

Water Right Number 1162-1

1. Considered 11-30, 1977
2. Name of Applicant CHARLES & DOROTHY SHANKETT
3. Post Office Address MILLER
4. Amount of Water claimed 4.6
5. Source of Water supply BELLE FOURCHE RIVER
6. Water to be used for IRRIGATION

Acres to be irrigated 324.7

7. Water to be diverted and used in BUTTE County
about 2N, 2W miles of VALE

8. Proof of Publication Received Paper hand delivered
Not Received @ Commission City
Approved _____

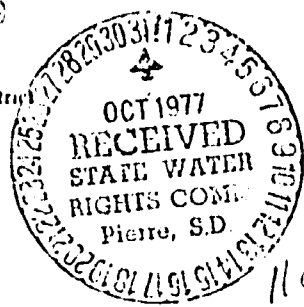
9. Application Subject to _____
Not Approved _____
Action Deferred _____

*The Shankett had paper of
Nov 28 at meeting showing
evidence of 2nd Pub.*

10. Remarks:

Map No. 978-1 Water Division No. 1 BELLE FOURCHE 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 Chas. R. and Dorothy M. Shaykett
 Postoffice address P.O. Box 162, Miller State South Dakota 57362
 If a corporation show date and place of incorporation _____ Contract _____
 2. Method of accomplishing work (contract, employment of others, or by direct labor) _____
 3. Name of diversion work Shaykett - Long #1
 4. Amount of water claimed (cubic feet per second) 4.6
 5. Source of water supply Belle Fourche River
 6. Location of point of diversion SW $\frac{1}{2}$ SW $\frac{1}{2}$, Section 18, T8, R6, BHM
 _____ County Butte
 7. Annual period or periods during which water is to be used Growing season
 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 324.7

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.
All areas above 2850'		All areas above 284'	
elevation in Sec. 18,		elevation in N $\frac{1}{2}$ N $\frac{1}{2}$ Sec. 19,	
T8, R6,	254.4	T8, R6, lying east of the	70.3
		Belle Fourche River	

Attach sheet if more space is needed

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 5 years.
 11. Choice of newspaper for Notice of Intent to Appropriately Water publication Valley Irrigator
 12. Principal Features of the Proposed Water Supply System.

A. Works proposed to divert water from its natural source.

Shall divert waters from Belle Fourche River

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

Electrical motor and pump

C. Works proposed to apply water to beneficial use.

Gravity irrigation

Estimated Total Cost \$ 100,000.00

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 Hughes)I, Chas. R. & Dorothy Shaykett

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 same.

Signed Dorothy M. Shaykett 31st day of October 1977

Subscribed and sworn to before me this _____ day of _____

Betty Westlund
 Notary Public (or other qualified officer)

BETTY WESTLUND, Land/Water Clerk II

WATER RIGHT APPLICATION APPROVAL

The Water Rights Commission hereby approves Water Right Application No. 1162-1

CHARLES E. & DOROTHY M SHAYKETT Box 162, MILLER
(Applicant) (Post Office Address)

SOUTH DAKOTA 57362 With the following modifications.
(State)

Diversion of water under this permit is contingent upon supplies being first available to the prior water rights on the Belle Fourche River.

This permit does not authorize diversions of water from the Belle Fourche River after August 15th of each calendar year, nor at any time when the river flow is obviously low, unless written orders have been so issued by the State Water Rights Commission, or its legally appointed representative. Diversions under this permit shall be in accordance with any written orders by the Commission or its representative.

Date of first receipt of application OCTOBER 31 19 77

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

Date of receipt of corrected application NOVEMBER 11 19 77

Approved DECEMBER 1 19 77, Recorded in Book 19 Page 155

WATER RIGHT PERMIT NO. 1162-1

The Water Rights Commission hereby grants and issues this Water Right Permit No. 1162-1 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 31 19 77
2. The equivalent of at least one-fifth of the work above specified is to be completed on or before JUNE 1 19 80
3. The whole of said work is to be completed on or before DECEMBER 1 19 82
4. The limit of time from proof of beneficial use of water appropriated in accordance herewith is DECEMBER 1 19 82
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 4.6 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 DECEMBER 1 19 82; said water to be used during the following described annual period: APRIL 1 THRU AUGUST 15

Witness my hand this 6TH day of DECEMBER 19 77

WATER RIGHTS COMMISSION

By: John Hatch
Chief Engineer, Executive Officer

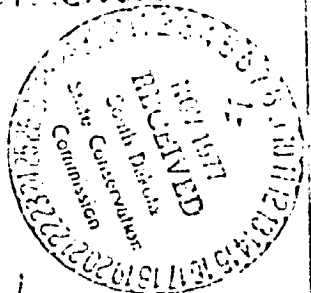
Certificate of Construction Issued — 19 —

Water License Issued — 19 —

CONSERVATION COMMISSION
FORM WI #1
6/77

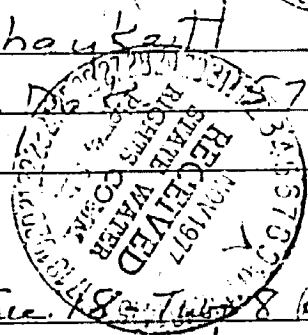
SOIL/WATER COMPATIBILITY APPLICATION FORM

STATE CONSERVATION COMMISSION
SOUTH DAKOTA DEPARTMENT OF AGRICULTURE



IMPORTANT: Read Instructions Before Proceeding!!!

NAME Chas. R. & Dorothy M. Shauketh
ADDRESS P.O. Box 166 Miller So. Dak.
COUNTY B. Co.



LEGAL DESCRIPTION:

1. WELL LOCATION OR DIVERSION POINT SW 1/4 SW 1/4 Sec. 18, Twp. 8, R. 6
2. LOCATION OF AREA TO BE IRRIGATED 324.7 acres in Sec. 18 + 19
above the 2845' level

TYPE OF IRRIGATION:

3. GRAVITY ☒ TOWLINE _____ CENTER PIVOT _____ GUN _____
OTHER (SPECIFY) _____
4. CROPS TO BE IRRIGATED Corn - Small Grain -

WATER QUALITY: (To be completed by SDSU Water Quality Lab)

5. SAMPLE NUMBER 1 - 1/2 in. 5 in. 10 in. 15 in. 20 in. 25 in. 30 in. 35 in. 40 in. 45 in. 50 in. 55 in. 60 in. 65 in. 70 in. 75 in. 80 in. 85 in. 90 in. 95 in. 100 in.
6. SALINITY (EC X 10⁶) 15.98 (measured at 25°C)
7. SODIUM (SAR) 1.45 (measured at 25°C)
8. RESIDUAL SODIUM CARBONATE (meg/1.) 0.00

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

SUBSCRIBED AND SWORN BEFORE ME THIS
31st DAY OF October 19 77

Chas. R. Shauketh
APPLICANT'S SIGNATURE
Dorothy M. Shauketh
Albert J. V. [Signature]
APPROVED

Janet M. [Signature]
(TITLE OR SEAL)
Notary Public

com. ex. 7/1/77

(SOILS INFORMATION ON REVERSE SIDE)

SOUTH DAKOTA DEPARTMENT OF AGRICULTURE
DIVISION OF CONSERVATION

(RECOMMENDED MANAGEMENT)

NAME OF APPLICANT Charles R. Shaykett, Miller, South Dakota (Butte County)

RECOMMENDED MANAGEMENT:

1. Water should not be applied more than 1, 2, 3, 4, 5, times during the irrigation season. Irrigate when not applicable on sandy soils. - Necessary.
2. Each uninterrupted application (one rotation of center pivot) should be of at least 1, 2, 3, 4, inches of water.
3. ☐ Yes ☐ No Surface drainage suggested
4. ☐ Yes ☐ No Subsurface drainage suggested
5. ☐ Yes ☐ No Specific land areas that should be avoided

