

**Key Facts:**

Ticker-Exchange	PMET-TSXV
Closing Price	C\$6.80
Date of Report	September 13, 2022
Company Website	patriotbatterymetals.com
Analyst	Brandon Smith

**Company Statistics:**

52-week High	C\$7.24
52-week Low	C\$0.22
Market Cap	C\$589.0 MM
Shares Outstanding	
Basic	86.6 MM
Diluted	127.2 MM
Cash	C\$8.8 MM
Debt	Nil
CEO	Blair Way

**Price Chart:**


Our **Emerging Ideas** publication seeks to highlight firms that we come across during our travels where, while perhaps not ready for formal research coverage, we see notable developments or inflection points that we believe may be of interest to investors.

## Hotter Than A Two Dollar Pistol

Unless otherwise denoted, all figures shown in US\$

**Corporate Overview:** Patriot Battery Metals is a lithium exploration company focused on its 100% owned Corvette property in the highly prospective James Bay region of Quebec. The company controls a large 214 km<sup>2</sup> land package with only 1 of 6 pegmatite clusters properly drill tested to date. A 20,000 m drill program is currently underway which means news flow should be steady (assays pending for the majority of holes), and with only 35 holes released from the property, including impressive intercepts of 1.65% Li<sub>2</sub>O over 159.7 m and 2.22% Li<sub>2</sub>O over 70.1 m, this is a name that should be on any lithium investor's radar screen.

**Key Points:**

- **Premier Land Package:** Patriot controls a large 214 km<sup>2</sup> land package in one of North America's premier lithium districts, the James Bay region of Quebec. Patriot's Corvette project is proximal to existing lithium deposits including James Bay (Allkem; 37.2 MMt reserve at 1.3% Li<sub>2</sub>O), Rose (Critical Elements; 26.3 MMt at 0.87% Li<sub>2</sub>O), and Whabouchi (Nemaska; 27.9 MMt at 1.33% Li<sub>2</sub>O).
- **Under-Drilled And Under-Explored Project:** The current property, which has seen limited historical exploration focused on base and precious metals, only received its first lithium drilling in 2021 and remains largely unexplored. Drilling to date has focused on the CV5-1 pegmatite corridor (~2 km of strike), a relatively small part of the 50 km of lithium pegmatite trend contained on the property. Exploration work has yet to be completed on 20 km of the CV lithium trend and 6 pegmatite clusters have already been identified.
- **Beefing Up The Board:** The recent addition of Ken Brinsden, former Managing Director and CEO of Pilbara Minerals, adds substantial lithium expertise to the Board in an industry that is starved for talent. We believe Patriot would have not been able to secure someone with Mr. Brinsden's credentials if the potential for a large-scale project was not evident.
- **Drilling Indicative Of Large Lithium Endowment:** While it is very early days at Corvette, drill results have caught the market's attention with intercepts including 1.65% Li<sub>2</sub>O over 159.7 m and 2.22% Li<sub>2</sub>O over 70.1 m. These intercepts are truly world-class and point to the potential of the ~2 km corridor. If Patriot can delineate a deposit over the 2 km strike with an average width of 75 m to a depth of 250 m, it points to the potential for a resource around 100 MMt, which would make it one of the largest hard-rock spodumene deposits in North America. If Patriot can expand on these assumptions at CV5-1 or the company can define resources at any of the other outcropping pegmatites identified to date, it could point to a project that rivals the large Western Australian deposits.

**Catalysts:**

- Drill results - ongoing
- ASX listing - Q4/22
- Maiden resource - H1/23

**Corvette Lithium Project, Quebec:**

The Corvette lithium project is located in the prolific James Bay area of Quebec. Patriot Battery Metals controls a 100%-interest in a consolidated 214 km<sup>2</sup> tenement package along a 50 km lithium pegmatite trend. The project is proximal to existing lithium deposits (Figure 1) including James Bay (Allkem; 37.2 MMt reserve at 1.3% Li<sub>2</sub>O), Rose (Critical Elements; 26.3 MMt at 0.87% Li<sub>2</sub>O), and Whabouchi (Nemaska; 27.9 MMt at 1.33% Li<sub>2</sub>O).

