

Form 20 - Application for Permit to appropriate Water - Artesian Water Well

NO _____ OFFICE OF STATE ENGINEER
FILE COPY

Water Division No. _____

District _____

APPLICATION FOR PERMIT

TO APPROPRIATE WATER WITHIN THE STATE OF SOUTH DAKOTA

RECEIVED

DEC 14 1945

OFFICE OF STATE ENGINEER
PIERRE, S. DAK.

CITY OF EDMONT

1. Name of applicant Chicago, Burlington & Quincy Railroad Company
Postoffice address 547 West Jackson Blvd., County FALL RIVER State ILLINOIS

I. If a corporation

(a) Name of same

(b) Date and place of incorporation

(c) Amount of capital stock \$ 27,419,301.47

(d) Amount paid in

(e) Names and address of directors:

See attached 1944 Annual Report

II. Method of accomplishing the work of the applicant;

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

2. Name of Artesian Well _____ Well No. 2

3. Quantity of water claimed _____ gals. per min.

4. Source of water supply 3500 Feet
Give depth + formation in which it is anticipated that required yield will be found.

5. Location of Well, Sub-division - Sec., Twp., Range NE NE Sec. 1, Twp. 9 So. Range 2 E

6. Estimated annual amount of water to be used 200,000 gal. daily

7. To be used for:

I. Mining, power, manufacturing, transportation, or other purposes;

8. Description of Artesian Well Project:

I. Method of Drilling: (Size of hole, size, type + weight of casing, method of

measuring yields)

Drill w/electric rotary drilling rig

17 1/4" hole to 400 feet

Set 400' of 13 3/8" 54.5 casing - cemented to top of ground

9" hole to 3500'

Set 3500' of 7" O.D. 23# Casing cemented to top of ground

Perforate 7" casing at production zone w/100 shots

acidize formation thru perforations & test w/conventional Halliburton Drill Stem Tester

9. Time required for completion of work 60 Days

10. Time required for commencement of use of water

11. Choice of newspaper for publication of notice of intention to appropriate

12. Give provisions for keeping log of well and samples or analysis of formation and water to be filed with the State Engineer or.

Daily progress reports to be kept at drilling location - sample cuttings dried and sacked at regular intervals. State engineer to be furnished with cut of samples.

ILLINOIS
STATE OF ~~SECRET~~

ss.

County of Cook

I, H. G. Dalton being first duly sworn

on my oath depose and say: That my relation to the above described, undertaking is that of

Structural Engineer

(Owner)

, that I have read the above foregoing statement, and examined the map accompanying the same, and I know of my own personal knowledge that the matter herein stated and shown are true.

Signed

H. G. Dalton

Subscribed and sworn to before me this 12th day of December, 1945

H. J. Porter
Notary Public (or other qualified officer)

SDO 1939

61.9907 UNLAWFUL USE OF WATER AND WASTE; UNAUTHORIZED CONSTRUCTION OF WORKS. The unauthorized use of water to which another person is entitled, or the willful waste of water to the detriment of another or the public, shall be a misdemeanor. It shall also be a misdemeanor to begin or carry on any construction of works for storing or carrying water until after the issuance of a permit to appropriate such water, except in the case of construction carried on under the authority of the United States.

Source: 8251 Rev. Code 1919

NO.

Water Division No.

District

(Blanks to be filled by the State Engineer.)

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

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

1. Name of applicant

Postoffice address

County

State

I. 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 address 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)

(b) Cash on hand, \$.....

(c) Treasury stock, \$.....

(d) Bonds to be issued, \$.....

(e) Other resources, \$.....

2. Name of diversion work

3. Quantity of water claimed cubic feet per second.

4. Source of water supply

5. Location of point of diversion

on bank.
(Right or left bank looking down stream.)

6. Annual periods during which water is to be used

7. To be used for:

I. Irrigation or domestic use:

(a) Number of acres to be irrigated acres.

(b) Legal subdivisions to be irrigated

(NOTE—A list of lands to be irrigated, giving each subdivision and fraction with average 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.)

II. Mining, power, manufacturing, transportation, or other purposes:

(a) Nature of use

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

(c) Location of plant

(d) Method of developing power

(e) Point where water will be returned to stream

Form 15.

Permit No. 306-2

Water Diversion No. 2 SOUTH CHEYENNE RIVER Water District

CERTIFICATE OF CONSTRUCTION

This is to Certify, That the Chicago, Burlington and Quincy Railroad Co.

