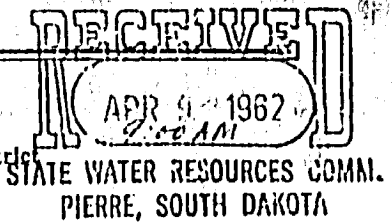


761-2

1. Considered 5-9, 1967
2. Name of Applicant City of Edgemont
3. Post Office Address _____
4. Amount of water claimed 1.5
5. Source of water supply Artesian formation
6. Water to be used for _____
- Acres to be irrigated _____
7. Water to be diverted and used in Fall River County about _____ miles _____ of in city limits.
8. Proof of Publication Received 1st
Not Received _____
9. Application Approved _____
Subject to _____
Not Approved _____
Action deferred _____

10. Remarks:

APPROVED
Sub to investigation
& receipt of
POEP

No. 7612Water Division No. 2 Sour Cheyenne River District
(Blanks to be filled by the Engineer for the W. R. C.)

APPLICATION FOR PERMIT To Appropriate Water within the State of South Dakota

(NOTE—Draw a line through items not applicable.)

1. Name of applicant CITY OF EDGEMONTPostoffice address EDGEMONT, County FALL RIVER State SOUTH DAKOTA

If a corporation

(a) Name of same

(b) Date and place of incorporation

(c) Amount of capital stock

(d) Amount paid in

(e) Names and addresses of directors

(NOTE—A certified copy of articles of incorporation must accompany the application.)

II. Method of accomplishing the work and financial resources of the applicant:

(a) Method of accomplishing work (Whether by contract, employment of others, or by direct labor)

CONTRACT

(b) Cash on hand, \$

(c) Treasury stock, \$

Bonds to be issued, \$60,000.00

(e) Other resources, \$

2. Name of diversion work EDGEMONT CITY WELL No. 43. Amount of water claimed 1.5 cubic feet per second4. Source of water supply PAHASAPA LIMESTONE FORMATION OR FALL RIVER-
LAKOTA FORMATION (SEE 9-111-6) 601 feet5. Location of point of diversion IN SE 1/4 SEC. 5, S2, T9S, R2E, BHM; S2°-56'W 1,950 FEET.
FROM THE E. CORNER OF SAID SECTION 2.

County

6. Annual period or periods during which water is to be used ALL YEAR

7. To be used for:

i. Irrigation or domestic use: Gravity, overhead sprinkling or combination system?

(a) Number of acres to be irrigated _____ aces.

(b) Legal subdivisions to be irrigated

(NOTE—A list of lands to be irrigated, giving each subdivision and fraction with acreage thereof, should be written here, or may be appended as a part of this application. Same must also be shown on accompanying map.)

(c) Statement as to domestic use (giving location, etc.) MUNICIPAL WATER SUPPLYFOR CITY OF EDGEMONT

II. Stockwatering, mining, milling, power, fish culture, fire protection and public recreation:

(a) Nature of use _____
Name any of the above uses claimed

(b) Amount of power to be generated _____ horse power.

Amount claimed for engine cooling

(c) Location of plant

(d) Method of developing power

(e) Point where water will be returned to stream

MAP 120663-2

8. Estimated cost of work:

(a) Head Gates, \$-----

(b) Pumping plant, \$-----

(c) Fluming, \$-----

(d) Canal-earth, \$-----

Rock, \$-----

(e) Other structures -----

WELL \$ 50,000.00

Total, \$ 60,000.00

PIPELINES 10,000.00

9. Description of diversion works:

I. Nature of works: (Reservoir, dam, ditch, flume, pumping plant, etc.)

EDGEMONT CITY WELL No. 4

II. Dimensions of works.

(a) Dam: Height ----- feet; length at bottom ----- feet; length at top ----- feet; thickness at bottom ----- feet; thickness at top ----- feet; slope at front water face -----; slope at back face ----- material used in construction -----

(b) Reservoir: Capacity when filled ----- acre feet. Surface area at highwater mark ----- acres.

DEPTH AT OUTLET-Feet	SURFACE AREA AT EACH DEPTH AT OUTLET--ACRES	FEET	ACRE-Feet CAPACITY

(c)* Head gate: Width ----- feet; height ----- feet; Material -----

(d) Canal: Total length ----- miles.

LOCATION BELOW HEADGATE	DEPTH	BOTTOM WIDTH	WIDTH AT WATER-LINE	GRADE PER MILE
At ----- Mile	----- feet	----- feet	----- feet	----- feet
At ----- Mile	----- feet	----- feet	----- feet	----- feet
At ----- Mile	----- feet	----- feet	----- feet	----- feet
At ----- Mile	----- feet	----- feet	----- feet	----- feet
At ----- Mile	----- feet	----- feet	----- feet	----- feet
At ----- Mile	----- feet	----- feet	----- feet	----- feet

(Give dimensions where reductions in size are made.)

10. Time required for completion of work ----- years.

11. Time required for complete application of water to the proposed beneficial use ----- years.

12. Choice of newspaper for publication of notice of intention to appropriate -----

STATE OF SOUTH DAKOTA

County of LAWRENCE

89.

I, HUGH C. HUTCHISON, FOR THE CITY OF EDGEMONT

being first duly sworn on my oath depose and say: That my relation to the above described undertaking is that of owner, that I have read the above foregoing statement, examined the map accompanying the same, and that I know of my own personal knowledge that the matters therein stated and shown are true.

CITY OF EDGEMONT

Signed Hugh C. Hutchison, Mayor

Subscribed and sworn to before me this 6th day of APRIL 19 62

Notary Public (or other qualified officer.)

