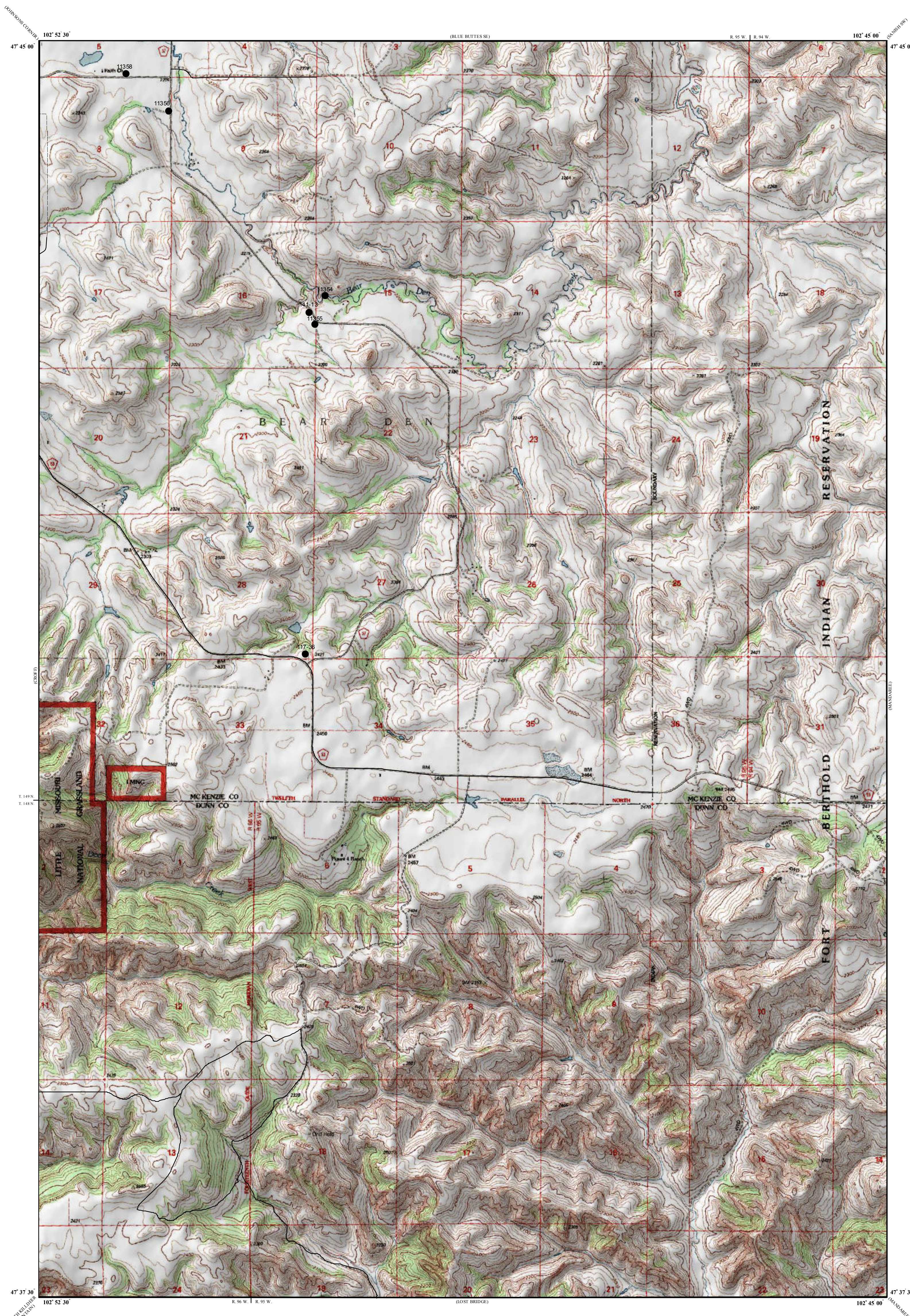


Lignite Reserves

Figure 4 Ranch Quadrangle, North Dakota

Edward C. Murphy
2008



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.
- 11354 ● Drill Hole Numbers

Other Features

- Paved Road
- - - - Unpaved Road

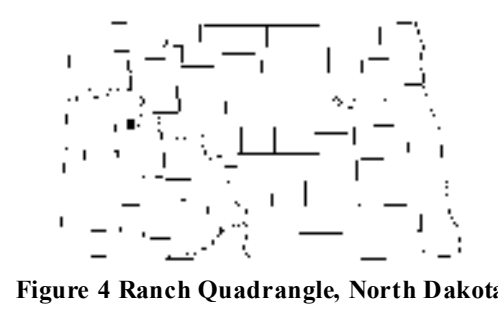
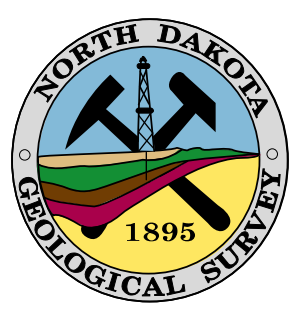


Figure 4 Ranch Quadrangle, North Dakota

