

USA HARD ROCK LITHIUM

SIGNIFICANT OWNERSHIP OVER AMERICA'S LARGEST HISTORICAL SPODUMENE PRODUCING DISTRICT

SEPTEMBER 2023



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LITHIUM MARKET AND ITS USES



Medicine/mental health/dentist



Glass and ceramics



Air treatment



Metallurgy



Grease/lubricant



The growing modern demand for lithium is driven by its use in batteries for electric vehicles and other devices.

Total Lithium Demand: 3,091







GLOBAL SHORTAGES ARE DRIVING GOVERNMENT POLICIES ESPECIALLY IN THE USA







US administration priority: Energy Security

Inflation Reduction Act



- "It is the policy of my Administration that ensuring a robust, resilient, sustainable, and environmentally responsible domestic industrial base to meet the requirements of the clean energy economy, such as the production of large-capacity batteries, is essential to our national security and the development and preservation of domestic critical infrastructure."
- Today the US is completely reliant on the Chinese supply chain for battery production

The New York Times

Daily Business Briefing >

Biden Invokes Cold War Statute to Boost Critical Mineral Supply

The action aims to enhance American production of crucial materials for electric vehicles, defense systems and other technologies.





China fires missiles near Taiwan after Pelosi visit

Taiwan and Japan say Chinese missiles land in their seas with Beijing angered by the visit.



Source: SC Insights

LITHIUM IS NOW A MATTER OF SECURITY



Department of Defense is targeting to use batteries in defense applications: vehicles, aircraft, munitions, platforms, unmanned systems and satellite systems.



CHINA OTHER USA

U.S. only produces 1% of the world's lithium* China provides 55% of the World's Lithium chemical supply. U.S. only has 2 % of supply*

Major security and geopolitical risk to the largest global economy



Midwest Lithium is well positioned to help secure the domestic supply chain



USA DEMAND FAR EXCEEDS SUPPLY IN THE COMING YEARS

South Dakota is in the heart of the US with excellent logistics to the main consumer markets





US & Canada Primary Lithium Supply Demand Balance 2020-2030 (000' Tonnes LCE)



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JURISDICTION & OPPORTUNITY

USA – A TRUE TIER 1 JURISDICTION

Midwest has a significant position in the **only remaining US Brownfield lithium district**

Jurisdiction

US is ranked **top 3** in the **world index of investment attractiveness** together with Australia and Canada and **4**th **largest gold producer globally**

Prospectivity

The Black Hills district hosts some of the highest grade and largest lithium bearing crystals on Earth, it was the main lithium producer worldwide until the 1950s

Proximity to Vehicle Producer

Midwest projects are one of the closest existing lithium projects to the main US vehicle manufacturing center



THE USA WILL NEED HARD ROCK SPODUMENE LITHIUM, LOTS OF IT

- High nickel batteries will dominate the EV market and all USA battery producers are high nickel
- Brine sources produce carbonate. Most conversion capacity to hydroxide is in China
- Tesla, Albemarle and Piedmont have announced lithium refining for the USA, using hard rock lithium

Midwest will produce spodumene, a commercially proven lithium feedstock, which will be utilized to produce high-grade lithium hydroxide, a crucial component in the production of high-grade cells.

- Hydroxide is the preferred lithium source for High-Ni batteries due to its lower melting point and thermal sensitivity of nickel.
- Using spodumene is a cost-effective and reliable way to produce this hydroxide while having a minimal impact on water resources.





MIDWEST HIGHLIGHTS

The only large hard rock lithium district in the USA with mining licenses



One of the world's main lithium producing districts in the last century



Some of the largest spodumene crystals in the world up to 15m long



Well understood and ready to drill spodumene mineralized outcrops





Over **24,000 pegmatite bodies** in the entire district



Existing geological mapping and historical drilling



Proven metallurgy: conventional methods produced at least 74kt spodumene concentrate 6% Li₂O





BOARD AND MANAGEMENT



RODRIGO PASQUA Chairman

- Mining corporate, technical, operations and consulting roles in five continents
- Previously Group Head of Mining for Evolution Mining (ASX:EVN) covering strategic planning, M&A, major projects and turnarounds on \$100m-\$2b assets
- Non-Executive Director of ASX companies
- Founder/MD of Harpia mining advisory and investment firm
- BEng (Mining) University of Sao Paulo, WA First Class Mine Manager Cert and specializations in Leadership, Strategy and Finance (Oxford, Illinois, Harvard)



