

RECENT

- Qal** **ALLUVIUM** (Floodplain deposits of silt and clay; contains some sand and gravel; relatively flat surface above normal river level.)
- Qwlv** **OUTWASH, VALLEY TRAIN** (Sand and gravel of glaciofluvial origin; confined to a valley or other low area; sloping to relatively flat surface.)
- Qwlt** **OUTWASH TERRACE** (Sand and gravel of glaciofluvial origin; flat to smoothly sloping surface above the floodplain.)

PLEISTOCENE

- Qwlc** **OUTWASH, COLLAPSED** (Sand and gravel of glaciofluvial origin; may contain minor amounts of till; topography is undulating to pitted.)
- Qwli** **OUTWASH, ICE WALLED** (Sand and gravel with minor amounts of silt, clay, and till; elevated feature with flat surface.)
- Qatc** **STRATIFIED DRIFT** (Gravel; some medium to coarse sand; minor amounts of silt and clay; hill and ridge topography.)
- Qwli** **LAKE SEDIMENTS, ICE WALLED** (Silt and clay with minor amounts of sand and fine gravel, elevated feature with flat surface.)

QUATERNARY

- Qwte** **TILL, END MORaine** (Heterogeneous mixture of boulders, sand, silt and clay; contains high ridges or is linear in mass.)
- Qwts** **TILL, STAGNATION MORaine** (Heterogeneous mixture of boulders, sand, silt and clay; rugged hummocky topography; contains many sloughs.)
- Qwlc** **TILL, GROUND AND STAGNATION MORaine** (Heterogeneous mixture of boulders, sand, silt and clay; smooth and gently rolling to hummocky topography; some sloughs.)
- Qwlt** **TILL, COTEAU SLOPE MORaine** (Heterogeneous mixture of boulders, sand, silt and clay; smooth, steeply sloping topography.)
- Qwtg** **TILL, GROUND MORaine** (Heterogeneous mixture of boulders, sand, silt and clay; smooth to gently rolling topography; contains some sloughs.)

UPPER CRETACEOUS

- Kp** **SHALE** (Dark gray to medium gray clay shale; weathers to a light gray; flaky when weathered; massive when unweathered.)

0 1 2 3 4 5 6 miles
0 1 2 3 4 5 6 kilometers

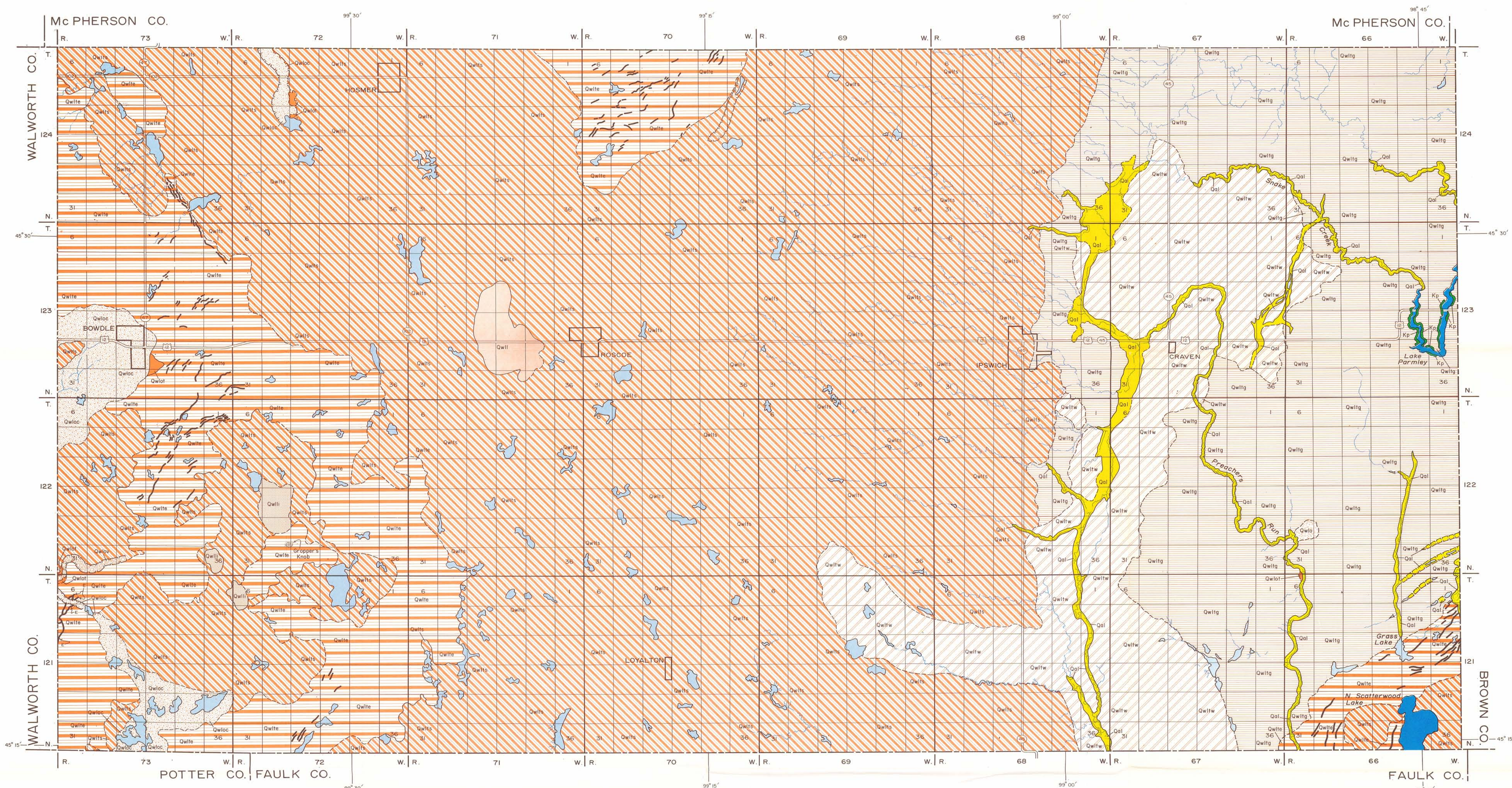
- End moraine crest
- Geologic contact, dashed where approximately located.
- Meltwater channel, pattern and color denotes the major sediment presently occupying the channel.
- Esker, disintegration ridge, or other gravel ridge.
- Ice contact face, arrowheads point downslope.
- Lake or pond.
- Intermittent stream
- Intermittent lake or slough

6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

Sectionized township

SOUTH DAKOTA GEOLOGICAL SURVEY
BULLETIN 26-PLATE 1
GEOLOGY AND LANDFORMS OF McPHERSON COUNTY, SOUTH DAKOTA
by C. M. Christensen, 1977

Index map of South Dakota showing the location of McPherson County.



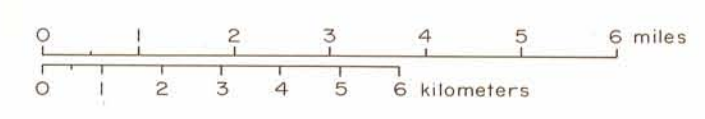
- RECENT**
- Qal** ALLUVIUM (Floodplain deposits of silt and clay; contains some sand and gravel; relatively flat surface above normal river level.)
 - Qwlo** OUTWASH, UNDIFFERENTIATED (Sand and gravel of glaciofluvial origin; includes proglacial outwash and outwash lenses; flat to gently rolling surface.)
 - Qwlv** OUTWASH, VALLEY TRAIN (Sand and gravel of glaciofluvial origin; confined to a valley or other low area; sloping to relatively flat surface.)
- PLEISTOCENE**
- Qwlt** OUTWASH TERRACE (Sand and gravel of glaciofluvial origin; flat to smoothly sloping surface above the floodplain.)
 - Qwlc** OUTWASH, COLLAPSED (Sand and gravel of glaciofluvial origin; may contain minor amounts of till; topography is undulating to pitted.)
 - Qwli** LAKE SEDIMENTS, ICE WALLED (Silt and clay with minor amounts of sand and fine gravel; elevated feature with flat surface.)
 - Qwl** LAKE SEDIMENTS (Silt and clay with minor amounts of sand and fine gravel; flat to smoothly sloping; low lying.)

- QUATERNARY**
- LATE WISCONSIN**
- Qwlv** TILL, WASHBOARD MORaine (Heterogeneous mixture of boulders, sand, silt and clay; abundant ridges 5 to 15 feet high.)
 - Qwlt** TILL, END MORaine (Heterogeneous mixture of boulders, sand, silt and clay; contains high ridges or is linear in mass.)
 - Qwls** TILL, STAGNATION MORaine (Heterogeneous mixture of boulders, sand, silt and clay; rugged hummocky topography; contains many sloughs.)
 - Qwlg** TILL, GROUND MORaine (Heterogeneous mixture of boulders, sand, silt and clay; smooth to gently rolling topography; contains some sloughs.)
- UPPER CRETACEOUS**
- Kp** SHALE (Dark gray to medium gray clay shale; weathers to a light gray; flaky when weathered; massive when unweathered.)

