NI 43-101 Technical Report Preliminary Economic Assessment for the Franklin Project Located in Hopkins, Franklin, and Titus Counties, Texas, United States

Prepared for:

Standard Lithium Ltd.

Prepared by:

Randal M. Brush, P.E., Haas & Cobb Petroleum Consultants
Marek Dworzanowski, EUR ING, CEng, FIMMM, HonFSAIMM
Randal Huffsmith, P.E., WSP USA Inc.
Ibrahim Karajeh, P.Eng., WSP USA Inc.
Mayooran Somanathan, P.Eng., WSP USA Inc.
Piers Wendlandt, P.E., WSP USA Inc.
Robert Williams, P.G., CPG, Haas & Cobb Petroleum Consultants

Effective Date: July 20, 2026



Notice to Readers

This National Instrument 43-101 - Standards of Disclosure for Mineral Projects Technical Report for Standard Lithium Ltd. was prepared and executed by the Qualified Persons named herein as Authors. This Report contains the expressions of professional opinions of the Authors based on (i) information available at the time of preparation, (ii) data supplied by Standard Lithium Ltd., and/or any enumerated outside sources, and (iii) the assumptions, conditions, and qualifications set forth in this Report. The quality of information, conclusions, and estimates contained herein are consistent with the stated levels of accuracy as well as the circumstances and constraints under which the mandate was performed. This Report was prepared for use by Standard Lithium Ltd. in accordance with contracts between WSP USA Inc., Haas & Cobb Petroleum Consultants, Marek Dworzanowski and Standard Lithium Ltd. which permits Standard Lithium Ltd. to file this Report as a Technical Report with the Canadian securities regulators pursuant to National Instrument 43-101. Except for the purposes legislated under Canadian provincial and territorial securities laws, any use of this Report by any third party is at that party's sole risk.

HAAS & COBB
PETROLEUM CONSULTANTS

CERTIFICATE OF QUALIFIED PERSON

I, Randal M. Brush, P.E., state that:

(a) I am a Senior Engineering Advisor with Haas & Cobb Petroleum Consultants at:
12770 Coit Road, Suite 907
Dallas, Texas, 75251, United States

(b) This certificate applies to the technical report titled "NI 43-101 Technical Report Preliminary Economic Assessment for the Franklin Project Located in Hopkins, Franklin, and Titus Counties, Texas, United States" with an effective date of July 20, 2026 (the "Technical Report").

(c) I am a "qualified person" for the purposes of National Instrument 43-101("NI 43-101"), for those sections/subsections of the Technical Report that I am responsible for preparing. My qualifications are as follows: I am a graduate of Stanford University with a Master of Science degree in petroleum engineering and a graduate of Rice University with a Bachelor of Science degree in chemical engineering. I am and have been a Professional Engineer registered in Texas since 1999 (License #85165).

As a professional engineer, I have over 42 years of experience in evaluating the injection and production of water, brines, and other fluids into and out of porous formations like the Smackover. This includes 10 years of evaluating brine recovery at a nearby Smackover field. These tasks have included the following: using engineering analysis, mathematical modelling, and appropriate data collection and analysis techniques to evaluate the injection of gases, water, brine, and steam into underground geologic formations, and the recovery of oil, gas, water, and brine from those formations, specializing in reservoir evaluation, management, and simulation studies to estimate hydrocarbon (crude oil, condensate, and natural gas) and non-hydrocarbon (e.g., bromine, lithium, CO_2, and helium) resources, reserves and inventories, including estimating mineral resources and mineral reserves for lithium, potassium and bromide brine deposits; provide ultimate recovery estimates by predicting reservoir performance under alternate development plans; and evaluate the performance of gas and CO_2 storage reservoirs in response to internal and external operational factors.

(d) My most recent personal inspection of the Franklin Property described in the Technical Report occurred on July 24, 2023 and was for a duration of one day.

(e) I am responsible for sections/subsections 1.1, 1.2, 1.3, 1.5, 1.8, 1.9, 1.17, 1.19.1, 1.20, 2, 3.1, 3.3, 4, 10, 12.1.1, 12.5, 12.10.3, 14.1, 14.3, 14.4, 14.5, 14.6, 15, 16, 24, 25.1, 25.2, 25.5, 25.7, 25.15.1, 26.1, 26.2, 26.6, and 27of the Technical Report.

(f) I am independent of Standard Lithium Ltd., as independence is described in Section 1.5 of NI 43-101.

(g) My prior involvement with the Franklin Property that is subject of the Technical Report was as a qualified person author of the previous technical report titled "NI 43-101 Technical Report: Maiden Inferred Resource Estimate for Standard Lithium Ltd.'s Franklin Project Located in Hopkins, Franklin, and Titus Counties, Texas, United States" with an effective date of September 24, 2025.

(h) I have read NI 43-101, and the sections/subsections of the Technical Report for which I am responsible have been prepared in compliance with NI 43-101.

(i) At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the sections/subsections of the Technical Report which I am responsible for preparing, contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 19th Day of October, 2026.

"signed and sealed"

Randal M. Brush, P.E.

CERTIFICATE OF QUALIFIED PERSON

I, Marek Dworzanowski, EUR ING, CEng, state that:

(a) I am an independent consulting metallurgical engineer at:
25 Rue Paul Doumer
Tregueux, 22950, France

(b) This certificate applies to the technical report titled "NI 43-101 Technical Report Preliminary Economic Assessment for the Franklin Project Located in Hopkins, Franklin, and Titus Counties, Texas, United States" with an effective date of July 20, 2026 (the "Technical Report").

(c) I am a "qualified person" for the purposes of National Instrument 43-101("NI 43-101"), for those sections/subsections of the Technical Report that I am responsible for preparing. My qualifications are as follows: I graduated from the University of Leeds, United Kingdom in 1980 with a Bachelor of Science Degree (with honours) in Mineral Processing. I am a registered European Engineer (EUR ING) and a registered Chartered Engineer (CEng) in the United Kingdom. I am also an Honorary Life Fellow of the Southern African Institute of Mining and Metallurgy (SAIMM), and I am a Fellow of the Institute of Materials, Minerals and Mining (IMMM).

I have practiced metallurgical engineering for 45 years, with 38 years as a registered Professional Engineer, in the global mining industry. I have acted as a qualified person for 15 lithium brine projects. In each case I have reviewed the metallurgical test work conducted and provided recommendations for further test work. I have also reviewed the process design of direct lithium extraction (DLE) plants, liming plants and lithium carbonate plants, as well as providing recommendations for improvements. I have provided operational and project reviews for brine operations and lithium carbonate plants in South America. I have provided process consulting on a geothermal brine project in France and on oil and gas brine projects in the USA, specifically on the Smackover formation.

(d) I have not conducted a personal inspection of the Franklin Property.

(e) I am responsible for sections/subsections 1.1, 1.2, 1.6, 1.7, 1.10, 1.17, 1.18.1, 1.19.3, 1.20, 2, 12.1.3, 12.4, 12.10.2, 13, 17, 25.1, 25.6, 25.14.1, 25.15.3, 26.1, 26.3, 26.6, and 27 of the Technical Report.

(f) I am independent of Standard Lithium Ltd., as independence is described in Section 1.5 of NI 43-101.

(g) My prior involvement with the Franklin Property that is subject of the Technical Report was as a qualified person author of the previous technical report titled "NI 43-101 Technical Report: Maiden Inferred Resource Estimate for Standard Lithium Ltd.'s Franklin Project Located in Hopkins, Franklin, and Titus Counties, Texas, United States" with an effective date of September 24, 2025.

(h) I have read NI 43-101, and the sections/subsections of the Technical Report for which I am responsible have been prepared in compliance with NI 43-101.

(i) At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the sections/subsections of the Technical Report which I am responsible for preparing, contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 19th Day of October, 2026.

"signed and sealed"

Marek Dworzanowski, EUR ING, CEng

CERTIFICATE OF QUALIFIED PERSON

I, Randal Huffsmith, P.E., state that:

(a) I am a Senior Vice President with WSP USA Inc. at:
505 Highland View CT
Mesquite, Nevada, 89027, United States

(b) This certificate applies to the technical report titled "NI 43-101 Technical Report Preliminary Economic Assessment for the Franklin Project Located in Hopkins, Franklin, and Titus Counties, Texas, United States" with an effective date of July 20, 2026 (the "Technical Report").

(c) I am a "qualified person" for the purposes of National Instrument 43-101("NI 43-101"), for those sections/subsections of the Technical Report that I am responsible for preparing. My qualifications are as follows: I am a graduate of the University of Wyoming in 1988 with a Bachelor of Science in Agricultural/Civil Engineering and a Master's of Science in Agricultural/Civil Engineering. I am a registered Professional Engineer in the State of Montana (PE 10554, 1992) and Arizona (2015).

My relevant experience after graduation and over the last 40 years for the purpose of the Technical Report includes environmental permitting, environmental compliance, remediation and water management for mining and industrial projects including major mining companies, regulatory agencies and state and local government. My experience includes State and Federal mine permitting; surface water and groundwater assessment, monitoring and management; groundwater supply and contamination evaluation; water and produced-water treatment; waste management and encapsulation; underground injection well evaluation; and water well installation and evaluation. This experience is relevant to lithium brine projects with respect to environmental permitting, groundwater protection and management, produced-water and other water management, waste management, and the environmental considerations associated with wellfield development and operation.

I have provided environmental support and leadership for lithium projects including McDermitt Lithium in Nevada and Owners Engineers support for Standard Lithium's SW Arkansas Project and have experience working with experts addressing cultural and biological resources. I am a Board-Certified Environmental Engineer for the American Academy of Environmental Engineers.

(d) I have not conducted a personal inspection of the Franklin Property.

(e) I am responsible for sections/subsections 1.1, 1.2, 1.13, 1.17, 1.19.4, 1.20, 2, 12.7, 12.10.5, 20, 21.2, 25.1, 25.10, 25.15.4, 26.1, 26.4, 26.6, and 27 of the Technical Report.

(f) I am independent of Standard Lithium Ltd., as independence is described in Section 1.5 of NI 43-101.

(g) I have not had prior involvement with the Franklin Property that is the subject of the Technical Report.

(h) I have read NI 43-101, and the sections/subsections of the Technical Report for which I am responsible have been prepared in compliance with NI 43-101.

(i) At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the sections/subsections of the Technical Report which I am responsible for preparing, contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 19th Day of October, 2026.

"signed and sealed"

Randal Huffsmith, P.E.

CERTIFICATE OF QUALIFIED PERSON

I, Ibrahim Karajeh, P.Eng., state that:

(a) I am a Senior Principal Consultant with WSP Canada Inc. at:
6925 Century Ave
Mississauga, Ontario, L5N 0E3, Canada

(b) This certificate applies to the technical report titled "NI 43-101 Technical Report Preliminary Economic Assessment for the Franklin Project Located in Hopkins, Franklin, and Titus Counties, Texas, United States" with an effective date of July 20, 2026 (the "Technical Report").

(c) I am a "qualified person" for the purposes of National Instrument 43-101("NI 43-101"), for those sections/subsections of the Technical Report that I am responsible for preparing. My qualifications are as follows: I am a graduate of the University of Jordan in 1991 with a Bachelor's degree in Mechanical Engineering, a graduate of Edinburgh Business School, Heriot Watt University in 2015 with a Master's in Business Administration, and a graduate of Harvard University Extension School in 2022 with a Master's in Liberal Arts - Finance. I am a Professional Engineer in good standing with the Professional Engineers of Ontario (PEO) (License #100050232).

My relevant experience after graduation and over 25 years for the purpose of the Technical Report includes preparation, review and evaluation of capital and operating cost estimates for mining and other projects. My experience includes the assessment of capital and operating methodologies, bases of estimate, quantities, unit costs, assumptions, allowances, and contingencies as well as the conduct of technical due diligence on lithium mining projects, including review of project capital and operating cost estimates and their supporting assumptions and methodologies.

(d) I have not conducted a personal inspection of the Franklin Property.

(e) I am responsible for sections/subsections 1.1, 1.2, 1.14, 1.17, 2, 12.8, 12.10.6, 21.1, 25.1, 25.11, and 27 of the Technical Report.

(f) I am independent of Standard Lithium Ltd., as independence is described in Section 1.5 of NI 43-101.

(g) I have not had prior involvement with the Franklin Property that is the subject of the Technical Report.

(h) I have read NI 43-101, and the sections/subsections of the Technical Report for which I am responsible have been prepared in compliance with NI 43-101.

(i) At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the sections/subsections of the Technical Report which I am responsible for preparing, contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 19th Day of October, 2026.

"signed and sealed"

Ibrahim Karajeh, P.Eng.

CERTIFICATE OF QUALIFIED PERSON

I, Mayooran Somanathan, P.Eng., state that:

(a) I am a Principal Metallurgical and Special Process Engineer with WSP Canada Inc. at:
25 York St
Toronto, Ontario, M5J 2V5, Canada

(b) This certificate applies to the technical report titled "NI 43-101 Technical Report Preliminary Economic Assessment for the Franklin Project Located in Hopkins, Franklin, and Titus Counties, Texas, United States" with an effective date of July 20, 2026 (the "Technical Report").

(c) I am a "qualified person" for the purposes of National Instrument 43-101("NI 43-101"), for those sections/subsections of the Technical Report that I am responsible for preparing. My qualifications are as follows: I am a graduate of the University of Toronto with a Bachelor of Applied Science (B.A.Sc), Chemical Engineering major in 2004. I am a licensed Professional Engineer in good standing with Professional Engineers of Ontario (PEO) since 2018 (PEO#: 100097387).

My relevant experience after graduation is over 19 years across base metals, gold, lithium (both lithium extraction from brine and processing of hard rock lithium ore), other battery metals, potash and industrial minerals. I have five years of lithium project and flowsheet experience. For the purpose of the Technical Report, my experience includes operating cost preparation and due diligence, capital cost input and project infrastructure review on lithium projects and other projects involving gold and base metals.

(d) I have not conducted a personal inspection of the Franklin Property.

(e) I am responsible for sections/subsections 1.1, 1.2, 1.11, 1.15, 1.17, 1.20, 2, 12.6, 12.10.4, 18, 21.3, 25.1, 25.8, 25.12, 26.1, 26.5, 26.6, and 27 of the Technical Report.

(f) I am independent of Standard Lithium Ltd., as independence is described in Section 1.5 of NI 43-101.

(g) I have not had prior involvement with the Franklin Property that is the subject of the Technical Report.

(h) I have read NI 43-101, and the sections/subsections of the Technical Report for which I am responsible have been prepared in compliance with NI 43-101.

(i) At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the sections/subsections of the Technical Report which I am responsible for preparing, contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 19th Day of October, 2026.

"signed and sealed"

Mayooran Somanathan, P.Eng.

CERTIFICATE OF QUALIFIED PERSON

I, Piers Wendlandt, P.E., state that:

(a) I am a Vice President, Mining with WSP USA Inc. at:
7245 W Alaska Dr, Suite 200
Lakewood, Colorado, 80226, United States

(b) This certificate applies to the technical report titled "NI 43-101 Technical Report Preliminary Economic Assessment for the Franklin Project Located in Hopkins, Franklin, and Titus Counties, Texas, United States" with an effective date of July 20, 2026 (the "Technical Report").

(c) I am a "qualified person" for the purposes of National Instrument 43-101("NI 43-101"), for those sections/subsections of the Technical Report that I am responsible for preparing. My qualifications are as follows: I am a graduate of the Colorado School of Mines in 2005 with Bachelor of Science in Mining Engineering, a graduate of University of Texas in 2009 with a Master's of Public Affairs and a graduate of the University of Colorado in 2019 with a Master's in Business Administration. I am registered as a Professional Engineer in the State of Colorado (2012), Arizona (2022), Alaska (2022), and Texas (2026).

My relevant experience after graduation and over 20 years for the purpose of the Technical Report includes site-based mining engineering roles, mining consulting and technical services roles. My experience includes the preparation of discounted cash-flow models in Excel for capital project evaluation, cash-flow analysis and forecasting, and economic analyses of precious metals, critical metals and battery materials projects including gold, copper, rare earths, graphite, iron, and manganese projects.

(d) I have not conducted a personal inspection of the Franklin Property.

(e) I am responsible for sections/subsections 1.1, 1.2, 1.12, 1.16, 1.17, 2, 3, 12.9, 12.10.7, 19, 22, 25.1, 25.9, 25.13, and 27 of the Technical Report.

(f) I am independent of Standard Lithium Ltd., as independence is described in Section 1.5 of NI 43-101.

(g) I have not had prior involvement with the Franklin Property that is the subject of the Technical Report.

(h) I have read NI 43-101, and the sections/subsections of the Technical Report for which I am responsible have been prepared in compliance with NI 43-101.

(i) At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the sections/subsections of the Technical Report which I am responsible for preparing, contain- all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 19th Day of October, 2026.

"signed and sealed"

Piers Wendlandt, P.E.

HAAS & COBB
PETROLEUM CONSULTANTS

CERTIFICATE OF QUALIFIED PERSON

I, Robert E. Williams, Jr., P.G., CPG, state that:

(a) I am a Principal Geologist with Haas & Cobb Petroleum Consultants at:
12770 Coit Road, Suite 907
Dallas, Texas, 75251, United States

(b) This certificate applies to the technical report titled "NI 43-101 Technical Report Preliminary Economic Assessment for the Franklin Project Located in Hopkins, Franklin, and Titus Counties, Texas, United States" with an effective date of July 20, 2026 (the "Technical Report").

(c) I am a "qualified person" for the purposes of National Instrument 43-101("NI 43-101"), for those sections/subsections of the Technical Report that I am responsible for preparing. My qualifications are as follows: I am a graduate of Oklahoma State University in 1991 with a Bachelor of Science in Geology. I am and have been a Professional Geologist registered with the Texas Board of Professional Geoscientist since 2003 (License #3964). I am a member in good standing of the American Institute of Professional Geologists (AIPG) Certification since 2023 (License #12158).

I have practiced my profession for 34 years. I have been involved in brine (for bromine, lithium, and other metals extraction) and petroleum geology projects during this time including: subsurface mapping, geologic modelling of carbonate reservoirs, geophysical log interpretation, drilling and sampling of wells, reservoir volumetric analysis, resources and reserve estimates.

(d) My most recent personal inspection of the Franklin Property described in the Technical Report occurred on December 29, 2025 and was for a duration of two days.

(e) I am responsible for sections/subsections 1.1, 1.2, 1.4, 1.5, 1.6, 1.17, 1.19.2, 1.20, 2, 5, 6, 7, 8, 9, 11, 12.1.2, 12.2, 12.3, 12.10.1, 14.2, 23, 25.1, 25.3, 25.4, 25.15.2, 26.1, 26.2, 26.6, and 27 of the Technical Report.

(f) I am independent of Standard Lithium Ltd., as independence is described in Section 1.5 of NI 43-101.

(g) My prior involvement with the Franklin Property that is subject of the Technical Report was as a qualified person author of the previous technical report titled "NI 43-101 Technical Report: Maiden Inferred Resource Estimate for Standard Lithium Ltd.'s Franklin Project Located in Hopkins, Franklin, and Titus Counties, Texas, United States" with an effective date of September 24, 2025.

(h) I have read NI 43-101, and the sections/subsections of the Technical Report for which I am responsible have been prepared in compliance with NI 43-101.

(i) At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the sections/subsections of the Technical Report which I am responsible for preparing, contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 19th Day of October, 2026.

"signed and sealed"

Robert E. Williams, Jr., P.G., CPG

Table of Contents

1.	**Summary**	**1-1**
1.1	Introduction	1-1
1.2	Terms of Reference	1-1
1.3	Property Description and Location	1-2
1.4	Geology and Mineralization	1-2
1.5	Exploration, Drilling and Sampling	1-2
1.6	Data Verification	1-3
1.7	Mineral Processing and Metallurgical Testing	1-3
1.8	Mineral Resource Estimates	1-5
1.9	Mining Methods	1-5
1.10	Recovery Methods	1-5
1.11	Project Infrastructure	1-7
1.12	Market Studies and Contracts	1-7
1.13	Environmental Studies, Permitting and Social or Community Impact	1-7
1.14	Capital Costs	1-8
1.15	Operating Costs	1-9
1.16	Economic Analysis	1-9
1.17	Conclusions	1-10
1.18	Opportunities	1-10
1.19	Risks	1-10
1.20	Recommendations	1-11
2.	**Introduction**	**2-1**
2.1	Issuer and Purpose	2-1
2.2	Terms of Reference	2-1
2.3	Qualified Persons	2-3
2.4	Personal Inspection	2-4
2.5	Effective Date	2-5
2.6	Sources of Information	2-5
3.	**Reliance on Other Experts**	**3-1**
3.1	Legal	3-1
3.2	Marketing and Commodity Pricing	3-1
3.3	Taxation	3-1
4.	**Property Description and Location**	**4-1**
4.1	Property Location	4-1
4.2	Surface and Mineral Rights in Texas	4-1
4.3	Brine and Brine-Sourced Mineral Production Legislation	4-3
4.4	Summary of Brine and Brine-Sourced Mineral Leases	4-3
4.5	Royalties and Agreements	4-4

4.6 Environmental Liabilities and Permitting 4-6
4.7 Other Significant Factors and Risks 4-6

5. Accessibility, Climate, Local Resources, Infrastructure, and Physiography 5-1
5.1 Accessibility 5-1
5.2 Climate 5-2
5.3 Local Resources and Infrastructure 5-2
5.4 Topography, Elevation, and Vegetation 5-3

6. History 6-1
6.1 Prior Ownership 6-1
6.2 Exploration and Development History 6-1

7. Geological Setting and Mineralization 7-1
7.1 Regional Geology 7-1
7.2 Local Geology 7-3
7.3 Property Geology 7-6

8. Deposit Types 8-1

9. Exploration 9-1
9.1 Subsurface Data Review 9-1
9.2 Stratigraphic Surface Interpretation and Definition of the Smackover Formation 9-1
9.3 Brine Sampling Program 9-1
9.4 Exploration Results and Interpretation 9-2

10. Drilling 10-1
10.1 Available Drill Data and Procedures 10-1
10.2 Standard Lithium Exploration Well Program 10-4
10.3 Interpretation of Drill Results 10-6

11. Sample Preparation, Analyses, and Security 11-1
11.1 Sample Procedure and Implementation 11-1
11.2 Sample Preparation, Analyses, and Security 11-1
11.3 Analytical Laboratories 11-3
11.4 Quality Control / Quality Assurance 11-4
11.5 Core Reports and Well Log Data 11-4
11.6 Qualified Person’s Opinion on Data Adequacy 11-5

12. Data Verification 12-1
12.1 Personal Inspection 12-1

12.2 Lithium, Bromide, and Potassium Concentration Data Verification 12-1
12.3 Seismic, Well Logs and Core Data Verification 12-3
12.4 Metallurgy and Mineral Processing Data Verification 12-3
12.5 Production Planning Data Verification 12-3
12.6 Project Infrastructure Data Verification 12-3
12.7 Environmental Studies, Permitting and Social or Community Impact Data Verification 12-3
12.8 Cost Estimation Data Verification 12-3
12.9 Market Studies and Economic Analysis Data Verification 12-4
12.10 Qualified Person's Opinion on Data Adequacy 12-4

13. Mineral Processing and Metallurgical Testing 13-1
13.1 Introduction 13-1
13.2 Standard Lithium Projects Brine Composition Comparison 13-1
13.3 Treatability Study of Direct Lithium Extraction Lithium Recovery 13-2
13.4 Lithium Recovery 13-4
13.5 Deleterious Elements 13-4
13.6 Potential Production of Bromine and Potash 13-4

14. Mineral Resource Estimates 14-1
14.1 Introduction 14-1
14.2 Geologic Model 14-1
14.3 Reasonable Prospects for Eventual Economic Extraction 14-8
14.4 Mineral Resource Classification 14-8
14.5 Lithium, Bromide, and Potassium Resource Estimates 14-9
14.6 Factors that Could Affect the Mineral Resource Estimate 14-10

15. Mineral Reserve Estimates 15-1

16. Mining Methods 16-1
16.1 Brine Extraction 16-1
16.2 Wellfield Network Design 16-1
16.3 Wellfield Configuration 16-1
16.4 Production 16-2
16.5 Production Wells Pads 16-3
16.6 Injection Wells Pads 16-4
16.7 Drilling Method 16-4

17. Recovery Methods 17-1
17.1 Process Design Basis and Criteria 17-1
17.2 Lithium Facility Design 17-1
17.3 Bromine Facility Design 17-5
17.4 Energy, Water, and Process Materials Requirements 17-6

18. Project Infrastructure 18-1
18.1 Introduction 18-1
18.2 Site Access 18-1
18.3 Wellfield and Pipeline Built Infrastructure 18-1
18.4 Lithium Processing Facility 18-2
18.5 Power Supply and Distribution 18-3
18.6 Fresh Water Supply and Distribution 18-3
18.7 Cooling Water 18-4
18.8 Natural Gas and Fuel 18-4
18.9 Steam Supply 18-4
18.10 Compressed Air 18-4
18.11 Infrastructure for Bromine Processing Facility 18-5

19. Market Studies and Contracts 19-1
19.1 Lithium Market 19-1
19.2 Bromine Market 19-5
19.3 Contracts 19-7
19.4 Qualified Person's Comments 19-7

20. Environmental Studies, Permitting, and Social or Community Impact 20-1
20.1 Introduction 20-1
20.2 Environmental Considerations 20-1
20.3 Permitting 20-2
20.4 Social and Community Impact 20-6
20.5 Environmental Management and Closure Plan 20-7

21. Capital and Operating Costs 21-1
21.1 Capital Costs 21-1
21.2 Closure and Reclamation Costs 21-4
21.3 Operating Costs 21-5

22. Economic Analysis 22-1
22.1 Cautionary Statement 22-1
22.2 Methodology Used 22-1
22.3 Financial Model Parameters 22-2
22.4 Financial Results 22-5
22.5 Sensitivity Analysis 22-7
22.6 Opportunity Case for Bromine Processing Facility 22-9

23. Adjacent Properties 23-1

24. Other Relevant Data and Information 24-1

25. Interpretation and Conclusions 25-1

25.1 Summary 25-1
25.2 Mineral Tenure 25-1
25.3 Exploration, Drilling and Sampling 25-1
25.4 Geology 25-1
25.5 Mineral Resource Estimates 25-2
25.6 Metallurgy and Mineral Processing 25-2
25.7 Mining Methods 25-2
25.8 Project Infrastructure 25-2
25.9 Market Studies and Contracts 25-3
25.10 Environmental Studies, Permitting and Social or Community Impact 25-3
25.11 Capital Costs 25-3
25.12 Operating Costs 25-3
25.13 Economic Analysis 25-3
25.14 Project Opportunities 25-4
25.15 Project Risks 25-4

26. Recommendations 26-1

26.1 Summary 26-1
26.2 Geology, Mineral Resource Estimates and Production Planning 26-1
26.3 Mineral Processing and Metallurgical Testing 26-2
26.4 Environmental Studies, Permitting and Social or Community Engagement 26-2
26.5 Project Infrastructure 26-2
26.6 Summary of Costs 26-3

27. References 27-1

Tables

Table 1.1:	Franklin Project Mineral Resource Estimates	1-6
Table 1.2:	Initial Capital Cost Estimate	1-8
Table 1.3:	Summary of Operating Costs	1-9
Table 1.4:	Financial Results	1-10
Table 2.1:	Key Acronyms and Definitions	2-2
Table 2.2:	Qualified Persons	2-3
Table 9.1:	Franklin Project Lithium, Bromide, and Potassium Concentration Data	9-3
Table 10.1:	Types of Well Data	10-1
Table 10.2:	Samples Collected During the Well Exploration Program	10-4
Table 11.1:	Comparison of Field Primary, Duplicate and Triplicate Samples from the 2025/2026 Sampling Program	11-4
Table 12.1:	2025/2026 Sample Comparison for Pine Forest 1	12-2
Table 12.2:	WETLAB to SGS Comparison for Upper Smackover Samples	12-2
Table 13.1:	Feed Brine Composition Comparison	13-2
Table 13.2:	Brine Composition Received by DLE Vendor	13-2
Table 13.3:	Brine Composition after LiCl Addition	13-3
Table 13.4:	DLE Rejection and Retention	13-3
Table 14.1:	Franklin Project Mineral Resource Estimates	14-11
Table 17.1:	Key Process Design Criteria	17-1
Table 17.2:	Reagents for Lithium Carbonate Production	17-7
Table 17.3:	Reagents for Bromine Production	17-7
Table 18.1:	Project Power Requirements	18-3
Table 20.1:	Anticipated Permits Required for Advancing the Franklin Project	20-8
Table 21.1:	Initial Capital Cost Estimate	21-1
Table 21.2:	Initial Capital Cost Estimate – Bromine Processing Facility	21-4
Table 21.3:	Closure and Reclamation Cost Estimate	21-5
Table 21.4:	Operating Cost Summary	21-5
Table 21.5:	Wellfield and Subsurface Operating Costs	21-6
Table 21.6:	Lithium Processing Facility Operating Costs	21-7
Table 21.7:	Bromine Processing Facility Operating Costs	21-7
Table 22.1:	IRC 45X Credit	22-4
Table 22.2:	Financial Model Cashflow	22-6
Table 22.3:	Before and After-Tax Financial Results	22-7
Table 22.4:	Inputs to the Opportunity Case	22-10
Table 22.5:	Opportunity Case Before and After-Tax Financial Results	22-10
Table 26.1:	Recommended Works for Geology and Mineral Resource Estimates	26-1
Table 26.2:	Recommended Works for Metallurgy and Mineral Processing	26-2
Table 26.3:	Recommended Works for Environmental Studies, Permitting and Social or Community Engagement	26-2
Table 26.4:	Recommended Works for Infrastructure	26-3

Table 26.5: Estimated Costs for Recommended Work 26-3

Figures

Figure 1.1:	Franklin Project Area	1-4
Figure 4.1:	Project Location Map	4-2
Figure 4.2:	Franklin Project Brine Mineral Lease Ownership Summary	4-5
Figure 5.1:	Franklin Project Area with Cities/Towns, Access Routes, Highways, and Railways	5-1
Figure 5.2:	Average Temperature and Precipitation in Sulphur Springs, Texas	5-3
Figure 6.1:	Recent East Texas Oil and Water Production	6-2
Figure 6.2:	Historical Smackover Formation Lithium, Bromide, and Potassium Brine Values Derived nearby the Franklin Project	6-4
Figure 6.3:	Regional Oil Fields	6-5
Figure 7.1:	Stratigraphic Column of the Late Triassic to Late Jurassic Formations of the Northern Gulf Coast	7-2
Figure 7.2:	Structural Framework, Northern Gulf Coast	7-4
Figure 7.3:	Facies Map of the Smackover Formation, Northern Gulf Coast Basin	7-5
Figure 7.4:	Upper Smackover Formation Structure Map	7-7
Figure 7.5:	Exploration Program Wells Cross Section	7-8
Figure 9.1:	Franklin Project Lithium, Bromide and Potassium Concentration Data	9-4
Figure 10.1:	Upper Smackover Interval Well Data Source	10-2
Figure 10.2:	Middle Smackover Interval Well Data Source	10-3
Figure 10.3:	Franklin Project Exploration Program	10-5
Figure 10.4:	Lundell Creek 1 Type Well	10-7
Figure 14.1:	Porosity Log Calibration to Core Data Plot	14-3
Figure 14.2:	Stratigraphic Porosity Cross Section, Exploration Program Wells	14-5
Figure 14.3:	Upper Smackover Interval Net Porosity-Thickness	14-6
Figure 14.4:	Middle Smackover Interval Net Porosity-Thickness	14-7
Figure 14.5:	Location of Upper Smackover Inferred and Indicated Resource Areas	14-9
Figure 16.1:	Lithium Carbonate Production Plan	16-2
Figure 16.2:	Bromine Production Plan	16-3
Figure 17.1:	Lithium Block Flow Diagram	17-2
Figure 17.2:	Bromine Flowsheet	17-6
Figure 19.1:	Battery Demand Forecast	19-2
Figure 19.2:	Lithium Supply Forecast	19-3
Figure 19.3:	Lithium Price Forecasts	19-4
Figure 19.4:	Market Size by Segment	19-6
Figure 22.1:	Distribution of After-Tax Cashflows	22-7
Figure 22.2:	After-Tax NPV_8 Sensitivity	22-8
Figure 22.3:	After-Tax Cashflow Sensitivity	22-8
Figure 22.4:	After-Tax IRR Sensitivity	22-9

1. Summary

1.1 Introduction

Standard Lithium Ltd. (Standard Lithium, or the Company) requested WSP USA Inc. (WSP), Haas & Cobb Petroleum Consultants (Haas & Cobb) and Marek Dworzanowski (independent) to prepare an independent National Instrument 43-101 (NI 43-101) technical report (Report) disclosing the results of a preliminary economic assessment (PEA) of their Franklin Project in East Texas, United States (US) (the Franklin Project or Project).

Standard Lithium is a public company headquartered in Vancouver, British Columbia (BC) focused on unlocking the lithium, bromine and potassium potential from brine reservoirs in the US. Its common shares are traded on the TSX Venture Exchange (TSXV) and the New York Stock Exchange (NYSE) under the symbol "SLI". Standard Lithium is a multi-jurisdictional filer under the multijurisdictional disclosure system (MJDS) which permits it to follow Canadian disclosure requirements when filing in the US.

The Report supports the disclosure in the news release, dated September 8, 2026, titled "Smackover Lithium Announces Positive Preliminary Economic Assessment for the Franklin Project, its First Lithium Project in East Texas".

1.2 Terms of Reference

Smackover Lithium is a partnership between Standard Lithium, through its subsidiaries, and Equinor, through subsidiaries of Equinor ASA (collectively, Equinor). Formed in May 2024, Smackover Lithium is developing two Direct Lithium Extraction (DLE) projects – the Franklin Project and the South West Arkansas project located in Southern Arkansas near the Texas and Louisiana borders (SWA or SWA Project, and collectively with the Franklin Project, the Projects). Standard Lithium owns a 55% interest and Equinor holds the remaining 45% interest in the two Projects, with Standard Lithium maintaining operatorship. Where Standard Lithium is referenced below in the various project activities, it can be broadly read that this refers to activities performed on behalf of the partnership.

The process technology and capital and operating cost estimates established in the SWA Definitive Feasibility Study (SWA DFS) (Pinto Gallardo et al., 2025) have been used as a benchmark for this PEA. The Report summarizes a conceptual study for the Franklin Project producing approximately 70,000 tonnes per annum (tpa) lithium carbonate. The Report also presents the opportunity to produce elemental bromine at approximately 50,000 tpa in addition to the lithium carbonate production.

The Report was prepared in accordance with the requirements and guidelines set forth in the NI 43-101 Companion Policy (43-101CP) and Form 43-101F1, and the mineral resource estimates were prepared in accordance with the 2019 Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (CIM Best Practice Guidelines) and the Draft CIM Leading Practice Guidelines for Sedimentary Basin and Geothermal Brine-Hosted Lithium Mineral Resources and Mineral Reserves Estimation (Draft CIM Leading Practice Guidelines) and reported in accordance with the 2014 CIM Definition Standards for Mineral Resources and Mineral Reserves (CIM Definition Standards).

Geographic coordinates will be projected in the State Plane Coordinate System, North Central Zone of Texas (FIPS 4202), based on the North American Datum of 1927 (NAD 1927).

Units of measurement and the abbreviated shorthand in this Report are consistent with the International System of Units (SI units). Key wellfield dimensions will use standard oil field units with SI units in brackets.

Currency is expressed in US dollars, unless otherwise stated.

1.3 Property Description and Location

The centre of the Franklin Project is located approximately 4.5 km south of the City of Mount Vernon in Franklin County, northeastern Texas, US. The Franklin Project lies within Hopkins, Franklin, and Titus counties (Figure 1.1).

As of the effective date, Standard Lithium has obtained a total of 1,196 separate brine and brine-sourced mineral leases from private mineral owners within an area of 44,541 ha (110,064 ac, Project area), consisting of 30,994 gross brine mineral hectares (76,588 gross brine mineral acres). The mineral resource estimates presented in this Report correspond to Standard Lithium's gross brine mineral holdings.

1.4 Geology and Mineralization

The Franklin Project lithium deposit is a confined brine aquifer deposit in the form of a lithium-, bromide-, and potassium-bearing brine contained within the porosity of the Smackover Formation (Smackover) within the Project area. The Smackover Formation in northeastern Texas is commonly subdivided into three intervals: the Upper Smackover (predominantly an oolitic limestone with common dolomite replacement), the Middle Smackover (a burrowed pellet packstone), and the Lower Smackover (a dark, dense, muddy limestone). The lithium-bromide-potassium brine resource, as reported, is contained within the Upper Smackover and Middle Smackover Formation which underlie the entire Project area. The Lower Smackover Formation does not contribute to the mineral resource estimates in this Report but is a future target for exploration.

The structural top of the Upper Smackover in the Project area generally dips from north to south and varies in depth from approximately 2,970 m subsea to approximately 3,810 m subsea. Brine has never been extracted commercially from the Smackover Formation in East Texas, except as a by-product of hydrocarbon production.

The volumes of in-place lithium, bromide, and potassium are proportional to the product of the brine-saturated pore volume and the respective concentrations, both of which are known with reasonable accuracy, based on the drilling, logging, coring, and sampling data obtained throughout the Project area. The data used to estimate and model the mineral resource were gathered from the three project-specific wells along with 100 existing and suspended oil and gas production and exploration wells in and around the Project area. Two-dimensional (2D) seismic data were combined with well log data to assess the top of the Smackover Formation structure and to identify faults.

1.5 Exploration, Drilling and Sampling

Standard Lithium conducted two exploration programs within the Project area. The 2023 exploration program consisted of:

- Conducting a historical geological compilation and subsurface review of the Smackover Formation stratigraphy using 2D seismic data, oil and gas well logs; and
- Completing three exploration wells to collect and analyze well logs, core samples and brine samples.

The 2025/2026 exploration program consisted of:

- Gathering additional brine samples from the Upper Smackover interval from each of the three wells; and
- Conducting pressure transient tests at each of the three wells.

Geotechnical and geochemical analyses for the three exploration wells were conducted by independent, accredited commercial laboratories (Intertek Westport Technology Center located in Houston, Texas and Western Environmental Testing Laboratory in Sparks, Nevada (WETLAB)). The average porosity and permeability from the 158 core samples collected from the two cored exploration wells in the Upper Smackover Formation were 14% and 17 millidarcies (mD), respectively. The brine sample analytical laboratory results yielded an average of 4,483 mg/L bromide, 562 mg/L lithium, and 11,096 mg/L potassium for the Upper Smackover and 4,600 mg/L bromide, 626 mg/L lithium, and 12,400 mg/L potassium for the Middle Smackover in the brine samples collected from all exploration wells.

1.6 Data Verification

Verification of data was accomplished through various activities, including but not limited to site visits, independent sampling of brine and review of source documents.

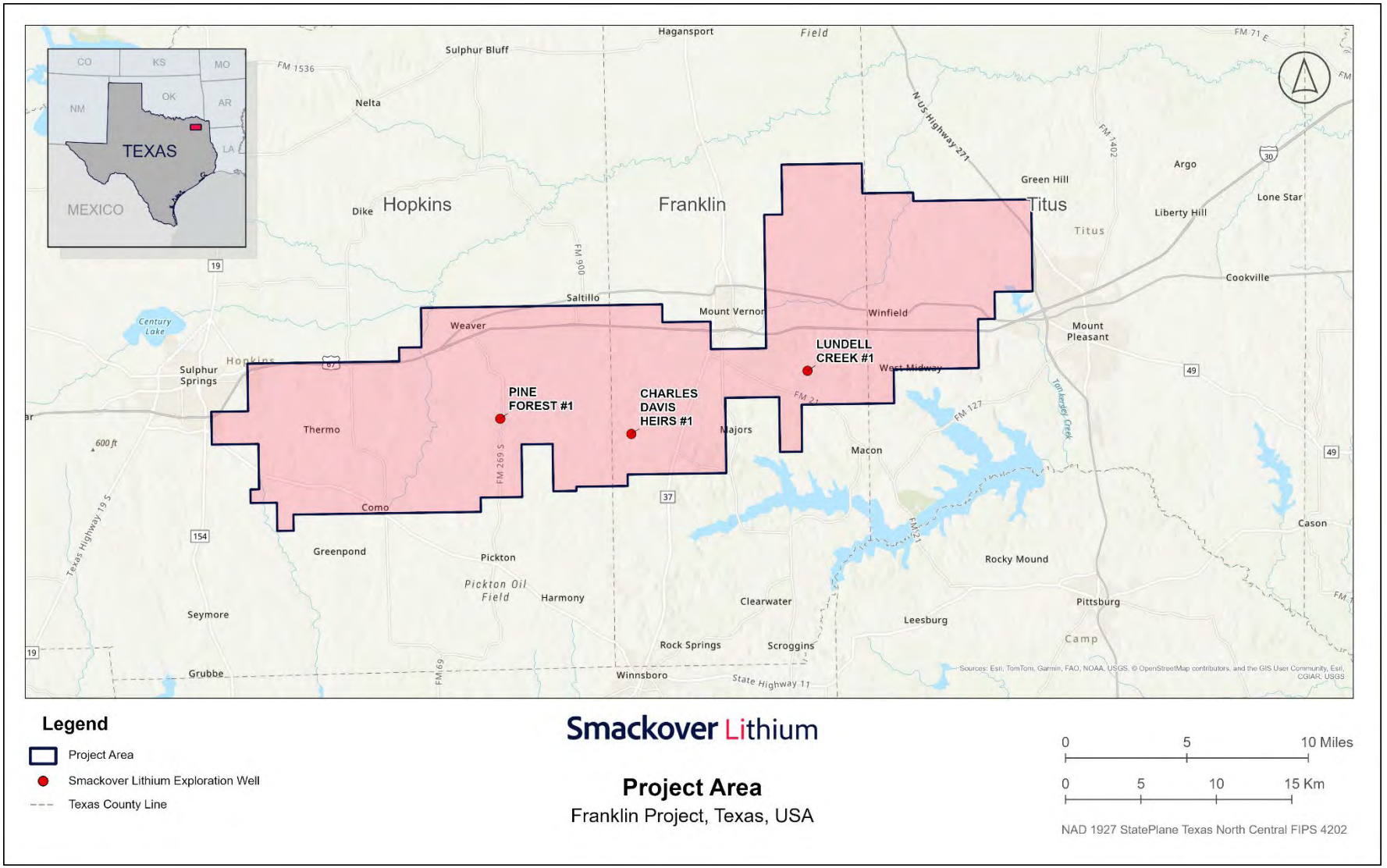
1.7 Mineral Processing and Metallurgical Testing

Metallurgical testing for the Franklin Project consisted of an independent laboratory-scale treatability study using approximately 1 m^3 of Project brine to evaluate the compatibility of DLE technology and to assess lithium recovery and impurity rejection performance. Standard Lithium has also accumulated significant operating experience through its Demonstration Plant near El Dorado, Arkansas, which has processed Smackover Formation brine since 2020 and provided operating data, process optimization information, and samples for downstream metallurgical testing. In addition, a dedicated DLE pilot plant was operated on the SWA Project during December 2024 to February 2025 to validate process performance under continuous operating conditions. Data generated from the Demonstration Plant and SWA pilot plant were used to support process flowsheet development, recovery assumptions, and design criteria for the Franklin Project.

The Franklin treatability study demonstrated that the Project brine is compatible with the trialed DLE process, achieving approximately 95% lithium recovery through the DLE stage while rejecting more than 99% of sodium, potassium, calcium, magnesium, and strontium. Downstream softening and concentration testing also performed as expected. For the purposes of the PEA, the Franklin lithium recovery process is based on the SWA Project flowsheet due to the similar composition of these Smackover brines. While the Franklin test work supports a DLE lithium recovery of approximately 95%, the PEA adopts an overall lithium recovery of 89.25% based on recoveries demonstrated through extraction, purification, concentration, and lithium carbonate production in the SWA Project metallurgical program.

No metallurgical test work has been completed for bromine or potash recovery; however, a conceptual bromine production study was completed in 2026 based on the extraction of bromine from brine in Arkansas. It simulated a potential bromine recovery of 95.8% from spent DLE brine, subject to confirmation through future test work.

Figure 1.1: Franklin Project Area



Source: Standard Lithium, 2026

1.8 Mineral Resource Estimates

The lithium, bromide, and potassium resources present in the Upper Smackover and Middle Smackover were estimated within the Project area. The estimated average geologic properties, the average lithium, bromide, and potassium concentrations, and the lithium, bromide, and potassium resource estimates for the gross Standard Lithium leased areas are presented in Table 1.1. The brine lithium concentration values observed in the exploration wells and estimated in the Smackover Formation within the Project area exceed the concentration cutoff value of 100 mg/L lithium, and the porous formation containing that brine exceeds the porosity cutoff value of 6%.

1.9 Mining Methods

The Franklin Project is designed as a lithium brine extraction and processing operation that will produce lithium-rich brine from the Upper Smackover Formation through a network of production wells, process the brine to recover lithium as battery-quality lithium carbonate, and reinject the depleted brine back into the same formation through a network of injection wells. The production plan and wellfield configuration were developed using a numerical reservoir simulation model constructed from Project-specific geological, hydrogeological, and reservoir data, including porosity, net pay, permeability, and pressure transient testing results. The modelling supports a development concept based on horizontal production and injection wells arranged to maximize brine recovery efficiency, maintain reservoir pressure, and minimize surface disturbance.

The PEA is based on a wellfield comprising 36 horizontal production wells and 36 horizontal injection wells designed to support lithium carbonate production of approximately 70,000 tpa during the first eight years of operation. Lithium carbonate production is projected to gradually decline over the 20-year Project life as in-situ lithium concentrations decrease, resulting in estimated life-of-project production of approximately 1.29 million tonnes of lithium carbonate, or an average of approximately 64,600 tpa.

In addition, the Project includes a secondary opportunity case for bromine recovery from lithium-depleted brine, with potential life-of-project bromine production estimated at approximately 922,000 tonnes.

1.10 Recovery Methods

The PEA process design criteria and operating assumptions are based on metallurgical testing completed on Franklin Project brine and benchmarking against the more advanced SWA Project, which extracts lithium from a similar Smackover Formation brine. The PEA is based on a production rate of approximately 70,000 tpa battery-quality lithium carbonate. The proposed recovery process consists of brine pre-treatment, DLE, lithium chloride purification and concentration, lithium carbonate conversion, and lithium-depleted brine treatment. Brine is conditioned and filtered prior to processing through the trialed DLE technology, which produces a lithium chloride solution while rejecting the majority of dissolved impurities. The lithium chloride solution is subsequently purified, concentrated, and converted into battery-quality lithium carbonate, while lithium-depleted brine is treated and returned to the wellfield for reinjection into the Smackover Formation.

In addition to lithium production, the Project contemplates a secondary opportunity case for bromine recovery from lithium-depleted brine using conventional steam-out technology that is widely utilized at operations within the Smackover Formation in Arkansas. The bromine would be recovered from the spent lithium brine before reinjection back into the Smackover Formation.

Table 1.1: Franklin Project Mineral Resource Estimates

Classification Category	Units	Indicated	Inferred		
Smackover Formation Interval		Upper Smackover	Upper Smackover	Middle Smackover	Total Smackover
Gross Aquifer Volume	km^3	7.84	8.70	17.16	25.86
Net Aquifer Volume	km^3	3.25	3.31	0.83	4.15
Average Porosity	%	18.21%	17.95%	12.60%	16.86%
Brine Volume	km^3	0.59	0.59	0.10	0.70
Average Lithium Concentration	mg/L	562	562	626	572
Contained Lithium	kt	333	334	66	400
Contained LCE	kt	1,771	1,779	349	2,128
Average Bromide Concentration	mg/L	4,483	4,483	4,600	4,501
Contained Bromide	kt	2,655	2,666	482	3,148
Average Potassium Concentration	mg/L	NA	11,096	12,400	11,291
Contained Potassium	kt	NA	6,597	1,299	7,896
Contained Potassium Chloride	kt	NA	12,579	2,477	15,056

Notes:

1. The effective date of the mineral resource is July 20, 2026. The QP for the mineral resource is Randal Brush, P.E. an employee of Haas & Cobb.
2. Mineral resources were prepared in accordance with CIM Best Practice Guidelines, Draft CIM Leading Practice Guidelines and are reported in accordance with CIM Definition Standards.
3. Mineral resources are not mineral reserves and do not have demonstrated economic viability.
4. The mineral resource estimate is reported using a cutoff of 6.0% porosity (net aquifer) and 100 mg/L lithium using the following assumptions: brine extraction from production wells and direct lithium extraction processing technology, lithium carbonate price of $22,400/t, twenty-year operating costs of $5,461 million, brine production volume of 528 million m^3, lithium process recovery of 89.25% and 2.5% royalty on gross revenue on lithium production.
5. Lithium has been converted to LCE by a conversion factor of 5.323 and potassium converted to potassium chloride by a conversion factor of 1.91.
6. The lithium, bromide, and potassium resources present in the Upper Smackover and Middle Smackover intervals were estimated based on the 30,994 ha gross Standard Lithium leased area within the 44,541 ha Franklin Project area.
7. The mineral concentration values for the Upper Smackover interval are the average of the three exploration wells from samples collected in 2025/2026. The mineral concentration values for the Middle Smackover interval are the average sample values collected in 2023 from a single exploration well.
8. Potassium mineral resources are limited to the inferred category because the potassium recovery process still requires development. Capital and operating cost studies have not advanced to permit evaluation of the economic viability of the deposit with regard to potassium. Therefore, there are no potassium mineral resource estimates associated with the indicated resource area of the Upper Smackover interval.
9. Numbers may not sum due to rounding.

1.11 Project Infrastructure

The Franklin Project infrastructure is planned to support the production of up to 70,000 tpa of battery-quality lithium carbonate and consists primarily of a lithium processing facility, a wellfield comprising 36 production and 36 injection wells, and the associated pipeline network required to transport brine between the wellfield and processing facilities. The wellfield includes well pads housing horizontal production and injection wells configured to maximize resource recovery and facilitate reinjection of lithium-depleted brine into the Smackover Formation. The processing facility is planned to be located along the Interstate 30 corridor between Mount Vernon and Sulphur Springs.

The Project benefits from existing regional transportation and utility infrastructure, including direct access to Interstate 30, nearby rail networks, electrical transmission infrastructure, natural gas supply, and groundwater resources required for operations. Lithium carbonate product is expected to be transported from site by truck, while raw materials and reagents will be delivered through established transportation networks.

In addition to the lithium production facilities, the Project includes a secondary opportunity case to add a bromine processing facility capable of producing up to 50,000 tpa bromine.

1.12 Market Studies and Contracts

An independent lithium market study was prepared in 2026 by Global Lithium LLC (Global Lithium) to support Standard Lithium's market entry and pricing assumptions used in the PEA. Long-term lithium demand is expected to be driven by continued growth in electric vehicles, battery energy storage systems (BESS), and other battery-related applications, with global demand projected to increase significantly through 2035. Based on its market assessment, Global Lithium recommended a long-term real battery-grade lithium carbonate forecast price of $22,400/t. The study concluded that the planned lithium carbonate production from the Franklin Project could be absorbed within the growing global lithium market.

A separate bromine market study was prepared in 2026 by Carousel Specialty Products, Inc. (Carousel) to evaluate the potential opportunity for bromine production from the Franklin Project. Bromine is a specialty chemical with a highly concentrated global supply structure, strong barriers to entry, and demand supported by electronics, oilfield, industrial, and consumer applications. An initial market entry volume of approximately 50,000 tpa bromine was recommended, representing less than 7% of current global demand, with brominated clear brine fluids identified as a potential target market. The study recommended a long-term bromine forecast price of $4,000/t.

No transportation, handling, sales, hedging, or forward sales contracts are currently in place or under negotiation for the Project.

1.13 Environmental Studies, Permitting and Social or Community Impact

Environmental studies completed to date are consistent with the preliminary level of assessment and have focused on identifying permitting requirements and environmental baseline data needs. No significant environmental impediments to Project development have been identified from the limited work completed to date. Limited desktop environmental reviews have been completed, and future permitting is expected to require baseline studies related to aquatic resources, threatened and endangered species, cultural resources, vegetation, water resources, and air quality. Environmental management plans and monitoring programs will be developed during subsequent project phases to support permitting, construction, operation, and closure activities.

The Project will require permits from several regulatory agencies including the Railroad Commission of Texas (RCC), the Texas Commission on Environmental Quality (TCEQ) and the United States Army Corps of Engineers (USACE). Activities and facilities that will require permits include installation and operation of brine production and injection wells, facilities with air emissions, water management (use and disposal), and impacts to waters of the US under Section 404 of the Clean Water Act.

Standard Lithium has initiated stakeholder and community engagement activities in East Texas, and the Project is expected to provide economic benefits through employment, local procurement, and investment opportunities.

The preliminary closure and reclamation cost estimate is $34.9 million, including well abandonment and associated infrastructure reclamation.

1.14 Capital Costs

The capital cost estimate was prepared with a -30%/+50% accuracy including contingency. All costs are expressed in second quarter (Q2) 2026 US dollars.

Table 1.2 summarizes the initial project capital cost totalling $3,496 million and includes all costs (e.g., brine production and disposal, central processing facility, ancillary infrastructure, power supply infrastructure and indirect costs) required to support the Project operations.