BARRY JUNOR Technical Director

- Geologist and Geotechnical Engineer with experience in operations covering exploration, mine geology, grade control, resource and geotechnical disciplines
- Oversees mine geology for the Australian lithium spodumene producer Allkem (AKE:ASX)
- Company Geologist at Harpia mining advisory
- During his time with Seequent/Leapfrog he was exposed to and helped develop some of the latest technologies in the geology and exploration fields
- BSc (Geology) University of Glasgow



JAMES CLARK Non-Executive Director

- Worked for and advised large mining houses in commodity markets, investments and financing
- Developed battery raw materials strategies for GM, Tesla, Ford, Rio Tinto, US Dept of State and States of Ohio, Ontario and Quebec
- Previously in charge of corporate development and market analysis with Glencore and financing with Caterpillar
- Executive with Freyr (NYSE: FREY) securing raw materials for the Gigafactory in Europe
- BSc (Geology) Royal School of Mines (Imperial College London)



MATTHEW FOY Non-Executive Director & Company Secretary

- Professional company secretary and director with over 15 years' experience facilitating public company compliance with core strengths in the ASX Listing Rules, transactional and governance disciplines
- Previously worked with the ASX as a Compliance Officer
- BCom (Investment Finance, International Business Economics, Money & Banking) University of Western Australia, Chartered Secretary and Fellow of Governance Institute Australia (GIA)



PETER RAMSAY Chief Financial Officer

- Chartered accountant with senior executive experience, particularly in fast-growing environments
- Corporate roles with Anglo American during London IPO; Finance director and controller for Xstrata during the acquisition-led trajectory from \$500m to \$50bn market cap including merger with Glencore
- Exposure to financial planning, M&A, treasury and reporting
- Fellow, Institute of Chartered Accountants in England and Wales (qualified with EY London). BSc (Chemistry) University of York



MICHAEL X. SCHLUMPBERGER Chief Operating Officer

- Accomplished mining executive covered several GM, COO and CEO roles in multiple American mining companies
- Strong operational background overseen exploration, SK-1300 Resources and Reserves, permitting, surface and underground mining, milling, and reclamation
- Instructor at the South Dakota School of Mines
- BSc (Mining Engineering) Missouri University of Science and Technology and MBA East Carolina University



BLACK HILLS LITHIUM POTENTIAL

Black Hills Pegmatite Field

World-class hard rock lithium region

Midwest was one of the first movers in the district

Well established mining district, with many operating quarries, active large mining projects, active exploration sites and many known lithium sites with visible spodumene



LITHIUM

LOCAL GEOLOGY - OVERVIEW



The fertile Harney Peak Granite melts are the source of Li bearing pegmatites in the Black Hills

Claims marked as blue boxes covering ~23,000 acres sit in the correct pressure and temperature corridors for Li bearing mineral crystallization (green schist facies) numerous pegmatite dikes, visible spodumene and historical producing sites throughout the claim package.

Primary faults (black lines) have been exploited by the Harney Peak Granite intrusions. Major historical workings area associated with these primary structures. These structures have been used in the desktop study along with other vectors such as crystallization of metamorphic index minerals Andalusite and Sillimanite as proxies for mineralization.



LAND HOLDING AND STRATEGY



3x Past producing lithium mines
+10x Targets with positive Li samples
+30x Spodumene bearing pegmatites

Main Projects

Private Land Projects

- · Mateen: one of the main producing mines historically
- · Ingersoll : one of the main producing mines historically
- · Old Mike Mica : mica producer; spodumene sighted

Federal Land Projects

- Soda Spar: rock face covered with spodumene
- Tin Mountain: spodumene pegmatites surrounding one of the main producing mines historically
- · Phelps East: new swarm of zoned pegmatites identified
- Ida/Da: geochemical anomaly and visible lithium minerals
- Tiger: new swarm of zoned pegmatites identified
- Etta/Hugo Ext: adjacent to the largest historical producer

Exploration Strategy

- Initiated initial exploration geology work including detailed mapping, geochemistry and target generation
- Preparing for first drill programs in late 2023 / early 2024



HILL CITY PROJECT: MATEEN







Mateen Cross Section



- One of the main historical producers. Midwest holds the private land with historical mine and federal ground around it.
- Mateen has produced 35kt at 1.2% Li2O and has 7 historical drill holes including 20m intercepts of spodumene bearing pegmatites.
- The spodumene core is 10-20m wide and the main dike can be traced for at least 300m. There are at least 3 known dikes in the swarm.



