

Considered: _____

WATER PERMIT NO. 2085-2

MAP No. same 394-4162

Name of Applicant City of Rapid City, Water Division

Post Office Address 300-6th Street, Rapid City SD 57701

Amount of Water Claimed 8.01 cfs Total Acres N/A

Source of Water Supply ground water - Madison Formation - up to 6 wells

Water to be used for municipal purposes County Pennington

About _____ miles _____ of Rapid City

PROOF OF PUBLICATION: Received _____ Not Received _____

APPLICATION: Approved _____ Subject to _____

F.F. & C.L. Adopted _____ Not Approved _____ Deferred _____

PRIORITY Date Received May 18, 1989 Fee \$2,400⁰⁰ Remarks _____

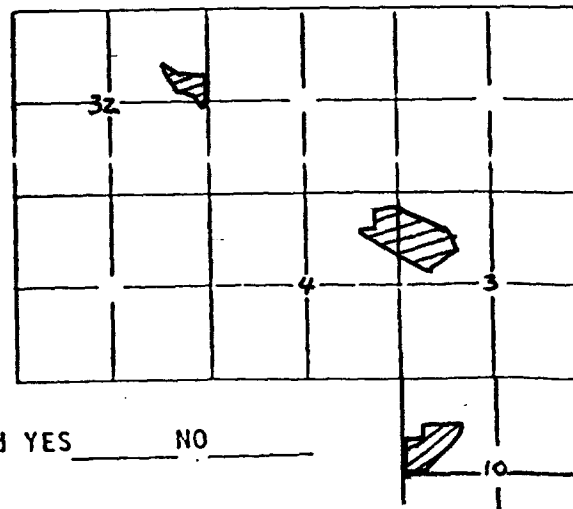
Corrected Application Received _____ Period of Annual Use Jan 1 - Dec 31

WATER QUALITY APPROVAL RECEIVED N/A APPROVED/CONDITIONAL (Circle one)

WI-1 Description same as Application YES _____ NO _____ REMARKS _____

Diversion Point 3 sites: SE 1/4 NE 1/4 section 32 - T2N - R7E; NW 1/4 section 3, E 1/2 NE 1/4 section 4; S 1/2 NW 1/4 section 10; all in T1N - R7E

Land to be Irrigated N/A



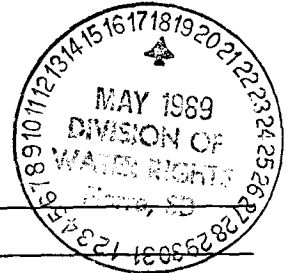
Well Log: Driller _____ Licensed YES _____ NO _____

Depth of Wells 800-1200 Feet REMARKS _____

Type of Map topo PREPARED BY Jimmy Hilton Reviewed and the Number assigned on May 22, 1989 By Ron Swall

523 E. Capitol
Pierre, SD 57501
(605) 773-3352No. 2085-2 Hydrologic Unit 10120110
Map No. Same Basin Upper Cheyenne
Newspaper Rapid City Journal, P.O. Box 450, 57709**Application For Permit To Appropriate Water Within The State Of South Dakota**Check use of water: Industrial ☐ Commercial ☐ Municipal ☒ Other Common Distribution System ☐
Rural Water System ☐ Suburban Housing ☐ Geothermal Heat ☐ Institutional ☐ Recreational ☐
Domestic ☐ (above 18gpm) Other ☐

Type of Application: Check one or more of the following

New ☒ Vested Right ☐ Future Use ☐ Change Use ☐☐ Amend Permit No. _____ with old priority date retainedChange diversion point(s) ☐ Add diversion point(s) ☐ Other ☐ _____☐ Application to: Change diversion point(s) ☐ Add diversion point(s) ☐ on Permit No. _____☐ Construction to use water reserved by Future Use Permit No. _____1. Name of Applicant Water Division, City of Rapid City Phone No. 394-4162Post Office Address 300-6th Street, Rapid City State SD 57701
(Street, RR or Box) (City) Zip Code2. Amount of water claimed (c.f.s.) ~~XXXXXXX~~ 8.01 cfs3. Source of water supply Madison Aquifer - up to 6 wells.1. Location of point of diversion SE 1/4 NE 1/4, Sec 32, T2N, R7E of BHM
NW 1/4 Section 3; E 1/2 NE 1/4 Section 4; S 1/2 NW 1/4 Section 10; all in T1N, R7ECounty Pennington5. Counties where water will be used Pennington6. Annual period during which water is to be used all year Jan 1- Dec 31

7. Give a brief description of proposed 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)

-attached sheet-

Attachments: Attach Form 2A if diversion from a well or dugout, or if storage of water, is proposed. Attach map (see instruction)

STATE OF SOUTH DAKOTA)
County of Pennington)^{ss}I, Keith T. Carlyle the applicant, certify that I have read this application, have examined the attached map and that the matters stated are true and that I intend, and am able to complete the necessary construction.Signed Keith T. CarlyleSubscribed and sworn to before me this 16th day of May 19 89Kay L. Ruppert
Notary Public

SOUTH DAKOTA
WATER PERMIT No. 2085-2

Date of first receipt of application May 18, 1989.

Date returned to applicant for corrections, amendments or changes May 22, 1989.

Date of receipt of corrected application July 6, 1989.

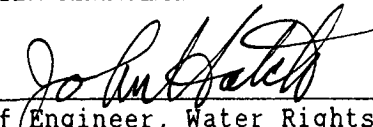
The Water Management Board approved Water Permit Application No. 2085-2 on July 26, 1989 for the City of Rapid City, 300 6th Street, Rapid City, South Dakota 57701 authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 2085-2 appropriates 8.01 cubic feet of water per second from up to 6 wells (Madison Formation) 800 to 1200 feet deep. The points of diversion are to be located within portions of the following three sites with no more than two wells per site: 1) SE1/4 NE1/4 Section 32-T2N-R7E; 2) NW1/4 Section 3, E1/2 NE1/4 Section 4; both in T1N-R7E; and 3) S1/2 NW1/4 Section 10-T1N-R7E.
2. The water appropriated shall be used for the purpose of supplying the City of Rapid City and may not exceed the amount of water needed for beneficial use for municipal purposes.
3. The water is to be used during the following described annual period: January 1 - December 31.
4. The date from which applicant may claim right is May 18, 1989.
5. One-fifth of the construction is to be completed on or before January 26, 1992.
6. All construction is to be completed on or before July 26, 1994.
7. Water is to be put to beneficial use on or before July 26, 1998.
8. 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 wells authorized by Permit No. 2085-2 shall be constructed by a licensed well driller and construction shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted with cement (bottom to top) from the Madison Formation to the surface pursuant to Section 74:02:04:30.
2. The wells 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.

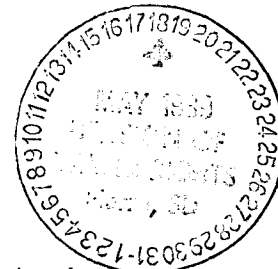
WATER MANAGEMENT BOARD

By: 
Chief Engineer, Water Rights Division
Department of Water and Natural Resources

AUG 15 1989
(date)

Supplemental Information

(type or print in ink)



1. Well Information - Proposed construction

- a) Drill Hole Diameter 16-20 inches Depth 800 feet
- b) Casing Type Low Carbon Steel Diameter 16-20 inches Thickness 1/2 inch
- c) Screen Type Open Hole Diameter 10-12 inches Thickness _____
- d) Gravel Pack Thickness None Length of Gravel Pack None
- e) Depth to Top of Water Bearing Material 800 feet
- f) Depth to Water (ground surface to water level) 40 feet
- g) Distance to nearest existing domestic well:
 On applicants property 9000 feet On property owned by others 7000 feet

2. Dugout Information Estimates

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

3. Water Storage Dams

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

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

b) Freeboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Primary Outlet Capacity _____
 If Pipe, diameter _____

f) Secondary Spillway Capacity _____
 Spillway width _____

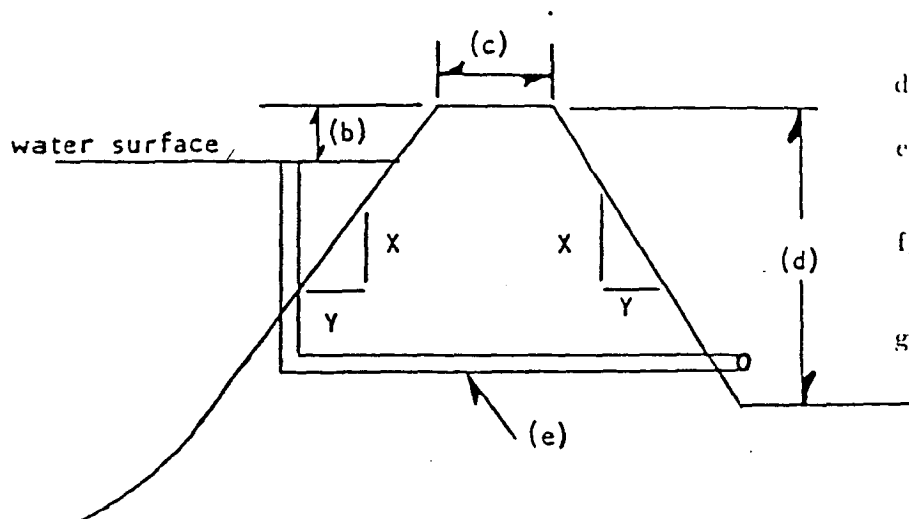
g) X & Y Slope
 Upstream _____

Downstream _____

Surface Area of Impoundment _____

Storage _____ acre feet

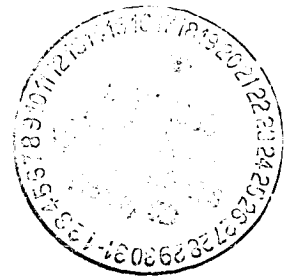
Drainage area above dam _____



Signature of Applicant _____

Supplemental Information

(type or print in ink)



