

WATER PERMIT NO. 2729-2

Name of Applicant: Town of Keystone

Address: PO Box 689, Keystone SD 57751 Phone: 605 666-4827

Amount of Water Claimed: 0.156 Total Acres: NA

Source of Water Supply: groundwater (one well)

Water to be used for: municipal County: Pennington

Type of Waste Disposal System:

Location:

PRIORITY Date Received: 8-11-2014

Application/License Fee: \$ 700

Corrected Application Received: 8-20-2014

Period of Annual Use: January 1 – December 31

Remarks:

Diversion Point: NW 1/4 SW 1/4 Sec 4-T2S-R6E

Land to be Irrigated: NA

Depth of Well: 300 feet deep

Well Driller: Alexander Drilling

Remarks:

Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 8-20-2014

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

			4		
	⊗				

SD EForm - 1585LD V4

FORM 2: Application for uses other than irrigation

(type or print)

Mail to: PMB 2020 DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>2729-2</u> (office use only) Hydrologic Unit <u>10120109</u>
	Basin <u>Upper Cheyenne</u>
	Newspaper <u>Rapid City Journal</u>
	<u>PO Box 450-5720 - 605-394-8300</u>

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Application For Permit To Appropriate Water Within The State Of South Dakota

Check use(s) of water:

- | | | | |
|---|---|--|--|
| ☒ Municipal | ☐ Suburban Housing | ☐ Recreational | ☐ Institutional |
| ☐ Rural Water System | ☐ Commercial | ☐ Fish & Wildlife | ☐ Geothermal Heat |
| ☐ Domestic (over 18 gpm) | ☐ Industrial | ☐ Other | |

Type of Application:
(check one)

- ☒ New ☐ Vested Right (Use predates Mar 2, 1955) ☐ Future Use Reservation
☐ Place to Beneficial Use Water Reserved by Future Use Permit No. _____
☐ Amendment/Correction to Permit No. _____

Description of amendment/correction: (i.e. change diversion point(s), add diversion point(s), change use, etc.)

1. Name to Appear on Water Permit Town of Keystone(check one) ☒ Owner ☐ Tenant/lessee ☐ Owner's Legal Agent

(name and complete address if different than above name)

Mailing Address PO Box 689 Keystone SD 57751

(Address)

(City)

(State)

(Zip Code)

Home Phone 605-666-4827 Cell _____ Email _____2. Amount of water claimed 0.156 *CFS or 70 **GPM ***AF

(*Cubic Feet per Second)

(**Gallons per Minute)

(***)Acre Feet - storage capacity of dam/dugout or annual use if applicable)

3. Source of water supply Hard rock fracture4. Location of point of diversion NW 1/4 SW 1/4 section 4 T2S R6E County Pennington

(example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W)

If not a public water supply (e.g. municipal), will water be used outside of the area described above? ☐ Yes ☐ No

If "Yes," where will water be used? _____

(example - NW 1/4 section 12-T104N-R53W)

5. County or counties where water will be used Pennington6. Annual period during which water is to be used Year-round Jan 1 - Dec 31

7. Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)

New well for domestic supply.I, David Colloid, the applicant, certify that I have read this application, have examined the attached map, and that the matters stated are true.

2012-09

Attachments: Attach Form 2A if diversion is from a well or dugout, or if storage of water is proposed. Also, attach map and any other technical information. (see instructions)

**SOUTH DAKOTA
WATER PERMIT NO. 2729-2**

Date of first receipt of application August 11, 2014.

Date of return to applicant for corrections, amendments or changes August 11, 2014.

Date of receipt of corrected application August 20, 2014.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 2729-2 to the Town of Keystone, PO Box 689, Keystone SD 57751 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 2729-2 appropriates 0.156 cubic feet of water per second from one well completed into the Precambrian Crystalline Rock (300 feet deep) located in the NW 1/4 SW 1/4 Section 4-T2S-R6E.
2. The water appropriated shall be used for the purpose of municipal use and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date of approval of Permit No. 2729-2 is November 17, 2014.
5. The date from which applicant may claim right is August 11, 2014.
6. One-fifth of the construction is to be completed on or before May 17, 2017.
7. All construction is to be completed on or before November 17, 2019.
8. Water is to be put to beneficial use on or before November 17, 2023.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The Water Permit Holder shall report to the Chief Engineer annually the amount of water withdrawn from the Precambrian Crystalline Rock.

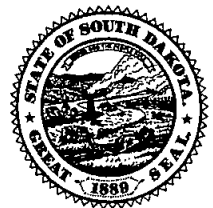
WATER MANAGEMENT BOARD

By: Jeanne Goodman

Jeanne Goodman, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

DEC 18 2014

date



Sec 32
T001S
R06E

Sec 33
T001S
R06E

Sec 34
T001S
R06E

Sec 5
T002S
R06E

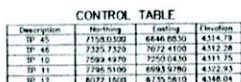
Sec 4
T002S
R06E

Sec 3
T002S
R06E

Sec 8
T002S
R06E

Sec 9
T002S
R06E

Sec 10
T002S
R06E



- LEGEND**
- | | |
|---|--------------------|
|  | WELL |
|  | CONTROL POINT |
|  | MANHOLE |
|  | FIRE HYDRANT |
|  | WATER VALVE |
|  | GUT WIRE ANCHOR |
|  | POWER POLE |
|  | DECIDUOUS TREE |
|  | PROPERTY LINE |
|  | OVERHEAD POWER |
|  | WATER CONTOUR (1') |
|  | MAJOR CONTOUR (5') |
|  | CONCRETE SURFACE |
|  | ASPHALT SURFACE |
|  | GRAVEL SURFACE |

(b) DENOTES SET 5/8" BEAR MARKED "PENNER-ASSOC. 0215"
 (c) MEASURED THIS SURVEY
 (d) RECORDED IN A PREVIOUS PLAT OR DESCRIPTION

UTILITIES

SOUTH DAKOTA ONE CALL NOTIFICATION CENTER
11800 GREENVILLE AVENUE
DALLAS, TX 75243
1-800-785-7474

The locations of existing underground utilities are shown in an approximate way only and have not been independently verified by the owner or its representative. It is always possible that an underground utility was not located during the One Call Locate for design and, as a result, not shown on the Engineering Plan. The contractor shall confirm the location of all utilities before commencing work, and agrees to be fully responsible for any and all damages which might be occasioned by the contractor's failure to exactly locate and preserve any and all underground utilities.

