OIL & GAS COMMISSION

ORDER NO. 050-2024-09 **December 2, 2024**

Smackover Limestone Formation
Columbia, Lafayette, Miller, and Union Counties, Arkansas

ESTABLISHMENT OF FAIR AND EQUITABLE CONSIDERATION FOR PROFITABLE EXTRACTION OF LITHIUM FROM BRINE

After due notice and public hearing in El Dorado, Arkansas, on November 4 and 5, 2024, the Arkansas Oil and Gas Commission ("AOGC" or "Commission"), in order to prevent waste, carry out an orderly program of development, and protect the correlative rights of each owner in the common source(s) of supply, has found the following facts and issued the following Order.

STATEMENT OF THE CASE

Albemarle Corporation ("Albemarle"), Saltwerx, LLC ("Saltwerx"), SWA Lithium LLC ("SWA"), LANXESS Corporation ("LANXESS"), and TETRA Technologies, Inc. ("TETRA") (collectively the "Co-Applicants"), jointly filed an Application requesting the Commission to issue an Order setting forth the methodology to fairly and equitably compensate underlying brine royalty owners of brine interests within Columbia, Lafayette, Miller, and Union Counties for the additional value of lithium ions to be profitably extracted from brine produced within the Co-Applicants' existing and proposed future units and/or producing areas.

FINDINGS OF FACT

Based upon the Application filed, the exhibits as introduced and made a part of the record, inclusive of those offered on behalf of the Commission, and other evidence presented by the Co-Applicants and other interested parties in said proceeding, the Commission finds that:

1. The Co-Applicants together with their affiliates own, in the aggregate, interests in brine leases and integration orders in the above-named Arkansas counties covering more than five hundred thousand (500,000) acres, from which they currently are producing or intend to produce brine and extract the chemical element lithium. The Co-Applicants filed an Application, as later amended, requesting that the Commission determine the fair and equitable consideration owed to brine royalty owners for the profitable extraction of lithium from brine produced within the Applicants' existing and proposed future units and/or producing areas.

2. Ark. Code Ann. § 15-76-315(c)(1) requires that additional consideration be remitted to each owner in a unit when a producer profitably extracts lithium from brine. This section reads as follows:

> In addition to any other amounts due and owing by the producer or producers of any unit to the owners therein, the producer or producers shall account separately and on a fair and equitable basis to each owner in the unit for all substances which are found by the commission to be profitably extracted from brine by a producer and which were not extracted by a producer on January 1, 1979.

3. The Co-Applicants proposed the following uniform methodology for calculating the additional fair and equitable consideration payable to brine royalty owners for the extraction of lithium from brine in the Co-Applicants' existing or proposed future units and/or producing areas:

   Volume x Price x Royalty Rate x Brine Royalty Owners' Interest = Royalty Payment

4. The methodology was introduced by the Co-Applicants as follows:

   a. **VOLUME – DEFINED AS LITHIUM CARBONATE EQUIVALENT PRODUCED.** The Co-Applicants stated that neither brine nor lithium ions, at their low concentrations, have any value at the wellhead or point of extraction. Instead, the Co-Applicants asserted that the value to be realized from lithium extraction will come from the specialty products manufactured from the extracted lithium ions. Such specialty products include lithium carbonate, lithium hydroxide, lithium oxide, and/or other lithium product derivatives.

      The Volume component of the above-referenced methodology is defined as the first marketable product produced converted to Lithium Carbonate Equivalent ("LCE"). LCE is a standardized measure used to compare the lithium content in different lithium-containing specialty products derived from the brine. The volume of lithium within each specialty product is measured by comparing each product's unique molecular lithium concentration to that within lithium carbonate.

   b. **PRICE – DEFINED AS LITHIUM CARBONATE EQUIVALENT MARKET INDEX PRICE.** The Co-Applicants stated that using actual sales proceeds from the sales of diverse specialty products as a basis for royalty calculation is not feasible because that type of information is considered confidential and/or based on trade secrets. The Co-Applicants further stated that publishing actual sales prices for these products presents potential antitrust concerns and could disadvantage the brine industry development in South Arkansas.