_____ the holder _____ of
Permit No. 306-2, issued upon Application No. 306-2, bearing date of priority of December 14,
1945 authorizing the diversion of .31 cu. ft. per second of the waters of _____
artesian ground water County of Fall River, State of South Dakota at _____
a point in the NW1/4, NE1/4, Section 1, T9S, R2E

_____, for originally transportation purposes, but now
used for municipal

purposes, has _____ 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 .42 cu. ft. per second of water.

Date September 16, 1974

By: WATER RIGHTS COMMISSION

DONALD DRISCOLL, Chief Engineer

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 306-2

(1) WHEREAS, On the 14th day of December A. D. 19 45

the Chicago, Burlington and Quincy Railroad Company

made Water Right Application No. 306-2 for a permit to use .31 cubic feet per second of the water of artesian ground water

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

purposes; and

(2) WHEREAS, On the 13th day of February A. D. 19 46

Permit No. 306-2, with a date of priority of December 14, 1945

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 13th day of February A. D. 19 47 and for the application to beneficial use of said water on or before the 13th day of February A. D. 19 47

and whereas on the 16th day of September, 1974, the Permit was transferred to the City of Edgemont.

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 .31 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

xx

the holder _____ and owner _____ of said permit No. 306-2 a water right, dating from December 14, 1945 to use of .31 cubic feet per second of the waters of artesian 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 in the NE 1/4, R2E, Section 1, T9S, R2E

and conduct to and from conducted through the City of Edgemont water distribution system.

for the purpose of municipal use

Subject to any limitations listed in Water Right Permit No. 306-2 and subject to the laws of the State of South Dakota.

WITNESS, My hand and seal of our office at Pierre, South Dakota
this 16th day of September A. D.
Nineteen Hundred and Seventy-four

WATER RESOURCES COMMISSION

By:

Chief Engineer, Executive Officer DONALD DRISCOLL

AFFIDAVIT OF PUBLICATION

COUNTY OF FALL RIVER

STATE OF SOUTH DAKOTA,

L. K. Kopriwa

of Edgemont, South Dakota, being duly sworn, upon his oath says: That he is publisher of THE EDMONT TRIBUNE, a Legal Newspaper published weekly at Edgemont, Fall River County, South Dakota; that the Advertisement headed Notice of Appropriation of Water

a printed copy of which is hereunto attached, was published in THE EDMONT TRIBUNE in the regular and entire issue of every number of said newspaper and in the proper, on Wednesday of each week, for four successive issues, beginning with the issue dated Jan. 16, 1946 and ending with the issue dated Feb. 6, 1946, that the full amount of the fee charged for the publication of said Notice is \$ 11.25 and that no agreement or understanding for the division thereof has been made with any other person and that no part thereof has been agreed to be paid to any person whomsoever, and that the whole amount of said fee inures to the benefit of the publisher of said newspaper.

L. K. Kopriwa

Subscribed and sworn to before me this 14 day of Feb., 1946

Orma Kopriwa
Notary Public

APPROPRIATION OF WATER

Office of State Engineer, Pierre, So. Dak., December 20, 1945.

Notice is hereby given that Chicago, Burlington & Quincy Railroad Co., whose postoffice address is Chicago 8, Illinois, So. 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 200,000 gal. per day from the artesian basin through Well No. 2, to be located in the NE1/4 of the NE1/4 of Section 1 Twp. 9 S. Range 2 E. Said water to be used for the purpose of providing railway transportation.

This application will be taken up by the State Engineer at his office at Pierre for consideration upon the 9th day of February, 1946, at 10:00 A. M. All persons who believe that their prior rights would be injuriously affected, or that the allowance of the permit would be detrimental to the public welfare shall file such protest with the State Engineer in writing prior to the above date and may appeal on the day above mentioned in person for the purpose of discussing further the information presented.

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

DEAN W. LOUCKS,

State Engineer.

Pub. Jan. 16, 23, 30; Feb. 6.

(First Publication 194.....)

APPROPRIATION OF WATER

Office of State Engineer,

Pierre, So. Dak., December 20, 1945

Notice is hereby given that Chicago, Burlington & Quincy Railroad Co. whose postoffice address is Chicago 6, Illinois, So. 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 200,000 gal. per day

of water to be taken from the artesian basin through Well No. 2, the point of diversion of which is to be located on the bank of said stream in the N.E. 1/4 of the N.E. 1/4 of Section 1

Twp. 9 S Range 2 E. Said water to be used for the purpose of providing railway transportation.

