

WATER PERMIT NO. 2796-2

Name of Applicant: Nelson's Oil & Gas Inc.

Address: 1346 Galveston Ave, Hot Springs SD 57747 Phone: 605 745-4189

Amount of Water Claimed: 0.018 cfs Total Acres: NA

Source of Water Supply: groundwater (one well)

Water to be used for: commercial County: Pennington

Type of Waste Disposal System: Septic system

Location: 1/2 mile east of Hill City

PRIORITY Date Received: 2-15-19

Application/License Fee: \$ 300

Corrected Application Received: 2-20-19

Period of Annual Use: January 1 – December 31

Remarks:

Diversion Point: NE 1/4 NW 1/4 (Lot 23) Section
29-T1S-R5E

Land to be Irrigated: NA

Depth of Well: 200 feet

Well Driller: Alexander Drilling

Remarks:

Type of Map: aerial

Prepared by:

Reviewed and the Number Assigned on: 2-20-19

By: **Karen Schlaak**

Notice of Hearing - date to intervene: _____

		⊗			
			29		

SOUTH DAKOTA
WATER PERMIT NO. 2796-2

Date of first receipt of application February 15, 2019.

Date of return to applicant for corrections, amendments or changes February 19, 2019.

Date of receipt of corrected application February 20, 2019.

The Chief Engineer, on behalf of the Water Management Board, issues Water Permit No. 2796-2 to Nelson's Oil & Gas Inc., c/o Brian Nelson, 1346 Galveston Ave, Hot Springs SD 57747 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. 2796-2 appropriates 0.018 cubic feet of water per second (8 gallons per minute) from one well completed into the Crystalline Rock Aquifer (200 feet deep) located in the NE 1/4 NW 1/4 (Lot 23) Section 29-T1S-R5E. The annual volume of water pumped will be less than 1.0 acre-foot of water. This site is located approximately 1/2 mile east of Hill City SD.
2. The water appropriated shall be used for the purpose of commercial use and may not exceed the amount of water needed for beneficial use.
3. The water is to be used during the following described annual period: January 1 – December 31.
4. The date of approval of Permit No. 2796-2 is April 22, 2019.
5. The date from which applicant may claim right is February 15, 2019.
6. One-fifth of the construction is to be completed on or before October 22, 2021.
7. All construction is to be completed on or before April 22, 2024.
8. Water is to be put to beneficial use on or before April 22, 2028.
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 permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Crystalline Rock aquifer.
3. Water Permit No. 2796-2 authorizes a total annual diversion of 1.0 acre foot of water.

WATER MANAGEMENT BOARD

By: _____

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

MAY 01 2019

date



PAID

FEB 15 2019

Ck# 012028

RECEIVED

FEB 15 2019

WATER RIGHTS
PROGRAM

Mail to: DENR - Water Rights 523 E Capitol Ave Pierre, SD 57501-3182 ph. (605) 773-3352	No. <u>2796-2</u> (office use only) Hydrologic Unit <u>10120109</u>
	Basin <u>Upper Cheyenne</u>
	Newspaper <u>Rapid City Journal</u>

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

Check use(s) of water:

☐ Municipal	☐ Water Distribution System	☐ Recreational	☐ Institutional
☐ Rural Water System	☒ Commercial	☐ Fish & Wildlife	☐ Geothermal
☐ Domestic (over 18 gpm)	☐ Industrial	☐ Other	

Type of Application:
(check one)

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

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

- Name to Appear on Water Permit Nelson's Oil & Gas Inc.
Mailing Address 1346 Dalton Ave. Hot Springs SD 57747
(Address) (City) (State) (Zip Code)
Phone (605) 745-4189 Mobile _____ Email Brian.Nelson@NelsonsOilandGas.com
- Amount of water claimed 0.018 *CFS or 8.0 **GPM and 1 ***AF or _____ Gallons
Flow rate and volume are both required. (*Cubic Feet per Second) (**Gallons per Minute) (***Acre Feet - storage capacity of dam/dugout or annual use)
- Source of water supply Well (Lot 23)
- Location of point of diversion 1 well NE 1/4 NW 1/4 Sec 29 Twp 15 Rg 53 County Penn
(example - 3 wells in SW 1/4 NE 1/4 section 12-T104N-R53W)
If not a public water supply (e.g. municipal), will water be used outside of the area described above? ☐ Yes ☒ No
If "Yes," where will water be used? _____
(example - NW 1/4 section 12-T104N-R53W)
- County or counties where water will be used Penn.
- Annual period during which water is to be used year round Jan 1-Dec 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)

Small office building & restrooms

I, Brian Nelson Owner, the applicant, certify under
Name of Person Title (if applicable)

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

Supplemental Information

(type or print)

1. Well Information (check one or both as applicable) ☐ Drilling new well(s) ☐ Using existing well(s)

a) If new wells, how many ____ Have test holes been drilled ☐ Yes ☐ No Drilled by ____
(if yes, please provide copies of logs)

b) If existing wells, how many ____ Provide copy of log(s), if available. Drilled by ____

For either Existing or Proposed Wells:

c) Well Depth (required) ____ Depth to Top of Water Bearing Material ____ Depth to Water from Surface ____

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

2. Wastewater Disposal System Information

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

b) System Capacity (gallons) ____ Year Constructed ____

c) Connected to the City of ____ Sanitary System

3. Dugout Information

a) Surface Dimensions ____ Depth ____

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

4. Water Storage Dams

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

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

b) Freeboard ____

c) Crest Width ____

Crest Length ____

d) Height ____

e) Primary Outlet Capacity ____

If pipe, diameter ____

f) Secondary Spillway Capacity ____

Spillway Width ____

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

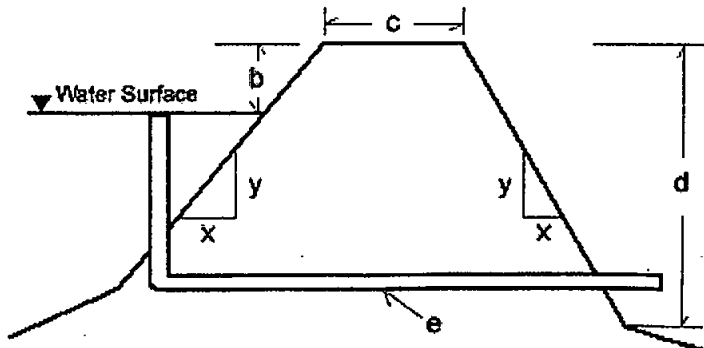
Upstream ____

Downstream ____

h) Surface Area of Impoundment ____

i) Storage ____ Acre Feet

j) Drainage Area Above Dam ____ Acres

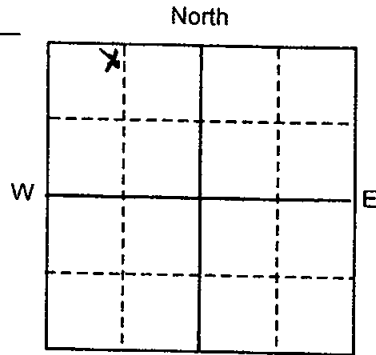


SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NW ¼ NW ¼ Sec 29 Twp 1S Rg 5E

