

WATER PERMIT NO. 2789-2

Name of Applicant: Rushmore Cave

Address: 13622 Hwy 40, Keystone SD 57751

Phone: 605 920-2236

Amount of Water Claimed: 0.013

Total Acres: NA

Source of Water Supply: groundwater (one well)

Water to be used for: commercial

County: Pennington

Type of Waste Disposal System:

Location: 4 miles southeast of Keystone

PRIORITY Date Received: 1-11-18

Application/License Fee: \$ 300

Corrected Application Received: 4-3-18

Period of Annual Use: Jan 1 – Dec 31

Remarks: Also has Water Right No. 1989-2

Diversion Point: NE 1/4 SW 1/4 Sec 18-T2S-R7E

Land to be Irrigated: NA

Depth of Well: 520 feet deep

Well Driller: Alexander Drilling

Remarks:

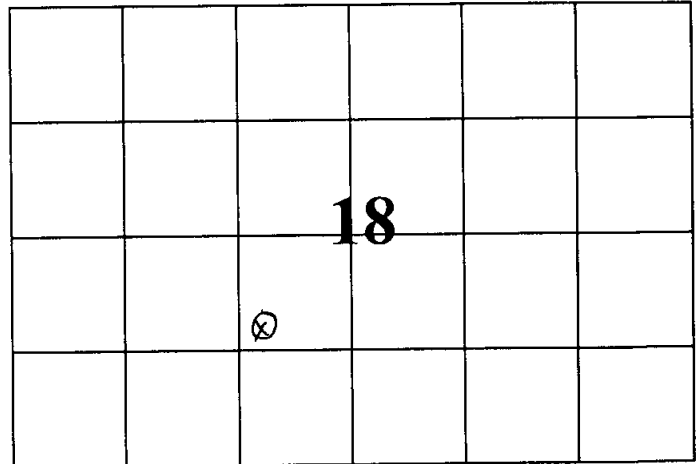
Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 1-11-18

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



RECEIVED

JAN 11 2018

WATER RIGHTS
PROGRAM

RECEIVED

APR 16 2018

WATER RIGHTS
PROGRAM

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>2789-2</u> (office use only) Hydrologic Unit <u>10120109</u>
	Basin <u>Upper Cheyenne</u>
	Newspaper <u>Rapid City Journal</u>

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

Check use(s) of water:

☐ Municipal	☐ Water Distribution System	☐ Recreational	☐ Institutional
☐ Rural Water System	☒ Commercial	☐ Fish & Wildlife	☐ Geothermal
☐ 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.)

- Name to Appear on Water Permit Rushmore Cave
Mailing Address 13622 Hwy 40 Keystone S.D. 57751
(Address) (City) (State) (Zip Code)
Phone 255-4384 Mobile 920-2236 Email Tom@RushmoreCave.com
 - Amount of water claimed 0.013 *CFS or 6 **GPM and ***AF or Gallons
Flow rate and volume are both required. (*Cubic Feet per Second) (**Gallons per Minute) (***)Acre Feet - storage capacity of dam/dugout or annual use)
 - Source of water supply Well NE 1/4 SW 1/4 Sec 18-T2S-R7E
 - Location of point of diversion SE 1/4 NW 1/4 Sec 18 Twp 25 R63W 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)
- County or counties where water will be used Pennington
 - Annual period during which water is to be used January 1 - December 31
 - 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)

I, Rick Hill Owner, the applicant, certify under
Name of Person Title (if applicable)

penalty of perjury that I have read this application, examined the attached map, and that the matters stated are true. I further certify, if acting on behalf of an entity or individual other than myself, that I am authorized to submit this application.

**SOUTH DAKOTA
WATER PERMIT NO. 2789-2**

Date of first receipt of application January 11, 2018.

Date of return to applicant for corrections, amendments or changes January 12, 2018.

Date of receipt of corrected application April 16, 2018.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 2789-2 to Rushmore Cave, 13622 Hwy 40, 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. 2789-2 appropriates 0.013 cubic feet of water per second from one well completed into the Crystalline rock aquifer (520 feet deep) located in the NE 1/4 SW 1/4 Section 18-T2S-R7E. This site is located approximately 4 miles southeast of Keystone SD.
2. The water appropriated shall be used for the purpose of commercial 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. 2789-2 is June 25, 2018.
5. The date from which applicant may claim right is April 16, 2018.
6. 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 Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Crystalline Rock aquifer. .

WATER MANAGEMENT BOARD

By: Jeanne Goodman
Jeanne Goodman, Chief Engineer

Water Rights Program

Department of Environment and Natural Resources

JUL 06 2018

date



Supplemental Information

(type or print)

1. Well Information (check one or both as applicable) ☐ Drilling new well(s) ☐ Using existing well(s)a) If new wells, how many ____ Have test holes been drilled ☐ Yes ☒ No Drilled by ____
(if yes, please provide copies of logs)b) If existing wells, how many ____ Provide copy of log(s), if available. Drilled by Alexander Drilling Inc.

For either Existing or Proposed Wells:

c) Well Depth (required) 520 Depth to Top of Water Bearing Material 60 Depth to Water from Surface 65

d) Distance to nearest domestic well on applicant's property ____ Property owned by others ____

2. Wastewater Disposal System Information

a) Type of System (i.e. septic tank, drain field) ____

b) System Capacity (gallons) ____ Year Constructed ____

c) Connected to the City of ____ Sanitary System

3. Dugout Information

a) Surface Dimensions ____ Depth ____

b) Depth to water (ground surface to water level) ____

4. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below for each dam. The locations of the dams need to be shown on the map submitted with the application.

a) If a private engineering firm or government agency was involved in the design of this dam, please give their name and address:

b) Freeboard ____

c) Crest Width ____

Crest Length ____

d) Height ____

e) Primary Outlet Capacity ____

If pipe, diameter ____

f) Secondary Spillway Capacity ____

Spillway Width ____

g) X & Y Slope (e.g. 3 to 1 is a typical slope)

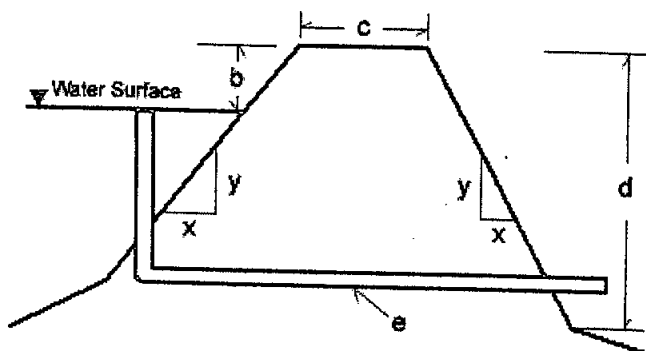
Upstream ____

Downstream ____

h) Surface Area of Impoundment ____

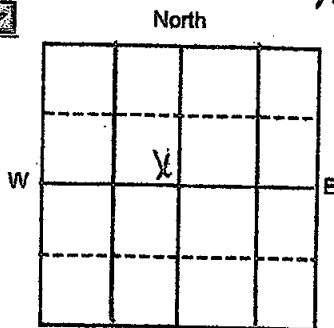
i) Storage ____ Acre Feet

j) Drainage Area Above Dam ____ Acres



SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location SE 1/4 NW 1/4 Sec 18 Twp 2S Rg 3NCounty PenningtonPlease mark well
location with an "X"