This application will be taken up by the State Engineer at his office at Pierre for consideration upon the 25th day of February, 1946, at 10:00 A. M. All persons who believe that their prior rights would be injuriously affected, or that the allowance of the permit would be detrimental to the public welfare shall file such protest with the State Engineer in writing prior to the above date and may appear on the day above mentioned in person for the purpose of discussing further, the information presented.

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

Dean W. Loucks,
State Engineer

1005

CHICAGO, BURLINGTON & QUINCY RAILROAD COMPANY

G. W. Giller
Asst. Chief Engineer, Lines East
H. A. Aulberg
Asst. Chief Engineer, Lines West
(Lincoln, Nebraska)
E. J. Brown
Engineer of Track
F. H. Ciemer
Bridge Engineer
R. W. Willis
Principal Assistant Engineer

ENGINEERING DEPARTMENT



547 West Jackson Boulevard
Chicago 6, Illinois
R. Clarke, Chief Engineer
G. A. Haggander, Assistant Chief Engineer

H. G. Dalton
Structural Engineer
W. F. Zane
Signal Engineer
P. F. Mulkey
Engineer Capital Expansion
C. W. Breed
Engineer of Standards

RECEIVED

MAR 1 1946

OFFICE OF STATE ENGINEER
PIERRE, S. DAK.

Chicago, March 2, 1946

Mr. Dean W. Loucks,
State Engineer,
State of South Dakota,
Pierre, South Dakota,

Dear Sir:

Our well at Edgemont, So. Dakota has been completed and we are pleased to send you herewith the log and formation record of the well.

Yours truly,

H. G. Dalton
Structural Engineer

WDG-am

Enc.

*See Antenna well file
for above*

May 29, 1967

Mr. L. G. Key
General Land Agent
Chicago, Burlington & Quincy Railroad Company
547 West Jackson Blvd.
Chicago, Ill. 60606

Dear Mr. Key:

This is in answer to your letter of May 23rd in which you inquire about the status of water rights held by the Chicago, Burlington and Quincy Railroad Company.

We do not maintain a list of current water rights at the present time. The status of a water right depends upon the continued use of the water granted under the right and this office has just recently been in position to make the necessary field investigations to determine if the old water rights are still being used and to what extent. However, we can give you some explanation of South Dakota water law and descriptions of the water right filings made by the Chicago, Burlington & Quincy Railroad Company. From this information you should be able to determine which water rights may still be valid.

Prior to 1907, all that was necessary to claim a water right was to post a notice of intention to divert water at the diversion works and to file a copy of such notice in the county records. Many of these old claims have never been filed in this office and we have no knowledge of how many of these claims might have been made by the C.B. & Q. However, we have one in our files and it will be described a little later on.

In 1907 the first state water law was passed and the State Engineer was given jurisdiction over the granting of water rights. The procedure for obtaining a water right under this law was to make an application to the State Engineer. He then took the application under consideration, and if it met with his approval, a permit for the construction of the diversion works was issued. This permit set forth the conditions, if any, by which the water was to be appropriated and set a time limit for completing the necessary diversion works and putting the water to beneficial use. After the works were completed, the State Engineer was to have an inspection made and issue the final water license. This license has no time limit and is valid as long as there is continued use of the water. Six of the filings in the name of the C.B. & Q. were initiated under this procedure.

In 1955, the Water Resources Commission was established and assumed jurisdiction over water right administration. Under the 1955 law, the Commission

is required to recognize all "vested rights" or uses of water made under the older laws.

The Commission's primary criterion for determining if a vested right is still valid is Sec. 61.0125 of the Water Law:

"61.0125. Forfeiture for Non-Use. When any person entitled to the use of appropriated water fails to use beneficially all or any part of such water for the purpose for which it was appropriated, for a period of three years, such unused water shall revert to the public and shall be regarded as unappropriated public water".

Now regarding the water right filings we have on record for the C.B. & Q. As mentioned earlier, there may be some filings prior to 1907 of which we have no record.

Water Right 0603-2. This is an old location notice with a priority date of June 17, 1903. It claims five cubic feet of water per second from Hot Brook, a stream in Fall River county, with a diversion point in the SW $\frac{1}{4}$, NE $\frac{1}{4}$, Section 14, T7S, R5E. The water was to be used for power, depot, grounds, and water tanks.