The overall life-of-project capital cost is $3,792 million, including $296 million of sustaining capital.

Table 1.2: Initial Capital Cost Estimate

Description	Cost ($ million)
Wellfield	975
Brine Preparation	103
Lithium Extraction	325
Lithium Purification / Concentration	242
Lithium Conversion	205
Lithium Product Handling	75
Utilities, Chemicals and Reagents	58
Infrastructure	175
Subtotal	**2,158**
Project Indirect Costs	388
Owners Costs	367
Contingencies	583
Total	**3,496**

The addition of a bromine process facility would add an additional $407 million to the initial capital cost and $34 million in sustaining capital. This would increase the overall life-of-project capital cost of the Franklin Project to $4,234 million.

1.15 Operating Costs

The average operating cost over the Project life is $4,226/t battery quality lithium carbonate. Operating costs are summarized in Table 1.3.

Table 1.3: Summary of Operating Costs

Cost Area	Annual Cost ($ million)	Cost ($/t Li_2CO_3)
Lithium Processing Facility	229.8	3,283
Wellfield and Subsurface	47.5	679
G&A	18.5	265
Total	**295.9**	**4,226**

The secondary opportunity case to produce 50,000 tpa of bromine would cost approximately $47.8 million annually to operate or $955/t of bromine produced.

1.16 Economic Analysis

The results of the economic analysis in the PEA represent forward-looking information that is subject to a number of known and unknown risks, uncertainties, and other factors that may cause actual results to differ materially from those presented here. Forward-looking information includes mineral resource estimates in the PEA production plan and the cashflows derived from them, forecast lithium carbonate prices used, capital and operating cost estimates, estimated lithium carbonate production, and payback period. Actual results may vary from the forward-looking information if the mineral resource estimates, costs, lithium carbonate prices, metallurgical recoveries, and taxes differ from what is assumed in the PEA.

The PEA is preliminary in nature and includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that this PEA will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

The PEA has been evaluated using a discounted cashflow analysis. Cash inflows consist of annual revenue projections for the Project. Cash outflows such as capital, pre-production costs, operating costs, taxes, and royalties, are subtracted from the inflows to arrive at the annual cashflow projections. Cashflows are taken to occur at the end of each period.

The after-tax evaluation of the Franklin Project under the assumptions used in this Report generates positive before- and after-tax results. Before-tax and after-tax financial results are presented in Table 1.4 for the production of lithium carbonate only. All model outputs are expressed on 100% basis. Standard Lithium's economic interest in the Project is 55%.

Project financial results are most sensitive to changes in lithium carbonate selling price and brine production, followed by changes to total capital costs and to operating costs.

Table 1.4: Financial Results

Description	Unit	Value
Before Tax Valuation		
Undiscounted Cumulative Cashflow	$ million	18,771
NPV @ 8%	$ million	5,924
Payback Period (from start of operations)	years	3.0
IRR Before Tax	%	25.7
After-Tax Valuation		
Undiscounted Cumulative Cashflow	$ million	16,084
NPV @ 8%	$ million	4,992
Payback Period (from start of operations)	years	3.1
IRR After-Tax	%	24.0

The secondary opportunity case to produce elemental bromine in addition to lithium carbonate generates both positive before and after-tax results. The after-tax financial results, after incorporating bromine production, produce an NPV of $5,560 million at a discount rate of 8%, an after-tax IRR of 24.0% and a payback period of 3.1 years.

1.17 Conclusions

Results of the PEA show a positive financial return for the Franklin Project. The QPs have identified recommendations that would support further engineering studies.

1.18 Opportunities

1.18.1 Metallurgical

The elevated potassium concentrations in the Franklin Project brine constitute a substantial resource and may support future potash production, subject to further process development, metallurgical testing, and economic evaluation.

1.19 Risks

1.19.1 Mineral Tenure

This could be the first brine production project that the RRC permits and permit approval times could result in Project delays. Also, several Texas lawyers have written articles arguing that Texas law is not clear about whether brine-sourced lithium is part of the mineral or surface estate in Texas, before concluding that it is most likely a mineral. Standard Lithium's Texas counsel has opined that the conclusion that brine-sourced lithium is a mineral is inescapable under Texas law; accordingly, this possibility is seen as low risk.

1.19.2 Geologic

Potential geologic risks include unexpected reservoir heterogeneity, which could include:

- Variations in net pay or mineral concentrations that would reduce or increase the volume of mineral resources subject to recovery;
- Variation in productivity resulting from lower-than or higher-than expected formation permeability;
- Variation in the porous formation resulting in a smaller or higher brine volume accessible from the project wells; and
- Unrecognized faults resulting in barriers to brine flow.

1.19.3 Metallurgical

The following metallurgical risks to the Franklin Project have been identified:

- Variability of feed brine composition could impact lithium recovery, impurity rejection and the ability to consistently produce battery-quality lithium carbonate to the specifications required;
- Performance of the DLE technology not meeting lithium recovery and impurity rejection targets;
- Sub-optimal operation of reinjection due to unexpected variability in the properties of the spent lithium brine; and
- Health and safety hazards associated with the removal and handling of hydrogen sulphide should if encountered in the brine supplying the processing facility.

1.19.4 Environmental Studies, Permitting and Social or Community Impact

The following permitting risk was identified at this stage of the Franklin Project:

- The need for National Environmental Policy Act (NEPA) compliance and compensatory mitigation would impact the timeline to permit the Project. If impacts to jurisdictional waters above Nationwide Permit thresholds cannot be avoided, it would result in the need for an individual 404 Dredge and Fill permit. Under the current scenario, a federal nexus (federal funding, federal permitting beyond 404 Nationwide permits) requiring compliance with the NEPA is not anticipated; however, final determination cannot be made until baseline data has been collected and Project definition is generally completed.

1.20 Recommendations

The QP authors have identified recommendations around upgrading the mineral resource definition and classification, advancing metallurgical test work, initiating environmental baseline studies, communicating with regulatory agencies and stakeholders, conducting infrastructure trade-off studies and initiating a preliminary feasibility study (PFS), with costs totalling $11.5 million.

2. Introduction

2.1 Issuer and Purpose

Standard Lithium requested WSP, Haas & Cobb and Marek Dworzanowski (independent) to prepare an independent NI 43-101 Report disclosing the results of a PEA of their Franklin lithium-brine project in East Texas, US.

Standard Lithium is a public company headquartered in Vancouver, BC focused on unlocking the lithium, bromide and potassium potential from brine reservoirs in the US. The Company is traded on the TSXV and the NYSE. Standard Lithium is a multi-jurisdictional MJDS filer which permits the Company to follow Canadian disclosure requirements when filing in the US.

The Report supports the disclosure in the news release dated September 8, 2026 titled “Smackover Lithium Announces Positive Preliminary Economic Assessment for the Franklin Project, its First Lithium Project in East Texas”.

2.2 Terms of Reference

Smackover Lithium is a partnership between Standard Lithium and Equinor. Formed in May 2024, Smackover Lithium is developing two DLE projects, the Franklin Project and the SWA Project. Standard Lithium owns a 55% interest and Equinor holds the remaining 45% interest in the two Projects, with Standard Lithium maintaining operatorship.

The process technology and capital and operating cost estimates established in the SWA DFS (Pinto Gallardo et al., 2025) have been used as a benchmark for this PEA.

The Report was prepared in accordance with the requirements and guidelines set forth in NI 43-101CP and Form 43-101F1, and the mineral resource estimates were prepared in accordance with CIM Best Practice Guidelines, Draft CIM Leading Practice Guidelines and reported in accordance with the CIM Definition Standards.

Geographic coordinates will be projected in the State Plane Coordinate System, North Central Zone of Texas (FIPS 4202), based on the North American Datum of 1927 (NAD 1927).

Units of measurement and the abbreviated shorthand in this Report are consistent with the SI units. Key wellfield dimensions will use standard oil field units with SI units in brackets.

Currency is expressed in US dollars, unless otherwise stated.

Table 2.1 describes the various abbreviations used in this Report.

Table 2.1: Key Acronyms and Definitions

Acronym	Definition
2D	two-dimensional
ac	acre
ASTM	American Society for Testing and Materials
BESS	battery energy storage systems
Carousel	Carousel Specialty Products, Inc.
CLF	clear brine fluids
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
CIM Best Practice Guidelines	CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines
CIM Definition Standards	CIM Definition Standards for Mineral Resources and Mineral Reserves
Draft CIM Leading Practice Guidelines	draft CIM Leading Practice Guidelines for Sedimentary Basin and Geothermal Brine-Hosted Lithium Mineral Resources and Mineral Reserves Estimation
CMF	calcium magnesium free
DFS	definitive feasibility study
DLE	direct lithium extraction
DTB	draft tube baffle
EA	environmental assessment
EIS	environmental impact statement
EPA	Environmental Protection Agency
ERO	eluate reverse osmosis
ESP	electric submersible pump
Franklin Project	the Franklin lithium-bromide-potassium-brine project located in East Texas, US
GDP	gross domestic product
Global Lithium	Global Lithium LLC
GR	gamma ray
G&A	general and administrative
ha	hectare
HGA	Hunt, Guillot & Associates
IBC	Intermediate Bulk Container
ICP-OES	inductively coupled plasma optical emission spectroscopy
IRR	Internal Rate of Return
IPaC	Information for Planning and Consultation
IX	ion exchange
kg	kilograms
km	kilometres
LCE	Lithium Carbonate Equivalent
MJDS	Multijurisdictional Disclosure System
MVR	mechanical vapour recompression
mD	millidarcies
mg/L	milligrams per litre
MMbtu	Million British Thermal Units
NAD	North American Datum
NEPA	National Environmental Policy Act
NPV	Net Present Value
NSR	New Source Review
NI 43-101	National Instrument 43-101
OARO	osmotically assisted reverse osmosis
PEA	preliminary economic assessment
PFS	preliminary feasibility study
POTW	Publicly Owned Treatment Works
PSD	Prevention of Significant Deterioration
QP	Qualified Person
RCRA	Resource Conservation and Recovery Act
RRC	Railroad Commission of Texas
SAC	strong acid cation
SI	Systems International

Acronym	Definition
Sm^3	standard cubic metres
SWA	South West Arkansas
Standard Lithium	Standard Lithium, or the Company
SM	Standard Methods
SP	spontaneous potential
SWRO	Seawater reverse osmosis
t	tonnes
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TDS	total dissolved solids
T&E	threatened and endangered
TxDOT	Texas Department of Transportation
WOTUS	Waters of the US
QA/QC	quality assurance/quality control
UIC	Underground Injection Control
US	United States
US$	US Dollars
USACE	United States Army Corps of Engineers
USFWS	US Fish and Wildlife Service
WETLAB	Western Environmental Testing Laboratory in Sparks, Nevada

2.3 Qualified Persons

Table 2.2 presents the list of QPs as defined in NI 43-101 that are co-authors of this Report.

Table 2.2: Qualified Persons

QP	Professional Designation	Position	Company
Randal M. Brush	P.E.	Senior Engineering Advisor	Haas & Cobb
Marek Dworzanowski	EUR ING, CEng, FIMMM, HonFSAIMM	Consulting Metallurgical Engineer	Independent
Randal Huffsmith	P.E.	Senior Vice President, Business Development	WSP
Ibrahim Karajeh	P.Eng.	Principal, Design Services Leader	WSP
Mayooran Somanathan	P.Eng.	Principal Metallurgical and Special Process Engineer	WSP
Piers Wendlandt	P.E.	Vice President, Mining Engineer	WSP
Robert Williams	P.G., CPG	Principal Geologist	Haas & Cobb

QP Brush takes responsibility for reliance on other experts, property description and location, drilling, mineral resource estimates, mineral reserve estimates, mining methods, other relevant data and the parts of the summary, introduction, interpretation and conclusions and recommendations relating to it.

QP Dworzanowski takes responsibility for mineral processing and metallurgical testing and recovery methods and the parts of the summary, introduction, data verification, interpretation and conclusions and recommendations relating to it.

QP Huffsmith takes responsibility for environmental studies, permitting, and social or community impact, and the parts of the summary, introduction, interpretation and conclusions and recommendations relating to it.

QP Karajeh takes responsibility for the capital costs, and the parts of the summary, introduction, interpretation and conclusions and recommendations relating to it.

QP Somanathan takes responsibility for the infrastructure as well as operating costs and the parts of the summary, introduction, interpretation and conclusions and recommendations relating to it.

QP Wendlandt takes responsibility for reliance on other experts, market studies and contracts, the economic analysis and the parts of the summary, introduction, interpretation and conclusions and recommendations relating to it.

QP Williams takes responsibility for accessibility, climate local resources, infrastructure and physiography, history, geological setting and mineralization, deposit types, exploration, sample preparation, analyses and security, adjacent properties, and the parts of the summary, introduction, data verification, mineral resource estimates, interpretation and conclusions and recommendations relating to it.

2.4 Personal Inspection

QP Brush conducted a site visit of the Franklin Project on February 22, 2023, to collect sample Cobb #5 from the Charles Davis Heirs #1 well, and visited again on July 24, 2023, to inspect the three exploration program wells and well pads.

QP Dworzanowski has not visited the Franklin Project given that it is a greenfield project. QP Dworzanowski visited the Standard Lithium demonstration plant on November 14-15, 2022, to inspect the DLE equipment in service and verify the process conditions and technology. He visited the plant again on November 11-12, 2024, to inspect the commercial scale DLE column operation and the SWA Project DLE pilot plant in Mission Creek, AR.

QP Huffsmith did not conduct a site visit as this is an early-stage Project with limited environmental assessments conducted.

QPs Karajeh and Wendlandt did not conduct a site visit as their scope of responsibility does not require site-specific technical assessments.

QP Somanathan did not conduct a site visit as information relating to surrounding infrastructure is publicly available.

QP Williams conducted a site visit of the Franklin Project in January, February and July 2023 and more recently in December 2025. While on site, QP Williams observed active exploration using oil and gas infrastructure to obtain well logs, core, and brine samples for analytical testing. These visits also allowed QP Williams to validate the Franklin Project area. Specific tasks conducted by QP Williams during the site visits are outlined below:

- January 27, 2023 - visited the Charles Davis Heirs #1 well during drilling operations, and examined the drilling cuttings to characterize the lithology and identify the top of the Smackover Formation;
- February 22, 2023 - observed brine sampling of the Charles Davis Heirs #1 and shipping of the Haas & Cobb samples to WETLAB;
- July 7-13, 2023 - observed coring, well logging and sidewall coring at Pine Forest #1;
- December 18-19, 2025 - preparation for sample collection; and
- December 29-30, 2025 - collection of brine samples for analytical testing at Pine Forest #1 and observed Standard Lithium's brine sample collection process.

2.5 Effective Date

The effective date of this Report is July 20, 2026.

2.6 Sources of Information

Reports and documents listed in Section 3 and Section 27 were used to support the preparation of the Report. Key sources of information include the Franklin Technical Report (as defined below) and the SWA DFS:

- Abinash Moharana, SME of WSP USA Inc., Marek Dworzanowski, EUR ING, CEng. and Randal M. Brush, P.E. and Robert E. Williams, Jr. P.G., CPG of Haas and Cobb Petroleum Consultants, LLC authored the technical report titled “NI 43-101 Technical Report: Maiden Inferred Resource Estimate for Standard Lithium Ltd.’s Franklin Project, located in Hopkins, Franklin, and Titus Counties, Texas, United States” dated November 5, 2025 with an effective date of September 24, 2025 (the Franklin Technical Report).
- Patricio Pinto Gallardo, C.P., R.M. of Ausenco Chile Ltda, Aleksandar Spasojevic, P. Eng., of Ausenco Engineering Canada ULC, Randal M. Brush, P.E. and Robert E. Williams, Jr. PG, CPG of Haas and Cobb Petroleum Consultants, LLC, Thomas Wynn Rogers, Jr., P.E of Hunt, Guillot & Associates, LLC, and Richard DeLong, P.G. of Trinity Consultants Inc. authored the technical report entitled “South West Arkansas Project NI 43-101 Technical Report & Definitive Feasibility Study, Arkansas, United States” dated October 14, 2025, with an effective date of September 3, 2025.
- United States Fish and Wildlife Service, Information for Planning and Consultation, https://ipac.ecosphere.fws.gov, accessed 24 August 2026.
- United States Fish and Wildlife Service, National Wetland Inventory, https://www.fws.gov/program/national-wetlands-inventory, accessed 24 August 2026.

3. Reliance on Other Experts

The QPs have relied upon the following experts who provided information regarding mineral rights, surface rights, agreements, marketing, commodity pricing and taxation content of this Report.

3.1 Legal

The QPs have not reviewed the mineral tenure, nor independently verified the legal status, ownership of the Project area, underlying property agreements or permits. The QPs have fully relied upon, and disclaim responsibility for, information derived from Standard Lithium and legal experts retained by Standard Lithium for this information through the following documents:

- Bennett, John, “Franklin PEA – Property and Leases”, emailed dated October 16, 2026.

This information is used in Section 4 of the Report and was also used to support considerations of reasonable prospects of economic extraction and declaration of mineral resources in Section 14, and for royalties and encumbrances and property agreements considered for the economic analysis in Section 22. The information was relied on to the extent needed to verify the legal status, ownership of the Project area, underlying property agreements or permits, as applicable.

3.2 Marketing and Commodity Pricing

QP Brush and QP Wendlandt have not independently verified the marketing information pertaining to the long-term lithium carbonate price, long-term bromine price and their markets. The QPs have fully relied upon, and disclaims responsibility for information supplied by experts retained by Standard Lithium related to marketing and commodity pricing in the following documents:

- Global Lithium LLC. (2026). The Lithium Market. A summary of the market for lithium chemicals with a battery-quality carbonate price forecast to 2049; and
- Carousel Specialty Products, Inc. (2026). Global Bromine Market Study.

This marketing expert information is used in Section 14 as support for the lithium carbonate and bromine price input when establishing reasonable prospects for eventual economic extraction and to support the lithium carbonate price and bromine price used in the economic analysis in Section 22. The QPs consider it reasonable to rely on Global Lithium as they are experts in the marketing of lithium chemicals. The QPs consider it reasonable to rely on Carousel for bromine as they are engaged in the market of bromine products.

3.3 Taxation

QP Wendlandt has not independently verified the taxation information. QP Wendlandt has fully relied upon, and disclaims responsibility for, information supplied by experts retained by Standard Lithium related to taxation contained in the following document:

- Standard Lithium, “Franklin Tax Reliance”, email dated September 19, 2026.

This information is used to the extent required to summarize the tax information and in support of the after-tax economic analysis in Section 22.

4. Property Description and Location

There are 1,196 separate brine and brine-sourced mineral leases comprising the Franklin Project held by Standard Lithium. QP Brush has relied on Standard Lithium's legal experts for all legal information summarized in this section (see Section 3). All mineral leases are expressed on a 100% ownership basis. Standard Lithium's economic interest in the Project is 55%.

4.1 Property Location

The Franklin Project area encompasses a nearly east-west trend approximately 25 km north to south and 54 km east to west. The area is contained in east Hopkins, Franklin, and west Titus Counties, Texas, US. The approximate centre of the Franklin Project is located 4.5 km south of the city of Mount Vernon. Coordinates for the centre of the Franklin Project are:

- Latitude 33.143597 degrees and Longitude -95.286196 degrees; and
- Lambert Conformal Conic 2,677,539.76 US survey feet Easting, 544,445.82 US survey feet Northing, State Plane Zone 4202 (Texas North Central), NAD 1927 (Figure 4.1, approximate boundary of property).

Standard Lithium has obtained a total of 1,196 separate brine and brine-sourced mineral leases from private mineral owners within the Project area of 44,541 hectares, consisting of 30,994 gross brine mineral hectares and 23,690 net brine mineral hectares. In the context of mineral leasing, gross area reflects the full geographic extent of the lands over which certain mineral rights exist, while net mineral area represents the share of minerals attributable to Standard Lithium's mineral interest in those lands after deducting all unleased interests in the same area.

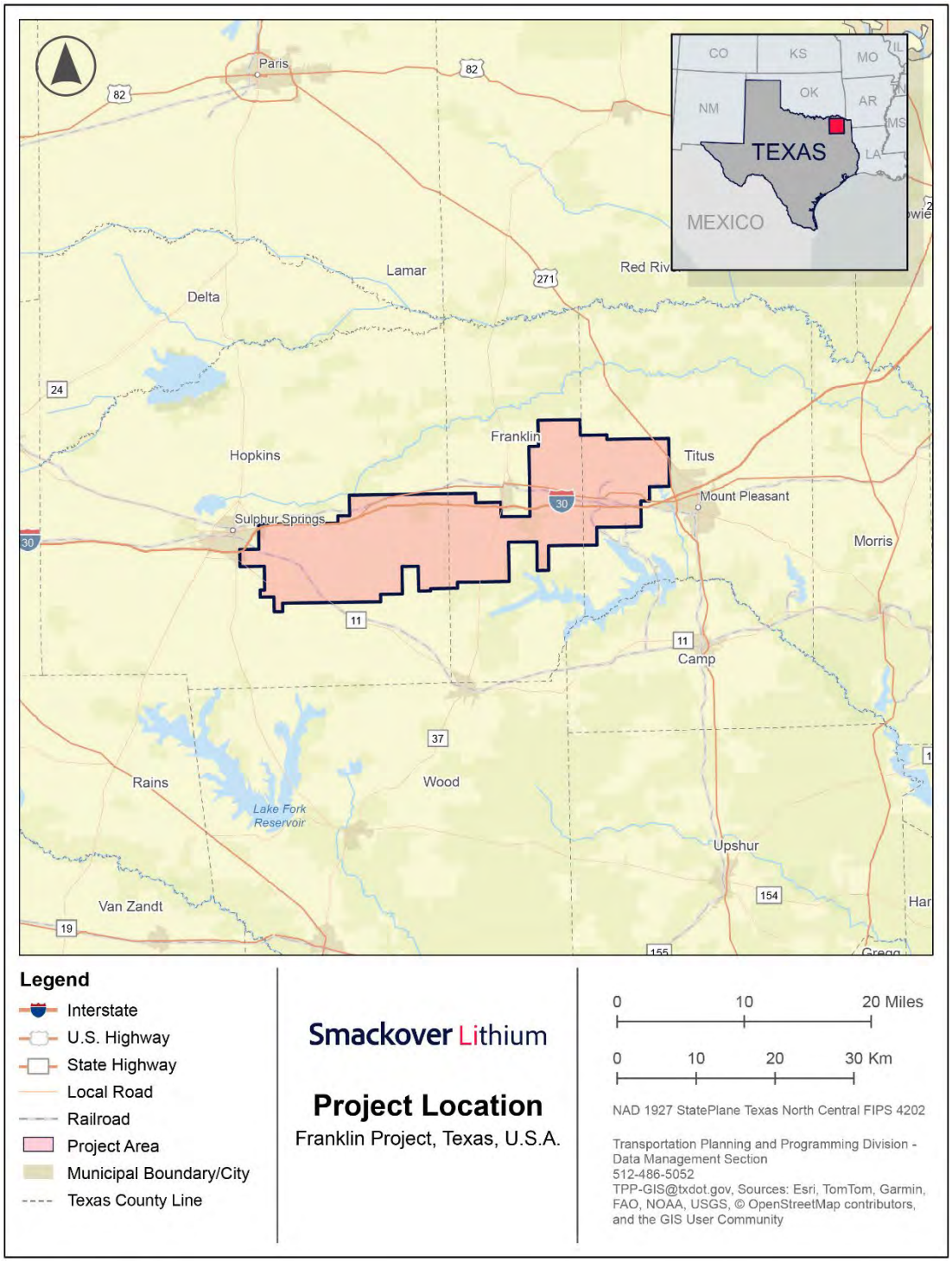
4.2 Surface and Mineral Rights in Texas

In Texas, case law has established the distinction between surface and minerals. The Texas courts apply one of two tests, depending on when the minerals were severed from the surface. For severances that occurred before June 8, 1983, Texas courts apply the "surface destruction test", under which valuable substances are considered minerals if reasonable use of the surface to extract them would not destroy or deplete the surface (Reed v. Wylie, 1980). For severances that occurred after June 8, 1983, Texas courts apply the "ordinary and natural meaning" test, under which minerals include "all substances within the ordinary and natural meaning of that word, whether their presence or value is known at the time of severance", except for building stone, limestone, caliche, surface shale, water, sand, gravel, and near-surface lignite, iron, and coal (Moser v. US Steel Corp., 1984). Brine-sourced lithium, bromide and potassium extracted by DLE are minerals under either test. The processes leave the surface of the land mostly untouched, satisfying the surface destruction test. Lithium is also ordinarily and naturally considered to be a mineral, including by the US federal government, which has listed it as a "critical mineral" for years (Final List of Critical Minerals, 2018). Potash (the potassium-bearing mineral commodity) is also listed as a critical mineral since 2018.

In Texas, a mineral interest owner has the inherent right to develop the minerals, which includes the right to lease the minerals to others for development. A company that desires to develop the mineral resources in an area must either purchase mineral interests outright or secure mineral leases from the mineral owners. Under Texas law, mineral leases are typically structured as fee simple determinable conveyances, meaning they convey actual ownership of the minerals to the leaseholder for as long as the lease endures. The lease's provisions describe how and when it terminates, as well as the duties the leaseholder owes to the party that granted the lease in the meantime.

This structure allows the leaseholder to stand in the shoes of the mineral owners during the exploration and extraction of the minerals covered by the lease.

Figure 4.1: Project Location Map



Note: Lease boundaries are within the approximate Project area outline
Source: Standard Lithium, 2026

With respect to surface rights, Texas law allows the severance of the surface estate from the mineral estate by proper grant or reservation, thereby creating separate estates. Under Texas law, the mineral estate is dominant over the surface, meaning the mineral owner has the implied right to use as much of the surface as is reasonably necessary to extract the minerals. As a result, ordinarily, a mineral leaseholder in Texas has the implied right to make whatever use of the surface is reasonably necessary to extract the minerals. However, this right can be disclaimed by the applicable lease. Particularly in situations where the landowner granting the lease owns both surface and mineral rights, the landowner may insist on including a clause in the lease that prohibits surface use without further negotiation. Additionally, even where surface use is not disclaimed by a mineral lease, conflicts that might otherwise arise between mineral leaseholders and severed surface owners over the reasonableness of planned surface use can be avoided by entering into Surface Use Agreements that clearly identify the scope of surface use rights.

In the State of Texas, when a person sells a piece of property, the mineral rights that person owned automatically transfer with the surface rights, unless otherwise stated in the deed.

4.3 Brine and Brine-Sourced Mineral Production Legislation

Adoption of new Section 16 Texas Administrative Code (TAC) §3.82 on January 29, 2025, implements the requirements of Senate Bill 1186 (88th Legislature, Regular Session, 2023), which amended Texas Water Code §27.036 to clarify the RRC's jurisdiction over brine mining under state law. The bill clarified the RRC's authority to permit and regulate brine production projects by:

- Amending the definition of "brine mining" to include Class V brine mining, in which naturally occurring brine is produced from the subsurface for the extraction of minerals and then reinjected into the same formation from which it was produced after mineral extraction.
- Instructing the RRC to adopt rules to regulate Class V brine mining, in addition to its existing rules for Class III brine mining.
- Instructing the RRC to seek delegation of primary enforcement authority over Class V reinjection wells under the federal Safe Drinking Water Act (42 U.S.C. §§ 300f, et seq.) to its underground injection control program,
- Prohibiting the drilling of Class V injection wells without a valid RRC permit.

Within the Franklin Project area, Standard Lithium acquired the rights to produce lithium, bromide, potassium, and other dissolved salts in the brine from brine and brine-sourced mineral owners.

4.4 Summary of Brine and Brine-Sourced Mineral Leases

4.4.1 Summary of Leases

In 2023, Standard Lithium implemented a brine mineral leasing program and acquired a total of 1,196 separate brine mineral lease holdings as of the effective date of this Report. In general, each lease has a five-year term, with two five-year extensions, known as the primary term. During the primary term, the leases may be maintained through the payment of lease extension payments, annual rentals, or similar contractual consideration, depending on the terms of the lease. The brine leases may be continued into a secondary term through the establishment of commercial production or other lease-sustaining activities as specified in the applicable lease agreement. Standard Lithium obtains brine leases from landowners who own both the surface of the land and at least some share of the minerals, and it obtains brine-sourced mineral leases from landowners who own severed mineral interests.

The Franklin Project brine and brine-sourced mineral leases have yet to be developed for commercial production of brine minerals. Accordingly, Standard Lithium's strategy for maintaining its brine leasehold position consists primarily of satisfying lease extension provisions, and other applicable contractual requirements. Once the Project is in production, those leases within an established production unit will be held by production, continuous operations or otherwise maintained by applicable lease-sustaining activities/provisions, and no additional primary term lease extension payments will be necessary.

Since the filing of the Franklin Technical Report (Moharana et al, 2025), the total hectares of the Franklin Project area have increased by 37%, while Standard Lithium's gross brine and brine-sourced mineral leasehold ownership within the Franklin Project area has increased from 58% to 70%.

4.4.2 Brine and Brine-Sourced Mineral Brine Right Distribution on Individual Leases

In some instances, the area encompassed by an individual lease may be very small, less than one hectare, or much larger, up to several hundred hectares. The percentage of mineral ownership may also vary for a brine or brine-sourced mineral lease. In some instances, the undivided interest in minerals conveyed by a lease may be small (i.e., less than 10%) or a full 100% interest. For this reason, net brine mineral hectares are lower than gross brine mineral hectares and reflect Standard Lithium's mineral ownership in the land covered by its leases less all unleased interests in the same land. Standard Lithium's lease portfolio comprises 30,994 gross brine mineral hectares and 23,690 net brine mineral hectares. Figure 4.2 shows the Project area outline, within which the lease boundaries lie. The Franklin Project area of 44,541 ha and the 70% gross brine mineral area basis are calculated based on the lease boundaries.

The lithium, bromide, and potassium resources present in the Upper Smackover and Middle Smackover were estimated based on the 30,994 ha gross Standard Lithium leased area within the 44,541 ha Franklin Project area.

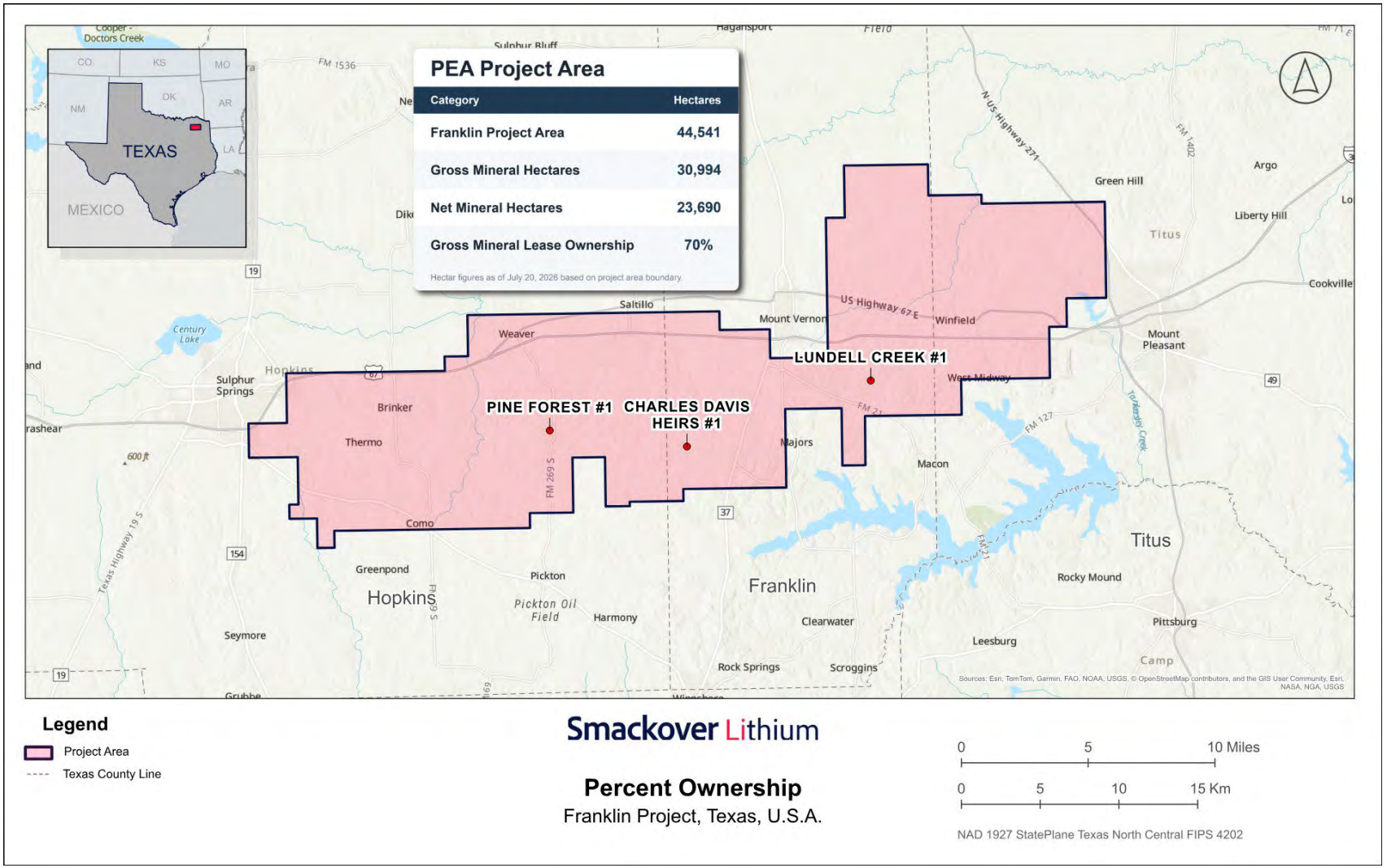
4.5 Royalties and Agreements

Royalty rates are determined by the terms of the lease agreements between mineral owners and their leaseholders, which are frequently treated as confidential in the brine fields of East Texas, and such leases are not regulated by the RRC.

Although the exact royalty rates that are provided within individual lease agreements are treated as confidential, for purposes of this economic analysis, future lithium royalty payments of 2.5% gross revenue are being considered. This assumption is considered reasonable based on Standard Lithium's experience negotiating brine and brine-sourced mineral leases within the Franklin Project area, where royalty discussions with individual mineral owners have generally occurred within a range that includes the assumed rate. In addition, the selected royalty rate is consistent with lithium royalty rates approved by the Arkansas Oil and Gas Commission for certain established brine production units in Arkansas.

Royalty rates for other minerals, such as bromide, are being considered on a dollar per hectare basis (approximately $99/ha), with the assumption that Standard Lithium will control brine and brine-sourced mineral leases covering 100% of the total gross hectares within the Franklin Project area. This assumption is to establish a conservative estimate for royalty payments, rather than assuming that the Project area will be 100% leased by Standard Lithium. The royalty rates considered for this economic analysis are well-aligned with Standard Lithium's existing brine and brine-sourced mineral leases.

Figure 4.2: Franklin Project Brine Mineral Lease Ownership Summary



Note: Lease boundaries are within the approximate Project area outline
Source: Standard Lithium, 2026

4.6 Environmental Liabilities and Permitting

Several Federal and State permits and approvals are required for brine production in Texas, for example:

- Clean Water Act Section 404 permitting through the USACE;
- Air emissions permitting through the TCEQ;
- Water discharge permitting through the TCEQ;
- Well drilling and operating permits through the RRC;
- Underground Injection Control permitting through the RRC; and
- Public water supply permitting through the TCEQ.

Currently, there is no brine production occurring on the Franklin Project for the express purpose of brine mineral extraction. Brine is produced from the Smackover Formation adjacent to the Project area as a normal part of oil and gas extraction operations, but any brine produced is removed and disposed of as per normal oilfield activities.

To date, three exploration wells have been completed in the Franklin Project area, subject to previously obtained permits. In the future, these exploration wells will need to be plugged and abandoned as per RRC requirements and well pads and access roads reclaimed. Refer to Section 20 for further detail on environmental permitting.

4.7 Other Significant Factors and Risks

The following risks and uncertainties have been identified at this stage of the Project's development:

- This could be the first brine production project that the RRC permits and could result in Project delays.
- Several Texas attorneys have written articles stating that there is uncertainty in Texas law over whether brine-sourced lithium is part of the surface or mineral estate before concluding that lithium is most likely part of the mineral estate. While agreeing that no Texas court has ruled on the exact issue yet, Standard Lithium's Texas counsel does not believe the degree of uncertainty these authors have expressed is reasonable in light of the overwhelming weight of the existing case law. Nevertheless, Standard Lithium's Texas counsel agrees there is some risk that one or more lower court decisions might confuse the issue before being corrected by higher courts on appeal.

5. Accessibility, Climate, Local Resources, Infrastructure, and Physiography

5.1 Accessibility

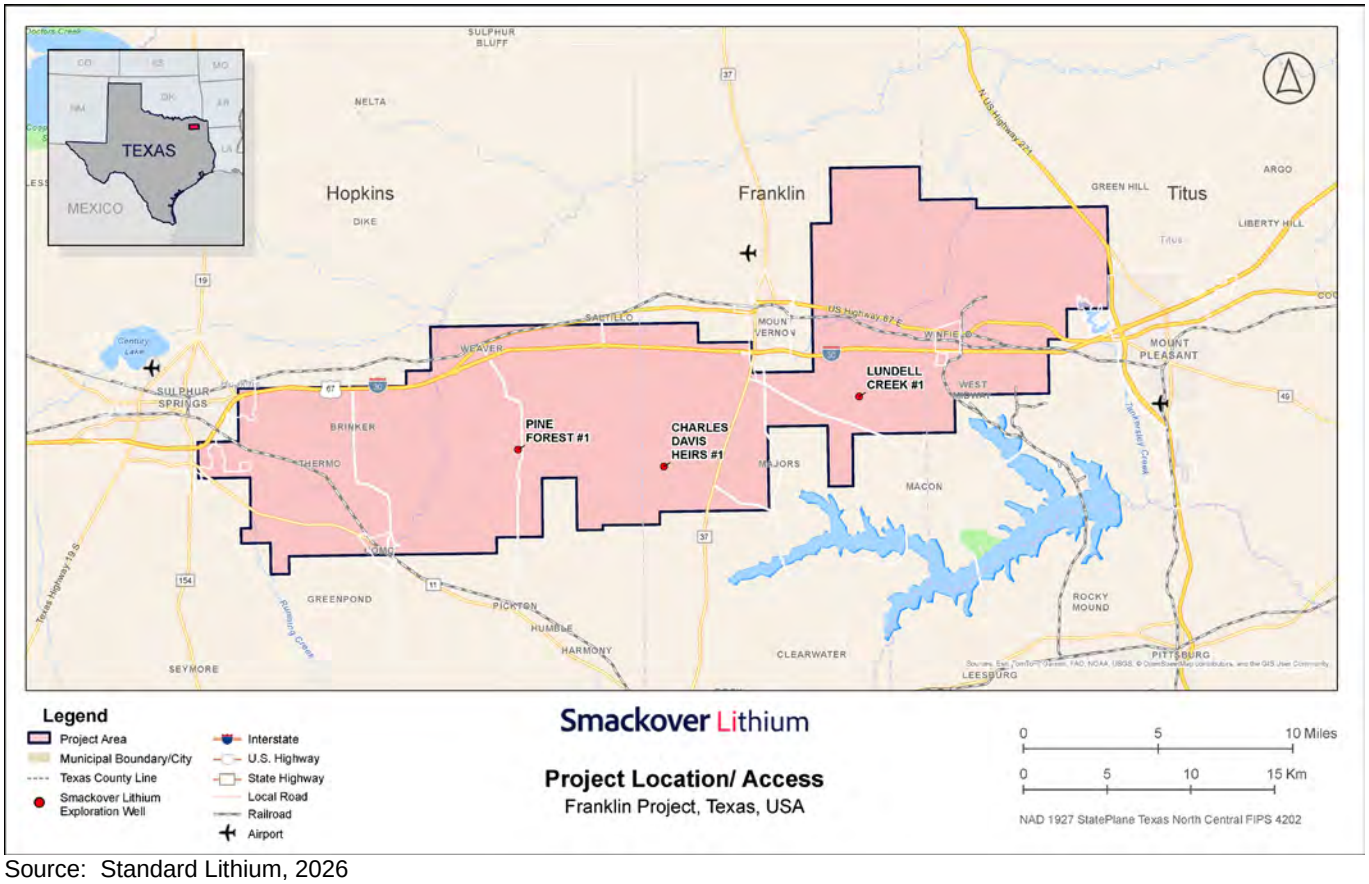
The area is serviced by an extensive all-season secondary road network (Figure 5.1). Access to the property where the Project is located is provided by US and Texas state highways. Interstate 30 links the cities of Sulphur Springs, Mount Vernon, and Mount Pleasant, running west-to-east. Texas State Highways 37, 67, 271, and several improved county roads provide access to every leased tract of the Project area.

The nearest airport is Sulphur Springs Municipal Airport, located in the northwestern area of the Franklin Project, in Hopkins County.

The nearest commercial airport is Texarkana Regional Airport, approximately 115 km east-northeast. Dallas Fort Worth International Airport is approximately 193 km west-southwest.

There is existing rail access parallel to Interstate 30, approximately 16 km north.

Figure 5.1: Franklin Project Area with Cities/Towns, Access Routes, Highways, and Railways



Source: Standard Lithium, 2026

5.2 Climate

East Texas climate is generally humid with an average temperature and precipitation of 25ºC and 113.7 cm, respectively (Figure 5.2). Annual rainfall is distributed throughout the year with May as the wettest month of the year averaging 146 mm of precipitation. The warmest month of the year is August with an average temperature of 29.4ºC, while the coldest month of the year is January with an average temperature of 7.5ºC.

The mild and humid climate as well as the moderate seasonal variations of the Franklin Project area are not expected to impede year-round exploration activities and should allow consistent access and operational flexibility throughout the year.

5.3 Local Resources and Infrastructure

The largest nearby city is Sulphur Springs with a population of 16,185 as of 2023. The combined population of the nearby counties of Hopkins, Franklin, and Titus is estimated at approximately 78,386 based on census data from 2020 (US Census Bureau, 2025). Regionally, Dallas is approximately 152 km west-southwest and has a population of 1.3 million, and Texarkana is approximately 115 km east-northeast with a population of 147,000. It is expected that these cities will be a source for supplies and skilled labour with experience with mineral projects.

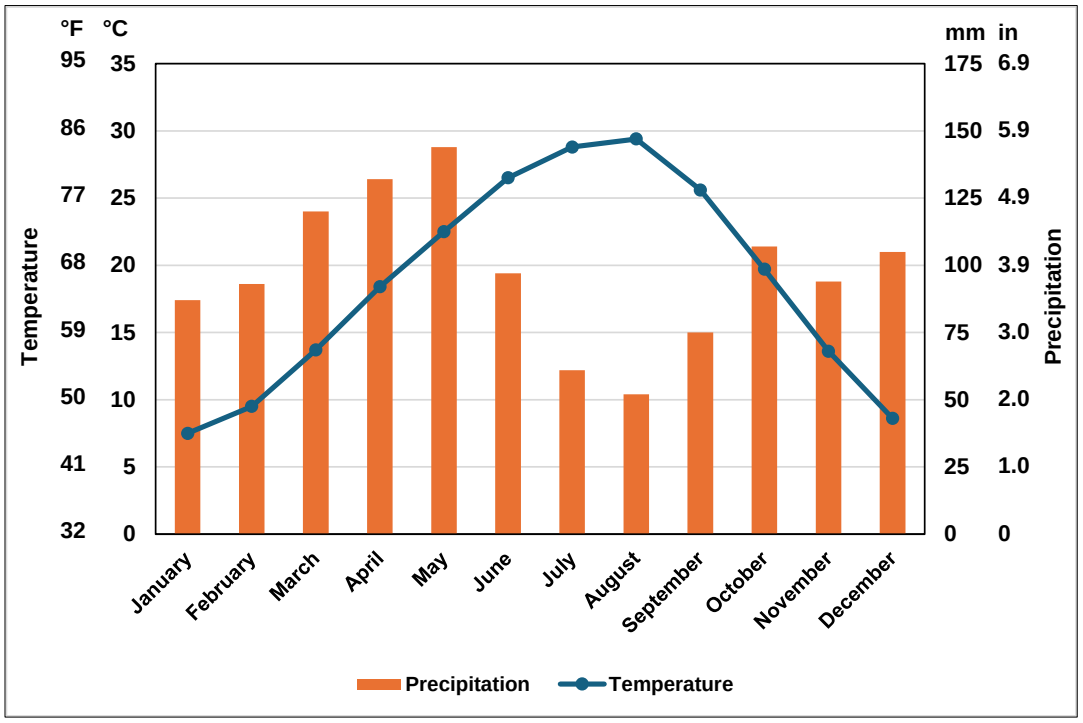
Oil and gas extraction-related infrastructure is present across the Franklin Project area, particularly to the north and south. This infrastructure consists of wellheads, collection facilities for various fluids, tank batteries, gas processing plants and associated pipelines, and cleared easements. Much of the infrastructure is sporadically in use by smaller operators, and the operation thereof can be cyclical depending on hydrocarbon market conditions.

The Franklin, Hopkins, and Titus County area has a mix of major transmission infrastructure, utility/co-op distribution systems, legacy thermal generation, and rapidly growing solar/BESS development. There are multiple transmission owners/operators in the counties and transmission infrastructure includes lines at both lower voltage and 345 kV.

There are currently no groundwater conservation districts in the Franklin, Hopkins, and Titus Counties. The three counties sit within the Northeast Texas portion of the Gulf Coastal Plains groundwater system. The principal aquifers of interest include Woodbine Aquifer, Queen City Aquifer, Sparta Aquifer, Carrizo-Wilcox Aquifer, Trinity Aquifer (particularly in the northern part of the region), and shallow alluvial/local groundwater systems.

There is sufficient space available to support operations including the wellfield and processing facilities within the Project area. There is a reasonable expectation that additional surface rights to support the Project development and operations can be obtained.

Figure 5.2: Average Temperature and Precipitation in Sulphur Springs, Texas



Source: http://en.climate-data.org/north-america/united-states-of-america/texas/sulphur-springs-16639/

5.4 Topography, Elevation, and Vegetation

The local terrain consists of rolling hills, with prairies and mixed hardwood and pine forests. The maximum elevation on the Project site is 170 m above sea level, and the minimum elevation is 113 m above sea level. The lowest point in the state is at sea level found along the Gulf Coast, 400 km to the south. The West Gulf Coastal Plain covers the southeastern portions of the state along the border of Louisiana. This lowland area of Texas is characterized by pine forests and farmlands.

Cattle ranching, dairy, and chicken operations are major forms of agriculture. Natural resources include natural gas, petroleum deposits, and lignite resources.

6. History

6.1 Prior Ownership

There have been no prior brine production operations in the area, other than brine produced as a waste by-product associated with oil and natural gas production. There are no publicly available historical mineral reserve or resource estimates in the Project area.

6.2 Exploration and Development History

6.2.1 Introduction to Brine Production

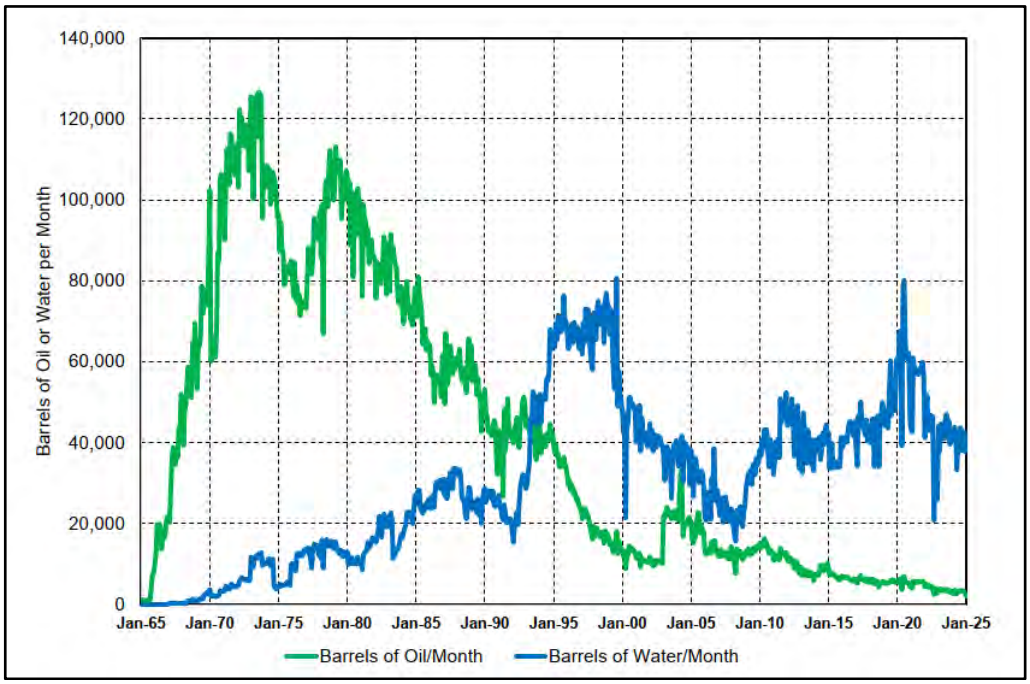
Prior to January 29, 2025, brine production as anything other than a by-product of oil and gas production was formerly recognized in Texas only in the context of Class III Brine Mining Injection Wells under 16 TAC §3.81, which regulates injection of fluid to dissolve subsurface salt formations and then extract the salts from the resulting artificial brines. The addition of new 16 TAC §3.82 governs wells that extract brine from naturally occurring aquifers and the reinjection of fluids, post-extraction of brine-sourced, non-hydrocarbon minerals. Currently, no industrial brine production exists in Texas under rule §3.82. Language is centred around lithium extraction but includes all other minerals.

In the neighbouring state of Arkansas, brine production from the Smackover Formation in southern Arkansas has a long history of recovering bromide as its chief product, a direct analog to the recovery of lithium and potassium from brine. Bromine, one of two elements that are liquid at room temperature, is found principally as a dissolved ionic species (bromide) in seawater, evaporitic (salt) lakes, and underground brine.

Some historical production of bromide occurred from ocean water, but since 1969, all US bromide has been produced from subsurface brine in southern Arkansas. The first commercial recovery of bromide from brine in Arkansas occurred in 1957 in Union County. Since then, bromide production in Union County by LANXESS Corporation (Lanxess) and in Columbia County by Albemarle Corporation has been continuous via a process in which the bromide-bearing brine is removed from the Smackover aquifer using production wells. The bromide is recovered through an exchange reaction with chlorine in surface facilities, and the bromide-free brine (effluent brine) is returned into the production formation via Class V injection wells that are regulated by the Arkansas Oil and Gas Commission.

In the Franklin Project area, brine is a by-product of oil and gas production. While there is no commercial brine production in East Texas, Figure 6.1 depicts the history of oil and water (brine) production from the Smackover Formation in the three-county area where the Franklin Project is located. Over the last 30 years, brine production has become greater than oil production as these legacy oil and gas fields slowly water-out. Recently, brine production has been about 40,000 barrels per month (S&P Global, 2025).

Figure 6.1: Recent East Texas Oil and Water Production



Source: S&P Global, 2025

6.2.2 Regional Assessment of the Smackover Formation Brine's Lithium Potential

Regional properties have verified lithium-brine mineralization within the Smackover Formation. Brine aquifers differ from conventional mineral deposits, such as precious and base metal deposits, in that they extend over very large subsurface areas. As a result, the scale of the Smackover Formation brine aquifer, and by extension, the distribution and extent of its lithium-bearing brine, provides important contextual information.

The USGS National Produced Waters Geochemical Database v3.0, compiles geochemical information from wells across the US, including 115,718 produced water samples that were collected between 1905 and 2023 (Blondes et al., 2023). In addition to the major element data, the database contains trace elements, isotope and time-series data that provide spatial coverage from specific formations and/or aquifers. Application of the dataset typically requires quality control through filtering based on geochemical criteria (Blondes et al., 2023). For this sub-section, while regional information may not necessarily be indicative of the mineralization on the Franklin Project area, QP Williams has not filtered any data and has included lithium-brine results directly from the USGS National Produced Waters Geochemical Database.

Figure 6.2 shows that lithium-enriched brine, identified within the database filtered on "Smackover," "Upper Smackover," or "Reynolds Member of the Smackover" (an equivalent term for the Upper Smackover), is distributed across East Texas including Hopkins, Franklin, and Titus counties. The highest recorded lithium-brine value within the USGS-compiled database is 473 mg/L, reported from Cass County. The figure also presents the distribution of bromide and potassium concentrations across the area.

Moldovanyi and Walter (1992) conducted a regional brine chemical study of Smackover Formation brine, analyzing 87 wells producing from 45 Smackover Formation oil and natural gas reservoirs in southwest Arkansas, East Texas,

and northern Louisiana. Based on this work, the authors identified several observations regarding the regional distribution of lithium-bearing brines in the Smackover Formation:

Boron (B) and alkali metal lithium (Li), potassium (K), and rubidium (Rb) exhibit consistent geochemical relationships across the East Texas shelf.

Concentrations of these elements are generally higher and more heterogeneous in hydrogen sulphide (H_2S)-rich brine relative to H_2S-free brine.

Regional concentration gradients in H_2S, B, Li, K, and Rb suggest that fluids enriched in these elements may have migrated into Smackover Formation reservoirs through large-scale circulation of deep-seated waters along regional fault segments.