Actual 1600 1.48

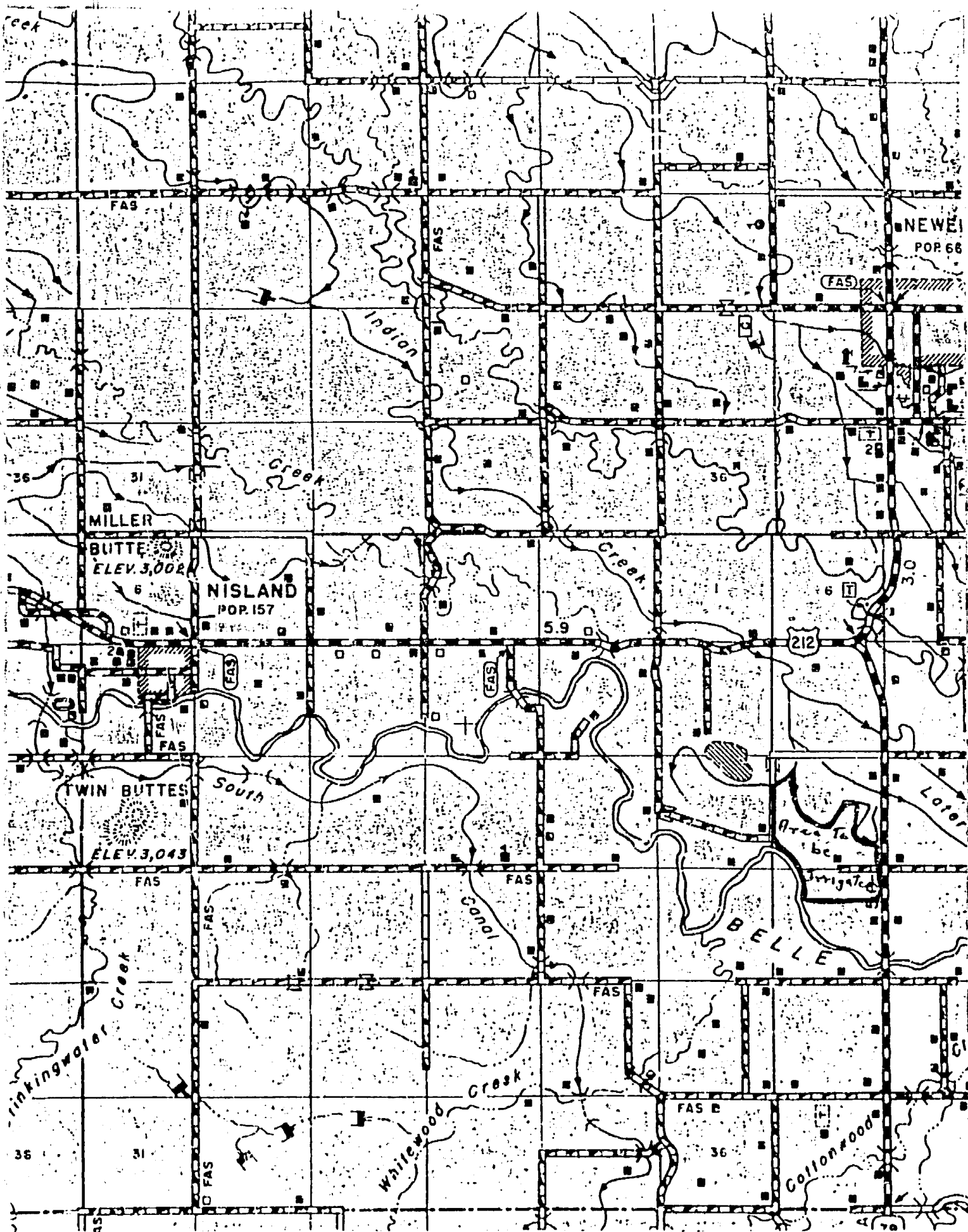
Permitted 1500-2200

6. ☐ Deep tillage (For the purpose of aiding movement of water through dense subsoils)
7. ☐ Heavy full application of irrigation water

You should have a nice project. Your planning on lengths of runs can be altered to fit needs.

The Razor silty clay loam has potential of irrigation if you can arrange to level it for gravity. Your small area of C slope will give you added considerations, if you plan on developing it.

Copy to Applicant - 1
Copies to Water Rights - 2
Copy to File - 1





SOIL SURVEY

plastic; common roots; medium acid; gradual, smooth boundary.

B2t-10 to 16 inches, grayish-brown (2.5Y 5.2) silty clay loam, dark grayish brown (2.5Y 4.2) moist; weak, coarse, blocky structure; very hard, firm, sticky and plastic; few roots; strongly acid; gradual, smooth boundary.

C3-16 to 28 inches, grayish-brown (2.5Y 5.2) silty clay loam, very dark grayish brown (2.5Y 3.2) moist; massive, very hard, firm, sticky and elastic; few roots; very strongly acid; gradual boundary.

C4-28 to 60 inches, light brownish-gray (2.5Y 6.2) silty clay loam, dark grayish brown (2.5Y 4.2) moist; massive, very hard, firm, sticky and plastic; few roots; strongly acid.

Soil colors are inherited from acid shale and range from dark gray to light brownish gray in hue of 10YR or 2.5Y. The A and C horizons are silty clay loam or silty clay and range from 35 to 60 percent clay. The C horizon is hard or very hard when dry and firm or friable when moist.

Lohmiller silty clay loam, acid variant is near Broadhurst, Donar, Graner, and Grummit soils. It differs from Broadhurst soils in having an erratic distribution of organic matter and in being subject to flooding. It does not have the columnar structure that is characteristic of Donar soils. It is less friable than Graner soils and is deeper over shale than Grummit soils. It is more acid than Lohmiller and Stetter soils, both of which are on bottom land.

Lohmiller silty clay loam, acid variant (0 to 3 percent slopes) (Ls).—This soil is on bottom land mainly along Middle Creek. Areas range up to several miles long and from 200 to 1,500 feet wide. The narrow areas commonly are cut into small parcels by meandering channels and are marked by older meander scars.

This soil has low fertility and is distinctly acid in reaction. Runoff is slow, and the areas are subject to flooding from stream overflow.

Areas of this soil are in native grass and are used for range and hay. Overflow range site; capability unit VIw-2; windbreak group 10.

Manter Series

The Manter series consists of deep, nearly level to gently sloping, well-drained loamy soils. These soils are on terraces along the Belle Fourche River. They formed in sandy alluvium.

In a representative profile the surface layer is a grayish-brown fine sandy loam about 10 inches thick. The subsoil, about 26 inches thick, is brown fine sandy loam that is hard when dry and very friable when moist. Below a depth of 26 inches it is calcareous. The underlying material is calcareous fine sandy loam that is brown in the upper part and pale brown in the lower part.

Manter soils have medium fertility and moderate or high available water capacity. Permeability is moderately rapid, and runoff is slow.

Many areas are cultivated. Alfalfa, corn, and edible beans are the main irrigated crops. Small grain is the main dryfarmed crop. Other areas are in native grass and are used for range.

Representative profile of Manter fine sandy loam, 0 to 2 percent slopes, in a cultivated area, 30 feet south and 1,650 feet west of the north east corner of sec. 22, T. 8 N., R. 5 E.:

Ap-0 to 10 inches, grayish-brown (10YR 5.2) fine sandy loam, very dark grayish brown (10YR 3.2) moist; cloddy parting to moderate, very fine and fine,

granular structure; hard, very friable, many roots; neutral; abrupt, smooth boundary.

B2t-10 to 16 inches, brown (10YR 5.3) fine sandy loam, very dark grayish brown (10YR 3.2) moist; weak, coarse, prismatic structure parting to moderate fine and medium, blocky; hard, very friable, common roots; thin continuous clay films on faces of peds; neutral; clear, smooth boundary.

B2t-16 to 28 inches, brown (10YR 5.3) fine sandy loam, dark grayish brown (10YR 4.2) moist; weak, coarse, prismatic structure parting to moderate, fine and medium, blocky; hard, very friable; common roots; thin continuous clay films on faces of peds; neutral; clear, smooth boundary.

B3ca-28 to 35 inches, brown (10YR 5.3) fine sandy loam, dark grayish brown (10YR 4.2) moist; weak, coarse, blocky structure; hard, very friable; common roots; thin patchy clay films on faces of peds; common fine segregations of lime; strong effervescence; mildly alkaline; gradual, smooth boundary.

C1ca-35 to 42 inches, brown (10YR 5.3) fine sandy loam, dark grayish brown (10YR 4.2) moist; massive, hard, very friable; common fine segregations of lime; strong effervescence; mildly alkaline, gradual boundary.

C2-2 to 60 inches, pale brown (10YR 6.5) fine sandy loam, brown (10YR 5.0) moist; massive; hard, very friable; strong effervescence; mildly alkaline.

Depth to carbonates ranges from 26 to 30 inches. The A and B2t horizons are neutral or mildly alkaline, and the B3 and C horizons are mildly alkaline or moderately alkaline. The A horizon ranges from dark gray to brown in hue of 10YR or 7.5YR. It commonly is fine sandy loam or silty loam, but in places it is loam. The B2t horizon ranges from dark grayish brown to brown in hue of 10YR or 7.5YR; it is fine sandy loam or sandy loam and ranges from 12 to 15 percent clay. The B3 and C horizons range from grayish brown to light brown in hues of 2.5Y to 7.5YR.

Manter soils are near Alice, Altvan, Glenberg, Keith, and Mawer soils. They differ from Alice soils in having more sand in the B2 horizon. They contain more sand in the A and B horizons than Altvan and Keith soils. They have a B3 horizon which does not occur in Glenberg soils, and they do not have the erratic distribution of organic matter that is characteristic of those soils. They do not have the grayish brown between depths of 20 and 40 inches that is characteristic of Mawer soils.

Manter fine sandy loam, 0 to 2 percent slopes

(MaA).—This soil is on terraces mainly along the Belle Fourche River. Areas are irregular in shape and range from 10 to 200 acres in size. This soil is the profile described as representative of the series.

Included with this soil in mapping are areas of Alice, Altvan, and Mawer soils. Alice soils are on slight rises. Altvan and Mawer soils are less than 10 inches deep over gravel.

This Manter soil has medium fertility. It takes in water readily and has moderate or high available water capacity. Runoff is slow. The soil blows easily.

Many areas are cultivated and irrigated. The soil is well suited to all crops commonly grown under irrigation in the county. Controlling soil blowing is the main concern in management. Sandy range site; capability units IIe-1 irrigated and IVe-6 dryland; windbreak group 5.

Manter fine sandy loam, 2 to 6 percent slopes (MaB).—This soil is on stream terraces. Areas are irregular in shape and range from 10 to 80 acres in size.

Included with this soil in mapping are areas of Alice and Mawer soils, mostly in the higher parts of the landscape.

This soil takes in water readily and has moderate

high available water capacity. Runoff is slow. Erosion and soil blowing are hazards. Many areas are cultivated and irrigated. Alfalfa and corn are the main irrigated crops. Small grain is the main dryland crop. Controlling soil blowing and erosion is the main concern in management. Sandy range site; capability units IIIe-4 irrigated and IVe-7 dryland; windbreak group 5.

Manvel Series

The Manvel series consists of deep, nearly level to gently sloping, well-drained, calcareous silty soils. These soils are on terraces and fans. They formed in calcareous material derived from chalky shale and limestone.