Water Right 27-A-2. This water right has a priority date of July 27, 1907 and the Water License was issued November 16, 1910. It grants the use of 90 cubic feet per second from Long Branch Creek in Fall River county. The diversion point is in the SW $\frac{1}{4}$, Section 16, T12S, R4E and water was to be stored in a reservoir situated in Section 9, T12S, R4E. The water was to be used for locomotive purposes and as a supply for the Ardmore, South Dakota station.

Water Right 210-2. This filing has a priority date of August 3, 1914 but the final inspection has never been made and no license issued. This filing claimed 0.08 cubic feet per second from Hot Brook in Fall River county. The diversion point was listed as in the NE $\frac{1}{4}$, Section 14, T7S, R5E. The water was to be used for general railroad supply and domestic purposes.

Water Right 130-1. This filing has a priority date of February 24, 1916 but the final inspection has never been made and no water license issued. This filing claimed 0.5 cubic feet per second from springs located in Lawrence county. The diversion point is listed as being located in the NW $\frac{1}{4}$, Section 13, T3N, R4E. The water was to be used for general railroad supply and domestic purposes.

Water Right 131-1. This filing has a priority date of February 24, 1916 but no inspection was made nor final papers issued. This filing claimed 0.5 cubic feet per second from Elk Creek in Lawrence county. The diversion point is listed as being in the NW $\frac{1}{4}$, SE $\frac{1}{4}$, Section 25, T4N, R3E. The water was to be used for general railroad supply.

Water Right 132-1. This filing has a priority date of February 24, 1916 and has never been inspected nor has the water license been issued. It claims 0.5 cubic feet per second from springs located in Lawrence county.

Mr. L. G. Key

(concluded)

May 29, 1967

The diversion point was in the NW 1/4, Section 16, T4N, R2E. The water was to have been used for general railroad supply and domestic purposes.

Our files contain no water right filings in the name of the Black Hills and Fort Pierre or the Deadwood Central Railroads.

If the C. R. & Q. is currently using water under any of the filings listed above, it would be beneficial to have the filings completed or modernized. The basic procedure would be for the company to furnish this office with a sworn statement (our Form 25) of the continuity and amount of use since the priority date. We would then cause an inspection to be made to determine the diversion rate and extent of beneficial use. If you wish to update any of these water rights, please notify us and we will give you all the assistance we can.

If you are no longer using the water granted by the above water right filings and do not feel you have any claim to them, please so notify us and they will be scheduled for cancellation by the Water Resources Commission.

Please feel free to contact this office if we may be of any further assistance.

Sincerely,

RICHARD D. SCHMOYER
Water Right Specialist

RDS:mf

P.S. I inadvertently omitted one water right, as follows: Water Right 205-2. This filing has a priority date of May 7, 1914 but no inspection was ever made or final papers ever issued. This filing claimed 17 cubic feet per second from Rapid Creek in Pennington county. The diversion point was listed as the SE 1/4 NW 1/4 Section 24, T2N, R3E. This water was to be used for power purposes in a plant built in 1891.

CHICAGO, BURLINGTON & QUINCY RAILROAD COMPANY

LAND



DEPARTMENT

R. G. SCHELLING
Assistant General Land Agent
D. V. ZEISS
Assistant General Land Agent

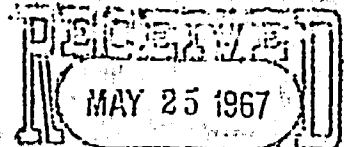
AC 312 Wabash 2-2345
547 West Jackson Blvd., Chicago, Illinois 60606

L. G. KEY, General Land Agent

H. D. SHANE
Manager, Leases and Contracts
E. V. RIEBOY
Real Estate Manager
C. G. KINGERY
Real Estate Manager

Chicago, May 23, 1967

Chief Engineer, Water Resources
State of South Dakota
Pierre, South Dakota



ATTENTION: Mr. Joe Grimes

STATE WATER RESOURCES COMM.
PIERRE SOUTH DAKOTA

Dear Sir:

In order to bring our records up to date regarding water rights held in the State of South Dakota under the CB&Q Railroad Company and predecessor railroads, the Black Hills & Fort Pierre Railroad and the Deadwood Central Railway, I will appreciate you advising if your office maintains a publication indicating current rights, and the charge for same. If no form of publication is available, is a list of current water right holders available, and what charge is made for copies of this information?

