Exhibit 96.6

MAGNOLIA FIELD BROMINE RESERVES AS OF DECEMBER 31, 2024

Magnolia, Arkansas, USA, property of Albemarle Corporation

716-RPS223461
Final
12 February 2025

rpsgroup.com

RESERVE EVALUATION

MAGNOLIA FIELD BROMINE RESERVES AS OF DECEMBER 31, 2024

Magnolia, Arkansas, USA, property of Albemarle Corporation

Approval for issue		
Michael Gallup, P. Eng.	Michael.Gallup@rpsgroup.com	29 January 2025

Prepared by:

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RPS Ref: 716-RPS223461

February 12, 2025

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MAGNOLIA FIELD BROMINE RESERVES AS OF DECEMBER 31, 2024
Technical Report Summary as of December 31, 2024

As requested in the engagement letter dated January 6th. 2025, RPS and RESPEC have evaluated certain Bromine reserves and resources in the Magnolia field, Arkansas, USA, as of December 31, 2024 ("Effective Date") and submit the attached report of our findings. The evaluation was conducted in compliance with subpart 1300 of Regulation SK.

This report contains forward looking statements including expectations of future production and capital expenditures. Potential changes to current regulations may cause volumes actually recovered and amounts future net revenue actually received to differ significantly from the estimated quantities. Information concerning reserves and resources may also be deemed to be forward looking as estimates imply that the reserves or resources described can be profitably produced in the future. These statements are based on current expectations that involve a number of risks and uncertainties, which could cause the actual results to differ from those anticipated. These risks include, but are not limited to, the underlying risks of the mining industry (i.e., operational risks in development, exploration and production; potential delays or changes in plans with respect to exploration or development projects or capital expenditures; the uncertainty of resources estimates; the uncertainty of estimates and projections relating to production, costs and expenses, political and environmental factors), and commodity price and exchange rate fluctuation. Present values for various discount rates documented in this report may not necessarily represent fair market value of the reserves or resources.

Yours sincerely,
for RPS Energy Canada Ltd

Michael Gallup
Technical Director – Engineering
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12 February 2025

February 12, 2025

CONSENT OF QUALIFIED PERSON

RPS Energy Canada Ltd. ("RPS"), in connection with Albemarle Corporation's Annual Report on Form 10-K for the year ended December 31, 2024 (the "Form 10-K"), consents to:

- the public filing by the Company and use of:

- the technical report titled "SEC Technical Report Summary for Jordan Bromine Operation" (the "Jordan Bromine Technical Report Summary"), with an effective date of December 31, 2024 and dated February 12, 2025;

- the technical report titled "SEC Technical Report Summary for Magnolia Field Bromine Reserves" (the "Magnolia Technical Report Summary" and together with the Jordan Bromine Technical Report Summary, the "Technical Report Summaries"), with an effective date of December 31, 2024 and dated February 12, 2025

that were prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission and filed as exhibits to this Form 10-K;

- the incorporation by reference of the Technical Report Summaries into the Company's Registration Statements on Form S-3 (No. 333-269815) and the Registration Statements on Form S-8 (No. 333-150694, 333-166828, 333-188599, 333-223167 and 333-271578) (collectively, the "Registration Statements");

- the use of and references to our name, including our status as an expert or "qualified person" (as defined in Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission), in connection with the Form 10-K, the Registration Statements and the Technical Report Summaries; and

- any extracts from or a summary of the Technical Report Summaries in the Form 10-K and incorporated by reference in the Registration Statements and the use of any information derived, summarized, quoted, or referenced from the Technical Report Summaries, or portions thereof, that was prepared by us, that we supervised the preparation of, and/or that was reviewed and approved by us, that is included or incorporated by reference in the Form 10-K and the Registration Statements.

RPS is responsible for authoring, and this consent pertains to, the Technical Report Summaries. RPS certifies that it has read the Form 10-K and that it fairly and accurately represents the information in the Technical Report Summaries for which it is responsible.

RPS Energy Canada Ltd.

By:

Name: Michael Gallup

Title: Technical Director – Engineering

PROFESSIONAL ENGINEER ALBERTA
MICHAEL G. GALLUP
ID 85104

12 February 2025

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RESERVE AND RESOURCES DEFINITIONS

The following definitions have been used by RPS Energy Canada Ltd. (RPS) in evaluating reserves. These definitions are based on the SEC RIN3232-AL81 "Modernization of Property Disclosures for Mining Registrants" Final rule, October 31, 2018, and are consistent with the definitions of the Committee for Mineral Reserves International Reporting Standards ("CRIRSCO") "International Reporting Template for the public reporting of Exploration Targets, Exploration Results, Mineral Resources and Mineral Reserves", November 2019, as published by the International Council of Mining & Metals ("ICMM").

Mineral Resources

A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction.

The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.

Mineral Resources are subdivided, in order of increasing geological confidence into Inferred, Indicated and Measured categories:

Inferred Mineral Resources

An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity.

An Inferred Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

Indicated Mineral Resources

An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.

Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation.

An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.

Measured Mineral Resources

A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit.

Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation.

A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proved Mineral Reserve or to a Probable Mineral Reserve.

Mineral Reserves

A Mineral Reserve is the economically mineable part of a Measured and/or Indicated Mineral Resource.

It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre- Feasibility or Feasibility level as appropriate that include application of Modifying Factors.

Probable Mineral Reserves

A Probable Mineral Reserve is the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource.

The confidence in the Modifying Factors applying to a Probable Mineral Reserve is lower than that applying to a Proved Mineral Reserve

Proved Mineral Reserves

A Proved Mineral Reserve is the economically mineable part of a Measured Mineral Resource. A Proved Mineral Reserve implies a high degree of confidence in the Modifying Factors.

INDEPENDENT CONSULTANT'S CONSENT AND WAIVER OF LIABILITY

The undersigned firm of Independent Consultants of Calgary, Alberta, Canada knows that it is named as having prepared an independent report and its addendum report of the bromine reserves and cash flows of the Magnolia bromine field operated by Albemarle Corporation, and it hereby gives consent to the use of its name and to the said report. The effective date of the report is December 31, 2024.

In the course of the evaluation, Albemarle provided RPS Energy Canada Ltd. (RPS) personnel with basic information which included the field's licensing agreements, geologic and production information, cost estimates, contractual terms, studies made by other parties and discussions of future plans. Any other engineering or economic data required to conduct the evaluation upon which the original and addendum reports are based, was obtained from public literature, and from RPS non-confidential client files. The extent and character of ownership and accuracy of all factual data supplied for this evaluation, from all sources, has been accepted as represented. RPS reserves the right to review all calculations referred to or included in the said reports and, if considered necessary, to revise the estimates in light of erroneous data supplied or information existing but not made available at the effective date, which becomes known subsequent to the effective date of the reports.

On behalf of RPS Energy Canada Ltd.

1 EXECUTIVE SUMMARY

RPS Energy Canada Limited ("RPS") has completed an evaluation of Albemarle's bromine reserves as of December 31, 2024, and assessed the following summary of results:

- The forecast production of sales bromide is 2,468 thousand tonnes for the Proved reserves case, plus an additional 467 thousand tonnes of Probable reserves, for a total Proved plus Probable reserves of 2,935 thousand tonnes. The ultimate recovery over the 100% leased area, represents a bromine recovery factor of 81% for the 1P case and 86% for the 2P case.
- The Smackover formation can be vertically subdivided into the upper Smackover, EOD 0 to 5, historically known as the Reynolds Oolite, and the lower Smackover, EOD 7-9, sometimes split into middle and lower in the literature. The reserves estimated in this report have been confined to the upper Smackover due to technology limitations.

- The bromine reserves represent an estimated net present value range to the Company as shown in the following economics summary tables:

Table 1-1: Albemarle Working Interest Reserves as of December 31, 2024 – Spot Prices

Albemarle Working Interest Bromine Reserves as of December 31, 2024 Spot Price Forecast											
	Mineral Reserves ('000 tonnes)	Net Present Value Before Tax					Net Present Value After Tax				
		0% ($MM)	5% ($MM)	10% ($MM)	15% ($MM)	20% ($MM)	0% ($MM)	5% ($MM)	10% ($MM)	15% ($MM)	20% ($MM)
Proved	**2,468**	**1,985**	**1,042**	**640**	**438**	**322**	**1,418**	**759**	**471**	**324**	**239**
Probable	467	1,138	579	396	315	270	892	448	304	241	206
Proved + Probable	**2,935**	**3,123**	**1,620**	**1,036**	**753**	**593**	**2,310**	**1,207**	**775**	**565**	**445**

Table 1-2: Albemarle Working Interest Reserves as of December 31, 2024 – Spot Prices less 15%

Albemarle Working Interest Bromine Reserves as of December 31, 2024 Spot Price Forecast less 15%											
	Mineral Reserves ('000 tonnes)	Net Present Value Before Tax					Net Present Value After Tax				
		0% ($MM)	5% ($MM)	10% ($MM)	15% ($MM)	20% ($MM)	0% ($MM)	5% ($MM)	10% ($MM)	15% ($MM)	20% ($MM)
Proved	**2,403**	**916**	**639**	**461**	**355**	**288**	**604**	**447**	**330**	**257**	**210**
Probable	531	878	379	212	141	105	685	297	167	111	82
Proved + Probable	**2,935**	**1,793**	**1,018**	**673**	**496**	**393**	**1,289**	**745**	**497**	**368**	**292**

Table 1-3: Albemarle Working Interest Reserves as of December 31, 2024 – Spot Prices less 30%

Albemarle Working Interest Bromine Reserves as of December 31, 2024 Spot Price Forecast less 30%											
	Mineral Reserves ('000 tonnes)	Net Present Value Before Tax					Net Present Value After Tax				
		0% ($MM)	5% ($MM)	10% ($MM)	15% ($MM)	20% ($MM)	0% ($MM)	5% ($MM)	10% ($MM)	15% ($MM)	20% ($MM)
Proved	**2,018**	**122**	**172**	**154**	**131**	**113**	**30**	**95**	**96**	**85**	**75**
Probable	711	468	259	158	108	81	352	201	124	85	64
Proved + Probable	**2,729**	**590**	**431**	**312**	**239**	**193**	**381**	**296**	**220**	**170**	**138**

Table 1-4: Albemarle Working Interest Reserves as of December 31, 2024 – Spot Prices less 45%

Albemarle Working Interest Bromine Reserves as of December 31, 2024 Spot Price Forecast less 45%											
	Mineral Reserves ('000 tonnes)	Net Present Value Before Tax					Net Present Value After Tax				
		0% ($MM)	5% ($MM)	10% ($MM)	15% ($MM)	20% ($MM)	0% ($MM)	5% ($MM)	10% ($MM)	15% ($MM)	20% ($MM)
Proved	**1,602**	**-984**	**-265**	**-124**	**-79**	**-58**	**-792**	**-222**	**-109**	**-72**	**-54**
Probable	516	544	157	87	64	52	435	117	64	49	40
Proved + Probable	**2,118**	**-441**	**-108**	**-37**	**-15**	**-6**	**-358**	**-105**	**-45**	**-24**	**-14**

RPS estimates that Albemarle will require a working interest share capital investment of US$1.0 to US$1.4 billion to develop the Proved reserves, and no additional capital to develop the Probable reserves. These estimates are in Constant 2025 dollars and are exclusive of abandonment and reclamation costs.

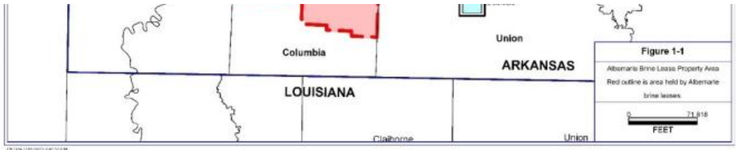


Figure 1-1: Albemarle Magnolia Field Location Map

The body of this report contains an evaluation of the bromine reserves tonnages together with net present value and cash flow forecasts for the Magnolia, Arkansas bromine field. Included in the analysis reported here is a discussion of recent activities, key reservoir and economic issues and RPS' rationale for the reserves evaluations.

This assessment has been conducted within the context of RPS's understanding of the effects of mineral resource extraction legislation, taxation and other regulations that currently apply to this property.

Albemarle has made a representation to RPS as to the validity and accuracy of the data supplied for this evaluation. RPS does not attest to property title or financial interest relationship for any of the appraised properties.

It should be clearly understood that any work program may be subject to significant amendment as a consequence of future results in both the subject and adjacent areas. Mineral exploration and development is a risky and speculative venture, and the actual outcome of work programs cannot be predicted with certainty or reliability.

The net present values reported herein do not necessarily reflect fair market values of the property evaluated.

2 INTRODUCTION

In June 2016, the US Securities Exchange Commission ("SEC" or "Commission") proposed revisions to its disclosure requirements for properties owned or operated by mining companies, to provide a more comprehensive understanding of a registrants' mining properties. Then in June 2018, after a consultation process, including receiving and considering over 60 comment letters on the proposed revisions from various parties, the SEC put in place the amended statutory disclosure and reporting requirements of mineral resources and reserves for public companies engaged in mineral extraction activities. These requirements were spelled out in SEC RIN3232-AL81 "Modernization of Property Disclosures for Mining Registrants" Final rule, dated October 31, 2018. As described in the revised rule, the amendments "are intended to provide investors with a more comprehensive understanding of a registrant's mining properties, which should help them make more informed investment decisions. The amendments also will more closely align the Commissions' disclosure requirements and pollicises for mining properties with current industry and global regulatory practices and standards." The rule requires that all publicly traded companies engaged in mineral exploration and production begin reporting for the first fiscal year beginning on or after January 2, 2021.

On January 6, 2025, RPS Canada Limited, ("RPS") was contracted, by purchase order from Albemarle Corporation ("Albemarle") to conduct an evaluation of Albemarle's interests in bromine reserves in the Magnolia producing brine field in central Arkansas, U.S.A., and the Jordan Bromine Company, Jordan, Dead Sea brine extraction operations in Jordan.

To conduct this evaluation, RPS utilized in-house engineering and associated staff, and engaged the services of RESPEC, an associated environmental and mineral engineering consulting firm to play a major role in many of the portions of the assessment and evaluation.

RPS and RESPEC visited the Magnolia bromine processing plant in August 2023 to inspect and verify that the information provided by Albemarle was accurate. The visit was successful, offering valuable insights into its advanced technology, safety measures, and commitment to environmental standards. Engaging discussions with the plant's management underscored its dedication to efficiency, sustainability, and continuous improvement. This visit confirmed the plant's responsible and eco-friendly bromine production practices, contributing significantly to a comprehensive understanding of its operations.

This report constitutes the final evaluation of the Magnolia, Arkansas brine field bromine reserves. The effective date of this evaluation is December 31, 2024.

3 PROPERTY DESCRIPTION

The Albemarle Corporation Magnolia bromine brine field operations property is located in Columbia County in southwestern Arkansas (Figure 3-1). From the subsurface Smackover formation in this field, Albemarle produces a brine rich in sodium bromide (referred to, throughout this report, as "bromide") from which bromine is extracted. The area shown is the under lease from the landowners for brine production as of the effective date of this evaluation.

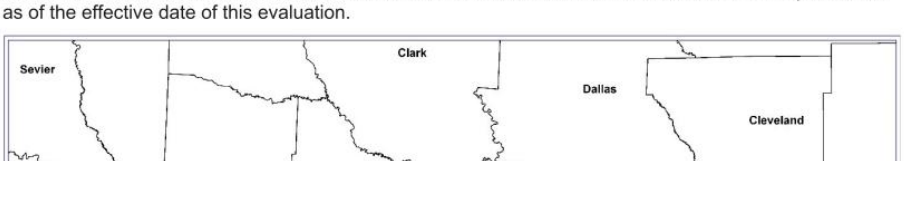


Figure 3-1: Magnolia Field Location Map

The brine field property is centered on the City of Magnolia, Arkansas, which is the county seat of Columbia County and has a population of approximately 12,000 residents. The property is divided into two parts, the South Field and the West Field with the City of Magnolia as the dividing line between the two areas. The area east of the City of Magnolia is referred to by Albemarle as the South Field and the area to the west is referred to as the West Field (Figure 3-2).

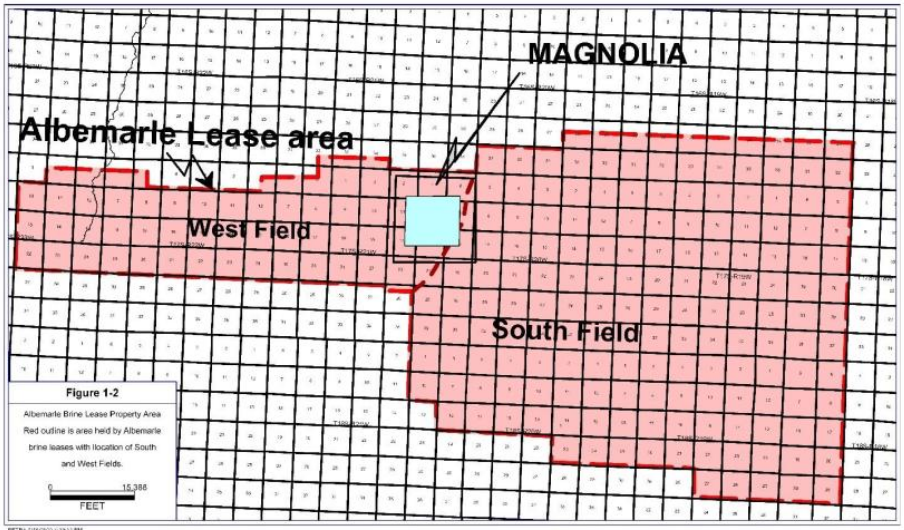
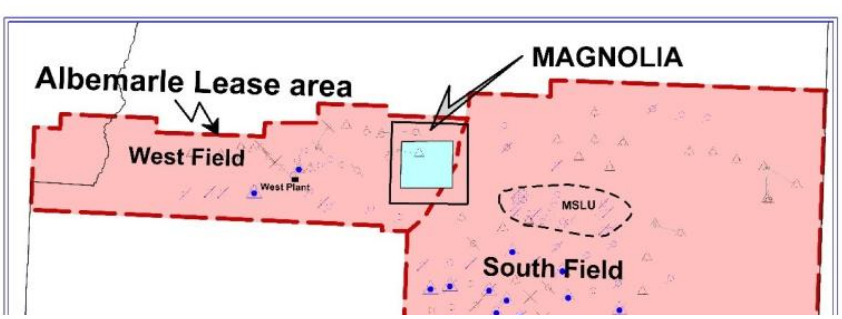


Figure 3-2: Magnolia Field Mapping and Naming

The West Field has a total area of approximately 36,863 acres extending 14.5 miles to the west of the City of Magnolia and is 4 to 5 miles wide (north to south) encompassing parts of Township 17 South, Ranges 21 through 23 West. The South Field has a total area of approximately 104,585 acres that extends 14.5 miles east of Magnolia and is 10 to 12.5 miles wide (north to south) covering all or parts of Townships 16 through 18 South, Ranges 18 through 20 West. The southern edge of the property is approximately 10 miles north of the Arkansas-Louisiana State Line. The property consisting of these two field areas under lease from the landowners by Albemarle Corporation covers approximately 141,448 acres (221 square miles).

The area outlined on the map identified as MSLU is the Magnolia Smackover Lime Unit oilfield in the Magnolia Field operated by White Rock Oil and Gas, LLC where oil was first discovered from the Smackover formation in 1938 (Figure 3-3).



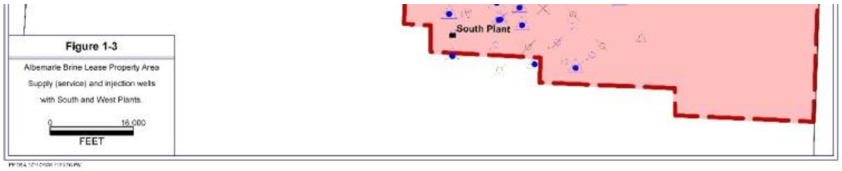


Figure 3-3: Magnolia Field Map showing MSLU Oilfield and Brine Processing Plant locations

The Magnolia oilfield was unitized (a joint operation of several owner/operators of different portions of the reservoir) with the name "MSLU" for secondary recovery and a water flood of the Smackover Formation began in 1945. The produced water (bromine rich) from the oilfield operations is separated, then sent via pipeline to Albemarle's South Plant and processed. Processed brine (depleted in bromine) is sent back to Magnolia Field to be re-injected into the Smackover Formation to continue the secondary recovery operations by White Rock Oil and Gas.

3.1 Property Leases

The area of bromine production operations is comprised of 9,570 individual leases with local landowners, comprising a total area of 99,763 acres. The leases have been acquired over the course of time as field development extended across the field. The production leases are generally of the form of the "Arkansas Form 881/8 Oil, Gas and Mineral Lease (1/8 Gas)" or some derivative thereof. Each of the leases was executed between the parties, with the following terms:

A map showing full sections of the field where Albemarle has lease holdings are shown on map in the following Figure 3-4. Also shown on the map are production, injection and appraisal wells in the area, where the dense clusters of wells show oilfield development contiguous with the brine field operations.

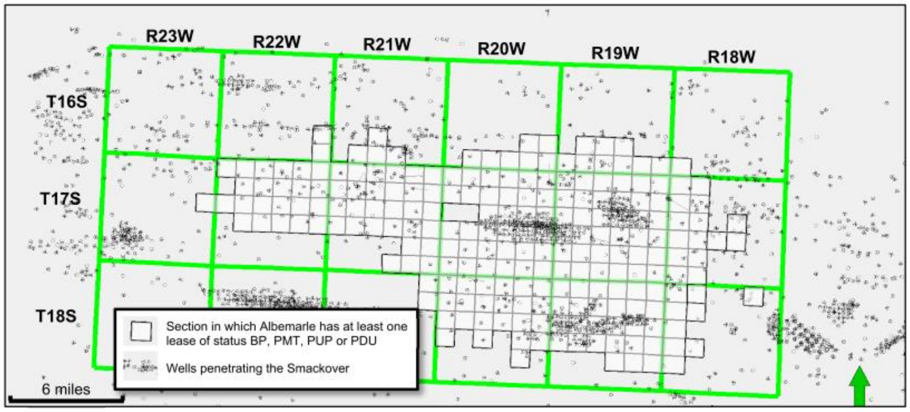


Figure 3-4: Albemarle Magnolia Field Lease Holdings as of December 31, 2021

3.1.1 Burdens on Production:

The production leases include the following burdens:

a) Production Royalties:

- Oil: 12.5% of production
- Gas: 12.5% of gas sales revenues
- Solution gas: 12.5% of gas sales revenues
- Other minerals (except brine and minerals contained in brine): 10% of mineral sales revenue
- Brine: No production royalty

b) Production Lease Licences Fees:

- Lease Years 1, 2, 3,& 4: $1.00 per acre
- Lease Years 4 through 14: $10.00 per acre
- Lease Years 15 onward: $25.00 per acre
- For the purposes of lease licencing fees, the above lease fees have been superseded by the Arkansas Code, Title 15, Subtitle 6, Chapter 76 (15-76-315) which specifies that in lieu of royalty, an annual lease compensation payment of $32.00 per acre payable to the lease owner. This payment amount is indexed to the March 1995 US Producer Price Index for Intermediate Materials, Supplies and Components, then later the Producer Price Index for Processed Goods for Intermediate demand, which specifies that prices and costs are based on a datum cost base as of March 1995 and are escalated annually based on the USA Producer Price Index.

For economic evaluation purposes, production lease licence fees have been included in the fixed field operating costs.

3.1.2 Term of Leases

The term of each lease begins on the effective date of the lease, and, as long as lease rentals are continuing to be paid, continues for a period of 25 years or longer until after a two year period where brine is not injected or produced from/to a well within 2 miles of lease lands area. The Lessee may hold leases after production has been shut in for twelve months by continuing the shut-in lease rental payments and hold the leases for a maximum of three years.

4 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

4.1 Topography

The topography of the area is characterized by rolling hills with five stream valleys that cut north-south across the Albemarle Lease Property (Figure 4-1).

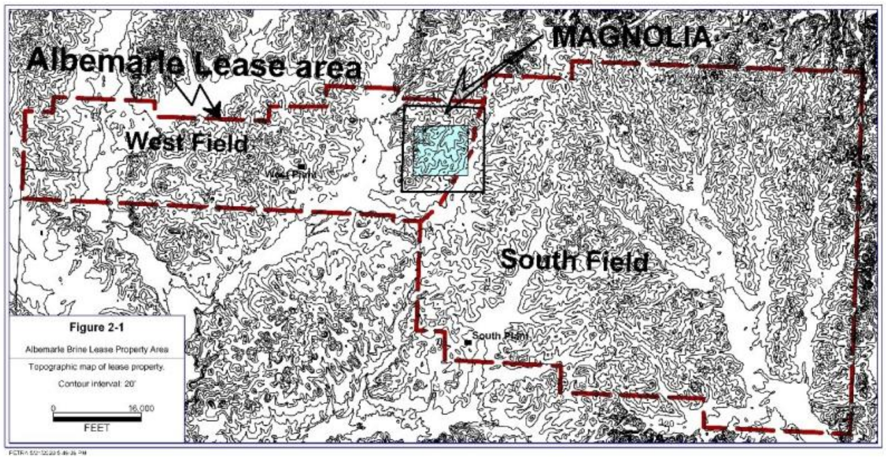


Figure 4-1: Magnolia Field Topography

There is approximately 100 to 200 feet of relief from the stream valleys to the hill tops. The elevations range from 180 feet to 360 feet with some hilltops over 400 feet above sea level. The City of Magnolia with an area of 13.27 square miles is located on one of the hilltops and is centered between the West Field and the South Field. The land area outside of the city is very rural, with vegetation being mostly pine trees on sandy hills with hard wood trees predominantly in the stream valleys. The bromine mineral deposit being extracted by Albemarle Corporation is found in the subsurface waters and is pumped through well bores to the surface and then sent to the main plants for processing by pipeline, therefore the surface pumps, pipelines and tanks would be affected by any changes in the topography. The topographic features and conditions on the surface are taken into consideration for the building of pipelines, roads and well site locations when planning the drilling of a development well to extract the bromine. The stream valleys and the cultural features of the City of Magnolia create challenges topographically for the necessary surface work required of any future development projects in those areas.

