
NORTH DAKOTA'S LIGNITE RESOURCES AND RESERVES

By Ed Murphy

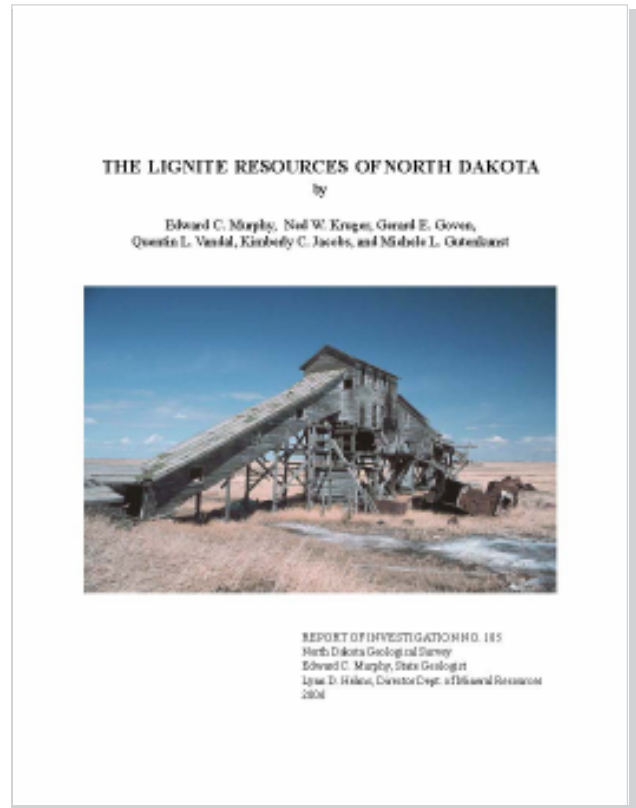
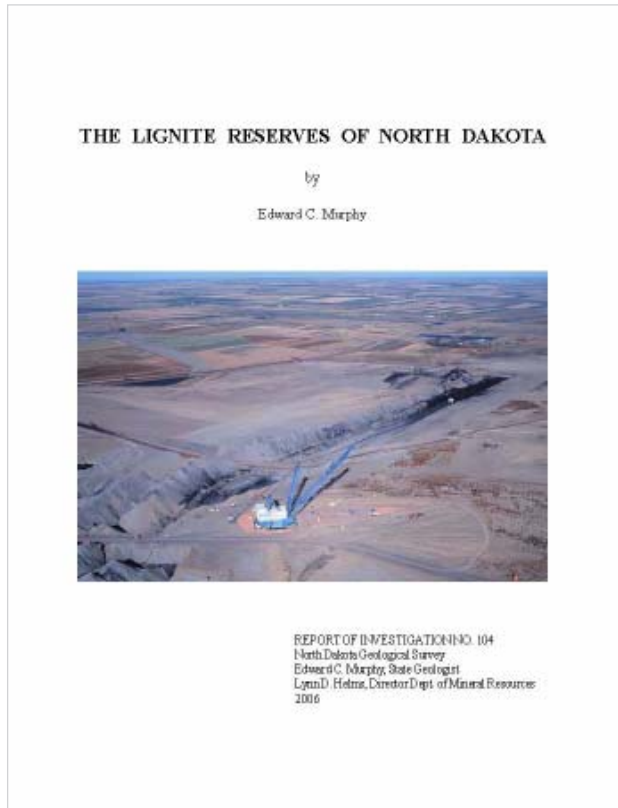
Two major coal reports were recently published by the North Dakota Geological Survey. Report of Investigation No. 104 (*The Lignite Reserves of North Dakota*) is a detailed accounting of all of the mineable coal deposits in the State by bed thickness, tonnages, etc. The report contains maps, cross sections, and tables of the mineable deposits. This publication is a companion report to *The Strippable Lignite Deposits of North Dakota* published by the Geological Survey in 2001 (North Dakota Geological Survey Miscellaneous Map No. 34). Conventional surface mining techniques in North Dakota dictate that economically mineable coal deposits meet several criteria including that they be ten or more feet thick and within about 150 feet of the surface.

Report of Investigation No. 105 (*The Lignite Resources of North Dakota*) concluded that there are approximately 1.3 trillion tons of coal in North Dakota, two to four times more than had been previously estimated. Coals within the Fort

Union Group in North Dakota extend to a maximum depth of about 1,800 feet at the center of the Williston Basin near Watford City in McKenzie County. While only 2% of this resource (25 billion tons) is economic by conventional surface mining practices, other potentially economic uses for coal such as *in situ* gasification, coalbed methane, and carbon sequestration may result in more beneficial use of this resource in the future.

Prior to these studies, it had been more than 50 years since a comprehensive analysis of North Dakota's lignite deposits had been undertaken. We currently have a database of about 20,000 holes at our disposal, at least one order of magnitude more than was available to previous studies.

A limited number of RI-104 were printed and are available in color for \$15. CDs of both RI-104 and RI-105 are available for \$5.



Two recently completed coal reports by the North Dakota Geological Survey.