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**SOUTH DAKOTA**  
**WATER PERMIT NO. 1803-1 FOR IRRIGATION**

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Date of first receipt of application July 18, 2003.

Date of return to applicant for corrections, amendments or changes July 21, 2003.

Date of receipt of corrected application July 22, 2003.

The Water Management Board approved Water Permit No. 1803-1 on December 3, 2003 for Albert and Ryett Harty, 519 McQuillan, Lead SD 57754 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. 1803-1 appropriates 0.222 cubic feet of water per second from one well (Minnelusa Formation) 725 feet deep located in the SW ¼ SW ¼ (Tract A of Government Lot 4) Section 18 to irrigate 22 acres located in the SW ¼ SW ¼ Section 18; all in T7N-R2E.

In addition to irrigation, water will also be utilized for commercial, geothermal heat, domestic purposes and for a hydro turbine power generator.

2. The amount of the appropriation may not exceed 2 acre feet annually for each acre of land to which water is actually and beneficially applied for irrigation. The water is to be used during the following described annual period: April 1 – October 31 (for irrigation) and January 1 – December 31 (for other uses).
3. The date from which applicant may claim right is July 18, 2003.
4. One-fifth of the construction is to be completed on or before June 3, 2006.
5. All construction is to be completed on or before December 3, 2008.
6. Water is to be put to beneficial use on or before December 3, 2012.
7. 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 well approved under this Permit shall be valved and the flow reduced to the amount needed or to a minimum when not being used. If this well is abandoned or the Permit cancelled, the well must be plugged in accordance with Water Management Board Rules, Chapter 74:02:04.

**WATER MANAGEMENT BOARD**

By: Garland Erbele

Garland Erbele, Chief Engineer  
Water Rights Program  
Department of Environment and Natural Resources

DEC 29 2003

date



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

RECEIVED

JUL 18 2003

WATER RIGHTS  
PROGRAM

|                                                                                                                    |                                                                        |
|--------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| Mail to:<br>Water Rights Program<br>Joe Foss Building<br>523 E. Capitol<br>Pierre, SD 57501-3181<br>(605) 773-3352 | No. <u>1803-1</u> (office use only)<br>Hydrologic Unit <u>10120203</u> |
|                                                                                                                    | Basin <u>Belle Fourche R</u>                                           |
|                                                                                                                    | Newspaper <u>Black Hills Pioneer, Spearfish</u>                        |

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

Check use(s) of water:

|                                                            |                                                |                                                                                                          |                                                     |
|------------------------------------------------------------|------------------------------------------------|----------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| <input type="checkbox"/> Municipal                         | <input type="checkbox"/> Suburban Housing      | <input type="checkbox"/> Recreational                                                                    | <input type="checkbox"/> Institutional              |
| <input type="checkbox"/> Rural Water System                | <input checked="" type="checkbox"/> Commercial | <input type="checkbox"/> Fish & Wildlife                                                                 | <input checked="" type="checkbox"/> Geothermal Heat |
| <input checked="" type="checkbox"/> Domestic (over 18 gpm) | <input type="checkbox"/> Industrial            | <input checked="" type="checkbox"/> Other <u>Agricultural (Irrigation)<sup>2</sup> Power<sup>3</sup></u> |                                                     |

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 Albert and Ryett Harty Phone (605) 584-2773  
(check one) ☒ Owner ☐ Tenant/lessee  
Mailing Address 519 McQuillan, Lead State SD 57754  
(Street, RR. or Box) (Zip Code)
- Amount of water claimed 0.222 \*CFS or 200,100 50<sup>4</sup> \*\*GPM 22Ac. irrigated ~~22Ac~~  
(\*Cubic Feet per Second) (\*\*Gallons per Minute) (\*\*\*)Acres - storage capacity of dam/dugout or annual use if applicable
- Source of water supply Minnelusa formation
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) 1 well in Parcel 24000-00702-180-10, Tract A of Government Lot 4, Sec 18, T7N, R2E, (SW1/4 SW1/4) Black Hills Meridian 22Ac irrigated - SW1/4 SW1/4 also County Lawrence
- County or counties where water will be used Lawrence
- Annual period during which water is to be used Year round, more in summer (Jan 1-Dec 31) (irrigation and cooling season)
- 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)

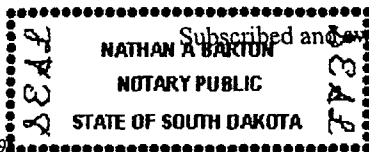
Well will provide water for two rural residences, outbuildings (shops, garage, etc.), commercial use (home-based businesses), irrigation, domestic cooling and heating, domestic power, and normal domestic and business use. Site is not supplied by rural water system.

STATE OF SOUTH DAKOTA)  
County of Lawrence ) SS

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)

I, Albert Harty, 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 Albert Harty  
day of July 2003



Nathan A. Barton

Notary Public

MY COMMISSION EXPIRES 2 DEC 2005

## Supplemental Information

(type or print in ink)

### 1. Well Information - Proposed Construction

- a) Drill Hole Diameter Varies<sup>5</sup> Depth 725 feet
- b) Casing Type Steel Diameter 6" ID (250 ft), 4" ID (464 ft) Thickness 3/8"
- c) Screen Type None Diameter NA Thickness NA
- d) Gravel Pack None Length of Gravel Pack NA
- e) Depth to Top of Water Bearing Material 712 feet
- f) Depth to Water (ground surface to water level) Surface: well is flowing at 100-200 gpm
- g) Distance to nearest existing domestic well: Estimated 4000 feet east-southeast, 700 feet deep<sup>6</sup>  
On applicants property No On property owned by others Yes

### 2. Wastewater Disposal System Information

- a) Type of System (i.e. septic tank, drain field) Septic system with use of gray water for irrigation<sup>7</sup>
- b) System Capacity (gallons) planned 1,500 gallons Year Constructed 2003
- c) Connected to the City of N/A Sanitary System

### 3. Dugout Information (to be used for washout and recycling of water)

- a) Surface Dimensions NONE Depth NONE
- b) Depth to water (ground surface to water level) NONE

### 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:

NO WATER STORAGE DAM

- 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

## WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date July 22, 2003

RECEIVED OF Albert Harty, Kyett Harty, 519 McQuillan, LEAD SD 57754

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

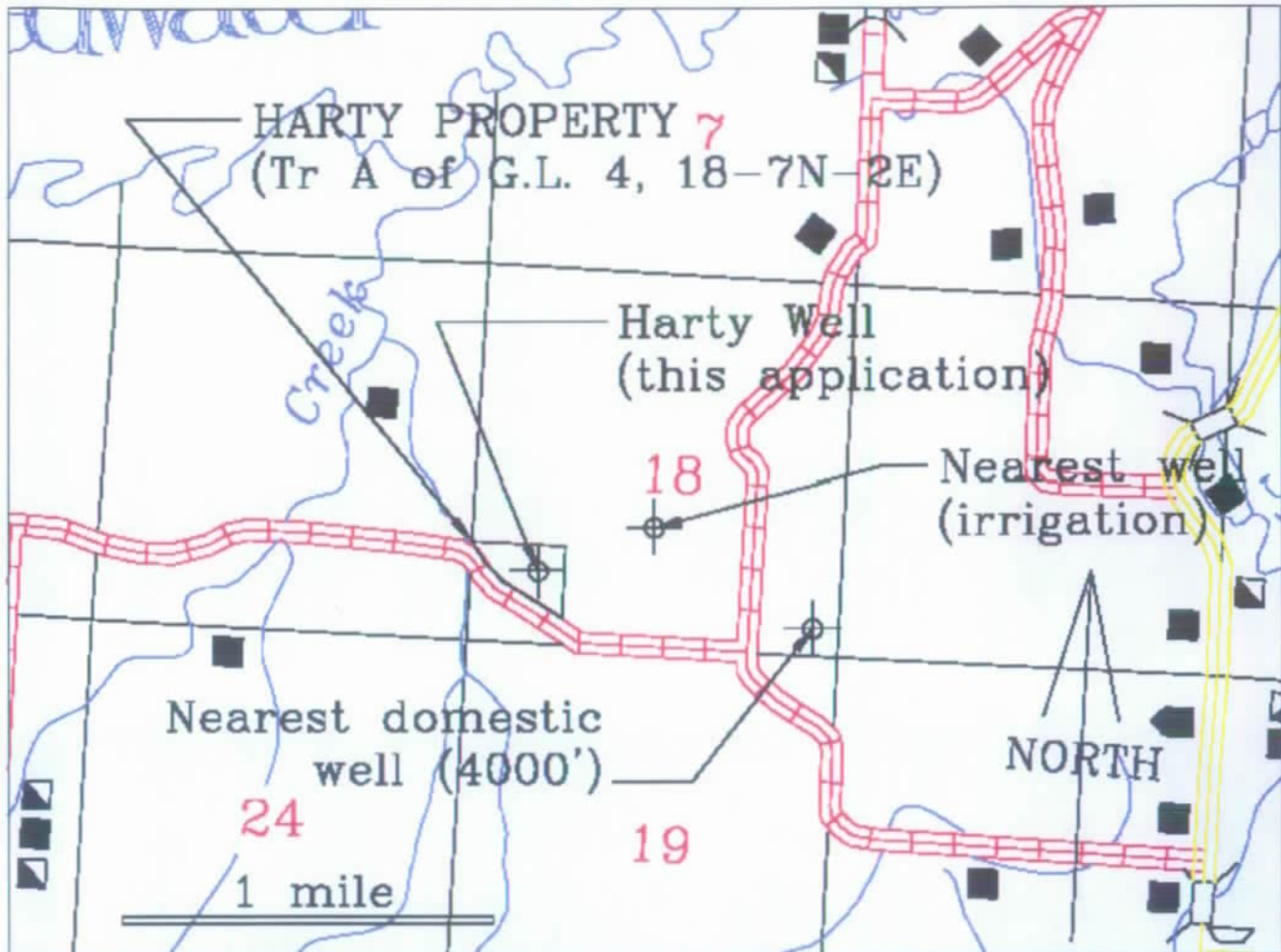
|                                                                                                                        |       |        |
|------------------------------------------------------------------------------------------------------------------------|-------|--------|
| Fee for Application for Permit No. <u>1203-1</u> to Appropriate Water, to construct and to put water to beneficial use | 225   | 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>1803-1</u>            | 50    | 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 | 275.00 |

