

City of Canton's Water Rights

May 5, 2004

	Amount	Priority date	Permit where Priority date comes from	Licensed Under
Well # 1	0.12 cfs	3-16-66	4312A-3	6499-3
	0.15 cfs	1-1-36	4312B-3	
	<u>0.01 cfs</u>	3-16-66	6499-3	
	0.28 cfs = 126 gpm			
Well # 6	0.30 cfs = 134 gpm	3-16-66	1262A-3	1262A-3
Well # 7 standby well	0.22 cfs = 100 gpm capable of 250 gpm – throttled to 0.22 cfs	1-1-18	1262B-3	1262B-3
Well # 8	0.31 cfs	3-16-66	4312A-3	6499-3
	<u>0.09 cfs</u>	3-16-66	6499-3	
	0.40 cfs = 180 gpm			
Well # 9	0.15 cfs	1-1-37	1262B-3	5216-3
	<u>0.52 cfs</u>	3-16-66	1262C-3	
	0.67 cfs = 300 gpm			
Well # 10	0.72 cfs = 325 gpm	8-25-88	5218-3	5218-3
Well # 11	0.11 cfs	1-1-50	1262B-3	5217-3
	<u>0.42 cfs</u>	3-16-66	1262C-3	
	0.53 cfs = 240 gpm			

Validated Vested Right No. 1262-3**Big Sioux River** - Water District**Report of Examination of Works and/or Application of Water to Beneficial Use**

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

I have this day, **October 15, 2004**, made a thorough examination of the water use system constructed by **City of Canton** of **210 N Dakota Street, Canton SD 57013** holder of Vested Right No. **1262-3**, bearing the priority of **1918, 1937, 1946, 1950** authorizing the diversion of **0.22, 0.15, 0.17 and 0.11** cu. ft. per second of the waters of **Big Sioux – South and Dakota Formation Aquifer** for **municipal** purposes, in **Lincoln** County.

Inspection contact & relationship **Jeff Fossum, Water and Sewer Superintendent**
to permit holder, if applicable:

A. Works used to divert the water:

Well Information: well #7 stand-by for emergencies Well Drilling Firm: Depth(s) <u>28</u> feet Well log is available <u>Form 2A</u> Comment: <u>built in 1918</u> Casing: Diameter <u>12</u> inches Length <u>27</u> feet Type <u>steel</u> Screen: Type _____ Length _____ feet Static water level <u>10</u> feet Pump: Make <u>Fairbanks/Morse</u> Model <u>250S</u> Size _____ Capacity <u>250</u> GPM Motor: Make <u>Fairbanks/Morse</u> Model No. _____ Horsepower rating <u>20</u> hp	Well Information: well #9 Well Drilling Firm: <u>Huron Well</u> Drilling Depth(s) <u>520</u> feet Well log is available <u>yes</u> Comment: <u>built in 1988</u> Casing: Diameter <u>12</u> inches Length <u>375</u> feet Type <u>steel</u> Screen: Type <u>stainless steel</u> Length <u>90</u> feet Static water level _____ feet Pump: Make <u>Grunfos</u> Model _____ Size <u>5"</u> Capacity <u>300</u> GPM Motor: Make <u>Franklin</u> Model No. _____ Horsepower rating <u>30</u> hp	Well Information: well #11 Well Drilling Firm: <u>Huron Well</u> Drilling Depth(s) <u>518</u> feet Well log is available <u>yes</u> Comment: <u>1989</u> Casing: Diameter <u>12</u> inches Length <u>374</u> feet Type <u>steel</u> Screen: Type <u>stainless steel</u> Length <u>120</u> feet Static water level <u>100</u> feet Pump: Make <u>Grunfos</u> Model _____ Size <u>5"</u> Capacity <u>240</u> GPM Motor: Make <u>Franklin</u> Model No. _____ Horsepower rating <u>30</u> hp
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B. Works used to transport water to place of use: lines from the well to the water plant