Thanking you in advance for your cooperation,
I remain,

Very truly yours,

CK:DS

June 15, 1967

Mr. L. G. Key, General Land Agent
Chicago, Burlington, and Quincy Land Department
547 West Jackson Blvd.
Chicago, Ill. 60606

Dear Mr. Key:

In checking further on our water right records, I find another water right for the C.B. & Q. as follows:

Water Right 306-2. This filing has a priority of December 14, 1945 but the final inspection has never been made and no license issued. This filing claims 0.31 cfs from an artesian well located near Edgemont, South Dakota. The diversion point is in the NE1/4 NE1/4, Section 1, T9S, R2E, Fall River county. The was was to be used for transportation purposes.

I wish to apologize for not finding this water right in time to include it in my letter of May 29th.

Sincerely,

RICHARD D. SCHMOYER
Water Right Specialist

RDS:mf

NOTICE OF TRANSFER OF WATER PERMIT

TO: **WATER RIGHTS COMMISSION**
 State Office Building No. 2
 Pierre, South Dakota 57501

Date

Sept. 9, 1974

This is to notify you that title to the lands described as follows:

Artesian well located in the NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 1, T9S, R2E

formerly owned by C. B. and Q. Railroad

has been transferred to City of Edgemont

together with any rights to the beneficial use of water thereon as evidenced by Water Right Permit No. 306-2 as provided for in Section 61.0127 of the 1960 Supplement to the South Dakota Code of 1939.

You are therefore hereby requested to file this "Notice of Transfer of Water Permit" in its appropriate file at the Office of Water Resources Commission as evidence of the change of ownership.

WATER RIGHTS COMMISSION

A fee of one dollar is hereto attached to cover filing fees as required under Section 61.0159 of the 1960 Supplement to the South Dakota Code of 1939.

STATE OF SOUTH DAKOTA

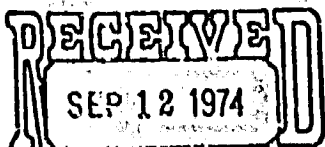
County of Fall River) ss.

I, Jack R. Nelson 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, and I know of my own personal knowledge that the information herein stated is true.

(Signed)

Suscribed and sworn to before me this 9th day of Sept, 1974

(Notary Public)



STATE WATER RIGHTS COMM.
 PIERRE, SOUTH DAKOTA

Permit No. 306-2Water Division 2 SOUTH CHEYENNE Water DistrictREPORT 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 CHICAGO, BURLINGTON, ANDQUINCY RAILROAD of EDGE MONT, SOUTH DAKOTA holderof Permit No. 306-2, bearing date of priority of DECEMBER 14, 1945authorizing the diversion of .309 cu. ft. per second of the waters of GROUND WATERfor 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:

FLOWING ARTESIAN WELL 3500 FEET DEEP
WITH 4 7/8 INCH STEEL CASING

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

ARTESIAN PRESSURE OF 450 gpm (FREE FLOW)

C. Works used to apply water to beneficial use.

500 SERVICE CONNECTIONSThe system is in the following condition: GOODThe point of diversion is located NE¹ NE⁴ SECTION 1, T. 9 S., R. 2 E. B.M.The works are capable of diverting and conveying to the place of use .42cu. ft. per second of water which is to be used for MUNICIPAL WATER SYSTEMWater has been put to beneficial use to the maximum extent as follows: 500 SERVICECONNECTIONS IN THE CITY OF EDGE MONT.

comprising a total of _____ acres of land.

THIS WELL (KNOWN AS WELL #2) IS A SUPPLEMENT
TO THREE OTHER WELLS FOR MUNICIPAL WATER IN THE CITY
OF EDGE MONT.

NOTICE OF TRANSFER SHOULD BE SENT WITH NOTICE OF
COMPLETION OF WORKS.

Date AUGUST 15, 1974

SEND TO: JACK NELSON, MAYOR
EDGE MONT, SOUTH DAKOTA

Thomas A. Gardner
(Signature)

THOMAS A GARDNER
WATER RESOURCES ENGINEER

*Michael Rasmussen
fyt*

CITY OF EDMONT
EDMONT, S. D., 57735

09275



*Horne VCK
Hatch
FYI
Bob*

July 19, 1979

Daniel P. Baker, State Director
Bureau of Land Management
Cheyenne, Wyoming 82001

Dear Sirs,

We are very concerned about the conservation and protection of the water in the Madison formation. The new drive on energy production may mislead someone into permitting the use of this water for coal slurry and it would be a devastating mistake for many communities in Wyoming, Nebraska and South Dakota. This is a principal source of municipal water in many towns.