4.2 Accessibility

Magnolia is located in southwest Arkansas, north of the center of Columbia County. The average altitude of the area is 336 ft above mean sea level. The surrounding region is a mix of dense forest, farm prairies, and low rolling hills.

The area includes extensive areas of loblolly-shortleaf pine forests. Despite its gently sloping terrain and areas of relatively rich soil, it is a region dominated by forests and forestry-related activities rather than by agriculture. Both pine and hardwood products are harvested in this region where the forest industry is particularly significant.

Magnolia is located about 50 miles east of Texarkana, about 135 miles south of Little Rock, and about 75 miles northeast of Shreveport, Louisiana.

Adjacent counties to Columbia County are Nevada County (north), Ouachita County (northeast), Union County (east), Claiborne Parish, Louisiana (southeast), Webster Parish, Louisiana (south) and Lafayette County (west).

4.2.1 Road Access

A road network consisting of U.S. Routes and local highways provides access to Magnolia.

Primary U.S. Highways in the Magnolia area include the following:

- U.S. Route 82 (US 82)
- U.S. Route 79 (US 79)

- U.S. Route 79 (US 79)
- U.S. Route 371
- Arkansas Highway 19 (AR 19 and Hwy. 19)
- Highway 355

Interstates 20, 30 and 49 (I-20, I-30 and I-49), are accessible from Magnolia by way of U.S. Route 371.

4.2.2 Airport Access

The Magnolia Municipal Airport is a public-use airport in Columbia County. It is owned by the city of Magnolia and located three nautical miles southeast of its central business district.

The closest international airports is located in Little Rock, AR, which is approximately 2.5-hours north of Magnolia (approximately 140 miles).

There are regional airports at El Dorado, Arkansas (South Arkansas Regional at Goodwin Field), Texarkana (Texarkana Regional Webb Field) and Shreveport, Louisiana (Shreveport Regional Airport), all within a 70-mile radius of Magnolia.
Rail Access

Union Pacific (UP) and the Louisiana & Northwest Railroad (LNW) provide rail service in Columbia County, Arkansas.

4.3 Climate

The average temperature is 64°F (18°C), and the average annual rainfall is 50.3 inches. The winters are mild but can dip into the teens at night and have highs in the 30s and even some 20s but average out around 50. The springs are warm and can be stormy with strong to severe storms and average highs in the mid-70s. Summers are often hot, humid and dry but with occasional isolated afternoon storms, highs in the mid to upper 90s and even 100s. In the fall the temps cool from the 90s and 100s to 80s and 70s. Early fall temperatures are usually in the 80s but can reach 90s and at times have reached 100. Late fall temps fall to 70s and 60s. It is not uncommon to see snow and ice during the winter. It has been known to snow a few times as late as April and as early as November in Magnolia.

Figure 4-2 shows the average temperatures and precipitation at Magnolia, Arkansas.

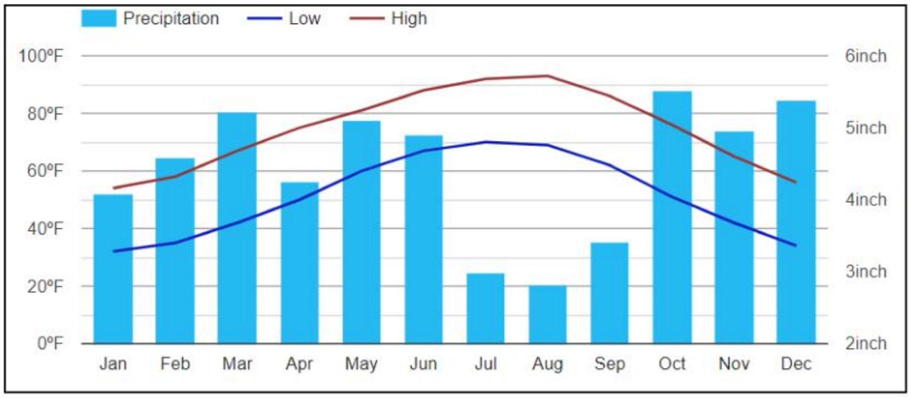


Figure 4-2: Average Temperature and Precipitation at Magnolia, AR

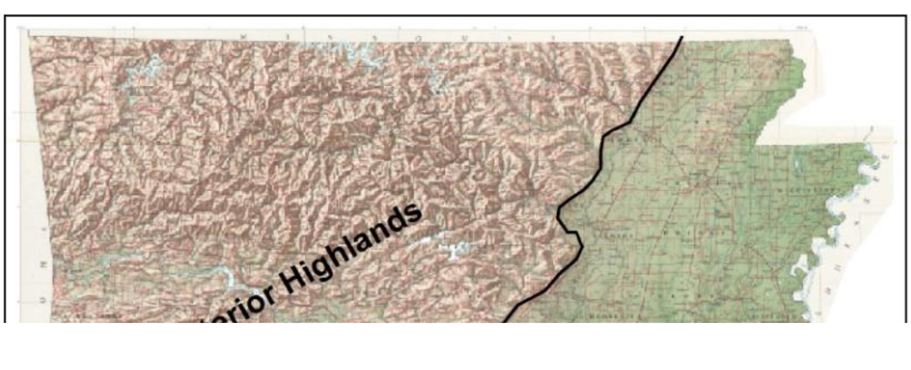
Source: https://www.usclimatedata.com/climate/magnolia/arkansas/united-states/usar0351

4.4 Physiography

Arkansas is divided into two major regions separated by a geologic fall line. The fall line is an imaginary line separating mostly consolidated rock of the Interior Highlands from mainly unconsolidated sediment of the Gulf Coastal Plain. Magnolia is located in the Gulf Coastal Plain Region.

The two major regions are sub-divided into five provinces based on their unique geological characteristics. Magnolia is located in the West Gulf Coastal Plain province, which is characterized by fairly at-lying rock formations and sediment deposited in terraces.

West Gulf Coastal Plain province extends across southern Arkansas. It is located south of the Ouachita Mountains and extends southward to the Gulf of Mexico and eastward to the Mississippi Alluvial Plain. The boundary between the Ouachita Mountains and the Coastal Plain is marked by rapids and waterfalls at points where streams leave the steeply sloping mountains. The eastern boundary of the West Gulf Coastal Plain is the Arkansas River as it extends from Little Rock (Pulaski County) to Pine Bluff (Jefferson County), and then Bayou Bartholomew from Pine Bluff to the Louisiana border. These two waterways separate the West Gulf Coastal Plain from the relatively recent stream deposits of the Mississippi Alluvial Plain.



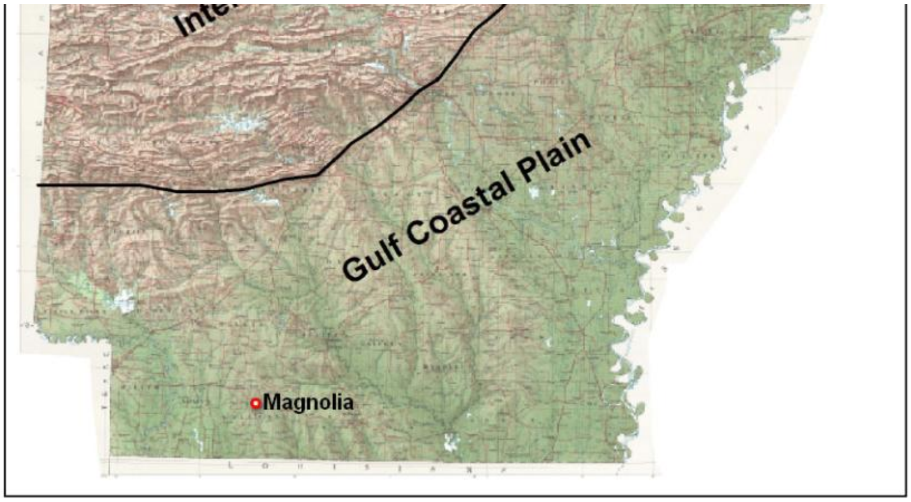


Figure 4-3: Arkansas physiographical regions and location of Magnolia.

Source: Arkansas Geological Survey https://www.geology.arkansas.gov/

5 HISTORY

Oil was first discovered in Arkansas in January of 1921 in the Nacatoch Formation in El Dorado Field, Union County near the site of the current Arkansas Oil and Gas Commission in El Dorado, AR (Figure 5-1). Oil was in demand and prices were good as a result of the First World War. Many discoveries were made in a number of formations in the Upper and Lower Cretaceous afterward with the largest oil field in Arkansas, the Smackover Field being discovered in 1922. By 1925 oil production reached a peak of 275,000 barrels per day and declined to 29,000 barrels per day by 1936[1]. Through the end of 2019, approximately 724 million barrels of oil have produced from many different formations in south Arkansas oil fields.

The Smackover is a geologic formation of limestone and dolomite that is 5000'-10,000' in the subsurface of South Arkansas where it plays an important role in the oil, gas, and brine industries of that area. It is the oldest and deepest oil producing formation in Arkansas and is also thought to be the main source of the oil found in most of the overlying formations in South Arkansas[2]. Subsequent to seismograph operations in the area in 1935[1], oil was first discovered in 1936 from the Smackover Formation in the Phillips Petroleum Co. Reynolds #1 well at Snow Hill in the Smackover Field in southeastern Ouachita County (Figure 5-1).

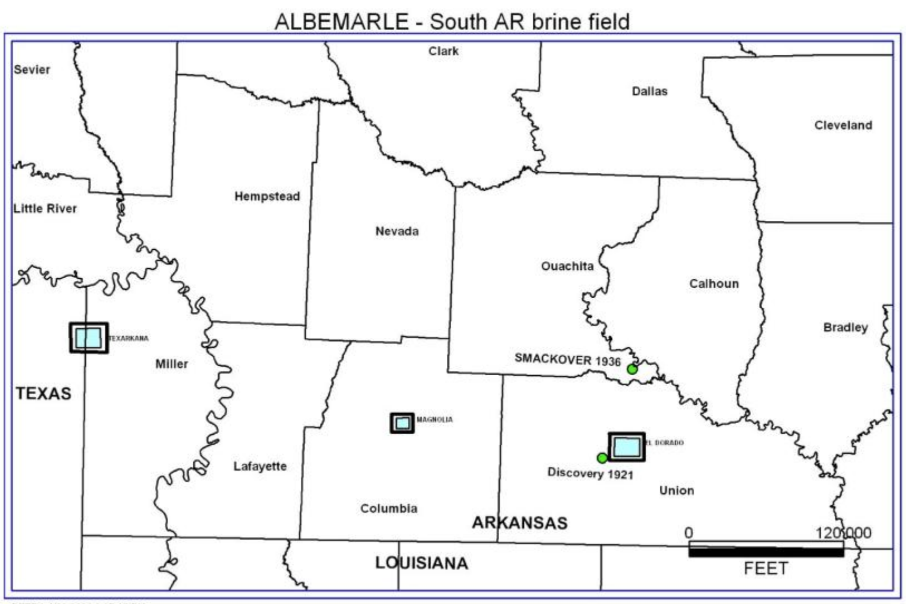


Figure 5-1: Magnolia Field Location Map

A string of Smackover oil field discoveries followed in the next 6 years which include many of the larger fields such as Magnolia, Village, Midway, Buckner, Dorcheat-Macedonia, and Atlanta. These structures were found after the advent of exploration with the use of seismic reflection methods. Exploration, drilling, and production of oil and gas from the Smackover Formation in South Arkansas have continued to the present day.

Brine is formation water that has higher than the usual concentration of dissolved salts, comprised of Ca, Na, K, and Cl and minor amounts of other elements [Bates, 1980]. The brine is produced as a by-product of the oil production in many subsurface reservoirs and generally the brine rate increases as the oil rate decreases throughout the life of a producing well. The Smackover Formation water (brine) is hypersaline containing higher concentrations of the previously mentioned elements as well as many other elements including Bromine (Br). The concentrations of Bromine in the Smackover Formation brine in South Arkansas are unusually high with a range of 1,300-6,800 parts per million[3].

Bromine is one of four halogen elements along with chlorine, fluorine, and iodine and is a highly corrosive, reddish-brown, volatile liquid that naturally occurs as sodium bromide in seawater with a normal concentration of 60-65 parts per million[4]. The bromine is generated and released into seawater with the decomposition of seaweed, plankton, and certain mollusks[4,5]. An Arkansas Oil and Gas Commission chemist found that the brine from 4 oil fields producing from the Smackover had concentrations ranging from 4,000-4,600 parts per million, which is much higher than the that found in seawater[4]. The high concentrations of bromine offer the opportunity for the bromine to be extracted commercially from the concentrations of bromine offer the opportunity for the bromine to be extracted commercially from the brine that is pumped from the Smackover Formation in the subsurface of South Arkansas. The brine produced from the Smackover in south Arkansas and to a lesser degree the brine production from wells in Michigan meets nearly one-half of the world's bromine demand annually. In the infancy of the business the largest demand for bromine was to make ethylene dibromide, an additive to gasoline to stop lead build up in engines running on leaded gasoline[6] [McCoy, 2014]. Today bromine and bromine compounds are used for fire retardant in plastics, water purification, agricultural pesticide products, oil field drilling fluids, and many other products and processes[4].

The Murphy Corporation in El Dorado, AR discovered oil from the Smackover Formation in June of 1950 at Catesville Field, Union Co, AR. In April of 1956, Murphy acting on behalf of Michigan Chemical Corp. applied for a saltwater disposal ("SWD") well to dispose of produced water from four Murphy oil wells producing from the Smackover. The produced water was to be processed through Michigan's El Dorado Bromine Plant, then disposed of into the subject SWD well (Figure 5-2).

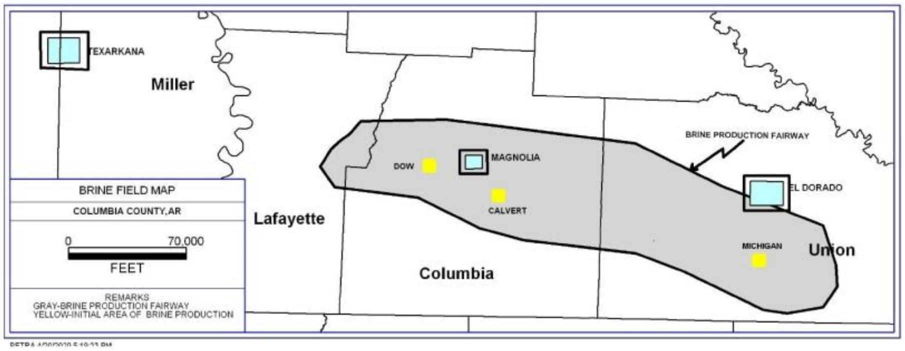


Figure 5-2: Brine Field Map

This was the beginning of the bromine extraction business in Arkansas where Michigan Chemical Corp, J-W Operating, Arkansas Chemical, and Great Lakes Chemical Corp. have been active in the brine business at times over the last 63 years in the El Dorado area. Great Lakes Chemical Corp. (now Lanxess AG) has been active since at least 1963 and currently is the only active operator in the El Dorado area.

In 1965, Brazos Oil and Gas Co. a division of Dow Chemical Co. drilled the first brine supply well near Magnolia, AR approximately 35 miles west of the Michigan Chemical Corp. operations in El Dorado (Figure 3-2). By February of 1967 six additional wells, 4 brine production supply wells and 3 brine injection wells were drilled and completed. These wells were all put into production in April of 1968 and are now called the West Field. In 1987 Ethyl Corporation took over operations of Dow Chemical in the West Field. A total of 36 brine supply and injection have been drilled through 2019 in this field.

In 1969, Bromet, a JV between Ethyl Corporation and Great Lakes Chemical Corp. expanded bromine production approximately 30 miles west of El Dorado and approximately 5 miles south of the town of Magnolia, Arkansas (Figure 5-2). Bromet drilled and completed twenty-three total wells, 18 brine production supply wells and 5 brine injection wells from 1/1968 to 10/1969. These 23 wells, in what is now called the South Field were put into operation by the end of 1969. Great Lakes left the JV in the early 1970s and Ethyl took over as the sole owner until they spun off to Albemarle in 1994. Through 2021 a total of 78 brine supply and injection wells have been drilled in this field.

The total development of these three areas combines to create a 600 square mile fairway of brine production that extends over a two-county area that is 60 miles long and 10 miles wide (Figure 5-2). Based on public records from the Arkansas Oil and Gas Commission ("AOGC"), brine production in Arkansas has averaged approximately 622,700 barrels per day or 227.3 million barrels per year from all operators for the past 10 years. An estimated total of 199 million barrels of brine was produced in 2023. The highest recorded annual production was in 2004 at 305million barrels of brine (Figure 5-3). The total cumulative production of brine from 1979 through 2023 for Arkansas is 9.6 MMbbls. As of the effective date of this report, December 31, 2024, the AOGC does not have any brine production data for the year 2024.

Figure 5-3: Historical Brine Production in South Arkansas

6 GEOLOGICAL SETTING, MINERALIZATION, AND DEPOSIT

6.1 Geologic Setting

The area of interest is located in South Arkansas which is on the north rim of the ancestral Gulf of Mexico. The early framework of the Gulf began with the rifting or parting of the North American Plate from the South American and African plates in Late Triassic Period and continued into the Early and Middle Jurassic Period from about 220 million years ago to 195 million years ago. During this time thick sequences of non marine clastic sediments filled the rifted basins in what is now called the Eagle Mills Formation (Figure 6-1). These initial deposits are predominately composed of red, purplish, greenish gray, or mottled shales, mudstones, and siltstones with some conglomerates and fine to very fine-grained sandstones. They are found around the rim of the Gulf of Mexico from Mexico through Texas, Arkansas, Mississippi, Alabama into Florida. Thicknesses have been recorded for Eagle Mills of over 6900' in South Arkansas[7].

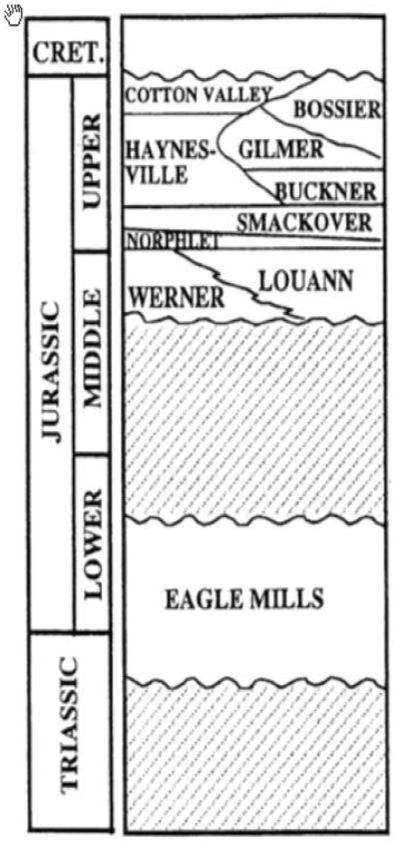


Figure 6-1: Generalized stratigraphic column for the Triassic through Jurassic section in South Arkansas[8,3].

Toward the end of the period of rifting in Middle Jurassic, the Gulf was a broad shallow restricted basin where evaporate deposits of anhydrite in the Werner Formation and thick salt deposits of the Louann Formation accumulated as marine waters periodically spilled into the basin probably across central Mexico[9]. The environment at that time was arid, where the evaporation exceeded the inflow of water with limited to no influx of terrigenous sediments, therefore the marine waters evaporated leaving layer upon layer of salt beds enriched with many other elements found in marine waters. The salt beds are approximately 3000' thick in East Texas and North Louisiana and thin to the north, coming out of the basin to a point of non deposition around the rim of the basin[7]. A fault system developed down dip of the salt around the north rim from Texas through Arkansas and Mississippi into Alabama marking the upper limits of the salt basin. The fault system lies immediately down dip of the Jurassic salt as described of the Mexia-Talco fault system in Texas[10]. This fault system extends northeastward into Arkansas and is identified as the South Arkansas fault system (Figure 6-2). The north limit of the salt in South Arkansas is thought to be up dip to this same system.

The extensive salt deposits were followed by a sea level low stand at the beginning of the Upper Jurassic (Figure 6-1), where sandstones, conglomerates and eolian or wind blown sediments of the Norphlet Formation were deposited directly onto the Louann Formation[11]. This was followed by a prolonged marine transgression or sea level rise that covered most of the present Gulf of Mexico basin. It reworked the upper most sandstones of the Norphlet Formation as the water level advanced shoreward over a broad, stable, ramp that dipped gently basinward[12, 7].

The Upper Jurassic sea level rise or transgressive sequence is thought to have progressed rapidly and initiated the production of deep water dark colored carbonate mudstones and shales in the lower sequence (commonly referred to as the “brown dense”) of the Smackover Formation[13, 14]. The lower section consists of very thin fairly continuous lamina of clean carbonate mudstones and organic rich clay lamina or layers[12]. This organic rich lamina are thought to be source rocks from which much of hydrocarbons along the north rim of the ancestral Gulf of Mexico were generated[15]. The rise in sea level is thought to have increased rapidly throughout the lower portion of the Smackover, slowing through the middle and reaching a high stand that probably extended through the upper Smackover[14]. There were possibly some minor fluctuations in the sea level in the upper Smackover. The advance of the sea level up the shoreline ramp defines the limit of deposition of the Smackover Formation around the rim of the Gulf of Mexico Basin. In South Arkansas the Smackover Formation is identified in the subsurface as far north as southern Clark County (Figure 6-2).

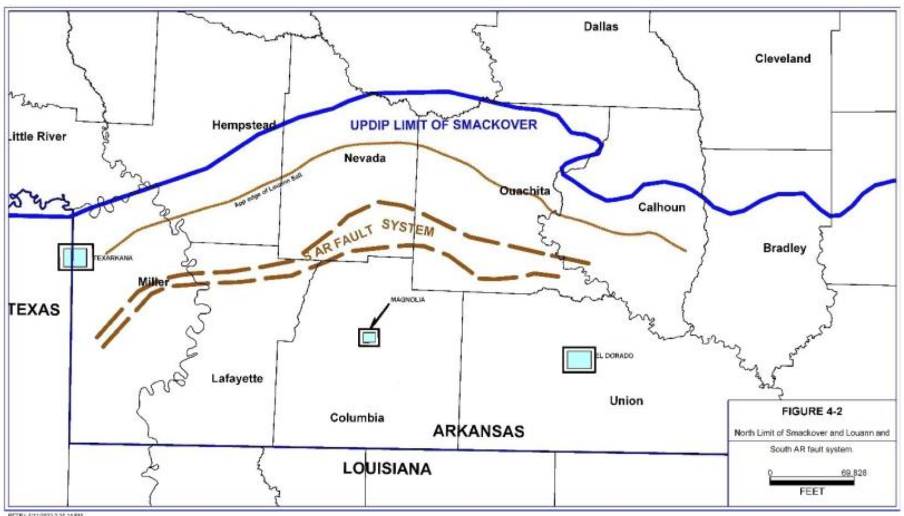


Figure 6-2: Northern Limit of Smackover and Louann and South Arkansas Fault System

The Smackover is divided by some into upper and lower[7] and some separate it into three members: upper, middle and lower with an overall thickness of over 1000’ [12,14]. The lower as previously mentioned was deposited in a basinal, deep water setting below any turbulence from wave or storm action. The middle Smackover is that portion of the basin that is subtidal on the steeper part of the shelf between the basinal sediments and the shallow water shoal of the upper member. The sediments in the middle Smackover would be characterized as burrowed peloidal mudstones and burrowed peloidal to skeletal wackestones (mainly carbonate mud with some grains). The upper Smackover sediments commonly referred to as the Reynolds Oolite, were deposited above wave base in a high energy shoal beach system that consists of grainstone and packstones composed predominately of ooids, oncoids and pellets and lacking carbonate mud[16].

The upper Smackover grainstones are the main reservoir for oil, gas and brine deposits due to excellent porosity and permeability in these rocks. The lower and middle Smackover for the most part are lacking these characteristics of good porosity and permeability and are generally non reservoir type rocks. The middle Smackover in some areas will have zones of porosity and permeability development when sediments from the near shore were transported down slope and deposited. These are commonly dolomitized, enhancing the reservoir characteristics, porosity and permeability to the point of potential exploitation for the production of oil, gas or brine if present.

The upper and middle Smackover is a progradational system in that the sediment supply was great enough that the shoal complex of the upper sediments advanced seaward or prograded over the middle Smackover sediments, which in turn prograded over the lower Smackover to create the vertical sedimentary profile of the upper, middle and lower Smackover (Figure 6-3).

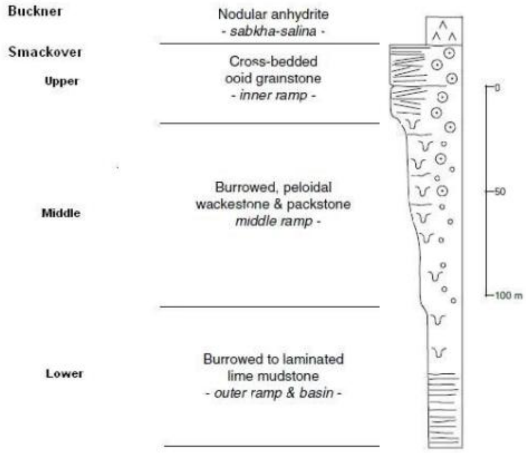


Figure 6-3: Vertical Stratigraphic Profile of the Smackover in Arkansas and Louisiana (modified from Hanford & Baria, 2007[17])

The Buckner Formation (Figure 6-1), which overlays the upper Smackover is composed of anhydrite and shale and was deposited in a restricted lagoonal, bay to tidal flat setting in an arid environment shoreward of the upper Smackover shoal/beach deposits. As the upper Smackover shoal/beach complex prograded seaward the dolomite, anhydrite, and shale of the Buckner followed, prograding over the upper Smackover. Toward the end of the Upper Jurassic, the sea level began a slow steady rise and deposited sandstone and shale of the Haynesville and Cotton Valley Formations that overlay these sediments[14].