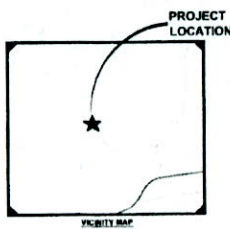
CERTIFICATE OF SURVEYOR

I, Erin D. Howard, Registered Land Surveyor No. 9213 of the State of South Dakota, do hereby certify that being so authorized, I did cause the within shown survey and map to be made under my direction and that the said map correctly shows the existing site conditions and permanent markers and their location.

Date: 6-24-14 SDH
Eric D. Howard, Registered Land Surveyor

BENCH MARK: SITE BENCH MARK TOP NUT OF FIRE HYDRANT
ELEVATION=141.21

BASIS OF ELEVATIONS:
ELEVATIONS ARE BASED ON FEMA BENCHMARK "RM2" - A BRASS TABLE
ON THE NORTHWEST ABUTMENT OF THE BRIDGE ACROSS BATTLE CREEK
ON US HIGHWAY 16 STAMPED A-56-88.
ELEVATION= 4,354.95' (NGVD 29)



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RENNER & ASSOCIATES, LLC.
918 NORTH ST., 2nd FLOOR CITY, SD 57701
P-544C 605.721.7310



Scale	1"=20'
Designed By	Drawn By PMBL
Design Date	Print Date 6/24/2014
Surveyed By RL, TA	Survey Date 6/2014

TRACT 37 OF THE SW1/4 OF
SECTION 4, T2S, R6E, B9M
KEYSTONE, PENNINGTON COUNTY, SOUTH DAKOTA

TOWN OF KEYSTONE
P.O. BOX 689
KEYSTONE, SD 57751

Industrial Job No. 2008.29

DETAILED
TOPOGRAPHIC MA

Sheet **1 of 1**

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SW corner

800' NW
of well #4

CLARK ST

FRONT ST

HARNEY ST

MADISON ST
CARSON ST

COLUMBIA ST

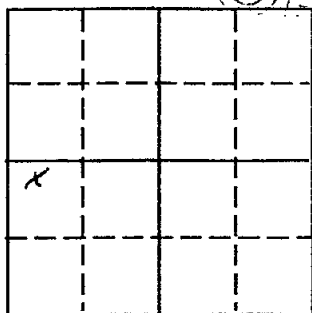
40

SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NW 1/4 SW 1/4 Sec 4 Twp 25 Rg 6ECounty
Pennington

North

Please mark well
location with an "X"

Well completion Date

2/14/14

Distance to nearest potential pollution source (Septic tank, abandoned well, feed lot, etc.)

1200 ft. from nearest pollution (identify source)

PROPOSED USE:

☒ Domestic/Stock
☐ Irrigation
☐ Municipal
☐ Industrial
☐ Business
☐ Institutional
☐ Test Holes
☐ Monitoring

METHOD OF DRILLING:

Rotary Down Hole Hammer

CASING DATA:

☒ Steel ☐ Plastic ☐ OtherOther describe 37' of 8" Sch 40 Steel

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	IN	0 FT	35 FT	10 IN
LB/FT	IN	35 FT	300 FT	6 IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type Standard No. of Sacks 18 Grout Weight W/2 0/0 bentonite Lb/gal 35 From 35 Ft To 0 FtDescribe grouting procedure thru trim pipe

SCREEN:

☐ Perforated pipe ☐ Manufactured

Diameter _____ Inches Length _____ Feet

Material _____

Slot Size _____ Set From _____ Feet to _____ Feet

Other information _____

WAS A PACKER OR SEAL USED?

☐ Yes ☒ No

If so, what material? _____

Describe packer(s) and location _____

DISINFECTION: Was well disinfected upon completion?

☒ Yes, How? W/ chlorine sol.☐ No, Why Not? _____

Lab sample sent to for water quality analysis _____

Well Owner:

Business Name:

City of Keystone

Address:

PO Box 6891

City, State, Zip:

Keystone, SD 57751

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Drift	0	30
Hd grey brown schist	30	48
Brn schist fract. 10 gpm	48	54
Hd grey brown schist	54	64
Brn schist fract. 15 gpm	64	66
Hd grey schist	66	112
Grey schist fract. 20 gpm	112	114
Hd grey schist	114	150
Broken, pink, punky schist 35 gpm	150	155
Hd grey schist	155	182
Grey schist fract. 40 gpm	182	185
Hd grey schist	185	215
Hd grey schist 45 gpm	215	218
Hd grey schist	218	245
Hd grey schist 50 gpm	245	247
Hd grey schist	247	253
Hd grey schist fract. 60 gpm	253	255
Hd grey schist	255	282

STATIC WATER LEVEL

15

FEET

If flowing: closed in pressure _____ PSI

GPM flow 65

through _____

Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced flow rate _____

GPM

Can well be completely shut in? _____

WELL TEST DATA:

☒ Pumped Describe: w/air☐ Bailed☐ Other _____

Pumping Level Below Land Surface

_____ Ft. After _____ Hrs. pumped _____ GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____

GPM

REMARKS Form cont.

Grey schist fract 65 gpm. 282-284
 Hd grey schist 284-300

This well was drilled under license # 243

And this report is true and accurate.

Drilling firm:

Alexander Drilling Inc.

Signature of License Representative:

Tom Sewell

Signature of Well Owner or Equitable Property Holder:

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JUL - 7 2014

Date:

523 E Capitol Ave.

Pierre SD 57501

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Please return WHITE COPY to: DENR Water Rights

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date 8/11, 20 14

RECEIVED OF Town of Keystone PO Box 689 Keystone SD 57751

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

Fee for Application for Permit No. <u>2729-2</u> to Appropriate Water, to construct and to put water to beneficial use	500 00	
Fee for Application for Permit No. _____ to Appropriate Water for Future use		
Fee to retain Future Use Permit No. _____ after period of seven years.	200 00	
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>2729-2</u>		
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	700 00

No. **06921**

By Jeanne Goodman
Chief Engineer



DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov



July 25, 2014

Bobbie Johnson, City Clerk
City of Keystone
PO Box 689
Keystone SD 57751

Dear Ms. Johnson:

I am writing in regard to a well completion report filed by Alexander Drilling Inc. The report shows a new well was completed for the city on February 14, 2014. I called and talked with you regarding the report. You indicated this was not a replacement well for one of the city's existing permitted wells.