We would therefore like to be informed of any decisions, or hearings on uses that might deplete this water to any extent so that we could enter protest.

Thankyou,

Peter W. Zeimet

Peter W. Zeimet
Mayor
Edgemont, South Dakota

cc: Governor Ed Herschler
Governor Bill Janklow
Senator George McGovern

RECEIVED

JUL 25 1979

DEPT. OF WATER &
NATURAL RESOURCES

The Edgemont Herald-Tribune

Volume 40, No. 11, March 1, 1962

Edgemont, Fall River County, S. D.

Burlington Railroad May Make City Gift Of "Ailing" Local Water Well

J. E. Hamer, Superintendent of the Alliance Division of the Chicago, Burlington and Quincy Railroad has told Edgemont Mayor Hugh Hutchison that he is recommending to the road superintendent in Chicago that the Burlington water well in Edgemont be given as a gift to the city of Edgemont.

Mayor Hutchison told Hamer that the city would be most grateful for the well providing that the city would not be held responsible for plugging the well in the event that efforts made to rehabilitate the water source are not successful.

If efforts to rehabilitate the \$63,000 well are successful the production from the well, plus an anticipated 300 gallons of excess water per minute from a new well soon to be drilled by MDI, would more than double the city's present water supply.

The Burlington well was drilled in 1945 and is considered still a relatively "new" well. Reliable estimates indicate that if the casing break can be bypassed by the installation of new casing inside the present casing that at least 500 gallons of water per minute could be expected.

The well, one of the area's most productive water wells, recently lost much of its production because of a casing break at about the 400 foot level. Water from the break is entering other formations and not leaving the well in useful production.

Officials of Mines Development, Inc., have offered the city water in excess of their mill's needs when their proposed new well is completed. The firm has been relying on water from the Burlington well in the past which they have been buying from the railroad.

Hutchison said he felt he should protect the city by seeking the escape provision on plugging the hole should repair attempts be unsuccessful because the cost of complying with state laws regarding an abandoned water well might run into the thousands of dollars.

The mayor and city council heard from well driller Jim Baker of Osage recently that if present 7" casing at the 399 foot casing could be screwed onto the level to get circulation and control the water that there would be little reason to feel the well could not be successfully rehabilitated.

The cost of this procedure, Baker told the mayor and council would be between \$1200 and \$1500 with his firm. This would be the major part of the gamble Baker said, and added that if

it was impossible to screw onto the 7" casing that he would advise forgetting attempts to repair the well.

If screw-on attempts were successful two alternatives are possible to restore production. A 5" casing could be introduced into the present casing to below the injured casing area with a "packer" below and the new casing cemented in, or a 5" casing could be run to the bottom of the present casing and cemented in giving in effect a new, or better well, better because it would be double-cased and double-cemented.

This repair job would run in the neighborhood of between \$15,000 and \$25,000 Mayor Hutchison estimated, as against a probable cost of between \$50,000 and \$60,000 for a new well which is the other alternative to solving the city's chronic water-shortage problem.

Present water production in the city is about 690 gallons per minute from all sources and together with the MDI excess water and from a repaired Burlington well could give approximately 1,490 gallons per minute, an equivalent of over 2 million gallons per day.

"With this kind of water production," Mayor Hutchison said, "we would be in a very favorable position to have no water restrictions at all and there now is a fair chance that this might develop."

Mayor Hutchison said that on the basis of a 1955 water study made by Kirkham, Michaels and Associates of Rapid City that present storage capacity for the city would be adequate, even with the new supplier available.

The matter now rests with the main office of the Burlington Railroad, Hutchison said, and their reaction to his request that the city not be held liable for closing costs on the well if repair efforts are to no avail. After that, he said, it is up to the city council to decide whether to spend the funds necessary to find out if the well can be salvaged.



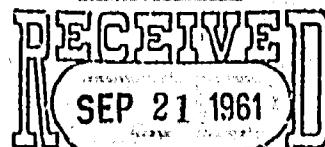
SOUTH DAKOTA
STATE GEOLOGICAL SURVEY

UNION BUILDING
ON THE CAMPUS OF THE STATE UNIVERSITY
VERMILLION

ALLEN F. AGNEW, STATE GEOLOGIST
AND DIRECTOR
TEL. MARKET 4-4471

September 19, 1961

Mr. J. W. Grimes
Chief Engineer
Water Resources Commission
Pierre, South Dakota



STATE WATER RESOURCES COMM.
PIERRE, SOUTH DAKOTA

Dear Joe,

Come information was recently passed along to me about the flowing well at the railroad roundhouse in Edgemont, which I thought should be referred to the proper authority.

