

WATER PERMIT NO. 1893-1

Name of Applicant: **Viewfield Rural Water Association, Inc.**

Address: **PO Box 157, New Underwood SD 57761** Phone: **605 441-6165**

Amount of Water Claimed: **0.29 cfs** Total Acres: **NA**

Source of Water Supply: **groundwater (one well)**

Water to be used for: **rws** County: **Meade**

Type of Waste Disposal System:

Location: **6 miles northwest of New Underwood**

PRIORITY Date Received: **11-14-07**

Application/License Fee: **\$275**

Corrected Application Received: **11-20-07**

Period of Annual Use: **January 1 – December 31**

Remarks:

Diversion Point: **NE ¼ SE ¼ Sec 3-T3N-R10E**

Land to be Irrigated: **NA**

Depth of Well: **2920 feet deep**

Well Driller:

Remarks:

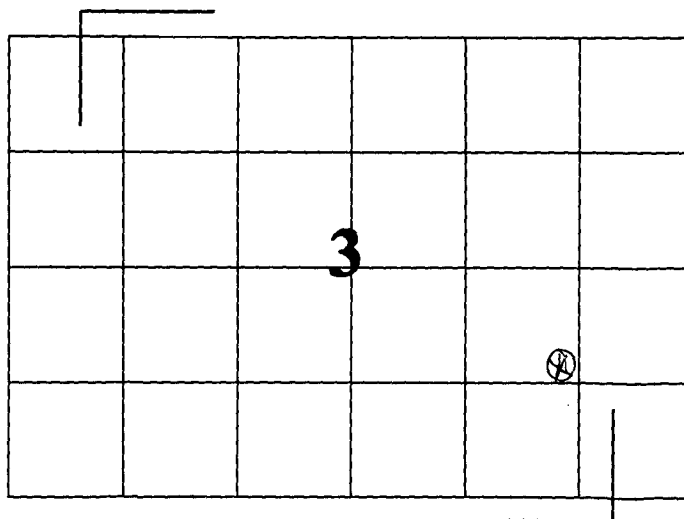
Type of Map: **aerial**

Prepared by: **Mitchell B Kertzman**

Reviewed and the Number Assigned on: **11-20-07**

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____



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	No. <u>1893-1</u>	(office use only) Hydrologic Unit <u>10120111</u>
	Basin <u>Upper Cheyenne</u>	
	Newspaper <u>Meade Co Times-Tribune</u>	

RECEIVED
NOV 14 2007
WATER RIGHTS
PROGRAM

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 VIEWFIELD RURAL WATER ASSOCIATION INC. Phone 605-441-6165
(check one) ☒ Owner ☐ Tenant/lessee
Mailing Address P.O. BOX 157 NEW UNDERWOOD State SD 57761
(Street, RR, or Box and City) (Zip Code)
- Amount of water claimed 0.29 *CFS or 130 **GPM ***AF
(*Cubic Feet per Second) (**Gallons per Minute) (**Acre Feet - storage capacity of dam/dugout or annual use if applicable)
- Source of water supply INYAN KARA AQUIFER
- Location of point of diversion (example - 3 wells in SW1/4 NE1/4 section 12-T104N-R53W) County MEADE
SE 1/4 - SE 1/4 - SECTION 3 - T3N - R10E
NE
- County or counties where water will be used MEADE
- Annual period during which water is to be used JANUARY 1 THROUGH DECEMBER 31
- Give a description of the project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)

PLEASE REFER TO ATTACHED DOCUMENTS

STATE OF SOUTH DAKOTA)

County of PENNINGTON 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)

LARRY GOSSARD, PRESIDENT
I, VIEWFIELD RURAL WATER ASSOC.

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.

Applicant's signature Larry Gossard

Subscribed and sworn to before me this 13th day of November 2007

Pat Mills
Notary Public signature

**SOUTH DAKOTA
WATER PERMIT NO. 1893-1**

Date of first receipt of application November 14, 2007.

Date of return to applicant for corrections, amendments or changes November 14, 2007.

Date of receipt of corrected application November 20, 2007.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 1893-1 to Viewfield Rural Water Association, Inc., PO Box 157, New Underwood SD 57761 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. 1893-1 appropriates 0.29 cubic feet of water per second from one well to be completed into the Inyan Kara Aquifer (approximately 2,920 feet deep) located in NE ¼ SE ¼ Section 3-T3N-R10E.
2. The water appropriated shall be used for the purpose of rural water system use and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date of approval of Permit No. 1893-1 is February 11, 2008.
5. The date from which applicant may claim right is November 14, 2007.
6. One-fifth of the construction is to be completed on or before August 11, 2010.
7. All construction is to be completed on or before February 11, 2013.
8. Water is to be put to beneficial use on or before February 11, 2017.
9. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The well authorized by Permit No. 1893-1 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. Viewfield Rural Water Association shall report to the Chief Engineer annually the amount of water withdrawn from the Inyan Kara Aquifer.

WATER MANAGEMENT BOARD

By: Garland Erbele

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

FEB 14 2008
date



Supplemental Information

(type or print in ink)

1. Well Information - Proposed Construction

- a) Drill Hole Diameter 8 $\frac{3}{4}$ " - 6 $\frac{1}{4}$ " Depth 60' - 2,920' 23 #/ft.
- b) Casing Type STEEL Diameter 7" O.D. - 4 $\frac{1}{2}$ " O.D. Thickness 11.6 # ft.
- c) Screen Type _____ Diameter _____ Thickness _____
- d) Gravel Pack _____ Length of Gravel Pack _____
- e) Depth to Top of Water Bearing Material 2,700 ft.
- f) Depth to Water (ground surface to water level) 315 ft.
- g) Distance to nearest existing domestic well: PERMIT NO. 1874-1
- On applicants property 5.36 miles On property owned by others _____

2. Wastewater Disposal System Information

- a) Type of System (i.e. septic tank, drain field) _____
- b) System Capacity (gallons) _____ Year Constructed _____
- c) Connected to the City of _____ Sanitary System

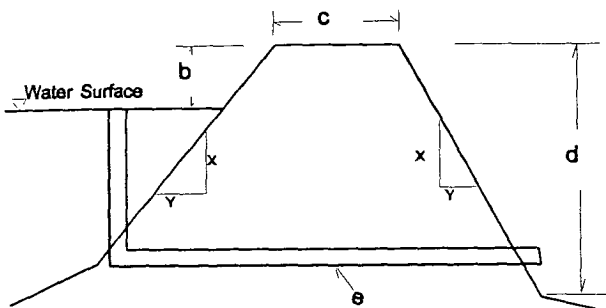
3. Dugout Information

- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

4. Water Storage Dams

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

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



- b) Freeboard _____
- c) Crest Width _____
Crest Length _____
- d) Height _____
- e) Primary Outlet Capacity _____
If pipe, diameter _____
- f) Secondary Spillway Capacity _____
Spillway Width _____
- g) X & Y Slope _____
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 11/14, 2007

RECEIVED OF Verwidened Rural Water Assn. Inc PO Box 157 New Underwood SD 57761

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	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. _____	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.

32

By

[Signature]

Chief Engineer

RENNER ASSOCIATES, LLC.

616 Sixth Street, Rapid City, South Dakota 57701
605-721-7310 fax 605-721-7313 cell 605-209-5992
Mitch@RennerAssoc.Com
Spearfish Office 605-717-0016

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WATER RIGHTS
PROGRAM

ERIC, DAVID,

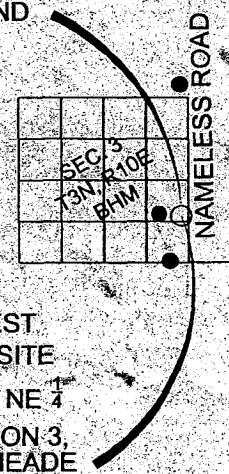
HERE IS THE CORRECTED
WELL LOCATION MAP.
CORRECT TOWNSHIP IS 3N.

THANKS,
Mitch

Civil Engineering - Municipal Engineering - Street Design
Utility Design - Drainage Design - Flood Certificates
Commercial and Residential Site Design
Track & Field Design - Wetland Delineation

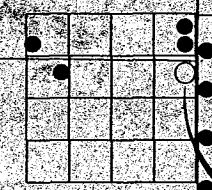
WEST CENTRAL
RESERVIOR AND
WELL SITE

PROPOSED WEST
CENTRAL WELL SITE
LOCATED IN THE NE 1/4
OF SE 1/4 OF SECTION 3,
T3N, R10E, BHM, MEADE
COUNTY, SD.
APPROXIMATELY 1360±
NORTH AND 150± WEST
OF THE SE CORNER OF
SECTION 3.