Well #7:

1) Type _____	2) Size <u>4</u> inches	3) Length <u>1050</u> feet
1) Type _____	2) Size <u>6</u> inches	3) Length <u>1440</u> feet

Well #9

1) Type _____	2) Size <u>6</u> inches	3) Length <u>750</u> feet
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Well #11

1) Type _____	2) Size <u>4</u> inches	3) Length <u>1025</u> feet
1) Type _____	2) Size <u>6</u> inches	3) Length <u>1440</u> feet

C. Works used to apply water to beneficial use:

Municipal water system

D. Compliance with Permit Requirements:

1) Permit qualifications being abided by yes

The system is in good condition with the point(s) of diversion located as follows: legal well #7 – 2360' S and 1540' W (43.294428, -96.595055); well #9 – 1280'S and 915' W (43.297414, -96.59246); well #11 – 2360' S and 1500' W (43.294428, -96.594658) all from the NE corner Section 23, T98N, R49W. The works are capable of diverting and conveying to the place of use 1.76 cu. ft. per second of water which is to be used for municipal use. The portion of the 1.76 cfs that is claimed under VR 1262-3 is as follows:

Well #7	0.22 cfs	1-1-1918
Well #9	0.15 cfs	1-1-1937
Well #11	0.11 cfs	1-1-1950

Water has been put to beneficial use to the maximum extent as follows:

Municipal water system

VR 1262-3 should be re-issued for 0.22 cfs priority date 1-1-1918; 0.15 cfs priority date 1-1-1937; 0.11 cfs priority date 1-1-1950.

All structures, wells and lands on map yes

Comments or other permit(s) associated with the project: City of Canton Water Right Nos. 1262-3, 4312-3, 5216-3, 5217-3 and 5218-3

Well #9 replaces well #2 under VR 1262-3 and well #11 replaces well #4 under VR 1262-3. Also see 5216-3 for other portions of diversion from well #9 and 5217-3 for other portions of diversion from well #11. Well #7 is capable of diverting 0.56 cfs of which 0.22 cfs is authorized by VR 1262-3. Well #7 will be throttled to 0.22 cfs.

VR 1262-3 was validated by the Water Management Board on 9-7-89.


Lynn Beck

Natural Resources Engineer Specialist
DENR, Water Rights Program

Date report completed: March 8, 2004

#7

1918
Year

9. (Continued)

III. Well Specifications Well No. 7 - Built in 1918

(a) Hole and casing

Size of drill hole or excavation 27', Depth 28'

Type of casing Concrete
(wood, concrete, steel, etc.)

Size of casing 27', Thickness of casing 12"

Length of casing 28' If collection gallery, length, size and depth of
gallery - -

(b) Screens

Type of perforated screen None

Size of perforated screen - -
(diameter) (length)

Thickness of gravel pack - - , length of gravel pack - -

(c) Water Bearing Materials

Distance to water 10' Character of water bearing materials
Gravel Terrace (Not a part of Big Sioux River Outwash)

Thickness of water bearing material

(d) Pump and Motor

Type of pump Centrifugal - 2 Pumps
(centrifugal, propeller, mixed flow, etc.)

Name of pump F-M , size 4"

Kind of motor Electric
(gasoline, electric, diesel, etc.)

