PIERRE GAS FIELD REVISITED

By
Fred V. Steece
And
Mack McGillivray

DIVISIONS

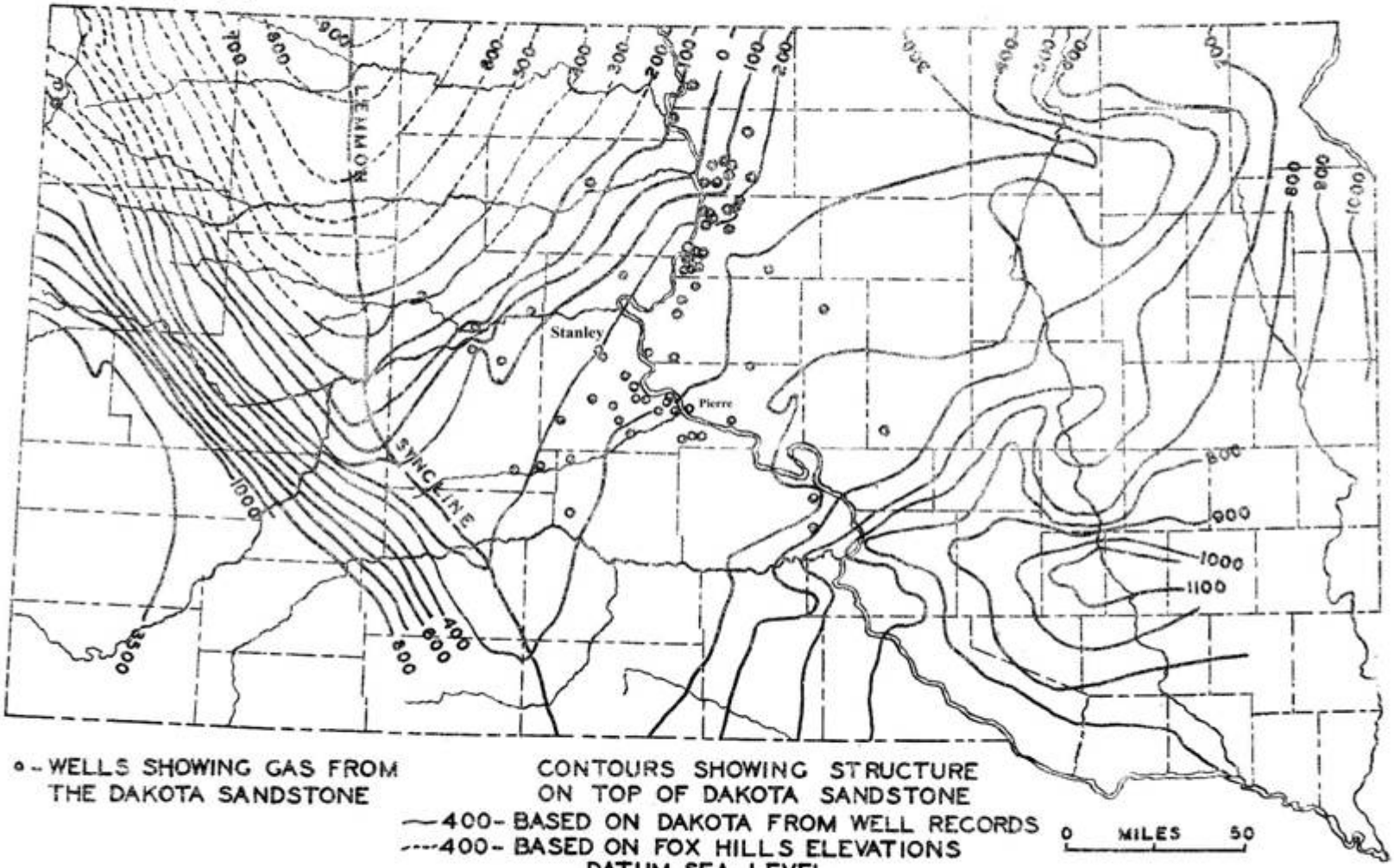
1. HISTORY
2. STRATIGRAPHY/STRUCTURE
3. CONCLUSIONS

HISTORY

- **1889 Pierre Gas Plant installed**
- **1892 Gas from Indian School water well *flared* until 1939**
- **1894**
  - **Locke Hotel; cook, heat, lights**
  - **City Gas Plant; “(every) home…”**
  - **City Streets; all lit with gas**