CORRECTED

PIONEER ROAD



SOUTH CENTRAL WELL SITE
(PERMIT # 1874-1) LOCATED
1650± SOUTH AND 240±
EAST OF THE NE CORNER OF
SECTION 31, LOCATED IN
THE SE 1/4 OF NE 1/4 OF
SECTION 31

WEST ELM SPRINGS ROAD

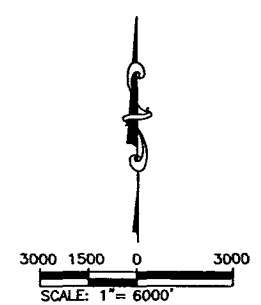
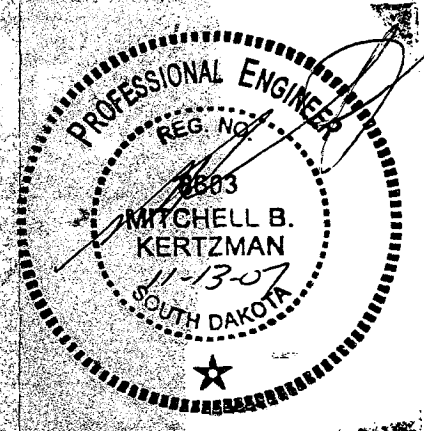
ELK CREEK ROAD

219TH PLACE

NEW UNDERWOOD ROAD

RED TOP ROAD

● SERVICE TAP LOCATIONS



Remer Associates, LLC.
816 5th St. • Rapid City, SD 57701 • 605/721-7310
FAX: 605/721-7313 • E-MAIL: Survey@RemerAssoc.com
South Dakota Office: 605/717-0016
CITY HALL 1983

Prepared By: [Signature]

Scale: [Blank]

Designed By: [Blank] Drawn By: MBK
Design Date: [Blank] Print Date: 11/13/2007
Surveyed By: JO Survey Date: 11/8-15/2006
Revisions: 11/14/07: CORRECTED
TOWNSHIP INFO. FOR WELL #2

RURAL WATER SYSTEM
VIEWFIELD, SD
LOCATED IN T2N, T3N, T4N, R10E
AND T3N, T4N, R11E, BHM,
MEADE COUNTY, SOUTH DAKOTA

Prepared For:
VIEWFIELD RURAL WATER
ASSOCIATION, INC.
22014 NEW UNDERWOOD ROAD
NEW UNDERWOOD, S.D. 57761

Internal Job No:
#2252

Sheet Title:
PROPOSED
WEST
CENTRALWELL
LOCATION

CORRECTED
Sheet: 1 of 1

VIEWFIELD RURAL WATER SYSTEM
Meade County, South Dakota

PROPOSAL

For

CONSTRUCTION OF A WATER WELL IN THE INYAN
KARA AQUIFER OF WESTERN SOUTH DAKOTA

Submitted To

Rick DeVore
Regional Drought Coordinator, GP-4500
Great Plains Region
Bureau of Reclamation
P.O. Box 36900
Billings, MT 59107-6900

Submitted By

Viewfield Rural Water Association Inc.
P. O. Box 157
New Underwood, SD 57761

August 29, 2007

Corporate Officers
Larry Gossard, President
605-754-6760

Charles Larsen, Vice-President
605-754-6562

Pamela Cox, Secretary
605-754-6752

Barbara Dedic, Treasurer
605-754-6772

Viewfield Rural Water Association Inc.

P.O. Box 157
New Underwood SD 57761



TRANSMITTAL MEMORANDUM

TO: Rick DeVore
Regional Drought Coordinator, GP-4500
Great Plains Region
Bureau of Reclamation
P. O. Box 36900
Billings, MT 59107-6900

Xc: Dr. Paul Gnirk [Viewfield Rural Water Association Inc.]
Mitchell B. Kertzman [Renner & Associates, LLC]

FROM: Larry Gossard
President
Viewfield Rural Water Association Inc.
P. O. Box 157
New Underwood, SD 57761

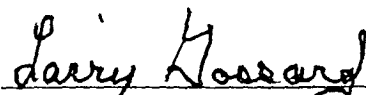
DATE: August 29, 2007

SUBJECT: Transmittal of a Proposal for Construction of a Deep-Aquifer Water Well into
the Inyan Kara Aquifer in Meade County, South Dakota.

Since its incorporation on September 19, 2006, the Viewfield Rural Water Association Inc. has dedicated considerable effort in designing a rural water system for 49 ranches, farms, and residential acreages in southern Meade County, South Dakota, and in acquiring the required funding for construction. Because of the persistent drought during the past six years and the poor quality water available for domestic and livestock use, there exists an extreme need for a reliable and safe water supply for the residents and the agricultural community. Funds have been secured for construction of the main pipeline and the first deep-aquifer water well and for purchase of the reservoir storage tank. Because of the relatively high projected peak water demand, of the order of 230,000 gpd, a second deep-aquifer well, and perhaps a third, will be required to meet the system needs. As such, the Association is submitting this proposal to the Bureau of Reclamation to request funds in the amount of \$260,000.00 for construction of a second water well in the Inyan Kara aquifer in Meade County, SD.

This proposal has been prepared by Dr. Paul Gnirk, an area rancher and a member of the Association, and by Mitchell Kertzman, a professional engineer with Renner & Associates in Rapid City, SD. If you should have any questions, please do not hesitate to contact Dr. Gnirk at 605-390-9319 or Mr. Kertzman at 605-209-5992.

The Association appreciates the opportunity afforded by the Bureau of Reclamation to submit this proposal for the funds necessary to construct a much-needed deep-aquifer water well to compliment the Viewfield Rural Water System.


Larry Gossard, President

1. INTRODUCTORY REMARKS.

The Viewfield area is centered around the old town site of Viewfield which is located in Meade County in western South Dakota, approximately 23 miles northeast of downtown Rapid City and 8 miles north of New Underwood, as shown in Figure 1-1. The area is bounded, more or less, on the south by the Meade County line and on the north by the Belle Fourche river, and encompasses an estimated 225 square miles of land dedicated to farming and cattle ranching. Elk Creek is a tributary stream, located in the southern part of the Viewfield area, traversing from west to east.

The Viewfield Rural Water Association Inc. was incorporated as a Nonprofit Corporation {No. NS013238} in the State of South Dakota on September 19, 2006. Since that date, a dedicated effort has been underway to design a rural water system for 49 users and to secure the funds to construct the system. It is anticipated that bids for construction of the main pipeline and the first deep-aquifer well, including the purchase of the reservoir tank, will be advertised in September 2007. Because of the projected peak water demand of 230,000 gpd in the service area, two deep-aquifer water wells, and possibly three, will be required. The funds acquired to date are sufficient for construction of the first well. This proposal is a request for funds to construct the second well.

2. STATEMENT OF THE PROBLEM.

During years of normal precipitation in the projected service area, water is provided to an estimated 11,000 head of cattle and horses by stock dams, shallow water wells, springs, and Elk Creek. Because of the persistent drought in western South Dakota since 2001, many of the water wells and springs provide little or no water, particularly during the Fall and Winter months. The stock dams contain less than 30% of full water capacity or are dry for most of the year, and the water flow in Elk Creek is nonexistent. During the summer months with high daytime temperatures, the quality of the waters in the stock dams degrades quite rapidly. At this point in time, the current livestock numbers are estimated to be 60 to 70% of full carrying capacity. Additionally, for the most part, the water required for crop spraying is provided by the municipal water system in New Underwood.

The principal water supply for domestic use in the Viewfield area is provided by shallow wells, 40 to 60 ft. in depth, or by hauling water from the city of New Underwood. Most of these wells are located in the shale formation that constitutes the surface geology of the area. For the purpose of this Project, fifteen water wells were tested for water quality. Two-thirds of the wells contained waters with sodium concentrations ranging from 160 to 760 mg/L, sulfate concentrations ranging from 278 to 2,700 mg/L, and a hardness ranging from acceptable to more than 50 grains/gal. Seven of the wells contain waters with total coliform present, and one with fecal coliform present. More than several households have been hauling water from New Underwood for domestic use, some for at least ten years, and many of the other households purchase bottled water for drinking purposes.

In summary, the quantity and quality of the water available for domestic use and livestock consumption in the Viewfield area is marginal at best. The net effect of this situation is a continuing adverse economic impact to the community.