In a representative profile the surface layer is grayish-brown silty clay loam about 3 inches thick. Below this is a 15-inch transition layer of light-gray silty clay loam that is hard when dry and firm when moist. The underlying material is light-gray silty clay loam. The entire profile is calcareous.

Manvel soils have low fertility and moderate or high available water capacity. Permeability is moderately slow, and runoff is slow or medium. Soil blowing is a hazard.

Most areas are in native vegetation and are used for range. A few areas are cultivated. Alfalfa is the main irrigated crop. Winter wheat and alfalfa are the main dryland crops. The native vegetation is mainly mid and short grasses.

Representative profile of Manvel silty clay loam, 2 to 6 percent slopes, in native grass, 125 feet west and 2,455 feet north of the southeast corner of sec. 30, T. 9 N., R. 3 E.:

- A1—0 to 3 inches, grayish-brown (2.5Y 5/2) silty clay loam, very dark grayish brown (2.5Y 3/2) moist; weak, thick, platy structure parting to weak, fine, granular; slightly hard, friable; violent effervescence; moderately alkaline; clear, smooth boundary.
- AC—3 to 18 inches, light-gray (5Y 7/1) silty clay loam, grayish brown (2.5Y 5/2) moist; weak, fine and medium, subangular blocky structure; hard, firm; violent effervescence; moderately alkaline; gradual, smooth boundary.
- C1—18 to 24 inches, light-gray (5Y 7/1) silty clay loam, grayish brown (2.5Y 5/2) moist; massive; hard, firm; violent effervescence; moderately alkaline; abrupt, wavy boundary.
- C2—24 to 27 inches, light gray (5Y 7/1) silty clay loam, grayish brown (2.5Y 5/2) moist; massive, hard, firm; many channel fragments of limestone; violent effervescence; moderately alkaline; abrupt wavy boundary.
- C3—27 to 60 inches, light-gray (5Y 7/1) silty clay loam, grayish brown (2.5Y 5/2) moist; massive; hard, firm; violent effervescence; moderately alkaline.

Depth to bedrock is more than 10 inches. A few fragments of limestone commonly are on the surface, and in places they are throughout the soil. Estimated calcium carbonate equivalent ranges from 15 to 60 percent between depths of 15 and 40 inches. The A horizon ranges from dark gray to grayish brown in hues of 5Y to 10YR. It is silty clay loam or silt loam, and in places is noncalcareous. It commonly ranges from 3 to 5 inches thick, but in a few places it is slightly thicker. The AC and C horizons range from gray to pale yellow in hue of 2.5Y or 5Y and are 27 to 35 percent clay. The AC horizon is mildly alkaline or moderately alkaline and ranges from 10 to 30 inches in thickness.

Manvel soils are near Minnequa and Penrose soils. They are deeper over bedrock than those soils.

Manvel silty clay loam, 0 to 2 percent slopes (McA).—This soil is on fans and terraces. Areas are irregular in shape and range from 5 to 200 acres in size. This soil has a profile similar to the one described as representative of the series, but in places the surface layer is slightly thicker.

This soil has low fertility. It takes in water slowly and has moderate or high available water capacity. Runoff is slow. Soil blowing is a hazard in cultivated areas.

Some of the acreage is cultivated. Alfalfa is the main irrigated crop. Small grain and alfalfa are the main dryland crops. Other areas are in native grass and are used for range. Controlling soil blowing is the main concern in management. Thin Upland range site; capability units I-1 irrigated and IVe-10 dryland; windbreak group 8.

Manvel silty clay loam, 2 to 6 percent slopes (McB).—This soil is on fans and foot slopes in the uplands. Areas are irregular in shape and range from 10 to 300 acres in size. This soil has the profile described as representative of the series.

Included with this soil in mapping are areas of Minnequa and Penrose soils in the higher parts of the landscape. Included soils make up less than 15 percent of any given area.

This Manvel soil has low fertility. It takes in water slowly and has moderate or high available water capacity. Runoff is medium. Erosion and soil blowing are hazards in cultivated areas.

Most of the acreage is in native grass and is used for range. Alfalfa and small grain are the main crops in cultivated areas. Controlling erosion and soil blowing is the main concern in management. Thin Upland range site; capability units IIIe-1 irrigated and IVe-8 dryland; windbreak group 8.

Marsh

Marsh (0 to 3 percent slopes) (Mb) is commonly wet throughout the year. In irrigated parts of the county it is in seeps and low spots where irrigation water collects and remains for prolonged periods. In dryland areas it is mainly in natural lakebeds that are nearly dry most years. Slopes are mainly less than 3 percent.

Marsh is used mainly for wildlife habitat. It is of little value for grazing. The vegetation is mainly water-tolerant grasses, sedges, and shrubs. Capability unit VIIlw-1; windbreak group 19; not assigned to a range site.

Mawer Series

The Mawer series consists of nearly level to gently sloping, well-drained loamy soils that are moderately deep—20 to 40 inches—over sand and gravel. These soils are on stream terraces. They formed in alluvium.

In a representative profile the surface layer is brown fine sandy loam about 8 inches thick. The subsoil, about 14 inches thick, is brown fine sandy loam that is hard when dry and very friable when moist. The underlying material is calcareous, light-gray sand and gravel.

SOIL SURVEY

Mawer soils have medium fertility and low available water capacity. Permeability is moderately rapid in the soil and rapid in the underlying sand and gravel. Runoff is slow or medium, depending on slope. Soil blowing is a severe hazard.

Many areas are cultivated. Alfalfa, corn, and edible beans are the main irrigated crops. Small grain is the main dryfarmed crop. Other areas are in native grass and are used for range. The native vegetation is a mixture of short, mid, and tall grasses.

Representative profile of Mawer fine sandy loam, 0 to 2 percent slopes, in a cultivated area, 1,500 feet west and 150 feet north of the southeast corner of sec. 20, T. 8 N., R. 7 E.:

- A₁—0 to 4 inches, brown (10YR 5/3) fine sandy loam, very dark grayish brown (10YR 3/2) moist; cloddy parting to weak, fine, granular structure; hard, very friable; many roots; few fine pebbles; slightly acid; abrupt, smooth boundary.
- A₂—4 to 8 inches, brown (10YR 5/3) fine sandy loam, very dark grayish brown (10YR 3/2) moist; weak, coarse and medium, subangular blocky structure; hard, very friable; many roots; few fine pebbles; neutral; clear, smooth boundary.
- B₂—8 to 22 inches, brown (10YR 5/3) fine sandy loam, dark grayish brown (10YR 4/2) moist; weak, very coarse, prismatic structure parting to moderate, medium and coarse, blocky; hard, very friable; common roots; thin continuous clay films; few fine pebbles; neutral; abrupt, wavy boundary.
- HC—22 to 60 inches, light-gray (10YR 7/2) sand and gravel, pale brown (10YR 6/3) moist; single grained; loose; slight effervescence; mildly alkaline.

The solum ranges from 16 to 30 inches in thickness. Depth to sand and gravel ranges from 20 to 40 inches, and depth to carbonates ranges from 15 to 25 inches. The A horizon ranges from dark grayish brown to brown in hues of 2.5Y to 7.5YR. It is fine sandy loam or sandy loam and ranges from 7 to 10 inches in thickness. The B₂ horizon ranges from dark grayish brown to light brown in hues of 2.5Y to 7.5YR and is 12 to 18 percent clay. It has weak or moderate, prismatic structure that parts readily to blocky or subangular blocky. Thin B₃ca and Cca horizons occur in places. The HC horizon ranges from loose sand and gravel to gravelly loamy fine sand.

Mawer soils are near Altvan, Dix, Keith, and Manter soils. They are more sandy than Altvan soils. They are deeper over sand and gravel than Dix soils. They are shallower over sand and gravel than Keith and Manter soils and contain more sand than Keith soils.

Mawer fine sandy loam, 0 to 2 percent slopes (MIA).—This soil is on terraces along the Belle Fourche River. Areas are irregular in shape and range from 10 to 800 acres in size. This soil has the profile described as representative of the series.

Included with this soil in mapping are areas of Manter soils that are more than 40 inches deep over gravel. Manter soils make up as much as 30 percent of any given area.

This Mawer soil has medium fertility. It takes in water readily, but it has low available water capacity and is droughty. Soil blowing is a hazard in cultivated areas. Runoff is slow.

Many areas are cultivated and irrigated. The soil is well suited to all crops commonly grown under irrigation in the county. Controlling soil blowing and conserving moisture are the main concerns in management. Sandy range site; capability units IIe-2 irrigated and IVe-4 dryland; windbreak group 6.

Mawer fine sandy loam, 2 to 6 percent slopes (MIB).—This soil is on terraces along streams. Areas are irregular in shape and range from 10 to 100 acres in size.

Included with this soil in mapping are areas of Alice, Dix, and Manter soils. Alice and Manter soils are more than 40 inches deep over gravel. Dix soils are on small knolls or humps where gravel is at a shallow depth. Included soils make up from 5 to 30 percent of any given area.

This Mawer soil has medium fertility. It takes in water readily, but it has low available water capacity and is droughty. Runoff is slow or medium. Erosion and soil blowing are hazards in cultivated areas.

Some of the acreage is in native grass and is used for range. Other areas are cultivated. Alfalfa and corn are the main irrigated crops. Small grain is the main dryland crop. Controlling erosion and soil blowing is the main concern in management. Sandy range site; capability units IVe-3 irrigated and IVe-5 dryland; windbreak group 6.

McKenzie Series

The McKenzie series consists of deep, level, poorly drained clayey soils. These soils are in closed depressions on uplands. They formed in clayey alluvium washed in from adjacent soils.

