1/4 of NE 1/4 Sec. 6 T 1S R 17E

Town of QuinnCounty Pennington

7. Annual period or periods during which water is to be used Daily
 8. Use to be made of water (irrigation, industrial, municipal, commercial, recreation, etc.) Municipal
 9. For irrigation use: Total number of acres to be irrigated _____

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

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

Attach sheet if more space is needed

10. Time required to complete construction of water supply system 15 days years. Additional time required to complete application of water to the proposed beneficial use _____ years.
 11. Choice of newspaper for Notice of Intent to Appropriate Water publication Pennington County Courant
Wall, S. D. 57790
 12. Principal Features of the Proposed Water Supply System.

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

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

20 HP Submersible Pump

C. Works proposed to apply water to beneficial use.

Estimated Total Cost \$ 18,000.00

Attachments: Attach Form 2A if diversion from a well or dugout, or if storage of water, is proposed. Attach map.
 (See instructions concerning preparation.)

STATE OF SOUTH DAKOTA)

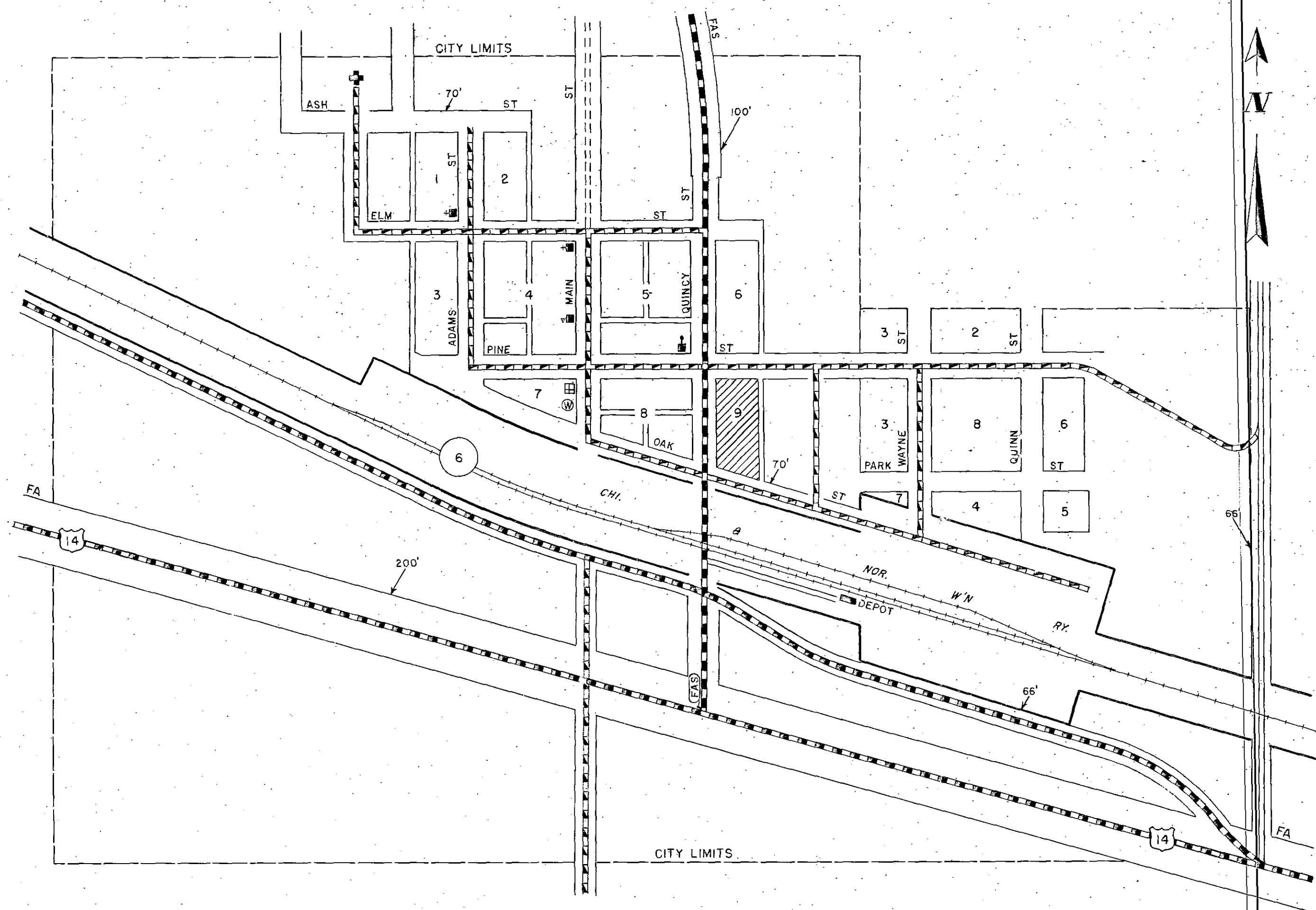
) ss.

County of Pennington)

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

Signed N. W. FellerSubscribed and sworn to before me this 20 day of September 1978

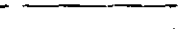
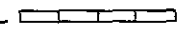
Notary Public (or other qualified officer)



CITY MAP
QUINN
PENNINGTON COUNTY · SOUTH DAKOTA
TIS-R17E

SCALE
0 300 ft.
POP. 105 (1970)

1974
DRAWN BY
DEPARTMENT OF TRANSPORTATION
OFFICE OF SYSTEM ANALYSIS
ALL STREET RIGHT OF WAY 80 FT.
ALLEYS 20 FT.
(UNLESS OTHERWISE INDICATED)

- LEGEND
- U.S. NUMBERED HIGHWAY 
 - STATE NUMBERED HIGHWAY 
 - FEDERAL AID PRIMARY HIGHWAY SYSTEM 
 - FEDERAL AID SECONDARY HIGHWAY SYSTEM 
 - END OF FEDERAL AID DESIGNATED ROUTE 
 - PRIMITIVE ROAD 
 - UNIMPROVED ROAD 
 - GRADED AND DRAINED ROAD 
 - GRAVEL ROAD 
 - BITUMINOUS SURFACED ROAD 
 - PAVED ROAD 
 - CENTRAL BUSINESS DISTRICT 
 - TOWN CENTER 
 - RAILROAD 
 - POST OFFICE 
 - SCHOOLHOUSE 
 - CHURCH OR OTHER RELIGIOUS INSTITUTION 
 - FIRE ENGINE HOUSE 
 - WATER SUPPLY STAND PIPE OR TANK 
 - HOSPITAL 

Map # 141-2
W.R. # 1647-2

WATER RIGHT APPLICATION APPROVAL

The Water Rights Commission hereby approves Water Right Application No. 1647-2

TOWN OF QUINN
(Applicant)

(Post Office Address)

SOUTH DAKOTA 57775 With the following modifications.
(State)

The ~~well~~ well approved under this Permit is located near domestic wells which may obtain water from the same aquifer. The ~~well~~ well owner, under this Permit, shall control his ~~withdrawals~~ withdrawals so there is not a reduction of needed water supplies in adequate domestic wells.