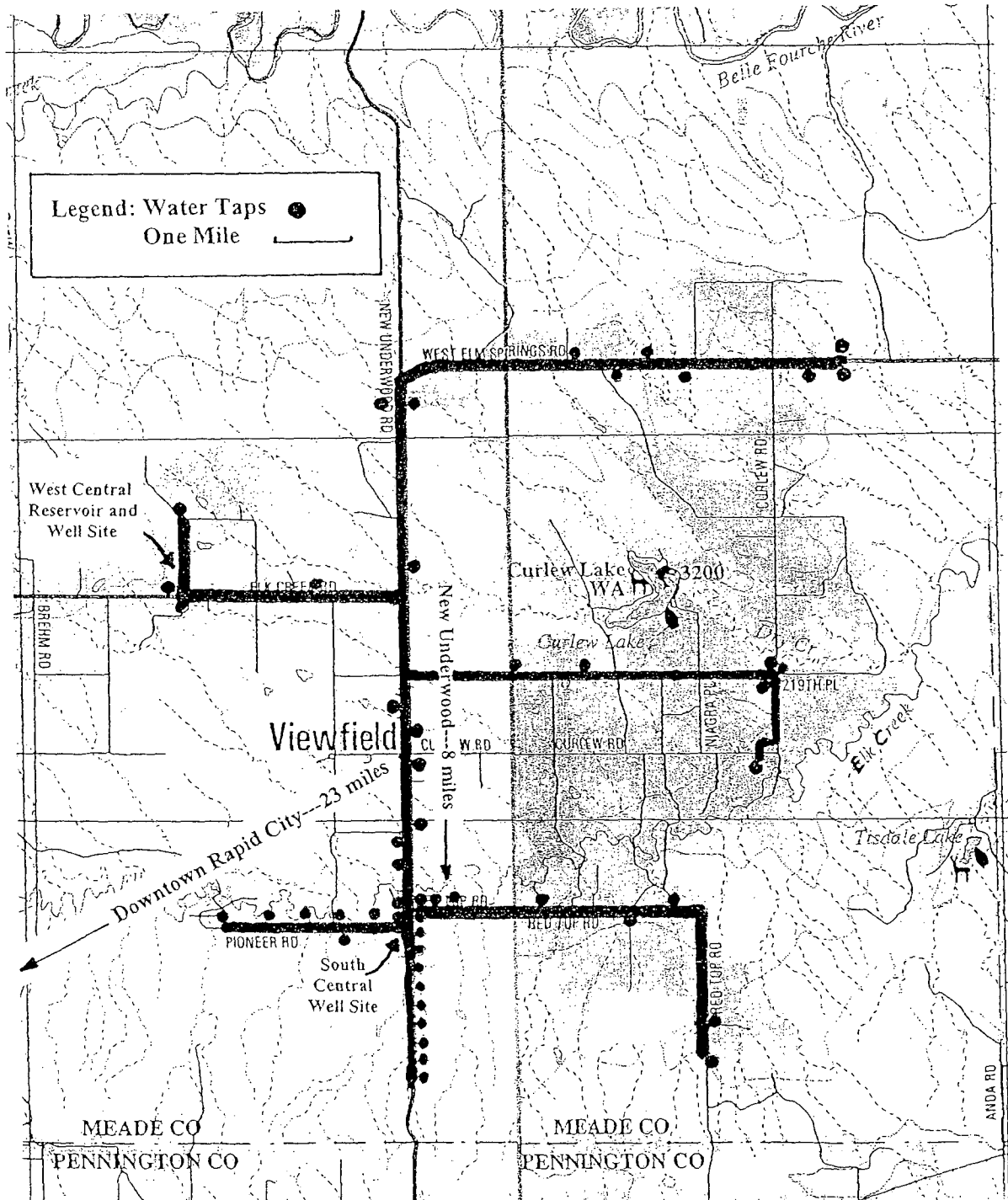


Figure 1-1. Proposed main water pipeline and water taps in the Viewfield area.

3. PROJECT DESCRIPTION.

At this point in time, the Project has completed the engineering design of the rural water system, obtained the easements for the pipeline and necessary permits, and secured the funding necessary to construct the main pipeline and the first deep aquifer water well and to purchase the water reservoir tank. Pending final approval of the loan application to USDA-Rural Development in late August or early September, the bid packages for the first well, the main pipeline, and the reservoir tank will be advertised.

The water system has been designed to provide, at peak daily demand, an estimated 230,000 gpd to 52 water taps for 49 users located along some 34 miles of main pipeline. Initially, during startup of the system, the water supply will be obtained from a single well, approximately 2,700 ft. in depth, in the Inyan Kara aquifer [see Appendix B]. Because of the large peak daily demand, a second well, and possibly a third, will be required to meet the projected water needs of the system. The water reservoir tank, with a storage capacity of 276,000 gal, will be located at an elevation that will provide gravity flow of water to the 52 water taps in the event of a failure of electrical power. Approximately 81% of the water will be used for livestock consumption, 8% for crop spraying, and 11% for domestic use.

At this point in time, the Project has [see Appendix C]:

- {1} completed the engineering design of the water system;
- {2} prepared the Detailed Specifications for the water system;
- {3} prepared the Submittals required to accompany the Construction bid documents;
- {4} obtained the easements and necessary permits for the pipeline construction;
- {5} secured the property for the deep-aquifer well and reservoir tank sites;
- {6} secured the funding for construction of the main pipeline and the first deep-aquifer well and purchase of the reservoir tank.

The total projected cost of the initial phase of the Project, including construction of the main pipeline and one deep-aquifer water well, the reservoir tank, engineering and legal fees, and the like is estimated to be, in round numbers, \$2,600,000. To date, the Project has secured \$2,643,159, which includes a SD-DENR consolidated grant of \$350,000, USDA-NRCS EQIP program funds of \$651,159, and a USDA-RD loan of \$1,330,000, as well as \$312,000 in subscriber memberships and pre-paid water-tap hookup fees. These funds will be adequate to construct the water system with one deep-aquifer water well and to provide a portion of the operation and maintenance costs, as well as a portion of interest due the USDA-RD loan, during the first year of operation.

4. FINANCIAL REQUEST.

The detailed cost estimate for construction of a water well into the Inyan Kara aquifer in southern Meade County, SD, as provided in Appendix A, was prepared by Mitchell Kertzman, PE, of Renner & Associates, LLC, in Rapid. This cost estimate includes the submersible pump, drop pipe, controls, and the like, as determined by Renner & Associates, LLC, together with the back-up cost estimate provided by Taylor Drilling Co. of Rapid City, SD for the drilling, casing, casing perforation, etc. The estimated cost for construction of the well is, in round numbers, \$260,000.00.

5. LIST OF APPENDICES.

**APPENDIX A. WATER-WELL CONSTRUCTION COST ESTIMATE PREPARED BY
THE ENGINEERING CONSULTANT.**

APPENDIX B. SITING THE WATER WELLS IN THE INYAN KARA AQUIFER.

**APPENDIX C. SYNOPSIS OF WORK PERFORMED BY THE ENGINEERING
CONSULTANT**

APPENDIX A

WATER-WELL CONSTRUCTION COST ESTIMATE

PREPARED BY THE ENGINEERING CONSULTANT

and includes the following

- [1] Letter from Mitchell B. Kertzman, PE of Renner & Associates to Larry Gossard of the Viewfield Rural Water Association Inc. regarding the Well Construction Cost Estimate.**
- [2] Engineers Estimate of Probable Construction Cost prepared by Mitchell B. Kertzman, PE of Renner & Associates.**
- [3] Estimate for Water Well completed in the Inyan Kara Formation prepared by Taylor Drilling Co. of Rapid City, SD.**

RENNER & ASSOCIATES, LLC.

616 Sixth Street, Rapid City, South Dakota 57701 - 605-721-7310
605-721-7313 fax 605-381-2808 cell Gary@RennerAssoc.Com
Spearfish Office 605-717-0016

APPENDIX A

TO: Larry Gossard, President
Viewfield Rural Water Association Inc.
P. O. Box 157
New Underwood, SD 57761

Cc: Dr. Paul Gnirk [Member, Viewfield Rural Water Association Inc.]