1. Well Information - Proposed construction

- a) Drill Hole Diameter 16-20 inches Depth 1200 feet
- b) Casing Type Low Carbon Steel Diameter 12-16 inches Thickness 1/2 inch
- c) Screen Type Open Hole Diameter 10-12 inches Thickness _____
- d) Gravel Pack Thickness None Length of Gravel Pack None
- e) Depth to Top of Water Bearing Material 1200 feet
- f) Depth to Water (ground surface to water level) 50 feet
- g) Distance to nearest existing domestic well:
On applicants property 6500 feet On property owned by others 4000 feet

2. Dugout Information Estimates

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

3. Water Storage Dams

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

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

b) Freeboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Primary Outlet Capacity _____
If Pipe, diameter _____

f) Secondary Spillway Capacity _____
Spillway width _____

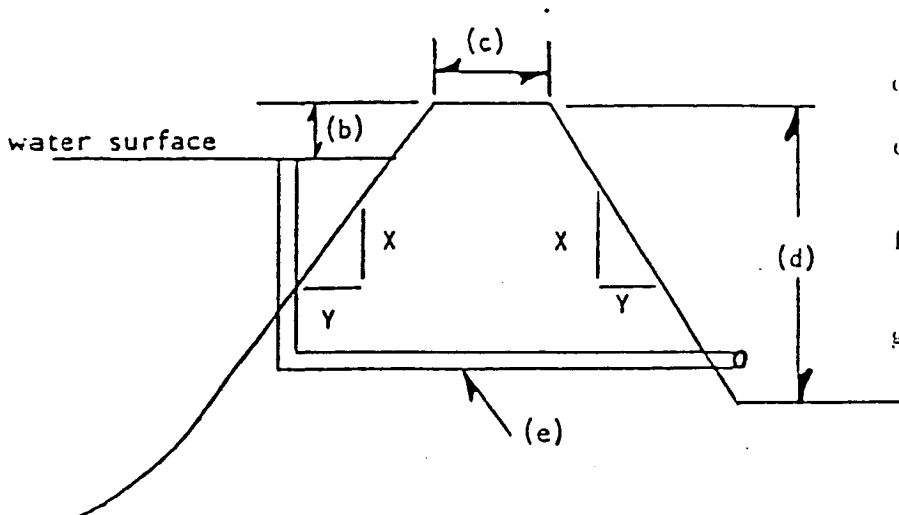
g) X & Y Slope
Upstream _____

Downstream _____

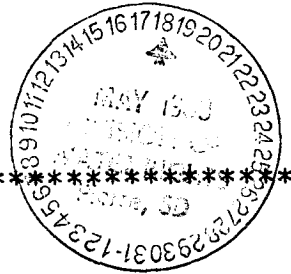
Surface Area of Impoundment _____

Storage _____ acre feet

Drainage area above dam _____



Signature of Applicant _____



MEMORANDUM

TO: Water Rights Division
FROM: Rodger Kruger
RE: Application for Permits to Appropriate Water
DATE: May 10, 1989
DISTRIBUTION:

Item 7: Brief Description of Proposed Project

Wells are intended to tap the Madison Aquifer. A small diameter hole (4 to 6 inches) will be drilled to completion within the Madison Aquifer. If tests show that this well is likely to be a good supply, then the hole will be reamed to match flow rates. A large diameter hole (16 to 20 inches) will be reamed until the Madison Aquifer is reached. The hole will then be cased and grouted. A reduced diameter (10 to 12 inches) open hole will then be reamed within the Madison Aquifer.

The Madison Aquifer is expected to be about 300 feet in depth. Normally the hole within the Madison Aquifer will be open and not screen.

Under Form 2A, Well Information, 300 feet would be added to the drill hole depth to take the hole to the bottom of the Madison Aquifer. This diameter is expected to be a reduced size from the upper drill hole.

The water will be used to expand the domestic supply of the City of Rapid City. To secure other sources in order to lessen our reliance on the Deerfield and Pactola Reservoirs.



MEMORANDUM

TO: Water Rights Division
FROM: Rodger Kruger
RE: Filing Fees for Application for Water Permit and/or Right
DATE: May 11, 1989
DISTRIBUTION:

Filing fee for SE 1/4 NE 1/4, Sec 32, T2N, R7E of BHM, known as City Springs area.

Amount of water claimed is 2.67 cfs.
Is equal to 1932.71 acre feet per year.

First 120 acre feet is	\$150.00	=	\$150.00
Second 120 acre feet is	\$75.00	=	75.00
Each addition 120 AF is	\$25.00	=	375.00
(1932.71-240=14.11 x 120)			\$600.00

Filing fee for NW quarter section of Sec 3, T1N, R7E of BHM, known as Camp Rapid area.

Amount of water claimed is 2.67 cfs.
Is equal to 1932.71 acre feet per year.

First 120 acre feet is	\$150.00	=	\$150.00
Second 120 acre feet is	\$75.00	=	75.00
Each addition 120 AF is	\$25.00	=	375.00
(1932.71-240=14.11 x 120)			\$600.00

Filing fee for SE 1/4 NW 1/4, Sec 10, T1N, R7E of BHM, known as the Meadowbrook area.

Amount of water claimed is 2.67 cfs.
Is equal to 1932.71 acre feet per year.

First 120 acre feet is	\$150.00	=	\$150.00
Second 120 acre feet is	\$75.00	=	75.00
Each addition 120 AF is	\$25.00	=	375.00
(1932.71-240=14.11 x 120)			\$600.00

Filing fee for future use, including the corporate city limit of the City of Rapid City.

Amount of water claimed is 15.60 cfs.
Is equal to 11293.31 acre feet per year.

First 120 acre feet is	\$150.00	=	\$150.00
Second 120 acre feet is	\$75.00	=	75.00
Each addition 120 AF is	\$25.00	=	2325.00
(11293.31-240=92.11 x 120)			\$2550.00 x 10%
			or \$255.00

Total Fees are: \$600 + \$600 + \$600 + \$255 = \$2055.00

RECEIPT

Division of Water Rights

South Dakota Department of Water and Natural Resources

Pierre, July 6, 1939

RECEIVED OF City of Rapid City, 300 Sixth Street, Rapid City, SD 57701

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

Fee for Application for Permit No. <u>2085-2</u> to Appropriate Water, to construct works and to put water to beneficial use _____	1400.00	
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. _____		
Fee for Filing Transfer Form _____		
Fee for Filing Extension Request _____		
Fee for Certified Copy of _____		
Fee for Print Copy of Map _____		
Fee for Certifying _____		
Fee for _____		
(Any Other Work Provided by Law)	Total	1400 00

By [Signature]
Chief Engineer

Conversation or File Documentation

NAME OF PERSON OR FILE: City of Rapid City,ADDRESS: 300 - 6th Street, Rapid City SD COUNTY PenningtonDATE: May 19, 1989 TELEPHONE _____RE: permit applications for Madison formation

COMMENTS:

Contacted Rodger Kruger regarding the following:

1) Total pumping capacity for the 3 applications to appropriate water:

Mr. Kruger stated that the pumping capacity was intended to be 2.67 cfs/site (3 sites) for a total capacity of 8.01 cfs

2) The number of wells to be constructed:

Mr. Kruger stated that the city hoped 3 wells would be sufficient to obtain 8.01 cfs. I informed Mr. Kruger that if the application is approved, then the city would be limited to 3 wells. I also informed Mr. Kruger the 3 applications could be combined into one application to reduce the application fee.

Mr. Kruger instructed me to combine the applications and to make the application for up to 6 wells to appropriate a total of 8.01 cfs.

File in Permit or other file as necessary. Use to document conversations and what the other party was told; why action or decision was made.

NAME: Ron Durrall



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

May 22, 1989

Rodger Kruger
City of Rapid City, Water Division
300-6th Street
Rapid City SD 57701

Dear Mr. Kruger:

This letter is in response to the water permit applications received on May 18, 1989 from the City of Rapid City. The following information is needed to complete the application to reserve water for future use:

- 1) A map outlining the proposed future use area needs to be submitted as part of the application. The map needs to be completed and signed according to directions on the enclosed instruction sheet.
- 2) An attachment specifying the legal description of the proposed future use area also needs to be submitted.

During our phone conversation on May 19, 1989, I indicated the three applications to appropriate water could be combined into one application. You instructed me to combine the applications and stated the city hoped to appropriate 8.01 cfs from three wells. I stated that if more than three wells are needed to obtain 8.01 cfs, then the city would need to make another application for the additional wells. You instructed me to revise the application to appropriate 8.01 cfs from up to six wells located within three sites.

The application fee will be less since the three applications are to be combined for a diversion rate of 8.01 cfs. The application fee for both the future use application and the combined application is \$1655.00 rather than \$2055.00. Enclosed is the Purchase Order for \$2055.00. A revised purchase order needs to be submitted for \$1655.00.

The future use permit application can not be processed for consideration by the Water Management Board until the application is complete. Please submit the map and the legal description of the future use area to complete the application and contact me if you have any questions.

Sincerely,

Ron Duvall
Natural Resources Engineer
605 773-3352

enc.



SOUTH Dakota Department of
Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

June 8, 1989

Roger Kruger
City of Rapid City
Water Division
300 6th Street
Rapid City, SD 57701

Dear Mr. Kruger:

This is in response to the water permit application fee received yesterday for Rapid City's Water Permit Application Nos. 2085-2, 2086-2.