In a representative profile the surface layer is gray clay about 3 inches thick. The underlying material is gray clay that is very hard when dry, very firm when moist, and very sticky and plastic when wet. Below a depth of 25 inches it is calcareous and contains spots and streaks of lime and other salts.

McKenzie soils have low fertility and low or moderate available water capacity. Permeability is very slow, and runoff is ponded. In most years water remains on the surface for short periods until it evaporates.

Most areas are in native grass and are used for range or hay.

Representative profile of McKenzie clay, in grass, 1,950 feet south and 1,500 feet west of the northeast corner of sec. 23, T. 12 N., R. 6 E.:

- A₁—0 to 3 inches, gray (5Y 5/1) clay, very dark gray (5Y 4/1) moist; weak, thin, platy structure; very hard, very firm, very sticky and plastic; slightly acid; clear, smooth boundary.
- C₁—3 to 9 inches, gray (5Y 5/1) clay, dark gray (5Y 4/1) moist; weak, fine, blocky structure; very hard, very firm, very sticky and plastic; slightly acid; gradual, wavy boundary.
- C₂—9 to 23 inches, gray (5Y 5/1) clay, dark gray (5Y 4/1) moist; massive; very hard, very firm, very sticky and plastic; moderately alkaline; gradual, wavy boundary.
- C₃ca—23 to 60 inches, gray (5Y 5/1) clay, dark gray (5Y 4/1) moist; massive; very hard, very firm, very sticky and plastic; common, fine, distinct segregations of lime and salt; slight effervescence; moderately alkaline.

Depth to bedded shale is more than 10 inches. McKenzie soils are saturated with water for 30 days or more in most years. The A horizon ranges from dark gray to light olive gray in hues of 10YR to 5Y. It commonly is clay, but some areas have an overwash of coarse textured material. It is slightly acid or neutral and ranges from 1 to 4 inches

SOIL SURVEY

1. These soils are on terraces. They formed in sandy alluvium.

In a representative profile the surface layer is grayish-brown fine sandy loam about 5 inches thick. The subsurface layer is light brownish-gray fine sandy loam about 5 inches thick. The subsoil is about 11 inches thick. It is grayish-brown sandy clay loam in the upper part, light brownish-gray sandy clay loam in the middle, and light brownish-gray fine sandy loam in the lower part. The upper part is very hard when dry and firm when moist. The middle and lower parts are calcareous. The underlying material is calcareous, light brownish-gray and grayish-brown fine sandy loam.

Archin soils have low fertility and moderate available water capacity. Permeability and runoff are very slow. Soil blowing is a hazard.

These soils are used mainly for range. The native vegetation is mainly mid and short grasses, prickly-pear cactus, and sagebrush.

Representative profile of Archin fine sandy loam in an area of Archin-Slickspots complex, 0 to 3 percent slopes, in native grass, 2,375 feet north and 300 feet west of the southeast corner of sec. 15, T. 14 N., R. 6 E.:

- A1—0 to 5 inches, grayish-brown (10YR 5/2) fine sandy loam, dark grayish brown (10YR 4/2) moist; weak, very fine, granular structure; soft, very friable; many roots; medium acid; gradual, wavy boundary.
- A2—5 to 10 inches, light brownish-gray (10YR 6/2) fine sandy loam, dark grayish brown (10YR 4/2) moist; very weak, coarse, subangular blocky structure; slightly hard, very friable; many roots; neutral; abrupt, smooth boundary.
- B2t—10 to 11 inches, grayish-brown (10YR 5/2) sandy clay loam, dark grayish brown (10YR 4/2) moist; strong, medium and coarse, columnar structure parting to strong, medium, blocky; very hard, firm; few roots; light brownish-gray coatings on column tops; thin continuous clay films; moderately alkaline; clear, smooth boundary.
- B2tca—11 to 17 inches, light brownish-gray (10YR 6/2) sandy clay loam, grayish brown (10YR 5/2) moist; moderate, medium, prismatic structure parting to moderate, fine and medium, blocky; very hard, friable; few roots; thin patchy clay films; common medium segregations of lime; strong effervescence; moderately alkaline; gradual boundary.
- B3ca—17 to 21 inches, light brownish-gray (2.5Y 6/2) fine sandy loam, grayish brown (2.5Y 5/2) moist; weak, medium and coarse, prismatic structure parting to weak, medium, subangular blocky; hard, friable; common fine and medium segregations of lime; strong effervescence; moderately alkaline; gradual boundary.
- C1ca—21 to 26 inches, light brownish-gray (2.5Y 6/2) fine sandy loam, grayish brown (2.5Y 5/2) moist; weak, coarse, prismatic structure; hard, friable; common fine and medium segregations of lime; strong effervescence; moderately alkaline; gradual, wavy boundary.
- C2ca—31 to 60 inches, grayish-brown (2.5Y 5/2) fine sandy loam, dark grayish brown (2.5Y 4/2) moist; very weak, coarse, prismatic structure; hard, very friable; common medium segregations of lime; slight effervescence; moderately alkaline.

Archin is the range from 0 to 18 percent. The A horizon is 5 to 10 inches thick. The B2t horizon ranges from 6 to 10 inches and has a combined thickness of 7 to 12 inches. The B2t horizon ranges from grayish brown to pale brown in hue of 10YR or 2.5Y. It is sandy clay loam or clay loam that is 18 to 27 percent clay and more than 15 percent material coarser than very fine sand. The B2t horizon has moderate or strong structure. The B2t horizon ranges from 6 to 10 inches

in thickness. The C horizon commonly is fine sandy loam or sandy loam, but in places it is stratified with clay loam or clay at a depth of more than 30 inches.

Archin soils are mapped with Slickspots and are near Chinook and Sorum soils. They differ from Slickspots in having distinct, columnar structure in the B horizon and in having less salts at shallow depths. They contain more clay and sodium in the B horizon than Chinook soils. They have a thinner A horizon than Sorum soils.

Archin-Slickspots complex, 0 to 3 percent slopes (AnA).—This mapping unit is about 60 percent Archin soils, 30 percent Slickspots, and 10 percent other soils. It is on terraces. Areas range from 10 to 500 acres in size and have an uneven surface. Archin soils are on many small mounds or ridges that rise 6 to 15 inches above the intervening low spots of Slickspots in small depressions. The depressions range from 5 to 50 feet in diameter. Areas of Slickspots commonly are nearly barren of vegetation.

Included with these soils in mapping are areas of Assiniboine, Chinook, and Sorum soils. Assiniboine and Chinook soils are on some of the larger mounds. Sorum soils are intermingled with Archin soils.

Archin soils take in water readily until the surface layer is saturated, but water penetrates the claypan subsoil very slowly. Runoff is very slow and commonly ponds in the small depressions of Slickspots. Archin soils are susceptible to soil blowing.

Most of the acreage is in native grass and is used for range. Archin soils are suited to cultivation, but in most areas they are so intermingled with Slickspots that cultivation is not feasible. Archin soil in Claypan range site, capability unit IVs-2, and windbreak group 9; Slickspots in capability unit VIIIs-3 and not assigned to a range site or windbreak group.

Arvada Series

The Arvada series consists of deep, nearly level, well-drained silty soils that have a claypan subsoil. These soils are on terraces and fans. They formed in clayey alluvium derived from state.

In a representative profile the surface layer is light brownish-gray silt loam about 2 inches thick. The subsoil, about 25 inches thick, is dark grayish-brown and grayish-brown silty clay in the upper part and calcareous, gray silty clay loam in the lower part. The upper part is extremely hard when dry and very firm when moist. The lower part contains many spots and streaks of lime and salts. The underlying material is calcareous, grayish-brown silty clay loam.

Arvada soils have low natural fertility and moderate available water capacity. Permeability is very slow, and runoff is slow or medium.

Most of the acreage is used for range. The native vegetation is mainly short grasses, prickly-pear cactus, sagebrush, and greasewood.

Representative profile of Arvada silt loam in an area of Arvada-Slickspots complex, 0 to 3 percent slopes, in native grass, near the southeast corner of sec. 15, T. 10 N., R. 2 E.:

- A2—0 to 2 inches, light brownish-gray (2.5Y 6/2) silt loam, dark grayish brown (2.5Y 4/2) moist; weak, thin,

B21t-2 to 1 inches, dark grayish-brown (2.5Y 4/2) silty clay, dark grayish brown (2.5Y 4/2) moist; moderate, coarse, and very coarse, columnar structure parting to moderate, coarse and medium, blocky; light brownish-gray silt coatings on column tops; extremely hard, very firm; few roots; thin continuous clay films on vertical and horizontal faces of ped; neutral; gradual, wavy boundary.

Bleas-a-13 to 27 inches, gray (5Y 5-1) silty clay loam, dark grayish brown (2.5Y 4-2) moist; weak, medium and coarse, subangular blocky structure; very hard, very firm; very few roots; thin patchy clay films; many segregations of salts and lime; strong effervescence; mildly alkaline; gradual, wavy boundary
C-27 to 60 inches, grayish-brown (2.5Y 5-2) silty clay loam, dark grayish brown (2.5Y 4-2) moist; massive; very hard, firm; strong effervescence; mildly alkaline.

Arvada soils are mapped with Slickspot, and resemble Hile soils. In contrast with Slickspots, they have distinct columnar structure in the B horizon and a smaller amount of salts within 10 inches of the surface. They are deeper over bedded shale than Hile soils.

Included with this soil in mapping are areas of Stetter soils and Slickspots. Stetter soils are on narrow bottoms along stream channels, and Slickspots are in small depressions on low spots. Also included in some areas are soils that have a Japann and a thicker surface layer than Arcadia sand and some soils that have sand or silt near the surface.