FROM: Mitchell B. Kertzman, PE
Renner & Associates, LLC
616 Sixth Street
Rapid City, SD 57701

DATE: August 29, 2007

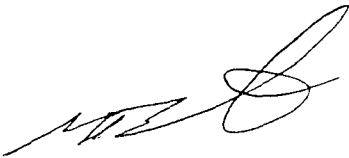
SUBJECT: Well Construction Cost Estimate

Dear Larry,

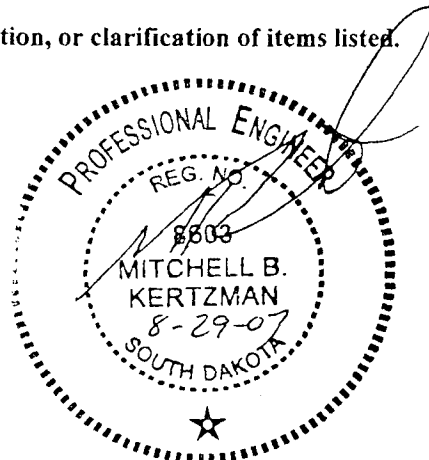
Per your request, we have assembled an Engineers Estimate of Probable Construction Cost for a 3000' Inyan Kara well, to be located within the Viewfield Rural Water System. The items and associated costs assume a well producing in the range of 60 to 130 gallons per minute, with a 6" nominal submersible pump and necessary equipment to complete the installation. The items shown are minimum for a well to be considered operable, but not connected to the system.

Not included is the well house needed to house the electrical controls, water treatment equipment, and metering equipment. For the well to productively deliver water to the system, the cost for the well house and associated equipment should be included. We are using a value of \$80,000.00 for the estimated cost to site, construct and equip the well house. If the well house qualifies as source production, you should add this estimated cost to the total showing on the attached worksheet.

Please, feel free to call if you require additional information, or clarification of items listed.


Renner and Associates, LLC
Mitchell B. Kertzman, PE

Attached: Cost Estimate Worksheet
Estimate from Taylor Drilling, Rapid City



Civil Engineering – Commercial and Residential Site Design - Municipal Engineering - Street Design -
Utility Design - Drainage Design & Flood Certificates
Wetland Delineation - Track & Field Design

12	4-1/2" L/H Couple	EA	1.00	\$375.00	\$375.00		
13	4-1/2" Guide Shoe	EA	1.00	\$275.00	\$275.00		
14	4-1/2" Float Insert Check Valve	EA	1.00	\$125.00	\$125.00		
15	Cement Pressure Grout 4-1/2" Casing	VF	1,700.00	\$7.70	\$13,090.00		
16	Casing Perforation	LS	1.00	\$2,500.00	\$2,500.00		
17	Well Air Development	HR	8.00	\$200.00	\$1,600.00		
18	Well Production Test	HR	4.00	\$200.00	\$800.00		
19	Well sanitizing	LS	1.00	\$250.00	\$250.00		
20	Geological Log, Drillers Report	LS	1.00	\$8,000.00	\$8,000.00		
21	Accusical Cement Bond log & Cement Squeeze as Needed	LS	1.00	\$7,000.00	\$7,000.00		
22	6" Sub. pump, Drop pipe, Lead, Low water shutoff, Pileless Adapter Wellhead Cap	LS	1.00	\$35,000.00	\$35,000.00		
23	Motor Starter/Controller/Protector Control Cabinet Assembly with Communication Module and Gateway, Three-Phase Lightning Arrestor.	ST	1.00	\$8,000.00	\$8,000.00		
24	Single Phase to 3-Phase Converter	EA	1.00	\$7,500.00	\$7,500.00		\$0.00
25	High-capacity water meter	EA	1.00	\$1,000.00	\$1,000.00		
	TAXES						\$0.00
26	SD Excise Tax 2.041%				\$5,000.00		\$0.00
27	SD Sales Tax 4%				\$9,798.44		\$0.00
	TOTAL				\$259,759.44		\$0.00

Engineers Estimate of Probable Construction Cost

PREPARED BY: Renner and Associates, LLC -- Mitchell B. Kertzman, PE

PROJECT NAME: Viewfield Rural Water Association

PROJECT NUMBER: RNR-2252

LET DATE: (TYPE DATE)

LOW BID AMOUNT: \$0.00

Estimate Assembled 8-29-07

ITEM NO.	DESCRIPTION OF ITEM	UNIT	QTY (EST)	ENGINEER'S ESTIMATE			(LOW BIDDER)	
				UNIT COST	TOTAL COST	UNIT COST	TOTAL COST	TOTAL COST
	<i>SOURCE (Well #1 2800-foot Inyan Kara)</i>							
1	Permanent Underground 3-Phase Power Drop (for well house by others) with Temporary Tap	LF	150.00	\$6.00	\$900.00			
2	13-1/2" Drilling	VF	60.00	\$85.00	\$5,100.00			
3	9-5/8" casing installed	VF	62.00	\$34.00	\$2,108.00			
4	Cement Pressure Grout 9-5/8" Casing	VF	60.00	\$20.00	\$1,200.00			
5	8-3/4" Drilling	VF	1,240.00	\$31.00	\$38,440.00			
6	7" Casing Installed	VF	1,300.00	\$23.50	\$30,550.00			
7	7" Casing Centralizers	EA	20.00	\$56.00	\$1,120.00			
8	Cement Pressure Grout 7" Casing	VF	1,240.00	\$9.70	\$12,028.00			
9	6-1/4" Drilling	VF	1,700.00	\$24.00	\$40,800.00			
10	4-1/2" Casing Installed	VF	1,740.00	\$15.00	\$26,100.00			
11	4-1/2" Casing Centralizers	EA	22.00	\$50.00	\$1,100.00			

TAYLOR DRILLING CO.
2310 Commerce St.
RAPID CITY, SOUTH DAKOTA 57702-8062

RALPH L. TAYLOR, JR. (Randy)
KIM E. TAYLOR

August 29, 2007

TELEPHONE:
Office: (605) 348-3600
After Hours: (605) 341-5417
or: (605) 787-4989

Larry Gossard
PO Box 157
New Underwood, SD 57761

VIEWFIELD RURAL WATER SYSTEM

Estimate for Water Well completed in the Inyan Kara Formation.
Estimated Depth: 3000 ft

60'	13 1/2" Drilling	@ 85.00/ft	\$ 5,100.00
62'	9 5/8" OD 36# steel casing	@ 34.00/ft	2,108.00
Lump Sum	Pressure grout 9 5/8" casing w/cement grout		1,180.00
1240'	8 3/4" Drilling	@ 31.00/ft	38,440.00
1300'	7" OD 23# steel casing	@ 23.50/ft	30,550.00
18	Casing centralizers	@ 56.00/ea	1,008.00
Lump Sum	Pressure grout 7" casing w/cement grout		12,000.00
1700'	6 1/4" Drilling	@ 24.00/ft	40,800.00
1740'	4 1/2" OD 11.6# steel casing	@ 15.00/ft	26,100.00
22	Casing centralizers	@ 49.50/ea	1,089.00
1	4 1/2" Left hand coupling		375.00
1	4 1/2" Guide shoe		275.00
Lump Sum	Pressure grout 4 1/2" casing w/cement grout		13,000.00
Lump Sum	Chlorinate Well		250.00
Lump Sum	Geophysical Logging & Perforation		10,500.00
12 hrs	Air Development & Testing Production	@ 200.00/hr	2,400.00
1	Acoustic cement bond log, casing perforation & Cement squeeze (If Necessary)		<u>7,000.00</u>
			\$192,175.00
		Excise Tax	<u>3,922.29</u>
		Total	\$196,097.29

Thank You For Considering Taylor Drilling Co.

MAILING ADDRESS: P.O. BOX 7738 • RAPID CITY, SOUTH DAKOTA 57709-7738

APPENDIX B

SITING THE WATER WELLS IN THE INYAN KARA AQUIFER

To identify the locations for drilling deep-aquifer water wells in the Viewfield area of Meade County, SD, the following individuals were consulted:

- Dr. Perry Rahn: Professor Emeritus, Department of Geology and Geological Engineering, South Dakota School of Mines and Technology, Rapid City, SD.
- Fred Steece: Oil & Gas Supervisor, SD Department of Environment and Natural Resources, Rapid City, SD.
- Jim Goodman: Natural Resources Administrator, SD Department of Environment and Natural Resources, Pierre, SD.
- Dan Driscoll: Hydraulic Engineer, United States Geological Survey, Rapid City, SD.