Date of first receipt of application SEPTEMBER 21 19 78

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

Date of receipt of corrected application _____ 19 _____

Approved NOVEMBER 15 19 78 Recorded: Book 20 Page 95

WATER RIGHT PERMIT NO. 1647-2

The Water Rights Commission hereby grants and issues this Water Right Permit No. 1647-2 authorizing the construction of the water use system and the putting of water to beneficial use as stated in the Application and as modified in the Water Right Application approval, subject, however, to the following limitations and conditions:

1. The date from which applicant may claim a right is SEPTEMBER 21 19 78
2. The equivalent of at least one-fifth of the work above specified is to be completed on or before NOVEMBER 22 19 78
3. The whole of said work is to be completed on or before NOVEMBER 30 19 78
4. The limit of time from proof of beneficial use of water appropriated in accordance herewith is COMPLETED
5. The water appropriated shall be used for the purpose of MUNICIPAL USE

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

7. The amount of the appropriation herein granted shall not exceed .20 cubic feet per second; neither shall it exceed the capacity of the above described water supply system, nor shall it exceed the amount of water needed for ~~beneficial use~~ and if for the irrigation purposes said appropriation must be limited to not more than 2 acre-feet per acre per year and be limited to not more than one-seventh (1/7) of one cubic foot of water per second of time for each acre of land to which water is USED FOR MUNICIPAL PURPOSES actually and beneficially ~~applied~~ THIS DATE for irrigation on or before CONTINUOUSLY said water to be used during the following described annual period:

Witness my hand this 17th day of NOVEMBER 19 78

WATER RIGHTS COMMISSION

By:

John Hatch
Chief Engineer, Executive Officer

Certificate of Construction Issued JANUARY 31 19 81

Water License Issued JANUARY 21 19 81

BAKER

DRILLING



OSAGE, WYOMING

Sept. 10, 1961

PHONE 465-2344

Subject: Water well-City of Quinn, South Dakota-Aug.23,1961-Sept.6,1961

Aug.23,1961-Rigged up and set 26' 10 3/4" 44# J-55 casing for surface, cemented with 15 sacks cement, 2% calcium chloride.

Aug.24-Drilling ahead 9" hole to 905'

Aug.25-905' to 1491'

Aug.26-1491' to 2011' Lost some mud starting at 1848'

Aug.27-2011' to 2161' Backed out of drill pipe going in hole, ran overshot and picked up fish and out of hole

Aug.28-2161' to 2237' Lost circulation at 2236', Came out of hole, mixed 40 sacks hulls, 60 sacks gel, 2 sacks turf plug, 10 sacks cellophane, 10 sacks filters.

Aug.29-2237' to 2327' Lost circulation again, ordered 7" pipe

Aug.29-Waiting on pipe

Aug.30-Waiting on pipe

Aug.31-2325'-2333'-Town Council day, ran back in hole to condition for long string, Town Council took over, bought some mud and was going to regain lost circulation, it didn't work. Ran 2333' of 7" 20# J-55 used casing with float shoe on the bottom, pipe was set on bottom of hole.

Sept.1-2335' to 2692'- In hole with 6 1/2" bit, new bit at 2680'

Sept.2-2692' to 3000'

Sept.3-3000' to 3030'- Out of hole, ran Electric log and Gamma log to 2989' as this was all the cable the state had on their machine. Ran 747' of 4 1/2" 9.5# J-55 new casing with two float collars on bottom, with a left and right thread on to drill pipe. Cemented with 85 sacks of cement, backed off of casing and flushed top of hole out with water.

Sept.4-Setting on cement

Sept.5-Perforated and ran Schlumberger gamma ray log. Log would only go to 2985', top of sand at 2925', perforated 30' of sand from 2925' to 2955' 2 shots per foot.

Sept.6-Ran submersible pump in well to 600' setting bottom shut off switch at 540', top shut off switch at 430'. Started pump, ran approximately 5 minutes and blew a fuse, pulled pump and checked trouble. Installed new fuse and ran pump back in well and pumped well for 24 hours at approximately 90 G.P.M. continually. We did not check draw down

James A. Baker

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

D. Well Information or Estimates

(1) Drill Hole, Diameter 9 " / 6 1/4 ", Depth 2333' / 2955'
(2) Casing, Type steel Diameter 7" & 4 1/2" Thickness 3/8 "
(wood, concrete, steel, etc)
(3) Perforated Screen
Type steel pipe, Diameter 4 1/2", Length 30'
(4) Gravel Pack, Thickness _____, Length of gravel pack _____

E. Dugout Information or Estimates

(1) Surface dimensions _____, Depth _____

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

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

Character of Water bearing materials Fall River Sands

Depth to top of water bearing material 2900'

Depth to bottom of water bearing material 2955'

Thickness of water bearing material 55'

Depth to water (ground surface to water level) 200'

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

On same owner's property 5 rds. On property owned by others 10 rds.

G. Water Storage Dams.

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

TOWN OF QUINN, S. D.

W. L. Fuller
Signature of Applicant

Widco

WELL LOG

COMPANY: Quinn City Well
 WELL: Quinn
 LOCATION: NW-3E, T. 1 S., R. 16 E., Sec. 6

COMPANY: City of Quinn, S. D.

AREA: Black Hills East

WELL: Quinn City water well

COUNTY: Pennington STATE: South Dakota

COORDINATES:

N

S

ELEVATION:

D.F.

K.B.