County Pennington

Please mark well
location with an "X"

Well Completion Date

1-7-2019

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

PROPOSED USE:

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

METHOD OF DRILLING:

Rotary downhole hammer

CASING DATA:

☒ Steel ☐ Plastic ☐ Other
 If other describe Set 42' of 6" steel

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
LB/FT	IN	0.0 FT	40.0 FT	8.75 IN
LB/FT	IN	40.0 FT	200.0 FT	6.00 IN
LB/FT	IN	FT	FT	IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
Portland II	4	Lb/gal	40.0 Ft	8.0 Ft
		Lb/gal	Ft	Ft

Describe grouting procedure
through trim pipe while driving casing

SCREEN:

☐ Perforated pipe ☐ Manufactured

Diameter _____ Inches Length _____ Feet

Material _____

Slot Size _____ Set From _____ Feet to _____ Feet

Other information _____

WAS A PACKER OR SEAL USED?

☐ Yes ☒ No

If so, what material? _____

Describe packer(s) and location _____

DISINFECTION: Was well disinfected upon completion?

☒ Yes, How? w/chlorine solution

☐ No, Why Not? _____
Lab to which water
quality sample sent for analysis _____

Well Owner: Nelson's Oil & Gas

Business Name: _____

Address: 1346 Galveston Ave.

City, State, Zip: Hot Springs SD 57747

WELL LOG:

FORMATION	DEPTH	
	FROM	TO
Drift- gravel	0	35
Hard grey schist	35	52
Grey schist fracture 3 gpm	52	54
Hard grey schist	54	110
Grey schist fracture 5 gpm	110	112
Hard grey schist	112	165
Grey schist fracture 8 gpm	165	167
Hard grey schist	167	200

STATIC WATER LEVEL 20.0 FEET

If flowing: closed in pressure _____ PSI

GPM flow 8.0 through _____ Inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other _____

Reduced flow rate _____ GPM

Can well be completely shut in? _____

WELL TEST DATA:

☒ Pumped Describe: w/air
☐ Bailed
☐ Other

Pumping Level Below Land Surface

_____ Ft. After _____ Hrs. pumped _____ GPM

_____ Ft. After _____ Hrs. pumped _____ GPM

If pump installed, pump rate: _____ GPM

REMARKS

This well was drilled under license # 324 and this
report is true and accurate.

Drilling firm: Alexander Drilling Inc.

Signature of License Representative: _____

Signature of Well Owner or Equitable Property Holder: _____

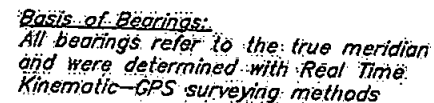
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JAN 18 2019

Date: 1-14-19

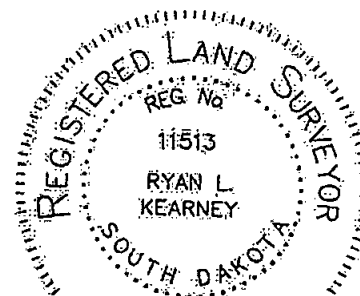
WATER RIGHTS
PROGRAM

LOCATED IN THE NW $\frac{1}{4}$ NE $\frac{1}{4}$, SECTION 29,
TOWNSHIP 1 SOUTH, RANGE 5 EAST, BLACK HILLS MERIDIAN,
PENNINGTON COUNTY, SOUTH DAKOTA



- *BLM brass cap monument,
2 1/2" diameter*
- *Angle point, not monumented*
- ▲ *Aluminum cap on 12 in. aluminum
rod, 5/8" diam., below ground*
- ◆ *Brass cap on 18 in. copper coated
steel rod, 1/2" diam., below ground*
- *Forest Service aluminum monument,
2 1/2" diameter*

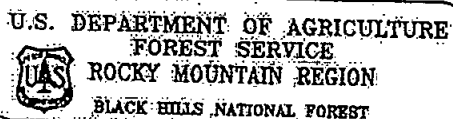
Highway Right-of-Way
Road Right-of-Way



I, Ryan L. Kearney, do hereby certify that this plat was made from a field survey done by me at the request of the U.S. Department of Agriculture, Forest Service, and that it represents the land shown hereon, to the best of my knowledge.

Ryan Korney	11513	8/26/13
Ryan Korney	LS Number	Date

Prepared By: Ryan Kearney



This Survey was made at my request and is hereby approved for National Forest right-of-way purposes:

Forest Engineer Date 8/26/13

ROW Exhibit



Sec 19
T001S
R05E

Sec 20
T001S
R05E

Sec 21
T001S
R05E

Sec 30
T001S
R05E

Sec 29
T001S
R05E

Sec 28
T001S
R05E

Sec 31
T001S
R05E

Sec 32
T001S
R05E

Sec 33
T001S
R05E

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date February 19, 2019

RECEIVED OF Nelson's Oil & Gas Inc. 1346 Galveston Ave Hot Springs SD 57747

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

Fee for Application for Permit No. <u>2796-2</u> to Appropriate Water, to construct and to put water to beneficial use	100	00
Fee for Application for Permit No. _____ to Appropriate Water for Future use		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. <u>2796-2</u>	200	00
Fee for Filing Transfer Form _____		
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	300 00

No. **09045**

By

Jeanne Goodman
Chief Engineer *Jm*

Schlaak, Karen

From: Schlaak, Karen
Sent: Wednesday, February 20, 2019 8:08 AM
To: 'Brian Nelson'
Subject: RE: [EXT] Application for Water Permit

We agree the 900 gallons per day is more than your use will ever be, but it is better to estimate high. I saw your address was Hot Springs and didn't review the location. I guess Hot Springs is in Fall River County and not Pennington County as you indicated on the application. Thanks for the clarifications.

A report and recommendation will be prepared regarding your application. You will receive a letter with instructions from us when it is time for the public notice. If you have questions, please contact me.

Karen

From: Brian Nelson [mailto:brian_nelson@nelsonsoilandgas.com]
Sent: Tuesday, February 19, 2019 3:11 PM
To: Schlaak, Karen
Subject: RE: [EXT] Application for Water Permit

Karen, the office is in Hill City, not Hot Springs, It is on a Septic, installed by Matt Hespen of Custer. I don't see us ever coming close to the 900 a day.