6.2 Property Geology

The Smackover Formation is the aquifer that contains the bromine rich brine in South Arkansas and the data through well logs, core analysis and seismic is sufficient to determine its geometry and other characteristics for use in the modeling and resource estimation process. It is present throughout South Arkansas extending to the north edge of Ouachita and Nevada Counties. This line is generally considered the depositional limit of the Smackover in South Arkansas (Figure 6-2).

South of this line is the northern limit of the salt of the Louann Formation, which underlays the Norphlet, and Smackover Formations. The salt increases in thickness from there south across South Arkansas into the salt basins of North Louisiana. Down structural dip of the edge of the Louann is the South Arkansas fault system, which is a prominent graben faulting system that extends from Miller County eastward through southern Nevada and Ouachita Counties. This system basically parallels the up-dip edge of the Louann Formation and is thought to have been initially caused by gravity sliding of the salt toward the basin[18]. The graben consists of opposing down thrown faults that create an east-west trending block that is structurally lower within the fault system. The structure of the Smackover Formation is dipping south to southwest at approximately 200 feet per mile, ranging from an elevation of 1000 feet below sea level in the north to 11,500 feet below sea level in the south along the Arkansas-Louisiana state line. The overall thickness of the formation ranges from 14 feet near the up-dip edge of Smackover to over 900 feet in the southern Columbia County. This thinning of the Smackover and of the Norphlet Formation is illustrated on the south to north cross section A-A' from southern Columbia County into Nevada County (Figure 6-4).

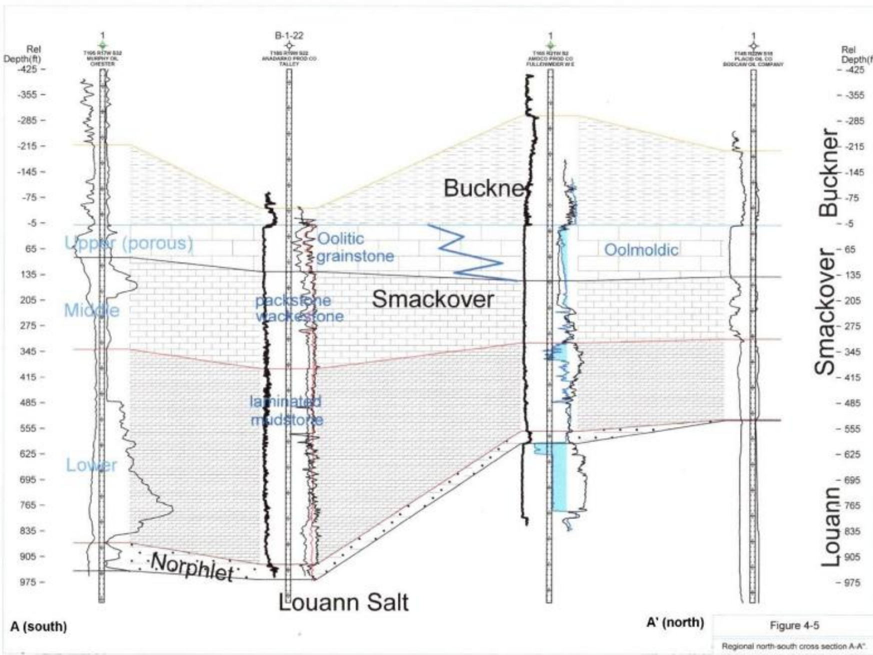


Figure 6-4: North to South Cross Section showing Norphlet and Smackover thinning

The upper Smackover is a thick porous and permeable body of oolitic-oncolitic grainstones composed of ooids, peloids, intraclasts and oncoids and was deposited throughout the area south of the updip limit and is present under the entire area of the Albemarle Property. It occurs at a depth of 7000 to 8500 feet below sea level and is a very good reservoir for the containment and extraction of bromide rich brine (Figure 6-5).

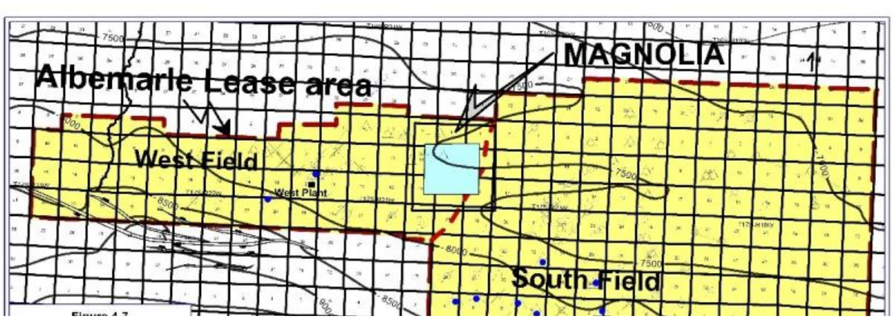


Figure 6-5: Smackover Structure Map

A significant number of wells, drilled to various depths, on and surrounding the Property were evaluated for use in understanding the Property Geology. Of these, several hundred were utilized due their possession of adequate information for this purpose. Information obtained from the wells includes:

- Wireline log data (gamma ray, spontaneous potential, resistivity, density, neutron, and acoustic) were evaluated to extract geological information about the reservoir including lithology, porosity, thickness, and stratigraphy of the Smackover
- Core analysis, where available, provided porosity and permeability data
- N-S and E-W wireline cross-sections of the logs were used to determine variation of geometry in the Smackover across the Property

The upper Smackover across South Arkansas from south to north has three distinctive east-west trends (Figure 6-6).

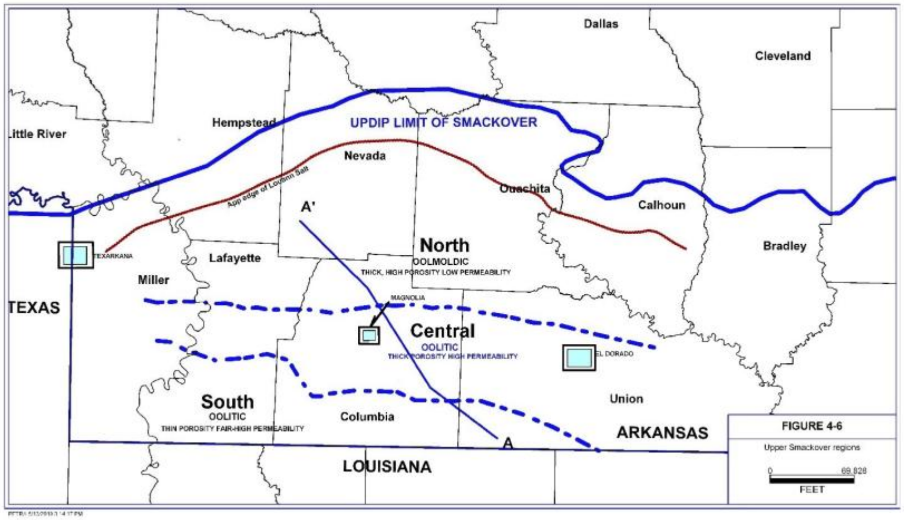


Figure 6-6: Upper Smackover Regions

The upper Smackover in the south region along the Arkansas State Line is generally an oolitic grainstone with relatively thin (less than 30 feet) intervals of sufficient porosity and having fair to high permeability. Many oil fields in this area are trapped stratigraphically. In the central area between the dashed lines, the upper Smackover is an oolitic grainstone having sufficient porosity and high permeability with thicknesses of total porosity that exceed 50 feet. The South Arkansas brine fields of Albemarle and Great Lakes Corporations are located in this area due to the thickness and the permeability of upper Smackover that allow for good reserves and high volume production. Also, located in this central portion are some of the largest oil fields in Arkansas that produce from salt cored anticlines in the Smackover. North of this region, oolitic grainstones were originally deposited in the upper Smackover with thicknesses similar to the central region. After deposition in this area, the oolitic grainstones were diagenetically altered by the dissolution of the ooids and calcite filling of the original pore space contemporaneously[14]. The result of this alteration creates a mold of the ooids that develops into rock with very high porosity (25-35%) and low to very low permeability that is called oolmoldic limestone.

The Smackover is subject to other diagenetic alterations after burial, most commonly the process of dolomitization which generally enhances the porosity and permeability.

The packstone-wackestone interval of the middle Smackover and the laminated mudstone of the lower Smackover both thin from south to north in South Arkansas (Figure 6-4). The middle interval generally has porosity less than 9% in the south region, with some porosity development to the north due to post deposition processes. This is evident in the central region where select intervals two to thirty feet thick in the middle Smackover are dolomitized, which generally enhances the original porosity and permeability of the rock. The laminated mudstones of the lower Smackover have very low porosity over the entire area of south Arkansas.

The environment of deposition of the Smackover is divided into coastal (beach facies), upper foreshore (beach to normal wave base), lower foreshore (normal wave base to storm wave base), subtidal (upper slope), deep subtidal (lower slope) and basinal (deep water, thin flat laminated strata). The upper Smackover grainstones were deposited in the coastal to lower foreshore regime of the coast line, while the middle Smackover packstone-wackestones were deposited on the slope in subtidal waters. These

sediments are deposited contemporaneously as clinoforms and prograded seaward over the laminar basinal sediments of the lower Smackover. Fluctuations of the sea level during upper Smackover deposition allowed the clinoforms to stack resulting in very thick, porous and permeable grainstones in the central area where the brinefields are located. The anhydrite and shale of the Buckner Formation were deposited simultaneously behind the coastal region of the upper in lagoons and mudflats as the upper and middle Smackover prograded seaward.

6.3 Mineralization

High concentrations of bromine (Br) are found on Albemarle Corporation Property in South Arkansas. The bromine exists as sodium bromide ("bromide") in the formation waters or brine of the Jurassic age Smackover Formation in the subsurface at a depth of 7000 to 8500 feet below sea level. The bromine on the Property was first mined in 1965 by pumping the brine through well bores that penetrated the Smackover Formation.

The bromine concentrations, from independent sources[19, 3] to 6609 parts per million with an average of 5702 (Figure 6-7).

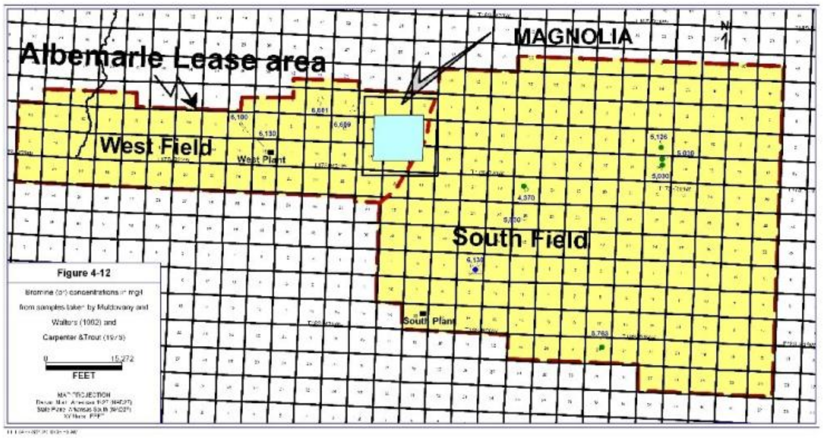


Figure 6-7: **Bromine Concentration Map**

The samples have good scatter across the Property with concentrations highest in the West Field diminishing slightly to the east in the South Field. These independent samples taken from producing oil or brine wells indicate excellent distribution of the bromine mineralization within the brine on the Property.

The upper and middle Smackover have porosities that range from 1% to over 28% and permeabilities from .1 millidarcy to over 8900 millidarcies. The rock with sufficient porosity ranges in thickness from 35 feet in the southern portion of the South Field to 262 feet in the northern portion of the South Field. Throughout most of the Property the porosity thickness is greater than 100 feet except in the southern half of the South Field where the average is less than 100'. The thick intervals tend to trend east and west following the depositional strike. The connectivity of the porous body of the upper Smackover is very good throughout the Property and can be recognized in the well performance between production and injection wells.

The mineralization occurs within the highly saline Smackover Formation waters or brine where the bromide has an abnormally rich composition. The bromine is more than twice as high as that found in normal evaporated sea water[19]. The bromine mineralization of the brine is distributed throughout the porous intervals of the upper and middle Smackover on the Property. The very good permeability and porosity of the Smackover grainstones provide excellent continuity of the bromine mineralization within the brine.

6.4 Deposit Type

Bromine is a chemical element with an atomic number of 35, an atomic weight of 79.904 and is a member of the halogen elements of the periodic table. It is a deep red noxious liquid that got its name from the Greek word bromos, meaning bad smell or stench[20]. It occurs naturally as soluble and insoluble bromides in the earth's crust and becomes concentrated in seawater from erosion of the crust and deposition into the sea with normal concentrations of 60-65 parts per million of bromine.

The bromine in sea water does not precipitate from sea water during the process of evaporation as does halite and other evaporate minerals, therefore the concentrations of bromine increase over time through the evaporation of the sea water. The brine water found in the Smackover Formation in some areas of South Arkansas contains up to 6600 parts per million or mg/l of bromine. These concentrations are similar to those found in the waters of the Dead Sea, which has over 2400 meters of halite deposits beneath it and is thought to be the main source of the bromine from the dewatering of the halite at depth[19]. Sodium-calcium chloride brines appear to originate as interstitial fluids in evaporates (salt or halite and other evaporites) and are subsequently expelled or dewatered as the result of compaction from the deposition of younger overlying sediments[21,22]. The bromine rich brine of the Smackover Formation is thought to have originated from the interstitial fluids within the salt deposits of the Louann Formation and expelled upward through faults and fracture into the Smackover during deposition of the Smackover and younger overlying sediments. Moldovanyi and Walters (1992) suggest that the brine may have been further enriched in bromine through the dissolution and recrystallization of the Louann salt by meteoric waters that may have penetrated the Louann through faults of the South Arkansas Fault System releasing more bromine into the waters.

The deposit that occurs on Albemarle Corporation Property is a confined bromine enriched brine deposit. The brine is confined within the porous intervals of the Jurassic Smackover Formation mostly in the upper 300' of the formation. This being the aquifer, it is bounded at the top by the impermeable anhydrite and shale of the Buckner Formation. The base of the aquifer is bounded by impermeable carbonate mudstones and shale in the lower Smackover. There are no lateral boundaries to the east and west as well as to the north. Although no boundary is found on the south side, the porous interval does thin to less than 50 feet just south of the Property boundary.

6.5 Static Geological Model

In order to describe the Magnolia field geology for use in determining in-place bromine volumes, and deriving bromine production forecasts, RPS constructed a three-dimensional (3D) geological model of the reservoir. The geological model grid captures all the data and the knowledge available about the sedimentology, stratigraphy, structure and about the rock characteristics of the Smackover in the Magnolia field. This information was gathered, interpreted, and combined into the Static Geological Model from a variety of sources including:

- Historical Albemarle and publicly available drilling log data
- Historical geological interpretations via contract geologists
- Multiple iterations of clinoform based interpretation of Smackover formation

7 EXPLORATION

7.1 Historical Exploration

Exploration for bromine rich brine preceded the initial brine production, which began in 1965 in the West Field and 1969 in the South Field. Since that time, the two fields have been under development by Albemarle and its predecessors as wells were drilled to add to or extend the infrastructure of both fields to its current day extent. The Property has had many wells drilled to the Smackover Formation in the search for oil and gas over many years. These wells give Albemarle information about the thickness and quality of the permeability and porosity of the Smackover Formation in areas that have not been developed to this point. Regional studies on the Smackover brine in South AR done by Walters and Moldovanyl, 1992 and Carpenter and Trout, 1978, provide information on bromine concentrations from particular wells on the Property and the surrounding area. This information and information regarding the physical characteristics of the Smackover have reduced the need for exploration on the Property.

7.2 Current Exploration

No exploration has been conducted on the property in the past year, and as such, no exploration activity results are included in this report.

8 SAMPLE PREPARATION, ANALYSIS, AND SECURITY

As the Magnolia field is currently on full commercial production, sample preparation, analysis, and security are discussed in Sections 10.1 and 10.3 of this report.

9 DATA VERIFICATION

The data set used in this study was collected from various agencies, from companies and from data generated and collected from Albemarle Corporation’s ongoing brine operations. Well logs, core analysis, production, and sampling data were all integrated to produce the mineral resource and reserve estimates. Well logs obtained from the client were compared with those available with the Arkansas Oil and Gas Commission (AOGC) in case of any discrepancy. The different gamma ray curves, density curves, acoustic curves and resistivity curves were compared with the well logs for accuracy. The Smackover subsea elevations were checked and compared with AOGC or Albemarle records for verification. Production data volumes were checked with AOGC records. Sampling of brine and authentication and procedures are described in the Sample Prep, Analysis and Security chapter of this technical report.

Due diligence on the collection of data, the validation of the data and the interpretation of the data has been sufficient to ensure the accuracy for use in this technical report. These available information and the sample or well density are adequate to allow a reasonable estimate of the geometry, tonnage, and continuity of the mineralization to model and establish confidence in the estimation of the mineral resources and mineral reserves of bromine on the Albemarle property found in this report.

10 MINERAL PROCESSING AND METALLURGICAL TESTING

The methods used to test the quality of the brine before it reaches the Magnolia plants are discussed in this chapter. Understanding the quality of the brine before it enters the plant is critical to ensure that the plant feed is consistent. The analytical procedures discussed herein are not typically used in the mining and exploration industry (e.g., geochemical assaying); however, the methods employed are sufficient for Albemarle to run its plants properly and efficiently. A site inspection was completed in 2023 and the sampling process was reviewed. The sampling process is described in the following sub-sections.

10.1 Brine Sample Collection

The Magnolia bromine field and production wells and facilities were designed for the explicit purpose of gathering substantial quantities of brine for transport to the central bromine production facilities. Once at the facilities, the bulk brine is processed to produce bromine. Concentration measurements of the bromide salts (hereafter referred to as bromides) are critical to the successful operation of the bromine plants. The brine consistency is critical for forecasting various bromine derivative production, alignment with forecast sales and the overall health of the Albemarle/Magnolia bromine business.

Bromide samples from the Magnolia brine plants are collected in two strategic locations: (1) upstream of the bromine tower and (2) downstream of the bromine tower. Because of the nature of brine collection, the feedbrine (i.e., upstream brine) concentration of bromine remains relatively consistent; however, the concentration does vary as would be expected from brine extracted from the Smackover geologic formation, the source of brine for the Magnolia plants. Feedbrine samples are therefore frequently taken to capture concentration changes and more effectively adjust downstream operating parameters.

Tailbrine (i.e., downstream brine) samples are also taken frequently, primarily to ensure that existing parameters at the bromine tower are set correctly. Magnolia operators collect brine samples multiple times per day and as requested by plant management. The sampling method includes the following steps:

1. Travel to each feedbrine and/or tailbrine sampling area within the plants
2. Slowly open the sample valves to purge out collected debris or stagnant brine to ensure that the samples collected are representative of the actual flow
3. Collect approximately 1 liter of brine within the sample bottle (roughly filling to the bottle's capacity)
4. Label the sample bottle with the date, time, and name of the operator who collected the sample. The label also indicates if the sample corresponds to feedbrine or tailbrine. Cap the bottle and transport to the on-site analytical laboratory for testing.

Because of the long-established operation of the Magnolia bromine plant, the samples collected at both feedbrine and tailbrine collection sites are only regularly tested for bromide salts. The composition of the feedbrine and tailbrine, in terms of additional salt content outside of the bromide salts, has been very consistent over the last several years of production, and consists of magnesium, sodium, calcium, and potassium chlorides. Density measurements are not frequently taken based on the lack of density change in the brine over time.

10.2 Security

Samples are taken directly from the sampling points to the internal Magnolia quality control ("QC") laboratory. Samples are verified by the QC laboratory technician and operator during delivery and tracked through an electronic sample monitoring system where samples are given a designated number and the results of analytical tests are posted. Samples are not sent to external laboratories for testing; however, some samples are sent to internal analytical laboratories at different Albemarle sites (primarily the

Process Development Center in Baton Rouge, Louisiana) for various other tests that are immaterial to plant operations but do provide quality assurance as duplicate sample analysis.

A check standard is run for each titration and if the test passes the actual sample is analyzed. If the sample fails, the instrumentation is recalibrated. The laboratory does not hold any internationally recognized certifications.

10.3 Analytical Method

Halogen titration is the current process to measure bromine in brine. This method is widely used across the company for measuring bromine because of its simplicity and no complex machinery/analytical tools are required. The method involves use of different concentrations of chemicals for feedbrine and tailbrine. Firstly, a buffer solution is prepared by adding sodium fluoride and sodium dihydrogen phosphate in deionized water. Clorox bleach is then added, and the solution is heated on a hot plate for 15 minutes.

Sodium formate is then added, after which the solution is heated for an additional 5 minutes and then cooled to room temperature. Potassium iodide and sulphuric acid is then added to the solution and then the solution is titrated with sodium thiosulfate until starch endpoint.

It is the QP's opinion that Albemarle's laboratory facilities meet or exceed the industry standard requirements for such facilities and that the implemented practices for the collection and preparation of samples, as well as the methodology followed to carry out the analytical work (including the sample security protocols) are based on industry best practices and, therefore, are adequate for their intended purposes.

The QP has reviewed the analytical method as provided by Magnolia and the method appears to be reasonable and well-established.

11 MINERAL RESOURCE ESTIMATES

All bromine mineral accumulations of economic interest and with reasonable prospects for eventual economic extraction within the Magnolia production lease area are either currently on production or subject to an economically viable future development plan and are classified as reserves. Therefore, there are no additional mineral resource estimates included in this evaluation.

The Magnolia facility has an established record of commercial production and, therefore, the reliability of the economic forecast operation is high. From the technical point of view, the quality of the feed, the expected recoveries and other key factors are well understood, by virtue of many years of operation.

The capital and operational costs correspond to a Class 1 estimate and therefore are also significantly accurate (between -10% and +10%), which minimizes the potential impact of those elements on the prospect of economic recovery. Economic factors have also been discussed at length in various sections of this technical report and it is the QP's opinion that they do not present any significant risk that could jeopardize the expected economic recovery of the operations. Moreover, it is the QP's opinion that no additional studies are required.

12 MINERAL RESERVE ESTIMATES

Bromine mineral reserves estimates have been derived using a reservoir simulation model of the Magnolia Smackover field. The simulation model was built using an industry standard modeling platform, utilizing the static geomodel described earlier in Section 6 of this report. The model was used to forecast brine production in the Albemarle licenced areas using the Albemarle corporate business development plan. This section of the report describes production forecasts and reserves estimate produced by the model.

12.1 Mineral Reserves Classification and Production Forecasts

The production forecast generated by the reservoir simulation model was utilized to generate reserves values as follows:

a. Production forecasts for each of the Proved reserves case and Proved + Probable reserves case (also denoted as "1P" and "2P", respectively, in this report), were input to an economic evaluation model to determine the commercial viability of production.

b. Both forecasts were generated for fifty years of production.

c. Then, economic models were run out in time to determine the economic limit for the field under each reserve case. The production volumes up to the point of economic limit then constitute the reserves for each case.

12.1.1 Probable Reserves

The fifty-year production forecast generated by the history matched reservoir simulation model, using the Albemarle business plan for future development of the field is considered to be the "most likely" forecast to be realized on the existing licenced area. Therefore, for the purposes of this reserve evaluation, utilizing the definitions of mineral reserves categories, RPS has classified this forecast as the Proved + Probable ("2P") reserves level.

12.1.2 Proved Reserves

The Proved reserves, by definition, constitute reserves volumes where there is a higher degree of confidence in the forecasts. In generating the production forecasts using a history matched reservoir simulation model, with in turn is based on a geological model built using reservoir geometry and property data from existing wells, the major uncertainties in the forecasts are considered to be related to the reservoir properties at infill drilling locations (locations of the reservoir not yet supported by actual well data.) The uncertainties in reservoir properties are considered to be directly related to the distance of the respective locations from existing well control. For the proved reserves case, to incorporate these uncertainties and reflect them into a production forecast, RPS has discounted the "most likely" forecast derived by the simulation model as follows:

- All existing development wells: Discount forecast by 10%
- For new development wells:
  - For wells within 1 mile of existing well control: discount forecast by 20%
  - For wells within 1 to 2 miles of existing well control: discount forecast by 30%
  - For wells more than 2 miles from existing well control: discount forecast by 40%

12.1.3 Reserves Classified Production Forecasts

The production forecasts derived as described above for the Proved + Probable and Proved reserves cases are shown in the following chart (Figure 12-1):

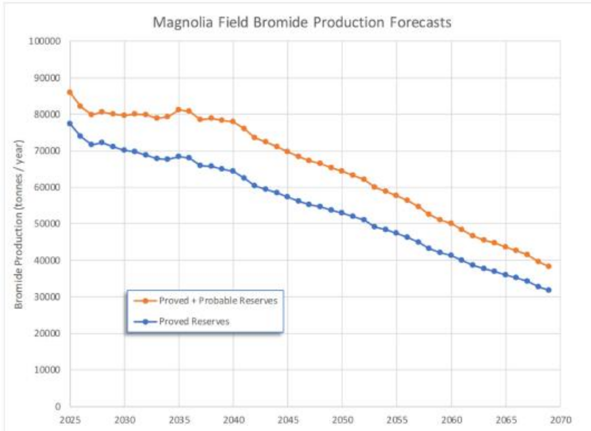


Figure 12-1: Bromide Production forecasts

The cumulative production as of the effective date of this report is 4.28 million tonnes (raw) and 3.98 million tonnes (sales).

