

Approved 34. well 12. 3.0 of

Water Right No. 3198-3

1. Considered Nov 17 19 76
2. Name of Applicant J. V. KENNEALLY
3. Post Office Address RAYMOND SD
4. Amount of Water Claimed 15.80
5. Source of Water Supply 3.75' 105' DEEP WELLS
6. Water to be used for IRRIGATION
7. Acres to be irrigated 1112 maximum acre feet
8. Water to be diverted and used in CLARK County
about 31.1 miles WEST of RAYMOND
9. PROOF OF PUBLICATION Received 11-17-76

Not Received

APPLICATION

Approved # 3 & # 4 WELLS approved Well
2 - 3.0 of
Subject to WI - sunk in disquisition
Not Approved # 2 WELL
Action deferred 11-17-76

Priority

Date

Received 10-1-76 Application Complete yes ☒ no FEE 8.00

10-1-76

Remarks Emerging O.K. report the SE 1/4 NE 1/4 was
advised as Section 34 and not Section 32 where
it is located - no indication in file as being corrected

Date information and/or
fee or corrected Application received

Period of Annual use April 1 - December 1

WATER
QUALITY

Received ☒ 11/3/76 no APPROVED/CONDITIONAL (Circle one)

WI-i Description same as application yes ☒ no Remarks

basin the top of land - SCC did not put in detail as they
do now
Disapproved

Returned

Diversion Point SE 1/4 NE 1/4
Sec. 9, SW 1/4 SE 1/4 2a, 9 and
SW 1/4 NE 1/4 16-117-59

Lands to be irrigated

NE 1/4 E 1/2 NW 1/4 NE 1/4 SW 1/4
N 1/2 SE 1/4 Sec 4; E 1/2 Sec 1
NE 1/4 N 1/2 SE 1/4 Sec 16; 117-59
4 SE 1/4, S 1/2 NE 1/4 33-118-59

Remarks

Log water on
from 3A's

WELL
LOC

Driller

unknown

Licensed yes

no

Depth

112' & 20, 95'

MAP Map No. 607-3
2461-3 Map located In Water Right X Map file _____
Type of Map Drawn Prepared by B. J. Jones

REVIEWED This Application was reviewed within 30 days of date received, accepted as complete, Number assigned and written up for advertisement before the Board on 11-17-76.
Bert Jones
(Signed)

PROTESTS Letters/Petitions in File - yes _____ no _____ Remarks _____

REMARKS Date
F.F. & C Final Decision, including F.F. & C of Law were adopted _____
OF LAW, Date
FINAL Final Decision mailed to parties and/or parties notified that Final Decision
DECISIONS was adopted _____
ETC.

Remarks _____

No. 3195-7
 Map No. 2461-3 Water Division No. 3 JAMES 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 J.V. Kennealley
 Post-office address Raymond, S. Dak. 57258, State S. Dak.
 If a corporation show date and place of incorporation _____
 2. Method of accomplishing work (contract, employment of others, or by direct labor) Contract
 3. Name of diversion work J.V. Kennealley - Irrigation Project #1
 4. Amount of water claimed (cubic feet per second) 15.88
 5. Source of water supply Ground Water - Well
 6. Location of point of diversion Well #3 - SW 1/4 NE 1/4 Sec. 9-117-59
Well #2 - SW 1/4 SE 1/4 Sec. 9-117-59
Well #4 - SW 1/4 NE 1/4 Sec. 16-117-59 County Clark
 7. Annual period or periods during which water is to be used April 1 to Dec. 1
 8. Use to be made of water, (irrigation, industrial, municipal, commercial, recreation, etc.) Irrigation
 9. For irrigation use, Total number of acres to be irrigated 1112.0

List below each forty acre subdivision, or lot, or fraction thereof and show number of acres to be irrigated in each.

Land Description	No. Acres Irr.	Land Description	No. Acres Irr.
SW 1/4 NE 1/4 Sec. 33-118-59	40.0	NE 1/4 NE 1/4 Sec. 9-117-59	39.0
SE 1/4 NE 1/4 Sec. 33-118-59	39.0	NE 1/4 NE 1/4 Sec. 9-117-59	18.0
NE 1/4 SE 1/4 Sec. 33-118-59	40.0	SW 1/4 NE 1/4 Sec. 9-117-59	40.0
NE 1/4 SW 1/4 Sec. 33-118-59	39.0	SE 1/4 NE 1/4 Sec. 9-117-59	38.0

Attach sheet if more space is needed

See Attachment

10. Time required to complete construction of water supply system 5 years. Additional time required to complete application of water to the proposed beneficial use 3 years.
 11. Choice of newspaper for Notice of Intent to Appropriate Water publication Clark County Courier
 12. Principal Features of the Proposed Water Supply System.

A. Works proposed to divert water from its natural source

Well and pumping system

B. Works proposed to transport water to place of use.

Underground pipeline

C. Works proposed to apply water to beneficial use.

Pivot-type irrigation systemEstimated Total Cost \$ 165,000.00

Attachments: Attach Form 2A if diversion from a well or dugout, or if storage of water, is proposed. Attach map.
 (See instructions concerning preparation.)

STATE OF SOUTH DAKOTA)

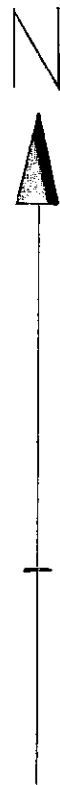
County of Clark)

I, J.V. Kennealley, the applicant, certify that I have read the foregoing application and have examined the attached map and that the matters therein stated are true and that I intend, and am able to complete the necessary construction

Signed J.V. Kennealley
 Subscribed and sworn to before me this 29 day of September, 1984

Notary Public (or other qualified officer)