PLATE IV

GAS AND STRUCTURE MAP OF SOUTH DAKOTA



o - WELLS SHOWING GAS FROM THE DAKOTA SANDSTONE

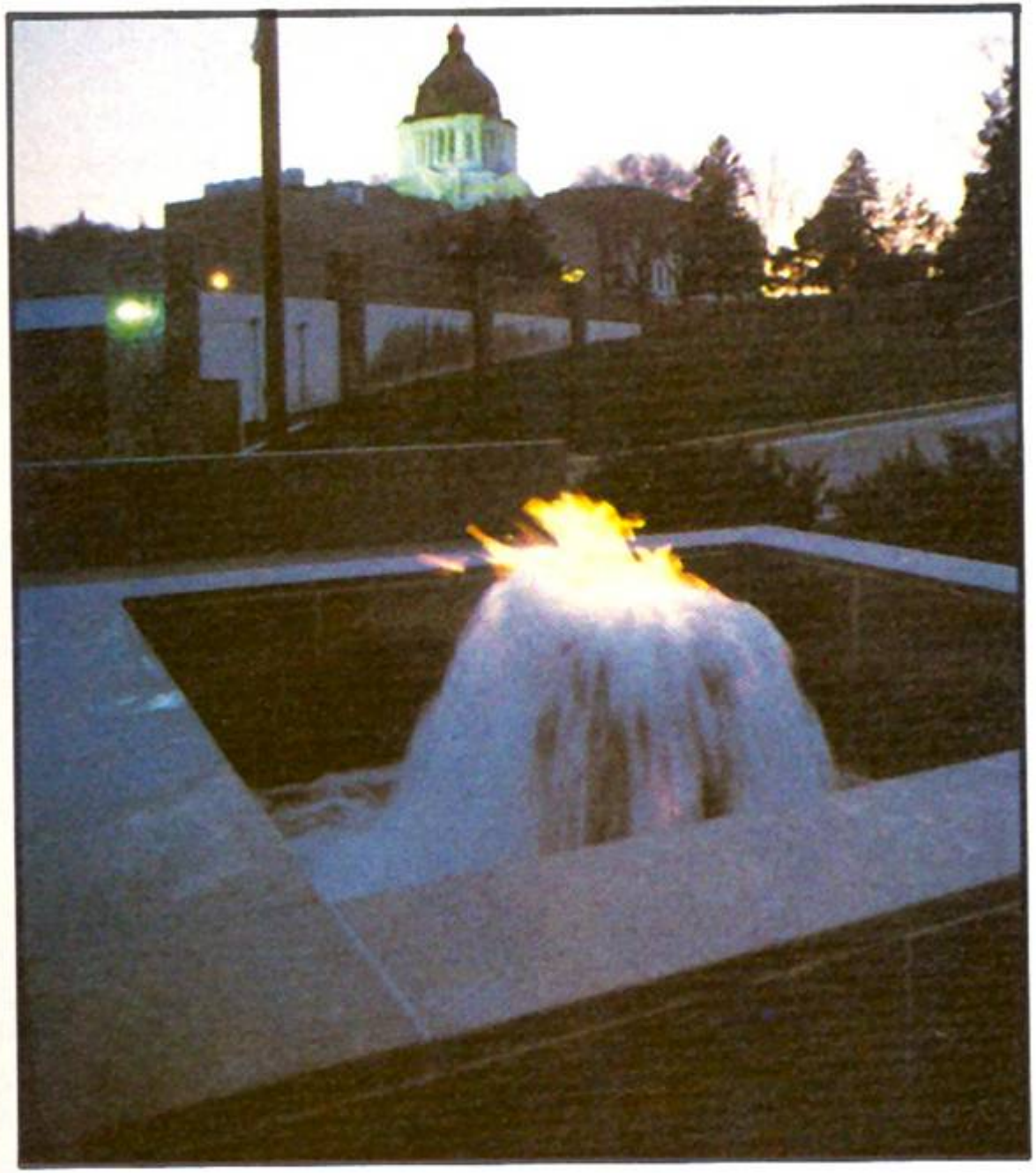
CONTOURS SHOWING STRUCTURE ON TOP OF DAKOTA SANDSTONE