Hope this help Thanks Brian Nelson

From: Schlaak, Karen [<mailto:Karen.Schlaak@state.sd.us>]
Sent: Tuesday, February 19, 2019 1:07 PM
To: Brian Nelson <brian_nelson@nelsonsoilandgas.com>
Subject: Application for Water Permit

Mr. Nelson,

We received your Application for a Water Permit and have a couple of questions.

Regarding the wastewater disposal system, do you utilize a septic tank, drain field system or are you connected to the City of Hot Springs sanitary system?

Also, the application states a diversion rate of 8 gallons per minute from the well. DENR also quantifies the water permit on an annual volume. Since the diversion is for a small office with two restrooms, we presume the annual volume is relatively small. In similar instances we quantify the annual volume at 1.0 acre foot of water which equates to 325, 851 gallons per year. This would equate to a daily use of just less than 900 gallons per day. We assume that is an over estimation of the water use but would rather be on the high side as opposed to under estimating the water use. Please let us know if this is acceptable.

If you have questions, please let me know.

Karen Schlaak

SD DENR, Water Rights Program

(605) 773-3352





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

denr.sd.gov

February 5, 2019

Nelson's Oil & Gas
1346 Galveston Ave
Hot Springs SD 57747

Dear Sir:

I am writing in regard to a well completion report filed by Alexander Drilling Inc. The report shows a new well has been completed on January 7, 2019 located in Pennington County. Based on the information in the report, you may need a water permit for this water use.

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

Enclosed are application forms and instruction sheet to apply for a water permit. The completed forms with the application fee and map can be returned to: Water Rights Program, 523 E. Capitol, Pierre, SD 57501. Please respond by March 1, 2019.

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

Sincerely,

A handwritten signature in black ink that reads "Karen Schlaak".

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

enclosures



**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

**RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2796-2, Nelson's Oil & Gas 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. 2796-2, Nelson's Oil & Gas Inc., c/o Brian Nelson, 1346 Galveston Avenue, Hot Springs SD 57747.

The Chief Engineer is recommending APPROVAL of Application No. 2792-2 because 1) there is reasonable probability that there is unappropriated water available for the applicant's proposed use, 2) the proposed diversion can be developed without unlawful impairment of existing rights, 3) the proposed use is a beneficial use and 4) it is in the public interest with the following qualifications:

1. The well approved under this Permit will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this Permit shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
2. The permit holder shall report to the Chief Engineer annually the amount of water withdrawn from the Crystalline Rock aquifer.
3. Water Permit No. 2796-2 authorizes a total annual diversion of 1.0 acre foot of water.

See report on application for additional information.

Jeanne Goodman, Chief Engineer
April 2, 2019

Report to the Chief Engineer
Water Permit Application No. 2796-2
Nelson's Oil & Gas, Inc. % Brian Nelson
1346 Galveston Ave. Hot Springs, SD 57747

15 March, 2019

Nelson's Oil & Gas, Inc. has applied to appropriate water at a maximum instantaneous diversion rate of 0.018 cubic feet per second (8 gallons per minute) from one well completed into the Crystalline Rock aquifer (200 feet deep) located in the NE ¼ NW ¼ (Lot 23) Section 29-T1S-R5E for commercial use. The annual volume of water pumped will be less than 1.0 acre-foot (ac-ft). This site is located approximately one half mile east of Hill City, South Dakota.

Aquifer: Crystalline Rock (CRSL)

Hydrogeologic characteristics of the aquifer

The Crystalline Rock aquifer is the designation given for all localized aquifers in the Precambrian igneous and metamorphic rocks and Tertiary Period igneous rocks of the Black Hills. Within those formations, water is transmitted to wells from joints, faults, and fractures (secondary porosity) below the surface (Rahn, 1979). Below a depth of 500 feet, lithostatic pressure effectively prevents secondary porosity from occurring in the aquifer (Rahn, 1979). Using a depth of 500 feet, an effective porosity of 0.01, and the area of the outcrop of the aquifer ($25 \times 10^9 \text{ ft}^2$), the amount of recoverable water in the Crystalline Rock aquifer is estimated to be around 2.9 million acre-feet (Rahn, 1979). Because water in the Crystalline Rock aquifer is transmitted to wells via secondary porosity, availability of water is site-specific.

One well was completed for this application on January 7, 2019 by Alexander Drilling, Inc. The driller reported "Drift- gravel" from 0 to 35 feet and hard grey schist from 35 to 200 feet below land surface. Fractures in the schist were found from 52 to 54 feet, 110 to 112 feet, and 165 to 167 feet below land surface. A casing was placed from the surface down to 40 feet below land surface, isolating this well from the gravel above the aquifer. The water level was 20 feet below the top of the casing the day the well was drilled.

Applicable South Dakota Codified Law

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

Pursuant to SDCL 46-6-3.1, no application to appropriate groundwater may be approved if 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 the water to the groundwater source. An

exception allows water distribution systems to withdraw from groundwater sources older or stratigraphically lower than the Greenhorn Formation regardless of the results of a hydrologic budget. The Crystalline Rock aquifer is older than the Greenhorn Formation, but Nelson's Oil and Gas is not a water distribution system as defined in SDCL 46-1-6(17).

Water Availability

Recharge to the aquifer occurs by infiltration of precipitation and streamflow losses. Discharge from the aquifer occurs through evapotranspiration, seepage to streams, and withdrawals from wells. Driscoll and Carter (2001) described the Crystalline Rock aquifer as multiple localized aquifers and estimated recharge to the Crystalline Rock aquifers to be equal to withdrawals, however, it was noted that actual recharge to the crystalline aquifers must be larger than estimated to account for discharge to streams. Driscoll and Carter (2001) concluded quantification of a hydrologic budget to the Crystalline Rock aquifer is not feasible because "Recharge conditions are highly transient and have large spatial variability." Therefore, there are no estimates of either average annual recharge to or withdrawals from the localized aquifer.

Observation Well Data

The Water Rights Program maintains two observation wells completed into the Crystalline Rock aquifer, labeled PE-95D and CU-86A. Observation Well PE-95D goes through 20 feet of clay, 40 feet of weathered Englewood Formation, and 292 feet of Deadwood Formation before it reaches Precambrian rock, so it is under extremely different conditions than the well for this application (SD Water Rights, 2019a). Observation Well CU-86A is located approximately 12 miles south of the location of the well for this application in the City of Custer. Figure 1 shows a hydrograph of Observation Well CU-86A.

