

Fulcrum Metals

8th January 2025

Gold tailings projects in Canada using the highly disruptive Extrakt leaching technology to unlock the value in this mining waste

Fulcrum Metals joined AIM in 2023 as a traditional early-stage minerals explorer with gold and uranium projects in Canada. But markets changed, and recognising this, the last 12 months have seen a transformation, switching focus to nearer-term production opportunities in reprocessing gold tailings in two of the biggest gold camps in Canada – Timmins and Kirkland Lake. Fulcrum acquired the Teck-Hughes and Sylvanite gold tailings projects, which are thought to hold a combined 205koz of gold worth US\$530m at today's spot price of US\$2,600. This has been left behind as the waste from gold production from these two old major mines, stretching back to the 1920s.

- **Promise of early cash flow, with first production targeted for H2 2026**

The ace up Fulcrum's sleeve is Extrakt, which offers impressive recovery rates that have been seen with refractory ore at Fulcrum's projects, which has always been the bugbear with tailings projects. Here, we are talking about double the recovery with a fraction of the leach time of using traditional cyanide. This much faster leach time suggests lower capex and opex. But most importantly, TNS™ is non-toxic and does not use cyanide, which makes for ESG heaven.

- **Negotiating MLA with Extrakt & Bechtel for Timmins and Kirkland Lake**

Two billion-dollar groups – Extrakt, founded by a member of the Reynolds family, and Bechtel, want Fulcrum to grow. All parties have agreed on terms to a Master Licencing Agreement (MLA) and are waiting for final components from the phase 2 conceptual study at Teck to complete, for the Timmins and Kirkland Lake gold camps, where 110Moz of gold has been mined and are home to 73 legacy tailings sites. This would enable Fulcrum to scale operations dramatically.

- **JV partners sought to further the drill-ready gold projects and add value**

Tully Gold looks like a mine in waiting. Whilst Big Bear has enviable potential. Both need their own decent drilling budgets to properly assess the potential. Fulcrum has brought the projects to a drill-ready stage and is in discussions with potential JV partners but will retain an interest to benefit from the upside.

- **Peer group comparison & uranium deal suggest 325% potential upside**

Our highly conservative valuation leads us to initiate coverage of Fulcrum Metals with a **target price of 32.89p**.

Table: Financial overview. Source: Company accounts & Optimo Capital

Year to end Dec	2022A	2023A	2024E	2025E
Revenue (£'000)	-	-	-	-
PTP (£'000)	(620)	(1,714)	(1,230)	(1,650)
EPS (p)	(7.2)	(3.7)	(2.3)	(2.6)

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**PRICE TARGET –
32.89p**



Key data

EPIC	FMET
Share price	7.75p
52 week high/low	16.25p/6.875p
Listing	AIM
Shares in issue	61.83m
Market Cap	£4.75m
Sector	Mining

12-month share price chart



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IMPORTANT: Fulcrum Metals is a research client of Optimo Capital. Optimo Capital owns shares in Fulcrum Metals. For full disclaimer & risk warning information please refer to the last page of this document.

Business Overview

Fulcrum Metals Operations

Fulcrum Metals PLC is an exploration and extraction company listed on the London Stock Exchange. Fulcrum develops mineral extraction opportunities using disruptive, non-toxic technology to unlock lost resources from historic mine waste (tailings) in a more sustainable manner that is capable of low-cost, near-term cash flow. Projects currently include The Teck-Hughes and Sylvanite gold tailings projects in Kirkland Lake, Ontario, Canada. Fulcrum also has a portfolio of highly prospective gold exploration assets in Ontario to either develop or seek disposal/partner opportunities and has successfully optioned out a portfolio of Saskatchewan Uranium projects.

- **Gold tailings (Kirkland Lake Gold Camp, Ontario, Canada)** – Fulcrum has a 100% interest in two gold tailings projects at Teck-Hughes and Sylvanite, which were major gold mines in the past and form part of the Kirkland Lake gold camp. Although not yet NI 43-101 compliant, Teck-Hughes tailings total 6.5Mt at a grade of 0.66g/t for 138koz gold and Sylvanite’s 4.2Mt at 0.47g/t gold for 67koz gold, which adds up to a combined 205k ounces. These projects are some 3km apart, plus there are several other tailings sites within 5km, which opens up the opportunity to create a tailings hub. Fulcrum is investigating the use of a new revolutionary non-toxic Extrakt leaching solution, which seems able to double the gold recovery rates in a fraction of the time of cyanide-based methods in early trials. Work on providing these resources and metallurgical testing is moving rapidly ahead and aims to get the first operation into production in H2 2026.

- **Gold exploration projects (Ontario, Canada)** – The company has a 100% interest in several highly prospective advanced gold exploration projects that lie on significant mineral belts, which, through Fulcrum’s efforts, have been brought smartly to a drill-ready stage. Timmins Tully Gold has an estimated NI 43-101 compliant 107,000oz gold resource (2013) at 6g/t gold over 600m of a proven 1,600m strike length and remains open to expansion with drill permits in place. Meanwhile, in the Schreiber-Hemlo Project, the Big Bear Prospect has a history of exploration and small-scale gold mining, including the Schreiber Pyramid Gold Mine, developed in the 1930s, where 150 tons was mined at an enviable grade of 17.6g/t gold.

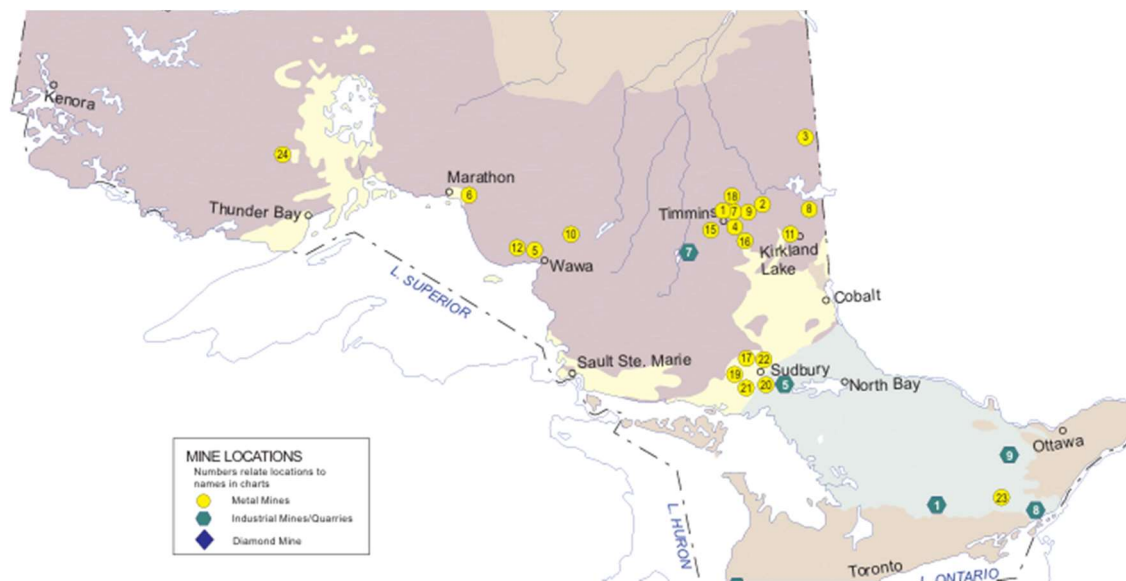
- **Uranium investment (Saskatchewan, Canada)** - Fulcrum previously had a 100% interest in a portfolio of uranium projects covering 59,000 hectares. In July 2024, the company optioned out the uranium portfolio to Terra Balcanica Resources (CSE:TERA) over a 4-year term for C\$3.36 million in cash and shares, a 1% Net Smelter Return (NSR) royalty and C\$3.25 million in work expenditure.