Apparently the casing or cement job on this well has failed, and water is coming up around the outside of the casing in a rather substantial flow.

I am sure that you have a copy of the detailed log by E. W. Krampert, Consulting Geologist from Casper, Wyoming, for this well. It shows that the well is approximately 75 feet into the Pahasapa limestone, which it topped at 2890 and had a total depth of 2955.

Conductor pipe was set at 45 feet, and 391 feet of 13 3/8-inch OD 48 pound 8 round thread of casing was cemented from the rotary table with 315 sacks, the top of the casing being at the bottom of the cellar. Then 2901 feet of 7-inch OD 22.6 pound 10 thread casing was cemented in stages, and the top was belled nipple at 382 feet from rotary table. The well was recorded to flow 1000 gallons a minute when it was completed in February, 1946, with 125 degrees Fahrenheit temperature and a shut in pressure of 110 pounds. Mr. H. L. Hollingworth of Edgemont says that wells to the Dakota sandstone are warming up, because they are being recharged by this warm Pahasapa water, and that the pressure is 400 pounds per square inch.

Mr. Hollingworth says that the 7-inch casing was cemented from its bottom up to about 1100 feet with 300 sacks. The 7-inch was then perforated at about 1000-1100, and cemented by squeezing through the perforations to about 350-375 feet depth. The 7-inch was then unscrewed at about 350 feet and the top part was pulled.

Mr. J. W. Grimes

-2-

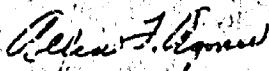
Sept. 19, 1961

I am enclosing a sketch showing the relationship as Mr. Hollingworth has stated.

Mr. Hollingworth says that the well has always been shut down very quickly, and he thinks that this has caused the cement to break at the base of the surface casing or at the perforations. The railroad is taking bids on the repair of the well.

This situation seems to be serious enough that Earl Cox and I thought that you should know about it, as apparently the Pahsapa water is invading the Dakota water in that area.