*Each diversion must have a headgate or measuring device

Remarks by State Water Resources Commission:

The well granted under this Permit is located near domestic wells and other irrigation wells which may obtain water from the same aquifer. If the well covered by this Permit depletes the domestic supplies or interferes with prior water rights, restrictions, to the extent necessary, of the capacity of the well or periods of operation, or other arrangements may be required to protect these water supplies.

STATE OF SOUTH DAKOTA
County of HUGHES } ss.

Pierre, South Dakota, SEPTEMBER 19, 1962

This is to certify that the foregoing application was received by the Commission at 9:00 o'clock
a. on the 9TH day of APRIL, 1962

State Water Resources Commission
By: [Signature]
Chief Engineer, Executive Officer

Number of permit 761-2

Date of first receipt of application APRIL 9, 1962

Date of return to applicant for correction, amendments or changes required as follows: _____, 19____

Date of receipt of corrected application _____, 19____

Date from which applicant may claim right APRIL 9, 1962

Approved MAY 9, 1962, Recorded in Book 7 Page 166

This is to certify that we have examined the foregoing application for a permit to appropriate water of the State of South Dakota, and we hereby grant the same as stated herein, subject, however, to the following limitations and conditions:

1st. The equivalent of at least one-fifth of the work above specified is to be completed on or before NOVEMBER 9, 1962

2nd. The whole of said work is to be completed on or before MAY 9, 1963

3rd. The limit of time for proof of beneficial use of water appropriated in accordance herewith is MAY 9, 1964

4th. The water appropriated shall be used for the purpose of MUNICIPAL USE

5th. The prior right of all persons who, by compliance with the laws of the State of South Dakota, have acquired a right to the use of water must not be injuriously affected by this appropriation.

6th. The amount of the appropriation herein granted shall not exceed 1.5 cubic feet per second; neither shall it exceed the capacity of the above described system of diversion works, nor the least amount of water that experience may hereafter indicate as necessary for the production of crops in the exercise of the best husbandry; and further, said appropriation must be limited to not more than one-seventieth (1/70) of one cubic foot of water per second of time for each acre of land to which water is actually

and beneficially applied for irrigation on or before MAY 9, 1964; said water to be used during the following described annual period:

CONTINUOUSLY

Witness my hand this 19TH day of SEPTEMBER, 1962

State Water Resources Commission

By: [Signature]
Chief Engineer, Executive Officer

Certificate of Construction Issued OCTOBER 9, 1970

Water License Issued OCTOBER 9, 1970

9 (Continued)

III. Well Specifications

(a) Hole and casing 14"
9"
 Size of drill hole or excavation Depth 400'
400-3200' ±
 Type of casing STEEL
10" (wood, concrete, steel, etc.) 0.36"
 Size of casing 7" Thickness of casing 0.34"
400' - 10"
 Length of casing 2600' - 7" 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 NONE
 length of gravel pack

(c) Water Bearing Materials
 Distance to water 3000' ± Character of water bearing materials LIMESTONE

(PAHASAPA FORMATION). THE FALL RIVER-LAKOTA FORMATION MAY BE TESTED AND,
 IF QUALITY, PRESSURE AND QUANTITY ARE SATISFACTORY, THE WELL MIGHT BE FINISH-
 ED IN THE FALL RIVER-LAKOTA AT AN ESTIMATED DEPTH OF 1800 FEET INSTEAD OF
 THE PAHASAPA. THIS IS NOT LIKELY, HOWEVER.
 Thickness of water bearing material 300' to 600' Est.

(d) Pump and Motor
 Type of pump EXPECT ARTESIAN FLOW WITH NO PUMPING.
(centrifugal, propeller, hand flow, etc.)
 Name of pump size
 Kind of motor
(gasoline, electric, diesel, etc.)
 Horsepower Name of Motor

(e) Complete well
 Capacity 500 GPM EST. at drawdown of 0 Estimated cost \$60,000.00

(f) Owner of land upon which well is located CITY OF EDMONT
Name
EDMONT, SOUTH DAKOTA
Address

(g) Distance to nearest existing wells
 On same owner's property 140 rods. On property owned by others 380 rods

STATE OF SOUTH DAKOTA

WATER LICENSE NO. ... 761-2

(1) WHEREAS, On the 9th day of April A. D. 19 62
the City of Edgemont

made Water Right Application No. 761-2 for a permit to use 1.5 cubic feet per second of the waters
of ground water

County of Fall River, State of South Dakota, for municipal

purposes; and

(2) WHEREAS, On the 19th day of September A. D. 19 62

Permit No. 761-2, with a date of priority of April 9, 1962

was issued to said applicant for the diversion of said water, and provided for the completion of construction of the water
supply system therein described on or before the 9th day of May A. D. 19 63 and for the
application to beneficial use of said water on or before the 9th day of May A. D. 19 64

and;

(3) WHEREAS, It is hereby certified that the applicant has complied with the provisions of the laws of the State of South Dakota
relating to completion of the construction of the water supply system and is entitled to divert .41 cubic feet
per second of water for beneficial use and;

(4) WHEREAS, It is hereby certified that the applicant has complied with the provisions of the laws of the State of South Dakota
relating to the application of water to beneficial use of the following extent,

water is used for municipal purposes by the City of Edgemont

(5) NOW, THEREFORE, By the virtue of the authority vested in us by the laws of the State of South Dakota, We hereby grant and confirm to the City of Edgemont

~~xxxx~~
the holder _____ and owner _____ of said permit No. 761-2 a water right, dating from April 19, 1962
to use of .41 cubic feet per second of the waters
of ground water
in the County of Fall River and State of South Dakota, or so much thereof as may be necessary for the
purposes hereinbelow mentioned, to be diverted at a point south 5 43' West, 611 feet from the E¹
corner, Section 2, T38, R2E

and ~~conducts~~ ~~xxxxxx~~ ~~conducted through the city water distribution system~~

for the purpose of municipal use

Subject to any limitations listed in Water Right Permit No. 761-2 and subject to the laws of the State of South Dakota.