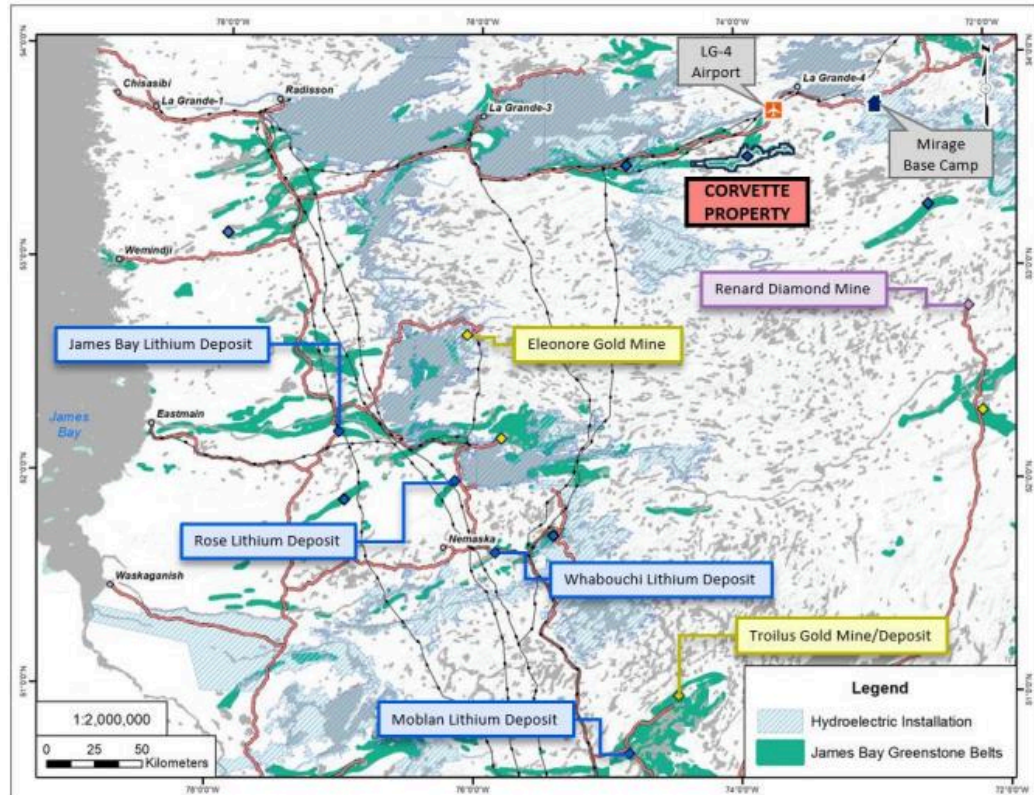
The project's history for the exploration of lithium is very limited with the company (previously named Gaia Metals in October 2019 and 92 Resources prior to that) having acquired the initial Corvette claim position in 2016. Between 2016 and 2020, the Corvette property land package was consolidated with geophysics, surface mapping, prospecting, soil sampling and rock sampling completed. It wasn't until 2021 that the first lithium-focused drill program was completed on the property which saw 5 holes (872 m) completed over the CV lithium trend. Drill results from this first program included the discovery hole at CV5 (CF21-002: 155.1 m at 0.94% Li<sub>2</sub>O) and 58.1 m at 1.25% Li<sub>2</sub>O in hole CF21-003.

Despite the project's location in the upper James Bay region of northern Quebec, infrastructure is robust with the project sitting 15 km from all-weather road access. The project is only 42 km from the Le Grande 4 hydro power station and 15 km from the closest hydro power lines.

Lithium mineralization is present within quartz-feldspar pegmatite often exposed at surface, and the pegmatite is often very coarse-grained and off-white in appearance. Preliminary mineralogy from three of the pegmatite bodies (CV5, CV6, and CV12) indicates spodumene is the dominant lithium-bearing mineral (98-99% based on 22 pegmatite core samples) with no significant petalite, lepidolite or apatite present. Tantalum is also present in the pegmatite as columbite/tantalite.