With respect to the Franklin Project, the Collins (1974) dataset includes six brine analyses from wells located within the same counties as the Project area, as shown in Figure 6.2. Reported lithium-brine values range from <1 mg/L (Robbie Ford #1) to 293 mg/L (New Hope Deen Unit #64), with an average concentration of 97 mg/L.

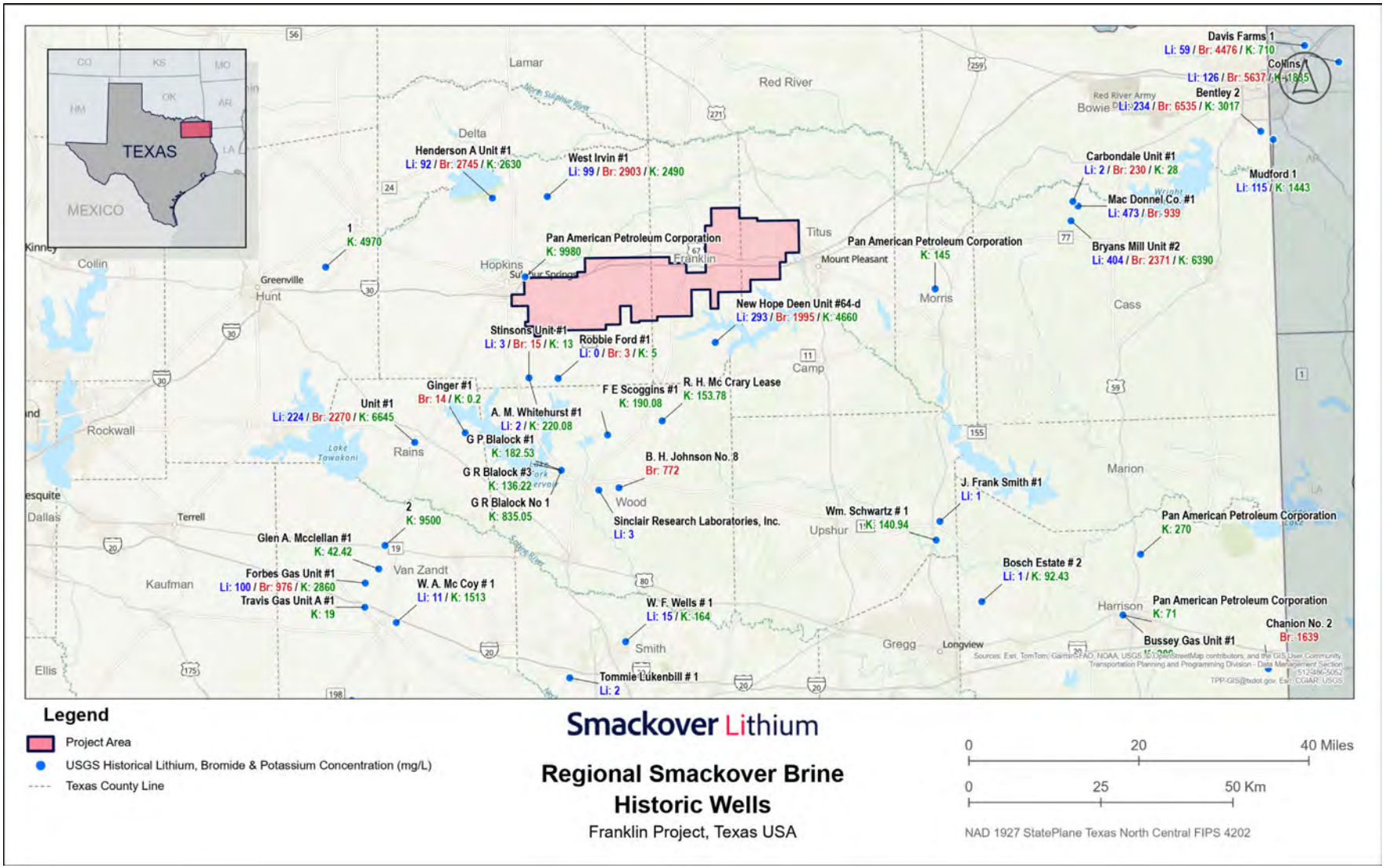
Bromide concentrations from five wells in the Project area range from 3 mg/L to 2,903 mg/L with an average of 1,532 mg/L, while potassium concentrations range from 5 mg/L to 9,980 mg/L with an average of 3,296 mg/L.

6.2.3 Franklin Project Historical Infrastructure Summary

Several former and currently operating oil fields within the Smackover Formation are located adjacent to the Franklin Project including New Hope, Chitsey, W.A. Moncrief, and Reilly Springs fields to the south and Mt. Olive, Hagansport, Bagwell, Spindletop, and Brantley-Jackson fields to the north (RRC, 2016). Figure 6.3 shows the locations of these oil fields relative to the Franklin Project, together with oil and gas wells in the area and wells associated with the Smackover Lithium exploration program. Currently, only the Brantley Jackson and New Hope fields remain active, while the remaining fields are inactive.

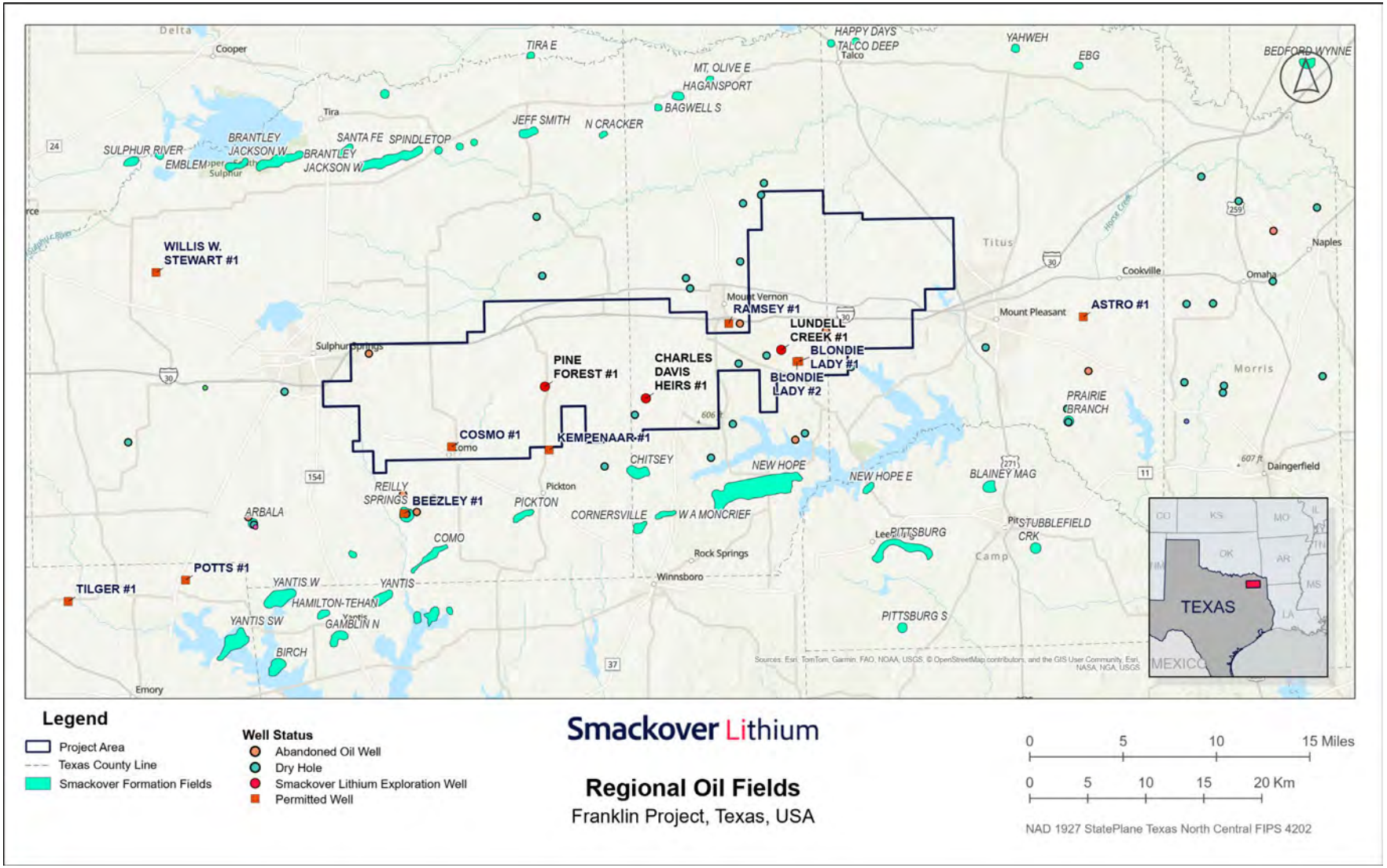
There has been no lithium, bromide or potassium production from the Franklin Project area.

Figure 6.2: Historical Smackover Formation Lithium, Bromide, and Potassium Brine Values Derived nearby the Franklin Project



Source: Collins, 1974

Figure 6.3: Regional Oil Fields



Source: Geomap Company, Executive Reference Map 320 – Ark-La-Tex Region, 30th Edition, 2020

7. Geological Setting and Mineralization

7.1 Regional Geology

7.1.1 Gulf Coast Tectono-Depositional Framework

Deposition of the Late Jurassic Smackover Formation is directly linked to the evolution of the Gulf of Mexico. The central Gulf Coast region is the site of Triassic-Jurassic rifting, which is associated with the opening of the Gulf of Mexico and a divergent margin basin characterized by extensional rift tectonics and wrench faulting (Pilger, 1981; Van Siclen, 1984; Salvador, 1987; Winker and Buffler, 1988; Buffler, 1991). The history of the interior salt basins in the central and eastern Gulf of Mexico includes a phase of crustal extension and thinning, a phase of rifting and sea-floor spreading and a phase of thermal subsidence (Nunn, 1984; Mancini, et al. 2008).

A proposed model for the evolution of the Gulf of Mexico and related basin and arch formation in Mississippi, North Louisiana, Arkansas, and East Texas includes the following:

- Late Triassic-Early Jurassic rifting developed pronounced half-grabens bounded by listric normal faults. This phase was accompanied by widespread doming, rifting, and filling of the rift basin(s) with volcanic and non-marine siliciclastic sedimentary (red beds) rocks as North America separated from Africa-South America (Buffler et al., 1981; Salvador, 1991; Sawyer et al., 1991; Marton and Buffler, 2016).
- Middle Jurassic rifting, crustal attenuation and the formation of transitional crust is characterized by the evolution of a pattern of alternating basement highs and lows as the Gulf area broke up into a series of separate arches/uplifts and subsiding basins, some of the latter becoming isolated and filling with thick sequences of evaporite.
- Late Jurassic sea-floor spreading and oceanic crust formation in the deep central Gulf of Mexico are characterized by a regional marine transgression related to crustal cooling and subsidence (Sawyer et al., 1991). Subsidence continued into the Early Cretaceous with a ramping up of a carbonate platform and deposition of shallow to deep-water sedimentary rocks along the margins of the basins.

Evolution of the Gulf Coast region ended with a prominent period of igneous activity and global sea-level fall during the Late Cretaceous (mid-Cenomanian), that produced a major lowering of sea level in the region and resulted in the exposure of the shallow Cretaceous platform margin that rimmed the Gulf (Salvador, 1991). This event is defined by a Gulf-wide unconformity that is most pronounced in the northern Gulf of Mexico area.

7.1.2 Triassic Jurassic Stratigraphy

During rifting phases, evolving grabens were filled with the earliest Late Triassic-Early Jurassic red-bed sedimentary sequences of the Eagle Mills Formation. This unit comprises a variety of terrestrial sedimentary rocks, including red, reddish-brown, purplish and greenish-grey coloured shale, mudstone, siltstone, and lesser amounts of sandstone and conglomerate. The Late Triassic-Early Jurassic age is based on the study of remnant plants and radiometric dating of intrusive material (Scott et al., 1961; Baldwin and Adams, 1971).

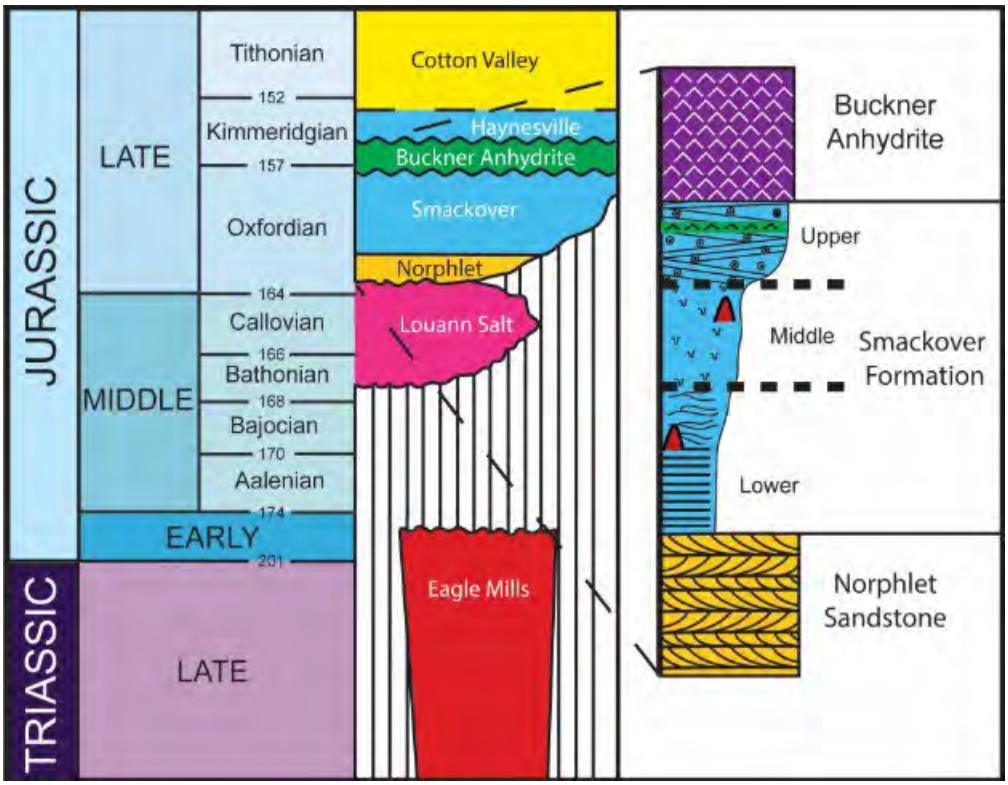
From central-north Louisiana to East Texas, rifting and continental crustal attenuation resulted in a period of non-deposition, as evidenced by a 40-million-year hiatus of the depositional record. Late Middle Jurassic (Bathonian–Callovian) depositional units include evaporite, red clastic and basal conglomerate of the Werner Anhydrite (Hazzard

et al., 1947). The Werner-Louann sequence unconformably overlies the Eagle Mills Formation, or older 'basement' rocks, and forms the basal unit(s) for the overlying Late Jurassic Louark Group, which includes the Norphlet, Smackover, and Haynesville-Buckner Anhydrite formations (Figure 7.1). More notably, continued basin-wide restriction resulted in deposition of a thick succession of the Louann Salt during the Callovian, which is over 3,050 m thick in some places (Salvador, 1991; Zimmerman, 1992). The Louann Salt has been estimated to cover as much as 466,000 km^2 in the Gulf of Mexico region (Hazzard et al., 1947).

The Late Jurassic Norphlet Formation unconformably overlies the Louann Salt, and older units, near the margins of the basin (Hazzard et al., 1947; Bishop ,1967). The Norphlet Formation was deposited during a regional sea-level low, attains a maximum thickness of approximately 45 m, and is comprised of alluvial-fan sandstone and conglomerate, channel and interdune red-bed and aeolian sandstone.

Marine deposition resumed during the late Oxfordian, as the Late Jurassic seas transgressed, initiating the deposition of the Smackover Formation, which conformably overlies the Norphlet Formation.

Figure 7.1: Stratigraphic Column of the Late Triassic to Late Jurassic Formations of the Northern Gulf Coast



Source: Schemper, Loucks, and Fu, 2022

The Smackover Formation carbonate rocks are succeeded by mixed evaporite, siliciclastic, and dolomite of the Buckner Anhydrite Formation.

The Buckner Anhydrite Formation consists of evaporitic deposits and associated red-beds reflecting a depositional environment that is less marine, or shallower-water marine, than those of the underlying Smackover Formation (Salvador, 1987). The Buckner Anhydrite Formation is made up of intercalated 2-6 m thick salt/anhydrite and marine limestone and extends from the Florida Panhandle to South Texas (Mann, 1988).

Overlying the Buckner Anhydrite Formation is the Haynesville Formation.

7.1.3 Regional Structures

The Mexia-Talco fault system is approximately parallel to the regional strike of the Smackover Formation deposition and was active during the Jurassic; likely from salt tectonics in the underlying Louann Formation (Bishop, 1973; Troell and Robinson, 1987). The present up-dip limit of the Louann Salt is generally marked by the Mexia-Talco fault system, a feature believed to have been produced during the Late Jurassic by downdip gravity sliding of the Louann Salt based upon the work in Arkansas and Louisiana (Figure 7.2, Troell and Robinson, 1987).

7.2 Local Geology

7.2.1 The Smackover Formation

The Late Jurassic evaporite and sedimentary strata that form the integral geological units in this Report, were deposited across much of the Gulf Coast basin as part of a seaward-dipping wedge of sediment that accumulated in differentially subsiding basins on the passive margin of the North American continent. These units include formations of the Louark Group: 1) the major lithium and bromide brine and hydrocarbon reservoir/aquifer known as the Smackover Formation; and 2) the Smackover Formation's overlying and underlying aquitards, the Buckner Anhydrite Member of the Haynesville Formation and the Louann Salt.

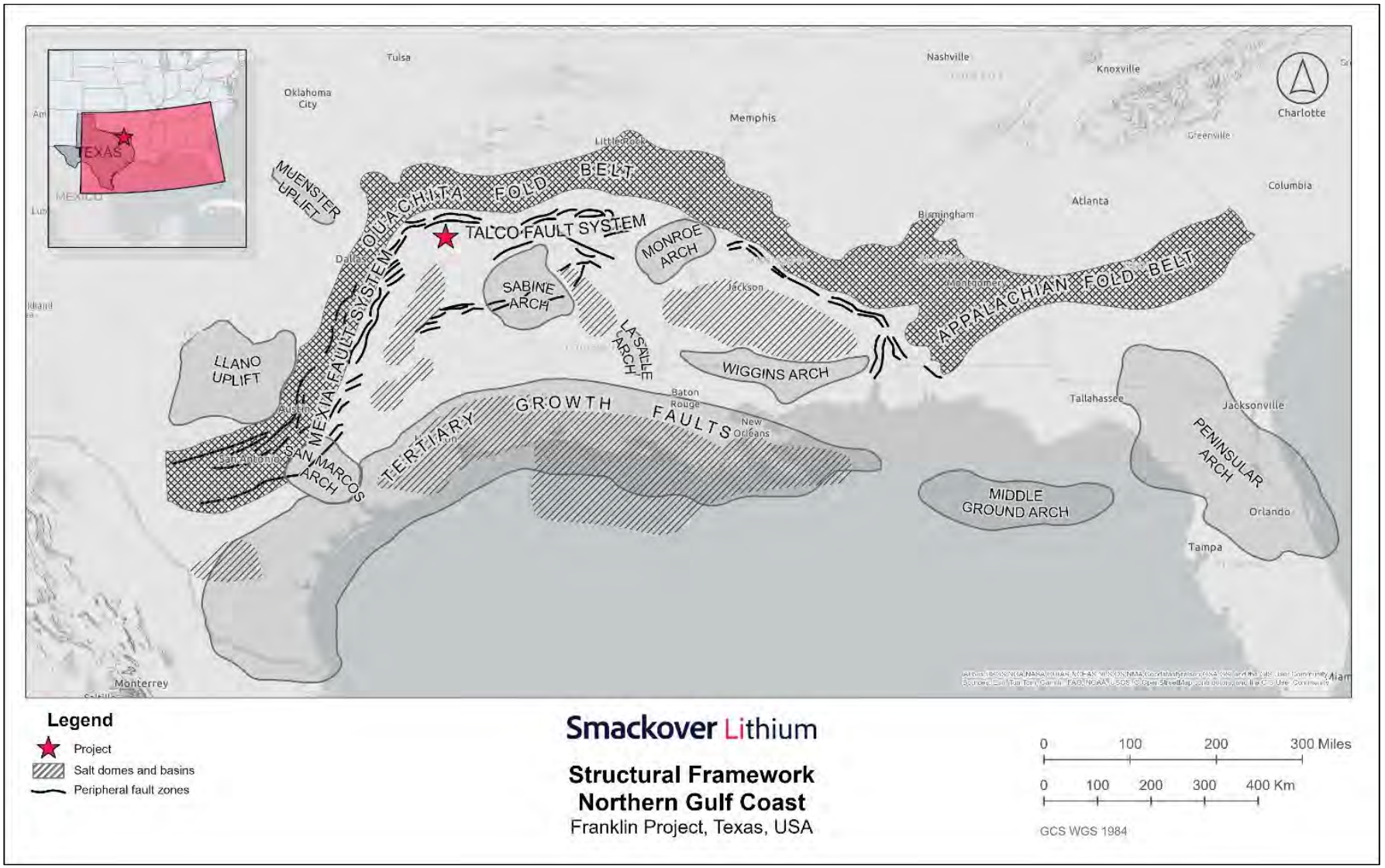
The Smackover Formation is Upper Jurassic in age and was named after the Smackover Field, Union County, Arkansas, which first produced oil in 1922 (Schneider, 1924). The Smackover Formation extends from the panhandle of Florida through Alabama, Mississippi, Louisiana, and Texas to Mexico.

The Smackover Formation is up to 365 m thick with an upper ooidal/oncolitic packstone and grainstone shoaling upward cycle facies that is nearly 100 m thick (Dickinson, 1968; Moore and Druckman, 1981). The Smackover Formation has been interpreted as a low-gradient slope (<1°) homoclinal ramp succession, due to its series of strike-oriented, relatively narrow depositional lithofacies belts across Texas, Arkansas, Louisiana, and Mississippi (Ahr, 1973; Bishop, 1968; Handford and Baria, 2007).

Figure 7.3: presents a regional map of the Smackover lithofacies belts in the US Gulf Coast Basin. These belts include evaporite and redbed sequences in the north that change basin-ward into ooidal (inner-ramp beaches and shoals) peloidal-facies belt (mid-outer ramp) and laminated mudstone (basin).

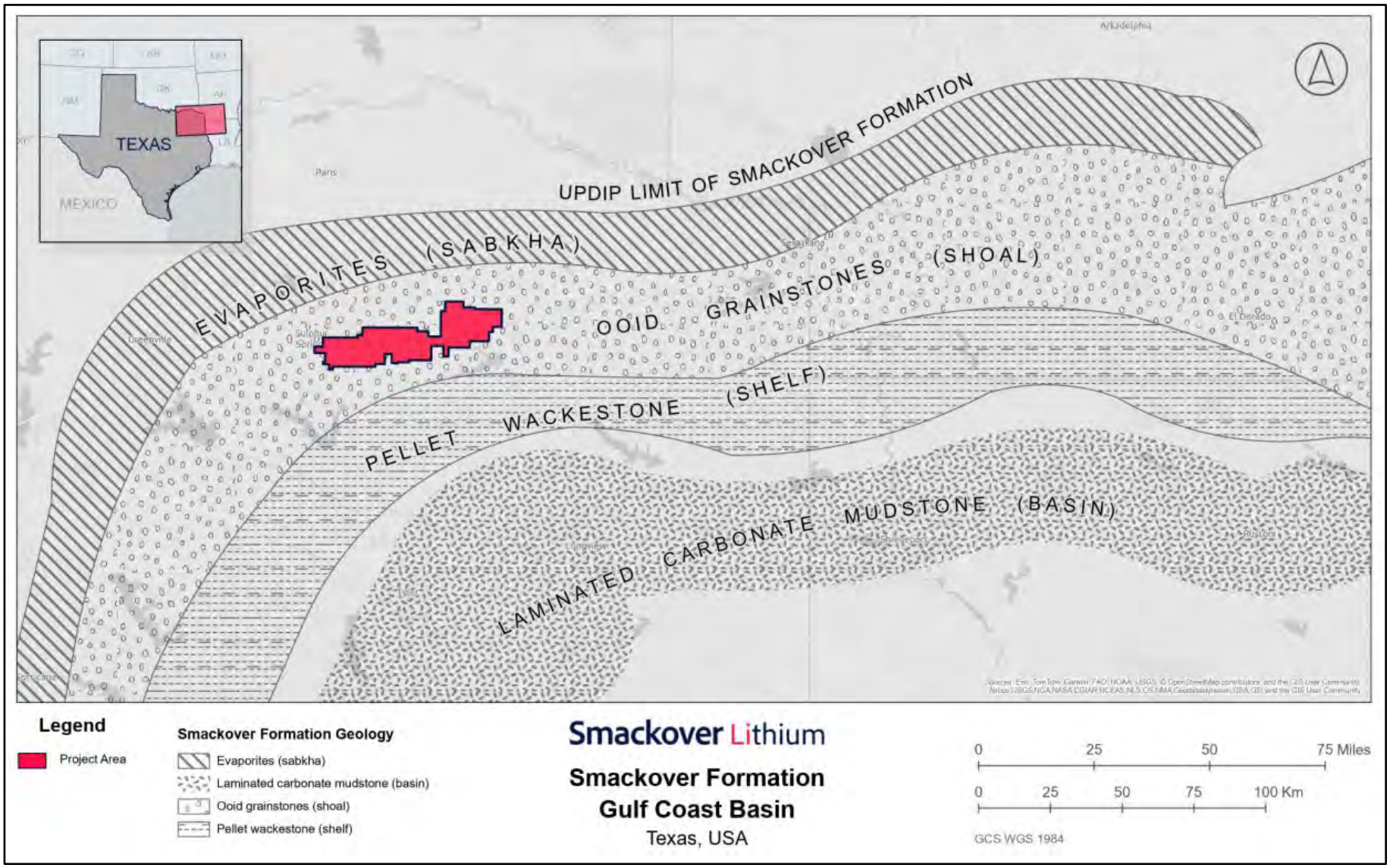
Stratigraphically, the Smackover Formation is bounded on the top by the Buckner Anhydrite Formation and on the bottom by the Norphlet Formation (Figure 7.1). The Smackover Formation is overlain by the Buckner Anhydrite Formation, which in Texas is dominated by red shale in the upper part and anhydrite in the lower part above the Smackover carbonates, and, because of its low permeability, acts as a geologic seal which traps oil and gas, and inhibits vertical brine movement. The Smackover Formation is underlain by the clastic section of the Norphlet Formation. The Norphlet Formation is comprised of red and grey clays with varying amounts of intercalated sands and occasional gravels.

Figure 7.2: Structural Framework, Northern Gulf Coast



Source: after Troell and Robinson, 1987

Figure 7.3: Facies Map of the Smackover Formation, Northern Gulf Coast Basin



Source: modified after Budd and Loucks, 1981

The Smackover Formation in eastern Texas has been subdivided into three intervals, the Upper Smackover, the Middle Smackover, and the Lower Smackover. The Upper Smackover is heterogeneous in both magnitude and type of porosity development. Dolomite is the main rock type. There are three distinctive rock types in the Upper Smackover with variations of each:

- ***Oomoldic dolomite:*** These dolomites are the result of complete dolomitization and leaching of oolite lime grainstones originally deposited in a high energy bar carbonate environment. This rock type generally constitutes the best quality reservoir rock in the East Texas Smackover trend.
- ***Sucrosic dolomite:*** This rock type is the result of what was probably deposited as a lime mudstone.
- ***Oolitic limestone:*** This type of limestone is the result of partial leaching of oolitic grainstones followed by the substantial calcite cementation which filled most of the intergranular pore space.

The Middle Smackover is a burrowed pellet packstone. Dolomitization is prevalent except in low permeability micritic intervals where limestone is preserved. The Lower Smackover (which does not contribute to the mineral resource estimates in this Report but could be a future target for exploration) is largely composed of dark, dense limestone with argillaceous bands (Imlay, 1940). The Lower Smackover has been found to contain porous and permeable intervals. The entire Smackover Formation has been dolomitized to varying degrees.

7.3 Property Geology

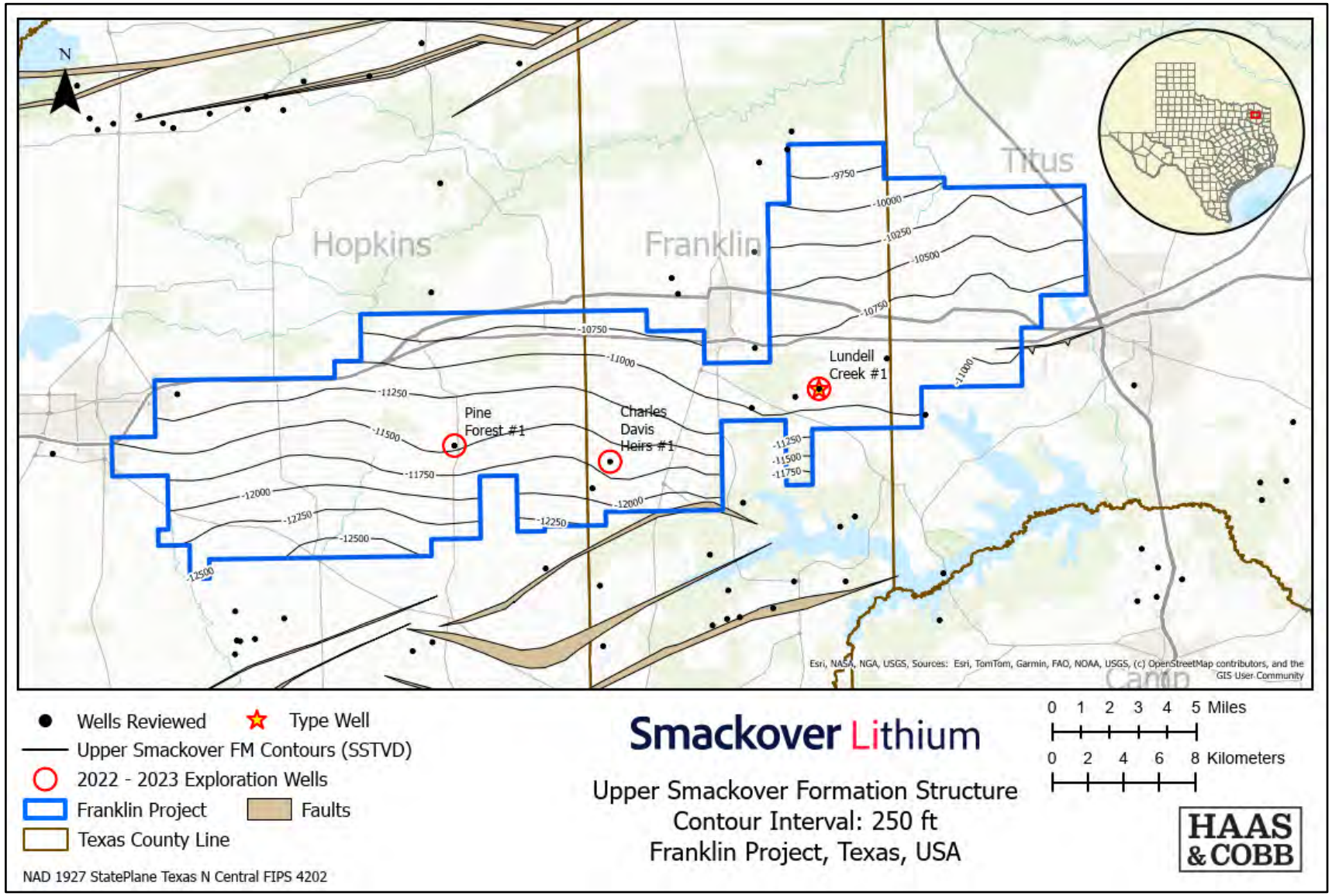
7.3.1 Mineralization

The focus of this Report is the Upper and Middle Smackover Formation underlying the Franklin Project area where the Smackover brine reservoir is continuous across and beyond the Franklin Project area. The top of the Smackover in the Franklin Project area generally dips from north to south (Figure 7.4) and varies in depth from approximately 2,970 m subsea to approximately 3,810 m subsea. There is a major east-west fault system north of the Franklin Project (the Talco Fault as shown in Figure 7.2) and four more northeast-southwest faults along the southern edge of the Franklin Project (see Figure 7.4).

Based on geologic characteristics and lateral correlations, the Upper and Middle Smackover intervals were divided into five zones and three zones, respectively (designated L0 through L7, see Section 14). These subdivisions, along with the continuity of the Upper and Middle Smackover Formations are shown in Figure 7.5, a 21.3 km cross-section through the Standard Lithium exploration wells.

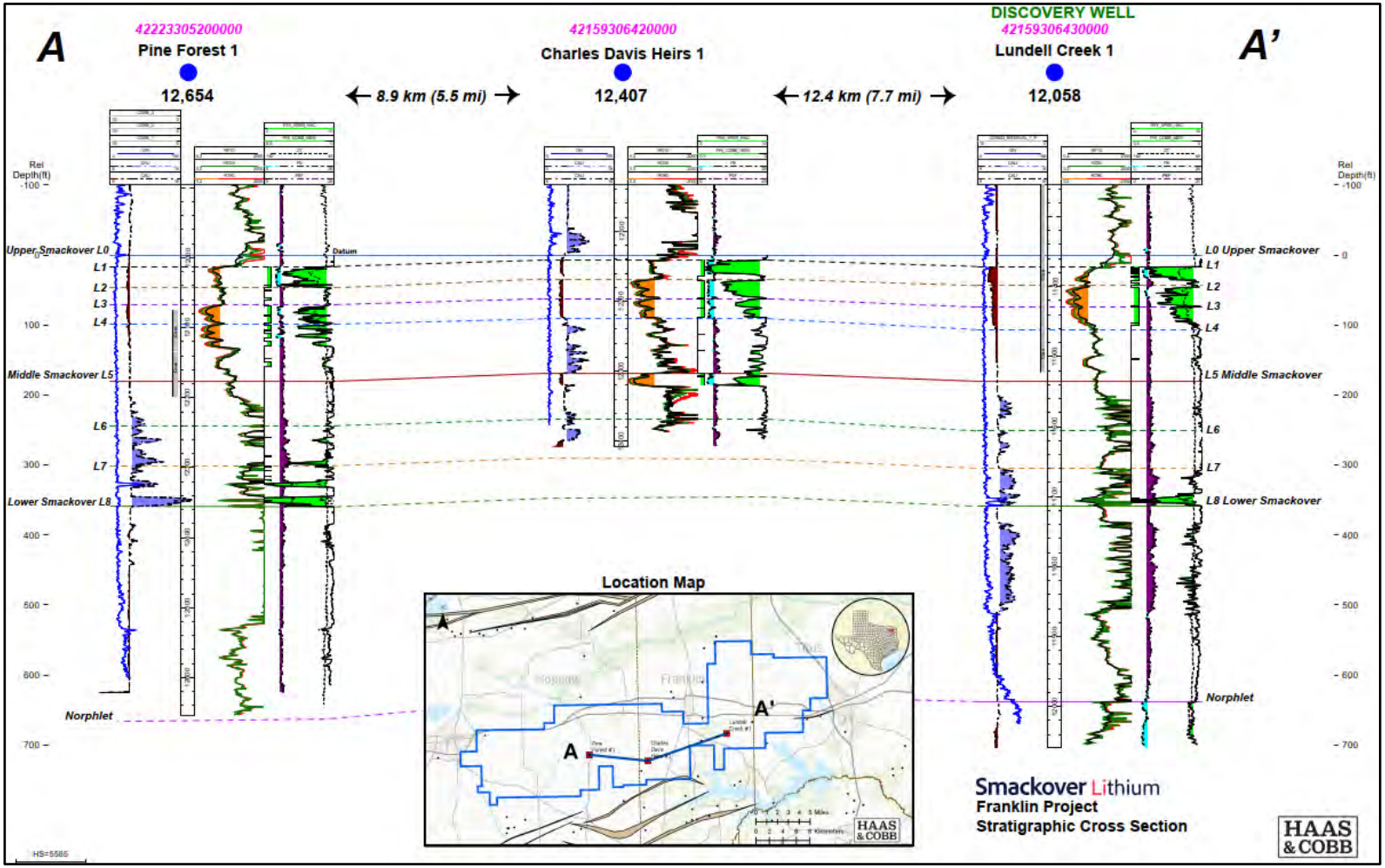
To quantify the amount of porous and permeable Smackover Formation present within the Franklin Project area, the available core data and log data were evaluated to determine the reservoir's structure, porosity, gross layer thickness, net pay thickness (that portion of the gross layer thickness expected to be productive because it exceeded a 6.0% minimum porosity value) and net pay thickness to gross layer thickness ratio (equal to the fraction of the layer at a given location that was estimated to be productive) for each layer at each well location. Some wells did not penetrate all layers; therefore, only layers that were intersected and supported by data were included in the mapping at those locations.

Figure 7.4: Upper Smackover Formation Structure Map



Source: Haas & Cobb, 2026

Figure 7.5: Exploration Program Wells Cross Section



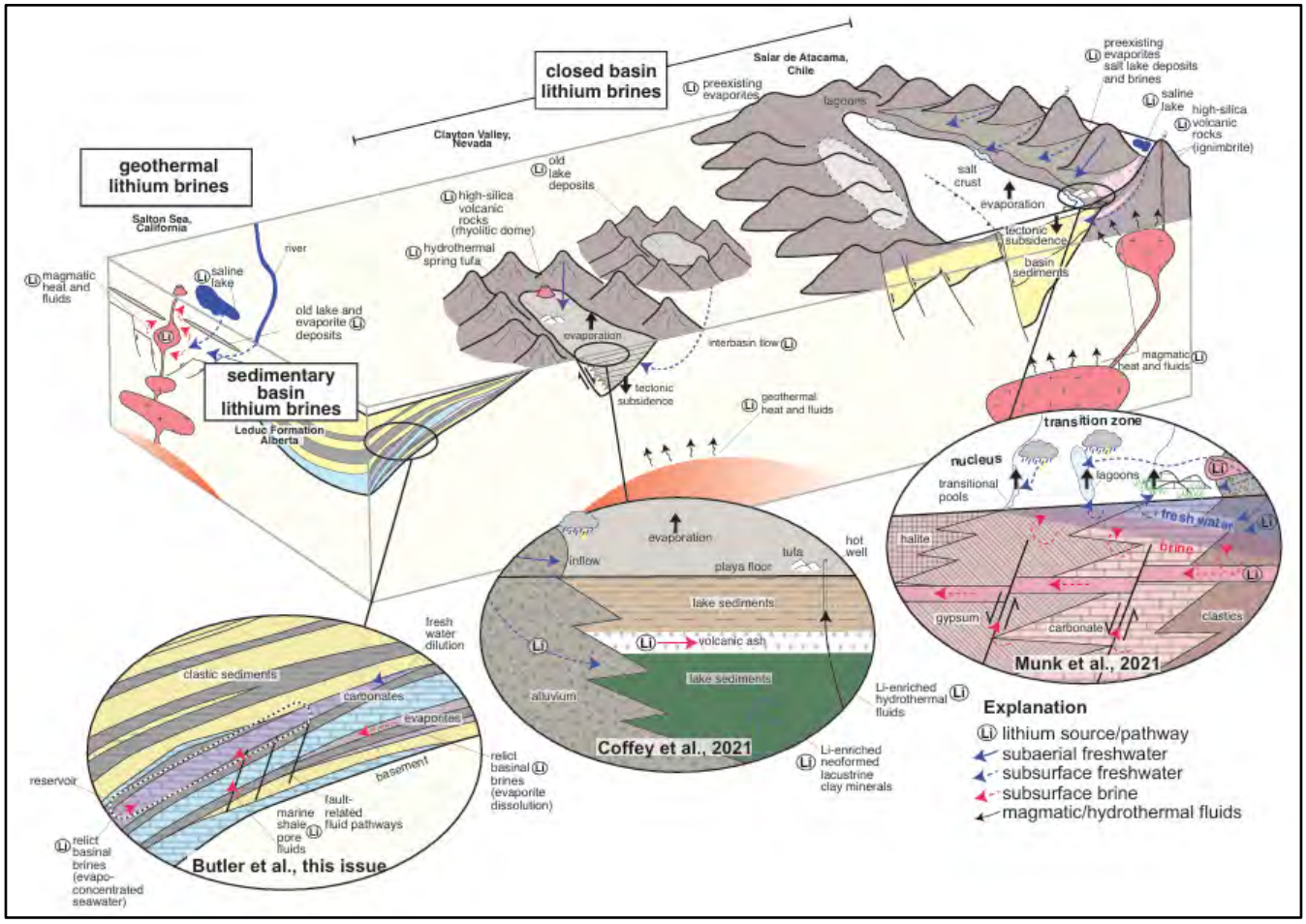
Note: Grey bar indicates the cored interval. Shaded orange is where the log resistivity RO90, is less than 6.0 ohm-metres. Shaded green is where log porosity PHI_COBB_NEW, is greater than 6.0%.

Source: Haas & Cobb, 2026

8. Deposit Types

Lithium is extracted today from either mineral deposits (often from pegmatite deposits containing the lithium-rich mineral spodumene or sediment hosted deposits) or mineral brine deposits, while bromide is usually extracted from brine, and potassium from either brine or evaporite deposits. Mineral brine deposits can either be unconfined in salars, where chemical constituents have been concentrated by the surface evaporation of water (found in arid regions of countries such as Bolivia, Chile, Argentina, and China), or confined in underground brine-bearing formations in a sedimentary basin (Figure 8.1). The Franklin Project deposit is a confined brine aquifer deposit in the form of lithium-potassium-bromide bearing brine contained within the porosity of the Smackover Formation within the Project area boundaries. The Smackover Formation in East Texas has proven to be a source of oil and gas, with lithium, potassium, and bromide now attractive development targets. Smackover Formation brine production for the purpose of bromide recovery is extensive in Arkansas' Union and Columbia counties to the east of the Franklin Project (Section 6).

Figure 8.1: Lithium Brine Deposit Types



Source: Munk et al, 2025

9. Exploration

9.1 Subsurface Data Review

From late 2022 to mid 2023, Standard Lithium conducted a review of subsurface information as supplied by third-party well and two-dimensional (2D) seismic data suppliers, analyzed porosity and permeability data from available cores, and conducted a three-well exploration program. Three wells (Charles Davis Heirs #1, Lundell Creek #1, and Pine Forest #1) were drilled, completed, and provided core, well log, and brine data. From late 2025 through mid 2026, Standard Lithium returned to these three wells to obtain additional brine data from the Upper Smackover Formation and to conduct pressure transient tests. These programs are discussed in the sections that follow.

9.2 Stratigraphic Surface Interpretation and Definition of the Smackover Formation

9.2.1 Well Data

Subsurface well log information for existing wells was obtained from TGS and IHS. These two companies allow users to access raster and digital well logs gathered by various well logging companies for oil and gas operators in the area, using industry-standard logging tools and procedures. These data, combined with the well log and core data obtained from Standard Lithium's exploration program, were used to define the Upper Smackover Formation type section. The 2022/2023 core data was analyzed for correlation to the well log data, and for indication of reservoir quality.

9.2.2 Seismic Surveys

In addition to the information from the well logs and cores, 400 km of 2D seismic data (collected by various seismic data survey companies for use in oil and gas exploration over the past several decades) was interpreted by Hill Geophysical Consulting to aid in constructing the top of the Upper Smackover Formation structure map. This seismic data included 19 different seismic lines distributed across the Project area, with on-strike and on-dip orientations. Industry-standard methods for interpreting the data included loading well locations, raster logs, and digital logs into a Petra® workstation and picking the key geologic formation tops. Seismic reflectors, where they existed, were interpreted for the top of the Smackover Formation. The time-depth relationship was established from the 2D seismic data using the Kingdom™ software program's depth conversion. A review of the time-depth conversion showed no issues, and the resulting structure maps were consistent with all well data.

The combined analysis of the well data and seismic surveys was used to formulate the stratigraphic surfaces of the Upper Smackover (Figure 7.5) and Middle Smackover Formations for the geologic model.

9.3 Brine Sampling Program

In 2023, Standard Lithium gathered a total of 14 brine samples in the Franklin Project area from the three exploration program wells. Additional brine samples were collected by QP Brush and QP Williams at the Charles Davis Heirs #1 well in February 2023 as confirmation samples and submitted independently to the primary laboratory. All brine samples were analyzed by WETLAB.

In 2025 and 2026 additional Upper Smackover samples were gathered from the three exploration wells, 18 by Standard Lithium and three by QP Williams from the Pine Forest #1 well during large-scale production tests. The concentration results from the 2025/2026 sampling supersede the 2023 sampling results for the Upper Smackover Formation, as the substantially larger volume of produced brine yielded more representative samples, and WETLAB applied an improved calibration technique for analysis (Section 11). The 2023 samples continue to be used for the Middle Smackover Formation because no additional samples were gathered during the 2025/2026 sampling program.

The samples were collected in accordance with the procedures outlined in Section 11, and the results were confirmed through analysis of duplicate and triplicate samples gathered by Standard Lithium (Section 11.3) along with an analysis of the independent samples gathered by QP Williams and by an additional laboratory (Section 12.1). The resulting lithium, bromide, and potassium concentration values provide a reasonable and consistent description of the concentration of these constituents within the Smackover Formation within the Franklin Project area.

Table 9.1 summarizes the lithium, bromide, and potassium concentration data used in this Report. Concentration values from individual Upper Smackover tests were averaged for each well, and the resulting values were subsequently averaged across the three wells to determine the Franklin Project average concentrations for the Upper Smackover Formation. The calculated average concentrations are 4,483 mg/L bromide, 562 mg/L lithium and 11,096 mg/L potassium. These average values were used in the mineral resource assessment, and in the simulation model that provided rate estimates for the economic evaluation. The average of the Middle Smackover concentration values from the Charles Davis Heirs #1 well collected in 2023 was used in the Middle Smackover mineral resource assessment. Figure 9.1 is a map showing the well locations and their concentration values.

No brine constituent historical data were available on the Franklin Project area.

9.4 Exploration Results and Interpretation

9.4.1 Subsurface Data Review and Stratigraphic Interpretation

The seismic, well log and core data were of sufficient quantity and quality to permit the reasonable interpretation of the configuration and volume of the Upper Smackover and Middle Smackover Formation represented in the Upper Smackover structure map (Figure 7.4) and the other components of the geologic model as described in more detail in Section 14.

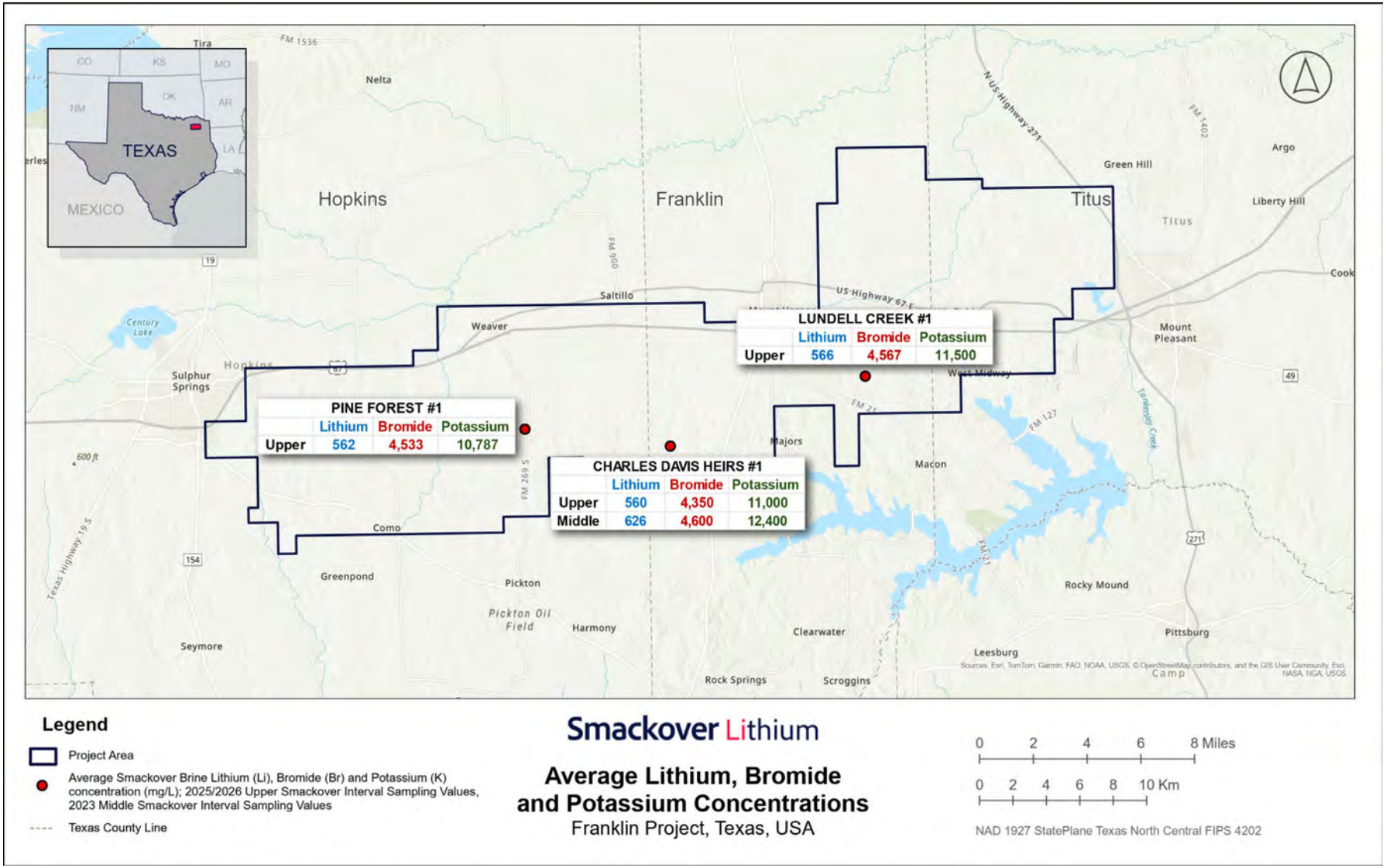
9.4.2 Brine Sampling

The brine sampling methods and quality control procedures implemented by Standard Lithium, and the data verification conducted by QPs Brush and Williams resulted in representative samples used to determine concentration data and to interpret the geologic model suitable for mineral resource estimation.

Table 9.1: Franklin Project Lithium, Bromide, and Potassium Concentration Data

Well Name	Perforation Depth (m)	Sample Number	Date	Bromide (mg/L)	Lithium (mg/L)	Potassium (mg/L)
Upper Smackover						
Pine Forest #1	3,679-3,696	25120928-001	12/30/2025	4,900	541	9,980
Pine Forest #1	3,679-3,696	25120928-003	12/30/2025	5,100	546	10,200
Pine Forest #1	3,679-3,696	25120928-005	12/30/2025	4,800	552	10,400
Pine Forest #1	3,679-3,696	26010538-001	1/16/2026	4,400	584	10,700
Pine Forest #1	3,679-3,696	26010538-002	1/16/2026	4,600	564	10,600
Pine Forest #1	3,679-3,696	26010538-003	1/16/2026	4,400	578	10,800
Pine Forest #1	3,661-3,671	26020668-001	2/19/2026	4,200	564	11,700
Pine Forest #1	3,661-3,671	26020668-003	2/19/2026	4,300	572	11,400
Pine Forest #1	3,661-3,671	26020668-005	2/19/2026	4,100	555	11,300
Total / Average	**3,661-3,696**			**4,533**	**562**	**10,787**
Charles Davis Heirs #1	3,710-3,725	26060108-001	6/1/2026	4,200	554	11,300
Charles Davis Heirs #1	3,710-3,725	26060108-003	6/1/2026	4,500	549	11,300
Charles Davis Heirs #1	3,710-3,725	26060108-005	6/1/2026	4,400	569	11,000
Charles Davis Heirs #1	3,710-3,725	26060109-001	6/1/2026	4,300	575	11,000
Charles Davis Heirs #1	3,710-3,725	26060109-003	6/1/2026	4,300	547	10,600
Charles Davis Heirs #1	3,710-3,725	26060109-005	6/1/2026	4,400	564	10,800
Total / Average	**3,710-3,725**			**4,350**	**560**	**11,000**
Lundell Creek #1	3,475-3,490	26030061-001	3/2/2026	4,600	586	11,600
Lundell Creek #1	3,475-3,490	26030061-002	3/2/2026	4,400	558	11,500
Lundell Creek #1	3,475-3,490	26030061-003	3/2/2026	4,700	554	11,400
Total / Average	**3,475-3,490**			**4,567**	**566**	**11,500**
Overall Average				**4,483**	**562**	**11,096**
Middle Smackover						
Charles Davis Heirs #1	3,750-3,755	23020600-001	2/16/2023	4,400	621	12,100
Charles Davis Heirs #1	3,750-3,755	23020600-002	2/16/2023	4,600	612	11,900
Charles Davis Heirs #1	3,750-3,755	23030200-6	2/16/2023	4,800	644	13,200
Total / Average	**3,750-3,755**			**4,600**	**626**	**12,400**

Figure 9.1: Franklin Project Lithium, Bromide and Potassium Concentration Data



Source: Standard Lithium, 2026

10. Drilling

10.1 Available Drill Data and Procedures

The layered geologic model described in Section 14 is based on well logs and core data obtained from 103 wells drilled within the Franklin Project area and the surrounding area that penetrated the top of the Smackover geologic marker. The 95 wells located outside the Franklin Project area and five of the eight wells drilled on the Franklin Project area were drilled by various operators exploring the area for hydrocarbons between 1944 and 2015. The remaining three wells were drilled as part of the Standard Lithium exploration program.