WITNESS, My hand and seal of our office at Pierre, South Dakota
this 9th day of October A. D.
Nineteen Hundred and Seventy

WATER RESOURCES COMMISSION

By:

Chief Engineer, Executive Officer, J.W. GRIMES

Form 15.

Permit No. 761-2

Water Diversion No. 2 SOUTH CHEYENNE RIVER Water District

CERTIFICATE OF CONSTRUCTION

This is to Certify, That the City of Edgemont

_____ the holder _____ of
Permit No. 761-2, issued upon Application No. 761-2, bearing date of priority of April 9, 1962
_____ authorizing the diversion of 1.5 cu. ft. per second of the waters of _____
ground water County of Fall River, State of South Dakota at _____
a point South 5° 43' west, 611 feet from the E½ Corner. Section 2, T9S, R2E
_____, for municipal

purposes, has ⁶ complied with the provisions of the laws of the State of South Dakota relating to proof of completion of the works of diversion, set out and described in said Permit; that said works are found in satisfactory condition for diverting and conveying to the place of intended use .41 cu. ft. per second of water.

Date October 9, 1970

WATER RESOURCES COMMISSION

By

J.W. GRIMES, Executive Officer

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA }
 County Fall River } ss.

Charles E. Donnelly, Jr. being duly sworn, deposes and says the annexed printed copy of Notice of Intention to Appropriate Water was taken from the _____

Edgemont Herald-Tribune a newspaper which during the whole time of publication of said notice herein after stated, has been and is printed and published in the _____

City of Edgemont County of Fall River and State of South Dakota; that the said notice was published in said newspaper on the following dates:

April 12, 1962

April 19, 1962

April 26, 1962

May 3, 1962

in each and every issue of the full number thereof, the first publication being made on the 12th day of April 1962 and the last publication on the 3rd day of

May 1962, upon which days or times of publication aforesaid the newspaper was regularly published, and that during the whole time of said publication he was editor the printer and publisher of the said newspaper.

Charles E. Donnelly, Jr.

Subscribed and sworn to before me this 3rd day of May A. D. 1962

Burton F. Jones

Notary Public Fall River County, S. D.

No. 520. April 12, 19, 26, May 3

(First publication on or before April 12, 1962.)

APPROPRIATION OF WATER

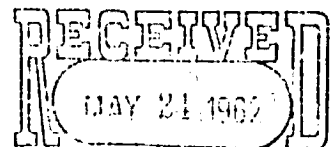
Office of State Water Resources Commission Pierre S. Dak., April 9, 1962.

Notice is hereby given that the City of Edgemont, S. Dak., has made an application in accordance with the provisions of the water laws of South Dakota for a permit to appropriate for beneficial use 15 cubic feet of water per second of time from artesian ground water through the city well No. 4, the point of diversion of which is to be located in the SE $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 2, Twp. 9S, Range 2E. Said water to be used for the purpose of providing municipal supplies for the city of Edgemont.

This application will be taken up by the State Water Resources Commission at their office at Pierre for consideration upon the 9th day of May, 1962, at 2 p. m. All interested persons may appear and be heard.

Appropriate action will be taken by the Water Resources Commission after suitable time has elapsed for the consideration of any or all information presented.

State Water Resources Commission
 By: Burton F. Jones
 Water Right Specialist



STATE WATER RESOURCES COMM.
 PIERRE, SOUTH DAKOTA

on or before April 12, 1962
 (First Publication _____)

APPROPRIATION OF WATER

Office of State Water Resources Commission,

Pierre, S. Dak., April 9, 1962

Notice is hereby given that the City of Edgemont ~~xxxxxxx~~

~~xxxxxxx~~ S. Dak., has made an application in accordance with the provisions of the water laws of South Dakota for a permit to appropriate for beneficial use 1.5 cubic feet of water per second of time from ~~xxx~~ alluvial ground water through the city well #4, the point of diversion of which is to be located ~~xxx~~

~~xxxxxxxxxxxx~~ in the SE $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 2 Twp. 9 S Range 2 E. Said water to be used for the purpose of providing ~~xxxxxxxxxxxx~~

~~xxxxxxxxxxxx~~

municipal supplies for the City of Edgemont

~~xxxxx~~ ~~xxxxxx~~

This application will be taken up by the State Water Resources Commission at their office at Pierre for consideration upon the 9th day of May, 1962, at 2 P. M. All interested persons may appear and be heard.

Appropriate action will be taken by the Water Resources Commission after suitable time has elapsed for the consideration of any or all information presented.