My Comm. Exp. March 29, 1984



LOCATION OF LAND TO BE IRRIGATED				
LOCATION	SECTION	TOWNSHIP	RANGE	ACRES
SW $\frac{1}{4}$ NE $\frac{1}{4}$	33	118 N	59 W	40.0
SE $\frac{1}{4}$ NE $\frac{1}{4}$	33	118 N	59 W	39.0
NW $\frac{1}{4}$ SE $\frac{1}{4}$	33	118 N	59 W	40.0
NE $\frac{1}{4}$ SE $\frac{1}{4}$	33	118 N	59 W	39.0
SW $\frac{1}{4}$ SE $\frac{1}{4}$	33	118 N	59 W	39.0
SE $\frac{1}{4}$ SE $\frac{1}{4}$	33	118 N	59 W	38.0
SW $\frac{1}{4}$ NW $\frac{1}{4}$	4	117 N	59 W	39.0
NW $\frac{1}{4}$ NE $\frac{1}{4}$	4	117 N	59 W	39.0
NE $\frac{1}{4}$ NE $\frac{1}{4}$	4	117 N	59 W	38.0
SE $\frac{1}{4}$ NW $\frac{1}{4}$	4	117 N	59 W	40.0
SW $\frac{1}{4}$ NE $\frac{1}{4}$	4	117 N	59 W	40.0
SE $\frac{1}{4}$ NE $\frac{1}{4}$	4	117 N	59 W	39.0
NE $\frac{1}{4}$ SW $\frac{1}{4}$	4	117 N	59 W	40.0
NW $\frac{1}{4}$ SE $\frac{1}{4}$	4	117 N	59 W	40.0
NE $\frac{1}{4}$ SE $\frac{1}{4}$	4	117 N	59 W	39.0
SE $\frac{1}{4}$ SW $\frac{1}{4}$	4	117 N	59 W	—
SW $\frac{1}{4}$ SE $\frac{1}{4}$	4	117 N	59 W	—
SE $\frac{1}{4}$ SE $\frac{1}{4}$	4	117 N	59 W	—
NW $\frac{1}{4}$ NE $\frac{1}{4}$	9	117 N	59 W	39.0
NE $\frac{1}{4}$ NE $\frac{1}{4}$	9	117 N	59 W	18.0
SW $\frac{1}{4}$ NE $\frac{1}{4}$	9	117 N	59 W	40.0
SE $\frac{1}{4}$ NE $\frac{1}{4}$	9	117 N	59 W	38.0
NW $\frac{1}{4}$ SE $\frac{1}{4}$	9	117 N	59 W	40.0
NE $\frac{1}{4}$ SE $\frac{1}{4}$	9	117 N	59 W	39.0
SW $\frac{1}{4}$ SE $\frac{1}{4}$	9	117 N	59 W	40.0
SE $\frac{1}{4}$ SE $\frac{1}{4}$	9	117 N	59 W	32.0
NW $\frac{1}{4}$ NE $\frac{1}{4}$	16	117 N	59 W	40.0
NE $\frac{1}{4}$ NE $\frac{1}{4}$	16	117 N	59 W	39.0
SW $\frac{1}{4}$ NE $\frac{1}{4}$	16	117 N	59 W	40.0
SE $\frac{1}{4}$ NE $\frac{1}{4}$	16	117 N	59 W	39.0
NW $\frac{1}{4}$ SE $\frac{1}{4}$	16	117 N	59 W	40.0
NE $\frac{1}{4}$ SE $\frac{1}{4}$	16	117 N	59 W	39.0
			Total	1112.0

 LAND TO BE IRRIGATED
 PUMP SITES

Scale: 1" = 200'

SURVEYOR'S CERTIFICATE

I, Franklin L. Fife DO HEREBY CERTIFY THAT
THIS MAP IDENTIFIES A REASONABLY ACCURATE
RECORD OF THE LAND OF J. V. Kenneally,
NO IRRIGATION PROJECT AND HAS BEEN PREPARED
BY:

SIGNATURE: Franklin L. Tate
TITLE: District Conservationist
Sail Conservation Service

SUBSCRIBED AND SWORN TO BEFORE ME THIS
29 DAY OF September, 1976, A.D.

Theresa Swanson
NOTARY PUBLIC

MY COMMISSION EXPIRES March 29, 1984.

MAP NC 2461-3 APR NC 3198-3

WATER RIGHT APPLICATION APPROVAL

The Water Rights Commission hereby approves Water Right Application No. 3198-3

J. V. KEMMERLY
(Applicant)

RAYMONT
(Post Office Address)

SOUTH DAKOTA 57258 With the following modifications:
(State)

THIS PERMIT AUTHORIZES CONSTRUCTION OF WELLS #3 & #4, WITH WELL NO 2 PLACED IN A DEFERRED STATUS. DIVERSION RATE SHALL BE 3.0 GFS PER WELL.

The irrigation well approved under this Permit will be located near domestic wells and other irrigation wells which may obtain water from the same aquifer. The irrigation well owner, under this Permit, shall control his irrigation withdrawals so there is not a reduction of needed water supplies in existing domestic wells or in irrigation wells having prior water rights.

Date of first receipt of application OCTOBER 1, 19 76

Date of return to applicant for correction, amendments or changes required _____, 19 _____

Date of receipt of corrected application NOVEMBER 3, 19 76

Approved NOVEMBER 17, 19 76, Recorded in Book 16 Page 265

WATER RIGHT PERMIT NO. 3198-3

The Water Rights Commission hereby grants and issues this Water Right Permit No. 3198-3 authorizing the construction of the water use system and the putting of water to beneficial use as stated in the Application and as modified in the Water Right Application approval, subject, however, to the following limitations and conditions:

1. The date from which applicant may claim right is OCTOBER 1, 19 76
2. The equivalent of at least one-fifth of the work above specified is to be completed on or before MAY 17, 19 79
3. The whole of said work is to be completed on or before NOVEMBER 17, 19 81
4. The limit of time from proof of beneficial use of water appropriated in accordance herewith is NOVEMBER 17, 19 84
5. The water appropriated shall be used for the purpose of IRRIGATION

6. 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.

7. The amount of the appropriation herein granted shall not exceed 6.0 cubic feet per second; neither shall it exceed the capacity of the above described water supply system, nor shall it exceed the amount of water needed for beneficial uses served, and if for the irrigation purposes said appropriation must be limited to not more than 3 acre feet per acre per year and 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 NOVEMBER 17, 19 84; said water to be used during the following described annual period: APRIL 1 - DECEMBER 1

Witness my hand this 23RD day of DECEMBER, 19 76

WATER RIGHTS COMMISSION

By:

John Hatch
Chief Engineer, Executive Officer

Certificate of Construction Issued _____, 19 _____

Water License Issued _____, 19 _____

Attachment

NE	NW	Sec. 4-117-59	39.0
NW	NE	Sec. 4-117-59	39.0
NE	NE	Sec. 4-117-59	38.0
SE	NE	Sec. 4-117-59	40.0
SW	NE	Sec. 4-117-59	40.0
SE	NE	Sec. 4-117-59	39.0
NE	SW	Sec. 4-117-59	40.0
NW	SE	Sec. 4-117-59	40.0
NE	SE	Sec. 4-117-59	39.0

NE	SE	Sec. 9-117-59	40.0
NE	SE	Sec. 9-117-59	39.0
NE	SE	Sec. 9-117-59	40.0
NE	SE	Sec. 9-117-59	39.0
NE	NE	Sec. 16-117-59	40.0
NE	NE	Sec. 16-117-59	39.0
NE	NE	Sec. 16-117-59	40.0
NE	NE	Sec. 16-117-59	39.0
NE	SE	Sec. 16-117-59	40.0
NE	SE	Sec. 16-117-59	39.0

WATER RIGHT APPLICATION APPROVAL

The Board of Water Management hereby approves Water Right Application No. 3198-3

J.V. KENNEALLY
(Applicant)

RAYMOND
(Post Office Address)

SOUTH DAKOTA 57258
(State)

With the following qualifications.

This Permit No. 3198-3 authorizes the construction of Well No. 2, along with wells No 3 and No 4, approved November 17, 1976. The diversion rate shall ~~not exceed~~ 3.0 cfs per well. *JH*

The irrigation wells approved under this Permit will be located near domestic wells and other irrigation wells which may obtain water from the same aquifer. The irrigation well owner, under this Permit, shall control his irrigation withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in irrigation wells having prior water rights.