All wells were drilled using rotary drilling rigs with varying hole diameters through the Smackover Formation. The quality of the historical well log data is not affected by hole diameter. No samples were collected from the historical wells. The wells were drilled as vertical or nearly vertical holes, consistent with standard drilling practices in the area.

The three exploration wells drilled by Standard Lithium were completed as vertical wells using 22.22 cm (8.75 inch) drill bits through the Smackover Formation. Deviation surveys confirmed inclination angles of 0.8 to 3.8 degrees within the Smackover Formation. Whole core samples collected from two wells were 11.43 cm (4.5 inches) in diameter. In addition, several sidewall core samples measuring 2.54 cm (1.0 inches) in diameter were collected.

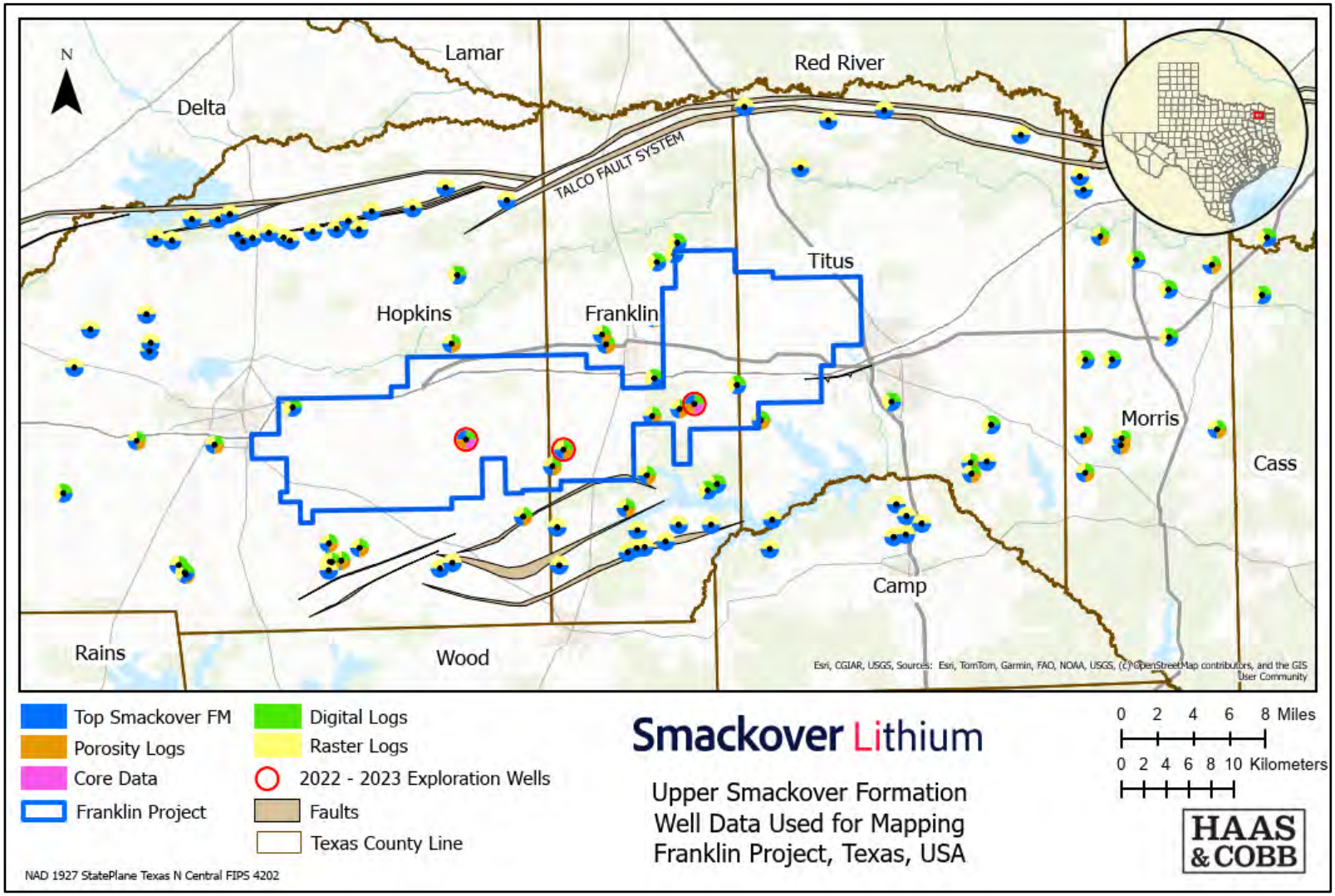
Table 10.1 provides a summary of the types of data collected from all wells informing the geologic model. Figure 10.1 depicts the Project area and locations of 103 wells from which these data were collected in the Upper Smackover and Figure 10.2 provides the same information for the data collected from 44 wells drilled in the Middle Smackover.

Table 10.1: Types of Well Data

Well Data	Wells Inside the Project Area	Wells Outside the Project Area	Total No. of Wells
Wells reviewed	8	95	103
Wells that penetrated top of Smackover marker	8	95	103
Wells that penetrated Middle Smackover marker	8	36	44
Wells that penetrated Lower Smackover marker	4	18	22
Digital Logs	8	44	52
Raster Logs	6	93	99
Porosity Logs	6	25	31
Core Data	2	0	2

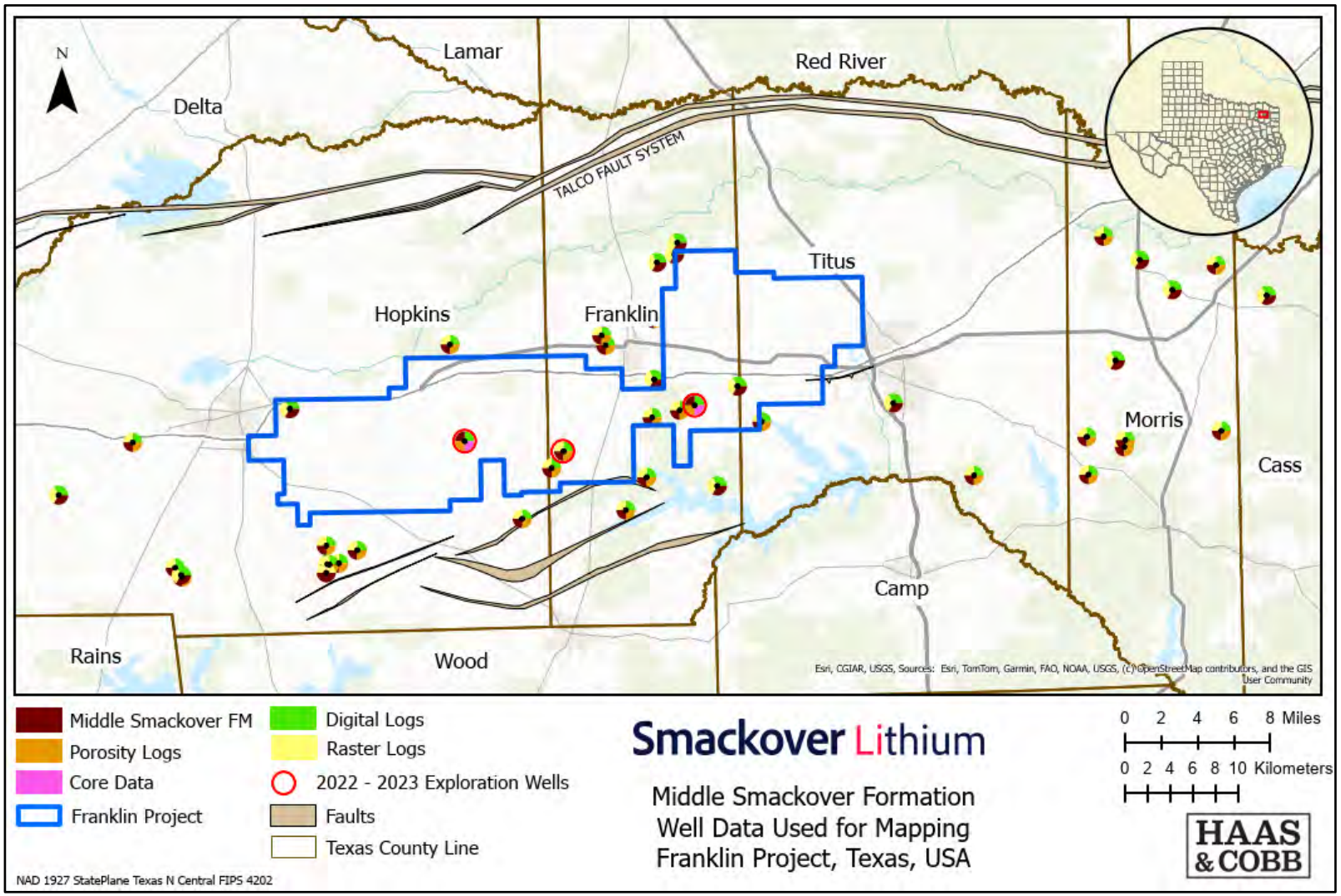
Geologic data obtained from the wells include raster or digital well logs and core data. The well logs provide a combination of structural data and porosity data while core data provide porosity and permeability data. The structural data were obtained from 103 wells with log data that included at least the top of the Smackover Formation. The log porosity data (density porosity, sonic porosity, and neutron porosity logs) were obtained from 31 wells, and the core porosity and permeability data were obtained from two wells drilled by Standard Lithium. Historical logs were collected by various operators using contractors and industry-standard procedures. The data were acquired using methods and equipment commonly employed in the oil and gas industry.

Figure 10.1: Upper Smackover Interval Well Data Source



Source: Haas & Cobb, 2026

Figure 10.2: Middle Smackover Interval Well Data Source



Source: Haas & Cobb, 2026

The well log data were used to establish correlations for structural control, to identify zone boundaries, to define gross interval thickness for each Smackover layer, to identify net pay intervals, and to estimate the porosity. The available well log data included varying combinations of the following logs: spontaneous potential (SP), gamma ray (GR), resistivity, MicroLog, and acoustic, neutron, and density porosity logs. Resistivity logs included conventional electric logs (EL), induction spherically focused logs (ISFL), and dual induction logs (DIL). The by-layer gross thickness values obtained from the logs were used to establish the overall geologic framework for the Upper and Middle Smackover and to constrain net pay thickness using a 6.0% porosity cutoff applied to the porosity logs. The primary source of log porosity data, the density porosity logs, were calibrated using the core porosity values, supplemented with the sonic porosity and neutron porosity logs, thereby reducing systematic error or bias in the resulting porosity value estimates.

10.2 Standard Lithium Exploration Well Program

From December 2022 to August 2023, Standard Lithium conducted a three-well exploration program at the Franklin Project. This program included drilling three vertical wells (Charles Davis Heirs #1, Pine Forest #1, and Lundell Creek #1). These three well locations were chosen to enhance the description of the geologic properties and provide lithium, bromide, potassium, and other constituent concentrations within the Project area. Figure 10.3 depicts the well locations.

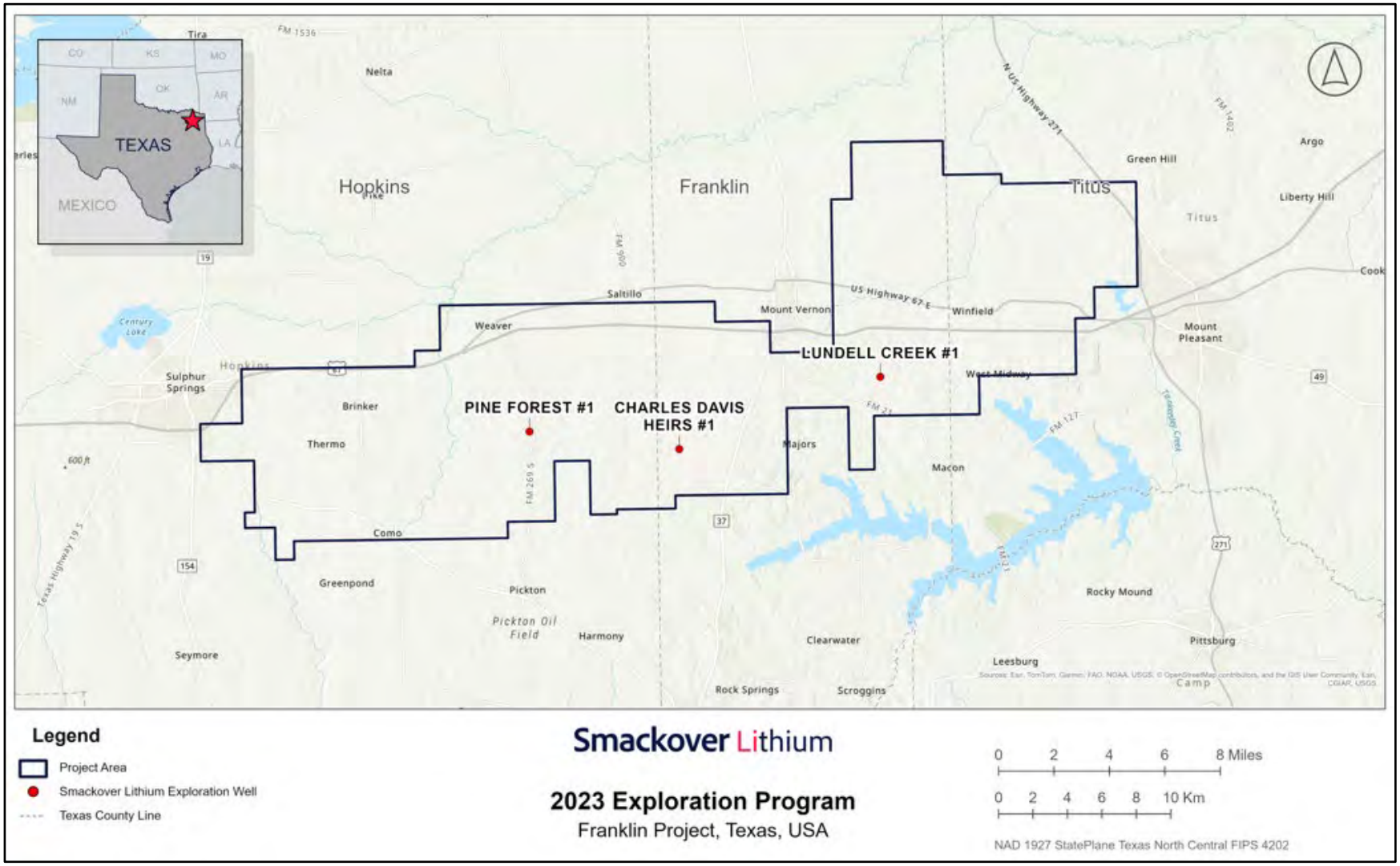
During the 2022/2023 and 2025/2026 exploration and sampling programs, well log data were used to identify the Smackover Formation intervals in each well. Whole core was obtained from the Pine Forest #1 and Lundell Creek #1 wells, and sidewall cores were obtained from the Pine Forest #1 well. Industry-standard porosity and permeability measurements were conducted on core plugs obtained on a foot-by-foot basis from the whole core samples. Table 10.2 summarizes the sample types collected during the sampling programs, including the brine volumes obtained from the Upper Smackover during the 2025/2026 program and from the Middle Smackover during the 2023 program. All wells successfully tested the high-porosity interval within the Upper Smackover, which is considered the Franklin Project's main pay zone. Additional net pay was encountered in the Middle Smackover interval in each well, and was successfully tested at various depths in the Charles Davis Heirs #1 well during the 2023 sampling program. During each production test, the physical and chemical characteristics of the brine were monitored and samples were collected for compositional analysis by WETLAB once these parameters were stabilized.

As part of the 2025/2026 sampling program pressure transient tests were conducted at all three wells. The resulting pressure data and test results (permeability thickness values) were matched with the reservoir simulation model, confirming that the Upper Smackover interval in this area has sufficient reservoir producibility to support development.

Table 10.2: Samples Collected During the Well Exploration Program

Well	Depth (m / ft)	Depth of Interval Cored (m / ft)	Total Interval Cored (m / ft)	Core Recovered (m / ft)	Num. of Rotary Sidewall Core Samples	Smackover Formation Intervals Sampled	Total Volume of Brine Produced (bbls)
Charles Davis Heirs #1	3,818 m 12,525 ft	--	--	--	--	Upper	3,849
						Middle	76
Pine Forest #1	3,856 m 12,650 ft	3,680-3,716 m 12,075-12,193 ft	36 m 118.2 ft	17 m 54.2 ft	14	Upper	1,770
Lundell Creek #1	3,673 m 12,052 ft	3,370-3,512 m 11,056-11,521 ft	142 m 464.9 ft	113 m 371.8 ft	--	Upper	706

Figure 10.3: Franklin Project Exploration Program



Source: Standard Lithium, 2026

Figure 10.4 presents a type well log for Lundell Creek #1 including the cored interval (grey bar), those intervals with conductive brines (shaded orange where the log resistivity “RO90” is less than 6.0 ohm-metres) and the intervals meeting the 6.0% porosity net pay cutoff (shaded green where log porosity, “PHI_COBB_NEW” is greater than 6.0%).

10.2.1 Charles Davis Heirs #1 Well

The Charles Davis Heirs #1 well was drilled in December 2022 and successfully cased and completed in the Upper and Middle Smackover intervals in March 2023. Test intervals were chosen based on the combination of porosity values exceeding 6.0% (indicative of net pay) or resistivity values less than 6.0 ohm-metres, indicating the presence of conductive brine. The same criteria were applied to the remaining two wells. Three intervals were sequentially perforated and tested using swabbing equipment, one in the Middle Smackover followed by two in the Upper Smackover. The well was sampled in June 2023. The Upper Smackover interval was successfully acidized and resampled.

In 2026 an electric submersible pump (ESP) was used to produce approximately 3,849 barrels of brine from the Upper Smackover interval which was sampled for analysis by WETLAB. Pressure transient testing was also conducted at the well which confirmed the reservoir quality (permeability) needed to inject and produce brine in a recovery project.

10.2.2 Pine Forest #1 Well

The Pine Forest #1 well was drilled in July 2023 into the Lower Smackover interval with whole core and rotary sidewall core recovered in portions of the Upper and Middle Smackover intervals. The well was cased, and the Upper Smackover was successfully perforated and brine samples collected using swabbing equipment.

In 2025 and 2026 an ESP was used to produce approximately 1,770 barrels of brine from the Upper Smackover interval which was sampled for analysis by WETLAB. Pressure transient testing was also conducted at the well which confirmed the reservoir quality (permeability) needed to inject and produce brine in a recovery project.

10.2.3 Lundell Creek #1 Well

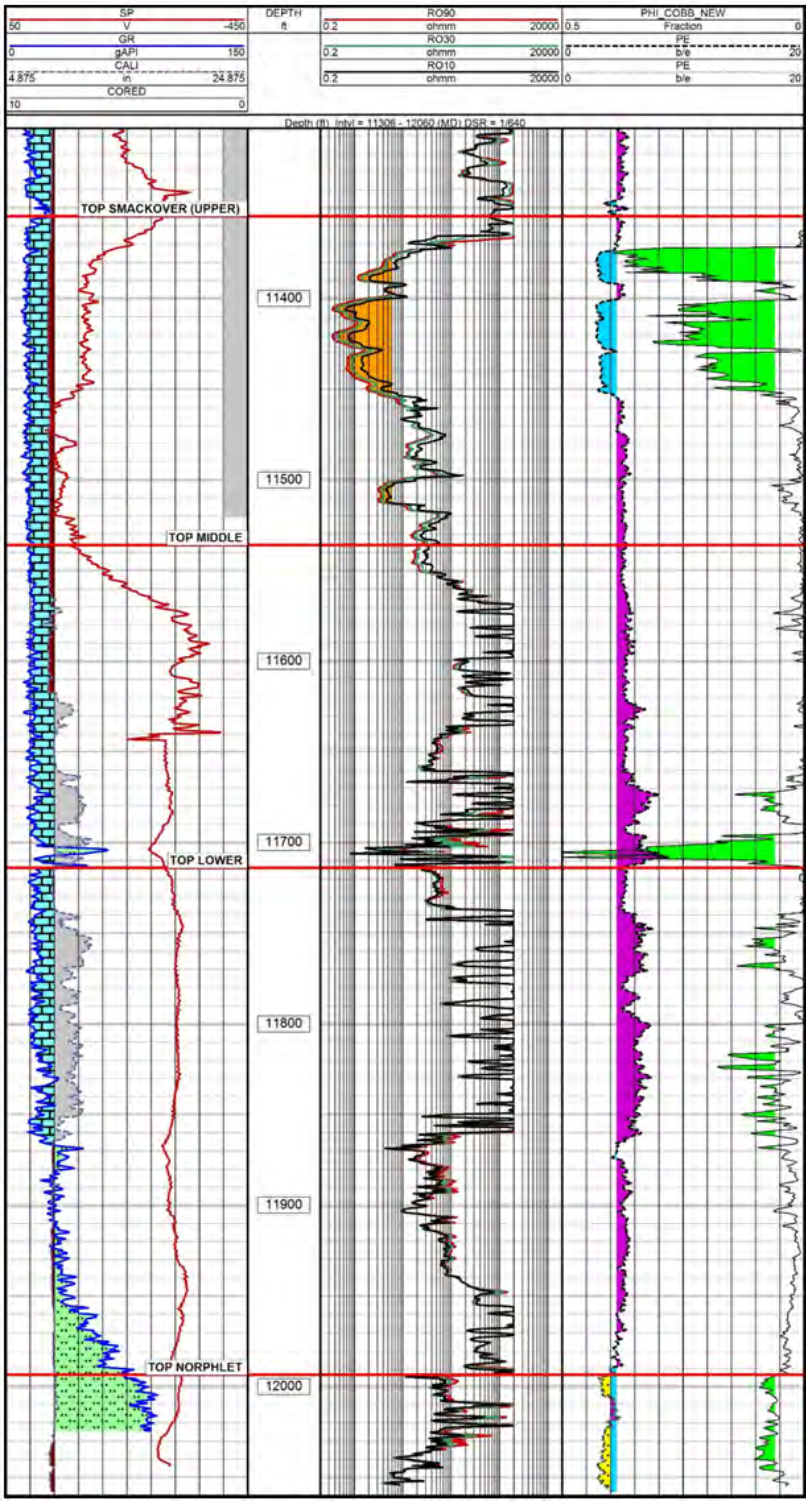
The Lundell Creek #1 well was drilled in August 2023 into the Norphlet Formation, with whole core recovered in the Upper Smackover interval. The high-porosity main pay target of the Upper Smackover interval was successfully sampled using swabbing equipment.

In 2025 an ESP was used to produce approximately 706 barrels of brine from the Upper Smackover interval which was sampled for analysis by WETLAB. Pressure transient testing was also conducted at the well which confirmed the reservoir quality (permeability) needed to inject and produce brine in a recovery project.

10.3 Interpretation of Drill Results

The core and log data obtained from the Standard Lithium exploration and sampling program, and from the prior wells drilled in the study area meet industry standards for accuracy and reliability. A geological interpretation of the drilling is illustrated in Figure 7.5, Figure 10.4 and Figure 14.2.

Figure 10.4: Lundell Creek #1 Type Well



Note: 1 ft = 0.3048 m. Grey bar indicates the cored interval. Shaded orange is where the log resistivity RO90, is less than 6.0 ohm-metres. Shaded green is where log porosity PHI_COBB_NEW, is greater than 6.0%.
Source: Haas & Cobb, 2026

11. Sample Preparation, Analyses, and Security

11.1 Sample Procedure and Implementation

The brine samples were collected in a consistent and secure manner, with a clear chain of custody from the sample collection point to the shipment to the laboratory.

11.2 Sample Preparation, Analyses, and Security

11.2.1 Brine Sample Collection

Brine samples were collected from the three Franklin Project exploration wells in 2023 and in 2025/2026. A critical step to sampling brine for geochemical analysis is to ensure that the brine collected is considered a “fresh” representative sample of the Upper or Middle Smackover interval.

During both sampling programs conducted by Standard Lithium and QPs Williams and Brush, sample collection was conducted using the following methodology (the sample splitting procedure is described in Section 11.4.1):

- Test intervals were identified from the well logs obtained once each well was drilled.
- For the 2023 sample collections, multiple intervals were sampled on each well. For each test interval, a cast iron bridge plug was set above the prior test interval (except for the first test), the test interval was perforated, a pressure gauge was set, and the swabbing assembly was run in the well, including a packer assembly immediately above the perforated zone to isolate the testing horizon. New production tubing was also installed in the well. All the work was completed by a workover rig.
- After the test interval was perforated, brine was removed from the well by swabbing the production tubing. Swabbing involves lowering swab cups on steel wireline inside the production tubing from above the perforations. Once the wireline and swab cups were lowered to the desired depth through a fluid column of approximately 300 m, they were raised, and the entire 300 m column of brine was brought to the wellhead, conveyed through a piping system to a three-stage fluid/gas separator, and then to a tank for storage. The volume of fluid removed from the well was measured with flow meters and calculated based upon the volume measured at regular intervals in the onsite storage tank.
- For the 2025/2026 sample collections, the Upper Smackover interval was sampled in each well. A cast iron bridge plug was set at the base of the Upper Smackover interval, perforations were added where necessary, a pressure gauge was set, and the ESP was run on tubing in the well. Brine was removed from the well by running the ESP, conveyed through a piping system to a three-stage fluid/gas separator, and then to fracture fluid storage tanks. The volume of fluid removed from the well was measured with flow meters. Brine samples were collected every hour and sent every eight hours to the Standard Lithium laboratory for field-measured parameters.
- Field-measured parameters were collected and analyzed onsite by a Standard Lithium representative to assess brine density, electrical conductivity, pH, and temperature from brine on every swab run. Field-measured parameters were compared to known values of the Smackover Formation. For example, the formation has a brine density of about 1.23 g/cm^3. Swabbing of the well continued until field-measured parameters and Standard Lithium El Dorado Laboratory results indicated constituent concentrations had stabilized.

- Brine established to be from the Smackover Formation (based on density, electrical conductivity, and pH) was collected by filling two (2023 sampling) or three (2025/2026 sampling) 1,000 L Intermediate Bulk Containers (IBCs) from a valve installed at the three-stage separator. Safety protocols were exercised on site due to the possibility of hydrogen sulphide (H_2S) gas content associated with the produced Smackover Formation fluids. A new 4-L carboy container was filled from the IBC to allow oil and brine to separate if oil was present. In every instance, the absence of oil in the carboys confirmed the high brine-to-oil ratio.
- The physical attributes of the brine sample were recorded (e.g., colour, smell, contaminants, etc.). The sampling process was completed by recording any comments that might be significant to the sampling site, the sample collection, or the sample itself.
- New laboratory-supplied sample containers with screw-on caps were labelled using Standard Lithium's label procedure that includes recording the sample identification, date and time of sample collection, and sampler's initials.
- Three sample containers were collected from the 4-L carboy container by Standard Lithium: 1-L plastic, 500 ml plastic preserved with nitric acid (HNO_3) and 250 ml glass preserved with phosphoric acid (H_3PO_4) for geochemical analysis at WETLAB, an independent laboratory.
- The sample containers were checked to verify that all sample label information was correct, and the sample container was properly closed. All sample containers were then stored in coolers for shipping to the independent laboratory.

11.2.2 Security

Coolers holding the sample containers were taken from the field to a secure location to double check the sample identification and make sure all containers were in good condition prior to shipping to the laboratory. Chain of Custody forms for the laboratory were filled out and included with the sample cooler. The cooler was taped closed and hand-delivered to the courier company (Fed-Ex) for delivery to WETLAB in Sparks, Nevada. The laboratory was instructed to confirm receipt of the samples and provide a statement pertaining to the condition of the samples upon receipt. The samples were then coded into the respective laboratory's sample stream for analysis.

11.2.3 Analytical Methodology

Standard Lithium has prepared its own internal analytical protocols for WETLAB to follow. These include the following analytical work (with the associated American Society for Testing and Materials (ASTM), Standard Methods (SM) and Environmental Protection Agency (EPA) international and national method code) "Expanded Lithium Brine Analytical Suite":

- General chemistry: density, pH, temperature, carbonate, bicarbonate, total dissolved solids, total organic carbon (ASTM 1963, SM 4500-H+B, SM 2550B, SM 2320B, SM 2540C and SM 5310B).
- Anions by Ion Chromatography: chloride, sulphate, bromide, fluoride (EPA 300.0).
- Sample preparation: trace metal digestion (EPA 200.2).
- Trace metals by Inductively Coupled Plasma Optical Emission Spectroscopy (ICP- OES): Li, Al, Sb, As, Ba, Be, B, Cd, Ca, Cr, Co, Cu, Ga, Fe, Pb, Mg, Mn, Mo, Ni, P, K, Sc, Se, Si, SiO_2, Ag, Na, Sr, Sn, Ti, V, and Zn (EPA 200.7).

WETLAB completed these analyses using the following methods:

- sample preparation by EPA 200.2;
- density by gravimetric;
- pH by SM 4500-H+B;
- temperature at pH by SM 2550B, carbonate and bicarbonate by SM 2320B;
- chloride and sulphate by EPA 300.0;
- total dissolved solids by SM 2540C;
- anions by ion chromatography by EPA 300.0;
- trace metal digestion by EPA 200.2; and
- trace metals by ICP-OES by EPA 200.7.

Only the 2025/2026 samples were used for the Upper Smackover interval as they were gathered from the brine produced using ESPs, with much larger (1.7 to 5.9 times) volumes gathered, compared to 2023 sampling. Additionally, the concentration values were determined using an improved calibration technique. This change in calibration technique resulted from an investigation into analytical discrepancies identified between the samples collected from the Pine Forest #1 well on December 30, 2025, by QP Williams and Standard Lithium. Following extensive reviews of analytical data, additional testing, and confirmation by an additional independent analytical laboratory, it was determined that the elevated sodium chloride concentration of the brine required a three-point calibration technique, consistent with that applied to the Standard Lithium samples, rather than the two-point calibration technique used on the QP Williams samples. Therefore, all Upper Smackover samples collected by Standard Lithium during the 2025/2026 program were evaluated using the three-point calibration technique.

No additional samples were taken from the Middle Smackover interval during the 2025/2026 sampling program. The Middle Smackover is not a development target at this time and was not included in the economic evaluation presented in this PEA. The 2023 Middle Smackover sample results were used for preparing Middle Smackover mineral resource estimates.

11.3 Analytical Laboratories

WETLAB in Sparks, Nevada has been the primary laboratory for all samples collected in 2023 and 2025/2026 from the three exploration wells. WETLAB is an independent laboratory certified by both Florida and Nevada for the analysis of lithium and potassium concentrations in brine using the EPA 200.7 analytical methodology and bromide using the EPA 300.0 analytical methodology. The Standard Lithium laboratory, located at the Standard Lithium Demonstration Plant near El Dorado, Arkansas, was used to monitor sample characteristics to determine proper sampling time. Its analyses conform to the ASTM 1963, SM 4500-H+B, SM 2550B, SM 2320B, SM 2540C, SM 5310B, EPA 300.0, EPA 200.2, and EPA 200.7 procedures, as appropriate. The SGS Canada Lakefield Laboratory in Lakefield, Ontario, Canada (SGS) was used to provide additional sample analyses for the 2025/2026 samples to confirm the values obtained from the WETLAB analyses of the Standard Lithium samples (see Section 12). SGS is independent of Standard Lithium and holds a certificate of accreditation from the Standards Council of Canada (SCC) for conforming to the standards of the SCC and to ISO/IEC 17205.2017.

11.4 Quality Control / Quality Assurance

11.4.1 Field Duplicate Samples

For the 2025/2026 Upper Smackover sampling program, primary, duplicate and triplicate samples were collected for every sampling event. The duplicate and triplicate samples were taken at the same time as the primary sample (i.e., back-to-back-to-back samples from the brine sample spigot). The samples were randomly presented to the laboratory.

A total of six primary, six duplicate and six triplicate brine samples were collected from the three exploration wells. The lithium, bromide, and potassium results comparison for the sample analyses is presented in Table 11.1. A T-Test statistical evaluation was conducted between the primary and duplicate samples, and between the primary and triplicate samples. The resulting *p* values, 0.21 to 0.86, indicate that all samples are from the same population of test results, supporting the reliability of the sampling procedure. QP Williams considers *p* values greater than 0.1 to be acceptable.

Table 11.1: Comparison of Field Primary, Duplicate and Triplicate Samples from the 2025/2026 Sampling Program

Sample Type	Statistical Measure	Bromide	Lithium	Potassium
Primary	Average, mg/L	4,433	567	11,047
	Standard Deviation, mg/L	273	18	641
	Sample Variance	74,667	313	411,467
Duplicate	Average, mg/L	4,533	556	10,933
	Standard Deviation, mg/L	301	11	535
	Sample Variance	90,667	111	286,667
Duplicate to Primary	T-Test *p* value	0.56	0.21	0.75
Triplicate	Average, mg/L	4,467	562	10,950
	Standard Deviation, mg/L	250	10	367
	Sample Variance	62,667	104	135,000
Triplicate to Primary	T-Test *p* value	0.83	0.54	0.76

Note: The T-Test *p* value is a measure of the likelihood that samples belong to the same population.

11.5 Core Reports and Well Log Data

Core reports include core measurements of the Upper and Middle Smackover intervals conducted by independent engineering consultant Intertek Westport Technology Center in Houston, Texas. Core measurements included porosity (%) and permeability (mD), obtained using industry-standard techniques.

Porosity and permeability of the core samples were typically obtained using the basic core analysis procedures specified in API RP40 method, “Recommended Practices for Core Analysis” (1998). Direct grain volume measurements were made using a small volume helium porosimeter, utilizing Boyles' Law principle of gas expansion. Pore volume and permeability measurements were made with the samples mounted in a rubber-sleeved, hydrostatically loaded overburden cell. Boyles' Law principle, using helium as the gas medium, was employed to determine pore volume. Unsteady-state Klinkenberg corrected permeability was measured after each pore volume

measurement. Permeability to air was calculated for each sample. Porosity values were calculated using the measured grain volume and pore volume data. Permeability was calculated using unsteady-state flow equations.

Well log data used in this Report were obtained from logs gathered by industry-recognized service providers using industry-accepted procedures. The 100 historical wells' logs were acquired onsite by industry-accepted service companies and obtained for this study from two data warehouse firms, TGS and IHS. Logs of the three exploration wells were obtained from Standard Lithium's logging contractor, Halliburton.

11.6 Qualified Person's Opinion on Data Adequacy

The analytical brine and core report data were prepared by independent and accredited third-party companies. The resulting quantitative data are used to make inferences on the brine analytical values and hydrogeological characteristics of the Upper and Middle Smackover intervals. The analytical methods carried out by the laboratories are standard and routine in the field of lithium, bromide, and potassium brine geochemical analytical and petrophysical core characterization test work. The well log data used to derive the porosity and net pay values were gathered by industry-recognized service companies using industry-accepted procedures.

QP Williams has reviewed the sample preparation, security, and analytical procedures and found no significant issues or inconsistencies that would cause one to question the validity of the data. In the opinion of QP Williams, the sample preparation, security and analytical procedures are adequate for the purposes used in this Report. The quality assurance/quality control (QA/QC) protocol adopted by Standard Lithium helped QP Williams to evaluate and validate the laboratory data as discussed in Section 12.

12. Data Verification

12.1 Personal Inspection

12.1.1 QP Brush

As part of the data verification process, QP Brush went to site. His activities are described in Section 2.4.

12.1.2 QP Williams

As part of the data verification process, QP Williams went to site. His activities are described in Section 2.4.

12.1.3 QP Dworzanowski

As part of the data verification process, QP Dworzanowski went to the Standard Lithium DLE test facilities. His activities are described in Section 2.4.

12.2 Lithium, Bromide, and Potassium Concentration Data Verification

QP Williams verified the lithium, bromide, and potassium concentrations using four approaches:

- Reviewing the selection of the analytical laboratory;
- Assessing data repeatability through evaluation of primary, duplicate and triplicate sample lithium, bromide, and potassium concentration data from each well (Section 11.4);
- Comparing concentration results from samples independently taken by QP Williams and analyzed by WETLAB with those collected by Standard Lithium and analyzed by WETLAB; and
- Comparing Standard Lithium's WETLAB concentration results with those obtained from SGS.

These evaluations confirmed the selection of WETLAB as the primary analytical laboratory and demonstrated the overall consistency of the analytical data. They also identified a difference between samples independently collected by QP Williams and those collected by Standard Lithium and analyzed by WETLAB. Additional analyses completed by SGS confirmed the validity of the lithium concentrations reported by WETLAB for the Standard Lithium samples, while identifying minor differences in the bromide and potassium concentrations. These four evaluations are described in more detail below.

Laboratory Selection: In 2021, Standard Lithium conducted an extensive comparison test of four laboratories known for brine analysis. That study's results indicate that WETLAB is the appropriate choice for the range of lithium concentrations encountered in this Report. QP Williams has reviewed the supporting documentation of that study and agrees with its conclusions. As a result, the WETLAB-reported lithium, bromide, and potassium concentration data are used throughout this Report.

Results Repeatability: Section 11.4 describes QP Williams' analysis of sample repeatability, which confirmed that the duplicate and triplicate samples were consistent with the primary samples.

QP Sample Comparison: During the 2025/2026 brine sampling program, QP Williams collected an independent brine sample from the Pine Forest #1 well following the Project's sampling procedures. He also completed a sample log and observed the WETLAB sample process. Comparison of sample concentrations for Pine Forest #1 identified a statistically significant difference (P<0.1) between the samples collected by QP Williams and those collected by Standard Lithium (Table 12.1:). Subsequent investigation determined that a different laboratory procedure was followed for the QP Williams samples, with the Standard Lithium concentration values determined using an enhanced calibration method. Following a comprehensive review of the analytical data, additional testing, and confirmation by an independent analytical laboratory, it was concluded that the elevated sodium chloride concentration of the brine required a three-point calibration technique, consistent with that applied to the Standard Lithium samples, rather than the two-point calibration technique used for the QP Williams samples. Therefore, all Upper Smackover samples collected by Standard Lithium during the 2025/2026 program were evaluated using the three-point calibration technique.

WETLAB/SGS Comparison: As part of the investigation, Standard Lithium engaged SGS to independently evaluate samples from all three exploration wells. The results indicated that the WETLAB and SGS lithium concentration values were statistically consistent (P>0.1), and small but statistically significant differences were identified between the WETLAB and SGS bromide and potassium concentration values (P<0.1, Table 12.2). QP Williams recommends that a laboratory selection comparison test similar to that conducted for lithium be conducted for bromide and potassium if those differences are deemed significant to the Project evaluation.

Table 12.1: 2025/2026 Sample Comparison for Pine Forest #1

Samples	Statistical Measure	Bromide	Lithium	Potassium
Standard Lithium	Average, mg/L	4,533	562	10,787
	Standard Deviation, mg/L	339	15	577
	Sample Variance	115,000	212	332,600
QP Williams	Average, mg/L	4,767	717	14,267
	Standard Deviation, mg/L	58	40	808
	Sample Variance	3,333	1,597	653,333
Comparison	T-Test *p* value	0.08	0.02	0.01
	% Difference in Average	5.1%	27.6%	32.3%

Table 12.2: WETLAB to SGS Comparison for Upper Smackover Samples

Laboratory	Statistical Measure	Bromide	Lithium	Potassium
WETLAB	Average, mg/L	4,478	562	10,977
	Standard Deviation, mg/L	262	13	498
	Sample Variance	68,889	178	247,682
SGS	Average, mg/L	4,660	563	10,407
	Standard Deviation, mg/L	146	10	215
	Sample Variance	21,384	95	46,381
Comparison	T-Test *p* value	0.02	0.80	0.00
	% Difference in Average	4.1%	0.2%	-5.2%

Note: The T-Test *p* value is a measure of the likelihood that samples belong to the same population.

12.3 Seismic, Well Logs and Core Data Verification

Hill Geophysical Consulting interpreted the seismic data to support development of the Upper Smackover structural surface. QP Williams reviewed the seismic time to depth conversion and compared the resulting structure map with the available well control. Minor adjustments were made to the interpreted structural surface to improve its agreement with Upper Smackover Formation tops identified in the wells.

QP Williams reviewed the well log and core data used to create the geologic model. This data was collected by independent service providers using industry-standard procedures and is consistent with similar datasets reviewed by QP Williams on comparable projects. As the data was acquired independently of mineral resource estimation of lithium, bromide and potassium, QP Williams considers it to provide an objective basis for geological model development.

12.4 Metallurgy and Mineral Processing Data Verification

QP Dworzanowski verified the data associated with the DLE treatability study by confirming the following:

- ICP-OES was used as the analytical instrument which is the standard for the analysis of lithium brine samples;
- Recognized certified standards were used for verifying the laboratory's internal standards; and
- Sample dilutions for high and low brine TDS concentrations were acceptable.

QP Dworzanowski also verified that the data derived from the source data was the data that was used for information presented in Section 13.

12.5 Production Planning Data Verification

As part of the data verification process, QP Brush confirmed that data used to develop the wellfield development plan and production schedule used in Section 16 are consistent with the data in the geological, hydrogeological, reservoir properties, operational and economic source documents.

12.6 Project Infrastructure Data Verification

As part of the project infrastructure data verification process, QP Somanathan reviewed the source documents for internal consistency with the data used to prepare the information presented in Section 18.

12.7 Environmental Studies, Permitting and Social or Community Impact Data Verification

As part of the environmental, permitting and social data verification process, QP Huffsmith has reviewed the source documents used to prepare the information presented in Section 20.

12.8 Cost Estimation Data Verification

As part of the data verification process, QP Karajeh has reviewed the SWA DFS cost estimate and confirms it is consistent with the cost data used to prepare the cost estimation presented in Section 21.

12.9 Market Studies and Economic Analysis Data Verification

As part of the data verification process, QP Wendlandt has reviewed the documentation provided by Standard Lithium on marketing studies and taxation information and has confirmed all inputs to the financial model are internally consistent with the source documents used to prepare the financial model presented in Section 22.

12.10 Qualified Person's Opinion on Data Adequacy

12.10.1 Brine Concentration Data, Well Logs and Core Data

All data used for the purposes of this Report including wells both on the Project area and adjacent to it, have been reviewed by QP Williams and found to be suitable for this evaluation.

In the opinion of QP Williams, the lithium, bromide, and potassium concentrations, well log, core, and test data used in the preparation of this Report meet the highest standards for the evaluation of the brine deposit and are adequate for the purpose of this Report. Any limitations present in the data are the unavoidable limitations present in all field measurements. Standard Lithium and the petroleum companies who have collected the data have employed industry-standard efforts in gathering high-quality data on and around the Franklin Project. Standard Lithium's data sampling program has been thorough and directly results in a high-quality database suitable for the evaluation of lithium, bromide, and potassium resources.

12.10.2 Metallurgical and Mineral Processing

In the opinion of QP Dworzanowski, the analytical data are suitable and adequate for supporting the process design basis presented in this Report.

12.10.3 Production Planning

In the opinion of QP Brush, the data are adequate for supporting the development plan and production schedule presented in the Report.

12.10.4 Project Infrastructure

In the opinion of QP Somanathan, the data are adequate for supporting the infrastructure information presented in this Report.

12.10.5 Environmental Studies, Permitting and Social or Community Impact

In the opinion of QP Huffsmith, the data are adequate for supporting the environmental, permitting, social and closure information presented in this Report.

12.10.6 Cost Estimation

In opinion of QP Karajeh, the data are adequate for supporting the cost estimate presented in the Report.

12.10.7 Market Studies and Economic Analysis

In the opinion of QP Wendlandt, the data are adequate for supporting the economic analysis presented in the Report.

13. Mineral Processing and Metallurgical Testing

13.1 Introduction

In addition to the Franklin Project, Standard Lithium is developing multiple lithium brine projects in the US, in partnership with Equinor as Smackover Lithium. This includes the SWA Project which is also based on DLE from Smackover brine and is well advanced in terms of metallurgical testing. The Franklin Project is the first project in Texas and has completed a treatability study for lithium recovery with Franklin Project brine. No metallurgical testing has been conducted for potash or bromine recovery.

13.2 Standard Lithium Projects Brine Composition Comparison

Standard Lithium has operated a Demonstration Plant, exclusively processing Smackover brine for lithium extraction, since May 2020. This has provided a valuable source of knowledge regarding the behaviour of the brine, direct testing of various flowsheet elements, and providing a test bed for operator training. In addition, the Demonstration Plant has facilitated the ability to produce lithium chloride samples along with brine samples from various stages of the flowsheet to support bench scale metallurgical testing, mini-pilot plant testing and vendor testing in support of equipment design and process guarantees. The Demonstration Plant is located near El Dorado, Arkansas, about 273 km east of the Franklin Project and it is Standard Lithium's intent to continue to use the information obtained from the Demonstration Plant to aid in flowsheet development, optimize lithium extraction and lithium chloride purification, and develop operations capability.

In addition to the work at the Demonstration Plant, a separate DLE pilot test program was conducted for the SWA Project. A dedicated, temporary DLE pilot plant was constructed at the Mission Creek Resources Dorcheat gas plant in the fourth quarter (Q4) of 2024 adjacent to the SWA Project brine lease area. Brine from a brine lease well was extracted over several months in Q4 2024 and Q1 2025 and processed through the SWA Project pilot plant for three months to validate performance.

Table 13.1 presents a brine composition comparison between the Franklin Project, the SWA Project, and the Demonstration Plant.

The Franklin Project and SWA Project brines are similar in terms of their major elemental constituents. In the Franklin Project brine sodium and potassium are higher in concentration with magnesium and calcium being lower in concentration when compared to the SWA Project brine. Although the SWA Project brine is similar, it is not fully representative of the brine for the Franklin Project.

Table 13.1: Feed Brine Composition Comparison

Element	Franklin Project (mg/L)	SWA Project Pilot Plant (mg/L)	Demonstration Plant (mg/L)
Lithium	562	476	237
Sodium	80,300	79,200	61,136
Calcium	27,437	38,400	31,793
Magnesium	1,549	2,810	2,682
Potassium	11,096	7,670	2,385
Strontium	2,086	2,480	1,932
Boron	474	334	189
Silicon	15	8	10
Chlorides	209,130	189,000	175,000
Bromides	4,483	5,300	< 360

Notes:
1. Franklin Project composition is based on average sample data collected in the 2025/2026 re-entry program and tested by WETLAB.
2. SWA Project pilot plant composition is based on average sample data collected from a single well on the SWA Project area during October 2024 through January 2025. The results from the laboratory have been regularly validated by independent testing at WETLAB.
3. Demonstration Plant composition is based on average sample data collected from May 4 to June 30, 2023, to reflect the period when strontium (Sr) was regularly measured. The results from the on-site laboratory have been regularly validated by independent testing at WETLAB. Demonstration Plant feed brine samples were collected downstream of Lanxess' bromine extraction facility which is reflected in the low bromide concentration.

13.3 Treatability Study of Direct Lithium Extraction Lithium Recovery

Standard Lithium engaged a vendor to produce a treatability study of Franklin Project brine to provide a preliminary assessment of the brine compatibility with fixed bed adsorption DLE technology.

The main objective was to determine the compatibility of DLE in the recovery of lithium and the rejection of contaminants. In addition, preliminary brine filtration, lithium chloride purification, and lithium chloride concentration testing were conducted to troubleshoot any issues in preparation for future work.

The vendor laboratory received 1 m^3 of Franklin Project brine for the treatability study. Due to the limited volume of brine processed, the treatability study does not reflect the optimized operating performance for DLE but is able to demonstrate the compatibility of the technology with the brine.

13.3.1 Materials and Methods

The brine received was mixed for 24 hours, a small sample was analyzed, and the composition of the brine is detailed in Table 13.2.

Table 13.2: Brine Composition Received by DLE Vendor

Concentration (mg/L)							
Li	Na	K	Ca	Mg	Sr	B	Mn
556	80,734	10,303	31,063	1,974	2,547	506	141

There was no appreciable iron present in the feedstock, H_2S was below detection on the safety meter used when the tote was opened, and the feed pH was recorded at 6.1.

At the time of the testing, the representative brine composition for the Franklin Project area was based on the NI 43-101 maiden inferred resource estimate (Moharana et al, 2025). To match the representative brine composition with a lithium concentration of 668 mg/L, the tote was spiked with anhydrous LiCl reagent to produce a final lithium feed concentration of 647 mg/L. The final tote composition is noted in Table 13.3.

Table 13.3: Brine Composition after LiCl Addition

Concentration (mg/L)							
Li	Na	K	Ca	Mg	Sr	B	Mn
647	80,762	10,851	31,046	1,849	2,508	516	139

For solids filtration, a series of cartridge filters (5/1/0.45 µm) were used.

The DLE test work was conducted using a series of 25.4 mm diameter columns.

Softening was accomplished on a 25.4 mm diameter column with conventional strong acid cation (SAC) resin. The material was regenerated with NaCl solution produced from calcium-magnesium free (CMF) NaCl feedstock which was also free of anti-caking agents that may contaminate or influence the process results.

Seawater reverse osmosis (SWRO) membranes were used during part of the processing to dewater the softened eluate (lithium chloride product) from DLE.

Deionized water was used for elution.

All cationic elements were analyzed on site utilizing ICP-OES with yttrium internal standards.

Not every element present is reported. If the element in question is not in appreciable concentration to impact product purity, or if not an element of concern economically, or if the element in question is at or below the limit of detection for the method, then it is not reported.

13.3.2 Results and Discussion

The Franklin Project brine was filtered and processed through the DLE column in multiple trials. By the fifth trial, the DLE column was able to produce an eluate that retained 95% of the feed lithium while rejecting more than 99% of the sodium, potassium, calcium, magnesium and strontium, 93% of the manganese, and 80% of the boron (see Table 13.4).

Table 13.4: DLE Rejection and Retention

	Li	Na	K	Ca	Mg	Sr	B	Mn
Retention	95.0%							
Rejection		99.6%	99.6%	99.4%	99.4%	99.6%	79.9%	93.3%

The eluate was softened using SAC ion exchange and the concentrations of calcium, magnesium, strontium and manganese were below the detection threshold in the softened product. The softened product was then concentrated using SWRO, which performed as expected for dewatering.

The DLE trials were able to achieve the target lithium retention as well as the target sodium, calcium and magnesium rejection, with the limited quantity of brine that was processed. Boron rejection can be further optimized. Softening with ion exchange and concentration with reverse osmosis performed as expected. However, more rigorous testing will be required to bring the lithium chloride to an optimized purity and lithium concentration for carbonation. Overall, the treatability study achieved the goal of demonstrating the compatibility of the brine provided to the DLE vendor.

13.4 Lithium Recovery

The 95% lithium recovery for the Franklin DLE process is based on the treatability study conducted by the DLE vendor. For the purposes of the PEA, the Franklin lithium recovery process is based on the SWA Project's lithium recovery process. Accordingly, the overall lithium recovery of 89.25% achieved by the SWA process has been adopted as the basis for the PEA and is considered appropriate for this level of study.

The brine composition of Franklin is similar to that of SWA, but in terms of potential overall lithium recovery, Franklin is likely to produce a higher lithium recovery because of the higher lithium concentration in the feed brine. Therefore, using the SWA overall lithium recovery for this PEA is considered conservative.

13.5 Deleterious Elements

Outside of sodium, potassium, calcium, magnesium, strontium, boron, silicon, manganese, chlorides, and bromides, the initial full chemical analysis of Franklin Project brine has not indicated the obvious presence of deleterious elements in concentrations of concern other than iron. This is consistent with the chemistry of the SWA Project brine and suggests that a similar iron removal process could be applied to the Franklin Project brine.

13.6 Potential Production of Bromine and Potash

13.6.1 Introduction

The data presented in Table 13.1 show high concentrations of bromide and potassium in the Franklin Project brine indicating potential for the production of bromine and potash by-products. In Arkansas, bromine has been produced from Smackover brine for many decades. Production of potash from potassium rich brines is a well proven process when using evaporation ponds and crystallization in Chile as well as in Utah. The bromine and potash would be recovered after the recovery of the lithium, and the spent brine would be reinjected back into the Smackover Formation.

13.6.2 Bromine Production

The extraction of bromine from brine is generally based on the steaming-out process. Spent brine from the lithium DLE plant is treated with elemental chlorine, which oxidizes the bromide in the brine to bromine. The chlorinated brine is fed to the top of a packed bromine tower operating under vacuum, where steam sparged below the packing strips the bromine. Bromide-depleted brine discharges from the bottom of the tower.

Before the bromide-depleted brine is returned to the DLE facility for eventual reinjection, it is treated with sodium bisulphite to reduce free chlorine to chloride and free bromine to bromide and is then partially neutralized with caustic soda to a pH suitable for reinjection.