—400- BASED ON DAKOTA FROM WELL RECORDS

----400- BASED ON FOX HILLS ELEVATIONS

DATUM SEA LEVEL

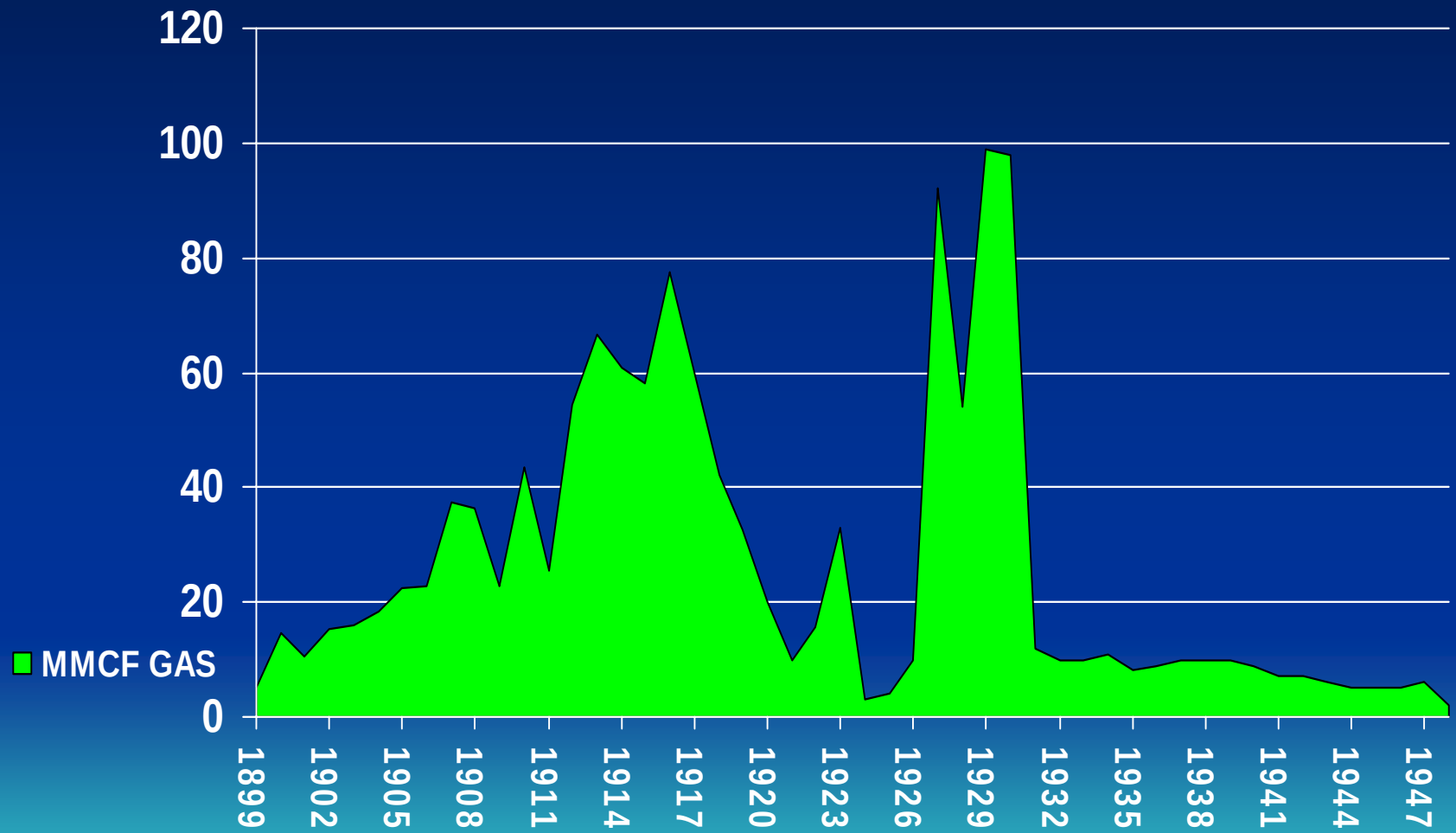
0 MILES 50

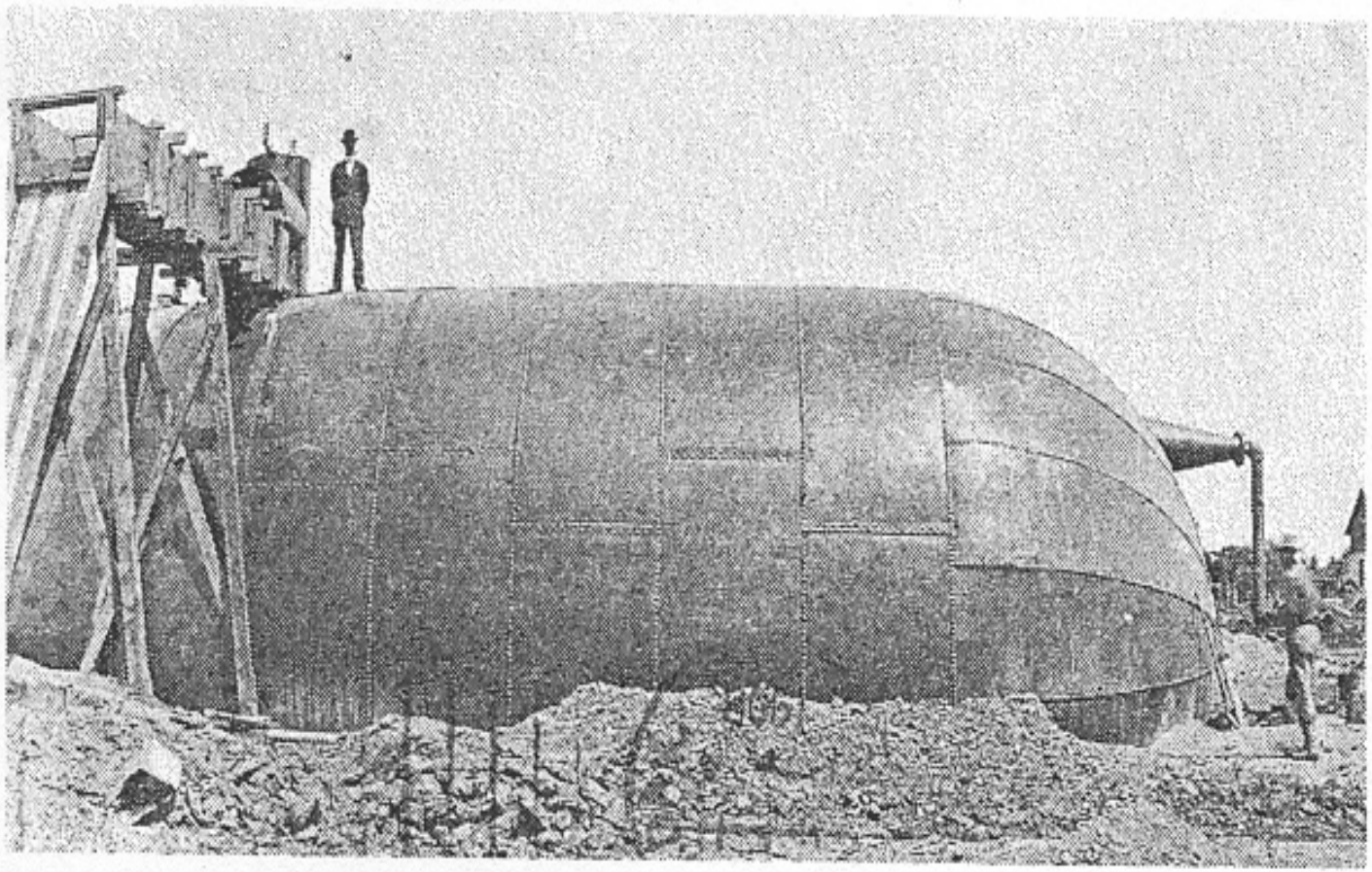


HISTORY (CONTD)

- **1910 State Capitol Well: 165 PSI; 2,650 GPM, 85,000 cu. ft. gas**
- **1930 Norbeck City Well; 14 million cu. ft./year; 75 cts/Mcf**