Enclosed is an application form and instruction sheet to apply for a water permit. The completed form with the application fee and map can be returned to: Water Rights Program, 523 E. Capitol, Pierre, SD 57501.

If you have any questions regarding completion of the application form or questions regarding the city's existing permits, please contact Eric Gronlund or me at (605) 773-3352. We will be happy to assist you in any way possible.

Sincerely,

Karen Schlaak

Karen Schlaak
Water Rights Program
karen.schlaak@state.sd.us

enclosures



DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov



August 11, 2014

Town of Keystone
c/o David Cofoid
PO Box 689
Keystone SD 57751

Dear Mr. Cofoid:

Thank you for submitting the *Application for a Permit to Appropriate Water* for municipal use in Pennington County. In order to complete the application, the following is required.

- Enclosed are copies of the maps submitted with the town's application. The map needs to reference a government section corner or quarter corner including section, township and range. For your use, I have enclosed a map with those designations. Please mark the proposed well location with an "X".

If you have any questions, please contact me.

Sincerely,

Karen Schlaak

Karen Schlaak
Water Rights Program
605 773-3352
karen.schlaak@state.sd.us

enclosures



**DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov



**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2729-2, Town of Keystone**

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Program, Department of Environment and Natural Resources concerning Water Permit Application No. 2729-2, Town of Keystone, c/o David Cofoid, PO Box 689, Keystone SD 57751.

The Chief Engineer is recommending APPROVAL of Application No. 2729-2 because 1) 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The Water Permit Holder shall report to the Chief Engineer annually the amount of water withdrawn from the Precambrian Crystalline Rock.

See report on application for additional information.

Jeanne Goodman, Chief Engineer
October 3, 2014

WATER PERMIT APPLICATION NO. 2729-2
TOWN OF KEYSTONE
SEPTEMBER 19, 2014

Water Permit Application No. 2729-2 proposes to appropriate 0.133 cubic feet of water per second (cfs) from one well completed into the Precambrian Crystalline Rock aquifer (280 feet deep) located in the NW¼ SW¼ Sec. 4, T2S-R6E. The water is for municipal use.

AQUIFER: Precambrian Crystalline Rock (CRSL)

Geology and Aquifer Characteristics:

The well this application proposes to use is located within the Keystone Mining District. “The Keystone district comprises an area of extremely complex pre-Cambrian geology.” (Connolly, 1929). In this area, the beds are tilted nearly on edge with generally a northwest-southeast strike and an easterly dip (Redden and DeWitt, 2008), although variations occur, likely due to later intrusives. There are at least three types of rock present in this area: ancient sediments now metamorphosed into slates, phyllites, quartzites and mica schist; intrusive rocks consisting primarily of Diorite; and granite pegmatites which have intruded into all of the earlier rocks (Connolly, 1929). The rock types present are all crystalline and make up what can be considered a single hydrologic unit. The crystalline rocks themselves are relatively impermeable, and groundwater is derived primarily through joints, fractures and foliation within the rock. The distribution, orientation and interconnection of these zones of secondary porosity and permeability are unpredictable, and the aquifer characteristics are site specific and highly variable. There is considerable faulting, folding and brecciation in the area, and the metamorphic rocks are cut by dikes of igneous rocks (Connolly 1929). The faults, intrusives, the orientation of the beds, and lithologic changes within the beds may all serve as local aquitards. The aquifer (crystalline rock), which is exposed at the surface throughout this area is under unconfined conditions, and the static water level of wells in this area are expected to be about the same elevation as Battle Creek.

The well completion report submitted with this application indicates the well was constructed in accordance with the SD Well Construction Standards. The report indicates the well produced 65 gallons per minute when developed with air, and the static water level of the well was reported to be 15 feet below grade on February 14, 2014.

SOUTH DAKOTA CODIFIED LAW (SDCL) 46-2A-9

Pursuant to SDCL 46-2A-9, a permit to appropriate water may be issued only if there is reasonable probability that there is unappropriated water available for the applicant's proposed use, that the proposed diversion can be developed without unlawful impairment of existing rights and that the proposed use is a beneficial use and in the public interest. This report will address the availability of unappropriated water and existing rights from the aquifer.

WATER AVAILABILITY:

The probability of unappropriated water available from an aquifer is typically evaluated by considering SDCL 46-6-3.1 which requires “No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source. An application may be approved, however, for withdrawals of groundwater from any groundwater formation older than or stratigraphically lower than the greenhorn formation in excess of the average estimated annual recharge for use by water distribution systems.”

Water Permit Application No. 2729-2 proposes to appropriate water from the crystalline rock aquifer for municipal use. The Precambrian aged crystalline rock is older than (i.e. stratigraphically lower than) the Greenhorn Formation, and the system of piping, valves, storage tanks, pumps, and appurtenances that conveys water for municipal use is a water distribution system pursuant to SDCL 46-1-6(17). Therefore, the exception provided in SDCL 46-6-3.1 applies in this case, and the average annual withdrawal versus average annual recharge issue need not be considered.

The Water Rights Program does not monitor any observation wells completed into the crystalline aquifer in this immediate area. The nearest observation well completed into this aquifer is located in Custer, SD, about 12 miles southwest of this site. The aquifer at the well site this application proposes to use and at CU-86A are both under unconfined conditions, and so, the aquifer is expected to act similarly in these areas. Water levels in the observation well fluctuate over 50 feet in response to varying climatic conditions, rising during wet years and gradually declining water levels during dry years. Well withdrawals are generally masked by climatic conditions. The proximity of streams to the well site could dampen the effects of climatic conditions. A hydrograph of the well data is shown in Figure 1.