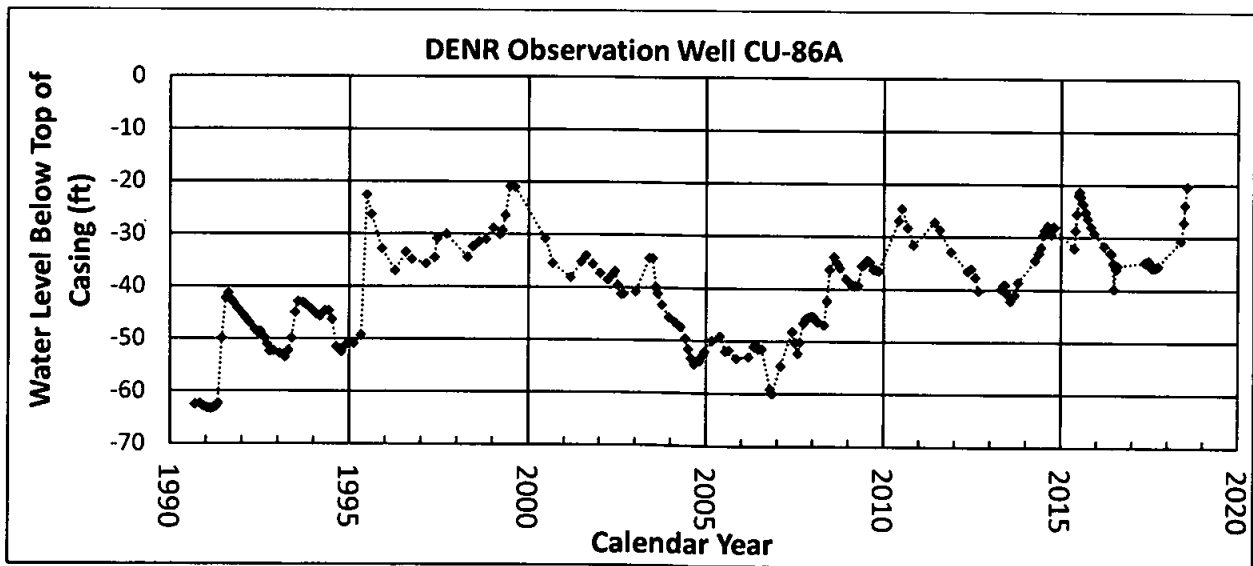


Figure 1: Hydrograph for DENR Observation Well CU-86A. The elevation at the top of the casing is 5381.5 feet above mean sea level (SD Water Rights, 2019a).

Observation Well CU-86A is unlikely to be hydrologically connected to the area of the aquifer the well for this application is in. However, the hydrograph for the observation well generally follows climate trends for the Black Hills and shows the large variance in water levels possible in the Crystalline Rock aquifer due to climate (NOAA, 2019). Since the pump rate for the well for this application is relatively small, it is unlikely this well will cause a change in water level in the aquifer that is distinguishable from variance due to climate. Therefore, there is reasonable probability water is available for this application without withdrawals exceeding recharge.

Existing Users

The nearest domestic well on file with the DENR is approximately 700 feet southwest of the site of this application (SD Water Rights, 2019c). The nearest water right or permit is Water Right No. 2267-2, owned by Larry and Karen Moore approximately 600 feet east of the site of this application, authorized to pump at a maximum instantaneous rate of 0.1 cfs (45 gallons per minute). Figure 2 shows a map of water rights and permits near this application and Table 1 displays information about the water rights or permits displayed within the extent of the map.

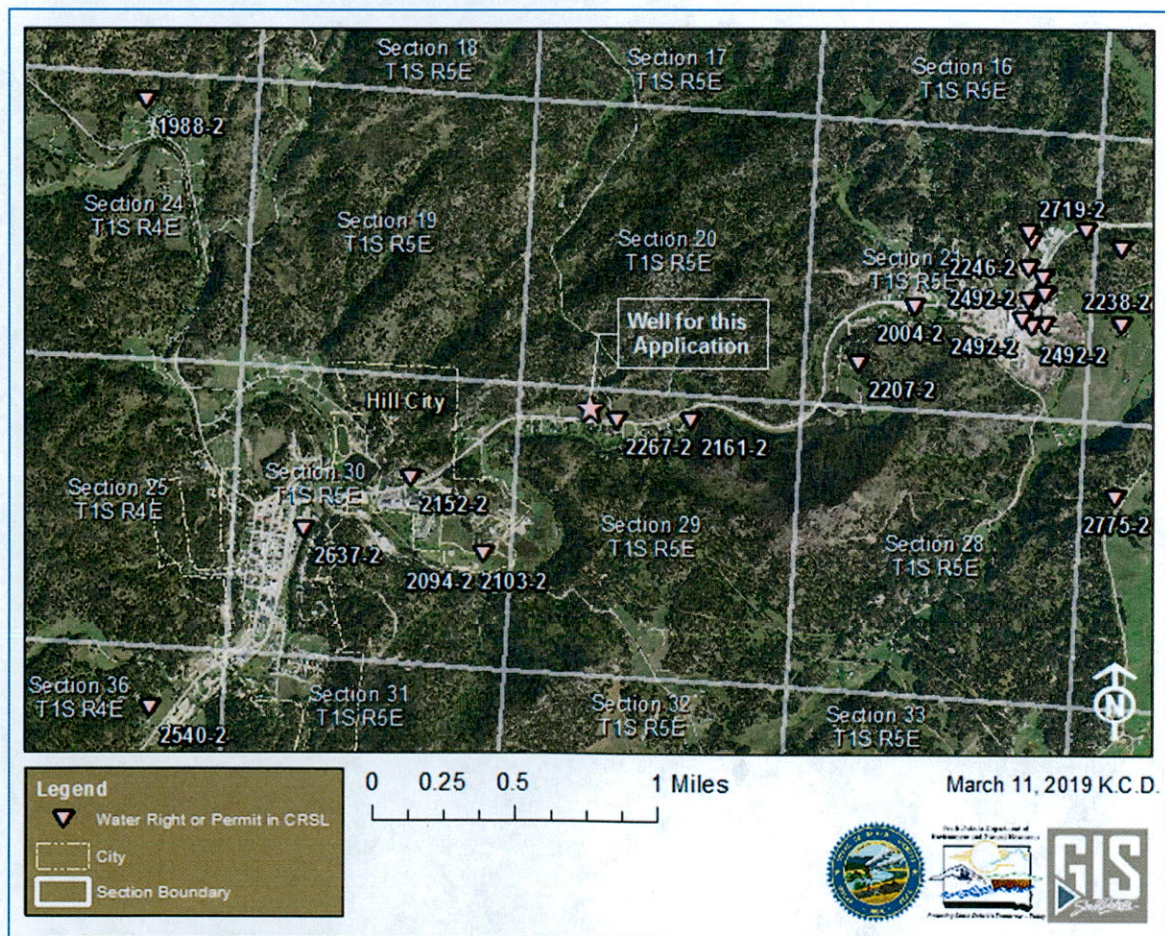


Figure 2: Water rights and permits withdrawing from the Crystalline Rock aquifer near this application (SD Water Rights, 2019b)