- Lake or pond
- Intermittent stream
- Intermittent lake or slough

6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

Sectionized township



- End moraine crest
- Esker, disintegration ridge, or other isolated gravel ridge
- Geologic contact, dashed where approximately located.
- Meltwater channel, pattern and color denotes the major sediment presently occupying the channel.

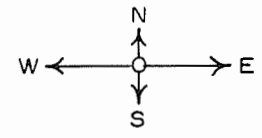
SOUTH DAKOTA GEOLOGICAL SURVEY
BULLETIN 26 - PLATE 2

GEOLOGY AND LANDFORMS OF EDMUNDS COUNTY, SOUTH DAKOTA

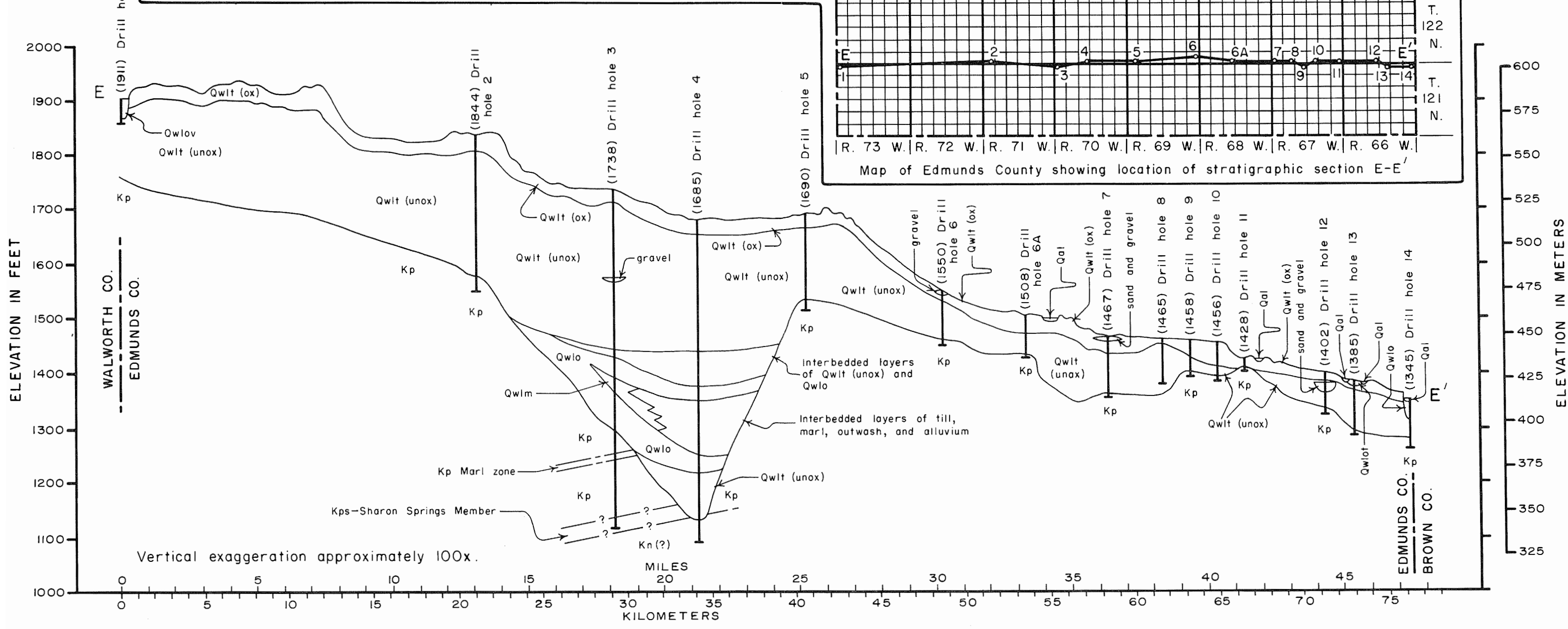
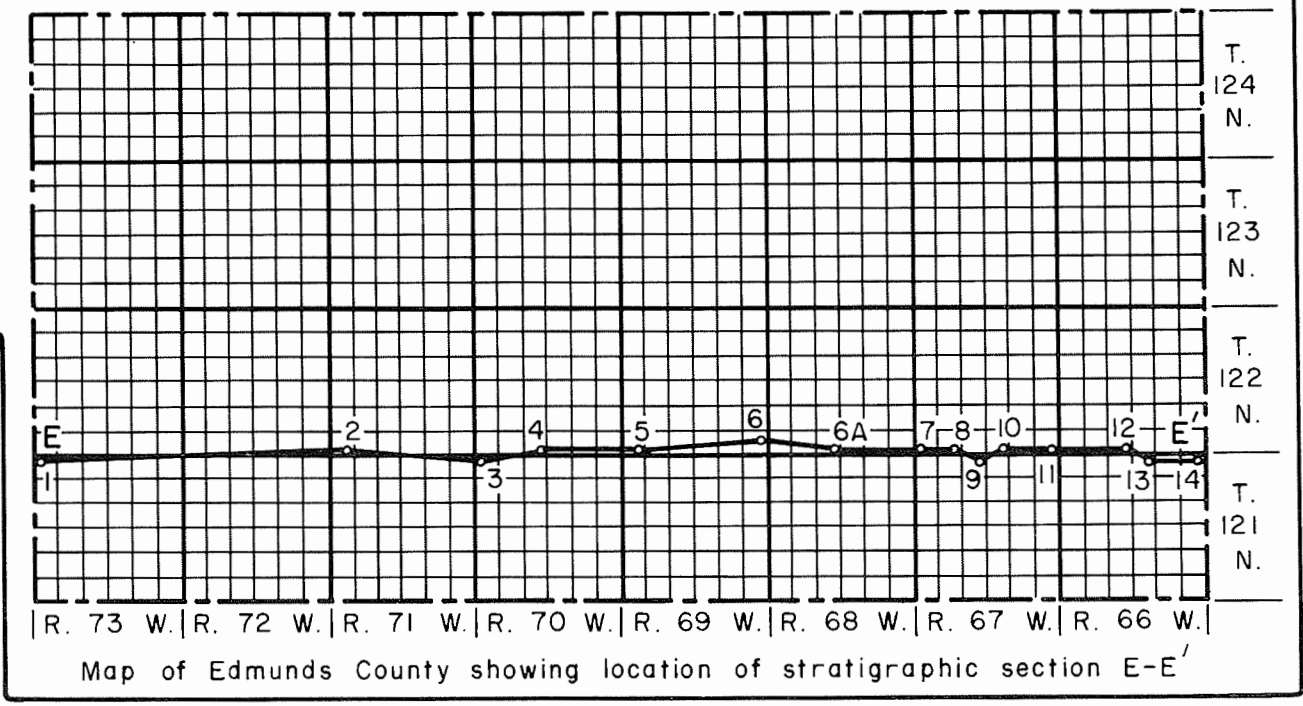
by C. M. Christensen, 1977

Index map of South Dakota showing the location of Edmunds County.

- Qal—Quaternary Recent Alluvium
 - Qwlov—Quaternary late Wisconsin Outwash Valley Train
 - Qwlot—Quaternary late Wisconsin Outwash Terrace
 - Qwlo—Quaternary late Wisconsin Outwash undifferentiated
 - Qwlt (ox)—Quaternary late Wisconsin Till, oxidized
 - Qwlt (unox)—Quaternary late Wisconsin Till, unoxidized
 - Qwlm—Quaternary late Wisconsin Marl
 - Kps—Cretaceous Pierre Shale, Sharon Springs Member
 - Kp—Cretaceous Pierre Shale undifferentiated
 - Kn—Cretaceous Niobrara Marl
- for complete log description of drill holes see Appendix