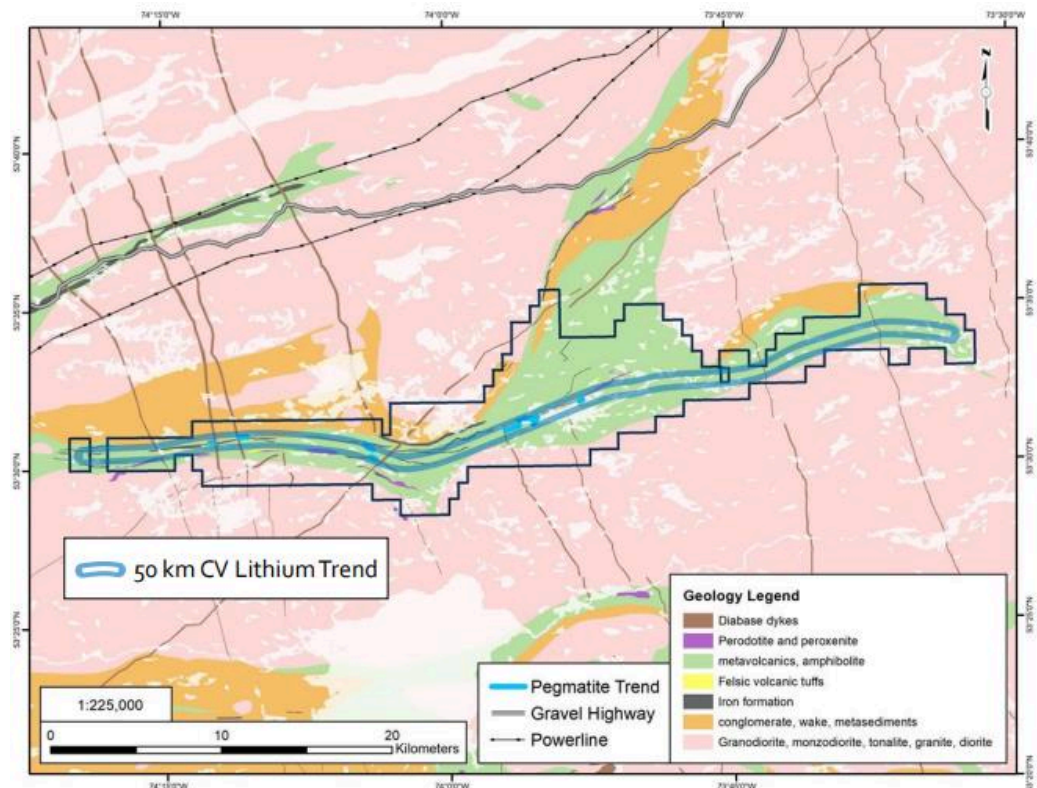
Preliminary met testing using heavy liquid separation (HLS) has produced a 6+% Li<sub>2</sub>O spodumene concentrate with recoveries exceeding 70% and low iron oxide (~0.65%). A follow up mineral processing program is anticipated to be completed this fall which will further prove out the metallurgy. If a DMS flowsheet is ultimately a viable option for Patriot Battery Metals, it will result in a very robust and cost-effective process which requires manageable initial capex (for context, Sigma Lithium's DMS-only flowsheet initial capex was \$130 MM for a 220,000 tpa spodumene operation).

**Figure 1: Project Map**



Source: Patriot Battery Metals Inc.

**Figure 2: Project Geology Map**



Source: Patriot Battery Metals Inc.