The northern tailings body at Teck-Hughes, Ontario. Source: Company

Timmins and Kirkland Lake Gold Camps

Canada is the fifth largest gold producer in the world, behind the USA, Russia, and Australia, with the leading producer being China. Regarding top high-grade economic gold projects in Canada, Ontario is the leading producer of gold, followed by Quebec, British Columbia, Yukon and Manitoba. In fact, in 2022, Ontario was Canada's largest-producing region by a mile, being responsible for 46% of the country's gold production. In the mid-19th century, Ontario experienced its first significant gold discovery, which kicked off a major gold rush, in the township of Eldorado. As gold fever spread across the province, Ontario's landscape was transformed by boomtowns and mining camps popping up everywhere. This has led to the development of flourishing mining communities such as Timmins, Kirkland Lake and Red Lake.



Location of the Timmins and Kirkland Lake Gold Camps in Ontario. Source: Ontario Mining Association

Timmins

Timmins claims to be Canada's most significant goldfield and is undoubtedly one of the richest in the world. Over the last century, this goldfield has produced more gold than any other mining camp in Canada. Although gold in quartz veins was first discovered near Porcupine Lake in 1896, the real madness did not kick off until 1909. Prospector Harry Preston slipped on a rocky knoll, stripping away moss to find a hill of quartz that was laden with gold. This went on to be known as The Big Dome. The discovery sparked the great Porcupine Gold Rush, with prospectors going on to discover the Hollinger and McIntyre gold deposits. Over the next hundred years, more than 50 gold mines produced 70Moz of gold, making the Timmins Mining Camp (previously known as the Porcupine Mining Camp) Canada's greatest producer. The gold-quartz ores of the Timmins gold fields were formed along the ancient Porcupine-Destor Fault as the continents collided due to plate tectonics, which was followed by the overlying rock being eroded and the ore exposed at the surface.

Kirkland Lake

The story of the Kirkland Lake Gold Camp began with the Larder Lake gold rush in 1906, which was accompanied by gold discoveries at Swastika ahead of a gold strike at Kirkland Lake in 1911. The camp's first producing gold mine was Tough-Oakes in 1912. However, during the peak years of the late 1930s, the Lake Shore, Wright Hargreaves, Teck-Hughes, Sylvanite, Kirkland Lake Gold and Macassa mines, along with what was termed the Main Break, were big employers.

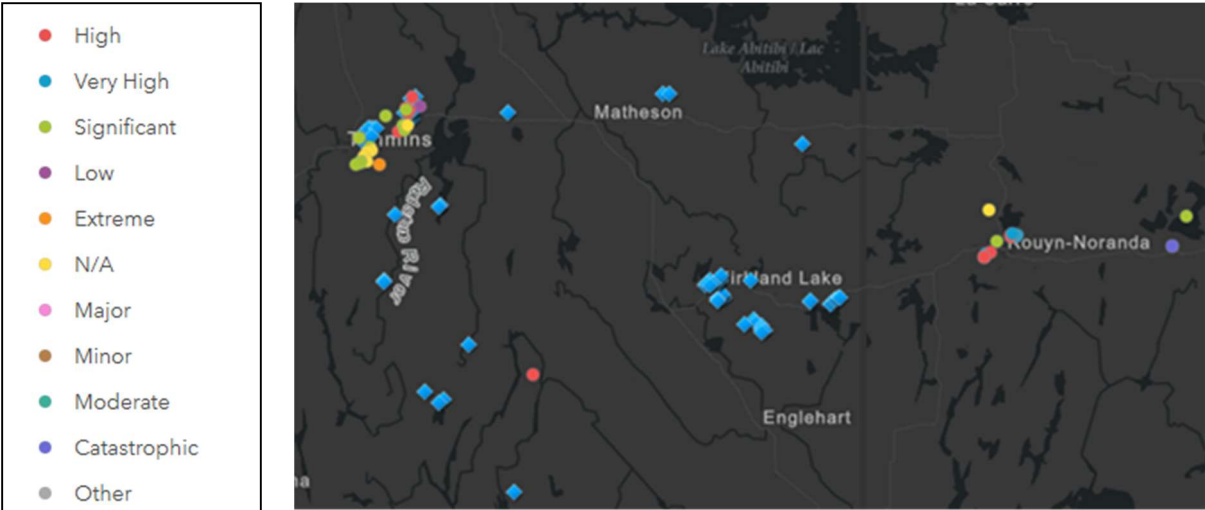
The Kirkland Lake gold camp has produced over 40Moz of gold from many historic mines and has left behind 43 legacy tailings sites. The Kirkland Lake-Larder Lake gold belt is an east-trending band of Timiskaming clastic (sedimentary rocks consisting of broken pieces of older weathered and eroded rock) and volcanic rocks which overlie older volcanics in the southern Abitibi greenstone belt of the Archean Superior province.

Tailings potential

Tailings are the legacy of the global mining industry. They are the materials left over from separating the valuable fraction from the gangue, which is the uneconomic fraction of rock. In hard rock mining, the ore is ground to liberate the minerals, and chemical reactions are then relied on to concentrate the metals. Due to this comminution process, mine tailings are usually produced from the mill in slurry form, a mixture of fine mineral particles and water normally stored in tailing dams - although tailings projects also include reprocessing dry stacked tailings and material from dumps. One hundred years of gold mining has generated substantial tailings at Timmins and Kirkland Lake, which remain as reprocessing is difficult using traditional technologies.

	Timmins	Kirkland Lake	Total
Legacy tailing sites	30	43	73
Gold produced to date	>70Moz	>40Moz	>110Moz

Legacy tailing sites in Timmins and Kirkland Lake. Source: Company



Tailings dams in the Timmins and Kirkland Lake mining camps.