Primary consideration was given to the Inyan Kara aquifer, which is known to provide good quality water and should be situated at a depth of 2,600 to 2,700 ft in the Viewfield area. According to the USGS Water-Resources Investigations Report 03-4049, the average saturated thickness of the formation immediately east of Rapid City ranges from 300 to 400 ft. The water production rates from the wells in that area are reported to average about 30 gpm, with a range of a few gpm to in excess of 250 gpm. According to Table B-1, the production zone for the well located in the SE corner of Section 9, R9E, T3N, approximately 10 miles directly west of the center of the Viewfield area, is 140 ft thick and capable of a water yield of 60 to 150 gpm. The production zone for the well located in the NW corner of Section 29, T2N, R11E, approximately 7 miles directly south of the center of the Viewfield area, is 273 ft thick and capable of a water yield of 200 gpm. The projected peak daily demand for the Viewfield service area is 230,000 gpd. This demand requires a water production rate, on average, of about 160 gpm. As such, at least two deep-aquifer wells, and perhaps three, will be required to satisfy this projected water demand.

Figure B-1 illustrates the projected cross-section of the Inyan Kara formation parallel to New Underwood Road, beginning approximately 5 miles south of the intersection of New Underwood Road and Pioneer Road and ending approximately 2.5 miles north of the intersection of New Underwood Road and East Elm Springs Road. This cross-section is based on detailed electrical and observational logs from three wells either adjacent to, or within 2.6 miles, of New Underwood Road. The projected thickness of the Inyan Kara formation ranges from 273 ft on the south end to 166 ft on the north end.

The south-central site of the proposed first deep-aquifer well is located in the NE corner of Section 31 [Rge 11 E, Twp 3 N], adjacent to the intersection of New Underwood Road and Pioneer Road. The elevation of the site is 2,720 ft, and a three-phase electric power line borders the New Underwood Road. The projected thickness of the Inyan Kara formation

The west-central site of the proposed second deep-aquifer well is located approximately 1,000 ft north of Elk creek Road along the east side of Section 3 [Rge 10E, Twp 3 N]. The elevation of the site is 2,920 ft, and a single-phase electric power line borders Elk Creek Road. The projected thickness of the Inyan Kara formation at this site is 220 ft, with the top of the formation situated at a depth of 2,700 ft and the bottom at a depth of 2,920 ft. The depth of the static water level should be about 315 ft.

TWP	RNG	SEC	Location	<<<<<<<<<<<<<Elevation [ft]>>>>>>>>>>	Surface	Newcas- tle Top	Lakota Top	Lakota Bottom	Water Level	Water Yield [gpm]	Year Drilled	Refer- ence
3N	9E	9	E-SW		2970					60-150	2001	1
2N	11E	29	NW-NW		2950	550	267	<-6>	2605	202	1988	2
3N	11E	3			2755	415				no test		3
4N	11E	9	SW-SW-NE		2586	411	155	<-11>		no test	1954	4
4N	11E	31	NE-SE		2811	437	223	6		no test	1969	5
4N	12E	1			2611	81				no test		6
4N	12E	22			2700	100				no test		7

- [1] South Dakota Well Completion Report 07-21, Feb. 12, 2002.
- [2] Dr. Paul Gries: Geologist's Report for New Underwood, SD, 1988.
- [3] Dr. Paul Gries Files, Dept. Geology & Geological Engineering, SD School of Mines & Technology.
- [4] Billings Geological Service Log No. 248 for Lion Oil Company, 1955.
- [5] Schlumberger Induction-Electrical Log for Midland Oil Corporation, December 1, 1969.
- [6] Dr. Paul Gries Files, Dept. Geology & Geological Engineering, SD School of Mines & Technology.
- [7] Dr. Paul Gries Files, Dept. Geology & Geological Engineering, SD School of Mines & Technology.

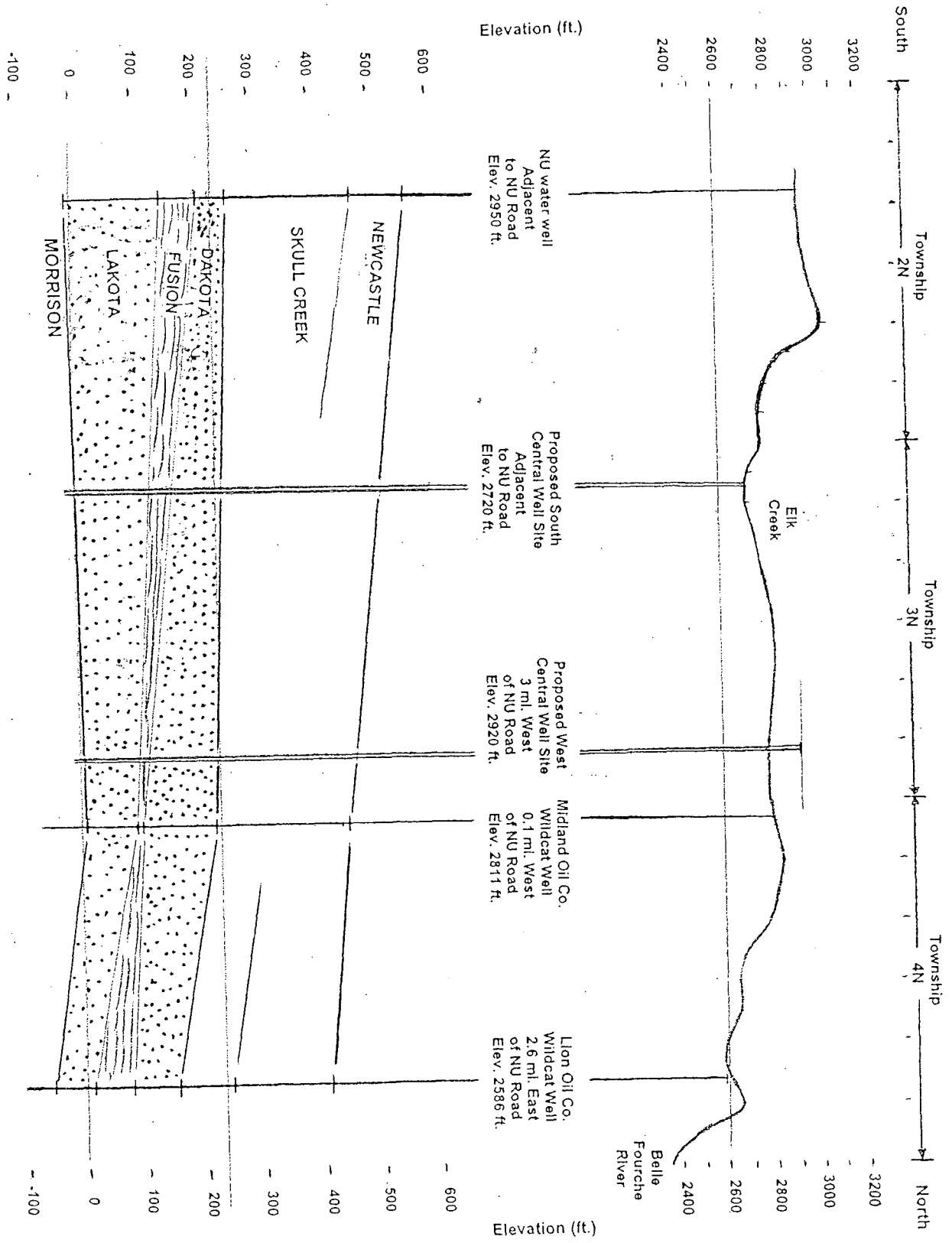


Figure 1-1. Structural cross-section of the Inyan Kara Aquifer parallel to New Underwood Road, Meade County, SD

RENNER & ASSOCIATES, LLC.

616 Sixth Street, Rapid City, South Dakota 57701 - 605-721-7310
605-721-7313 fax 605-381-2808 cell Gary@RennerAssoc.Com
Spearfish Office 605-717-0016

APPENDIX C

SYNOPSIS OF WORK PERFORMED BY THE ENGINEERING CONSULTANT

TO: Larry Gossard, President
Viewfield Rural Water Association Inc.
P. O. Box 157
New Underwood, SD 57761

Cc: Dr. Paul Gnirk [Member, Viewfield Rural Water Association Inc.]

FROM: Mitchell B. Kertzman, PE
Renner & Associates, LLC
616 Sixth Street
Rapid City, SD 57701

DATE: August 29, 2007

SUBJECT: Synopsis of Engineering Work Performed by Renner & Associates for the Viewfield Rural Water System.