In 2026, Hunt, Guillot & Associates, LLC (HGA) produced a conceptual study for the production of bromine from the Franklin Project spent DLE brine. Aspen modelling of the process was carried out based on the brine composition, flowrate, pH and temperature. This information was derived from the lithium process METSIM model. A bromine recovery of 95.8% was presented. This will require test work to confirm, but based on industry practice (existing bromine producers in Arkansas) it is reasonable to use for determining the economic potential of producing bromine. The applicability of the conceptual study can be supported by the fact that the existing bromine producers in Arkansas treat essentially the same brine with similar concentrations of bromide.

The HGA study also assumed a chlorine addition rate of 20% above the stoichiometric requirement to estimate overall chlorine consumption. This assumption is considered conservative and will require verification through test work.

There are no expected chemical constituents present in the spent DLE brine that would cause process problems during the production of bromine from the brine.

13.6.3 Potash Production

The lithium and bromide barren brine would require evaporation and then crystallization of the contained sodium and potassium salts in conventional potash brine facilities. In Utah brine is pumped into solar evaporation ponds. Initially sodium chloride is crystallized and removed from the brine. Then the brine is further evaporated to crystallize potash. This potash is removed from the brine, filtered and dried.

Recovery of potash from Franklin Project spent brine would likely require concentration and crystallization using technologies other than solar evaporation. Additional test work and engineering studies would be needed to assess the technical and economic potential for potash recovery.

14. Mineral Resource Estimates

14.1 Introduction

The preparation of the lithium, bromide, and potassium mineral resource estimates for the Franklin Project are based on the volume of porous rock estimated by the geologic model and the lithium, bromide, and potassium concentrations present in the brine samples obtained from exploration wells in the Upper and Middle Smackover Formations within the Project area.

Mineral resources have been prepared in accordance with the CIM Best Practice Guidelines, the Draft CIM Leading Practice Guidelines and are reported in accordance with the CIM Definition Standards. The Draft CIM Leading Practice Guidelines have been applied to the specific conditions present to this Project.

Mineral resources are sub-divided, in order of increasing geological confidence, into inferred, indicated, and measured categories. An inferred mineral resource has a lower level of confidence than that applied to an indicated mineral resource. An indicated mineral resource has a higher level of confidence than an inferred mineral resource but has a lower level of confidence than a measured mineral resource.

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. Inferred mineral resources are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves.

An indicated mineral resource is that part of a mineral resource for which quantity, grade or quality, and other 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.

A measured mineral resource is that part of a Mineral Resource for which quantity, grade or quality, and other 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.

The Franklin Project's brine accumulation exists in a well-defined porous geologic formation at depth, the Smackover Formation. This extensive brine accumulation is bounded vertically by impermeable formations and laterally by the Franklin Project area boundaries.

The mineral resource estimates were prepared using a detailed layered geologic model that fully captures the factors that affect the content and quality of brine and the associated lithium, bromide, and potassium in the Smackover Formation aquifer.

14.2 Geologic Model

To understand and quantify the Smackover Formations' structure, geometry, and the location of the porous and permeable zones, a multi-layer geologic model of the Franklin Project was constructed as the basis of the mineral resource estimates using industry-standard software and procedures. The structural understanding of the overall Smackover Formation was first developed through analysis of the well data and 2D seismic data. The Upper Smackover and Middle Smackover intervals were then divided into separate layers and the geologic characteristics of each layer were evaluated based on the core and log data. This geologic mapping effort covered the Franklin

Project and the surrounding area as depicted in Figure 10.1. The procedures followed in creating this multi-layer geologic model relate to well log and core data analysis, net pay estimation, mapping procedures, and estimation of in-place brine volumes.

The following steps were carried out to construct the multi-layer geologic model:

1) The Upper and Middle Smackover intervals were divided into eight layers, with five in the Upper Smackover interval and three in the Middle Smackover interval, based on their distinct geologic characteristics. The interval and layer picks were recorded for the eight well logs within the Franklin Project area and 95 well logs outside the Franklin Project area, to the extent allowed by the depth encountered for each well. These divisions are identified in the cross section of the exploration wells represented in Figure 7.5. The calibrated log porosity curve, PHI_COBB_NEW, is shaded green to indicate the intervals meeting the 6.0% porosity net pay cutoff.

2) Core data obtained from Standard Lithium's exploration wells (203 whole core samples, 158 of which were from the Upper Smackover interval), was reviewed to quantify the amount of porous Smackover Formation within the Project area. This evaluation indicated a large fraction of core data with moderate to high permeability values (between 0.5 and 550 mD), which is important in a brine displacement process for recovering the target lithium, bromide, and potassium.

3) The core data was also evaluated to understand the overall permeability and porosity characteristics of the Upper Smackover interval. The average porosity and permeability from the 158 core samples collected from the two cored 2023 exploration wells in the Upper Smackover interval were 14% and 17 mD, respectively. At this stage of the evaluation a porosity cutoff was not applied to the data when calculating the average core values.

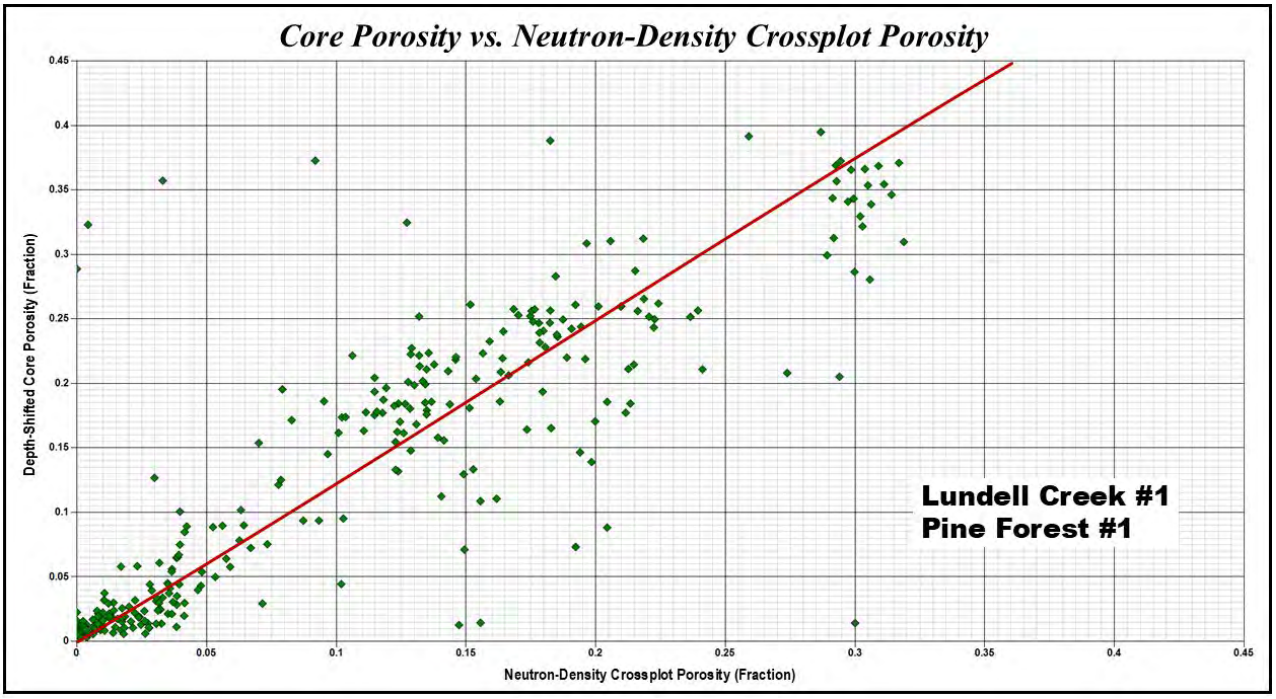
4) The Smackover Formation core porosity data were compared to the well log porosity data to develop a calibration function relating the log-derived porosity to core-measured porosity (the red line in Figure 14.1). The resulting function was applied to calibrate each porosity well log. A strong correlation was observed between the core porosity measurements and the calibrated log porosity values.

5) For wells with both log and core porosity data, the core porosity measurements were used as the primary source of porosity information with the calibrated log porosity curve used in intervals lacking core data. This resulting best estimate porosity curve is labelled PHI_COBB_NEW on Figure 7.5 and Figure 10.4, respectively. This porosity curve was used to determine net pay based on a 6.0% porosity cutoff.

6) A 6.0% minimum porosity cutoff was applied to each well's PHI_COBB_NEW values. This cutoff value corresponds to approximately a 0.5 mD permeability, which identifies that portion of the formation that has sufficient permeability to allow fluids to flow between injection and production wells over the economic life of the Project.

7) For each of the eight layers, the net pay intervals were evaluated to determine the net pay thickness (the productive thickness of the layer exceeding the minimum porosity cutoff), the average porosity for that net pay interval, and the ratio of net pay thickness to gross thickness. Gross thickness values were estimated for wells with only resistivity logs (which permitted layer boundary selection). Net pay thickness was calculated when porosity data were available from porosity logs or cores.

Figure 14.1: Porosity Log Calibration to Core Data Plot



Note: Red line is the correlation between core porosity and log porosity
Source: Haas & Cobb, 2026

8) Net pay identification is shown in Figure 7.5 and Figure 10.4, respectively. The layer picks result in the gross pay values, the application of the 6.0% porosity cutoff results in the net pay values (the green shading on the porosity log and the green pay flags), the ratio of net pay and gross pay values for each layer provides the net to gross ratio, and the average porosity over each layer's net pay intervals results in the average porosity of the net pay for that layer.

9) The geologic data (location, wireline well logs) from the eight wells within the Project area and 95 wells outside the Project area were imported into Petra® Software. Available digital porosity data was imported into the PowerLog ® Software database, calibrated to core porosity, and exported for inclusion in the Petra® Software. The top of Smackover Formation depth picks, along with the by-layer gross thickness, net to gross ratio, and porosity data were evaluated using the Petra® Software.

10) A mapping grid with 76.2 m by 76.2 m cell size was used, and the well geologic data was contoured using two Petra gridding options:

- The *Highly Connected Features* option applied a least-squares gridding algorithm that is well-suited to both structure maps and the smoothly-changing petrophysical data present here. The "grid flexing" option, appropriate for this type of well-behaved data, was used to regularize the maps' contour lines.
- The *Directional Bias* option was used, with a direction of 85 degrees. This directional bias was applied to capture the regional strike direction of the Smackover Formation, corresponding to the orientation of the oolite bars as they were deposited.

11) Following the gridding and contouring process, bounding limits were applied to the gross thickness, porosity, and net thickness to gross thickness ratio grids. The gross thickness, porosity, and net thickness to gross thickness grids were constrained to between 95% of the minimum observed value and 105% of the maximum observed value to prevent the mapping algorithm from extrapolating to unreasonable values. Additionally, porosity values were limited to no lower than the 6.0% cutoff for net pay. The net thickness to gross thickness ratio grids were further constrained between 0.0 and 1.0, corresponding to the physical limits of that ratio.

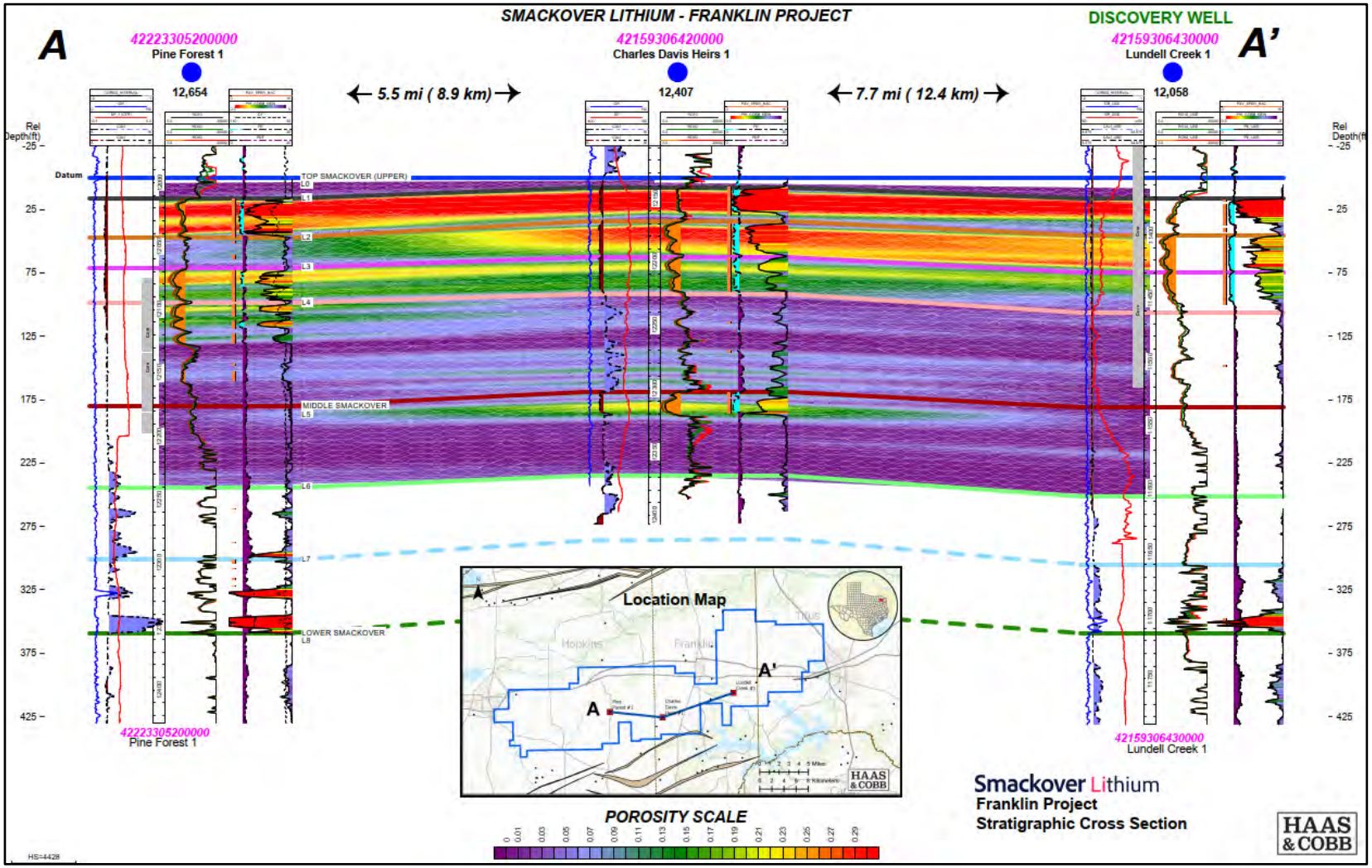
12) The net pay grid for each layer was calculated by multiplying the gross thickness grid by the net thickness to gross thickness grid. Similarly, the pore-thickness grids for each layer were calculated by multiplying the calculated net pay grids by that layer's porosity grids.

13) The resulting layer grids for structure, porosity, gross pay, and net pay were then summed as appropriate to create maps of gross pay, net to gross ratio, net pay, average porosity, and pore-thickness for the Upper Smackover and the Middle Smackover intervals.

Figure 10.1 depicts the locations of the eight wells within the Franklin Project area and 95 wells outside the Franklin Project that penetrated the top of the Upper Smackover interval, thereby containing structure, porosity, or core data relevant to the description of one or more of the five geologic layers within the Upper Smackover interval. Figure 7.4 presents the structure map for the top of the Upper Smackover interval. Figure 10.2 depicts the locations of the eight wells within the Franklin Project area and 33 wells outside the Franklin Project that penetrated the top of the Middle Smackover interval, thereby containing structure, porosity, or core data relevant to the description of one or more of the three geologic layers within the Middle Smackover interval. Figure 14.2 is a stratigraphic porosity cross section through the three exploration wells. It uses the top of the Upper Smackover interval as datum and illustrates the thick, continuous nature of the high-porosity net pay (shaded in green, yellow, orange, or red) of the Upper Smackover interval, in comparison to the thinner, less-continuous Middle Smackover interval net pay.

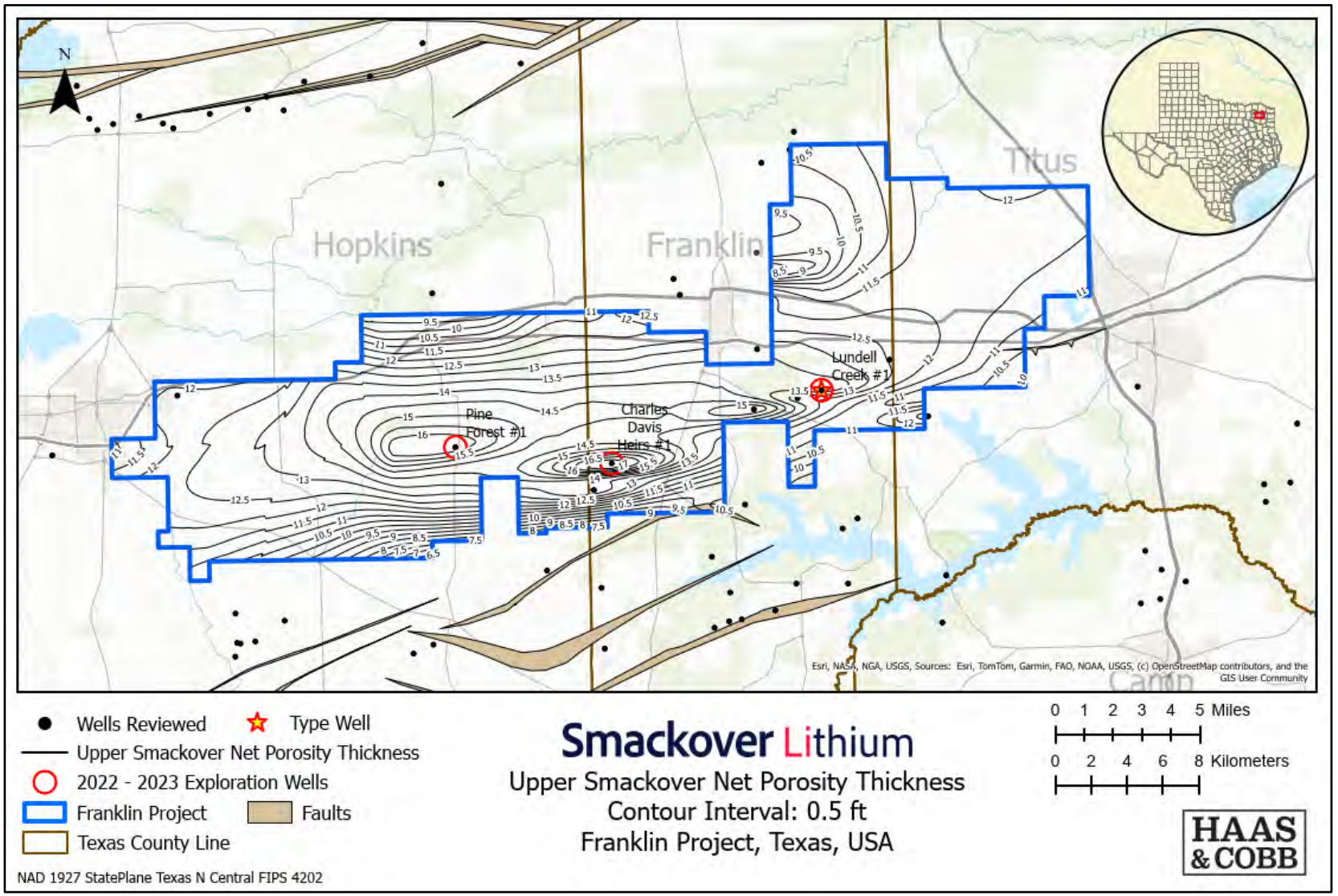
The net porosity-thickness (also known as Phi-H) maps for the Upper and Middle Smackover intervals are presented in Figure 14.3 and Figure 14.4, respectively. Net porosity-thickness is a direct indicator of the amount of brine below any location within the Franklin Project area. The greater the mapped pore-feet, the greater the volume of brine. Each porosity-thickness map is multiplied by the lithium, bromide, or potassium concentration map, then integrated over the Franklin Project area to obtain the in-place lithium, bromide, and potassium resource estimates for each mineral.

Figure 14.2: Stratigraphic Porosity Cross Section, Exploration Program Wells



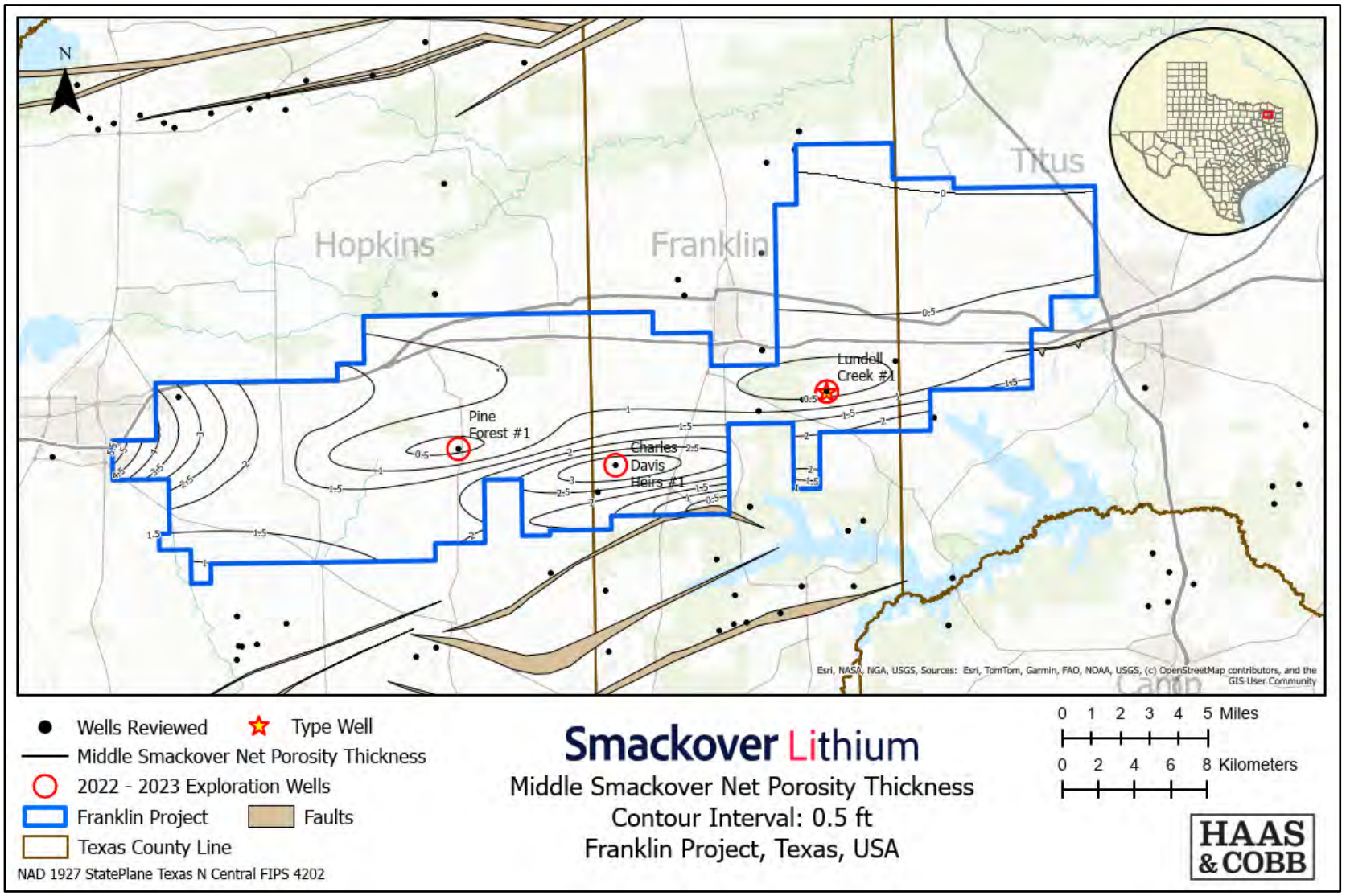
Note: 1ft = 0.3048 m
Source: Haas & Cobb, 2026

Figure 14.3: Upper Smackover Interval Net Porosity-Thickness



Source: Haas & Cobb, 2026

Figure 14.4: Middle Smackover Interval Net Porosity-Thickness



Source: Haas & Cobb, 2026

14.3 Reasonable Prospects for Eventual Economic Extraction

14.3.1 Cutoff Determination

As lithium is the main economic contributor for the mineral resource, the mineral resource cutoff is based only on lithium. The cutoff determination for lithium evaluated the concentration required for Project revenue to offset the Project operating costs over the lifetime of the Project. A lithium cutoff value of 100 mg/L was calculated, based on the forecast 20year operating costs of $5,461 million, brine production volume of 528 million m^3, lithium recovery factor of 89.25%, lithium carbonate price of $22,400/t, and lease royalty terms assumed at an average 2.5% of gross revenue (see Section 4). This 100 mg/L cutoff value is less than all measured lithium concentrations in the Smackover Formation within the Franklin Project area, the average estimated lithium concentration values, and the forecast produced lithium concentrations. Therefore, the lithium concentrations within the gross leased area within the Franklin Project are believed to exceed this lithium concentration cutoff value.

The porosity cutoff value of 6.0% corresponds to a permeability of approximately 0.5 mD and identifies that portion of the formation that has sufficient permeability to allow fluids to flow between injection and production wells throughout the economic life of the Project.

14.4 Mineral Resource Classification

Mineral resources for the Franklin Project were classified as indicated and inferred within the Project area as shown in Figure 14.5.

14.4.1 Indicated Mineral Resources

Indicated mineral resources are that part of a mineral resource for which quantity, grade or quality, and other 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.

The indicated mineral resource category is applied to lithium and bromide contained within that portion of the Upper Smackover interval with productivity determined and quantified through 2025/2026 additional testing of samples from the three exploration wells (refer to Section 10.2). This increase in confidence classification is justified because the well test results, when combined with the geologic description of the area, determined reservoir properties sufficient to support production planning and economic extraction of the brine. Using this information, lithium and bromide recovery process capital and operating cost-studies have been conducted that resulted in this Report's evaluation of the conceptual economic viability of lithium and bromide production from the deposit.

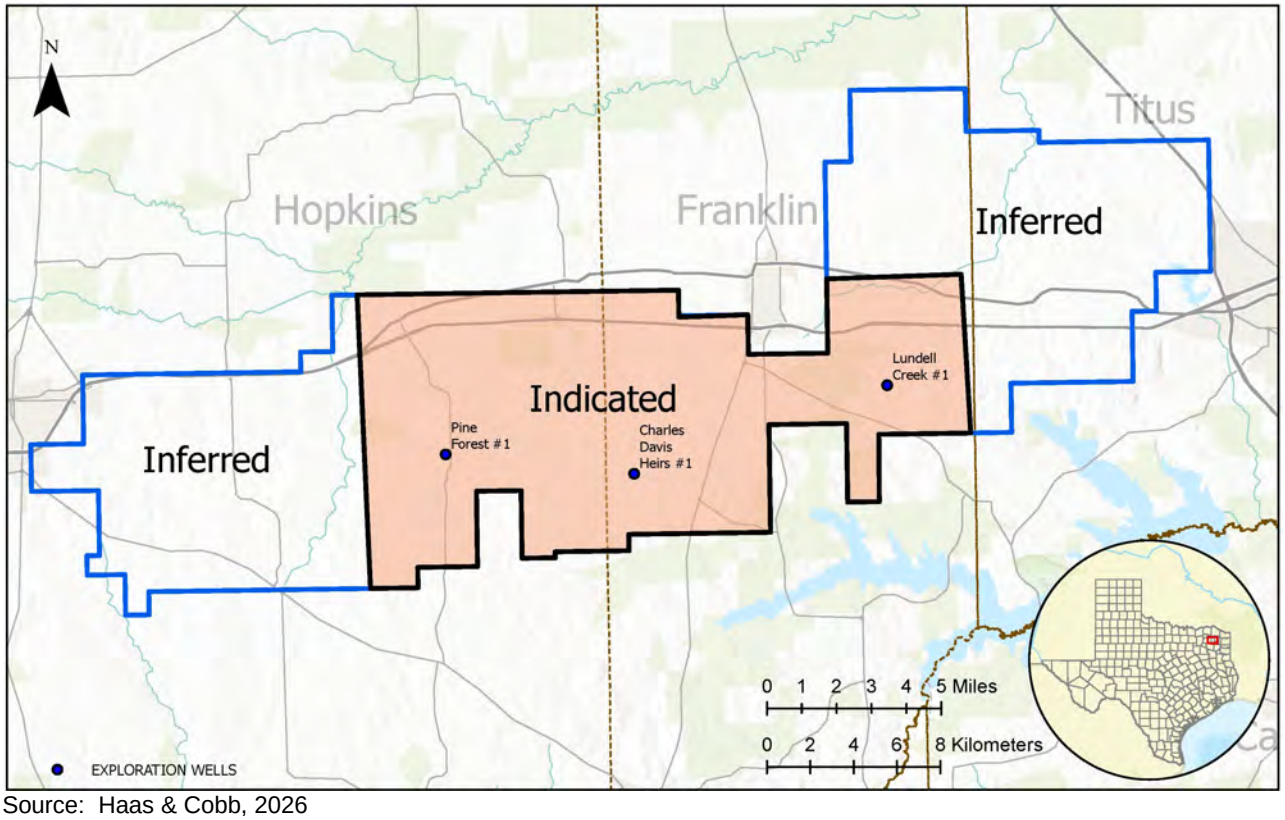
The area associated with the indicated resources was based on the area adjacent to and between the three exploration wells, using an approximate 4 km distance west from the Pine Forest #1, south from the Charles Davis Heirs #1, and east from the Lundell Creek #1 to locate the west, south, and east boundaries. The north boundary location was based on the simulation results described in Section 16, where the simulation model incorporating much of this area indicated the productive potential of the brine resource, based on the geologic model and substantiated by the well test data from the three exploration wells. The locations of these boundaries for the indicated resources are consistent with the continuous nature of the target Upper Smackover porous interval observed over the distances shown in Figure 14.2.

Potassium mineral resources are not classified as indicated, because there is insufficient information on the potassium recovery process capital and operating costs.

14.4.2 Inferred Mineral Resources

The remainder of the Upper Smackover and the entirety of the Middle Smackover resources remain categorized as inferred mineral resources. Inferred mineral resources are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves.

Figure 14.5: Location of Upper Smackover Inferred and Indicated Resource Areas



Source: Haas & Cobb, 2026

14.5 Lithium, Bromide, and Potassium Resource Estimates

To obtain the in-place lithium, bromide, and potassium mineral resource estimates for Upper Smackover and Middle Smackover intervals the net porosity-thickness maps (Figure 14.3 and Figure 14.4) were multiplied by the corresponding lithium, bromide, or potassium concentration values. The lithium, bromide, and potassium resources in the Upper Smackover and Middle Smackover intervals were estimated based on the 30,994 ha gross Standard Lithium leased area within the 44,541 ha Franklin Project area.

The resulting estimated average geologic properties, the average lithium, bromide, and potassium concentrations, and the lithium, bromide, and potassium resource estimates for the gross Standard Lithium leased areas are presented in Table 14.1. These resource estimates differ from those presented in the Franklin Technical Report (Moharana et al., 2025) because of:

- Increased gross leased area involved (65% larger);
- Increased brine volume estimated within that area (112% larger);
- Difference in average concentration values applied to that volume (the average lithium concentration was 15%; lower, the average bromide concentration was 3% higher, the average potassium concentration was 16% lower); and
- Removal of potassium resources from the Upper Smackover interval that is classified in the indicated mineral resource area.

Conversion factors of 5.323 kg of lithium carbonate equivalent per kilogram of lithium and 1.91 kg of potash (potassium chloride) per kilogram of potassium were used to estimate the contained quantities. The lithium, bromide, and potassium resource estimates have an effective date of July 20, 2026.

The brine lithium concentration values observed in the exploration wells and estimated in the Smackover Formation within the Franklin Project area exceed the concentration cutoff value of 100 mg/L lithium, and the porous formation containing that brine exceeds the porosity cutoff value of 6%.

Mineral resources are not mineral reserves and do not have demonstrated economic viability.

14.6 Factors that Could Affect the Mineral Resource Estimate

The estimate of mineral resources may be materially affected by the following:

- geology (unrecognized geological structures, less than assumed geological and grade continuity and changes to variations in the porosity, net pay, or brine concentration values);
- unrecognized environmental restrictions;
- delays or conditions required for permits;
- changes to rules regarding mineral tenure;
- inability to obtain surface rights at reasonable rates;
- changes to marketing assumptions including assumed commodity prices;
- changes to assumptions regarding mineral processing; and
- changes to assumed operating costs.

Table 14.1: Franklin Project Mineral Resource Estimates

Classification Category	Units	Indicated	Inferred		
Smackover Formation Interval		Upper Smackover	Upper Smackover	Middle Smackover	Total Smackover
Gross Aquifer Volume	km^3	7.84	8.70	17.16	25.86
Net Aquifer Volume	km^3	3.25	3.31	0.83	4.15
Average Porosity	%	18.21%	17.95%	12.60%	16.86%
Brine Volume	km^3	0.59	0.59	0.10	0.70
Average Lithium Concentration	mg/L	562	562	626	572
Contained Lithium	kt	333	334	66	400
Contained LCE	kt	1,771	1,779	349	2,128
Average Bromide Concentration	mg/L	4,483	4,483	4,600	4,501
Contained Bromide	kt	2,655	2,666	482	3,148
Average Potassium Concentration	mg/L	NA	11,096	12,400	11,291
Contained Potassium	kt	NA	6,597	1,299	7,896
Contained Potassium Chloride	kt	NA	12,579	2,477	15,056

Notes:

1. The effective date of the mineral resource estimate is July 20, 2026. The QP for the mineral resource is Randal Brush, P.E. an employee of Haas & Cobb.
2. Mineral resources were prepared in accordance with CIM Best Practice Guidelines, Draft CIM Leading Practice Guidelines and are reported in accordance with CIM Definition Standards.
3. Mineral resources are not mineral reserves and do not have demonstrated economic viability.
4. The mineral resource estimate is reported using a cutoff of 6.0% porosity (net aquifer) and 100 mg/L lithium using the following assumptions: brine extraction from production wells and direct lithium extraction processing technology, lithium carbonate price of $22,400/t, twenty-year operating costs of $5,461 million, brine production volume of 528 million m^3, lithium process recovery of 89.25% and 2.5% royalty on gross revenue on lithium production.
5. Lithium has been converted to LCE by a conversion factor of 5.323 and potassium converted to potassium chloride by a conversion factor of 1.91.
6. The lithium, bromide, and potassium resources present in the Upper Smackover and Middle Smackover intervals were estimated based on the 30,994 ha gross Standard Lithium leased area within the 44,541 ha Franklin Project area.
7. The mineral concentration values for the Upper Smackover interval are the average of the three exploration wells from samples collected in 2025/2026. The mineral concentration values for the Middle Smackover interval are the average sample values collected in 2023 from a single exploration well.
8. Potassium mineral resources are limited to the inferred category because the potassium recovery process still requires development. Capital and operating cost studies have not advanced to permit evaluation of the economic viability of the deposit with regard to potassium. Therefore, there are no potassium mineral resource estimates associated with the indicated resource area of the Upper Smackover interval.
9. Numbers may not sum due to rounding.

15. Mineral Reserve Estimates

This Report summarizes a PEA study, which cannot be used to support mineral reserves. There are no mineral reserves for the Franklin Project.

16. Mining Methods

16.1 Brine Extraction

The inferred and indicated lithium and bromide brine resource estimate represents the brine resource present in the Franklin Project area that is potentially available for extraction. The mineral-rich brine from the Upper Smackover interval is proposed to be pumped from a network of production wells to ground surface and processed to remove the lithium, to be processed into lithium carbonate, and bromide, to be processed into elemental bromine. The depleted brine exiting the processing facility will then be reinjected into the same aquifer system through a network of brine injection wells. The recoverable amount of lithium and bromide will depend on the reservoir properties (porosity, thickness, continuity, and permeability) of the Upper Smackover interval and the design of the production and injection well networks. A key factor affecting the mineral production rate and projected Project life is the efficiency with which the depleted injection brine displaces the native rich brine in the geologic formation. The well locations and designs, when combined with the geologic description, determine the displacement efficiency and, thereby, the grade of the produced brine throughout the Project's economic life.

A numerical reservoir simulation model was developed using the industry standard Schlumberger ECLIPSE simulation modelling platform to design the well networks for extracting the mineral-rich brine from the formation and to re-injecting the depleted brine from the central processing facility into the formation. The numerical model was constructed using site data and interpreted geologic descriptions over the Franklin Project (discussed in Sections 7 and 9, respectively). The model parameters are based on the estimates of structure, gross pay, net pay, and porosity and the reservoir permeability values were matched to the results of the pressure transient tests conducted in each of the three exploration program wells. The model incorporates all available geologic information relevant to mineral recovery at the Franklin Project.

16.2 Wellfield Network Design

After evaluating several potential wellbore configurations, the ECLIPSE simulation model was configured with alternating rows of horizontal injection and production wells, with 12 of each type of well in the simulated portion of the Frankin Project area. This configuration would result in meeting production targets using fewer wells, compared to using vertical wells, thereby reducing surface well pad requirements. Horizontal wells also provide increased productivity and injectivity, compared to vertical wells. The simulated increment was designed to support production rates consistent with the facility design used in the SWA DFS, including an assumption of approximately 22,500 tpa lithium carbonate. The Franklin Project area can accommodate three such development increments, resulting in a full development of 36 horizontal production wells and 36 horizontal injection wells and simulation analysis that supports the Project production target of approximately 70,000 tpa lithium carbonate.

16.3 Wellfield Configuration

To achieve the 70,000 tpa lithium carbonate production capacity, the wellfield will include the following well pad configuration:

- 18 production well pads with two wells per pad totaling 36 horizontal production wells;
- 15 injection well pads with two wells per pad totaling 30 horizontal injection wells;
- 6 injection well pads with one well per pad totaling 6 horizontal injection wells; and

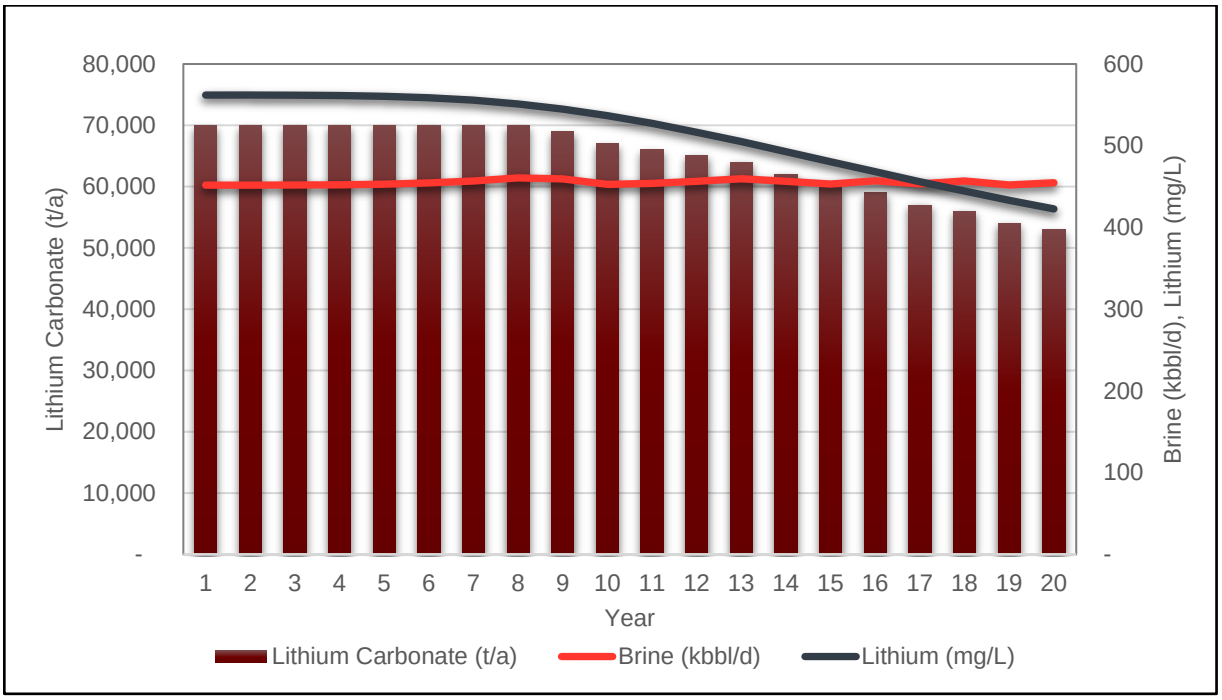
The horizontal well section lengths will be in the range of 1,280 m to 2,560 m.

16.4 Production

Each production well will produce between 1,100 m^3/d and 3,000 m^3/d of brine with an average rate of 2,009 m^3/d. The production wells will extract the raw brine from the Smackover Formation on a continuous basis. The average brine production rate will be 3,241 m^3/h during the 8,147 hours in the operational year.

Lithium carbonate production is projected at approximately 70,000 tpa for the first eight years of the 20-year Project life. Production subsequently declines as the lithium concentration of the brine decreases, reaching approximately 53,000 tpa in Year 20. Total life-of-project lithium carbonate production is estimated at approximately 1.29 million tonnes, equivalent to an average of approximately 64,600 tpa at 515 mg/L Li. The production plan assumes a lithium process recovery of 89.25%.

Figure 16.1: Lithium Carbonate Production Plan

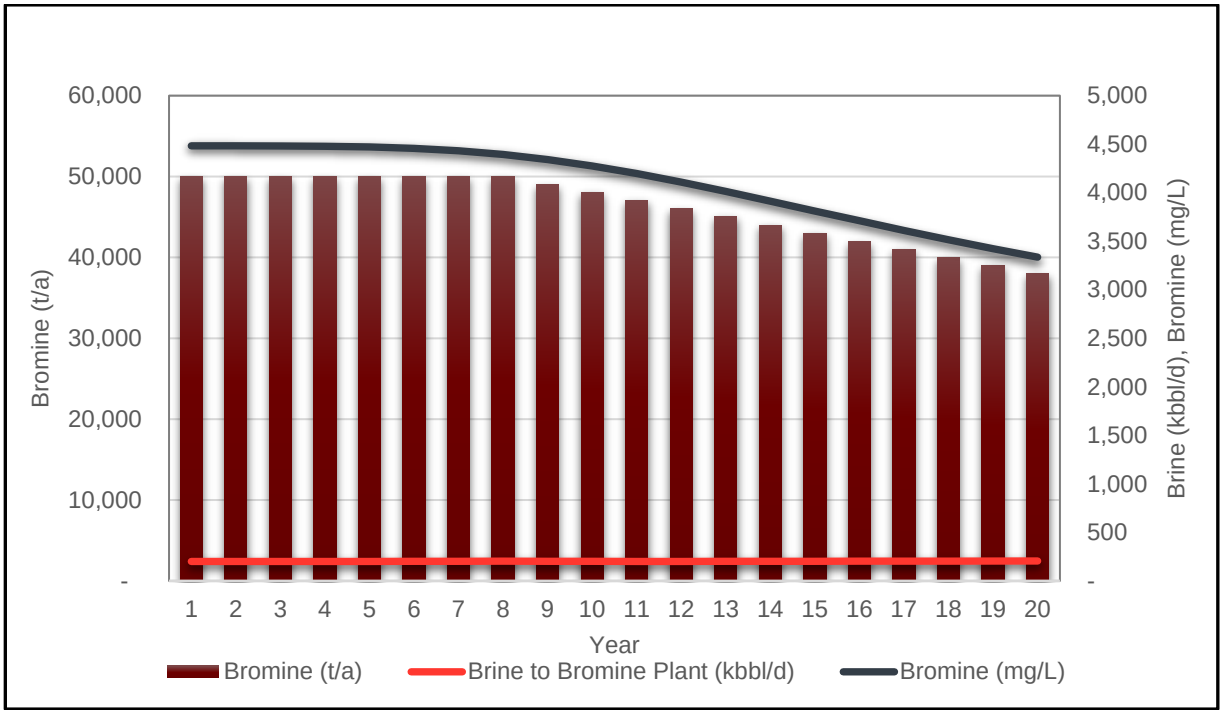


Source: Haas & Cobb, 2026

16.4.1 Bromine Opportunity

Standard Lithium is contemplating the production of elemental bromine from the lithium depleted brine. This opportunity considers approximately 50,000 tpa of bromine production for the first eight years before progressively declining to approximately 38,000 tpa in Year 20 as the bromine concentration of the brine decreases (Figure 16.2). Total bromine production over the 20-year Project life is estimated at approximately 922,000 tonnes, equivalent to an average of approximately 46,100 tpa at 4,097 mg/L Br. The bromine production plan assumes a process recovery of 95.8%.

Figure 16.2: Bromine Production Plan



Source: Haas & Cobb, 2026

16.5 Production Wells Pads

An electric submersible pump (ESP) will be installed in each production well that will pump the brine to the surface through the tubing.

As the brine is pumped to the surface, natural gas will degas out of the brine as the pressure drops. The brine, gas, and trace amounts of oil and solids (sludge) will be separated from one another at the production well pads using three-phase separators. The brine produced will be sent from the separators to the lithium processing facility via pipelines. The oil/sludge mixture that is separated from the brine will be stored in tanks on the well pad and periodically removed through a pump truck for further processing. The separated gas stream will be sent to a scrubber for capture and conversion into stable compounds and removal.

Brine from the production wells will be combined prior to leaving the well pad into single headers and “boosted” with pumps to deliver it to the lithium processing facility through a common brine pipeline. Brine variability will be reduced by combining and mixing all the brine streams from all the well pads in the brine pipelines. Brine pumped from production wells and well pads through the brine pipeline is then discharged to a large capacity brine receiving tank at the lithium processing facility.

Pressurized hot gas, containing light hydrocarbons (i.e., ethane, propane and butane), carbon dioxide and water vapour, separated from the brine in the three-phase separators, will be cooled to condense out higher boiling point condensable hydrocarbons and water. The liquids (condensate) will be separated and returned to the three-phase separator feed.

16.6 Injection Wells Pads

Once the lithium and, potentially, bromide are removed from the brine, depleted brine is then disposed of through injection wells. A network of pipelines connects the processing facility to the injection wells. Depleted brine is delivered from the processing facility by brine pumps to the well pads. The depleted brine is pumped down through the injection wells into the Upper Smackover interval. The reinjection of the depleted brine is necessary to maintain pressure in the Smackover Formation aquifer and to displace the rich native brine to the production wells.

16.7 Drilling Method

The production and injection facility/well locations and drilling methodology used for each were chosen in an effort to maximize production and minimize costs and environmental impacts (Section 18.3).

Horizontal wells will be used for both the production wells and the injection wells. Horizontal wells are drilled in a manner similar to directional wells but are unique in that they continue to increase the drilling angle until the well is being drilled horizontally into the target formation. This allows the horizontal wells to provide an extended horizontal stretch of wellbore directly in the pay zone, thereby providing increased production and flexibility for the well location.

The production and injection wells will be drilled with heavy-duty rotary-type drilling rigs due to the large wellbore size and depths required for each of the wells. The rigs will incorporate specialized directional drilling technology appropriate for horizontal wells. Local drilling service providers will be utilized to the extent possible to minimize the mobilization costs associated with the drilling rigs.

17. Recovery Methods

17.1 Process Design Basis and Criteria

The key process design criteria presented in Table 17.1 are based on the benchmarking of the more developed SWA Project extracting a similar composition brine from the Smackover Formation, and the results of a treatability study using Franklin brine described in Section 13.

Table 17.1: Key Process Design Criteria

Parameter	Unit	Value
Plant Production		
Lithium Carbonate Design Capacity	tpa	70,000
Operating Life	years	20
Lithium Recovery	%	89.25
Feed Brine Composition		
Lithium	mg/L	562
Calcium	mg/L	27,437
Magnesium	mg/L	1,549
Potassium	mg/L	11,096
Bromide	mg/L	4,483
Boron	mg/L	474
Sodium	mg/L	80,300
Strontium	mg/L	2,086
Total Dissolved Solids	mg/L	382,222

17.2 Lithium Facility Design

Brine received at the lithium processing facility is degassed, pH adjusted, filtered, and conditioned in a series of pre-treatment processes in preparation for the DLE process. The DLE technology is a fixed bed adsorption process, which extracts lithium ions from the brine to produce a raw lithium chloride solution that is low in contaminants. The lithium chloride is then purified through chemical softening and ion exchange and concentrated using reverse osmosis and evaporation/crystallization to produce a polished and concentrated lithium chloride solution.

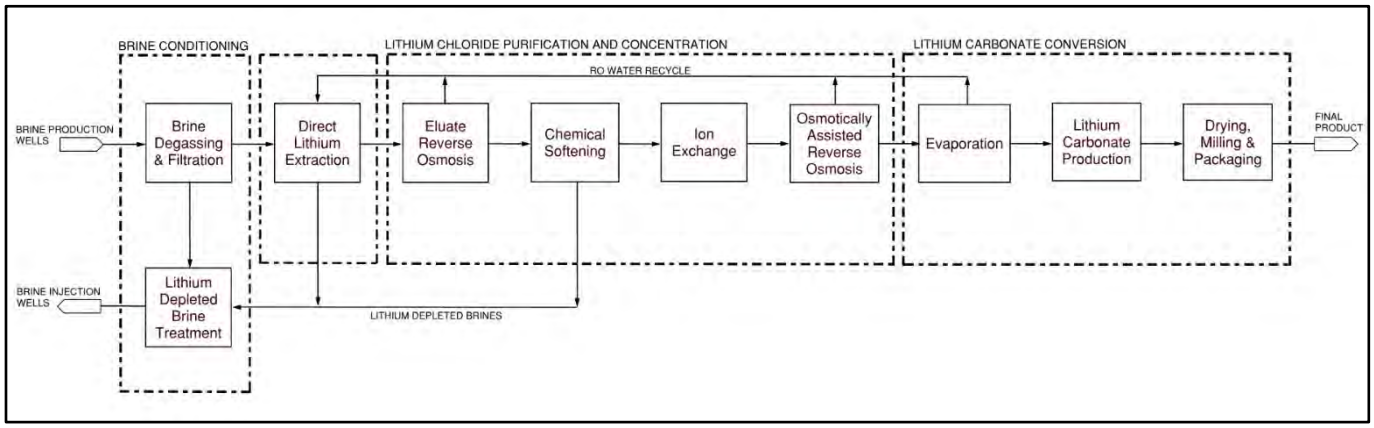
The concentrated lithium chloride brine enters a conventional carbonation process to produce “crude” lithium carbonate (Li_2CO_3), which undergoes a product purification process including bicarbonation, ion exchange, decarbonation, and carbon dioxide (CO_2) recovery to obtain battery-quality lithium carbonate. The lithium carbonate is dried, micronized, and packaged to produce the finished product.

The lithium recovery method consists of the following major process blocks:

- brine pre-treatment;
- DLE;
- concentration and purification;
- lithium carbonate conversion; and
- lithium-depleted brine treatment.

The process block flow diagram in Figure 17.1 provides an overview of the lithium recovery process proposed for the Project.

Figure 17.1: Lithium Block Flow Diagram



Source: Standard Lithium, 2026

17.2.1 Brine Conditioning / Pre-Treatment

17.2.1.1 Degassing

The presence of gases in the brine is not anticipated, including hydrogen sulphide. However, degassing has been included in the design in case gases need to be removed from the brine. The brine degassing process is designed to remove gases (primarily H_2S, methane, and CO_2) from the brine via air stripping and scrubbing. This system employs a two-stage process involving air stripping to transfer dissolved gases from the brine into an air stream, followed by a scrubbing stage to remove H_2S from the air stream.

17.2.1.2 Brine Conditioning

The degassed brine is pumped through a heat exchanger, transferring its heat to cooling water from the cooling tower. The cooled degassed brine is then adjusted for pH and oxidation-reduction potential.

17.2.1.3 Brine Filtration

The brine filtration system is designed to protect the downstream equipment and prevent fouling of the DLE sorbent bed. Degassed and conditioned brine is pumped through the multimedia filters to remove coarse suspended solids and any residual oil droplets from the brine.

The filtrate is then pumped to the ultrafiltration system that uses multiple membrane cartridges mounted on skid units to remove suspended solids. The flow rate through the membranes is maintained with a programmed series of filtration, backflush and clean-in-place processes.

After ultrafiltration, the brine is treated in a guard bed to remove any iron still present in the brine after the filtration steps.

17.2.2 Direct Lithium Extraction

The DLE process is the fundamental technology required to extract lithium from the brine. The DLE process selected utilizes a lithium chloride selective sorbent in fixed bed columns. The DLE system goes through a series of loading and elution steps that are operated at specific durations and flow rates to maximize the efficiency of lithium recovery.

The lithium and chloride ions adsorbed onto the adsorbent in the loading process are then eluted (released) from the adsorbent along with lesser amounts of contaminants by passing an eluant (clean water) through the DLE columns. The elution produces a lithium chloride solution (eluate) that contains over 95% of the lithium from the feed brine and up to a 99% reduction in the concentration of the major contaminant ions. The eluate from the DLE columns is pumped to the eluate reverse osmosis (ERO) stage. The lithium-depleted brine is directed to the lithium-depleted brine treatment area prior to reinjection.