Since the amount of water appropriated for future use was reduced from 11,294 acre-feet (15.6 cfs) to 9991 acre-feet (13.8 cfs), the permit application fee is \$227.50, not \$255 as submitted.

I am enclosing the check for \$1665 that was submitted. The application fees for each of the water permit applications is as follows:

Water Permit No. 2085-2	-----	\$1400
Water Permit No. 2086-2	-----	\$ 227.50

Total	-----	\$ 1627.50

Please submit the correct amount for the water permit applicaiton fees at your earliest convenience. Feel free to contact me if you have any questions.

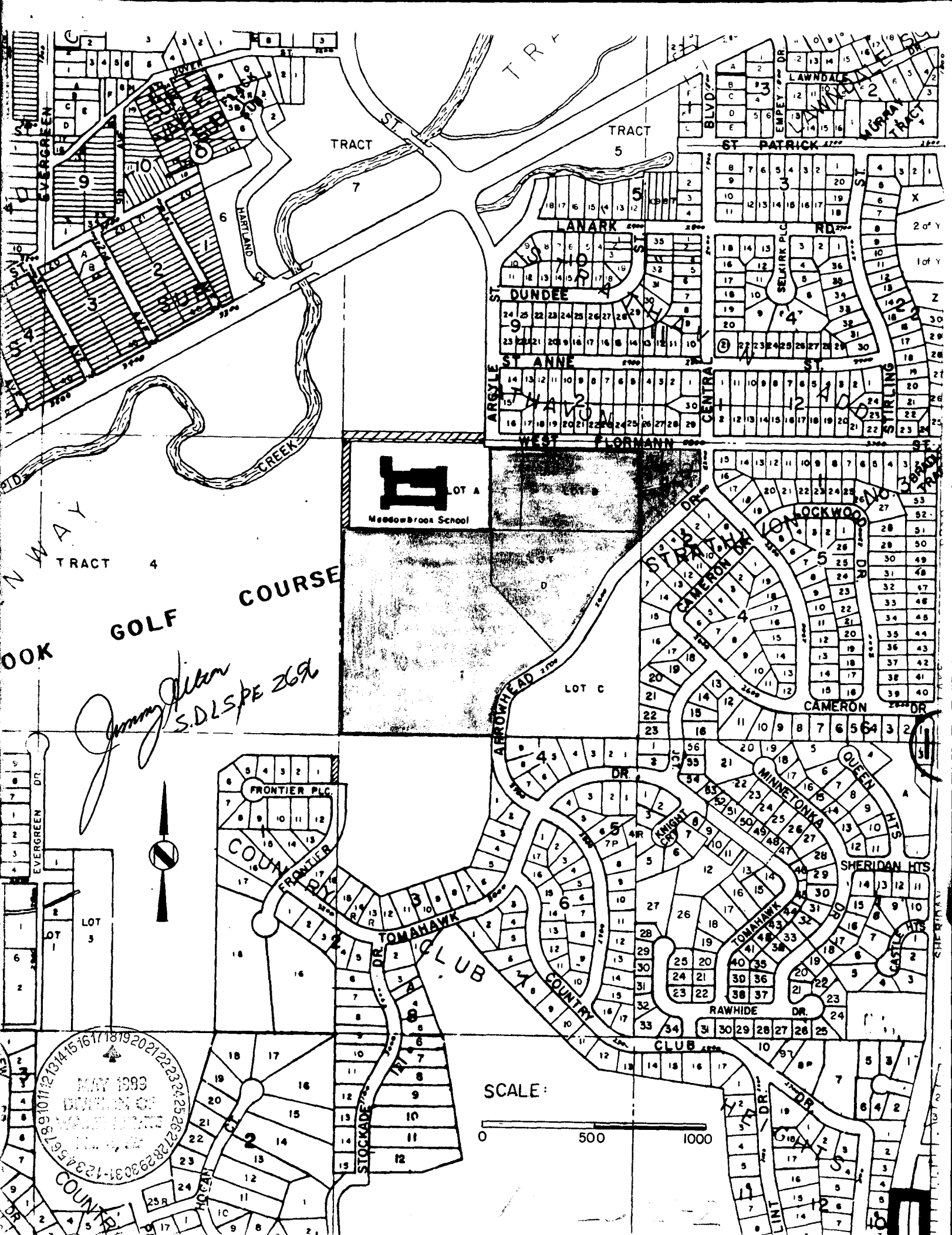
Sincerely,

Susan A. Bowar

Susan A. Bowar
Natural Resources Engineer
Water Rights Division
(605) 773-3352

enclosure





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Meadowbrook School

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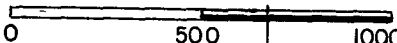
GOLF

TRACT

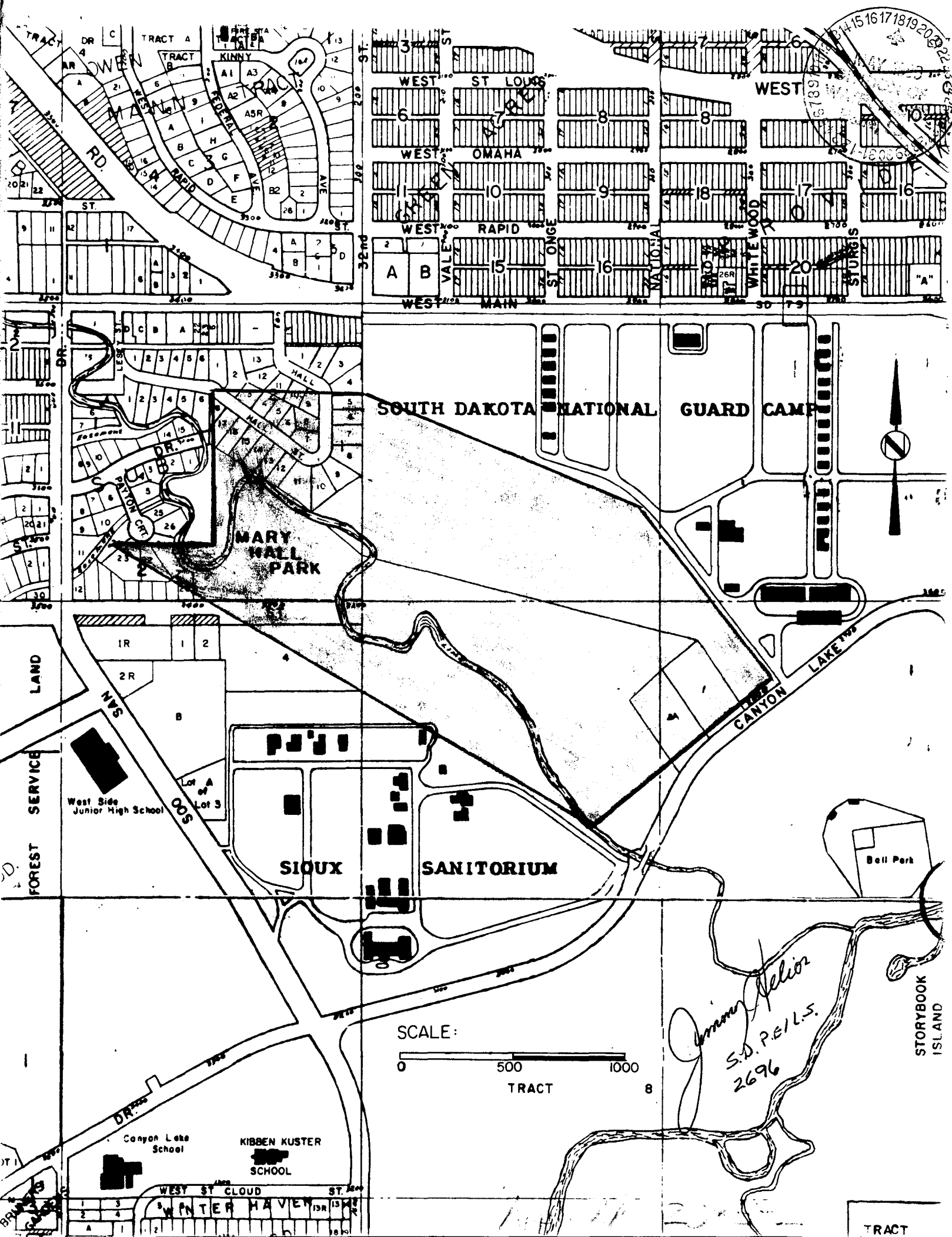
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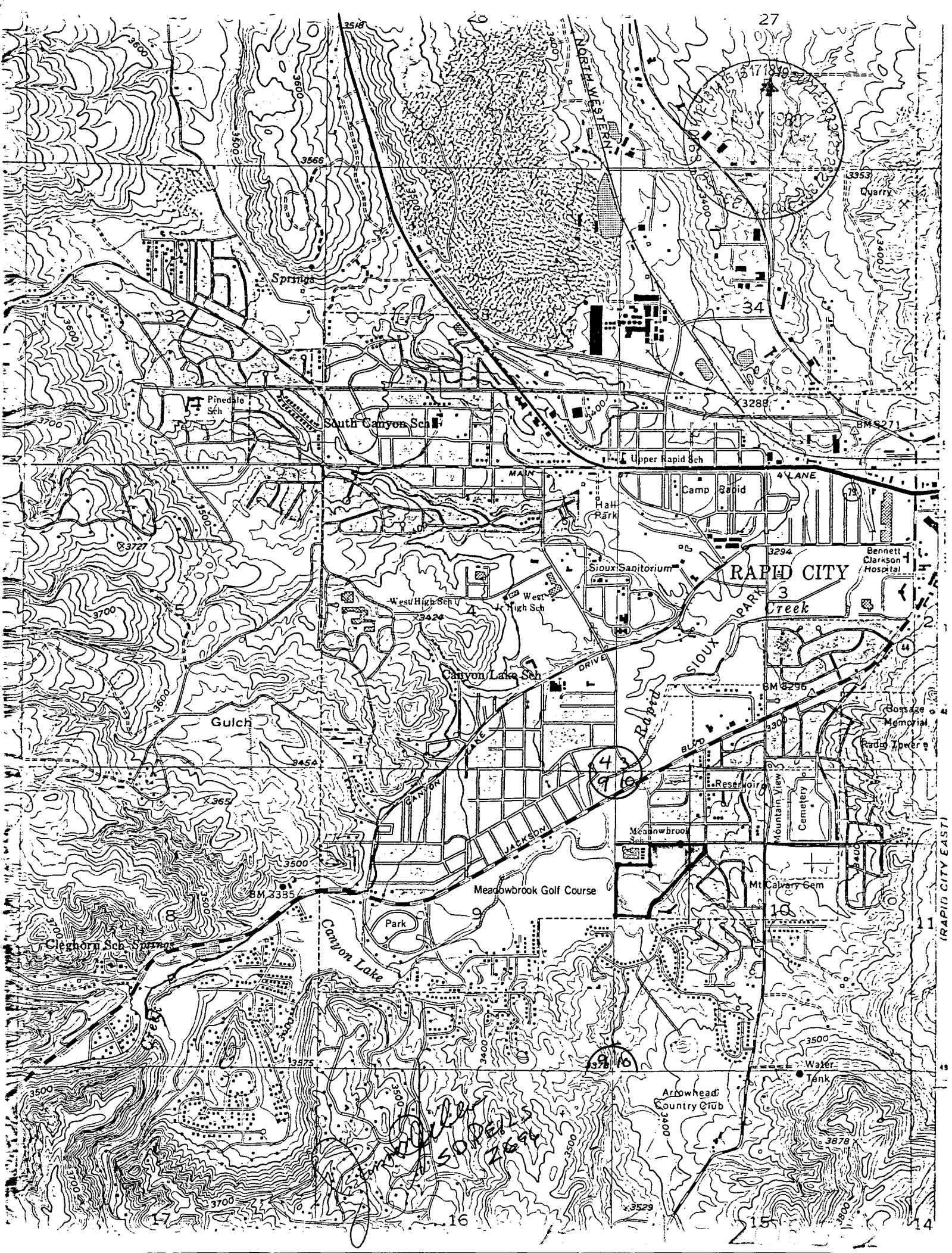