Well Completion Date

10/13/16

1 Mile

Distance to nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)?
160 ft. from Septic (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Rotary Downhole Hammer

CASING DATA:

☐ Steel ☒ Plastic ☐ Other
 If other describe Set 70' of 6" 160 PVC

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	IN	0 FT	68 FT	8.75 IN
LB/FT	IN	68 FT	520 FT	6 IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Portland II	8	Lb/gal	68 Ft	12 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure
through 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 solution
☐ No, Why Not?
 Lab to which water
 quality sample sent for analysis

Well Owner:

Business Name: Rushmore CaveAddress: 13622 Highway 40City, State, Zip: Keystone ☒ SD ☒ 57751

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Deadwood	0	60
Hard grey schist	60	132
Schist fracture 2 gpm	132	133
Hard grey schist	133	266
Schist fracture 3 gpm	266	267
Hard grey schist	267	430
Schist fracture 5 gpm	430	432
Hard grey schist	432	485
Schist fracture 6 gpm	485	487

STATIC WATER LEVEL 65 FEET
 If flowing: closed in pressure _____ PSI
 GPM flow 6 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

Well Log Formation Continued:
Hard Grey Schist 487-520

CRYSTALLINE AB

RECEIVED

OCT 31 2016

WATER RIGHTS
PROGRAMThis well was drilled under license # 324 and this
report is true and accurate.Drilling firm: Alexander Drilling Inc.

Signature of License Representative

Signature of Well Owner or Equitable Property Holder

Date:

Sec 12
T002S
R06E

Sec 7
T002S
R07E

Sec 8
T002S
R07E

Sec 13
T002S
R06E

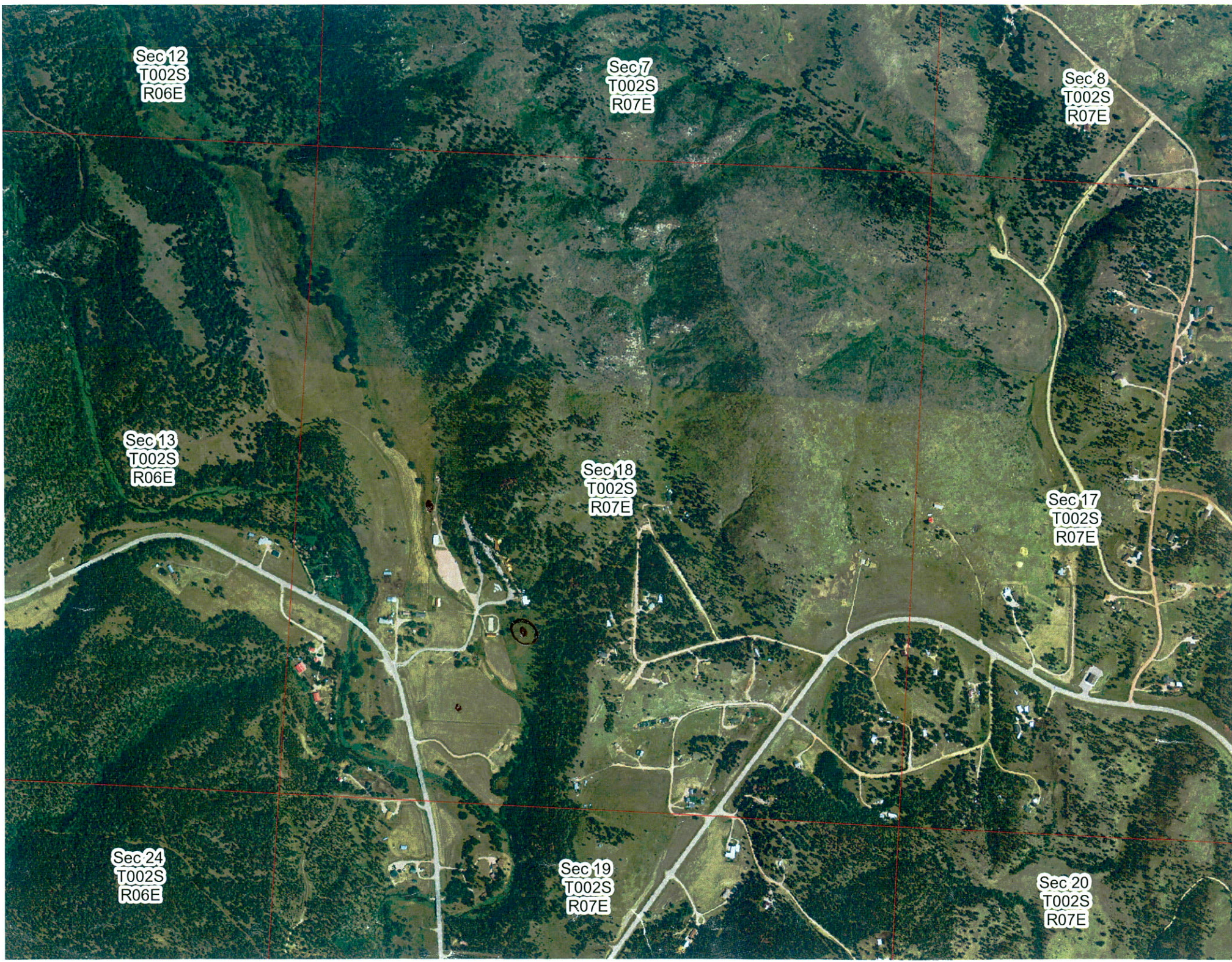
Sec 18
T002S
R07E

Sec 17
T002S
R07E

Sec 24
T002S
R06E

Sec 19
T002S
R07E

Sec 20
T002S
R07E





530269465

2017

FILING YEAR

South Dakota State Capitol
500 E. Capitol Ave
Pierre, SD 57501
(605) 773-3537

ANNUAL REPORT

Domestic Limited Liability Company
SDCL 47-34A-211; 59-11-24, 24.1

Filing Fee: \$50

Please Type or Print Clearly in Ink
Please submit one Original and one Photocopy
Make payable to the SECRETARY OF STATE

1. Business ID and Name:

DL015949
BUSINESS ID

RUSHMORE CAVE, LLC
BUSINESS NAME

2. The jurisdiction under whose law it is formed **SOUTH DAKOTA**

3. The address of the principal executive office (business address):

545 S FOURTH ST
HOT SPRINGS, SD 57747-2411

4. The South Dakota Registered Agent's Name:

South Dakota law permits the registered agent to be either a (a) noncommercial registered agent, (b) a commercial registered agent, or (c) an office holder.

(a) The South Dakota Noncommercial Registered Agent's name

THOMAS HAGEN
545 SOUTH FOURTH STREET
HOT SPRINGS, SD 57747-2411

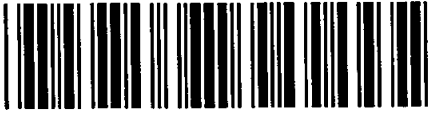
5. If the LLC is manager managed, list the names and addresses of its Managers. SDCL 59-11-24. If the LLC is member-managed, this section may be left blank.