- **1949 Records stopped**

Pierre Area Natural Gas Production
1899 - 1948





Tank for natural gas separated from artesian water in Fort Pierre, 1908.

(Photo courtesy of Robert E. Kolbe collection)

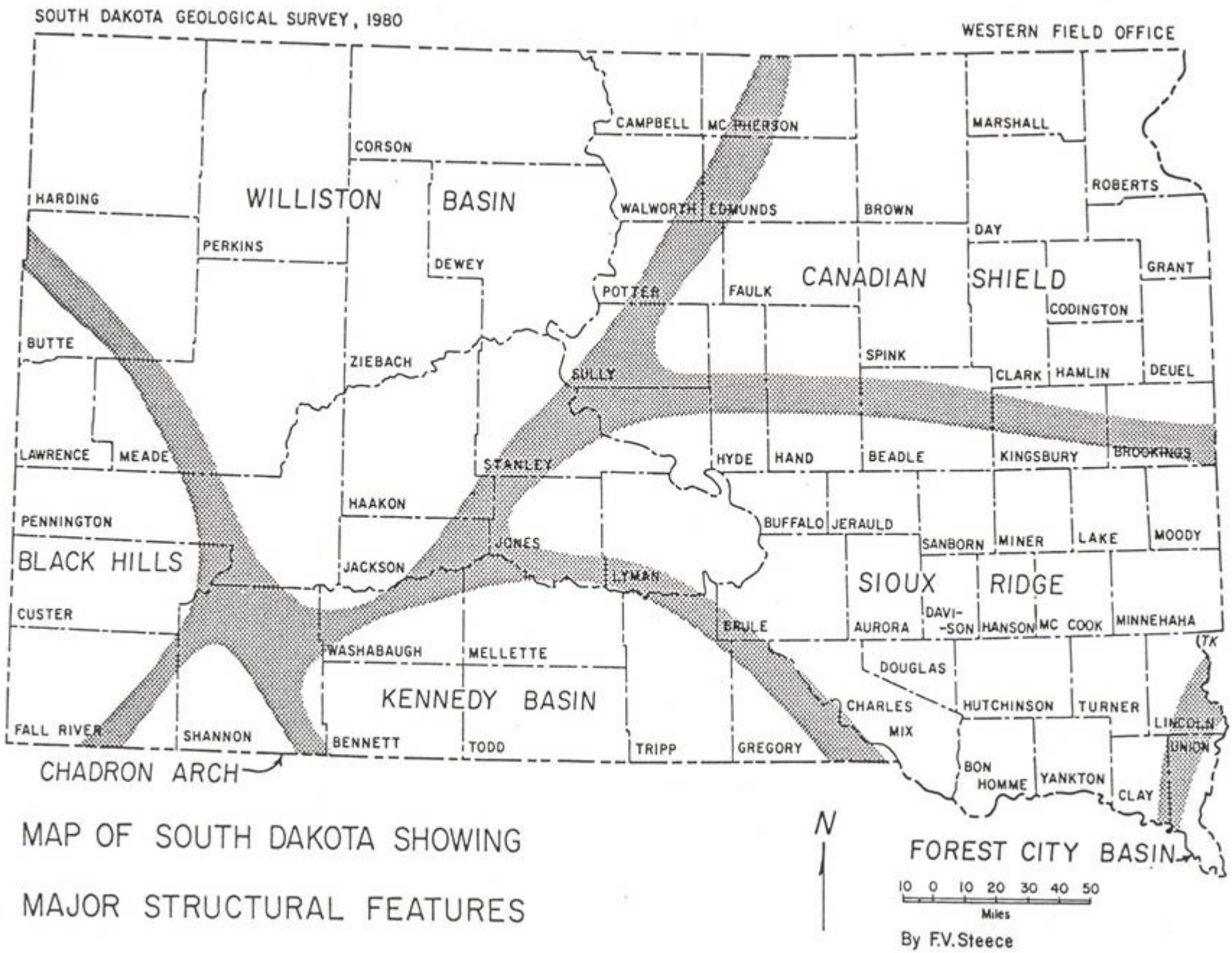
GAS ANALYSES

- State Capitol Well
  - CH4……94 %
  - N2…….. 5.7
  - O2…….. 0.13
  - CO2……0.06
  - Btu……..907