Date of first receipt of application OCTOBER 1, 1976

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

Date of receipt of corrected application _____, 19____

Approved NOVEMBER 17, 1976, Recorded in Book 16 Page 265A
AND MARCH 26, 1980 WATER RIGHT PERMIT NO. 3198-3

The Board of Water Management hereby grants and issues this Water Right Permit No. 3198-3 authorizing the construction of the water use system and the putting of water to beneficial use as stated in the Application and as qualified in the Water Right Application approval, subject, however, to the following limitations and conditions:

1. The date from which applicant may claim right is OCTOBER 1, 1976
2. The equivalent of at least one-fifth of the work above specified is to be completed on or before MAY 17, 1979
3. The whole of said work is to be completed on or before NOVEMBER 17, 1981
4. The limit of time from proof of beneficial use of water appropriated in accordance herewith is NOVEMBER 17, 1984
5. The water appropriated shall be used for the purpose of IRRIGATION

6. 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.

7. The amount of the appropriation herein granted shall not exceed 3.0 cubic feet per second; neither shall it exceed the capacity of the above described water supply system, nor shall it exceed the amount of water needed for beneficial uses served, and if for irrigation purposes said appropriation must be limited to not more than 2 acre feet per acre per year and 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 NOVEMBER 17 1984; said water to be used during the following described

annual period: APRIL 1ST - DECEMBER 1ST

Witness my hand this 31ST day of MARCH, 1980

THE BOARD OF WATER MANAGEMENT

By: John Hatch

Chief Engineer, Water Rights

JOHN HATCH

Certificate of Construction Issued _____, 19____

Water License Issued _____, 19____

12. Principal Features of the Proposed Water Supply System (continued.)

D. Well Information or Estimates

- (1) Drill Hole, Diameter 30", Depth 118'
- (2) Casing, Type Steel Diameter 16" Thickness .250
(wood, concrete, steel, etc.)
- (3) Perforated Screen.
- Type Johnson Irrigator, Diameter 16", Length 30'
- (4) Gravel Pack, Thickness 7", Length of gravel pack 118'

E. Dugout Information or Estimates.

- (1) Surface dimensions N.A., Depth _____

F. Fill out for Either a Well or a Dugout.

- (1) Water Bearing Materials. (Please attach a copy to test well log if available.)

Character of Water bearing materials	<u>32-38 Sand & gravel</u>
<u>0-1 Top soil</u>	<u>38-67 Blue clay</u>
<u>1-11 Sandy yellow clay</u>	<u>67-96 Fine sand</u>
<u>11-32 Blue clay</u>	<u>96-118 Medium sand</u>

Depth to top of water bearing material 67'

Depth to bottom of water bearing material 118'

Thickness of water bearing material 51'

Depth to water (ground surface to water level) 21'

- (2) Distance to nearest existing household or livestock watering wells.

On same owner's property 2000 ft. rds. On property owned by others 1600 ft. rds.
~~XXXX~~ ~~XXXX~~

G. Water Storage Dams.

If the proposed water use system contains one or more water storage dams, please show in the space below, the height, maximum water depth, surface area and storage capacity of each storage dam. The location of each water storage dam should be shown on the water right map.

W. Kennedy
Signature of Applicant

12. Principal Features of the Proposed Water Supply System (continued.)

D. Well Information or Estimates

(1) Drill Hole, Diameter 30", Depth 95'
 (2) Casing, Type Steel (wood, concrete, steel, etc), Diameter 16" Thickness .250
 (3) Perforated Screen.
 Type Johnson Irrigator, Diameter 16", Length 20'
 (4) Gravel Pack, Thickness 7", Length of gravel pack 95'

E. Dugout Information or Estimates.

(1) Surface dimensions N.A., Depth —

F. Fill out for Either a Well or a Dugout.

(1) Water Bearing Materials. (Please attach a copy to test well log if available.)

Character of Water bearing materials
0-1 Top soil 77-95 Medium sand
1-22 Yellow clay 95-120 Blue clay
22-77 Blue clay

Depth to top of water bearing material 77'
 Depth to bottom of water bearing material 95'
 Thickness of water bearing material 18'
 Depth to water (ground surface to water level) 26'

(2) Distance to nearest existing household or livestock watering wells.

On same owner's property 1800 Ft. ~~XXXXXX~~ rds. On property owned by others 1600 Ft. ~~XXXXXX~~ rds.

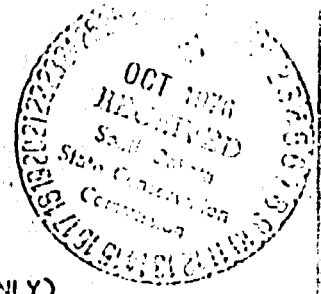
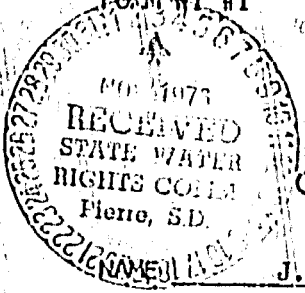
G. Water Storage Dams.

If the proposed water use system contains one or more water storage dams, please show in the space below, the height, maximum water depth, surface area and storage capacity of each storage dam. The location of each water storage dam should be shown on the water right map.

(2) Well # 3 same owners property 2800 Ft. on property owned by others 1600 Ft.
 Well # 2 " " " 1800 " " " 4000 Ft
 Well # 4 " " " 2000 " " " 2000 Ft

M. C. Cunniff
 Signature of Applicant

CONSERVATION
COMMISSION
FORM #1 #1



STATE CONSERVATION COMMISSION
SUPPORTING INFORMATION
FOR APPROPRIATION OF GROUND WATER IN ACCORDANCE
WITH SDCL 46-6-3 AS AMENDED
(THIS FORM REQUIRED FOR PROPOSED GROUND WATER IRRIGATION ONLY)

NAME J. Vincent Kennealley

ADDRESS Raymond, South Dakota

COUNTY Clark

LEGAL DESCRIPTION

1. WELL LOCATION See Map on Back
2. LOCATION OF AREA TO BE IRRIGATED SE 1/4-33; S 1-33; (E 1/4-1; E 1/4-9; NE 1/4-16; SW 1/4-16)
All in township T17, Range 59, Clark County

TYPE OF IRRIGATION

3. GRAVITY _____ TOWLINE _____ CENTER PIVOT X GUN _____
4. CROPS TO BE IRRIGATED _____

WATER QUALITY

5. SAMPLE NUMBER	<u>76-1244</u>	<u>76-1245</u>	<u>76-1246</u>	<u>76-1247</u>
6. SALINITY (EC X 10 ⁶)	<u>1819</u>	<u>1548</u>	<u>2351</u>	<u>1369</u>
7. SODIUM (SAR)	<u>0.93</u>	<u>0.95</u>	<u>4.71</u>	<u>0.41</u>
8. RESIDUAL SODIUM CARBONATE (meq/l.)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

I do hereby certify that a chemical analysis of the ground water representative of that used to irrigate shall be acquired from South Dakota State University and; the soils information has been acquired from Clark Conservation District, County Extension office or Soil Conservation Service. and; that the legal description for the location of the well and land to be irrigated is true and correct.

J. Kennealley
APPLICANT'S SIGNATURE

SUBSCRIBED AND SWORN BEFORE ME THIS
DAY OF _____ 19 ____.