Name	Address
ROSS JOHNSON	13622 HWY 40
PAUL THORSTENSON	13622 HWY 40
BOBBY SUNDBY	13622 HWY 40
Tom Hagen	13622 Hwy 40, Keystone, SD 57751

6. A beneficial owner (Optional) is a person who has or in some manner controls an equity security. Please consult an attorney for legal advice if you have any questions concerning this entry. Any question under this heading is considered a request for legal advice and the secretary of state's office is, by statute, not permitted, to provide legal advice.

No person may execute this report knowing it is false in any material respect. Any violation may be subject to a criminal penalty (SDCL 22-39-36).

B0021-7315 01/10/2017 12:20PM Rec'd by SD SOS



01/10/2017

Dated

thagen@goldenwest.net

Email (Optional)

Thomas Hagen

Signature of an Authorized Person

Thomas Hagen

Printed Name

B0021-7316 01/10/2017 12:20PM Rec'd by SD SOS

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date April 3, 2018

RECEIVED OF Rushmore Cave, LLC. 13622 Hwy 40 Keystone, SD 57751

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

Fee for Application for Permit No. <u>2789-2</u> to Appropriate Water, to construct and to put water to beneficial use	100	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.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>2789-2</u>	200	00
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	300 00

No. **08645**

By

Jeanne Goodman
Chief Engineer

791



DEPARTMENT OF ENVIRONMENT
and NATURAL RESOURCES

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



December 24, 2014

Rushmore Cave
13622 Highway 40
Keystone SD 57751

Dear Sir:

I am writing regarding two well driller's report filed by Alexander Drilling Inc. The reports show two wells were completed for Rushmore Cave on December 5, 2014. Based on the information in the reports, you may need a water permit for this water use.

1. According to state law, a water permit is needed for any water use except for reasonable, private domestic use. Examples of commercial uses that require a water rights permit are: truckstops; motels; restaurants; bars; clubs; tourist attractions; campgrounds or any other business operation.
2. Also, as a new well owner, you need to be aware of some of your responsibilities. Enclosed is a copy of "Well Owner Responsibilities". Please review these responsibilities to ensure you are complying with all of the requirements.

Enclosed are application forms and instruction sheet to apply for a water permit. The completed forms with the application fee and map can be returned to: Water Rights Program, 523 E. Capitol, Pierre, SD 57501. Please respond by February 1, 2015.

If you believe your water use does not require a water permit or that you have an existing permit, or if help is needed completing the application forms, please contact Ron Duvall or me at (605) 773-3352. We will be happy to assist you in any way possible.

Sincerely,

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

June 23, 2017

Rushmore Cave
Tom Hagen
13622 Highway 40
Keystone SD 57751

Dear Mr. Hagen:

I am writing regarding three Well Completion Reports filed by Alexander Drilling Inc. The most recent report is for a well drilled October 13, 2016 and located in the SE 1/4 NW 1/4 Section 18-T2S-R7W. Two other well completion reports identify wells drilled December 5, 2014 in approximately the same area.

A review of our files indicates Rushmore Cave holds Water Right No. 1989-2 which authorizes 0.055 cubic feet of water per second (25 gallons per minute) from one well (260 feet deep) located in the NE 1/4 SW 1/4 Section 18-T2S-R7E for commercial use (copy enclosed). Is this well still being used for commercial purposes?

Enclosed are copies of the three well completion reports and an aerial photo map of the area. Please mark the location of each well, identifying each by depth. What is the water use from each well? Once we have this information, we can determine what, if any, additional permitting may be required.

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

Sincerely,

A handwritten signature in cursive script that reads "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

November 7, 2017

denr.sd.gov

Rushmore Cave
13622 Highway 40
Keystone SD 57751

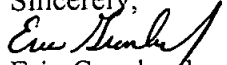
Dear Sir:

In June, Karen Schlaak with the Water Rights Program corresponded with Rushmore Cave regarding three well completion reports on file completed for Rushmore Cave. DENR's letter was addressed to Tom Hagen but I believe she spoke with Rick. The reason for contacting Rushmore Cave was to determine if water right permitting was necessary for the wells. The three well completion reports are attached. The wells are:

1. The 160 feet deep well completed in December 2014 is used solely for a residential home. As such, this is a domestic use of water that does not require a water permit as long as the pump rate is not greater than 25 gallons per minute (gpm) with a daily use not to exceed 25,920 gallons per day which equates to 18 gpm run continuously over a 24 hour period.
2. The 487 feet deep well completed in October 2016 is used for the Coaster Building that is part of the Adventure Park. This use of water is a commercial use of water that does require a water permit.
3. The 180 feet deep well completed in December 2014 is used for water trees. A water permit is not required if the application of water is by drip irrigation applied directly to the root zone, the pump rate does not exceed 18 gpm and is for noncommercial purposes. Noncommercial means tree plantings specifically for conservation purposes and excludes trees for ornamental or commercial purposes. If the water is not applied at the root zone by means of drip irrigation, the pump rate exceeds 18 gpm or the use is for commercial purposes, a water permit is required.

Rushmore Cave does hold Water Right No. 1989-2 for a well to pump 25 gpm for commercial use. It is our understanding that the three wells listed above are separate for the well used under this water right.

Water in South Dakota is property of the people of this state, and as such, the state water law requires a permit to use water anytime it is put to a beneficial use for commercial use. Attached are water permit application forms and an instruction sheet for both non-irrigation and irrigation purposes. Please feel free to contact me by phone or email to discuss water right permitting.

Sincerely,

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

enclosures

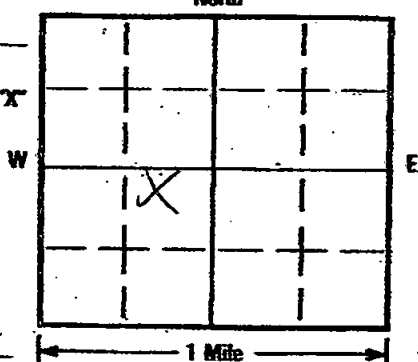
SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location: NE 1/4 SW 1/4 Sec 1618 Twp 25 Rg 7E

County
Pennington

Please mark well location with an "X"



Well-Completion Date

12/31/14

LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? 300 ft from septic (identify source)

PROPOSED USE:

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

METHOD OF DRILLING:

Rotary Downhole Hammer

CASING DATA: ☐ Steel ☒ Plastic ☐ Other

If other describe Set 40' of 6" 160 PVC

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	IN	0 FT	38 FT	8 3/4 IN
LB/FT	IN	38 FT	180 FT	6 IN
LB/FT	IN	FT	FT	IN

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
Portland II	5	lb./gal	38 ft	4 ft
		lb./gal	ft	ft

Describe grouting procedure

SCREENER: ☐ Perforated pipe ☐ Manufactured

Diameter _____ IN 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?

X YES, How: Withlorne sol

laboratory sent to for water quality analysis

NO, Why Not?