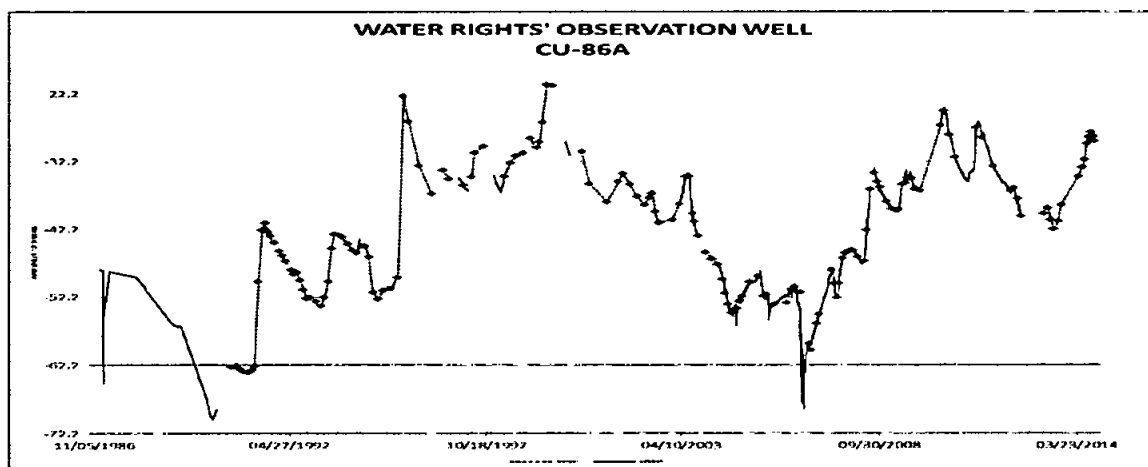


Figure 1. Hydrograph of Water Rights Observation Well Completed into the crystalline aquifer located approximately 12 miles southwest of this well site (Water Rights, 2014a).

REVIEW OF EXISTING WATER RIGHTS:

Any domestic wells in this area would be completed into the crystalline rock (Water Rights, 2014c). Water rights/ permits appropriating groundwater within approximately one mile of this site are shown in Figure 2 and Table 1.

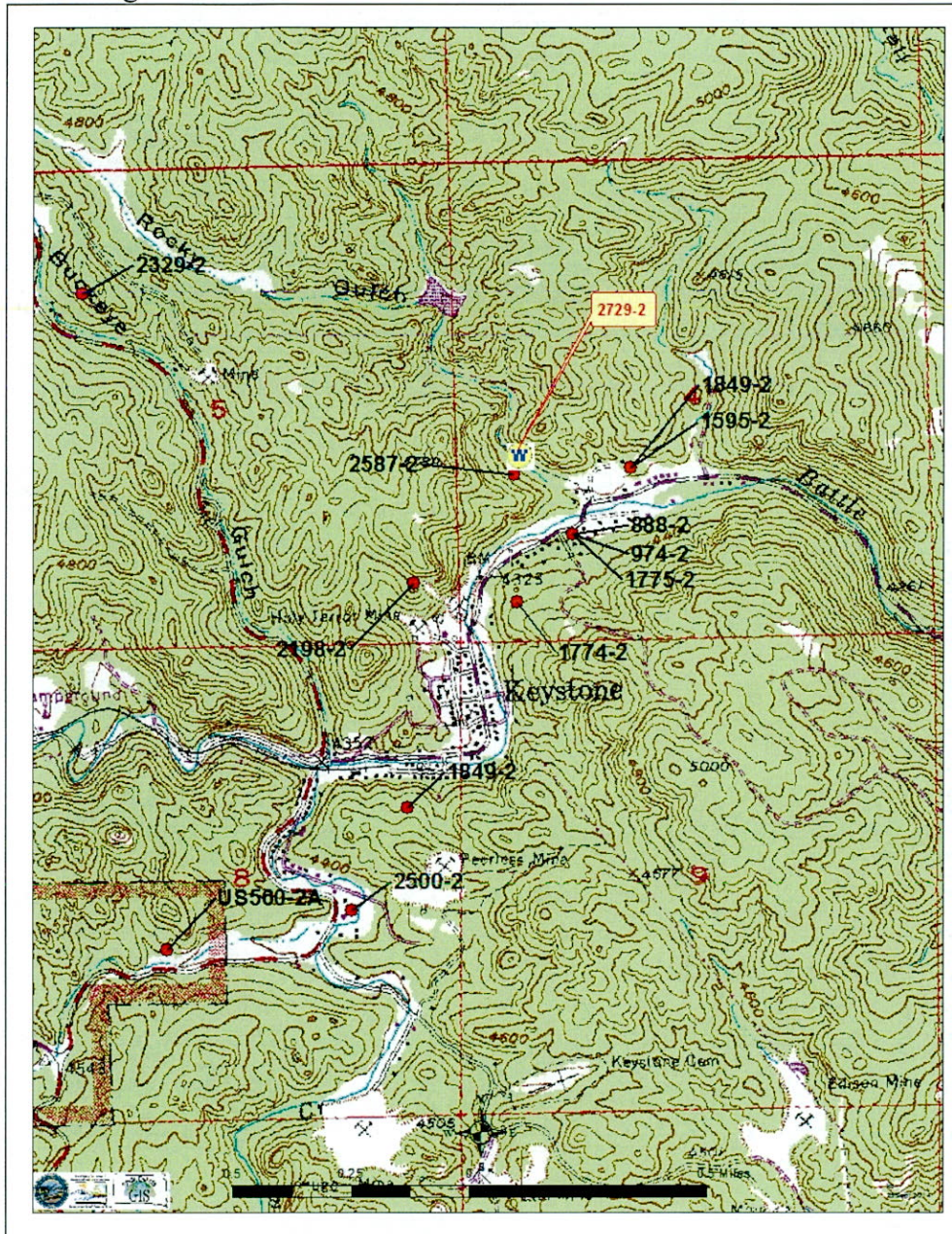


Figure 2. Water Rights/Permits in the vicinity of the well that Application No. 2729-2 proposes as a supply (Water Rights, 2014b).

