



Lithium South
DEVELOPMENT CORPORATION

HOMBRE MUERTO NORTH LITHIUM PROJECT

A DEVELOPING LITHIUM VALUE PROPOSITION

AUGUST 2023

www.lithiumsouth.com

TSX-V: LIS
OTCQB: LISMF

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THE FINANCIAL PROJECTIONS PERTAINING TO THE HOMBRE MUERTO LITHIUM PROJECT ARE BASED UPON ASSUMPTIONS, EXPERIENCE AND PROPRIETARY KNOWLEDGE OF KEY LITHIUM MANAGEMENT. FURTHER EXPLORATION OF THE HOMBRE MUERTO NORTH LITHIUM PROJECT IS REQUIRED TO CONFIRM THE ASSUMPTIONS CONTAINED WITHIN THIS PRESENTATION AND TO VERIFY AND CONFIRM THE POTENTIAL OF THE FINANCIAL MODEL.

THIS PRESENTATION IS FOR DISCUSSION PURPOSES ONLY.

The production of this presentation was supervised by William Feyerabend, a Qualified Person as defined under National Instrument 43-101. Mr. Feyerabend approves the scientific disclosure contained herein.

WHY LITHIUM SOUTH?



Located in the Lithium Triangle

40% of global production
>90% of Brine Resources
HMN Li Project is 100% owned
Excellent access with current infrastructure



High Grade, Low Impurities

High grade low impurity 571,000 tonne LCE resource identified on 14% of project area
Recently completed resource expansion drill program returns excellent results with 70% of the salar area now drilled
Significantly upgraded resource expected September 2023



Evaporation Recovery

Industry proven lithium recovery process
Recent pilot scale evaporation ponds completed and in operation
HMN Li Project pilot plant producing battery grade lithium carbonate