Source: ArcGIS - A counting of tailings in Canada

Extracting valuable minerals from the tailings and legacy dams is both responsible and a good opportunity to convert waste into value. Important for the Tailings Storage Facilities (TSF) challenge has been the escalating scale of mining operations and the reducing ore-to-gangue ratio. As miners have naturally, over the decades, prioritised high-grade, low-cost deposits, the grades of modern mines are low. Meanwhile, the world’s rapidly rising population and improving living standards are driving the growing demand for metals. This means that an ever-increasing tonnage of metals needs to be extracted, and a greater proportion of waste is finding its way into TSF.

Reprocessing historic tailings has positive environmental and social governance (ESG) implications. Tailings are mineral waste products that can be a source of significant pollution and can contaminate the surrounding land if carried by wind or water. Being easily accessible and with much lower production risk and need for labour, tailings retreatment is attracting growing interest amongst investors who realise that such operations could have highly attractive economic returns.

Extrakt Process Solutions

Kentucky-based Extrakt Process Solutions are pioneers in sustainable solutions in liquid-solid separation technology. It is a forward-thinking technology business striving to revolutionise industries by offering innovative and environmentally friendly processes. At this stage, it has to be pointed out that the Extrakt process can be used in wide-ranging applications from environmental clean-up, tailings dewatering and oil/bitumen recovery.



Extrakt's ground-breaking solid-liquid separation technology is known as TNS™. The process behind this globally patented technology is described as a simple concept that works well for three main reasons. Firstly, the strongly attractive force between TNS™ chemistry and the mineral surface reduces the adhesion between silica and bitumen, which allows them to be easily separated. Secondly, the process is based on chemistry, which is completely incompatible with hydrocarbons such as bitumen or oil. This factor, together with a significant difference in densities, allows distinct phase separation of hydrocarbons from the chemistry. The tailings technology works similarly to enhance water recovery to increase productivity for miners.

Extrakt is a technology company that has developed a suite of sustainable solutions including a non-Cyanide leaching technology, which is becoming increasingly essential for a social licence to operate and bears all the hallmarks of being a truly disruptive technology. The science is all in the chemistry so that standard equipment can be used although Extrakt does have equipment designs to leverage its chemistries. Metallurgical tests have shown that Extrakt can effectively recover metals from mineralised complex oxides and refractory material. Extrakt brings with it very powerful positive ESG implications, being non-Cyanide, which means that no cyanide is required to leach the gold. The residues are inert and non-acid generating, which is a big problem with gold tailings. The technology has a very low water consumption.

The rollout of Extrakt's powerful technology seems to have begun in earnest. In February 2024, Extrakt Process Solutions signed a global commercialisation alliance with Bechtel to commercialise TNS™ by leveraging Bechtel's track record of engineering and delivering solutions globally. Bechtel needs no introduction as it is a trusted engineering, construction and project manager, which, in the mining industry, helps companies achieve operational and performance excellence in building smelters, refineries and processing plants. At the time, Faisal Mohammed, President of Bechtel Energy Technologies & Solutions (BETS), commented, *"..this collaboration is set to transform the industry.."*

So who is using it? Silver One Resources (TSX-V:SVE) hit some difficult ore with cyanide leach recovery rates down to 29%, but testing with Extrakt TNS™ non-toxic leaching technology, the recovery rate more than doubled to 64.4%, as announced by Silver One in April 2024. May 2024 saw this US business partner with a Saudi firm, NEZ, to deploy these technologies in Saudi Arabia. Here, TNS™ will be used to address pressing environmental needs and be part of the tremendous progress that this country is currently undergoing⁽¹⁾.

NEZ is the vehicle of His Royal Highness Prince Abdulmajeed Abudulelah, a businessman who was Deputy Foreign Affairs Minister. In December 2024, CJK Milling, a US-based company whose mission is to repurpose legacy mining waste in Leadville, Colorado, selected Extrakt TNS™ non-toxic technology as a partner for its operations in Leadville.

Through the Global Alliance partnership, Extrakt and Bechtel are commercialising TNS™ around the world⁽²⁾. These are two private companies so information might not be freely available. However, it is clear that Fulcrum have partnered with Extrakt just at the point of significant commercialisation and further publicly announced news looks to be on the cards as this unfolds. Moving forward, there seem to be enormous ESG benefits in using the Extrakt technology in tailing reprocessing. TNS™ appears to offer the opportunity to transform mine tailings into a sustainable resource using its innovative technology. So, old tailings sites can be reprocessed to help regenerate nature and local environments, along with a smaller carbon and waste pollution footprint. This will allow historic mine waste and sites to be repurposed into valuable assets for the community.

- 1) www.prnewswire.com/news-releases/us-firm-with-iconic-roots-partners-with-prestigious-saudi-firm-to-bring-technologies-and-development-to-the-kingdom-302150357.html
- 2) <https://www.bechtel.com/newsroom/press-releases/extrakt-and-bechtel-partner-to-commercialize-groundbreaking-solid-liquid-separation-technology/>

Corporate Background

Fulcrum Metals was incorporated in October 2022 as the holding company for a mineral exploration group with base, precious and energy metal projects in Canada. The shares were listed on AIM in February 2023. On admission, the company had a market capitalisation of £8.275 million, following a successful placing of shares at 17.5p each to raise £3.0 million before costs.

On admission, the company's project portfolio consisted of six gold and base metal projects in Ontario totalling 252km², which covered the Schreiber-Hemlo, Wawa Winston Lake and Dayohessarah Greenstone Belts. This was along with two uranium and gold projects in the Northern Athabasca Basin region in Saskatchewan spanning 136km².

April 2023 saw the acquisition of 42 claim cells covering 8.9km², known as Carib Creek East, which extended the company's Winston Lake Project in Ontario. Carib Creek East is under explored, and the little historical work undertaken here has resulted in some promising results, including copper in soils of up to 1,100ppm and in rock samples as high as 1.35%.

In May 2023, the board was able to report that significant progress had been made since listing, with advanced plans to accelerate exploration across the company's projects. These moves included an initial focus on the Big Bear property at the Schreiber-Hemlo Project, which aimed to advance the project to the drilling stage in Q3 2023. At Tocheri Lake, a high-quality airborne magnetic and Transient Electromagnetic Method (TDEM) survey covering 232km was completed, with full results announced in Q3 2023. These results did not disappoint as they greatly increased the prospectivity of the Big Bear property by almost doubling the number of priority geophysical targets to 72 and identifying several new structures and target areas for investigation.