State Water Resources Commission

By:

CC: Mr. Charles E. Donnelly, Jr.,
 Publisher
 Edgemont Tribune
 Edgemont, South Dakota

~~xxxxxxxxxxxxxxxxxxxxxx~~
 BURTON F. JONES
 Water Right Specialist

Brady Engineering
CONSULTING ENGINEERS
146 EAST HUDSON PHONE 642-2656
SPEARFISH, SOUTH DAKOTA

RECEIVED
JAN 11 1963
STATE WATER RESOURCES COMM.
PIERRE, SOUTH DAKOTA

9 JANUARY 1963

MR. JOSEPH GRIMES
EXECUTIVE OFFICER AND CHIEF ENGINEER
WATER RESOURCES COMMISSION
PIERRE, SOUTH DAKOTA

RE: EDGEHONT WELL No. 4
PERMIT No. 761-2

DEAR MR. GRIMES:

IN REGARD TO THE ABOVE WELL, THE LOCATION AS DRILLED IS IN THE NE 1/4 SEC, S2, T9S, R2E, AND IS S5°-43'W 611 FEET FROM THE EAST 1/4-CORNER OF SAID SECTION 2 RATHER THAN THE LOCATION SPECIFIED IN THE PERMIT. THE REASON FOR THIS CHANGE IN LOCATION IS AS FOLLOWS:

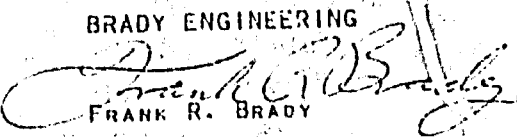
WE HAD STAKED THE WELL LOCATION AS SPECIFIED IN THE ORIGINAL APPLICATION IN SEC 1/4 SEC, S2, T9S, R2E. WE ALSO STAKED A WATER LINE FROM THE WELL LOCATION TO THE CITY'S RESERVOIR AT THE SAME TIME. WHEN THE WELL DRILLER MOVED ONTO THE JOB, RATHER THAN CALLING US AS WE HAD REQUESTED, HE CALLED ON THE CITY OFFICIALS. THE DRILLER AND THE CITY OFFICIALS FOUND ONE OF OUR WATER LINE STAKES AND, WITHOUT FURTHER CHECKING, DECIDED THAT IT WAS THE WELL LOCATION. BY THE TIME WE WERE FINALLY NOTIFIED THAT THE DRILLER HAD STARTED WORK THEY WERE DOWN SEVERAL HUNDRED FEET. WE WOULD HAVE REQUIRED THE DRILLER TO MOVE TO THE PROPER LOCATION BUT SINCE THE CITY HAD ASSISTED HIM IN DECIDING ON THE LOCATION THEY FELT THAT THEY WOULD BE LIABLE FOR THE CONSIDERABLE COST INVOLVED IN MAKING THE MOVE.

CAN THIS CHANGE BE NOTED AND PROPERLY RECORDED ON THEIR PERMIT AT THIS TIME OR WILL IT BE NECESSARY FOR THEM TO APPLY FOR A NEW PERMIT?

ENCLOSED IS A SKETCH OF THE "AS CONSTRUCTED" WELL.

YOURS TRULY,

BRADY ENGINEERING


FRANK R. BRADY

FRB:FG

LOCATION
MAP
(SEE LOC.)

WELL #4
SITE

2' THICK BY 5' 6" SQUARE
CONC. SLAB (3000# CONC.)
WITH 8 #5 & 4 #6 RE-BARS.
WELD ALL RE-BAR TO
CASING

WELDED FLANGE

15" BORE

10 3/4" CASING - MIN. VIT.
(PLAIN END) 40.45' / FT.

CEMENT
GROUT

-301'

-330'

-335'

9 5/8" BORE

5" O.D. CASING
23' / FT.

CEMENT
GROUT

-305'

OPEN

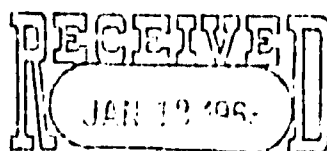
BORE

EDGEMONT CITY WELL #4
EDGEMONT, S. DAK.
JUNE 1962

AS CONSTRUCTED

3051
201
2150

3458 T.D.



Permit No. 761-2

Water Division No. 2

SOUTH CHEYENNE STATE WATER RESOURCES COMM.
RIVER Water District PIERRE, SOUTH DAKOTA

NOTICE OF COMPLETION OF WORKS

This blank must be filled out by the holder of permit and forwarded to the Executive Officer at least 60 days before the time set for completion of works

(P. O.) EDEGMONT, SOUTH DAKOTA

(Date) 9 JANUARY 1963

TO THE STATE WATER RESOURCES COMMISSION
OF SOUTH DAKOTA, PIERRE:

DEAR SIR: Notice is hereby given of the completion of the works for the diversion of 1.5
cu. ft. per second of the waters of the state from
through the ALL YEAR
for MUNICIPAL WATER SUPPLY purposes
in accordance with the terms and con-
ditions of a certain permit heretofore issued by the Water Resources Commission of the State of South Dakota.

- The name of the person or corporation holding said permit is CITY OF EDEGMONT
- The postoffice address of such person or the place of business of such corporation is EDEGMONT
County of FALL RIVER State of SOUTH DAKOTA
- The number of such permit is 761-2 and the date set for the completion of such work is
15 JANUARY 1963
- Said water to be used for MUNICIPAL WATER SUPPLY purposes.
- Said works of diversion will be fully completed on the date set for such completion, and the amount of water which said works are capable of conducting to the place of intended use, in accordance with the plans accompanying the application for such permit, is 0.6 cubic feet per second.
- The amount of land for which said water is available is --- acres,
particularly described as follows: CITY OF EDEGMONT

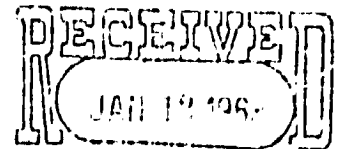
I hereby certify that the facts set forth in the above notice are true.

CITY OF EDEGMONT

(Signature of Owners)

By:

TAYLOR



Permit No. 761-2

Water Division No. 2

SOUTH CHEROKEE STATE WATER RESOURCES COMM.
RIVER Water District PIERRE, SOUTH DAKOTA

Notice of Application of Water to Beneficial Use

(This blank must be filled out by holder of permit and forwarded to the State Water Resources Commission at least sixty days before the time set for application of water.)