The total future forecast production volumes and total ultimate recovery from the leased area of the Magnolia field are summarized in

Table 12-1. The Bromine produced by Albemarle is essentially pure elemental Bromine, measured at >99.99% purity.

The cut-off grade is an industry-accepted standard expression used to determine what part of a mineral deposit can be considered a mineral resource. It is the grade at which the cost of mining and processing the ore is equal to the desired selling price of the commodity extracted from the ore.

The considered sales price ranges between USD 1,660 and USD 3,020 per tonne and the operating cost ranges between USD $756 and USD $1,094 per tonne, as detailed in Section 18 of this report.

The cut-off grade of the Magnolia operation has been estimated to be at 1,000 ppm. The bromide ion concentration in the brine extracted from the Smackover Formation, which feeds to bromine plants, significantly exceeds the selected cut-off grade.

Table 12-1: Bromine Recovery Factors

Bromine Recovery			
	Raw Bromine (Million Tonnes)	Sales Bromine (Million Tonnes)	Recovery Factor (%OBIP)*
Albemarle OBIP	8.48		
Cumulative Production	4.28	3.98	50%
Forecast Recovery (1P)	2.57	2.47	30%
Forecast Recovery (2P)	3.06	2.93	36%
Ultimate Recovery (1P)	6.84	6.45	76%
Ultimate Recovery (2P)	7.33	6.91	82%

*Recovery factor calculations (Sales/Raw OBIP) are based on sales production, as the difference between raw and sales volumes is injected back into the reservoir

Being a mature project with significant historical production information, the reliability of the modifying factors for Magnolia are considerably high and therefore the risks associated with those modifying factors are relatively low.

It is the QP's opinion that the material factors that could cause actual results to differ materially from the conclusions, estimates, designs, forecasts or projections, including recovery factors, processing assumptions, cut off grades, etc., are well understood and, due to the nature of the deposit and the established extraction and processing operations, they are unlikely to significantly impact the mineral reserve estimates.

13 MINING METHODS

All bromine mineral extraction is conducted using supply (production) wells, producing brine from the subsurface Smackover Sands aquifer, as described in previous sections of this report. The produced brine is transported from the production wells via underground pipelines to two production processing plant facilities, where the bromine is extracted. The tailwater from the processing plants is transported back to the Magnolia field via underground pipeline, where it is re-injected into the same Smackover Sands aquifer via injection wells, providing reservoir pressure maintenance support to the brine producing operations. Figure 13-1 shows a simplified schematic of the complete system used by Albemarle.

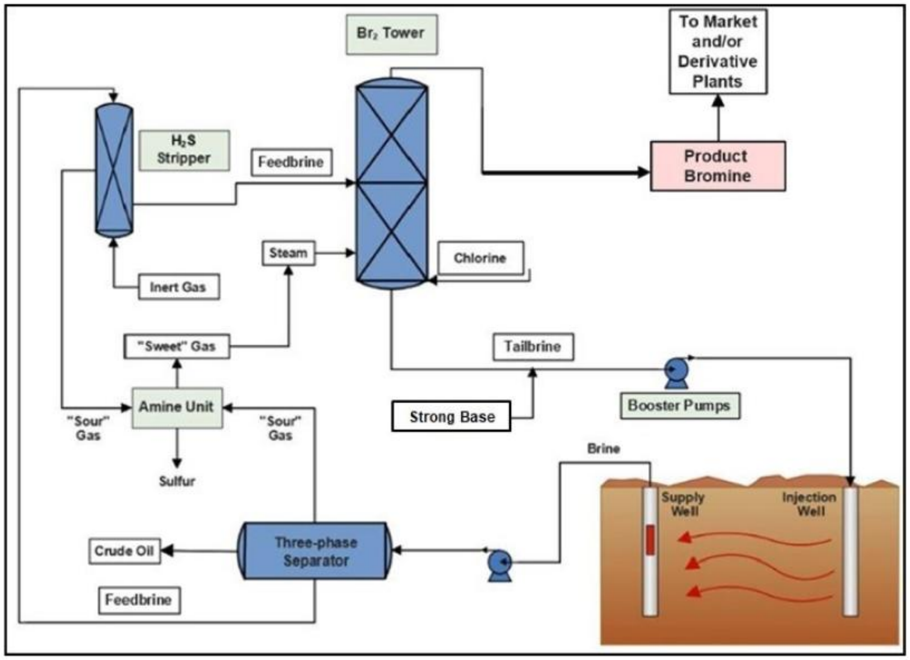
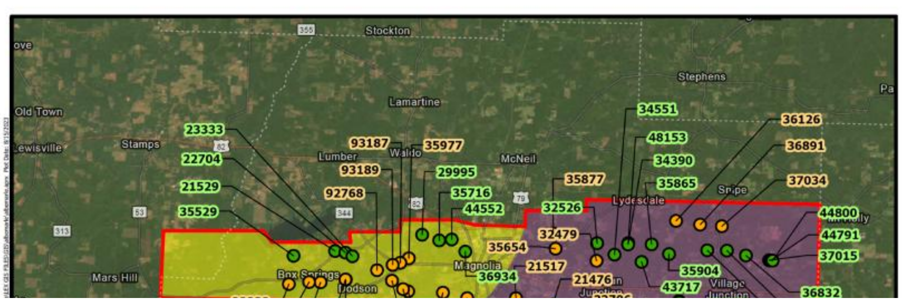


Figure 13-1: Schematic depiction of the bromine extraction and recovery process at Magnolia's South and West Plants

Previous sections of this report explain the importance of the two types of wells included in the brine extraction and reinjection used by Albemarle, namely the brine supply wells and brine injection wells, which are depicted in Figure 13-2.



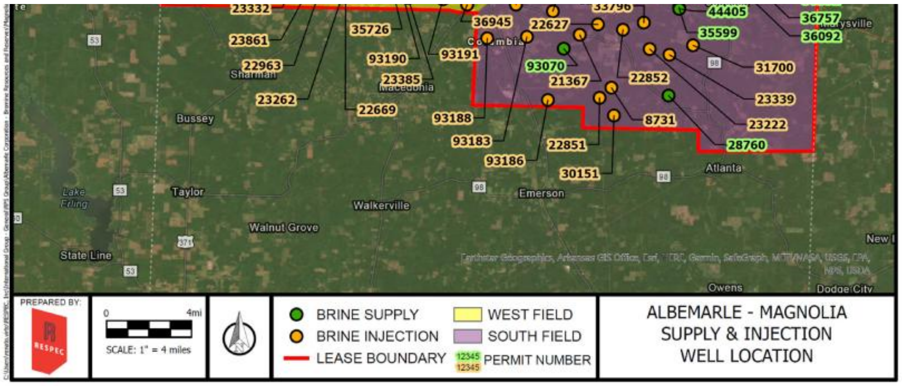


Figure 13-2: Albemarle Magnolia – Supply and Injection Wells

The bromine production process is not a typical mining/mineral processing sequence, however for the purposes of this report, all the steps involved in recovering the brine from the supply wells and its preliminary preparation to be put into the bromine separation plants will be considered “mining” activities, while the processes that takes place inside the bromine plants for the separation of the elemental bromine will be included under the processing and recovery methods.

Figure 13-3 shows a simplified schematic of the portion of the system used by Albemarle to extract the brine from the Smackover formation and prepare it for processing at Albemarle’s bromine plants.

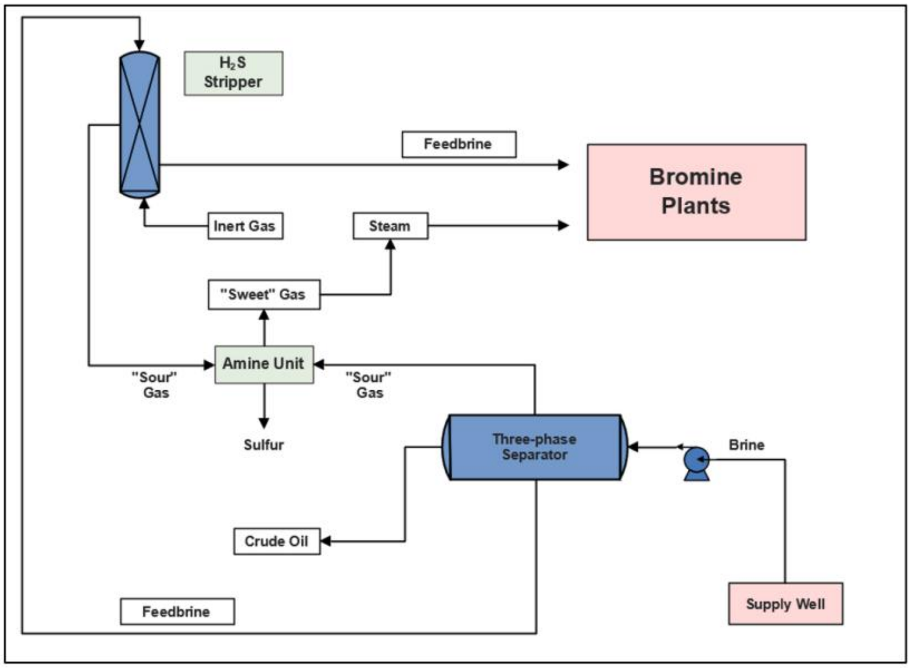
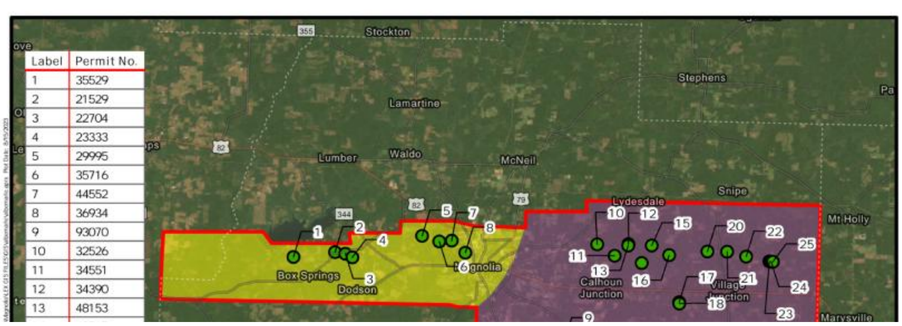


Figure 13-3: Schematic depiction of the brine extraction process at Magnolia's South and West Fields

13.1 Producing Brine at Supply Wells

Brine supply wells ("BSW"s) are utilized to pump brine from the Smackover formation to the surface. Downhole submersible pumps ("DHP"s) are used to elevate flow and pressure from the formation to the surface and are sized based on depth and downhole tubing size to provide an ideal production rate. The key components of the produced brine are chloride salts (primarily calcium and sodium, ~25 %) and bromide salts (sodium, ~1,000-5,000 parts per million ("ppm")). The high chloride-salt content results in the produced brine having a relatively high density (SG = ~1.2).

Figure 13-4 shows all the active Brine Supply Wells in Magnolia operated by Albemarle.



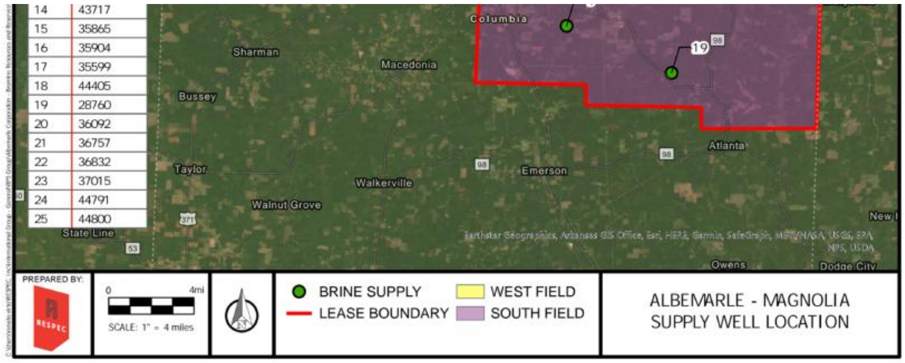


Figure 13-4: Albemarle Magnolia – Brine Supply Wells

After the brine reaches the surface, is processed in the field to remove co-produced oil and natural gas. Co-produced oil is separated into storage and later sales at the well head. Co-produced sour natural gas is fed into a gas handling system for transport to the main plants (South and West) for sweetening (H2S removal) and ultimately combusted as fuel for steam production. The magnitude of co-produced oil and natural gas depends upon location of the well in the field.

13.2 Transporting Brine and Gas from Wellheads to Processing Plants

Upon being discharged from the wellhead booster pumps, the brine flows into a network of pipelines which transports the brine to the main processing plant. A similar, separate system of pipeline transports the produced sour gas from the wellhead to the plant. Both networks operate in parallel in the same right of way ("ROW") to provide efficiency installation and maintenance.

The network of pipelines stretches over tens of miles and is comprised of a combination of both fiber-reinforced plastic ("FRP") and Transite (asbestos-cement) pipeline. Historically, Transite pipelines were used due to their relatively low-cost, availability, and effectiveness. However, since the field has considerably expanded and innovative technology/materials have become available, new pipeline additions use FRP to provide improved protection against leaks, improved compatibility, greater pressure ratings, in addition to overall safety. Ongoing maintenance includes replacing the current Transite pipeline with FRP, particularly closer to the plant.

The sour gas flows through a steel pipeline designed for sour gas service, meeting the demands of the National Association of Corrosion Engineers ("NACE") Standard MR0175 (Petroleum and Natural Gas Industries – Materials for Use in H_2S-containing environments in oil and gas production), and also FRP. Pipeline sizing is determined by flowrate and pressure drops requirements throughout the field.

The pressure with which the brine and gas exit the wellhead is not high enough to flow under natural pressure to the plant. Therefore, there are brine booster facilities as well as natural gas compressor stations to aid in transferring the brine along with gas to the Plants.

13.3 Sour Gas Treatment

Natural gas is usually considered sour if it contains more than 4 ppm by volume of hydrogen sulfide ("H_2S") at standard temperature and pressure conditions.

Amine gas treating, also known as amine scrubbing, gas sweetening and acid gas removal, refers to a group of processes that use aqueous solutions of various alkylamines (commonly referred to simply as amines) to remove H_2S and carbon dioxide ("CO_2") from gases.

At the Magnolia field, the sour gas enters an amine unit as soon as it arrives at the South Plant. This unit is designed to sweeten (remove H_2S) the gas, in order to improve its downstream processing and handling. The amine unit treats the gas using a counter-current absorption process in which the gas flows upwards and a lean amine flows downward. In the absorber, the amine reacts with H_2S and CO_2, removing it from the gas. Nearly all of the H_2S is consumed by the amine.

The sweetened gas, which at this point is primarily methane natural gas and nitrogen, is sent to the boilers for combustion and heat generation

The enriched amine is sent to a stripper unit where steam is directly injected to remove the sour gas from the amine.

Any residual water vapor within the sour gas is condensed/captured in knockout drums and the sour gas, containing nearly all of the H_2S and most of the CO_2, is sent further downstream.

The H_2S rich gas is sent to either a Claus Plant for further conversion to elemental sulfur or to a plant that produces NaHS.

13.4 Life of Mine Production Schedule

The following tables summarize the life of mine production schedule of the project for the 1P (Proved Reserves) and 2P (Proved + Probable Reserves) scenarios. Columns beyond year 2034 have been combined and the values under 2035+ correspond to the sum of the individual figures through year 2069. When applicable, like in the case of well counts, the reported number corresponds to the annual average number of wells between the years 2034 and 2069.

Table 13-1: Life of Mine Production schedule (1P Scenario)

SUMMARY OF BROMINE FIELD RESERVES, PRODUCTION AND CASHFLOW

COMPANY: Albemarle Corporation
OPERATOR: Albemarle Corporation
CASHFLOW FORECAST CASE: Real 2025$
PRICE FORECAST: Spot
ANNUAL COST INFLATION: 0.0%
EFFECTIVE DATE OF ANALYSIS: 2024-12-31
FIELD: Magnolia
WORKING INTEREST: 100.0%
RESERVES CLASS: Proved (1P)

RESERVES		Total Field Gross	Total Field Net	Company Share Gross	Company Share Net
Bromine	(K Tonnes)	2,468	2,468	2,468	2,468

FULL FIELD GROSS PRODUCTION Year		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035+	Total
Production Wells		18	18	19	19	19	21	22	21	21	22	-	-
Injection Wells		23	23	23	23	23	23	23	23	23	23	-	-
Annual Gross Production & Injection													
Brine Production	(MMbbl)	133.6	130.8	129.3	133.2	132.5	135.5	135.8	134.9	133.4	134.9	3,998	5,332
Brine Injection	(MMbbl)	146.7	143.6	141.9	146.0	144.9	146.1	147.6	147.5	144.6	146.9	4,476	5,932
Bromine Production (Sales)	(k Tonne)	77	74	72	72	71	70	70	69	68	68	1,758	2,468

Table 13-2: Life of Mine Production schedule (2P Scenario)

SUMMARY OF BROMINE FIELD RESERVES, PRODUCTION AND CASHFLOW

COMPANY: Albemarle Corporation
OPERATOR: Albemarle Corporation

CASHFLOW FORECAST CASE: Real 2025$
PRICE FORECAST: Spot
ANNUAL COST INFLATION: 0.0%
EFFECTIVE DATE OF ANALYSIS: 2024-12-31

FIELD: Magnolia
WORKING INTEREST: 100.0%
RESERVES CLASS: Proved + Probable (2P)

RESERVES		Total Field Gross	Total Field Net	Company Share Gross	Company Share Net
Bromine	(K Tonnes)	2,935	2,935	2,935	2,935

FULL FIELD GROSS PRODUCTION Year		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035+	Total
Production Wells		18	18	19	19	19	21	22	21	21	22	-	-
Injection Wells		23	23	23	23	23	23	23	23	23	23	-	-
Annual Gross Production & Injection													
Brine Production	(MMbbl)	133.6	130.8	129.3	133.2	132.5	135.5	135.8	134.9	133.4	134.9	3,998	5,332
Brine Injection	(MMbbl)	146.7	143.6	141.9	146.0	144.9	146.1	147.6	147.5	144.6	146.9	4,476	5,932
Bromine Production	(k Tonne)	89	85	83	84	83	83	83	83	82	82	2,219	3,056
Recovery	(%)	97	97	96	96	96	96	96	96	96	96	95	96
Bromine Production (Sales)	(k Tonne)	86	82	80	81	80	80	80	80	79	79	2,129	2,935

14 PROCESSING AND RECOVERY METHODS

This chapter will describe the methods employed by Albemarle to process the bromine-rich brine from and obtain essentially pure (>99.99%) elemental bromine at its South and West Plants.

Figure 14-1 shows a simplified schematic of the portion of the system used by Albemarle to process the bromide-rich brine from the Smackover formation and recover elemental bromine.

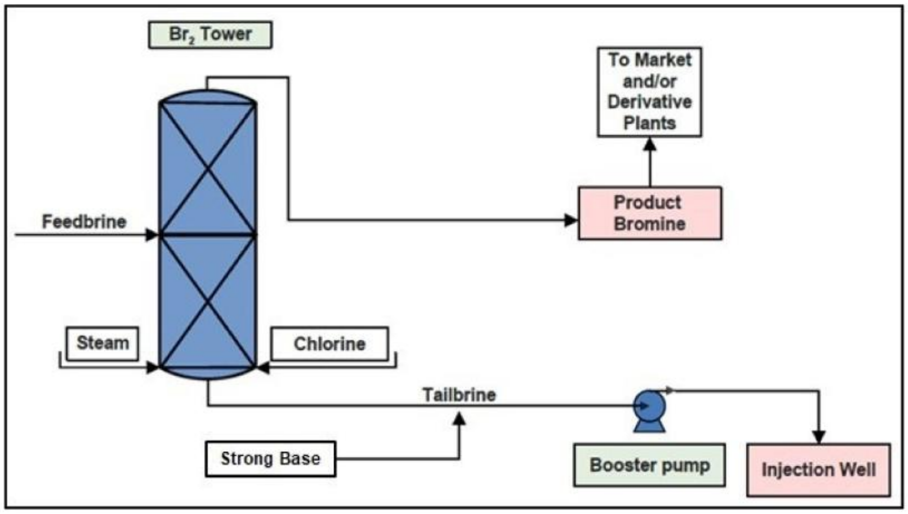


Figure 14-1: Schematic depiction of the bromine recovery process at Magnolia's South and West Plants

14.1 Bromine Production

Feedbrine from the brinefield supply wells in the South Field enters the plant downstream of the DS-7 booster station at a flow rate of between 11,000 and 13,000 gpm. The feedbrine then passes through a hydrogen sulfide (H_2S) stripper that removes the bulk of H_2S. This gas is then sent to the Amine/Claus plant described in previous chapters of this document. The stripped brine flows to the feedbrine tank, which acts as a surge capacity vessel and allows for a small amount of oil removal through extended residence time.

Feedbrine is pumped out of the feedbrine tank to the bromine tower. The feedbrine generally enters the tower with a temperature of 180-190°F.

The main reaction to transform the bromide salts in the feedbrine into bromine consists of the inclusion of chlorine in the tower. Liquid chlorine is brought into place by railcars and vaporized through chlorine vaporizers. The quantity of chlorine necessary is determined by the bromide salt concentration of the feedbrine. The inclusion of chlorine changes the bromide salts to elemental bromine and creates chloride salts within the feedbrine.

In order to strip the bromine from the feedbrine, steam is put into a tower to boil the bromine.

The stripped bromine leaves the tower overhead with water, chlorine, and light natural impurities as a vapor. The vapor stream then goes through a main condenser and secondary condenser, using water as their cooling medium. The condensed fluid out of both exchangers is combined into a phase separator, in

which the bromine settles to the bottom as a result of its higher density. At this point of the process, the bromine is classified as "crude" due to the presence of organic impurities, chlorine, and water. The crude bromine drains by gravity and is then pumped to the purification train and derivative plants.

The process described above is the same in the West Plant, with the only difference being the sizing and capacities of the equipment

14.2 Tailbrine Treatment

At the bromine tower, once the bromine has been stripped of its bromine content, the brine is referred to as tailbrine. Normal conversion rates of bromide salts within the tower are over 90%, and sometimes more than 95%.

Considering the existence of acid and residual chlorine and bromine, the pH level of the tailbrine is particularly low and has to be dealt with before disposal.

particularly low and has to be dealt with before disposal.

Soon after passing through a heat recovery system, the tailbrine flows by gravity towards the neutralization tanks where a strong base to adjust the pH. After pH adjustment the tail brine is cooled before being reinjected. There is adequate tail brine surge capacity between the plant and the injection operations.

14.3 Disposing of Tailbrine at Injection Wells

Albemarle currently operates approximately 37 brine injection wells (“BIW”) between the South and West fields. All BIWs inject the tailbrine into the Smackover Formation, the same reservoir zones as the supply wells’ completions.

Figure 14-2 shows all the active BIWs in Magnolia operated by Albemarle.

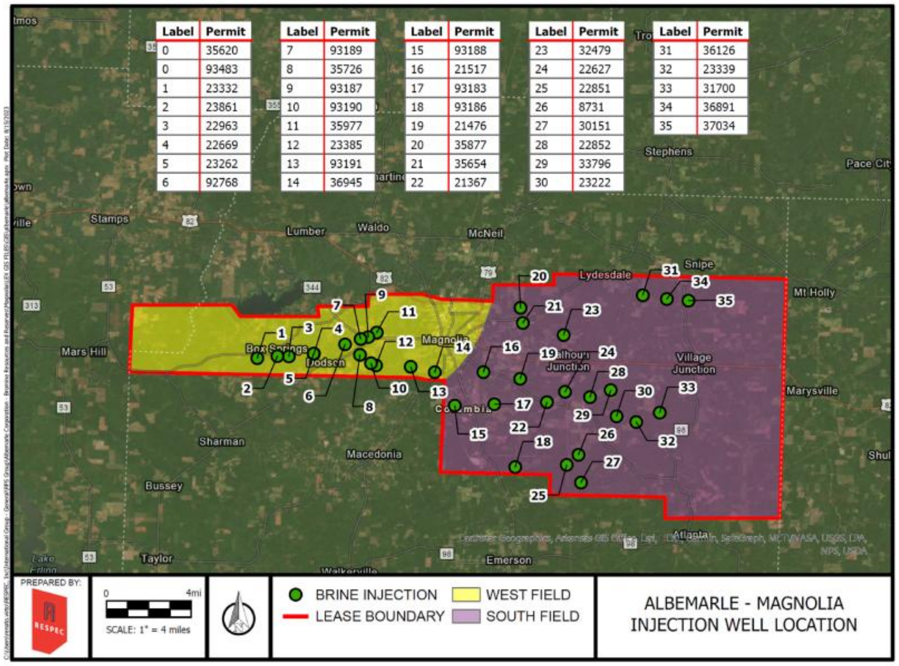


Figure 14-2: Albemarle Magnolia – Brine Injection Wells

In the South Field, tailbrine is pumped from the tailbrine tank into the brinefields with its final destination being 21 injection wells from where it is pumped back into the Smackover Formation for disposal.

15 INFRASTRUCTURE

Albemarle operates two production facilities in Columbia County, Arkansas: The West Plant and the South Plant. The West Plant is located approximately seven miles west of Magnolia, Arkansas. The South Plant is located approximately three miles south of the City of Magnolia. Pipelines run between the two plants and from the plants back to subsurface brine supply (production) wells. The production wells produce bromine rich brine from the Smackover geological formation.

The Magnolia-area operation dates back to 1969 when the Bromet Company began a small bromine extraction operation at a Smackover Brine Formation plot located south of the city along Hwy. 79. The plot is now the site of Albemarle's South Plant.

Ethyl, as the company was later known, in 1987 absorbed Dow Chemical's operation at what is now the West Plant. In 1994, Ethyl's chemical operations were spun off into the Albemarle Corporation

West Plant. In 1994, Ethyl's chemical operations were spun off into the Albemarle Corporation.