SOUTH DAKOTA GEOLOGICAL SURVEY
BULLETIN 26
PLATE 3. STRATIGRAPHIC SECTION E-E'
by C. M. Christensen, 1977



SOUTH DAKOTA
GEOLOGICAL SURVEY




Bulletin 26-Plate 4

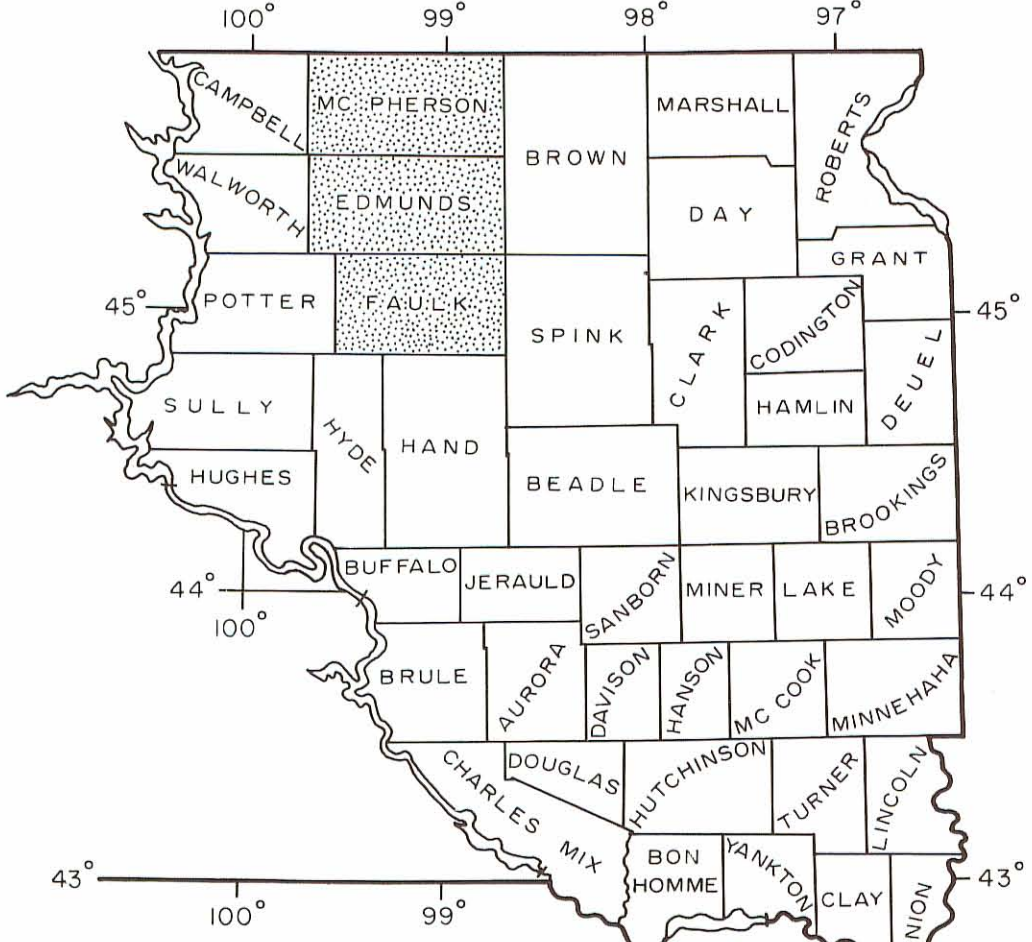
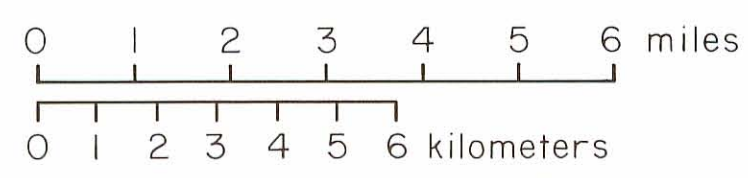
BEDROCK MAP OF
Mc PHERSON, EDMUNDS,
AND FAULK COUNTIES,
SOUTH DAKOTA
SHOWING CONTOURS ON
THE BEDROCK SURFACE

1824 • Control point (log available) Number is elevation above sea level.

1696 • Control point where bedrock surface is less than the number shown.

Contour on bedrock surface. Number is elevation above sea level. Contour interval is 50 feet.

-  Elevation below 1350 feet
-  Elevation between 1350 and 1650 feet.
-  Elevation above 1650 feet.

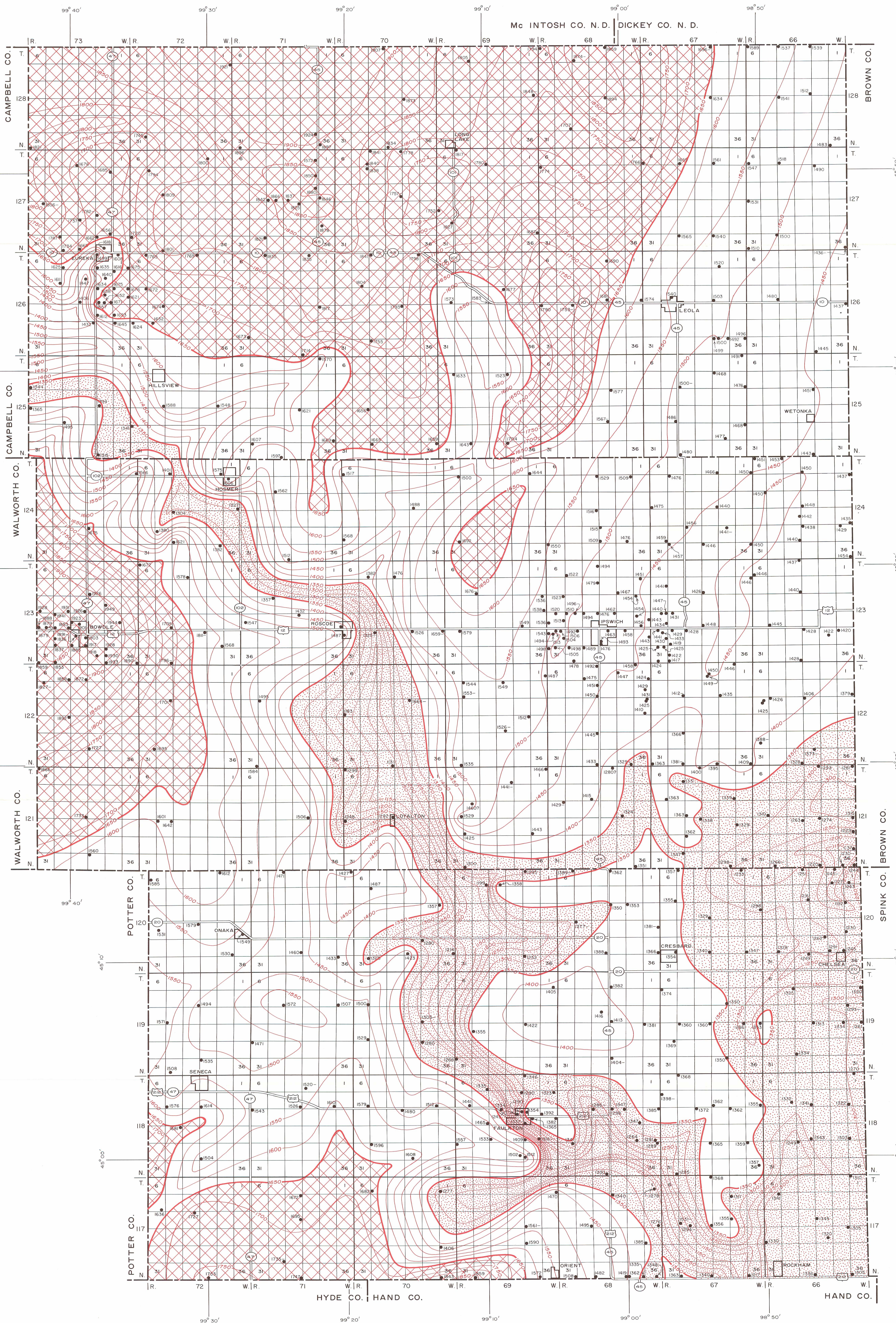
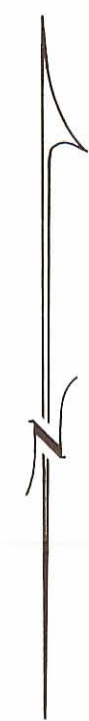


Map of eastern South Dakota showing the location of McPherson, Edmunds and Faulk Counties.