Well Owner:

Business Name: Bushmore Cave

Address: 13622 Highway 40
Keystone, SD 57751

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Drift	0	32
Hard Deadwood	32	65
Deadwood Sand frac. 59gpm	65	68
Deadwood	68	116
Deadwood frac. 109gpm	116	118
Deadwood	118	157
Deadwood frac. 25gpm	157	159
Deadwood	159	180

STATIC WATER LEVEL 25 Feet

If flowing: closed in pressure _____ PSI

GPM flow 25 through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

Reduced Flowrate _____ 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

RECEIVED

DEC 22 2014

WATER RIGHTS PROGRAM

This well was drilled under license # 324

And this report is true and accurate.

Drilling firm: Alexander Drilling Inc.

Signature of License Representative:

Signature of Well Owner or Equitable Property Holder:

Date: 12/17/14

70801

70802

trees & orchard less than 1 Acre

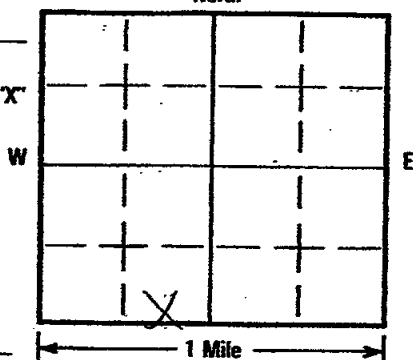
SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location SE 1/4 SW 1/4 Sec 10¹⁸ Twp 25 Rg 7ECounty Pennington

Please mark well location with an "X"

Well-Completion Date

12/5/14

LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? 250 ft. from Septic (identify source).

PROPOSED USE:

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

METHOD OF DRILLING:

Rotary Downhole HammerCASING DATA: ☐ Steel ☒ Plastic ☐ OtherIf other describe Set 50' of 6" 160 PVC

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	IN	0 FT	48 FT	8 3/4 IN
LB/FT	IN	48 FT	160 FT	6 IN
LB/FT	IN	FT	FT	IN

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Portland</u>	<u>8</u>	lb./gal	<u>48</u> ft	<u>0</u> ft
		lb./gal	ft	ft

Describe grouting procedure

SCREEN: ☐ Perforated pipe ☐ Manufactured

Diameter _____ IN 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: Wichloronol☐ NO, Why Not? _____

Laboratory sent to for water quality analysis _____

Well Owner: _____

Business Name: Bushmore CaveAddress: 13622 Highway 40
Keystone 5751

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Drift	0	15
Gravel-Soft Deadwood	15	40
Hard Deadwood	40	90
Deadwood fracture 5gpm	90	92
Deadwood	92	115
Deadwood fract. 15gpm	115	117
Deadwood	117	131
Deadwood fracture 25gpm	131	133
Deadwood	133	150
Deadwood fract 40 gpm	150	152
Deadwood	152	160

STATIC WATER LEVEL 15 Feet

If flowing: closed in pressure _____ PSI

GPM flow 40 through _____ inch pipeControlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced Flowrate _____ 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

RECEIVED

DEC 22 2014

WATER RIGHTS
PROGRAMThis well was drilled under license # 324

And this report is true and accurate.

Drilling firm Durander Drilling Inc.

Signature of License Representative: _____

Signature of Well Owner or Equitable Property Holder: _____

Date: 12-17-14Residence & domestic use



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

January 12, 2018

Rushmore Cave
Rick Hill
13622 Hwy 40
Keystone SD 57751

Dear Mr. Hill

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

- The application/license filing fee for 6 gallons per minute will be \$300.00.
- Item # 6 of the application requests the annual period of use. Are you proposing to use this well the entire year?

If you have any questions, please contact me.

Sincerely,

Karen Schlaak

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



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

March 14, 2018

Rushmore Cave
Rick Hill
13622 Hwy 40
Keystone SD 57751

Dear Mr. Hill:

On January 11, 2018, you submitted an *Application for Permit to Appropriate Water Within the State of South Dakota* for commercial use. You were notified what additional information was required to complete the application. A copy of that letter is enclosed. To date, we have not received the required information.

Obtaining a water permit that accurately reflects your water use ultimately benefits you by protecting your right to use water. Except for domestic use, any water user without a water right is not entitled to receive protection in the event of interference by a new or future user who has a water right.

If you have any questions, please contact me.

Sincerely,

Karen Schlaak

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

enclosure



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

April 3, 2018

Rushmore Cave
Rick Hill
13622 Hwy 20
Keystone SD 57751

Dear Mr. Hill:

We received the required \$300 fee for the *Application for a Permit to Appropriate Water* for commercial use at Rushmore Cave.

A review of the Secretary of State's corporation website finds Rushmore Cave, LLC listed. Your name is not listed as one of its partners. DENR will need the application to be signed by a listed partner or a statement of authority that the person signing the application has the authority to act on behalf of Rushmore Cave on all matters involving the water permit application.

Please have the application signed by Thomas Hagen or submit a statement of authority. Enclosed is a postage prepaid envelope for your use.

Also, on Item No. 4, the legal description of the well has been changed to the NE 1/4 SW 1/4 Section 18-T2S-R7E which corresponds with the location identified on the map.

If you have any questions, please contact me.

Sincerely,

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
<http://denr.sd.gov>

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2789-2, Rushmore Cave**

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. 2789-2, Rushmore Cave, c/o Tom Hagen, 13622 Hwy 40, Keystone SD 57751.

The Chief Engineer is recommending APPROVAL of Application No. 2789-2 because 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 Permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Crystalline Rock aquifer.

See report on application for additional information.

A handwritten signature in black ink, reading "Jeanne Goodman". The signature is fluid and cursive, with the first name "Jeanne" being more prominent than the last name "Goodman".

Jeanne Goodman, Chief Engineer
June 4, 2018

Report to the Chief Engineer
Water Application No. 2789-2
Rushmore Cave
May 20, 2018

Water Permit Application No. 2789-2 for Rushmore Cave c/o Tom Hagen proposes to appropriate water at a maximum instantaneous diversion rate of 0.013 cubic feet per second (cfs) (6 gallons per minute (gpm)) from one well completed into the Crystalline Rock aquifer for commercial use. The well is 520 feet deep located in the NE ¼ SW ¼ Section 18-T2S-R7E in Pennington County about four miles southeast of Keystone, SD.

Aquifer: Crystalline Rock (CRSL)

Aquifer Characteristics

The crystalline rock aquifer consists of numerous localized aquifers in the Precambrian aged core of the Black Hills where extensive fractures or weathering zones allow for the transmission of water (Driscoll and Carter, 2001). The crystalline rocks of this aquifer have low primary porosities, so water is conveyed to wells along fractures, joints, and faults (Rahn, 1979). Therefore, water availability in the aquifer is site specific and depends upon the occurrence of fractures, joints, and faults (secondary porosity) in the subsurface at a given site. Additionally, well yields are variable across the extent of the crystalline rock in the Black Hills (Water Rights, 2018c). In western South Dakota, wells completed into the Precambrian aged crystalline rock outside of the Black Hills area have not encountered measureable amounts of groundwater (Driscoll and Carter, 2001).

The wellsite for this application is located in close proximity to the Deadwood Formation and Precambrian aged crystalline rock contact (Redden, and DeWitt, 2008). The well completion report for this application indicates the crystalline rock at the well site for this application is overlain by 60 feet of the Deadwood Formation. At the time of well completion (October 13, 2016) the static water level was reported to be 65 feet below the measuring point.