Fulcrum's gold interests were further increased in August 2023 with the acquisition of the Tully Gold Project from TSX-listed 1911 Gold Corp for C\$800,000 plus a 1.5% NRS royalty. The project has a historic Indicated and Inferred Mineral Resource and lies within the world-class Timmins-Porcupine Gold Camp. High hopes for this project were centred on an old high-grade gold mine.

November 2023 represented a significant milestone in the company's growth with news of a deal to acquire the Teck Hughes Gold Tailings project in Kirkland Lake, Ontario. Fulcrum gained the option to purchase a 100% interest in the Teck-Hughes Gold Tailings Project, which resulted from the past milling of 9.6Mt tons of ore and production of 3.7Moz of gold. The board saw this step as an excellent opportunity to gain exposure to a project that has the potential to generate cash flow in the future. Subsequently, the tailings interests were enlarged by acquiring the nearby Sylvanite tailings reprocessing project.

In July 2024, the company signed a Definitive Option Agreement with Terra Balcanica Resources Corp. to sell its Saskatchewan Uranium Projects. This strategic move gave Fulcrum the capital to advance its tailings projects, Teck-Hughes and Sylvanite. Indeed, this impressive step validated the company's business model of identifying low entry-level assets and crystallising shareholder value.

A site visit in August 2024 to the Teck-Hughes and Sylvanite gold tailing reprocessing projects followed the successful Phase 1 results at Teck-Hughes. These results included an impressive 59.4% gold recovery rate using Extrakt's non-toxic technology. In September 2024, Fulcrum raised a total of £863,270 at 8p per share to accelerate the development of the gold tailings projects. This work included reviewing opportunities for drone-supported geophysical surveys, auger sampling, on-site bulk sample extraction, and reprocessing to support defining 43-101 compliant resources. This new money would also finance further work with Extrakt on its separation technology to thoroughly investigate the application of this technology and increase gold recovery rates from tailings.

Operations

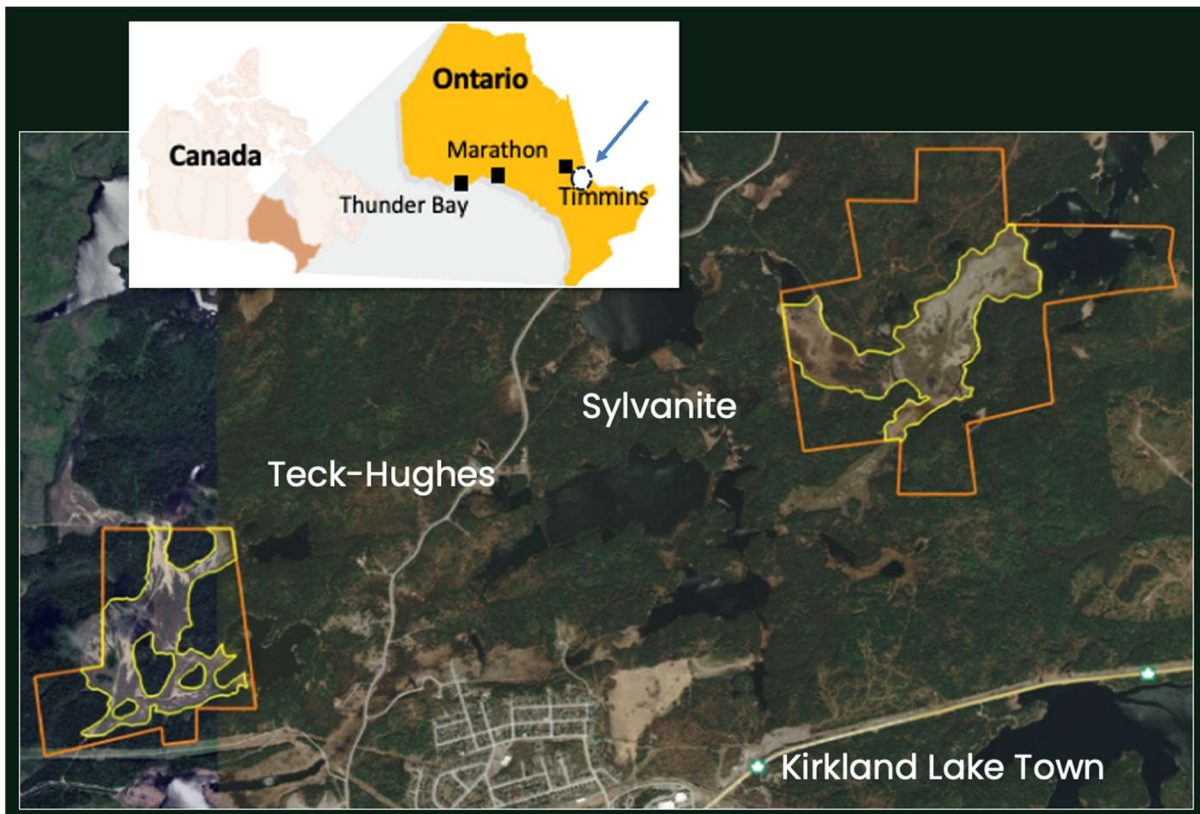
Fulcrum was initially focused on traditional mineral exploration projects seeking economic deposits of gold, uranium and base metals in Canada but has recently pivoted towards developing gold tailings projects where there is the promise of early cash flow.

GOLD TAILINGS

The company has moved swiftly to acquire two gold tailings projects in a rising gold market, which have rapidly become the company's new focus moving ahead.

Teck-Hughes Gold Tailings Project

This project lies 1.5km NW of Kirkland Lake, Ontario and is the location of part of the Teck-Hughes historical gold mine. The Teck-Hughes Gold Mine operated for more than 50 years until 1968 and is known to have milled c.9.6Mt of ore and produced c3.7Moz of gold between 1917 and 1968. Tailings were pumped around 2km north into the Lost Lake, and when that was full, a wooden dam was constructed to provide additional capacity.



Location of the Teck-Hughes and Sylvanite Gold Tailings Projects. Source: Company

In November 2023, the company entered an option agreement to acquire a 100% interest in the Teck-Hughes Gold Tailings Project. Beyond a C\$15,000 payment on signing the option agreement, there was a total of C\$525,000 to be paid over the next two years, plus the granting of a 3% NSR Royalty to the vendors. Fulcrum has the right to buy back 1.5% of the royalty for C\$1.5 million (taking the from 3% down to 1.5%) and buy back a further 0.5% for C\$1.0 million, reducing this royalty to a more acceptable 1%.

Historical work

A decade after the mine closed in 1980, Rene Paiement and associates organised a 9-hole drill programme at 500-foot intervals along a line that ran NNE from the SW corner of the tailings to the north central portion. The grade of these holes averaged 0.63g/ton of gold. Grades were found to be higher in the south and steadily decreased in the north, which is most likely due to higher grades in the oldest tailings being deposited closest to the mine.