Outstanding Results

2018 Preliminary Economic Assessment confirms support for a 5000 TPA operation
New resource study expected September 2023 anticipated to significantly expand throughput and project size



Unique High-quality Lithium Brine

Low impurity = Lower OPEX
High grade = Lower CAPEX
High evaporative brine profile indicated by preliminary testing



Strategic Investor / Proven Team

Strong strategic partner with Chemphys – Highly experienced producer of lithium products.
Strong local technical lithium experience. Corporate laboratory in Salta City, Argentina

FUTURE VALUE REALIZATION THROUGH PROJECT DEVELOPMENT

- Lithium South owns the HMN Li Project located in Salta Province, Argentina
- The project is situated on the world-renowned Hombre Muerto Salar, a major lithium-producing salar.
- The completed 2022-23 drill program will significantly expand the maiden 571,000 tonne LCE resource.
- A pilot plant is being designed to prove low risk evaporation technology as the recovery method.
- With recent consolidation on the Hombre Muerto salar, the four players are Lithium South, POSCO and the newly announced Livent/Allkem merger, and Galan Lithium. [Source: thedaesreport.com](https://www.thedaesreport.com)
- POSCO is spending US\$ 4 Billion to develop their lithium production adjacent to the LIS development.

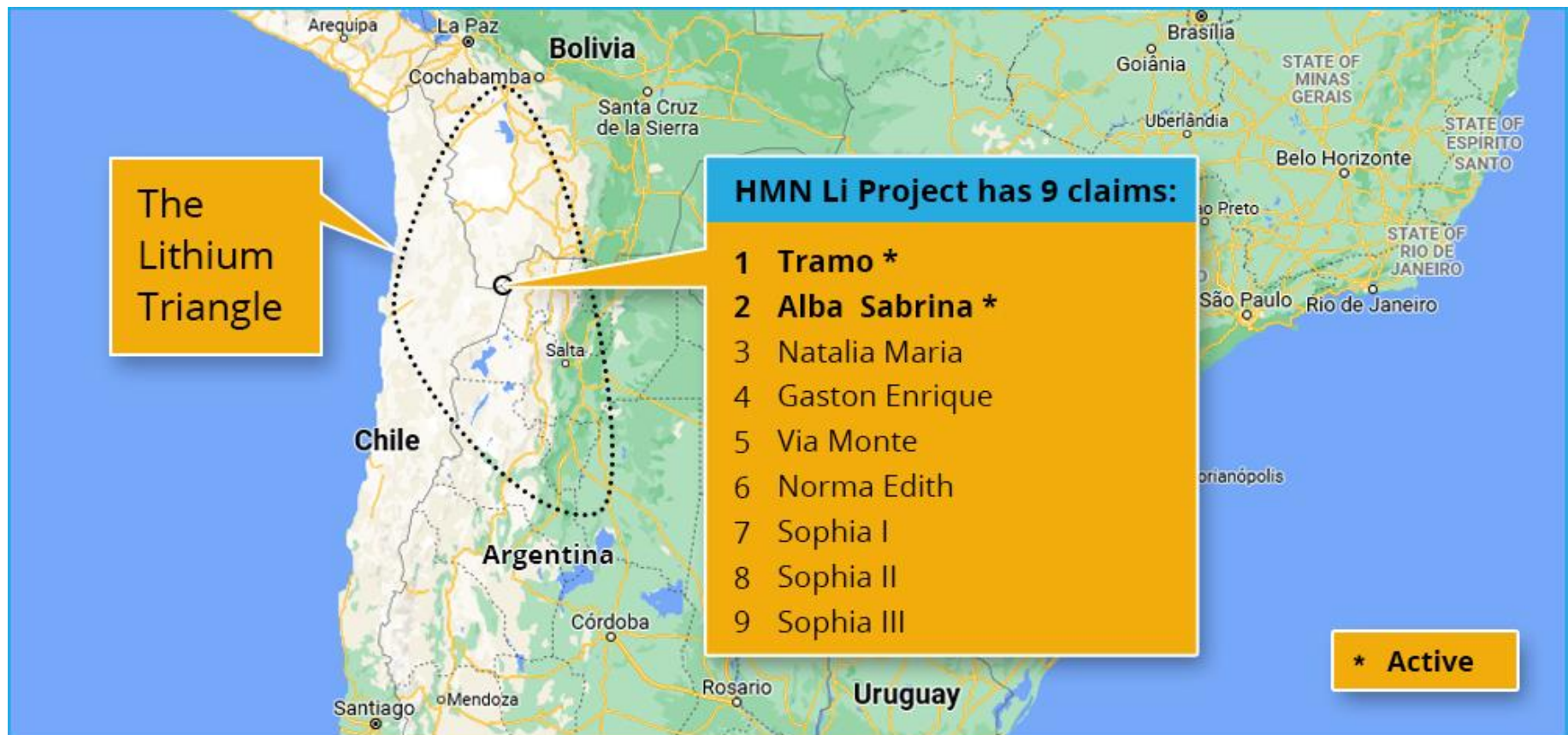
With a resource update pending, Lithium South could be revalued in relation to peers



