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THE MIDDLE THREE FORKS (2ND BENCH) IN THE BAKKEN PETROLEUM SYSTEM CONTAINS HUNDREDS OF MILLIONS OF BARRELS OF UNDEVELOPED RECOVERABLE OIL

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REPORT OF INVESTIGATION 135 & REPORT OF INVESTIGATION 136

BISMARCK, ND – Nathan Anderson, Director of the North Dakota Department of Mineral Resources, and Ed Murphy, North Dakota State Geologist, announced the completion of a case study evaluating the middle Three Forks reservoir within the Bakken Petroleum System. The study results indicate that significant undeveloped oil resources remain in this reservoir across a portion of western North Dakota.

Following the 2006 discovery of the Parshall Field in western North Dakota, oil and gas companies primarily targeted the Middle Bakken with horizontal wells. The upper Three Forks later developed into a second established exploration and development target during 2008-2010. Then, beginning in 2013, the middle Three Forks began to be targeted. To date, over 360 horizontal wells have been drilled and completed in the middle Three Forks which have produced over 92 million barrels of oil and 238 billion cubic feet of gas. These wells have amounted to ~2% of the drilling activity in the Bakken-Three Forks petroleum system, and ~1.7% of the total oil production to date. While drilling and completion activity in the middle Three Forks has been relatively steady, questions remain regarding whether developing the middle Three Forks adds to long-term oil and gas recovery or simply accelerates the rate of recovery, producing the same amount of oil and gas but at a faster rate.

An initial phase of the study was completed early in 2024 which led to a second, larger phase that was completed in 2024. Between the two phases, historical and future projected oil production was evaluated from 593 horizontal wells spanning fifty-one 1280-acre drilling spacing units. A total of 25 drilling spacing units evaluated contained middle Three Forks horizontal wells, of which 17 exhibited a clear volumetric addition of oil from middle Three Forks development (68%), six did not (24%), and in two (8%) the contribution was unclear. Additionally, the study results indicate that developing the middle Three Forks reservoir, when sufficiently charged with oil, will add on the order of 1-2 million barrels of additional recoverable oil per 1280-acre drilling spacing unit. The development of the initial prospective area of northeastern McKenzie County is estimated to require the drilling and completion of more than 600 additional middle Three Forks wells, which could produce more than 250 million barrels of oil. Additional middle Three Forks resource potential lies outside of the study area, and there is significant potential for this development opportunity to grow.

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