In 1985, C. Von Hessert commissioned a drill programme on five tailings areas in the Kirkland Lake District – one of which was Teck-Hughes, where drilling was carried out on a 400 – 600ft spacing. Those results were used to roughly determine that the Teck-Hughes Gold Tailings Project might contain 6,122,000 tons of material at 0.62g/ton for 121,700 ounces of gold.

It all seemed to go quiet then, but in 2018/19, Jon Van Der Weduwen took 85 augur samples at 50m intervals along 100m spaced lines, covering most of the tailing surface apart from the most NE portion. The average grade of these surface samples (which were only collected up to 1m deep) was 0.60g/ton of gold.

In 2022, Jon Van De Weduwen was back drilling the claims again, completing 17 auger drill holes for 108.4m, ranging in depth from 3.6 to 9.2m, but some holes failed to reach the bottom of the tailings. All the holes were drilled vertically, using the same grid pattern as before, and sampled every metre from 1 - 2m deep (as his previous efforts had captured that data). A total of 95 auger samples ran as high as 1.23g/ton gold, with three-quarters of these samples assaying in the 0.5 – 0.8g/t gold range with an average of 0.66g/ton gold. This data, together with the results of the 1980 sampling, resulted in an estimated tonnage for the north, west and north-east areas of the tailings being calculated to be 6.53M tons of material at 0.66g/ton for 138,460oz gold.

Initial sampling – Phase 1

From the beginning of Fulcrum’s tailings journey, management has been advancing discussions with Extrakt concerning its patented proprietary separation technology. Phase 1 results were announced in May 2024, including some tremendous revelations that we believe the market ignored.



Teck-Hughes Tailings Project. Source: Company

In 2023, sampling was carried out by local contractors across six locations to create a representative sample of the Teck-Hughes gold tailings. In all, 32 samples were taken, totalling 39kg, which were composited to create six individual site samples for testing. Results showed an average weighted grade of 0.71g/t gold, 16.9% higher than historic samples from the same sites. Initial X-ray diffraction (XRD) Semi-Quantitative Analysis of the samples, which are used to determine the weight fraction of the constituents, showed that they mainly contained quartz, feldspar and carbonate.

Site Location	2023		Historical Direct comparison with historic samples from 2019 and 2022			
	Metres sampled	Average g/t gold	Meters sampled	Average g/t gold	Difference to 2023 grade g/t gold	Difference to 2023 grade %
225-12	5.0	0.592	5.0	0.52	0.069	13.2%
225-2	5.0	0.975	5.0	0.75	0.225	30.0%
425-14	7.0	0.635	7.0	0.59	0.047	8.0%
425-4	5.0	0.837	5.0	0.81	0.025	3.1%
525-10	6.0	0.641	6.0	0.49	0.149	30.3%
625-4	4.0	0.662	4.0	0.54	0.123	22.8%
Total	32.0	0.717	32.0	0.61	0.104	16.9%

Comparison of Fulcrum’s 2023 sampling and gold grade analysis compared to the reported historic grades at each location. Source: Company

Gold recovery testing involved submitting a composite sample across all sites grading at 0.7223g/t gold for batch testing using Extrakt non-toxic cyanide-free technology. Batch leach testing of 12 samples was run twice, with recovery rate analysis carried out separately by two leading assay labs. In June 2024, the company announced that Extrakt’s technology had delivered impressive initial gold recovery rates of up to 59.4%. These are cracking results as recovery rates from refractory gold without cyanide or pre-treatment are usually under 40%. Achieving such recovery rates with no pre-treatment or re-grinding looks to be outstanding and is very encouraging for the future.

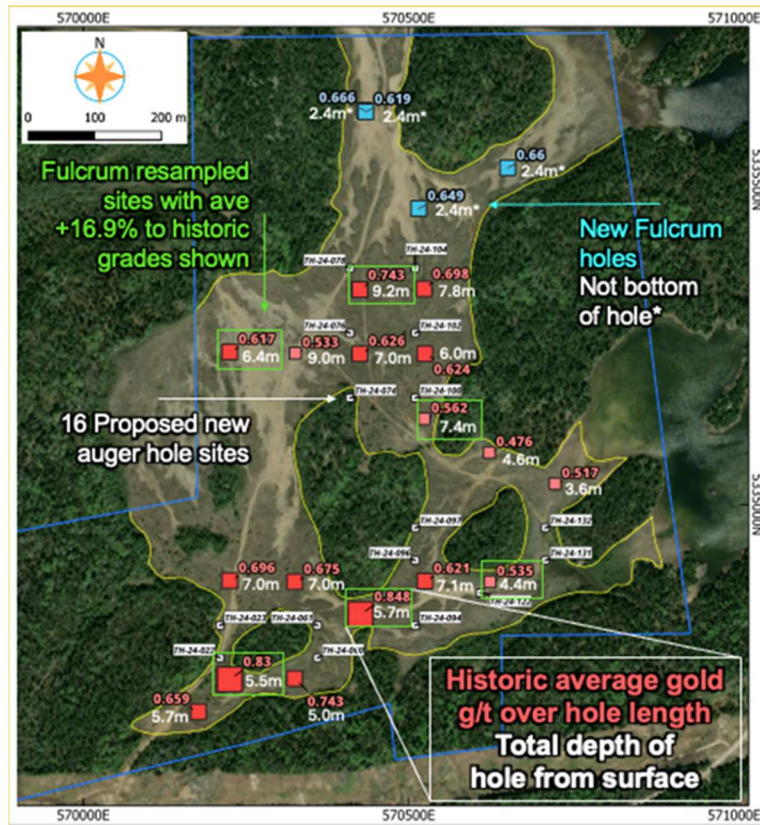
Compared to cyanide-based methods testing in 2008, over a 48-hour leach time at Sylvanite, the initial Extrakt leach testing not only gave nearly twice the gold recovery rate (59.4%) but also the leach time at just 3-6 hours was 8-16 times less. These are important factors that will continue to be investigated and could substantially impact both opex and capex considerations moving forward. Further, leach tests were reported to be underway to optimise the operational parameters required to boost gold recovery above 60%, focusing on overall efficiency and cost-effectiveness.



Ryan Mee (CEO) sampling at Teck-Hughes, auger sample pulling at Sylvanite and Mitchell Smith (NED) recording auger sample information at Sylvanite – August 2024 site visit. Source: Company

Further sampling and testing for conceptual study – Phase 2

Since the company’s initial sampling work, data collection, sampling and analysis, have been ongoing. A site visit in August 2024 provided an opportunity to take more samples to be sent for gold fire assaying. Moving into Phase 2, the company sought to expand the project database to better understand the gold grades across the tailings body.