No. 000000

By Darlan Ebele  
Chief Engineer gm

# MAP SHOWING LOCATION IN SW QTR, SEC 18, T7N, R2E, BHM, Lawrence County

NOTE: Map extracted from SD DOT Lawrence County Highway Map and shows portions of R1E and R2E of T7N. Redwater River is located to north, Chicken Creek on west edge of map. Location of ranch shown on Chicken Creek in Section 13 is incorrect (based on USGS Satellite Photography, 12 JUN 1995) and is actually approximately 1000 feet to the NNW of location shown on SDDOT map. Well is approximately 500 feet from Chicken Creek Road (County Road along southwest edge of Harty Property, and approximately 400 feet west of the east property line, or approximately 1400 ft E and 900 ft N of the SE Corner of Section 18.



MAP PREPARED BY NATHAN A. BARTON, PE, DEE

*Nathan A. Barton*

## END NOTES FOR APPLICATION

<sup>1</sup> Water may be used both for cooling (air conditioning through heat pump and heat exchanger) for summer use and for heating (heat pump and heat exchanger) for winter use. Existing temperature is 55F, suitable for both.

<sup>2</sup> Up to 22 acres will be irrigated: most will be native grass hayland; some trees (Shelterbelt and landscaping), and garden/cropland (2-4 acres estimated). All land proposed to be irrigated is located on the Harty property as described.

<sup>3</sup> Discharge flow may also be used for small household hydroturbine generator for power on property, to supplement net and solar system.

<sup>4</sup> The flowing well produces about 200 GPM at about 50 psi, but will not be used continuously. Peak demand is planned at 100 gpm, average when actually flowing from the well is estimated at 50 gpm; planned is to use water year-round, but peak only during irrigation season. When used for geothermal (heating/cooling) and/or power, water will be recycled for other use.

<sup>5</sup> For first 10 feet, hole diameter was 10 inches; for next 240 feet (to 250 feet below grade), hole diameter was 9 inches; for next 464 feet (to 714 feet below grade), hole diameter was 6 inches; for final 11 feet (to 725 feet below grade), hole diameter was 3 inches.

<sup>6</sup> There is a nearer irrigation well located in the SE ¼ of Section 18, about 2000 feet east-northeast.

<sup>7</sup> Single system will serve both residences and outbuildings.

1803-1

1803-1

## SOUTH DAKOTA WATER WELL COMPLETION REPORT

07-92

Location SW 1/4 SW 1/4 Sec 18 Twp 7N Rg 2E

County

North

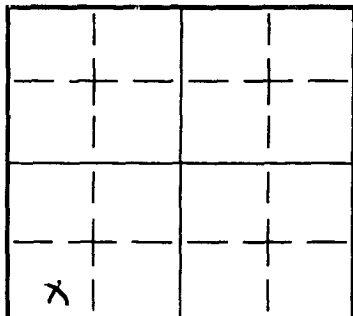
Lawrence

Please mark well location with an "X"

W

E

Well Completion Date

6-19-03

## LOCATION:

Distance from nearest potential pollution source (septic tank, abandoned well, feed lot, etc.)? 230 ft. from septic sys. (identify source).

## PROPOSED USE:

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

## METHOD OF DRILLING:

Mud rotaryCASING DATA: ☒ Steel ☐ Plastic ☐ Other

If other describe \_\_\_\_\_

| PIPEWEIGHT          | DIAMETER        | FROM        | TO            | HOLE DIAMETER   |
|---------------------|-----------------|-------------|---------------|-----------------|
| <u>22</u> LB/FT     | <u>6 5/8</u> IN | <u>0</u> FT | <u>250</u> FT | <u>8 3/4</u> IN |
| <u>11 1/2</u> LB/FT | <u>4 1/2</u> IN | <u>0</u> FT | <u>714</u> FT | <u>5 3/4</u> IN |
| _____ LB/FT         | _____ IN        | _____ FT    | _____ FT      | _____ IN        |

## GROUTING DATA

| Grout Type      | No. of Sacks | Grout Weight        | From        | To            |
|-----------------|--------------|---------------------|-------------|---------------|
| <u>portland</u> | <u>46</u>    | <u>15.6</u> lb./gal | <u>0</u> ft | <u>250</u> ft |
| <u>portland</u> | <u>70</u>    | <u>15.6</u> lb./gal | <u>0</u> ft | <u>714</u> ft |

Describe grouting procedure pumped thru casingSCREEN: ☐ 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: \_\_\_\_\_

\_\_\_\_\_ NO, Why Not? \_\_\_\_\_

Laboratory sent to for water quality analysis \_\_\_\_\_

Well Owner: Albert Harty

Business Name: \_\_\_\_\_

Address: 519 McQuillan  
Lead, S.D. 57754

## WELL LOG:

## DEPTH

| FORMATION                            | FROM       | TO         |
|--------------------------------------|------------|------------|
| <u>Sandy loam &amp; gravel</u>       | <u>0</u>   | <u>10</u>  |
| <u>red shale &amp; gyp</u>           | <u>10</u>  | <u>215</u> |
| <u>red shale</u>                     | <u>215</u> | <u>250</u> |
| <u>red shale, silt stone, gyp</u>    | <u>250</u> | <u>560</u> |
| <u>red siltstone &amp; gyp</u>       | <u>560</u> | <u>580</u> |
| <u>lime stone</u>                    | <u>580</u> | <u>607</u> |
| <u>purple shale</u>                  | <u>607</u> | <u>615</u> |
| <u>red shale with silt stone</u>     | <u>615</u> | <u>704</u> |
| <u>white &amp; yellow sand stone</u> | <u>713</u> | <u>735</u> |

STATIC WATER LEVEL \_\_\_\_\_ Feet

If flowing: closed in pressure 42 PSIGPM flow 300 through 4 inch pipeControlled by ☒ Valve ☐ Reducers ☐ Other \_\_\_\_\_

Reduced Flowrate \_\_\_\_\_ GPM

Can well be completely shut in? yes

## WELL TEST DATA:

☐ Pumped☐ Bailed☐ OtherDescribe: 4" pipe with 12"  
of water above pipe.

Pumping Level Below Land Surface

\_\_\_\_\_ ft. After \_\_\_\_\_ Hrs. pumped \_\_\_\_\_ GPM

\_\_\_\_\_ ft. After \_\_\_\_\_ Hrs. pumped \_\_\_\_\_ GPM

If pump installed, pump rate \_\_\_\_\_ GPM

## REMARKS

RECEIVED

JUL 25 2003

This well was drilled under license # 668 WATER RIGHTS PROGRAM

And this report is true and accurate.