HOMBRE MUERTO SALAR – LITHIUM TRIANGLE

The **Hombre Muerto North Lithium Project** (HMN Li Project) resides within The Lithium Triangle, a region of the Andes that borders Argentina, Bolivia and Chile, known for its lithium production.

The property package of 5,687 hectares is comprised of nine mining concessions, six on the salar, and three off the salar. The project is strategically located with developed infrastructure on the renowned Hombre Muerto Salar in the Salta province of Argentina.



MOVING FROM EXPLORATION TO DEVELOPING A LITHIUM MINE

- 2018 Maiden Resource – high quality brine resource of 571,000 tonnes LCE
- Nine claim blocks totaling 5,687 hectares and 100% owned by LIS
- Preliminary Economic Assessment completed 2019 on 5,000 TPA LCE
- 2022-23 resource expansion drill program completed yielding impressive lithium grades from all 8 drill holes at Alba Sabrina and Natalia Maria claim blocks.
- Process test work ongoing to produce battery grade lithium carbonate
- Permitting process nearing completion
- Feasibility study to be completed 2023-24 based on upgraded resource size
- Proven low risk evaporation technology for lithium recovery



LITHIUM SOUTH PROJECT MILESTONES

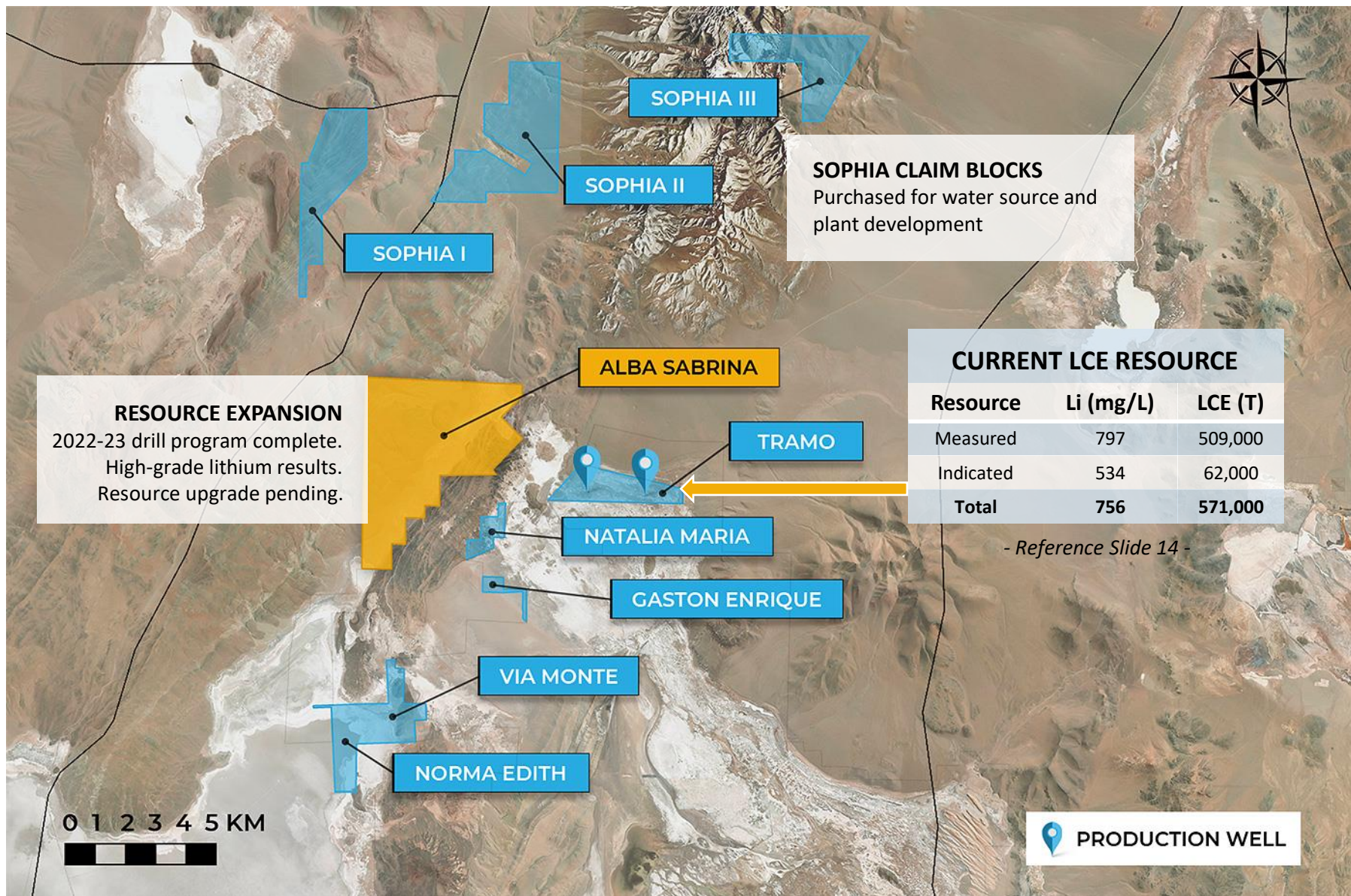
MILESTONES COMPLETED

- 2018 ● Acquired option to purchase
- 2019 ● Completed NI 43-101 Resource Calculation on 14% of project area
- 2019 ● Completed Preliminary Economic Assessment based on Tramo Claim
- 2021 ● Completed first phase of environmental permitting
- 2021 ● Completed first phase of process test work for evaporation
- 2022 ● Initiate bid process for upgraded Preliminary Economic Assessment
- 2022-23 ● Completed expansion drill program on Alba Sabrina Claim

MILESTONES AHEAD

- 2023 ● Calculate results and delineation of a new upgraded lithium resource
- 2023 ● Validate traditional evaporation as the lithium extraction technology of choice
- 2023 ● Complete environmental permitting
- 2023-24 ● Construct and operate pilot plant on site
- 2023-24 ● Complete full Feasibility Study

2022-23 DRILL PROGRAM COMPLETE ON ALBA SABRINA CLAIM



TRAMO CLAIM BLOCK HOSTS THE MAIDEN RESOURCE CALCULATION



TRAMO CLAIM BLOCK

2018 two pumping/production wells installed.