Horsepower 10 , Name of Motor F-M

(e) Complete well

Capacity 100GPM at drawdown of 10' Estimated cost \$10,000

(f) Owner of land upon which well is located City of Canton
Name

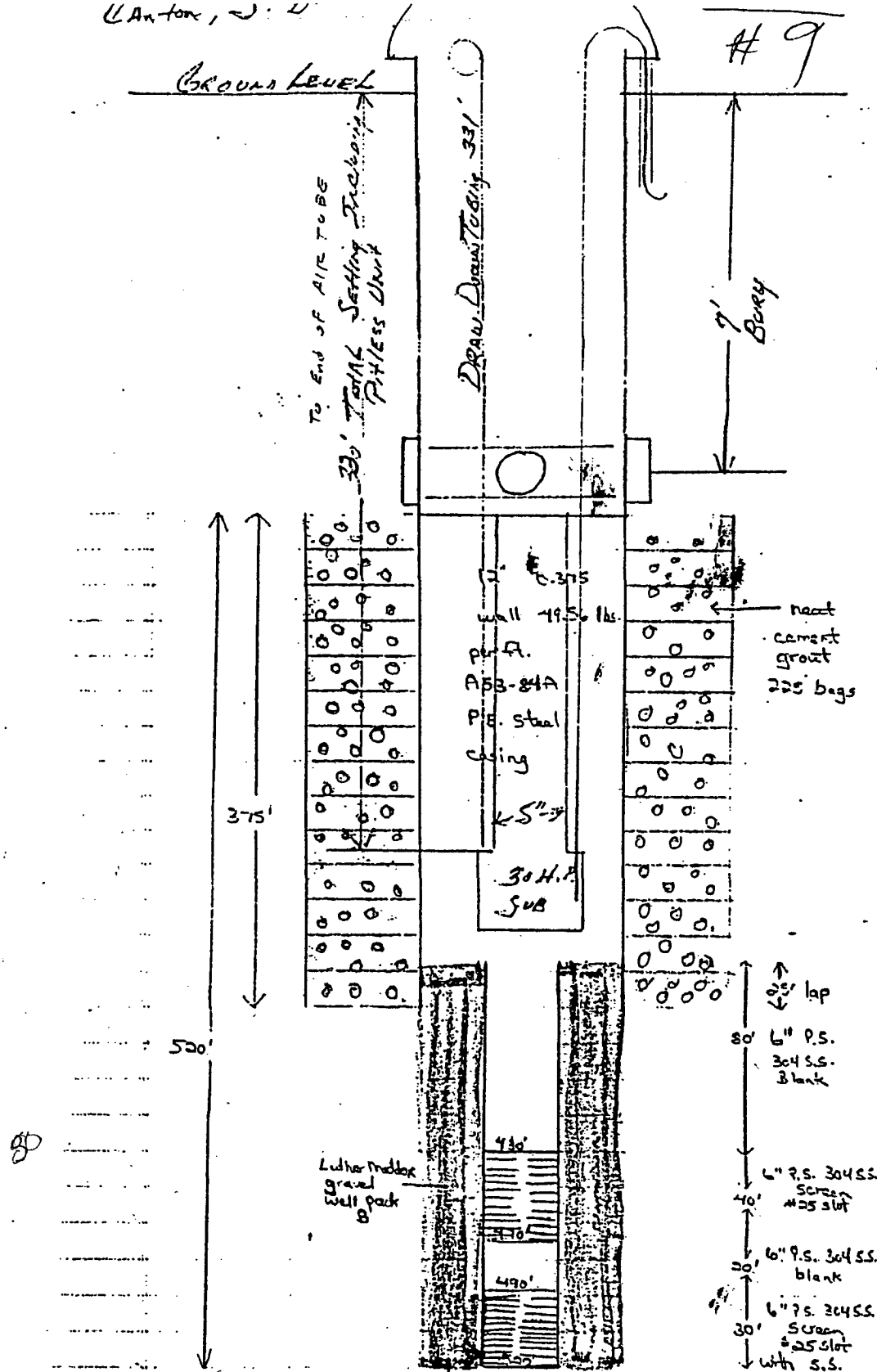
Canton, South Dakota

Address

(g) Distance to nearest existing wells

On same owner's property 60 rods. On property owned by others - - rods

U Antonio, J. L.