Drilling firm: Cameron's Pump & Drilling

Signature of License Representative:

Donald M. Cameron

Signature of Well Owner or Equitable Property Holder:

Albert Harty

Date:

July 22, 2003

# WASTELINE INC.

P.O. Box 3471 Rapid City, SD 57709-3471 (605)348-0244  
PO Box 88 Cortez, CO 81321-0088 (970) 564-1380 FAX (425) 696-2025  
E-mail: [WASTELINE6@aol.com](mailto:WASTELINE6@aol.com) or [SDLiberty@aol.com](mailto:SDLiberty@aol.com)



21 July 2003

Mr. Eric Gronlund  
Water Rights Program  
South Dakota Department of Environment and Natural Resources  
Foss Building, 523 E. Capitol  
Pierre, SD 57501-3181

SUBJECT: APPLICATION FOR PERMIT TO APPROPRIATE WATER, ALBERT HARTY

Dear Mr. Gronlund:

Thank you very much for your prompt help on this matter, and for your comments and corrections.

I have signed the map on the third page of the package, and have also revised the endnotes, to provide the information that is needed:

- Peak diversion flow is planned to be limited to 100 gallons/minute. Uncontrolled flow from the well would be 200 gpm or more; average flow will be 50 gpm.
- All irrigation will be done on the Harty property, north of Chicken Creek Road in the SW ¼ of SW ¼ of Section 18 (with the legal description as on the form).

I am sending this revised information as a PDF file, with hard copy to follow.

Again, thank you very much for the assistance, and please call with any questions (Cell Phone 605-390-7255).

Sincerely,

NATHAN A. BARTON, PE, DEE  
WASTELINE, INC.

Water Rights Program - DENR  
Conversation File Documentation

NAME OF PERSON OR FILE: Albert and Ryett Harty

ADDRESS: COUNTY: Meade

DATE: July 21, 2003 TELEPHONE:

RE: Call to Nathan Barton (605 390-7255) regarding Harty application

COMMENTS:

I contacted Mr. Barton about the application he helped the Harty's complete. Specifically I brought up the following issues:

The map needs to be signed. Mr. Barton will submit it with when he sends the hardcopy in the mail.

I asked what the peak instantaneous diversion rate will be. Mr. Barton responded that the diversion rate will not exceed 100 gpm. The well is valved and flow will not be allowed to exceed 100 gpm.

I asked that he provide in his cover letter the location and breakdown of the acres to be irrigated. He said all the acres are located in Tract A of Govt. Lot 4 of Section 18, T7N, R2E. He will include this in his cover letter.

I said I will contact Mr. Harty with the fee he will need to submit. I then called and got ahold of Mrs. Harty and she will be submitting the application filing & licensing fee of \$275.

NAME: Eric H. Lund

WATER PERMIT APPLICATION NO. 1803-1  
ALBERT AND RYETT HARTY  
AUGUST 28, 2003

Water Permit Application No.1803-1 proposes to appropriate 0.222 cubic feet of water per second (100 gallons per minute) from one existing well (Minnelusa aquifer) 725 feet deep located in the SW¼ SW¼ (Tract A of Government Lot 4) Sec.18, T7N-R2E, Lawrence County. Water from the well will be used to irrigate 22 acres located in the SW¼ SW¼ Sec. 18, T7N-R2E; for commercial, domestic, geothermal heating and cooling use, and for a hydro turbine power generator.

**AQUIFER:** Minnelusa aquifer (MNLS)

**GENERAL:**

The Minnelusa Formation consists of alternating beds of sandstone and dolomitic limestone with lesser amounts of shale and chert, approximately 500 feet thick in this area (Carter and Redden, 1999a; Carter and Redden, 1999b). The Minnelusa Formation outcrops about two and one-half miles southwest of this site (Strobel and others, 1999) and the SD Water Well Completion Report for the existing well to be used for this project reports the top of the formation to be 713 feet below grade at this well. The report indicates the well is capable of flowing 300 gallons per minute and has a closed in pressure of 42 pounds per square inch. The porous portions of the formation form the Minnelusa aquifer. Well sorted sand lenses have porosity's approaching 25%, but generally the sands have porosity's of 10%. The average porosity of the Minnelusa is estimated to be 10% and the effective porosity is assumed to be 5% (Rahn, 1979). The Minnelusa Formation underlies virtually all of western South Dakota and the Minnelusa aquifer contains over 755 million acre-feet of recoverable water in storage (Allen and others, 1984). The Minnelusa aquifer underlies approximately 199,680 acres of Lawrence County and contains an estimated 5,591,040 acre-feet of recoverable water in storage in the county (Allen and others, 1984). Ground water movement in the aquifer is probably toward the north and east (Strobel, and others, 2000). There is no aquifer-test data available for the Minnelusa aquifer at this site; therefore, the aquifer transmissivity and storage coefficient values are unknown. Estimates from regional studies of the aquifer indicate the aquifer transmissivity may range from .86 to 8,600 ft<sup>2</sup>/d, and the storage coefficient ranges from 0.003 to 5x10<sup>-9</sup> (Driscoll, and others, 2002). The water quality of the aquifer is generally good near the outcrop but deteriorates considerably with distance from the recharge area.

**WATER AVAILABILITY:**

The availability of unappropriated water from an aquifer can be evaluated by considering SDCL 46-6-3.1. This statute requires that an application to appropriate groundwater can not 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 average estimated annual recharge.

There are reports of declines of the potentiometric surface of the Minnelusa aquifer in this area since the first wells were completed. Although Cox, (1962), alluded to poor well construction as one reason some wells were experiencing decreased flow and/or pressure, he did report that "a serious overdraft" [withdrawals exceed recharge] of the Minnelusa aquifer exists in the Spearfish-Belle Fourche area.

Recharge to the Minnelusa aquifer is primarily from infiltration of precipitation on the outcrop and stream flow losses. Average annual recharge from 1931-1998 is estimated to be approximately 112,000 acre-feet per year (Carter and others, 2001a).

There are a total of 188<sup>1</sup> appropriations from the Minnelusa aquifer in South Dakota, including two Future Use Reservations (Water Rights, 2003c). The aquifer is used primarily for domestic, commercial, municipal, suburban housing and irrigation uses. There are 53 permits/rights appropriating water from the Minnelusa aquifer in Lawrence County (Water Rights, 2003c). In addition to appropriative rights, there are a number of domestic wells completed into the Minnelusa aquifer on file with the Water Rights Program (Water Rights, 2003a). The Future Use Permits (No. 902-1 and 969-1) reserve 1,460 acre-feet annually. Water permits and rights represent appropriations up to 10,802.7 acre-feet annually for irrigation use (Water Rights, 2002) and a combined diversion rate of 29.88<sup>1</sup> cfs for non-irrigation uses. Maximum well withdrawals from the Minnelusa aquifer, assuming (1) that permits/rights with an annual withdrawal limitation (ac-ft/yr.) will use the maximum allowable; and (2) permits/rights that are limited by a diversion rate only, will use 60% of the maximum allowable (considered reasonable for water distribution systems); would be approximately 25,000 acre-feet per year. The actual amount of water used from the aquifer is considerably less than this estimate. Withdrawals from wells (domestic and appropriative) completed into the Minnelusa aquifer were estimated to be 8,108 acre-feet annually from 1987-1996 (Carter and others, 2001b).

Comparison of annual recharge estimates and estimated annual well withdrawals show that well withdrawals from the Minnelusa are only a fraction of estimated average annual recharge. Therefore, based on a simple water budget, it is clear that unappropriated water is available for this appropriation.

The best information available to evaluate development as it relates to recharge, is historical records and data from observation wells. The difference between withdrawal from an aquifer and recharge is reflected by the water level of the aquifer. If the water level of an aquifer continues to decline, it may suggest that withdrawals exceed recharge. The Water Rights Program monitors 23 observation wells completed into the Minnelusa aquifer in the Black Hills area (Water Rights, 2003b). Water Rights' Observation Well LA-62A is located approximately three and one-half miles northeast of the well to be used to supply this appropriation, Observation Well LA-86A is located approximately three and one-half miles south-southeast of this site, and Observation Well LA-87B is located approximately five miles southwest of this well. There is some question about whether the data from 1987-1991 for Observation Well LA-87B is representative of natural conditions of the aquifer. However, the hydrographs for these wells (figures 1, 2 & 3), are fairly typical for the

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<sup>1</sup> currently one application is pending

Minnelusa aquifer. That is, the water levels reach their peak in the early summer each year and gradually decline until spring. The majority of the recharge to the system occurs between March and July.