  Analysis by S.D. State College

- Pierre City Wells
  - Methane…….78.8%
  - Ethane……13.2
  - Propane……..10.7
  - Butane……..1.3

  Analysis by Carter Oil Company



MAP OF SOUTH DAKOTA SHOWING

MAJOR STRUCTURAL FEATURES

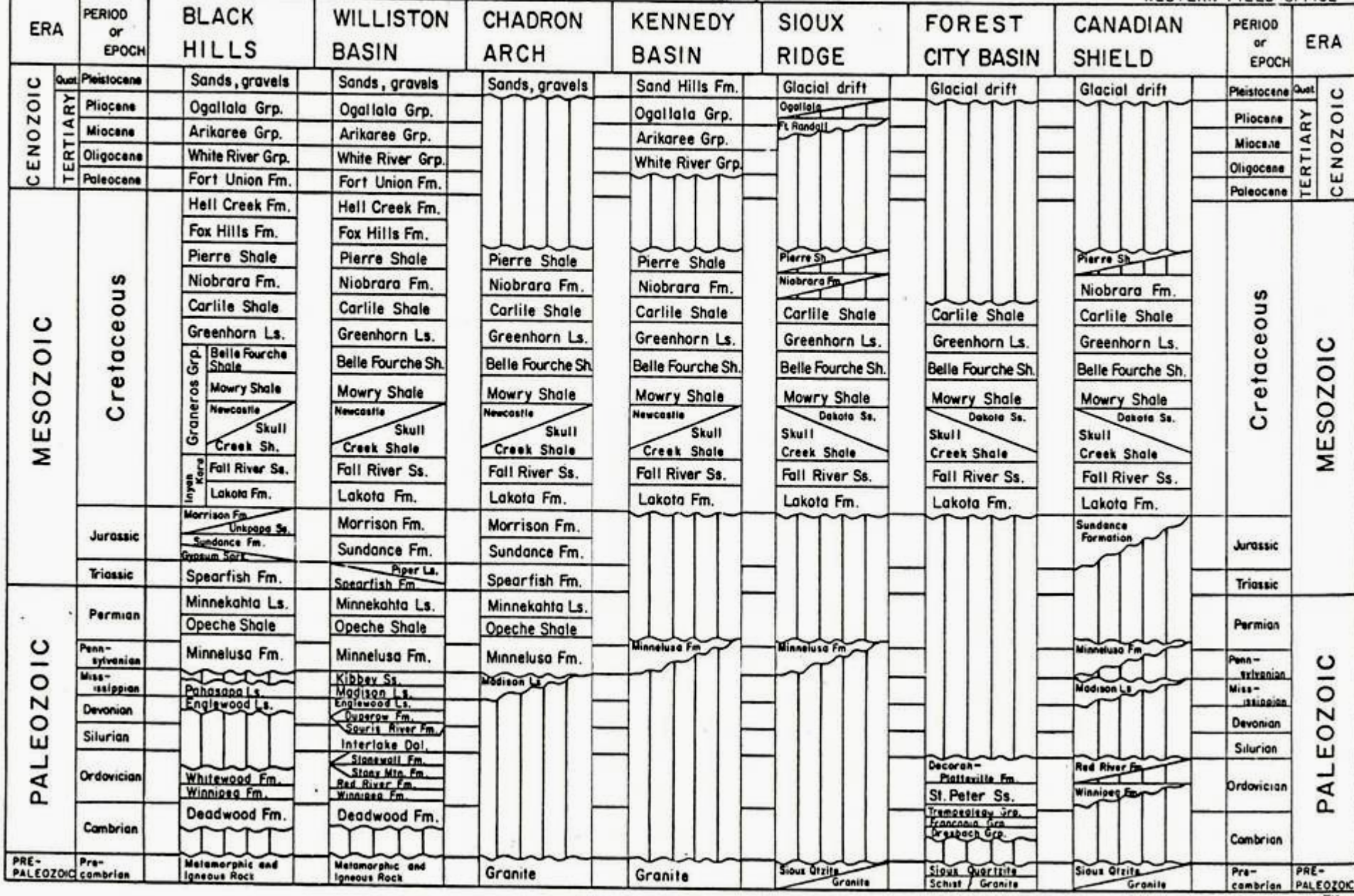
By F.V. Steece

GENERALIZED STRATIGRAPHIC CORRELATION CHART FOR SOUTH DAKOTA

SOUTH DAKOTA GEOLOGICAL SURVEY, 1980