On 10-30-2006, the Viewfield Rural Water Association Inc. contracted with Renner & Associates for the purpose of designing a rural water system for the Viewfield Area. Apart from the design and cost estimating, this work included the preparation of documents for bidding the various elements of the construction and the associated supervision of the construction. At this point in time, Renner and Associates, LLC have prepared the following documents:

- [1] Volume III: "Engineering Design and Cost Estimate - Preliminary Design Report"
December 29, 2006
- [2] Preliminary Plans - December 2006. 11" x 17" folded insert, and 22" x 34" set - 18 sheets.
- [3] Easement Exhibits for Water Main Construction - 8-1/2" x 11" approximately 84, with revisions.
- [4] "Summary of Design Revisions" - March 20, 2007.
- [5] Addendum #1: to Preliminary Design Report - Jan 17, 2007.
- [6] Addendum #2: to Preliminary Design Report - May 22, 2007.
- [7] Layout Plats for two well sites.

Civil Engineering - Commercial and Residential Site Design - Municipal Engineering - Street Design -
Utility Design - Drainage Design & Flood Certificates
Wetland Delineation - Track & Field Design

- [8] Final Plats for two well sites.
- [9] Map for Geotechnical Exploration.
- [10] Bound set: "Submittals Required for Loan Approval" 8-1/2" x 11" – June 2007.
- [11] "Map of Proposed System Users and Decliners" - June 2007.
- [12] "Bound Set: "Submittals Required with the Construction Bid Documents" – July 2007.
- [13] "Construction Observation by Owner" procedures and policies.
- [14] Board Policies Manual – Viewfield Rural Water Association Inc. – Draft.
- [15] Volume I of II: "Advertisement for Bids and Contract Documents" – Draft - June 2007.
- [16] Volume II of II: "Detailed Specifications" Sealed Review Set - June 2007.
- [17] Plans – 22" x 34" Sealed Review Set – 20 sheets.
- [18] EJCDC format Engineers Agreement.
- [19] EJCDC format Attorneys Agreement.
- [20] Construction Cost Estimates for various sizes and configurations of the proposed system.
- [21] Life cycle cost analysis – Vitrified steel tank vs. Painted steel tank.

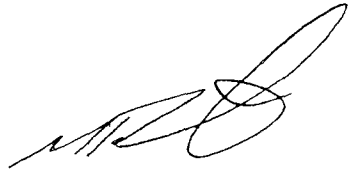
Documents in Progress: [22] "Submittals Required at Loan Closing" Bound set
 [23] Revisions to Plans and Specifications in response to agency reviews.

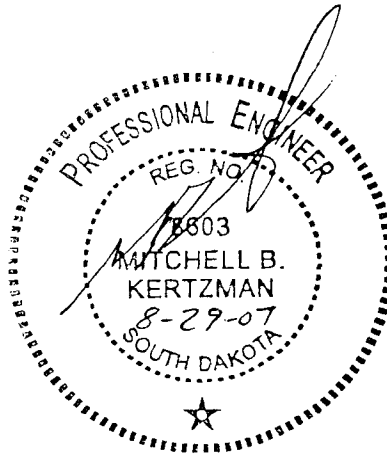
In addition, Renner & Associates have performed the following tasks on behalf of the Association to support its applications for construction funds, acquisition of easements and permits, and the like:

- [1] Coordination required for the assembly, reproduction and distribution of:
 "Submittals Required for Loan Approval"
 "Submittals Required with the Construction Bid Documents"
- [2] Coordination required for the final review and approval of the ROW Permit from Meade County.
- [3] Coordination required and meetings required for the review and approval of the Layout and Final Plats for the Well Sites.
- [4] Coordination with Funding Agencies, Review Authorities, and state Field Engineers for the assembly of Plans, Specifications, and Bid Documents.
- [5] Creation of approximately 27 Hydraulic Models to simulate various demands, patterns, configurations, sizes.

- [6] Surveying and Mapping Services in the form of GPS Mapping of the proposed route; Topographic Survey of the proposed Well Sites, Elk Creek Crossing, and New Underwood Road Crossings (two places); Monumentation of the Well Sites.
- [7] Correspondence with various suppliers, service providers and contractors for material specifications, estimated costs and configurations.
- [8] Coordination of the preliminary Certified Water System Operator Agreement.
- [9] Mapping and coordination with Western Area Power Coop and DeMersseman, et al, Attorney for Power Transmission Crossing License Agreement.
- [10] Coordination with DeMersseman, et al, Attorney for the creation of easement exhibits, submittal documents and plats.
- [11] Coordination with Meade County Planning toward approval of building permits for the Well Houses.
- [12] Attendance and participation in various meetings with Viewfield Rural Water Association, State, Regional, County, and Local agencies.

Please, feel free to call if you require additional information, or clarification of items listed.


Renner and Associates, LLC
Mitchell B. Kertzman, PE



Corporate Officers
Larry Gossard, President
605-754-6760

Charles Larsen, Vice-President
605-754-6562

Pamela Cox, Secretary
605-754-6752

Barbara Dedic, Treasurer
605-754-6772

Viewfield Rural Water Association Inc.

P.O. Box 157
New Underwood SD 57761



RECEIVED

NOV 14 2007

WATER RIGHTS
PROGRAM

TO: Eric Gronlund
Water Rights Program
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3181

xc: Board of Directors of the Viewfield Rural Water Association Inc.
Mitch Kertzman, Renner & Associates
David Ryan, SD Department of Environment and Natural Resources

FROM: Paul Gnirk
Member
Viewfield Rural Water Association Inc.
P. O. Box 157
New Underwood, SD 57761

Handwritten signature and date: 11-13-07

DATE: November 13, 2007

SUBJECT: Transmittal of Application for Permit to Appropriate Water within the State of South Dakota.

Please find attached:

- {1} Form 2: Application for Uses other than Irrigation [Application for Permit to Appropriate Water within the State of South Dakota], together with (a) Form 2A: Supplemental Information, (b) a map, prepared by Renner & Associates, showing the location of the proposed well, and (c) a copy of the "Proposal for Construction of a Water Well in the Inyan Kara Aquifer of Western South Dakota" that was submitted to the Bureau of Reclamation—Great Plains Region on August 29, 2007.
- {2} The Proposal provides a summary of the various design and cost aspects of the Viewfield Rural Water System, as of late August, and includes (a) in Appendix A, a copy of a cost estimate, prepared by Taylor Drilling Co., dated 08-29-07, for drilling a 3,000 ft well into the Inyan Kara formation, and (b) in Appendix B, a north-south geologic cross section, prepared by me in late 2006, situated three miles east of the proposed well site that is located in the SE ¼ of Section 3, Range 10 East, Township 3 North, Meade County, SD.
- {3} According to the geologic cross section in Appendix B of the Proposal, the surface elevation of the proposed well site is 2,920 ft, and (a) the depth to the static water level is estimated to be about 315 ft, (b) the depths to the top and bottom of the Inyan Kara formation are estimated to be 2,700 ft and 2,920 ft, respectively, and (c) as such, the thickness of the Inyan Kara formation should be of the order of 220 ft.

In addition, please find enclosed a check in the amount of \$275.00 to cover the filing fee.

If you should have any questions or need additional information, please do not hesitate to contact me [Tel. 605-754-6900/Cell 605-390-9319], or Larry Gossard [Cell 605-441-6165], or Mitch Kertzman of Renner & Associates [Cell 605-209-5992].

Water Rights Program - File Documentation

NAME: Paul Gnirk, Viewfield Rural Water Association, Inc.

ADDRESS: New Underwood SD

DATE: 11-14-07 **COUNTY:** Meade **TELEPHONE:** 605 754-6900

RE: Pending Application

COMMENTS:

I called Paul Gnirk about the legal description on the application not matching the legal description as identified on the map.

Mr. Gnirk stated the well will be located in the **NE ¼ SE ¼ Section 3-T3N-R10E**. I told him I would make that change on the application. Mr. Gnirk stated he would have the engineer make the corrections on the map and resubmit it.


Karen Schlaak
Environmental Scientist



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 1893-1, Viewfield Rural Water Association, Inc.**

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. 1893-1, Viewfield Rural Water Association, Inc., c/o Larry Gossard, President, PO Box 157, New Underwood SD 57761.

The Chief Engineer is recommending APPROVAL of Application No. 1893-1 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 qualification:

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 authorized by Permit No. 1893-1 shall be constructed by a licensed well driller and construction of the well and installation of the pump shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted (bottom to top) pursuant to Section 74:02:04:28.
3. Viewfield Rural Water Association shall report to the Chief Engineer annually the amount of water withdrawn from the Inyan Kara Aquifer.

See report on application for additional information.

