

# Independent Feasibility Study and Expansion Case for Atlas Salt's Great Atlantic Project

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ST. JOHN'S, Aug. 28, 2023 - Atlas Salt (the "Company" or "Atlas" - TSXV: SALT) is pleased to announce the results of a Feasibility Study (FS) and updated Mineral Resource estimate prepared by SLR Consulting (Canada) Ltd. (SLR) on its 100%-owned Great Atlantic Salt Project ("Great Atlantic", or the "Project") located in western Newfoundland, Canada. The FS represents a significant economic improvement over the Preliminary Economic Assessment (PEA), also completed by SLR, released by Atlas January 30, 2023 (all figures in Canadian dollars).

In addition, SLR has also provided an expansion case to 4.0 million tonnes per year (Mtpa) of road deicing salt over a 47.5-year mine life presented at a Preliminary Economic Assessment (PEA) level analysis. This demonstrates a robust upside production scenario with a pre-tax net present value (NPV) at 8% of \$2.015 billion (CDN) and a pre-tax IRR of 28%. The expansion case is based on Probable Mineral Reserves, with the remainder being Inferred Mineral Resources. Inferred Mineral Resources are considered too geologically speculative to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves. There is no certainty that the production forecasts on which the expansion case is based will be realized.

## FS Highlights

*Robust economics based on 2.5 million tonnes-per-year production over a 34-year mine life:*

### Pre-Tax Economics

- Internal Rate of Return (IRR) of 23%.
- Net Present Value (NPV) at 8% of \$1.017 billion (CDN).
- Payback in 4.2 years after commencement of operations.
- Low-cost production - utilizing a Q3 2023 cost basis of \$22.70 per tonne FOB originating port.

*Expansion of Indicated Mineral Resources, and first-time declaration of Mineral Reserves:*

### Updated Mineral Resource Estimate

- Indicated Mineral Resources totaling 383 Mt at 96.0 % NaCl.
- Inferred Mineral Resources totaling 868 Mt at 95.2 % NaCl.
- Probable Mineral Reserves totaling 88.1 Mt at 96% NaCl.

*Note: The conversion of Inferred to Indicated Mineral Resources (and subsequent conversion to Probable Mineral Reserves) has been limited by the target of an initial 34-year mine life. It is anticipated that further upgrading of Mineral Resources to Mineral Reserves will be carried out from underground during the production phase.*

- Key elements of the Project are designed to accommodate mine and processing expansion of up to 4.0 Mtpa and to extend the mine life beyond 34 years.
- Great Atlantic would stand out as a low-cost producer and the first major underground salt mine in North America designed to be accessible by declines as opposed to shafts.
- Designed to minimize environmental impact by utilizing electrified equipment.

Mr. Rick LaBelle, Atlas CEO, commented: "I am thrilled to be joining the Company at this pivotal point in its history. The Independent Feasibility Study is a major milestone on the path to the development of the massive high-grade Great Atlantic deposit which will stand out as the salt mine of the 21<sup>st</sup> century in North America, strategically located in the heart of a robust salt market serving Eastern Canada and the U.S. East Coast."

Mr. LaBelle added, "I'm excited to be working with President Rowland Howe, who played such an important role in the development of the world's largest underground salt mine at Goderich, and we're in the midst of assembling a top-notch team to get the job done at Great Atlantic. The expansion scenario underscores how there is substantial additional room to optimize an already strong Feasibility Study. We have de-risked this project and we will maximize the value of this unique, transformative asset for shareholders in an investor-friendly way."

Mr. LaBelle concluded, "I look forward to a very busy Q4 as we build momentum and accordingly I expect Atlas Salt will have much more to announce."

PRMediaNow Interview with CEO Rick LaBelle:

"I think until today, this project was a trailblazer. After today, it's a game-changer." - Atlas Salt CEO Rick LaBelle discusses this news release with PRmediaNow's Cyndi Edwards - click on the link below to view.

<https://www.youtube.com/watch?v=SNodVL4d-Nc>

## FS Technical Summary

### Overview

The FS considers developing Great Atlantic into an underground operating mine capable of producing 2.5 Mtpa of rock salt with key mine access and plant infrastructure designed for 4.0 Mtpa. Construction of the mine would occur over three years, with access to the deposit via twin declines. Extraction of rock salt would occur using the room and pillar method, with continuous mining equipment. Salt would be processed to a specific size and grade using a crushing and screening plant located within the underground mine, and then brought to surface via conveyor belts. An overland conveyor would transport the rock salt from the mine area to the existing Turf Point port for loading onto ships destined for Canadian and American markets. The FS builds upon the January 30, 2023 PEA and will form the basis for environmental licensing and permitting and the next phase of engineering design.