      Instead, the Co-Applicants proposed a methodology in which the price is determined by a market-based index based on the first marketable product, lithium carbonate, represented by the technical grade lithium carbonate index for North American markets published by FastMarkets (the "Index"). The Index is adjusted for each manufactured product in accordance with its LCE value. The Co-Applicants asserted

that the Index represents a fair and equitable value of such product with connected market transparency and consistency, while protecting the producers' proprietary product and confidential marketing information and providing uniformity among brine royalty owners. The Co-Applicants further asserted that this particular technical grade index is the most appropriate value measurement because it represents the first marketable product in the variety of lithium-containing products or derivatives. The Co-Applicants stated that while indices exist for the valuation of other grades or derivatives of lithium-containing products, such product indices reflect incremental value from further refining/manufacturing beyond the value contributed by the base lithium element.

The Co-Applicants proposed that the value determination should be made quarterly, in compliance with Ark. Code Ann. § 15-76-315(c)(3), using the quarterly average of the Index's daily spot market prices.

c. **ROYALTY RATE – DEFINED AS A PERCENTAGE, HEREIN 1.82%.** The Co-Applicants stated that in order to transform brine with additional substances (in this case, lithium) into specialty products, developers involved in lithium production would need to invest a significant amount of capital in processing facilities where the raw materials would be converted into final products and in the development of emerging technology.

The Co-Applicants stated that the predominant elements of cost, expertise, technical know-how, and risk associated with lithium production will be incurred after the brine reaches the wellhead. The Co-Applicants asserted that for that reason, the value of wellhead brine is a mere fraction of the value of products manufactured using materials extracted from that brine. The lithium ion which will be extracted from the brine is of minimal value until it is processed. Realizable value comes from transforming the lithium extracted from the brine into lithium carbonate or another compound with a LCE measurable value.

The Co-Applicants proposed that the mineral owners be compensated at 1.82% of the LCE average technical grade index value of the first lithium carbonate, lithium hydroxide, lithium oxide, and/or other lithium product derivatives manufactured from lithium ions extracted from brine by any of the Co-Applicants from brine produced within existing and proposed future units and/or producing areas located in the Referenced Counties, whether formed by Order of the Commission or pursuant to authority contained within brine leases.

d. **BRINE ROYALTY OWNERS' INTEREST – DEFINED AS A PERCENTAGE OF EACH BRINE ROYALTY OWNER'S NET ACREAGE WITHIN A BRINE PRODUCING AREA OR UNIT.** The Co-Applicants' requested that the royalty applicable to the extraction of lithium ions be distributed to the brine royalty owners within their respective brine units and/or producing areas based upon each such owner's proportional net acreage therein.

5. On September 10, 2024, G. Alan Perkins of PPGMR Law, PLLC filed an objection on behalf of the South Arkansas Minerals Association, and on September 20, 2024, R. Patrick Hickey filed an objection on behalf of Simmons Bank, Wayne Weathersby, the M. Johnson Family Limited Partnership, and the Eddy Family (collectively the "Hickey Objectors"). In response to the objections filed by G. Alan Perkins and R. Patrick Hickey, the Co-Applicants filed three Motions, including two Motions for Declaratory Judgment and a Motion to Quash subpoenas issued by the Commission Hearing Officer.

6. On October 15, 2024, the Commission's Hearing Officer, after hearing arguments and reviewing the motions, responses, and replies filed with the Commission, issued a recommended decision on all issues presented in the Co-Applicants' Motions referenced in paragraph 5 above. This recommended decision included the following:

   a. The Commission Hearing Officer granted the Co-Applicants' motion relating to the Hickey Objectors and found that: (1) the AOGC is empowered by statute to determine royalties on additional extracted substances; (2) the AOGC lacks jurisdiction during an administrative hearing process to declare the Brine Act unconstitutional and the Brine Act is presumed to be constitutional until a court says otherwise; and (3) the brine leases and integration orders covering the brine interests owned by the Hickey Objectors include all chemical substances extracted from brine, including lithium and lithium chloride.

   b. The Commission Hearing Officer granted in part and denied in part the Co-Applicant's motion for declaratory judgment relating to the Perkins objection and found that: (1) the Co-Applicants' Application does not violate the Arkansas Administrative Procedure Act; (2) the Brine Act requires that a royalty rate on "additional substances" be determined on a brine unit basis, but multiple brine units can be consolidated into one Application and docket; (3) if the Commission determines that a "brine unit" is synonymous with a brine "operational area," then Albemarle has standing to participate in this docket – if not, then Albemarle should be dismissed from the docket to create clear legal boundaries between "brine units" and "brine operational areas"; and (4) the Brine Act requires a threshold, or condition precedent, determination that any additional substances from brine can be profitably extracted before determining a royalty rate for those substances.

   c. The Commission Hearing Officer recommended that the Co-Applicants' Motion to Quash the issued subpoenas be denied.