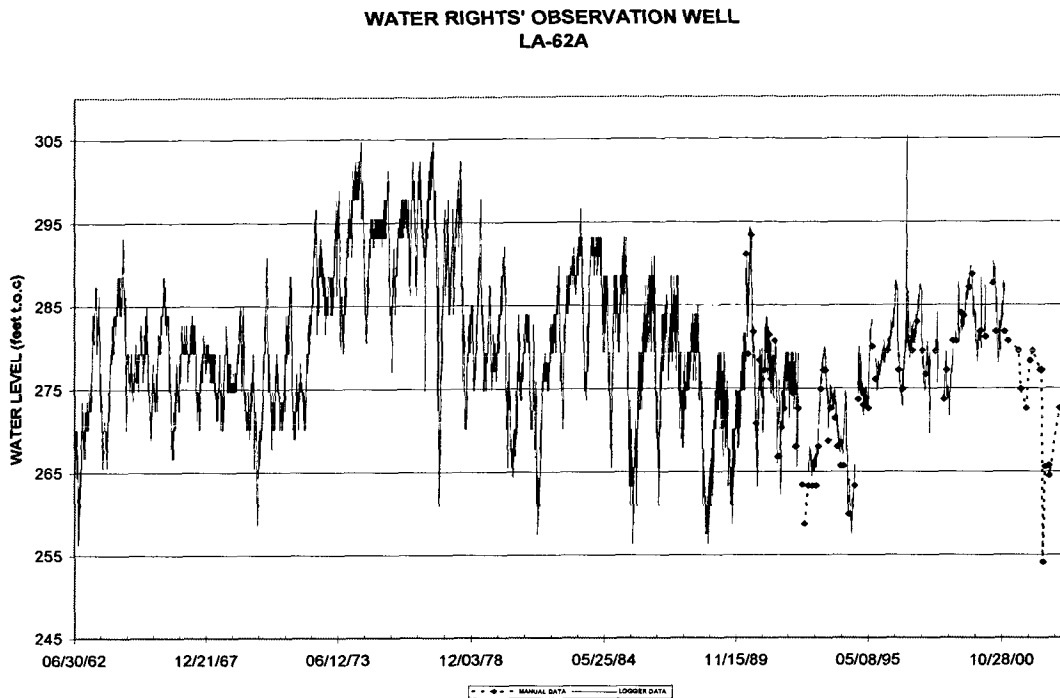


Figure 1. Hydrograph of Water Rights' Minnelusa aquifer Observation Well approximately three and one-half miles northeast of 1803-1.

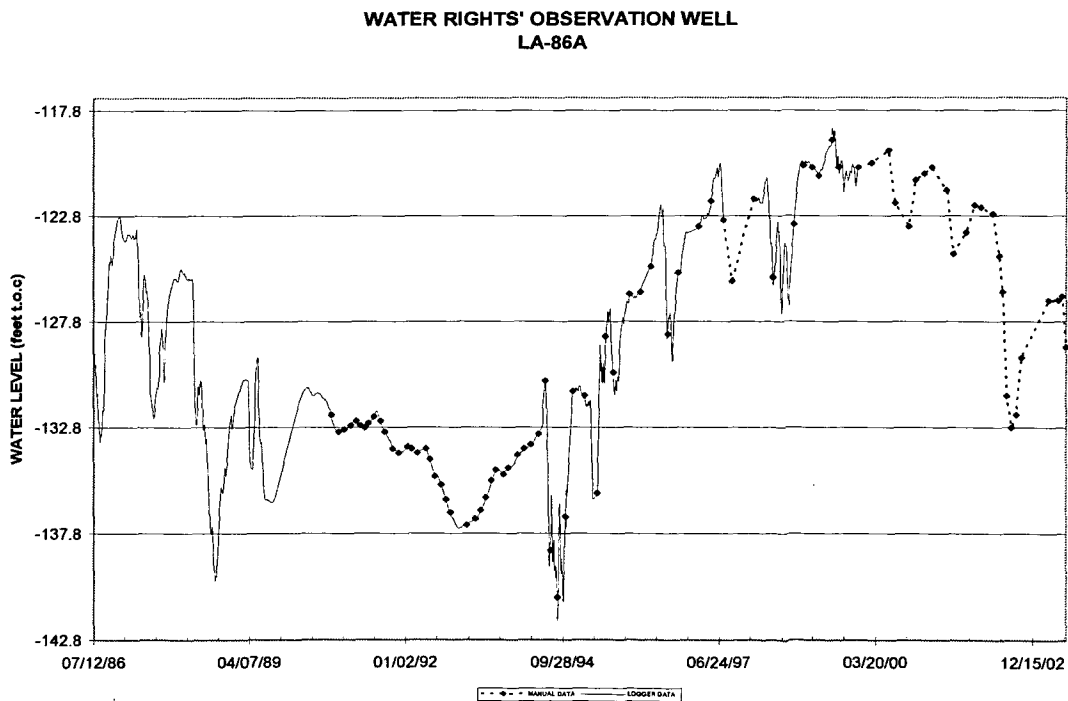


Figure 2. Hydrograph of Water Rights' Minnelusa aquifer Observation Well approximately three and one-half miles south-southeast of 1803-1.

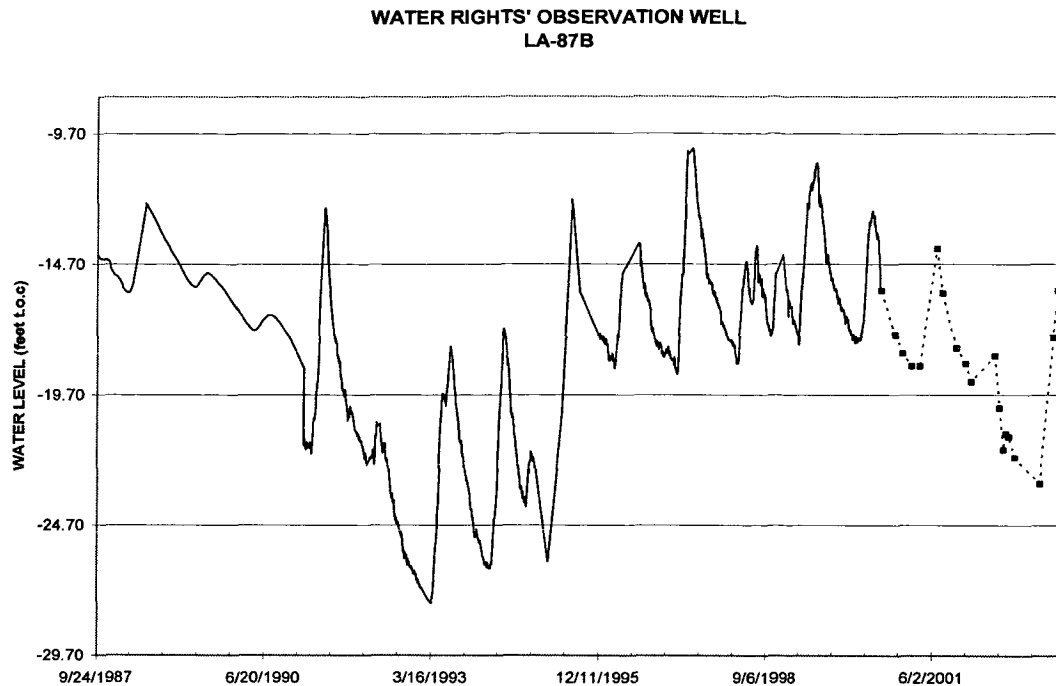


Figure 3. Hydrograph of Water Rights' Minnelusa aquifer Observation Well approximately five miles southwest of 1803-1.

The hydrographs also shows the magnitude of fluctuation in the water levels in the area ( $\cong 51'$  in LA-62A,  $\cong 23'$  in LA-86A, and  $\cong 17'$  in LA-96C) with the lowest water levels of record occurring in the early 1990's and the highest occurring in the late 1990's or early 2000's.

It is obvious from the hydrographs of Minnelusa observation wells, that withdrawals have not exceeded recharge for the period of record. The observation well data suggests that the aquifer is capable of sustaining additional withdrawals.