High Quality, Low Impurities Brine

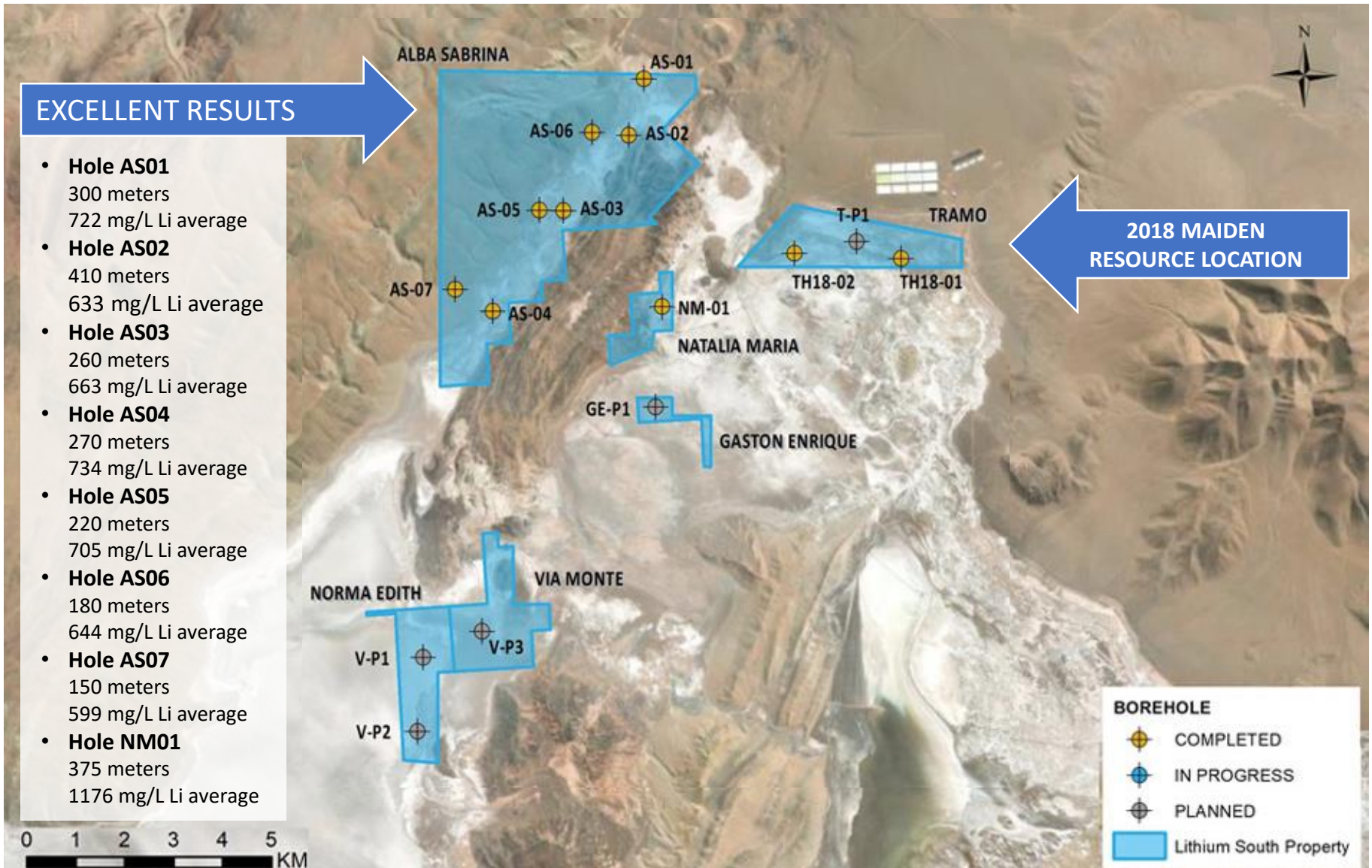
>750 mg/L Li, low Mg/Li ratio 2.6:1

RESOURCE EXPANSION COMPLETION

The 2023 program will likely allow the expansion of the resource and the revaluation of the production potential to greater than the current 5,000 TPA.



MAP OF DRILL TARGETS AND EXCELLENT LITHIUM RESULTS



DRILL PAD ON ALBA SABRINA CLAIM BLOCK
8-hole drill program complete. Results indicate a high-grade, low magnesium brine zone.



COMPLETED DRILL RESULTS SHOW HIGH-GRADE LITHIUM RESULTS

The **Alba Sabrina** drill program returned an average lithium concentration of **692 mg/liter** lithium.

The **Natalia Maria** core hole returned an average of **1176 mg/liter** lithium.

The program was completed under the supervision of Dr. Mark King, QP of Groundwater Insight of Halifax, Nova Scotia.

Lithium assay work was completed by Alex Stewart Laboratories (ISO Certified) of Mendoza, Argentina.

Core samples have been submitted to GeoSystems Analysis, Inc. in Tucson, Arizona, for porosity analysis. Initial results from 18 core samples indicate that the brine within the Alba Sabrina units is potentially drainable.

Lithium South's objective is to expand its 2018 maiden measured and indicated resource of 0.571 million tonnes LCE

