

WATER PERMIT NO. 2389-2

Name of Applicant: Sitting Bull Crystal Cavern

Address: 518 St. Joseph Street, Rapid City SD 57701

Phone: 605 342-2000

Amount of Water Claimed: 0.044 cfs - 20 gpm

Total Acres: NA

Source of Water Supply: groundwater (one well)

Water to be used for: commercial use

County: Pennington

Type of Waste Disposal System: septic tank with drain field

Location: 3 miles east of Rockerville

PRIORITY Date Received: June 16, 1997

Fee: \$50.00

Corrected Application Received: June 25, 1997

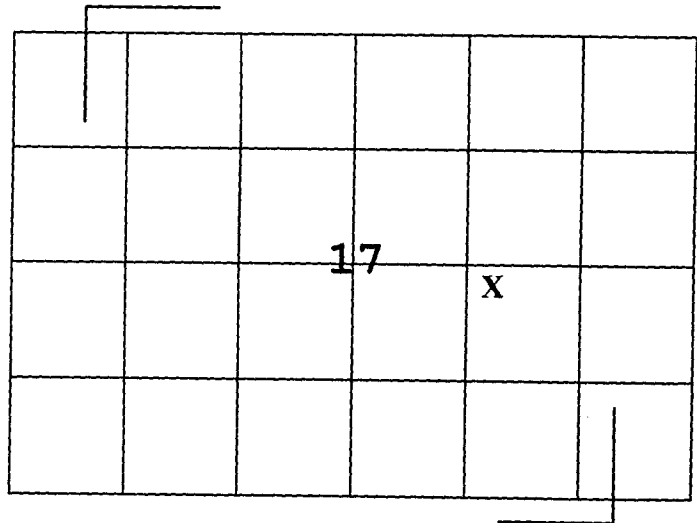
Period of Annual Use: January 1 - December 31

Remarks:

Diversion Point: NE 1/4 SE 1/4

Sec 17-T1S-R7E

Land to be Irrigated: NA



Depth of Well: 710 feet deep

Well Driller: S Bice Drilling Co. Inc.

Remarks:

Type of Map: topographic

Prepared by: Allen D Foster, PE

Reviewed and the Number Assigned on: 6-25-1997

By: Karen Schlaak

Notice of Hearing - date to intervene: _____

**SOUTH DAKOTA
WATER PERMIT NO. 2389-2**

Date of first receipt of application June 16, 1997.

Date of return to applicant for corrections, amendments or changes June 16, 1997.

Date of receipt of corrected application June 25, 1997.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 2389-2 to Sitting Bull Crystal Cavern, 518 St Joseph Street, Rapid City SD 57701 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. 2389-2 appropriates 0.044 cubic feet of water per second (20 gallons per minute) from one well (Deadwood Formation) 710 feet deep located in the NE 1/4 SE 1/4 Section 17-T1S-R7E.
2. The water appropriated shall be used for the purpose of supplying water for the business and may not exceed the amount of water needed for beneficial use for commercial use purposes.
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. 2389-2 is September 8, 1997.
5. The date from which applicant may claim right is June 16, 1997.
6. One-fifth of the construction is to be completed on or before March 8, 2000.
7. All construction is to be completed on or before September 8, 2002.
8. Water is to be put to beneficial use on or before September 8, 2006.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

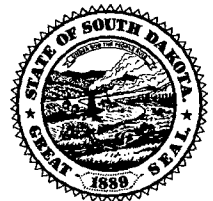
WATER MANAGEMENT BOARD

By: _____

John Hatch
John Hatch, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

NOV 12 1997

date



Form 2: Application for uses other than irrigation
(type or print)

Mail to: Water Rights Program Joe Foss Building 523 E. Capitol Pierre, SD 57501-3181 (605) 773-3352	(office use only) No. <u>2389-2</u> Hydrologic Unit <u>10/20/10</u> Basin <u>Upper Cheyenne</u> Newspaper <u>Rapid City Journal, Rapid City, SD</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: ☒ New ☐ Vested Right (Use predates Mar 2, 1955) ☐ Future Use Reservation
(check one) ☐ 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 of Applicant Sitting Bull Crystal Cavern Phone (605) 342-2000
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address 518 St. Joseph Street, Rapid City State SD 57701
(Street, RR. or Box) (Zip Code)
2. Amount of water claimed 0.044 *CFS or 10 GPM pump 20 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 Deadwood Formation
4. Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W)
1 Well ~~SW1/4~~ SE1/4 Section 17 Township 1S Range 7E
NE1/4 County Pennington
5. County or counties where water will be used Pennington
6. Annual period during which water is to be used 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)

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

STATE OF SOUTH DAKOTA)

SS

County of Pennington)

I, William F. Duhanice, the applicant, certify that I have read this application, have examined the attached map and that the matters stated are true and that I intend, and am able to complete the necessary construction.

Signed William F. Duhanice

Subscribed and sworn to before me this 13 day of June 19 97

Darren Stampler
Notary Public

Supplemental Information

(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter 6 3/4" Depth 710'
- b) Casing Type steel Diameter 5.5" Thickness .275 wall
- c) Screen Type None Diameter _____ Thickness _____
- d) Gravel Pack Thickness None Length of Gravel Pack _____
- e) Depth to Top of Water Bearing Material 660'
- f) Depth to Water (ground surface to water level) 365'
- g) Distance to nearest existing domestic well:
On applicants property _____ On property owned by others _____



2. Wastewater Disposal System Information

- a) Type of System (i.e. septic tank, drain field) _____
- b) System Capacity (gallons) _____ c) Year Constructed _____
- d) 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

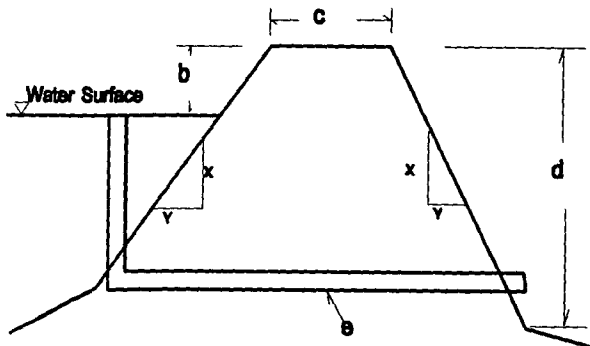
Upstream _____

Downstream _____

h) Surface Area of Impoundment _____

i) Storage _____ Acre Feet

j) Drainage Area Above Dam _____ Acres



RECEIPT

415389

Division of Water Rights

South Dakota Department of Environment and Natural Resources

Pierre, _____ June 16, 19 97

RECEIVED OF Sitting Bull Crystal Caverns, P.O. Box 1760, Rapid City, SD 57709

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

Fee for Application for Permit No. <u>2389-2</u> to Appropriate Water, to construct and to put water to beneficial use _____	50	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. _____		
Fee for Filing Transfer Form _____		
Fee for Filing Extension Request _____		
Fee for _____		

