

# Lignite Reserves

## Carlyle Quadrangle, North Dakota

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### UNIT DESCRIPTIONS

**GU** Geology Undifferentiated

**I** 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

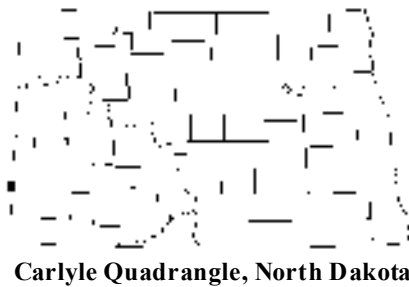
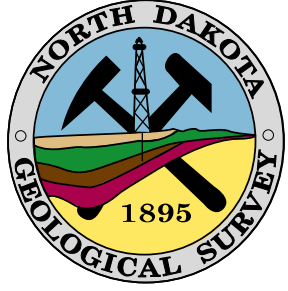
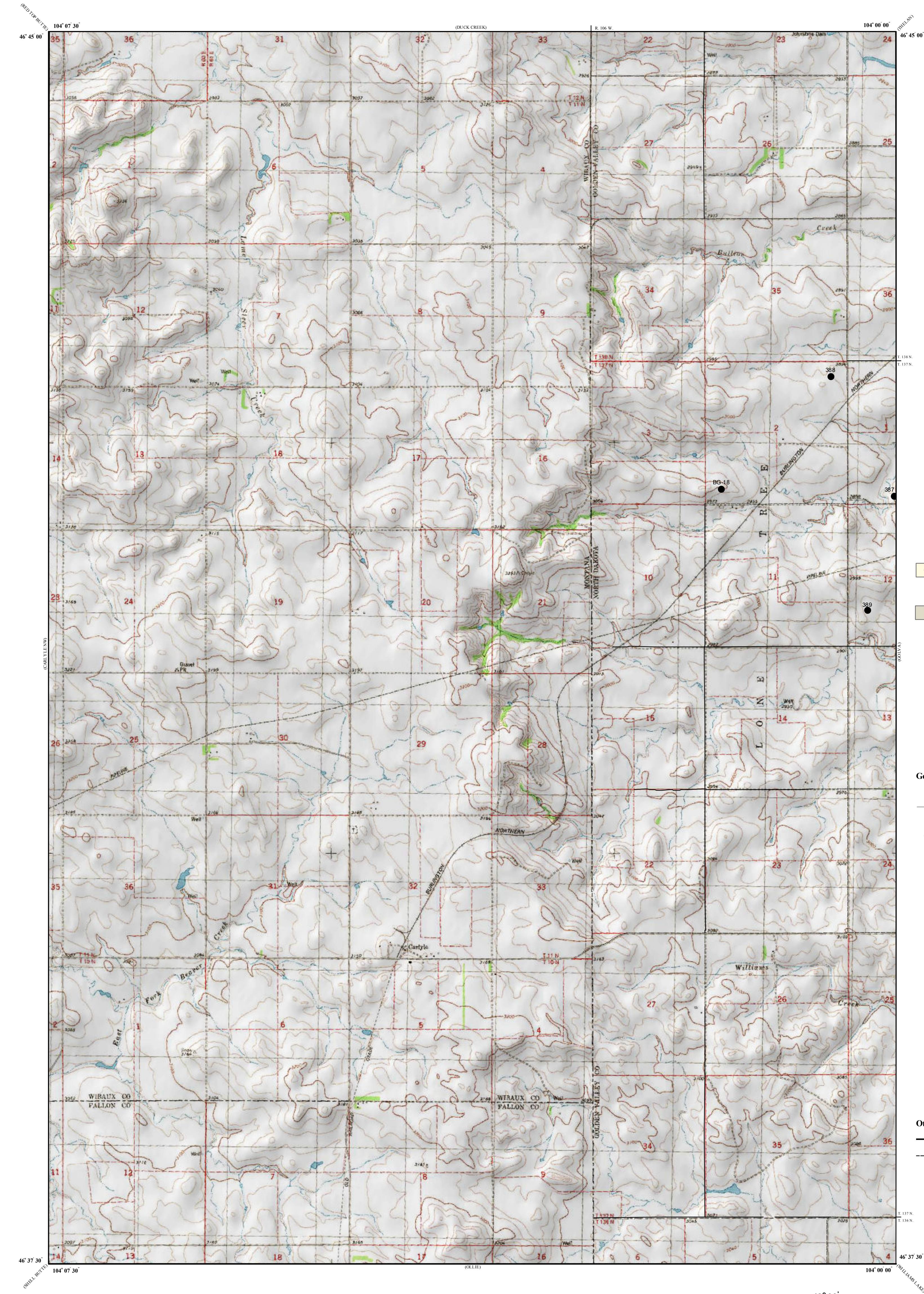
Extent of Local Lignite Reserves

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

● Drill Hole Numbers

### Other Features

— Paved Road  
--- Unpaved Road



Carlyle Quadrangle, North Dakota

Scale 1:24,000  
0 0.5 1  
Miles  
Lambert Conformal Conic Projection Standard Parallel 46° 37' 30" and 46° 45' 00"  
1927 North American Datum NGVD 1929  
USGS 7.5 Minute Topographic Map - Contour Interval 20 Feet

12° 30'  
MN  
1981 Magnetic North  
Declination at Center of Sheet