Mateen Plan View

HILL CITY PROJECT: IDA/DA & ZIMMER RIDGE

100% of the Federal Ground Dedicated to 'Resource Production'



Other Hill City Pegmatites

- Between the two isograd lines, the Whitetail project is situated the desirable pressure/temperature gradient and includes several tin and spodumene prospects hosted within the pegmatites.
- Harney Peak Granite intrusions are also present throughout the project which are a great proxy for Li in the area



Ida and Da

 Previously mined spodumene prospects. Several pegmatites already mapped on the claims and geochemical studies show well defined Li anomalies for potential drill targets.





Mateen

Details in previous slide

- Zimmer Ridge
 - The area contains records of pegmatite dikes with visible spodumene in addition to numerous tin prospects (lithium proxy).
 - Midwest has not yet completed mapping and surface sampling in this area however this is schedule for the 2023 field season

KEYSTONE PROJECT: INGERSOLL



- One of the few Black Hill past producing lithium mines with a processing plant and is comprised of private patented ground held by Midwest
- Produced various lithium minerals. Midwest is targeting the spodumene zones
- Contains five known pegmatite bodies: two have been partially mined and three have proven lithium mineralization of which two include visible spodumene
- Most of the spodumene found at Ingersoll was present at Dike 2 (cross section)







KEYSTONE PROJECT: SODA SPAR, HUGO/ETTA & TIGER







PHELPS PROJECT: OLD MIKE MICA

75% of the Federal Ground Dedicated to 'Resource Production'

Old Mike Mica Mine

- Midwest controls 2x private claims in the area. The Old Mike Mica Mine contains well defined pegmatite bodies with historical spodumene sights.
- LiBS samples are returning high Li values in the micas indicating potential lithium mineralization.









Visible Spodumene

 Visible spodumene sights during staking campaign. Up to 0.8% Li2O samples on zoned pegmatites swarm.



TIN MOUNTAIN REGION PROJECT

Tin Mountain Region (Unpatented Claims in Federal Land).

The claim package acquired, west of Custer, adds unpatented 93 claims and around 1,900 acres in federal land encapsulating the pastproducing Tin Mountain mine.







Tin Mountain Site (Not owned by Midwest)

Lithia Lode

- Outcropping pegmatite with presence of lithium (amblygonite) and beryl.
- Other parallel
- pegmatites can be seen parallel to it.



Highview

- Pegmatite dike outcropping for around 70m and between 1m-5m wide with other parallel dikes alongside it.
- Spodumene, beryl and amblygonite are present in the pegmatite.
- Most of the core is microcline and perthite with albite, quartz, muscovite, and lithiophilite.





SUSTAINABILITY AND PERMITTING

The Black Hill is a Mining Region

- Continuously mined since the 1800s
- Homestake (one of the largest US gold mines) operated for +100 years
- Iris Metals and Dakota Gold currently executing drilling programs
- Permitting leveraging from brownfields, Federal policy and State law
- USFS progressing permitting to large critical minerals projects such as South 32's Hermosa, BHP/Rio's Resolution and Perpetua's Stibnite
- ~75% of Midwest's land allocated to 'Resource Production'

Environment, climate risk and emissions

- Targeting minimal carbon emission from exploration to mining
- Leveraging from hydro-powered State grid

Communities and Cultural Heritage

 High priority to hire local workforce and develop local business and institutions. Contractors imbedded in community









PROJECT DEVELOPMENT PLAN





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KEY TAKEAWAYS





Proven lithium mining district with various historical mines and processing plants

Large number of outcropping mineralized pegmatites ready to drill



Experienced management team from well established international mining houses

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Strong initial news flow with imminent drilling and proposed mining licenses



Strategic: unique value proposition with a hard rock lithium source in the heart of the USA



QUESTIONS











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