Moving from 5,000 TPA LCE to a potentially larger operating size

TPA: Tonnes per Annum
LCE: Lithium carbonate equivalent



LITHIUM BRINE SAMPLES COLLECTED FROM EXPLORATION HOLES

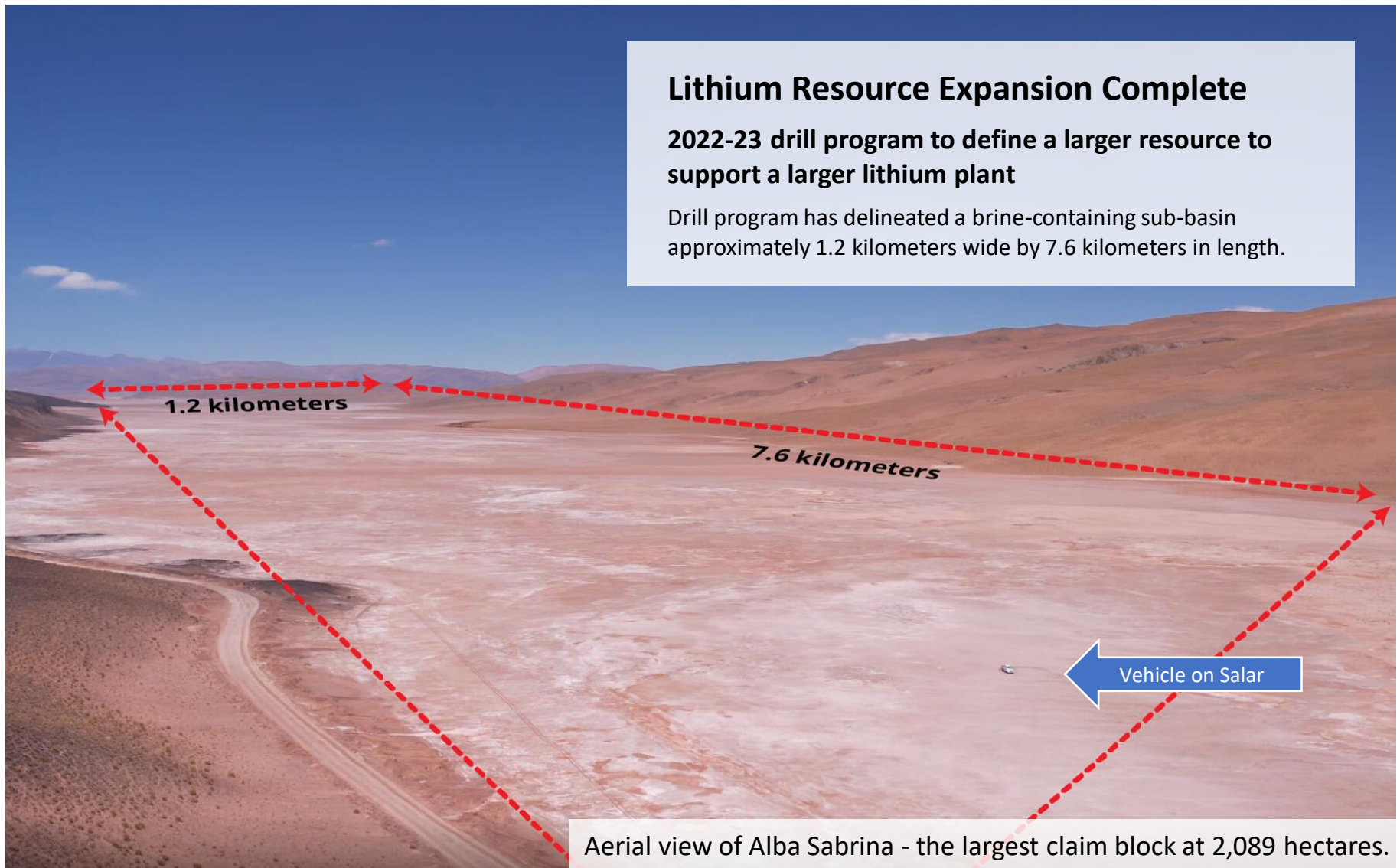
Well	Property	Brine Samples	Average Li concentration [mg/L]	Porosity Samples
DDH-AS22-01	Alba Sabrina	7	722	13
DDH-AS22-02	Alba Sabrina	6	633	14
DDH-AS22-03	Alba Sabrina	6	663	15
DDH-AS22-04	Alba Sabrina	10	734	15
DDH-AS22-05	Alba Sabrina	8	705	6
DDH-AS22-06	Alba Sabrina	3	644	6
DDH-AS22-07	Alba Sabrina	1	599	2
DDH-AS22-07A	Alba Sabrina	1	694	3
DDH-NM23-01	Natalia Maria	9	1176	11



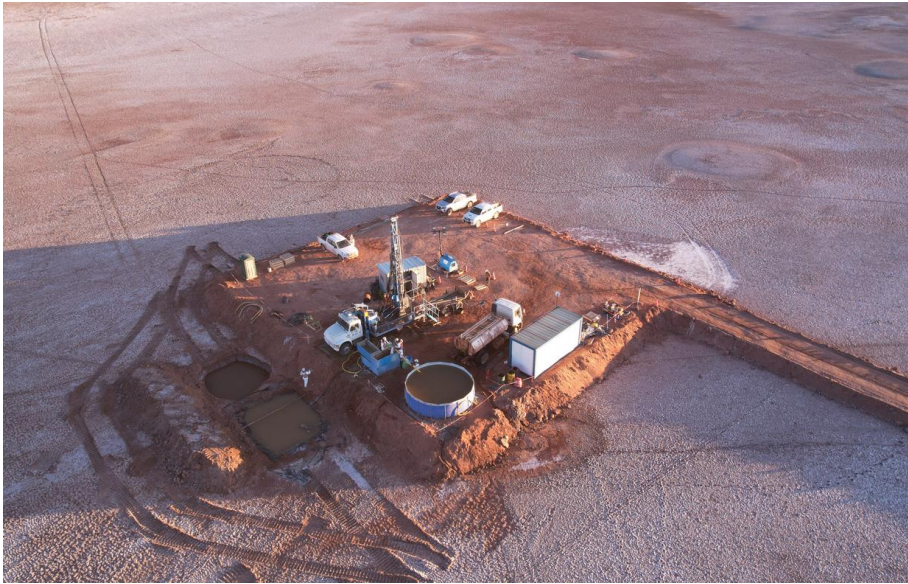
Lithium Resource Expansion Complete

2022-23 drill program to define a larger resource to support a larger lithium plant

Drill program has delineated a brine-containing sub-basin approximately 1.2 kilometers wide by 7.6 kilometers in length.