The principal use of the South Plant is production of flame retardants, bromine, inorganic bromides, agricultural intermediates and tertiary amines, while the West Plant's produces flame retardants and bromine.

15.1 Road and Rail

15.1.1 Roads

The City of Magnolia, the South Plant, and the West Plant are serviced by several roadways. The South plant is accessible via US Route 79 ("US-79") that runs north-south to the City of Magnolia to the north and the State of Louisiana to the south. The West Plant is accessible by US-371 that runs east-west to the City of Magnolia to the east. Additional major thoroughfares in the area include Arkansas Highway 19, 98, 160, and 344. These smaller roads are used for travel to the decentralized well sites around the brinefields.

US-79 is a United States highway in the southern United States. The route is officially considered and labeled as a north-south highway. The highway's northern/eastern terminus is in Russellville, Kentucky, at an intersection with U.S. Highway 68 and KY 80. Its southern/western terminus is in Round Rock, Texas, at an intersection with Interstate 35, ten miles (16 km) north of Austin.

In Columbia county US-79 continues northward from Louisiana into Emerson and then Magnolia, where it has a brief concurrency with US-82 through the city. From there, the route turns to the northeast, through Camden, where it intersects US-278, and Fordyce, in which it has a brief concurrency with US-167.

Figure 15-1 shows the road network that serves the Albemarle plants.

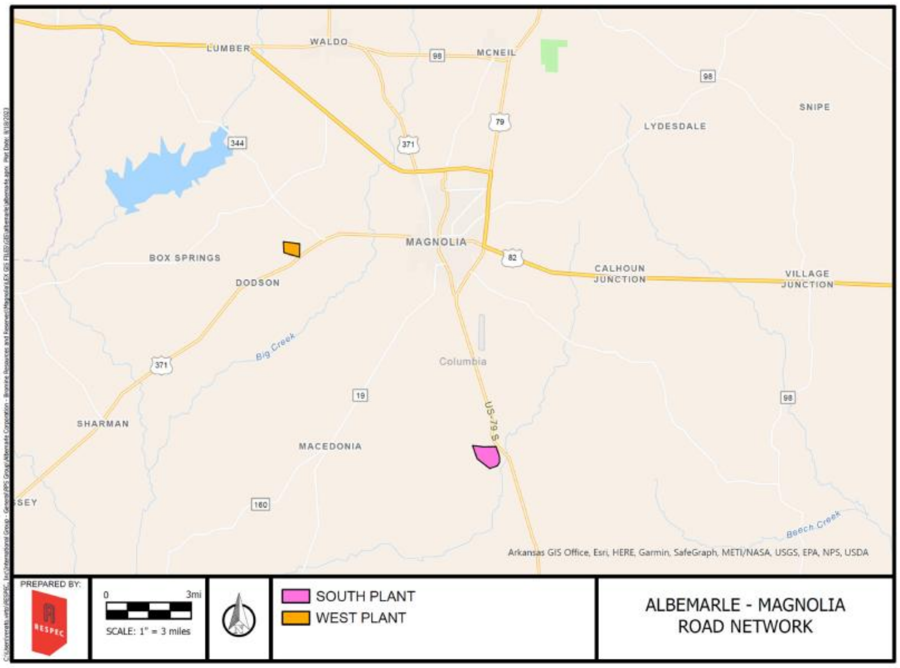


Figure 15-1: Road Network

15.1.2 Rail

Union Pacific ("UP") and the Louisiana & Northwest Railroad ("LNW") provide rail service in Columbia County, Arkansas. UP owns and operates Class I lines nationwide and LNW is a 68-mile, freight short line railroad (Class III). Both Albemarle plants have dedicated rail spurs that provide access to the UP and LNW lines, allowing the transportation of products all over the country.

Figure 15-2 shows the rail network that serves the Albemarle plants.

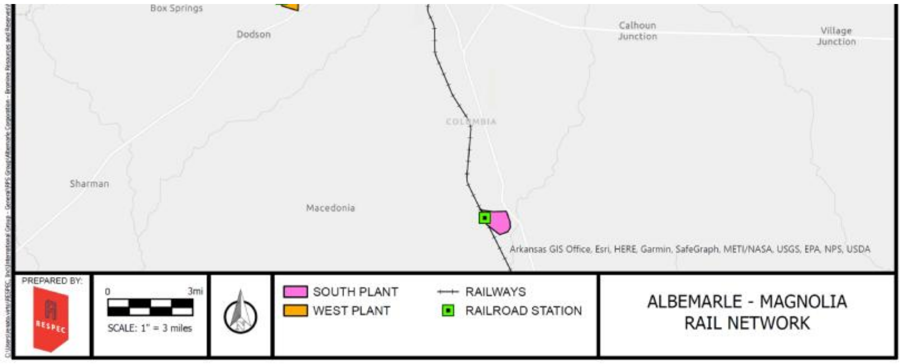


Figure 15-2: Rail Network

15.2 Port Facilities

The closest port is the Port of Houston. Several warehouses in the Houston area stockpile Albemarle finished products for distribution around the country and around the world. Products and supplies that are offloaded in Houston (or other nearby ports including New Orleans), are transported by road to Magnolia via trailer. The port system is not heavily involved in day-to-day production in Magnolia.

15.3 Plant Facilities

15.3.1 Water Supply

Fresh water is supplied to both the South and West plants via Albemarle owned and operated water wells. The wells are drilled into the Sparta Aquifer, a confined aquifer within the Mississippi embayment aquifer system, mostly localized in Arkansas but extending into Louisiana, Mississippi, Missouri, and Tennessee.

The Sparta aquifer is an excellent source of water because of favorable hydrogeologic characteristics. The thickness of the Sparta aquifer in Arkansas ranges from less than 100 feet ("ft") near the outcrop area up to 1,000 ft in the southeastern part of the State. Through most of the aquifer's extent in Arkansas, it is underlain by the Cane River formation and overlain by the Cook Mountain formation. These two formations are low-permeability, fine-grained, clay-rich units that confine flow within the much more permeable sands of the Sparta Sand. Water enters (recharges) the Sparta aquifer from the outcrop areas and adjacent geologic units. The outcrop areas provide hydraulic connection between the aquifer and surface-water sources such as rivers, lakes, and percolation of rainfall. Before development of the aquifer as a water resource (predevelopment), flow in the aquifer was predominantly from the topographically high outcrop areas downdip to the east and southeast. The aquifer in Arkansas County is confined by the Cook Mountain confining unit. Depth to the Sparta aquifer in Arkansas County ranges from 300 to 700 feet below land surface, with thickness varying from 500 to 800 feet.

The water quality of the Sparta is such that it is used as residential potable water in the City of Magnolia and surrounding areas. Three water wells are used to supply potable water to the South plant with a nominal flow of 1000-1200 gallons per minute to supply the whole site. Process requirements, including injection wells are approximately 650 GPD.

Two additional water wells are used to the supply potable water to the West plant, where the demand from the plant is far outstripped by the water capacity of those two wells.

15.3.2 Power Supply

Electricity is provided to the South Plant, West Plant, and brinefields by Entergy Arkansas, LLC ("Entergy"), a utility company that has served Arkansas customers for more than 100 years. Entergy companies serve approximately 715,000 customers in 63 counties and have approximately 3,500 employees in Arkansas. Entergy owns and operates the substation(s) at each property and within the brinefields.

Arkansas ranks among the 10 states with the lowest average retail price for electricity. According to the Energy Information Administration, industrial electricity in Arkansas[23] is approximately 11 percent less expensive than the U.S. average as shown in Figure 15-3, which represents a strategic comparative advantage for industries located in the state.

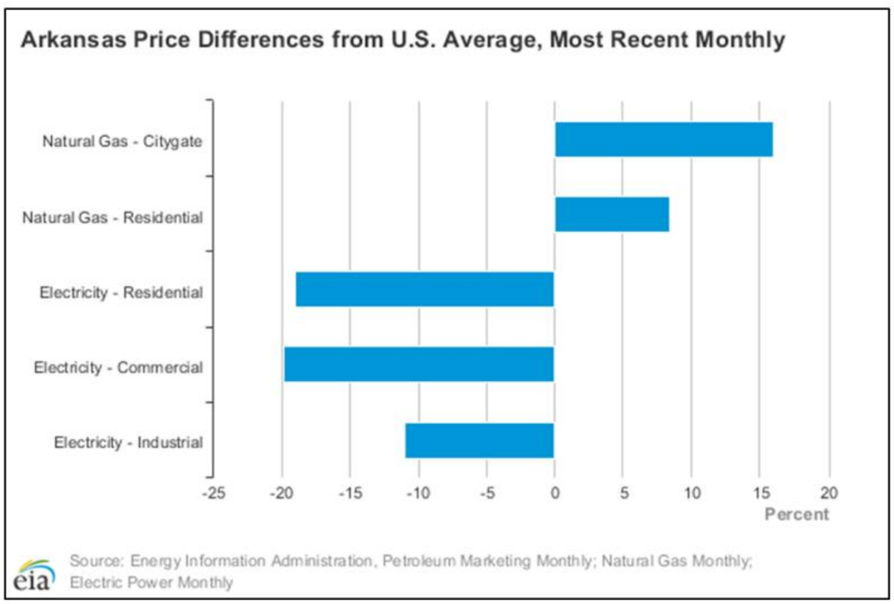


Figure 15-3: Arkansas Energy

115-kV systems are responsible for transmitting power from the larger transmission systems and generation facilities throughout the entire state of Arkansas. Some large industrial customers, such as Albemarle, are served directly from 115-kV systems.

Figure 15-4 shows the main power and distribution lines, as well as the location of the substations that serve the Albemarle plants in Magnolia.

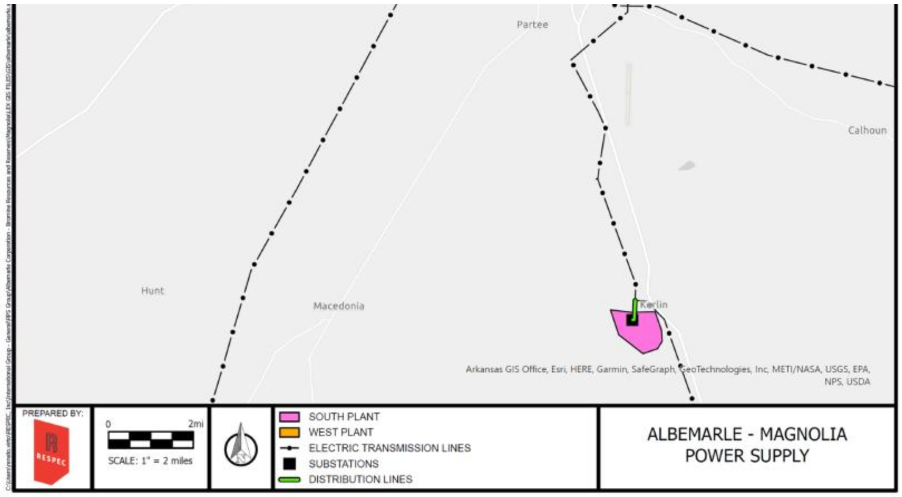


Figure 15-4: Albemarle-Magnolia Power Supply

Most industries need 2,400 to 4,160 volt power supply to run heavy machinery and they usually have their own substation at their facilities, as is the case of Albemarle's South and West Plants.

For the South Plant, there are two transformers within the substation: (1) 20MVA transformer dedicated to the plant itself where approximately 13 MVA is used when the plant is fully operational. The other transformer is a 10 MVA transformer that feeds offsite loads including some brinefield operations, the nearby nitrogen generation plant, and others.

For the West Plant, there are two substations. The Magnolia Dow substation rated at 12.5MVA provides supply to the plant itself where approximately 13 MVA is used when the plant is fully operational. The Magnolia West substation is rated at 27 MVA and feeds offsite loads including some brinefield operations and others.

15.3.3 Brine Supply

The brine produced from the wells is conveyed to the plants via a network of gathering lines with pumps/booster stations as necessary. Depleted brine is returned and injected back into the formation. This process is discussed in detail in the Mining Chapter, Section 13.2.

15.3.4 Waste Steam Management

There are no significant dump sites for the brine/bromine process other than that described in the "Process Description" Section. Various derivative processes have solid waste streams that capture solids via filters. These are collected in localized areas around the plant sites and shipped off site for disposal. Due to the local climate, open air ponds for evaporation are not feasible so there has been an extended focus on stream recycling and process waste minimization over the 50-year lifetime of the Magnolia site.

16 MARKET STUDIES

16.1 Bromine Market Overview

As reported by Technavio [2021][24], a market research company, the global bromine market is expected to grow steadily at a Compound Annual Growth Rate ("CAGR") of around 4.02 percent from 2022-27. One major reason for this trend is the increased demand for plastics. Flame-retardant chemicals use bromine to develop fire resistance. Plastics are widely used in packaging, construction, electrical and electronics items, automotive, and many other industries. The increasing demand for plastics across various end-user industries is driving the demand for flame-retardant chemicals that in turn, will propel the bromine market.

Another trend that is responsible for a growing bromine market forecast is the growth in bromine and bromine derivatives used as mercury-reducing agents. Bromine derivatives are used in reducing mercury bromine derivatives used as mercury-reducing agents. Bromine derivatives are used in reducing mercury emissions from coal combustion in coal-fired power plants. Mercury emissions in the environment is a major concern for public health. The rising health concern along with stringent government regulations may increase global bromine market demand. The increased use of specialty chemicals in various end-use industries such as oil and gas, automobile, pharmaceuticals, and construction will also drive the demand for bromine.

16.1.1 Major producers

The major world producers of elemental bromine are Israel, Jordan, China, and the United States, as shown in Table 16-1. The bromine production from the United States is withheld to avoid disclosing company proprietary data. The world total values exclude the bromine produced in the United States.

Table 16-1: Bromine Production in Metric Tons by Leading Countries (2018-2023)

[Source: USGS Mineral Commodity Summary- Bromine]

Country	2018 (MMt)	2019 (MMt)	2020 (MMt)	2021(e) (MMT)	2022(e) (MMT)	2023 (MMT)
Israel	175,000	180,000	170,000	180,000	178,000	170,000
Jordan	100,000	150,000	84,000	110,000	115,000	120,000
China	60,000	64,000	70,000	75,000	73,000	76,000
Japan	20,000	20,000	20,000	20,000	20,000	20,000
Ukraine	4,500	4,500	4,500	4,500	10,800	11,000
India	2,300	10,000	3,300	3,000	3,500	3,500
United States	W	W	W	W	W	W
World Total (Rounded)	**362,000**	**429,000**	**352,000**	**390,000**	**400,000**	**400,000**

(e) estimated
W = withheld.

The prominent players in the global bromine market are Israel Chemicals Limited (Israel), Albemarle Corporation (United States), Chemtura Corporation (United States), Tosoh Corporation (Japan), Tata Chemicals Limited (India), Gulf Resources Inc. (China), TETRA Technologies, Inc. (United States), Hindustan Salts Limited (India), Honeywell International Inc. (United States), and Perekop Bromine (Republic of Crimea). The production from the major global bromine producers is also provided in Table 16-1.

16.2 Major Markets

The global bromine market is dominated by manufacturers who have an extensive geographical presence with massive production facilities, all around the world. Competition among the major players is mostly based on technological innovation, price, and product quality.

According to a report by Market Research Future [2021][25], which forecasted the global bromine market until 2023, the market is divided into five regions: Latin America, the Middle East and Africa, Asia Pacific, North America, and Europe. Among these, Market Research Future [2021][25] predicts that Asia would be the fastest-growing region for bromine consumption because of a growing population and increasing purchasing power in the developing nations. The growth of agriculture and automobile industries in countries such as China and India will also drive the increasing demand for bromine. North America will remain a dominant market, and developed industries such as cosmetics, automobile, and pharmaceuticals will affect the demand for bromine. The European region is expected to experience a moderate growth that will be driven by the cosmetic and automobile industries. The growing oil-and-gas drilling activities in Russia will also contribute to the growth of the bromine market.

16.3 Bromine Price Trend

The price of bromine gradually increased during the period 2014-2021. The price in January 2014 was approximately $2,800 per tonne and in January 2021 it had increased to approximately $5,200 per tonne.

In 2021, the price of bromine significantly increased, reaching a peak of $10,700 per tonne in November, before falling sharply and ranging between $2,000 to $4,000 in 2024. The bromine spot price on the effective date of this report, December 31, 2024, was USD 3,020 per tonne and the overall outlook is relatively stable pricing at current levels.

Bromine prices have greatly decreased in the last two years mainly because of reduced demand and an increase in the release of domestic inventories before the close of the financial year. The slow demand for Bromine in industries such as flame-retardant production and other end-use sectors is due to excess inventories in the local market.

The above-described behavior of the market is the product of a combination of factors, including China's decrease in bromine production from brine due to the country's electricity curtailment policy.

Figure 16-1 illustrates the behavior of bromine prices in the period January 2014-December 2024.

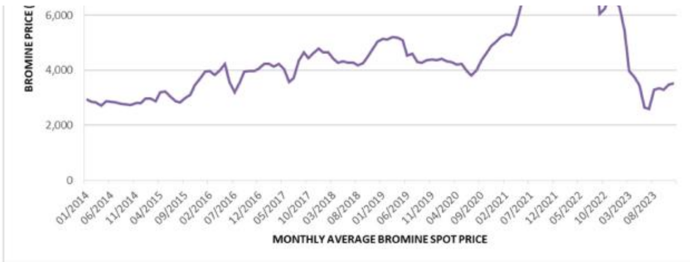


Figure 16-1: Bromine Price Trend as per China Petroleum and Chemical Industry Federation (Price is in US$)[26]

16.4 Bromine Applications

Albemarle produces a variety of substances from bromine [www.albemarle.com]. The specific derivatives produced are not discussed in detail in this technical report for proprietary reasons. The following list illustrate the ways that elemental bromine or bromine derivatives are used in a variety of products:

- Flame Retardants: Bromine is very efficient as a constituent element when used in producing flame retardants; therefore, only a small amount is needed to achieve fire resistance.
- Biocides: Bromine reacts with other substances in water to form bromine-containing substances that are disinfectants and odorless.
- Pharmaceuticals: Bromide ions have the ability to decrease the sensitivity of the central nervous system, which makes them effective for use as sedatives, anti-epileptics, and tranquillizers.
- Mercury Emission Reduction: Bromine-based products are used to reduce mercury emissions from coal-fired power plants.
- Energy Storage: Bromine-based storage technologies are a highly efficient and cost-effective electro-chemical energy storage solution that provides a range of options to successfully manage energy from renewable sources, minimize energy loss, reduce overall energy use and cost, and safeguard supply.
- Water Treatment: Bromine-based products are ideal solutions for water-treatment applications because of bromine's ability to kill harmful contaminants.

- Oil-and Gas Industry Drilling Fluids: Bromine is used in clear brines to increase the efficiency and productivity of oil-and-gas wells.

17 ENVIRONMENTAL STUDIES, PERMITTING, AND PLANS, NEGOTIATIONS, OR AGREEMENTS WITH LOCAL INDIVIDUALS OR GROUPS

17.1 Environment

In 2014, Albemarle officially joined the ENERGY STAR as a partner (the ENERGY STAR program is an initiative of the EPA), by making a fundamental commitment to protect the environment through the continuous improvement in energy performance.

For two straight years, Albemarle facilities have been awarded the Energy Efficiency Award by the American Chemistry Council ("ACC") to high-performing Responsible Care® member companies.

Responsible Care® is the chemical manufacturing industry's environmental, health, safety, and security performance initiative, and it helps ACC member companies to enhance their performance and improve the health and safety of their employees, the communities in which they operate, and the environment as a whole.

Already certified by the Wildlife Habitat Council ("WHC") since 2006, Albemarle's Magnolia plants achieved Corporate Lands for Learning ("CLL") certification in 2009.

WHC Conservation Certification programs can be found in 47 U.S. states and 28 countries. This certification is the only standard designed for broad-based biodiversity enhancement on corporate landholdings. It is a continual process by which activities are maintained to offer ongoing benefit to biodiversity and people.

The CLL certification is accredited by the Wildlife Habitat Council, a nonprofit, non-lobbying charitable organization comprised of a group of corporations, conservation organizations, and individuals dedicated to restoring and enhancing wildlife habitat. This designation recognizes the learning opportunities created by Albemarle's commitment to environmental conservation and increasing native biodiversity across Magnolia's 100-acre tract of reforested land and 70-acre artificially created marsh.

Magnolia's South Plant and West Plant have artificial wetlands[27], which meet the needs of numerous wildlife species while also providing an economic and environmentally friendly solution for industrial water treatment.

The Magnolia sites have a wetland mitigation bank, which allows needed wetland permitting if required for any new brine well or pipeline construction that may fall within jurisdictional land.

17.2 Permitting

The purpose of environmental permits is to ensure that businesses and individuals understand and comply with all applicable federal and state environmental standards to protect the air, land, and water.

It is established that the State has primacy in issuing relevant permits for the whole operation of the brine extraction and processing plants. The Environmental Protection Agency ("EPA") has delegated responsibility for many of the regulatory programs under its jurisdiction to the State; these could be Title V Air Permits, underground injection control ("UIC"), National Pollutant Discharge Elimination System ("NPDES"), among others.

The organizations responsible for issuing most of these permits are the Arkansas Department of Energy and Environment ("E&E") and the Arkansas Oil & Gas Commission ("AOGC"). Currently between the two plants there is a combined total of 60 permits obtained from AOGC related to the supply and injection wells used in the brine extraction process.

17.2.1 Division of Environmental Quality (DEQ)

In Arkansas, the regulatory body in the area of environmental protection is the Arkansas Department of Energy and Environment ("E&E"), which absorbed the former Arkansas Department of Environmental Quality ("ADEQ"), which is now named the Division of Environmental Quality ("DEQ"). It was established in 2019 as part of the Transformation and Efficiencies Act of 2019 (Act 910).

The DEQ has four offices, with specific areas of competence:

- **Office of Air Quality**: regulates industries that emit air pollutants.
- **Office of Energy**: works to promote energy efficiency, clean technology, and sustainable strategies that encourage economic development, energy security, and environmental well-being.
- **Office of Land Resources**: regulates activities to ensure that Arkansas's land is protected.
- **Office of Water Quality**: regulates stormwater runoff and industrial discharges.

Albemarle's operation at Magnolia are regulated by the Office of Air Quality and the Office of Water Quality.

17.2.1.1 Office of Air Quality

The Office of Air Quality consists of four branches: Permits, Compliance, Planning, and Air Quality Analysis, and Enforcement and Asbestos. Each branch of the Office of Air Quality has specific duties and addresses various aspects of the air program. The branches work together to meet Arkansas's federal obligations under the Clean Air Act; and protect air quality to enhance the lives and health of all Arkansans and visitors to the State, while fostering responsible economic expansion opportunities. Albemarle's South Plant and West Plants air emissions are regulated by this office.

The Permits Branch issues new permits and permit modifications to existing facilities after reviewing and evaluating permit applications for administrative and technical completeness and ensuring that each application meets regulatory adequacy. The permit is written to meet state and federal regulations to include information on which pollutants are being released, how much may be released, and what kinds of steps the source's owner or operator is taking to reduce pollution. All permits will include a mechanism to demonstrate compliance with the permit conditions. There are two types of air permits: Minor Source and Major Source/Title V.

The Office of Air Quality Compliance Branch's primary responsibility is to ensure that permitted facilities are operating according to state and federal air pollution regulations. This is accomplished through annual compliance inspections, stack testing, and monitoring of reporting requirements. Compliance inspectors also investigate citizen complaints relative to air pollution.

The Policy & Planning Branch is responsible for developing plans to implement DEQ's program to protect outdoor air quality in the state in accordance with Arkansas law and the Clean Air Act. The Branch is also responsible for gathering and evaluating information on air quality conditions and emissions of air pollutants in the state. The Branch provides technical expertise to the other branches of the Office of Air Quality and helps to educate the public about air quality issues.

The Asbestos Section is focused on providing assistance and training to office staff, the regulated community, and the general public on asbestos related issues (mainly abatement, stabilization, and remediation).

17.2.1.2 Office of Water Quality

Each of the Office of Water Quality's four branches, Compliance, Enforcement, Permits, and Water Quality Planning, has different duties. Their common goal is protecting and enhancing Arkansas's waterways.

The Compliance Branch performs compliance inspections at municipal wastewater treatment plants, construction sites, industrial properties, animal waste facilities, and oil and gas drilling sites.

The Enforcement Branch outlines corrective actions, sets corrective action schedules and civil penalties, and monitors instances of noncompliance throughout the state. The branch also oversees DEQ's wastewater licensing program.

The Permits Branch issues a range of individual and general permits. The permits not only set pollution limits but also lay out reporting and other requirements all aimed at preserving water quality.

The Water Quality Planning Branch develops water quality standards for waterways and closely monitors surface water and groundwater across the state.

The Water Office staff maintains a Water Quality Management Plan (WQMP) in accordance with Section 208 of the Clean Water Act. The WQMP is an inventory of point source dischargers and their associated permit limits and other information.

17.2.2 Arkansas Oil and Gas Commission

The mission of the Arkansas Oil and Gas Commission[28] is to prevent waste and encourage conservation of the Arkansas oil, natural gas, and brine resources, to protect the correlative rights associated with those resources, and to respect the environment during the production, extraction, and transportation of those resources.

The Commission's Regulatory Functions are the following:

- Issue permits to drill oil, natural gas, and brine production wells, and other types of exploratory holes.
- Issue authority to operate and produce wells through approval of well completions and recompletions.
- Initial production test to establish production allowable.
- Conduct compliance inspections during drilling process and operational life of well.
- Issue authority to plug and abandon wells to insure protection of freshwater zones and production intervals.
- Issue permits to conduct seismic operations for exploration of oil and natural gas.
- Issue permits to drill and operate Class II UIC (Underground Injection Control) enhanced oil recovery injection wells and saltwater disposal wells.
- Issue permits to drill and operate Class V UIC brine injection wells for the disposal of spent brine fluids following removal of bromine and other minerals.
- Conduct monthly administrative hearings to enforce provisions of the oil and gas statutes and regulations.