### CV5-1 Pegmatite Corridor:

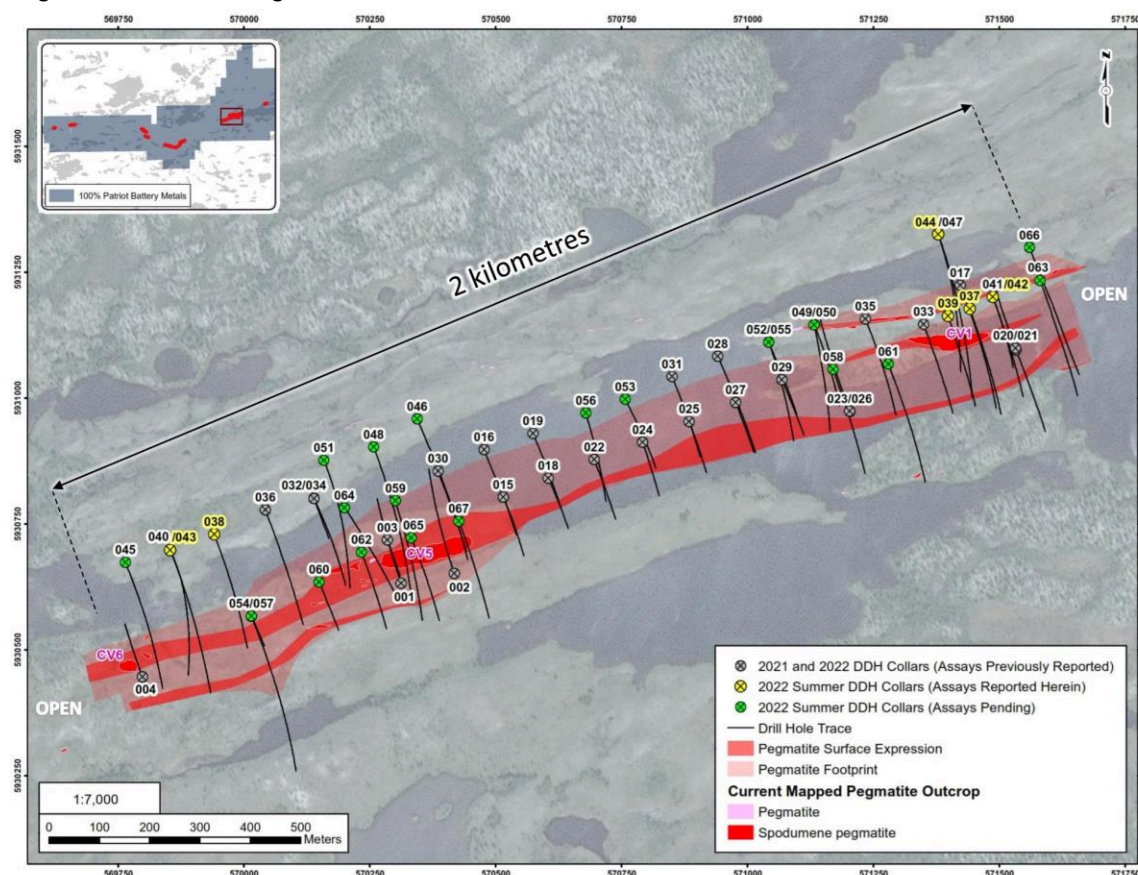
The current focus of Patriot Battery Metals is the CV5-1 pegmatite trend where three diamond drill rigs are operating. Drilling to date has traced the main pegmatite body to a strike length of approximately 2 km and remains open in all directions (Figure 3).

Drill results along the corridor include the CV5 discovery hole of **155.1 m at 0.94%  $\text{Li}_2\text{O}$**  (CF21-002), **152.8 m at 1.22%  $\text{Li}_2\text{O}$**  (CV22-030; CV5), **70.1 m at 2.22%  $\text{Li}_2\text{O}$**  (CV22-017; CV1), **159.7 m at 1.65%  $\text{Li}_2\text{O}$**  (CV22-042; CV1), **61.3 m at 1.17%  $\text{Li}_2\text{O}$**  (CV22-025, halfway between CV1 and CV5), and **59.3 m at 1.42%  $\text{Li}_2\text{O}$**  (CV22-038; halfway between CV5 and CV6).

Management's interpretation of the corridor is a large, dominantly spodumene-bearing pegmatite body, and the impressive drill results to date give investors a glimpse into the potential of the corridor. If we plug in 2 km of strike, 75 m true thickness, and a depth of 250 m into a crude resource calculator, it points to a resource close to 100 MMt, which would make it one of the largest hard-rock spodumene deposits in North America.