(TITLE OR SEAL)

Approval does not imply that this project can be carried out successfully in all circumstances. Individual man-
Robert S. J. [Signature]
APPROVED/DISAPPROVED

(SOILS INFORMATION ON REVERSE SIDE)

REPORT OF ANALYSIS
Water Quality Laboratory
Water Resources Research Institute
South Dakota State University
Brookings, South Dakota 57006

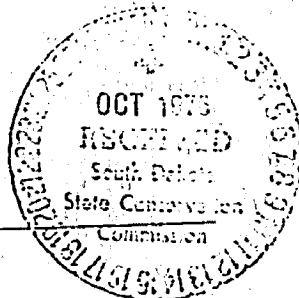
Submitted by: J. Vincent Kemmcalley
 Address: Raymond, SD 57258

Date Rec'd: September 1, 1976
 Sample No.: 76-1264
 Identification: 153, Loc. 9, T 117N, R 59E

WATER ANALYSIS

Calcium (Ca)	230	ppm*	11.50	me/l**
Magnesium (Mg)	71	ppm	3.55	me/l
Sodium (Na)	63	ppm	2.74	me/l
Potassium (K)	12	ppm	0.31	me/l
Sulfate (SO ₄)	670	ppm	13.94	me/l
Nitrate (as N)		ppm		me/l
Chloride (Cl)	10	ppm	0.29	me/l
Bicarbonate (HCO ₃)	476	ppm	7.80	me/l
Carbonate (CO ₃)		ppm		me/l
Iron (Fe)		ppm		me/l
Fluoride (F)		ppm		g.p.g.***
Hardness (EDTA as CaCO ₃)		ppm		
Alkalinity (Methyl Orange)	390	ppm (as CaCO ₃)		
Alkalinity (Phenolphthalein)	0	ppm (as CaCO ₃)		
Electrical Conductivity	1819	microhmhos per cm at 25° C.		
Sodium Adsorption Ratio	0.93			
Sodium	13.29	% of cations		
Residual sodium carbonate	0.00	me/l		
pH	7.55			
Others:				

*ppm=parts per million
 **me/l=millequivalents per liter
 ***g.p.g.=grains per gallon



COMMENTS: Total cations 20.38 me/l
 Total anions 22.03 me/l

By: Shirley Litten

Service Performed

Amount Due

Irrigation analysis

\$8.00

Make checks payable to: Water Quality Laboratory

Cut along dotted line and return the lower portion with payment

Sample No. 76-1264

Amount Enclosed \$

Signed

REPORT OF ANALYSIS
Water Quality Laboratory
Water Resources Research Institute
South Dakota State University
Brookings, South Dakota 57006

Submitted by: J. Vincent Kenneally
 Address: Raymond, SD 57258

Date Rec'd. September 1, 1976

Sample No. 76-1246

Identification _____

Et. Sec. 33, T. 118N, R. 59W

WATER ANALYSIS

Calcium (Ca)	227	ppm*	11.35	me/l**
Magnesium (Mg)	71	ppm	5.82	me/l
Sodium (Na)	317	ppm	13.79	me/l
Potassium (K)	17	ppm	0.44	me/l
Sulfate (SO ₄)	960	ppm	19.97	me/l
Nitrate (as N)		ppm		me/l
Chloride (Cl)	48	ppm	1.34	me/l
Bicarbonate (HCO ₃)	459	ppm	7.52	me/l
Carbonate (CO ₃)		ppm		me/l
Iron (Fe)		ppm		me/l
Fluoride (F)		ppm		me/l
Hardness (EDTA as CaCO ₃)		ppm		g.p.g.***
Alkalinity (Methyl Orange)	376	ppm (as CaCO ₃)		
Alkalinity (Phenolphthalein)	0	ppm (as CaCO ₃)		
Electrical Conductivity	2351	micromhos per cm at 25° C.		
Sodium Adsorption Ratio	4.71			
Sodium	43.91	% of cations		
Residual sodium carbonate	0.00	me/l		
pH	7.55			
Others:				

*ppm=parts per million

**me/l=milliequivalents per liter

***g.p.g.=grains per gallon

COMMENTS: Total cations 31.40 me/l
 Total anions 28.83 me/l



By: Shirley Mitten

Service Performed

Amount Due

Irrigation analysis

\$8.00

Make checks payable to: Water Quality Laboratory

Cut along dotted line and return the lower portion with payment

Sample No. 76-1246

Amount Enclosed \$ _____

Signed _____

REPORT OF ANALYSIS
 Water Quality Laboratory
 Water Resources Research Institute
 South Dakota State University
 Brookings, South Dakota 57006

Submitted by: J. Vincent Kenneally
 Address: Raymond, SD 57258

Date Rec'd: September 1, 1976

Sample No. 76-1247

Identification

SE-1, Sec. 4, T 117N, R 59W

WATER ANALYSIS

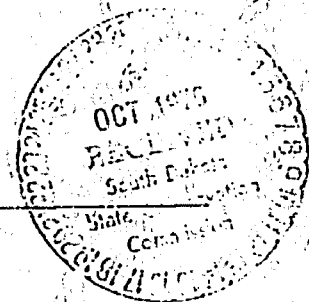
Calcium (Ca)	238	ppm	11.90	me/l**
Magnesium (Mg)	49	ppm	4.02	me/l
Sodium (Na)	27	ppm	1.17	me/l
Potassium (K)	8	ppm	0.21	me/l
Sulfate (SO ₄)	435	ppm	9.05	me/l
Nitrate (NO ₃)		ppm		me/l
Chloride (Cl)	7	ppm	0.20	me/l
Bicarbonate (HCO ₃)	498	ppm	8.16	me/l
Carbonate (CO ₃)		ppm		me/l
Iron (Fe)		ppm		me/l
Fluoride (F)		ppm		me/l
Hardness (EDTA as CaCO ₃)		ppm		g.p.g.***
Alkalinity (Methyl Orange)	408	ppm (as CaCO ₃)		
Alkalinity (Phenolphthalein)	0	ppm (as CaCO ₃)		
Electrical Conductivity	1369	micromhos per cm at 25° C.		
Sodium Adsorption Ratio	0.41			
Sodium	6.76	% of cations		
Residual sodium carbonate	0.00	me/l		
pH	7.41			
Others:				

*ppm=parts per million

**me/l=millequivalents per liter

***g.p.g.=grains per gallon

COMMENTS: Total cations 17.30 me/l
 Total anions 17.41 me/l



By: Shirley Hittan

Service Performed

Amount Due

Irrigation analysis

\$8.00

Make checks payable to: Water Quality Laboratory

Cut along dotted line and return the lower portion with payment

Sample No. 76-1247

Amount Enclosed \$

Signed

REPORT OF ANALYSIS
Water Quality Laboratory
Water Resources Research Institute
South Dakota State University
Brookings, South Dakota 57006