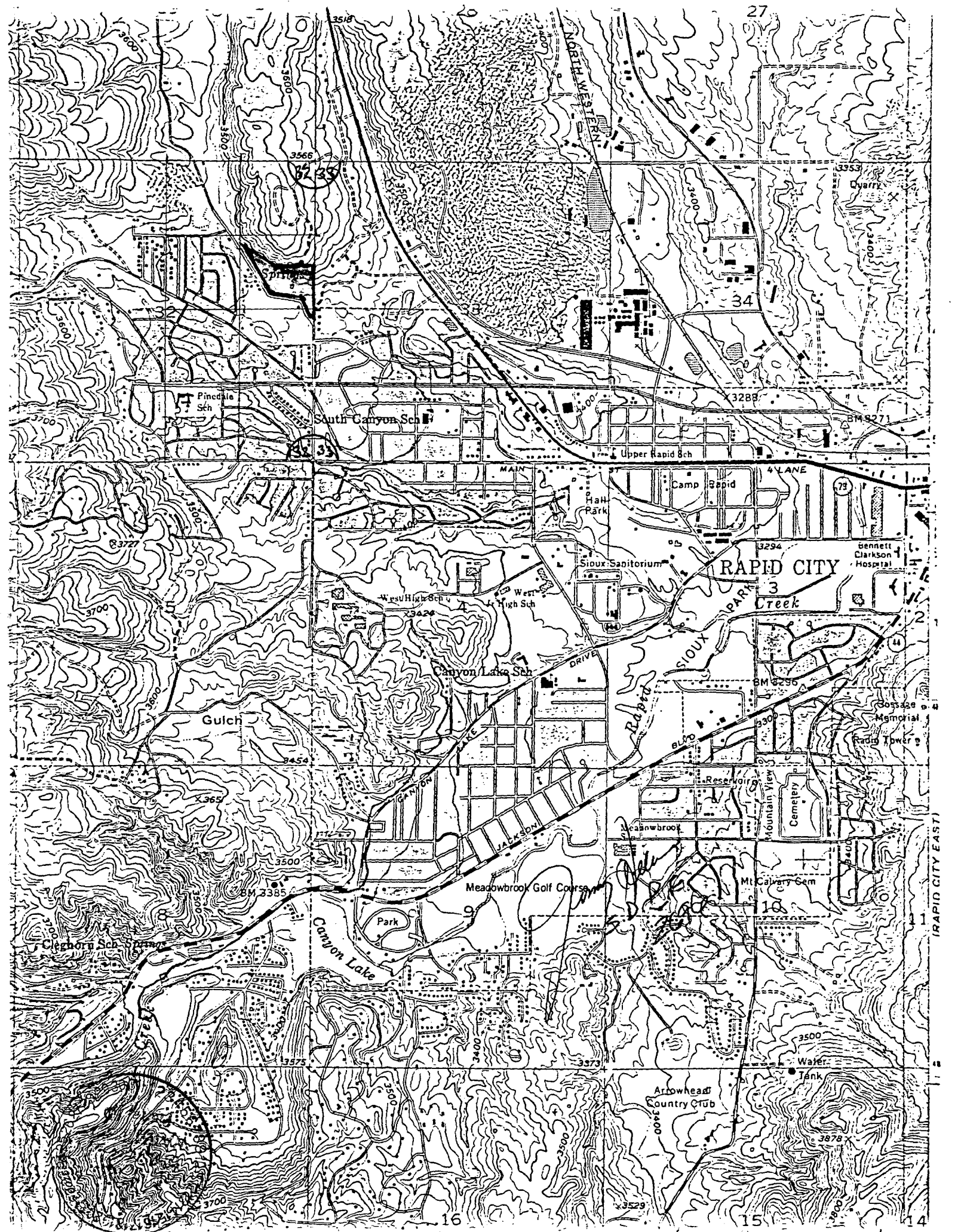
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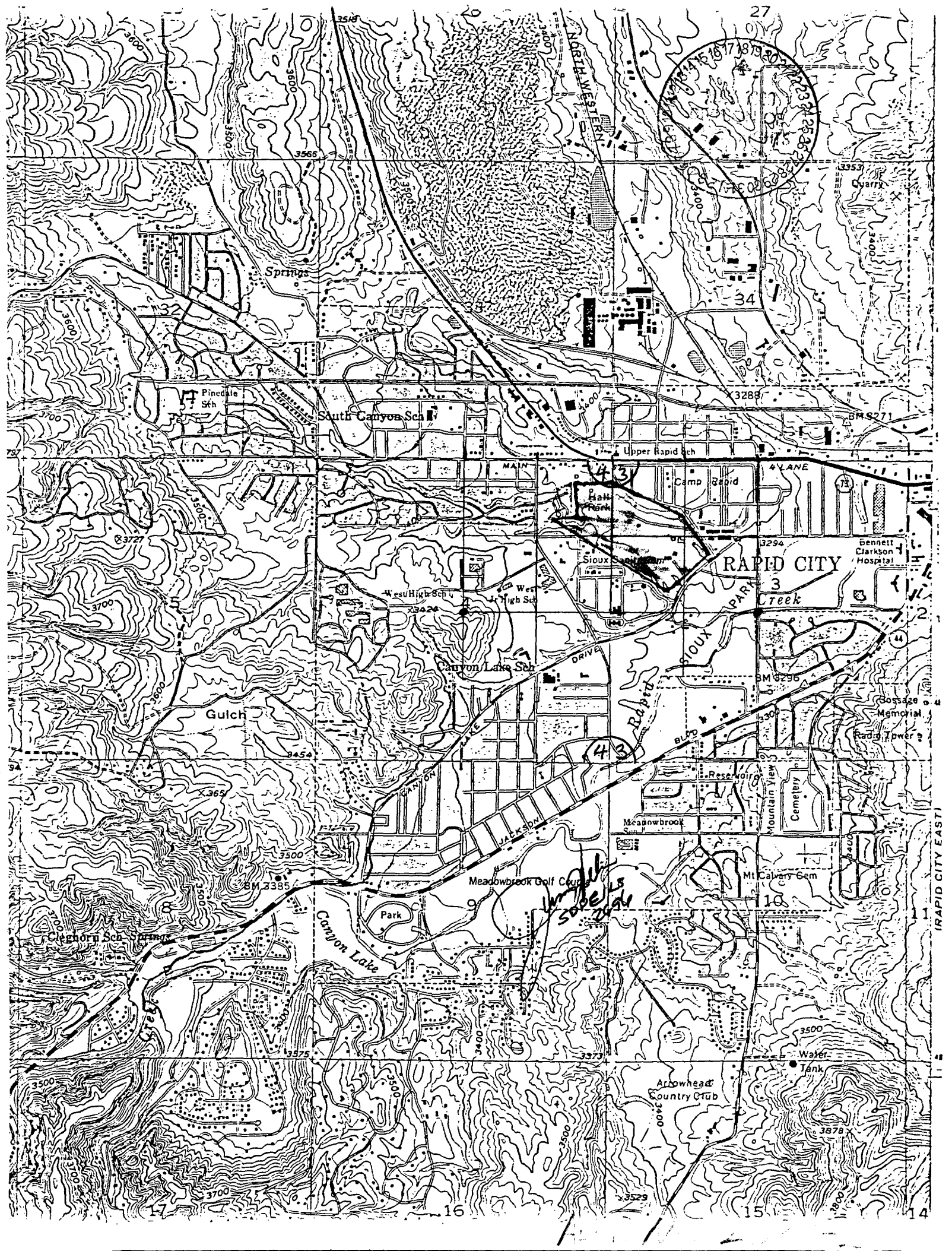


Jimmy Wilson
S.D.L.S.P.E. 269









10-85

Date _____



10-85

County Sumner, Tex

Air & Mud Rotary

Date _____

Report on Application Nos. 2085-2 and 2086-2
City of Rapid City
June 19, 1989

Application No. 2085-2 is to appropriate 8.01 cfs from up to six wells 800 to 1200 feet deep. The points of diversion are to be located within portions of the following three sites: 1) SE1/4 NE1/4 of Section 32-T2N-R7E; 2) NW1/4 of Section 3, E1/2 NE1/4 of Section 4; both in T1N-R7E; and 3) S1/2 NW1/4 of Section 10, T1N-R7E. The water is to be used for municipal purposes by the City of Rapid City.