By F.V. Steece and T.L. Kenyon

WESTERN FIELD OFFICE

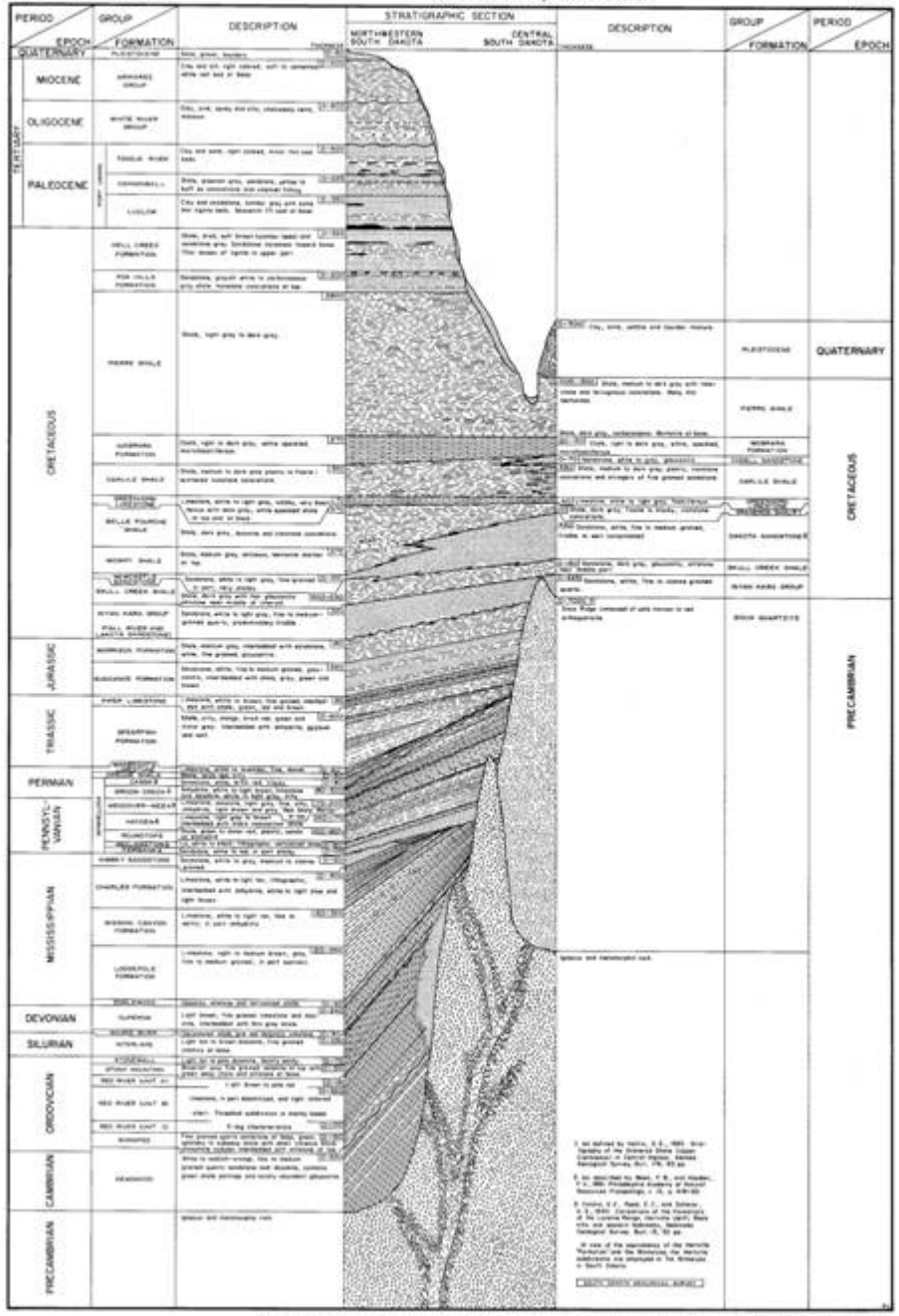


TK

Department of Natural Resource Development
South Dakota Geological Survey

GENERALIZED STRATIGRAPHIC COLUMN OF CENTRAL AND NORTHWESTERN SOUTH DAKOTA — by Robert A. Schoon

Educational Series
Map Six



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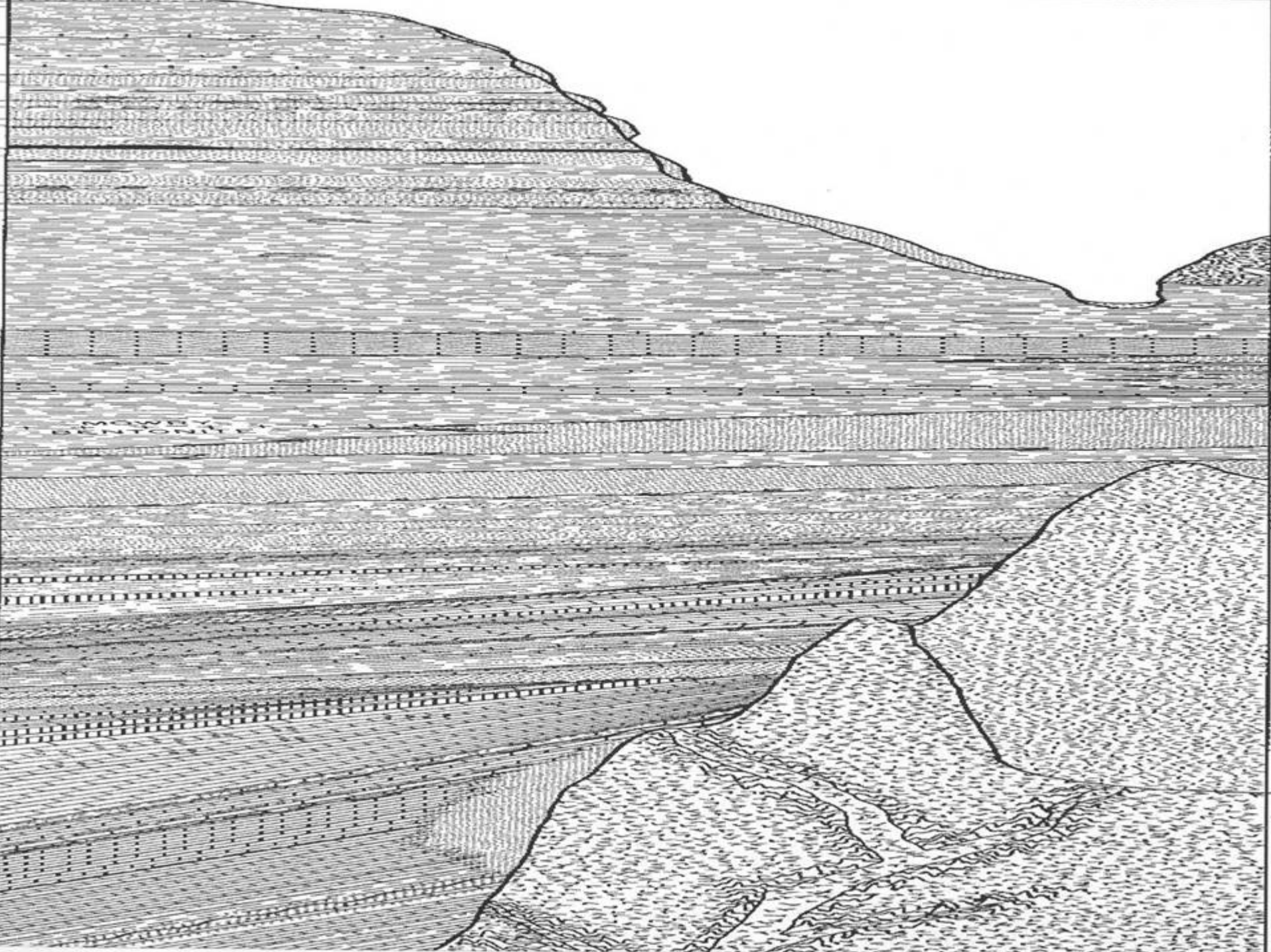