ALBA SABRINA CLAIM – ADDING TO A HIGH QAULTY RESOURCE



OUTSTANDING RESULTS based on US\$12,420 per tonne LCE pricing

National Instrument 43-101 calculated Resource Estimate

Resource Category	Brine Volume (1000m ³)	Li Grade (mg/L)	Li (tonnes)	Li2CO3 Equivalent (tonnes)	K Grade (mg/L)	K (tonnes)	KCl Equivalent (tonnes)
Measured	119,862	797	96,000	509,000	7,039	844,000	1,609,000
Indicated	21,936	534	12,000	62,000	5,517	121,000	231,000
M&I	141,798	756	107,000	571,000	6,803	965,000	1,840,000

The resource estimate was prepared in accordance with the requirements of National Instrument 43-101 and uses best practice methods specific to brine resources, including a reliance on core drilling and sampling methods that yield depth-specific chemistry and effective (drainable) porosity measurements. The resource estimation was completed by independent qualified person Mr. Michael Rosko, M.Sc., C.P.G. of the international hydrogeology firm E.L. Montgomery & Associates (M&A). Tonnages are rounded off to the nearest 1,000. Cut-off grade: 500 mg/L lithium, but no laboratory results were less than the cut-off grade. The conversion used to calculate the equivalents from their metal ions is based on the molar weight for the elements added to generate the equivalent. The equations are $Li \times 5.3328 = \text{lithium carbonate equivalent}$ and $K \times 1.907 = \text{potassium chloride equivalent}$. The reader is cautioned that mineral resources are not mineral reserves and do not have demonstrated economic viability.

Preliminary Economic Assessment

After-tax net present value (8% discount rate)	\$217 million
After-tax internal rate of return (IRR)	28%
CAPEX capital expenditures	\$93.3 million
OPEX cash operating costs (per metric tonne of lithium carbonate)	\$3,112
Average annual production (lithium carbonate)	5,000
Mine life	30 years
Payback period (from commencement of production)	2 years 5 months

The PEA was prepared by Knight Piesold Consulting (KP) and JDS Energy and Mining (JDS), both of Vancouver, in accordance with the standards set out in National Instrument 43-101 Standards of disclosure for Mineral Projects (NI 43-101), and CIM's Best Practice Guidelines for Mineral Processing (BPGMP). NI 43-101 PRELIMINARY ECONOMIC ASSESSMENT REPORT for the HOMBRE MUERTO NORTE PROJECT SALTA PROVINCE, ARGENTINA Prepared by: Knight Piésold Ltd. 1400 - 750 W Pender St. Vancouver, BC V6C 2T8 JDS Energy & Mining Inc. Suite 900, 999 W Hastings St. Vancouver, BC V6C 2W2 Qualified Persons Company Richard Goodwin, P.Eng. JDS Energy and Mining Inc. Alex Mezei, P.Eng. Ken Embree, P.Eng. Knight Piésold Ltd. Knight Piésold Ltd. Mike Rosko Montgomery and Associates 2019.

The Preliminary Economic Assessment is preliminary in nature, there is no certainty that the Preliminary Economic Assessment will be realized. The economic analysis is based upon mineral resources that are measured and indicated, but are not mineral reserves, and have not demonstrated economic viability.

PROVEN EVAPORATION TECHNOLOGY

- The high quality of the HMN Li brine allows for excellent evaporation recovery
- Using the large solar resource available at 15,000 feet altitude, evaporation will require less energy
- Proven technology with a successful operating history within the industry.

Lithium South is completing construction of a pilot plant to test lithium evaporation characteristics. Evaporation test is underway on the Tramo claim block.



Adrian F. C. Hobkirk

PRESIDENT
CHIEF EXECUTIVE OFFICER

Adrian has 32 years of experience in the mining and venture capital industry. He is the co-discoverer of the Dublin Gulch Gold Deposit (Yukon) and the Yarnell Gold Mine (Arizona). He has explored for precious metals around the world and is currently developing the 1.5-million-ounce AuCuEq Groete Gold Copper Project in Guyana. He is the founder of Lithium South Development Corp., having acquired the HMN Lithium Project and managed its development to date. Mr. Hobkirk has extensive experience working in Argentina.

Christopher P. Cherry

CHIEF FINANCIAL OFFICER AND
DIRECTOR

Mr. Cherry has over 20 years of corporate accounting and audit experience. Formerly an auditor with KPMG, Mr. Cherry has extensive corporate experience and has held senior-level positions for several public mining companies. He is a certified general accountant and a chartered accountant.

Yi Hua Dai

DIRECTOR

Yi Hua (PhD) founded Chemphys in 1998 to focus on battery quality and high purity lithium processing. He is a certified Technical and Economic Expert of Sichuan Province and China Non-ferrous Metals Industry Association Expert. Yi Hua has a proven record of leading the development of lithium manufacturing techniques with 24 patents valid and under application. .