Application No. 2086-2 is to appropriate 9991 acre-feet of water annually for future use from the Madison Formation. Water is to be reserved for future use from the Madison Formation. Water is to be reserved for future use in portions of the following sections located within the city limits of Rapid city: sections 13, 24 thru 29, 32 thru 36; all in T2N, R7E; sections 1 thru 5, 8 thru 17, 21 thru 23; all in T1N, R7E; sections 28 thru 33; all in T2N, R8E; and sections 4 thru 9, 17, 18; all in T1N, R8E. The water is to be reserved for the purposes of providing future municipal water supplies to the City of Rapid City. Approval of this application will not authorize construction of any works or placement of water to beneficial use.

Aquifer - Madison Limestone (MDSN)

The Madison (locally called Pahasapa) is a medium crystalline dolomitic limestone which is cavernous in the upper half (Cattermole, 1969). Locally the formation is 300 to 400 feet thick and in general the formation thins from North to South along the axis of Black Hills (Allen, 1984). The Madison underlies 1.48 million acres and contains 29.8 million acre feet of recoverable water in Pennington County alone (Allen, 1984). Recharge to the Madison occurs through streamflow losses in sinkhole areas along the major drainages and by infiltration of precipitation. Regionally ground water moves from North to South and from West to East. This is shown by potentiometric surface map which is simply a contour of water surface as it moves from higher to lower elevations by gravity. Recharge estimates for the entire Black Hills have been estimated to range from 140,000 to 400,000 acre feet per year (Woodward Clyde, 1981).

Well yields from the Madison are very unpredictable and are reported to range from 22 to more than 500 gpm in this area (Peter, 1985). Nearly all investigators agree that the Madison is an aquifer which contains excellent quality water especially near the outcrop and is basically an undeveloped source in terms of quantity.

The Division of Water Rights monitors two Madison Limestone observation wells in Pennington County. These are PE-65A and PE-86A. Records for these wells indicate the Madison responds to seasonal precipitation changes and to droughts (lack of recharge). In general terms, the data indicates that existing development has not affected the aquifer (Water Rights, 1989). Hydrographs for these two wells are included with this report.

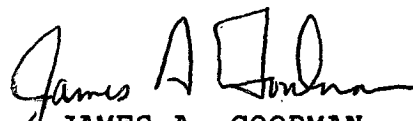
There is one major obstacle concerning any groundwater development from the Madison Aquifer. That is what will be the potential for affecting springflow such as Cleghorn Springs. This is a very serious question with no easy answer. The Division of Water Rights in cooperation with the USGS and the City of Rapid City will begin drilling additional observation wells in order to monitor potential effects when the City begins to test and develop the Madison. For the most part the Madison is under artesian condition, although water table conditions exist in the recharge area just a few miles to the west of Rapid City.

Review of Existing Water Permits

There are 15 water permits issued for Madison Limestone wells in Pennington County. Of these permits. Nos. 433-2 and 454-2 are located within the future use area. Permit Nos. 1154-2, 1838-2 and 1858-2 are within 1 mile of the future use area. The proposed diversion points area #2 and area #3 for applicaiton 2085-2 are approximately 1 mile from permit nos. 454-2 and 433-2, respectively. There are other existing permits from surface water sources and many permits from the Minnelusa Formation in this area. Water level data indicates there is a potential for water moving upward from the Madison into the Minnelusa Formation. Although the formations overlies one another, there appears to be a confining layer within the Minnelusa at least partially separating the two formations hydrologically. Generally, the upper Minnelusa has a lower water level than the Madison (Water Rights, 1989) and this is consistent with information from observation wells in the Northern Black Hills. A list of Madison well Permits for Pennington County is included.

Conclusions

1. Water is available from the Madison Formation.
2. Further testing will be necessary to evaluate the potential of continuous long term withdrawals from wells on springflow in this area. Well spacing as proposed by application 2085-2 should be reasonable, however, two wells at each site is not advisable until test pumping is completed.
3. The aquifer is under artesian conditions and fluctuations in the water table will occur as a result of pumping.
4. Interference with existing diversions (wells) is unlikely to be adverse because of distance between sites and the fact that present withdrawals are not significantly impacting observation well water levels in this area.
5. The Division of Water Rights is proposing to complete 4 observation wells in Rapid City this year. Two near Cleghorn Springs and 2 near City Springs. The purpose of these wells is to help evaluate the testing of the Madison by the City of Rapid City, monitor leakage effects between the Madison and Minnelusa, evaluate pumping effects on spring flow and establish permanent monitoring stations.
6. There are many domestic and permitted wells completed into the Minnelusa Formation in the Rapid City area. Short term affects of pumping from the Madison will probably not affect water levels in the Minnelusa; however, affects are likely in the long term. These affects should not adversely affect water availability from the aquifers.
7. The Madison contains water of excellent chemical quality and Rapid City needs to diversify water supply sources and not be so dependent upon surface water.
8. Wells drilled must comply with SD Well Construction Standard 74:02:04:30 and must be open to the Madison Limestone only.


JAMES A. GOODMAN
Hydrologist

Bibliography

Allen, J.C. 1984, Analysis of Ground Water and Streamflow Data Western Dakotas Region of SD, Task 3 and 4, Ground Water Resources Inventory, for US Army Corps of Engineers, SD DWNR, SDGS, Vermillion, SD 57069

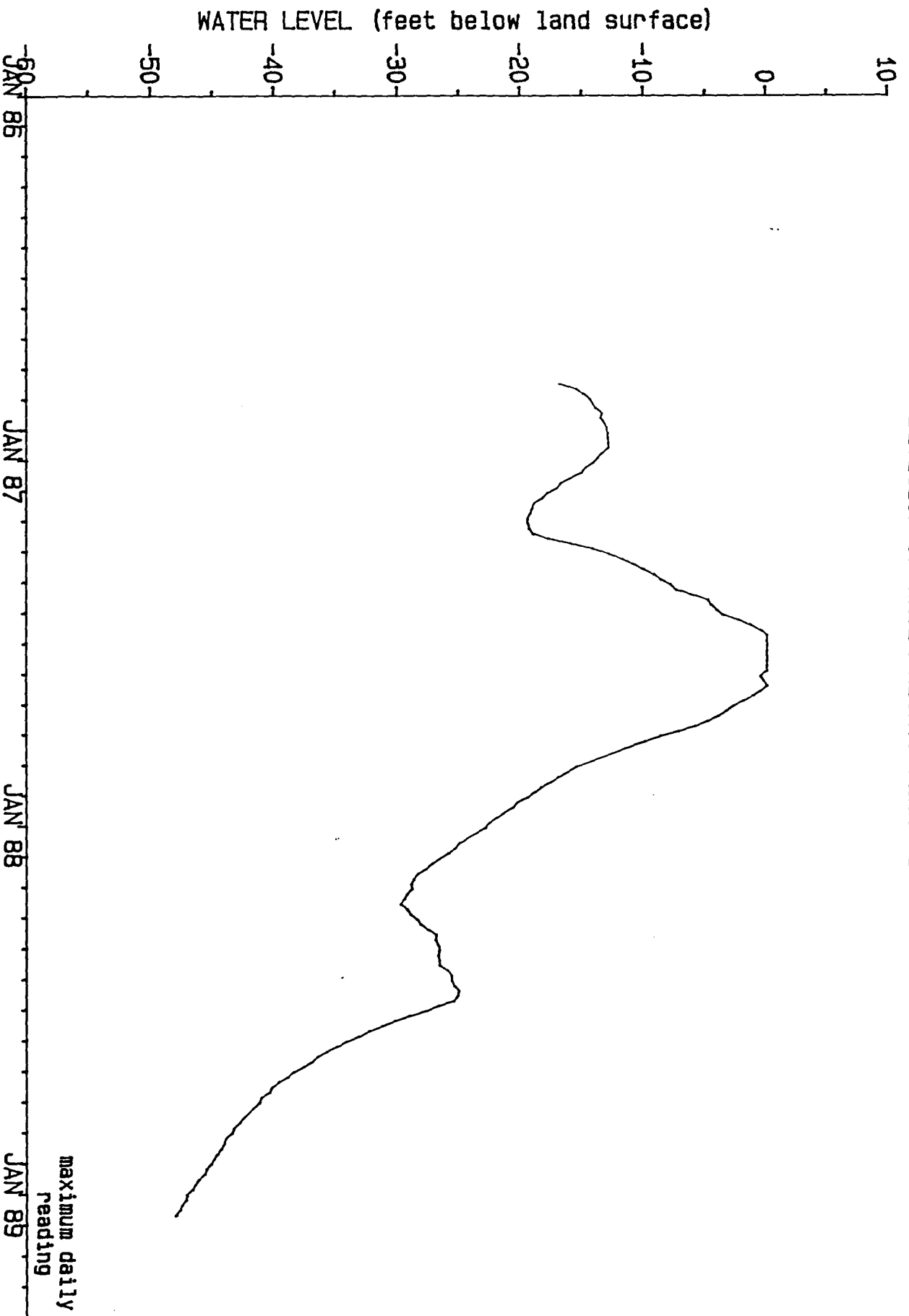
Cattermole, J.M., 1969, Geologic Map of Rapid City West Quadrangle, Map GQ-828, USGS, Washington, DC