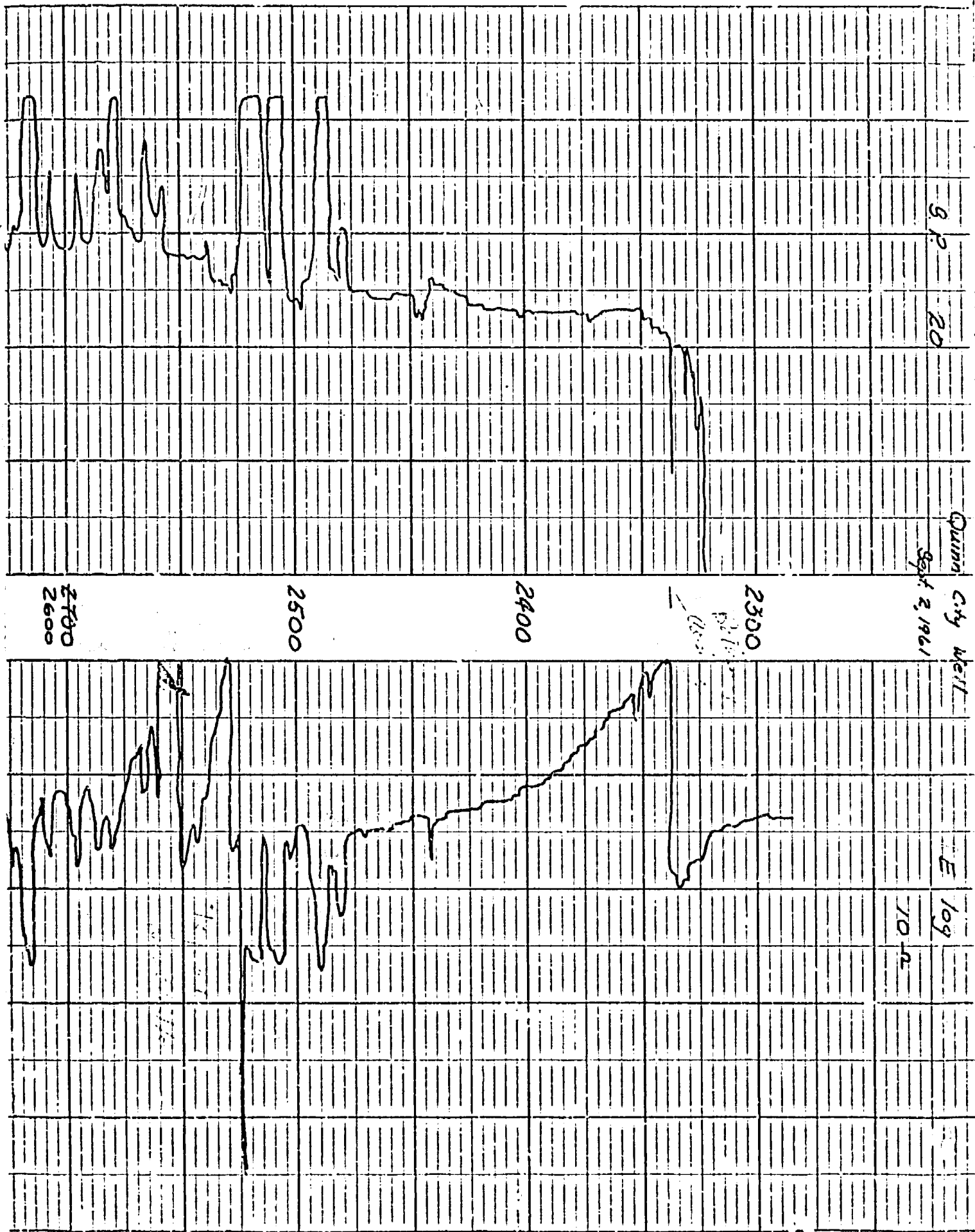
G.I. 2520

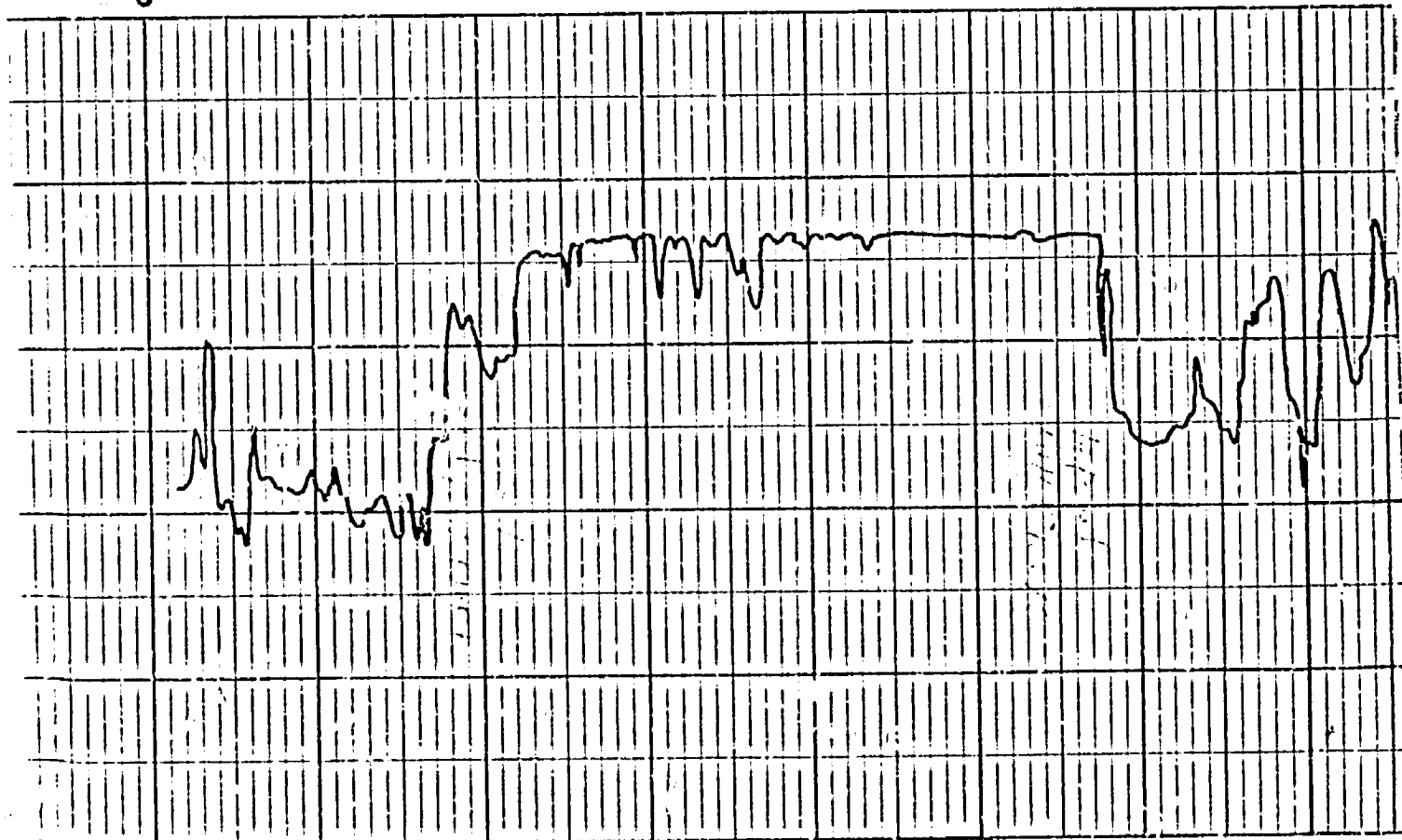
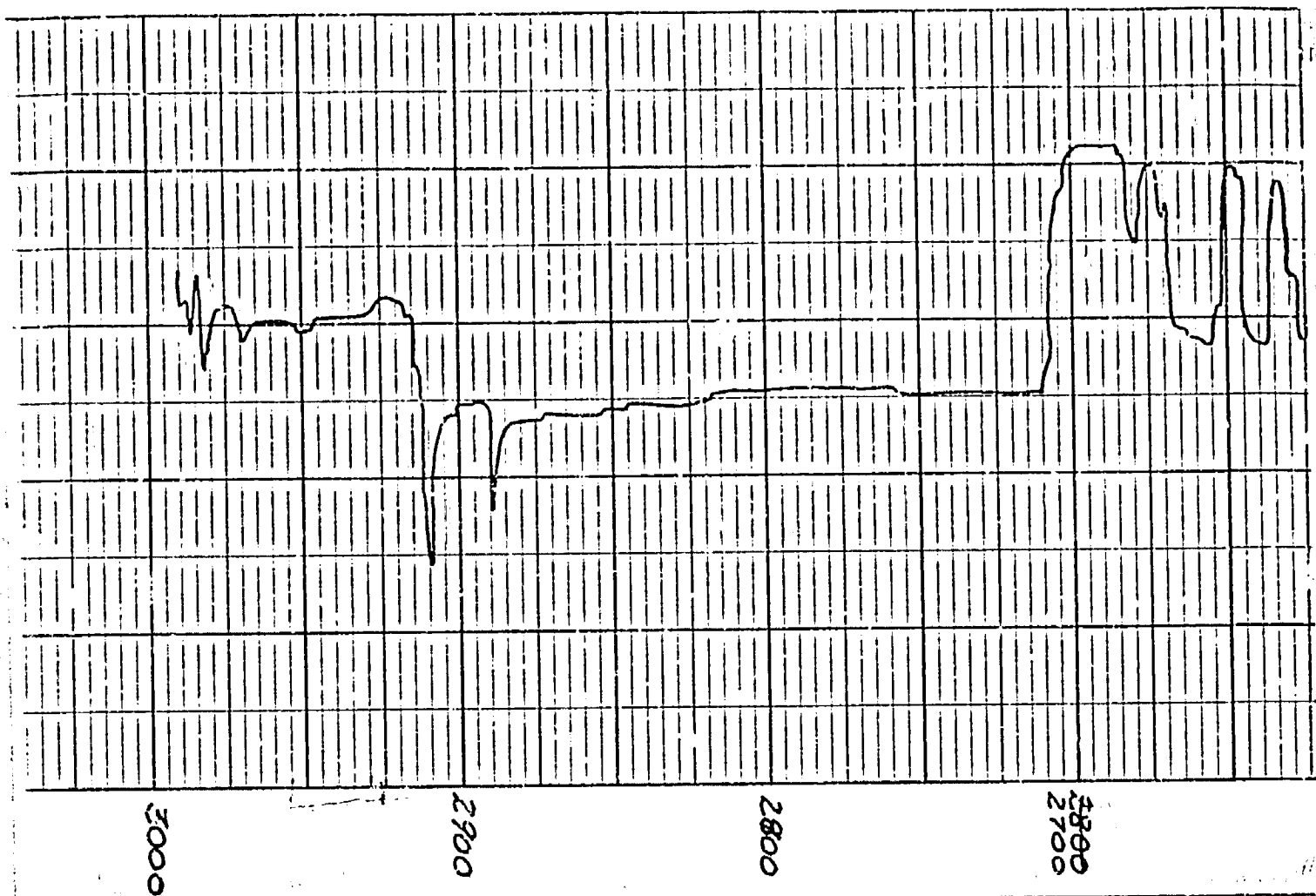
	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	<u>Sept. 3, 1961</u>		Nature		
First Reading	<u>2989</u>		Density		
Last Reading	<u>9</u>		Viscosity	@ °F	@ °F
Footage Logged	<u>2959</u>		Resistivity	@ °F	@ °F
Bottom (Driller)	<u>0030</u>		Res. @ BHT	@ °F	@ °F
Casing (From Log)			pH		
Casing (Driller)			Circ. Temp.		
Casing Size			E.H. Temp.		
Bit Size:					
Bit Size:					
			logged by	<u>Christensen and</u>	
			Witnessed by	<u>Baker</u>	

REMARKS

* Reg. U.S. Pat. Off.