#### **AFFECTS ON EXISTING RIGHTS:**

There are ten Water Rights/ Permits appropriating ground water within approximately two miles of this site, they are shown in table 1.

| PERMIT NO | NAME                       | AQUIFER | USE | CFS  | ACRES  |
|-----------|----------------------------|---------|-----|------|--------|
| 1254-1A   | CARL L/MELVIN ANDERSON     | MNLS    | IRR | 1.34 | 156.80 |
| 372-1     | RICHARD D SLEEP            | MNLS    | IRR | 1.78 | 174.00 |
| 439-1     | BILLY J EVANS              | MNKT    | IRR | 2.22 | 302.05 |
| 514-1     | ROLAND BRYAN               | MNLS    | IRR | 2.72 | 191.00 |
| 566-1     | ERIC/MICHELLE JENNINGS     | MNLS    | IRR | 1.10 | 121.00 |
| 647-1     | MC GUIGAN DAIRY INC        | MNKT    | IRR | 0.40 | 94.00  |
| 654-1     | RANDALL CHRISTENSEN        | MNKT    | IRR | 0.70 | 76.00  |
| 660-1     | JOHN/BRENDA SWANSON        | MNLS    | IRR | 1.77 | 263.00 |
| 891-1     | BILLY J EVANS              | MNLS    | IRR | 1.77 | 126.90 |
| 1776-1    | ROBERT A<br>CHRISTOFFERSON | MNLS    | IRR | 0.67 | 141.20 |

Table 1. Groundwater appropriations within two miles of 1803-1

In addition to the wells supplying Water Permits/Rights, there are a number of domestic wells completed into the Minnelusa aquifer on file with the Water Rights Program (Water Rights, 2003a).

Wells that are not supplied by the Minnelusa aquifer should not be affected by withdrawals from this well since the Opeche Shale serves as a confining layer above the Minnelusa, and the thick carbonate sequence in the lower Minnelusa isolates the Minnelusa aquifer from lower aquifers.

Although the impact of approving this application cannot be quantified precisely, it is still possible to address whether this appropriation can be made without adversely affecting water rights, including domestic wells. Water Management Board rules 74:02:04 and 74:02:05, which were promulgated pursuant to SDCL 46-6-6.1, provide protection to prior appropriators only to the degree necessary to maintain an adequate depth of water in wells that have the ability to produce water independent of artesian pressure. Simply put, the pump placement, or artesian flow, in a prior appropriator's well is not necessarily protected. In fact, in past action, the Water Management Board it has concluded that if increased cost or decreased production is considered an adverse impact, it could be in conflict with SDCL 46-1-4, which requires South Dakota's water resources to be put to beneficial use to the fullest extent of which they are capable.

Although the Minnelusa is under artesian conditions in this area and pumping may cause a decline in the potentiometric surface over a fairly widespread area. Considering the Board's past actions, any well interference this proposed use would have on area water rights/permits and domestic wells is not expected to be significant or adverse. It may be necessary to lower pumps in some wells to maintain water use at the present level.

Any interference this proposed use would have on these or other water rights/permits is not expected to be adverse due to the distance between wells, and the relatively low diversion rate requested by this application.

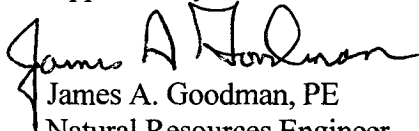
## CONCLUSIONS:

1. The Minnelusa Aquifer is a viable aquifer in this area, and water is available for this appropriation.
2. The Minnelusa is under artesian conditions and drawdown due to this diversion can be expected. This drawdown is not expected to adversely affect adequate wells in the area.
3. The Completion Report submitted with this application indicates the existing well has been constructed in compliance with the SD Well Construction Standards.
4. The well to be used to supply this appropriation is a free flowing well. Some of the uses of water proposed by this application (e.g. geothermal heating and cooling; and the operation a turbine power generator) could require the continuous discharge of the well. It could be debated whether the continuous discharge of 100 gallons per minute is a beneficial use of water or in the public interest.



Ken Buhler  
Natural Resources Engineer

Approved by



James A. Goodman, PE  
Natural Resources Engineer

## REFERENCES:

- Allen, J.C., Iles, D.L., and Petres, A.K., 1984, Analysis of Groundwater and Streamflow Data Western Dakotas Region of South Dakota, Task 3 and 4: Groundwater Resource Inventory: South Dakota Department of Water and Natural Resources,
- Carter, J.M., and Redden J.A., 1999a, Altitude of the Top of the Minnelusa Formation in the Black Hills Area, South Dakota: U.S. Geological Survey Hydrologic Investigations Atlas HA-744-C, 2 sheets, scale 1:100,000
- Carter, J.M., and Redden J.A., 1999b, Altitude of the Top of the Madison Limestone in the Black Hills Area, South Dakota: U.S. Geological Survey: Hydrologic Investigations Atlas HA-744-D, 2 sheets, scale 1:100,000

- Carter, J.M., Driscoll, D.G., and Hamade, G.R., 2001a, Estimated Recharge to the Madison and Minnelusa Aquifers in the Black Hills Area, South Dakota and Wyoming, Water Years, 1931-98: U.S. Geological Survey Water Resources Investigations Report 00-4278, 66 p.
- Carter, J.M., Driscoll, D.G., Hamade, G.R., and Jarrell, G.J., 2001b, Hydrologic Budgets for the Madison and Minnelusa Aquifers, Black Hills of South Dakota and Wyoming, Water Years 1987-96: U.S. Geological Survey Water-Resources Investigations Report 01-4119, 53 p.
- Cox, E.J., 1962, Artesian Water, Minnelusa and Pahasapa Formations, Spearfish-Belle Fourche Area: South Dakota Geological Survey, Special Report 19, 17 p.
- Driscoll, D.G., Carter, J.M., Williamson, J.E., and Putnam, L.D., 2002, Hydrology of the Black Hills Area, South Dakota: U.S. Geological Survey Water Resources Investigations Report 02-4094, 150 p.
- Rahn, P.H., 1979, Ground Water Resources of Western South Dakota, US Army Corps of Engineers, Draft Report-Final
- Strobel, M.L., Jarrell, G.J., Sawyer, J.F., Schleicher, J.R., and Fahrenbach, M.D., 1999, Distribution of Hydrogeologic Units in the Black Hills Area, South Dakota: U.S. Geological Survey Hydrologic Investigations Atlas HA-744-C, 3 sheets, scale 1:100,000
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- Water Rights Program, 2002, "Irrigation Use Summary": DENR-Water Rights Program
- Water Rights Program, 2003a, "Domestic Well Log Files": DENR-Water Rights Program,
- Water Rights Program, 2003b, "Observation Well Files": DENR-Water Rights Program
- Water Rights Program, 2003c, "Water Permit Files": DENR-Water Rights Program,



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**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT  
APPLICATION NO. 1803-1, Albert and Ryett Harty**

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. 1803-1, Albert and Ryett Harty, 519 McQuillan, Lead SD 57754.

The Chief Engineer is recommending APPROVAL of Application No. 1803-1-3 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 well approved under this Permit shall be valved and the flow reduced to the amount needed or to a minimum when not being used. If this well is abandoned or the Permit cancelled, the well must be plugged in accordance with Water Management Board Rules, Chapter 74:02:04.

See report on application for additional information.

Garland Erbele, Chief Engineer  
October 9, 2003

NOTE: Water use under this permit, if approved, is limited to amount of water needed and put to beneficial use. The approval of this permit does not authorize the use of the water for the sole purpose of augmenting flow in the downstream drainage. The free flow of water from this well without a beneficial use being made constitutes a waste of water and is prohibited.

9-19-03

Dear Mr. Gromlund,

On July 21, 03 I sent  
you a check for \$275<sup>00</sup>  
for the water permit  
on our property at  
Spearfish in the name  
of Albert + Ryett Harty.  
This check cleared our  
bank on 8/5/03.

Has this water permit  
been approved. A response  
would be appreciated.

Thank You  
Albert + Ryett Harty

Nathan Barton filed the water rights application.



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September 24, 2003

Albert and Ryett Harty  
519 McQuillan  
Lead SD 57754

Dear Mr. and Mrs. Harty:

I am writing in response to your inquiry on the status of the pending water right permit application. A staff report has been completed on the application and has been forwarded to the Chief Engineer for his recommendation. Once this recommendation is made, we will proceed with public notice of the application.

A water permit can only be issued if 1) water is available for the appropriation; 2) the use is not likely to adversely affect existing users; 3) it is a beneficial use; and 4) it is in the public interest. Since there could be a "public interest issue" centering around the potential continuous discharge from the flowing well for the geothermal heating/cooling and hydroturbine generator aspects of this application, I expect the application will be scheduled to be considered by the Water Management Board.

I understand you wanted this application processed quickly. However, we plan to schedule this application for consideration before the Water Management Board. The next Board meeting is December 3 - 4, 2003 in Pierre. Once the Chief Engineer makes his recommendation, a copy of the report, recommendation and public notice will be sent to you with instructions for you to contact the newspaper to authorize publication of the notice.