Teck-Hughes historic and new auger holes with gold grades and depth (18 December 2024).Source: Company

By the end of October 2024, a further auger hole sampling programme targeting 16 site locations was in progress. Plus, geophysical surveys were being investigated that could define the dimensions and volumes of tailings at Teck-Hughes. Results from the first four new auger sites averaged 0.56g/t gold, 1.3g/t silver and 13g/t tellurium. Tellurium had not been assayed in the past, but it is a critical mineral in Canada and has important applications in alloys, solar cells and thermoelectric devices. Commercial-grade tellurium sells at US\$90 per kg, which could offer by-product credits.

Hole-ID	Depth (m)	2024 results		
		Gold g/t FA/AA	Silver g/t ICP	Tellurium g/t ICP
BHTH001 (Centre-east)	2.44	0.65	1.5	13.0
BHTH0322 (Northeast)	2.44	0.66	1.4	16.0
BHTH0323 (Centre-north)	2,44	0.67	1.3	8.0
BHTH0324 (Centre-north)	2.44	0.62	1.2	14.0
Total	9.75	0.65	1.3	12.8

Teck-Hughes additional auger hole results (announced 05 November 2024). Source: Company

In mid-December 2024, investors learnt that 16-site auger hole sampling was nearing completion, expanding the data set on which the NI 43-101 mineral resource estimate will be based. In parallel with this work, the Phase 2 conceptual study was designed and commenced to deliver operating plans and cost estimates.

Sylvanite Gold Tailings

The Sylvanite Gold Mine Tailing Property lies less than 3km from Teck-Hughes. This offers the opportunity for economies of scale which come from developing a larger potential project. Out of the 36 historic mines that make up the Kirkland gold camp, the Sylvanite gold mine was the fourth largest. The property consists of 8 contiguous mineral claims consisting of 19 mining claims over an area of 179.4 hectares, which cover all the tailings from the old Sylvanite Gold Mine. During the 1927 – 61 period, Sylvanite milled 4.5mt of ore at an average recovered grade of 0.332oz/ton (10.38g/ton), producing 1.67Moz of gold.

Fulcrum announced an option agreement to acquire a 100% interest in the Sylvanite Gold Tailings Project in April 2024. There was a signing-on fee of C\$25,000 and an acquisition price of C\$340,000 (C\$240,000 cash and \$100,000 in Fulcrum shares) spread over a four-year period. Fulcrum will also be granting the vendors a 1.5% NSR Royalty.

Historic work

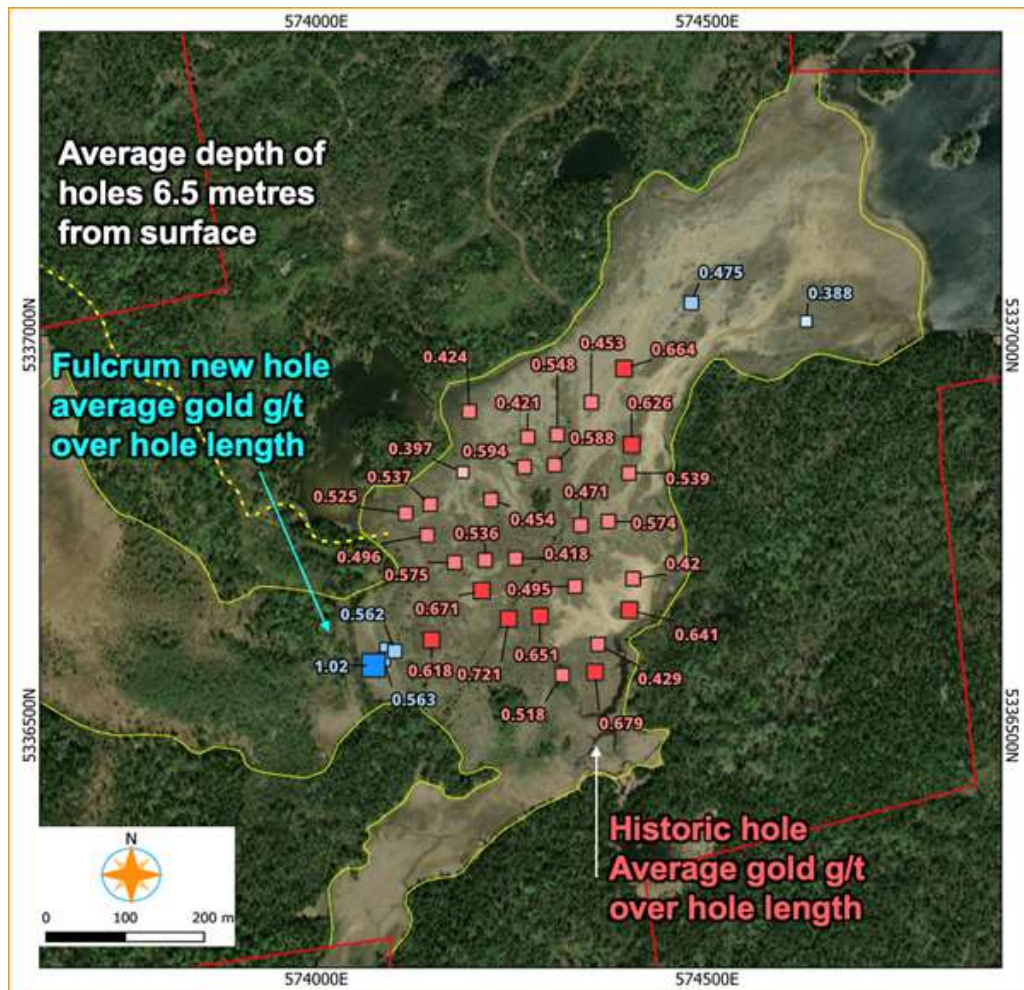
There is a non-compliant historical resource estimate of 67,051 ounces. This comes from a 1986 report file on the Property, which estimated a tailings resource of 4.52M tons (4.14Mt) grading 0.015 oz/ton gold, which equates to 0.47g/t gold.

Twenty years or so later, in 2008, 149 holes for 926.6m (average depth 6.21m) were drilled on a 30m by 25m grid to the base of tailings, which was found to have a maximum thickness of 12.2m. This resulted in an average grade of 0.541g/t gold in the 20 holes fully sampled and assayed. 2008 also saw metallurgical studies undertaken, which suggested that a combination of gravity, grinding and flotation techniques might boost the recovery rate to 70%.

Larger scale pilot plant tests were performed in 2010 and 2012 using up to 850kg of sample material which recovered some 65-72% of gold to a rougher concentrate. This work not only demonstrated a mineral processing route to recovering a saleable gold concentrate but also reckoned that the reprocessed material could be used in the restoration of the site.