### Mineral Resources

Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves (CIM (2014) definitions) were used for Mineral Resource classification. The updated Mineral Resource currently includes 383 Mt of Indicated Mineral Resources plus 868 Mt of Inferred Resources. Table 1 provides a summary of the Great Atlantic Mineral Resource estimate prepared by SLR, with an effective date of May 11, 2023. The results from the January 30 PEA are shown for comparison.

Table 1: Summary of Great Atlantic Mineral Resources

Category	Tonnage (Mt)	Grade (% NaCl)	Contained NaCl (Mt)	Jan 30 PEA Resource Tonnage (Mt)	Jan 30 PEA Resource Grade (%NaCl)
Indicated	383	96.0	368	187.2	96.4
Inferred	868	95.2	827	999.4	95.6

### Notes:

1. CIM (2014) definitions were followed for Mineral Resources.
2. Mineral Resources are estimated without a reporting cut-off grade. Reasonable Prospects for Eventual Economic Extraction were instead demonstrated by reporting within Mineable "Stope" Optimised (MSO) shapes, with a minimum height of 5 m, minimum width of 20 m, length of 40 m, and minimum grade of 90% NaCl, with a 5 m minimum pillar width between shapes.
3. Bulk density is 2.16 t/m<sup>3</sup>.
4. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

5. Mineral Resources are inclusive of Mineral Reserves.
6. Salt prices are not directly incorporated into the Mineral Resource MSO minimum target grades, however, the mean Mineral Resource grades exceed the 95.0% NaCl ( $\pm 0.5\%$ ) specification outlined in ASTM Designation D632-12 (2012).
7. Numbers may not add due to rounding.

The QP is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Reserve estimate.

#### Mining and Mineral Reserves

Mining designs, development plans, and schedules have been prepared for a fully electric, mechanized room and pillar mining operation. It is envisaged that salt will be mined using continuous miners and hauled by truck to a lump breaker and conveyor system to move material to a crushing and screening plant located underground. The FS is based upon the initial production of 2.5 Mtpa of rock salt product with key mine infrastructure capacity to expand to 4.0 Mtpa. A summary of Mineral Reserves, effective July 31, 2023, is shown in Table 2.

Table 2: Summary of Great Atlantic Mineral Reserves

Category	Tonnage (Mt)	Grade (Mt NaCl)
Probable	88.1	96.6%

#### Notes:

1. CIM (2014) definitions were followed for Mineral Reserves.
2. All Mineral Reserves are classified as Probable Mineral Reserves, with extents limited to the Indicated Mineral Resource wireframe.
3. Salt prices are not directly correlated into the Mineral Reserve estimate, however the mean Reserve grades exceed the 95.0% NaCl ( $\pm 0.5\%$ ) specification outlined in ASTM Designation D632-12 (2012) and based on a detailed salt market review to determine economic viability.
4. A minimum mining height of 5.0 m and width of 16.0 m were used for production rooms.
5. Sterilization zones 8.0 m below top of salt and 5.0 m above bottom of salt have been applied.
6. A mining extraction factor of 100% was applied to all excavations.
7. Bulk density is 2.16 t/m<sup>3</sup>.
8. Planned process recovery is 95%.
9. Numbers may not add due to rounding.

The QP is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Reserve estimate.

The mine will be accessed through two declines driven to 240 Level (nominally 240 m below surface) where the process plant and related infrastructure will be located. One decline will provide fresh air into the mine and be used for vehicle access, while the other will exhaust air and contain an overhead conveyor to transport finished rock salt product to surface. Twin declines will be extended from the 240 Level to the first production level at 320 Level, continuing deeper into the mine as each new production level gets established. The primary mine-related infrastructure including maintenance shops, vehicle charging bays, and gear storages will be located on the 320 Level.

Internal declines will be developed as necessary to sustain the initial production rate of 2.5 Mtpa over an initial 34-year mine life. A total of seven production levels supported with internal declines and level-specific infrastructure will be constructed to support mining activities on each level. Room and pillar production mining will be executed in four cuts of five meters height, resulting in a maximum room height of 20 m. Rooms will be 16 m wide, separated by 25 m square pillars.