PERMIT NO	NAME	PRIORITY DATE	STATUS	USE	CFS
1595-2	ROCKY GULCH LLC	06/20/1977	LC	COM	0.07
1774-2	MINERAL TECHNOLOGY CORP	05/08/1981	LC	COM	0.09
1775-2	PACER CORP	05/08/1981	CA	IND	0.55
1849-2	TOWN OF KEYSTONE	08/09/1983	LC	MUN	0.56
2198-2	MINERAL TECHNOLOGY CORP	08/26/1991	PE	IND	0.33
2329-2	LITTLE GUYS LLC	02/15/1995	PE	COM	0.1
888-2	LAWRENCE JUDSON	05/18/1966	CA	IND	0.55
974-2	LAWRENCE JUDSON	07/10/1968	CA	IND	0.55
US560-2A	US NATIONAL PARK SERVICE	05/11/1961	LC	COM	0.066
2500-2	TOWN OF KEYSTONE	01/16/2003	LC	MUN	0.22
2587-2	TOWN OF KEYSTONE	04/20/2006	LC	MUN	0.133
LC= Water Right, CA= Cancelled, PE= Water Permit, COM= Commercial, IND= Industrial, MUN= Municipal					

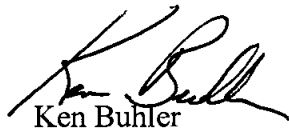
Table 1. Water Rights/Permits in the vicinity of the well that Application No. 2729-2 proposes as a supply (Water Rights, 2014b).

Since the porosity of the Crystalline aquifer is small, 0.03-0.10, (Driscoll and others, 2002) drawdown from a pumped well or wells, may extend over a fairly widespread area. The nearest appropriation not belonging to the Town of Keystone, 1595-2, Rocky Gulch, LLC is located about 1,250 feet east of this well site. The next nearest water right/permit that does not belong to the Town of Keystone is Water Right No.1774-2, Mineral Technology Corp. The well supplying 1774-2 is located approximately 1,650 feet southwest of this well site. It is possible that drawdown from this proposed well could be measurable in neighboring wells, but interference should not be significant.

ARSD 74:02:04:20(6) defines an adequate well as a well constructed to allow the inlet to the pump to be placed not less than 20 feet into the saturated aquifer. An adversely impacted domestic well is defined by ARSD 74:02:04:20(7) as a well in which the pump intake was set at least 20 feet below the top of the aquifer and the water level of the aquifer has declined to a level that the pump will no longer deliver sufficient water for the well owner's needs. Since the porosity of the Crystalline aquifer is low, 20 feet of saturated thickness may not be sufficient for a well to be a reliable water supply. In other words, in this hydrogeologic setting, wells that are "adequate" by definition may not be reliable water supplies. Under these circumstances it can be argued that, any measurable interference (drawdown), from a competing well is actually an adverse impact. However, with natural water level fluctuations in this aquifer measured in excess of 50 feet at the Water Rights' Observation well interference of a few feet could be considered insignificant.

CONCLUSIONS:

1. The Precambrian aged Crystalline Rock is a viable aquifer in this area.
2. The aquifer is unconfined, and interference is not expected to be a concern.



Ken Buhler

SD DENR-Water Rights Program

REFERENCES:

Connolly, J.P., 1929, Gold Deposits of the Keystone District: The Black Hills Engineer, Volume 7, No. 1

Driscoll, D.G., Carter J.M., Williamson, J.E., and Putnam, L.D., 2002, Hydrology of the Black Hills Area, South Dakota: U.S. Geological Survey Water-Resources Investigations Report 02-4094, 1503 p.

Redden, J.A. and DeWitt, E. 2008. Maps Showing Geology, Structure, and Geophysics of the Central Black Hills, South Dakota, Scientific Investigations Map 2777 Scale 1:100,000

Water Rights. 2013a. Observation Well Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

Water Rights. 2013b. Water Right/Permit Files, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

Water Rights. 2013c. Water Well Completion Reports, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

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OCT 30 2014

Affidavit of Publication

**WATER RIGHTS
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State of South Dakota)

)ss.

County of Pennington)

Charles W. Najacht of said county, being duly sworn, on oath says that he is publisher of the Hill City Prevalier-News, a weekly newspaper printed and published in Hill City, said County of Pennington, and has full and personal knowledge of all the facts herein stated; that said newspaper is a legal newspaper and has a bona-fide circulation of at least two hundred copies weekly, and has been published within said County for fifty-two successive weeks next prior to the publication of the notice herein, mentioned, and was and is printed wholly or in part in an office maintained at said place of publication: that the

Town of Keystone
Notice of Application
No. 2729-2

a printed copy of which, taken from the paper in which the same was published, is attached to this sheet, and is made a part of this Affidavit, was published in said newspaper at least once each week for 1 successive week(s), on which said newspaper was regularly published, to wit:

Oct 20, 2014; _____;
_____; _____;
_____; _____;
_____; _____;
_____; _____;

as stipulated in SDCL 17-2-2.1 through 17-2-2.4 inclusive; the full amount of the fees for the publication of the annexed notice is \$ 21.90.

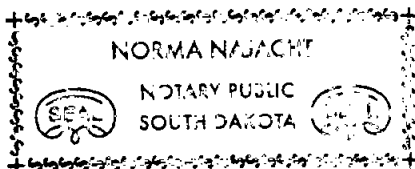
Charles W. Najacht

Subscribed and sworn to me before this 22
of October, 20 14;

Norma Najacht

NOTARY PUBLIC

MY COMMISSION EXPIRES: May 5, 2018



**TOWN OF
KEYSTONE**

**NOTICE OF APPLICATION
NO 2729-2 TO APPROPRIATE
WATER**

Notice is given that the Town of Keystone, P.O. Box 689, Keystone SD 57751 has filed an application for a water permit to appropriate 0.156 cubic feet of water per second from one well completed into the Precambrian Crystalline rock (300 feet deep) located in the NW 1/4 SW1/4 Section 4-T2S-R6E for municipal use.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2729-2 because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss building, 523 E Capitol, Pierre SD 57501 (605-773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by October 31, 2014.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Information concerning this application is available at <http://denr.sd.gov/public>. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Piener, Secretary, Department of Environment and Natural Resources.

Published once at an approximate cost of \$21.90. Represents 1/00002 of the total budget.