Peter K.D., 1985, Availability and Quality of Water from Bedrock Aquifers in the Rapid City Area, SD, WRI 85-4022, USGS, Rapid City, SD 57709

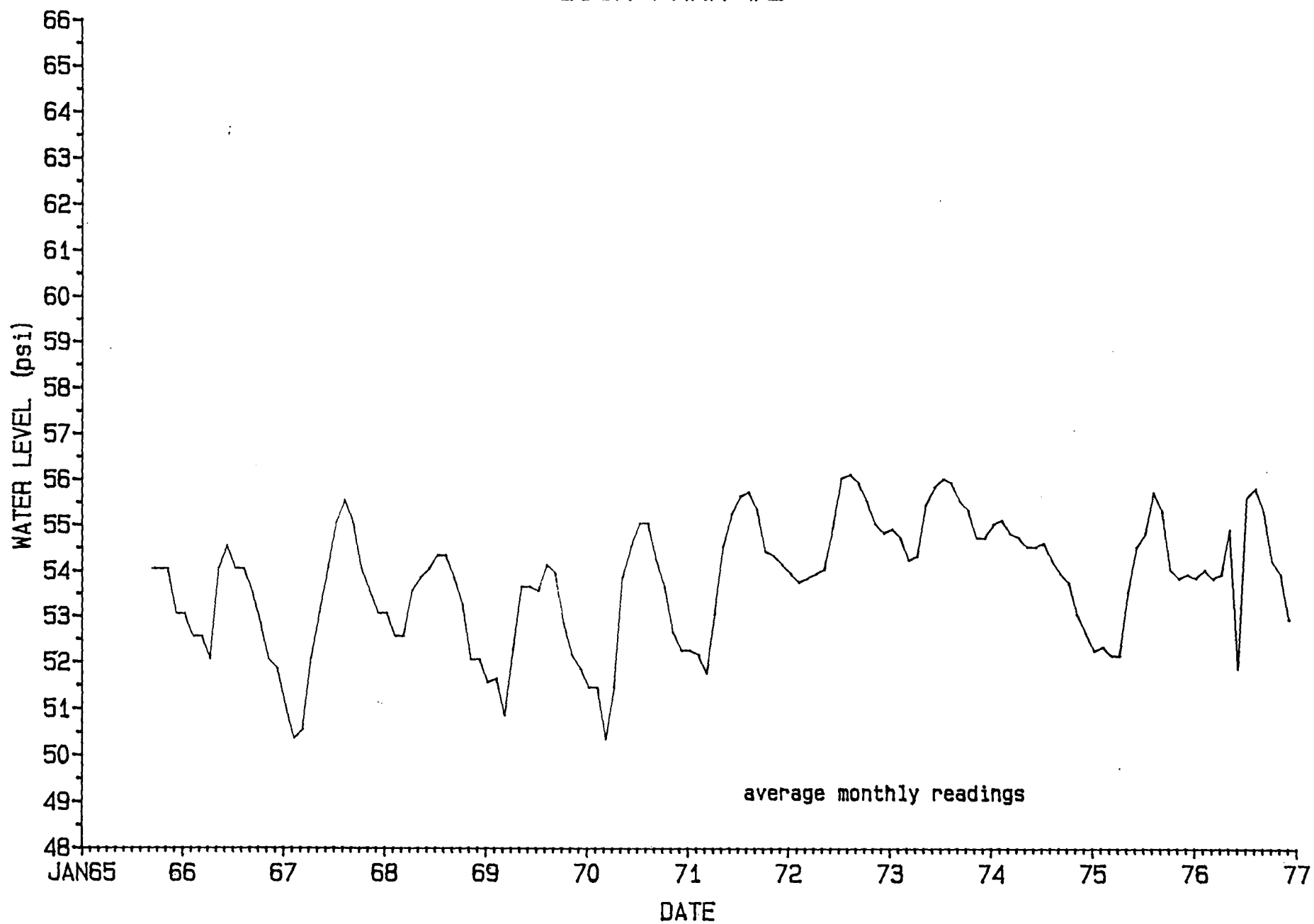
Water Rights, 1989, Records of Observation Wells Completed in Madison Limestone and Minnelusa Formation in Black Hills, unpublished data, SD DWNR, Division of Water Rights, Joe Foss Bldg, Pierre, SD 57501

Woodward, Clyde, 1981, Well Field Hydrology, ETSI EIS, At SD DWNR, Division of Water Rights, Pierre, SD 57501

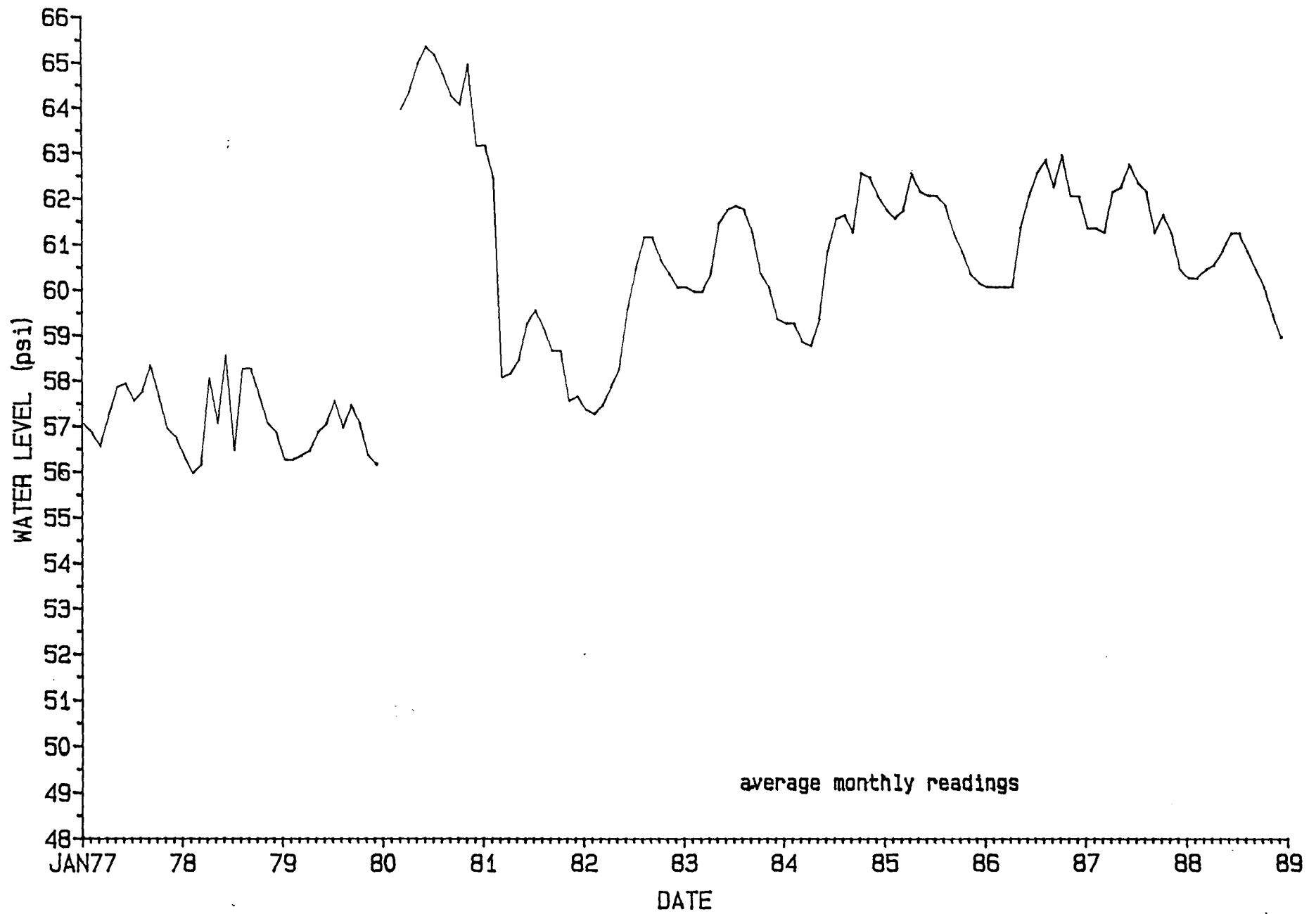
MADISON AQUIFER OBSERVATION WELL
DIVISION OF WATER RIGHTS WELL PE-86A



SIoux PARK #2



SIoux PARK #2



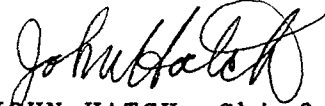
RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 2085-2, Rapid City SD

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Division, Department of Water and Natural Resources concerning Water Permit Application No. 2085-2, City of Rapid City, Water Division, 300 - 6th Street, Rapid City SD.

The Chief Engineer is recommending APPROVAL of Application No. 2085-2 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) in the public interest with the following qualifications:

1. The wells authorized by Permit No. 2085-2 shall be constructed by a licensed well driller and construction shall comply with Water Management Board Well Construction Rules, Chapter 74:02:04 with the well casing pressure grouted with cement (bottom to top) from the Madison formation to the surface pursuant to Section 74:02:04:30.
2. The wells 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.

See the attached report for additional information.