17.2.3 Lithium Chloride Purification and Concentration

17.2.3.1 Eluate Reverse Osmosis

The ERO unit aims to concentrate the eluate by reverse osmosis. Eluate (raw lithium chloride solution) from the DLE system is filtered and cooled before being pumped to the reverse-osmosis membranes, which provide the initial separation of water from the eluate. The eluate is concentrated through multiple stages of higher pressure reverse-osmosis membranes for final separation of the water and lithium chloride (along with other ions) in the eluate. The ERO concentrate is pumped to the softening area and the ERO permeate is reused as eluant in the DLE process.

17.2.3.2 Chemical Softening

The chemical softening system is designed to remove the bulk of the calcium (Ca) and magnesium (Mg) ions present in the ERO concentrate (lithium chloride solution).

The concentrated eluate from the ERO stage is chemically dosed to precipitate magnesium and calcium. The precipitated solids are separated from the lithium chloride solution then redissolved and transferred to the lithium-depleted brine treatment area.

17.2.3.3 Ion Exchange

The ion exchange (IX) units are intended to minimize the trace calcium, magnesium and boron remaining in the brine by employing selective ion exchange resins packed in columns.

The brine is first purified through the Ca/Mg IX columns and then through the B IX columns for further purification. The purified brine is pumped to the osmotically assisted reverse osmosis (OARO) system.

17.2.3.4 Osmotically Assisted Reverse Osmosis

The OARO unit aims to concentrate the treated lithium chloride brine after IX by reverse osmosis. Treated lithium chloride brine from the IX process is filtered and cooled before being pumped to the OARO stages, obtaining a concentrated (high total dissolved solids (TDS)) lithium chloride solution. The OARO concentrate is pumped to the

mechanical vapour recompression (MVR) evaporation system. The OARO permeate is reused as eluant in the DLE process.

17.2.3.5 Mechanical Vapour Recompression Evaporation

The MVR evaporation system is designed to evaporate water from the concentrated lithium chloride brine coming from the OARO.

The further concentrated lithium chloride brine is then pumped to the lithium carbonate plant. The condensate from evaporation is recycled to the DLE section.

17.2.4 Lithium Carbonate Conversion

The lithium carbonate plant receives polished lithium chloride solution from the MVR evaporator and produces lithium carbonate using a two-stage conventional crystallization process with a bicarbonate purification process and Ca/Mg ion exchange treatment in between the two stages.

17.2.4.1 First Stage Carbonation

Low solubility lithium carbonate is produced by reacting lithium chloride with a sodium carbonate solution in the first stage draft tube baffle (DTB) crystallizer. The crystallizer forms a lithium carbonate slurry that is pumped to the first stage peeler-type lithium carbonate centrifuge for dewatering and washing. The cake discharged from the centrifuge is then repulped with hot lithium chloride brine from the second stage lithium carbonate centrifuge and reverse osmosis (RO) water to form a crude lithium carbonate slurry.

17.2.4.2 Bicarbonation

The crude lithium carbonate slurry is cooled and fed into the bicarbonate reactor to convert the carbonate into a soluble lithium bicarbonate by reaction with carbon dioxide under pressure. The lithium bicarbonate solution is then filtered and purified to remove calcium and magnesium in a fixed-bed ion exchange system.

17.2.4.3 Second Stage Carbonation

The second stage lithium carbonate DTB crystallizer converts the lithium bicarbonate back to lithium carbonate using steam, with carbon dioxide evolving from the solution. The carbon dioxide is recovered and reused in the bicarbonate reactor. The purified lithium carbonate slurry is pumped to the second stage peeler-type lithium carbonate centrifuge for dewatering and washing. The wash water from the second stage centrifuge is used to repulp the first stage crude lithium carbonate and to wash the first stage centrifuge cake. Crystals in the second stage centrifuge cake are battery-quality lithium carbonate ready for drying, milling and packaging.

17.2.5 Drying, Milling and Packaging

Following crystallization, the lithium carbonate will be dried, micronized, and conveyed for packaging. After sampling and laboratory analysis, the battery-quality lithium carbonate is packed into 500 kg or 1,000 kg bulk bags, palletized, and ready for shipment.

17.2.6 Lithium-Depleted Brine Treatment

The lithium-depleted brine treatment system takes the brine that has been stripped of lithium (rejected by DLE) and potentially bromide (downstream of the bromine tower) and combines it with spent reagent streams from different areas of the lithium process facility. Any remaining solids present in the brine are filtered and dissolved and the pH of the combined stream is adjusted as required for transport by pipeline back to the wellfield for reinjection.

17.3 Bromine Facility Design

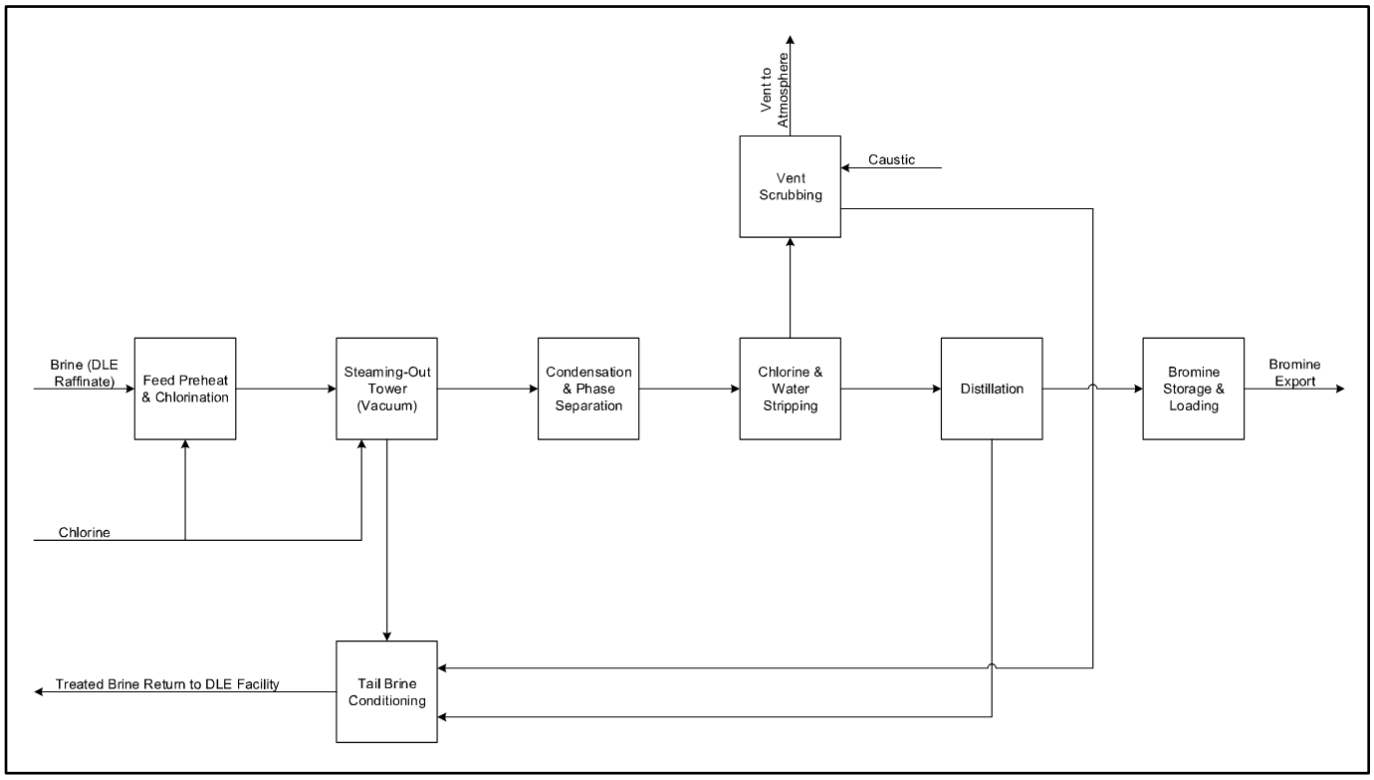
In addition to lithium production, the Project contemplates a secondary opportunity case for bromine recovery from lithium-depleted brine. The extraction of bromine is based on the industry standard steaming-out process as shown in Figure 17.2. Spent brine from the lithium DLE plant is preheated by heat interchange against the returning bromide-depleted brine and treated with elemental chlorine, which oxidizes the bromide in the brine to bromine. The chlorinated brine is fed to the top of a packed bromine tower operating under vacuum, where steam sparged below the packing strips the bromine overhead; additional chlorine is sparged within the tower packing to complete the conversion. Bromide-depleted brine discharges from the bottom of the tower with approximately 98% of the contained bromine removed.

The tower overhead vapour is condensed and separated by gravity. The aqueous phase returns to the tower feed and the crude bromine passes forward. Dissolved chlorine and water are stripped from the crude bromine, which is then purified by distillation to a saleable technical grade of at least 99.5% bromine and transferred to lined storage tanks for dispatch by road or rail.

Process vents pass through two brine-irrigated scrubbers in series, which recover the contained bromine and chlorine to the process, and then through a caustic scrubber, where residual chlorine is converted to sodium chloride and sodium hypochlorite before release. The spent scrubber caustic joins the bromide-depleted brine for pretreatment.

Before the bromide-depleted brine is returned to the DLE facility for eventual reinjection, it is treated with sodium bisulphite to reduce free chlorine to chloride and free bromine to bromide, and is then partially neutralized with caustic soda to a pH suitable for reinjection.

Figure 17.2: Bromine Flowsheet



Source: HGA, 2026

17.4 Energy, Water, and Process Materials Requirements

17.4.1 Power

The overall estimated power demand for the lithium process facility is 58 MW. The bromine process facility would require an additional 2 MW of power.

17.4.2 Water

Fresh water is needed to produce various types of water, including process, demineralized, cooling, seal, fire, and potable water. The process plant design incorporates water recovery and recycling, reducing the total water requirement. Current, non-optimized estimated annual fresh water consumption is 7.5 million m^3.

17.4.3 Reagents

The main reagents required in the lithium carbonate production process are listed in Table 17.2 and for the bromine production process in Table 17.3.

Table 17.2: Reagents for Lithium Carbonate Production

Reagent Description	Chemical Formula	Annual Consumption (tpa)
32% Hydrochloric Acid	HCl	142,700
34% Hydrogen Peroxide	H_2O_2	8,100
50% Sodium Hydroxide (Caustic Soda)	NaOH	54,700
Sodium Carbonate (Soda Ash)	Na_2CO_3	142,600
Carbon Dioxide	CO_2	6,600

Note: Consumption based on 70,000 tpa lithium carbonate production.

Table 17.3: Reagents for Bromine Production

Reagent Description	Chemical Formula	Annual Consumption (tpa)
Chlorine	Cl_2	28,000
50% Sodium Hydroxide (Caustic Soda)	NaOH	12,900
Sodium Bisulphite	$NaHSO_3$	4,700

Note: Consumption based on 50,000 tpa bromine production.

18. Project Infrastructure

18.1 Introduction

The infrastructure plan for the Franklin Project encompasses the development of a lithium processing facility designed to produce up to 70,000 tpa of battery-quality lithium carbonate. The processing facility will be supported by a network of production and injection wells (wellfield), as well as underground pipelines to transport brine to and from the processing facility.

The Project includes the following physical areas:

- Production and injection wellfield;
- Lithium processing facility; and
- Utilities.

18.2 Site Access

The main access to the Project site is via east-west interstate Highway 30 (I-30) connecting Texas to Arkansas. Roads will connect Highway 30 to the processing facility and well pad facilities allowing access by vehicle for construction, drilling, maintenance, and operations.

The Project area is also accessible by the state and nation-wide rail network that passes through the local surrounding towns.

18.3 Wellfield and Pipeline Built Infrastructure

18.3.1 Wellfields and Pipelines

The wellfield will utilize the latest horizontal drilling technology to provide an optimal multi-directional wellfield design that consolidates the surface locations of the wells into 18 producer well pads and 21 injection well pads. The well pad locations will be chosen following more definitive geological, hydrogeological and land-use siting studies.

The brine produced after the three-phase separator will be sent to the lithium processing facility via pipelines. Lithium-depleted brine and process water will be pumped from the processing facility through pipelines to a network of brine injection wells.

Each of the brine injection wells will be equipped with a booster pump to reinject the depleted brine back into the Smackover Formation. Brine will be transported via fiberglass pipelines from the lithium processing facility to the booster pumps at each brine injection well pad and then to each individual injection well.

18.3.2 Utilities

Each well pad facility will be equipped with a water well that will provide water for drilling and routine well maintenance operations as well as for chemical injection to maintain the completed wells.

Electrical power for the Project is anticipated to be supplied by the local utility, with one or more transmission interconnection points required depending on facility locations, load demands, and proximity to existing utility infrastructure. Onsite substations will likely be required to provide step down transmission line voltage, switching, protection, metering, distribution and redundancy.

Compressed air will be supplied via a single compressor at each well pad facility located within the motor control centrebuildings.

18.3.3 Chemicals and Reagents

Chemicals and reagents required for operation and maintenance of the production wells and well pad facilities will be stored within the equipment containment areas at each well pad facility. These include, but are not limited to, anti-scalant and anti-corrosion chemicals.

18.3.4 Auxiliary Infrastructure

The following auxiliary infrastructure will be required at each well pad facility:

- Access roads to the facility;
- Communication (internet to the site whether that be Ethernet or wireless);
- Electrical substation and power distribution lines; and
- Metering stations for brine.

18.4 Lithium Processing Facility

The lithium processing facility has been assumed to be located along the I-30 corridor between Mount Vernon and Sulphur Springs. A siting study for the lithium processing facility will be completed in the next phase of work. The processing facility will include the following major areas and supporting infrastructure facilities:

- Brine preparation area;
- Lithium extraction;
- Lithium concentration and purification;
- Lithium conversion; and
- Product handling.

The following auxiliary infrastructure facilities are associated with the lithium process facility:

- Access/security checkpoint;
- Perimeter fencing;
- Weigh scale(s);
- Internal access roads;
- Communication (phone lines, internet);
- Electrical substation and power distribution lines for energy supply;
- Natural gas metering station and distribution lines for natural gas supply;
- Sanitary wastewater disposal lines and processing pond;

- Solid waste disposal; and
- Buildings:
  - Administrative office and laboratory;
  - Warehouse(s);
  - Workshop(s);
  - Storeroom(s);
  - Shipping and receiving.

18.4.1 Sour Gas Disposal

Two of the three exploration wells sampled on the Project area did not encounter sour gas. The PEA has assumed no sour gas pipeline or third-party disposal is required.

18.4.2 Shipping and Receiving Facilities

The dried and cooled final lithium carbonate product will be placed into 500 kg or 1,000 kg bulk bags and loaded into trucks that will transport it off site.

Chemicals and reagents required for operation and maintenance of the processing facility will be received through truck unloading stations and stored within containment areas.

18.5 Power Supply and Distribution

Power for the Project will be supplied by energy from the power grid. An overhead transmission line will provide power to each of the well pad areas and will include a small substation for line termination and transformation to facility voltage level. In case of supply interruptions, standby diesel generators could be utilized to provide backup power.

The production well pad facilities and lithium processing facility will require new substations and transmission lines. The breakdown of electricity consumption for the wellfield and lithium processing facility is provided in detail in Table 18.1. The total annual energy demand of the Project is 963,600 MWh.

Table 18.1: Project Power Requirements

Area	Annual Energy Requirement (MWh)
Wellfield	455,520
Lithium Processing Facility	508,080
Total	**963,600**

18.6 Fresh Water Supply and Distribution

An estimated annual volume of 7.5 million m^3 fresh water will be supplied to the lithium processing facility. The PEA assumes supply wells will be installed, but other fresh water sources will be further investigated. The fresh water supplied will be stored in the plant for the following uses:

- ***Fire Water*:** The tank will be designed such that sufficient water will be reserved for fire water use;

- ***Process Water:*** Process water will be obtained directly from the tank without further processing for general plant use;
- ***RO/Potable Water:*** RO water will be generated onsite using a RO treatment unit primarily for use in the sorbent washing process, ion exchange units, demineralized water filtration unit, and potable water applications;
- ***Demineralized (Demin) Water:*** Demineralized water will be generated onsite using a demineralization, filtration unit designed to produce demineralized water primarily used for elution in DLE columns, and dilution of hydrochloric acid and sodium hydroxide solution as needed; and
- ***Cooling Water Make-up:*** Fresh water will be added to make up cooling water demand from time to time.

18.7 Cooling Water

The cooling water from the evaporative cooling towers will be used to cool the following streams in the lithium processing facility.

- Closed heat exchange loop to cool incoming degassed brine;
- Utility cooling water provided to the bicarbonation stage;
- Reverse osmosis systems stream temperature adjustment;
- Carbon dioxide (CO_2) recovery and recompression system; and
- Lithium carbonate product dryer.

18.8 Natural Gas and Fuel

Natural gas for the lithium processing facility is expected to be sourced from existing industrial natural gas supply lines near Mount Vernon, Texas**.** These supply lines are a critical component of regional energy infrastructure and managed through a network of major intrastate and interstate pipeline operators. Since Mount Vernon sits within Fraounty and the broader East Texas region, it benefits from heavy midstream infrastructure due to its proximity to the historical East Texas gas production fields. The gas will be distributed to the steam boiler and lithium carbonate dryer at an approximate rate of 12,200 Sm^3/d.

Diesel fuel storage and dispensing will be provided outside the processing facility for use by light vehicles on site.

18.9 Steam Supply

The lithium processing facility will be equipped with a natural-gas-fired boiler unit to provide approximately 6,600 kg/h of medium pressure steam to the plant. The steam will primarily be used in the evaporator unit (after concentration and purification circuits) and will also be used at the lithium carbonate crystallization and various area heaters throughout the plant.

18.10 Compressed Air

Compressed air for the lithium processing facility will be supplied through a bank of compressors.

18.11 Infrastructure for Bromine Processing Facility

In addition to lithium production, the Project contemplates a secondary opportunity case for bromine recovery from lithium-depleted brine. The potential to add a bromine processing facility will require additional power, natural gas, reagent receiving and storage capacity as well as process and auxiliary equipment.

The bromine production from the lithium-depleted brine requires a significant amount of steam for reboilers, chlorine vaporization, vacuum injection, and separation (stripping) of the bromine from the brine. The demand for steam is expected to be supplied by natural gas-fired boilers, resulting in an estimated natural gas demand of approximately 81,800 Sm^3/d and steam requirement of approximately 42,800 kg/h.

The energy demand for bromine production operation is estimated at 16,300 MWh/a, and it will be supplied from the electricity grid.

Additional infrastructure located at the facility will be required for the receiving and storage facilities for chlorine, caustic solution and other reagents.

19. Market Studies and Contracts

19.1 Lithium Market

In Q2 2026, Standard Lithium retained Global Lithium to prepare an independent market study report discussing the lithium market with a focus on lithium chemicals. Analysis of the market study is summarized in the sections that follow.

Lithium is central to the energy transition. Despite rapid growth in recent years, it remains a small market with limited liquidity. Unlike bulk commodities the lithium industry behaves more like a specialty chemical market than a mature commodity market. China accounts for over 80% of global lithium chemical demand with two companies accounting for roughly 40%. This concentration gives a small number of Chinese participants significant influence over purchasing behaviour, inventories, and market sentiment.

Battery-quality lithium carbonate is not yet a fungible product; specifications vary by producer and most buyers require rigorous qualification testing before accepting new supply.

19.1.1 Demand

In 2010, global demand for lithium chemicals was less than 100,000 tonnes of LCE, concentrated in industrial applications such as glass, lubricants, air treatment, and organometallics. Lithium-ion batteries were primarily used in portable electronics.

By 2020, global demand exceeded 300,000 tonnes LCE, with batteries representing more than 60% of total consumption. Growth has since been driven by electric transportation (EV/HEV), battery energy storage systems (BESS), and other battery-related uses.

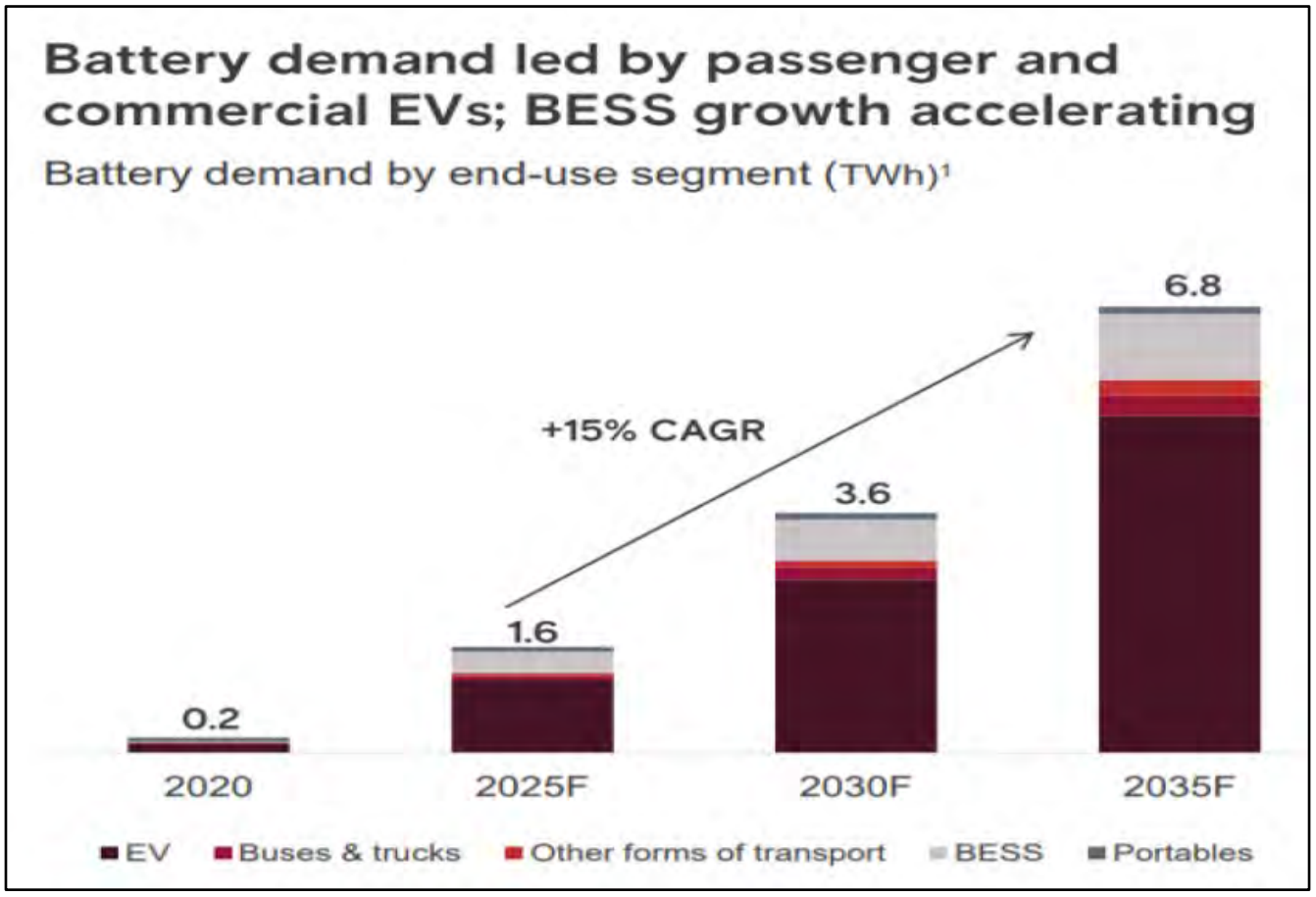
In 2026, demand will approach 1.9 million tonnes LCE. For 2030, the demand is projected to reach approximately 3.2 million tonnes LCE. Consensus forecasts for battery terawatt hour demand beyond 2035 continue to increase each year as the category expands into larger vehicles.

In China, use of large format electric trucks and autonomous electric mining vehicles is growing rapidly with forecasts predicting these categories will account for 12% of global lithium demand by 2030. In 2020, the category rounded to 0% of demand.

Figure 19.1 shows forecasts for battery demand in 2035 of approximately 6.8 TWh (6,800 GWh), equivalent to approximately 5.5 million tonnes LCE. BESS adoption has rapidly accelerated since 2022 and is expected to comprise a growing share of battery demand.

Asia is expected to remain the largest lithium chemical market over the next decade. China currently produces over 80% of global lithium-ion batteries and remains the largest EV market. Korea and Japan are also battery producers but at much lower levels than China. Battery production in the US is expected to grow rapidly in the near future especially as both General Motors and Ford plan to redeploy underutilized EV battery capacity for the growing BESS market in the US.

Figure 19.1: Battery Demand Forecast



Note: CAGR = Compound Annual Growth Rate; F = Forecast
[1]Source: Benchmark Minerals Insight 3Q 2025. Rio Tinto Economics

Additionally, battery-quality lithium carbonate remains essential for major cathode chemistries, including lithium iron phosphate (LFP), lithium manganese iron phosphate (LMFP), and nickel-cobalt-manganese types such as NCM523 and NCM622. LFP and LMFP are widely used in mass-market EVs, electric buses, and grid-scale energy storage systems, particularly in China, with adoption expected to accelerate in North America and Europe as costs decline and local supply chains mature.

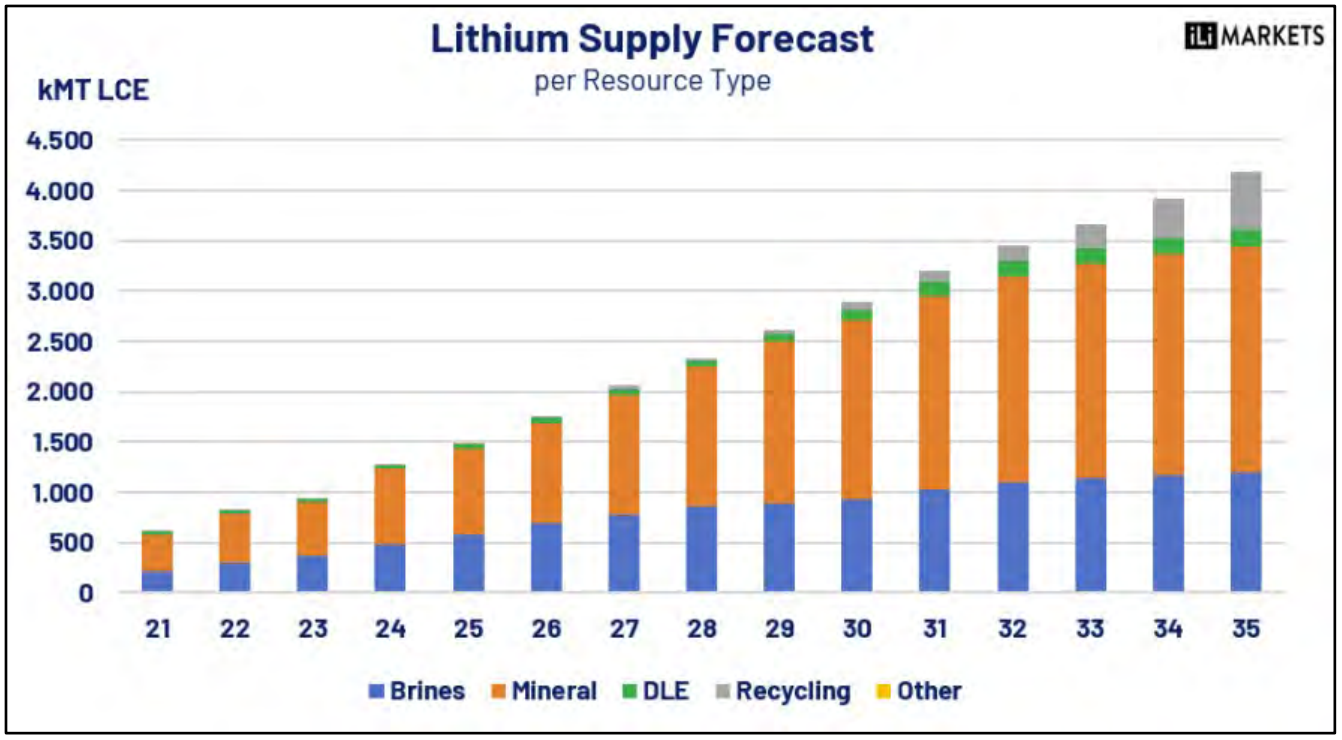
19.1.2 Supply

Battery-quality lithium carbonate will lead market growth over the next decade, followed by lithium hydroxide. These chemicals are produced primarily from two types of resources: hard rock (spodumene) and brines, although it is expected that there will also be production from sedimentary deposits (also referred to as clay) later in this decade as projects come online.

Western Australia is currently the largest global source of lithium values with estimated production of almost 500,000 tonnes of LCE in 2026. China is the next largest producer from their domestic resources, followed by Chile, Zimbabwe, Argentina and Brazil. Several countries in Africa along with the US, Canada and Europe also produce modest amounts of LCE. China dominates the conversion of various lithium feedstocks from around the world into

lithium chemicals with over 95% of hard rock conversion capacity. The projected mix of lithium supply sources through 2035 is shown in Figure 19.2. Hard rock (shown as "Mineral") is expected to remain the largest supply source, while both conventional brine and DLE are projected to increase their contributions over the forecast period.

Figure 19.2: Lithium Supply Forecast



Source: iLi Markets, 2026

High prices in 2021–2022 triggered a rapid supply response in China, accelerating development of domestic lepidolite assets in Jiangxi Province, and brine in Qinghai. In addition, new hard-rock supply from Africa came into the market alongside higher spodumene exports from Australia.

By mid-2023, these additions, combined with greater imports of African lithium-bearing ores into China, created an oversupply financed in large part by aggressive strategies from two major Chinese battery producers, CATL and BYD. These two companies, accounting for roughly 50% of global cell output, pursued vertical integration, supporting lithium production even at low or negative margins to secure feedstock, drive down global lithium chemicals pricing, and improve their overall battery economics.

Lithium carbonate prices below $10,000/t curtailed investment in many Western projects, where longer development timelines, financing constraints, and regulatory hurdles slowed the pace of new capacity additions compared with the speed of project execution in China.

China’s efforts to keep global average lithium carbonate prices below the mid-teens were effective until strong demand growth put the market back in a balanced situation and depleted the inventory overhang developed in 2023–2024.

Global Lithium expects the market to be undersupplied rather than oversupplied into the 2030s based on strong battery demand in both transportation and BESS.

Lithium recycling is expected to remain a minor contributor until at least the late 2030s and is unlikely to materially offset primary supply requirements before the 2040s.

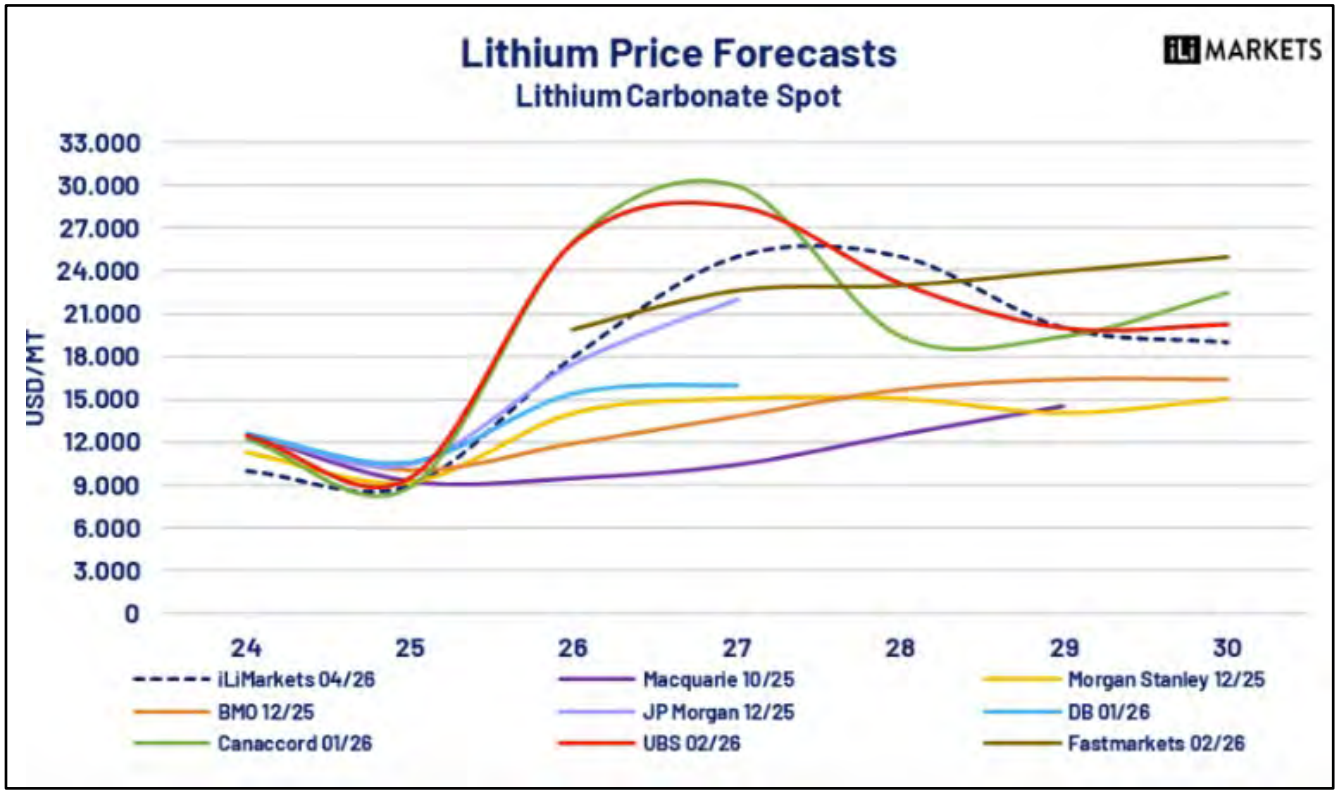
19.1.3 Price

Lithium carbonate prices have been highly volatile in recent years. After bottoming near $5,000/t in 2020, prices peaked at over $80,000/t on the Chinese spot market in 2022. Ex-China contract prices averaged $60,000/t in 2023 before declining sharply as China brought on both the domestic lepidolite supply and imported spodumene and other lithium-containing minerals from Africa.

In 2025, regulatory changes in China resulted in what is thought to be the temporary closure of multiple high-cost hard rock mines due to both permitting and environmental issues. Although the supply/demand balance was impacted more by demand growth, the China mine closures contributed to lower domestic supply. Prices bottomed in mid-2025 and rose to the mid $20,000/t, as of mid-2026.

Figure 19.3 illustrates opinions regarding future lithium prices with a clear consensus that the price trend in the coming years will remain above the 2025 lows.

Figure 19.3: Lithium Price Forecasts



Source: iLi Markets, 2026

As production tonnes increase, the cost to produce lithium is expected to rise, supporting higher prices.

Additionally, new production in China from lepidolite and certain brines in Western China is under increasing regulatory pressure. On July 1, 2025, China's revised Mineral Resources Law took effect, closing permitting

loopholes that enabled several lepidolite mines in Jiangxi Province and brine operations in Qinghai to operate. This supports a projected market shortage in the second half of the decade. While volatility is likely to continue in the short term, structural demand growth and persistent project delays are expected to maintain price support.

19.1.4 Franklin Project Price Recommendation

Lithium prices are driven by changes in the supply/demand balance. A long-term forecast price assumption is intended to represent an average price over the evaluation period rather than an estimate of the price in any individual year. For the purposes of this PEA, Global Lithium recommends a long-term real battery-grade lithium carbonate forecast price assumption of $22,400/t as a basis for Project economics, which is below its forecast long-term average price of $23,500/t.

19.2 Bromine Market

In Q2 2026, Standard Lithium retained Carousel to prepare an independent market study report discussing the bromine and bromine derivates market as a potential product of the Franklin Project. Analysis of the market study is summarized in the sections that follow.

Bromine is a critical material that is essential for everyday life. Bromine's unique properties enable functionalities that are valuable and cannot be easily substituted. Bromine and brominated derivatives are key inputs for consumer electronics, servers, EVs, deep well off-shore drilling, water disinfection, pharmaceuticals, and personal care products. The global bromine market is valued at $2.8-3.2 billion annually (2025–2026).

Bromine is a rare resource and is largely found in the Dead Sea region and the Smackover Formation with smaller operations existing in China and India. Most large bromine producers operate integrated production facilities in which derivatives production and elemental bromine are produced in the same plant. This arrangement allows for economies of scale, reduces the need for expensive and dangerous transportation of elemental bromine, and allows for recycling of bromine byproducts and waste streams. The market for bromine and derivatives is highly consolidated with three major companies accounting for more than 80% of production and sales.

The scarceness of bromine resources, high capital requirements for integrated production facilities, and technical requirements act as barriers to entry for new entrants in the bromine market. The combination of bromine's high in-use value, consolidated supply, and barriers to entry has allowed the three largest bromine producers to enjoy high margins for decades and has created an attractive entry point for those with the necessary resources.

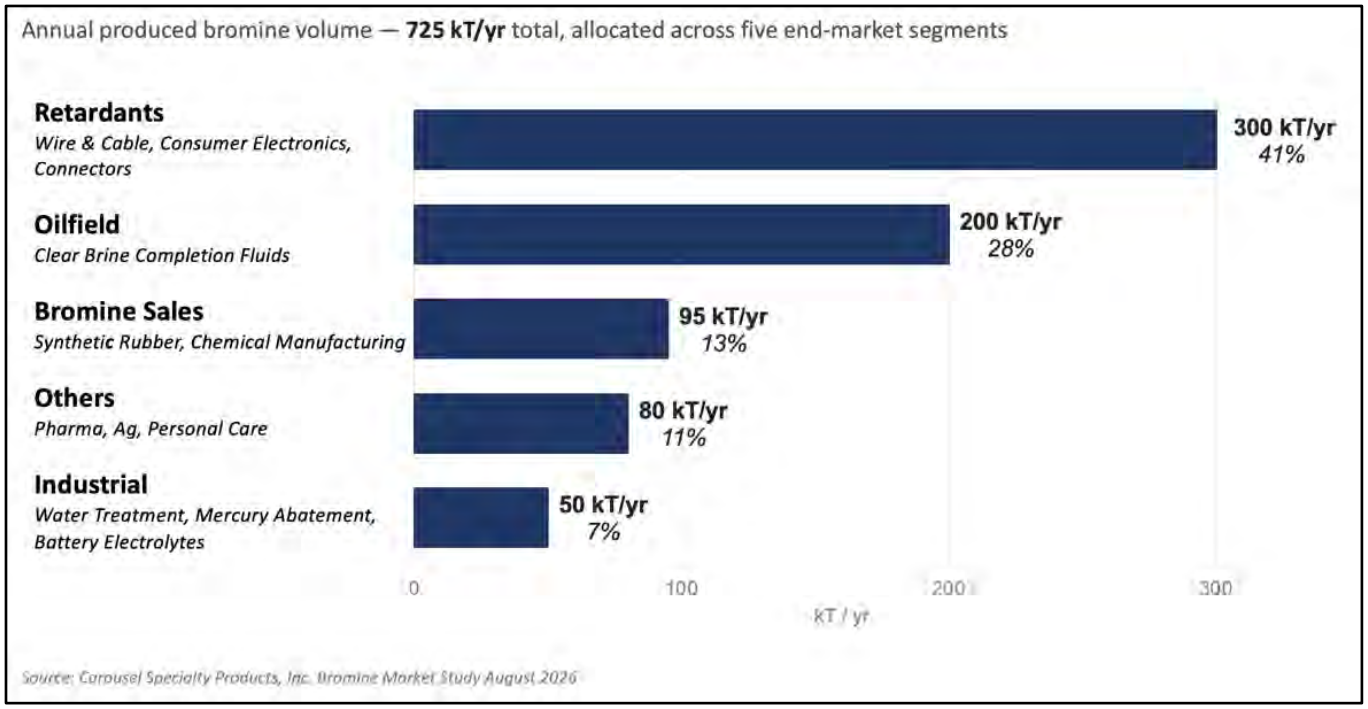
19.2.1 Demand

Global elemental bromine demand for 2025–2026 is estimated at 725,000 tpa. Due to the expense and difficulty of transportation, less than 15% is sold as elemental bromine with the balance being derivatized by the producer. Significant bromine derivatives include flame retardants for electronic applications, clear brine fluids (heavy salt solutions) for oilfield completions, and specialty industrial intermediates used across a wide range of commercial sectors (Figure 19.4).

The global bromine market has historically grown at a rate near gross domestic product (GDP). The near-term market demand for bromine is underpinned by growth across electronics, oilfield clear brine fluids, and fire protection, while long-term demand is sustained by the broad use of bromine in consumer and industrial applications. Key end-markets such as electronics and oilfield are projected to outpace GDP to support CAGRs of 4.0-5.5% in the near to

mid-term. Over the next 25 years, the overall bromine growth rate is conservatively estimated at 2.0-3.5%. This long-term estimate accounts for offsetting macrotrends, such as application efficiency gains and product miniaturization that historically dampen growth rates to levels at or slightly below GDP.

Figure 19.4: Market Size by Segment



Source: Carousel, 2026

19.2.2 Supply

Bromine supply is highly consolidated around the Dead Sea in the Middle East and the Smackover with smaller operations in China and India. ICL is the largest producer, operating on the Israeli side of the Dead Sea. Albemarle Corporation operates in Southern Arkansas extracting from the Smackover and has a joint venture operating on the Jordanian side of the Dead Sea. The third largest global player, Lanxess is also operating in Southern Arkansas. In addition, Tetra Technologies has announced and is constructing a bromine extraction plant in Southern Arkansas but is not yet in production.

Given the concentration of production in Southern Arkansas, North America is a significant producer of bromine and derivatives accounting for 30-50% of global supply. North America is also a significant consumer, particularly of oilfield and industrial bromine derivatives.

19.2.3 Market Strategy

Three producers account for more than 80% of global bromine supply. As a result, the bromine market functions as a high-margin oligopoly rather than a traditional commodity market. Existing bromine suppliers prioritize maintaining attractive margins over maximizing volume and market share. This structural discipline is evidenced by new supply

from India and China entering the market without corresponding price retaliation, which is typical for commodity markets driven by supply-and-demand dynamics.

The initial market entry volume recommendation for Standard Lithium is 50,000 tonnes, which represents only 6.9% of the estimated 725,000 tonnes global bromine market. The market can support additional bromine sales should Standard Lithium decide to increase volumes beyond the initial entry volume. Focus on production of bromine derivatives is recommended given the low demand for elemental bromine.

Brominated salts of sodium bromide, calcium bromide, and zinc bromide are known as clear brine fluids (CBF) used in deep oil and gas well completions primarily found offshore. Bromine CBFs are used for hydrostatic pressure control and wellbore cleanout following drilling operations. Bromine CBFs are the ideal market for Standard Lithium to deploy bromine from the Franklin Project.

Below are the key attributes for prioritizing bromine deployment in the CBF market:

- Low manufacturing cost for bromine CBF products.
- Bromine CBF products are mature technology with relatively low customer acceptance barriers.
- Proximity to US Gulf Coast ports serving the largest global CBF market – the Gulf of America.
- The growth path for the bromine CBF market may outpace other bromine segments as the oil industry shifts focus from onshore shale to deep-water offshore oil and gas development. Deep-water offshore resources offer substantially higher economics and break-even costs that are up to 50% lower than onshore shale projects. Furthermore, US shale resources have matured, leaving mostly subprime targets with higher break-even costs.

19.2.4 Franklin Project Price Recommendation

The market price benchmark for bromine and bromine derivatives is $4,000/t for 2026. Bromine pricing is expected to rise over the lifecycle of the Franklin Project, driven by growth in electronics and oilfield applications, strong underlying market fundamentals, and producer discipline. While higher future pricing is anticipated between 2030 to 2050, Carousel recommends a conservative baseline model assuming a flat, long-term forecast price of $4,000/t throughout this period.

19.3 Contracts

There are currently no transportation, handling, sales and hedging, forward sales contracts or arrangements in place or under negotiation for the Franklin Project.

19.4 Qualified Person’s Comments

In accordance with Section 3.2 of this Report, QP Wendlandt has reviewed the lithium and bromine market studies and analyses, and their results support the assumptions used in this Report.

20. Environmental Studies, Permitting, and Social or Community Impact

20.1 Introduction

Given the preliminary nature of the Project, environmental baseline and social studies are commensurate with the level of assessment completed to date. This section summarizes the permitting framework, closure planning considerations, and environmental and stakeholder engagement activities expected to support future project development and regulatory approvals.

20.2 Environmental Considerations

The Franklin Project will involve the pumping of brine from the Smackover Formation, removal of lithium from the brine and reinjection of the lithium-depleted brine back into the same formation. In addition to lithium production, the Project contemplates a secondary opportunity case for bromine recovery from lithium-depleted brine. Environmental considerations associated with the Project include obtaining and complying with required permits, obtaining relevant baseline information for permitting, management of waste, water management and closure.

A number of permits will be required for construction and operation of the Franklin Project. Under the current scenario, a federal nexus (federal funding, federal permitting beyond 404 Nationwide permits) requiring compliance with the NEPA is not anticipated; however, final determination cannot be made until baseline data has been collected and Project definition is generally completed. Permits for air emissions, surface waters discharge and management, resources extraction, underground injection, and waste management will be the primary permits required for construction and operation. Depending on the location of proposed pipelines, a Section 404 Dredge and Fill permit will likely be required from the USACE. It is likely that a nationwide 404 permit for impacts to Waters of the US would be required rather than an individual permit. If an individual permit is required by the USACE, NEPA compliance would likely be required through development of an Environmental Assessment (EA) or Environmental Impact Statement (EIS).

Permit application approvals may take more than a year including preparation time, agency review, public comment and approval. Planning for permitting requirements is critical in development of the overall schedule for the Project.

20.2.1 Environmental Baseline Studies

To date, no field baseline surveys have been conducted. A limited desktop study for potential threatened and endangered (T&E) species and jurisdictional waters was completed. Potential T&E species were identified using the US Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC), and jurisdictional waters data was obtained from the USFWS National Wetlands Inventory database. A search of the IPaC database resulted in two threatened species and five proposed threatened species with the possibility of occurring in the Project area, as shown below. Proposed species currently have no legal protection under the Endangered Species Act.

Threatened Species

- Piping plover (*Charadrius melodus*) – shorebird
- Rufa red knot (*Calidris canutus rufa*) – shorebird

Proposed Threatened

- Tricoloured bat (Perimyotis subflavus)
- Alligator snapping turtle (Macrochelys temminckii) – turtle
- Louisiana pigtoe (Pleurobema riddellii) – clam
- Texas heelsplitter (Potamilus amphichaenus) – clam
- Monarch butterfly (*Danaus Plexippus*) – insect

A review of data from the National Wetlands Inventory identified multiple aquatic resources throughout the area including the following types of aquatic resources:

- Fresh water ponds;
- Fresh water forested/shrub wetlands;
- Fresh water emergent wetlands; and
- Riverine habitat.

Baseline surveys required to support permitting would be those needed for 404 Dredge and Fill permitting through the USACE. Needed baseline surveys to comply with the 404 permit requirements include the following:

- Aquatic resources (jurisdictional waters delineation);
- Threatened and endangered species survey including habitat assessment;
- Section 106 cultural resources survey; and
- Vegetation survey.

Other baseline surveys that may be needed to support state permitting and or technical studies include surface and groundwater characterization, socioeconomics, land use and air quality.

20.2.2 Waste Management

Waste generated will include domestic wastewater, potential for sour gas collected from production wells, and domestic solid waste. A waste management plan will be developed to address disposal of any waste generated during construction and operation.

Water management will include stormwater (contact and non-contact), sanitary/domestic wastewater, cooling tower blowdown discharges, water treatment plant discharges, and spent brine management. Non-contact stormwater and cooling tower blowdown will be surface discharged. Contact stormwater will be managed with sediment basins and, if necessary, treated through the water treatment plant prior to discharge. Other wastewater generated on-site will be sent to a water treatment plant prior to discharge. Depleted brine will be injected into the Smackover Formation.

20.3 Permitting

The following sections identify the anticipated permits that would be required for construction and operation of the Franklin Project. As of the date of this report, no permit applications have been filed with the regulatory agencies.

20.3.1 Overview

The primary permitting agencies are the RRC and the TCEQ. Other agencies will include the Texas Department of Transportation (TxDOT), the USACE, state, counties and municipalities.

The RRC is the state agency with jurisdiction over issuance of permits for brine extraction and injection wells. TCEQ is the state permitting agency for air quality permits, stormwater permits, water management permits (drinking water, wastewater), Section 401 Water Quality Certification, and domestic waste management. Each of the separate programs with TCEQ issues permits specific to the resources within that program. Water related permits include drinking water supply, stormwater management (construction and industrial activity), and wastewater treatment and discharge. The land program issues permits and oversees waste management, remediation, septic systems, and storage tanks (above and below ground). The air program issues air quality permits for construction and operation. The Underground Injection Control (UIC) program issues permits for injection wells including Class V wells, which would be required for the Franklin Project.

The USACE is the permitting authority for construction activities impacting waters of the US (WOTUS), and the Franklin Project is within the jurisdiction of the USACE Fort Worth District. The USACE issues two types of authorizations, nationwide permits for certain categories of activities with minimal impacts to WOTUS, and an individual permit for all other activities.

20.3.2 Brine Production and Injection Wells

In 2023, the Texas legislature gave the RRC authority to regulate brine production wells and Class V injection wells. The RRC will issue permits to drill both the production wells and the injection wells. Following submittal of the applications for brine operation and Class V injection well, the timeframe for permit issuance is six to 12 months. The permit for well drilling requires one to three months to be issued.

Brine operation permit application information includes the following:

- Project description and design;
- Brine field characterization;
- Confining zone integrity evaluation;
- Plat maps showing ownership and Project boundaries; and
- Financial assurance documentation.

Class V injection well permit application information needed includes the following:

- Casing and cementing plans;
- Mechanical integrity testing procedures;
- Injection pressure data; and
- Area of review and monitoring plan.

20.3.3 Air Emissions Permitting

The TCEQ will issue an air permit based on expected emission sources and volume of emissions. The most likely scenario for the lithium processing facility will be to obtain a New Source Review (NSR) permit. If emissions exceed specific thresholds for emissions, additional permitting requirements could include Prevention of Significant

Deterioration (PSD) permit and Title V operating permit. The timeline for obtaining an NSR permit is 12 or more months depending on the level of emissions. The permit must be in place prior to initiating construction. Design phase information will be utilized to determine the emissions rates for the permit application. The calculations will take into consideration the production throughput, chemical reactions, and type of air emission controls used at the facility.

20.3.4 Water Discharge Permitting

TCEQ issues multiple NPDES permit variations for discharge to surface waters depending on the activity associated with the permit request. The NPDES permits applicable to the Franklin Project may be categorized as general permits. These permits include:

- ***Construction General Permit (Construction Stormwater):*** The TCEQ water program has issued a general permit for discharges of stormwater runoff from construction (earthmoving) activities that disturb greater than 0.4 ha (1 acre). The objective of permit TXR150000 is to eliminate or reduce the transport of sediments and construction related contaminants. The general permit requires development and compliance with a Storm Water Pollution Prevention Plan (SWPPP) specific to the construction site. A Notice of Intent for coverage under the general permit and SWPPP are required to be submitted to TCEQ. The SWPPP includes management practices and controls to minimize sediment and contaminant transport off the Project area. Once authorized, the permit is in effect until the disturbed area is stabilized after construction is completed. The current permit TXR150000 expires March 5, 2028.
- ***Multi-Sector General Permit (Stormwater, Non-contact Wastewater, and Sanitary Wastewater):*** A general permit (TXR050000) has been issued by TCEQ for stormwater discharges from industrial facilities. Non-stormwater discharges that may occur at the lithium processing facility allowed under the Multi-Sector General Permit include potable water sources, wash water with detergents, uncontaminated condensate, water from footing drains, dust suppression water, and windblown mist from cooling towers. A Notice of Intent will need to be submitted for initiation of coverage under this permit.
- ***Industrial Wastewater Discharge Permit:*** If the Franklin Project operations generate wastewater that requires disposal through a discharge point to the surface water, an Industrial Wastewater Discharge Permit will be required. Depending on the contaminants in the discharge, treatment may be required prior to discharge. Obtaining an Industrial Wastewater Discharge Permit may take up to 12 months or more.
- ***Sanitary Wastewater:*** Treated domestic (sanitary) wastewater could be discharged to a local Publicly Owned Treatment Works (POTW) or through a septic system. For discharge to a POTW, approval and a possible permit may be required by that POTW. For domestic wastewater only septic systems, a Texas Land Application Permit may be required for drain fields associated with the septic system.

20.3.5 Public Water Supply

Several options exist for supplying potable water for the lithium processing facility and other associated operations. These options include supply from a local municipal system, trucked in and stored in tank(s), or providing through development of a public water system permit. The TCEQ issues approvals for public water systems serving non-municipal potable water. The Franklin Project will require fresh water sources to support the lithium extraction process and provide potable water for personnel use. A system for Standard Lithium would be classified as a non-community, non-transient and non-municipal water system. The likely source would be groundwater which would be disinfected,

stored, and distributed following TCEQ rules. Following submission of engineering design, construction plans, and specifications that meet standards, the TCEQ will issue an approval to Standard Lithium for the potable water system.