Arvada-Slickspots complex. 0 to 3 percent slopes (AsA).—This mapping unit is about 60 percent Arvada soils and 20 to 40 percent Slickspots. It is on terraces along some of the major creeks and drainageways. Relief is uneven because many mounds rise 4 to 8 inches above small depressions. The Arvada soil is on the rounds. It has the profile described as representative of the Arvada series. Areas of Slickspots are in small depressions 10 to 100 feet wide.

These soils take in water slowly and release it slowly to plants. They have very poor tilth and are not suitable for cultivation. Runoff is slow and commonly ponds in the depressions until it evaporates.

Assinniboine Series

In a representative profile the surface layer is grayish-brown fine sandy loam about 6 inches thick. The subsoil is about 27 inches thick. It is brown sandy clay loam in the upper part, grayish-brown sandy clay loam in the middle, and grayish-brown fine sandy loam in the lower part. The upper part is hard when dry and friable when moist. The underlying material is calcareous, light brownish-gray fine sandy loam.

Most areas are in native vegetation and are used mainly for range. Small grain and alfalfa are the main crops in cultivated areas. The native vegetation is mid and short grasses.

Representative profile of *Asciinibolus* fine sandy loam, 6 to 8 percent slopes, formerly cultivated and now in grass, 2,500 feet west and about 500 feet south of the intersection of E. 144 St. E. and 24th St.

[illegible]

B211-6 to 13 inches, brown (10YR 4/3); red clay loam, dark brown (10YR 3/3) moist; dark grayish brown (10YR 3/2) coatings on peels, very dark grayish brown (10YR 3/1) moist; weak, coarse, prismatic structure; parting to moderate, coarse and medium, blocky; hard, friable; common roots; thin continuous clay films; neutral; gradual, smooth boundary.

B22c--15 to 22 inches, grayish brown (10YR 5/2) sandy clay loam, dark grayish brown (10YR 4/2) moist; moderate, coarse and medium, prismatic structure parting to moderate, medium and coarse, blocky; hard, friable; common roots; thin continuous clay films; neutral; gradual, wavy boundary.

B3-22 to 33 inches, grayish-brown (10YR 5/2) fine sandy loam, dark grayish brown (10YR 4/2) moist; weak coarse, prismatic structure; slightly hard, very friable; few roots; thin patchy clay films; neutral; gradual, wavy boundary.

BLT 11 06 57L 254111 DA 111 A

Series

The Razor series consists of moderately deep, very level to strongly sloping, well-drained silty soils on uplands. These soils formed in calcareous material weathered from the underlying shale.

In a representative profile the surface layer is light brownish-gray silty clay loam about 2 inches thick. The subsoil, about 18 inches thick, is silty clay loam that is grayish brown in the upper 2 inches and light brownish gray in the rest. It is hard and very hard when dry and firm when moist. Except for the upper 2 inches, the subsoil is calcareous. The underlying material to a depth of 30 inches is calcareous, light olive-gray silty clay loam that contains many spots and streaks of soft lime. Below a depth of 30 inches is calcareous, light olive-gray shale.

Razor soils have low fertility and available water capacity. Permeability is slow, and runoff is slow or medium. Heavy erosion occurs on these soils, and they are highly erodible.

Most areas are used for range. Small grain and alfalfa are the main crops in the few cultivated areas. Alfalfa is the main irrigated crop. The native vegetation is mainly mid and short grasses.

Representative profile of Razor silty clay loam in an area of Midway-Razor silty clay loams, 3 to 15 percent slopes, in native grass, 1,690 feet east and 1,000 feet north of the southwest corner of sec. 7, T.9 N., R.3 E.:

- A1—0 to 2 inches, light brownish-gray (2.5Y 6/2) silty clay loam, dark grayish brown (2.5Y 4/2) moist; weak, thin, platy structure parting to weak, fine, crumbly; hard, friable, slightly sticky and slightly plastic; many roots; neutral; clear, smooth boundary.
- B21—2 to 14 inches, grayish-brown (2.5Y 5/2) silty clay loam, dark grayish brown (2.5Y 4/2) moist; moderate, medium, prismatic structure parting to moderate, fine, subangular blocky; hard, firm, slightly sticky and plastic; many roots; neutral; clear, wavy boundary.
- B22ca—4 to 14 inches, light brownish-gray (2.5Y 6/2) silty clay loam, dark grayish brown (2.5Y 4/2) moist; moderate, medium, prismatic structure parting to moderate, fine and medium, subangular blocky; very hard, firm, slightly sticky and plastic; common roots; strong effervescence; moderately alkaline; clear, wavy boundary.
- Bwa—14 to 20 inches, light brownish gray (2.5Y 6/2) silty clay loam, grayish brown (2.5Y 5/2) moist; few prominent, strong brown (5YR 3/4) nodules; moderate, columnar and angular blocky structure; very hard, firm, slightly sticky and plastic; common roots; strong effervescence; moderately alkaline; clear, wavy boundary.
- 23ca—24 to 29 inches, light olive gray (5Y 6/2) silty clay loam, olive gray (5Y 5/2) moist; many, no 2's and coarse, yellowish brown (10YR 5/6) and light olive brown (2.5Y 5/4) nodules; weak, coarse, subangular blocky structure; very hard, firm, slightly sticky and plastic; few roots; fragments of olive-gray shale make up about 20 percent of the mass; many coarse segregations of lime; strong effervescence; moderately alkaline; diffuse, wavy boundary.
- C2—30 to 48 inches, light olive-gray (5Y 6/2) chile, olive gray (5Y 5/2) moist; very hard, firm, slightly sticky and plastic; thick salt coatings in upper part and diminishing with increasing depth; strong effervescence; moderately alkaline.

Depth to bedrock ranges from 29 to 40 inches, and depth to carbonates ranges from 4 to 10 inches. In cultivated areas, the A1 and B21 horizons commonly are calcareous. The soil is neutral or mildly alkaline in the A1 and B21 horizons and mildly alkaline or moderately alkaline below. The A1 horizon is grayish brown or light brownish gray in hue of 2.5Y or 10Y

[illegible]

Razor soils are mapped with Midway soils and are near - ools, and are similar to Minnemoqua and Pierre soils in depth to bedrock. They are more shallow over bedrock than Minnemoqua soils and are deeper over bedrock than Midway soils. They are more clayey and less calcareous than Minnemoqua soils and are less clayey than Pierre soils.

Razor silt clay loam, 0 to 2 percent slopes (RcA).—This soil is in irregularly shaped areas that range from 10 to 100 acres in size. This soil has a profile similar to the one described as representative of the series, but in places the surface layer is slightly thicker, and in cultivated areas the surface layer commonly is calcareous.

This soil has low fertility. It takes in water slowly and has low available water capacity. Runoff is slow.

Many areas are in native grass and are used for range. Other areas are cultivated. Alfalfa is the main irrigated crop. Winter wheat is the main dry-farmed crop. Improving fertility and water intake and controlling soil blowing are the main concerns in management. Clayey range site; capability units IVes-2 irrigated and IIIs-1 dryland; windbreak group 4.

Razor silty clay loam, 2 to 6 percent slopes (RCE).--This soil is on uplands. Areas are irregularly shaped and range from 10 to 350 acres in size. This soil has a profile similar to the one described as representative of the series, but the surface layer is calcareous in some cultivated areas and is silt loam in some areas that are in native grass.

This soil has low fertility and takes in water slowly. Runoff is medium. Erosion and soil blowing are hazards in cultivated areas.

Many areas are in native grass and are used for range. Other areas are cultivated. Alfalfa is the main irrigated crop. Winter wheat, oats, barley, and alfalfa are the main dryland crops. Controlling erosion and soil blowing is the main concern in management. Clayey range sites; capability and Uses: 2 irrigated and 1 West dryland; windbreak group 1.

Razor silty clay loam, 6 to 9 percent slope (R:C)—This soil is on uplands. Areas range from 1 to 200 acres in size. Included in mapping are areas of Midway soils in the higher parts of the landscape.

This Razor soil has low fertility. It takes in water slowly and has low available water capacity. Runoff is medium. Erosion is a hazard in cultivated areas.

Most of the acreage is in native grass and is used for range. Winter wheat is the main crop in the few cultivated areas. Controlling erosion and soil blowing is the main concern in management. Clay range site; capability unit Vle-1; windbreak group 10.

Form 6 - Notice of Intent to Appropriate Water
SURFACE WATER

No. 1162-1

Publish first publication, on or before November 17, 1977

NOTICE OF HEARING ON
APPLICATION TO APPROPRIATE WATER

Pierre, South Dakota 57501

November 10, 1977

Notice is hereby given that Charles R. & Dorothy M. Shaykett whose post office address is Miller, South Dakota, has made an application in accordance with the provisions of SDCL 46-1-1 thru 46-1-8; 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, and Commission Rules ARSD 52:01:01:01 thru 52:01:01:13, for a permit to appropriate for beneficial use 4.0 cubic feet of water per second of time from the Belle Fourche River through the Shaykett - Long #1, the point of diversion of which is to be located in the

SW $\frac{1}{4}$ SW $\frac{1}{4}$

of Section 18, Twp. 8N Range 6E. Said water to be used for the purpose of providing irrigation on portions of the following described land:

S $\frac{1}{2}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, W $\frac{1}{2}$ NW $\frac{1}{4}$, Section 18; N $\frac{1}{2}$ N $\frac{1}{2}$, Section 19, T2N, R6E

This Application No. 1162-1 will be considered by the Water Rights Commission at Pierre, SD upon the 30 day of November, 1977 at 10 AM. The Commission is authorized to make a determination on this application at the hearing. All interested persons may appear and be heard. Any person who may be affected by a Commission decision who desires to present evidence or cross-examine witnesses according to SDCL 1-26 may notify the Commission in writing prior to the hearing or orally at the hearing.