(P. O.) EDGE MONT, SOUTH DAKOTA

(Date) 9 JANUARY 1963

TO THE STATE WATER RESOURCES COMMISSION OF SOUTH DAKOTA, PIERRE:

DEAR SIR: Notice is hereby given that on the 15 day of JANUARY 1963, at EDGE MONT County of FALL RIVER State of South Dakota, before _____ proof will be submitted of the application to beneficial use (Examining Engineer, or Officer) of 0.6 cubic feet per second of the waters of FAHASAPA FORMATION in accordance with the terms and conditions of Permit No. 761-2 heretofore issued by the Water Resources Commission of South Dakota.

- The name and postoffice address of the person or corporation holding said permit are
CITY OF EDGE MONT, EDGE MONT, SOUTH DAKOTA
- The use to which said water has been applied is MUNICIPAL WATER SUPPLY
- The amount applied to beneficial use is 0.6 cfs.
- The place where said water is used is (if for irrigation, give full and accurate description of the lands irrigated)
CITY OF EDGE MONT
- The name of the canal or ditch or other works by which said water is conducted to such place of use is
CITY WATER DISTRIBUTION SYSTEM
- The right to take the water from such works is based upon permit No. 761-2
- The source of supply from which such water is diverted is FAHASAPA FORMATION
- The date of priority which said user is prepared to establish is 9 APRIL 1962

CITY OF EDGE MONT

(Sign) By:

MAYOR

*THE PRESENT ARTESIAN FLOW IS 0.6 CFS, BUT WE WANT TO HOLD OUR PERMIT AT 1.5 CFS TO ALLOW FUTURE PUMPING TO THAT RATE.

DCP/6 3051

Permit No. 761-2
2 SOUTH CHEYENNE RIVER Water District

REPORT OF EXAMINATION OF WORKS
 AND/OR APPLICATION OF WATER TO BENEFICIAL USE

TO: Water Resources Commission, State Office Building No. 2, Pierre, South Dakota 57501

I have this day made a thorough examination of the water use system constructed by THE CITY OF
EDGE MONT holder _____
 of Permit No. 761-2, bearing date of priority of APRIL 9, 1962
 authorizing the diversion of 1.5 cu. ft. per second of the waters of ARTESIAN & POND WATER
 for MUNICIPAL purposes, in FALL RIVER County.

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

The Water Use System consists of,

A. Works used to divert the water:

WELL IS 3051' DEEP W/ 7" CASING
 FLOW OF ~~300~~ G.P.M.
185

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

8" MAIN LINE TO 500,000 GALLON STORAGE

C. Works used to apply water to beneficial use.

THROUGH CITY DISTRIBUTION SYSTEM TO
 INDIVIDUAL HOOK UPS.

The system is in the following condition: GOOD

The point of diversion is located S 5° 43' W, 611 FEET FROM THE
E 1/4 CORNER, SECTION 2, T 9 S, R 2 E

The works are capable of diverting and conveying to the place of use .41

cu. ft. per second of water which is to be used for MUNICIPAL USE

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

comprising a total of _____ acres of land.

Date SEPTEMBER 10, 1970

Dustin Jones
 (Signature)

WATER RIGHT SPECIALIST
 WATER RESOURCES COMMISSION

EDGEMONT CITY WELL #4

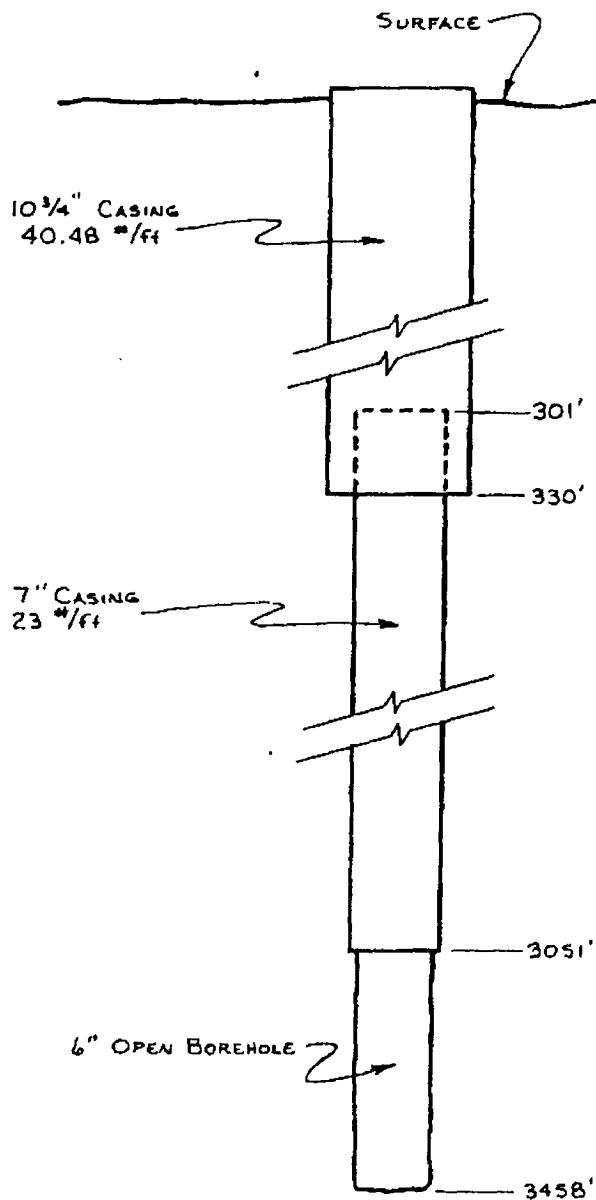
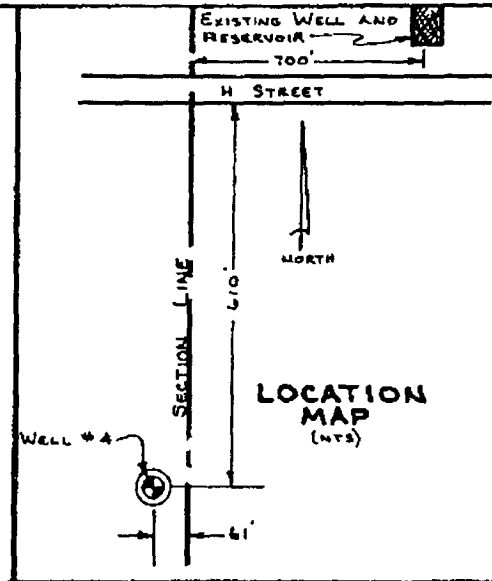
EDGEMONT, S.D.

