Miscellaneous Map No. 35
North Dakota Geological Survey
John P. Bluemle, State Geologist

THE HARMON LIGNITE BED IN WESTERN NORTH DAKOTA

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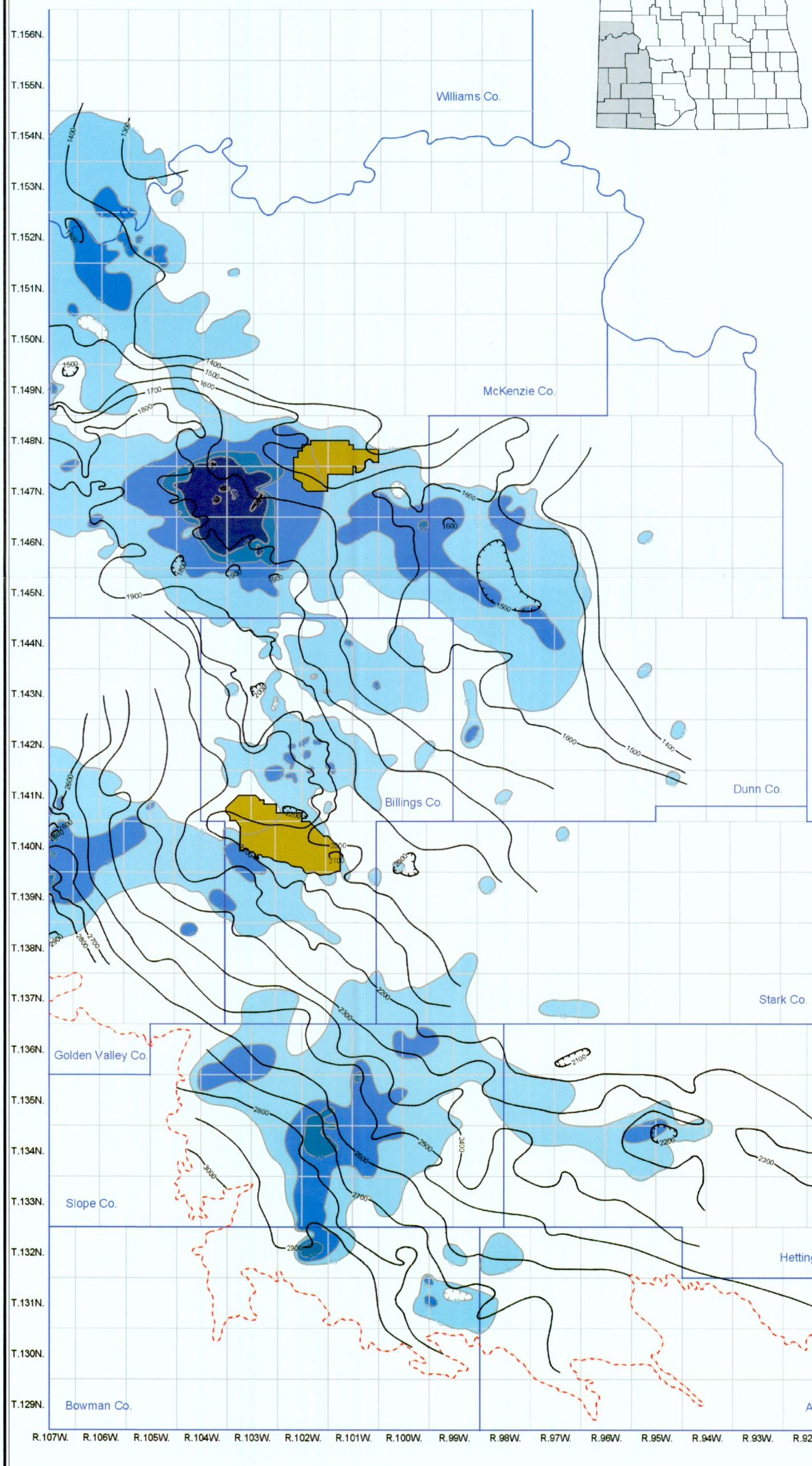

The Harmon lignite bed occurs in the lower Bullion Creek Formation (Paleocene) of the Fort Union Group in western North Dakota. The Harmon bed is the most extensive lignite in the North Dakota portion of the Williston Basin. It extends over an area of approximately 13,000 square miles, roughly one-third the total area underlain by coal-bearing strata in the state. The Harmon bed was correlated using electrical logs from more than 6,900 coal and uranium test holes, water wells, and oil wells. The Harmon bed averages about 18 feet thick, compared to a range of 6 to 20 feet for the Hanson bed, a lignite that occurs from a few feet up to 50 feet beneath the Harmon. The Harmon bed reaches a maximum thickness of 53 feet in south-central McKenzie County, the thickest known occurrence of lignite in North Dakota. In that area, the Harmon is 400 to 800 feet beneath the surface, the variation in depth due to a combination of badlands topography and dip of the bed. The Harmon bed is 500 to 900 feet beneath the surface in northern and central Billings County and western Dunn County. In northeastern Slope County, the Harmon bed is 300 to 600 feet deep. The Harmon is mineable by surface methods, ie., within 170 feet of the surface, in western Golden Valley County, southwestern Billings County, central Slope County, and north-central and northeastern Bowman County.

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