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 a reasonable probability there is unappropriated water available for the applicant's proposed use, the proposed diversion can be developed without unlawful impairment of existing rights, and the proposed use is a beneficial use and in the public interest. This report will address the availability of unappropriated water and potential effects on existing rights from the aquifer that are pertinent to this application.

Water Availability

The probability of unappropriated water being available from the Crystalline Rock aquifer can be 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 formation older than or stratigraphically lower than the greenhorn formation in excess of the average estimated annual recharge for use by water distribution systems.” Here, the Crystalline Rock aquifer is older than the Greenhorn Formation, but a water distribution system as defined by SDCL 46-1-6 (17) is not involved, therefore the issue of recharge versus discharge must be considered.

Recharge to the aquifer is from infiltration of precipitation and streamflow losses. Discharge from the aquifer occurs through pumping from wells, evapotranspiration, and seepage to streams. Driscoll and Carter (2001) estimated recharge to the Crystalline Rock aquifers to be equal to withdrawals (3,600 acre-feet per year), however it was noted that actual recharge to the crystalline aquifers must be much larger than estimated to account for discharge to streams. Driscoll and Carter (2001) noted for crystalline rock aquifers, “Recharge conditions are highly transient and have large spatial variability; thus, quantification is not attempted.” Additionally, data is not available to attempt delineation of the localized aquifers within the crystalline core area of the Black Hills. Therefore, there are no estimates of either average annual recharge to or average annual withdrawal from the localized aquifer.

Observation Wells

The Water Rights Program monitors two observation wells completed into the Crystalline Rock aquifer in the Black Hills. Neither of these observation wells are located in the immediate area of the well for Application No. 2789-2. Due to the site specific nature of the Crystalline Rock aquifer, these observation wells do not describe local characteristics in the aquifer. However, they can provide information as to general aquifer characteristics.

Observation Well PE-95D is located 9.5 miles to the north and has historically been considered to be completed into the crystalline rock aquifer (Water Rights, 2018a). However, in examining the well construction information for PE-95D the well is open hole completed into both the Deadwood Formation and the crystalline rock, and both can be aquifers in the vicinity of PE-95D (Water Rights, 2018a and 2018c). In examining the period of record for observation well PE-95D, the water levels appear to be more similar to the Deadwood aquifer than the crystalline rock aquifer (Strobel et al, 2000; Water Rights, 2018a and 2018c). Additionally, the well log for PE-95D does not note if secondary porosity features were encountered in the crystalline rock, so it is uncertain how representative PE-95D is of either the Deadwood or crystalline rock aquifers.

Observation well CU-86A is located about 14.7 miles to the southwest of the well site. The hydrograph for this observation well is shown in Figure 1. In examining Figure 1, water levels can be seen responding to climatic conditions rising during wet periods and decreasing during drier periods. Water levels fluctuate as much as 40 feet in this observation well in response to climatic conditions. In general when examining Figure 1, the effects of pumping

from the aquifer are masked by climatic conditions indicating that the aquifer is dominated by natural conditions (recharge to and natural discharge from the aquifer). Since recharge to and natural discharge from the aquifer can be captured for well withdrawals, this proposed appropriation is not expected to cause withdrawals to exceed recharge in the area of the well sites.

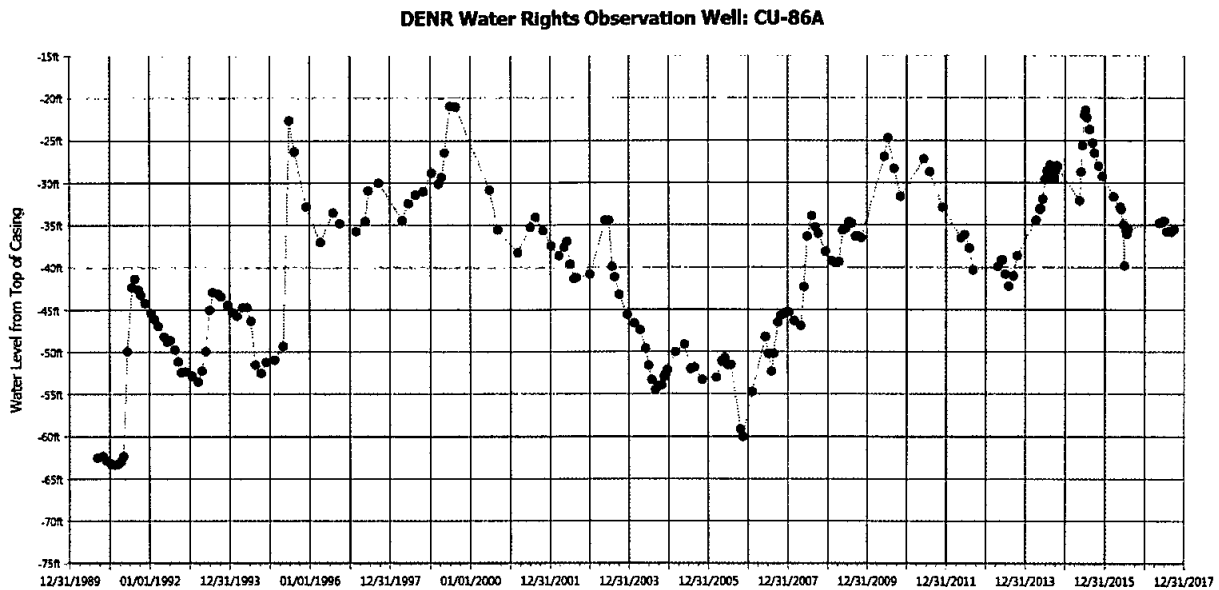


Figure 1: Hydrograph of Observation well CU-86A (Water Rights, 2018a)

Existing Users

Nearby water rights/permits currently authorized to appropriate groundwater from the crystalline rock aquifer are shown in Figure 2 and summarized in Table 1. The nearest water right completed in the Crystalline Rock aquifer to the well site for this application is Water Right No. 2386-2 for the Town of Keystone located about 3.4 miles to the west-northwest of the well for this application. Table 1 also shows estimated water use for the area water rights and the application in the area. Estimations assume that water rights/permits limited by maximum instantaneous diversion rate historically use less than 60% of the permitted diversion rate annually, and water rights/permits limited by an annual volume are assumed to use the full annual volume (Water Rights, 2018b). There are several domestic well completion reports on file with the Water Rights Program within one mile of this application that are all completed into the Crystalline Rock aquifer (Water Rights, 2018c).