7. At the hearing on the merits of the Application, the Commission granted the Motion for Declaratory Judgment filed by the Co-Applicants against the Hickey Objectors and denied the Motion to Quash the issued subpoenas. The Commission further found that Albemarle had standing to participate in the docket, and otherwise adopted the Commission Hearing Officer's recommended decision granting in part and denying in part the Co-Applicants' Motion for Declaratory Judgment filed concerning the G. Alan Perkins objection.

8. On October 29, 2024, the Co-Applicants filed an amended Application, submitted proof of notice publications, and submitted an affidavit of service for named interested parties. The amended Application and its exhibits included new references to designated lands within the Co-Applicants' existing and proposed future brine developments.

9. Numerous other written objections and letters of support were filed and made part of the record. During the hearing, oral comments were allowed to be presented by the general public, and attorneys of record who attended the hearing were allowed to present evidence and make arguments.

10. The following attorneys entered their appearance on behalf of their clients:

    a. Thomas A. Daily of Daily & Woods, PLLC on behalf of the collective Co-Applicants;

    b. Carolyn Clegg of Keith & Clegg on behalf of Saltwerx, LLC;

    c. Robert Honea of Hardin, Jesson and Terry on behalf of SWA lithium, LLC;

    d. G. Alan Perkins of PPGMR Law, PLLC on behalf of the South Arkansas Minerals Association;

    e. R. Patrick Hickey on behalf the M. Johnson Family Limited Partnership, Simmons Bank in its capacity as Trustee of any Trust that owns minerals or brine royalties in the Referenced Counties, Wayne Weathersby, Donald Anthony Eddy, Trustee of the Donald Anthony Eddy 2015 Trust Agreement dated September 13, 2015, Donald Anthony Eddy and Cole Reeves Eddy, Co-Trustees of The Donald Anthony Eddy Non-Exempt Trust, and Betty Whiddon Eddy;

    f. James D. Rankin III and Forrest C. Stobaugh for Robin Cheatham, Pat Cheatham, Tyree Sherman Jr., Robbie L. Sherman, Elizabeth A. Burrell (Sherman), Janice Bradford, Joyce A. Martin, James C. Bradford Jr., Oliver D. Sherman, Wanda Williams, Emma Jackson, Terry Williams, Dorothy Jordan, Thurman Story, S.T. Crone Ltd., Indaba Investments, Panan Energy, Inc., Anthony Energy Ltd., Janice Weatherspoon, Gary Wallace, Leonard Wallace, Gregory Wallace, Lloyd Parker, Rebecca Boatman, Terry Reagan, Jenny Crone, Patricia Nelson, Herman Parker, and The Corbin and Bell Families; and

    g. Karen Talbot Gean on behalf of Tullamore, LLC, Paul H. Spaht, Katherine Shaw Spaht, and William Marshall Shaw, Jr.

11. At the conclusion of the evidentiary hearing, the Commission denied the Co-Applicants' Application, as amended and presented.

CONCLUSIONS OF LAW

1. That this Commission has jurisdiction over said parties and the matter herein considered.

2. That this Commission has authority to grant or deny the Application under the provisions of Act No. 937 of 1979, as amended.

ORDER

Now, therefore, it is Ordered that the Co-Applicant's Application, as amended and presented at the hearing on November 4 and 5, 2024, is hereby denied.

This Order shall be effective from and after **December 2, 2024** and the Commission shall have continuing jurisdiction for the purposes of enforcement and/or modifications or amendments to the provisions of this Order.

ARKANSAS OIL AND GAS COMMISSION



Lawrence E. Bengal Director
Director