WATER RIGHTS COMMISSION

EURION F. JONES

Water Rights Specialist

cc: Charles R. & Dorothy Shaykett, Box 162, Miller, SD

NOTE: Final Proof of Publication must be received by the hearing date for the Commission to take action.

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

No. 1162-1

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County BUTTE) ss.

I, Vernon J. Allison hereby

certify that the annexed printed copy of Notice of Intent to Appropriate

Water was taken from the Valley Irrigator

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 Newell of South Dakota

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

November 16, 1977

November 23, 1977

Vernon J. Allison
(Signature)

Publisher

(Title)

12/1/77

(Date signed)

**NOTICE OF HEARING ON
APPLICATION TO
APPROPRIATE WATER**
Notice is hereby given that
Charles R. and Dorothy M. Shay-
kett whose post office address is
Miller, South Dakota, has made
an application in accordance with
the provisions of SDCL 46-1-1
through 46-1-8; 46-2-9 through
46-2-11, 46-2-13; 46-5-1 through
46-5-8, 46-5-10 through 46-5-22,
46-5-41, and Commission Rules
ARSD 52:01:01:01 through 52:01:
01:13, for a permit to appropriate
for beneficial use 4.6 cubic feet of
water per second of time from the
Belle Fourche River through the
Shaykett-Long No. 1, the point of
diversion of which is to be located
in the SW¹/₄, SW¹/₄ of Section 18,
Twp. 8N, Range 6E. Said water to
be used for the purpose of
providing irrigation on portions
of the following described land:
S¹/₂, SW¹/₄, NE¹/₄, W¹/₂ NW¹/₄, Sec-
tion 18; N¹/₂, N¹/₂, Section 19, T8N,
R6E.

This Application No. 1162-1 will
be considered by the Water
Rights Commission at Pierre,
S.D., upon the 30th day of Novem-
ber, 1977 at 10 A.M. The Commis-
sion is authorized to make a de-
termination on this application at
the hearing. All interested per-
sons may appear and be heard.
Any person who may be affected
by a Commission decision who
desires to present evidence or
cross-examine witnesses accord-
ing to SDCL 1-26 may notify the
Commission in writing prior to
the hearing or orally at the hear-
ing.

**WATER RIGHTS
COMMISSION
BURTON F. JONES
Water Rights Specialist
Publ Nov 16 & 23, 1977 49**



July 31, 1978

Charles R. Shaykett
Box 162
Miller, SD 57362

Dear Mr. Shaykett:

You may consider this letter as authorization to continue pumping from the Belle Fourche River under Permit No. 1162-1 until September 15, of this calendar year.

If U.S. Geological Survey flow readings indicate a substantial reduction in flows, this authorization may be terminated.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Commission

JH/gy

Water Rights, Water Management Division
(605) 773-3352

July 23, 1979

Charles Shaykett
Box 162
Miller, SD 57367

Dear Mr. Skaykett:

In answer to your phone call July 20, 1979 regarding continued pumping from the Belle Fourche River. In checking with our engineers, they will check the first week of August to see how the flow readings are before issuing an extension

If you have any questions, please feel free to contact this office.

Sincerely,

BETTY WESTLUND
Water Rights Specialist I

BW/gy

August 31, 1979

Charles R. Shaykett
Box 162
Miller, SD 57362

Dear Mr. Shaykett:

You may consider this letter as authorization to continue pumping from the Belle Fourche River under Permit No. 1162-1 until September 15, of this calendar year.

If U.S. Geological Survey flow readings indicate a substantial reduction in flows, this authorization may be terminated.

Sincerely,

JAMES E WINTERTON
Water Resources Engineer IV

JEW/gg

Water Rights Division (605) 773-3352

August 25, 1980

Charles R Shaykett
Bpx 162
Miller, SD 57362

Dear Mr. Shaykett:

You may consider this letter as authorization to continue pumping from the Belle Fourche River under Permit No. 1162-1 until September 15, of this calendar year.

If US Geological Survey flow readings indicate a substantial reduction in flows, this authorization may be terminated.

Very truly yours,

JAMES WINTERTON,
for JOHN HATCH
Chief Engineer
Division of Water Rights

JH/JW/gy

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

June 10, 1981

Charles & Dorothy Shaykett
Box 162
Miller, SD 57362

Dear Mr. & Mrs. Shaykett:

The rules adopted by the Water Management Board for establishing a water use control area on the Belle Fourche River, Whitewood Creek and Owl Creek requires that the water right holder be assessed a fee of ten dollars for each cubic foot per second or portion thereof of the diversion capability of the diversion works plus twenty-five cents for each acre irrigated as shown by the water rights of record in the Division of Water Rights. These fees are required to be paid to the Division of Water Rights by July 1, 1981.

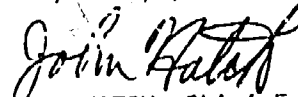
Permits for which fees have not been paid by July 1, 1981 shall be refused the right to divert water for the remainder of the year. The fees paid will be used to defray the costs of providing water master services within the water use control area. The following is a tabulation of your assessment+.

<u>Permit No.</u>	<u>Diversion Rate</u>	<u>Acreage</u>	<u>Fee</u>
1162-1	4.61	324.7	\$131.25
1219-1	1.80	128.3	52.25
TOTAL			\$183.50

Please make check or money order payable to the Dept. of Water and Natural Resources and send to the Division of Water Rights, Joe Foss Building, Pierre, SD 57501.

If you have any questions, do not hesitate to contact this office.

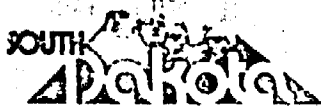
Very truly yours,



JOHN HATCH, Chief Engineer
Water Rights Division

JH/JW/gy

Equal Opportunity Employer



Department of Water & Natural Resources

Joe Foss Building

Water Rights Division

(605) 773-3352

Pierre, South Dakota 57501

July 6, 1981

NOTICE

Charles & Dorothy Shaykett

Box 162

Miller, SD 57362

Subject: Shut Off Order

Under the rules established by the Water Management Board for the Belle Fourche River Water Use Control Area, Chapter 174:02:08, each water right holder was assessed a fee of ten dollars for each cubic foot per second or portion thereof of the diversion capability of the diversion works plus twenty-five cents for each acre irrigated as shown by the water rights of record in the office of Water Rights. Also it was required that all fees shall be paid to the Division of Water Rights by July 1, 1981.

Any fees not paid by July 1, 1981 are a violation of SDCL 46-10-26 and the water master (or Chief Engineer) shall refuse the water right holder the right to divert water.

According to our records, you have not paid the assessed fee, therefore, it is hereby ordered that you are not to divert water pursuant to your Permit No. 1162-1 until the 1982 irrigation season. Any intakes that you may have in the river or creek must be removed by July 9, 1981 and remain out of the river or creek until the 1982 irrigation season. 1210

Any violation of this order shall be considered to be in violation of State Statutes and subject to penalties provided in SDCL 46-1-11 and SDCL 46-1-12.

Please advise this office if you have any questions.

Very truly yours,

James E. Hatch
JOHN HATCH, Chief Engineer
Water Rights Division

JW/gy

cc: Marlin Lee, Water Master

Equal Opportunity Employer

RECEIPT

WATER RIGHTS COMMISSION
State of South Dakota

No 4 8377

PIFRRE, July 9, 1931

RECEIVED OF Charles Shaykett, 225 N. Broadway, Miller, SD 57362

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

Fee for Application for Permit to Appropriate Water No. _____ (examination, processing, recording and filing) _____		
Fee for inspecting Construction, and issuing Cert. of Construction No. _____		
Fee for inspecting Beneficial Use, and issuing Water License No. _____		
Fee for issuing Location Certificate-Dry Draw, No. _____		
Fee for filing _____		
Fee for certified copy of _____		
Fee for Print copy of map _____		
Fee for Certifying _____		
Fee for water master services on WR# 1162-1 (as other work as provided by law)	131	00
TOTAL	131	00

WATER RIGHTS COMMISSION

By *(Signature)*
Chief Engineer, Executive Officer
JOHN HATCH / (bt)

Water Rights Division
(605) 773-3352

July 9, 1981

Charles Shaykett
225 E 6th, Box 162
Miller, SD 57362

Mr. Shaykett:

Enclosed are your receipt nos. 4 8377 and 4 8378 in the amounts of \$131.00 and \$52.00 respectively. These are fees you paid for water master services on the Belle Fourche River.

For your information, the name, address and phone number of the water master is as follows:

Marlin Lee
Newell, SD 57760
PH: 456-2221

If you have any questions, please contact this office.

Very truly yours,

JAMES E WINTERTON
Water Resources Engineer

JEW/qy

encl

LOANS
RENTALS
APPRAISALS
SALES

SHAYKETT AGENCY

REAL ESTATE

Chas. R. Shaykett

Steven C. Shaykett

MILLER, SOUTH DAKOTA 57362

Phone 853-3684

FARMS
CITY PROPERTY
RANCHES
RESIDENCES

August 10, 1981

S. D. Dept of Water & Natural Resources
Joe Foss Building
Water Rights Division
Pierre, South Dakota



re: Water Rights Number 1162-1 and 1210-1

Dear Sirs:

Please extend the pumping period for the above numbered water rights. Flows appear to be adequate that there will not be any reduction in the amounts available for irrigation.

Further, it has appeared to me that there has not been a need for the water master hired, therefore will the charge for the water master fee be returned?

Thank you for your cooperation.