Garland Erbele, Chief Engineer
January 16, 2008

WATER PERMIT APPLICATION NO. 1893-1
VIEWFIELD RURAL WATER ASSOCIATION, INC.
JANUARY 2, 2008

Water Permit Application No. 1893-1 proposes to appropriate 0.29 cubic feet of water per second from one well to be completed into the Inyan Kara aquifer (approximately 2,920 feet deep) located in the NE¼ SE¼ Sec. 3, T3N-R10E, Meade County. The water will be used to supply a rural water system.

AQUIFER: Inyan Kara (INKR)

GENERAL:

The Inyan Kara aquifer is composed of several sandstone units of the Fall River and the underlying Lakota Formations. In a geologic sense, the Fall River and Lakota are separate and distinct formations, and the upper Lakota often contains the Fuson shale unit that may hydraulically separate the two formations locally. However, for all practical purposes, the Fall River Formation and the Lakota Formation can be considered a single hydrologic unit in this area. The Inyan Kara, which was deposited in shallow waters along the eastern shore of the Skull Creek Sea during the Lower Cretaceous age (Merewether, 1975), occurs at a regional scale, extending into Wyoming, North Dakota and Nebraska as well as a major portion of South Dakota, see figure 1. Although the Inyan Kara is areally extensive, only a portion of the water it contains is fresh. More than one-half of the water in the Inyan Kara is moderately saline, and the water is saline to brine in parts (Driscoll and others, 2002)

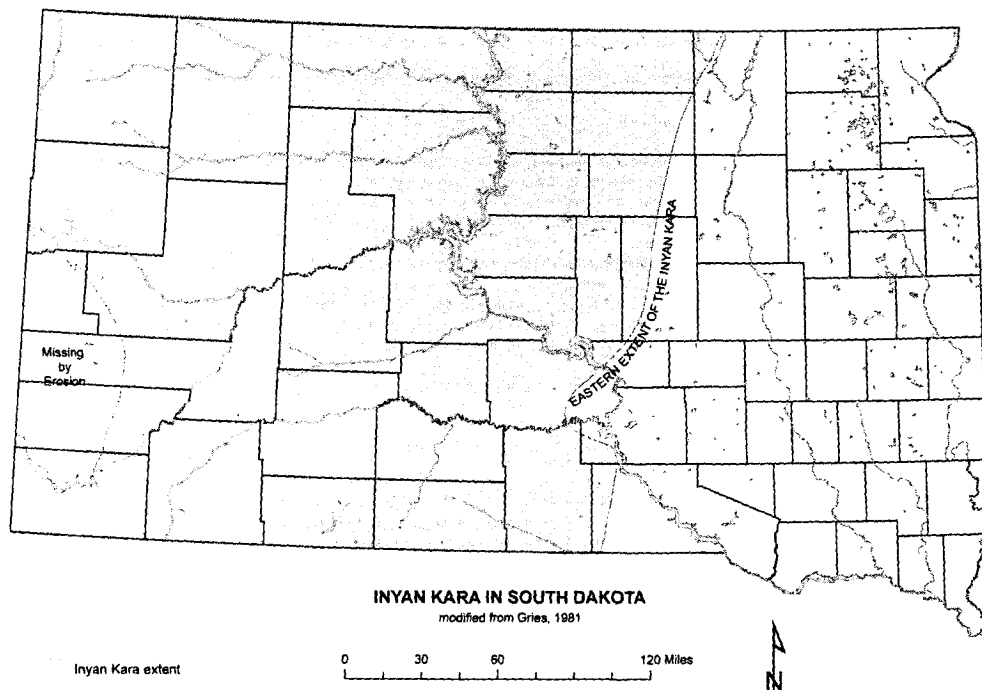


Figure 1. Areal extent of the Inyan Kara aquifer in South Dakota

The aquifer underlies 2,107,520 acres and contains an estimated 36,354,720 acre-feet of recoverable water in storage in Meade County alone (Allen and others 1985). The top of the Inyan Kara is projected to be approximately 2,550 feet below grade at this proposed well site, and the aquifer is estimated to be 300 feet thick at this site (Allen and others, 1985). The thickness of the Inyan Kara Aquifer does however vary considerably within short distances. The Inyan Kara is under confined conditions in this area and the static water level of an Inyan Kara well at this site is expected to be around 300 feet below grade.

The transmissivity of the Inyan Kara ranges from 0.86-6,000 ft²/d (Driscoll and others, 2002). Recent work done for West River/Lyman Jones RWS near Quinn, SD and near Creighton, SD indicate transmissivity values of 561 ft²/d and 588 ft²/d respectively (Water Rights, 2005). The Transmissivity at the City of Wall is reported to be 578 ft²/d (Gries and others, 1976). Yields from wells completed into the Inyan Kara aquifer are unpredictable but it is not unreasonable to anticipate a well capable of producing the 130 gallons per minute requested by this application.

The water quality of the Inyan Kara aquifer is generally good. Although radionuclides are not a persistent problem with wells completed into the Inyan Kara aquifer, they have been detected in a number of public water systems supplied from the Inyan Kara aquifer (e.g. Kadoka, New Underwood, Hermosa, Rainbow Water Company).

WATER AVAILABILITY:

The availability of water for this proposed appropriation can be evaluated by considering SDCL 46-6-3.1 which requires that:

“No application to appropriate groundwater may be approved if, according to the best information reasonably available, it is probable that the quantity of water withdrawn annually from a groundwater source will exceed the quantity of the average estimated annual recharge of water to the groundwater source. An application may be approved, however, for withdrawals of groundwater from any groundwater formation older than or stratigraphically lower than the greenhorn formation in excess of the average estimated annual recharge for use by water distribution systems.”

It must be noted that the exception identified by this statute applies to this permit application since the Inyan Kara aquifer is stratigraphically lower than the Greenhorn Formation and the proposed use is to supply a water distribution system. However, a comparison of recharge with withdrawals is useful to characterize the resource.

Recharge to the Inyan Kara aquifer occurs through infiltration of precipitation and streamflow losses at the outcrop; and possibly through upward leakage from underlying aquifers (Bredehoeft and others, 1983). The total recharge to the aquifer just from infiltration at the outcrop, consequently a minimum value, is estimated to be 11,600 acre-feet per year (Driscoll and others, 2002).

There are currently 169 water rights/permits appropriating water from the Inyan Kara aquifer in South Dakota representing diversion authority of 39.56 cfs for non-irrigation use, and irrigation

rights for 957.65 acres (Water Rights, 2008). In addition the City of New Underwood holds Future Use Permit No. 1780-2 which reserves 142 acre-feet annually from the Inyan Kara aquifer. If the worst case assumptions are made that (1) 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); the total water use from the Inyan Kara aquifer would be around 15,000 acre-feet per year. The actual amount of water used from the Inyan Kara is considerably less than this estimate. For example, in the study area of the "Black Hills Hydrology Study", the aforementioned "worst case" methodology estimates a maximum annual water use by appropriative rights of about 10,000 acre-feet per year (106 Water Rights/Permits, 18,378 cfs, 765.65 acres irrigated). Withdrawals from wells completed into the Inyan Kara aquifer were estimated to be 1,400 acre-feet annually from 1950-1998 in the Black Hills area (Driscoll and others, 2002).

Comparison of the estimated annual recharge to the Inyan Kara with the water use estimated from the aquifer suggests that withdrawals from the aquifer have not exceeded recharge. A water budget is not intended to suggest that all of the water that is in storage in the Inyan Kara or that all of the recharge is available for this appropriation, merely to demonstrate that in general the Inyan Kara aquifer is an immense resource that is relatively untapped.

The Water Rights Program does not monitor any observation wells completed into the Inyan Kara aquifer in this area and water level information is limited. Water level declines of five feet per year between 1961 and 1984 were reported at New Underwood (Water Rights, 1985). Data suggests that water levels in the City of Wall declined about 150 feet between 1961 and 1987 (Winter, 1994). The decline of water levels, actually localized drawdown, is probably the result of increased development and usage rather than an indication of over appropriation. Large temporal fluctuations of the water level of the Inyan Kara are not expected in this area due to the distance to the recharge area.

EXISTING WATER RIGHTS:

Excepting Water Permit No. 1874-1 for Viewfield Rural Water Association well number one, (approximately five and one-half miles southeast of this well site), the nearest Inyan Kara appropriation, (Water Permit No. 1799-1, Kaski Homes, Inc), is located approximately 7.5 miles west of this proposed well location. Well interference is not expected to be significant given the distance between wells.