by C. M. Christensen, 1977

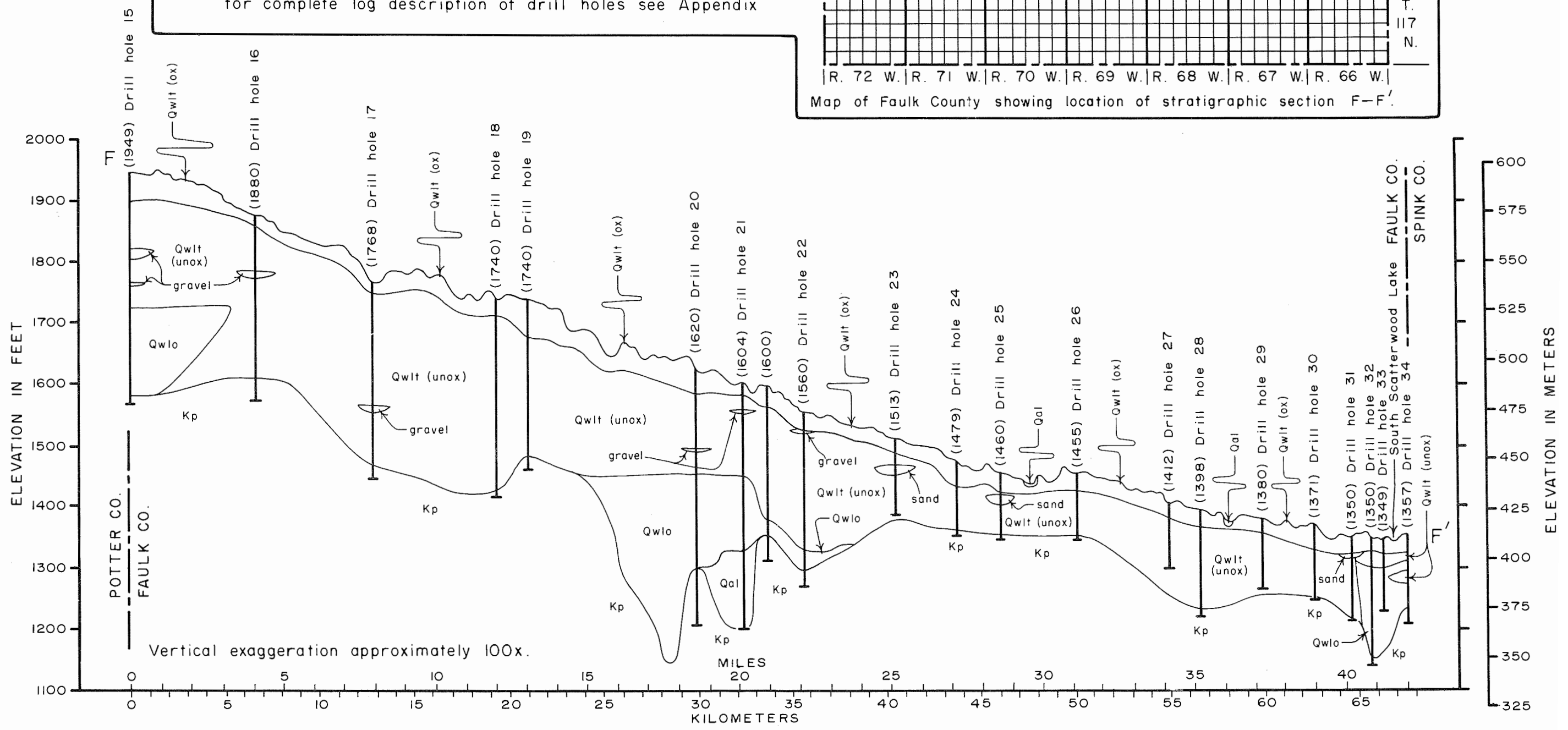
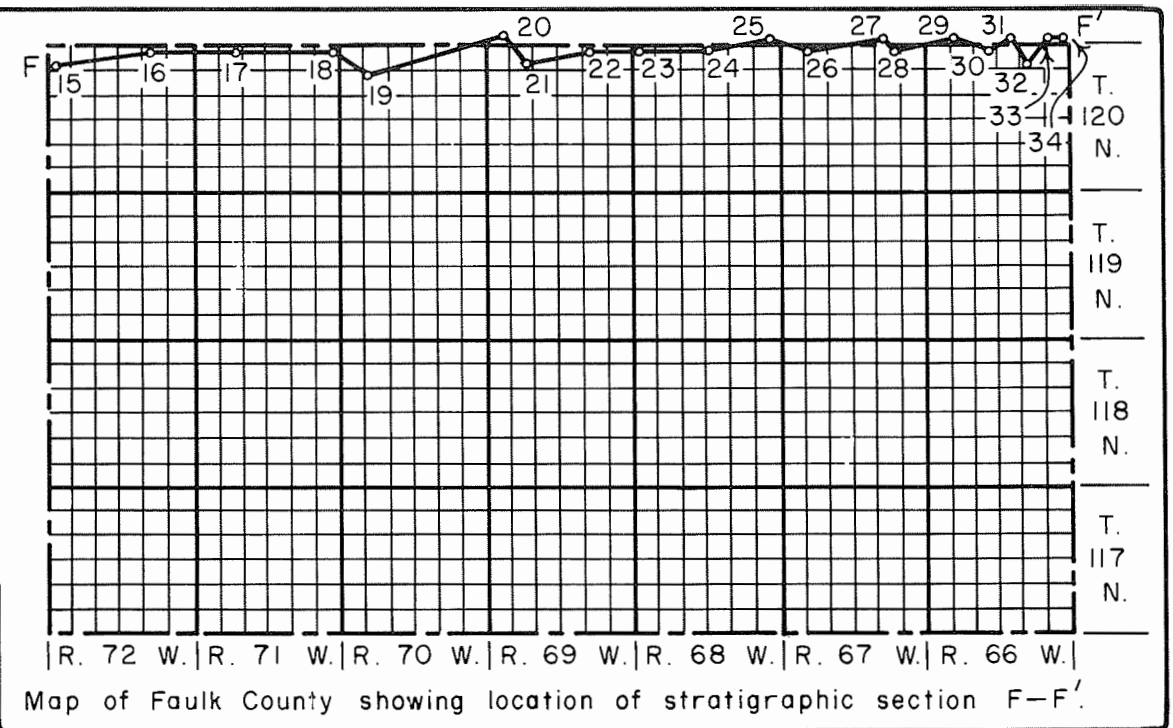
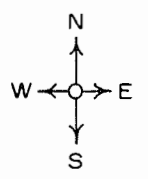
6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

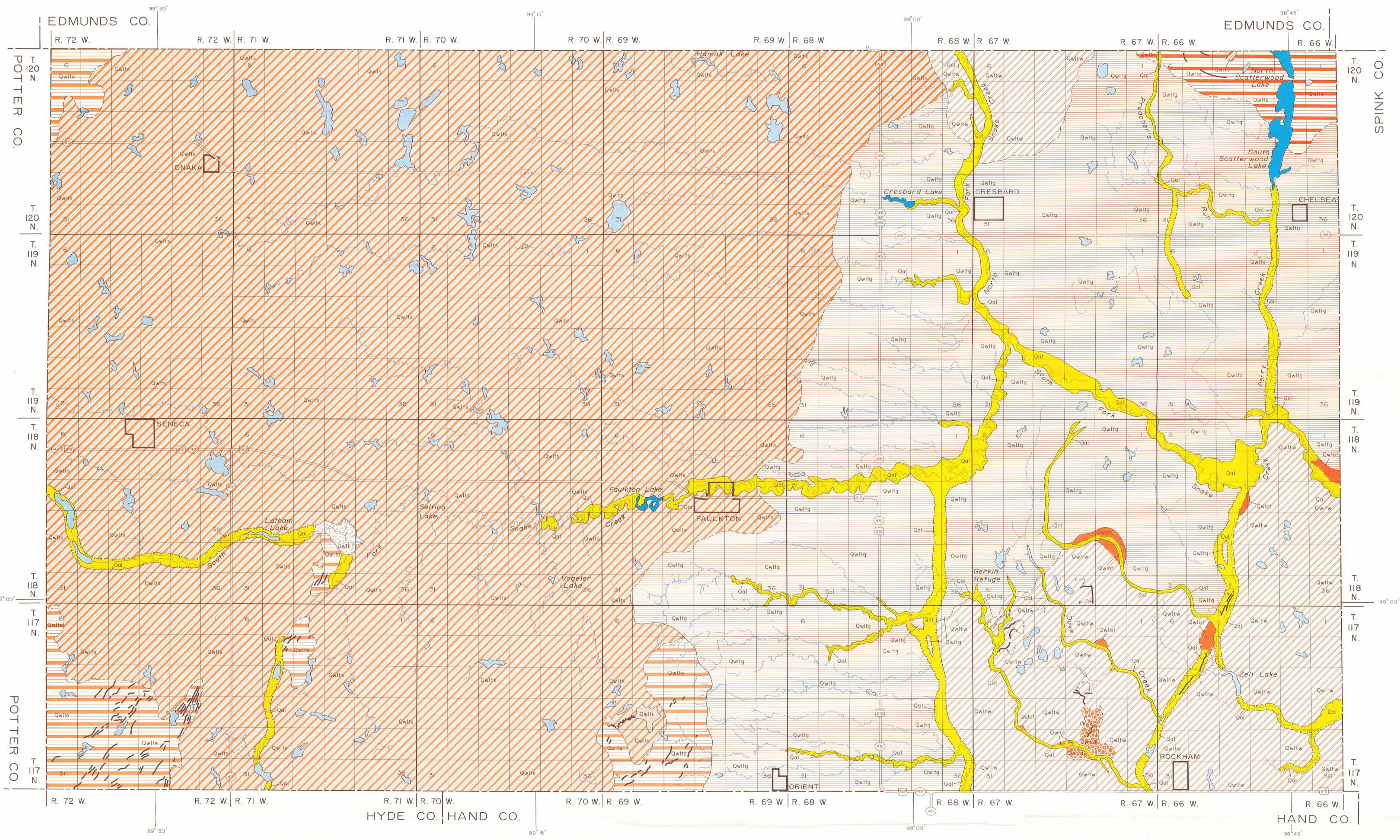
Township section numbering system



SOUTH DAKOTA GEOLOGICAL SURVEY
 BULLETIN 26
 PLATE 5. STRATIGRAPHIC SECTION F-F'
 by C. M. Christensen, 1977

Qal—Quaternary Recent Alluvium
 Qwlt (ox)—Quaternary late Wisconsin Till, oxidized
 Qwlt (unox)—Quaternary late Wisconsin Till, unoxidized
 Qwlo—Quaternary late Wisconsin Outwash undifferentiated
 Kp—Cretaceous Pierre Shale undifferentiated
 for complete log description of drill holes see Appendix





RECENT

- Qal** **ALLUVIUM** (Floodplain deposits of silt and clay; contains some sand and gravel; relatively flat surface above normal river level.)
- Qwlot** **OUTWASH TERRACE** (Sand and gravel of glaciofluvial origin; flat to smoothly sloping surface above the present floodplain.)
- Qwls** **STRATIFIED DRIFT** (Gravel; some medium to coarse sand, minor amounts of silt and clay; hill and ridge topography.)