Sincerely,


Chas. R. Shaykett

1162-1 ✓
1210-1

(605) 773-3352
Water Rights Division

August 11, 1981

Charles R. Shaykett
Box 162
Hiller, South Dakota 57362

Dear Mr. Shaykett:

Your request for extending the pumping period for the 1981 irrigation season is hereby approved for an additional 30 days or until September 15, 1981.

Any money remaining in the Water Use Control Area Fund will be returned to the individual proportioned according to the amount received and according to the time spent by the water master in a particular area.

Please advise this office if you have any additional questions.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Division

JH/bt

Belle Fourche River and Tributaries
Water Use Control Area
Financial Report
1981
Summary of Receipts and Expenditures
June, 1981 - July, 1981

	<u>Receipts</u>	<u>Disbursements</u>	<u>Balance</u>
Collections (Water User's fees)	\$7,379.37	\$	\$
Watermaster (Salary and Mileage)		2,028.62	5,350.75
	<u>\$7,379.37</u>	<u>\$2,028.62</u>	<u>\$5,350.75</u>

Detailed Report of Receipts

No.	Name	Diversion Rate	Acreage	Receipts (total fee)	Amount Returned
789-1	Louis Budmayr	0.90	95.50	\$ 34.00	\$ 30.10
429-1	Ed Brunner & Son	1.43	106.00	46.50	41.16
429-1A	Mel Pittman	1.07	79.00	40.00	35.41
506-1	Bob Bartels	.23	17.00	14.25	12.61
892-1	Bob Bartels	1.00	70.00	27.50	24.34
417-1A	Quinten & Karen Watson	.53	78.00	29.50	26.11
417-1B	Clarence Anderson	1.43	206.00	64.00	56.65
417-1	Mrs. Eddie (Vivian) Anderson	1.15	69.00	69.50	61.52
531-1	Ruby Dillinger	1.27	89.29	42.50	37.62
1162-1	Charles & Dorothy Shaykett	4.61	324.70	131.00	115.96
1210-1	Charles & Dorothy Shaykett	1.80	128.30	52.00	46.03
1132-1	Ezra Pauley	4.00	285.00	111.25	98.48
1204-1	Art Heitz, Jr.	2.19	153.00	68.25	60.41
1205-1	Harlan K Schnell	1.88	132.00	53.00	46.91
1215-1	H L & Mildred Brunner	3.00	264.50	96.12	85.08
418-1	Alex Miller	.67	117.00	49.25	43.59
1213-1	Robert W Grant	1.43	100.00	45.00	39.83
419-1	Herman Stark	2.50	179.00	74.75	66.17
421-1	Lee Dutton	2.50	175.00	73.75	65.28
1049-1	Thorval Jensen	1.47	103.00	45.75	40.50
1122-1	Thorval Jensen	4.88	324.14	135.75	120.16
1160-1	Thorval Jensen	1.90	133.49	53.50	47.36
1029-1	Homestake Mining	1.39	97.00	44.25	39.17
910-1	Donald Halhmaier	2.50	175.00	73.75	65.28
1165-1	Tom Bowen	2.85	200.00	80.00	70.81
722-1	Edith Anderson & Tom Bowen	2.80	196.00	79.00	69.93
1148-1	Homestake Mining	13.50	948.00	377.00	333.71
430-1	Gerald Wetz	1.65	116.00	49.00	43.37
432-1	Roy Casteel	4.30	307.00	126.75	112.20
414-1	Mary Ann Schummer	3.40	239.00	99.75	88.30
411-1	Edward Poss	5.10	452.00	173.00	153.13
440-1	David A Richards	5.00	416.00	154.00	136.32
1149-1	Homestake Mining	3.20	226.00	96.50	85.42
1150-1	Homestake Mining	7.60	534.00	213.50	188.98
437-1	McNenny Ranch Inc.	5.90	418.00	164.50	145.61
1151-1	Homestake Mining	5.50	390.00	157.50	139.41
821-1	George Levin & Sons	7.00	490.00	192.50	170.40
1136-1	George Levin & Sons	3.07	215.00	93.75	82.98

Detailed Report of Receipts Cont.

No.	Name	Diversion Rate	Acres	Receipts (total fee)	Amount Returned
1152-1	Homestake Mining	6.60	462.00	185.50	\$ 164.20
449-1	George Wurnig	5.00	365.00	171.25	151.59
1153-1	Homestake Mining	6.10	428.00	177.00	156.68
311-1	Lester Clark	16.61	1,163.60	461.00	408.06
310-1	Lester Clark	6.76	473.20	188.50	166.85
248-1	Lawrence Burke	0.90	64.00	26.00	23.01
1077-1	Charles M Arneson	1.44	131.00	52.75	46.69
165-1	Trigg Ranches Inc.	4.30	301.00	275.00	243.42
122-1	Trigg Ranches Inc.	3.75	263.00		
1146-1	Trigg Ranches Inc.	1.89	336.00		
928-1	Charles Wennberg	2.20	155.00	68.75	60.86
912-1	Gilbert Alan	1.46	101.80	45.50	40.28
926-1	Donald Berger	2.04	143.00	65.75	58.20
1176-1	Arthur J Odekoven	2.30	163.00	70.75	62.63
1190-1	Neil Shuck	3.53	247.00	101.75	90.07
611-1	Alex Miller	3.35	235.00	98.75	87.41
569-1	Ramona McFarland	0.97	68.00	27.00	23.90
870-1	Eugene C Bishop	0.70	49.00	22.25	19.70
401-1	Kenneth & Dorothy Aker	1.88	132.00	53.00	46.91
135-1	Walter Hoffman	3.11	220.00	95.00	84.09
408-1	James A Mickelson	3.10	218.00	94.50	83.65
469-1	Raymond Garness	1.30	91.00	42.75	37.84
1218-1	William Dillinger	.40	42.70	20.75	18.37
1222-1	John Ismay(Norman)	1.11	79.00	39.75	35.19
1154-1	Homestake Mining	4.50	319.00	129.75	114.35
285-1	Edgar Colin Smart	1.42	150.00	67.00	---
331-1	Anna Stetta (Louis Budmayr)	1.87	131.00	52.75	---
472-1	Timothy Reich	2.00	167.84	62.00	---
275-1	John Durr	1.90	133.00	53.25	---
271-1	Herbert Clarkson	.06	43.00	20.75	---
296-1	Robert Helmer	2.50	179.00	74.75	---
308-1	Lewis Bertolotto	.64	45.00	21.25	---
282-1	James Jeffrey	1.05	73.70	38.50	---
1182-1	George Leach	1.60	108.00	47.00	---
228-1	Thornton Vallery	.72	54.17	23.75	---
290-1	Thornton Vallery	5.50	386.00	156.50	---
264-1	Thornton Vallery	.22	15.30	14.00	---
321-1	Clarence & Lawrence Foos	1.64	115.00	48.75	---
962-1	Ione A Shevling	3.00	251.00	92.75	---
960-1	Thornton & Gwenivere Vallery	.50	35.00	18.75	---
289-1	Thornton & Gwenivere Vallery	1.02	75.00	38.75	---
273-1	Ruben & Esther Kling	.46	32.60	18.25	---
275-1A	Ruben & Esther Kling	1.54	108.40	47.25	---
1177-1	Ruben & Esther Kling	3.30	231.00	97.75	---
416-1	Creta & Leslie Miner	2.66	198.00	79.50	---
565-1	Solomn Stark	2.14	150.00	67.50	---
287-1	David G Rathbun	2.20	154.00	68.50	---
1126-1	John Lewis	3.11	339.00	124.75	---

STATE OF SOUTH DAKOTA

Do not use this space.

DIRECT VOUCHER

AGENCY VOUCHER No.	DATE
11	11/10/81

PAYEE

DEPT.

Charles & Dorothy Shaykett
Box 162
Miller, SD 57362

DWNR, Water Rights Division
Foss Bldg.
Pierre, SD 57501

STAPLE
HERE

AGENCY

ADDRESS

Agency	Fund	Sub Fund	Prog. Act.	Obj. Sub. Obj.	Agency Coding	Amount	Contract No.
200301	699	01	0000	0801		161.99	1
							2
							3
							4
							5
							6
							7
							8
							9
							10
TOTAL						22 161.99	

NOTE: Vendors invoice must be attached.

Warrant # 82079295
AC # 077396
date 11/10/81

Invoice No.(s)	Date Delivered	QUAN.	DESCRIPTION OF SERVICE OR COMMODITY	UNIT PRICE	AMOUNT	MEMO
			Refund of unexpended funds collected from the Belle Fourche River and tributaries Water Use Control Area Permit Owners			
			1162-1 Charles & Dorothy Shaykett	115.96		
			1210-1 " " "	46.03		
				161.99	161.99	
TOTAL					161.99	

I declare and affirm under the penalties of perjury that this claim is in all things, true and correct. I further agree to comply with the provisions of the Civil Rights Act of 1964 and regulations issued thereunder relating to nondiscrimination in federally assisted programs.

I hereby certify that this claim has been examined by me, and to the best of my knowledge and belief is in all things true and correct and the same is hereby approved.

Claimant Signature

Date

DIVISION APPROVAL

DATE

APPROVAL SIGNATURE

DATE

7-10-78

CHAS SHAYKETT

Butte

1162-1 READY FOR
INSPECTION

TENANT: H.L. BRUNER
456-2164
VALE

Butte County

1162-1. Ch. B. R. (D. 1/2) M. Blythe II

13-15-81 Lows NVC. (D. 1/2) Blythe

Rel. on 1/2 1/2

8" PVC L. (D. 1/2) 17.10

11" PVC L. (D. 1/2) 17.10

Pill. in bottom well (D. 1/2)

pipe. 2nd 1/2 1/2

11" PVC L. (D. 1/2) 17.10

11" PVC L. (D. 1/2) 17.10

11" PVC L. (D. 1/2) 17.10

11" PVC L. (D. 1/2) 17.10

11" PVC L. (D. 1/2) 17.10

11" PVC L. (D. 1/2) 17.10

11" PVC L. (D. 1/2) 17.10

11" PVC L. (D. 1/2) 17.10

11" PVC L. (D. 1/2) 17.10

11" PVC L. (D. 1/2) 17.10

11" PVC L. (D. 1/2) 17.10

11" PVC L. (D. 1/2) 17.10

~~James~~ James

So. 11 78 105 81

M. 66 140 191

Long Run

North slope of Mt. St. Helens

July 1, 1980 10:00 - 12:00

1000 ft. to 6000 ft.