17.2.2.1 Underground Injection Control (UIC) Program

In 1974, Congress passed the Safe Drinking Water Act, which required the U.S. Environmental Protection Agency ("EPA") to establish a system of regulations for underground injection activities. The regulations are designed to establish minimum requirements for controlling all injection activities, to provide enforcement authority, and to provide protection for underground sources of drinking water.

In 1982, EPA gave to the State of Arkansas the authority to administer the UIC program[29], and the former Arkansas Department of Energy and Environment's Division of Environmental Quality now named Division of Environmental Quality, became the primary enforcement authority to regulate Class I, Class III, Class IV, Class V (other than spent brine from bromine production wells), and Class VI UIC wells. At present, there are no Class III, Class IV, or Class VI UIC wells in Arkansas.

The Arkansas Oil and Gas Commission (AOGC) regulates Class II UIC wells and Class V bromine-production-related spent brine UIC disposal wells.

Class IV wells are banned by CFR 144.13 and APC&EC Regulation 17, except for EPA- or state-authorized groundwater cleanup actions.

17.2.2.2 Underground Injection Control Well Classes

The Underground Injection Control program[30] consists of six classes of injection wells. Each well class is based on the type and depth of the injection activity, and the potential for that injection activity to result in endangerment of an underground source of drinking water (USDW).

- Class I wells are used to inject hazardous and non-hazardous wastes into deep, isolated rock formations.
- Class II wells are used exclusively to inject fluids associated with oil and natural gas production.
- Class III wells are used to inject fluids to dissolve and extract minerals.
- Class IV wells are shallow wells used to inject hazardous or radioactive wastes into or above a geologic formation that contains a USDW.
- Class V wells are used to inject non-hazardous fluids underground. Most Class V wells are used to dispose of wastes into or above underground sources of drinking water.
- Class VI wells are wells used for injection of carbon dioxide (CO_2) into underground subsurface rock formations for long-term storage, or geologic sequestration.

17.2.3 Albemarle South and West Plant Permits

A detailed examination of the permits issued by the corresponding regulators showed that the Albemarle South and West plants were in full compliance with local, state, and federal regulations and related requirements for their current operations.

Each permit associated with both existing Albemarle plants require a certain issuance time and it varies depending on whether the application is for a renewal or for a new permit. Table 17-1 shows the estimated time it takes for the whole permitting process.

Table 17-1: Typical Processing Times for Modification or Issuance of New Permits

PERMIT	MODIFICATION	NEW APPLICATION
Class I Underground Injection Control (UIC) Well (non-hazardous waste)	≥ 3 mo ≤ 6 mo	≥ 6 mo ≤ 9 mo
NPDES Industrial Wastewater Discharge	≥ 3 mo ≤ 6 mo	≥ 6 mo ≤ 9 mo
Title V Air Operating Permit	≥ 3 mo ≤ 6 mo	≥ 6 mo ≤ 12 mo

Table 17-2 and Table 17-3 show a list of the current active permits corresponding to the South and West plants as well as a brief description of each permit. Voided permits and permits that are pending or under review as of the date of this report were not listed in the tables. The permits listed below are only those shown as “Active” in DEQ data base. The validity of the permits can vary between two and 10 years.

Table 17-2: Existing Permits for Albemarle South Plant

ALBERMARLE SOUTH / AFIN # 14-00028			
MEDIA	PERMIT TYPE	STATE PERMIT # (IF APPLICABLE)	DESCRIPTION
AIR	Title V	0762-AOP-R29	Authorization to construct, operate and maintain the equipment and/ or control apparatus at the plant.
AIR	Minor Source	1394-A	Authorization to operate a portable flare at the well site during periods of maintenance in the case of brine leak.
WATER-NPDES	Cooling Water	AR0038857	Authorization to discharge to all receiving waters in accordance with conditions set forth

			in this permit.
SOLID WASTE	Class III Non-Commercial	0175-S	Authorization to construct, maintain and/or operate a Solid Waste Disposal Facility.
SOLID WASTE	Class III Non-Commercial	0251-S3N-R1	Authorization of the Waste Disposal Facility set forth in the original permit renewal application.
WATER-UIC	UIC Class I	0004-UR-3	Non-discharge Water Permit: This permit is for the operation and maintenance of a nonhazardous Class I underground injection Waste Disposal Well.
WATER	Waste Storage	3419-WR-6	Authorization to construct, operate and maintain a facility with no discharge of process waste directly on to waters of the state.
WATER	Brine	2189-WR-8	This is the authorization to operate and maintain storage impoundments and transmission pipelines, consisting of storage and handling of brine and tail brine for and from chemical manufacturing process units, with no discharge of process waste directly on to waters of the state.
WATER	Waste Storage	3532-WR-9	This is the authorization to operate and maintain storage impoundments and transmission pipelines, consisting of storage and handling of wastewater from chemical manufacturing process units, with no discharge of process waste directly on to waters of the state.

Table 17-3: Existing Permits for Albemarle West Plant

ALBERMARLE WEST / AFIN # 14-00011			
MEDIA	PERMIT TYPE	STATE PERMIT # (IF APPLICABLE)	DESCRIPTION
AIR	Minor Source	0779-AR-1	Authorization to operate a portable flare at the well site during periods of maintenance in the case of brine leak
AIR	Minor Source	0882-AR-9	Authorization to construct, operate and maintain the equipment and/ or control apparatus at the plant.
WATER-NPDES	Cooling Water	AR0047635	Authorization to discharge treated sanitary wastewater, non-contact cooling water, boiler blowdown, boiler de-aerator blowdown, and other miscellaneous sources from a facility.
WATER-NPDES	Stormwater	ARR00A588	Authorization to discharge receiving storm water in accordance with conditions set forth in this permit.
WATER	Brine	0690-WR-5	This is the authorization to operate the plant brine pre-treatment and management system.
WATER	Brine	4007-WR-4	This is the authorization to operate and maintain storage impoundments and transmission pipelines, consisting of storage and handling of brine and tail brine for and from chemical manufacturing process units, with no discharge of process waste directly on to waters of the stat

17.2.3.1 Title V Air Permits

The DEQ Office of Air Quality, oversees issuing new permits or renewals for the existing plants. They achieved this after evaluating and reviewing permit applications received to check for compliance with all the requirements and regulations stipulated in Title V of the Clean Air Act. It is a legally enforceable document designed to improve compliance by clarifying what facilities (sources) must do to control air pollution. EPA Region 6 provides oversight for air regulatory programs in Arkansas.

17.2.3.2 Underground Injection Control (UIC) Permits

The Underground Injection Control ("UIC") program is designed to ensure that fluids injected underground will not endanger drinking water sources. All Class I wells have strict siting, construction, operation and maintenance requirements designed to ensure protection of the uppermost sources of drinking water ("USDW"s). Wells injecting hazardous wastes have siting requirements to show that, with a reasonable degree of certainty, there will be no migration of hazardous constituents from the injection interval. Any Class I wells that dispose of hazardous wastes via injection then they would have to have a no migration petition (which only EPA issues) in addition to an DEQ state permit for injection well operations.

17.2.3.3 National Pollution Discharge Elimination System

The permit program addressing water pollution by regulating point sources that discharge pollutants to waters of the United States is the National Pollutant Discharge Elimination System ("NPDES"), which was created by the Clean Water Act ("CWA") in 1972. Its objective is achieved by regulating the point sources that discharge pollutants into the waters of the State. These discharges can include discharges from industrial process wastewater discharges and runoff conveyed through a storm sewer system.

17.2.4 Albemarle Well Permits

Albemarle has a total of 62 active well permits corresponding to the Magnolia Operations.

17.2.4.1 Communities

Albemarle Corp. is one of the largest employers in Columbia County[31], with about 375 employees at its two plants in Magnolia and another approximately 200 contractors who work on-site.

Albemarle's advocacy efforts are focused on promoting sustainable solutions to global challenges, supporting its communities and customers, and defending the science upon which its chemistry solutions are based. Societal concerns raised by multiple stakeholders about certain chemicals is of particular concern to Albemarle.

Albemarle has a strong commitment towards sustainability, indicating that it is the cornerstone of its community and stakeholder engagement efforts. The corporation acknowledges that its social license to operate is contingent on the trust and reputation that comes with engagement.

Albemarle regularly engages with many stakeholder groups to maintain strong relationships, share information, and gather feedback.

Most of Albemarle's US sites, including Magnolia, organize Community Advisory Panels ("CAP"s) under the Responsible Care Management System. In these CAPs, site leaders and employees meet regularly with members of the community in order to inform them about their operations and progress on important initiatives as well as to gather feedback and suggestions from local community members.

Albemarle sites also donate funds and volunteer time toward community initiatives, typically with the assistance of the Albemarle Foundation[31], a private endowed charitable (501(c)(3)) entity created in 2007, with the mission of making a positive, sustainable difference in the communities where the corporation operates.

To date, the Albemarle Foundation has granted over $39.5 million into the communities where it operates, in the form of matching gifts, volunteer grants, scholarships, and nonprofit grants.

In 2019, the Albemarle Foundation donated over $250,000 to the Magnolia community for a variety of projects including a park on the town square and Southern Arkansas University's engineering program. Employee's volunteerism includes a youth program called "Play It Safe" to teach outdoor safety, internet safety, fire response, and prom and graduation night safety reminders.

The Albemarle Foundation has also worked closely with Southern Arkansas University (SAU), giving $100,000 over four years to help the engineering program earn accreditation last year from the Accreditation Board for Engineering & Technology (ABET). SAU's Muleriders Kids College, a day camp, also receives Albemarle support.

Albemarle bought the naming rights to the stage in a new "pocket park" on the town square in Magnolia, and it sponsors musical programs at the Magnolia Arts Center.

In 2019 Albemarle conducted a materiality assessment[32], in which some of its key stakeholders helped it to review its environmental, social and governance efforts. The assessment included efforts to identify, assess, and prioritize the main issues on which Albemarle should focus and report.

17.3 Qualified Person's Opinion

The QP opines that the Magnolia facility is operating in conformance with high industrial standards and is comparable with other similar facilities worldwide.

Albemarle's robust Corporate Social Responsibility strategy is targeted at supporting sustainable community development projects and creating and funding sustainable social, cultural, and economic initiatives that service to local and national needs.

An example of good environmental practices in Magnolia is the initiative to convert stormwater captured in an artificial marsh to freshwater for the Albemarle operations, reducing the burden on the local underground aquifer. Albemarle's plants in Magnolia utilize aquatic plants to treat non-contact water and storm water runoff from within the main plant and adjacent areas. This is an innovative and economical solution to treating industrial water using a naturally occurring biological process that does not harm the environment or consume vast amounts of valuable energy resources.

The QP found that the environmental policies implemented by Albemarle at the Magnolia operation met or exceeded the requirements of local and international industry standards.

18 CAPITAL AND OPERATING COSTS

The economic evaluation of the bromine reserves accounts for capital and operating costs for the Magnolia field operations as well as the mineral processing operations at the West and South plants. Cost forecasts were based on data supplied by Albemarle, including corporate P&L statements for Bromine operations from 2014 through 2024, annual historical production data from 2013 through 2024, business plan forecasts for 2025 through 2030. All cost estimates and forecasts are shown in real 2025 USD terms.

The Albemarle operation is a mature project which has been in commercial production for years. The accuracy of the capital and operating cost estimates used in the technical report are based on best industry practices and detailed historical information from the operation; therefore, they correspond to an AACE International Class 1 Estimate (AACE International Recommended Practice No. 18R-97).

As indicated by AACE, "Class 1 estimates are typically prepared to form a current control estimate to be used as the final control baseline against which all actual costs and resources will now be monitored for variations to the budget, and form a part of the change/variation control program. They may be used to evaluate bid checking, to support vendor/contractor negotiations, or for claim evaluations and dispute resolution."

Typical accuracy ranges for Class 1 estimates are -3% to -10% on the low side, and +3% to +15% on the high side, depending on the technological complexity of the project, appropriate reference information, and the inclusion of an appropriate contingency determination. Albemarle's capital and operating cost estimates have an accuracy of -10% to +10%.

18.1 Capital Costs

Capital costs required to produce the bromine reserves have been forecast based on analysis of historical field and plant capital costs, the Company's field development plans, and the Company's associated capital budget forecast. RPS estimates that Albemarle will require a working interest share capital investment of US$1.0 to US$1.4 billion to develop the Proved and Probable reserves.

18.1.1 Development Drilling Costs

The cost for drilling new development production (BSW) and injection (BIW) wells have been estimated based on actual costs incurred by Albemarle while drilling new wells from 2019 to 2024.

18.1.2 Development Facilities Costs

No further facilities/plant capital has been included in the business plan. No facilities capital costs have been included in the economic analysis.

18.1.3 Plant Maintenance Capital (Working Capital)

Albemarle historically spends maintenance capital costs to cover ongoing well and plant upgrades in order to maintain production and processing operations, and to conduct workovers and pump replacements on the producing wells in the field. Albemarle's five year budget plan forecasts includes a schedule of maintenance capital from which RPS has estimated the following capital costs:

- Production (source) well workovers: $400k per workover
  - One workover on each production well every two years
- Process plant maintenance capital: $18.9 million per year

18.2 Operating Costs

The operating costs required for the production of brine and processing the brine to obtain bromine reserves have been forecast based on analysis of historical field and plant operating costs, the Company's field development plans, and the Company's associated operating budget forecast. The field and plant operating costs are combined for each of the West Field and Plant and the South Field and Plant. The operating cost estimates shown are based on the approximate midpoint of a range of uncertainty associated with each estimate.

18.2.1 Plant and Field Operating Costs

In evaluating the historical operating cost data, RPS has split operating costs into fixed and variable components to allow forecasting with variable product volumes, variable producing well counts, and variable injection well counts. Fixed costs include all costs not directly related to production/injection volumes and well counts, including annual lease payments on the multiple leased licence areas. Producing well variable costs include base costs for routine field operations which would vary depending on producing well count, but do not include production well workover costs, which have been included in maintenance capital. Injection well variable costs include the base well costs plus an amount to cover costs of regular acid stimulation treatments in order to maintain injectivity. Operating costs have some uncertainty associated with them, typically +/- 10% in a given year. Total operating costs for the Magnolia operation are forecast to be in the range of US$756 - US$1,094 per tonne of elemental bromine.

18.2.2 General and Administrative Costs

Albemarle's historical expenditures on general, sales, R&D, and administrative costs have been reviewed and analyzed for the past six years, with a fractional portion of total corporate G&A costs being allocated to the elemental bromine sales business and incorporated into the economic analysis.

18.2.3 Abandonment and Reclamation Costs

RPS has estimated abandonment and reclamation costs as follows:

18.2.3.1 Well Abandonments:

Albemarle includes well abandonment cost estimates in its operating costs forecasts of $185k per well for each production and injection well, plus $50k per well for site reclamation for a total of $235k per well. This cost estimate, which has been reviewed and adopted by RPS for this analysis, covers all rig and operations cost to remove all downhole tubing and equipment, set a plug over the producing formation plug, cement the well to surface, remove the wellhead and surface flowline equipment, decommission all subsurface flowlines, and reclaim the well site to original purpose use.

18.2.3.2 Plant Abandonments

Albemarle does not include plant decommissioning, abandonment, and reclamation in its business plan for the two Magnolia bromine plants. The rationale for this plan is that the active commercial activity of both plants is planned to survive the field abandonment, and the plants will continue in operation sourcing bromine and other possible feedstock materials.

On this basis, RPS has not included plant abandonment costs in its economic evaluation.

The following tables contain details on Albemarle's annual capital by major components and operating costs by major cost centers for the 1P (Proved Reserves) and 2P (Proved + Probable Reserves) scenarios. Columns beyond year 2034 have been combined and the values under 2035+ correspond to the sum of the individual figures through year 2069. When applicable, like in the case of well counts, the reported number corresponds to the annual average number of wells between the years 2035 and 2069.

Table 18-1: Summary of Operating and Capital Expenses (1P Scenario)

SUMMARY OF BROMINE FIELD RESERVES, PRODUCTION AND CASHFLOW

COMPANY: Albemarle Corporation
OPERATOR: Albemarle Corporation
CASHFLOW FORECAST CASE: Real 2025$
FIELD: Magnolia
WORKING INTEREST: 100.0%
RESERVES CLASS: Proved (1P)

FULL FIELD GROSS PRODUCTION													
Year		**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035+**	**Total**
Bromine Production	(k Tonne)	77	74	72	72	71	70	70	69	68	68	1,758	2,468
COMPANY SHARE CASHFLOW													
Year		**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035+**	Total
Operating Costs													
Field and Plant Opex	($MM/yr)	77.2	75.5	74.4	74.7	74.1	73.8	73.6	73.1	72.6	72.5	2,232.6	2,974
G&A	($MM/yr)	34.9	34.6	34.5	34.5	34.4	34.4	34.3	34.3	34.2	34.2	1,150.2	1,494
Abandonmnet and Reclamation	($MM/yr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.4	32
Total Opex, G&A, Abex	**($MM/yr)**	**112.1**	**110.2**	**108.9**	**109.2**	**108.5**	**108.1**	**107.9**	**107.3**	**106.8**	**106.7**	**3,415.2**	**4,501**
Operating Cash Income Before Tax	**($MM/yr)**	**121.4**	**113.2**	**107.7**	**108.7**	**105.9**	**103.8**	**102.6**	**100.5**	**98.3**	**97.4**	**1,892.7**	**2,952**
Capital Costs													
Field	**($MM/yr)**	3.6	3.6	3.8	3.8	3.8	4.2	4.4	4.2	4.2	4.4	163.8	204
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Plant	($MM/yr)	16.8	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	593.7	763
Total Capital Costs	**($MM/yr)**	**20.4**	**20.6**	**20.8**	**20.8**	**20.8**	**21.2**	**21.4**	**21.2**	**21.2**	**21.4**	**757.5**	**967**

Table 18-2: Summary of Operating and Capital Expenses (2P Scenario)

SUMMARY OF BROMINE FIELD RESERVES, PRODUCTION AND CASHFLOW

COMPANY: Albemarle Corporation
OPERATOR: Albemarle Corporation

CASHFLOW FORECAST CASE: Real 2025$

FIELD: Magnolia
WORKING INTEREST: 100.0%
RESERVES CLASS: Proved + Probable (2P)

FULL FIELD GROSS PRODUCTION													
Year		**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034+**	**Total**
Bromine Production	(k Tonne)	86	82	80	81	80	80	80	80	79	79	2,129	2,935
COMPANY SHARE CASHFLOW													
Year		**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034+**	**Total**
Operating Costs													
Field and Plant Opex	($MM/yr)	81.6	79.7	78.5	78.9	78.7	78.6	78.9	78.7	78.2	78.4	2,421.0	3,211
G&A	($MM/yr)	35.5	35.3	35.1	35.1	35.1	35.1	35.1	35.1	35.0	35.0	1,178.0	1,529
Abandonmnet and Reclamation	($MM/yr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.4	32
Total Opex, G&A, Abex	**($MM/yr)**	**117.1**	**115.0**	**113.6**	**114.1**	**113.8**	**113.6**	**114.0**	**113.8**	**113.3**	**113.5**	**3,631.4**	**4,773**
Operating Cash Income Before Tax	**($MM/yr)**	**142.4**	**133.2**	**127.3**	**129.3**	**128.1**	**126.8**	**127.9**	**127.3**	**125.2**	**125.8**	**2,796.7**	**4,090**
Capital Costs													
Field	**($MM/yr)**	3.6	3.6	3.8	3.8	3.8	4.2	4.4	4.2	4.2	4.4	163.8	204
Plant	**($MM/yr)**	16.8	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	593.7	763
Total Capital Costs	**($MM/yr)**	**20.4**	**20.6**	**20.8**	**20.8**	**20.8**	**21.2**	**21.4**	**21.2**	**21.2**	**21.4**	**757.5**	**967**

19 ECONOMIC ANALYSIS

An economics model has been used to forecast cash flow from bromine production and processing operations to derive a net present value for the bromine reserves. As there is uncertainty associated with the input capital and operating cost estimates, the approximate midpoint of the range of uncertainty has been used as an input to the cash flow forecasts, in order to develop a single deterministic cash flow forecast and valuation for each of the reserve categories. Cash flows have been generated using annual forecasts of production, sales revenues, operating costs and capital costs. The cash flow model can generate forecasts in either "nominal dollar" (money of the day) or "real dollar" (2025$) terms. The salient features of the cash flow model include:

19.1 Burdens on Production

The production leases include the following burdens:

a. Production Royalties:
   - Oil: 12.5% of production
   - Gas: 12.5% of gas sales revenues
   - Solution gas: 12.5% of gas sales revenues
   - Other minerals (except brine and minerals contained in brine): 10% of mineral sales revenue
   - Brine: No production royalty

b. Production Lease Licences Fees:
   - Lease Years 1, 2, 3, & 4: $1.00 per acre
   - Lease Years 4 through 14: $10.00 per acre
   - Lease Years 15 onward: $25.00 per acre
   - For the purposes of lease licencing fees, the above lease fees have been superseded by the Arkansas Code, Title 15, Subtitle 6, Chapter 76 (15-76-315) which specifies that in lieu of royalty, an annual lease compensation payment of $32.00 per acre payable to the lease owner. This payment amount is indexed to the March 1995 US Producer Price Index for Intermediate Materials, Supplies and Components, then later the Producer Price Index for Processed Goods for Intermediate demand, which specifies that prices and costs are based on a datum cost base at March 1995 and are escalated annually based on the USA Producer Price Index.

Production lease licence fees have been included in the fixed field operating costs.

19.2 Bromine Market and Sales

Bromine produced from the Magnolia field is marketed and sold as both elemental bromine, as well as a constituent in a number of derivative products. The market value of the elemental bromine produced has been estimated from the historical records of elemental bromine sales revenues which the Company has supplied for analysis. Based on discussions with the Company, RPS has generated cash flow cases based on China Spot bromine price at December 31, 2024, with discounts of 0%, 15%, 30%, and 45% (Table 19-1) applied in order to produce a range of estimated values for the reserves. Prices are held flat for the full life of the production forecasts.

Table 19-1: Price Forecast Summary

Bromine Price Forecasts $/tonne			
Spot	Spot less 15%	Spot less 30%	Spot less 45%
$3,020	$2,570	$2,110	$1,660

19.3 Capital Depreciation

Albemarle depreciates capital on a unit of production ("UOP") basis. Based on the historical depreciation from the Albemarle PL statements, utilizing data from 2016 to 2020, RPS has utilized a UOP capital depreciation rate of $154/tonne

19.4 Income Tax

Albemarle has advised RPS that its combined state and federal tax rate on income is 23.2%. RPS has utilized this rate in the economic cash flow calculations.

19.5 Economic Limit

Using the bromine production forecasts, and above estimates of capital, operating, and G&A costs, RPS forecasts cash flow until the operating cash income becomes negative. At this point the field is deemed to have reached its economic limit of production. At that point, the field assumed to be shut in. In the following year of the cash flow forecast, all remaining production and injection wells are assumed to be abandoned, and the appropriate abandonment costs applied. The plant is assumed to not be abandoned, as per advice from Albemarle that the plant will continue operations, processing alternate bromine feedstock sources after the abandonment of the Albemarle field, and therefore no plant abandonment and reclamation costs are applied.