PLEISTOCENE

LATE WISCONSIN

- Qwll** **LAKE SEDIMENTS, ICE WALLED** (Silt and clay with minor amounts of sand and fine gravel; elevated feature with flat surface.)
- Qwl** **LAKE SEDIMENTS** (Silt and clay with minor amounts of sand and fine gravel; flat to smoothly sloping surface; low lying.)
- Qwltw** **TILL, WASHBOARD MORaine** (Heterogeneous mixture of sand, silt, and clay; abundant ridges 5 to 15 feet high.)
- Qwlt** **TILL, END MORaine** (Heterogeneous mixture of boulders, sand, silt, and clay; contains high ridges or is linear in mass.)

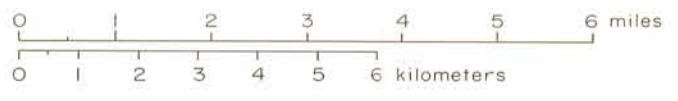
QUATERNARY

LATE WISCONSIN

- Qwlt** **TILL, STAGNATION MORaine** (Heterogeneous mixture of boulders, sand, silt, and clay; rugged hummocky topography; contains many sloughs.)
- Qwltg** **TILL, GROUND MORaine** (Heterogeneous mixture of boulders, sand, silt, and clay; smooth and level to gently rolling topography; contains some sloughs.)

QUATERNARY

- End moraine crest
- Geologic contact, dashed where approximately located.
- Meltwater channel; pattern and color denotes the major sediment presently occupying the channel.
- Esker, disintegration ridge, or other isolated gravel ridge.
- Ice contact face, arrowheads point downslope.
- Lake or pond
- Intermittent lake or slough
- Intermittent stream



6	5	4	3	2	1
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

Township section numbering system

SOUTH DAKOTA GEOLOGICAL SURVEY
BULLETIN 26-PLATE 6
GEOLOGY AND LANDFORMS OF FAULK COUNTY, SOUTH DAKOTA
by C. M. Christensen, 1977

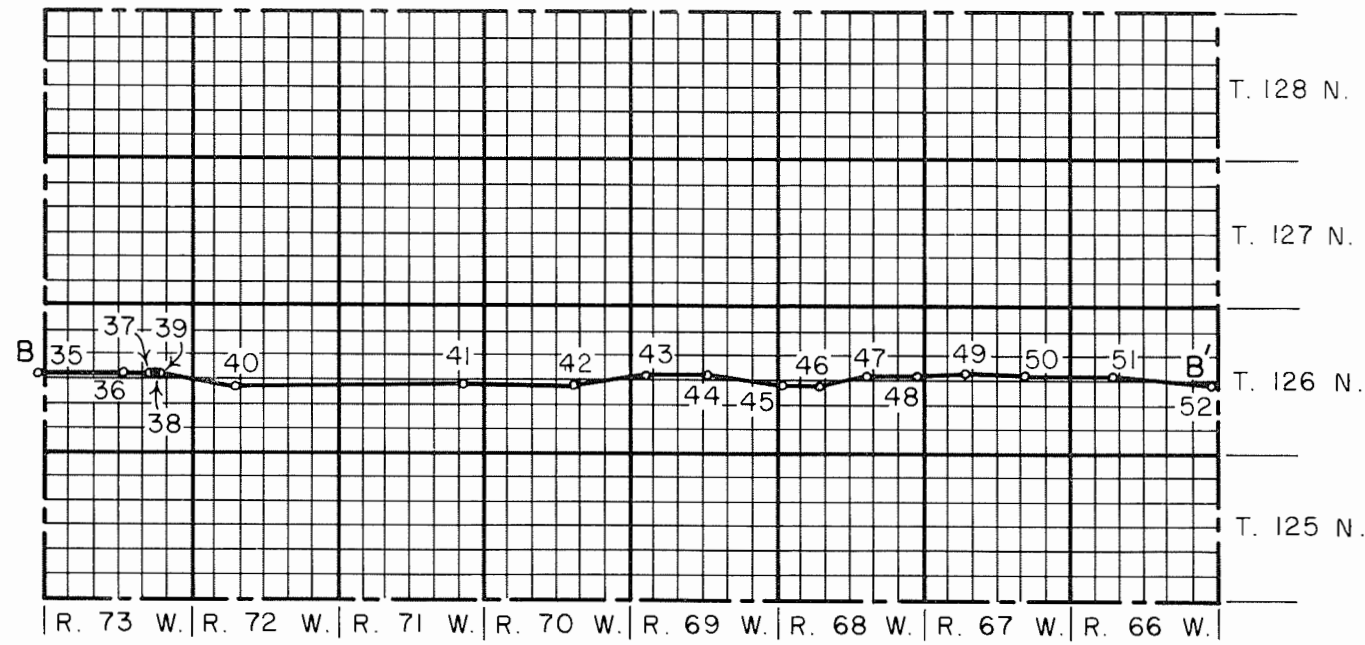
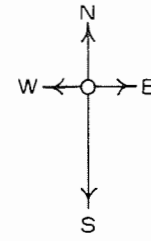
Index map of South Dakota showing the location of Faulk County.

SOUTH DAKOTA GEOLOGICAL SURVEY

BULLETIN 26

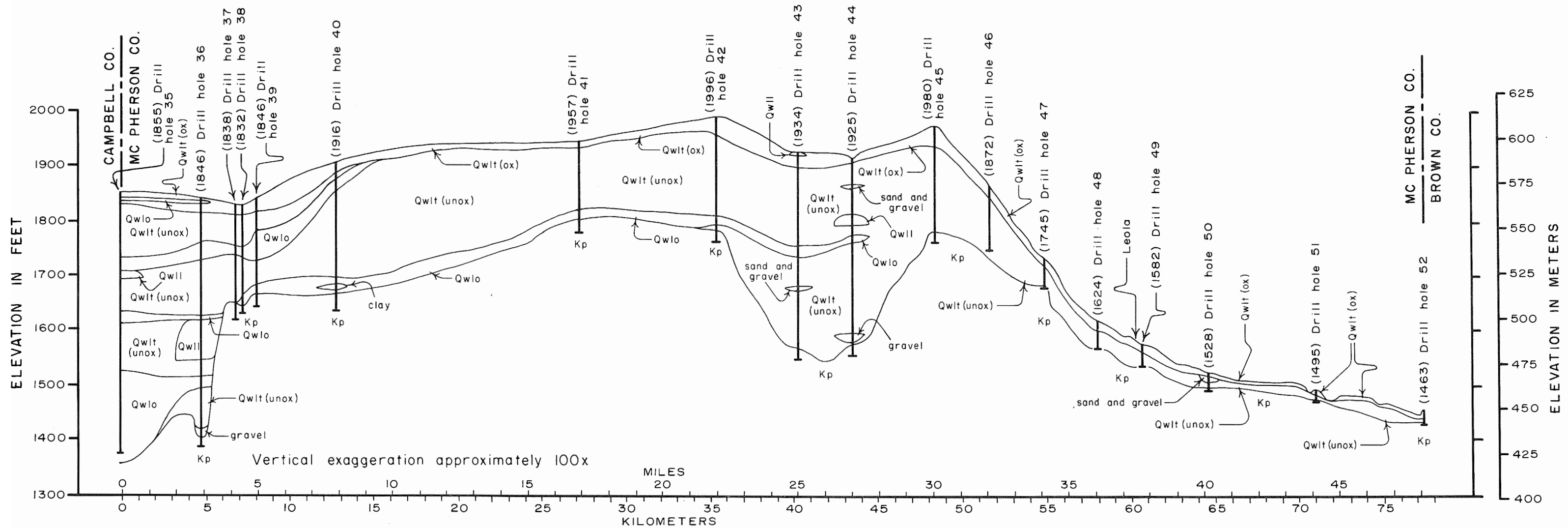
PLATE 7. STRATIGRAPHIC SECTION B-B'