City of Canton
JOB NAME

Well #9 LOCATION

DATE _____

26
RIG NO.

Karl Osberg
FOREMAN

Jt No.	DEPTH	TIME	REMARKS
	20	1:30	
2	40	2:11	0-2 Topsoil
3	60	2:57	2-45 Sand
4	80	4:19	45-75 Blue clay
5	100	5:00	75-215 Shale
6	120	6:01	215-238 Greenhorn
7	140	6:37	238-285 Shale
8	160	7:22	285-300 Dakota Sand
9	180	8:03	300-303 Shale
10	200	8:41	303-315 Sand
11	220	6:15	7-7-88 315-320 Shale
12	240	7:12	320-335 Sand
13	260	8:34	335-420 Shale
14	280	8:50	420-440 Sand
15	300	9:30	440-455 Shale with good sand streaks
16	320	10:12	445-470 Sand
17	340	11:07	470-485 Shale
18	360	12:03	485-495 Hard Sand
19	380	12:50	495-523 Sand
20	400	2:50	523-527 Rock
21	420	3:40	
22	440	6:00	
23	460	7:00	
24	480		7-8-88
25	500	8:06	
TD	527		
			520-490 screen 30'
			490-470 blank 20'
			470-430 screen 40'
			430-350 blank 80'
			Set 375 12"
			25' lap

Clinton, S.D.

#11

GROUND LEVEL

Total Sealing In casing
Drill less 1/2 in.

Drill Down Tagline 331'

7' Buoy

330'

12" 375 wall
49.5' 116 per
ft. A53-84A
PE steel
casing

Next
Cement
grout
220 bags

374'

304/P
50B

26' lap

50'

50' 6" P.S. 304 S.S.
blank

120' 6" P.S. 304 S.S.
#20 slot screen
with S.S. plate bottom

Drawn to scale

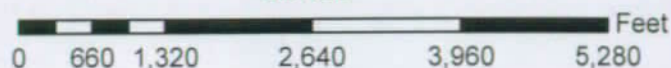
FOREMAN

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WATER RIGHT NOS. 1262-3, 4312-3, 5216-3, 5217-3 & 5218-3 CITY OF CANTON

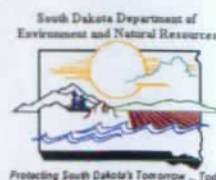


SCALE



Lynn Beck

Lynn Beck
 Natural Resources Engineer Specialist
 DENR, Water Rights Program
 March 1, 2004



STATE OF SOUTH DAKOTA
REISSUED WATER LICENSE NO. 1262B-3
DIVISION OF NO. 1262-3 INTO NOS. 1262A-3, 1262B-3 & 1262C-3

(1) City of Canton, 210 N Dakota St, Canton SD 57013 was issued Water License No. 1262-3, December 9, 1968 for a water permit to divert 1.45 cubic feet of water per second (cfs) from groundwater (seven wells), Lincoln County, South Dakota for municipal purposes. Permit No. 1262-3, with priority dates of 1918, 1936, 1937, 1946, 1950 and March 16, 1966 was issued with construction of the described water supply system completed and the application to beneficial use of water completed.

On October 15, 2003, an investigation of the entire water use system for the City was conducted. Water License No. 1262-3 is being divided and will separate the vested right portion and the future use portions from the water right. The following indicates the city's water usage as it existed at the time of this investigation:

Water Right No. 1262A-3 – authorizing 0.30 cfs from Well # 6 located in the NE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 23-T98N-R49W – Priority date of March 16, 1966.

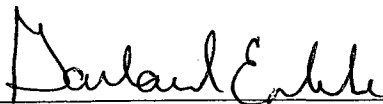
Vested Water Right No. 1262B-3 – authorizes 0.22 cfs from Well #7 (standby well) located in the SW $\frac{1}{4}$ NE $\frac{1}{4}$, 0.15 cfs from Well #9 located in the NE $\frac{1}{4}$ NE $\frac{1}{4}$ and 0.11 cfs from Well #11 located in the SW $\frac{1}{4}$ NE $\frac{1}{4}$; all in Section 23-T98N-R49W. Priority dates of January 1, 1918 (Well #7), January 1, 1939 (Well #9) and January 1, 1950 (Well #11). The Water Management Board validated the vested right portion of No. 1262-3 on September 27, 1989. The applicable portions of 1262B-3 (Wells #9 and #11) are incorporated into Nos. 5216-3 and 5217-3.