(Any Other Work Provided by Law)	Total	50 00

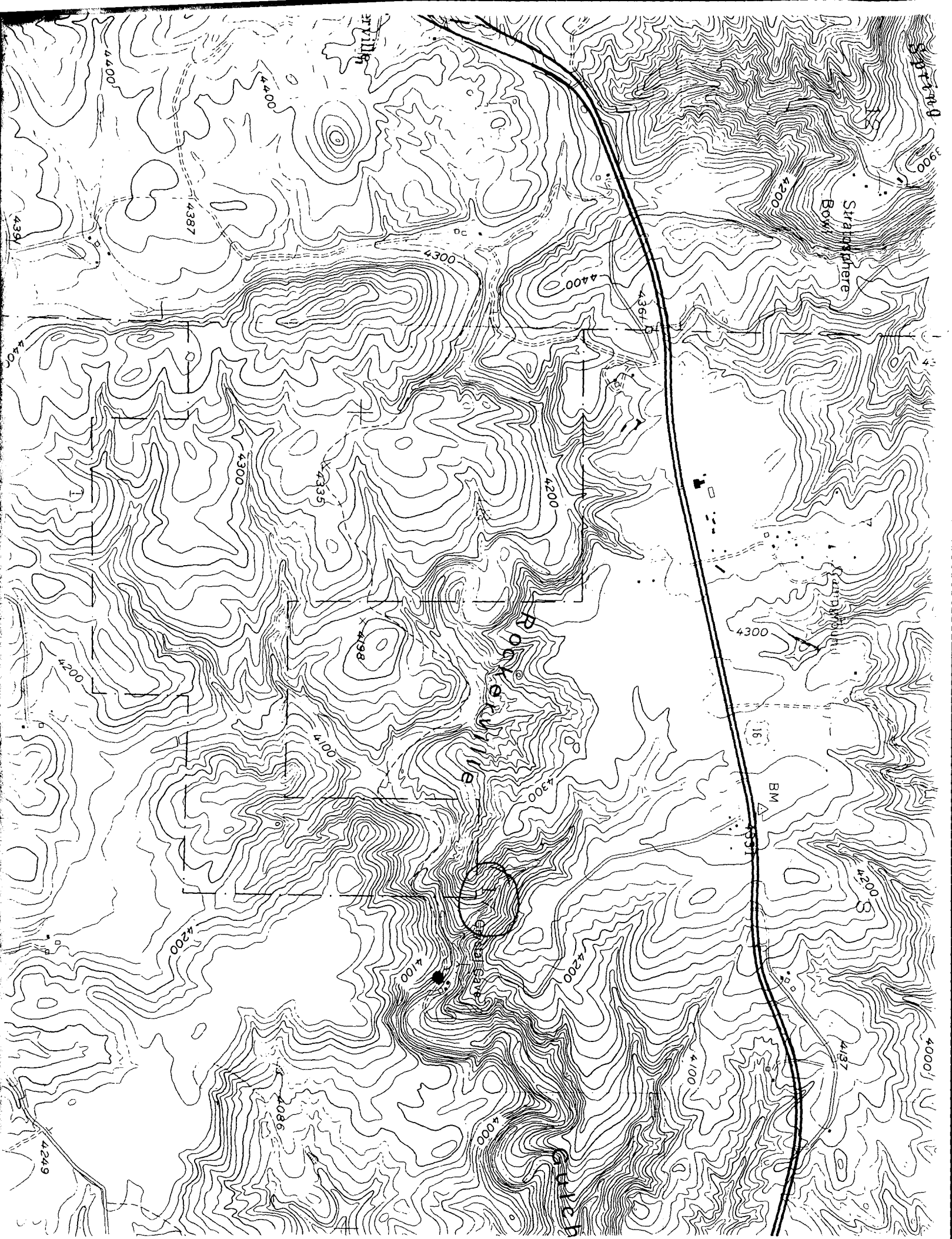
By John Hatch
Chief Engineer

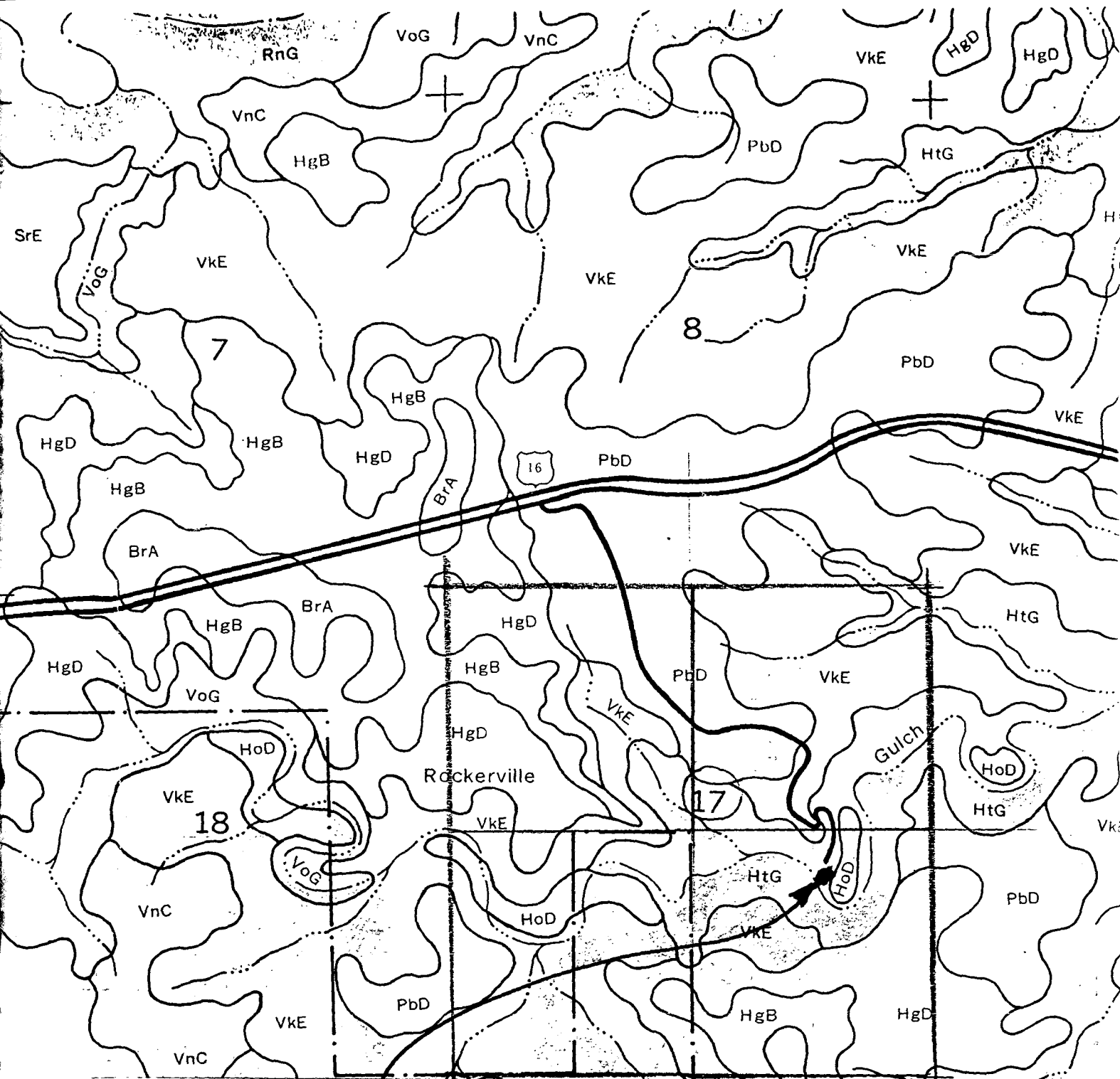
NAPP

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1815
15/20

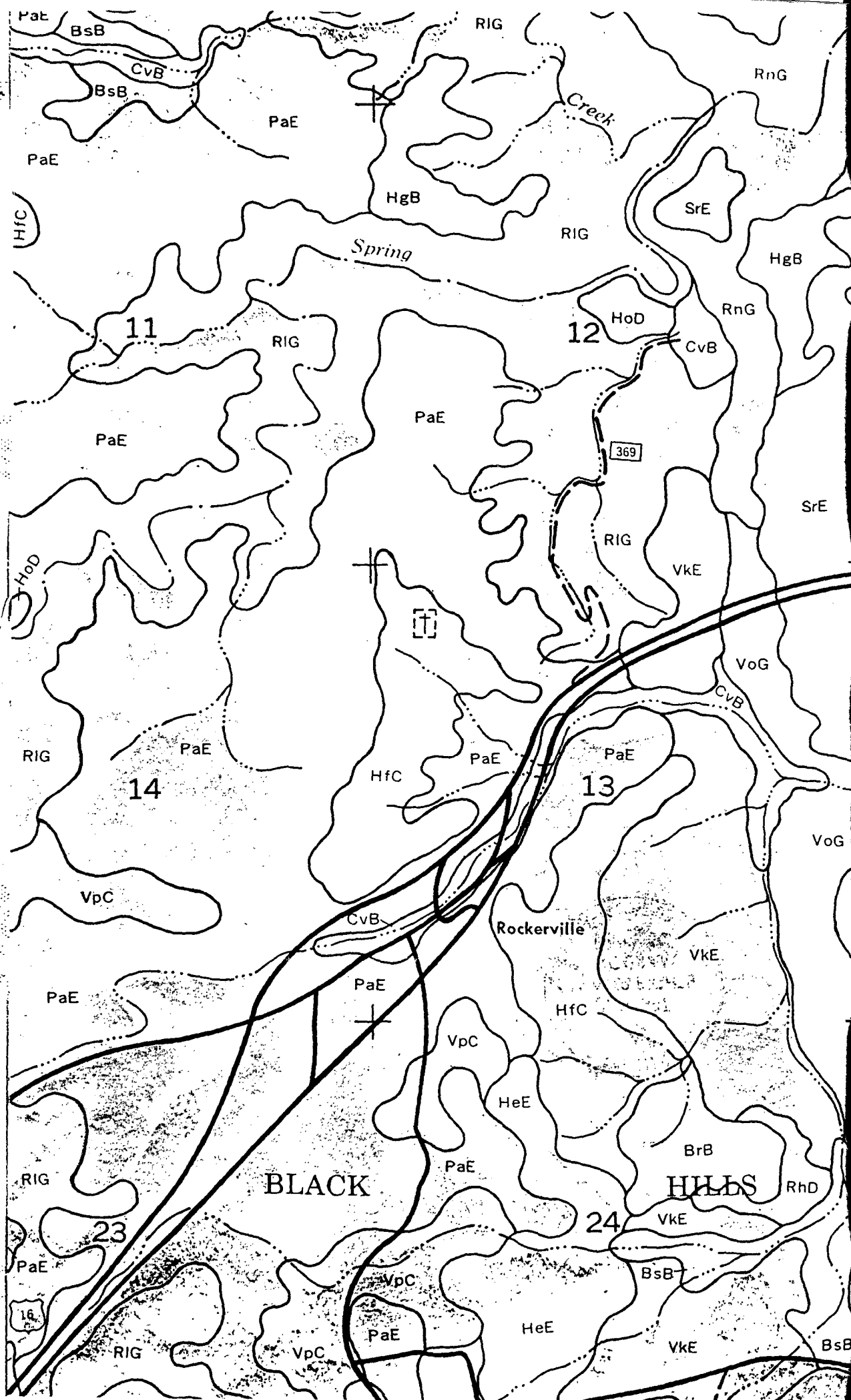
17/6
20/21





APPROXIMATE LOCATION OF WELL
LOCATED IN SE 1/4, SEC 17, T15S, R7E, BHM.





SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92 ✓

Location SW $\frac{1}{4}$ NE $\frac{1}{4}$ Sec 16 Twp 15 Rg 7 E
County Pennington
North

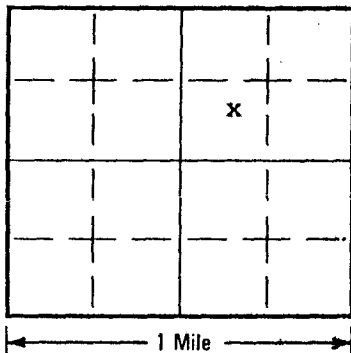
Please mark well location with an "X"

W

E

Well Completion Date

04-21-98



LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? 290 ft. from Proposed Septic (identify source).

