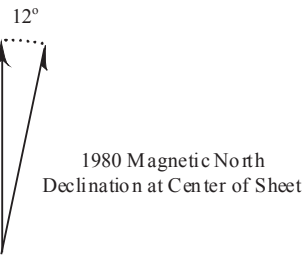


Lignite Reserves

Minot 100K Sheet, North Dakota

Kenmare	Mohall	Bottineau
Stanley		Velva
Parshall	Garrison	Drake



Edward C. Murphy

2007

The Minot 100K sheet encompasses most of Ward County and contains approximately 225 million tons of coal reserves (economically mineable coal). The Black Water Coulee Deposit in T.153N., R82W. contains about 81 million tons of coal. Both the Saron Church (T.153N., R83W.) and Bonnes Coulee (T.152N., R82W.) deposits contain about 60 million tons of coal (Murphy, 2006). Mineable coal thicknesses range from 14 to 17 feet in these deposits.

According to the records of the North Dakota Public Service Commission, 25 coal mines are known to have operated in this map sheet. Most of these were underground mines that were situated along either the Des Lacs or Souris River Valleys from Minot to Foxholm. The majority of mines were operating in the 1920s with several originating in the early 1900s. All mining ceased in this area by 1945. The target coal through much of the area was 8 to 10 feet thick and the largest of these operations mined up to 30,000 tons of coal per year. Six mines operated in the coulees and ravines that extend southwestward from the Souris River Valley in what are now the Blackwater and Bonnes Coulee Deposits. The Miller Mine (T.152N., R82W., section 11) was a surface operation that mined between 19,000 and 45,000 tons per year. The Miller Mine closed in 1965.

References
Murphy, E.C., 2006, The lignite reserves of North Dakota: North Dakota Geological Survey Report of Investigation no. 104, 141 p.

UNIT DESCRIPTIONS

Geology Undifferentiated

Economic Coal Deposits

Economic coal deposits are those that meet the minimum criteria established by coal companies operating surface mines in North Dakota. These economic criteria include a minimum cumulative coal thickness of ten feet-typically occurring in less than two beds, a minimum individual bed thickness of at least 2.5 feet, a ratio of overburden to coal thickness of not more than 10:1, a minimum of 25 feet of overburden, and a maximum depth to coal of approximately 150 feet.

Geologic Symbols

Extent of Local Lignite Reserves

Data Points
Includes coal exploration NDGS/USGS drill holes, sub-surface mineral drill holes, oil & gas wells, and NDSWC drill holes.

Abandoned coal mine plotted from the records of the Abandoned Mine Land Division of the North Dakota Public Service Commission.

Other Features

- | | |
|-----------------------------|-----------------|
| Water | County Boundary |
| Water - Intermittent | State Highway |
| River/Stream - Perennial | State Highway |
| River/Stream - Intermittent | Paved Road |
| Section Corners | Unpaved Road |

Scale 1:100,000

0 1 2 3 4
Miles

Mercator Projection 1927 North American Datum

Standard parallel 48°00' Central meridian 101°30'

Shaded Relief - Vertical Exaggeration 9x

The North Dakota Geological Survey can publish on demand 1:24,000 scale quadrangle maps (24k - c series) of the mineable coal deposits in the Minot 100k sheet. These maps include information on mineable coal thicknesses.

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