20.3.6 Clean Water Act Section 404 Permitting

Section 404 of the Clean Water Act established a statutory mechanism for control of dredged or fill material into WOTUS. The USACE has final administrative authority to determine the status of land surface as WOTUS. Currently, there are scientific criteria used as indicators of WOTUS to allow the USACE to make a Jurisdictional Determination (JD). Generally, developers will prepare a JD for the USACE to expedite their decision-making process. A site visit by the USACE may be required following submittal of a JD or if the USACE is developing its own JD.

USACE authorizes impacts to WOTUS through either a nationwide or an individual Section 404 permit. Nationwide permits are structured for specific activities and minimal impacts, usually limited to less than 0.4 ha (1 acre), and do not require lengthy agency review. Generally, NEPA compliance has been conducted for nationwide permits; thus, additional NEPA compliance is not required. However, compliance with Section 7 (Endangered Species Act) and Section 106 (National Historic Preservation Act) must be completed for both nationwide and individual permits. Surveys in WOTUS areas (including a buffer) would be required for cultural resources and the presence of threatened and endangered species. There have been 60 nationwide permits issued by the USACE in 2026, with the following potentially applicable to the Franklin Project:

- NWP 7 – Outfall Structures and Associated Intake Structures;
- NWP 12 – Oil or Natural Gas Pipeline Activities;
- NWP 14 – Linear Transportation Projects;
- NWP 39 – Commercial and Institutional Developments;
- NWP 43 – Stormwater Management Facilities;
- NWP 57 – Electric Utility Line and Telecommunications Activities; and
- NWP 58 – Utility Line Activities for Water and Other Substances.

If a nationwide permit is not applicable due to the amount of WOTUS disturbance or if the USACE deems it in the public interest, then an individual permit would be required. An individual Section 404 permit may require a year for issuance by the USACE and, like nationwide permits, will mandate compensatory mitigation for impacts to WOTUS. It is also likely that NEPA compliance through the development of an EA or EIS would be required. At this time, it is undetermined whether an individual 404 permit or a nationwide permit would be required.

When considering the impacts to WOTUS, the lithium processing facility, wellfield (supply and disposal), pipelines, roads, and utilities may be considered a singular project by USACE when evaluating eligibility for a nationwide or an individual Section 404 permit.

20.3.7 Section 401 Water Quality Certification

A Section 401 Water Quality Certification is required whenever a project needs a federal permit or license for an activity that may result in a discharge to waters of the US requiring a USACE Section 404 permit. The certification confirms that the project will comply with Texas water quality standards. The TCEQ is the primary certifying authority.

20.3.8 Resource Conservation and Recovery Act

A Resource Conservation and Recovery Act (RCRA) Hazardous Waste Permit is required of any facility that performs treatment, storage (greater than 90 days), or disposal of waste meeting the criteria to be classified as hazardous. The Franklin Project is not anticipated to conduct any of the activities requiring RCRA permit authorization. Process waste generated by the facility is not expected to meet the hazardous classification. Small quantities of universal wastes (batteries, pesticides, mercury containing equipment, lamps, electronics, and aerosol cans) may be generated by the operation and maintenance of the site. Title 40 Code of Federal Regulations, Part 273 provides an alternative set of management standards for universal wastes in lieu of regulation as hazardous waste.

20.3.9 Construction Permits, Approvals, and Plans

Engineering plans sufficient to allow calculation of probable emission levels, land disturbance, water use, and wastewater quality will be required for preparation of many of the permit applications. Each permit will require its data and engineering needs including drawings. Depending on the permit and degree of complexity, the time necessary to complete individual permit applications may range from several months to a year. These timelines must be considered in the schedule development for the Project.

The regulatory actions and permits discussed have been identified as required or probable for construction and operation of the Franklin Project. Table 20.1 provides a list of permits that may be needed for the Franklin Project.

20.4 Social and Community Impact

The economy of the Franklin Project area is principally supported by agriculture, ranching, forestry, and oil and gas production. Major agricultural activities include cattle ranching, dairy operations, and poultry production. The area also has a long history of hydrocarbon development associated with the Smackover Formation, and extensive oil and gas infrastructure remains present throughout the region. Timber resources and forest-related activities contribute to the local economy. Emerging lithium and critical mineral development associated with the Smackover Formation represents a potential new economic sector for the region.

Standard Lithium has begun stakeholder and community engagement with some of the local communities and organizations in East Texas. This outreach has included the following:

- Contributions to local non-profits and charities;
- Engaged with city and county officials to provide Project updates and foster open communications;
- Joined the Franklin County and Sulphur Springs Chambers of Commerce;
- Presented a Project update on company activities to the Mount Vernon Rotary Club in August 2025; and
- Engaged with the Northeast Texas Community College, met with superintendents of local school districts, and contributed to sponsorships of local school athletic programs in Mt. Vernon and Mt. Pleasant in the first quarter of 2026..

A formal social impact study will likely be required for this Project to assess the potential impacts on community resources. It is likely that public meetings will be necessary as a requirement for several of the permits. There is an opportunity for a positive social impact on the surrounding communities. The community will benefit from the construction phase due to the need for skilled labour and other workers/contractors to complete construction. The

community will also benefit from the additional opportunities for a labour market skilled in similar operations once the lithium processing facility has been constructed. Local businesses that supply goods and services to the Franklin Project may also benefit from the influx of capital associated with construction and operation of the Project. Potential negative impacts on schools, roads and other infrastructure could occur.

20.5 Environmental Management and Closure Plan

Environmental management plans will be developed, and an environmental management system will be implemented to guide compliance with the regulatory programs. The environmental management plans will address the various aspects of the design, construction, commissioning, and operation phases of the Project, identify the key environmental issues from the various Project phases, and provide plans and actions that will be undertaken to manage them effectively. The environmental management system will be used to track compliance requirements and schedule needed activities such as sampling and analysis, agency submittals, permit renewal, and other compliance requirements.

A closure plan will be developed to comply with requirements for decommissioning facilities with minimal need for further maintenance and minimal impact on the environment. The closure plan will address reclamation or rehabilitation efforts, if required, to permanently cease operation. Closure and abandonment of the Class V UIC wells will be included and will follow the requirements of the RRC and TCEQ. The RRC requires financial assurance to plug and abandon brine production and injection wells and to remove waste, storage vessels, and equipment. The financial assurance can be in the form of cash, an individual or blanket performance bond, or a letter of credit.

The closure and reclamation cost estimate is based on 36 production wells, 36 injection wells, 36 fresh water wells, well pads, pipelines, roads, power lines, and the processing facility. The process facility may not be subject to any state or federal formal closure plan requirements; therefore, the cost of decommissioning the process facility has not been included in the estimated reclamation cost of $34.9 million. The financial assurance amount that the RRC could require is estimated to be $18 million for the abandonment of the production, injection, and fresh water wells, and removal of equipment from the well pads.

Table 20.1: Anticipated Permits Required for Advancing the Franklin Project

Permit / Approval	Agency	Trigger	Phase	Review Duration	Critical Path
Section 404 Permit	USACE	Wetland/WOTUS impacts	Siting	6–18 mo.	Yes
RCRA Subtitle C Permit (if TSDF)	TCEQ/EPA	Onsite treatment/storage/disposal	Design	2–5 yr	Major
Industrial Solid Waste Authorization	TCEQ	Non-hazardous process wastes	Design	3–12 mo.	Secondary
Greenhouse Gas Review	TCEQ	Large combustion sources	Design	3–6 mo.	Secondary
Industrial Wastewater Discharge Permit	TCEQ	Surface discharge	Design	12–18 mo.	Yes (if discharge)
Road Access / Driveway Permit	TxDOT	State highway access	Design	2–6 mo.	Secondary
PSD Permit (if triggered)	TCEQ/EPA	Major-source emissions	Design/Construction	18–30 mo.	Yes
NSR Air Permit	TCEQ	Boilers, dryers, crystallizers, emissions units	Design/Construction	12–24 mo.	Yes
Floodplain Development Permit	County	FEMA floodplain disturbance	Development	2–6 mo.	Secondary
Brine Production Project Permit	RRC	Commercial lithium brine extraction	Development	6–12 mo.	Yes
Class V Spent Brine Return Injection Well Permit	RRC	Reinjection of lithium-depleted brine	Development	6–12 mo.	Yes
Brine Unitization / Field Development Approval	RRC	Brine production unit establishment	Development	6–12 mo.	Yes
Drilling Permits – Production Wells	RRC	New brine extraction wells	Development	1–3 mo.	Secondary
Drilling Permits – Injection Wells	RRC	New injection wells	Development	1–3 mo.	Secondary
Water Supply Wells Registration/Permits	GW Cons. District (if applicable)	Fresh water production wells	Development	1–6 mo.	Secondary
401 Water Quality Certification	TCEQ	Generally required if a 404 permit is required	Development	3–9 mo.	
Industrial Stormwater Permit (TXR050000)	TCEQ	Process facility operations	Construction	2–6 mo.	No
TPDES Construction Stormwater NOI (TXR150000)	TCEQ	>0.4 ha (1 acre) disturbance	Construction	1 mo.	No
Public Water System Authorization	TCEQ	Potable water system	Construction	3–9 mo.	Secondary
Building Permit	County/Local Authority	Processing facility construction	Construction	1–4 mo.	Secondary
Spill Prevention, Control and Countermeasure Plan (SPCC)	US EPA	For facilities to store, transfer, use or consume oil or oil products, and store more than 1,320 gallons in total in aboveground containers	Construction and operation	1-2 mo.	No
Hazardous Waste Generator ID	EPA/TCEQ	Hazardous wastes generated	Startup	1–2 mo.	No
Title V Operating Permit	TCEQ	Major source	Operations	12–18 mo.	No
Used Oil Registration	TCEQ	Maintenance activities	Operations	<1 mo.	No

21. Capital and Operating Costs

21.1 Capital Costs

21.1.1 Summary

Table 21.1 summarizes the Project's initial capital cost estimate by major scope area including all costs (e.g., brine production and disposal, lithium processing facility, ancillary infrastructure, power supply infrastructure and indirect costs, owner's cost and contingency) required to support the Project operations. Sustaining capital costs are estimated at $296 million. The overall life-of-project capital cost is $3,792 million.

The level of accuracy for the estimate is -30%/+50% and includes a contingency of 20%. Costs have a base date of Q2 2026 and are provided in US dollars.

Table 21.1: Initial Capital Cost Estimate

Description	Cost ($ million)
Wellfield	975
Brine Preparation	103
Lithium Extraction	325
Lithium Purification / Concentration	242
Lithium Conversion	205
Lithium Product Handling	75
Utilities, Chemicals and Reagents	58
Infrastructure	175
Subtotal	**2,158**
Project Indirect Costs	388
Owner's Costs	367
Contingencies	583
Total	**3,496**

Note: Figures may not sum due to rounding.

21.1.2 Basis of Estimate

The estimate followed a capacity-factoring methodology suitable for the estimate's level of accuracy. The SWA Project was developed to a DFS level in Q1 2025. It is similar to the Franklin Project in terms of primary scope components; methods of brine feed, treatment, conditioning, minerals extraction, impurities removal, conversion to product, disposal of waste, design concepts, and configuration of facilities. It is situated in a setting similar to the Franklin Project, with comparable access to infrastructure, services, and utilities; and labour force availability, skill level, cost and productivity. Adjustments were applied to estimated costs of specific areas where differences are known and significant. The capacity-factoring was made with the application of the 0.6 rule to account for economies of scale.

The following are the basic assumptions, qualifications and limitations of the estimate:

- Estimate date is Q2 2026;

- Costs obtained from the SWA DFS were escalated to the estimate date of Q2 2026. No further escalation was made from Q2 2026 forward;
- Costs were estimated in US dollars. No allowance has been made for foreign currency exchange rate fluctuations;
- Growth allowances were included in the direct cost prior to addition of indirect costs and contingency; and
- Engineering on different scope areas advanced to varying levels of definition. Information on throughput, preliminary sizing of primary system components, and selected processing technologies were used to validate the comparison with the SWA Project and support the application of capacity-based scaling factors in developing the Franklin Project costs.

The following items were not considered in this cost estimate:

- Financing charges;
- Residual value of temporary equipment and facilities;
- Further project studies;
- Force majeure events;
- Future scope changes;
- Special incentives (e.g., schedule, safety, or others);
- Strikes or other work stoppages;
- Management reserve above the Project contingency included;
- Foreign exchange exposure; and
- Working capital.

21.1.3 Direct Costs

21.1.3.1 Wellfield

The direct initial capital costs for the wellfield include the brine supply and lithium depleted brine disposal and waste handling areas. Cost estimates developed from conceptual study engineering were used to validate the costs derived by capacity-factoring the SWA DFS cost estimates. Adjustments were made to the estimated cost through the application of conservative growth factors to account for the conceptual level of design and the potential quantity increases as engineering advances. An exception was made for waste handling, where the estimated cost was reduced to reflect the lower brine flow for the Franklin Project relative to the SWA Project on a per tonne of lithium carbonate production basis.

21.1.3.2 Lithium Processing Facility

The direct initial capital costs for the lithium processing facility include:

- Brine pre-treatment (brine preparation, conditioning and filtration);
- Lithium extraction (DLE);
- Lithium purification/concentration (ERO, chemical softening, ion exchange, OARO and MVR evaporation);
- Lithium conversion (first stage carbonation, bicarbonation and second stage carbonation);

- Lithium product handling (drying, milling and packaging);
- Auxiliary systems; and
- Infrastructure.

The Franklin Project engineering was advanced to a PEA level and used to validate the basis for comparison to the SWA Project. The following adjustments were made to the estimated cost on a per tonne of lithium carbonate production basis in comparison to the SWA Project:

- Brine pre-treatment costs were reduced due to the reduced brine flow rates in the Franklin Project;
- Boron ion exchange removal costs were increased to reflect the higher concentration of boron in the Franklin Project; and
- NaCl crystallization was removed and replaced by MVR evaporation based on the Franklin brine characteristics.

The direct initial capital costs for the auxiliary systems include generic costs related to the area, and reagents and consumables. The direct initial capital costs for the infrastructure include site-wide general expenditure, buildings, electrical rooms, site services and utilities, site electrical, site controls and communications, access and roads, and off-site infrastructure.

21.1.4 Indirect Costs

Indirect initial and sustaining capital costs include all items not directly related to the acquisition and construction of permanent Project assets. This includes:

- Construction contractors' indirect costs like administration and other overhead items;
- Engineering, procurement and construction management;
- Temporary site facilities like contractors' temporary construction facilities, site offices, temporary fencing, temporary roads, temporary parking, temporary lighting, and construction utilities (power supply, water supply, communications);
- Construction site consumables (fuel, lubricants, water, office supplies);
- Construction support services (surveying, testing, inspection, training, waste collection and management, security);
- Spares for commissioning and first year of operation;
- First fills;
- Vendor representatives; and
- Commissioning and start up.

The indirect costs were estimated by applying factors derived from the ratio of indirect costs to direct costs in the SWA Project capital cost estimate. The factoring was based on the assumption that the two projects have comparable scope, geographic location, site conditions, ownership, and execution model.

21.1.5 Owner's Costs

The owner's costs include all owner's staff and corporate overhead expenses related to the Project prior to operation including salaries, travel expenses, technology, utilities, land agreements, insurance and other management items.

The costs were estimated by applying factors derived from the ratio of owner's costs to direct costs in the SWA DFS capital cost estimate. The factoring was based on the assumption that the two projects have comparable scope, geographic location, site conditions, ownership, and execution model.

21.1.6 Contingency

A contingency reserve of 20% of total direct and indirect costs, including owner's costs is recommended given the preliminary nature of the study. The majority of costs were estimated by applying capacity-based factors to the SWA DFS capital cost estimate with a contingency of 12.3%.

21.1.7 Sustaining Capital Costs

The sustaining capital costs were estimated by applying factors derived from the ratio of sustaining capital costs to initial capital costs in the SWA Project capital cost estimate. The factoring was based on the assumption that the two projects have comparable scope, geographic location, site conditions, ownership, and execution model.

21.1.8 Bromine Process Facility

In addition to lithium production, the Project contemplates a secondary opportunity case for bromine recovery from lithium-depleted brine. Costs associated with the potential addition of a bromine processing facility were estimated by HGA based on a conceptual design and capacity-factoring estimation using a similar project that was developed to a feasibility level. Adjustments were made to specific scope areas like processing equipment, where necessary. Costs for equipment that required adjustment were established based on budget quotes from vendors. Table 21.2 provides a breakdown of all initial capital costs associated with the addition of a bromine processing facility. Sustaining capital costs are estimated at $34 million for an additional $442 million in total capital costs.

Table 21.2: Initial Capital Cost Estimate – Bromine Processing Facility

Description	Cost ($ million)
Bromine Processing Facility Direct Costs	257
Project Indirect Costs	46
Owner's Costs	44
Contingencies	61
Total	**407**

Note: Figures may not sum due to rounding.

21.2 Closure and Reclamation Costs

The costs associated with closure and reclamation described in Section 20 are summarized in Table 21.3.

Table 21.3: Closure and Reclamation Cost Estimate

Item	Cost ($ million)
Plug and Abandon Wells, Remove and Reclaim Well Pads	18.0
Pipelines and Road Reclamation	6.0
Waste Disposal	5.0
Closure Indirect Costs, Owner's Cost, and Maintenance	5.9
Total	**34.9**

Note: Figures may not sum due to rounding.

21.3 Operating Costs

21.3.1 Summary

The cash operating cost for the production of lithium carbonate includes the operating costs for the wellfield, subsurface, lithium processing facility and General and Administrative Costs (G&A) as summarized in Table 21.4. Operating costs are within an accuracy range of -30%/+50%.

The annual average cash operating cost is calculated at $4,226/t lithium carbonate produced or $295.9 million per year based on 70,000 tpa lithium carbonate production. The lithium processing facility accounts for a significant portion of the cash operating cost due to the complexity and scale of process circuits, high consumption of power and reagents and labour requirements. The overall cash operating cost of $4,226/t lithium carbonate produced is considered competitive with comparable DLE projects.

Table 21.4: Operating Cost Summary

Cost Area	Annual Cost ($ million)	$/t Li_2CO_3 Produced	Percent Contribution (%)
Lithium Processing Facility	229.8	3,283	78
Wellfield and Subsurface	47.5	679	16
G&A	18.5	265	6
Total	**295.9**	**4,226**	**100**

Notes:

1. Figures may not sum due to rounding.
2. The annual cost is based on 70,000 tpa lithium carbonate production.

21.3.2 Basis of Estimate

Operating cost estimates for the Franklin Project are based on and scaled from the SWA Project. The estimate incorporates wellfield, subsurface infrastructure, and lithium processing facility operating costs. Escalation was applied to adjust costs from Q1 2025 (SWA DFS) to Q2 2026 dollars.

Quantities of each reagent were based on preliminary process flowrate calculations for the plant. Unit costs for each reagent were derived by applying the escalation factor to the corresponding SWA reagent price. Total reagent costs were then estimated by multiplying the escalated unit costs by the calculated reagent consumption for the Franklin Project.

Power and natural gas consumption was estimated by scaling the SWA Project power and natural gas consumption to reflect the Franklin Project basis. The power costs were calculated using a unit electricity cost of $0.065/kWh. The natural gas unit cost was estimated by escalating the unit natural gas cost used in the SWA DFS. The resulting natural gas unit cost is estimated at $4.38/MMBtu.

Labour costs were estimated by escalating the labour costs used in the SWA DFS and using an appropriate scaling factor to reflect the increase in production capacity.

The maintenance costs were factored estimates from the SWA DFS maintenance costs by escalating the capital cost estimate of the SWA DFS and applying an appropriate scaling factor to reflect the increase in production capacity.

The G&A from the SWA DFS was escalated and scaled to reflect the increase in production.

21.3.3 Wellfield and Subsurface

The breakdown of cash operating costs for the wellfield and subsurface activities is provided in Table 21.5.

The annual average wellfield and subsurface cash operating cost is estimated at $679/t lithium carbonate produced. Costs are driven mainly by the power requirement to pump a high volume of brine as well as the maintenance required to service the pumps, pipelines and subsurface tubing. Power is the largest component of wellfield and subsurface operating costs, accounting for 62% of the total operating cost, equivalent to $423/t lithium carbonate.

Table 21.5: Wellfield and Subsurface Operating Costs

Cost Area	Annual Cost ($ million)	Cost ($/t Li_2CO_3)
Labour	1.1	16
Maintenance and Services	7.4	106
Power	29.6	423
Subsurface	9.4	134
Total	**47.5**	**679**

Notes:

1. Figures may not sum due to rounding.
2. The annual cost is based on 70,000 tpa lithium carbonate production.

21.3.4 Lithium Processing Facility

The breakdown of cash operating costs for the lithium processing facility is provided in Table 21.6.

Reagent and power consumption are the primary contributors to the cash operating costs of the lithium processing facility accounting for approximately 85% of the total facility operating cost. The annual total cash operating cost for the lithium processing facility is estimated at $3,283/t lithium carbonate produced or $229.8 million per year based on 70,000 tpa lithium carbonate production.

Table 21.6: Lithium Processing Facility Operating Costs

Cost Area	Annual Cost ($ million)	Cost ($/t Li_2CO_3)
Labour	16.4	234
Maintenance and Services	17.1	245
Power and Natural Gas	34.8	497
Reagents and Consumables	161.5	2,307
Total	**229.8**	**3,283**

Notes:
1. Figures may not sum due to rounding.
2. The annual cost is based on 70,000 tpa lithium carbonate production.

21.3.5 Bromine Processing Facility

In addition to lithium production, the Project contemplates a secondary opportunity case for bromine recovery from lithium-depleted brine. The operating costs for the potential bromine processing facility were estimated based on a plant production capacity of 50,000 tpa bromine. The breakdown of cash operating costs for the bromine processing facility is provided in Table 21.7.

Reagents and consumables as well as maintenance costs are the primary contributors to the cash operating costs accounting for approximately 79% of the total facility operating cost. The annual average bromine facility cash operating cost is calculated at $955/t bromine produced or $47.8 million in total annual cost for 50,000 tpa bromine production.

Table 21.7: Bromine Processing Facility Operating Costs

Cost Area	Annual Cost ($ million)	Cost ($/t Bromine)
Labour	3.5	70
Maintenance	8.1	161
Power and Natural Gas	5.7	113
Reagents and Consumables	29.6	592
G&A	0.9	18
Total	**47.8**	**955**

Notes:
1. Figures may not sum due to rounding.
2. The annual cost is based on 50,000 tpa bromine production.

21.3.6 General and Administrative

G&A costs include the G&A labour as well as G&A expenses. The G&A expenses include road and other general maintenance, health and safety related expenses, human resources, site administration (office supplies, garbage handling), environmental monitoring, information technology and telecommunications, sales and marketing, customer relations and other contract services. The G&A labour includes salaries for management, administrative, shipping and receiving and security personnel of the site.

22. Economic Analysis

22.1 Cautionary Statement

The results of the economic analysis represent forward-looking information that is subject to a number of known and unknown risks, uncertainties, and other factors that may cause actual results to differ materially from those presented here. Forward-looking statements in this Report include, but are not limited to: timing and amount of future cashflows from operations, forecast production rates and amounts of lithium and bromine produced from the Franklin operation, estimation of the mineral resources and the realization of the mineral resource estimates within the production plans, the time required to develop the Project based on the development plan, statements with respect to future prices of lithium and bromine and the ability to capture a share of the lithium and bromine markets, assumptions regarding production dilution and losses, the expected grade of the material delivered to the process plant, metallurgical recovery rates, and sustaining capital costs, NPV, IRR, payback period, Project life, production, cashflows and other financial and operational metrics, as well as Project closure costs and reclamation, timing and conditions of permits required to initiate project construction, maintaining production activities, project closure, and assumptions regarding geotechnical and hydrogeological factors.

The reader is cautioned that the actual results of mining operations may vary from what is forecast. Risks to forward-looking information include, but are not limited to, unexpected variations in grade or geological continuity, as well as geotechnical and hydrogeological assumptions that are used in the development plan. There could be seismic or climate events during the construction, operations, closure, and post-closure periods that could affect predicted production, timing of the production, costs of future production, capital expenditures, future operating costs, permitting timelines, potential delays in the issuance of permits, or changes to existing permits, as well as requirements for additional capital. The plant, equipment or metallurgical or production processes may fail to operate as anticipated. There may be changes to government regulation of mining operations, environmental issues, permitting requirements, and social risks, or unrecognized environmental, closure costs and closure requirements, unanticipated reclamation expenses, title disputes or claims and limitations on insurance coverage.

The PEA is preliminary in nature and includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that this PEA will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

22.2 Methodology Used

The Project has been evaluated using a discounted cashflow analysis. Cash inflows consist of annual revenue projections for the Project. Cash outflows such as capital, pre-production costs, operating costs, taxes, and royalties, are subtracted from the inflows to arrive at the annual cashflow projections. Cashflows are compiled on an annual basis and are taken to occur at the end of each yearly period.

To reflect the time value of money, annual net cashflow projections are discounted back to the start of construction using an 8% discount rate. The discount rate appropriate to a specific project depends on many factors, including the type of commodity and the level of project risks, such as market risk, technical risk, and political risk. The discounted present values of the cashflows are summed to arrive at the NPV for the Project.

22.3 Financial Model Parameters

The financial analysis was based on:

- Royalty agreements described in Section 4;
- Lithium carbonate process recovery outlined in Section 13;
- Mineral resources presented in Section 14;
- Production plan and assumptions detailed in Section 16;
- Process plan and assumptions detailed in Section 17;
- Projected infrastructure requirements outlined in Section 18;
- Lithium price assumptions in Section 19;
- Permitting, social and environmental regime discussions in Section 20; and
- Capital and operating cost estimates detailed in Section 21.

All costs within the financial model are expressed in Q2 2026 US dollars.

22.3.1 Mineral Recovery

Within the financial model, a lithium recovery of 89.25% is estimated across all periods of the Project life. Section 13 provides the process recovery leading to an approximate total of 1,292 kt lithium carbonate recovered over the 20-year Project life. No bromine or potash recovery is considered in this economic case.

22.3.2 Mineral Price

Long-term lithium prices are detailed in Section 19 and are derived from a market study prepared by Global Lithium (2026) for US market destinations. The long-term lithium price of $22,400/t was kept consistent throughout the life of the Project.

Lithium payability was incorporated at 99.5%.

22.3.3 Exchange Rate

For the purposes of the capital cost estimate, the operating cost estimate, and the financial analysis, no foreign exchange rates are included. All monetary values are reported in US dollars.

22.3.4 Transportation and Selling Costs

Transportation and selling costs have not been included. The expectation is that the buyer will be responsible for transportation costs from site. There is provision for the selling costs in contingency.

22.3.5 Royalties

Royalties in the financial model are applied according to the royalty agreements described in Section 4.

22.3.6 Property Purchase Agreements

No purchase agreements for surface rights have been made.

22.3.7 Taxes

QP Wendlandt has not independently reviewed the taxation information and has fully relied upon information supplied by Standard Lithium for all content related to taxation and to tax inputs in the financial model. This information is used in support of the after-tax financial analysis. QP Wendlandt considers it reasonable to rely on Standard Lithium for the tax information because the Company obtained guidance from independent tax advisors.

The financial model for the Project incorporates US federal and Texas state corporate income taxes and credits, depletion and depreciation.

For the after-tax cashflow model, the following principal tax assumptions were applied to the Franklin Project.

22.3.7.1 Income Taxes

US and State income taxes:

- US and State income tax of 21.59% (21% federal / 0.75% Texas net of federal benefit); and
- Loss carryover to the next year(s) is permitted where a net loss in any given year occurs. Net operating losses are limited to 80% of any future income until fully used.

22.3.7.2 Depreciable Capital Expenditures

Depreciable capital expenditures include assets used in the mining and quarrying of metallic and nonmetallic minerals and the milling, beneficiation and other primary preparation of such materials. Capital expenses are depreciated according to the following schedule:

- Property and equipment expense – expensed as incurred;
- Facilities capital expense – 7-year modified accelerated cost recovery system (MACRS);
- Equipment capital expense – 7-year MACRS;
- Reinjection capital expense – 7-year MACRS;
- Transportation / pipeline capital expense (to and from facilities) – 7-year MACRS; and
- Infrastructure – 39-year MACRS.

22.3.7.3 Lease Rights (Depletable Capex)

The taxpayer takes the greater of cost (Units of Production) or percentage depletion.

- Lithium percentage depletion is based on applying a rate of 22% to “gross income from the mining”.
- Bromine percentage depletion is based on applying a rate of 5% to “gross income from the mining”.

- The amount of percentage depletion deducted may not exceed 50% of the “net income from property” in the year. Net income includes gross income, less direct expenses and allocable indirect costs (including overhead).

22.3.7.4 Severance Tax Considerations

Currently, Texas does not levy a severance tax directly on the production of lithium in and of itself.

22.3.7.5 Sales Tax Considerations

Sales tax has been assumed to be included, where applicable, in the capital and operating cost estimates.

22.3.7.6 IRC 45X Credit

Lithium qualifies as an “applicable critical mineral” for the §45X advanced manufacturing production credit if it is converted to lithium carbonate or lithium hydroxide or purified to at least 99.9% lithium by mass.

- The credit amount for applicable critical minerals, including lithium, is generally 10% of production costs;
- Costs incurred by the taxpayer with respect to production of critical minerals include costs that are paid or incurred by the taxpayer inclusive of direct and indirect materials costs, respectively, and any costs related to the extraction of raw materials in the US or US territory; and
- Lithium remains eligible through production after December 31, 2030 at the full rate, then phases out as outlined in Table 22.1.

Table 22.1: IRC 45X Credit

Calendar Year of Sale	Credit Value %
2030 (and earlier)	100%
2031	75%
2032	50%
2033	25%
2034 (and beyond)	Eliminated

No extraordinary tax rulings, advance income tax rulings, or project-specific negotiated fiscal incentives have been assumed beyond those generally available under existing federal and state legislation applicable to mining projects in Texas.

All tax calculations were prepared on a nominal basis consistent with the financial model assumptions and reflect legislation in force as of the effective date of the PEA.

22.3.8 Working Capital

Working capital is the capital required to fund operations prior to receiving revenue from the finished product. It is defined as the current assets minus the current liabilities. The financial model estimates working capital by

subtracting 30 days of direct operating costs from 30 days of revenue. Over the Project life, working capital nets to zero.

22.3.9 Closure and Reclamation

Closure costs include an annual insurance bond amount of 5% based on the well abandonment cost ($18 million) and a lump sum cost incurred in the year following the completion of the Project. Sections 20 and 21 detail the closure requirements and costs for the Project.

22.3.10 Capital Costs

Total Project capital is described in Section 21.

22.3.11 Operating Costs

Operating costs have been applied as described in Section 21.

22.3.12 Salvage Value

No salvage value is applied within the financial model.

22.3.13 Inflation

No escalation or inflation is applied. All amounts are expressed in constant Q2 2026 terms.

22.3.14 Financing

All model outputs are expressed on a 100% basis with no adjustments for financing assumptions. Standard Lithium's economic interest in the Project is 55%.

22.4 Financial Results

Based on the economic analysis, the Project generates positive before- and after-tax discounted cashflows. The after-tax NPV_8 for the Project is $4,992 million. The after-tax IRR for the Project is 24%. The after-tax Project payback period is 3.1 years.

The cashflow forecast on an annual basis is shown in Table 22.2.

Figure 22.1 shows the distribution of yearly and cumulative after-tax cashflows and NPV_8.

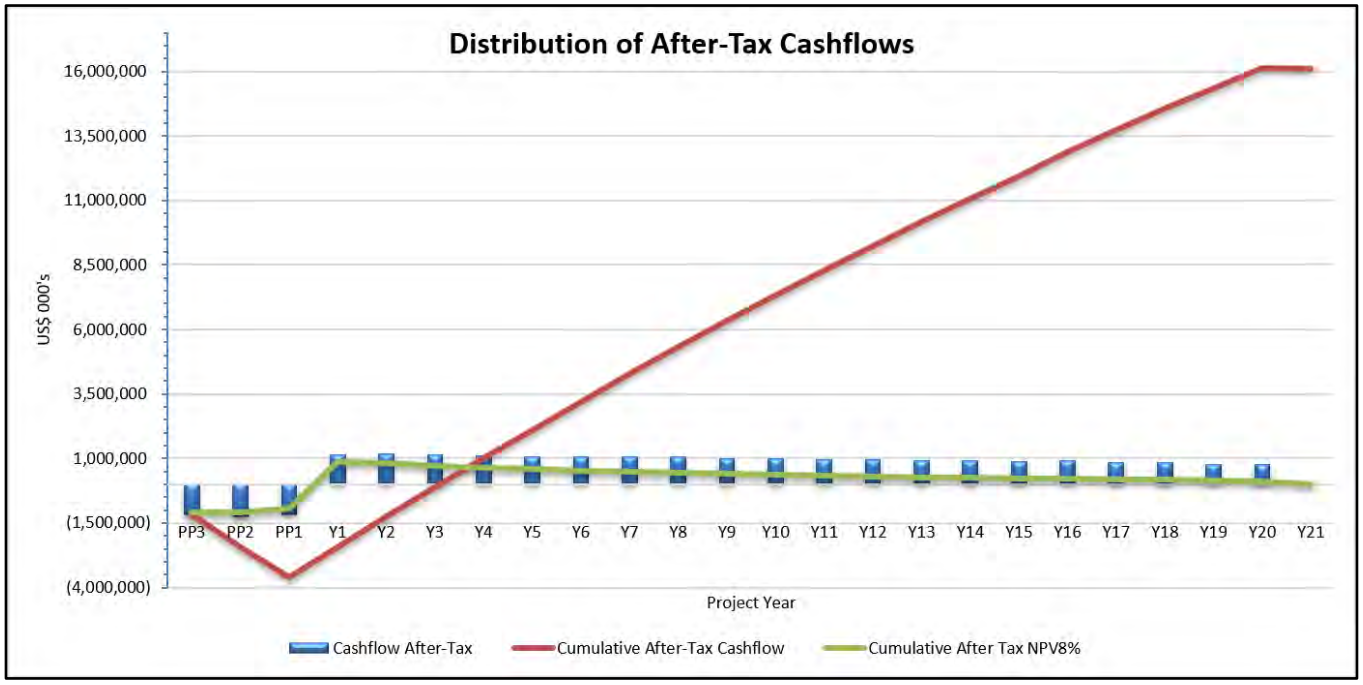
Table 22.3 shows the before- and after-tax financial statistics.

The PEA is preliminary in nature and includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that this PEA will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

Table 22.2: Financial Model Cashflow

Item	Unit	Total	PP3	PP2	PP1	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y20	Y21
Production Schedule																										
Brine Production																										
Total Brine Rate	kbbl/d	9,099	-	-	-	452	452	452	452	453	454	457	461	459	453	454	456	460	456	453	457	453	457	452	455	-
Average Li Concentration	mg/l		-	-	-	562	562	562	561	561	559	556	551	545	537	527	516	505	493	480	468	456	445	433	423	-
Lithium Carbonate Production																										
Recovery	%		*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	
LCE:Li Conversion			*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	
LCE Produced	kt	1,292	-	-	-	70	70	70	70	70	70	70	70	69	67	66	65	64	62	60	59	57	56	54	53	-
Total Lithium Carbonate Produced	**kt**	**1,292**	**-**	**-**	**-**	**70**	**70**	**70**	**70**	**70**	**70**	**70**	**70**	**69**	**67**	**66**	**65**	**64**	**62**	**60**	**59**	**57**	**56**	**54**	**53**	**-**
Metals Prices																										
Lithium Carbonate Price	$/t		22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400
Payability	%		99.5%	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%
Sales																										
Gross Li Revenue	$k	28,796,096	-	-	-	1,560,160	1,560,160	1,560,160	1,560,160	1,560,160	1,560,160	1,560,160	1,560,160	1,537,872	1,493,296	1,471,008	1,448,720	1,426,432	1,381,856	1,337,280	1,314,992	1,270,416	1,248,128	1,203,552	1,181,264	-
Total Gross Revenue	**$k**	**28,796,096**	**-**	**-**	**-**	**1,560,160**	**1,560,160**	**1,560,160**	**1,560,160**	**1,560,160**	**1,560,160**	**1,560,160**	**1,560,160**	**1,537,872**	**1,493,296**	**1,471,008**	**1,448,720**	**1,426,432**	**1,381,856**	**1,337,280**	**1,314,992**	**1,270,416**	**1,248,128**	**1,203,552**	**1,181,264**	**-**
Sales Costs																										
Total TR/RC, Shipping, Selling	$k	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Revenue																										
Total Net Revenue	**$k**	**28,796,096**	**-**	**-**	**-**	**1,560,160**	**1,560,160**	**1,560,160**	**1,560,160**	**1,560,160**	**1,560,160**	**1,560,160**	**1,560,160**	**1,537,872**	**1,493,296**	**1,471,008**	**1,448,720**	**1,426,432**	**1,381,856**	**1,337,280**	**1,314,992**	**1,270,416**	**1,248,128**	**1,203,552**	**1,181,264**	**-**
Operating Costs																										
Central Processing Costs	$k	-4,241,603	-	-	-	-229,808	-229,808	-229,808	-229,808	-229,808	-229,808	-229,808	-229,808	-226,525	-219,959	-216,676	-213,393	-210,110	-203,544	-196,978	-193,696	-187,130	-183,847	-177,281	-173,998	-
Wellfield & Subsurface Costs	$k	-876,834	-	-	-	-47,506	-47,506	-47,506	-47,506	-47,506	-47,506	-47,506	-47,506	-46,828	-45,470	-44,792	-44,113	-43,434	-42,077	-40,720	-40,041	-38,684	-38,005	-36,648	-35,969	-
G&A	$k	-342,111	-	-	-	-18,535	-18,535	-18,535	-18,535	-18,535	-18,535	-18,535	-18,535	-18,271	-17,741	-17,476	-17,211	-16,947	-16,417	-15,888	-15,623	-15,093	-14,828	-14,299	-14,034	-
Total Operating Costs	**$k**	**-5,460,549**	**-**	**-**	**-**	**-295,850**	**-295,850**	**-295,850**	**-295,850**	**-295,850**	**-295,850**	**-295,850**	**-295,850**	**-291,624**	**-283,171**	**-278,944**	**-274,718**	**-270,492**	**-262,039**	**-253,586**	**-249,359**	**-240,907**	**-236,680**	**-228,227**	**-224,001**	**-**
Total Production Costs																										
Total Operating Costs	$k	-5,460,549	-	-	-	-295,850	-295,850	-295,850	-295,850	-295,850	-295,850	-295,850	-295,850	-291,624	-283,171	-278,944	-274,718	-270,492	-262,039	-253,586	-249,359	-240,907	-236,680	-228,227	-224,001	-
Closure Bond	$k	-18,000	-	-	-	-900	-900	-900	-900	-900	-900	-900	-900	-900	-900	-900	-900	-900	-900	-900	-900	-900	-900	-900	-900	-
Royalty	$k	-719,902	-	-	-	-39,004	-39,004	-39,004	-39,004	-39,004	-39,004	-39,004	-39,004	-38,447	-37,332	-36,775	-36,218	-35,661	-34,546	-33,432	-32,875	-31,760	-31,203	-30,089	-29,532	-
Depletion	$k	-6,022,371	-	-	-	-334,654	-199,819	-315,098	-334,654	-334,654	-334,654	-334,654	-334,654	-329,874	-320,312	-315,531	-310,750	-305,970	-296,408	-286,847	-282,066	-272,504	-267,723	-258,162	-253,381	-
Depreciation	$k	-3,792,184	-	-	-	-482,142	-825,668	-595,109	-430,423	-313,173	-314,160	-315,815	-167,594	-19,045	-19,045	-19,045	-19,045	-19,045	-19,045	-19,045	-19,045	-19,045	-176,695	-	-	-
Total Production Costs	**$k**	**-16,013,006**	**-**	**-**	**-**	**-1,152,551**	**-1,361,241**	**-1,245,962**	**-1,100,832**	**-983,581**	**-984,569**	**-986,224**	**-838,002**	**-679,889**	**-660,760**	**-651,196**	**-641,631**	**-632,067**	**-612,938**	**-593,809**	**-584,245**	**-565,116**	**-713,202**	**-517,378**	**-507,814**	**-**
Income from Operations																										
Net Revenue	$k	28,796,096	-	-	-	1,560,160	1,560,160	1,560,160	1,560,160	1,560,160	1,560,160	1,560,160	1,560,160	1,537,872	1,493,296	1,471,008	1,448,720	1,426,432	1,381,856	1,337,280	1,314,992	1,270,416	1,248,128	1,203,552	1,181,264	-
Production Costs	$k	-16,013,006	-	-	-	-1,152,551	-1,361,241	-1,245,962	-1,100,832	-983,581	-984,569	-986,224	-838,002	-679,889	-660,760	-651,196	-641,631	-632,067	-612,938	-593,809	-584,245	-565,116	-713,202	-517,378	-507,814	-
Net Income Before Taxes	**$k**	**12,783,090**	**-**	**-**	**-**	**407,609**	**198,919**	**314,198**	**459,328**	**576,579**	**575,591**	**573,936**	**722,158**	**857,983**	**832,536**	**819,812**	**807,089**	**794,365**	**768,918**	**743,471**	**730,747**	**705,300**	**534,926**	**686,174**	**673,450**	**-**
Income from Operations		**-2,655,734**																								
Tax	$k	-2,686,226	-	-	-	-58,428	-20,763	-53,051	-91,784	-124,498	-124,285	-123,927	-155,932	-185,260	-179,765	-177,018	-174,271	-171,523	-166,029	-160,534	-157,787	-152,292	-115,504	-148,162	-145,415	-
+ Depletion	$k	-6,022,371	-	-	-	-334,654	-199,819	-315,098	-334,654	-334,654	-334,654	-334,654	-334,654	-329,874	-320,312	-315,531	-310,750	-305,970	-296,408	-286,847	-282,066	-272,504	-267,723	-258,162	-253,381	-
+ Depreciation	$k	-3,792,184	-	-	-	-482,142	-825,668	-595,109	-430,423	-313,173	-314,160	-315,815	-167,594	-19,045	-19,045	-19,045	-19,045	-19,045	-19,045	-19,045	-19,045	-19,045	-176,695	-	-	-
Net Income After Taxes	**$k**	**13,889,048**	**-**	**-**	**-**	**1,165,978**	**1,203,643**	**1,171,355**	**1,132,622**	**1,099,908**	**1,100,121**	**1,100,479**	**1,068,474**	**1,021,642**	**992,127**	**977,370**	**962,613**	**947,856**	**918,342**	**888,828**	**874,071**	**844,557**	**863,841**	**796,174**	**781,417**	**-**
Capital Cost																										
Initial & Sustaining	$k	-3,792,184	-1,165,372	-1,165,372	-1,165,372	-14,803	-14,803	-14,803	-14,803	-14,803	-14,803	-14,803	-14,803	-14,803	-14,803	-14,803	-14,803	-14,803	-14,803	-14,803	-14,803	-14,803	-14,803	-14,803	-14,803	-
Reclamation & Closure	$k	-34,900	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-34,900
Total Capital Cost	**$k**	**-3,827,084**	**-1,165,372**	**-1,165,372**	**-1,165,372**	**-14,803**	**-14,803**	**-14,803**	**-14,803**	**-14,803**	**-14,803**	**-14,803**	**-14,803**	**-14,803**	**-14,803**	**-14,803**	**-14,803**	**-14,803**	**-14,803**	**-14,803**	**-14,803**	**-14,803**	**-14,803**	**-14,803**	**-14,803**	**-34,900**
Working Capital	**$k**	**0**	**-**	**-100,361**	**-275**	**-**	**-**	**275**	**-275**	**-**	**-**	**1,710**	**2,606**	**1,439**	**1,439**	**1,690**	**2,626**	**2,877**	**1,439**	**3,101**	**77,393**	**2,877**	**1,439**	**-**	**-**	**-**
Cashflow Before-Tax	$k	18,770,561	-1,165,372	-1,265,733	-1,165,647	1,209,602	1,209,602	1,209,877	1,209,327	1,209,602	1,209,602	1,211,312	1,212,209	1,193,537	1,158,528	1,141,275	1,124,707	1,107,454	1,071,006	1,037,660	1,094,447	984,923	965,980	929,533	912,028	-34,900
Cumulative Before-Tax Cashflow	$k		-1,165,372	-2,431,105	-3,596,752	-2,387,150	-1,177,547	32,330	1,241,658	2,451,260	3,660,863	4,872,175	6,084,384	7,277,920	8,436,448	9,577,723	10,702,430	11,809,884	12,880,890	13,918,550	15,012,997	15,997,920	16,963,900	17,893,433	18,805,461	18,770,561
Cashflow After-Tax	$k	16,084,335	-1,165,372	-1,265,733	-1,165,647	1,151,174	1,188,840	1,156,827	1,117,543	1,085,105	1,085,318	1,087,385	1,056,277	1,008,277	978,763	964,257	950,436	935,930	904,978	877,126	936,661	832,631	850,476	781,370	766,613	-34,900
Cumulative After-Tax Cashflow	$k		-1,165,372	-2,431,105	-3,596,752	-2,445,578	-1,256,738	-99,911	1,017,632	2,102,737	3,188,055	4,275,440	5,331,716	6,339,993	7,318,756	8,283,013	9,233,449	10,169,379	11,074,357	11,951,483	12,888,144	13,720,775	14,571,251	15,352,621	16,119,235	16,084,335

Figure 22.1: Distribution of After-Tax Cashflows



Source: WSP, 2026

Table 22.3: Before and After-Tax Financial Results

Valuation Indicators	Unit	Before-Tax Value	After-Tax Value
Undiscounted Cumulative Cashflow	$ million	18,771	16,084
NPV_6	$ million	7,853	6,664
NPV_8	**$ million**	**5,924**	**4,992**
NPV_{10}	$ million	4,462	3,722
Payback Period (from start of operations)	years	3.0	3.1
IRR Before Tax	%	25.7	24.0

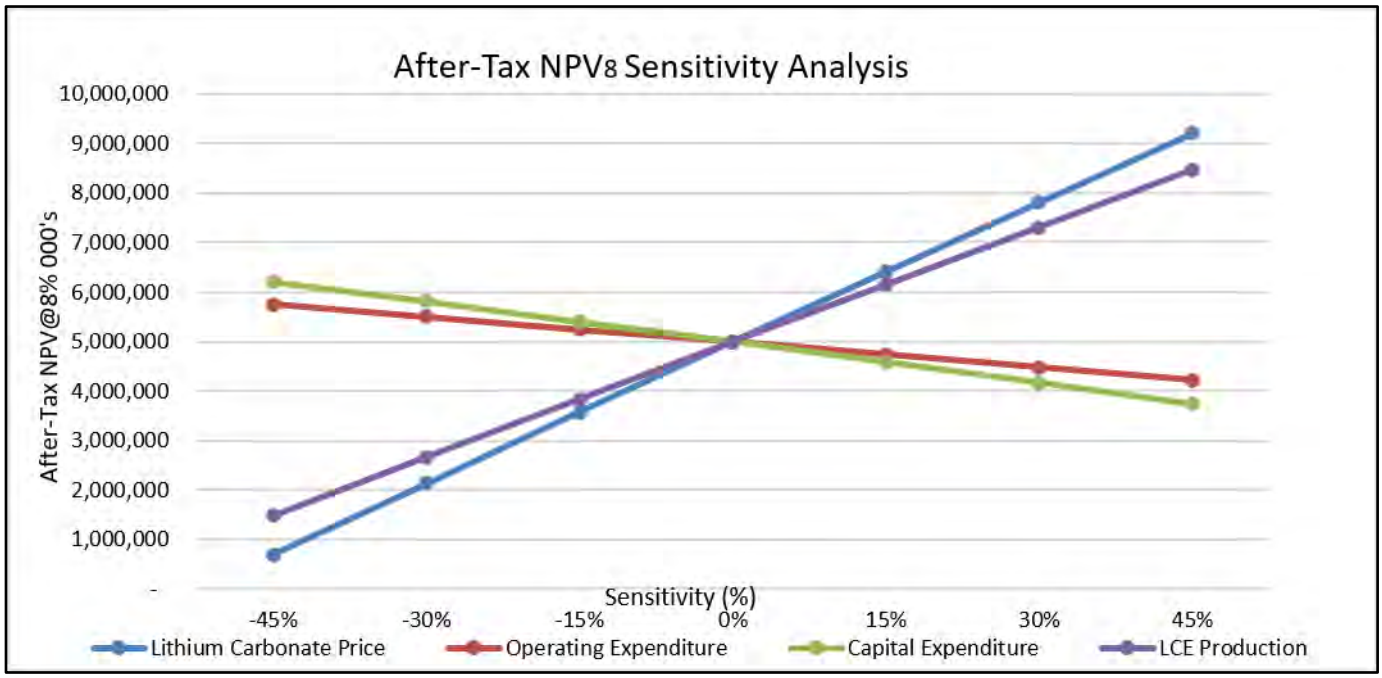
Note: The bolded NPV corresponds to the Project's reporting discount rate of 8%.

22.5 Sensitivity Analysis

A sensitivity analysis was completed for the Project's after-tax cashflow, NPV_8, and IRR over the ranges of ±45% for lithium selling price, LCE production, total capital cost, and operating cost and shown in the spider graphs in Figure 22.2, Figure 22.3, and Figure 22.4, respectively.

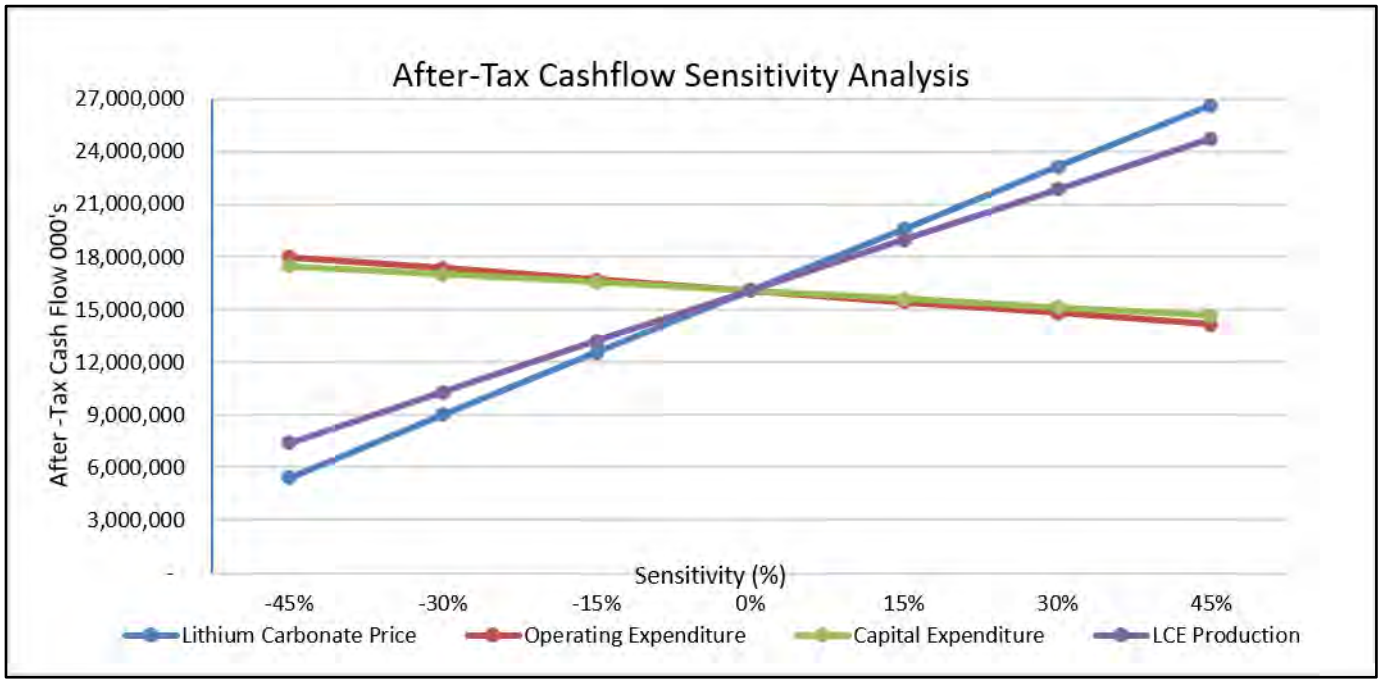
The Project is most sensitive to changes in lithium carbonate selling price and LCE production, followed by changes to total capital costs and to operating costs.