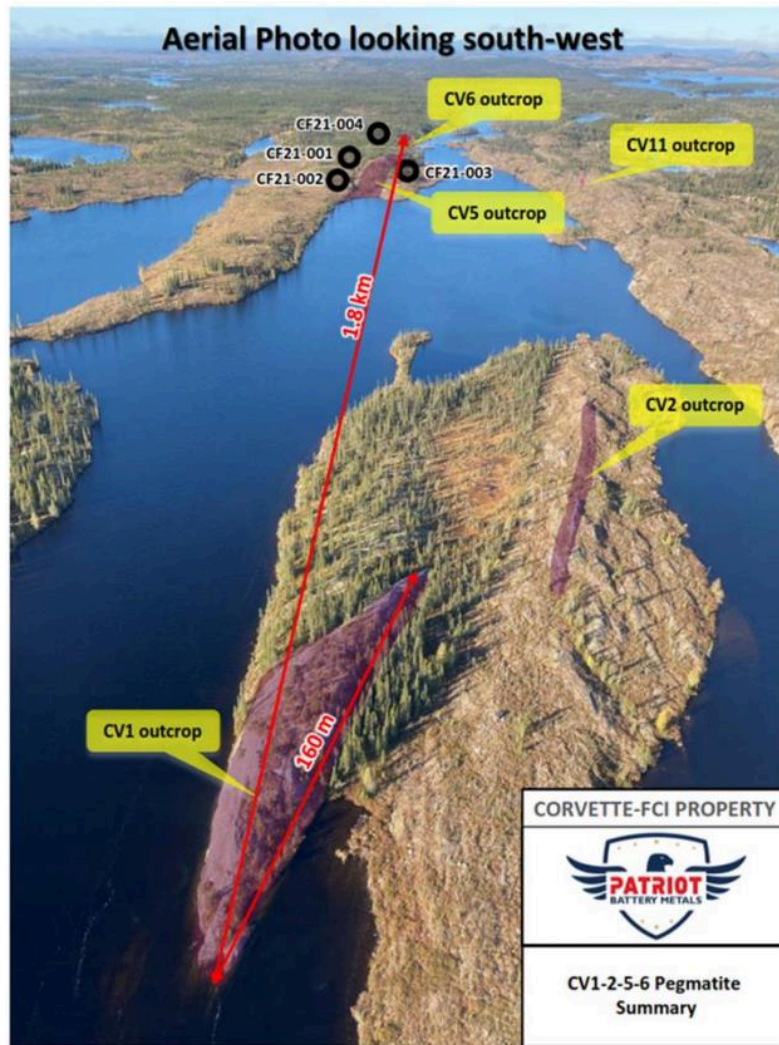
The current 20,000 m 2022 summer drill program is focused on this corridor with assays pending and the mineralization open in all directions. If drilling can increase the strike of the main corridor, define a thickness above 75 m or Patriot Battery Metals can delineate material sub-parallel trending spodumene-bearing pegmatites, the possibility exists for something much larger for CV5-1. For context, if a 100 m true width is achieved while holding the other parameters constant, the deposit size would increase to 135 MMt. Once we factor in the regional exploration potential (only 1 of 6 pegmatite clusters properly drill tested to date), it becomes clear that the Corvette project could rival the large Western Australian deposits.

**Figure 3: CV5-1 Pegmatite Corridor With Drill Hole Collar Locations**



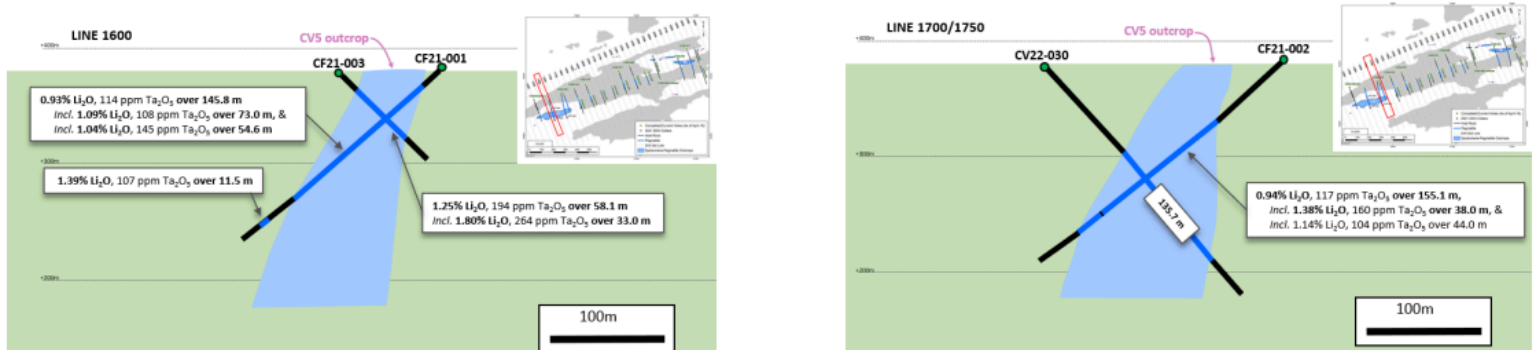
Source: Patriot Battery Metals Inc.

Figure 4: CV5-1 Aerial Photo Looking South-West



Source: Patriot Battery Metals Inc.

Figure 5: CV5 Cross Sections Indicate Pegmatite Thickening At Depth



Source: Patriot Battery Metals Inc.

### Regional Potential:

Patriot Battery Metals has identified at least 71 individual spodumene pegmatites on the property which form six distinct pegmatite clusters – CV5-1, CV4, CV8-12, CV9, CV10, and the recently discovered CV13.