PROPOSED USE:

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

METHOD OF DRILLING:

Air Rotary

CASING DATA:

- ☒ Steel ☐ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>23</u> LB/FT	<u>7</u> IN	<u>+1.5</u> FT	<u>808</u> FT	<u>8 3/4</u> IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Portland</u>	<u>125</u>	<u>14</u> lb./gal	<u>808</u> ft	<u>0</u> ft
_____	_____	_____ lb./gal	_____ ft	_____ ft

Describe grouting procedure Pressure grouted
through casing

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: Chlorine

_____ NO, Why Not? _____

Laboratory sent to for water quality analysis _____

Well Owner: Duhamel Enterprises
Business Name: Setting Bone Cyston Caverns, Inc.
Address: 528 St. Joe St
Rapid City, SD 57701

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
<u>Minnelusa</u>	<u>0</u>	<u>220</u>
<u>Off White Limestone</u>	<u>220</u>	<u>360</u>
<u>Lost Returns</u>	<u>360</u>	
<u>Tan Sand/Hard Green Shale</u>	<u>880</u>	<u>900</u>

STATIC WATER LEVEL 800' Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced Flowrate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

- ☐ Pumped Describe: Air Developed
☐ Bailed
☒ Other _____

Pumping Level Below Land Surface

<u>900</u> ft.	After <u>2</u> Hrs.	pumped <u>30</u> GPM
<u>800</u> ft.	After <u>2</u> Hrs.	pumped <u>12</u> GPM

If pump installed, pump rate _____ GPM

REMARKS

DRILLER: Frank Conway

This well was drilled under license # 195

And this report is true and accurate.

Drilling firm S. Bice Drilling Co.

Signature of License Representative: Frank Conway

Signature of Well Owner or Equitable Property Holder: Setting Bone Cyston Caverns, Inc.

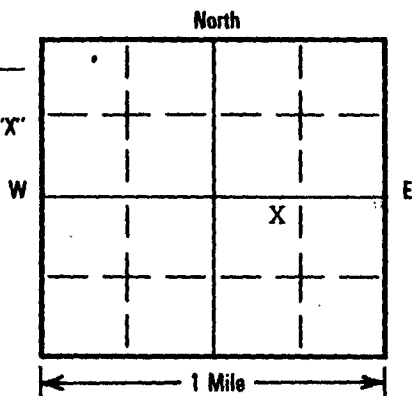
Date: 06-15-98

SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location NW ¼ SE ¼ Sec 17 Twp 1S Rg 7ECounty
Pennington

Please mark well location with an "X"

Well Completion Date 03-02-97

LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? 200 ft. from Septic (identify source).

PROPOSED USE:

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

METHOD OF DRILLING:

Air Rotary

CASING DATA:

☒ Steel ☐ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>17 LB/FT</u>	<u>5.5 IN</u>	<u>+1.5 FT</u>	<u>665 FT</u>	<u>6 3.4 IN</u>
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUTING DATA

Grout Type	No. of Sacks	Grout Weight	From	To
<u>Portland</u>	<u>75</u>	<u>14 lb./gal</u>	<u>665 ft</u>	<u>0 ft</u>
_____	_____	_____ lb./gal	_____ ft	_____ ft

Describe grouting procedure _____

Pressure Grouted Through CasingSCREEN: ☐ Perforated pipe ☐ Manufactured

Diameter _____ IN Length _____ FEET

Material _____

Slot Size _____ Sat 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? XXYES, How: Chlorine

_____ NO, Why Not? _____

Laboratory sent to for water quality analysis _____

Well Owner: Duhamel EnterprisesBusiness Name: Sitting Bull CaveAddress: 518 St. JoeRapid City, SD 57701ATTN: Monte Loos

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Red Clay/Limestone.	0	15
Off White Limestone	15	120
Yellow to Orange Limestn	120	140
Off White Limestone	140	220
Off White/Pink Limestone	220	400
Drk Rose Limestone	400	460
Drk Purple Siltstone	460	500
Hard Red Siltstone	500	560
Hard Purple/Green Shale	560	580
Hard Green Shale	580	660
Brownish Orange Sand	660	710

STATIC WATER LEVEL 365 Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced Flowrate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

☐ Pumped Describe: Air Developed☐ Bailed _____☒ Other _____

Pumping Level Below Land Surface

650 ft. After 2 Hrs. pumped 20 GPM

_____ ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate _____ GPM

REMARKS

Driller: Frank ConwayThis well was drilled under license # 195

And this report is true and accurate.

Drilling firm S. Bice Drilling Co. Inc.

Signature of License Representative:

Frank Conway

Signature of Well Owner or Equitable Property Holder:

XDate: 06-11-97



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181

June 16, 1997

William F Duhamel
Sitting Bull Crystal Cavern
518 St Joseph Street
Rapid City SD 57701

Dear Mr. Duhamel:

Thank you for submitting your *Application for a Permit to Appropriate Water* for commercial use at the Sitting Bull Crystal Cavern.

Enclosed is one of the maps you submitted with the application. The map is being returned because it must be signed by one of the following: Registered Land Surveyor, Registered Professional Engineer or by any other government employee who normally prepares maps as a part of his assigned duties (i.e. local NRCS office).

Also, please complete Item No. 2 on the Supplemental Information sheet regarding the wastewater disposal system.

If you have any questions, please contact me.

Sincerely,

Karen Schlaak
Water Rights Program
605 773-3352

enclosures

WATER PERMIT APPLICATION NO. 2389-2
SITTING BULL CRYSTAL CAVERN
JULY 31, 1997

Water Permit Application No. 2389-2 proposes to appropriate 0.044 cubic feet of water per second (20 gallons per minute) from one well (Deadwood Formation) 710 feet deep located in the NE¼ SE¼ Section 17, T1S-R7E. The water is for commercial use.

AQUIFER: Deadwood Formation (DDWD)

INTRODUCTION:

SDCL 46-2A-9 requires that a permit to appropriate water may only be issued 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 questions of water availability and the affects on existing rights.