DRILLED: JUNE 1962

INITIAL FLOW: 275 gpm

FLOW DECEMBER 1990: ± 150 gpm

SKETCH PREPARED FROM BEST INFORMATION AVAILABLE
FROM FILE.





CONSTRUCTION REPORT
EDGEMONT CITY WELL NO. 4
EDGEMONT, SOUTH DAKOTA

THE EDGEMONT CITY WELL NO. 4 WAS CONSTRUCTED BY HUBBARD DRILLING COMPANY OF LANDER, WYOMING, IN 1962. THE WELL LOCATION IS APPROXIMATELY 670 FEET SOUTH AND 61 FEET WEST OF THE EAST 1/4 CORNER OF S2, T9S, R2E, BHM, AND IS IN THE NE1/4 SE1/4 OF SAID SECTION 2.

THE WELL WAS STARTED ON THE 6th OF JUNE AND COMPLETED ON THE 26th OF JUNE. AS SHOWN ON THE ATTACHED "AS CONSTRUCTED" DRAWING, THE TOTAL DEPTH IS 3,458 FEET WITH A SIX-INCH OPEN BORE HOLE IN THE PAHASAPA LIMESTONE FROM 3,051 TO 3,458.

A 15-INCH HOLE WAS DRILLED TO 335 FEET AND A 10 $\frac{1}{2}$ -INCH, 40.48-POUND CASING WAS SET AND CEMENTED TO A DEPTH OF 330 FEET. THE CONTRACT CALLED FOR A 13 $\frac{1}{2}$ -INCH HOLE FOR THIS PART OF THE WELL BUT THE CONTRACTOR PREFERRED TO DRILL A 15-INCH HOLE FOR THE SAME PRICE. TWO HUNDRED AND FIFTY 94-POUND BAGS OF PORTLAND CEMENT WERE USED IN CEMENTING THIS SURFACE. THE CEMENT GROUT WAS PUMPED DOWN THE CASING AND RETURNED TO THE SURFACE BETWEEN THE CASING AND WALLS OF THE DRILL HOLE. A GOOD RETURN TO THE SURFACE WAS EVIDENT AND SAMPLES WERE TAKEN OF THE "RETURN." ONE OF THE SAMPLES IS ENCLOSED WITH THIS REPORT. TWO HUNDRED SACKS OF OLD CEMENT THAT THE CONTRACTOR HAD ON HAND WERE REJECTED AS UNFIT AND THE CONTRACTOR PURCHASED 250 SACKS OF NEW CEMENT FOR THE CEMENT JOB.

AFTER THE SAMPLES TAKEN FROM THE RETURN CEMENT HAD HARDENED, THE CONTRACTOR WAS ALLOWED TO RESUME DRILLING WITH A 9-5/8" BIT. THE 9-5/8" HOLE WAS DRILLED TO 3,050 REACHING THAT DEPTH ON THE 22ND OF JUNE.

SCHLUMBERGER WELL SURVEYING CORPORATION FROM NEWCASTLE, WYOMING, RAN A LATEROLOG AND A SONIC LOG TO 3,050 ON THE MORNING OF 23 JUNE. THEIR CREW FOREMAN WAS MR. CLAUDE CULVER. THE ORIGINAL REPRODUCIBLE NEGATIVES OF THESE LOGS ARE ON PERMANENT FILE IN THE GEOLOGICAL DEPARTMENT AT THE SOUTH DAKOTA SCHOOL OF MINES. PRINTS OF THE LOGS ARE INCLUDED WITH THIS REPORT. THE LOGS INDICATED THAT THE HOLE WAS INTO THE TOP OF THE PAHASAPA LIMESTONE AND THAT THE FORMATION AT 3,050 WAS SOLID AND WOULD BE A SUITABLE LEVEL TO CASE AND CEMENT TO.

BECAUSE THE DRILLER HAD LOST CIRCULATION AT ABOUT 2,100 AND AT ABOUT 3,000 IT WAS THOUGHT ADVISABLE TO SET CEMENT BASKETS AT ABOUT 2,900 AND AT ABOUT 1,900 AND TO USE A LIGHTER GROUT FOR CEMENTING. BOTH OF THESE PRECAUTIONS WOULD REDUCE THE POSSIBILITY OF LOSING THE CEMENT GROUT INTO THE FORMATION. THE BASKETS WERE SET ON CASING COLLARS AT ACTUAL DEPTHS OF 2,912 AND 1,862. ALSO, TWENTY CENTRALIZERS WERE INSTALLED ON THE 7-INCH O.D. 23-POUND CASING AT APPROXIMATELY 150 FEET APART.