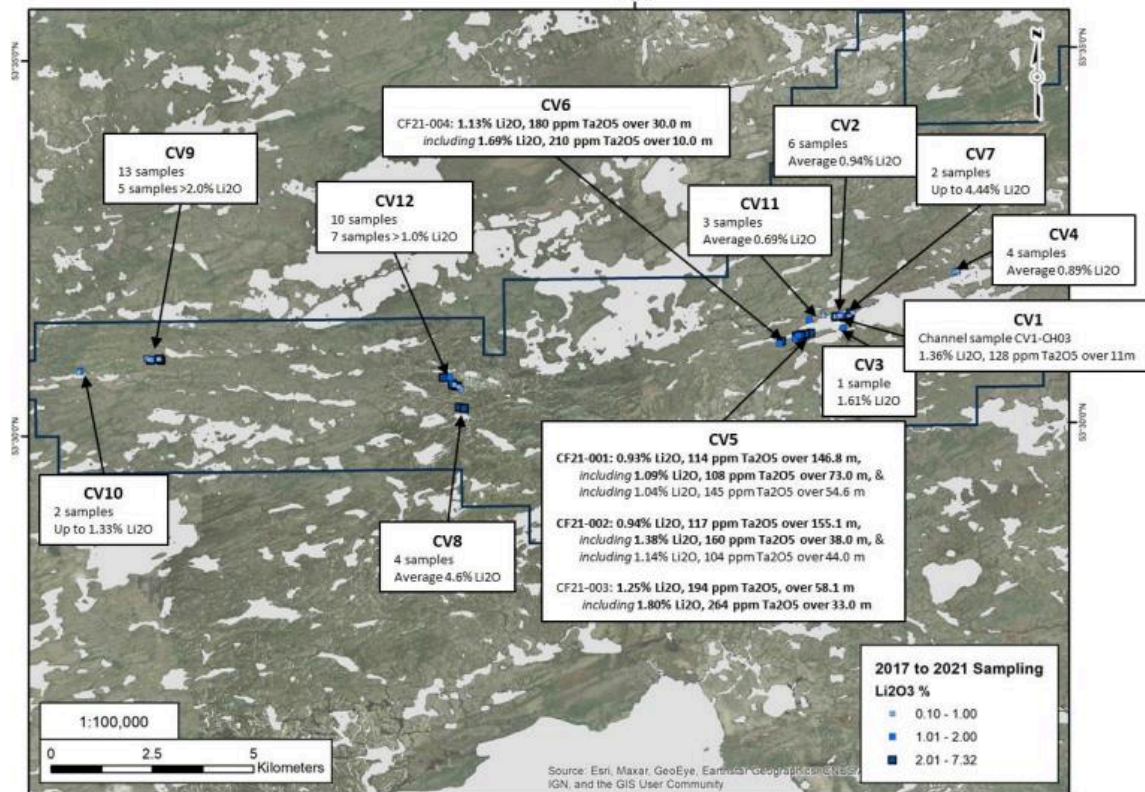
The CV8-12 cluster has its main outcrop at the CV12 pegmatite which is ~140 m x 5-40 m wide while the CV8 pegmatite appears to be a discontinuous pegmatite over an 80x10 m area. Eleven surface samples were collected over the trend which averaged 2.81% Li<sub>2</sub>O with 1 hole drilled at CV12 that intersected 0.60% Li<sub>2</sub>O over 5.1 m.

The CV9 pegmatite trend has seen 8 of 12 surface samples return greater than 1.5% Li<sub>2</sub>O to a peak of 4.72% Li<sub>2</sub>O. Recently, the trend was extended to include at least 16 spodumene-bearing outcrops over a strike length of 400 m.

The recently discovered CV13 cluster (discovery announced on August 10, 2022) looks particularly interesting. A total of 31 pegmatite outcrops have been identified with the cluster defined by 2 contiguous trends over 2.3 km in combined strike length. The cluster is on trend between the CV5-1 pegmatite corridor where the company is actively drilling (4.3 km away) and the CV8 pegmatite that has yet to see any drilling (1.9 km away). The area between the pegmatite clusters is predominately glacial till cover which means it is possible that additional pegmatites lay under cover along trend. Assays from 32 samples along the CV12 trend have averaged 0.98% Li<sub>2</sub>O to a maximum of 3.73% Li<sub>2</sub>O.