by C. M. Christensen, 1977



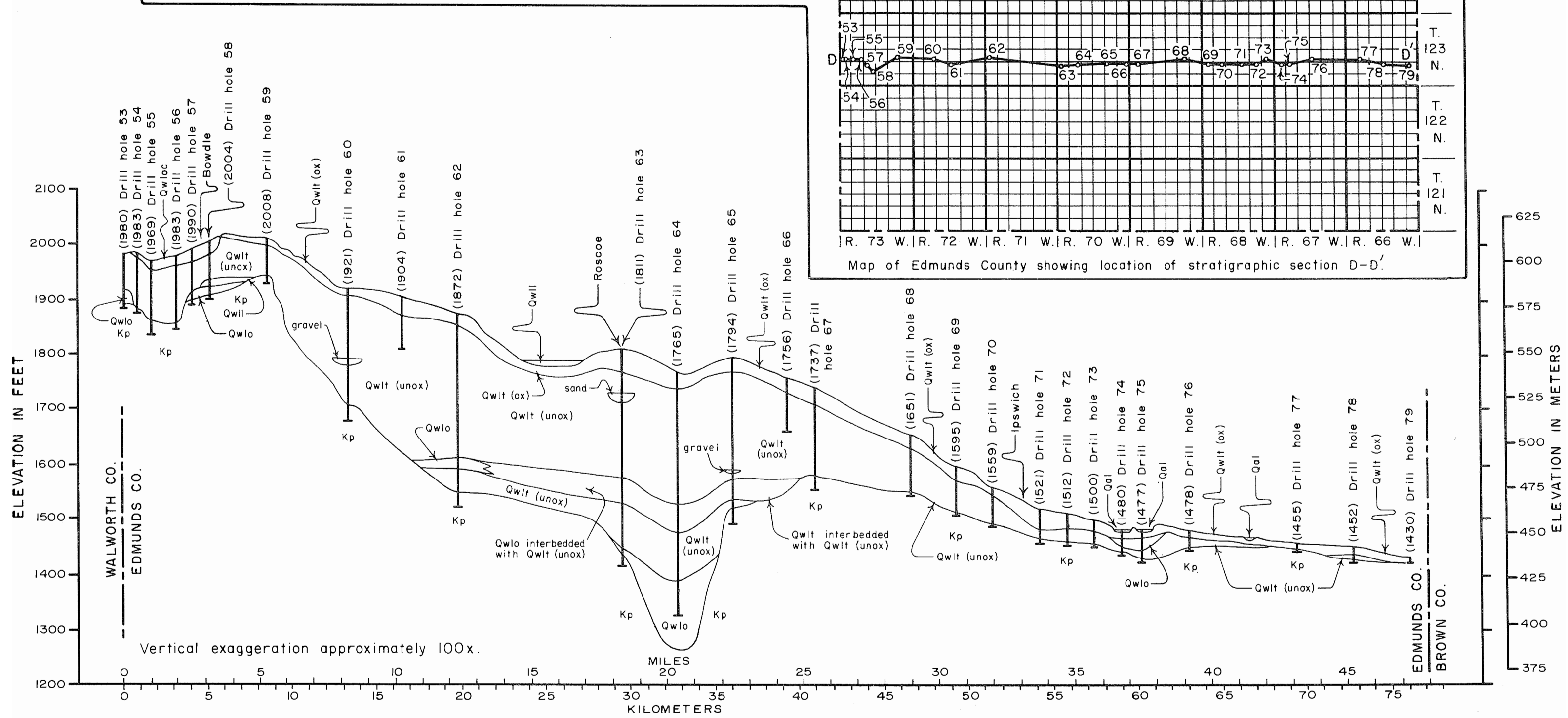
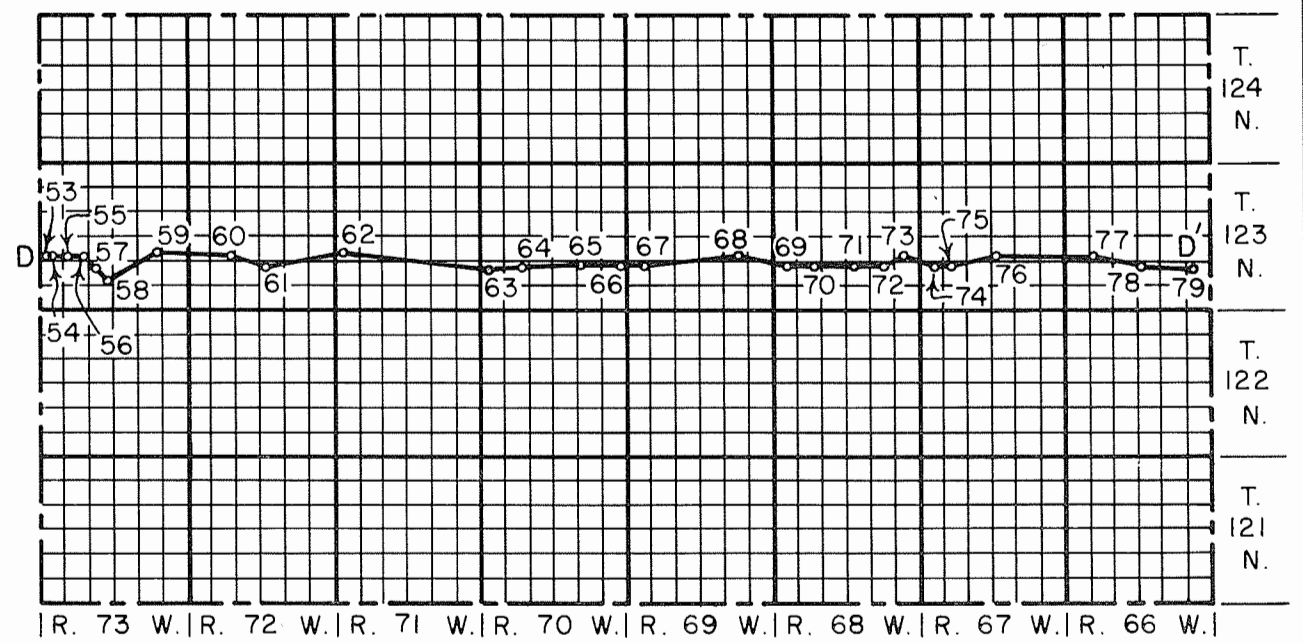
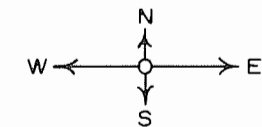
Map of McPherson County showing location of stratigraphic section B-B'.

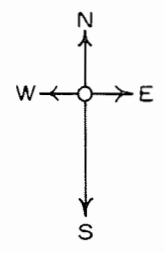
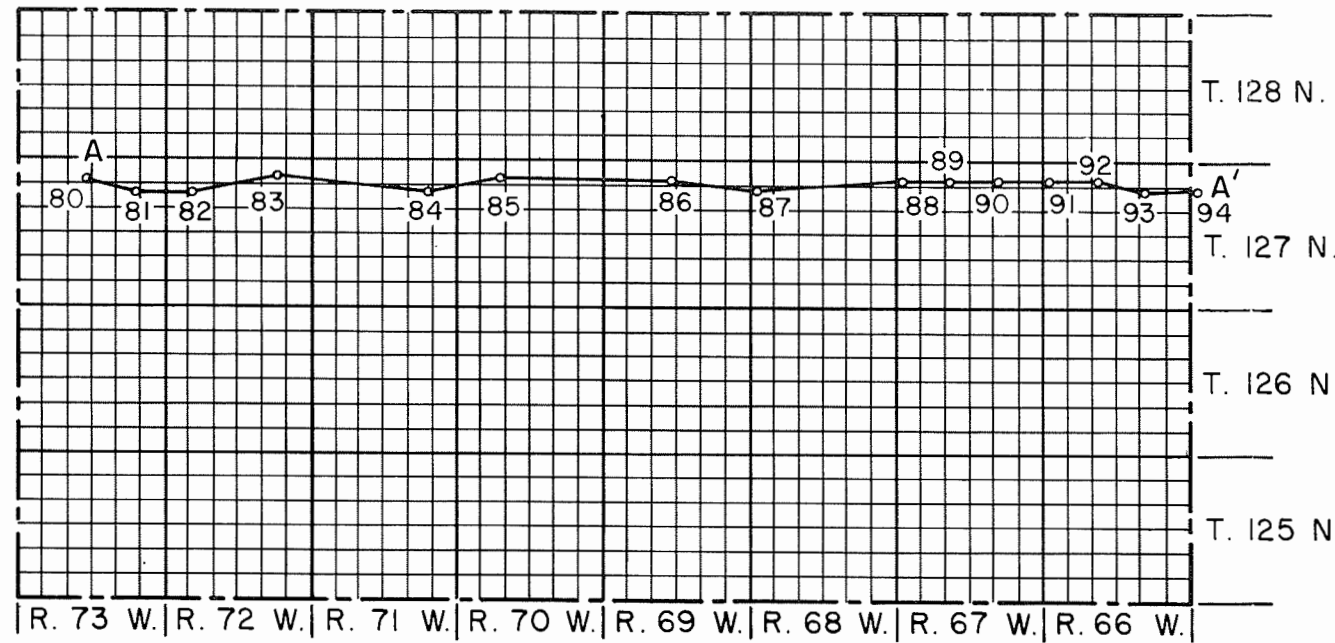
- Qwll - Quaternary Late Wisconsin Lacustrine sediments
 - Qwlo - Quaternary Late Wisconsin Outwash undifferentiated
 - Qwlt (ox) - Quaternary Late Wisconsin Till, oxidized
 - Qwlt (unox) - Quaternary Late Wisconsin Till, unoxidized
 - Kp - Cretaceous Pierre Shale undifferentiated
- for complete log descriptions of drill holes see Appendix



Qal—Quaternary Recent Alluvium
 Qwll—Quaternary Late Wisconsin Lacustrine sediments—low level
 Qwloc—Quaternary Late Wisconsin Outwash Collapsed
 Qwlt (ox)—Quaternary Late Wisconsin Till Oxidized
 Qwlt (unox)—Quaternary Late Wisconsin Till Unoxidized
 Kp—Cretaceous Pierre Shale Undifferentiated
 for complete log description of drill holes see Appendix.