All major equipment used in the mine will be battery electric or plugged electric, with minimal diesel-powered equipment in the mine.

## Processing

Processing of the salt will take place at a crushing and screening plant located within the underground mine. The rock salt produced will be suitable for use as a deicing product, conforming to specification ASTM-D632, with a minimum NaCl grade of 95% and certain grading sizes. Excess fines produced during the crushing and screening process will be used within the mine for haulage way surfacing. There are no chemical processes or reagents involved in the production of rock salt, other than an anti-caking agent that is added to the product immediately before shipping. After rock salt has been processed, it will be transported to the surface via conveyor belts. On surface, a series of conveyor belts will transport the rock salt from the mine site to the port.

## Infrastructure

The Great Atlantic operation will include both on and off-site infrastructure. On-site infrastructure has been configured to minimize the mine site surface footprint. Components of the on-site infrastructure include:

- Site terrace
- Lined and covered temporary salt storage area used during initial excavations
- Boxcut and decline access area
- Surface buildings such as administration, warehouse, fuel bay, dry facility, maintenance shop
- Salt storage building and associated material handling system
- Electrical substation and distribution
- Surface water management system
- Gatehouse and fencing

Notably, a tailings management facility is not required for the Project, as all material that is processed will be sold as rock salt or remain in the mine as fines.

Off-site infrastructure has been designed to take advantage of some of the existing facilities available in the immediate area, including the port, historical haul road, and a NL Power electrical substation. From PEA to FS, the design of elements for the off-site infrastructure have been improved based on discussions with stakeholders.

Planned off-site infrastructure includes the following:

- Improved site access road alignment overland conveyor connecting the mine to the port
- Retrofitting of the existing port facilities to handle rock salt
- Addition of a new building and material handling system at the port to expand the capacity of covered material storage
- High voltage transmission line connection to NL Power's substation located in the town
- Sewer and water connection to town utilities

## Environment and Community Engagement

Environmental base line studies of the project area have been completed by GEMTEC Consulting Engineers and Scientists Limited (GEMTEC) throughout 2022 in preparation for the registration of the project under the environmental review process. Consultations with local community and affected groups are ongoing. Atlas has retained the services of an experienced communications consultant to assist and facilitate informed community input into the project development. With the FS now concluded, Atlas intends to launch into the formal environmental assessment process.

## Marketing and Logistics

As part of the FS, Atlas and SLR have commissioned multiple independent assessments of marketing and logistics. These independent assessments have formed the basis of the assumptions used in the FS.

Rock salt produced from Great Atlantic will initially target the regional deicing markets in eastern Canada and

the US East Coast. It is estimated that this market requires between 11.0 Mtpa and 16.0 Mtpa of rock salt in any given year, sourced from domestic and international suppliers, with the demand highly correlated to weather conditions. The primary customers of rock salt are government entities which use a tender system for the annual supply of deicing salt. Secondary customers include commercial deicing operators.

Government entities include municipalities, Departments of Transportation (DoT), counties, and other provincial or state entities, while commercial operators may vary from distribution companies for retail purchase, or contractors who purchase rock salt for de-icing commercial and private properties.

#### Cash Flow Model Basis

SLR has prepared a cash flow model that is based on a 34-year mine plan with a production rate of 2.5 Mtpa. It is noted that the Mineral Resource base will allow for a much longer mine life. The mine schedule includes a three year ramp up period, with year one production of 1.5 Mtpa, year two production of 2.0 Mtpa, and year three reaching steady-state production of 2.5 Mtpa.

The cash flow model comprises estimates of capital costs, operating costs, an assessment of revenue, and estimate of project economic metrics such as net present value, internal rate of return, and payback period. Economic metrics were assessed both on a pre- and post-tax basis.

SLR has assumed that pre-construction activities commence in 2024, construction of the mine would commence in 2025, with salt production commencing in 2028. To bring salt prices to a 2028 base date, SLR has applied a 4.0% annual increase to the price of salt, which is consistent with other publicly available technical reports on existing salt operations in North America. Beyond 2028, SLR has applied a 2.0% annual increase to the price of salt. In terms of costs, SLR has applied 2.0% annual inflation to capital and operating costs. SLR has also applied a 2% premium to prices every fifth year, to account for volatility in the rock salt markets due to weather events.