Long Run

So. 11 78 105 81

M. 66 140 191

H. 61 140 191

M. 66 140 191

So. 11 78 105 81

M. 66 140 191

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

Joe Foss Building
623 East Capitol
Pierre, South Dakota 57501

Division of Water Rights
605 773-3352

August 15, 1983

Charles R Shaykett
PO Box 162
Miller SD 57362

Dear Mr. Shaykett:

In response to your request by telephone on August 15, 1983 the Water Rights Division hereby authorizes continuation of irrigation under Permit Nos. 1162-1, 1210-1 and 1269-1 from the Belle Fourche River through September 15, 1983.

This authorization is subject to flows remaining available for downstream domestic users and prior water rights.

If there are any questions, do not hesitate to contact this office.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Division

JH:JW:ks



**Department of
Water & Natural Resources**

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501

WATER RIGHTS DIVISION
Phone (605) 773-3352

No. 1269-1

1162-1

DEC 1 1986

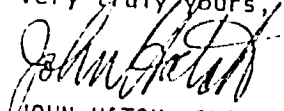
Dorothy M. Shaykett
Box 166
Miller, South Dakota 57362

Dear Mrs. Shaykett:

Enclosed herewith is, Water License No. 1269-1. This is the final water right document completing your process of obtaining a water right.

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.

Very truly yours,


JOHN HATCH, Chief Engineer
Water Rights Division

JH:ms

Enclosures

Applicable portions of Water Permit No. 1162-1 are incorporated into this License No. 1269-1.

WNR-817 3/83

Transmittal of Water License

1162-1

CHARLES AND DOROTHY SHANKETT
BOX 162
MILLER
SD 57362

BU/BF

S

This is the Water Management Board data sheet for recording 1980 SURFACE WATER source irrigation estimates.

November 1980

For Dept. use only

Please fill out and return at once.

No. Acres irrigated with Surface Water 490

1. ☒ X

If you did not irrigate during 1980-check this box ☐

No system ☐

Type of Power	No. acres irrigated	Total Energy used-1980
1. Electric	<u>470</u>	<u>221,300</u> kWh
2. Gravity	<u>20</u>	
3. Gasoline		gal
4. Nat. Gas pipeline		cf
5. Diesel		gal
6. Propane		gal
7. Other		

Type of System	No. of
1. Hand Moved Sprinklers	
2. Portable booms	
3. Center pivots (# of)	<u>3</u>
4. Gated pipes	<u>1800</u>
5. Sidewheel	
6. Towlines	
7. Gun type	
8. Hydromatic	
9. Siphons	
10. Flood	
11. Other	

Month	# days pumped	Average # hours per day	Average pump rate (gpm)	Acres of Crop Irrigated and Estimated Water Use			
				Crop	Acres	Water Used	Crop Acres
April							
May	10	24	2300	CORN	80	25	1659
June	20	24	2300	CORN	410	25	20328
July	20	24	2300	CORN	410	25	20328
August	20	24	2300	CORN	410	25	20328
Sept.	4	24	2300	CORN	410	25	4066
Oct.							
Other Month							

Season Static Water Level: beginning _____ and _____

Comments: Dry Summer

Complete and return to: WATER MANAGEMENT BOARD

Water Rights Division
Joe Foss Building
Pierre SD 57501

Numerous operational problems with Dept the total applied to less than optimum

Owner or address change, if any:
Please complete front and back.



The South Dakota Office of Energy has requested your cooperation in completing the following:

1979

Type of Power	No. Acres Irrigated	Total Energy Used
1. Electric	_____	_____ kwh
2. Gravity	_____	_____
3. Gasoline	_____	_____ gal
4. Nat. Gas pipeline	_____	_____ cf
5. Diesel	_____	_____ gal
6. Propane	_____	_____ gal
7. Other	_____	_____

1978

Type of Power	No. Acres Irrigated	Total Energy Used
1. Electric	_____	_____ kwh
2. Gravity	_____	_____
3. Gasoline	_____	_____ gal
4. Nat. Gas pipeline	_____	_____ cf
5. Diesel	_____	_____ gal
6. Propane	_____	_____ gal
7. Other	_____	_____ gal

- What is your on-farm storage capacity for gasoline _____ gallons
diesel 1000 gallons
- What are your present plans for acres under irrigation for 1981?
 _____ an increase in acres
X irrigate same acres
 _____ a decrease in acres
- A. Has your regular fuel supplier been able to meet your fuel needs for irrigation this past year?
X yes
 _____ no
 B. If no, were you able to buy from other sources?
 _____ yes
 _____ no
- Would you continue irrigating the same number of acres in 1981 if the price of fuel increased-
 10% yes X no _____
 15% yes X no _____
 20% yes X no _____
 over 20% yes X no _____
- At what price for fuel would you cut back on irrigation activities? .05/KW
- What is your best estimate of your fuel needs for irrigation in 1981, if we experience a
 Dry summer: 500000 gallons.
 Wet summer: 140000 gallons.

1162-1

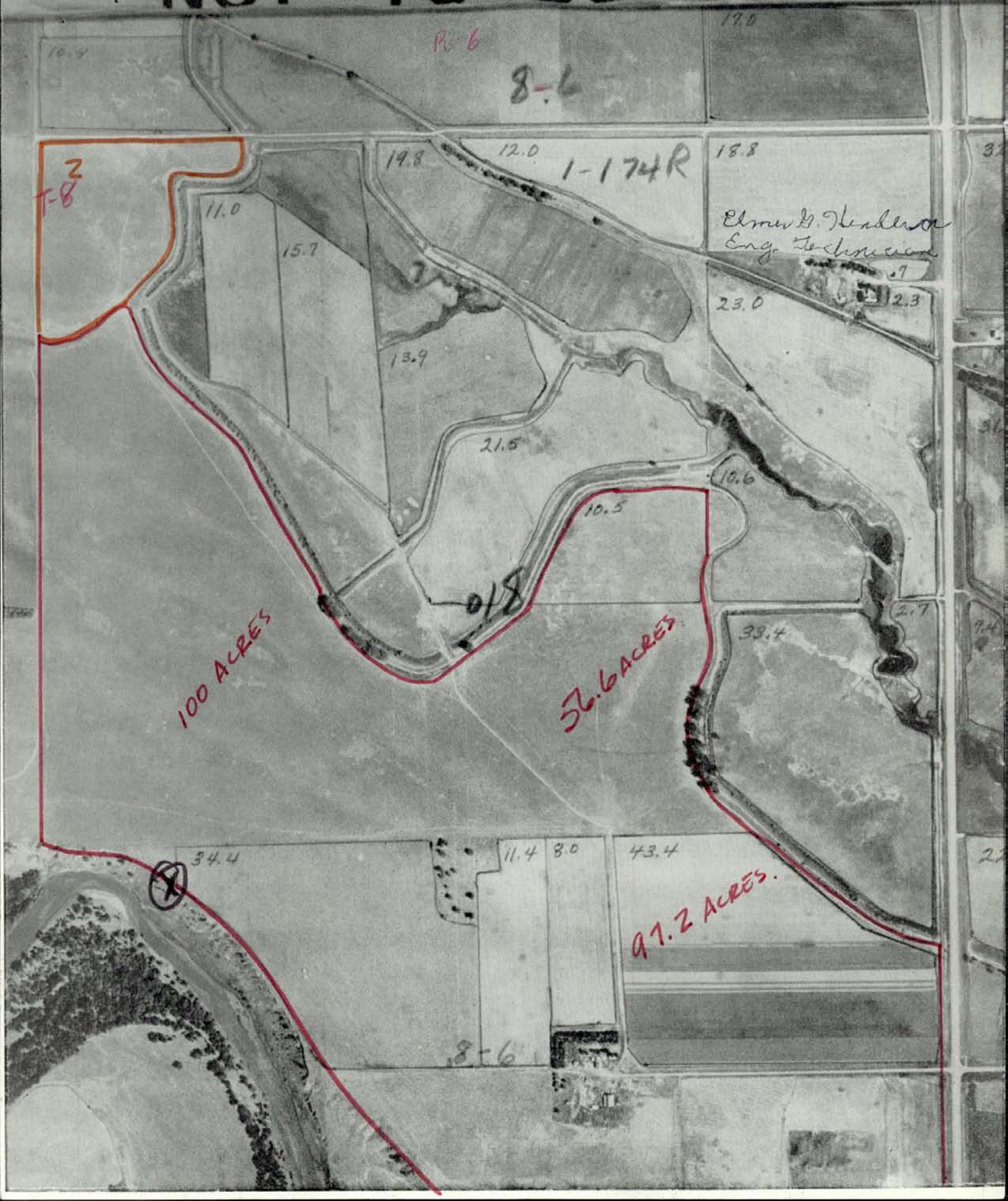
~~MAP NO 993-1 APPL NO 1162-1~~

Elmer H. Henderson
Eng. Technician

10.3 ACRES



NOT TO SCALE





Appl. # 1162-1

- See Appl # 1210-1