If you have any questions on the water right permitting process, please do not hesitate to contact me.

Sincerely,

Eric Gronlund  
Water Rights Program, DENR  
(605) 773-3352



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

October 9, 2003

Albert & Ryett Harty  
519 McQuillan  
Lead SD 57754

Dear Mr. & Mrs. Harty:

Water Permit Application No. 1803-1 for irrigation 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 Black Hills Pioneer printed at Spearfish, SD (Ph # 605-642-2761). 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 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.

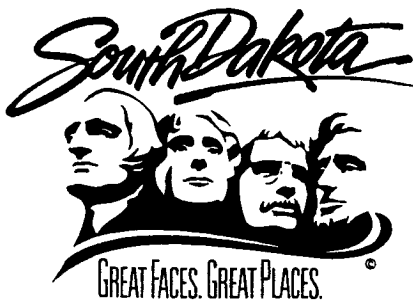
Be sure to contact the above newspaper to authorize publication of your Notice of Hearing and to arrange for payment. Early contact with the paper can eliminate delays. Upon receiving authorization, the publisher has been instructed to publish your notice once each week for two consecutive weeks with the last publication to occur twenty days before the board meeting. The newspaper has 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.



DEPARTMENT of ENVIRONMENT  
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October 9, 2003

Black Hills Pioneer  
PO Box 7  
Spearfish SD 57783-0007

ATTENTION: Legal Public Notice

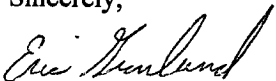
Enclosed is a Notice of Hearing on Application No. 1803-1 to Appropriate Water to be published twice. Please publish the first notice on October 21, 2003 with the second publication 7 days later.

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 Albert & Ryett Harty, 519 McQuillan, Lead SD (Ph # 605-584-2773).

**Please send the Water Rights Program the first publication immediately.** The publication is checked for accuracy so any corrections can be made in the second publication. You may use the form below or fax a copy of the first publication. Any fax should be sent to the attention of Karen Schlaak at (605) 773-4068. Publication errors can invalidate the public notice.

After the second publication, **please send us an affidavit or use the enclosed Proof of Publication form.** The applicant pays the cost of publication, but the Water Rights Program records require an affidavit or Proof of Publication. Delays in receiving the affidavit can be costly to the applicant.

Sincerely,

  
Eric Gronlund  
Natural Resources Engineer  
605 773-3352

enclosures

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

No. 1803-1

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

Date \_\_\_\_\_

We are in receipt of your letter of October 9, 2003 enclosing Notice of Hearing to Appropriate Water by Application No. 1803-1 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 October 21, 2003 with the second publication 7 days later. The applicant is responsible for payment.

---

### NOTICE OF HEARING on Application No. 1803-1 to Appropriate Water

Notice is given that Albert and Ryett Harty, 519 McQuillan, Lead SD 57754 have filed an application for a water permit to appropriate 0.222 cubic feet of water per second from one well (Minnelusa Formation) 725 feet deep located in the SW ¼ SW ¼ (Tract A of Government Lot 4) Section 18 to irrigate 22 acres located in the SW ¼ SW ¼ Section 18; all in T7N-R2E. In addition to irrigation, water will also be utilized for commercial, geothermal heat, domestic purposes and for a hydro turbine power generator.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1803-1 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.

Any person interested in opposing or supporting this application must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by November 21, 2003. 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.

The Water Management Board will consider this application at 10:00 AM, December 3, 2003 in the Matthew Training Center, Foss Building, 523 E Capital Ave., Pierre SD. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing. The December 3, 2003 hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any interested person opposing the application. The request for an automatic delay must be filed by November 21, 2003.

Any hearing may be an adversarial proceeding. Any person filing a petition and/or the applicant have the right to be represented by a lawyer and may present evidence or cross-examine witnesses according to SDCL 1-26. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. Contact Eric Gronlund by November 21, 2003, at the above Water Rights Program address to request copies of information pertaining to this application, to assure access to the hearing by the handicapped or to obtain an interpreter for the hearing impaired.

This application is made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; 46-6-3, 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14, 46-6-26; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15

# Affidavit of Publication

STATE OF SOUTH DAKOTA )  
COUNTY OF LAWRENCE

Stewart Huntington of said County and State being first duly sworn on his oath says: That the BLACK HILLS PIONEER is a legal daily newspaper of general circulation, printed and published in the City of Spearfish, in said County and State by Stewart Huntington, and has been such a newspaper during the times hereinafter mentioned; and that said newspaper has a bonafide circulation of at least 200 copies weekly, and has been published within said County in the English language for at least one year prior to the first publication of the notice herein mentioned, and is printed in whole or in part in an office maintained at the place of publication; and That I, Stewart Huntington, the undersigned, am the Publisher of said newspaper and have personal knowledge of all the facts stated in this affidavit; and that the advertisement headed:

Notice of Hearing on  
Application No. 1803-1

a printed copy of which is hereto attached, was printed and published in said newspaper for 2 successive and consecutive weeks, the first publication being made on the 22<sup>nd</sup> day of Oct., 2003, and the last publication on the 28<sup>th</sup> day of Oct., 2003, that the full amount of fees charged for publishing same, to-wit: The sum of \$ 55.31, insures solely to the benefit of the publisher of the BLACK HILLS PIONEER, that no agreement or understanding for a division thereof has been made with any person and that no part thereof has been agreed to be paid to any other person whomsoever.

Stewart H. H.

Subscribed and sworn to before me this 28<sup>th</sup> day of Oct., 2003

Adith Johnson

Notary Public, Lawrence County, South Dakota

My commission expires: 10-24-2004

## NOTICE OF HEARING on Application No. 1803-1 to Appropriate Water

Notice is given that Albert and Ryett Harty, 519 McQuillan, Lead SD 57754 have filed an application for a water permit to appropriate 0.222 cubic feet of water per second from one well (Minnelusa Formation) 725 feet deep located in the SW 1/4 SW 1/4 (Tract A of Government Lot 4) Section 18 to irrigate 22 acres located in the SW 1/4 SW 1/4 Section 18; all in T7N-R2E. In addition to irrigation, water will also be utilized for commercial, geothermal heat, domestic purposes and for a hydro turbine power generator.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1803-1 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.

Any person interested in opposing or supporting this application must file a written petition with BOTH the applicant and Chief Engineer. The applicant must also file a petition if opposed to the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by November 21, 2003. 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.

The Water Management Board will consider this application at 10:00 AM, December 3, 2003 in the Marmot Training Center, Foss Building, 523 E Capitol Ave., Pierre SD. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve

with qualifications, 3) defer, or 4) deny this application based on the facts presented at the public hearing. The December 3, 2003 hearing date will be automatically delayed for at least 20 days upon written request to the Chief Engineer from the applicant or any interested person opposing the application. The request for an automatic delay must be filed by November 21, 2003.

Any hearing may be an adversarial proceeding. Any person filing a petition and/or the applicant have the right to be represented by a lawyer and may present evidence or cross-examine witnesses according to SDCL 1-26. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. Contact Eric Gronlund by November 21, 2003, at the above Water Rights Program address to request copies of information pertaining to this application, to assure access to the hearing by the handicapped or to obtain an interpreter for the hearing impaired.

This application is made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-16; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15, 46-2A-20, 46-2A-21; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; 46-6-3, 46-6-3.1, 46-6-5.1, 46-6-10, 46-6-13, 46-6-14, 46-6-26; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15.

#683

Oct. 22, 28

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DEC 29 2003

Albert & Ryett Harty  
519 McQuillan  
Lead SD 57754

Dear Mr. & Ms. Harty:

Enclosed is Water Permit No. 1803-1 authorizing construction of your water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

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

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

Sincerely,

Garland Erbele, Chief Engineer  
Water Rights Program  
(605) 773-3352

enclosures



1803-1  
DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES

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January 18, 2013

NOTICE

TO: ALBERT & RYETT HARTY, 519 MCQUILLAN RD, LEAD, SD 57754

FROM: Ron Duvall, Natural Resources Engineer  
for Garland Erbele, Chief Engineer  
Water Rights Program

A handwritten signature in black ink, appearing to read 'Ron Duvall'.

SUBJECT: Reporting Requirement for 2012 Irrigation Questionnaire(s)

Our records indicate that the 2012 Irrigation Questionnaire has not been submitted for Permit No(s) 1803-1 as required by administrative rule 74:02:01:14.02. The request for the Questionnaire was dated October 12, 2012. The Water Management Board has directed that owners of water permits who have not submitted the 2012 Irrigation Questionnaire be given notice of hearing to determine if any Board action is to be taken concerning this issue.