Submitted by: J. Vincent Vernealley
 Address: Maywood, SD 57258

Date Rec'd: September 1, 1976

Sample No. 76-1245

Identification

NE 1/4, Sec. 16, T. 117N, R. 59E

WATER ANALYSIS

Calcium (Ca)	264	ppm*	13.20	me/l**
Magnesium (Mg)	72	ppm	5.90	me/l
Sodium (Na)	34	ppm	1.48	me/l
Potassium (K)	9	ppm	0.23	me/l
Sulfate (SO ₄)	540	ppm	11.23	me/l
Nitrate (as N)		ppm		me/l
Chloride (Cl)	27	ppm	0.75	me/l
Bicarbonate (HCO ₃)	483	ppm	7.92	me/l
Carbonate (CO ₃)		ppm		me/l
Iron (Fe)		ppm		me/l
Fluoride (F)		ppm		me/l
Hardness (EDTA as CaCO ₃)		ppm		g.p.g.***
Alkalinity (Methyl Orange)	396	ppm (as CaCO ₃)		
Alkalinity (Phenolphthalein)	0	ppm (as CaCO ₃)		
Electrical Conductivity	1584	micromhos per cm at 25° C.		
Sodium Adsorption Ratio	0.48			
Sodium	7.11	% of cations		
Residual sodium carbonate	0.00	me/l		
pH	7.12			
Others:				

*ppm=parts per million
 **me/l=millequivalents per liter
 ***g.p.g.=grains per gallon

COMMENTS: Total cations 20.81 me/l
 Total anions 19.90 me/l

By: Shirley Litten

Service Performed

Amount Due

Irrigation analysis

\$8.00

Make checks payable to: Water Quality Laboratory

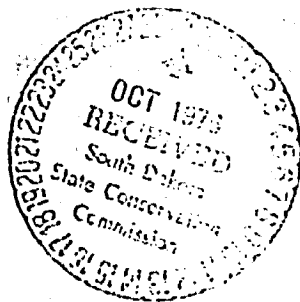
Cut along dotted line and return the lower portion with payment

Sample No. 76-1245

Amount Enclosed \$

Signed

October 27, 1976



Mr. J. Vincent Kennealley
Raymond, SD 57258

Dear Mr. Kennealley:

I have now received the WI-1 form with the designations of the various water samples assigned to the tracts of land on which you intend to use each water supply. I am sending a copy of this letter of recommendation to the State Conservation Commission for their formal action.

The general recommendation for all these waters is that you use them as infrequently as possible, but in substantial amounts. Most of the soils you propose to irrigate have the ability to hold up to 2 1/4 inches of available water per foot of soil. Some of them are less by a substantial amount, but generally speaking, an inch and 3/4 per foot could be held by use of these soils at field capacity. If the rooting depth of your crop is 3 feet, this means you probably could apply nearly 6 inches per application and not have any leaching loss. Occasionally you do want leaching loss because of the fact that salts will build up if you do not have it. Occasionally, you will also want to irrigate to bring the entire rooting zone up to field capacity very late in the fall, such as the end of October. This will increase the chances that natural precipitation will cause leaching. These general recommendations apply to all water samples. Irrigate as infrequently as you can, use substantial amounts and irrigate to completely fill the soil late in the fall about 1 year out of 3, at least.

One sample, #1246, is considerably higher in total salinity and in sodium than the other samples. It should be used sparingly and not at all if you can avoid its use. It is enough higher in salinity so that I would suggest you use this water only for forage crops and use it only in the cool part of the year, that is, April, May and early June, and September and October. This will enhance the possibility of natural leaching and reduce the total evaporation loss and thus reduce the salinity hazards considerably. The other 3 waters are just normally high ceiling waters, not excessively high, but waters which you should manage in the above indicated fashion to increase the longevity of your soil. There is no way of predicting under our climatic vagaries just how long you might go before any damage to the soil could be determined.

I am thus recommending approval of all of these water samples and their use with the exception that #1246 should be used only in the cool parts of the year and if possible no more than twice in any growing season.

Mr. Kennealley
October 27, 1976
Page 2

These recommendations are being forwarded to the State Conservation Commission.

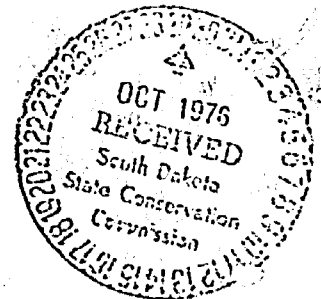
The original copies of the report of analysis on these water samples are returned to you for your keeping. They are yours, we have sufficient copies.

Sincerely yours,

L. O. Fine

L. O. Fine
Water Quality Lab

LOF:ckh
Enclosures
cc: State Conservation Commission
Soil Conservation Service, Clark



Form 6. - Notice Intent to Appropriate Water

No. 3193-3

Publish first publication, on or before

November 5, 1976

NOTICE OF INTENT TO APPROPRIATE WATER

Pierre, South Dakota 57501

November 5, 1976

Notice is hereby given that J. V. Kenneally
whose post office address is Raymond, South Dakota, has made an
application in accordance with the provisions of the water laws of South Dakota for
a permit to appropriate for beneficial use 15.8 cubic feet of water per
second of time from ~~the~~ ground water through the
Kenneally # 1, the point of diversion of which ~~is~~ are
be located in the SW 1/4 NE 1/4, Section 9; SW 1/4 SE 1/4, Section 4 and SW 1/4
NE 1/4

of Section 16, Twp. 117N, Range 59W. Said water to be used
for the purpose of providing irrigation on the following described land:

/portions
NE 1/4, E 1/4 NE 1/4, NE 1/4 SW 1/4, N 1/4 SE 1/4, Section 4; E 1/4, Section 9; NE 1/4, N 1/4 SE 1/4,
Section 16, T117N, R59W; SE 1/4, S 1/4 NE 1/4, Section 34, T118N, R59W

This application No. 3193-3 will be considered by the Water Rights
Commission at the Marvin Hughitt Hotel in Huron, South Dakota
upon the 17th day of November, 1976 at 10:00 A.M. All
interested persons may appear and be heard.

WATER RIGHTS COMMISSION

By:

BURTON F. JONES, Water Rights Specialist

BFJ/bw

cc: J. V. Kenneally, Raymond, SD 57258

Form 8 - Proof of Publication - Notice of Intent to Appropriate Water

No. 3198-3

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County Codington) ss.

I, John R. Lowrie hereby
certify that the annexed printed copy of Notice of Intent to Appropriate
Water was taken from the Watertown Public Opinion

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 Watertown

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

November 8th, 1976

November 15th, 1976

General Manager

(Title)

November 15, 1976

(Date Signed)

PUBLIC NOTICE
No. 3198-3
NOTICE OF INTENT TO
APPROPRIATE WATER
Pierre, South Dakota 57501
November 5, 1976
Notice is hereby given that J.A.V.
Kenneally whose post office address
is Raymond, South Dakota, has
made an application in accordance
with the provisions of the water laws
of South Dakota for a permit to
appropriate for beneficial use 15.8
cubic feet of water per second of
time from ground water through the
Kenneally No. 1 well the points of
diversion of which are to be located
in the SE 1/4, NE 1/4, Section 9, SW 1/4
SE 1/4, Section 10, and SW 1/4, NE 1/4 of
Section 16, Twp. 117N, Range 57W.
Said water to be used for the purpose
of providing irrigation on portions of
the following described land: NE 1/4
EW 1/4 NW 1/4, NE 1/4 SW 1/4, NW 1/4
Section 4, EW 1/4 Section 9, NE 1/4 NW 1/4
SE 1/4, Section 16, T117N, R57W,
SE 1/4, SW 1/4 NE 1/4, Section 34, T118N,
R59W.
This application No. 3198-3 will be
considered by the Water Rights
Commission at the Marvin Hughitt
Hotel in Huron, South Dakota upon
the 17th day of November, 1976, at
10:00 A.M. All interested persons
may appear and be heard.
WATER RIGHTS
COMMISSION
By: BURTON E. JONES,
Water Rights
Specialist
(November 8, 15, 1976)



3198-3

SOUTH DAKOTA
Department of
Water & Natural Resources
Joe Foss Building Water Rights, Water Management Division
Pierre, South Dakota 57501 (605) 773-3352

March 12, 1980

TO: Persons Interested in Deferred Applications in Clark County
FROM: John Hatch, Chief Engineer, Water Rights
SUBJECT: Reconsideration of Deferred Applications

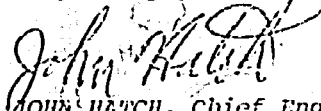
The Water Management Board will reconsider deferred water right applications in Clark County at 2:00 p.m. on March 26, 1980 at the SDEA Auditorium, 411 East Capitol, Pierre SD.

