

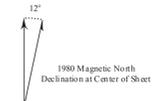


# Lignite Reserves

## Mott 100K Sheet, North Dakota

Belfield	Dickinson	Glen Ullin
Bowman		Elgin
Camp Creek	Lemmon	Mc Intosh

Adjoining 100K Maps



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There are more than 570 million tons of economically mineable lignite within the Mott 100k Sheet (Murphy et al., in press). The Coal Bank Creek deposit (Ts.134 & 135N., Rs. 95-97W.) contains about 180 million tons of coal on this sheet, 359 million tons in total. The Mehrer Creek deposit (114 million tons in Ts.132 & 133N., Rs. 92 & 93W.) is the only other deposit in this map sheet that contains more than 100 million tons of mineable coal (Murphy et al., in press). Due to the small size of the economic deposits in this sheet, the Coal Bank Creek deposit is likely the only one that would ever be considered for large-scale mining.

According to the records of the Abandoned Mine Lands Division of the North Dakota Public Service Commission, both surface and underground mining of the Harmon bed has taken place near Haynes, approximately seven miles east of Hettinger. Underground mining began in this area in 1911, but was replaced by surface mining in the 1950s. Leonardite, oxidized or weathered lignite, was mined by N.L. Baroid (currently the American Colloid Company) from 1971 to the 1990s when the operation was moved to the Gascoyne area in eastern Bowman County.

References  
Murphy, E.C., Kruger, N.W., and Goven, G.E., 1999. The major coals of Bowman, Slope, Adams, and Hettinger counties, North Dakota: North Dakota Geological Survey Open-File Report 99-1, 56 p.  
Murphy, E.C., 2006. The Lignite Reserves of North Dakota: North Dakota Geological Survey Report of Investigation No. 104.

### UNIT DESCRIPTIONS

- Geology Undifferentiated**
- Area of Mined Lignite**
- 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.

### Other Features

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

Scale 1:100,000



Mercator Projection 1927 North American Datum  
Standard parallel 46°00' Central meridian 102°30'  
USGS NED 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 Mott 100k sheet. These maps would include information on mineable coal thicknesses.

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