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SOUTH DAKOTA

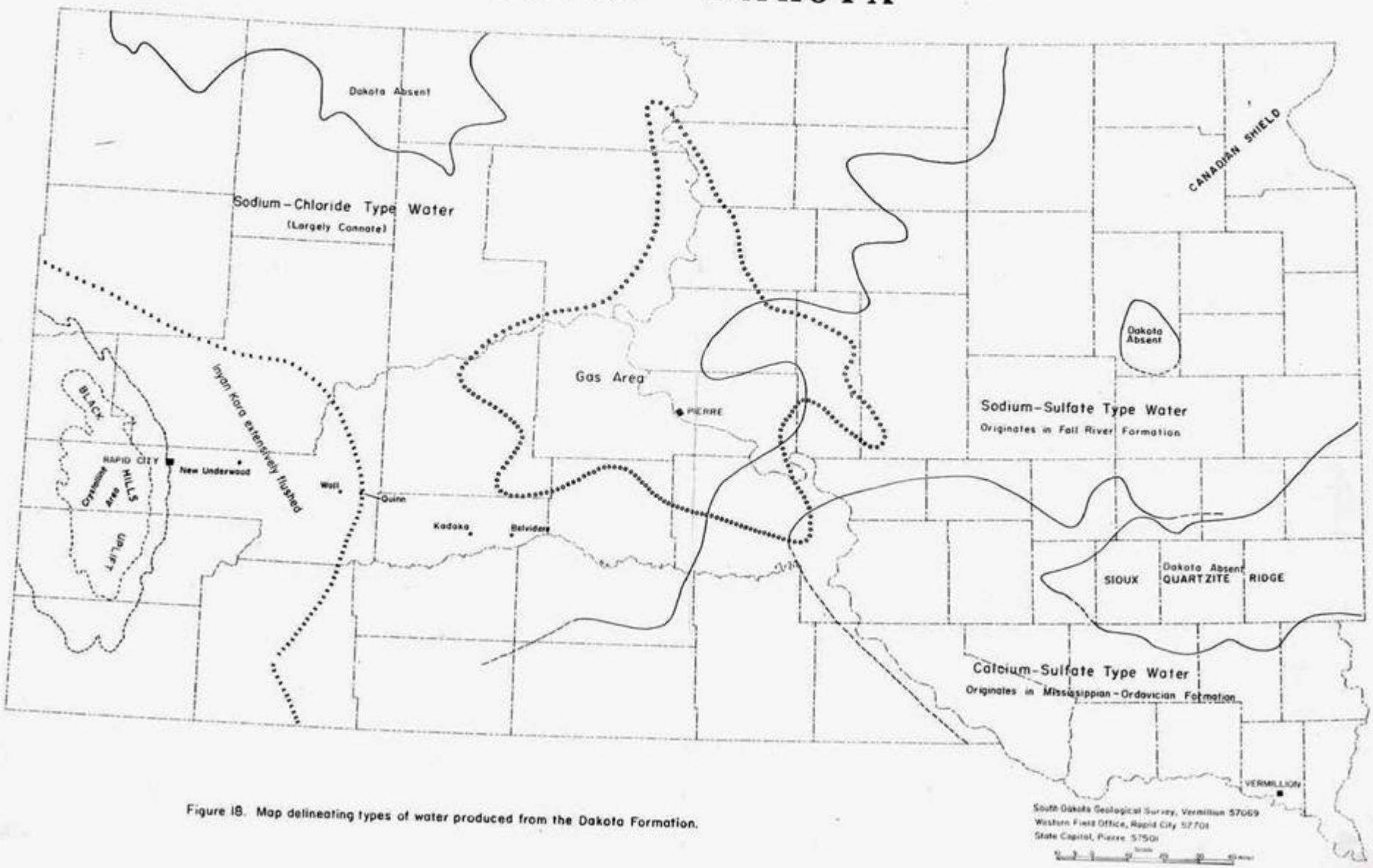

Figure 18. Map delineating types of water produced from the Dakota Formation.

SOUTH DAKOTA