19.6 Cash Flow and Net Present Value Estimates

With the above inputs, RPS has generated cash flow forecasts for the Proved and Proved + Probable reserves cases. The economic viability of the reserves is such that in both the Proved (1P) and Proved + Probable (2P) reserves cases, the economic limit is reached beyond 2069, which is the end of the production forecast. Therefore, for the integrity of this cash flow analysis, the field abandonment costs are applied in the year after the end of the production forecast, i.e., in 2070. Cash flow forecasts were run in real 2025$ terms. The results are summarized in the following tables:

Table 19-2: Albemarle Working Interest Bromine Reserves as of December 31, 2024 – Spot Prices

Albemarle Working Interest Bromine Reserves as of December 31, 2024 Spot Price Forecast											
	Mineral Reserves ('000 tonnes)	Net Present Value Before Tax					Net Present Value After Tax				
		0% ($MM)	5% ($MM)	10% ($MM)	15% ($MM)	20% ($MM)	0% ($MM)	5% ($MM)	10% ($MM)	15% ($MM)	20% ($MM)
Proved	**2,468**	**1,985**	**1,042**	**640**	**438**	**322**	**1,418**	**759**	**471**	**324**	**239**
Probable	467	1,138	579	396	315	270	892	448	304	241	206
Proved + Probable	**2,935**	**3,123**	**1,620**	**1,036**	**753**	**593**	**2,310**	**1,207**	**775**	**565**	**445**

Table 19-3: Albemarle Working Interest Bromine Reserves as of December 31, 2022 – Spot Prices less 15%

Albemarle Working Interest Bromine Reserves as of December 31, 2024 Spot Price Forecast less 15%											
	Mineral Reserves ('000 tonnes)	Net Present Value Before Tax					Net Present Value After Tax				
		0% ($MM)	5% ($MM)	10% ($MM)	15% ($MM)	20% ($MM)	0% ($MM)	5% ($MM)	10% ($MM)	15% ($MM)	20% ($MM)
Proved	**2,403**	**916**	**639**	**461**	**355**	**288**	**604**	**447**	**330**	**257**	**210**
Probable	531	878	379	212	141	105	685	297	167	111	82
Proved + Probable	**2,935**	**1,793**	**1,018**	**673**	**496**	**393**	**1,289**	**745**	**497**	**368**	**292**

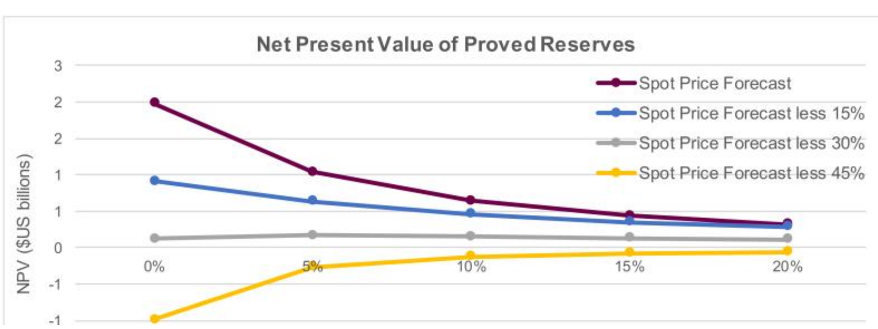
Table 19-4: Albemarle Working Interest Bromine Reserves as of December 31, 2022 – Spot Prices less 30%

Albemarle Working Interest Bromine Reserves as of December 31, 2024 Spot Price Forecast less 30%											
	Mineral Reserves ('000 tonnes)	Net Present Value Before Tax					Net Present Value After Tax				
		0% ($MM)	5% ($MM)	10% ($MM)	15% ($MM)	20% ($MM)	0% ($MM)	5% ($MM)	10% ($MM)	15% ($MM)	20% ($MM)
Proved	**2,018**	**122**	**172**	**154**	**131**	**113**	**30**	**95**	**96**	**85**	**75**
Probable	711	468	259	158	108	81	352	201	124	85	64
Proved + Probable	**2,729**	**590**	**431**	**312**	**239**	**193**	**381**	**296**	**220**	**170**	**138**

Table 19-5: Albemarle Working Interest Bromine Reserves as of December 31, 2022 – Spot Prices less 45%

Albemarle Working Interest Bromine Reserves as of December 31, 2024 Spot Price Forecast less 45%											
	Mineral Reserves ('000 tonnes)	Net Present Value Before Tax					Net Present Value After Tax				
		0% ($MM)	5% ($MM)	10% ($MM)	15% ($MM)	20% ($MM)	0% ($MM)	5% ($MM)	10% ($MM)	15% ($MM)	20% ($MM)
Proved	**1,602**	**-984**	**-265**	**-124**	**-79**	**-58**	**-792**	**-222**	**-109**	**-72**	**-54**
Probable	516	544	157	87	64	52	435	117	64	49	40
Proved + Probable	**2,118**	**-441**	**-108**	**-37**	**-15**	**-6**	**-358**	**-105**	**-45**	**-24**	**-14**

Per the NPV estimate analysis, the 10% discounted NPV of the Magnolia project is estimated to be between -$124 million and $640 million for Proved reserves and between -$37 million and $1.04 billion for Proved + Probable reserves as of December 31, 2024, demonstrating that the operations are economic for majority of pricing scenarios and supporting the estimation of reserves. The following Figure 19-1 and Figure 19-2 show the full distribution of the NPV range for each price forecast for Proved and Proved plus Probable reserves.



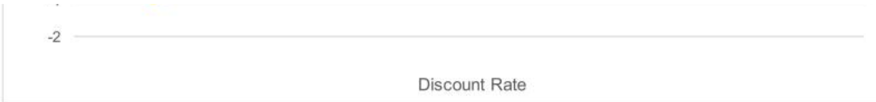


Figure 19-1: Net Present Value Distribution of Proved Reserves by Price Forecast

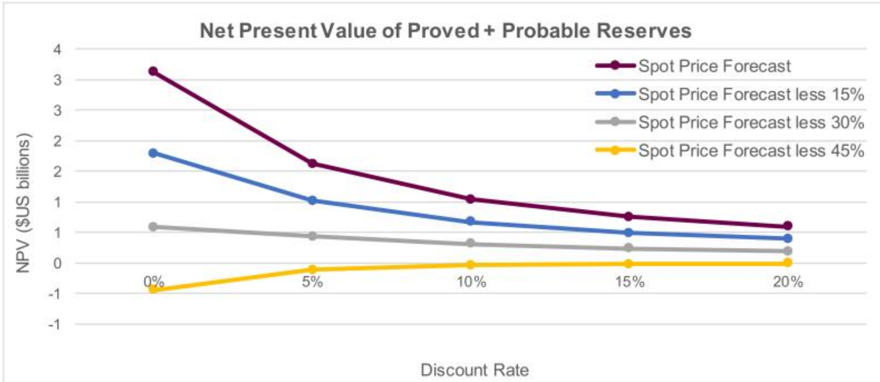


Figure 19-2: Net Present Value Distribution of Proved + Probable Reserves by Price Forecast

Summaries of the cash flow analysis on an annual basis are shown in the following tables. Columns beyond year 2034 have been combined and the values under 2035+ correspond to the sum of the individual figures through year 2069. When applicable, like in the case of well counts, the reported number corresponds to the annual average number of wells between the years 2035 and 2069.

Table 19-6: Annual Cash Flow Summary – Proved Reserves – Spot Prices

SUMMARY OF BROMINE FIELD RESERVES, PRODUCTION AND CASHFLOW

COMPANY:	Albemarle Corporation	**CASHFLOW FORECAST CASE:**	Real 2025$	**FIELD:**	Magnolia
OPERATOR:	Albemarle Corporation	**PRICE FORECAST:**	Spot	**WORKING INTEREST:**	100.0%
		ANNUAL COST INFLATION:	0.0%	**RESERVES CLASS:**	Proved (1P)
		EFFECTIVE DATE OF ANALYSIS:	2024-12-31		

RESERVES		Total Field Gross	Total Field Net	Company Share Gross	Company Share Net
Bromine	(K Tonnes)	2,468	2,468	2,468	2,468

PRESENT VALUE - COMPANY SHARE (Million US$) Discount Rate:	0%	5%	10%	15%	20%
Gross Revenue	7,453	3,111	1,731	1,134	815
Net Revenue	7,453	3,111	1,731	1,134	815
Operating Costs, G&A & Aband	4,501	1,719	910	582	413
Operating Income	2,952	1,395	822	552	402
Capital Costs	967	354	182	114	80
Cash Flow Before Tax (CFBT)	1,985	1,042	640	438	322
Tax Payable	599	286	169	114	83
Cash Flow After Tax (CFAT)	1,418	759	471	324	239

PRODUCT PRICES (US$) Year		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Annual Average 2034+
Bromine	(US$/Kg)	$3.02	$3.02	$3.02	$3.02	$3.02	$3.02	$3.02	$3.02	$3.02	$3.02	$3.02

FULL FIELD GROSS PRODUCTION Year		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035+	Total
Production Wells		18	18	19	19	19	21	22	21	21	22	-	-
Injection Wells		23	23	23	23	23	23	23	23	23	23	-	-
Annual Gross Production & Injection													
Brine Production	(MMbbl)	133.6	130.8	129.3	133.2	132.5	135.5	135.8	134.9	133.4	134.9	3,998	5,332
Brine Injection	(MMbbl)	146.7	143.6	141.9	146.0	144.9	146.1	147.6	147.5	144.6	146.9	4,476	5,932
Bromine Production	(k Tonne)	80	77	74	75	74	73	72	71	71	70	1,832	2,569
Recovery	(%)	97	97	96	96	96	96	96	96	96	96	96	96
Bromine Production (Sales)	(k Tonne)	77	74	72	72	71	70	70	69	68	68	1,758	2,468

COMPANY SHARE CASHFLOW Year		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035+	Total
Bromine Gross Sales Revenue	($MM)	233.6	223.4	216.6	217.8	214.4	212.0	210.5	207.8	205.1	204.1	5,307.9	7,453
Production Royalty	($MM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Net Sales Revenue	($MM)	233.6	223.4	216.6	217.8	214.4	212.0	210.5	207.8	205.1	204.1	5,307.9	7,453
Operating Costs													
Field and Plant Opex	($MM/yr)	77.2	75.5	74.4	74.7	74.1	73.8	73.6	73.1	72.6	72.5	2,232.6	2,974
G&A	($MM/yr)	34.9	34.6	34.5	34.5	34.4	34.4	34.3	34.3	34.2	34.2	1,150.2	1,494
Abandonmnet and Reclamation	($MM/yr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.4	32
Total Opex, G&A, Abex	**($MM/yr)**	**112.1**	**110.2**	**108.9**	**109.2**	**108.5**	**108.1**	**107.9**	**107.3**	**106.8**	**106.7**	**3,415.2**	**4,501**
Operating Cash Income Before Tax	**($MM/yr)**	**121.4**	**113.2**	**107.7**	**108.7**	**105.9**	**103.8**	**102.6**	**100.5**	**98.3**	**97.4**	**1,892.7**	**2,952**
Capital Costs													
Field	**($MM/yr)**	3.6	3.6	3.8	3.8	3.8	4.2	4.4	4.2	4.2	4.4	163.8	204
Plant	**($MM/yr)**	16.8	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	593.7	763
Total Capital	**($MM/yr)**	**20.4**	**20.6**	**20.8**	**20.8**	**20.8**	**21.2**	**21.4**	**21.2**	**21.2**	**21.4**	**757.5**	**967**
Cash Flow Before Tax	**($MM/yr)**	101.0	92.6	86.9	87.9	85.1	82.7	81.2	79.3	77.1	76.0	1,135.2	1,985
Income Tax	**($MM/yr)**	25.3	23.5	22.3	22.5	21.9	21.4	21.2	20.7	20.2	20.0	380.2	599
Cash Flow After Tax	**($MM/yr)**	**75.8**	**69.2**	**64.6**	**65.4**	**63.2**	**61.2**	**60.0**	**58.6**	**56.9**	**56.0**	**787.3**	**1,418**

Table 19-7: Annual Cash Flow Summary – Proved Reserves – Spot Prices less 15%

SUMMARY OF BROMINE FIELD RESERVES, PRODUCTION AND CASHFLOW

COMPANY:	Albemarle Corporation	**CASHFLOW FORECAST CASE:**	Real 2025$	**FIELD:**	Magnolia
OPERATOR:	Albemarle Corporation	**PRICE FORECAST:**	Spot -15%	**WORKING INTEREST:**	100.0%
		ANNUAL COST INFLATION:	0.0%	**RESERVES CLASS:**	Proved (1P)
		EFFECTIVE DATE OF ANALYSIS:	2024-12-31		

RESERVES		Total Field Gross	Total Field Net	Company Share Gross	Company Share Net
Bromine	(K Tonnes)	2,403	2,403	2,403	2,403

PRESENT VALUE - COMPANY SHARE (Million US$) Discount Rate:	0%	5%	10%	15%	20%
Gross Revenue	6,170	2,896	1,778	1,274	998
Net Revenue	6,170	2,896	1,778	1,274	998
Operating Costs, G&A & Aband	4,329	1,876	1,099	769	594
Operating Income	1,841	1,024	680	505	403
Capital Costs	925	385	219	150	115
Cash Flow Before Tax (CFBT)	916	639	461	355	288
Tax Payable	344	196	132	99	79
Cash Flow After Tax (CFAT)	604	447	330	257	210

PRODUCT PRICES (US$) Year		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Annual Average 2034+
Bromine	(US$/Kg)	$2.57	$2.57	$2.57	$2.57	$2.57	$2.57	$2.57	$2.57	$2.57	$2.57	$2.57

FULL FIELD GROSS PRODUCTION													
Year		**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035+**	**Total**
Production Wells		18	18	19	19	19	21	22	21	21	22	-	-
Injection Wells		23	23	23	23	23	23	23	23	23	23	-	-
Annual Gross Production & Injection													
Brine Production	(MMbbl)	133.6	130.8	129.3	133.2	132.5	135.5	135.8	134.9	133.4	134.9	3,829	5,163
Brine Injection	(MMbbl)	146.7	143.6	141.9	146.0	144.9	146.1	147.6	147.5	144.6	146.9	4,286	5,742
Bromine Production	(k Tonne)	80	77	74	75	74	73	72	71	71	70	1,832	2,569
Recovery	(%)	97	97	96	96	96	96	96	96	96	96	96	96
Bromine Production (Sales)	(k Tonne)	77	74	72	72	71	70	70	69	68	68	1,758	2,468
COMPANY SHARE CASHFLOW													
Year		**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035+**	**Total**
Bromine Gross Sales Revenue	($MM)	198.5	189.9	184.1	185.2	182.2	180.2	178.9	176.6	174.3	173.5	4,346.3	6,170
Production Royalty	($MM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Net Sales Revenue	($MM)	198.5	189.9	184.1	185.2	182.2	180.2	178.9	176.6	174.3	173.5	4,346.3	6,170
Operating Costs													
Field and Plant Opex	($MM/yr)	77.2	75.5	74.4	74.7	74.1	73.8	73.6	73.1	72.6	72.5	2,123.7	2,865
G&A	($MM/yr)	34.9	34.6	34.5	34.5	34.4	34.4	34.3	34.3	34.2	34.2	1,087.2	1,431
Abandonmnet and Reclamation	($MM/yr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.4	32
Total Opex, G&A, Abex	**($MM/yr)**	**112.1**	**110.2**	**108.9**	**109.2**	**108.5**	**108.1**	**107.9**	**107.3**	**106.8**	**106.7**	**3,243.3**	**4,329**
Operating Cash Income Before Tax	**($MM/yr)**	**86.4**	**79.7**	**75.2**	**76.0**	**73.7**	**72.0**	**71.0**	**69.3**	**67.5**	**66.8**	**1,103.0**	**1,841**
Capital Costs													
Field	**($MM/yr)**	3.6	3.6	3.8	3.8	3.8	4.2	4.4	4.2	4.2	4.4	155.8	196
Plant	**($MM/yr)**	16.8	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	559.8	729
Total Capital	**($MM/yr)**	**20.4**	**20.6**	**20.8**	**20.8**	**20.8**	**21.2**	**21.4**	**21.2**	**21.2**	**21.4**	**715.6**	**925**
Cash Flow Before Tax	**($MM/yr)**	66.0	59.1	54.4	55.2	53.0	50.9	49.6	48.1	46.3	45.4	387.4	**916**
Income Tax	**($MM/yr)**	17.1	15.7	14.7	14.9	14.4	14.1	13.8	13.5	13.1	12.9	199.5	**344**
Cash Flow After Tax	**($MM/yr)**	**48.9**	**43.4**	**39.7**	**40.3**	**38.5**	**36.8**	**35.8**	**34.7**	**33.2**	**32.5**	**220.4**	**604**

Table 19-8: Annual Cash Flow Summary – Proved Reserves – Spot Prices less 30%

SUMMARY OF BROMINE FIELD RESERVES, PRODUCTION AND CASHFLOW

COMPANY: Albemarle Corporation
OPERATOR: Albemarle Corporation

CASHFLOW FORECAST CASE: Real 2025$
PRICE FORECAST: Spot -30%
ANNUAL COST INFLATION: 0.0%
EFFECTIVE DATE OF ANALYSIS: 2024-12-31

FIELD: Magnolia
WORKING INTEREST: 100.0%
RESERVES CLASS: Proved (1P)

RESERVES		Total Field Gross	Total Field Net	Company Share Gross	Company Share Net
Bromine	(K Tonnes)	2,018	2,018	2,018	2,018

PRESENT VALUE - COMPANY SHARE (Million US$) Discount Rate:	0%	5%	10%	15%	20%
Gross Revenue	4,267	2,255	1,441	1,045	821
Net Revenue	4,267	2,255	1,441	1,045	821
Operating Costs, G&A & Aband	3,432	1,738	1,075	764	593
Operating Income	835	523	367	281	227
Capital Costs	713	351	213	149	115
Cash Flow Before Tax (CFBT)	122	172	154	131	113
Tax Payable	125	83	60	47	38
Cash Flow After Tax (CFAT)	30	95	96	85	75

PRODUCT PRICES (US$) Year		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Annual Average 2034+
Bromine	(US$/Kg)	$2.11	$2.11	$2.11	$2.11	$2.11	$2.11	$2.11	$2.11	$2.11	$2.11	$2.11

FULL FIELD GROSS PRODUCTION Year		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035+	Total
Production Wells		18	18	19	19	19	21	22	21	21	22	-	-
Injection Wells		23	23	23	23	23	23	23	23	23	23	-	-
Annual Gross Production & Injection													
Brine Production	(MMbbl)	133.6	130.8	129.3	133.2	132.5	135.5	135.8	134.9	133.4	134.9	2,306	3,640
Brine Injection	(MMbbl)	146.7	143.6	141.9	146.0	144.9	146.1	147.6	147.5	144.6	146.9	2,587	4,043
Bromine Production	(k Tonne)	80	77	74	75	74	73	72	71	71	70	1,832	2,569
Recovery	(%)	97	97	96	96	96	96	96	96	96	96	96	96
Bromine Production (Sales)	(k Tonne)	77	74	72	72	71	70	70	69	68	68	1,758	2,468

COMPANY SHARE CASHFLOW Year		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035+	Total
Bromine Gross Sales Revenue	($MM)	163.5	156.4	151.6	152.5	150.1	148.4	147.3	145.5	143.5	142.9	2,765.0	4,267
Production Royalty	($MM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Net Sales Revenue	($MM)	163.5	156.4	151.6	152.5	150.1	148.4	147.3	145.5	143.5	142.9	2,765.0	4,267
Operating Costs													
Field and Plant Opex	($MM/yr)	77.2	75.5	74.4	74.7	74.1	73.8	73.6	73.1	72.6	72.5	1,546.4	2,288
G&A	($MM/yr)	34.9	34.6	34.5	34.5	34.4	34.4	34.3	34.3	34.2	34.2	630.8	975
Abandonmnet and Reclamation	($MM/yr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.4	32
Total Opex, G&A, Abex	**($MM/yr)**	**112.1**	**110.2**	**108.9**	**109.2**	**108.5**	**108.1**	**107.9**	**107.3**	**106.8**	**106.7**	**2,346.1**	**3,432**
Operating Cash Income Before Tax	**($MM/yr)**	**51.4**	**46.2**	**42.7**	**43.3**	**41.6**	**40.2**	**39.4**	**38.1**	**36.7**	**36.2**	**418.8**	**835**
Capital Costs													
Field	**($MM/yr)**	3.6	3.6	3.8	3.8	3.8	4.2	4.4	4.2	4.2	4.4	94.2	134
Plant	**($MM/yr)**	16.8	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	390.1	560
Total Capital	**($MM/yr)**	**20.4**	**20.6**	**20.8**	**20.8**	**20.8**	**21.2**	**21.4**	**21.2**	**21.2**	**21.4**	**503.1**	**713**
Cash Flow Before Tax	**($MM/yr)**	30.9	25.6	21.9	22.6	20.8	19.1	18.1	17.0	15.6	14.8	-84.3	**122**
Income Tax	**($MM/yr)**	9.0	7.9	7.2	7.3	7.0	6.7	6.5	6.2	6.0	5.8	55.3	**125**
Cash Flow After Tax	**($MM/yr)**	**21.9**	**17.7**	**14.7**	**15.2**	**13.9**	**12.4**	**11.5**	**10.7**	**9.6**	**9.0**	**-107.2**	**30**

Table 19-9: Annual Cash Flow Summary – Proved Reserves – Spot Prices less 45%

SUMMARY OF BROMINE FIELD RESERVES, PRODUCTION AND CASHFLOW

COMPANY: Albemarle Corporation
OPERATOR: Albemarle Corporation

CASHFLOW FORECAST CASE: Real 2025$
PRICE FORECAST: Spot -45%
ANNUAL COST INFLATION: 0.0%
EFFECTIVE DATE OF ANALYSIS: 2024-12-31

FIELD: Magnolia
WORKING INTEREST: 100.0%
RESERVES CLASS: Proved (1P)

RESERVES		Total Field Gross	Total Field Net	Company Share Gross	Company Share Net
Bromine	(K Tonnes)	1,602	1,602	1,602	1,602

PRESENT VALUE - COMPANY SHARE (Million US$) Discount Rate:	0%	5%	10%	15%	20%
Gross Revenue	2,662	1,421	986	760	619
Net Revenue	2,662	1,421	986	760	619
Operating Costs, G&A & Aband	3,013	1,424	936	707	569
Operating Income	-351	15	57	56	51
Capital Costs	633	280	181	135	109
Cash Flow Before Tax (CFBT)	-984	-265	-124	-79	-58
Tax Payable	-127	-25	-8	-3	-2
Cash Flow After Tax (CFAT)	-792	-222	-109	-72	-54

PRODUCT PRICES (US$) Year		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Annual Average 2034+
Bromine	(US$/Kg)	$1.66	$1.66	$1.66	$1.66	$1.66	$1.66	$1.66	$1.66	$1.66	$1.66	$1.66

FULL FIELD GROSS PRODUCTION													
Year		**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035+**	**Total**
Production Wells		18	18	19	19	19	21	22	21	21	22		
Injection Wells		23	23	23	23	23	23	23	23	23	23		
Annual Gross Production & Injection													
Brine Production	(MMbbl)	133.6	130.8	129.3	133.2	132.5	135.5	135.8	134.9	133.4	134.9	2,071	3,405
Brine Injection	(MMbbl)	146.7	143.6	141.9	146.0	144.9	146.1	147.6	147.5	144.6	146.9	2,310	3,766
Bromine Production	(k Tonne)	80	77	74	75	74	73	72	71	71	70	1,832	2,569
Recovery	(%)	97	97	96	96	96	96	96	96	96	96	96	96
Bromine Production (Sales)	(k Tonne)	77	74	72	72	71	70	70	69	68	68	1,758	2,468

COMPANY SHARE CASHFLOW													
Year		**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035+**	**Total**
Bromine Gross Sales Revenue	($MM)	128.5	122.8	119.1	119.8	117.9	116.6	115.8	114.3	112.8	112.3	1,481.7	2,662
Production Royalty	($MM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Net Sales Revenue	($MM)	128.5	122.8	119.1	119.8	117.9	116.6	115.8	114.3	112.8	112.3	1,481.7	2,662
Operating Costs													
Field and Plant Opex	($MM/yr)	77.2	75.5	74.4	74.7	74.1	73.8	73.6	73.1	72.6	72.5	1,213.2	1,955
G&A	($MM/yr)	34.9	34.6	34.5	34.5	34.4	34.4	34.3	34.3	34.2	34.2	648.8	993
Abandonmnet and Reclamation	($MM/yr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64.8	65
Total Opex, G&A, Abex	**($MM/yr)**	**112.1**	**110.2**	**108.9**	**109.2**	**108.5**	**108.1**	**107.9**	**107.3**	**106.8**	**106.7**	**1,926.9**	**3,013**
Operating Cash Income Before Tax	**($MM/yr)**	**16.3**	**12.7**	**10.2**	**10.6**	**9.4**	**8.4**	**7.8**	**6.9**	**6.0**	**5.6**	**-445.2**	**-351**
Capital Costs													
Field	**($MM/yr)**	3.6	3.6	3.8	3.8	3.8	4.2	4.4	4.2	4.2	4.4	84.4	124
Plant	**($MM/yr)**	16.8	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	339.3	509
Total Capital	**($MM/yr)**	**20.4**	**20.6**	**20.8**	**20.8**	**20.8**	**21.2**	**21.4**	**21.2**	**21.2**	**21.4**	**423.7**	**633**
Cash Flow Before Tax	**($MM/yr)**	-4.1	-7.9	-10.6	-10.1	-11.3	-12.7	-13.5	-14.2	-15.2	-15.8	-868.8	**-984**
Income Tax	**($MM/yr)**	0.9	0.1	-0.3	-0.3	-0.5	-0.7	-0.8	-1.0	-1.2	-1.3	-121.9	**-127**
Cash Flow After Tax	**($MM/yr)**	**-5.0**	**-8.0**	**-10.2**	**-9.9**	**-10.8**	**-12.0**	**-12.7**	**-13.2**	**-14.0**	**-14.5**	**-682.1**	**-792**

Table 19-10: Annual Cash Flow Summary – Proved + Probable Reserves – Spot Prices

SUMMARY OF BROMINE FIELD RESERVES, PRODUCTION AND CASHFLOW

COMPANY:	Albemarle Corporation	CASHFLOW FORECAST CASE:	Real 2025$	FIELD:	Magnolia
OPERATOR:	Albemarle Corporation	PRICE FORECAST:	Spot	WORKING INTEREST:	100.0%
		ANNUAL COST INFLATION:	0.0%	RESERVES CLASS:	Proved + Probable (2P)
		EFFECTIVE DATE OF ANALYSIS:	2024-12-31		

RESERVES

		Total Field Gross	Total Field Net	Company Share Gross	Company Share Net
Bromine	(K Tonnes)	2,935	2,935	2,935	2,935

PRESENT VALUE - COMPANY SHARE (Million US$)

Discount Rate:	0%	5%	10%	15%	20%
Gross Revenue	8,863	4,015	2,419	1,715	1,333
Net Revenue	8,863	4,015	2,419	1,715	1,333
Operating Costs, G&A & Aband	4,773	2,004	1,163	811	625
OCIBT	4,090	2,010	1,256	904	708
Capital Costs	967	390	220	150	115
Cash Flow Before Tax (CFBT)	3,123	1,620	1,036	753	593
Tax Payable	846	417	261	188	148
Cash Flow After Tax (CFAT)	2,310	1,207	775	565	445

PRODUCT PRICES (US$)

Year		2025	2026	2025	2026	2027	2028	2029	2030	2031	2032	Annual Average 2034+
Bromine	(US$/Kg)	$3.02	$3.02	$3.02	$3.02	$3.02	$3.02	$3.02	$3.02	$3.02	$3.02	$3.02

FULL FIELD GROSS PRODUCTION

Year		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035+	Total
Production Wells		18	18	19	19	19	21	22	21	21	22	-	-
Injection Wells		23	23	23	23	23	23	23	23	23	23	-	-
Annual Gross Production & Injection													
Brine Production	(MMbbl)	133.6	130.8	129.3	133.2	132.5	135.5	135.8	134.9	133.4	134.9	3,998	5,332
Brine Injection	(MMbbl)	146.7	143.6	141.9	146.0	144.9	146.1	147.6	147.5	144.6	146.9	4,476	5,932
Bromine Production	(k Tonne)	89	85	83	84	83	83	83	83	82	82	2,219	3,056
Recovery	(%)	97	97	96	96	96	96	96	96	96	96	96	96
Bromine Production (Sales)	(k Tonne)	86	82	80	81	80	80	80	80	79	79	2,129	2,935