SOUTH DAKOTA GEOLOGICAL SURVEY
 BULLETIN 26
 PLATE 8. STRATIGRAPHIC SECTION D-D'
 by C. M. Christensen, 1977



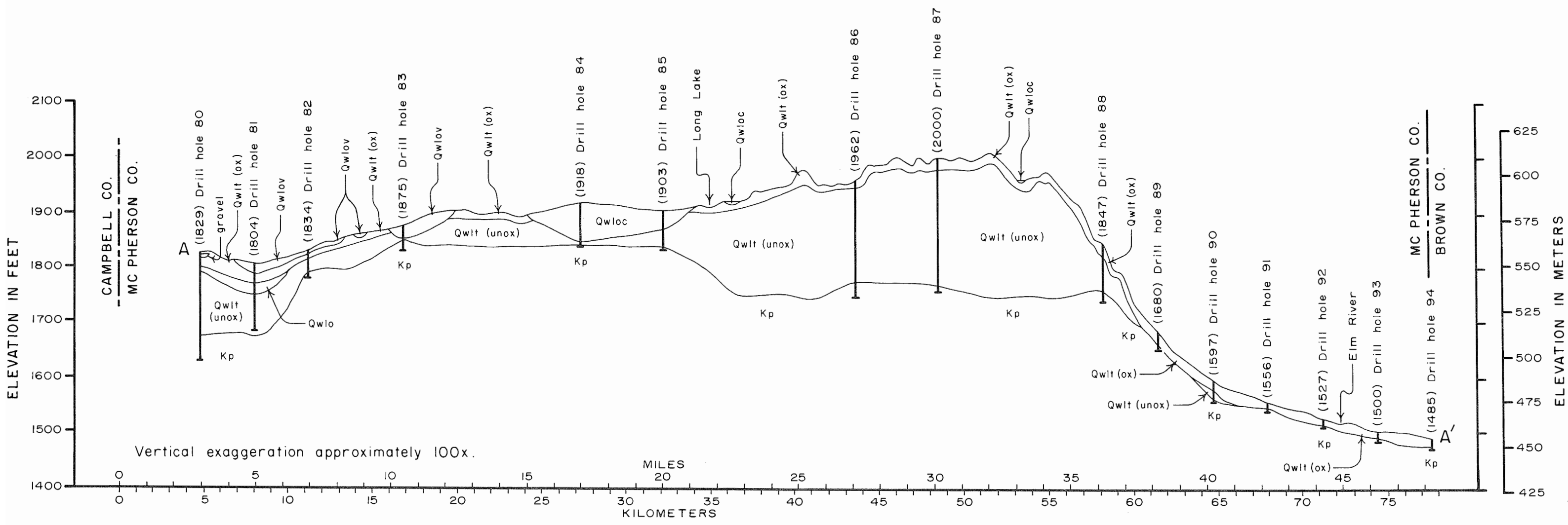


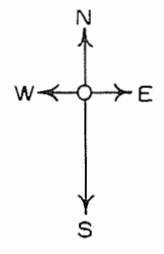
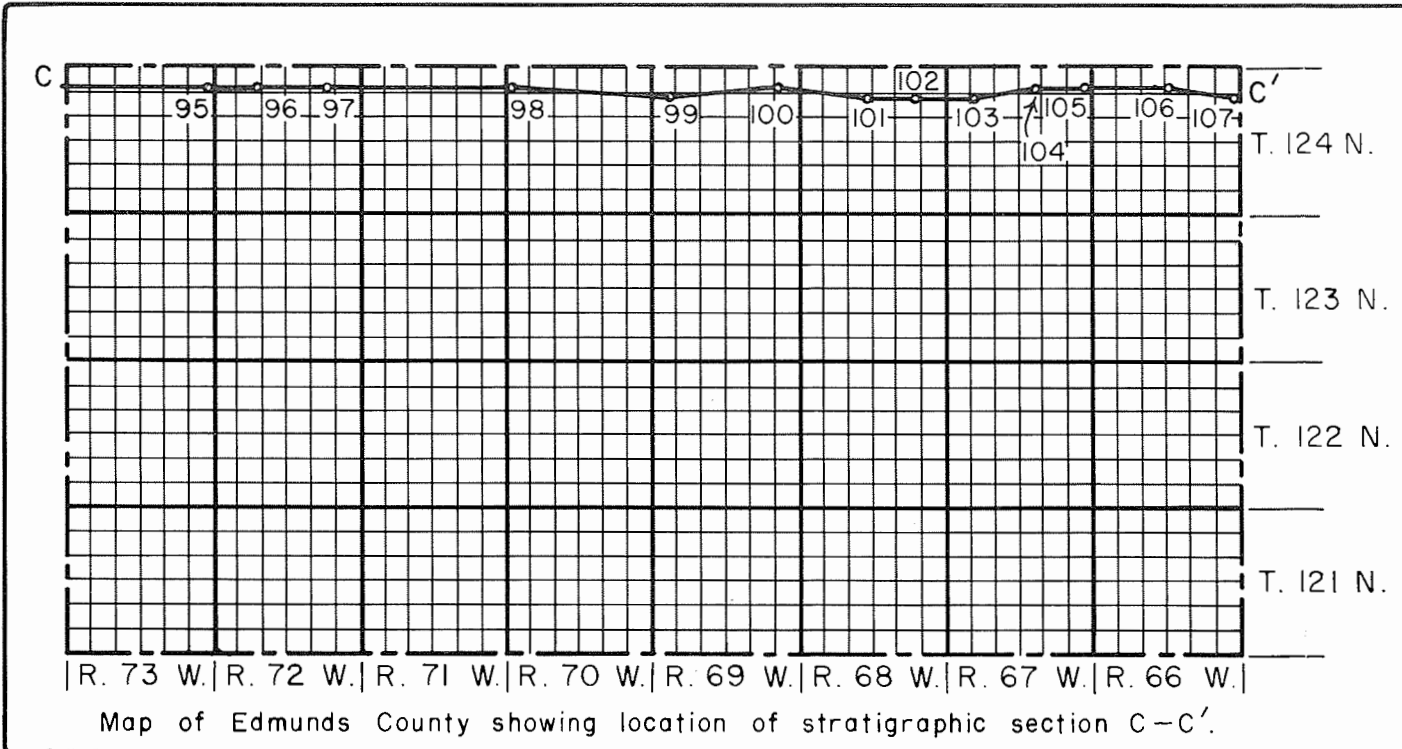
SOUTH DAKOTA GEOLOGICAL SURVEY
 BULLETIN 26
 PLATE 9. STRATIGRAPHIC SECTION A-A'

by C. M. Christensen, 1977

- Qwlov - Quaternary Late Wisconsin Valley Train
 - Qwloc - Quaternary Late Wisconsin Outwash Collapsed
 - Qwlo - Quaternary Late Wisconsin Outwash Undifferentiated
 - Qwit (ox) - Quaternary Late Wisconsin Till, oxidized
 - Qwit (unox) - Quaternary Late Wisconsin Till, unoxidized
 - Kp - Cretaceous Pierre Shale undifferentiated
- for complete log descriptions of drill holes see Appendix

Map of McPherson County showing location of stratigraphic section A-A'.