Sincerely yours,



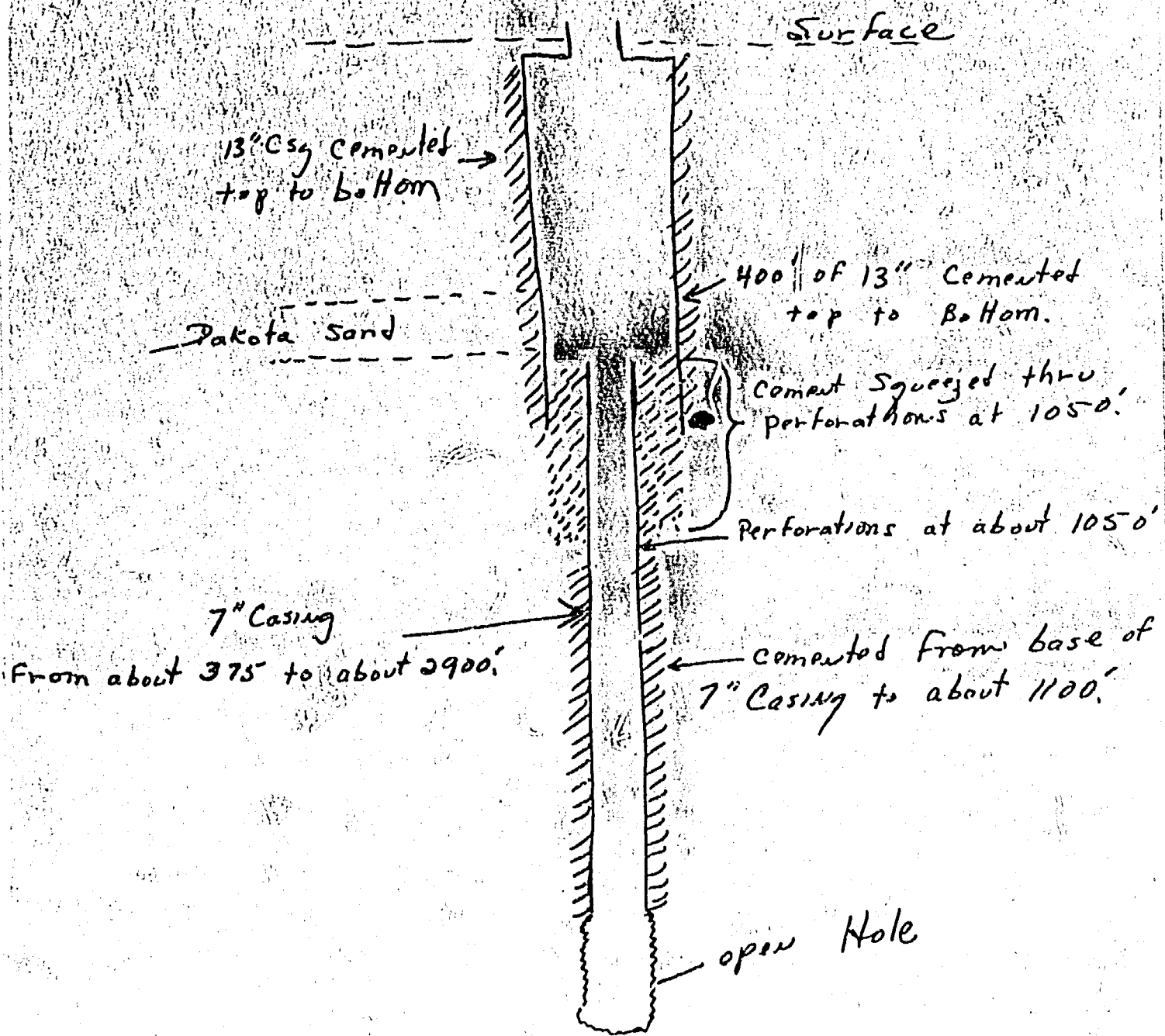
Allen F. Agnew
State Geologist

AFA/bb

Enc.

cc - Earl J. Cox
State Geological Survey
Belle Fourche, South Dakota

Well at Round House, Edgemont, So. Dak



CHICAGO, BURLINGTON & QUINCY RAILROAD COMPANY

ENGINEERING



DEPARTMENT

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Chicago, Illinois
September 21, 1961

Hollingsworth Drilling Co.

Edgemont, South Dakota

Gentlemen:

Please be referred to your letter of August 14, 1961, to Mr. C. C. Peterson concerning repairs to our Well No. 2 at Edgemont, So. Dakota.

As you know, we arranged with the Schlumberger people to make a survey of this well to determine where the well is failing. This survey indicated that the water is able to penetrate the 7" casing in the upper two joints of the 7" at about the 400-410 ft. level. Information developed during the survey also indicated that the 7" casing is partially filled with mineral deposits, greatly reducing the inside diameter of the well.

We presume this information will greatly alter your proposal of August 16th estimating the repairs at about \$2,500.00, and you may want to reconsider giving us a new proposal.

Your proposal should outline how you propose to remedy the well failure and make necessary repairs. Proposal and bid should include all costs for materials, labor, taxes, insurance, and any other items necessary to perform and complete the work to insure a good and acceptable operating repaired well.

Alternate bid should be furnished covering cost of surety bond on the above mentioned proposal in the amount of \$50,000.00.

It is the understanding that contractor, upon being awarded contract, will enter into standard C B & Q RR Company form of contract No. 1842, copy attached, take out and pay for any necessary permits covering the work, also Federal, State, City or other Governmental Sales, Use, Excise or other similar taxes; also, take out and pay for necessary fire insurance, workmen's compensation insurance, public liability insurance in limits of not less than \$25,000/\$50,000 and property damage insurance in limits of

Hollingsworth Drilling Co.

-2-

September 21, 1961

not less than \$1,000/\$10,000.

The Contractor shall guarantee all materials and workmanship furnished by him to be free from defects or flaws in operation or workmanship for a period of one year from date of acceptance and of final payment. The Contractor shall further guarantee to promptly replace or repair without expense to the Railroad Company, any materials or workmanship furnished by him under this proposal proving defective within the period of the guarantee.

The Railroad Company reserves the right to reject any and all proposals. Proposals and bids should be addressed to Mr. E. J. Brown, Chief Engineer, Attention Mr. G. J. Bonnevier, Engineer of Buildings, 547 West Jackson Blvd., Chicago 6, Illinois.

Yours very truly,

Engineer of Buildings

CFM:ms

Enc.