10/22

Affidavit of Publication

RECEIVED

STATE OF SOUTH DAKOTA

NOV 17 2014

County of Pennington

SS:

WATER RIGHTS
PROGRAM

Nov 7

L20902666

NOTICE OF APPLICATION

NO. 2729-2 to Appropriate Water

Notice is given that the Town of Keystone, PO Box 689, Keystone SD 57751 has filed an application for a water permit to appropriate 0.156 cubic feet of water per second from one well completed into the Precambrian Crystalline Rock (300 feet deep) located in the NW 1/4 SW 1/4 Section 4-T2S-R6E for municipal use.

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Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by November 17, 2014.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained. Information concerning this application is available at <http://denr.sd.gov/public>. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Steven M. Pirner, Secretary, Department of Environment and Natural Resources.

(Published once at the total approximate cost of \$52.64).

Robert Evans being first duly sworn, upon his/her oath says: That he/she is now and was at all time hereinafter mentioned, an employee of the RAPID CITY JOURNAL, a corporation of Rapid City, South Dakota, the owner and publisher of the RAPID CITY JOURNAL, a legal and daily newspaper printed and published in Rapid City, in said County of Pennington, and has full and personal knowledge of all the facts herein stated as follows: that said newspaper is and at all of the times herein mentioned has been a legal and daily newspaper with a bonafide paid circulation of at least Two Hundred copies daily, and has been printed and published in the English language, at and within an office maintained by the owner and publisher thereof, at Rapid City, in said Pennington County, and has been admitted to the United States mail under the second class mailing privilege for at least one year prior to the publication herein mentioned; that the advertisement, a printed copy of which, taken from said Rapid City Journal, the paper in which the same was published, is attached to this sheet and made a part of this affidavit, was published in said paper once each day for one successive day, the first publication there of being on the seventh day of November that the fees charged for the publication there of are fifty two dollars and sixty four cents.

Robert J. Evans

Subscribed and sworn to before me this seventh day of November, 2014.

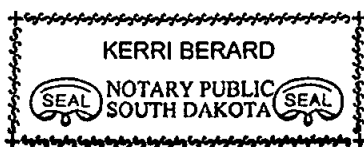
Kerri Berard

Notary public

KERRI BERARD
NOTARY PUBLIC

MY COMM. EXP. AUGUST 21, 2019

My commission expires





DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov



October 6, 2014

Rapid City Journal
PO Box 450
Rapid City SD 57701

ATTENTION: Legal Public Notice

Enclosed is a Notice on Application No. 2729-2 to Appropriate Water. Please publish the notice once on October 15, 2014. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published and arrange for payment. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Town of Keystone, PO Box 689, Keystone SD 57751 (Ph #605-666-4827).

Please send the Water Rights Program an affidavit or the enclosed Proof of Publication form immediately.

The applicant pays the cost of publication, but the Water Rights Program records require an affidavit or Proof of Publication. Delays in receiving the affidavit can be costly to the applicant.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

Schlaak, Karen

From: Gronlund, Eric
Sent: Thursday, October 16, 2014 4:25 PM
To: Schlaak, Karen
Subject: Keystone

I received a call from Vanessa who is Keystone's finance officer. We sent the publication notice out on their water permit application but since she was out of the office she did not get a hold of the RC Journal to authorize publication. She inquired if she could just do so now. I said the date of publication affect the date for citizens to intervene. She seemed to want to handle this herself by contacting the newspaper and having them publish ASAP so I explained that the date to intervene needs to be at least 10 days after the publication and if that ends up being on a weekend, then use the date of the following Monday.



DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov



**NOTE: TO BE SURE OF PUBLICATION ON
THE CORRECT DATES, CONTACT
THE NEWSPAPER(S) RIGHT AWAY.**

October 6, 2014

Town of Keystone
Vanessa Row – Finance Officer
PO Box 689
Keystone SD 57751

Dear Ms. Row:

Water Permit Application No. 2729-2 for municipal use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Rapid City Journal printed at Rapid City SD (Ph # 605-394-8300). You will need to contact the newspaper(s) and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

Be sure to contact the above newspaper(s) to authorize publication of your Notice and to arrange for payment. Early contact with the paper(s) can eliminate delays. Upon receiving authorization from you, the publisher has been instructed to publish your notice. The newspaper has also been instructed to send us the Proof of Publication. We must receive Proof of Publication before action can be taken on the application.

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352
enclosures

NOTE: If you plan to contest any part of the Chief Engineer's recommendation, you must file a petition pursuant to the procedures outlined in the attached notice of hearing. The Water Management Board will then consider your concerns during a hearing on the application.

Instruction to Newspaper - Publish the Notice on November 7, 2014.
The Town of Keystone is responsible for payment.

NOTICE OF APPLICATION NO. 2729-2 to Appropriate Water

Notice is given that the Town of Keystone, PO Box 689, Keystone SD 57751 has filed an application for a water permit to appropriate 0.156 cubic feet of water per second from one well completed into the Precambrian Crystalline Rock (300 feet deep) located in the NW 1/4 SW 1/4 Section 4-T2S-R6E for municipal use.

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Published once at the total approximate cost of _____.

Schlaak, Karen

From: Schlaak, Karen
Sent: Monday, October 27, 2014 9:30 AM
To: RCY Legals (legals@rapidcityjournal.com)
Subject: FW: Notice of Application No. 2729-2, Town of Keystone
Attachments: 2729-2public.short.docx

Bobby,
Please send me the affidavit for this notice.
Thanks,
Karen

From: Schlaak, Karen
Sent: Friday, October 10, 2014 9:47 AM
To: 'legals@rapidcityjournal.com'
Subject: Notice of Application No. 2729-2, Town of Keystone

Bobby,
Since I will be out of the office until Tuesday and this notice for the Town of Keystone should be published on October 15th, I am attaching the text. The Town of Keystone has been notified to contact you to authorize publication and arrange for payment.

Karen Schlaak
Water Rights Program
523 E Capitol Ave
Pierre SD 57501
Phone: 605 773-3352

Schlaak, Karen

From: Schlaak, Karen
Sent: Monday, November 03, 2014 11:39 AM
To: RCY Legals (legals@rapidcityjournal.com)
Cc: Bobbie Johnson (Bobbie@Mt-Rushmore.net)
Subject: Notice of Application No. 2729-2, Town of Keystone
Attachments: 2729-2public.short.docx

Bobby,

Attached is a Notice of Application No. 2729-2 for the Town of Keystone to be published on November 7, 2014.