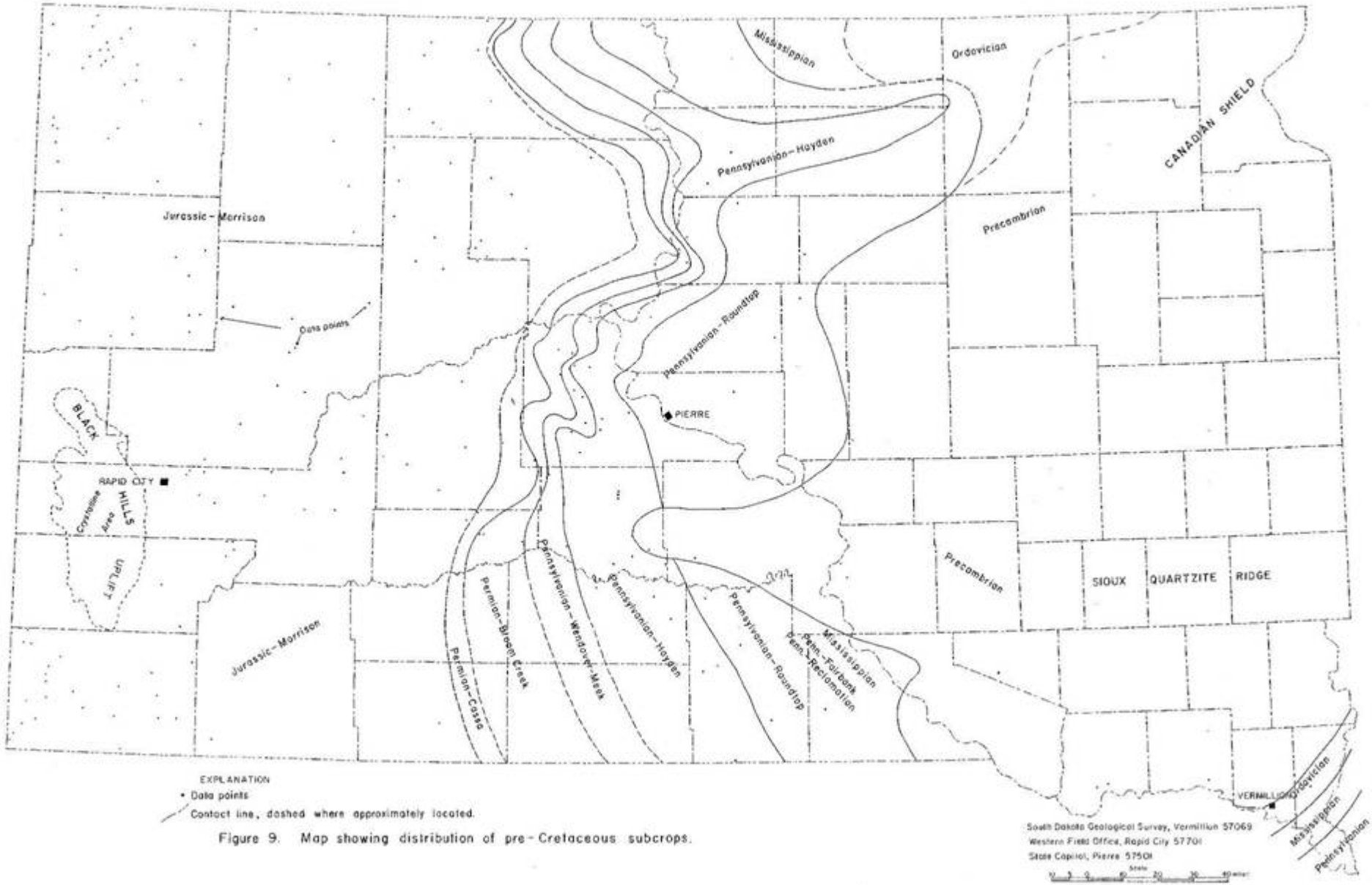

Figure 9. Map showing distribution of pre-Cretaceous subcrops.

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State Capitol, Pierre 57501

1971