3 sec. at 0.01





STATE OF SOUTH DAKOTA

WATER LICENSE NO. 1647-2

(1) WHEREAS, On the 21st day of September A. D. 1978
the Town of Quinn

made Water Right Application No. 1647-2 for a permit to use .20 cubic feet per second of the waters of groundwater (one well)

County of Pennington, State of South Dakota, for municipal

(2) WHEREAS, On the 15th day of November, 1978 A.D. 1978
1647-2 September 21, 1978
 Permit No. _____, with a date of priority of _____

was issued to said applicant _____ for the diversion of said water, and provided for the completion of construction of the water supply system therein described on or before the 30th day of November, 78 A. D. 19____ and for the application to beneficial use of said water on or before the _____ day of _____, A. D. 19____

and:

(3) WHEREAS, It is hereby certified that the applicant has complied with the provisions of the 20 of the State of South Dakota relating to completion of the construction of the water supply system and is entitled to divert _____ cubic feet per second of water for beneficial use and,

(4) WHEREAS, It is hereby certified that the applicant has complied with the provisions of the laws of the State of South Dakota **water to be used for municipal purposes for Town of Quinn** relating to the application of water to beneficial use of the following extent;

(5) NOW, THEREFORE, By the virtue of the authority vested in us by the laws of the State of South Dakota, We hereby grant and confirm to the Town of Quinn

the holder _____ and owner _____ said permit No. 1647-2 a water right, dating from September 21, 1978
to use of .20 cubic feet per second of the waters
of groundwater (one well)

in the County of Pennington and State of South Dakota, or so much thereof as may be necessary for the
purposes hereinbelow mentioned, to be diverted at a point 130' north and 300' east of the
center of Section 6-T1S-R17B

and conducted to and upon thru the Town of Quinn's distribution system

for the purpose of municipal use

Subject to any limitations listed in Water Right Permit No. 1647-2 and subject to the laws of the State of South Dakota.

WITNESS, My hand and seal of our office at Pierre, South Dakota
this 21st day of January A. D.

Nineteen Hundred and eighty-one

WATER MANAGEMENT BOARD

By:

John Hatch
Chief Engineer, Executive Officer **JOHN HATCH**

Permit No. 1647-2

Water Diversion No. 2 Bad River Water District

CERTIFICATE OF CONSTRUCTION

This is to Certify, That the Town of Quinn

the holder of
Permit No. 1647-2, issued upon Application No. 1647-2, bearing date of priority of September 21,
1978 authorizing the diversion of .20 cu. ft. per second of the waters of groundwater (one well) County of Pennington, State of South Dakota at a
point 130' north and 300' east of the center of Sec. 6-T1S-R17E

for Municipal

purposes, have 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 .20 cu. ft. per second of water.

Date January 21, 1981

John Hatch
JOHN HATCH, Chief Engineer
Water Rights Division

Form 8 - Proof of Publication - Notice of
Intent to Appropriate Water

No. 1647-2

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County Pennington) ss.

I, Les Ravellette hereby
certify that the annexed printed copy of Notice of Intent to Appropriate

Water was taken from the Pennington County Courant

A newspaper which during the whole time of publication of said notice
herein after stated, has been and is printed and published in the _____

Town _____ of Wall

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

September 28, 1978

October 5, 1978

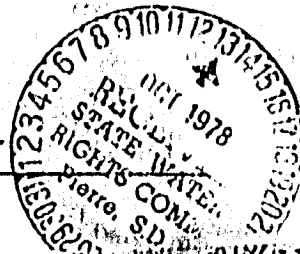
Les Ravellette
(Signature)

Publisher

(Title)

October 6, 1978

(Date Signed)



NOTICE OF HEARING ON
APPLICATION TO
APPROPRIATE WATER

Pierre, South Dakota 57501
September 22, 1978
Whereas, it is hereby given that the
Town of Quinn, whose post office
is at Quinn, South Dakota, has
made application in accordance
with the provisions of SDCL 46-1-1
thru 46-1-8; 46-2-1 thru 46-2-11;
46-2-13; 46-3-1 thru 46-3-8; 46-5-10
thru 46-5-22; 46-6-1; 46-6-3; 46-6-5;
46-6-6; 46-6-10; 46-6-11 (1989) Com-
mission Rules ARSD 52:01:01 thru
52:01:0113; for a permit to appropri-
ate for beneficial use, a cubic foot of
water per second of time from ground
water (one well) through the Quinn
Water Well, the point of diversion of
which is to be located in the SW 1/4
NE 1/4 of Section 6, Twp. 13, Range
17E, said water to be used for the
purpose of providing municipal water
supplies for the Town of Quinn.

This Application No. 1647-2 will be
considered by the Water Rights Com-
mission at SDEA Auditorium, 11 E.
Capitol, Pierre, South Dakota, upon
the 15th day of November, 1978, at 10
A.M. The Commission is authorized
to make a determination on this appli-
cation at the hearing. All interested
persons may appear and be heard.
Any person who may be affected by a
Commission decision who desires to
present evidence or cross-examine
witnesses according to SDCL 1-26
may notify the Commission in writing
prior to the hearing or orally at the
hearing.

This hearing is an adversary pro-
ceeding. Any person has the right to
be present or to be represented by a
lawyer. These and other due process
rights will be forfeited if they are not
exercised at the hearing. Decisions of
the Commission may be appealed to
the Courts as provided by law.

WATER RIGHTS COMMISSION

BETTY WESTLUND

Water Rights Specialist
Pur. Sept. 28, Oct. 5

Publish first publication, on or before October 20, 1978 No. 1647-2

NOTICE OF HEARING ON
APPLICATION TO APPROPRIATE WATER

Pierre, South Dakota 57501

September 22, 1978

Notice is hereby given that the Town of Quinn whose post office address is Quinn, South Dakota, has made an application in accordance with the provisions of SDCL 46-1-1 thru 46-1-8; 46-2-9 thru 46-2-11, 46-2-13; 46-5-1 thru 46-5-8; 46-5-10 thru 46-5-22, 46-5-41, 46-6-3, 46-6-5, 46-6-6.1, 46-6-10, 46-6-14 and Commission Rules ARSD 52:01:01:01 thru 52:01:01:13, for a permit to appropriate for beneficial use .20 cubic feet of water per second of time from ground water (one well) through the Quinn Water Well, the point of diversion of which is to be located in the SW 1/4 NE 1/4

of Section 6, Twp. 1S Range 17E. Said water to be used for the purpose of providing ~~irrigation on portions of the following described land:~~

municipal water supplies for the Town of Quinn

This Application No. 1647-2 will be considered by the Water Rights Commission at SDEA Auditorium, 411 E. Capitol, Pierre, South Dakota, upon the 15th day of November, 1978 at 10 A.M. The Commission is authorized to make a determination on this application at the hearing. All interested persons may appear and be heard. Any person who may be affected by a Commission decision who desires to present evidence or cross-examine witnesses according to SDCL 1-26 may notify the Commission in writing prior to the hearing or orally at the hearing.