THE CEMENTING MIXTURE USED CONSISTED OF 50 PER CENT POZOMIX AND 50 PER CENT PORTLAND CEMENT WITH 6 PER CENT BENTONITE ADDED AND A

QUARTER OF A POUND OF CELLULOSE FLAKES PER GALLON. THE WEIGHT OF THIS MIXTURE WAS 12.5 POUNDS PER GALLON COMPARED TO 15.2 POUNDS PER GALLON FOR STRAIGHT PORTLAND CEMENT GROUT. THE THEORETICAL VOLUME OF THE ANNULAR SPACE TO BE CEMENTED WAS CALCULATED AT 703 CUBIC FEET. THE ACTUAL AMOUNT OF SLURRY USED WAS 880 CUBIC FEET OF THE ABOVE DESCRIBED MIXTURE PLUS 59 CUBIC FEET OF STRAIGHT PORTLAND CEMENT SLURRY THAT WAS PUMPED IN LAST TO PROVIDE A HARDER CEMENT AT THE BASE OF THE CASING. THIS TOTAL VOLUME OF 939 CUBIC FEET WOULD PROVIDE A 34 PER CENT SAFETY FACTOR.

THE 7-INCH O.D. CASING WITH THE CENTRALIZERS AND CEMENT BASKETS WAS RUN IN WITH NO DIFFICULTY TO 3,050 FEET. A FLOAT SHOE WAS INSTALLED ON THE BOTTOM OF THE CASING AND A FLOAT COLLAR ONE CASING LENGTH (33.83 FEET) ABOVE. THE CASING WAS LOWERED ON DRILL PIPE WITH A BACK OFF COLLAR AT 301 FEET.

BEFORE PUMPING IN THE CEMENT MIXTURE THE DRILLING MUD WAS CIRCULATED UP AROUND THE CASING TO INSURE THAT THE HOLE WAS OPEN. HALLIBURTON OF NEWCASTLE MIXED AND PUMPED IN THE CEMENT MIXTURE COMPLETING THE JOB AT 4:30 A.M. ON 24 JUNE. THERE WAS NOT A DEFINITE RETURN OF CEMENT TO THE SURFACE SO A TEMPERATURE SURVEY WAS RUN BY SCHLUMBERGER WELL SURVEYING CORPORATION TO DETERMINE THE LOCATION OF THE TOP OF THE CEMENT. THE LOG WAS RUN AT 4:00 P.M. ON THE 24th OF JUNE. A COPY OF THE TEMPERATURE LOG IS ENCLOSED.

THERE WAS A DIFFERENCE OF OPINION AS TO THE INTERPRETATION OF THE TEMPERATURE SURVEY; MR. CAMPER OF SCHLUMBERGER ESTIMATED THE TOP OF THE CEMENT AT 1,000 FEET BUT HALLIBURTON'S FIELD ENGINEER READ IT AT 300, WHICH WOULD BE AT THE TOP OF THE 7-INCH CASING WHERE IT SHOULD BE. TO CHECK THE SEAL BETWEEN THE 7-INCH CASING AND THE 10-INCH CASING, THE CONTRACTOR SEALED THE TOP OF THE 10-INCH CASING AND APPLIED PRESSURE TO THE INSIDE OF THE CASING TO OVER 500 POUNDS PER SQUARE INCH WITH NO LOSS IN PRESSURE. THIS WAS ACCEPTED AS AN ADEQUATE CHECK OF THE SEAL BETWEEN THE TWO CASINGS.

AFTER THE CEMENT HAD SET, THE CONTRACTOR CONTINUED DRILLING INTO THE PANASAPA WITH A 6-INCH BIT TO A FINAL DEPTH OF 3,458 FEET. THE WELL STARTED FLOWING AND THE FLOW WAS MEASURED AT APPROXIMATELY 225 GPM. ON THE 11th OF OCTOBER, 1962, AFTER THE TRANSMISSION LINE TO THE RESERVOIR WAS COMPLETED, THE FLOW INTO THE RESERVOIR WAS MORE ACCURATELY MEASURED AT 275 GPM.

DRILLING SAMPLES WERE TAKEN THROUGHOUT CONSTRUCTION OF THE WELL AND ARE ON PERMANENT FILE IN THE GEOLOGICAL DEPARTMENT OF THE SCHOOL OF MINES AT RAPID CITY. A GENERAL GEOLOGIST LOG OF THE FORMATIONS BASED ON THE DRILLING SAMPLES IS INCLUDED WITH THIS REPORT.

10" x 8" FL. RED.
ELBOW

10" GATE VALVE -

WELDING FLANGE

LOCATION
MAP
(NO SCALE)

2' THICK BY 5' 6" SQUARE
CONC. SLAB (3000# CONC.)
WITH 8 #5 x 4'-6" RE-BARS.
WELD ALL RE-BARS TO
CASING

15" BORE

10 3/4" CASING - MIN. WT.
(PLAIN END) 40.48#/FT

CEMENT
GROUT

9 1/8" BORE

57 O.D. CASING -
23#/FT

EDGEMONT CITY WELL
EDGEMONT, S. DAK.
JUNE 1962

"AS CONSTRUCTED"

CEMENT
GROUT

6" OPEN
BORE

PANASAPA FORMATION
LIMESTONE

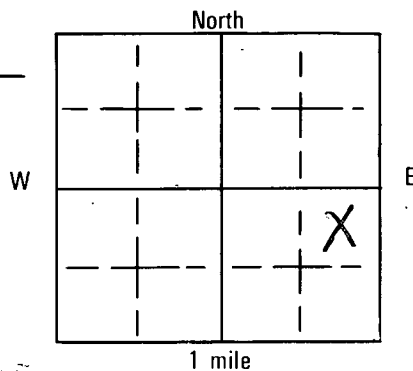
Brady Engineering

STANDARD, DRYER, SCALES

30458'