Report on Water Permit Application 2796-2

Table 1: Water rights or permits withdrawing from the Crystalline Rock aquifer near this application (SD Water Rights, 2019b)

Permit/Right No.	Owner	Status	Priority	Use	Pump Rate (cfs)	Appropriation (ac-ft/yr)
1988-2	Rand & Gayla Williams	LC	06/25/1986	SHD	0.070	N/A
2004-2	Gustave A Orloske	LC	01/01/1948	COM	0.020	N/A
2094-2	City of Hill City	LC	07/17/1989	MUN	0.250	N/A
2103-2	City of Hill City	LC	10/03/1989	MUN	0.200	N/A
2152-2	Drew Dawson	LC	01/01/1948	COM	0.050	N/A
2159-2	Daisey Enterprise, LLC	LC	01/01/1945	COM	0.070	N/A
2161-2	Lode Stone Motel	LC	01/24/1991	COM, DOM	0.017	N/A
2207-2	Robins Roost Cabins	LC	08/01/1953	COM	0.020	N/A
2232-2	Mountain View Lodge	LC	06/11/1992	COM	0.034	N/A
2238-2	Larry & Karen Moore	LC	07/28/1992	COM, DOM	0.022	N/A
2246-2	Gordon W. Collins	LC	09/16/1992	COM	0.022	N/A
2267-2	Larry & Karen Moore	LC	01/01/1953	COM	0.100	N/A
2492-2	Rushmore Forest Products	LC	10/31/2002	IND, DOM	0.520	N/A
2529-2	Prairie Berry, LLC	LC	04/14/2004	COM	0.056	N/A
2540-2	Jane Meuwissen	PE	10/04/2004	COM	0.100	N/A
2589-2	Rolland and Dawnette Owens	LC	05/25/2006	COM	0.022	N/A
2637-2	Black Hills Central Railroad Co.	LC	08/15/2008	COM	0.090	N/A
2719-2	Prairie Berry, LLC	LC	10/15/2013	COM	0.060	N/A
2775-2	Chace or Leslie Larsen	LC	09/05/2017	COM	0.031	2.0
DOM - Domestic, COM - Commercial, IND - Industrial, SHD - Suburban Housing Development, MUN - Municipal						

In the past, the Water Management Board has recognized that to place water to maximum beneficial use, a certain amount of drawdown within the aquifer may occur. To protect domestic well users, the Water Management Board defined an “adversely impacted adequate well” in ARSD 74:02:04:20(7) as:

“A well in which the pump intake was set at least 20 feet below the top of the aquifer at the time of construction or, if the aquifer is less than 20 feet thick, is as near to the bottom of the aquifer as is practical and the water level of the aquifer has declined to a level that the pump will no longer deliver sufficient water for the well owner's needs.”

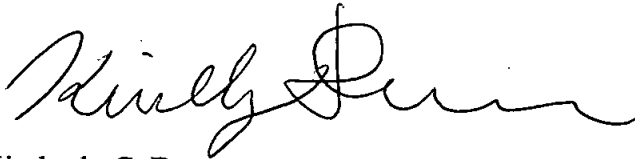
While in most aquifers putting the pump intake 20 feet below the top of the aquifer is sufficient for domestic wells, in the Crystalline Rock aquifer, 20 feet below the top of the aquifer is seldom a sufficient depth for a well to be a dependable water supply. This is due to the low porosity of the crystalline rock and water availability at a given location being linked to the unpredictable occurrence of secondary porosity, so wells that meet the ARSD 74:02:04:20(7) definition of an adequate well might not yield sufficient water for a well owner’s needs. The precise drawdown behavior cannot be known without a pumping test. Water levels in the Crystalline Rock aquifer are known to vary up to 40 feet based on climactic conditions, as shown in Figure 1. No well interference issues are on file with the DENR Water Rights Program for wells completed into the Crystalline Rock aquifer in Pennington County (SD Water Rights, 2019d). Due to the low pump

Report on Water Permit Application 2796-2

rate for this application and lack of well interference issues, it is not expected that drawdown will unlawfully impact nearby domestic users or prior water rights/permits.

Conclusions

1. Water Permit Application 2796-2 for Nelson's Oil and Gas proposes to appropriate 0.018 cfs (8 gallons per minute) from a well in the Crystalline Rock aquifer for commercial use. The maximum annual appropriation will be less than 1.0 acre-foot.
2. An estimate of average annual recharge to the local Crystalline Rock aquifer is not available so a hydrologic budget cannot be analyzed. However, based on observation well data and the relatively small diversion rate proposed by this application, there is reasonable probability unappropriated water is available for this application.
3. It is not likely well interference caused by this well will unlawfully impact nearby domestic users or Water Rights/Permits with an earlier priority date.



Kimberly C. Drennon
Natural Resources Engineer I

References

- Driscoll, D. G. & Carter, J. M., 2001. *Hydrologic Conditions and Budgets for the Black Hills of South Dakota, Through Water Year 1998*, Rapid City, South Dakota: U. S. Geological Survey.
- NOAA, 2019. *Climate at a Glance: Divisional Time Series*. [Online]
Available at: <https://www.ncdc.noaa.gov/cag>
[Accessed 8 March 2019].
- Rahn, P. H., 1979. *Ground Water Resources of Western South Dakota*, Rapid City, South Dakota: South Dakota School of Mines and Technology.
- SD Water Rights, 2019a. *Observation Well Database*, Joe Foss Bldg., Pierre, South Dakota: SD DENR Water Rights Program.
- SD Water Rights, 2019b. *Water Right/Permit File Database*, Joe Foss Bldg., Pierre, South Dakota: SD DENR Water Rights Program.
- SD Water Rights, 2019c. *Well Completion Reports Database*, Joe Foss Bldg., Pierre, South Dakota: SD DENR Water Rights Program.
- SD Water Rights, 2019d. *County Files*, Joe Foss Bldg. Pierre, South Dakota: SD DENR Water Rights Program.