#### Capital Costs

Capital costs for the Project have been estimated based on first principles build ups, factored estimates, and quotes for major equipment and supplies. The capital cost estimate conforms to an AACE Class 3 estimate, as of the third quarter (Q3) of 2023. Capital costs are divided between pre-production capital (representing years leading up to salt production) and sustaining capital. Costs are divided into areas including mining, processing, infrastructure, off-site infrastructure, indirect costs, owner's costs, and contingency. The capital cost estimate is presented in Table 3.

Table 3: Capital Cost Estimate - Initial 34 Year Production Plan

Direct Cost	Amount (C\$ '000)
Mining	151,646
Processing	39,352
On-Site Infrastructure	46,437
Off-Site Infrastructure	64,522
Total Direct Cost	301,958
Other Costs	
Indirect Cost	71,121
Owners Costs	34,154
Subtotal Costs	407,232
Contingency	72,898
Initial Capital Cost	480,130
Sustaining	599,930
Reclamation and closure	30,246
Total Capital Cost	1,107,222

Notes:

1. Capital costs include escalation.

Operating Costs

Operating costs for the Project have been estimated based on first principles build ups, estimations of labour quantities and remuneration, productivity, and consumption assumptions. The operating cost estimate is as of Q3 2023. Operating costs are divided into disciplines including mining, processing, general and administration, and port operations. SLR has assumed that the port would be owned and operated by a third-party and accessible based on commercial terms. The operating cost estimate is presented in Table 4.

Table 4: Operating Cost Estimate

Area	LOM - Initial 34 Unit Costs with Q3 LOM Unit Costs		
	Year Plan (C\$ '000)	2023 Basis (C\$/mt shipped)	(C\$/mt shipped)
Mining	1,532,637	11.71	18.32
Processing and Material Handling	1,087,987	8.34	13.01
General and Administration	345,763	2.65	4.13
Total	2,966,386	22.70	35.46

Notes:

2. The columns *LOM (life of mine) - Initial 34 Year Plan*, and *LOM Unit Costs* include escalation.

Pricing and Revenue Assumptions

SLR has assumed a weighted average price of rock salt based on a market analysis review completed by a third-party, as well as taking into consideration the shipping and logistics costs of getting the salt to destination ports. SLR's revenue analysis is based on pricing FOB Turf Point and is based on Q3 2023. The Project is subject to a royalty payable to [Vulcan Minerals Inc.](#), in the amount of 3% of net production revenue. A summary of revenue assumptions is presented in Table 5.

Table 5: Summary of Revenue Assumptions

Price Forecast (FOB Turf Point) Value	Units
Q3 2023 Base Price	72.24 C\$/mt
Year 1 Sales Price	87.90 C\$/mt
LOM Sales Price	124.86 C\$/mt

Economic Outcomes

The resulting economics of the Project including net present value (NPV) and internal rate of return (IRR) are presented in Table 6. Results from the January 30 PEA are shown for comparison purposes.

Table 6: Summary of Economic Outcomes - Initial 34 Year Production Plan at 2.5 Mtpa

Metric	Units	Value	January 30 PEA
Pre-Tax Payback Period	yrs	4.2	4.2
Pre-Tax IRR	%	23%	22.1%
Pre-tax NPV at 5% discounting	C\$ '000	1,900,081	1,627,736
Pre-tax NPV at 8% discounting	C\$ '000	1,017,038	909,338
Pre-tax NPV at 10% discounting	C\$ '000	681,292	620,247

Post-Tax Payback Period	yrs	4.8	5.0
Post-tax IRR	%	19%	17.3
Post-tax NPV at 5% discounting	C\$ '000	1,145,765	920,320
Post-tax NPV at 8% discounting	C\$ '000	599,926	481,900
Post-tax NPV at 10% discounting	C\$ '000	386,682	304,935

It is noted that all calculations of NPV and IRR assume an initial capital spending period of four years. The payback period calculations have a base date of the commencement of operations.

#### Expansion Case To 4 Million Tonnes Per Year Production

In addition to the FS Case of 2.5 Mtpa, SLR has prepared a Preliminary Economic Assessment for a scenario comprising expanded production at a rate of 4 Mtpa. The mine plan for the PEA is based upon extraction of 193 million tonnes, consisting of the Mineral Reserves defined in the FS plus Indicated and Inferred Mineral Resources from 320 level to 530 level. The mine life is 47.5 years, with significant unmined Inferred Resources remaining.