Alison Dai

DIRECTOR

Ms. Dai has 9 years of experience in the lithium industry and is responsible for business development and is a director for Chengdu Chemphys Chemical Industry Co., Ltd. In her role at Chemphys, Ms. Dai has been involved in developing strategic partnerships, international markets and procurement. Prior to joining Chemphys, Ms. Dai was an investment banking analyst at J.P. Morgan Australia in the mining and metals team. Ms. Dai holds a double degree in Bachelor of Laws and Bachelor of Commerce from the University of Western Australia.

Jan Urata

CORPORATE SECRETARY

Ms. Urata brings over 20 years experience in public company corporate finance and securities related matters including her years as a paralegal at McMillan. She also serves as a Corporate Secretary to other TSX Venture issuers.

LITHIUM SOUTH TEAM IN ARGENTINA & CHINA

Fernando E. Villarroel

VICE PRESIDENT &
DIRECTOR PROJECT DEVELOPMENT

Mr. Villarroel has 12 years of experience in the mining industry in Argentina with a focus on Lithium process development. From 2009 to 2013 he worked with Lithium Americas Corp. (Minera Exar S.A.) as Project Manager which included construction management and commissioning of the initial pilot evaporation facilities and laboratory at the Cauchari Olaroz Lithium Project. He has also acted as a consultant to Neo Lithium and International Lithium Inc. He holds a degree in Industrial Engineering and has specialized training in Data Modeling & Analysis for Business and Engineering from M.I.T.

Gerardo Ismael Martinez

MINING ENGINEER AND DRILL
PROGRAM MANAGER

Mr. Martinez has vast industry experience in managing and supervising large drilling programs both in Guyana and Argentina. He holds a mining engineer degree from the National University of San Juan located in San Juan, Argentina. He is proficient at managing the technical operations of planning and executing drill programs for proper and successful mineral and resource extraction.

Vijay Mehta

TECHNICAL CONSULTANT AND
QUALIFIED PERSON

A recognized expert in lithium mining and processing, Dr. Mehta (PhD) brings almost five decades of experience to LIS. His experience includes evaluating the technological and economic feasibility of lithium brine projects around the world. He was the Product and Process Technology Development Leader of FMC Corporation (NYSE: FMC) for 30 years and was one of the founding developers of FMC's lithium plant at the Hombre Muerto Salar, Argentina, which has been in production since 1998. He holds 12 lithium related U.S. patents and has published over 50 technology reports and ten academic papers.

Chemphys

LITHIUM EXTRACTION &
PROCESSING TEAM

Chemphys is a strategic partner that provides technical assistance and lithium market expertise. They have an 11-member technical team working full time on development of the Lithium Extraction Technology. Founded in 1998, Chemphys is recognized as one of the world's leading lithium processing and technology companies with over 22 patents (valid and under application) developed in-house.

Dr. Mark King

QUALIFIED PERSON (QP)

Dr. King is the Principal Hydrologist and President of Groundwater Insight, Inc (GWI). Dr. King has more than 30 years of experience in groundwater research and consulting. His resource and reserve estimation experience on major lithium brine projects is arguably the most extensive of any geologist, hydrogeologist, or engineer in the world.

Shares Issued & Outstanding

96 million

Fully Diluted Shares Issued & Outstanding

164 million

Cash (March 31, 2023)

CDN\$4.6 million approx.

Fully Diluted Cash Position

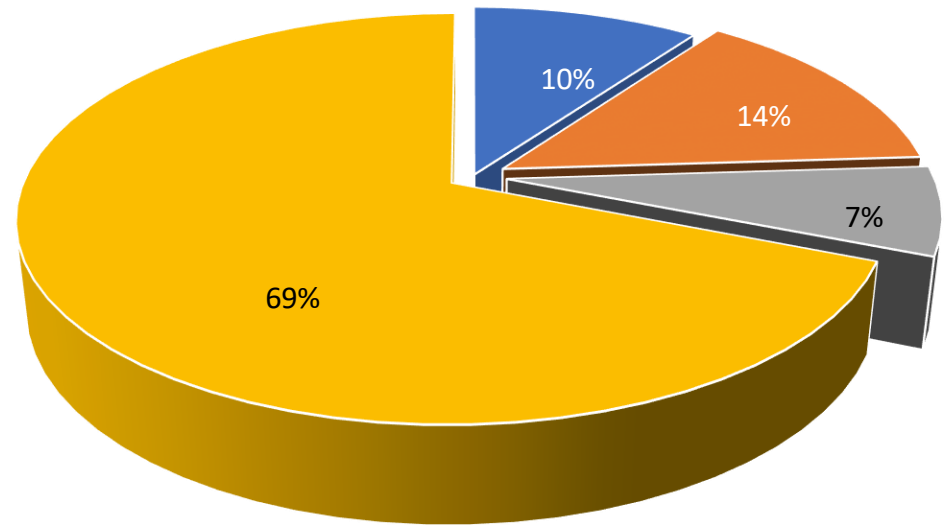
CDN\$42.6 million

Market Capitalization

CDN\$48 million

No Debt and HMN Li Project is owned 100%

Shareholder Structure



- Financial Groups
- Management and Key Associates
- Key Investors
- Public Float

Chemphys of Chengdu China, an early investor and strategic partner, holds 6% and a conditional offtake agreement for the project ¹.

		a high-end lithium refinisher with decades of experience in the lithium industry.
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1. Offtake conditional on Company meeting 80% initial design capacity by 2029.