RECEIVED

APR 18 2019

WATER RIGHTS
PROGRAM

April 11 L21111425

NOTICE OF APPLICATION

NO. 2796-2 to Appropriate Water
Notice is given that Nelson's Oil & Gas Inc, c/o Brian Nelson, 1346 Galveston Ave, Hot Springs SD 57747 has filed an application for a water permit to appropriate 0.018 cubic feet of water per second (8 gallons per minute) from one well completed into the Crystalline Rock Aquifer (200 feet deep) located in the NE 1/4 NW 1/4 (Lot 23) Section 29-T1S-R5E for commercial use. The annual volume of water pumped will be less than 1.0 acre-foot of water. This site is located approximately 1/2 mile east of Hill City SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2796-2 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352) and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by April 22, 2019.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

If the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

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

(Published once at the total approximate cost of \$38.27)

Affidavit of Publication

STATE OF SOUTH DAKOTA

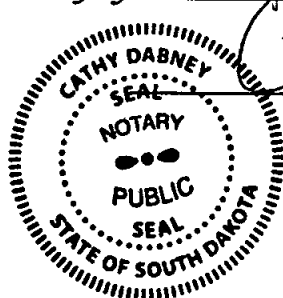
County of Pennington

SS:

Sheri Sponder being first duly sworn, upon his/her oath says: That he/she is now and was at all time hereinafter mentioned, an employee of the RAPID CITY JOURNAL, a corporation of Rapid City, South Dakota, the owner and publisher of the RAPID CITY JOURNAL, a legal and daily newspaper printed and published in Rapid City, in said County of Pennington, and has full and personal knowledge of all the facts herein stated as follows: that said newspaper is and at all of the times herein mentioned has been a legal and daily newspaper with a bonafide paid circulation of at least Two Hundred copies daily, and has been printed and published in the English language, at and within an office maintained by the owner and publisher thereof, at Rapid City, in said Pennington County, and has been admitted to the United States mail under the second class mailing privilege for at least one year prior to the publication herein mentioned; that the advertisement, a printed copy of which, taken from said Rapid City Journal, the paper in which the same was published, is attached to this sheet and made a part of this affidavit, was published in said paper once each day for one successive day, the first publication there of being on the 11th day of April 2019 that the fees charged for the publication there of are 50 dollars and 27 cents.

Sheri Sponder

Subscribed and sworn to before me this 15th day of April, 2019.



Cathy Dabney
Notary public
4-16-2024
My commission expires

Schlaak, Karen

From: Schlaak, Karen
Sent: Tuesday, April 02, 2019 1:48 PM
To: RCY Legals (legals@rapidcityjournal.com)
Subject: 2796-2, Nelson's Oil & Gas Inc.
Attachments: 2796-2public.short.docx; FORM8.FRM.doc

Attached is a notice to be published on April 11, 2019.

Nelson's Oil & Gas Inc, c/o Brian Nelson, 1346 Galveston Ave, Hot Springs SD 57747 (605 745-4189) has been notified to contact you to authorize publication and arrange for payment.

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

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

Karen Schlaak

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





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

denr.sd.gov

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

April 2, 2019

Nelson's Oil & Gas Inc.
c/o Brian Nelson
1346 Galveston Ave
Hot Springs SD 57747

Dear Mr. Nelson:

Water Permit Application No. 2796-2 for commercial use has been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice has been sent to the Rapid City Journal printed at Rapid City SD (Ph # 605 394-8300). You will need to contact the newspaper and authorize publication of this notice. For your information, a copy of the notice, the recommendation of the Chief Engineer and report on the application are enclosed. Please review the notice prior to publication and notify this office, if you have any corrections or questions.

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

Sincerely,

Eric Gronlund
Natural Resources Engineer
(605) 773-3352

enclosures

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

NOTICE OF APPLICATION NO. 2796-2 to Appropriate Water

Notice is given that Nelson's Oil & Gas Inc, c/o Brian Nelson, 1346 Galveston Ave, Hot Springs SD 57747 has filed an application for a water permit to appropriate 0.018 cubic feet of water per second (8 gallons per minute) from one well completed into the Crystalline Rock Aquifer (200 feet deep) located in the NE 1/4 NW 1/4 (Lot 23) Section 29-T1S-R5E for commercial use. The annual volume of water pumped will be less than 1.0 acre-foot of water. This site is located approximately 1/2 mile east of Hill City SD.

Pursuant to SDCL 46-2A-2, the Chief Engineer recommends APPROVAL of Application No. 2796-2 with qualifications because 1) unappropriated water is available, 2) existing rights will not be unlawfully impaired, 3) it is a beneficial use of water, and 4) it is in the public interest. The Chief Engineer's recommendation with qualifications, the application, and staff report are available at <http://denr.sd.gov/public> or contact Eric Gronlund for this information, or other information, at the Water Rights Program address provided below.

Any person interested in opposing or supporting this application or recommendation must file a written petition with BOTH the applicant and Chief Engineer. The applicant must file a petition if contesting the Chief Engineer's recommendation. The Chief Engineer's address is "Water Rights Program, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)" and the applicant's mailing address is given above. A petition filed by either an interested person or the applicant must be filed by April 22, 2019.

The petition may be informal, but must include a statement describing the petitioner's interest in the application, the petitioner's reasons for opposing or supporting the application, and the signature and mailing address of the petitioner or the petitioner's legal counsel, if legal counsel is obtained.

If the applicant does not contest the recommendation of the Chief Engineer and no petition to oppose the application is received, the Chief Engineer shall act on the application pursuant to the recommendation with no hearing held before the Water Management Board. If a petition opposing the application or contesting the recommendation is filed, then a hearing will be scheduled and the Water Management Board will consider this application. Notice of the hearing will be given to the applicant and any person filing a petition.

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



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

MAY 01 2019

Nelson's Oil & Gas Inc
c/o Brian Nelson
1346 Galveston Ave
Hot Springs SD 57747

Dear Mr. Nelson:

Enclosed is Water Permit No. 2796-2 authorizing construction of the water diversion system and beneficial use of the water, not exceeding the limits as specified in the Water Permit.

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

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

Sincerely,


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

enclosures

2796-2
RECEIVED

MAY 09 2019

WATER RIGHTS
PROGRAMNOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USEDate 5-7-2019TO: Water Rights Program, DENR
523 E. Capitol
Pierre, SD 57501-3181

FROM:

Nelson's Oil & Gas Inc.
(name)23909 Hwy 385
(address)Hill City SD 57745 (city, state, zip) (605) 745-4189 (phone)

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

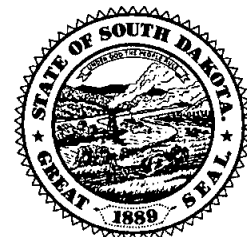
Water Permit No. 2796-2 states that the water use system is to be constructed by 4-1-2019 (date), and water is to be put to beneficial use by 5-7-2019 (date).