GENERAL:

The Deadwood Formation consists of alternating beds of sandstone, shale and shaley limestone, approximately 240 feet thick in this area (Rahn, 1987). The formation underlies approximately 1,492,480 acres of Pennington County and contains an estimated 14,924,800 acre feet of recoverable water in storage (Allen, 1984). The aquifer is laterally extensive and underlies most of Western South Dakota. There is limited aquifer test data available for wells in the Deadwood, and aquifer characteristics are not available, however the permeability of the formation is assumed to be "moderately low" (Rahn, 1979). The Deadwood Formation outcrops within 2 miles of this well site and is approximately 460 feet below grade at this site. The aquifer is under confined conditions at this site. The quality of the water in the Deadwood Aquifer is difficult to assess due to the limited amount of data. The concentration of common ions in the Deadwood Aquifer water in this area appears to be quite low, with analysis from area wells indicating total dissolved solids of less than 500 ppm. The water quality probably deteriorates rapidly within a few miles down dip of the aquifer. Very high concentrations of radionuclides are present in some water supplied from the Deadwood Aquifer. Recharge to the Deadwood aquifer which occurs through direct infiltration of precipitation at the outcrop area and to a minor extent streamflow losses, has not been quantified.

Water Availability:

Development of the Deadwood Aquifer has generally been limited to a fairly small area in or near the outcrop area. This is due to the fact that most of the aquifer is overlain by other productive aquifers. Relatively few wells have been completed into the Deadwood Aquifer and the water use from the Deadwood Formation is fairly low. The aquifer is utilized primarily for domestic use near the outcrop area. However, there are 35 Water Rights/Permits appropriating water from the Deadwood Aquifer in

South Dakota. Water use by appropriate rights/permits include: 12 permits/rights for suburban housing developments; 12 permits/rights for commercial use; 4 permits/rights for industrial use; 2 permits/rights for institutional use; 2 permits/rights for multiple use; 1 permit for irrigation use; 1 permit for domestic use and 1 water right for RWS use. The combined diversion rate of these appropriate rights totals 5.459 cfs (Water Rights, 1997). It is doubtful that the combined use from the Deadwood exceeds 2,300 acre-feet per year.

Since average annual recharge has not been quantified for the aquifer, a direct comparison between recharge and withdrawals can not be made. The Water Rights Program does however, monitor 6 observation wells completed into the Deadwood Aquifer in the Black Hills (Water Rights, 1997). Observation Wells PE-84A and PE-95D are both located within 4 miles of this well. Data from observation wells indicate the potentiometric surface of the Deadwood Aquifer fluctuates seasonally in response to recharge events, with the highest water level occurring in late spring-early summer, and the lowest water level occurring in late winter-early spring. The water levels are generally higher in "wet" years and are generally lower in "dry" years. Observation well data suggest that at the existing level of development, natural influences dominate the water levels of the aquifer and the effects of pumping as yet are not obvious.

Affects on Existing Rights:

There are several domestic wells completed into the Deadwood Aquifer within approximately one mile of this well (Water Rights, 1997). There are five Water Rights/Permits appropriating water from the Deadwood Aquifer within approximately 2 miles of this well site, they include:

Permit No.	Owner	Location	Diversion Rate (cfs)
608-2	United National Bank	1S7E18ab	0.01
1450-2	Bear Country USA	1S7E9cb	0.20
1819-2	Strato-Rim Estates Inc	1S7E7cb	0.50
2288-3	Black Hills Resorts, Inc	1S7E8db	0.03
2305-2	Spring Canyon Water	1S7E5ba	0.08

Interference from pumping this Deadwood well is not expected to be a problem for adequate wells in the area because of the relatively low diversion rate proposed by this application and the distance between wells.

CONCLUSIONS:

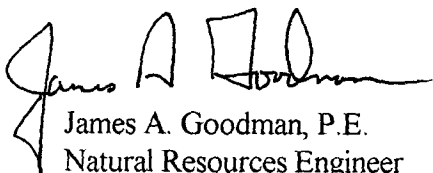
1. The Deadwood Aquifer is a viable aquifer in this area, and water is available for this appropriation.

2. The Deadwood well has been constructed at this site. The Well Completion Report for the well indicates it was constructed in accordance with the SD Well Construction Standards.
4. Well interference should not be a problem in this area.
5. This application proposes to use a septic system for effluent disposal.



Ken Buhler
Natural Resources Engineer

approved by



James A. Goodman, P.E.
Natural Resources Engineer

REFERENCES:

- Allen, J.C., D.Iles, A.Petres, 1984, Analysis of Groundwater and Streamflow Data, Western Dakotas Region of South Dakota, Task 3 & 4: Groundwater Resources Inventory, US Army Corps of Engineers Contract DAWC 45-82-C-015, SD DENR-Division of Geological Survey, Vermillion SD
- Rahn, P.H., 1987, Geologic Map and Measured Stratigraphic Section for the Rockerville Quadrangle, Pennington, County, South Dakota, MCH062, Geological Society of America Map and Chart Series, Boulder CO
- Rahn, P.H., 1979, Ground Water Resources of Western South Dakota, US Army Corps of Engineers, SDSM&T Project #2533,
- Water Rights Program, 1997, "Water Permit/Right Files", DENR-Water Rights Program, Joe Foss Building, Pierre, SD 57501
- Water Rights Program, 1997, " Observation Well Files", DENR-Water Rights Program, Joe Foss Building, Pierre, SD 57501
- Water Rights Program, 1997, "Domestic Well Log Files", DENR-Water Rights Program, Joe Foss Building, Pierre, SD 57501

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2389-2, Sitting Bull Crystal Cavern**

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. 2389-2, Sitting Bull Crystal Cavern, c/o William F. Duhamel, 518 St. Joseph Street, Rapid City, SD 57701

The Chief Engineer is recommending APPROVAL of Application No. 2389-2 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) in the public interest.

See report on application for additional information.

A handwritten signature in black ink, appearing to read "John Hatch", is written above the printed name.

JOHN HATCH, Chief Engineer

August 13, 1997



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

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

August 14, 1997

Sitting Bull Crystal Cavern
%William F. Duhamel
518 St. Joseph Street
Rapid City, SD 57701

Dear Mr. Duhamel:

Water Permit Application No. 2389-2 for commercial use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice of hearing has been sent to the Publisher of the Rapid City Journal printed at Rapid City, SD (Ph # (605) 394-8300). For your information, a copy of the notice, the recommendation of the Chief Engineer and a 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 of Hearing and to arrange for payment. Early contact with the paper can eliminate delays. The publisher has been instructed to publish your notice once each week for two consecutive weeks with the last publication to occur twenty days before the board meeting. The newspaper has 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.