The hearing will be held at **8:30 am, March 7, 2013**, in the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol Avenue, Pierre, SD and will be conducted pursuant to SDCL 46-1-12, 46-1-14, 46-2-9, 46-2-11 and 46-2-17. These are contested case hearings pursuant to Chapter 1-26. Following the hearing, the Water Management Board can:

1. Amend Permit No(s) 1803-1 to require the Irrigation Water Use Questionnaire to be submitted each year;
2. Postpone any action; or
3. Take no action.

The hearing is an adversary proceeding. The permit owner has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

If the questionnaire(s) is (are) received in this office on/or before **March 4, 2013**, you will no longer be in violation of your permit and your name will be removed from the Board agenda. Enclosed are additional questionnaire(s) for your use. If you have questions or need assistance, please contact Genny McMath at (605) 773-3352 or email at [genny.mcmath@state.sd.us](mailto:genny.mcmath@state.sd.us). If you prefer, you can complete the questionnaire online at the following link: <http://denr.sd.gov/iq.aspx>

**Note:** Please contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) to assure access to the meeting room for the handicapped or to obtain an interpreter for the hearing impaired.



**DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES**

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January 25, 2013

1803-1

Albert & Ryett Harty  
519 McQuillan Rd  
Lead SD 57754

Dear Mr. & Mrs. Harty:

I am writing to acknowledge receipt of your 2012 irrigation questionnaire.

You may disregard the January 18, 2013, "Notice" concerning reporting requirements for Water Permit No. 1803-1. The information was received in our office prior to the Water Management Board meeting and your name has been deleted from the agenda.

If you have any questions, please contact me.

Sincerely,

Genny McMath  
Water Rights Program  
(605) 773-3352  
email: [genny.mcmath@state.sd.us](mailto:genny.mcmath@state.sd.us)

**Water Permit No. 1803-1**  
**Belle Fourche 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 made a thorough examination of the water use system constructed by **Albert and Ryett Harty** of **519 McQuillan, Lead, SD 57754** holder of Permit No. **1803-1**, bearing the priority of **July 18, 2003** authorizing the diversion of **0.22** cu. ft. per second of the waters of the **Minnelusa Formation** for **Irrigation use** purposes, in **Lawrence** County.

**A. Works used to divert the water:**

**Well Information:**

- 1) Well Drilling Firm: **Cameron's Pump and Drilling**
- 2) No. of Wells **1**
- 3) Depth(s) **735** feet
- 4) Well log is available **Y**

**Casing:**

- 1) Diameter **6 5/8, and 4 1/2** inches
- 2) Length **714** feet
- 3) Type **Steel**

**Screen:**

- 1) Type **None**
- 2) Static water level **Flowing**

**Chemigation Equipment:**

- 1) Does chemigate **N**

**B. Compliance with Permit Requirements:**

- 1) Permit qualifications being abided by **Y**
- 2) Irrigation Questionnaires checked to determine if permit owner started irrigation by the end of construction period **Y**
- 3) Exceptions to compliance are: **None**

The system is in Good condition with the point(s) of diversion located as follows:

Approximately 905 feet north and 1,020 feet east of the SW corner of Section 18-T07N-R02E

(N 44.56361, W -103.92690) (SW ¼ SW ¼)

The works are capable of diverting and conveying to the place of use 0.22 cu. ft. per second of water which is to be used for Irrigation use. Water has been put to beneficial use to the maximum extent as follows:

**SW ¼ SW ¼ Section 18-T07N-R02E – 10 acres**

comprising a total of 10 acres of land and the license should be issued for 0.22 cfs.

All structures, wells and lands on map Y

Comments or other permit(s) associated with the project:

This permit authorizes 0.22 cfs of water from one well completed into the Minnelusa Fm. in Lawrence Co. for irrigation of 22 acres, geothermal heating and cooling, hydro-electric power, commercial use for their home based business as-well-as domestic use. This well is a flowing well which is controlled (valved) to allow a peak flow rate of 0.22 cfs (100 gpm).

I am recommending licensing of this permit for the 0.22 cfs as applied for; however, the irrigation portion of this permit should only be authorized to irrigate the 10 acres actually being irrigated and 0.14 cfs as allowed by SDCL 46-5-6 which states in part that:

*“In the issuance of permits to appropriate water for irrigation or in the adjudication of rights to the use of water for such purpose, the amount allowed may not be in excess of the rate of one cubic foot of water per second for each seventy acres, or the equivalent thereof, and the volume of water diverted for use may not exceed two acre-feet per acre, delivered on the land for a specified time each year”.*



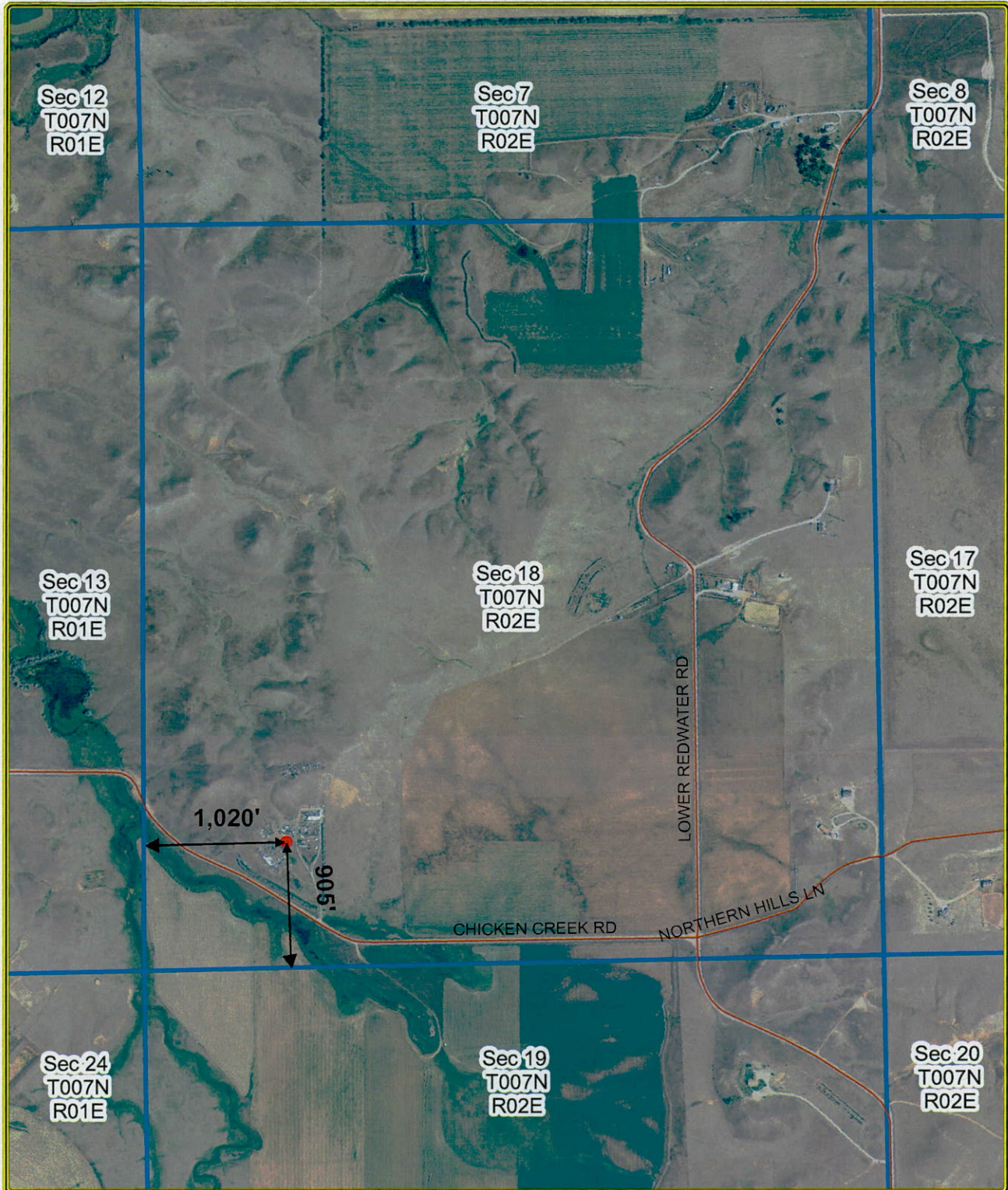
Mike DeFea

Natural Resources Engineer II  
DENR, Water Rights Program

Date report completed: **April 23, 2014**

# Water Permit No. 1803-1

Albert and Ryett Harty



0 850 1,700 3,400 Feet

*Mike DeFea*

Mike DeFea  
Natural Resources Engineer  
DENR, Water Rights Program  
April 23, 2014