The water use system was completed on Feb. 1, 2019 (date).

Applying the water to beneficial use was completed on Feb. 20, 2019 (date).

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

B Nelson
(signature)





DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

May 9, 2019

2796-2

Brian Nelson
Nelson's Oil & Gas Inc
23909 Hwy 385
Hill City SD 57745

Dear Mr. Nelson:

I am writing to acknowledge receipt of the "Notice of Completion of Works" form that you sent in to let us know that you are completed with the water use system authorized under Permit No. 2796-2.

The system is now ready for inspection. Inspections are done on a county-by-county basis as staff time permits. You have done everything you need to do and the intervening time between the completion of your project and the staff inspection has no bearing on your water permit.

Someone from our office will contact you prior to the inspection to set up a time that is convenient for you. 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

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 2796-2

I have this day, May 16, 2019 made a thorough examination of the water use system constructed by **Nelson's Oil and Gas Inc., 1346 Galveston Ave., Hot Springs, SD 57747** of Permit No. **2796-2**, bearing the priority of **2/15/19** authorizing the diversion of .018 cu. ft. per second of the water from one well for commercial purposes in Pennington County.

Inspection contact & relationship to permit holder,
if applicable:

Brian Nelson, owner

Brian.Nelson@nelsonoilandgas.com

605-745-4189

**Physical address: 23909 Hwy 385, Hill City SD
57745**

A. Works used to divert the water:

Well Information:

- 1) Well Drilling Firm: Alexander Drilling (1/2019)
- 2) No. of Wells 1
- 3) Depth(s) 200 feet
- 4) Well log is available Yes

Casing:

- 1) Diameter 6"
- 2) Length 42 feet
- 3) Type Steel

Screen:

- 1) Type open hole
- 2) Length 160 feet
- 3) Static water level 20 feet

Pump:

- 1) Make Grundfos
- 2) Model 10SQE10-290
- 3) Size 3"
- 4) Capacity 8 GPM (constant pressure pump set at 60 psi.)
- 5) Horsepower rating 1 hp

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

The well pumps to a 60 psi constant pressure system located in the office building nearby for Nelson's Oil and Gas.

C. Works used to apply water to beneficial use:

The well serves the office building and two rest rooms.

D. Compliance with Permit Requirements:

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

E. Condition and Location:

The system is in good condition. The diversion point is located as follows:

368' S and 1,205' E of the NW corner Section 29 T1S R5E (43.939904 -103.553853)

1. The works are capable of diverting and conveying to the place of use .018 cu. ft. per second (8 gpm) of water which is to be used for **commercial** use and the license should be issued for .018 cfs.
2. All structures, wells and lands on map: **Yes**