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

August 14, 1997

Rapid City Journal
P.O. Box 450
Rapid City, SD 57709-0450

ATTENTION: Legal Department

Enclosed is a Notice of Hearing on Application No. 2389-2 to be published twice. Please publish the first notice on August 22, 1997, with the second publication 7 days later.

The APPLICANT MUST VERIFY TO YOU THAT THE NOTICE IS TO BE PUBLISHED, before you make the first publication. Please BILL the APPLICANT for the cost of publication. The APPLICANT is Sitting Bull Crystal Cavern, %William F. Duhamel, 518 St. Joseph Street, Rapid City, SD 57701 (Ph # (605) 342-2000).

A copy of BOTH publications must be SENT to the WATER RIGHTS PROGRAM. IMMEDIATELY return the FIRST publication with the FIRST Transmittal form on the bottom of this page. The first copy is needed to check the publication for errors so any corrections can be made in the second publication. Publication errors can invalidate the public notice and cause the applicant costly delays.

Please be sure the SECOND publication is returned IMMEDIATELY with the enclosed Proof of Publication form. DO NOT WAIT until the end of the month or the billing cycle. No action may be taken on the permit application until proof of publication has been received.

Sincerely,

Eric Gronlund
Natural Resources Engineer
605 773-3352

enclosures

-----CUT HERE-----

FIRST TRANSMITTAL NOTICE

TO: Eric Gronlund
Water Rights Program
Joe Foss Building
Pierre SD 57501-3181

No. _____

Date _____

We are in receipt of your letter of _____ enclosing Notice of Hearing to Appropriate Water by Application No. _____ which was first published in our issue of _____. ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.

Name

Newspaper

Instruction to Newspaper - Publish first Notice on August 22, 1997, with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 2389-2 to Appropriate Water

Notice is given that Sitting Bull Crystal Cavern, 518 St. Joseph Street, Rapid City SD 57701 has filed an application for a water permit to appropriate 0.044 cubic feet of water per second (20 gallons per minute) from one well (Deadwood Formation) 710 feet deep located in the NE 1/4 SE 1/4 Section 17-T1S-R7E. The water is for commercial use.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2389-2 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 the 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 the 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 September 8, 1997.

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. Contact Eric Gronlund at the above Water Rights Program address to request copies of information pertaining to this application. Nettie H. Myers, Secretary, Department of Environment and Natural Resources.

Form 8



PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) SS
County of Pennington)

I, Patricia K. Van Patten

certify that the attached printed Notice was taken

from the Rapid City Journal

printed and published in Rapid City

County of Pennington and

state of South Dakota. The notice was published

in the newspaper on the following two dates:

August 22, 1997

August 29, 1997

Cost of Printing Sixty-eight Dollars

and fourteen cents (\$68.14)

Patricia K. Van Patten
(Signature)

Legal Advertising Representative
(Title)

8/29/97
(Date Signed)

Aug. 22, 29 L5296
NOTICE OF APPLICATION
NO. 2389-2

TO APPROPRIATE WATER
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Nettie H. Myers
Secretary
Department of Environment
and Natural Resources



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3181

NOV 12 1997

Sitting Bull Crystal Cavern
%William F. Duhamel
518 St. Joseph Street
Rapid City, SD 57701

Dear Mr. Duhamel:

Enclosed is Water Permit No. 2389-2 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

Also enclosed is Form 10, Notice of Completion of Works and Application of Water to Beneficial Use, which you are to complete and submit to the Chief Engineer when you have completed the system and/or have put the water to beneficial use. An inspection can then be scheduled so that the Water License may be issued, thus completing your acquisition of a Water Right.

Very truly yours,

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

enclosures

PLEASE NOTE: Certain changes may be made to your water permit usually without affecting the priority date. The location of a point of diversion may be changed or additional points of diversion may be approved if the water source remains unchanged; no additional water is appropriated; and, if irrigating, no additional land is irrigated. The change may be allowed without application or publication, if the Water Rights Program is contacted and the chief engineer makes a finding that the change does not increase the potential for interference with existing diversions.

A new water permit application is required to change water sources, increase the permitted diversion rate, or increase the irrigated acreage. If the application is approved, the water permit will receive a new priority date.

2389-2

**WATER RIGHTS PROGRAM
FILE DOCUMENTATION**

NAME OF PERSON OR FILE: Monte w/Sitting Bull Crystal Cavern

ADDRESS: 518 St Joseph St., Rapid City, SD

COUNTY: Pennington

DATE: November 17, 1997

TELEPHONE: 605 342-2000

RE: Water Permit No. 2389-2

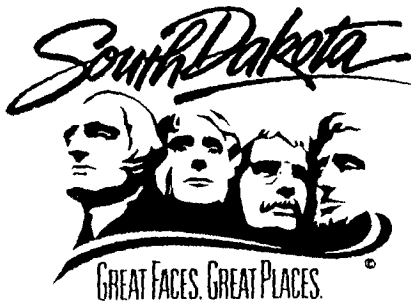
COMMENTS:

Monte called to inquire how to fill out the Form 10 he received with the permit. He stated the system has already been completed and is ready to be inspected.

I told him he could toss the Form 10 he received and I would put a note in the file stating the system was ready for investigation. He reminded me that the business is seasonal and is not open in the winter time. Any investigation would have to be done during the summer months when they are open.



Genny McMath
Environmental Scientist



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181
www.state.sd.us/denr

June 24, 1998

Sitting Bull Crystal Caverns, Inc.
c/o William F Duhamel
518 St Joe St
Rapid City SD 57701

Dear Mr. Duhamel:

I am writing in regard to a well driller's report filed by S. Bice Drilling Co. The report shows a new well was completed for your business on April 21, 1998. A review of our files indicates that Sitting Bull Crystal Cavern holds Water Permit No. 2389-2 for 20 gallons per minute (gpm) from one well, 710 feet deep located in the NE ¼ SE ¼ Section 17-T1S-R7E.

South Dakota Codified Law 46-5-13.1 provides that a point of diversion may be changed or additional points of diversion may be approved without application or publication of a notice of hearing if the additional point of diversion is from the same source of water, no additional water is appropriated and the Chief Engineer makes a finding that the change does not increase the potential for interference with existing diversions.