The mining designs contained in the PEA are based, in part, on Inferred Mineral Resources. Approximately 46% of the mine plan is based on Probable Mineral Reserves, with the remainder being Inferred Mineral Resources. Inferred Mineral Resources are considered too geologically speculative to have economic considerations applied to them that would enable them to be categorized as Mineral Reserves. There is no certainty that the production forecasts on which the PEA is based will be realized.

The major difference from the FS case is the addition of three more continuous miners (total of five plus a roadheader) and up to seven additional haul trucks. In the pre-production and early years of production, development is accelerated in order to access more workplaces.

The results of the PEA economic analysis are shown in Table 7.

Table 7: Expansion Case Results Summary

Item	Units	Expansion Case
Reserve Tonnes Mined	Mt	88
Inferred Tonnes Mined	Mt	105
Total Tonnes Mined	Mt	193
NaCl Grade	%	95.5
Mine Life	Years	47.5
Total Net Revenue <sup>1</sup>	C\$ millions	24,754
Total LOM Operating Cost <sup>1</sup>	C\$ millions	4,885
LOM Unit Operating Cost	C\$/tonne	34.45
Initial Capital Cost	C\$ millions	480
Expansion Capital Cost	C\$ millions	101
Sustaining Capital	C\$ millions	1,446
Reclamation and Closure	C\$ millions	39
Total Capital	C\$ millions	2,063
Pre-Tax Cashflow	C\$ millions	17,803
Payback	Years	4.2
Pre-Tax IRR	%	28
Pre-tax NPV at 5%	C\$ millions	4,095
Pretax NPV at 8%	C\$ millions	2,015
Pretax NPV at 10%	C\$ millions	1,320

1. All costs and revenue are escalated from Q3/2023. Revenue is escalated at 4% per year to 2028 and 2% per year thereafter. Operating costs are escalated at 2% per year.

## Next Steps

Upon completion of the FS, Atlas intends to release a supporting NI 43-101 Technical Report filed on SEDAR within 45 days of this news release. Other ongoing work towards advancing the Project includes the following:

- Ramp up of owner's team to advance the next phases of engineering
- Initiation of formal environmental approvals process
- Review of recommended field programs that could further de-risk the project
- Continued engagement with stakeholders and First Nations groups
- Ongoing discussions with potential vendors and suppliers

## Qualified Persons

This News Release describes an updated Mineral Resource estimate, a feasibility study and cash flow, and an expansion case at a PEA level based upon geological, engineering, technical and cost inputs developed by SLR Consulting (Canada) Ltd. A National Instrument 43-101 Technical Report (NI 43-101) will be filed on SEDAR within 45 days. The technical information in this news release has been prepared in accordance with the Canadian regulatory requirements set out in NI 43-101 and reviewed and approved by EurGeol Dr. John G. Kelly, P.Geo., FIMMM, MIQ, David M. Robson, P.Eng., MBA, Lance Engelbrecht, P.Eng., Derek J. Riehm, M.A.Sc., P.Eng., and Graham G. Clow, P.Eng. each of whom is a "qualified person" under National Instrument 43-101 - *Standards of Disclosure for Mineral Projects* ("NI 43-101").

The technical information in this news release has been prepared in accordance with the Canadian regulatory requirements set out in National Instrument 43-101 and reviewed on behalf of the company by Patrick J. Laracy, P. Geo, Chairman of Atlas Salt, a qualified person.

## About Atlas Salt

*Bringing the Power of SALT to Investors:* Atlas Salt owns 100% of the Great Atlantic salt deposit strategically located in western Newfoundland in the middle of the robust eastern North America road salt market. The project features a large homogeneous high-grade resource located immediately next to a deep-water port. Atlas is also the largest shareholder in Triple Point Resources as it pursues development of the Fischell's Brook Salt Dome approximately 15 kilometers south of Great Atlantic in the heart of an emerging Clean Energy Hub.

We seek Safe Harbor.

*For information, please contact:*

Richard LaBelle, CEO  
(709) 754-3186  
investors@atlassalt.ca

MarketSmart Communications Inc.  
Adrian Sydenham  
Toll-free: 1-877-261-4466  
info@marketsmart.ca

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