This hearing is an adversary proceeding. Any person has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised at the hearing. Decisions of the Commission may be appealed to the Courts as provided by law.

WATER RIGHTS COMMISSION

BETTY WESTLUND
Water Rights Specialist

cc: Town of Quinn, SD , 57775

Form 10.

No. 1647-2 Pennington

City of Pierre



NOTICE OF COMPLETION OF WORKS AND/OR
APPLICATION OF WATER TO BENEFICIAL USE

Post Office QUINN

Date 2-12-79

TO: Water Rights Commission
Joe Foss Building
Pierre, South Dakota 57501

Dear Sirs:

This is to inform you that I have completed the construction of the water diversion system and/or that I have put the water to beneficial use to the maximum extent it is going to be used, not exceeding the amounts as specified in Water Right Permit No. 1647-2.

Water Right Permit No. 1647-2 states that the diversion system is to be constructed by Nov 30, 1978 and that the water is to be put to beneficial use by Nov 30, 1978.

The diversion system was completed on Nov 30, 1978.
Applying the water to beneficial use was completed on Nov, 1978.

You may schedule an inspection so that the Certificate of Construction and/or the Water License may be issued, thus completing my acquisition of a water right.

John L. Harrison
(Signature)

REPRODUCTION: SECTION 25-1 ROLL NO. 14 DATE RECEIVED 2-20-79

RECEIPT

WATER RIGHTS COMMISSION

State of South Dakota

No 4 7916

PIERRE, January 14, 1931

RECEIVED OF Town of Quinn, Quinn, SD 57775

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

Fee for Application for Permit to appropriate Water No. (examination, processing, recording and filing)		
Fee for inspecting Construction, and issuing Cert. of Construction No. 1647-2	50.	00
Fee for inspecting Beneficial Use, and issuing Water License No. 1647-2		
Fee for issuing Location Certificate-Dry Draw, No.		
Fee for filing		
Fee for certified copy of		
Fee for Print copy of map		
Fee for Certifying		
Fee for		
(any other work as provided by law)		
TOTAL	50.	00

WATER RIGHTS COMMISSION

By *(John Hatch)*
Chief Engineer, Executive Officer
JOHN HATCH *(St)*

Permit No. 1647-2Water Division 2 Bad River Water District

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

TO: WATER RIGHTS, WATER MANAGEMENT BOARD / POSS BLDG., PIERRE, SOUTH DAKOTA 57501

I have this day made a thorough examination of the water use system constructed by Town of Quinn
Quinn, South Dakota 57775 holder
 of Permit No. 1647-2, bearing date of priority of September 21, 1978
 authorizing the diversion of 120 cu. ft. per second of the waters of Well
 for Municipal purposes, in Pennington County.

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

The Water Use System consists of,

A. Works used to divert the water:

Submersible Pump Est 20 HP
Pumping 90 gpm.

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

City Water Mains
City Water Tower

C. Works used to apply water to beneficial use.

Commercial and Residential Use

The system is in the following condition: GoodThe point of diversion is located 130 ft N and 300 ft E of the
Center of Sec. 6, T1S R17EThe works are capable of diverting and conveying to the place of use 120cu. ft. per second of water which is to be used for Municipal Purposes

Water has been put to beneficial use to the maximum extent as follows:

comprising a total of _____ acres of land.

Well Data

Depth 2989 ft.Pump Set at 100 ft.Pumps 90 gpm

Date

April 11, 1980

LeRoy J. McLaughlin
 (signature)

Tract #3
4.52 A.

1/4 SECTION

N.E. 1/4 - S.W. 1/4

Tract #1
39 A.

State of South Dakota } ss.
County of Pennington }

I, Evan R. Rounds, a Registered
Land Surveyor, hereby certify that I
compiled this map from maps and deeds
as recorded in the Register of Deeds office,
and that the only additions or changes made
are identification numbers or letters given
to certain tracts.

Evan R. Rounds
REGISTERED LAND SURVEYOR

Subscribed and sworn to before
me this ____ day of March, 1951.

NOTARY PUBLIC

T.I.S. - R.I.T.E.

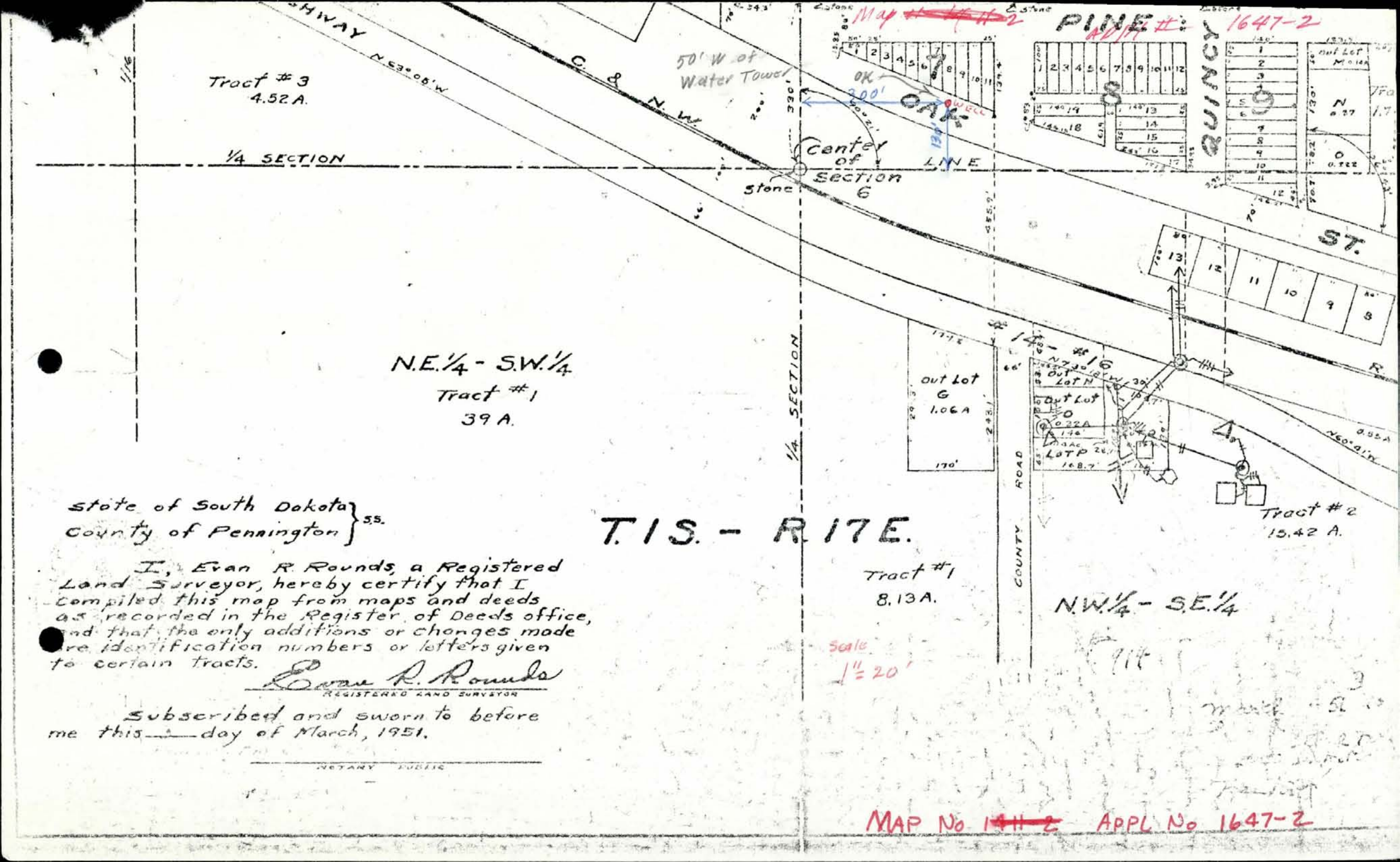
Tract #1
8.13 A.