Mr. Duhamel, does the peak diversion rate from the two wells exceed 20 gpm? If so, a new permit application will be required for the additional diversion rate above 20 gpm. If not, we will consider the well driller's report as a request for authorization of an additional point of diversion for Water Permit No. 2389-2.

If you have any questions or need a water permit application form, please contact Eric Gronlund or me. We will assist you in any way possible.

Sincerely,

Karen Schlaak

Karen Schlaak
Water Rights Program
605 773-3352

*driller called
Retirement home for Duhamel's
domestic use*



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181
www.state.sd.us/denr

November 2, 1999

2389-2

William Duhamel
Sitting Bull Crystal Cavern
P.O. Box 1760
Rapid City, SD 57709

Dear Mr. Duhamel:

The investigation of your water use system was conducted on September 11, 1998, by Ken Buhler, staff engineer. The investigation included the extent of application of water to beneficial use, as developed under Water Permit No. 2389-2. Your final water right document, the Water License, can now be issued.

Statutes require that we charge a \$50.00 fee for the investigation and issuance of the Water License. Upon receipt of the \$50.00 fee from you, we will begin processing your Water License.

Please remit fee to:
Department of Environment & Natural Resources
Water Rights Program
523 E. Capitol
Pierre, SD 57501-3181

Sincerely,

Cheryl F. Frost
Secretary
Water Rights Program
(605) 773-3352

NOTE: On check or money order, please specify your permit number. This will insure proper handling of the fee.

RECEIPT

Water Rights Program

South Dakota Department of Environment and Natural Resources

№ 416256

Pierre, November 15, 19 99

RECEIVED OF Sitting Bull CryasaklCSavannah P.O. Box 1760, Rapid City, SD 57709
the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. _____ to Appropriate Water, to construct
and to put water to beneficial use _____

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. 2389-2

50 00

Fee for Filing Transfer Form _____

Fee for Filing Extension Request _____

Fee for _____

(Any Other Work Provided by Law)

Total

50 00

By

Chief Engineer

John Hatch

REPORT ON INSPECTION OF PERMIT NO. 2389-2

Other permit(s) associated with the project: na

NAME & ADDRESS OF INSPECTION CONTACT Peter Heffron and Bud Duhamel

PO Box 1760

Rapid City, SD 57709

RELATIONSHIP TO PERMIT HOLDER, IF APPLICABLE: Peter Heffron is William "Bud"

Duhamel's Grandson and the

Assistant Manager. William

Duhamel is the owner

NAME & ADDRESS OF PERMIT HOLDER: Sitting Bull Crystal Cave

PO Box 1760

Rapid City, SD 57709

DATE OF INSPECTION: September 11, 1999

DIVERSION POINT LEGAL LOCATION: 2200 feet north and 1500 feet west of the southeast corner of Sec. 17, T1S-R7E, (SE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 17, T1S-R7E)

WELL INFORMATION:

- 1) Well Drilling Firm: S. Bice Drilling
- 2) No. of Wells one
- 3) Depth(s) 710 feet
- 4) Well log is available yes

Casing:

- 1) Diameter 5 inches
- 2) Length 665 feet
- 3) Type steel

Screen:

- 1) Type none open hole completion
- 2) Length 45 feet
- 3) Static water level 365 feet

Pump:

- 1) Make AY McDonald
- 2) Model submersible
- 3) Size 5-inch
- 4) Capacity 10 GPM

Motor:

- 1) Make Franklin Electric
- 2) Horsepower rating 2 hp

DISTRIBUTION LINES OR CANALS:

- 1) Type Polyethylene
- 2) Size 1 1/4 inches
- 3) Length 100 feet

SYSTEM:

Water is used for the restrooms in the gift shop.

PERMIT QUALIFICATIONS AND REGULATIONS:

- 1) Special qualifications to permit being abided by yes
- 2) All structures, wells and lands on map yes
- 3) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period na

Permit No. 2389-2
Upper Cheyenne River - Water District

Report Of Examination Of Works And/Or Application of Water To Beneficial Use

TO: Chief Engineer, Water Rights Program, DENR, Foss Bldg., Pierre, SD 57501

I have this day, **September 11, 1998**, made a thorough examination of the water use system constructed by **Sitting Bull Crystal Cavern of PO Box 1760, Rapid City, SD 57709** holder of Permit No. **2389-2**, bearing the priority of **June 16, 1997** authorizing the diversion of **0.044** cu. ft. per second of the waters of **groundwater** for **commercial** purposes, in **Pennington** County.

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

A. Works used to divert the water:

Water is diverted from a 5-inch diameter well, 710 feet deep located 2200 feet north and 1500 feet west of the southeast corner of Sec. 17, T1S-R7E (SE¼ NE¼ NW¼ SE¼ Sec. 17, T1S-R7E) with a 2 horsepower, submersible, AY McDonald pump capable of diverting 10 gallons per minute.

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

Water is transported to place through 100 feet of 1 ¼ -inch diameter polyethylene pipe.

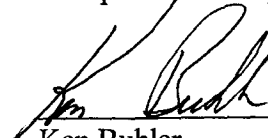
C. Works used to apply water to beneficial use:

Water is applied to beneficial use in restrooms at the gift shop.

The system is in the following condition **good**. The point of diversion is located **2200 feet north and 1500 feet west of the southeast corner of Sec. 17, T1S-R7E**. The works are capable of diverting and conveying to the place of use **0.022** cu. ft. per second of water which is to be used for **commercial purposes**. The license should be issued for **0.022** cfs.

Applicable permit qualifications have been complied with: **yes**

Exceptions to compliance are: **na**



Ken Buhler
Natural Resources Engineer
DENR, Water Rights Program

10/13/99

Date

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

NAME: Sitting Bull Crystal Cavern

ADDRESS: PO Box 1760, Rapid City, SD 57709

DATE: November 1, 1999

COUNTY: Pennington

TELEPHONE:

AUTHORITY:

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

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

The water source developed (the Deadwood Formation) is the same source that was permitted and there is no additional water appropriated.

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

This is not an irrigation appropriation.

- **Review of Existing Diversions**

The actual location of this well does not increase the potential for interference with existing appropriations from the Deadwood Aquifer over the location that was permitted.

RECOMMENDED ACTION

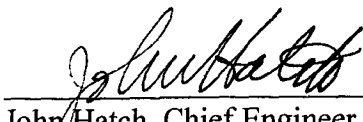
Based on the above criteria, it is recommended that the diversion point(s) be licensed as developed.



