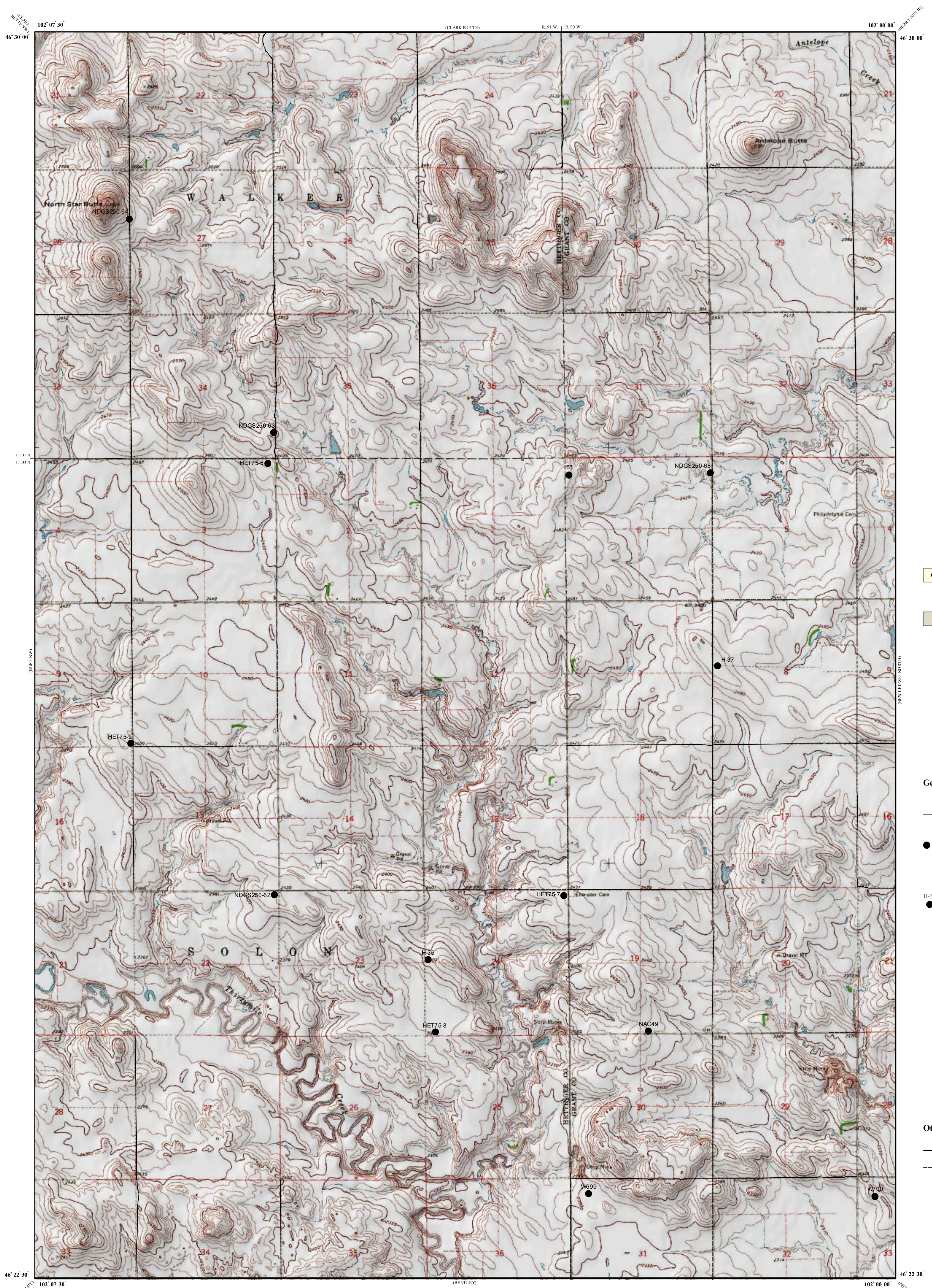


North Star Butte Quadrangle, North Dakota

Edward C. Murphy
2009



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

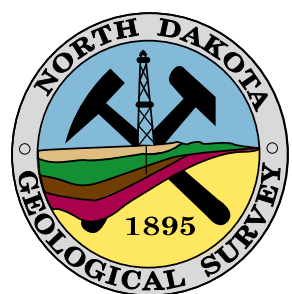
— Extent of Local Lignite Reserves

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

H-37
● Drill Hole Numbers

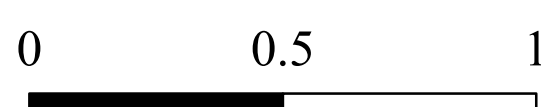
Other Features

 Paved Road
 Unpaved Road



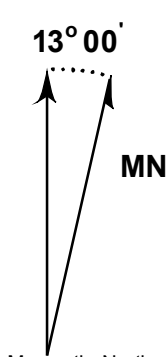
North Star Butte Quadrangle, North Dakota

Scale 1:24,000



Miles

Lambert Conformal Conic Projection Standard Parallels 46° 22' 30" and 46° 30' 00"
1927 North American Datum NGVD 1929
USGS 7.5 Minute Topographic Map - Contour Interval 10 Feet



1969 Magnetic North
Declination at Center of Sheet

Cartographic Compilation: Steve Kranich