Sylvanite Tailings Project. Source: Company



Sylvanite historic and recent auger holes with gold grades (5th November 2024) Source: Company

Hole-ID	Depth m	2008 results	2024 results			Difference	
		Gold g/t	Gold g/t FA/AA	Silver g/t TD-ICP	Tellurium g/t TD ICP	Gold g/t difference	Difference %
BH08-17	4.88	0.53	0.50	1.03	12.50	-0.03	-5.1%
BH08-32	7.32	0.65	0.71	1.15	15.33	0.06	9.8%
BH08-46	4.88	0.51	0.53	1.05	14.00	0.02	3.6%
BH08-66	4.88	0.41	0.50	1.15	14.75	0.10	23.3%
BH08-87	4.88	0.75	0.46	1.18	16,75	-0.29	-38.7%
Resampling	26.82	0.57	0.56	1.11	14.64	-0.01	-1.9%
BH08-110	4.88		0.48	1.13	14.50		
BH08-131	3.66		0.39	1.10	15.66		
S.low, Bas1	2.44		0.58	1.10	14.00		
S.low Bas2	2.44		0.56	1.00	13.00		
S.low Bas3	2.44		1.02	1.20	14.00		
S.low Bas4	2.44		0.56	1.10	10,00		
New	18.29		0.58	1.11	13.91		
Total	45.11		0.56	1.11	14.38		

Sylvanite additional auger hole results (announced 5th November 2024). Source: Company

Notes:

The "BH" holes are duplicates of samples sent to Extrakt for Phase 1 testing.

The "S.low. Bas" holes were used to establish gold grades for a wider systematic auger hole programme (these holes were not completed to the base of the tailings).

Initial work

Following the successful results at Teck-Hughes, Phase 1 sampling and testing began at Sylvanite in June 2024. The work programme mirrored that undertaken at Teck-Hughes, with composite sample material from 8 site locations sent to Extrakt's testing facility in Kentucky, USA for testing. Phase 1 testing was underway in October 2024 using Extrakt's proprietary technology on these samples. Also carried out were Inductively-Coupled Plasma Mass Spectrometry (ICP-MS - which can detect at least 40 elements, including gold), XRD mineralogical analysis and batch leach testing. Duplicate Phase 1 and additional tailings samples were sent for gold fire assays.

Results for six new auger sites were announced in November 2024, which averaged 0.58g/t gold, 1.1gh/t silver and 13.9g/t tellurium (shown in the table on the previous page). Silver and tellurium had only been sampled as part of bulk concentrating testing in 2012 with in situ grades of 1g/t and 7.5g/t, respectively. Concentrating achieved 21.5g/t gold, 14.1g/t silver and 152g/t tellurium. Concentrating and by-product credits could enhance the economics of the project.

In mid-December 2024, the company updated investors on the initial unoptimised Phase 1 leach test work results, where Extrakt's leaching technology delivered significant improvements compared to 2008 cyanide-based test methods. Gold recoveries rose to 49% against 30% (for cyanide in tests undertaken in the past), whilst there was a 94% reduction in leaching times from 48 hours to as little as 3 hours. Extrakt believes these results indicate that higher gold recovery can be achieved through an optimisation programme of the operational parameters.

GOLD TAILINGS - THE WAY AHEAD

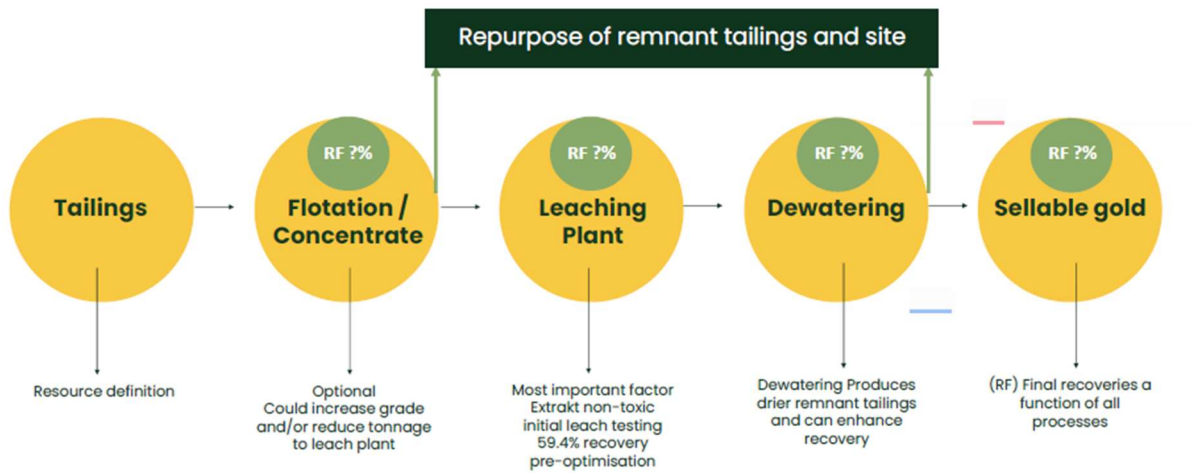
Although the company has made terrific strides, it is still early days, but the plan seems to be to reprocess the tailings centrally. With Teck-Hughes and Sylvanite just 3km apart and other tailing sites within a 5km radius, creating a tailings hub is possible to take advantage of obvious synergies. With that in mind, both tailings projects are being advanced using a similar phased development plan. Mineral processing is moving ahead in parallel with the exploration work on the ground, and proposals have been received from Extrakt regarding a Phase 2 conceptual plant design at Teck-Hughes.

Objectives	Through the end of 2024	Through 2025
Extrakt Leach testing and study programme	-Sylvanite Phase 1 sampling and testing complete -Teck Hughes Phase 2 conceptual study start	-Complete the four-phase programme and get construction ready
Additional standard recovery processes	-Review flotation, concentrating and dewatering	-Final maximised recovery process
Resource definition work	-Auger hole sampling and assays -Review drone-based survey options -Digitisation of all data	-Defined resources on projects through workstreams
Extrakt Gold Leach Technology exclusivity	-Convert terms of the definitive master agreement for Timmins and Kirkland Lake	-Scale opportunity

Fulcrum's phased development programme for the gold tailings. Source: Company

Phase	Programme	Teck-Hughes	Sylvanite
1	High-Level Gold Recovery Investigation Initial sampling and test work. Initial high-level gold recovery investigation is the primary evaluation of the enhanced gold recovery achievable using the Extrakt technology. The data collected in this phase will validate and refine the technology and support the planned Phase 2.	Grade +16.9% Recovery rate of 59.4%	Grade on a par Recovery rate of 49%
2	Conceptual study on project viability Will provide Fulcrum with the first insight into the project's viability (with +/- 50% accuracy) based on the information resulting from Phase 1.	Underway	2025
3	Laboratory test work Detailed sampling and test work to optimise and scale up. In this phase, more detailed test work is required to optimise some leach parameters and develop the necessary scale-up parameters for all the major equipment used in the operation.	2025	2025
4	Economic Assessment Study This study will provide a more accurate insight into the project viability using the more detailed test work results for the flowsheet. The aim is to study accurately at the pre-feasibility level (i.e., +/- 30% accuracy).	2025	2025
Licence agreement	Usually agreed upon once the economics of the project are fully understood, offering flexibility		