Future Use Permit No. 1262C-3 – reserves 3.0 cfs (Dakota Formation) located in the N $\frac{1}{2}$ Section 23 and NW $\frac{1}{4}$ Section 24; all in T98N-R49W to provide future municipal supplies to the City. Priority date – March 16, 1966. The Water Management Board allowed the permit to remain in effect for 674 acre-feet annually on December 2, 1998.

(2) The water supply system has been completed and water applied to beneficial use in accordance with South Dakota State Law. Pursuant to South Dakota Codified Law 46-5-30.1, the holder and/or owner of Vested Water Right No. 1262B-3 is reissued a license, bearing a priority date of January 1, 1918 to appropriate 0.22 cubic feet of water per second from Well # 7 for standby use.

Well #7 is located: 2,360 south and 1,540 feet west from the northeast corner of Section 23-T98N-R49W (NE $\frac{1}{4}$ SE $\frac{1}{4}$).

(3) This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Permit No. 1262-3.



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

JUN 23 2005

date





**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

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

JUN 23 2005

City of Canton
Jeff Fossum, Water Superintendent
210 N Dakota St
Canton SD 57013

Dear Mr. Fossum:

Enclosed are the following: Reissued Water License Nos. 1262A-3, 1262B-3 and 1262C-3, Water License Nos. 5216-3, 5217-3, 5218-3 and Water Permit and License No. 6499-3. These are the final water right documents completing the city's process of obtaining Water Rights.

Also enclosed for your records is a map showing the location of each of the wells and an information sheet listing the applicable information for each well. All the required fees have been paid. Enclosed are three receipts for license fees submitted earlier.

As long as the city uses the water beneficially, as stated in the Water Licenses, State Water Laws provides that the city has a continuing right to use the water.

Sincerely,

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

enclosures

File Nos. 5216-3, 5217-3, 5218-3, 5219-3, 6499-3,
1262A-3, 1262B-3, 1262C-3, 6743-3, 4401-3,
4982-3, 5647-3, 6490-3, 6311-3, 6300-3,
6435-3, 6456-3, 6727-3

Water Rights Program File Documentation

DATE: 04/02/2008

The table below represents the water use reported from the Dakota Formation from Lincoln County by the major water users (City of Canton, Town of Worthing, Town of Fairview and South Lincoln Rural Water Sytem).

	Canton	Worthing	Fairview	SLRWS
	Acre-feet per year*			
2006	406	110	10	863
2005	403	34	8	769
2004	411	37	5	904
2003	384	48	9.2	725
2002	352	NA	NA	786
2001	331	NA	NA	877
2000	370	NA	NA	843
1999	384	4	9.4	781
1998	395	33	12	693
1997	427	36	9	663
1996	394	34	13	689
1995	397	30	11	707
1994	383	25	13	766
1993	351	24	12	630
1992	345	26	8	680
1991	391	28	10	696
1990	401	26	9	669
1989	402	31	NA	650
1988	388	26	20	660
1987	430	32	14	453
1986	330	25	22	370
1985	334	27	22	370
1984	346	27	24	368
1983	330	27	NA	341

* Numbers shown in black originated from Non Irrigation Questioner Data Base

Numbers in blue originated from 4/2/2008 personal correspondence with John Sievers (SLRWS manager)

Numbers shown in red originated from Jim Goodman's report on Application Nos. 5155-3 and 5156-3 (with permit files)

NA= not available

Ken Buhler
Natural Resources Engineer