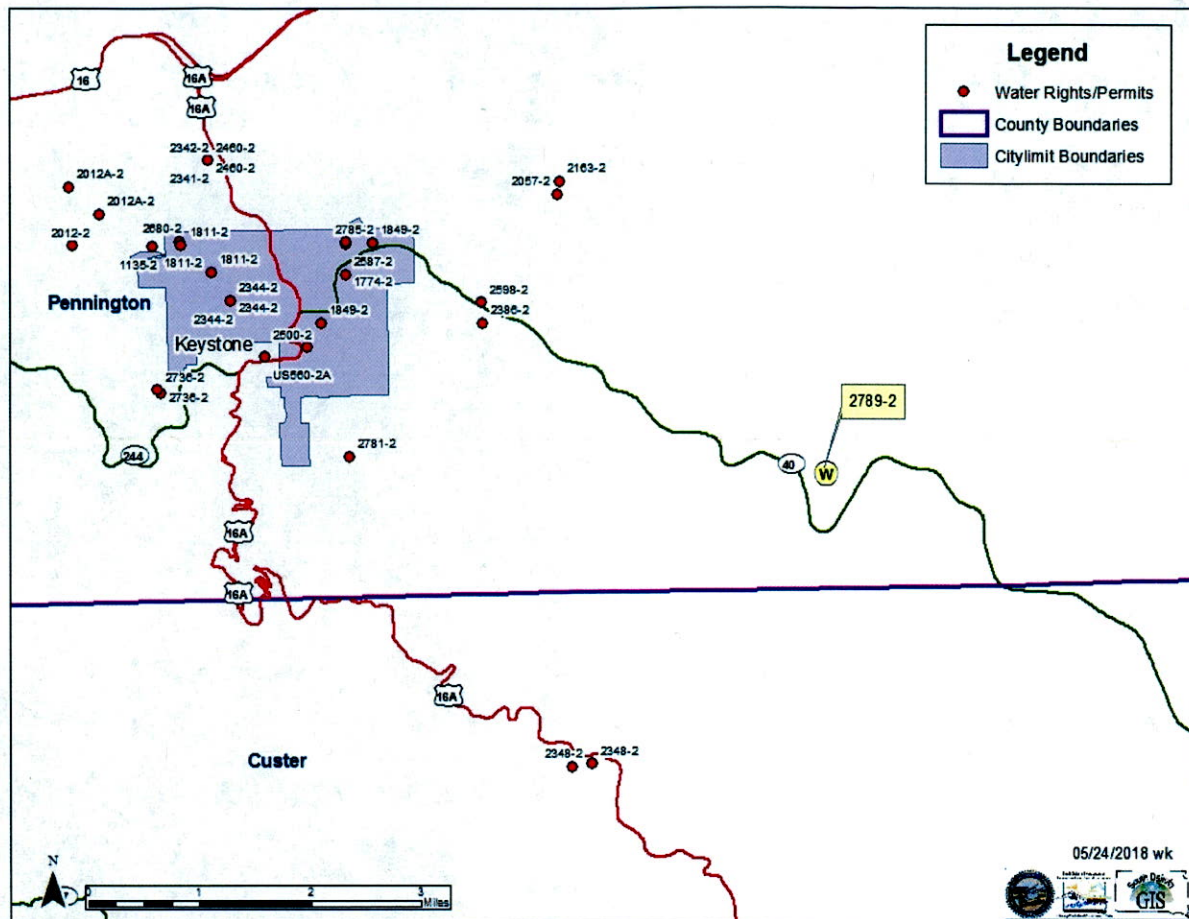


Figure 2: Water rights/permits in the area currently authorized to appropriate groundwater from the Crystalline Rock aquifer (Water Rights, 2018b)

Table 1: Summary of Water Rights/Permits shown in Figure 2 (Water Rights, 2018b)

Permit No.	Name	Status	Use	Rate (cfs)	Estimated water use (acre-feet per year)
US560-2A	US NATIONAL PARK SERVICE	LC	COM	0.066	28.7
1135-2	JOHN KINYON	LC	COM	0.03	13.0
1595-2	ROCKY GULCH LLC	LC	COM	0.07	30.4
1774-2	MINERAL TECHNOLOGY CORP	LC	COM	0.09	39.1
1811-2	BREEZE INC	LC	COM&DOM	0.067	29.1
1849-2	TOWN OF KEYSTONE	LC	MUN	0.56	243.3
2012-2	BAPTIST CAMP JUDSON	LC	INS	0.04	17.4
2012A-2	BAPTIST CAMP JUDSON	LC	INS	0.04	17.4
2057-2	BLACK HILLS CHILDRENS HOME	LC	INS	0.019	8.3
2163-2	BLACK HILLS CHILDRENS HOME	LC	INS	0.04	17.4
2341-2	DANIELLE BANKS	LC	COM	0.013	5.6
2342-2	DANIELLE BANKS	LC	COM	0.044	19.1
2344-2	MIKE VINTON	LC	COM	0.044	19.1
2348-2	SPOKANE CREEK CABINS & CAMPGROUND	LC	COM	0.07	30.4
2386-2	TOWN OF KEYSTONE	LC	MUN	0.089	38.7
2460-2	KENNETH D. KNAPP	LC	COM	0.033	14.3
2500-2	TOWN OF KEYSTONE	LC	MUN	0.22	95.6
2587-2	TOWN OF KEYSTONE	LC	MUN	0.133	57.8
2598-2	GRANITE POINT LLC	LC	SHD	0.067	29.1
2680-2	BREEZE INC	LC	COM	0.029	12.6
2729-2	TOWN OF KEYSTONE	LC	MUN	0.11	limited by 2785-2
2736-2	MT RUSHMORE NAT'L MEMORIAL	LC	REC & COM	0.122	53.0
2781-2	UNDER CANVAS INC	PE	COM	0.033	8*
2785-2	TOWN OF KEYSTONE	PE	MUN	0.11	24.6*
MUN- municipal, COM- commercial, INS- Institutional, IRR- Irrigation, LC- water right, PE- water permit, SHD- suburban housing development, DOM- domestic, REC- recreation					
*subject to an annual volume limit					

An adequate well as defined by Administrative Rule of South Dakota (ARSD) 74:02:04:20(6) is “a well constructed or rehabilitated to allow various withdrawal methods to be used, to allow the inlet to the pump to be placed not less than 20 feet into the saturated aquifer or formation material when the well is constructed, or to allow the pump to be placed as near as possible to the bottom of the aquifer as is practical if the aquifer thickness is less than 20 feet.” In the past the Water Management Board has recognized that to place water to maximum beneficial use, a certain amount of drawdown may occur. ARSD 74:02:04:20(7) defines an adversely impacted domestic well as, “a well in which the pump intake was set at least 20 feet below the top of the aquifer at the time of construction or, if the aquifer is less than 20 feet thick, is as near to the bottom of the aquifer as is practical 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.” While in most aquifers 20 feet is an adequate depth of water for domestic wells, in the Crystalline Rock aquifer 20 feet below the top of the aquifer is seldom a sufficient depth for a well to be a dependable water supply. This is due to the low porosity of the crystalline rock and water availability at a given location being linked to the unpredictable occurrence of secondary porosity, so wells that meet the definition of an adequate well might not yield sufficient water for a well owner’s needs. The precise drawdown effects at the well site will depend on aquifer characteristics in the immediate vicinity of the well, and determination of the exact effects would require additional data and testing. Water levels in the Crystalline Rock aquifer are known to vary based on climatic conditions; Figure 1 demonstrates a water level variability of 40 feet as a result of

climatic conditions. Taking all the above into consideration along with the relatively low diversion rate requested by this application (6 gpm) this application is not expected to adversely impact existing users.