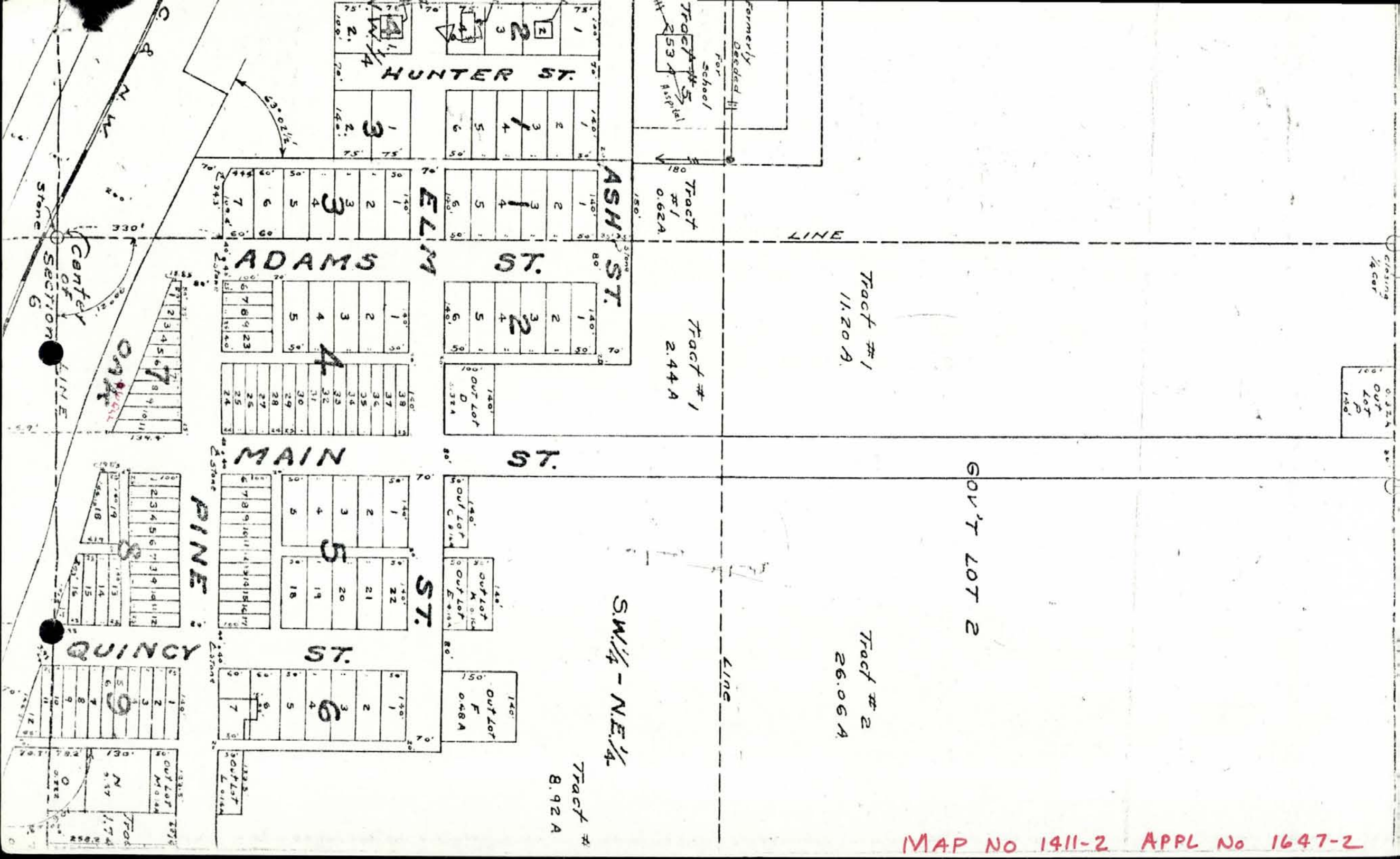
Scale
1" = 20'

N.W. 1/4 - S.E. 1/4

Tract #2
15.42 A.

MAP No 14H-2 APPL No 1647-2





No. D 1-17-626

OTHER NOS. _____

WELL LOG

State S. Dak. County Pennington Subarea _____

Owner City of Quinn

Location SEE SPECIAL LOG FILE FOR

Location: MORE INFORMATION (T.D. 303046.)

Drilled by Baker Drlg Address Osage, Wyo.

Date 9-3-61 Casing diam. _____ Land-surf. alt. 2620

Source of data SDGS x-ray; Fly from 2300 to 2989

(Enter type of well, perforations, yield, and drawdown at end of log)

CORRELATION		MATERIAL	THICKNESS (feet)	TOP DEPTH (feet) SDAS
1911 alt	1912 top			
		Sharon Springs		1300 - 1340
1079	1541(?)	Niobrara		1340
526	1745(?)	Carlile	Shale & thin bedded ls.	
500	2100(?)	Greenhorn		2125
3826	2238(?)	Girgones		
+143	2477	Newcastle		2480
-93	2703	SKNH Creek		2705
-292	2912	Fall River		2910

RECORD BY _____ DATE _____

SHEET _____ OF _____

SCHEDULED

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

City of Quinn

well #2

S. Dak Dept. Health

Analyses by ~~Geological Survey, United States Department of the Interior~~
9-268q (parts per million)

Sample number.....					
Date of collection.....	10/61				
Temperature (°F).....		me/l			
Silica (SiO ₂).....					
Iron (Fe).....	0.1				
Manganese (Mn).....	0.0				
Calcium (Ca).....	2.4	0.10	} 15.99		
Magnesium (Mg).....	0	0			
Sodium (Na).....	363	15.79			
Potassium (K).....	3.9	.10			
Bicarbonate (HCO ₃).....	571				
Carbonate (CO ₃).....					
Sulfate (SO ₄).....	3.8				
Chloride (Cl).....	13				
Fluoride (F).....	3.0				
Nitrate (NO ₃).....	0.0				
Boron (B).....	-				
Dissolved solids					
Calculated.....					
Residue on evaporation at 180°C .	194				
Hardness as CaCO ₃	6				
Noncarbonate hardness as CaCO ₃					
Alkalinity as CaCO ₃	P. 22				
	T 468				
Specific conductance					
(micromhos at 25°C).....					
pH.....	8.7				
Color.....					
Percent sodium.....	91				
Sodium-adsorption ratio.....					

Owner: City of Quinn, well #2

Well type: Artesian

Date drilled: 1961

Depth (ft.): 3030

Diameter (in.): 6

Cased to (ft.):

Water-bearing formation:

Remarks: from S. Dak Dept. Health, "Public Water Supply Data, 1966"

Point of collection:

Water level (ft.):

Yield (gpm): 95 pump copy

Use: ps

Appearance:

Collected by: S.D. D.H.