F. Comments or other permit(s) associated with the project: none

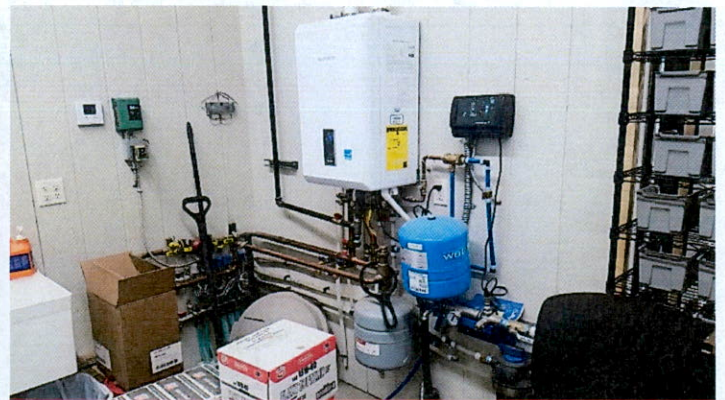


Steven Quissell
Water Rights Inspector
DENR, Water Rights Program

Date report completed: 5/17/2019

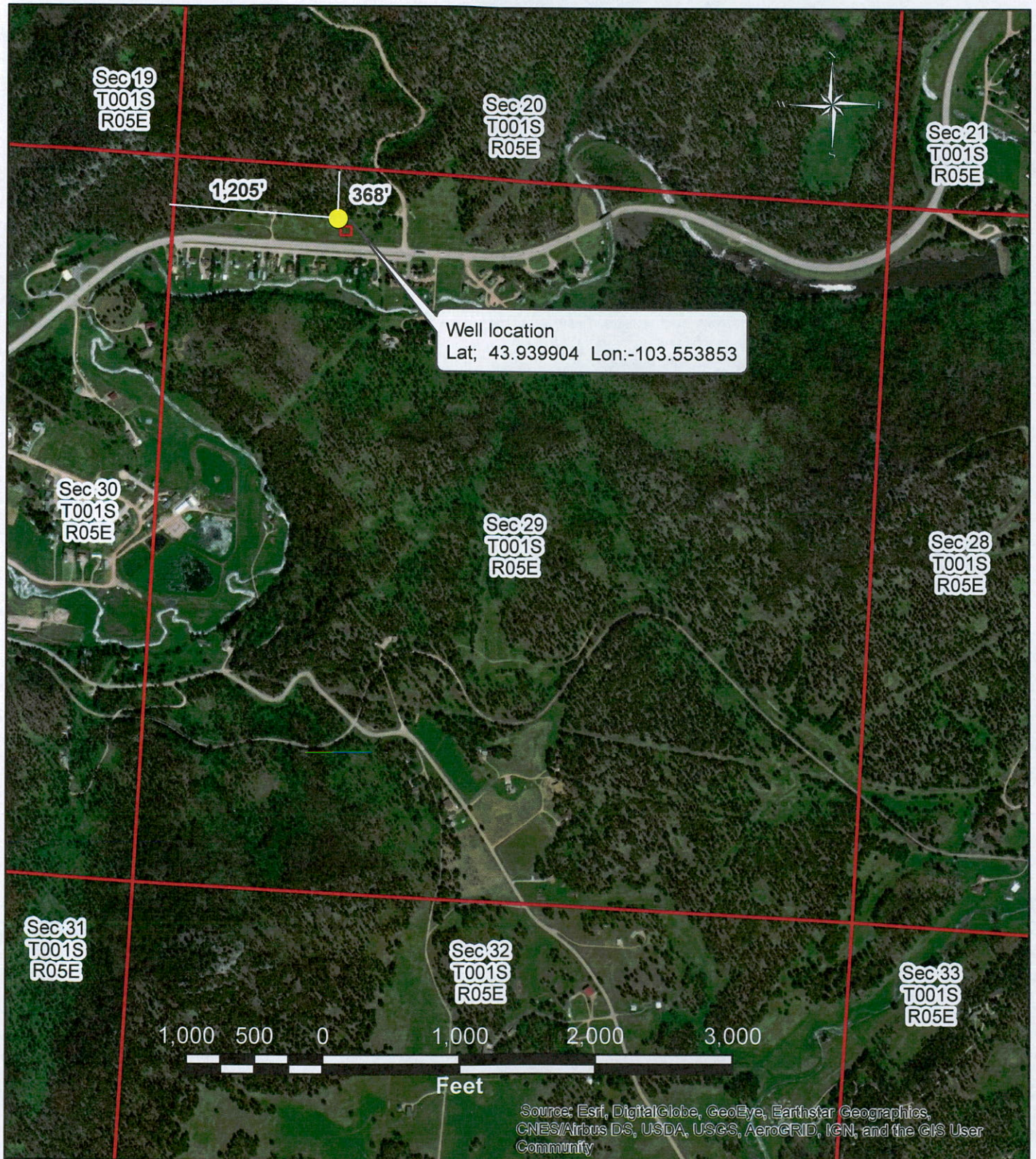


Well and Nelson Oil Building



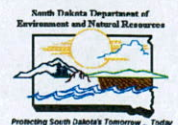
Plumbing and controls in building

Water Right #2796-2
Nelson's Oil and Gas
5/16/2019



Steven Quissell

Steven Quissell
Water Rights Inspector
DENR Water Rights Program



Approval of Location Change of Diversion Point

NAME: Nelson's Oil & Gas Inc.

ADDRESS: mailing address - 1346 Galveston Avenue, Hot Springs SD 57747
physical address – 23909 Hwy 385, Hill City SD 57745

DATE: May 22, 2019

COUNTY: Pennington

TELEPHONE:

AUTHORITY:

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

BACKGROUND:

Water Permit No. 2796-2 appropriates 0.018 cubic feet of water per second (8 gpm) from one well completed into the Crystalline Rock aquifer (200 feet deep) located in the NE ¼ NW ¼ Section 29-T1S-R5E. The annual volume of water pumped will be less than 1.0 acre-foot of water.

A licensing investigation was conducted on May 16, 2019, which found the well to actually be located in the NW ¼ NW ¼ Section 29-T1S-R5E. The well is 115 feet west of the quarter-quarter line separating the NW ¼ NW ¼ and the NE ¼ NW ¼ of Section 29. It appears to have been an error in describing the legal location at the time the application was filed due to the close proximity of the well to the quarter-quarter section line.

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

Based on the well depth, the well is constructed into the Crystalline Rock aquifer which is the authorized water source.

Water Permit No. 2796-2 appropriate 0.018 cfs (8 gpm). The licensing investigation found the permitted amount is what is being applied to beneficial use.

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

Not applicable

- **Review of Existing Diversions**

The nearest water right is located approximately 600 feet east of the originally listed well location. The actual well is a little over 115 feet farther west from this existing water right which lessens the chance for impairment. The nearest domestic well on file was 700 feet southwest of the original well site location. The actual well authorized by No. 2796-2 could mean the wells are slightly closer initially thought.

The nearest observation well that would be representative of conditions at this site is CU-86A. However the well is located approximately 12 miles south of the location of the well authorized by Permit No. 2796-2. This observation well is unlikely to be hydrologically connected to the area where the Nelson well is located. However, what the observation well does indicate is the wells generally follow climatic trends.

(continued)

Given the small pump rate, the original report for Application No. 2796-2 concluded that it is unlikely this well will cause a change in water level in the aquifer that is distinguishable from variances due to climate. Therefore, this change in location should not increase the potential for adverse effects to existing diversions.

RECOMMENDED ACTION

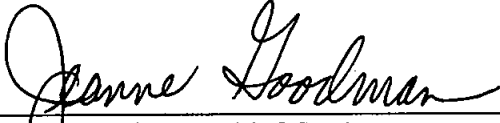
Based on the above criteria, it is recommended that the diversion point be licensed as developed.



Eric Gronlund, Engineering Manager
Water Rights Program

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

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



Jeanne Goodman, Chief Engineer
Water Rights Program



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

JUN 27 2019

2796-2

Brian Nelson
Nelson's Oil & Gas Inc.
1346 Galveston Ave
Hot Springs SD 57747

Dear Mr. Nelson:

Enclosed is Water License No. 2796-2. This is the final water right document completing your process of obtaining a Water Right. Included with your license is a map prepared by the staff engineer who conducted the field investigation.

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

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

Sincerely,

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

enclosures

**STATE OF SOUTH DAKOTA
WATER LICENSE NO. 2796-2**

(1) Nelson's Oil & Gas Inc., 1346 Galveston Ave., Hot Springs SD 57747 made Application No. 2796-2, February 15, 2019 for a water permit to divert 0.018 cubic feet of water per second (8 gallons per minute) from ground water, one well (Crystalline Rock Aquifer), Pennington County, South Dakota for commercial purposes. Permit No. 2796-2, with a priority date of February 15, 2019 was approved April 22, 2019 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before April 22, 2024 and for the application to beneficial use of said water on or before April 22, 2028.

Water Permit No. 2796-2 authorized a well located in the NE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 29, T1S, R5E. The investigation of the water use system for licensing purposes found the well was located in the NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 29. The Chief Engineer made a finding pursuant to SDCL 46-5-13.1 and ARSD 74:02:01:14.01 that the change in location does not increase the potential for adverse effects to existing diversions.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the water supply system and is entitled to divert 0.018 cubic feet of water per second for beneficial use. The location of the diversion point is:

- 368'S and 1,205'E of the NW corner of Section 29, T1S, R5E (NW $\frac{1}{4}$ NW $\frac{1}{4}$)
Latitude 43.939904, Longitude -103.553853

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

(4) Pursuant to South Dakota Water Law 46-5-30.1 Nelson's Oil & Gas Inc., 1346 Galveston Ave., Hot Springs SD 57747 the holder and/or owner of Water Right No. 2796-2 is issued a license to appropriate water, the right to use 0.018 cubic feet of water per second (8 gallons per minute) from ground water, one well (Crystalline Rock Aquifer) with a priority date of February 15, 2019 from the location specified in (2) of this license for commercial purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 2796-2 and subject to the following qualifications:

- The well approved under this water right will be located near domestic wells and other wells which may obtain water from the same aquifer. The well owner under this water right shall control his withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in adequate wells having prior water rights.
- The water right holder shall report to the Chief Engineer annually the amount of water withdrawn from the Crystalline Rock Aquifer.
- Water Right No. 2796-2 authorizes a total annual diversion of 1.0 acre foot of water.


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

JUN 27 2019
date

