

Coal in Burleigh County—Practically all the mines in this area are in the northwestern part of the county, in the vicinity of Wilton. The Washburn Mine, in sec. 1, T. 142 N., R. 80 W., is the largest and most thoroughly equipped mine in North Dakota.

The coal bed is reached by a shaft 60 feet deep. The lignite varies in thickness from 8 to 13 feet and has a thin clay parting near the bottom. The entries are unusually wide and timbering is necessary. As a rule, 6 to 8 feet of the coal are mined out first, leaving lignite for a roof, which is taken down when the pillars are pulled. The underground equipment, which is very complete and efficient, consists of electric undercutting machinery and electric motors for haulage.

Chemical analyses and producer gas, briquetting and steaming tests.—The following analyses and producer gas tests were made of samples taken from the Washburn Mine at Wilton and show the general nature and composition of the fuel.

*Analyses of Lignite from Wilton, North Dakota.*²

	Mine Samples		Car sample
Air-drying loss	32.30	33.50	12.70
Moisture	10.53	41.88	35.96
Proximate Volatile matter	27.05	26.11	31.92
Fixed carbon	27.37	26.73	24.37
J Ash		5.05	7.75
Sulphur76	I	I 1.1
Ultimate: Hydrogen			6.54
Carbon			41.43
Nitrogen			p.21
Oxygen			41.92
Caloric value determined:			
Calories	3,691		3,927
British thermal units	6,644	I	7,069

These analyses were made at the fuel-testing plant of the United States Geological Survey at St. Louis.

Another consideration that adds materially to