Based upon results to date, management believes LIS could be substantially re-valued

1. HMN Li Project owned 100% on Hombre Muerto Salar
2. Located in Salta Province adjacent to POSCO \$ 4 Billion development
3. Completed very successful resource expansion drill program
4. New updated NI 43-101 lithium resource pending
5. Pilot plant and pumping wells next phase



US \$4 Billion lithium development next door

Significantly undervalued against peers



Millennial sold to Lithium Americas for **US \$400 million**



Lithea Inc. sold to Gang Feng for **US \$962 million**



Neo Lithium sold to Zinjin Mining for **US \$960 million**



Galaxy sold to Posco for **US \$280 million**

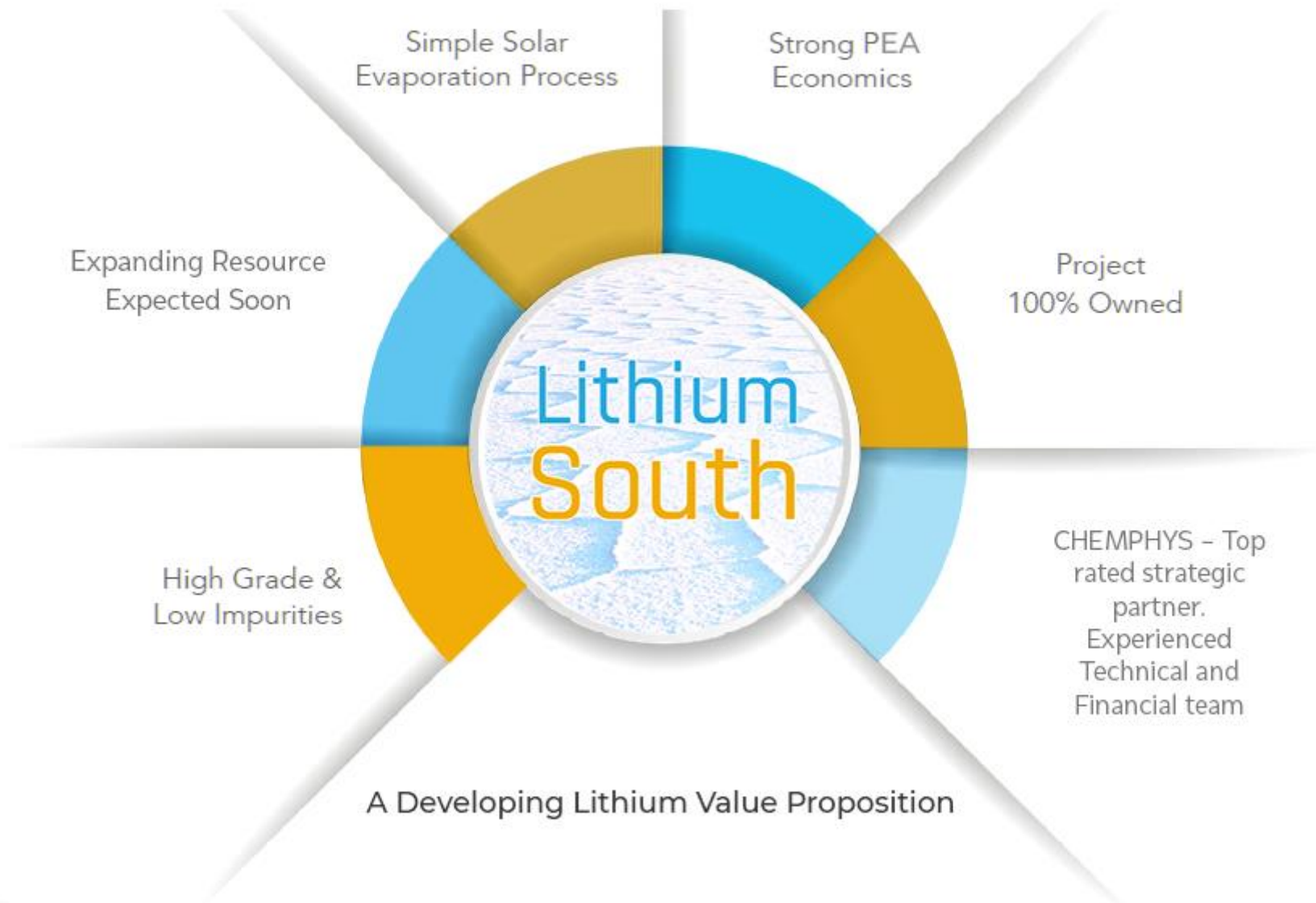


Rincon Mining sold to Rio Tinto for **US \$825 million**



Arena Minerals sold to Lithium Americas for **US \$227 million**

WHY LITHIUM SOUTH?



Lithium South

DEVELOPMENT CORPORATION

CONTACT US

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President & Chief Executive Officer

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