WATER RESOURCES DIVISION SITE SCHEDULE

GENERAL SITE DATA (0)

Check One ☒ English ☐ Metric Units

Site Ident No 12345678901234567890 RG Number R=0* Transaction T= D M V *
 Site-Type 2= C D H I M P T W * Data 3= C L M * Reporting Agency 4= U.S.G.S. *
 Project No. 5= * District 6= 46 * State 7= 46 * County (or town) FRANKLIN * B= 113 *
 Latitude 9= 35.5908 * Longitude 10= 102.2723 * Lat-Long Accuracy 11= S F Y M *
 Local Number 12= 115 * Land Net Loc. 13= N H S E S 16 T 15 R 17 E *
 Location Map 14= W44 * Scale 15= 24000 *
 Altitude 16= * Method of Measurement 17= A L M * Accuracy 18= *
 Topo Setting 19= D C E F H K L O P S T U V W * Hydrologic Unit (OWDC) 20= 10140102 *
 Date of First Construction/Completion 21= 2/24/ * Use of Site 23= A D E G H O M P R S T U W X Z *
 Use of Water 24= A B C D E F H I M N (P) R S T U Y Z *
 Secondary Water Use 25= * Tertiary Use of Water 26= * Depth of Hole 27= * Depth of Well 28= 3030 * Source of Depth Data 29= 1 *
 Water Level 30= * Data Measured 31= / / * Source 33= *
 Method of Measurement 34= A C E G H L M R S T V Z *
 Site Status 37= D F G H O P R S T V X Z *
 Source of Geohydrologic Data 36= * Pump Used 35= * Measuring Point 266= * Measuring Point Date 267= / / *

OWNER IDENTIFICATION (1)

R=158 * T= A D M * Date of Ownership 159= 2/24/ *
 Name Last 161= * First 162= * Middle Initial 163= *

OTHER SITE IDENTIFICATION NUMBERS (1)

R=189 * T= A D M * Ident 190= * Assigner 191= *
 New Card Same R & T Ident 190= * Assigner 191= *

SITE VISIT DATA (1)

R=186 * T= A D M * Date of Visit 187= / / 76 * Name of Person 188= *

FIELD WATER QUALITY MEASUREMENTS (1)

R=192 * T= A D M * Date 193= / / * Geohydrologic Unit 195= 217 INKRS *
 New Card Same R thru 195
 Temperature 196= 00010 * Degrees C 197= *
 Conductance 196= 00095 * μ Mhos 197= *
 Hardness 196= 00900 * Mg/l 197= *
 Chloride 196= 00940 * Mg/l 197= *
 Bicarbonate 196= 00440 * Mg/l 197= *

FOOT NOTES:

① Source of Data Codes:

S D O A
 reporting, driller, owner, other gov't agency
 R L G Z
 other, local ecologist, other reported

SCHEDULED

D 1-17-0

City Water Well
Pennington County, South Dakota

SDDPH WATER QUALITY ANALYSES 4/56, 12/56

well assumed to be at water tower

2623 ± 5

- 940 shale, same, slightly micaceous.
- 980 shale, same, some bluish-white bentonite.
- 1000 shale, same, more bentonite.
- 1020 shale, same, fragments Inoceramus shell.
- 1040 shale, medium gray, limestone concretion fragments, gray, Inoceramus fragments.
- 1060 shale, same, bentonitic.
- 1080 shale, like 1040, with limestone.
- 1100 shale, medium gray, bentonitic, with streaks white bentonite.
- 1140 shale, same, streaks buff-colored stuff and Inoceramus fragments.
- 1160 shale, soft, dark gray, with concretion fragments.
- 1180 shale, medium gray, with streaks impure greenish gray bentonite.
- 1200 shale, light to medium gray, bentonitic.
- 1220 shale, medium gray.
- 1240 shale, light to medium gray, some very pyritic.
- 1260 shale, light to medium gray.
- 1280 shale, medium gray to yellow, much buff pyritic dolomitic concretionary limestone.
- 1300 shale, same, fragments limestone and fibrous calcites.
- 1320 shale, medium gray.
- 1340 shale, medium to dark gray, trace limestone concretions and some bentonite; fish fragments.
- 1360 shale, same, pyritic.
- 1380 shale, same.
- 1400 shale, medium to dark gray; much concretion limestone and much white bentonite.
- 1420 shale, medium to dark gray; much interbedded bentonite.
- 1440 shale, light to medium gray; trace speckled shale.
- 1460 shale, medium gray, some very pyritic.
- 1500 shale, medium gray, much buff dolomite or concretion limestone.
- 1520 shale, medium gray, micaceous, slightly bentonitic, some dirty green bentonite, much concretion limestone.
- 1540 shale, medium gray, micaceous, slightly micaceous; much concretion limestone.

Niobrara (sample top 1540)

- 1540 - 1560 shale, medium gray, some good speckled.
- 1580 shale, light gray, silty to bentonitic; several pieces speckled.
- 1600 shale, medium to dark gray; few pieces speckled.
- 1640 shale, same.
- 1660 shale, medium gray, several pieces light to medium heavy speckled.
- 1680 shale, same and much greenish buff, light gray brown shale.
- 1720 shale, medium to dark gray, much is medium speckled.
- 1740 shale, light to medium gray, pyritic; trace speckled.
- 1760 shale, light to medium gray, much speckled.
- 1780 shale, same, half is speckled.
- 1800 shale, same, possible streaks sand; still much speckled, oaved?
- 1820 shale, same.

- 1840 - 1845 sandy light gray, silty, with small white bryozoan
 1850 shale, light gray
 1860 shale, light gray
 1870 shale, light gray
 1880 shale, light gray
 1890 shale, medium gray (all these layers have coarse free sand grains)
 1900 shale, same, much milky white bentonite.
 1910 shale, medium gray.
 1920 shale, medium to dark gray; some free sand, oiled chalk and fine to medium tight salt and pepper sandstone.
 1930 shale, same; some finely crystalline gray argillaceous limestone and more free sand.
 1940 shale, medium to dark gray; some speckled shale may be oiled.
 1950 shale, same; sample about 1/3 coarse sand and granules.
 2010 - 2045 shale, dark gray.
 50 shale, medium to dark gray, much speckled, much coarse sand.
 55 shale, medium gray, much bentonite.
 60 shale, medium to dark gray, silty.
 65 shale, medium to dark gray.
 77 shale, dark gray to nearly black.
 80 shale, medium to dark gray.
 85 shale, dark gray to nearly black; trace speckled; trace Inoceramus limestone.
 90 shale, dark gray.
 95 shale, dark gray to black; trace speckled; much free sand and sawdust.
 2100 shale, dark gray to sooty black.
 05 shale, light to medium gray.
 10 shale, dark gray to black with organic specks; trace speckled.
 15 shale, same.
 20 shale, dark gray to black, much speckled; trace Inoceramus prism detrital limestone.
 30 shale, dark gray to black, some speckled.
 35 shale, same; trace medium crystalline limestone with foraminifera.
 40 shale, black, speckled.

Greenhorn formation

- 2140 - 2145 limestone, fine to coarsely crystalline, golden, pyritic, interbedded with black speckled shale.
 55 limestone, same; much detrital limestone with forams.
 60 limestone, same, 2/3; shale, black, speckled, 1/3.
 65 limestone, detrital and coarsely crystalline, golden.
 70 limestone, 3/4; shale, same, 1/4.
 75 shale, speckled, 2/3; limestone, detrital, 1/3; free sand.
 80 same.
 85 shale, dark gray, much speckled; thin stringers Inoceramus limestone.
 90 shale, medium to dark gray, speckled; limestone stringers.
 95 shale, dark gray, speckled.
 2355 - 2360 bentonite, white, 2/3; free sand, coarse, 1/3.
 65 shale, dark gray, speckled, very much fluorescent bentonite; much free coarse sand.
 70 shale, same, with fragments Inoceramus limestone; much free medium and coarse sand.
 75

- 50 sand, medium to coarse, with some limestone fragments and some bentonite.
 55 sand and grit, 2/3, limestone fragments and some bentonite.
 60 limestone, some 1/2 sand, some 1/2 bentonite.
 2400 same, some 1/2 sand, some 1/2 bentonite.
 10 same.
 15 shale, dark gray to black, trace bentonite and free sand.
 20 same; little more free sand and limestone fragments.
 25 same; still more free sand and limestone fragments.
 30 same; less free sand and limestone fragments.
 35 shale, dark gray to black.
 40 shale, same.
 45 shale, same; more sand and bentonite.
 50 shale, same; sample half sand and grit.
 55 shale, dark gray to black; still much sand and some bentonite.
 60 shale, same.