This reconsideration hearing will be conducted in accordance with the provisions of SDCL 46-1-1 thru 46-1-9; 46-1-14; 46-2-9 thru 46-2-11; 46-2-13; 46-5-1 thru 46-5-8; 46-5-10 thru 46-5-22; 46-5-41; 46-6-3; 46-6-5; 46-6-6.1; 46-6-10; 46-6-3.1; 46-6-14 and Board Rules ARSD 52:01:01:01 thru 52:01:01:13.

These applications were previously deferred by the Water Rights Commission, pending staff investigation.

This hearing is an adversary proceeding. Any person has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised at the hearing. Decisions of the Board may be appealed to the Courts as provided by law.

Very truly yours,


JOHN HATCH, Chief Engineer
Water Rights, WMD

JH:kw

Equal Opportunity Employer

REPORT ON DEFERRED APPLICATIONS IN CLARK COUNTY
Permit No. 3198-3, J.V. Kenneally (one well deferred)
Application No. 3874-3, James Jenkins and Lucille Auger

March 17, 1980

Information Pamphlet No. 16 by Louis J. Hamilton, USGS, defines the Altamont Aquifers, numbered 1, 2, and 3, which underlie approximately 70 percent of Clark County. This report is concerned only with wells in the Altamont No. 2 glacial aquifer which is approximately 630 square miles in areal extent and has an average saturated thickness of 40 feet. Water in the aquifer occurs under artesian head conditions (see plate 1).

Permit No. 3198-3, J.V. Kenneally, authorizes the use of two wells with a third 95 foot deep well for 3.0 cfs in deferred status. Application No. 3874-3, James Jenkins and Lucille Auger, calls for 2.2 cfs from a 125 foot deep well (see plate 1 for locations). These applications were deferred pending data collection, including observation well drilling and effects of pumping large capacity wells already approved in the area.

Two observation wells were drilled in the area in 1976 and four observation wells were put in in 1978. Water levels in these observation wells have been monitored regularly (see table 1). The water levels in wells in the study area have been maintained with a maximum fluctuation in CK78C of 3.4 feet. Fluctuations in the other wells range from .70 feet in CK78D to 3.1 feet in CK76D. CK76C shows a maximum fluctuation of 6.3 feet; however, this well reflects irrigation well pumping to the north as well as in the study area (see plate 1). Following is a list of permit holders in the area, the appropriated diversion rate, and the priority dates.

<u>Permit Holder</u>	<u>Appropriated Diversion Rate</u>	<u>Priority Date</u>
2866-3 Wilmot M. Uecker	5.6 cfs	August 12, 1976
3030-3 James Jenkins	2.6 cfs	September 3, 1976
3198-3 J. V. Kenneally	6.0 cfs	October 1, 1976

According to well logs, in a 40 square mile study area there is an estimated total storage of 205,000 acre-feet of water. Water diverted for irrigation use ranges from 350 acre-feet in 1977 to an estimated 480 acre-feet in 1979 for the 40 square mile area. All of the above permits are developed, and there have been no complaints in the area.

CONCLUSIONS AND RECOMMENDATIONS

Applications No. 3874-3 and one well for Permit No. 3198-3 were deferred pending data collection. Observation wells have been drilled and monitored in the area and based on the formation encountered in those wells, there is unappropriated water available. Spacing of large capacity wells is an important consideration in an artesian aquifer. The spacing of the present and proposed wells in the study area should be adequate.

The Staff recommends approval of the third well in Permit No. 3198-3, J.V. Kenneally, for 3.0 cfs, and approval of Application No. 3874-3 for 2.2 cfs, with the following qualification:

The irrigation well approved under this Permit will be located near domestic wells and other irrigation wells which may obtain water from the same aquifer. The irrigation well owner, under this Permit, shall control his irrigation withdrawals so there is not a reduction of needed water supplies in adequate domestic wells or in irrigation wells having prior water rights.