SOUTH DAKOTA WELL AND TEST HOLE PLUGGING REPORT

10-85

Location NE 1/4 SE 1/4 Sec 2 Twp 9S Rg 2ECounty
FALL RIVERPlease mark well
location with
an "X"Well Owner: EDGE MONT well 2Name CITY OF EDGE MONTAddress P.O. Box AEDGE MONT, SD 57735Plugging completion Date 8-18-2020EDGE MONT well 2

CHECK APPROPRIATE BOX

EXISTING WELL ☒TEST HOLE ☐Well depth 3250' +-Casing material STEELCasing size(s) 7" + 5 1/2"Casing condition VERY POOR

Hole depth _____

Hole size _____

Describe plugging procedure: Ran 2 3/4" + 2 1/2" Tubing until the MINERAL BUILD UP
AND DRAG got to RAD. 2783'. HOOKED up BASIC ENERGY CEMENTS
AND Pumped 600 SKS of CLASS G CEMENT until cement came
to SURFACE. Shut DOWN for 15 minutes topped off cement. Completed
Left all tubing in hole cemented.

Describe grout or plugging material: Pumped STRAIGHT CLASS G. NO CALCIUM CHLORIDE
DUE to TEMPERATURE of Flowing WATER. Pumped cement then
2783' of Tubing to SURFACE.

Type of non-slip plug: _____

This well or test hole was plugged under license # 698 And this report is true and accurate.Drilling firm WATER SYSTEM DRILLING INC.Signature of Licensed Representative Scott Axman

Signature of Well Owner _____

Date 12/3/2020

RECEIVED

DEC 21 2020

WATER RIGHTS
PROGRAM

SD EForm - 1621LD V1

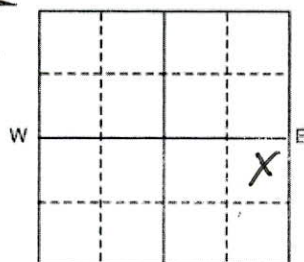
SOUTH DAKOTA WATER WELL COMPLETION REPORT

11-02

Location NE 1/4 SE 1/4 Sec 2 Twp 9S Rg 2ECounty FALL RIVER

North

Please mark well location with an "X"



Well Completion Date

April 2020

1 Mile

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

PROPOSED USE:

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

METHOD OF DRILLING:

Mud RotaryCASING DATA: ☐ Steel ☐ Plastic ☐ Other

If other describe

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>65</u> LB/FT	<u>16</u> IN	<u>0</u> FT	<u>40</u> FT	<u>22</u> IN
<u>40.50</u> LB/FT	<u>10.75</u> IN	<u>0</u> FT	<u>331</u> FT	<u>14.75</u> IN
<u>23</u> LB/FT	<u>7</u> IN	<u>275</u> FT	<u>3070</u> FT	<u>9.825</u> IN

GROUTING DATA:

Grout Type	No. of Sacks	Grout Weight	From	To
<u>XLITE #6</u>	<u>310</u>	<u>14.8</u> Lb/gal	<u>0</u> Ft	<u>331</u> Ft
<u>XLITE #6</u>	<u>200</u>	<u>14.8</u> Lb/gal	<u>275</u> Ft	<u>3070</u> Ft

Describe grouting procedure

POSITIVE DISPLACEMENTSCREEN: N/A ☐ Perforated pipe ☐ ManufacturedDiameter N/A Inches Length N/A Feet

Material

Slot Size N/A Set From N/A Feet to N/A Feet

Other information

WAS A PACKER OR SEAL USED? ☐ Yes ☐ NoIf so, what material? N/A

Describe packer(s) and location

DISINFECTION: Was well disinfected upon completion?

☒ Yes, How? Chlorine☐ No, Why Not?

Lab to which water quality sample sent for analysis

Well Owner: CITY OF EDGE MONT

Business Name:

Address: P.O. Box A.City, State, Zip: EDGE MONT SD 57735

WELL LOG:

DEPTH

FORMATION	FROM	TO
<u>RUSIAN</u>	<u>0</u>	<u>270</u>
<u>LAKOTA</u>	<u>270</u>	<u>320</u>
<u>MORRISON</u>	<u>320</u>	<u>460</u>
<u>SUNDANCE</u>	<u>460</u>	<u>1020</u>
<u>SPEARFISH</u>	<u>1020</u>	<u>1775</u>
<u>MINNECATA</u>	<u>1775</u>	<u>1820</u>
<u>GRACE</u>	<u>1820</u>	<u>1990</u>
<u>MINNEBLUSA</u>	<u>1990</u>	<u>3062</u>
<u>MANISOL</u>	<u>3062</u>	<u>3435</u>

STATIC WATER LEVEL ARTESIAN

FEET

If flowing: closed in pressure 26 PSI PSIGPM flow N/A through N/A Inch pipeControlled by ☐ Valve ☐ Reducers ☐ OtherReduced flow rate N/A GPM

Can well be completely shut in?

WELL TEST DATA:

☐ Pumped Describe:☐ Bailed☐ Other

Pumping Level Below Land Surface

N/A Ft. After N/A Hrs. pumped N/A GPMN/A Ft. After N/A Hrs. pumped N/A GPMIf pump installed, pump rate: 240 GPM

REMARKS

This well was drilled under license # 698 and this report is true and accurate.Drilling firm: WATER SYSTEM DRILLING INC.

Signature of License Representative:

South Dakota

Signature of Well Owner or Equitable Property Holder:

RECEIVED

DEC 21 2020

Date: 12/8/2020

WATER RIGHTS PROGRAM