STATE OF NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES OIL CONSERVATION DIVISION

APPLICATION OF BLACK RIVER WATER MANAGEMENT COMPANY, LLC TO AMEND ADMINISTRATIVE ORDER SWD-1628 FOR A SALT WATER DISPOSAL WELL IN EDDY COUNTY, NEW MEXICO.

CASE NO. 15854

SELF-AFFIRMED DECLARATION OF BRADLEY M. ROBINSON

- 1. My name is Bradley M. Robinson. I am over the age of eighteen, of sound mind, and am competent to make this self-affirmed declaration, which is based on my personal knowledge, and given pursuant to New Mexico Rules of Civil Procedure Rule 1-011(B) NMRA.
- 2. I am employed by MRC Energy Company as a petroleum engineer. My current position is Senior Vice President of Reservoir Engineering and Chief Technology Officer. The applicant in this case, Black River Water Management Company, LLC, ("Black River") is an affiliate of MRC Energy Company.
- 3. After concluding Black River's technical presentation to increase the injection tubing size in the Rustler Breaks SWD No. 2 well from 4.5 inches to 5.5 inches at the Division hearing on October 12, 2017, the Division's hearing examiner requested that Black River provide supplemental information, including an analysis to determine the radial extent of injection fluids after a period of twenty years. *See* Case No. 15854, Hearing Tr. 37:17-24, dated 10/12/17.

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- 4. In response to that request, I used confidential and proprietary company data to develop a numerical reservoir simulation model to estimate the expected radial extent of the fluid front resulting from the injection of produced water into the Rustler Breaks SWD No. 2 well. I used this model to evaluate two different reservoir conditions across a bracketed range of reservoir thickness and permeability based on the company's proprietary data obtained during the drilling and completion of the well. The model assumed the well would inject 40,000 barrels of produced water per day, which is the rate of injection anticipated with 5.5-inch tubing, over a period of twenty years. I presented my interpretation of the data and the model results to the Division's hearing examiner in a meeting with the Division on Friday, November 3, 2017, in the Division's Santa Fe office.
- 5. I affirm under penalty of perjury under the laws of the State of New Mexico that the foregoing statements in Paragraphs 1-4 are true and correct. I understand that this self-affirmed declaration will be used as written testimony in this case. This declaration is made on the date next to my signature below. *See* Rule 1-011(B) NMRA.

Bradley M. Robinson, P.E.

Date

11/14/17

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