JEANNE CHRISTENSEN
Water Resources Engineer

Plate 1

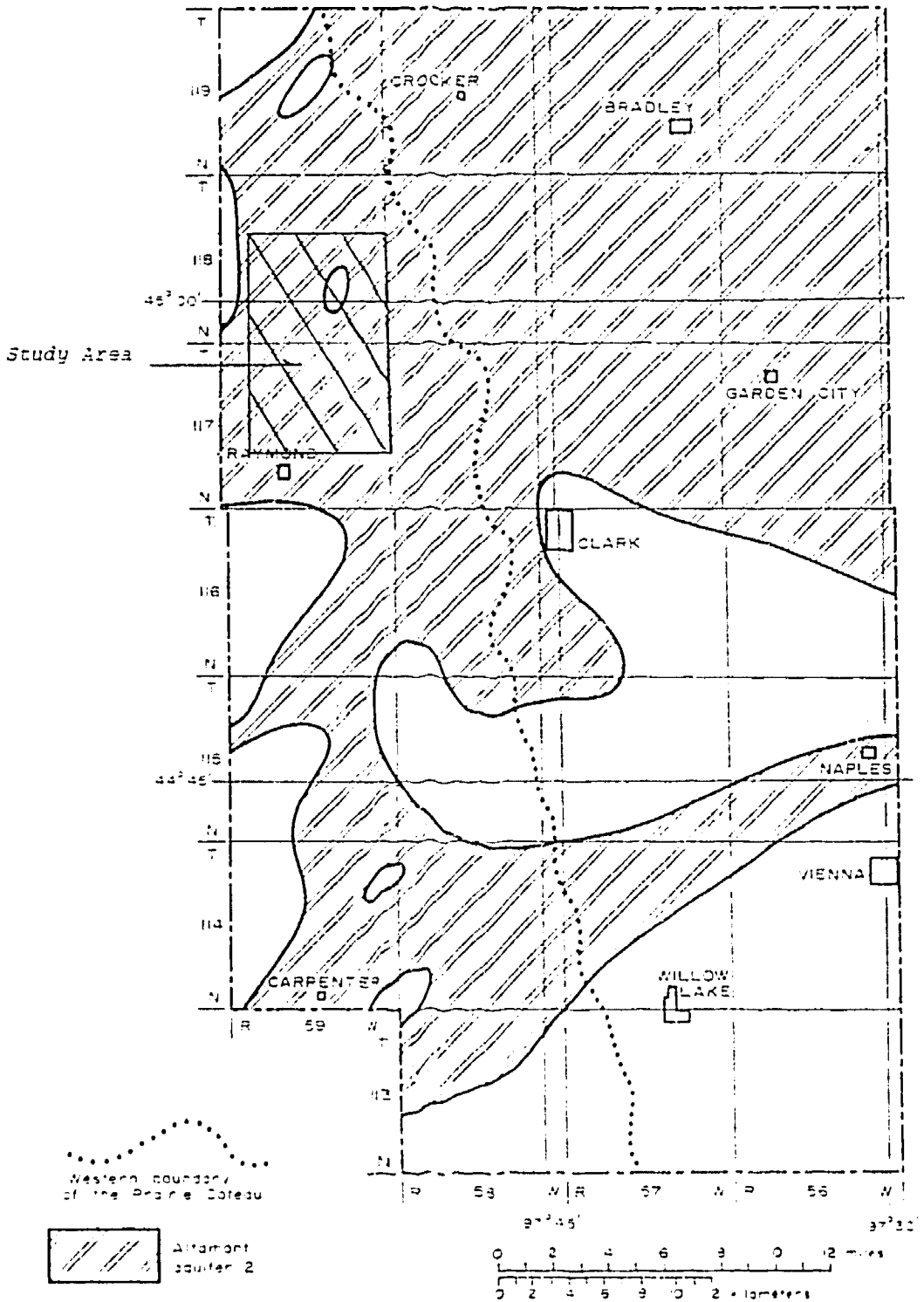


Figure 4 Map showing areal extent of the Allamont aquifer 2

Hamilton, Louis C.
Major Aquifers in Clark County, South Dakota. Vermillion, SD: South Dakota
 Geological Survey, 1973.

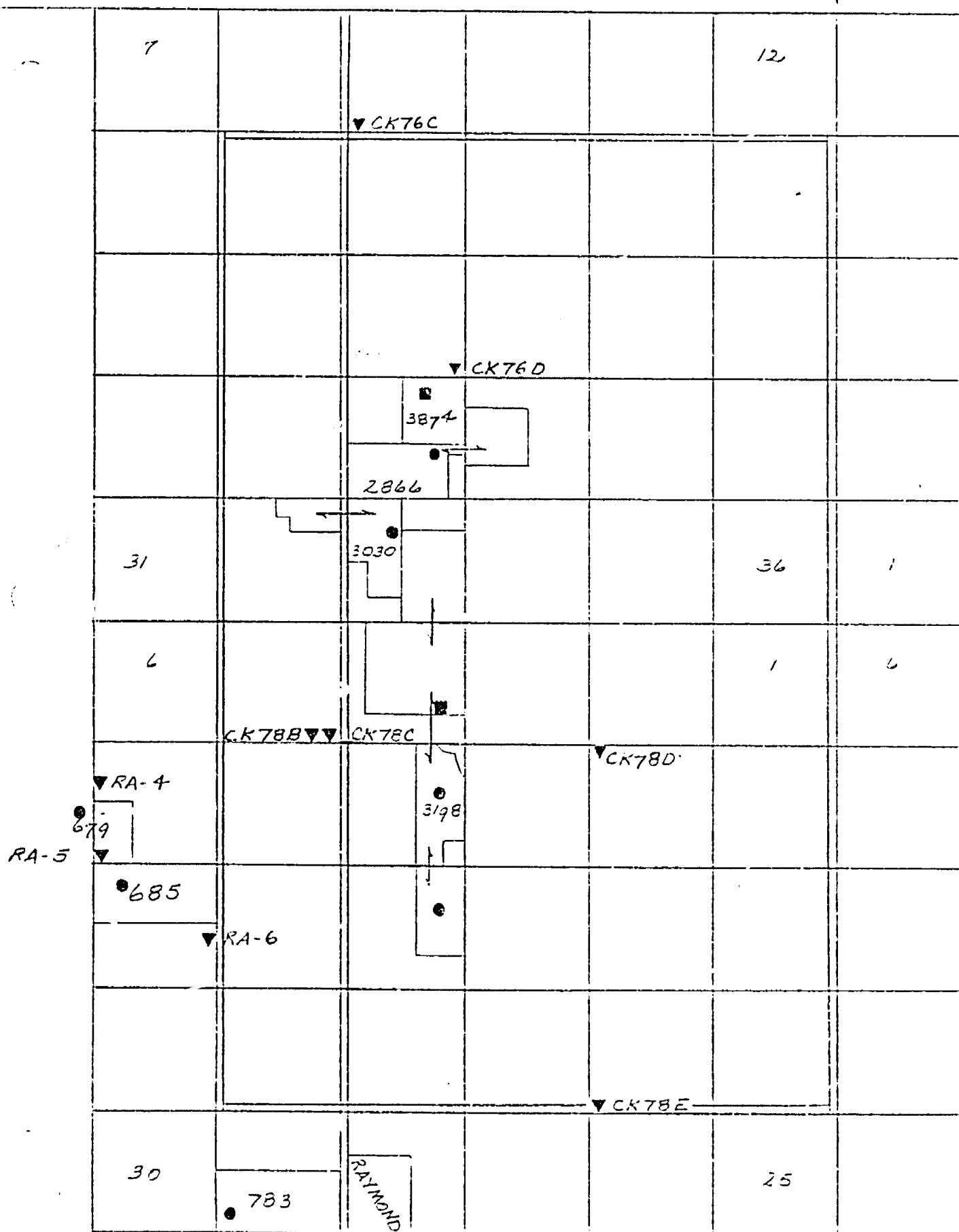


TABLE 1

OBSERVATION WELL READINGS

<u>DATE</u>	<u>CK76C</u>	<u>CK76D</u>	<u>CK78C</u>	<u>CK78D</u>	<u>CK78E</u>
11-30-76	14.5	38.5			
2-7-77	14.9	38.6			
4-19-77	13.6	38.6			
6-7-77	14.0	39.3			
6-22-77	13.1	39.2			
7-7-77	13.5	38.9			
7-27-77	15.4	40.3			
8-3-77	15.7	40.3			
8-17-77	16.0	40.5			
9-7-77	16.4	40.7			
9-22-77	16.3	40.7			
10-21-77	15.9	39.6			
12-30-77	15.5	39.1			
4-26-78	10.0	38.4			
5-23-78	10.2	37.8			
6-5-78	10.5	38.1			
6-22-78	11.2	38.0			
7-19-78	13.0	38.5			
8-15-78	14.6	40.7			
9-5-78	15.2	40.1			
9-29-78	15.7	40.5	4.3	71.5	65.3
10-16-78	15.7	40.3	4.1	71.7	65.6
11-30-78	15.5	39.3	3.2	71.5	65.2
1-25-79	15.4	39.2	3.7	71.9	65.3
5-3-79	13.5	39.2	3.7	71.9	65.5
6-1-79	13.5	39.2	3.7	71.8	65.2
6-14-79	14.1	38.8	3.2	71.5	64.8
7-2-79	13.8	38.7	4.1	71.6	65.0
7-16-79	14.5	39.0	6.6	71.8	65.6
7-30-79	15.0	39.6	4.4	71.8	65.4
8-13-79	15.4	39.8	4.2	71.9	65.6
9-6-79	15.1	40.0	4.7	71.7	65.4
9-27-79	15.4	40.0	5.8	71.2	65.1
10-24-79	15.6	40.2	4.0		
1-18-80	15.5	39.2	3.5	71.4	65.1
3-6-80	15.5	39.0	3.5	71.1	64.9

**South Dakota Department of
Water & Natural Resources**

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

February 17, 1989

J.V. Kenneally
Box E
Raymond, SD 57258

Dear Mr. Kenneally:

On October 6, 1988, the Water Management Board adopted rules to implement a 1988 law for application of chemicals through irrigation systems. The rules establish equipment standards, performance standards and installation requirements for irrigation systems that apply chemicals (fertilizers, insecticides, or herbicides) with irrigation water.