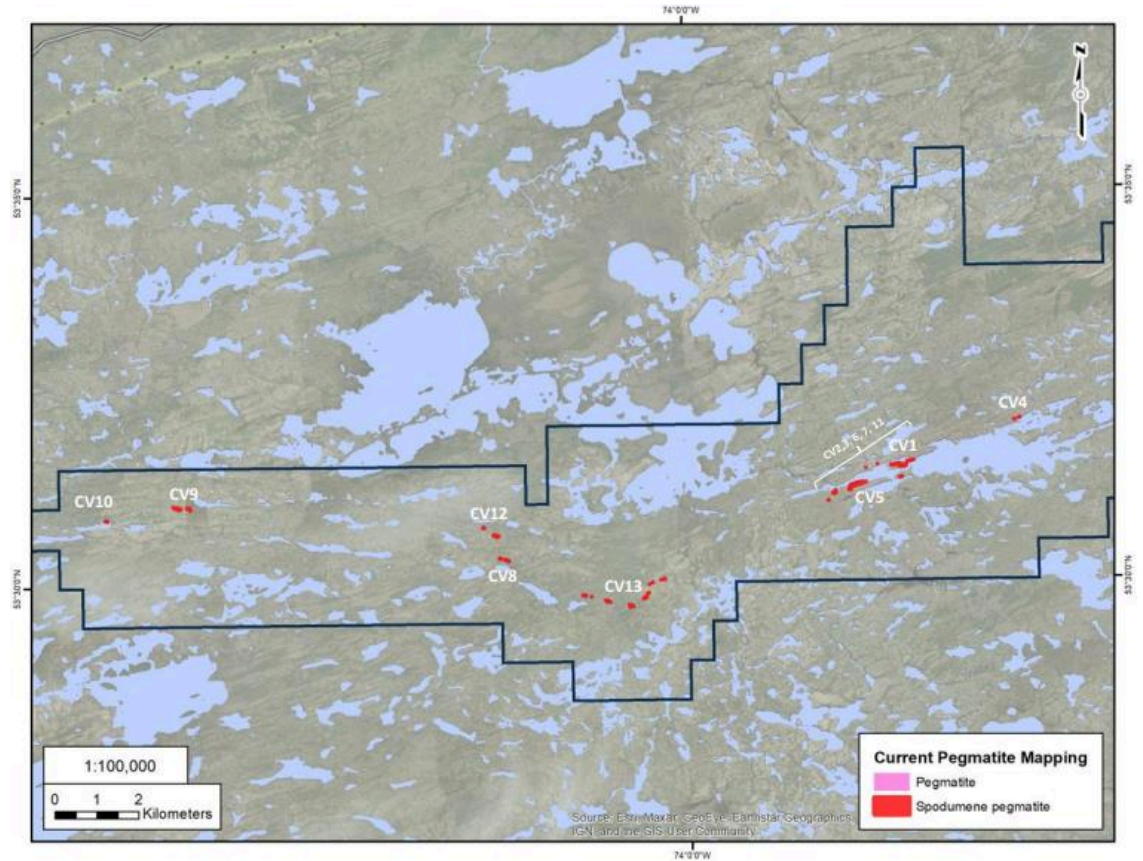
Due to the CV13 pegmatite discovery, the surface exploration program has been extended until mid-October or first snowfall, and the company is actively permitting drill holes for initial drill testing along the CV13 pegmatite trend (company expects to move a rig there in September).

**Figure 6: Property Map With Sampling Results**



Source: Patriot Battery Metals Inc.

**Figure 7: Location of Pegmatite Clusters**



Source: Patriot Battery Metals Inc.

### Drilling Indicative Of Large Lithium Endowment:

As detailed earlier in the report, reasonable assumptions point to a resource that approaches or surpasses the 100 MMt level just for the CV5-1 pegmatite cluster. The CV5-1 trend has a strike length of 2 km while the recently discovered CV13 pegmatite cluster contains a combined 2.3 km of strike that is yet to be drilled tested. In addition to this, Patriot Battery Metals still has 4 additional pegmatite clusters to property drill test and approximately 20 km of the 50 km CV lithium trend has yet to be explored.

From a grade perspective, hole CV22-042 returned 1.65% Li<sub>2</sub>O over 159.7 m on August 31, 2022 at CV1 which is the best intercept to date on the property. If higher-grade mineralization is consistently intercepted, the tonnage and grade could rival the large Western Australia deposits that can see tonnage above 100 MMt at grades above 1.3%.