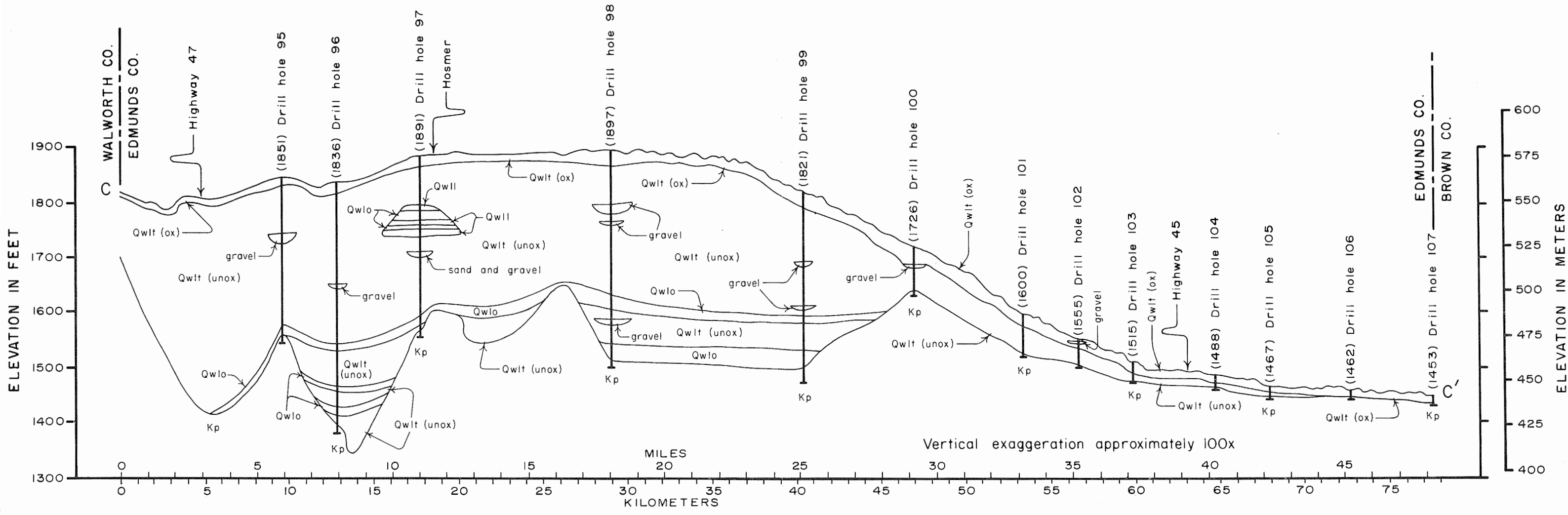


SOUTH DAKOTA GEOLOGICAL SURVEY
BULLETIN 26

PLATE IO. STRATIGRAPHIC SECTION C-C'

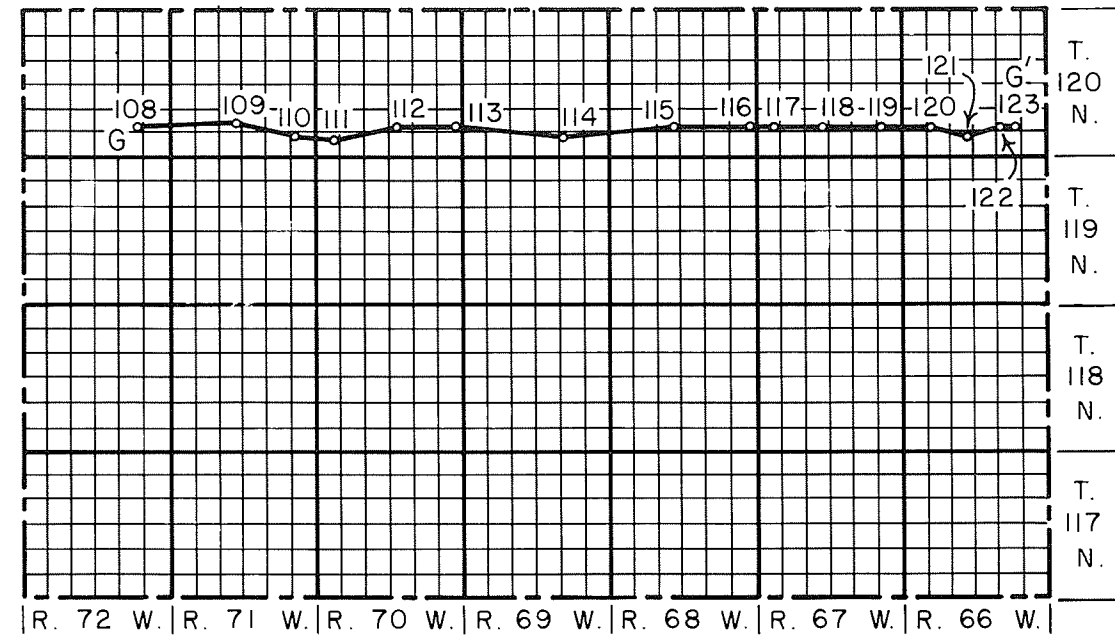
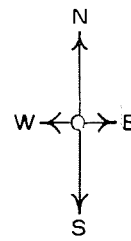
by C. M. Christensen, 1977

- Qwloc - Quaternary Late Wisconsin Outwash Collapsed
 - Qwlo - Quaternary Late Wisconsin Outwash Undifferentiated
 - Qwlt (ox) - Quaternary Late Wisconsin Till, oxidized
 - Qwlt (unox) - Quaternary Late Wisconsin Till, unoxidized
 - Kp - Cretaceous Pierre Shale undifferentiated
- for complete log descriptions of drill holes see Appendix

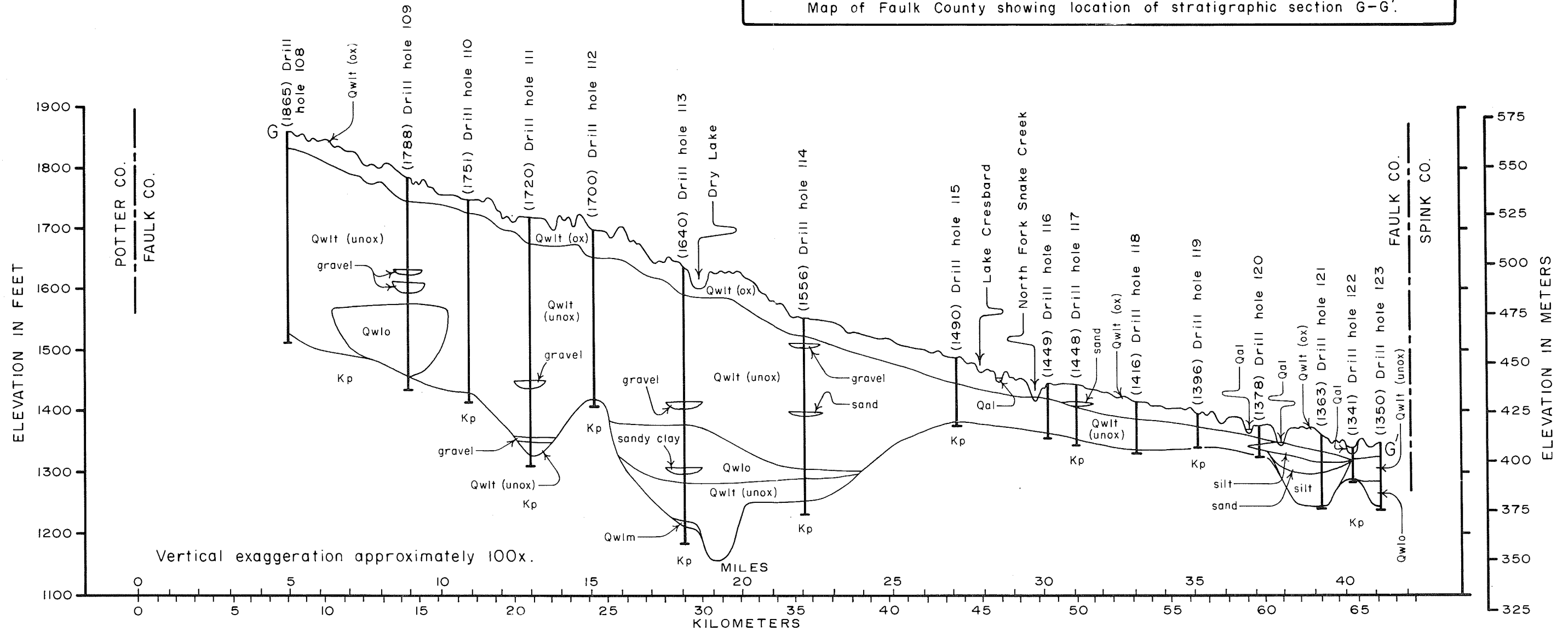


SOUTH DAKOTA GEOLOGICAL SURVEY
 BULLETIN 26
 PLATE II. STRATIGRAPHIC SECTION G-G'
 by C. M. Christensen, 1977

- Qal—Quaternary Recent Alluvium
 - Qwlt (ox)—Quaternary late Wisconsin Till, oxidized
 - Qwlt (unox)—Quaternary late Wisconsin Till, unoxidized
 - Qwlo—Quaternary late Wisconsin Outwash undifferentiated
 - Qwlm—Quaternary late Wisconsin Marl
 - Kp—Cretaceous Pierre Shale, undifferentiated
- for complete log description of drill holes see Appendix



Map of Faulk County showing location of stratigraphic section G-G'.



SOUTH DAKOTA GEOLOGICAL SURVEY
 BULLETIN 26
 PLATE 13. STRATIGRAPHIC SECTION I-I'
 by C. M. Christensen, 1977

Qal—Quaternary Recent Alluvium
 Qwlt (ox)—Quaternary late Wisconsin Till, oxidized
 Qwlt (unox)—Quaternary late Wisconsin Till, unoxidized
 Qwlo—Quaternary late Wisconsin Outwash, undifferentiated
 Kp—Cretaceous Pierre Shale, undifferentiated
 for complete log description of drill holes see Appendix