JOHN HATCH, Chief Engineer
June 19, 1989



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

June 23, 1989

Rapid City Journal
PO Box 450
Rapid City SD 57709

Dear Sir:

Enclosed is a Notice of Hearing on Application Nos. 2085-2 and 2086-2 to be published twice. Please publish the first notice on or before June 28, 1989 with the second publication 7 days later.

The APPLICANT MUST VERIFY TO YOU THAT THE NOTICE IS TO BE PUBLISHED, before you make the first publication. Please BILL the APPLICANT for the cost of publication. The APPLICANT is the City of Rapid City, Water Division, 300-6th Street, Rapid City SD.

A copy of BOTH publications must be SENT to the WATER RIGHTS DIVISION. IMMEDIATELY return the FIRST publication with the FIRST Transmittal form on the bottom of this page. The first copy is needed to check the publication for errors so any corrections can be made in the second publication. Publication errors can invalidate the public notice and cause the applicant costly delays.

Please be sure the SECOND publication is returned IMMEDIATELY with the enclosed Proof of Publication form. DO NOT WAIT until the end of the month or the billing cycle. The permit application cannot be considered by the Water Management Board until proof of publication has been received.

Sincerely,

Ron Duvall
Natural Resources Engineer
605 773-3352

enclosures

CUT HERE

FIRST TRANSMITTAL NOTICE

TO: Ron Duvall
Water Rights Division
Joe Foss Building
Pierre SD 57501-3181

No. _____

Date _____

We are in receipt of your letter of _____ enclosing Notice of Hearing to Appropriate Water by Application No. _____ which was first published in our issue of _____. ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.

Name _____

Newspaper _____





Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

June 23, 1989

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

City of Rapid City
Water Division
300 - 6th Street
Rapid City SD 57701

Dear Sir:

Water Permit Application Nos. 2085-2 and 2086-2 for municipal and future use have been examined and found to comply with the South Dakota Water Laws and applicable rules. A notice of hearing has been sent to the Publisher of the Rapid City Journal printed at Rapid City SD. For your information, a copy of the notice is enclosed. The recommendation of the Chief Engineer and a report on the application will be sent later. 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 of Intent to Appropriate Water and to arrange for payment. Early contact with the paper can eliminate delays. The publisher has been instructed to publish your notice once each week for two consecutive weeks with the last publication to occur twenty days before the board meeting. We must receive Proof of Publication before the application can be considered by the Water Management Board.

Sincerely,

Ron Duvall
Natural Resources Engineer
605 773-3352

enclosures



Instruction to Newspaper - Publish first Notice on or before June 28, 1989 with 2nd publication 7 days later. The applicant is responsible for payment.

NOTICE OF HEARINGS on Application No. 2085-2 to Appropriate Water and
Application No. 2086-2 to Reserve Water For Future Use

Notice is given that the City of Rapid City, Water Division, 300-6th Street, Rapid City SD 57701 has filed a water permit application and a future use application. Application No. 2085-2 is to appropriate a total of 8.01 cubic feet of water per second from up to 6 wells (Madison Formation) 800 to 1200 feet deep. The points of diversion are to be located within portions of the following three sites with no more than two wells per site: 1) SE 1/4 NE 1/4 section 32-T2N-R7E; 2) NW 1/4 section 3, E 1/2 NE 1/4 section 4; both in T1N-R7E; and 3) S 1/2 NW 1/4 section 10-T1N-R7E. Water is to be used for municipal purposes by the City of Rapid City.

Application No. 2086-2 is to appropriate 9991 acre-feet of water annually for future use from the Madison Formation. Water is to be reserved for future use in portions of the following sections located within the city limits of Rapid City: sections 13, 24 thru 29, 32 thru 36; all in T2N-R7E; sections 1 thru 5, 8 thru 17, 21 thru 23; all in T1N-R7E; sections 28 thru 33; all in T2N-R8E; and sections 4 thru 9, 17, 18; all in T1N-R8E. The water is to be reserved for the purpose of providing future municipal water supplies to the City of Rapid City. This application does not authorize construction of any works or placement of water to beneficial use.

Pursuant to SDCL 46-2A-2, the Chief Engineer of the Water Rights Division recommends APPROVAL of Application No. 2085-3 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.

Pursuant to SDCL 46-2A-2, the Chief Engineer of the Water Rights Division recommends APPROVAL of Future Use Application No. 2086-2 because 1) unappropriated water is available, 2) the quantity of water reserved will be needed, 3) will be a beneficial use of water and 4) it is in the public interest.

These applications will be considered by the Water Management Board at the Hilton Inn, Deerfield Room, 445 Mt. Rushmore Road, Rapid City SD on July 26, 1989 at 10:00 am. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer or 4) deny these applications based on the facts presented at the public hearing.

Any interested person that intends to participate in a hearing before the Board by presenting evidence or cross-examining witnesses according to SDCL 1-26, must file a written petition with BOTH the applicant and Chief Engineer by July 14, 1989. The Chief Engineer's address is "Water Rights Division, Foss Building, 523 E Capitol, Pierre SD 57501 (605 773-3352)". The petition may be informal, but must include a statement describing the petitioner's interest in an application, the petitioner's reasons for opposing or supporting an application and the signature and mailing address of the petitioner or legal counsel if legal counsel is obtained. The applicant need not file a petition. Contact the Water Rights Division to request information on these applications or to assure access to the hearing by the handicapped.

(continued)

These hearings are adversary proceedings. Any person filing a petition and/or the applicant have the right to be represented by a lawyer. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. The time of a hearing will also be automatically delayed for at least twenty days upon written request to the Chief Engineer from the applicant or a petitioner. The request for a delay must be received by July 14, 1989.

These applications are made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; 46-6-3, 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14; 46-5-38 thru 46-5-40; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15; 74:02:01:24 thru 74:02:01:25.

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
) ss.
 County _____)

I, Mary K. Garness

certify that the attached printed Notice was taken

from the Rapid City Journal

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 Rapid City

County of Pennington and State of South Dakota;
 that the said notice was published in said newspaper on the following two dates:

June 28, 1989

July 5, 1989

Mary K. Garness
 (Signature)

Bookkeeper
 (Title)

July 5, 1989
 (Date Signed)

These hearings are adversary proceedings. Any person filing a petition and/or the applicant have the right to be represented by a lawyer. These hearings are adversary proceedings. Any person filing a petition and/or the applicant have the right to be represented by a lawyer. These and other due process rights will be forfeited if not exercised. Decisions of the Board may be appealed to the Circuit Court and State Supreme Court as provided by law. The time of a hearing will also be automatically delayed for at least twenty days upon written request to the Chief Engineer from the applicant or a petitioner. The request for a delay must be received by July 14, 1989.

These applications are made pursuant to SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-15; 46-2-3-1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2, 46-5-30.4, 46-5-31; 46-6-3, 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14; 46-5-38 thru 46-5-40; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15; 74:02:01:24 thru 74:02:01:25.



June 28, July 5 L413
**NOTICE OF HEARINGS
 ON APPLICATION NO. 2085-2
 TO APPROPRIATE WATER AND
 APPLICATION NO. 2085-2
 TO RESERVE WATER
 FOR FUTURE USE**

Notice is given that the City of Rapid City, Water Division, 300-6th Street, Rapid City, S.D. 57701 has filed a water permit application and a future use application. Application No. 2085-2 is to appropriate a total of 8.01 cubic feet of water per second from up to 6 wells (Madison Formation) 800 to 1200 feet deep. The points of diversion are to be located within portions of the following three sites with no more than two wells per site: 1) SE 1/4 NE 1/4, Section 32, T2N-R7E; 2) NW 1/4 Section 3, E 1/2 NE 1/4 Section 4; both in T1N-R7E; and 3) S 1/2 NW 1/4, Section 10, T1N-R7E. Water is to be used for municipal purposes by the City of Rapid City.

Application No. 2086-2 is to appropriate 9991 acre-feet of water annually for future use from the Madison Formation. Water is to be reserved for future use in portions of the following sections located within the city limits of Rapid City: Sections 13, 24 thru 29, 32 thru 36; all in T2N-R7E; Sections 1 thru 5, 8 thru 17, 21 thru 23; all in T1N-R7E; Sections 28 thru 33; all in T2N-R8E; and Sections 4 thru 9, 17, 18; all in T1N-R8E. The water is to be reserved for the purpose of providing future municipal water supplies to the City of Rapid City. This application does not authorize construction of any works or placement of water to beneficial use.

Pursuant to SDCL 46-2A-2, the Chief Engineer of the Water Rights Division recommends APPROVAL of Application No. 2085-3 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.

Pursuant to SDCL 46-2A-2, the Chief Engineer of the Water Rights Division recommends APPROVAL of Future Use Application No. 2086-2 because 1) unappropriated water is available, 2) the quantity of water reserved will be needed, 3) it will be a beneficial use of water and 4) it is in the public interest.

These applications will be considered by the Water Management Board at the Hilton Inn, Deerfield Room, 445 Mt. Rushmore Road, Rapid City, S.D., on July 26, 1989 at 10:00 a.m. The Chief Engineer's recommendation is not final or binding upon the Board. The Board is authorized to 1) approve, 2) approve with qualifications, 3) defer or 4) deny these applications based on the facts presented at the public hearing.

Any interested person that intends to participate in a hearing before the Board by presenting evidence or cross-examining witnesses according to SDCL 1-26, must file a written petition with BOTH the applicant and Chief Engineer by July 14, 1989. The Chief Engineer's address is "Water Rights Division, Foss Building, 523 E. Capitol, Pierre, S.D. 57501 (605-773-3352)." The petition may be informal, but must include a statement describing the petitioner's interest in an application, the petitioner's reasons for opposing or supporting an application and the signature and mailing address of the petitioner or legal counsel if legal counsel is obtained. The applicant need not file a petition. Contact the Water Rights Division to request information on these applications or to assure access to the hearing by the handicapped.