This notice was originally published in the Rapid City Journal on October 23. Because of a mix up on the date of publication and a date within the notice, the notice must be published again to avoid any legal conflicts due to improper public notice.

The Town of Keystone has been notified to contact you to authorize publication and arrange for payment. This email is being sent to the Town of Keystone also.

Please acknowledge receipt of this notice. Thank you.

Karen Schlaak

Water Rights Program
523 E Capitol Ave
Pierre SD 57501
Phone: 605 773-3352



DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
denr.sd.gov



DEC 18 2014

Town of Keystone
David Cofoid
PO Box 689
Keystone SD 57751

Dear Mr. Cofoid:

Enclosed is Water Permit No. 2729-2 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

Form 10, *Notice of Completion of Works and Application of Water to Beneficial Use*, is enclosed. Please return this completed form after you have finished the system and have put the water to beneficial use. An investigation can then be scheduled so the water license may be issued, thus completing the acquisition of a water right.

An informational sheet *Common Water Right Questions?* is also enclosed. This sheet is intended to answer some of the questions associated with obtaining and keeping a water right.

Sincerely,

Jeanne Goodman, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 2729-2

I have this day, April 28, 2017 made a thorough examination of the water use system constructed by **Town of Keystone, P.O. Box 689, Keystone, SD 57751** of Permit No. **2729-2**, bearing the priority of **8/11/2014** authorizing the diversion of **.156** cu. ft. per second of the water from one well for **municipal** purposes, in **Pennington** County.

Inspection contact & relationship to permit holder, if applicable: **Jerry Przybylski, Public Works Director**
605-666-4827
Correspondence % **Vanessa Row**
Finance Officer

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Alexander Drilling (2014)
- 2) No. of Wells 1
- 3) Depth(s) 300 feet
- 4) Well log is available Yes

Casing:

- 1) Diameter 8" (+2 to -35)
- 2) Length 37 feet
- 3) Type Steel

Screen:

- 1) Type n/a
- 2) Length - feet
- 3) Static water level 15 feet

Pump:

- 1) Make Grundfos
- 2) Model 75S100-15
- 3) Size 6"
- 4) Capacity 50 GPM (metered rate)
- 5) Horsepower rating 10 hp (discharge pressure @ well house approx. 80 psi)

Note: The well was air tested at 65 gpm.

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

- 1) Type PVC
- 2) Size Various inches
- 3) Length -- feet

C. Works used to apply water to beneficial use:

Keystone utilizes five wells which pump to three elevated storage tanks ranging from 135,000 to 150,000 gallons each. The system serves the entire town of Keystone.

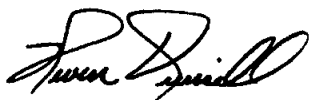
D. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by: Yes,
- 2) Exceptions to compliance are: none

E. Condition and Location:

1. The system is in good condition with the point of diversion located as follows:
2,050' N and 712' E of the SW corner Section 4 T2S R6E (43.902603, -103.416645)
2. The works are capable of diverting and conveying to the place of use **0.11** cu. ft. per second (50 gpm) of water which is to be used for **municipal** use and the license should be issued for **0.11** cfs.
3. All structures, wells and lands on map: **No, well only**

F. Comments or other permit(s) associated with the project: The Town of Keystone also has Licensed Water Right Nos. 1849-2, 2386-2, 2500-2 and 2587-2.



