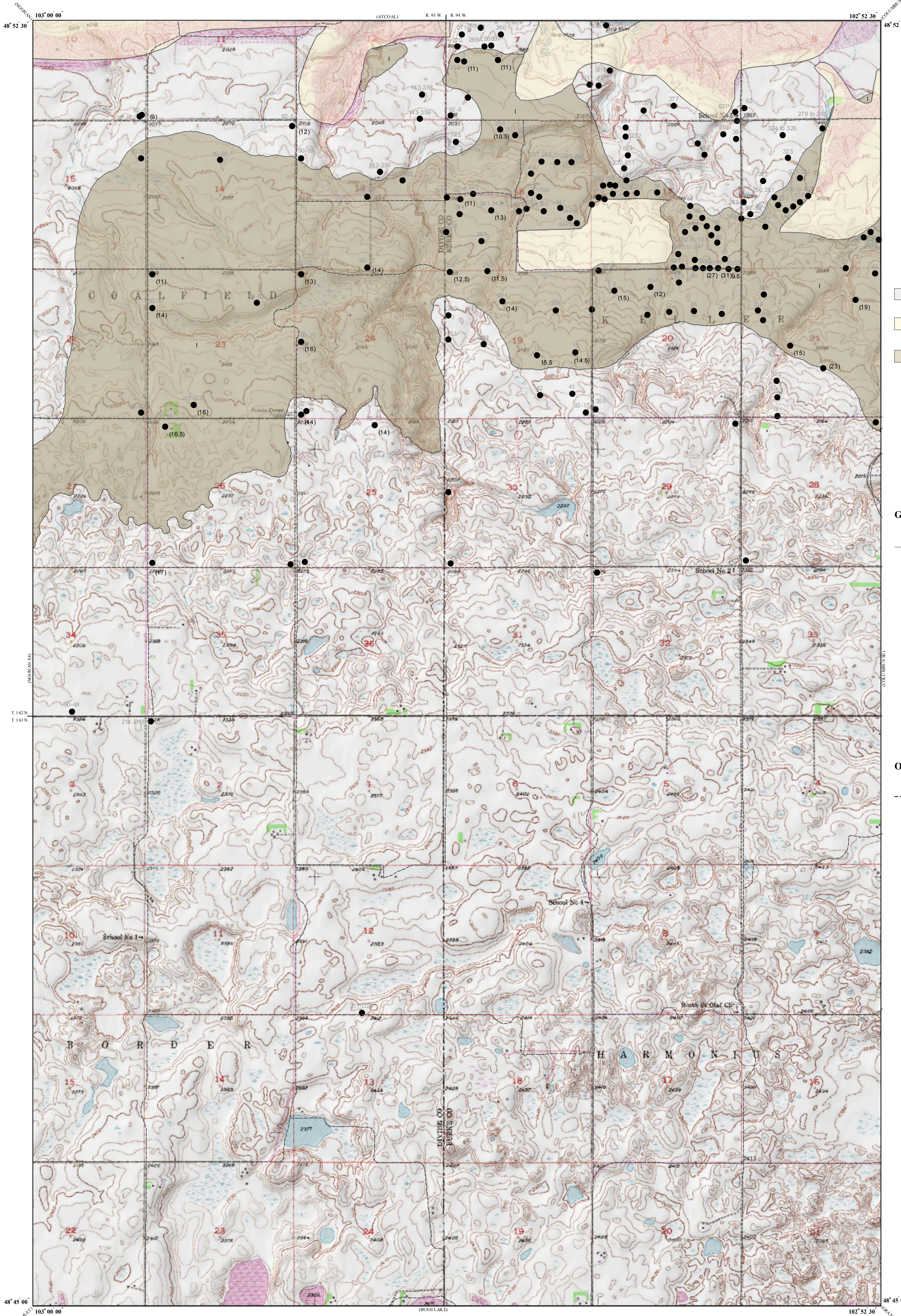


Lignite Reserves

Columbus SW Quadrangle, North Dakota

Edward C. Murphy
2008



UNIT DESCRIPTIONS

- Geology Undifferentiated
- Mined Area
- Economic Coal Deposits

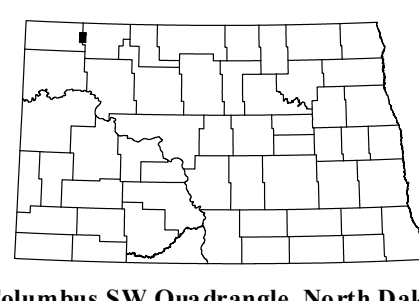
Economic coal deposits are those that meet the minimum criteria established by coal companies operating surface mines in North Dakota. These economic criteria include a minimum cumulative coal thickness of ten feet—typically occurring in less than two beds, a minimum individual bed thickness of at least 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 drill holes, and NDSWC drill holes.
- Drill Hole Numbers
- Thickness (in feet) of Mineable Lignite
15.5
Coal thicknesses were determined by interpretation of electric logs from individual drill holes. Gamma and density logs were typically available for coal exploration holes but, oil wells were often limited to a gamma log run through surface casing.

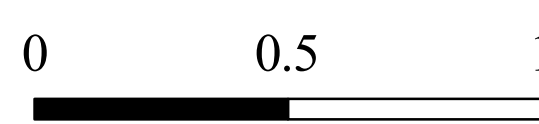
Other Features

- Unpaved Road



Columbus SW Quadrangle, North Dakota

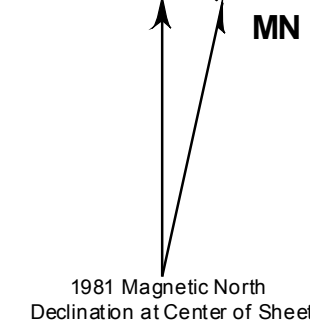
Scale 1:24,000



Miles

Lambert Conformal Conic Projection Standard Parallels 48° 45' 00" and 48° 52' 30"
1927 North American Datum NGVD 1929
USGS 7.5 Minute Topographic Map Contour Interval 10 Feet
Road Layer Rectified to 2003 NAIP Digital Orthophoto

12° 30'



1981 Magnetic North
Declination at Center of Sheet

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