Water Management Board rules 74:02:04 and 74:02:05, which were promulgated pursuant to SDCL 46-6-6.1, provide protection for existing wells 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 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. In this area, the Inyan Kara aquifer has around 2,200 feet of artesian head pressure. Therefore well interference is not likely to adversely impact existing uses, including domestic.

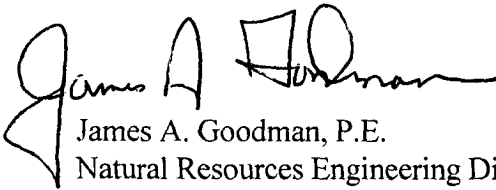
CONCLUSIONS:

1. The Inyan Kara Aquifer is a viable aquifer in this area, and water is available for this appropriation.
2. Well interference should not be a problem at this proposed well site.



Ken Buhler
Natural Resources Engineering Specialist

approved by



James A. Goodman, P.E.
Natural Resources Engineering Director

REFERENCES:

- Allen, J.C., Iles, D.L., and Petres, A.K., 1985, Analysis of Groundwater and Streamflow Data, Western Dakotas Region of South Dakota, Tasks 3A.B.C. AND 4A.B: Groundwater Resources Inventory: US Army Corps of Engineers Contract DAWC 45-82-C-0151, SD DENR- Geological Survey, Vermillion SD
- Bredehoeft, J.D., Neuzil, C.E. and Milly, P.C.D., 1983, Regional Flow in the Dakota Aquifer: A Study of the Role of Confining Layers: U.S. Geological Survey Water-Supply Paper 2237, 45 p.
- Driscoll, D.G., Carter, J.M., Williamson, J.E., and Putnam, L.D., 2002, Hydrology of the Black Hills Area, South Dakota: USGS Water-Resources Investigations Report 02-4094, 150 p.
- Gries, J.P., Rahn, P.H., and Baker, R.K., 1976, A Pump Test in the Dakota Sandstone at Wall, South Dakota: South Dakota Geological Survey Circular 43, 9 p.
- Merewether, E.A., 1975, Mesozoic Rocks: Mineral and Water Resources of South Dakota, Committee on Interior and Insular Affairs, United States Senate pg. 41
- Water Rights Program, 1985, "Water Permit File 1947-2, City of New Underwood," DENR-Water Rights Program, Joe Foss Building, Pierre, SD 57501

Water Rights Program, 2005, "Well Completion Report for West River/Lyman Jones "Quinn #1 Well," Well Completion Report Files DENR-Water Rights Program, Joe Foss Building, Pierre, SD 57501

Water Rights Program, 2008, "Water Right/Permit Files" DENR-Water Rights Program, Joe Foss Building, Pierre, SD 57501

Winter, D.R., 1994, Water Levels through 1989 in Bedrock Aquifers in South Dakota, U.S. Geological Survey Open-File Report 94-320,



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

January 17, 2008

Mr. Kelly McPhillips, Environmental Specialist
Bureau of Reclamation
PO Box 1017
Bismarck, ND 58502-1017

Dear Mr. McPhillips:

Enclosed is a copy of the report, recommendation and public notice for Water Permit Application No. 1893-1 filed by Viewfield Rural Water Association. The public notice is scheduled to be published January 13 and 20, 2008 in the Mead Co. Times & Tribune.

23 30

Sincerely,

Eric Gronlund
Water Rights Program
(605) 773-3352

enclosures

FEB - 1 2008

WATER RIGHTS
PROGRAM

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County of Meade) SSI, Pam Buhlercertify that the attached printed Notice was
takenfrom the Meade County
Times Tribuneprinted and published in SturgisCounty of Meade andstate of South Dakota. The notice was
published

in the newspaper on the following two dates:

Jan. 23, 2008Jan. 30, 2008Cost of Printing 39.30Pamela Buhler
(Signature)Legal Ad rep / office manager
(Title)Jan 31, 2008
(Date Signed)

NOTICE OF APPLICATION NO.

1893-1 to Appropriate Water

Notice is given that Viewfield Rural
Water Association Inc., PO Box 157, |New Underwood SD 57761 has filed
an application for a water permit to
appropriate 0.29 cubic feet of water
per second from one well to be com-
pleted into the Inyan Kara Aquifer
(approximately 2,920 feet deep)
located in NE 1/4 SE 1/4 Section 3-
T3N-R10E for rural water system
use.Pursuant to SDCL 46-2A-2, the
Chief Engineer recommends
APPROVAL of Application No. 1893-
1 because 1) unappropriated water
is available, 2) existing rights will not
be unlawfully impaired, 3) it is a ben-
eficial use of water, and 4) it is in the
public interest. In accordance with
SDCL 46-2A-23, the Chief Engineer
will act on this application, as recom-
mended, unless a petition is filed
opposing the application or the appli-
cant 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 sched-
uled and the Water Management
Board will consider this application.
Notice of the hearing will be given to
the applicant and any person filing a
petition.Any person interested in opposing
or supporting this application or rec-
ommendations 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 mail-
ing address is given above. A peti-
tion filed by either an interested per-
son or the applicant must be filed by
February 11, 2008.The petition may be informal, but
must include a statement describing
the petitioner's interest in the appli-
cation, the petitioner's reasons for
opposing or supporting the applica-
tion, and the signature and mailing
address of the petitioner or the peti-
tioner's legal counsel, if legal coun-
sel is obtained. Contact Eric
Gronlund at the above Water Rights
Program address to request copies
of information pertaining to this
application.Steven M. Pimer,
Secretary,
Department of Environment
and Natural Resources.
Meade County Times-Tribune
Publ. Jan. 23 & 30, 2008



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

January 17, 2008

Meade County Times & Tribune
PO Box 69
Sturgis SD 57785

ATTENTION: Legal Public Notice

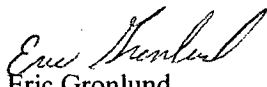
Enclosed is a Notice on Application No. 1893-1 to Appropriate Water to be published twice. Please publish the first notice on January 23, 2008 with the second publication 7 days later. The text of the notice can be e-mailed to your paper by contacting Karen Schlaak at (605) 773-3352.

The applicant must verify to you that the notice is to be published, before you make the first publication. **Please BILL the APPLICANT for the cost of publication.** The APPLICANT is Viewfield Rural Water Assn, Larry Gossard, PO Box 157, New Underwood, SD 57761 (Ph # 605-441-6165).

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. 1893-1

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

Date _____

We are in receipt of your letter of January 17, 2008 enclosing Notice to Appropriate Water by Application No. 1893-1 which was first published in our issue of _____. **ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.**

Name

Newspaper



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

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

January 17, 2008

Viewfield Rural Water Association Inc
Larry Gossard
PO Box 157
New Underwood SD 57761

Dear Mr. Gossard:

Water Permit Application No. 1893-1 for rural water system use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Publisher of the Meade County Times & Tribune printed at Sturgis SD (Ph # 605-347-2503). You will need to contact the newspaper and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the applications are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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

Instruction to Newspaper - Publish first Notice on January 23, 2008 with the second publication 7 days later. The applicant is responsible for payment.

NOTICE OF APPLICATION NO. 1893-1 to Appropriate Water

Notice is given that Viewfield Rural Water Association Inc., PO Box 157, New Underwood SD 57761 has filed an application for a water permit to appropriate 0.29 cubic feet of water per second from one well to be completed into the Inyan Kara Aquifer (approximately 2,920 feet deep) located in NE ¼ SE ¼ Section 3-T3N-R10E for rural water system use.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 1893-1 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. In accordance with SDCL 46-2A-23, the Chief Engineer will act on this application, as recommended, unless a petition is filed opposing the application or the applicant files a petition contesting the Chief Engineer's recommendation. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

Any person interested in opposing or supporting this application or recommendations 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 February 11, 2008.

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



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

FEB 14 2000

Viewfield Rural Water Assoc, Inc.
Larry Gossard, President
PO Box 157
New Underwood SD 57761

Dear Mr. Gossard:

Enclosed is Water Permit No. 1893-1 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

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCESJOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
<http://denr.sd.gov>

JUN 21 2017

1874-1
1893-1
1898-1Larry Gossard, President
Viewfield Rural Water Association Inc
16195 Pioneer Rd
New Underwood SD 57761

Dear Mr. Gossard:

Enclosed are Water License Nos. 1874-1 and 1898-1. These are the final water right documents completing your process of obtaining Water Rights. Included with each license is a map prepared by the staff engineer who conducted the field investigation.

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

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

Sincerely,

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

enclosures

Note: Upon licensing, the applicable portions of Water Permit No. 1893-1 were incorporated into Water License No. 1898-1.