Conclusions

1. Water Permit Application No. 2789-2 for Rushmore Cave proposes to appropriate water at a maximum instantaneous diversion rate of 0.013 cfs (6 gpm) from one well completed into the Crystalline Rock aquifer for commercial use located in the NE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 18-T2S-R7E in Pennington County.
2. Average annual recharge to the local Crystalline Rock aquifer has not been quantified; however, based on best information reasonably available (observation well data) the relatively small appropriation proposed by this application is not expected to cause the average annual withdrawals from the aquifer to exceed the average annual recharge to the aquifer and there is a reasonable probability there is unappropriated water available for this application.
3. Available information indicates that any well interference as a result of this application, if approved, is not expected to be adverse.



Whitney Kilts

SDDENR-Water Rights Program

References

- Driscoll, D. G. and Carter J. M., 2001, Hydrologic Conditions and Budgets for the Black Hills of South Dakota, through Water Year 1998. Water-Resources Investigations Report 01-4226. USGS. Rapid City, SD.
- Rahn, P. H., 1979, Ground Water Resources of Western South Dakota. South Dakota School of Mines and Technology Project #2533. Rapid City, South Dakota. p 2-1 to 2-3.
- Redden, J.A., and DeWitt, E., 2008, Maps showing geology, structure, and geophysics of the central Black Hills, South Dakota: U.S. Geological Survey Scientific Investigations Map 2777.
- Strobel, M.L., Galloway, J.M., Hamade, G.R., and Jarrell, G.J., 2000, Potentiometric surface of the Deadwood aquifer in the Black Hills area, South Dakota: U.S. Geological Survey Hydrologic Investigations Atlas HA-745-E, 2 sheets, scale 1:100,000.
- Water Rights. 2018a. Observation Well Files and Data, SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, SD.
- Water Rights. 2018b. Water Right/Permit Files. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.
- Water Rights. 2018c. Well Completion Reports. SD DENR-Water Rights Program, Joe Foss Bldg., Pierre, South Dakota.

Schlaak, Karen

From: Schlaak, Karen
Sent: Monday, June 04, 2018 1:21 PM
To: RCY Legals (legals@rapidcityjournal.com)
Subject: 2789-2, Rushmore Cave
Attachments: 2789-2public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on June 13, 2018.

Rushmore Cave, c/o Tom Hagen, 13622 Hwy 40, Keystone SD 57751 (605 255-4384 or 605 920-2236) has been notified to contact you to authorize publication and arrange for payment.

Please send the affidavit or return the attached Proof of Publication form ASAP to the Water Rights Program, 523 E Capitol, Pierre SD 57501.

Let me know if you have questions. Please acknowledge receipt of this email.

Karen Schlaak
SD DENR, Water Rights Program
(605) 773-3352





**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 RIGHT AWAY.**

June 4, 2018

Rushmore Cave
c/o Tom Hagen
13622 Hwy 40
Keystone SD 57751

Dear Mr. Hagen:

Water Permit Application No. 2789-2 for commercial 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 (Ph # 605-394-8300). You will need to contact the newspaper 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 to authorize publication of your Notice and to arrange for payment. Early contact with the paper 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.

NOTICE OF APPLICATION NO. 2789-2 to Appropriate Water

Notice is given that Rushmore Cave, c/o Tom Hagen, 13622 Hwy 40, Keystone SD 57751 has filed an application for a water permit to appropriate 0.013 cubic feet of water per second from one well completed into the Crystalline rock aquifer (520 feet deep) located in the NE 1/4 SW 1/4 Section 18-T2S-R7E for commercial use. This site is located approximately 4 miles southeast of Keystone SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2789-2 with qualifications 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. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

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 June 25, 2018.

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.

If the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. 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.

Steven M. Pirner, Secretary, Department of Environment and Natural Resources. Published once at the total approximate cost of _____.

Affidavit of Publication

RECEIVED

JUN 22 2018

WATER RIGHTS
PROGRAM

STATE OF SOUTH DAKOTA

County of Pennington

SS:

June 13 L21085907

NOTICE OF APPLICATION NO. 2789-2 to

Appropriate Water

Notice is given that Rushmore Cave, c/o Tom Hagen, 13622 Hwy 40, Keystone SD 57751 has filed an application for a water permit to appropriate 0.013 cubic feet of water per second from one well completed into the Crystalline rock aquifer (520 feet deep) located in the NE 1/4 SW 1/4 Section 18-T2S-R7E for commercial use. This site is located approximately 4 miles southeast of Keystone SD. Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2789-2 with qualifications 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. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

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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 June 25, 2018.

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If the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. 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.

Steven M. Pirner, Secretary
Department of Environment
and Natural Resources

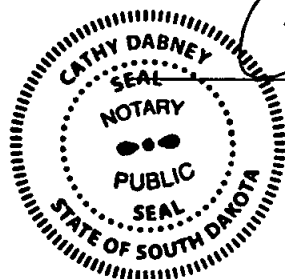
(Published once at the total approximate cost of \$58.26)

Sheri Sponder 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
_____ 13th _____ day of _____ June 2018 _____ that the fees charged for
the publication there of are _____ 58 _____ dollars
and _____ 26 _____ cents.

Sheri Sponder

Subscribed and sworn to before me this _____ 20th _____
day of _____ June _____, _____ 2018 _____.



Cathy Dabney
Notary public

4-16-2024

My commission expires



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

JUL 06 2018

Rushmore Cave
c/o Tom Hagen
13622 Hwy 40
Keystone SD 57751

Dear Mr. Hagen:

Enclosed is Water Permit No. 2789-2 authorizing construction of the water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

We will schedule an inspection so that the Water License may be issued to you, thus completing your acquisition of a Water Right.

Sincerely,

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

enclosures

Approval of Location Change to Diversion Point

NAME: Rushmore Cave

ADDRESS: 13622 Hwy 40, Keystone SD 57751

DATE: September 19, 2018

COUNTY: Pennington

TELEPHONE: 605 890-1736 (Rick Hill)

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:

The water permit was issued for the well to be located in the NE $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 18-T2S-R7E and the licensing investigation found the well is actually located in the SE $\frac{1}{4}$ SW $\frac{1}{4}$ of this section. The well is 14 feet to the south of the boundary between these two quarter-quarter sections.

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

The water source remains Crystalline Rock. Water Permit No. 2789-2 appropriated 0.013 cfs (6 gpm) and that is the diversion rate found when the licensing investigation was conducted.

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

Not applicable

- **Review of Existing Diversions**

The nearest well that is permitted is about 900 feet to the northwest of the well authorized by No. 2789-2. This water right is also held by Rushmore Cave.

Given the well location and its close proximity to where it was originally thought to be it is unlikely there is an increase in the potential for adverse effect to existing diversions.

RECOMMENDED ACTION

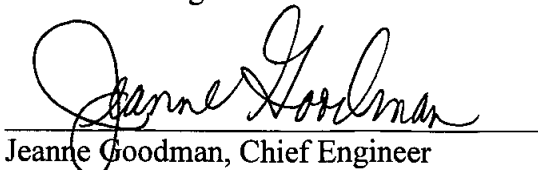
Based on the above criteria, it is recommended that the diversion point be licensed as developed.