You have indicated on your 1988 Water Management Board Irrigation Questionnaire that you do apply chemicals with irrigation water. A copy of the new rules for chemigation are enclosed for your information.

The new standards include:

- * a check valve between the irrigation pump and the point of chemical injection;
- * a vacuum relief valve on top of the pipeline between the irrigation pump and the irrigation pipeline check valve;
- * a low-pressure drain on the bottom of the pipeline between the irrigation pump and the irrigation pipeline check valve;
- * a chemical injection line check valve between the chemical injection pump and the point at which the chemical is injected into the irrigation line; a second check valve is required if the chemical injection pump is not a positive displacement pump;
- * an interlock system which ensures that the chemical injection pump will stop whenever the irrigation pump stops;
- * an inspection port between the irrigation pump and the check valve on the irrigation line;



Each of these equipment requirements are discussed more thoroughly in Sections 74:02:09:05 through 74:02:09:10 of the enclosed rules. Appendix A contains diagrams of the arrangements of these anti-pollution devices.

The equipment must be installed according to the manufacturer's specifications, calibrated, and maintained in good working condition. All chemical product labels must be followed and warning signs must be posted. These rules also require reporting of all spills, accidents, and system malfunctions. A 24-hour telephone number is provided.

The chemigation rules contain notification and record keeping requirements. Prior to using chemigation, notification must be given to the Chief Engineer on the enclosed Form 1C. Information that must be provided in this notification includes the water permit or right number, the name, address, and telephone number of the water permit or right holder and of the system operator, and the legal description of the lands on which the system is located. A record of the name, quantity, dates and hours of each chemical applied must be provided to the Chief Engineer on Form 2C. A copy of this form is also enclosed for your information. It will be mailed with the annual irrigation questionnaire and must be returned with the questionnaire by the date specified. If you have any questions regarding these rules or need additional copies of the forms, please contact Susan Bowar, Water Rights Engineer (605-773-3352).

Very truly yours,

John Hatch
JOHN HATCH, Chief Engineer
Water Rights Division



3198-3

DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

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

AUG 18 1992

3198A-3

J. V. Kennealley
P.O. Box 50
Raymond, SD 57258

Dear Mr. Kennealley:

Enclosed is Water License No. 3198A-3. This is the final water right document completing your process of obtaining a Water Right. Enclosed is Receipt No. 413373 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. 3198A-3, 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.

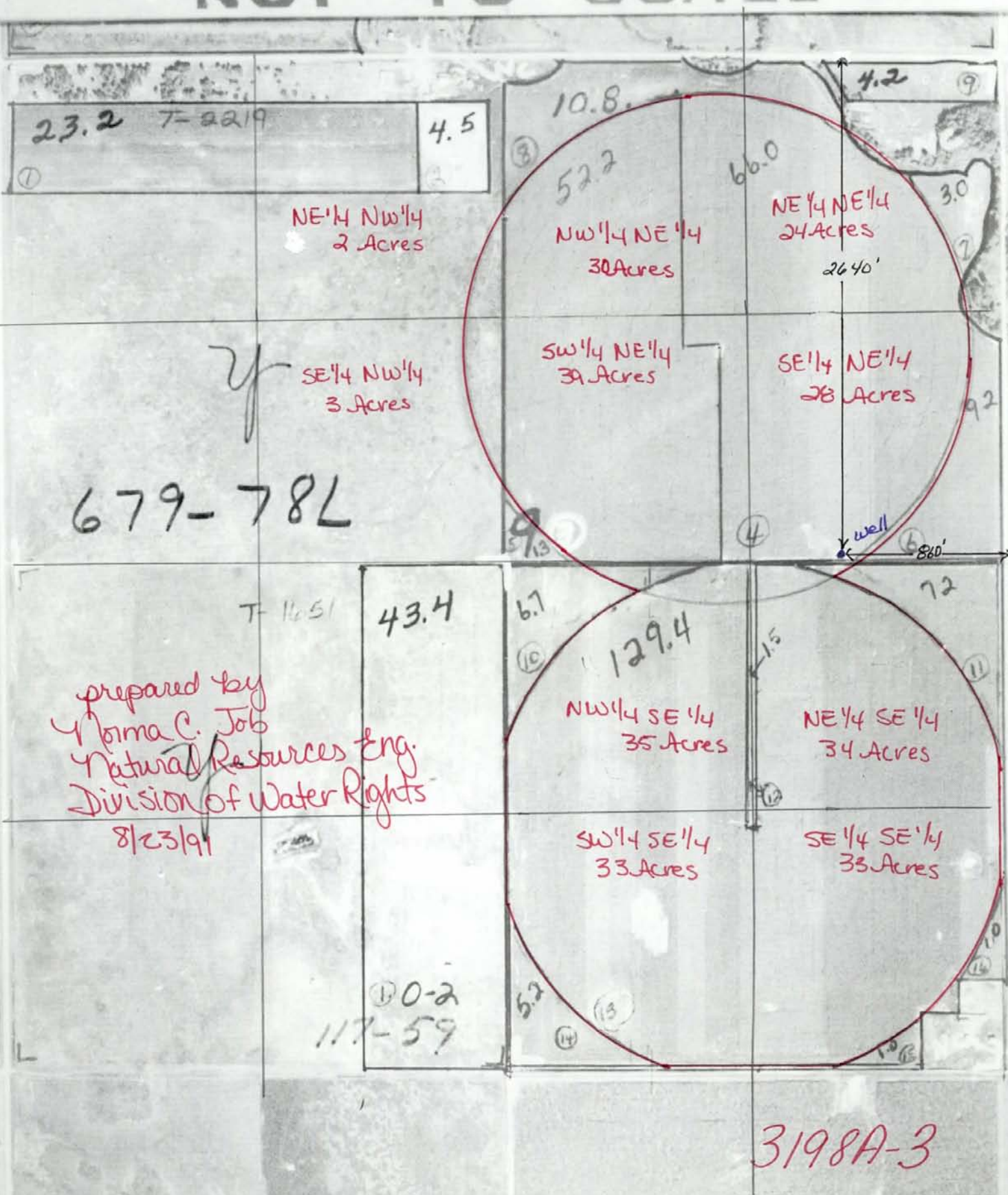
Very truly yours,

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

enclosures

NOTE: The applicable portions of Water Permit No. 3198-3 have been incorporated into this Water License No. 3198A-3.

NOT TO SCALE



NOT TO SCALE

3198A-3

23.2

4.5

140.2

1.2 0.5

y

679-78L

9

43.4

152.0

39.40

y

117-59

39.60

8 in

8 in

Area
1981
unfilled