Ken Buhler, Natural Resources Engineer
Water Rights Program

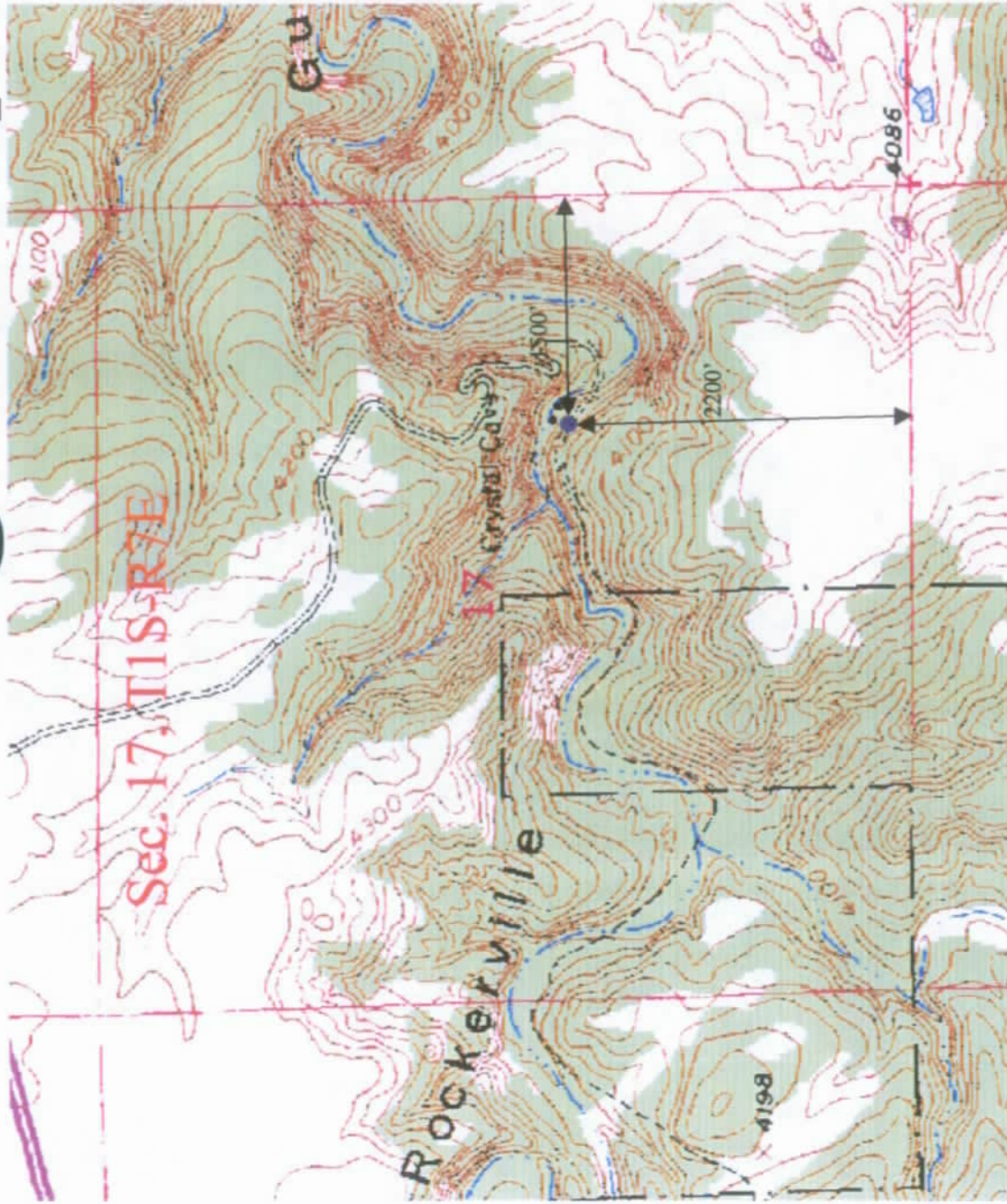
The Chief Engineer makes a finding pursuant SDCL 46-5-13.1 and ARSD 74:02:01:14.01 that:

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

 11-1-99

John Hatch, Chief Engineer
Water Rights Program

Water Right Map 2389-2



Ken Buhler

Ken Buhler
Natural Resources Engineer
Water Rights Program

0.8 Miles

0.4

0

0.4



STATE OF SOUTH DAKOTA

WATER LICENSE NO. 2389-2

(1) Sitting Bull Crystal Cavern, PO Box 1760, Rapid City SD 57709 made Application No. 2389-2, June 16, 1997 for a water permit to divert 0.044 cubic feet of water per second from groundwater (one well), Pennington County, South Dakota for commercial purposes. Permit No. 2389-2, with a priority date of June 16, 1997 was approved September 8, 1997 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before September 8, 2002 and for the application to beneficial use of said water on or before September 8, 2006.

An investigation conducted for licensing purposes found the well under Water Permit No. 2389-2 was not in the location authorized by the permit. Pursuant to SDCL 46-5-13.1, the Chief Engineer makes a finding that the change in location of diversion point does not increase the potential for interference with existing water rights.

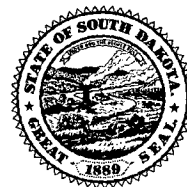
(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 0.022 cubic feet of water per second for beneficial use. The location of the diversion point is 2,200 feet north and 1,500 feet west of the southeast corner Section 17-T1S-R7E (NW ¼ SE ¼).

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

(4) Pursuant to South Dakota Water Law 46-5-30.1 Sitting Bull Crystal Cavern, PO Box 1760, Rapid City SD 57709 the holder and/or owner of Water Right No. 2389-2 is issued a license to appropriate water, the right to use 0.022 cubic feet of water per second from groundwater (one well) with a priority date of June 16, 1997 from the location specified in (2) of this license for commercial purposes. This license is subject to any limitations or qualifications listed in Water Right No. 2389-2 and subject to South Dakota State Law.


JOHN HATCH, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

DEC 3 1999
date





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181
www.state.sd.us/denr

DEC 3 1999

2389-2

William Duhamel
Sitting Bull Crystal Cavern
P.O. Box 1760
Rapid City, SD 57709

Dear Mr. Duhamel:

Enclosed is Water License No. 2389-2. This is the final water right document completing your process of obtaining a Water Right. Enclosed is Receipt No. 416256 in the amount of \$50.00 which you paid for the investigation and issuance of the Water License.

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. 2389-2, 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.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Program
(605) 773-3352

ks
enclosures