Eric Gronlund, Engineer III
Water Rights Program

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

This change in location does not increase the potential for adverse effects to existing diversions.



Jeanne Goodman, Chief Engineer
Water Rights Program

Inspection contact & relationship to permit holder, if applicable: **Rick Hill, maintenance**
605-890-1736

Well Information:

- ### Casing:

- Screen:**

- Pump:**

- Note:** The well was air tested at 6 gpm at time of completion

1) Type **PE**
2) Size **1** inches
3) Length **--** feet

The well is controlled with a pressure switch and pressure tank installation and provides water to the Coaster building and bunkhouse for Rushmore Cave.

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:

1,306' N and 1,936' E of the SW corner Section 18 T2S R7E (43.872215, -103.330908)

2. The works are capable of diverting and conveying to the place of use **0.013** cu. ft. per second (6 gpm) of water which is to be used for **commercial** use and the license should be issued for **0.013** cfs.

3. All structures, wells and lands on map: **No, wells only**

F. Comments or other permit(s) associated with the project: Rushmore Cave also holds Water Right No. 1989-2.



Steven Quissell
Water Rights Inspector
DENR, Water Rights Program

Date report completed: **8/29/2018**

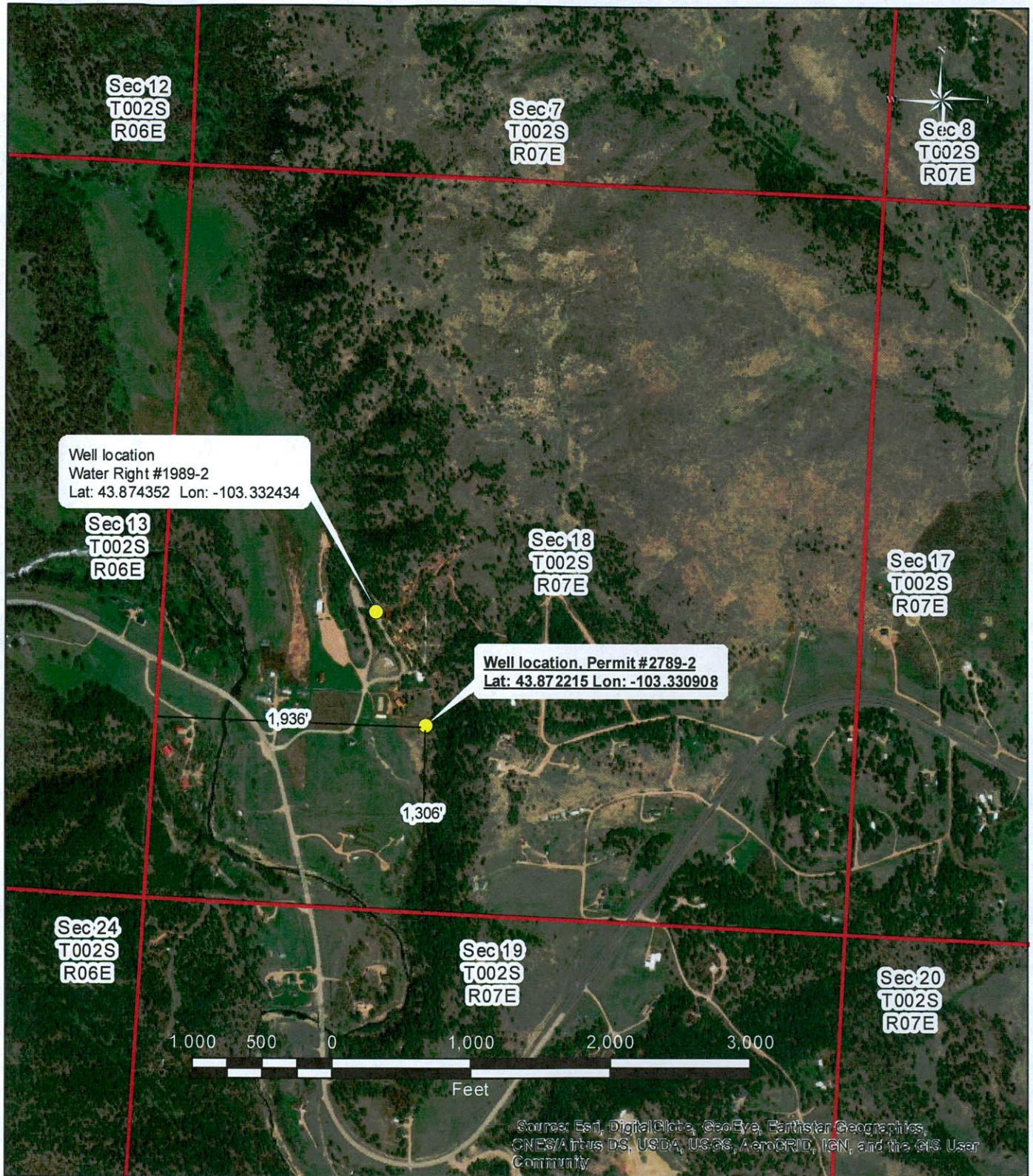


Well with Coaster building in background



pressure tank installation

Water Right #2789-2
Rushmore Cave
8/28/2018



Steven Quissell

Steven Quissell
Water Rights Inspector
DENR Water Rights Program





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

SEP 26 2018

2789-2

Tom Hagen
Rushmore Cave
13622 Hwy 40
Keystone SD 57751

Dear Mr. Hagen:

Enclosed is Water License No. 2789-2. 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

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 2789-2

(1) Rushmore Cave, 13622 Hwy 40, Keystone SD 57751 made Application No. 2789-2, January 11, 2018 for a water permit to divert 0.013 cubic feet of water per second (6 gallons per minute) from ground water, one well (Crystalline Rock Aquifer), Pennington County, South Dakota for commercial purposes. Permit No. 2789-2, with a priority date of April 16, 2018 was approved June 25, 2018 and issued to the applicant for diversion of water with construction of the described water supply system and the application to beneficial use of water completed.

An investigation of the water use system found the well to be located 14 feet south of the permitted area. The Chief Engineer made a finding pursuant to SDCL 46-5-13.1 and ARSD 74:02:01:14.01 that the change in location of the diversion point did not increase the potential for adverse effects to existing diversions.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the water supply system and is entitled to divert 0.013 cubic feet of water per second (6 gallons per minute) for beneficial use. The location of the diversion point is:

- 1,306'N and 1,936'E of the SW corner of Section 18, T2S, R7E (SE ¼ SW ¼)
Latitude 43.872215, Longitude -103.330908

(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 Rushmore Cave, 13622 Hwy 40, Keystone SD 57751 the holder and/or owner of Water Right No. 2789-2 is issued a license to appropriate water, the right to use 0.013 cubic feet of water per second from ground water, one well (Crystalline Rock Aquifer) with a priority date of April 16, 2018 from the location specified in (2) of this license for commercial purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 2789-2 and subject to the following qualifications:

- The well approved under this water right 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 Right holder shall report to the Chief Engineer annually the amount of water withdrawn from the Crystalline Rock Aquifer.



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

SEP 26 2018

date