Dakota sandstone

- 2460 - 2465 same and new fine to medium subangular shiny tight sandstone, much pyrite.
 70 sandstone, fine, gray to medium white, tight.
 75 sandstone, same; trace porous in white.
 80 sandstone, same and some free sand probably from up the hole.
 85 sandstone same, tight.
 90 sandstone, fine, gray, micaceous; trace dolomite, finely crystalline buff; much black shale.
 95 same, more dolomite.
 2500 sandstone, fine to medium, white, micaceous, some porous.
 10 sandstone, same.
 15 sandstone, medium, sub-angular to sub-round, shiny, porous, some stained.
 20 sandstone, same.
 25 sandstone, same, but less coherent.
 30 sandstone, same, much of it drills to free sand.
 35 sand, as above; drills free.
 40 sandstone, same.
 45 sand, same, but finer; with streaks tight white siltstone.
 50 same; still fairly porous; streaks of pyritic sandstone.
 55 probably same, but drilled slower and more black shale in sample.
 65 sample mostly black shale.
 75 no samples.
 80 shale, gray, organic, micaceous; some sandstone, fine to coarse, poorly sorted, white, only slightly porous.
 85 sandstone, medium, rounded to frosted, shiny, very porous.
 95 sandstone, same, with streaks fine silty white sandstone with organic inclusion.
 2600 sandstone, medium, rounded to frosted, shiny, porous.
 05 sandstone, same, 2/3; bentonite, cream, 1/3.
 20 sandstone, with streaks light gray and gray to white siltstone.
 35 sandstone, fine, micaceous, tight to porous.
 2635 50 sandstone, fine to medium, the fine is tight, the coarser sand has some porosity.
 55 sandstone, fine to coarse, white, shiny, drills free.
 60 sample mostly black shale, trace fine white tight sandstone.
 75 shale, dark gray to black.
 80 no sample.
 85 sandstone, fine to medium, some tight; some drills free, white.
 T.D. 90 sample mostly black shale, trace sandstone as above.

U.S. DEPT. OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION
SITE SCHEDULE

Check One ☒ English ☐ Metric Units

GENERAL SITE DATA (0)

Site Ident No 425912102063301 RG Number R=0 Transaction T= A D M V
add, delete, modify, verified
Site-Type 2= C D H I M P T W Data 3= C U L M Reporting Agency 4= U.S.G.S.
collector, drain, sinkhole, connector, multiple, pond, tunnel or, well
well shaft field checked, unchecked, location not, minimal accurate data
Project No. 5= District 6= 4,6 State 7= 4,6 County PENNINGTON 8= 1,03
Latitude 9= 23 59 15 Longitude 10= 102 06 25 Lat-Long Accuracy 11= S F T M
deg min sec deg min sec sec, 5 sec, 10 sec, Min
Local Number 12= 15 17 5 5 Land Net Loc 13= S 5 T 1 S R 17 E
1/4 1/4 1/4 section, township, range, merid
Location Map 14= WILKIE Scale 15= 12,400.0
Altitude 16= 131.2 Method of Measurement 17= A L M Accuracy 18=
altimeter, level, map
Topo Setting 19= D C E F H K L O P S T U V W Hydrologic Unit (OWDC) 20= 101401P.2
depression, stream, dunes, flat, hilltop, sink, swamp, offshore, pediment, hillside, terrace, undulating, valley, upland flat draw
Date of First Construction/Completion 21= 01 01 1956 Use of Site 23= A D E G H O M P R S T U W X Z
month day year anode, drain, geo-seismic, heat, observ- mine, oil or, recharge, repress, test, unused, with- waste, destroyed drawal, thermal reserv. ation, gas
Use of Water 24= A B C D E F H I M N P R S T U Y Z
air cond., bottling, commercial, dewater, power, fire, domestic, irrigation, medicinal, industrial, public, recreation, stock, institution, unused, desal, other supply
Secondary Water Use 25= Tertiary Use of Water 26= Depth of Hole 27= 263.0 Depth of Well 28= Source of Depth Data 29= A
Water Level 30= Data Measured 31= / / Source 33=
month day year
Method of Measurement 34= A C E G H L M R S T V Z
airline, calibrated, estimated, pressure, calibrated, geophysical, manometer, reported, steel, electric, calibrated, other
airline pipe pressure pipe logs
Site Status 37= D F G H O P R S T V X Z Activity Status 273=
dry, flowing, nearby, nearby, obstruction, pumping, recently, nearby, nearby, foreign surface water other
flowing, recently flowing, pumped, pumping, recently, substance effects
pumped
Source of Geohydrologic Data 36= Pump Used 35= Measuring Point 266= Measuring Point Date 267= / /
no month day year

Y = Online data base

OWNER IDENTIFICATION (1)

R=158 T= A D M Date of Ownership 159 # 01 01 1956
add, delete, modify month day year
Name: Last 161= DUNN First 162= JAMES Middle Initial 163=

OTHER SITE IDENTIFICATION NUMBERS (1)

R=189 T= A D M Ident 190 # 1 WILKIE Assigner 191=
add, delete, modify
New Card Same R & T Ident 190 # Assigner 191=

SITE VISIT DATA (1)

R=186 T= A D M Date of Visit 187 # 01 01 1956 Name of Person 188= JAMES
add, delete, modify month day year

FIELD WATER QUALITY MEASUREMENTS (1)

R=192 T= A D M Date 193 # / / Geohydrologic Unit 195 # 241 101 KOT
add, delete, modify month day year
New Card Same R thru 195
Temperature 196 # 0 0 0 1 0 Degrees C 197=
Conductance 196 # 0 0 0 9 5 μ Mhos 197=
Hardness 196 # 0 0 9 0 0 Mg/l 197=
Chloride 196 # 0 0 9 4 0 Mg/l 197=

FOOT NOTES:

① Source of Data Codes:

S D O A
reporting, utility, owner, other gov't, agency
R L G Z
other logs, geologist, other

Field Number:

SCHEDULED

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

Let snow

1-17-5

QUINN CITY WATERWELL

S. D. K. Dept. Health

Analyses by ~~Geological Survey, United States Department of the Interior~~
9-268q (parts per million)

Sample number.....		1688 to 5008 to City 480			
Date of collection.....	12/56	6/56			
Temperature (°F).....		me/l water found 30 mg/l at 30 °C			
Silica (SiO ₂).....					
Iron (Fe).....	5.2		2.2		
Fe ₂ O ₃ + Al ₂ O ₃ + Mn ₂ O ₃ (E ₂ O ₃) -			8.0		
Manganese (Mn).....	0.0		0.00		
Calcium (Ca).....	14	.70			
Magnesium (Mg).....	4	.33			
Sodium (Na).....	1428	62.12	1388		
Potassium (K).....	14.7	.38	16.3		
Bicarbonate (HCO ₃).....	1220		1203		
Carbonate (CO ₃).....					
Sulfate (SO ₄).....	0		2.96		
Chloride (Cl).....	1535		1505		
Fluoride (F).....	0.6		0.6		
Nitrate (NO ₃).....	0.0		1.0		
Boron (B).....	-				
Dissolved solids					
Calculated.....					
Residue on evaporation at 180°C	3685		3902		
Hardness as CaCO ₃	61		60		
Noncarbonate hardness as CaCO ₃ ...					
Alkalinity as CaCO ₃	1,000		186		
	P 12		27		
Specific conductance					
(micromhos at 25°C).....			6,667		
pH.....	8.1		7.8		
Color.....					
Percent sodium.....					
Sodium-adsorption ratio.....					

Owner: City of Guinn #1

Well type:

Date drilled: 1956

Depth (ft.): 2690

Diameter (in.): 7"-4"

Cased to (ft.):

Water-bearing formation:

Remarks:

"Public Water Supply Data, 1961", "1959"

Point of collection: *at road*

Water level (ft.):

Yield (gpm): Pump Capacity 30

Use: Public Supply
Appearance:

Appearance:

Collected by: SDDH.