While it is too early to gauge the ultimate potential of the project, we have included a table that outlines the hypothetical value per share based on different tonnage and EV/t LCE assumptions (assuming a resource grade of 1% Li<sub>2</sub>O). We note that current developers trade in the \$350/t LCE range, but advanced hard-rock developers can trade well north of this (Sigma Lithium currently trades at \$900/t LCE).

**Figure 8: Hypothetical Value Per Share Based on Resource Size & EV/t LCE Valuation**

		EV/t LCE (\$/t)						
		\$150	\$250	\$350	\$450	\$550	\$650	\$750
Tonnage (MMt)	50	C\$2.19	C\$3.46	C\$4.72	C\$5.98	C\$7.25	C\$8.51	C\$9.77
	75	C\$3.14	C\$5.04	C\$6.93	C\$8.83	C\$10.72	C\$12.62	C\$14.51
	100	C\$4.09	C\$6.62	C\$9.14	C\$11.67	C\$14.20	C\$16.73	C\$19.25
	125	C\$5.04	C\$8.19	C\$11.35	C\$14.51	C\$17.67	C\$20.83	C\$23.99
	150	C\$5.98	C\$9.77	C\$13.57	C\$17.36	C\$21.15	C\$24.94	C\$28.73
	175	C\$6.93	C\$11.35	C\$15.78	C\$20.20	C\$24.62	C\$29.05	C\$33.47
	200	C\$7.88	C\$12.93	C\$17.99	C\$23.04	C\$28.10	C\$33.15	C\$38.21

\*Assumes 127.2 MM diluted shares outstanding, cash of C\$37.7 MM (ITM warrants/options exercised), no debt, and Li<sub>2</sub>O grade of 1.00%.

Source: Cormark Securities Inc.

### Balance Sheet & Capital Structure:

The current cash position of C\$8.8 MM should be sufficient to complete the current 20,000 m drill program (18,249 m (60 holes) completed as of September 7, 2022) and grassroots exploration work planned for the remainder of the year.

Patriot Battery Metals currently has 86.6 MM shares outstanding, 7.0 MM options (average exercise price of C\$0.91) and 33.6 MM warrants (average exercise price of C\$0.67) as of June 30, 2022. In late August 2022, 2.0 MM additional stock options were granted due to the addition of Ken Brinsden as Non-Executive Chairman (1 MM options exercisable at C\$7.00 and 1 MM options exercisable at C\$9.20). The last financing (6 MM units issued at a stock price of C\$0.50 with a full warrant at C\$0.75) was completed in March 2022.

**Management Team & Board:**

- **Blair Way – CEO, President & Director:** Mr. Way is an experienced international executive with over 30 years of management experience within the resources and construction industry throughout Australasia, Canada, the United States and Europe. He has experience in a wide range of commodities including gold, copper, nickel, zinc, magnesium, graphite, cobalt and lithium. Mr Way was most recently CEO, President and Director of TSXv listed Leading Edge Materials for over 5 years. Prior to that he was VP Project Development for TSX listed Ventana Gold. Prior to Ventana, he was Project Director and President for Oceanagold Philippines. Mr Way was Project Director – Major Projects for BHP Billiton. He holds a Bachelor of Science (Geology) from Acadia University in Nova Scotia, Canada, an MBA from the University of Queensland, Australia, and is a Fellow of the Australasian Institute of Mining and Metallurgy.
- **Ken Brinsden – Non-Executive Chairman & Director:** Mr. Brinsden joined Pilbara Minerals as Chief Executive Officer in January 2016 and was appointed Managing Director and CEO in May 2016. He led the rapid development of Pilbara Minerals through corporate development, financing, project execution and ongoing production at Pilgangoora such that it has become one of the leading lithium development projects globally and facilitated Pilbara's entry into the ASX 100. Mr. Brinsden is a Mining Engineer with approximately 30 years of experience in surface and underground mining operations. He graduated from the Western Australian School of Mines in 1993. He previously worked for WMC Resources, Normandy, Central Norseman Gold Corporation, GoldFields, Iluka Resources, and Atlas Iron in various production, development, Executive and Board roles.
- Darren L. Smith – VP Exploration
- Dusan Berka – CFO
- Kelly Pladson – Corporate Secretary
- Jon Christian Evensen – Director
- Brian Jennings – Director
- Todd Hanas – Director

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