Steven Quissell
Water Rights Inspector
DENR, Water Rights Program

Date report completed: **5/8/2017**

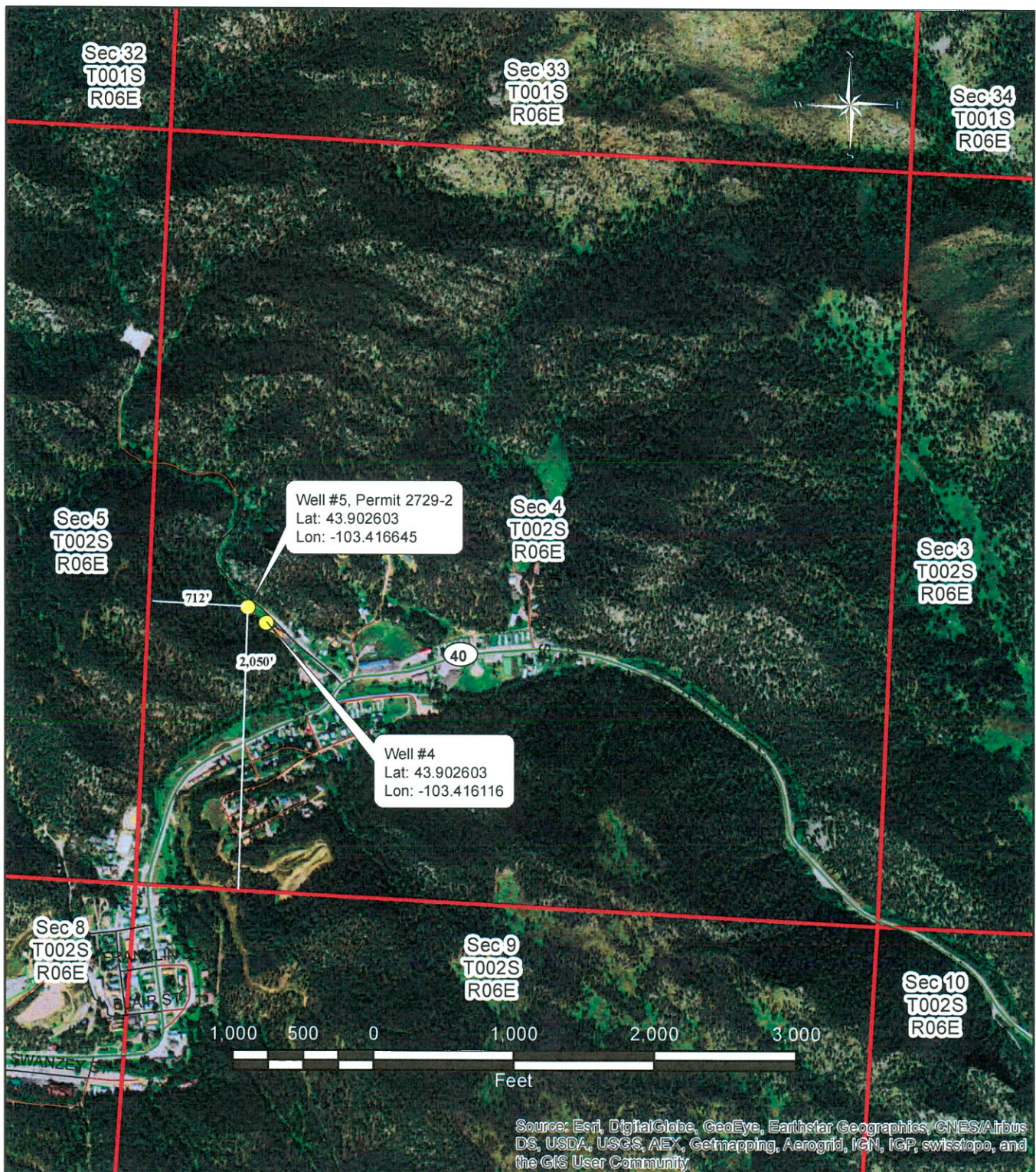


Well # 5 and pump house



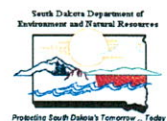
Pump house appurtenances

Water Right #2729-2
Town of Keystone
4/28/2017



Steven Quissell

Steven Quissell
Water Rights Inspector
DENR Water Rights Program



**NOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USE**

MAIL TO: PMB 2020
DENR - Water Rights Program
523 E Capitol Ave
Pierre, SD 57501-3182
ph. (605) 773-3352

Date ☒ 4/28/17

FROM: Town of Kerstone
(name)
P.O. Box 689
(address)
Kerstone S.D. 57751 605-666-57751
(city) (state) (zip) (phone)

I have completed the construction of the water use system and I have put the water to beneficial use to the maximum extent it is going to be used.

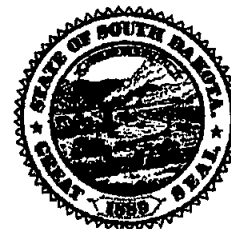
Water Permit No. 2729-2 states that the water use system is to be constructed by 11/17/2019, and water is to be put to beneficial use by 11/17/2023
(date) (date)

The water use system was completed on ☒ 5/20/16
(date)

Applying the water to beneficial use was completed on ☒ 5/20/16
(date)

You may schedule an investigation so that the water license may be issued.

x Mr. [Signature]



STATE OF SOUTH DAKOTA

WATER LICENSE NO. 2729-2

(1) The Town of Keystone, PO Box 689, Keystone SD 57751 made Application No. 2729-2, August 11, 2014 for a water permit to divert 0.156 cubic feet of water per second from ground water, one well (Precambrian Crystalline Rock), Pennington County, South Dakota for municipal purposes. Permit No. 2729-2, with a priority date of August 11, 2014 was approved November 17, 2014 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before November 17, 2019 and for the application to beneficial use of said water on or before November 17, 2023.

The Permit holder submitted a "*Notice of Completion of Works and Application of Water to Beneficial Use*" on April 28, 2017. The "*Notice*" stated the water use system was completed and water applied to beneficial use in May, 2016.

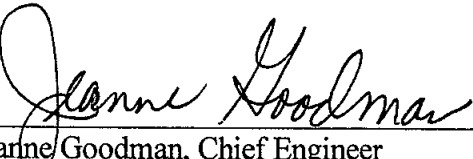
(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 0.11 cubic feet of water per second for beneficial use. The location of the diversion point is 2,050'N and 712'E of the SW corner of Section 4, T2S, R6E (NW ¼ SW ¼).

(3) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use.

(4) Pursuant to South Dakota Water Law 46-5-30.1 the Town of Keystone, PO Box 689, Keystone SD 57751 the holder and/or owner of Water Right No. 2729-2 is issued a license to appropriate water, the right to use 0.11 cubic feet of water per second from ground water, one well (Precambrian Crystalline Rock) with a priority date of August 11, 2014 from the location specified in (2) of this license for municipal purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 2729-2 and subject to the following qualifications:

- The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
- The water permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Precambrian Crystalline Rock.


Jeanne Goodman, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

JUN 21 2017
date





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
<http://denr.sd.gov>

JUN 21 2017

2729-2

Vanessa Row, Finance Officer
Town of Keystone
PO Box 689
Keystone SD 57751

Dear Ms. Row:

Enclosed is Water License No. 2729-2. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

For your information SDCL 46-6-27 requires that if the owner of an existing well, such as the well authorized by Water Right No. 2729-2, constructs a replacement well and does not plan to use the old well, the old well is considered abandoned and must be plugged. Also, any well that is being used or is not considered abandoned must be valved and controlled, if flowing, or sealed and capped so that no leaking occurs either underground or at the surface.

As long as you use the water beneficially, as stated in the Water License, the State Water Laws provide that you have a continuing right to use the water. If you have any questions, please contact our office.

Sincerely,

Jeanne Goodman, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

2729-2



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
<http://denr.sd.gov>

SEP 12 2018

2729-2

2785-2

Cassandra Ott
Town of Keystone
PO Box 689
Keystone SD 57751-0689

Dear Ms. Ott:

Enclosed is Water License No. 2785-2. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

For your information SDCL 46-6-27 requires that if in the future, the owner of an existing well, constructs a replacement well and does not plan to use the old well, the old well is considered abandoned and must be plugged. Also, any well that is being used or is not considered abandoned must be valved and controlled, if flowing, or sealed and capped so that no leaking occurs either underground or at the surface.

As long as you use the water beneficially, as stated in the Water License, the State Water Laws provide that you have a continuing right to use the water. If you have any questions, please contact our office.

Sincerely,

Jeanne Goodman, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

Note: Upon licensing, the applicable portions of Water Right No. 2729-2 were incorporated into Water License No. 2785-2.