Cost of Printing: Ran 12 5/16 inches legal advertising in

the Rapid City Journal on June 28 & July 5 @ \$4.20
per inch = \$103.42

Ran public notice of hearing L413

SOUTH Dakota Department of
Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

July 21, 1989

City of Rapid City
Water Division
300 - 6th St
Rapid City SD 57701

Dear Sir:

Enclosed is the Report and Recommendations of the Chief Engineer for your Water Permit Application Nos. 2085-2 and 2086-2.

Sincerely,

Karen Schlaak

KAREN SCHLAAK
Senior Secretary
605 773-3352

enclosures

cc: Leslie Englund, Attorney





Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

AUG 15 1989

Keith T. Carlyle, Mayor
City of Rapid City
Water Division
300 6th St
Rapid City SD 57701

Dear Mayor Carlyle:

Enclosed is Water Permit No. 2085-2 as approved by the Water Management Board authorizing you to construct your water diversion system and put the water to beneficial use, not exceeding the limits as specified in the Water Permit.

Also enclosed is Form 10, Notice of Completion of Works and Application of Water to Beneficial Use, which you are to complete and submit to the Chief Engineer when you have completed the system and/or have put the water to beneficial use. An inspection can then be scheduled so that the Water License may be issued, thus completing your acquisition of a Water Right.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Division
605 773-3352

enclosures

PLEASE NOTE: Certain changes can be made in your permit within the five year construction period, usually without affecting the priority date provided an application to amend your permit is made within the five year period - i.e. changes in location or number of diversion points (wells) or location of land to be irrigated. Well locations for wells into the same aquifer can be moved up to 660 feet without application.

Applications to amend a permit after the five year construction period will be assigned a new priority date. Applications to change water sources, to add lands or increase original diversion rates, if approved will usually receive the date of the new application as a priority date regardless of the five year construction period.



FARRELL, FARRELL & GINSBACH

LAWYERS

441 NORTH RIVER STREET

HOT SPRINGS, SOUTH DAKOTA 57747

Martin P. Farrell
Jane M. Farrell
Patrick M. Ginsbach



(605) 745-5161

August 23, 1989

Secretary of Water & Natural Resources
Department of Water & Natural Resources
State of South Dakota
Pierre, SD 57501

Re: Wells in Madison Formation

Gentlemen:

I am the lawyer for the Evans Plunge, Inc.

The Evans Plunge (as it is known) is and has been an established business in Hot Springs for over 100 years. The Plunge attracts many visitors to its warm water, and as a result is one of the greatest assets the city of Hot Springs possesses.

The Board of Directors of the Plunge is aware of certain media accounts of the plans of the city of Rapid City to drill several wells into the Madison Formation, and to withdraw from these wells a vast amount of water.

The Evans Plunge does not know whether or not the aquifer from which the Evans Plunge water comes is interconnected with the Madison Formation. If so, the city of Hot Springs is also at risk of losing its supply of water if a draw down is significant from the Madison Formation.

Very few actual facts are known about this. At the lowest depth that has been explored in the Wind Cave National Park, lakes located there indicate there has been a substantial drop in the water level in the last two or three years.

This letter is to express the concern of the Evans Plunge about these wells which might result in the Plunge going out of business and a financial loss to its owners and an adverse effect upon Hot Springs.

Sincerely,

MARTIN P. FARRELL

MPF/jc

cc: Evans Plunge, Inc.

**Department of
Water & Natural Resources**

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

September 6, 1989

Martin P. Farrell
441 North River Street
Hot Springs SD 57747

Dear Mr. Farrell:

I am writing in response to your August 23, 1989 letter concerning the Madison Formation. The source of water for Evan's Plunge is a spring originating from alluvium which overlies the Minnelusa Formation. A hydrologic connection between the Madison and Minnelusa is generally accepted; however, test well drilling by the Division of Water Rights during the last few years indicates there are differences in water levels between the Madison and upper Minnelusa Formation. The Madison is generally under greater pressure (higher water levels). This suggests, there is a confining layer or at least a partially confining layer within the Minnelusa Formation.

Rapid City, the State of South Dakota and the United States Geological Survey (USGS) are attempting to answer questions concerning potential affects of pumping Rapid City wells. Of primary importance is the potential for affecting Cleghorn Springs which is within city limits of Rapid City. Observation wells will be constructed to measure water levels and test pumping will be completed on potential production wells to determine the effects of pumping. Until this work is completed, it is premature to speculate on any potential effects outside the Rapid City area. Rapid City's water permit is conditioned to protect existing area water users. The Rapid City permit authorizes 8.01 cfs (3600 gpm) from up to 6 wells completed only in the Madison Formation.

I did check on the Wind Cave question. The USGS in Rapid City has been measuring water levels in the cave for the past 18 months or so. Their records indicate a 1-2 foot decline over the period of record.



September 6, 1989
Martin P. Farrell
Page 2

I think your concerns are the same as ours. Hopefully, the testing that will be done will answer some of the questions. Nearly all experts working in the ground water field agree that the Madison and Minnelusa Formations are a virtually untapped water resources.

If you have further questions or if I can be any assistance, please let me know.

Very truly yours,

A handwritten signature in cursive script, appearing to read "John Hatch".

JOHN HATCH, Chief Engineer
Water Rights Division
605 773-3352



City of Rapid City

RAPID CITY, SOUTH DAKOTA 57701

Michael D. Plub, Public Works Director

Public Works Department

300 Sixth Street

605-394-4165

September 6, 1990

Mr. John Hatch, Chief Engineer
Water Rights Division
SD Department of Water & Natural Resources
Joe Foss Building
Pierre, SD 57501



Re: NOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USE
Water Permit No. 2085-2

Dear John:

Transmitted herewith is the above referenced Notice for Water Permit 2085-2. This completion of works is for Water Well No. 5 located adjacent to the south side of Camp Rapid. The pumping rate of the well is 3.7 cubic feet per second. Since this well is producing a high rate of flow which is creating some drawdown in the area, I do not believe that the City will drill another well in the NW1/4, Sec. 3, or E1/2 of NE1/4, Sec. 4; both in T1N, R7E, BHM as per the Water Permit.

If you have any questions, please contact me.

Sincerely,

Daniel L. Bjerke, PE/LS
Water/Water Reclamation Division Manager



EQUAL HOUSING
OPPORTUNITY

EQUAL OPPORTUNITY EMPLOYER

**NOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USE**

Date September 6, 1990

TO: Water Rights Division, DWNR
Joe Foss Building
Pierre SD 57501-3181

FROM: City of Rapid City, 300 Sixth Street, Rapid City, SD 57701
name address city

I have completed the construction of the water diversion system and I have put the water to beneficial use to the maximum extent it is going to be used. I have not exceeded the amounts specified in Water Permit No. 2085-2 (future use)

Water Permit No. 2085-2 states that the diversion system is to be constructed by City of Rapid City, SD, and that the water it put to beneficial use by City of Rapid City, SD.

The diversion system was completed on August 24, 1990.
Applying the water to beneficial use was completed on August 24, 1990

You may schedule an inspection so that the Water License may be issued.

See Attachment "A"



signature

WATER/WATER RECLAMATION DIVISION MANAGER

Attachment "A"

Water Well No. 5
Rapid City, South Dakota

Legal Description: Located approximately 1470 feet on a bearing of S 22 30' E from the Northwest Section Corner of Section 3, Township 1 North, Range 7 East, Black Hills Meridian. Commonly called the Camp Rapid Madison Well.

Total diversion from Water Well No. 5 is 3.9 cubic feet per second of the total future use of 8.01 cubic feet per second.



NOTICE OF COMPLETION OF WORKS AND
APPLICATION OF WATER TO BENEFICIAL USE

Date November 29, 1990

TO: Water Rights Division, DWNR
Joe Foss Building
Pierre SD 57501-3181

FROM: City of Rapid City, 300 Sixth Street, Rapid City, SD 57701
name address city

I have completed the construction of the water diversion system and I have put the water to beneficial use to the maximum extent it is going to be used. I have not exceeded the amounts specified in Water Permit No. 2085-2 (Future Use)

Water Permit No. 2085-2 states that the diversion system is to be constructed by City of Rapid City, SD, and that the water it put to beneficial use by City of Rapid City, SD.

The diversion system was completed on November 16, 1990.
Applying the water to beneficial use was completed on 11/16/1990.

You may schedule an inspection so that the Water License may be issued.


signature



Attachment "A"

Water Well No. 6
Rapid City, South Dakota

Legal Description: Located approximately 350 feet on a bearing of N 23 00' W from the center of Section 32, Township 2 North, Range 7 East, Black Hills Meridian. Commonly called the Wilderness Park Madison Well.

Total diversion from Water Well No. 6 is 1.7 cubic feet per second of the total future use of 8.01 cubic feet per second. Total diversion from future use permit 2085-2 including Water Well Nos. 5 & 6 is 5.6 cubic feet per second.





2085-2

**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3181

SEP 6 1995

2273-2

Dan Bjerke
City of Rapid City
300 6th St.
Rapid City, SD 57701

Dear Mr. Bjerke:

Enclosed is Water License No. 2273-2. This is the final water right document completing your process of obtaining a Water Right. Enclosed is Receipt No. 414358 in the amount of \$50.00 which you paid for the inspection and issuance of the Water License.

For your information SDCL 46-6-27 requires that if the owner of an existing well, such as the well authorized by Water Right No. 2273-2, 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.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Program
(605) 773-3352

rd
enclosures

NOTE: The applicable portions of Water Permit Nos. 2085-2, 2125-2, 2271-2 and 2272-2 have been incorporated into this Water License No. 2273-2 with a total annual diversion of 5,394 acre-feet of water annually.