Figure 22.2: After-Tax NPV$_8$ Sensitivity



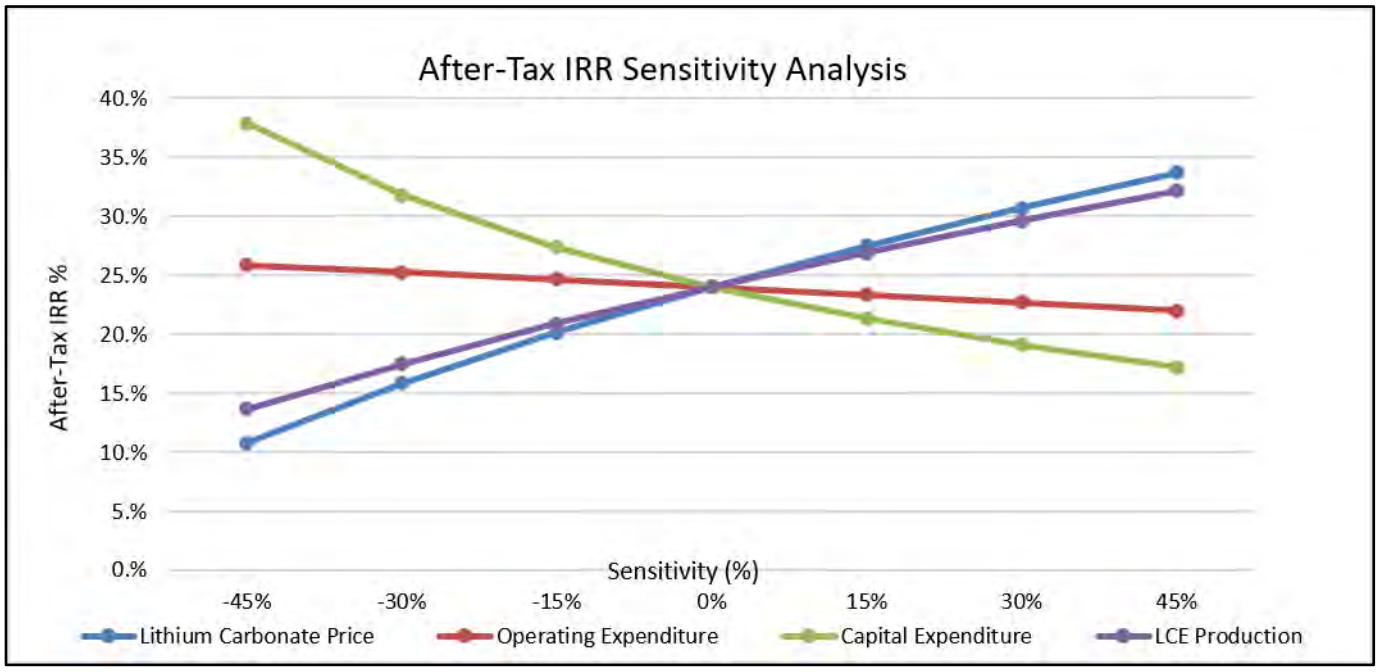
Source: WSP, 2026

Figure 22.3: After-Tax Cashflow Sensitivity



Source: WSP, 2026

Figure 22.4: After-Tax IRR Sensitivity



Source: WSP, 2026

22.6 Opportunity Case for Bromine Processing Facility

In addition to lithium production, the Project contemplates a secondary opportunity case for bromine recovery from lithium-depleted brine. In this secondary opportunity case, bromide is extracted from a portion of the lithium-depleted brine producing a second product, bromine in combination with lithium carbonate. The economic results of the secondary opportunity case are not additive to the economic results of the base case. The only additional infrastructure that is required for the secondary opportunity case is the bromine processing facility with the ability to produce up to 50,000 tpa of bromine over the 20-year production life.

The methodology used to evaluate the secondary opportunity case is similar to the base case as described in Section 22.2, utilizing a discounted cashflow analysis with annual periods.

The financial analysis for the secondary opportunity case was based on: royalty agreements described in Section 4; the lithium and bromine process recovery outlined in Section 13; the mineral resources presented in Section 14; the production plan and assumptions detailed in Section 16; the process plan and assumptions detailed in Section 17; the projected infrastructure requirements outlined in Section 18; the lithium and bromine price assumptions in Section 19; the permitting, social and environmental regime discussions in Section 20 and the capital and operating cost estimates detailed in Section 21. All costs within the financial model are expressed in Q2 2026 US dollars.

A summary of the key inputs to the secondary opportunity case is shown in Table 22.4.

The secondary opportunity case incorporates a similar tax policy regime as the base case to derive the post-tax economic results. Based on the economic analysis, the Project generates positive before- and after-tax discounted cashflows. The after-tax NPV_8 for the Project is $5,560 million. The after-tax IRR for the Project is 24%. The after-tax Project payback period is 3.1 years.

The before and after-tax financial results for the secondary opportunity case are shown in Table 22.5.

The secondary opportunity case PEA is preliminary in nature and includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that this secondary opportunity case PEA will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

Table 22.4: Inputs to the Secondary Opportunity Case

Input	Unit	Value
Project Life	Years	20
Total Lithium Carbonate Production	kt	1,292
Total Bromine Production	kt	922
Lithium Price	$/t	22,400
Bromine Price	$/t	4,000
Lithium Recovery	%	89.25
Bromine Recovery	%	95.8
Lithium Payability	%	99.5
Bromine Payability	%	99.5
Discount Rate	%	8

Table 22.5: Secondary Opportunity Case Before and After-Tax Financial Results

Valuation Indicators	Unit	Before-Tax Value	After-Tax Value
Undiscounted cumulative cashflow	$ million	21,030	17,931
NPV_6	$ million	8,804	7,423
NPV_8	**$ million**	**6,643**	**5,560**
NPV_{10}	$ million	5,006	4,146
Payback period (from start of operations)	years	3.0	3.1
IRR	%	25.8	24.0

Note: The bolded NPV corresponds to the Project's reporting discount rate of 8%.

The cashflow forecast for the secondary opportunity case on an annual basis is shown in Table 22.6.

Table 22.6: Secondary Opportunity Case Financial Model Cashflow

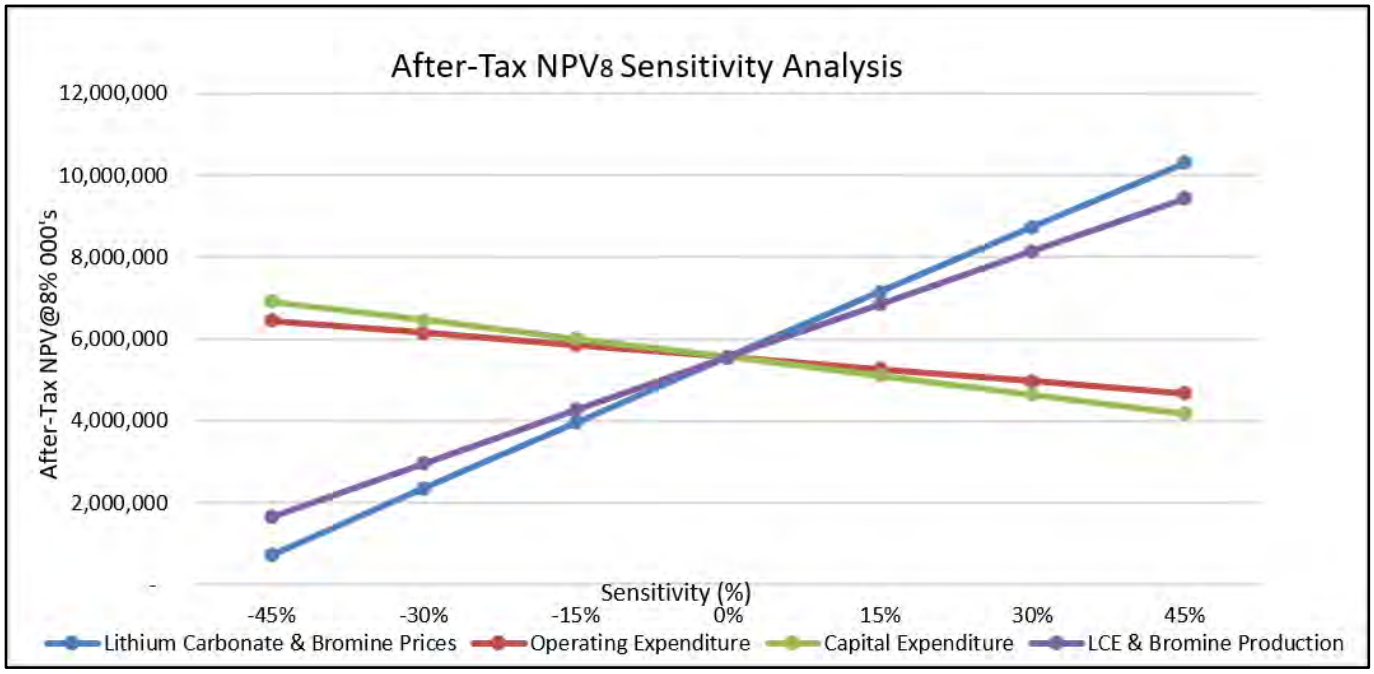
Item	Unit	Total	PP3	PP2	PP1	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y20	Y21
Mine Production Schedule																										
Brine Production																										
Total Brine Rate	kbbl/d	9,099	-	-	-	452	452	452	452	453	454	457	461	459	453	454	456	460	456	453	457	453	457	452	455	-
Bromine Brine Rate Required	kbbl/d	4,051	-	-	-	201	201	201	201	201	202	203	205	203	202	201	201	202	202	203	204	204	205	205	205	-
Average Li Concentration	mg/l		-	-	-	562	562	562	561	561	559	556	551	545	537	527	516	505	493	480	468	456	445	433	423	-
Average Bromine Concentation	mg/l		-	-	-	4,483	4,483	4,481	4,478	4,471	4,456	4,431	4,394	4,342	4,275	4,198	4,108	4,014	3,912	3,810	3,711	3,610	3,516	3,423	3,336	-
Lithium Carbonate Production																										
Recovery	%		*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	*89.25%*	
LCE:Li Conversion			*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	*5.323*	
LCE Produced	kt	1,292	-	-	-	70	70	70	70	70	70	70	70	69	67	66	65	64	62	60	59	57	56	54	53	-
Total Lithium Carbonate Produced	**kt**	**1,292**	**-**	**-**	**-**	**70**	**70**	**70**	**70**	**70**	**70**	**70**	**70**	**69**	**67**	**66**	**65**	**64**	**62**	**60**	**59**	**57**	**56**	**54**	**53**	**-**
Bromine Production																										
Recovey	%																									
Bromine Produced	kt	922	-	-	-	50	50	50	50	50	50	50	50	49	48	47	46	45	44	43	42	41	40	39	38	-
Total Bromine Produced	**kt**	**922**	**-**	**-**	**-**	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**50**	**49**	**48**	**47**	**46**	**45**	**44**	**43**	**42**	**41**	**40**	**39**	**38**	**-**
Metals Prices																										
LCE Price	$/t		22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400	22,400
Bromine Price	$/t		4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Sales																										
Gross Li Revenue	$k	28,796,096	-	-	-	1,560,160	1,560,160	1,560,160	1,560,160	1,560,160	1,560,160	1,560,160	1,560,160	1,537,872	1,493,296	1,471,008	1,448,720	1,426,432	1,381,856	1,337,280	1,314,992	1,270,416	1,248,128	1,203,552	1,181,264	-
Gross Bromine Revenue	$k	3,669,560	-	-	-	199,000	199,000	199,000	199,000	199,000	199,000	199,000	199,000	195,020	191,040	187,060	183,080	179,100	175,120	171,140	167,160	163,180	159,200	155,220	151,240	-
Total Gross Revenue	**$k**	**32,465,656**	**-**	**-**	**-**	**1,759,160**	**1,759,160**	**1,759,160**	**1,759,160**	**1,759,160**	**1,759,160**	**1,759,160**	**1,759,160**	**1,732,892**	**1,684,336**	**1,658,068**	**1,631,800**	**1,605,532**	**1,556,976**	**1,508,420**	**1,482,152**	**1,433,596**	**1,407,328**	**1,358,772**	**1,332,504**	**-**
Sales Costs																										
Total TR/RC, Shipping, Selling	$k		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Revenue																										
Total Net Revenue	**$k**	**32,465,656**	**-**	**-**	**-**	**1,759,160**	**1,759,160**	**1,759,160**	**1,759,160**	**1,759,160**	**1,759,160**	**1,759,160**	**1,759,160**	**1,732,892**	**1,684,336**	**1,658,068**	**1,631,800**	**1,605,532**	**1,556,976**	**1,508,420**	**1,482,152**	**1,433,596**	**1,407,328**	**1,358,772**	**1,332,504**	**-**
Operating Costs																										
Central Processing Costs	$k	-4,241,603	-	-	-	-229,808	-229,808	-229,808	-229,808	-229,808	-229,808	-229,808	-229,808	-226,525	-219,959	-216,676	-213,393	-210,110	-203,544	-196,978	-193,696	-187,130	-183,847	-177,281	-173,998	-
Wellfield & Subsurface Costs	$k	-876,834	-	-	-	-47,506	-47,506	-47,506	-47,506	-47,506	-47,506	-47,506	-47,506	-46,828	-45,470	-44,792	-44,113	-43,434	-42,077	-40,720	-40,041	-38,684	-38,005	-36,648	-35,969	-
Bromine Costs	$k	-880,643	-	-	-	-47,757	-47,757	-47,757	-47,757	-47,757	-47,757	-47,757	-47,757	-46,802	-45,847	-44,892	-43,937	-42,981	-42,026	-41,071	-40,116	-39,161	-38,206	-37,251	-36,295	-
G&A	$k	-342,111	-	-	-	-18,535	-18,535	-18,535	-18,535	-18,535	-18,535	-18,535	-18,535	-18,271	-17,741	-17,476	-17,211	-16,947	-16,417	-15,888	-15,623	-15,093	-14,828	-14,299	-14,034	-
Total Operating Costs	**$k**	**-6,341,191**	**-**	**-**	**-**	**-343,607**	**-343,607**	**-343,607**	**-343,607**	**-343,607**	**-343,607**	**-343,607**	**-343,607**	**-338,426**	**-329,018**	**-323,836**	**-318,655**	**-313,473**	**-304,065**	**-294,657**	**-289,475**	**-280,067**	**-274,886**	**-265,478**	**-260,296**	**-**
Total Production Costs																										
Total Operating Costs	$k	-6,341,191	-	-	-	-343,607	-343,607	-343,607	-343,607	-343,607	-343,607	-343,607	-343,607	-338,426	-329,018	-323,836	-318,655	-313,473	-304,065	-294,657	-289,475	-280,067	-274,886	-265,478	-260,296	-
Closure Bond	$k	-18,000	-	-	-	-900	-900	-900	-900	-900	-900	-900	-900	-900	-900	-900	-900	-900	-900	-900	-900	-900	-900	-900	-900	-
Royalty	$k	-807,902	-	-	-	-43,404	-43,404	-43,404	-43,404	-43,404	-43,404	-43,404	-43,404	-42,847	-41,732	-41,175	-40,618	-40,061	-38,946	-37,832	-37,275	-36,160	-35,603	-34,489	-33,932	-
Depletion	$k	-6,234,501	-	-	-	-344,384	-223,044	-344,384	-344,384	-344,384	-344,384	-344,384	-344,384	-339,405	-329,644	-324,664	-319,684	-314,705	-304,944	-295,184	-290,204	-280,443	-275,463	-265,703	-260,723	-
Depreciation	$k	-4,233,868	-	-	-	-540,577	-926,060	-667,298	-482,468	-350,875	-351,976	-353,826	-187,479	-20,769	-20,769	-20,769	-20,769	-20,769	-20,769	-20,769	-20,769	-20,769	-20,769	-186,386	-	-
Total Production Costs	**$k**	**-17,635,462**	**-**	**-**	**-**	**-1,272,873**	**-1,537,016**	**-1,399,594**	**-1,214,764**	**-1,083,171**	**-1,084,272**	**-1,086,121**	**-919,775**	**-742,346**	**-722,063**	**-711,345**	**-700,626**	**-689,908**	**-669,625**	**-649,342**	**-638,623**	**-618,340**	**-773,238**	**-566,570**	**-555,851**	**-**
Income from Operations																										
Net Revenue	$k	32,465,656	-	-	-	1,759,160	1,759,160	1,759,160	1,759,160	1,759,160	1,759,160	1,759,160	1,759,160	1,732,892	1,684,336	1,658,068	1,631,800	1,605,532	1,556,976	1,508,420	1,482,152	1,433,596	1,407,328	1,358,772	1,332,504	-
Production Costs	$k	-17,635,462	-	-	-	-1,272,873	-1,537,016	-1,399,594	-1,214,764	-1,083,171	-1,084,272	-1,086,121	-919,775	-742,346	-722,063	-711,345	-700,626	-689,908	-669,625	-649,342	-638,623	-618,340	-773,238	-566,570	-555,851	-
Net Income Before Taxes	**$k**	**14,830,194**	**-**	**-**	**-**	**486,287**	**222,144**	**359,566**	**544,396**	**675,989**	**674,888**	**673,039**	**839,385**	**990,546**	**962,273**	**946,723**	**931,174**	**915,624**	**887,351**	**859,078**	**843,529**	**815,256**	**634,090**	**792,202**	**776,653**	**-**
Income from Operations		-2,655,734																								
Tax	$k	-3,116,308	-	-	-	-70,641	-22,196	-60,459	-108,959	-145,963	-145,725	-145,326	-181,244	-213,884	-207,779	-204,421	-201,064	-197,706	-191,601	-185,496	-182,139	-176,034	-136,916	-171,056	-167,699	-
+ Depletion	$k	-6,234,501	-	-	-	-344,384	-223,044	-344,384	-344,384	-344,384	-344,384	-344,384	-344,384	-339,405	-329,644	-324,664	-319,684	-314,705	-304,944	-295,184	-290,204	-280,443	-275,463	-265,703	-260,723	-
+ Depreciation	$k	-4,233,868	-	-	-	-540,577	-926,060	-667,298	-482,468	-350,875	-351,976	-353,826	-187,479	-20,769	-20,769	-20,769	-20,769	-20,769	-20,769	-20,769	-20,769	-20,769	-20,769	-186,386	-	-
Net Income After Taxes	**$k**	**15,947,754**	**-**	**-**	**-**	**1,300,608**	**1,349,053**	**1,310,790**	**1,262,290**	**1,225,286**	**1,225,523**	**1,225,923**	**1,190,004**	**1,136,836**	**1,104,907**	**1,087,735**	**1,070,564**	**1,053,392**	**1,021,463**	**989,534**	**972,363**	**940,434**	**959,023**	**886,849**	**869,677**	**-**
Capital Cost																										
Initial & Sustaining	$k	-4,233,868	-1,301,105	-1,301,105	-1,301,105	-16,528	-16,528	-16,528	-16,528	-16,528	-16,528	-16,528	-16,528	-16,528	-16,528	-16,528	-16,528	-16,528	-16,528	-16,528	-16,528	-16,528	-16,528	-16,528	-16,528	-
Reclamation & Closure	$k	-34,900	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-34,900
Total Capital Cost	**$k**	**-4,268,768**	**-1,301,105**	**-1,301,105**	**-1,301,105**	**-16,528**	**-16,528**	**-16,528**	**-16,528**	**-16,528**	**-16,528**	**-16,528**	**-16,528**	**-16,528**	**-16,528**	**-16,528**	**-16,528**	**-16,528**	**-16,528**	**-16,528**	**-16,528**	**-16,528**	**-16,528**	**-16,528**	**-16,528**	**-34,900**
Working Capital	$k	0	-	-112,397	-308	-	-	308	-308	-	-	1,991	2,823	1,687	1,687	1,968	2,845	3,126	1,687	3,377	86,700	3,126	1,687	-	-	-
Cashflow Before Tax	$k	21,029,794	-1,301,105	-1,413,503	-1,301,413	1,354,721	1,354,721	1,355,029	1,354,413	1,354,721	1,354,721	1,356,712	1,357,544	1,335,879	1,297,846	1,277,597	1,257,945	1,237,697	1,198,224	1,161,880	1,224,675	1,103,067	1,081,099	1,041,378	1,020,848	-34,900
Cumulative Before Tax Cashflow	$k		-1,301,105	-2,714,608	-4,016,021	-2,661,300	-1,306,579	48,450	1,402,863	2,757,584	4,112,305	5,469,017	6,826,561	8,162,440	9,460,285	10,737,883	11,995,827	13,233,524	14,431,748	15,593,628	16,818,303	17,921,370	19,002,468	20,043,846	21,064,694	21,029,794
Cashflow After Tax	$k	17,913,487	-1,301,105	-1,413,503	-1,301,413	1,284,080	1,332,525	1,294,570	1,245,455	1,208,758	1,208,996	1,211,386	1,176,299	1,121,996	1,090,067	1,073,176	1,056,881	1,039,990	1,006,623	976,384	1,042,536	927,032	944,183	870,321	853,150	-34,900
Cumulative After Tax Cashflow	$k		-1,301,105	-2,714,608	-4,016,021	-2,731,941	-1,399,416	-104,846	1,140,609	2,349,367	3,558,363	4,769,748	5,946,048	7,068,044	8,158,110	9,231,286	10,288,168	11,328,158	12,334,781	13,311,165	14,353,700	15,280,733	16,224,916	17,095,237	17,948,387	17,913,487

22.6.1 Opportunity Case Sensitivity Analysis

A sensitivity analysis was completed for the Project's secondary opportunity case after-tax cashflow, NPV8, and IRR over the ranges of ±45% for selling prices, production quantities, total capital cost, and operating cost and shown in the spider graphs in Figure 22.5, Figure 22.6, and Figure 22.7, respectively. In the analysis, sensitivities were applied to both LCE and bromine products.

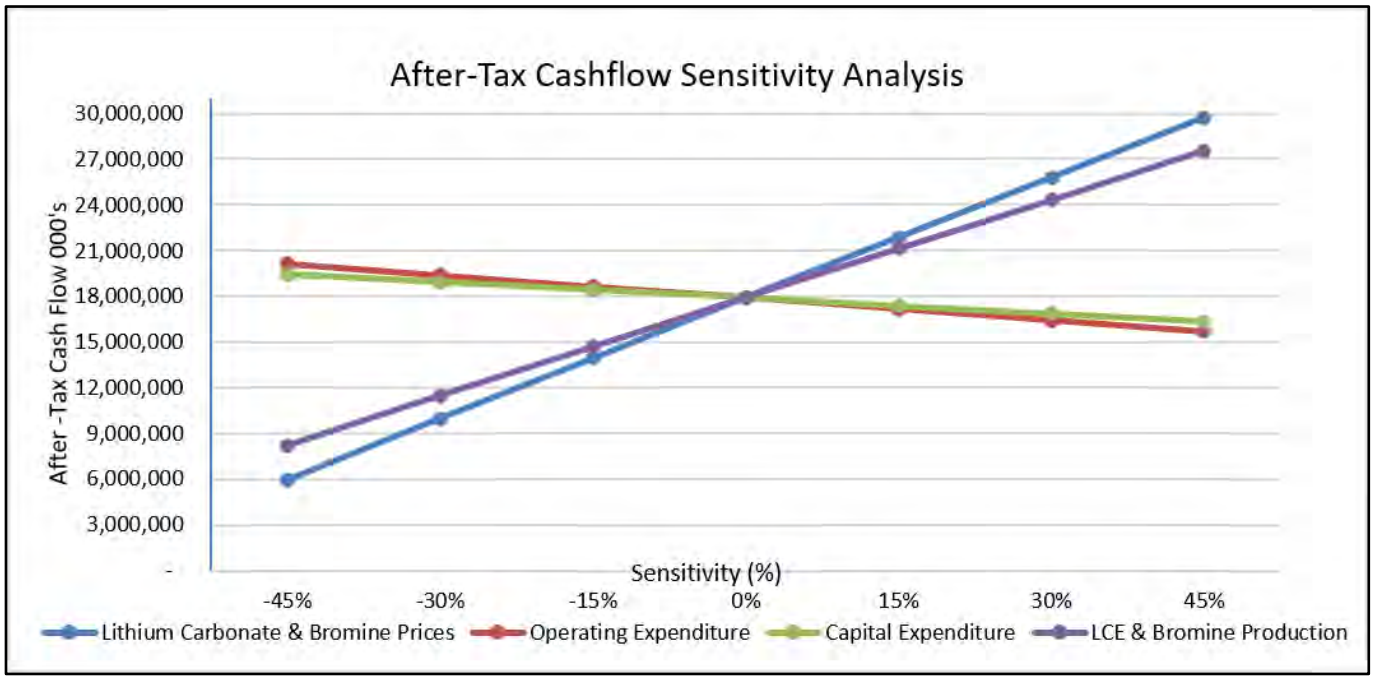
The Project is most sensitive to changes in lithium carbonate and bromine selling price and production, followed by changes to total capital costs and to operating costs.

Figure 22.5: After-Tax NPV8 Sensitivity – Secondary Opportunity Case



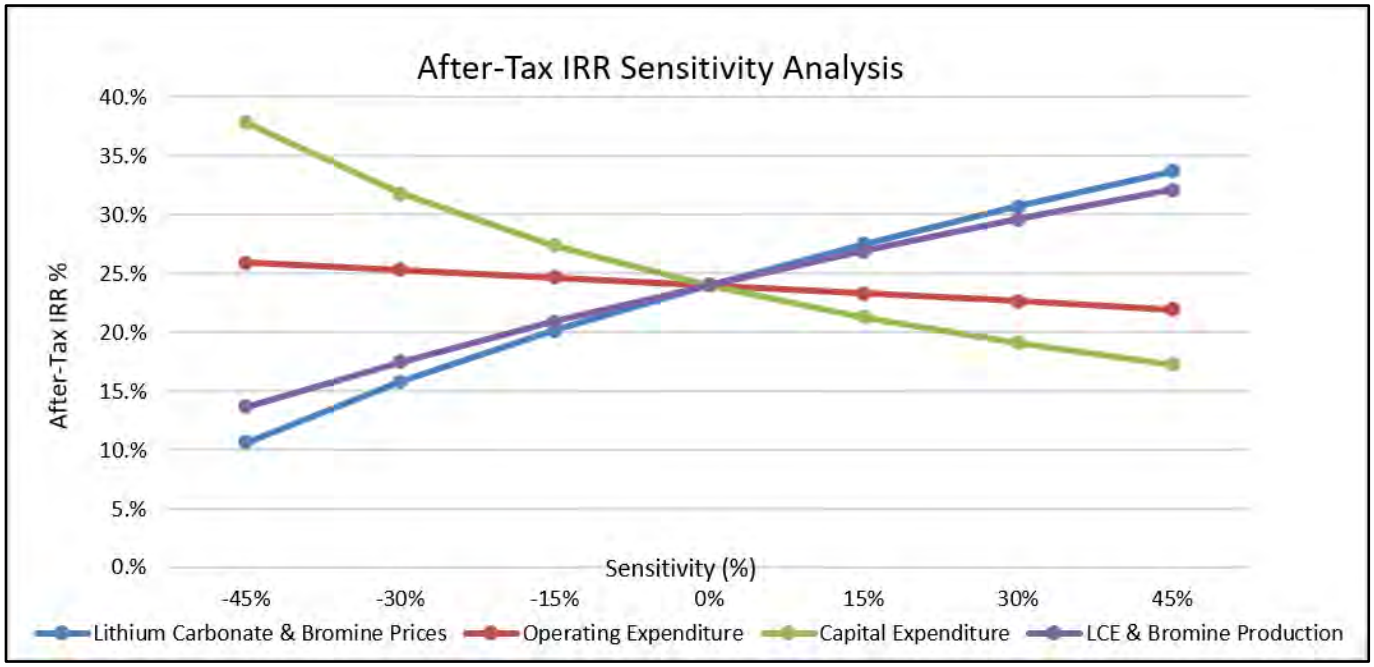
Source: WSP, 2026

Figure 22.6: After-Tax Cashflow Sensitivity – Secondary Opportunity Case



Source: WSP, 2026

Figure 22.7: After-Tax IRR Sensitivity – Secondary Opportunity Case



Source: WSP, 2026

23. Adjacent Properties

There are no adjacent properties considered relevant to the evaluation of the Franklin Project.

24. Other Relevant Data and Information

There are no additional data or information necessary to make this Report understandable and not misleading.

25. Interpretation and Conclusions

25.1 Summary

The QPs note the following interpretations and conclusions in their respective areas of expertise, based on the review of data available for this Report.

25.2 Mineral Tenure

The Franklin Project brine and brine-sourced mineral leases have yet to be developed for commercial production of brine minerals. Once the Project is in production, those leases within an established production unit will be held by production, or otherwise maintained by applicable lease provisions, and no additional primary term extensions will be necessary.

Expert legal information provided by Standard Lithium regarding the mineral tenure held and the lease agreements supports the potential economic viability of the mineral resources.

25.3 Exploration, Drilling and Sampling

Standard Lithium successfully executed a three-well exploration program in 2023 and a three-well re-entry sampling and testing program in 2025/2026 that significantly improved the geologic description of the target Smackover Formation. The program addressed the three key factors that determine the quality of the mineral resource: the total volume of brine based on core and log porosity data, the brine's lithium, bromide and potassium concentrations based on the analysis of multiple brine samples from the wells, and the productivity of the formation based on the core permeability data and flow test (pressure transient analysis) data collected. In the opinion of QP Williams, the resulting data and analyses are adequate for the purposes used in this Report.

25.4 Geology

The Franklin Project contains a significant lithium-bromide-potassium brine mineral resource hosted within the Upper and Middle Smackover intervals. The resource estimate is supported by a detailed geologic and hydrogeologic model incorporating drilling, core data, well logs, seismic interpretation, brine sampling, and reservoir testing, which, in the opinion of QP Williams, collectively demonstrate the presence of laterally continuous porous and permeable intervals capable of hosting substantial volumes of lithium-, bromide-, potassium-bearing brine.

The volume of in-place lithium, bromide, or potassium is proportional to the product of the brine-saturated pore volume in the Franklin Project and the chosen mineral's concentration, each of which has been estimated with reasonable accuracy based on the drilling, logging, coring, and sampling data obtained throughout the Franklin Project. The geologic characteristics of the reservoir and its lithium, bromide, and potassium content estimates are based on the available geologic data set and the results of brine sampling in the Upper and Middle Smackover. This comprehensive data set provides a reasonable basis upon which to estimate the mineral resource.

25.5 Mineral Resource Estimates

The preparation of mineral resources has followed industry accepted best practice guidelines and the mineral resources have been classified in accordance with CIM Definition Standards. A portion of the Upper Smackover resource has been classified as indicated based on the confidence provided by the three exploration wells and associated reservoir testing, while the remaining Upper Smackover and all Middle Smackover resources have been classified as inferred pending additional drilling and hydrogeological evaluation. The mineral resource estimate confirms lithium concentrations well above the adopted cutoff and also identifies significant bromide resources that may provide future by-product opportunities. Potassium resources have been estimated in the inferred classification category due to the need for further process development and supporting economic studies.

In the opinion of QP Brush, the data and analyses support the classification of the mineral resource estimates present at the Franklin Project.

The mineral resource estimate remains subject to uncertainties associated with geological continuity, porosity and permeability distribution, brine chemistry variability, permitting, environmental considerations, operating costs, commodity prices, processing assumptions, and other modifying factors that could materially affect the quantity or economic significance of the mineral resources.

25.6 Metallurgy and Mineral Processing

QP Dworzanowski concludes that the Franklin Project brine is similar to the SWA brine from a metallurgical perspective and that the differences in concentrations of the major constituents are relatively small. This leads to the inference that the potential lithium process flowsheet for the Franklin Project will likely be similar to that for the SWA Project.

The elevated bromide and potassium concentrations present in the Franklin Project brine indicate opportunities for the future recovery of bromine and potash as by-products. Bromine recovery is supported by a conceptual process study and extensive industry precedent within the Smackover Formation, suggesting reasonable potential for future commercial recovery. Potash recovery remains at a more conceptual stage and will require additional metallurgical testing, process development, and economic evaluation to assess its technical and commercial viability.

25.7 Mining Methods

The extraction of brine from the Upper Smackover interval has been modelled using 36 production wells and 36 injector wells to reach a maximum of 70,000 tpa lithium carbonate production over a 20-year Project life. The potential to produce up to 50,000 tpa of bromine in addition to the lithium carbonate has also been examined. Horizontal wells have been identified as being the most suitable extraction method for the Franklin Project.

25.8 Project Infrastructure

The Franklin Project benefits from access to established transportation, utility, and energy infrastructure in East Texas, including highway networks, rail access, electrical transmission infrastructure, natural gas supply, and fresh water resources. No infrastructure-related constraints have been identified that are expected to preclude Project development; however, additional engineering, infrastructure siting studies, utility connection agreements, and

permitting activities will be required during subsequent project phases to confirm facility layouts, power supply requirements, water sourcing, and wellfield infrastructure requirements.

25.9 Market Studies and Contracts

A current commodity market research report was obtained for both lithium carbonate and bromine by independent research companies. The analysis supports a market entry strategy for the proposed production of lithium carbonate and bromine, and provides long-term price forecasts for both saleable products.

25.10 Environmental Studies, Permitting and Social or Community Impact

A number of permits will be required for construction and operation of the Franklin Project. State permits for air emissions, surface waters discharge and management, resources extraction, underground injection, and waste management will be needed through both the RRC and the TCEQ. A socio-economic impact study will likely be required to evaluate benefits of additional jobs, tax revenue, and opportunities created for the community, as well as evaluate infrastructure needs, impacts on schools and other community services.

Federal permits for impacts to Waters of the US (jurisdictional waters) would likely be required from the USACE. Impacts to jurisdictional waters are expected to be minimal and could be permitted under a Nationwide 404 permit(s). As Nationwide Permits are supported by existing NEPA review, additional project-specific NEPA compliance is not anticipated. However, if impacts on jurisdictional waters exceed Nationwide permit thresholds, an individual permit would be required, together with project-specific NEPA compliance as part of the permitting process.

To date, no field baseline studies have been conducted. Baseline surveys would be required by the USACE for the Nationwide or Individual permit to comply with Section 7 of the Endangered Species Act and Section 106 of the National Historic Preservation Act. Other studies would include an aquatics survey, hydrologic/hydraulic analysis, and tribal consultation.

25.11 Capital Costs

Capital costs have been prepared with a -30%/+50% accuracy including a contingency of 20%, expressed in Q2 2026 dollars. The estimate is based on capital costs estimated for the SWA DFS, tailored for the Franklin Project through the application of escalation, capacity-based factors, and adjustments for scope differences. The option to develop a bromine processing facility would increase the initial capital costs by approximately 12%.

25.12 Operating Costs

Operating costs have been prepared with a -30%/+50% accuracy. expressed in Q2 2026 dollars. The reagent and natural gas estimate was developed based on mass flowrate requirement as well as by applying appropriate escalation to the unit costs of reagents and natural gas from the SWA DFS. The other costs (power, labour, maintenance and services and G&A) were estimated by escalating and applying appropriate factors to the operating costs from the SWA DFS. Power and reagent consumption are the major contributors to the overall operating costs.

25.13 Economic Analysis

All model outputs are expressed on 100% basis. Standard Lithium’s economic interest in the Project is 55%.

Results of the economic analysis show the potential economic viability of mineral resources with the Project most sensitive to changes in lithium carbonate selling price and LCE production, followed by changes to total capital costs and to operating costs.

The PEA is preliminary in nature and includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that this PEA will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

The economic analysis also demonstrates positive economic returns under a development scenario that includes the production of both lithium carbonate and bromine.

25.14 Project Opportunities

25.14.1 Metallurgical

The elevated potassium concentrations in the Franklin Project brine may support future potash production, subject to further process development, metallurgical testing, and economic evaluation.

25.15 Project Risks

25.15.1 Mineral Tenure

This could be the first brine production project that the RRC permits and permit approval times could result in Project delays. Also, several Texas lawyers have written articles arguing that Texas law is not clear about whether brine-sourced lithium is part of the mineral or surface estate in Texas, before concluding that it is most likely a mineral. Standard Lithium's Texas counsel has opined that the conclusion that brine-sourced lithium is a mineral is inescapable under Texas law; accordingly, this possibility is seen as low risk.

25.15.2 Geologic

Potential geologic risks include unexpected reservoir heterogeneity, which could include:

- Variations in net pay or mineral concentrations that would reduce or increase the volume of mineral resources subject to recovery;
- Variation in productivity resulting from lower-than or higher than-expected formation permeability;
- Variation in the porous formation resulting in a smaller or higher brine volume accessible from the Project wells; and
- Unrecognized faults resulting in barriers to brine flow.

25.15.3 Metallurgical

The following metallurgical risks to the Franklin Project have been identified:

- Variability of feed brine composition could impact lithium recovery, impurity rejection and the ability to consistently produce battery-quality lithium carbonate to the specifications required;
- Performance of the DLE technology not meeting lithium recovery and impurity rejection targets;
- Sub-optimal operation of reinjection due to unexpected variability in the properties of the spent lithium brine; and
- Health and safety hazards associated with the removal and handling of hydrogen sulphide if encountered in the brine supplying the processing facility.

25.15.4 Environmental Studies, Permitting and Social or Community Impact

The following permitting risk was identified at this stage of the Franklin Project:

- The need for NEPA compliance and compensatory mitigation would impact the timeline to permit the Project. If impacts to jurisdictional waters above Nationwide Permit thresholds cannot be avoided, it would result in the need for an individual 404 Dredge and Fill permit. Under the current scenario, a federal nexus (federal funding, federal permitting beyond 404 Nationwide permits) requiring compliance with the NEPA is not anticipated; however, final determination cannot be made until baseline data has been collected and Project definition is generally completed.

26. Recommendations

26.1 Summary

The QPs recommend advancing the Franklin Project to a PFS with an estimated cost of $1 million.

The QPs make the following recommendations for advancing the Franklin Project with an estimated budget of $11.5 million. Recommended work programs can be executed in a single phase of work.

26.2 Geology, Mineral Resource Estimates and Production Planning

The following steps are recommended to upgrade the mineral resource classification:

- Drill an additional exploration test well targeting the Upper, Middle, and Lower Smackover intervals in an area not tested by the 2023 and 2025/2026 data gathering programs. Consider drilling the well as a horizontal well in the Upper Smackover to evaluate the productivity of this wellbore configuration. The well should provide:
  - Geologic data;
  - Lithium, bromide, and potassium concentrations;
  - Production test information to estimate well rates, the number of wells needed, facility rates, and the completion plans for those wells;
  - Information regarding the potential extent of Middle and Lower Smackover development targets;
  - Information regarding the benefit of well stimulation to well productivity;
- Monitor the test wells for salt precipitation, evaluate the potential effect of salt precipitation on production operations, and identify remediation options;
- Conduct a laboratory selection comparison test, similar to that conducted for lithium, for bromide and potassium if noted concentration differences are deemed significant to the Project evaluation.
- Update the geologic model.

Reassess mineral resource classification as additional geological and hydrogeological and engineering data become available.

- Revise the reservoir simulation model, incorporating all geologic data obtained from the additional exploration program, in support of development of an optimized well plan and brine production profile.
- Revise the potential Franklin Project development concept and plan, including brine flow rate, well count, and well configuration.

QPs Brush and Williams anticipate that these tasks will be completed over a one-to-two-year period. Estimated costs are presented in Table 26.1.

Table 26.1: Recommended Works for Geology and Mineral Resource Estimates

Recommended Works	Estimated Cost ($ million)
Drill and Test Additional Exploration Well	6.0
Update Geological Model and Reservoir Simulation Model, Update Development Plan	2.0
Total	**8.0**

26.3 Mineral Processing and Metallurgical Testing

The following metallurgical testing steps are recommended for the Franklin Project with the estimated costs presented in :

- Pilot scale DLE testing of Franklin brine and DLE eluate test work for the purification, concentration and lithium carbonate production steps;
- Bench scale testing by bromine plant equipment vendors to determine process design criteria, including stripping and chlorination tests, for the bromine plant. This will use the spent brine from DLE testing; and
- A potash recovery from brine technology development study to be undertaken to explore alternatives to the evaporation and crystallization process route.

Table 26.2: Recommended Works for Metallurgy and Mineral Processing

Recommended Works	Estimated Cost ($ million)
Pilot scale DLE testing and DLE eluate testing	0.8
Bromine plant equipment vendor test work	0.5
Potash recovery from brine technology development study	0.3
Total	**1.5**

26.4 Environmental Studies, Permitting and Social or Community Engagement

The following activities associated with environmental studies, permitting and social/community engagement are recommended for the Franklin Project with the estimated costs presented in Table 26.3:

- Initiation of environmental baseline surveys for aquatic resources, cultural resources, and biological resources;
- Initiation of outreach to the regulatory agencies;
- Continue stakeholder engagement activities; and
- Early identification of potential pipeline routes, well pad siting, road locations to identify potential impacts to resources.

Table 26.3: Recommended Works for Environmental Studies, Permitting and Social or Community Engagement

Recommended Works	Estimated Cost ($ million)
Baseline Studies (aquatic, biological, cultural)	0.5
Total	**0.5**

26.5 Project Infrastructure

The following trade-off studies on infrastructure are recommended for the Franklin Project with the estimated costs presented in Table 26.4:

- Evaluate on-site power generation and grid electricity supply alternatives to optimize capital and operating costs; and
- Investigate opportunities to reduce total surface pipeline length to minimize capital and operating costs.

Table 26.4: Recommended Works for Infrastructure

Recommended Works	Estimated Cost ($ million)
Infrastructure Trade-off Studies	0.5
Total	**0.5**

26.6 Summary of Costs

The estimated costs for completing the recommendations are summarized in Table 26.5.

Table 26.5: Estimated Costs for Recommended Work

Recommended Works	Estimated Cost ($ million)
Geology and Mineral Resources	8.0
Metallurgical Testing	1.5
Environmental Studies	0.5
Project Infrastructure Trade-off Studies	0.5
PFS	1.0
Total	**11.5**

27. References

Ahr, W.M. (1973). The carbonate ramp: an alternative to the shelf model. *Gulf Coast Association of Geological Societies Transactions*, 23.

Alkin, R.H. and Graves, R.W. (1969). Reynolds oolite of Southern Arkansas. *The American Association of Petroleum Geologists Bulletin,* 53(9), pp. 1909-1922.

Baldwin, O.C. and Adams, J.A. (1971). K40/Ar40 ages of the alkalic igneous rocks of the Balcones trend of Texas. *Texas Journal of Science*, 22, pp. 223–231.

Bishop, W.F. (1967). Petrology of Upper Smackover Limestone in North Haynesville Field, Claiborne Parish, Louisiana. *American Association of Petroleum Geologists Bulletin,* 52(1).

Bishop, W.F. (1968). Petrology of Upper Smackover limestone in North Haynesville field, Claiborne Parish, Louisiana. *American Association of Petroleum Geologists Bulletin*, 52, pp. 92–128.

Bishop, W.F. (1971a). Geology of a Smackover stratigraphic trap. *American Association of Petroleum Geologists Bulletin*, 55, pp. 51–63.

Bishop, W.F. (1971b). Geology of upper member of Buckner Formation, Haynesville Field area, Claiborne Parish, Louisiana. *American Association of Petroleum Geologists Bulletin*, 55, pp. 566–580.

Bishop, W.F. (1973). Late Jurassic contemporaneous faults in north Louisiana and south Texas. *American Association of Petroleum Geologists Bulletin*, 57, pp. 566–580.

Blondes, M.S., Knierim, K.J., Croke, M.R., Freeman, P.A., Doolan, C., Herzberg, A.S. and Shelton, J.L. (2023). U.S. Geological Survey National Produced Waters Geochemical Database (ver. 3.0, December 2023): U.S. Geological Survey data release, https://doi.org/10.5066/P9DSRCZJ.

Budd, D.A. and Loucks, R.G. (1981). Smackover and lower Buckner formations, South Texas: Depositional systems on a Jurassic carbonate ramp: Bureau of Economic Geology Report of Investigation 112, 38 p.

Buffler, R.T. (1991). Early evolution of the Gulf of Mexico basin; In: D. Goldthwaite, (ed.), An Introduction to Central Gulf Coast Geology, New Orleans: New Orleans Geological Society, pp. 1–15.

Buffler, R.T., Shaub, F.J., Huerta, R., Ibrahim, A.B.K. and Watkins, J.S. (1981). A model for the early evolution of the Gulf of Mexico; Oceanologica Acta, No. SP, pp. 129–136.

Canadian Institute of Mining, Metallurgy and Petroleum, (Draft). CIM Leading Best Practice Guidelines for Sedimentary Basin and Geothermal Brine-Hosted Lithium Mineral Resources and Mineral Reserves Estimation, prepared by the Canadian Institute of Mining, Metallurgy, and Petroleum. CIM Mineral Resources & Mineral Reserve Committee.

Canadian Institute of Mining, Metallurgy and Petroleum, (2014). CIM Definition Standards for Mineral Resources & Mineral Reserves, prepared by the Canadian Institute of Mining, Metallurgy, and Petroleum. CIM Mineral Resources & Mineral Reserve Committee.

Canadian Institute of Mining, Metallurgy and Petroleum, (2019). CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines, prepared by the Canadian Institute of Mining, Metallurgy, and Petroleum. CIM Mineral Resources & Mineral Reserve Committee.

Carousel Specialty Products, Inc. (2026). Global Bromine Market Study.

Collins, A.G. (1974). Geochemistry of Liquids, gases, and Rocks from the Smackover Formation. U.S. Bureau of Mines report of Investigations.

Dickinson, K.A. (1968). Upper Jurassic stratigraphy of some adjacent parts of Arkansas, Louisiana and Texas; U.S. *Geological Survey Professional Paper*, 594, pp.E1—E25.

Final List of Critical Minerals (2018). 83 F.R. 23295-23296 (May 18, 2018). https://www.govinfo.gov/app/details/FR-2018-05-18/2018-10667/summary

Forgotson, J.M. (1954). Regional Stratigraphic Analysis of Cotton Valley Group of Upper Gulf Coastal Plain. AAPG Bulletin, 38(12), pp. 2476–2499.

Global Lithium LLC (2026). The Lithium Market. A summary of the market for lithium chemicals with a battery quality carbonate price forecast to 2049, prepared for Standard Lithium.

Handford and Baria (2007). Geometry and seismic geomorphology of carbonate shoreface clinoforms, Jurassic Smackover Formation, north Louisiana. Geological Society, London, Special Publications, 277.

Harris, P.M. and Dodman, C.A. (1987). Jurassic evaporites of the U.S. Gulf Coast: the Smackover-Buckner contact; Society of Economic Paleontologists and Mineralogists, Depositional and Diagenetic Spectra of Evaporites (CW3), pp. 174–192.

Hazzard, R.T., Spooner, W.C. and Blanpied, B.W. (1947). Notes on the stratigraphy of the formations which underlie the Smackover Limestone in south Arkansas, northeast Texas and north Louisiana, in Shreveport Geological Society Reference Report, 2.

Heydari, E. and Baria, L. (2005). A microbial Smackover Formation and the dual reservoir–seal system at the Little Cedar Creek Field in Conecuh County of Alabama; Gulf Coast Association of Geological Societies Transactions, 55, pp. 294–320.

Hunt, B.W. (2013). *Regional Norphlet facies correlation, analysis and implications for paleostructure and provenance, eastern Gulf of Mexico*. The University of Alabama.

Imlay, R.W. (1940). Lower Cretaceous and Jurassic Formations of Southern Arkansas and their Oil and Gas Possibilities. Office of the State Geologist Arkansas. Information Circular IC-12.

International Bureau of Weights and Measures (BIPM), (2006). *The international system of units (SI)* (8th ed.).

Kopaska-Merkel, D.C., Mann, S.D. and Tew, B.H. (1992). Geologic setting, petrophysical characteristics, and regional heterogeneity patterns of the Smackover in southwest Alabama; Geological Survey of Alabama, Contract No. DE-FG22-89BC14425, 215 p.

Mancini, E.A., Aharon, P., Goddard, D.A., Horn, M. and Barnaby, R. (2008). Basin analysis and petroleum system characterization and modelling, interior salt basins, central and eastern Gulf of Mexico, Part 3: tectonic / depositional history, resource assessment; Adapted from Final Report, issued June 30, 2008, for period May 1, 2003 to April 30, 2008, prepared for U.S. Department of Energy, for DOE Award Number DE- FC26-03NT15395 and available at Texas A&M University (http://berg- hughes.tamu.edu/research/sedimentary-basin-analysis-studies).

Mann, S.D. (1988). Subaqueous evaporites of the Buckner Member, Haynesville Formation, northeastern Mobile County, Alabama.

Marton, G. and Buffler, R.T. (2016). Jurassic–Cretaceous tectonic evolution of the southeastern Gulf of Mexico, constrains on the style and timing of Gulf of Mexico rift–drift development. In *AAPG/SEG International Conference & Exhibition*.

Moharana, A., Dworzanowski, M., Brush, R.M. and Williams, R.E. (2025). NI 43-101 Technical Report: Maiden Inferred Resource Estimate for Standard Lithium Ltd.'s Franklin Project Located in Hopkins, Franklin, and Titus Counties, Texas, United States, effective date September 24, 2025.

Moldovanyi, E.P. and Walter, L.M. (1992). Regional trends in water chemistry, Smackover Formation, southwest Arkansas: Geochemical and physical controls. *The American Association of Petroleum Geologists Bulletin*, 76(6), pp. 864–894.

Moore, C.H. and Druckman, Y. (1981): Burial diagenesis and porosity evolution, Upper Jurassic Smackover, Arkansas and Louisiana; *AAPG Bulletin*, 65(4), pp. 597–-628.

Moore, C.H. (1984): The upper Smackover of the Gulf rim: depositional systems, diagenesis, porosity evolution and hydrocarbon production; In: W. P. S. Ventress, D. G. Bebout, B. F. Perkins, and C. H. Moore (eds.), The Jurassic of the Gulf rim: Gulf Coast Section SEPM, 3rd Annual Research Symposium, Program and Abstracts, p. 283–307.

Moser v. US Steel Corp., 676 S.W.2d 99, 101–08 (Tex. 1984).

Munk, L.A., Boutt, D., Butler, K., Russo, A., Jenekes, J., Moran, B. and Kirshen, A. (2025). Lithium Brines: Origin, Characteristics, and Global Distribution. *Economic Geology*, 120(3), pp. 575-597.

Nunn, J.A. (1984). Subsidence and temperature histories for Jurassic sediments in the northern Gulf Coast: a thermal-mechanical model.

Pilger Jr, R.H. (1981). The opening of the Gulf of Mexico: Implications for the tectonic evolution of the northern Gulf Coast.

Pinto Gallardo, P., Spasojevic, A., Brush, R.M., Williams, R.E., Rogers Jr. and DeLong, R. (2025). South West Arkansas Project NI 43-101 Technical Report & Definitive Feasibility Study Arkansas, United States, effective date September 3, 2025.

Railroad Commission of Texas, 16 Tex. Admin. Code § 3.81.

Railroad Commission of Texas, 16 Tex. Admin. Code § 3.82.

Reed v. Wylie, 597 S.W.2d 743, 747 (Tex. 1980).

Relating to the regulation by the Railroad Commission of Texas of brine mining. SB1186. 88th Legislature. (2023). https://legiscan.com/TX/text/SB1186/id/2809037.

S&P Global (2025). Products & Solutions Upstream Oil & Gas Consulting. https://www.spglobal.com/commodity-insights/en/products-solutions/consulting/upstream-oil-gas

Salvador, A. (1987). Late Triassic-Jurassic paleography and origin of Gulf of Mexico basin. *AAPG Bulletin*, 71, pp. 419–451.

Salvador, A. (1990). Triassic-Jurassic, in: Salvador, A., (ed.) *DNAG The Geology of North America The Gulf of Mexico Basin*, J. Boulder, The Geological Society of America, pp. 131–180.

Sawyer, D.S., Buffler, R.T. and Pilger, R.H. Jr. (1991). The crust under the Gulf of Mexico Basin, in Salvador, A., (ed.) *DNAG The Geology of North America The Gulf of Mexico Basin, J. Boulder:* The Geological Society of America.

Schemper, P., Loucks, R.G. and Fu, Q. (2022). Depositional systems, lithofacies, and lithofacies stacking patterns of the Jurassic Smackover Formation (Oxfordian) and Buckner Anhydrite (Kimmeridgian) in Van Zandt County, Texas: A type-cored section from northeastern Texas, *Gulf Coast Association of Geological Societies Journal*, 11, pp. 16–36.

Schneider, H.G. (1924). Smackover Oil Field, Ouachita and Union Counties, Ark. Transactions of the AIME, 70(01), pp. 1076–1099.

Scott, K.R., Hayes, W.E. and Fietz, R.P. (1961). Geology of the Eagle Mills Formation. *Gulf Coast Association of Geological Socieities Transaction*, 11, pp. 1–14.

Sulphur Springs Climate: Weather Sulphur Springs & Temperature by Month. (n.d.). https://en.climate-data.org/north-america/united-states-of-america/texas/sulphur-springs-16639/.

Texas A&M Agrilife Extension. (n.d.). Extension Education in Franklin County. https://franklin.agrilife.org/.

Troell, A.R. and Robinson, J.D. (1987). Regional stratigraphy of the Smackover limestone (Jurassic) in south Arkansas and north Louisiana, and the geology of Chalybeat Springs oil field. *Gulf Coast Association of Geological Societies Transactions*, 37, pp. 225–262.

U.S. Census Bureau (2025). Annual Estimates of the Resident Population for Counties in Texas: April 1, 2020 to July 1, 2024 (CO-EST2024-POP-48), Source: U.S. Census Bureau, Population Division, Release Date: March 2025.

Van Siclen, D.C. (1984). Early opening of initially closed Gulf of Mexico and Central North Atlantic Ocean. *AAPG Bulletin*, *68*(9), pp. 1221–1221.

Winker, C.D., and Buffler, R.T. (1988). Paleogeographic evolution of early deep-water Gulf of Mexico and margins, Jurassic to Middle Cretaceous (Comanchean). *AAPG Bulletin*, 72(3), pp. 318–346.

Zimmerman, R.K. (1992). Fractured Smackover limestone in northeast Louisiana; Implications for hydrocarbon exploitation. *Gulf Coast Association of Geological Societies Transactions,* 42, pp. 401–412.