*South Dakota*  
Department of Environment  
& Natural Resources  
Protecting SD's Tomorrow... Today



DEPARTMENT OF ENVIRONMENT  
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MAY 16 2014

1803-1

Albert & Ryett Harty  
519 McQuillan  
Lead SD 57754

Dear Mr. & Mrs. Harty:

Enclosed is Water License No. 1803-1. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

For your information SDCL 46-6-27 requires that if the owner of an existing well, such as the well authorized by Water Right No. 1803-1, 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. 1803-1

(1) Albert and Ryett Harty, 519 McQuillan, Lead SD 57754 made Application No. 1803-1, July 18, 2003 for a water permit to divert 0.222 cubic feet of water per second from ground water (one well – Minnelusa Formation), Lawrence County, South Dakota for irrigation, commercial, geothermal heat and domestic purposes. Permit No. 1803-1, with a priority date of July 18, 2003 was approved December 3, 2003 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before December 3, 2008 and for the application to beneficial use of said water on or before December 3, 2012.

(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 0.222 cubic feet of water per second for beneficial use.

The location of the diversion point is 905 feet north and 1,020 feet east of the SW corner of Section 18, T7N, R2E (SW ¼ SW ¼).

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

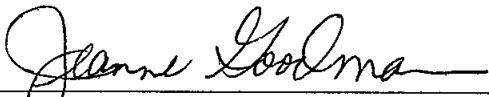
- Section 18, T7N, R2E SW ¼ SW ¼ 10 acres

In addition to irrigation of the above 10 acres, the permit holder utilizes water for geothermal heating and cooling, hydroelectric power, commercial use and domestic purposes.

(4) Pursuant to South Dakota Water Law 46-5-30.1 Albert and Ryett Harty, 519 McQuillan, Lead SD 57754 the holder and/or owner of Water Right No. 1803-1 is issued a license to appropriate water, the right to use 0.222 cubic feet of water per second from ground water (one well – Minnelusa Formation) with a priority date of July 18, 2003 from the location specified in (2) of this license for irrigation, geothermal heating and cooling, hydroelectric power, commercial use and domestic purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 1803-1 and subject to the following qualifications:

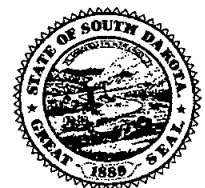
- The well approved under this Permit shall be valved and the flow reduced to the amount needed or to a minimum when not being used. If this well is abandoned or the Permit cancelled, the well must be plugged in accordance with Water Management Board Rules, Chapter 74:02:04.
- The well approved under 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.



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

MAY 16 2014

date





1803-1  
DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES

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[www.state.sd.us/denr](http://www.state.sd.us/denr)

January 15, 2016

NOTICE

TO: ALBERT & RYETT HARTY, 519 MCQUILLAN RD, LEAD, SD 57754

FROM: Ron Duvall, Natural Resources Engineer  
for Jeanne Goodman, Chief Engineer  
Water Rights Program

SUBJECT: Reporting Requirement for 2015 Irrigation Questionnaire(s)

Our records indicate your 2015 Irrigation Questionnaire has not been submitted for Permit No(s) 1803-1 as required by administrative rule 74:02:01:14.02. The request for the Questionnaire was dated October 23, 2015. The Water Management Board has directed that owners of water permits who have not submitted the 2015 Irrigation Questionnaire be given notice of hearing to determine if any Board action is to be taken concerning this issue.

The hearing will be held at **Thursday, March 3, 2016 at 9:30 am (Central Time)** in the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol Avenue, Pierre, SD and will be conducted pursuant to SDCL 46-1-12, 46-1-14, 46-2-9, 46-2-11 and 46-2-17. These are contested case hearings pursuant to Chapter 1-26. Following the hearing, the Water Management Board can:

1. Amend Permit No(s) 1803-1 to require the Irrigation Water Use Questionnaire to be submitted each year;
2. Postpone any action; or
3. Take no action.

The hearing is an adversary proceeding. The permit owner has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

If the questionnaire(s) is (are) received in this office before the **March 3, 2016** hearing you will no longer be in violation of your permit and your name will be removed from the Board agenda. Enclosed are additional questionnaire(s) for your use. If you have questions or need assistance, please contact Genny McMath at (605) 773-3352 or email at [genny.mcmath@state.sd.us](mailto:genny.mcmath@state.sd.us). If you prefer, you can complete the questionnaire online at the following link: <http://denr.sd.gov/iq.aspx>

**Note:** Please contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) to assure access to the meeting room for the handicapped or to obtain an interpreter for the hearing impaired.



**DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES**

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

denr.sd.gov

February 3, 2016

1803-1

Albert & Ryett Harty  
519 McQuillan Rd  
Lead SD 57754

Dear Mr. & Mrs. Harty:

I am writing to acknowledge receipt of your 2015 irrigation questionnaire.

You may disregard the January 15, 2016, "Notice" concerning reporting requirements for Water Right No. 1803-1. The information was received in our office prior to the Water Management Board meeting and your name has been deleted from the agenda.

If you have any questions, please contact me.

Sincerely,

A handwritten signature in cursive script that reads "Genny McMath".

Genny McMath  
Water Rights Program  
(605) 773-3352  
email: genny.mcmath@state.sd.us



1803-1  
DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES

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PIERRE SOUTH DAKOTA 57501-3182  
[www.state.sd.us/denr](http://www.state.sd.us/denr)

January 20, 2017

NOTICE

TO: ALBERT & RYETT HARTY, 519 MCQUILLAN RD, LEAD, SD 57754

FROM: Ron Duvall, Natural Resources Engineer  
for Jeanne Goodman, Chief Engineer  
Water Rights Program

SUBJECT: Reporting Requirement for 2016 Irrigation Questionnaire(s)

Our records indicate your 2016 Irrigation Questionnaire has not been submitted for Permit No(s) 1803-1 as required by administrative rule 74:02:01:14.02. The request for the Questionnaire was dated October 21, 2016. The Water Management Board has directed that owners of water permits who have not submitted the 2016 Irrigation Questionnaire be given notice of hearing to determine if any Board action is to be taken concerning this issue.

The hearing will be held at **Wednesday, March 1, 2017 at 11:00 am (Central Time)** in the Floyd Matthew Training Center, Joe Foss Building, 523 E Capitol Avenue, Pierre, SD and will be conducted pursuant to SDCL 46-1-12, 46-1-14, 46-2-9, 46-2-11 and 46-2-17. These are contested case hearings pursuant to Chapter 1-26. Following the hearing, the Water Management Board can:

1. Amend Permit No(s) 1803-1 to require the Irrigation Water Use Questionnaire to be submitted each year;
2. Postpone any action; or
3. Take no action.

The hearing is an adversary proceeding. The permit owner has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

If the questionnaire(s) is (are) received in this office before the **March 1, 2017** hearing you will no longer be in violation of your permit and your name will be removed from the Board agenda. Enclosed are additional questionnaire(s) for your use. If you have questions or need assistance, please contact Genny McMath at (605) 773-3352 or email at [genny.mcmath@state.sd.us](mailto:genny.mcmath@state.sd.us). If you prefer, you can complete the questionnaire online at the following link: <http://denr.sd.gov/iq.aspx>

**Note:** Please contact the Water Rights Program, Joe Foss Building, 523 E Capitol, Pierre, SD (605-773-3352) to assure access to the meeting room for the handicapped or to obtain an interpreter for the hearing impaired.



1803-1  
DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES

JOE FOSS BUILDING  
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PIERRE, SOUTH DAKOTA 57501-3182

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February 1, 2017

1803-1

Albert & Ryett Harty  
519 McQuillan Rd  
Lead SD 57754

Dear Mr. & Mrs. Harty:

I am writing to acknowledge receipt of your 2016 irrigation questionnaire.

You may disregard the January 20, 2017, "Notice" concerning reporting requirements for Water Right No. 1803-1. The information was received in our office prior to the Water Management Board meeting and your name has been deleted from the agenda.

If you have any questions, please contact me.

Sincerely,

Genny McMath  
Water Rights Program  
(605) 773-3352  
email: genny.mcmath@state.sd.us