COMPANY SHARE CASHFLOW

Year		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035+	Total
Bromine Gross Sales Revenue	($MM)	259.5	248.2	240.9	243.4	241.9	240.5	241.8	241.0	238.5	239.2	6,428.1	8,863
Production Royalty	($MM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Net Sales Revenue	($MM)	259.5	248.2	240.9	243.4	241.9	240.5	241.8	241.0	238.5	239.2	6,428.1	8,863
Operating Costs													
Field and Plant Opex	($MM/yr)	81.6	79.7	78.5	78.9	78.7	78.6	78.9	78.7	78.2	78.4	2,421.0	3,211
G&A	($MM/yr)	35.5	35.3	35.1	35.1	35.1	35.1	35.1	35.1	35.0	35.0	1,178.0	1,529
Abandonmnet and Reclamation	($MM/yr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.4	32
Total Opex, G&A, Abex	**($MM/yr)**	**117.1**	**115.0**	**113.6**	**114.1**	**113.8**	**113.6**	**114.0**	**113.8**	**113.3**	**113.5**	**3,631.4**	**4,773**
Operating Cash Income Before Tax	**($MM/yr)**	**142.4**	**133.2**	**127.3**	**129.3**	**128.1**	**126.8**	**127.9**	**127.3**	**125.2**	**125.8**	**2,796.7**	**4,090**
Capital Costs													
Field	($MM/yr)	3.6	3.6	3.8	3.8	3.8	4.2	4.4	4.2	4.2	4.4	163.8	204
Plant	($MM/yr)	16.8	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	593.7	763
Total Capital	**($MM/yr)**	**20.4**	**20.6**	**20.8**	**20.8**	**20.8**	**21.2**	**21.4**	**21.2**	**21.2**	**21.4**	**757.5**	**967**
Cash Flow Before Tax	**($MM/yr)**	122.0	112.7	106.5	108.5	107.3	105.7	106.5	106.1	104.0	104.4	2,039.2	**3,123**
Income Tax	($MM/yr)	29.8	27.8	26.5	26.9	26.7	26.4	26.6	26.5	26.1	26.2	576.0	**846**
Cash Flow After Tax	**($MM/yr)**	**92.2**	**84.9**	**80.0**	**81.6**	**80.6**	**79.2**	**79.9**	**79.6**	**78.0**	**78.2**	**1,495.7**	**2,310**

Table 19-11: Annual Cash Flow Summary – Proved + Probable Reserves – Spot Prices less 15%

SUMMARY OF BROMINE FIELD RESERVES, PRODUCTION AND CASHFLOW

COMPANY:	Albemarle Corporation	CASHFLOW FORECAST CASE:	Real 2025$	FIELD:	Magnolia
OPERATOR:	Albemarle Corporation	PRICE FORECAST:	Spot -15%	WORKING INTEREST:	100.0%
		ANNUAL COST INFLATION:	0.0%	RESERVES CLASS:	Proved + Probable (2P)
		EFFECTIVE DATE OF ANALYSIS:	2024-12-31		

RESERVES

		Total Field Gross	Total Field Net	Company Share Gross	Company Share Net
Bromine	(K Tonnes)	2,935	2,935	2,935	2,935

PRESENT VALUE - COMPANY SHARE (Million US$)

Discount Rate:	0%	5%	10%	15%	20%
Gross Revenue	7,534	3,412	2,056	1,457	1,133
Net Revenue	7,534	3,412	2,056	1,457	1,133
Operating Costs, G&A & Aband	4,773	2,004	1,163	811	625
OCIBT	2,760	1,408	893	647	508
Capital Costs	967	390	220	150	115
Cash Flow Before Tax (CFBT)	1,793	1,018	673	496	393
Tax Payable	537	277	177	129	101
Cash Flow After Tax (CFAT)	1,289	745	497	368	292

PRODUCT PRICES (US$)

Year		2025	2026	2025	2026	2027	2028	2029	2030	2031	2032	Annual Average 2034+
Bromine	(US$/Kg)	$2.57	$2.57	$2.57	$2.57	$2.57	$2.57	$2.57	$2.57	$2.57	$2.57	$2.57

FULL FIELD GROSS PRODUCTION													
Year		**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035+**	**Total**
Production Wells		18	18	19	19	19	21	22	21	21	22	-	-
Injection Wells		23	23	23	23	23	23	23	23	23	23	-	-
Annual Gross Production & Injection													
Brine Production	(MMbbl)	133.6	130.8	129.3	133.2	132.5	135.5	135.8	134.9	133.4	134.9	3,998	5,332
Brine Injection	(MMbbl)	146.7	143.6	141.9	146.0	144.9	146.1	147.6	147.5	144.6	146.9	4,476	5,932
Bromine Production	(k Tonne)	89	85	83	84	83	83	83	83	82	82	2,219	3,056
Recovery	(%)	97	97	96	96	96	96	96	96	96	96	96	96
Bromine Production (Sales)	(k Tonne)	86	82	80	81	80	80	80	80	79	79	2,129	2,935
COMPANY SHARE CASHFLOW													
Year		**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035+**	**Total**
Bromine Gross Sales Revenue	($MM)	220.6	210.9	204.8	206.9	205.6	204.4	205.6	204.9	202.7	203.4	5,463.9	7,534
Production Royalty	($MM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Net Sales Revenue	($MM)	220.6	210.9	204.8	206.9	205.6	204.4	205.6	204.9	202.7	203.4	5,463.9	7,534
Operating Costs													
Field and Plant Opex	($MM/yr)	81.6	79.7	78.5	78.9	78.7	78.6	78.9	78.7	78.2	78.4	2,421.0	3,211
G&A	($MM/yr)	35.5	35.3	35.1	35.1	35.1	35.1	35.1	35.1	35.0	35.0	1,178.0	1,529
Abandonmnet and Reclamation	($MM/yr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.4	32
Total Opex, G&A, Abex	**($MM/yr)**	**117.1**	**115.0**	**113.6**	**114.1**	**113.8**	**113.6**	**114.0**	**113.8**	**113.3**	**113.5**	**3,631.4**	**4,773**
Operating Cash Income Before Tax	**($MM/yr)**	**103.5**	**96.0**	**91.1**	**92.8**	**91.8**	**90.7**	**91.6**	**91.1**	**89.4**	**89.9**	**1,832.5**	**2,760**
Capital Costs													
Field	**($MM/yr)**	3.6	3.6	3.8	3.8	3.8	4.2	4.4	4.2	4.2	4.4	163.8	204
Plant	**($MM/yr)**	16.8	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	593.7	763
Total Capital	**($MM/yr)**	**20.4**	**20.6**	**20.8**	**20.8**	**20.8**	**21.2**	**21.4**	**21.2**	**21.2**	**21.4**	**757.5**	**967**
Cash Flow Before Tax	**($MM/yr)**	83.0	75.4	70.4	72.0	71.0	69.6	70.2	70.0	68.3	68.5	1,075.0	**1,793**
Income Tax	**($MM/yr)**	20.8	19.2	18.1	18.5	18.3	18.0	18.2	18.1	17.8	17.9	352.3	**537**
Cash Flow After Tax	**($MM/yr)**	**62.3**	**56.3**	**52.3**	**53.5**	**52.8**	**51.5**	**52.0**	**51.8**	**50.5**	**50.7**	**755.1**	**1,289**

Table 19-12: Annual Cash Flow Summary – Proved + Probable Reserves – Spot Prices less 30%

SUMMARY OF BROMINE FIELD RESERVES, PRODUCTION AND CASHFLOW

COMPANY: Albemarle Corporation	**CASHFLOW FORECAST CASE:** Real 2025$	**FIELD:** Magnolia
OPERATOR: Albemarle Corporation	**PRICE FORECAST:** Spot -30%	**WORKING INTEREST:** 100.0%
	ANNUAL COST INFLATION: 0.0%	**RESERVES CLASS:** Proved + Probable (2P)
	EFFECTIVE DATE OF ANALYSIS: 2024-12-31	

RESERVES		Total Field Gross	Total Field Net	Company Share Gross	Company Share Net
Bromine	(K Tonnes)	2,729	2,729	2,729	2,729

PRESENT VALUE - COMPANY SHARE (Million US$) Discount Rate:	0%	5%	10%	15%	20%
Gross Revenue	5,769	2,755	1,686	1,199	933
Net Revenue	5,769	2,755	1,686	1,199	933
Operating Costs, G&A & Aband	4,317	1,948	1,155	809	625
OCIBT	1,452	807	530	390	308
Capital Costs	862	377	218	150	115
Cash Flow Before Tax (CFBT)	590	431	312	239	193
Tax Payable	241	139	93	69	55
Cash Flow After Tax (CFAT)	381	296	220	170	138

PRODUCT PRICES (US$) Year		2025	2026	2025	2026	2027	2028	2029	2030	2031	2032	Annual Average 2034+
Bromine	(US$/Kg)	$2.11	$2.11	$2.11	$2.11	$2.11	$2.11	$2.11	$2.11	$2.11	$2.11	$2.11

FULL FIELD GROSS PRODUCTION Year		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035+	Total
Production Wells		18	18	19	19	19	21	22	21	21	22	-	-
Injection Wells		23	23	23	23	23	23	23	23	23	23	-	-
Annual Gross Production & Injection													
Brine Production	(MMbbl)	133.6	130.8	129.3	133.2	132.5	135.5	135.8	134.9	133.4	134.9	3,553	4,887
Brine Injection	(MMbbl)	146.7	143.6	141.9	146.0	144.9	146.1	147.6	147.5	144.6	146.9	3,975	5,431
Bromine Production	(k Tonne)	89	85	83	84	83	83	83	83	82	82	2,219	3,056
Recovery	(%)	97	97	96	96	96	96	96	96	96	96	96	96
Bromine Production (Sales)	(k Tonne)	86	82	80	81	80	80	80	80	79	79	2,129	2,935

COMPANY SHARE CASHFLOW Year		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035+	Total
Bromine Gross Sales Revenue	($MM)	181.7	173.7	168.6	170.4	169.3	168.3	169.3	168.7	166.9	167.5	4,064.6	5,769
Production Royalty	($MM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Net Sales Revenue	($MM)	181.7	173.7	168.6	170.4	169.3	168.3	169.3	168.7	166.9	167.5	4,064.6	5,769
Operating Costs													
Field and Plant Opex	($MM/yr)	81.6	79.7	78.5	78.9	78.7	78.6	78.9	78.7	78.2	78.4	2,125.8	2,916
G&A	($MM/yr)	35.5	35.3	35.1	35.1	35.1	35.1	35.1	35.1	35.0	35.0	1,017.1	1,369
Abandonmnet and Reclamation	($MM/yr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.4	32
Total Opex, G&A, Abex	**($MM/yr)**	**117.1**	**115.0**	**113.6**	**114.1**	**113.8**	**113.6**	**114.0**	**113.8**	**113.3**	**113.5**	**3,175.4**	**4,317**
Operating Cash Income Before Tax	**($MM/yr)**	**64.5**	**58.8**	**55.0**	**56.3**	**55.5**	**54.7**	**55.3**	**55.0**	**53.7**	**54.0**	**889.2**	**1,452**
Capital Costs													
Field	($MM/yr)	3.6	3.6	3.8	3.8	3.8	4.2	4.4	4.2	4.2	4.4	143.2	183
Plant	($MM/yr)	16.8	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	508.9	678
Total Capital	**($MM/yr)**	**20.4**	**20.6**	**20.8**	**20.8**	**20.8**	**21.2**	**21.4**	**21.2**	**21.2**	**21.4**	**652.1**	**862**
Cash Flow Before Tax	**($MM/yr)**	44.1	38.2	34.3	35.5	34.7	33.5	34.0	33.8	32.5	32.6	237.1	**590**
Income Tax	($MM/yr)	11.7	10.5	9.8	10.0	9.9	9.7	9.8	9.7	9.5	9.5	141.2	**241**
Cash Flow After Tax	**($MM/yr)**	**32.4**	**27.7**	**24.5**	**25.5**	**24.9**	**23.8**	**24.1**	**24.1**	**23.0**	**23.1**	**128.3**	**381**

Table 19-13: Annual Cash Flow Summary – Proved + Probable Reserves – Spot Prices less 45%

SUMMARY OF BROMINE FIELD RESERVES, PRODUCTION AND CASHFLOW

COMPANY: Albemarle Corporation	**CASHFLOW FORECAST CASE:** Real 2025$	**FIELD:** Magnolia
OPERATOR: Albemarle Corporation	**PRICE FORECAST:** Spot -45%	**WORKING INTEREST:** 100.0%
	ANNUAL COST INFLATION: 0.0%	**RESERVES CLASS:** Proved + Probable (2P)
	EFFECTIVE DATE OF ANALYSIS: 2024-12-31	

RESERVES		Total Field Gross	Total Field Net	Company Share Gross	Company Share Net
Bromine	(K Tonnes)	2,118	2,118	2,118	2,118

PRESENT VALUE - COMPANY SHARE (Million US$) Discount Rate:	0%	5%	10%	15%	20%
Gross Revenue	3,518	1,949	1,275	930	730
Net Revenue	3,518	1,949	1,275	930	730
Operating Costs, G&A & Aband	3,316	1,728	1,105	797	622
OCIBT	202	220	170	133	108
Capital Costs	643	328	207	147	114
Cash Flow Before Tax (CFBT)	-441	-108	-37	-15	-6
Tax Payable	-18	10	11	10	9
Cash Flow After Tax (CFAT)	-358	-105	-45	-24	-14

PRODUCT PRICES (US$) Year		2025	2026	2025	2026	2027	2028	2029	2030	2031	2032	Annual Average 2034+
Bromine	(US$/Kg)	$1.66	$1.66	$1.66	$1.66	$1.66	$1.66	$1.66	$1.66	$1.66	$1.66	$1.66

FULL FIELD GROSS PRODUCTION													
Year		**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035+**	**Total**
Production Wells		18	18	19	19	19	21	22	21	21	22	-	-
Injection Wells		23	23	23	23	23	23	23	23	23	23	-	-
Annual Gross Production & Injection													
Brine Production	(MMbbl)	133.6	130.8	129.3	133.2	132.5	135.5	135.8	134.9	133.4	134.9	2,346	3,680
Brine Injection	(MMbbl)	146.7	143.6	141.9	146.0	144.9	146.1	147.6	147.5	144.6	146.9	2,613	4,068
Bromine Production	(k Tonne)	89	85	83	84	83	83	83	83	82	82	2,219	3,056
Recovery	(%)	97	97	96	96	96	96	96	96	96	96	96	96
Bromine Production (Sales)	(k Tonne)	86	82	80	81	80	80	80	80	79	79	2,129	2,935
COMPANY SHARE CASHFLOW													
Year		**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035+**	**Total**
Bromine Gross Sales Revenue	($MM)	142.7	136.5	132.5	133.9	133.0	132.3	133.0	132.6	131.2	131.6	2,178.8	3,518
Production Royalty	($MM)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Net Sales Revenue	($MM)	142.7	136.5	132.5	133.9	133.0	132.3	133.0	132.6	131.2	131.6	2,178.8	3,518
Operating Costs													
Field and Plant Opex	($MM/yr)	81.6	79.7	78.5	78.9	78.7	78.6	78.9	78.7	78.2	78.4	1,429.2	2,219
G&A	($MM/yr)	35.5	35.3	35.1	35.1	35.1	35.1	35.1	35.1	35.0	35.0	680.3	1,032
Abandonmnet and Reclamation	($MM/yr)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	64.8	65
Total Opex, G&A, Abex	**($MM/yr)**	**117.1**	**115.0**	**113.6**	**114.1**	**113.8**	**113.6**	**114.0**	**113.8**	**113.3**	**113.5**	**2,174.3**	**3,316**
Operating Cash Income Before Tax	**($MM/yr)**	**25.6**	**21.5**	**18.9**	**19.8**	**19.2**	**18.6**	**19.0**	**18.8**	**17.9**	**18.1**	**4.5**	**202**
Capital Costs													
Field	**($MM/yr)**	3.6	3.6	3.8	3.8	3.8	4.2	4.4	4.2	4.2	4.4	93.8	134
Plant	**($MM/yr)**	16.8	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	339.3	509
Total Capital	**($MM/yr)**	**20.4**	**20.6**	**20.8**	**20.8**	**20.8**	**21.2**	**21.4**	**21.2**	**21.2**	**21.4**	**433.1**	**643**
Cash Flow Before Tax	**($MM/yr)**	5.2	1.0	-1.9	-1.0	-1.5	-2.6	-2.3	-2.4	-3.3	-3.2	-428.6	**-441**
Income Tax	**($MM/yr)**	2.7	1.9	1.4	1.5	1.4	1.3	1.4	1.3	1.2	1.2	-33.5	**-18**
Cash Flow After Tax	**($MM/yr)**	**2.5**	**-0.9**	**-3.2**	**-2.5**	**-3.0**	**-3.9**	**-3.7**	**-3.7**	**-4.4**	**-4.5**	**-330.3**	**-358**

20 ADJACENT PROPERTIES

20.1 Brine Producing Properties

Immediately east of the Albemarle property, in the west-southwestern portion of Union County, Arkansas, is a brine production venture operated by Great Lakes Chemical Corporation ("GLCC") out of El Dorado, Arkansas. GLCC produces brine from the Smackover Formation through wells with depths ranging from 7400 feet to 8700 feet. The characteristics of the Smackover Formation are similar to those found to the west in Columbia County. GLCC has been producing brine in Union County since at least 1963. It has a plant located in El Dorado and is the only active operator in Union County currently producing brine.

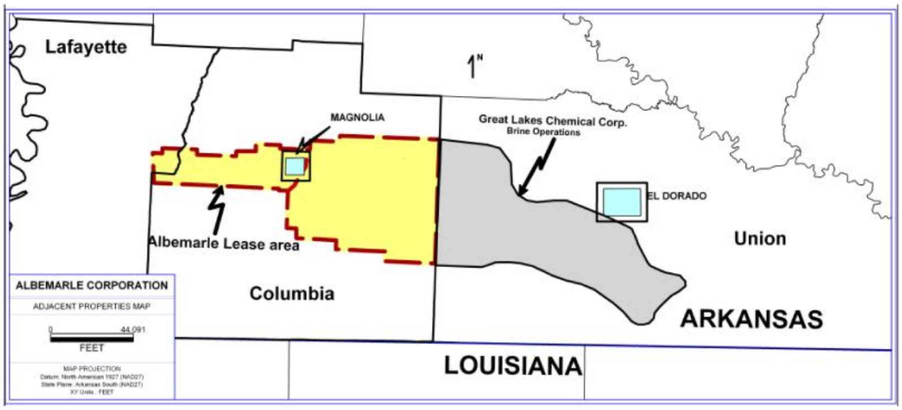


Figure 20-1: Adjacent Properties

20.2 Oil Producing Properties

There are both active and inactive oil fields within and adjacent to the Albemarle Magnolia Field property. The active oil fields within the outline of the property are Atlanta, Pine Tree, Village, Magnolia, Kerlin, and Columbia. All of these active fields, with the exception of the Pine Tree field produce reservoir fluids from horizons shallower than the Smackover Formation. Magnolia, Atlanta, and Pine Tree Fields all produce from the Smackover Formation with Magnolia being the most significant producing field within the confines of the Albermarle property. Two other oil fields in the area, the Big Creek and Kilgore Lodge Fields are inactive and have not produced in many years.

The active oil fields immediately adjacent to the Albemarle Property include McKamie-Patton, Grayson, Dorcheat-Macedonia, and Mt. Holly. These are all very mature fields that produce oil from the Smackover Formation. Dorcheat-Macedonia Field is the largest field outside the property outline with most of the current oil production coming from horizons above the Smackover. Oil production from Mt. Vernon Field ceased a few years ago and is currently inactive.

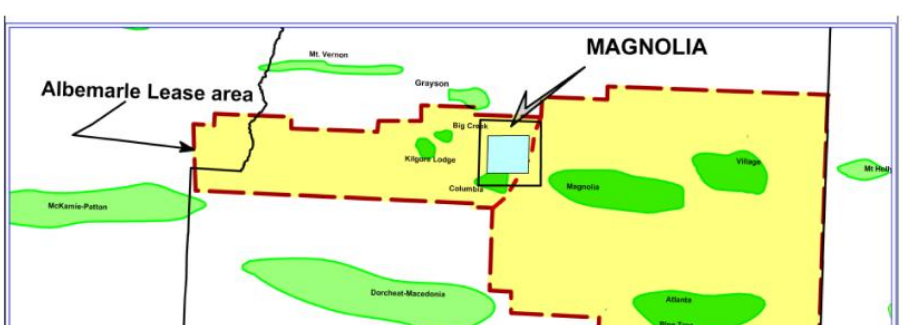


Figure 20-2: Adjacent Oil Fields

21 OTHER RELEVANT DATA AND INFORMATION

This section is intentionally left blank, as there is no additional relevant data and information to be included in this section.

22 INTERPRETATION AND CONCLUSIONS

- The Albemarle Magnolia Field bromide production and processing operations in Columbia County, Arkansas, USA represent an ongoing viable commercial source of bromine, both historically and for the future.
- The portion of the Magnolia field, under bromide production lease contracts to Albemarle contains an original bromide in place ("OBIP") resource of 13.6-15.0 million tonnes, of which Albemarle's working interest share is 10.2-11.2 million tonnes.
- Albemarle operates two bromide processing plants which extract the bromine from the raw bromide production, which results in an overall bromide sales production to bromide raw production ratio averaging about 92.8% over life.
- The Smackover formation can be vertically subdivided into the upper Smackover, EOD 0-5

- The Smackover formation can be vertically subdivided into the upper Smackover, EOD 0-5, historically known as the Reynolds Oolite, and the lower Smackover, EOD 7-9, sometimes split into middle and lower in the literature. The reserves estimated in this report have been confined to the upper Smackover due to technology limitations. Based on current understanding, there may be additional volumes in the lower Smackover, which will likely require advanced technologies to unlock.
- The cumulative bromine production forecast to the effective date of this report (December 31, 2024) has been 4.28 million tonnes (raw) and 3.98 million tonnes (bromine sales), which represents 50% of Albemarle's share of original bromide in place under leased areas.
- The Magnolia field is forecast to continue to produce bromide until 2069, with continued development of the proved and probable reserves.
- The forecast production of sales bromide is 2,468 thousand tonnes for the Proved reserves case, plus an additional 467 thousand tonnes of Probable reserves, for a total Proved plus Probable reserves of 2,935 thousand tonnes. The ultimate recovery at the end of this forecast represents a bromide recovery factor of 81% for the 1P case and 86% for the 2P case.
- To maintain field bromide productivity and fully exploit the future reserves, in addition to maintaining the current production and processing operations, Albemarle will require an estimated capital investment of US$1.0 to $1.4 billion to develop the Proved reserves, with no additional capital required to develop the Probable reserves. These estimates are in Constant 2025 dollars and are exclusive of abandonment and reclamation costs.

23 RECOMMENDATIONS

The qualified persons contributing to this evaluation report offer the following recommendations:

1. Continue to operate the Magnolia field and bromine extraction plants with due regard to all environmental, safety, and social responsibility standards followed to date
2. Continue to assess future field development opportunities on the leased bromine lands, including opportunities for outstep drilling to optimize overall bromine recovery efficiency.
3. Implement a full electronic land and lease database management system to replace the current manual paper-based land records systems.
4. Maintain and update the geological static models if/when additional drilling data becomes available and continue to monitor the Magnolia field brine production reservoir performance utilizing reservoir simulation modeling technology to optimize production performance of the reservoir.

24 RELIANCE ON INFORMATION PROVIDED BY THE REGISTRANT

This report is based on information from a variety of sources, including data available in the public domain, various technical and commercial reference materials, and also information provided by the registrant. The sections of this report for which rely upon information provide by the registrant to a significant degree are summarized in the following table:

All such information provided by the registrant has been reviewed for consistency and deemed to be reasonable and reliable by the qualified persons conducting this evaluation.

Table 24-1: Reliance on Information Provided by the Registrant

Category	Report Item/ Portion	Disclose why the Qualified Person considers it reasonable to rely upon the registrant
Property Description	Section 3	The registrant holds the information on lease ownership. The QP crossed checked this information with lease information in the public domain.
Sample Processing, Analysis, and Security	Section 8 and Section 10.2	The registrant has sampling procedures in place, the description of which was accepted by the QP.
Data Verification	Section 9	Well logs, core analysis, production and sampling data on the project are owned by the registrant and were relied upon by the QP, in concert with using like data available in the public domain.
Mineral Processing and Metallurgical Testing	Section 10	The processing and testing methods used for the Magnolia operations were obtained from the registrant, then reviewed and deemed reasonable by the QP.
Mining Methods	Section 13	The brine extraction and bromine processing system and operations data is all proprietary to the registrant. This data was obtained by the QP from the registrant and deemed to be reasonable and reliable information.
Processing and Recovery Methods	Section 14	The brine extraction and bromine processing system and operations data is all proprietary to the registrant. This data was obtained by the QP from the registrant and deemed to be reasonable and reliable information.
Marketing information	Section 16.1	Market overview information obtained from Technavio, a market research company with expertise in the field.
Major Producers	Section 16.2	Major producer information was sourced from USGS Mineral Commodity Summary for Bromine. The USGS is considered by the QP as a reliable source of such data. The USGS canvasses very thoroughly the world mineral markets and its commodity specialists gather first-hand information from both producers and consumers of minerals.
Major Markets	Section 16.3	Information on major markets was sourced from Market Research Future, a source considered as reliable by the QP, as well as of gather publicly available market indicators.
Bromine Applications	Section 16.5	Albemarle provided information on bromine applications which was reviewed by the QP and considered reasonable. The QP also reviewed the public domain in order to obtain general information on bromine applications.

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