Extrakt leach testing and study programme for Fulcrum's two gold tailing projects. Source Company

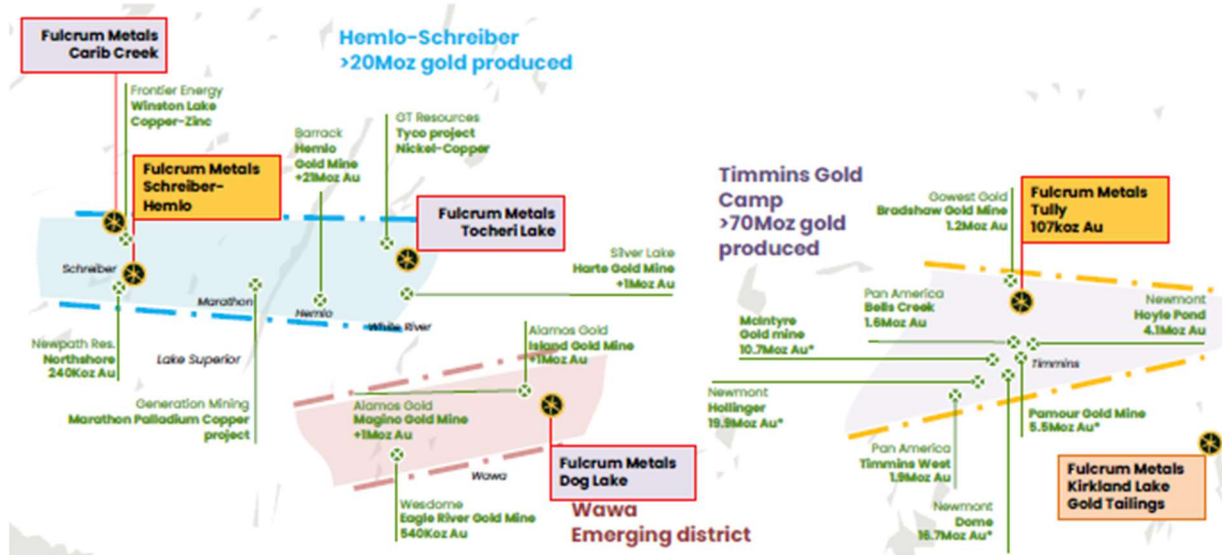


Planned tailings reprocessing using Extrakt's leaching technology. Source: Company

It looks like the board has far larger ambitions as there have also been discussions with Extrakt on the exclusive licensing of its non-toxic leaching technology across the Timmins and Kirkland Lake areas. These areas have historically produced more than 110 million ounces of gold, and there are 73 legacy tailings sites, which the company believes could enable it to scale operations. In mid-December 2024, the board reported that Extrakt, Bechtel and Fulcrum are now focused on documentation to close out the terms in a definitive Master Licencing Agreement (MLA).

GOLD PROJECTS – ONTARIO

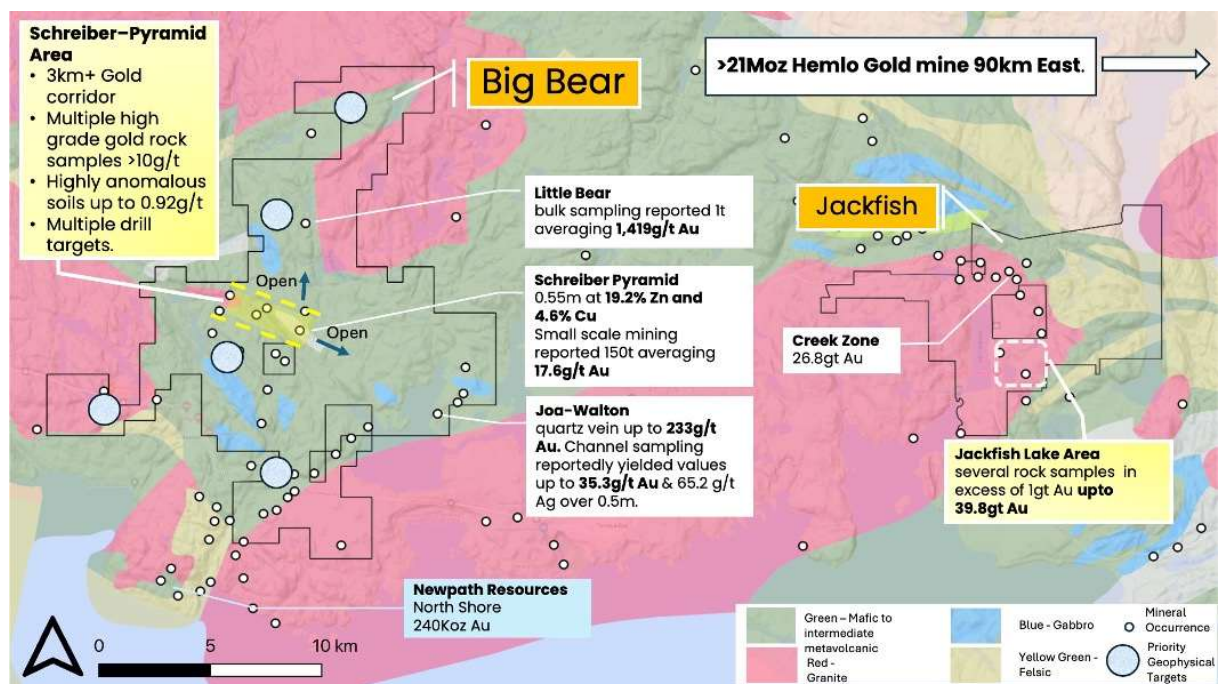
On admission to AIM, the company’s project portfolio comprised six gold and base metal projects in Ontario totalling 252km², covering the Schreiber-Hemlo, Wawa, Winston Lake and Dayohessarah Greenstone Belts. Since joining AIM, the gold exploration portfolio has been significantly expanded.



Fulcrum’s gold exploration projects in Ontario. Source: Company

SCHREIBER- HELMO PROJECT

The Schreiber-Hemlo Greenstone belt is well-known for hosting numerous gold and base metal deposits and occurrences across various deposit types, including lode gold, polymetallic volcanogenic massive sulphide (VMS) and banded iron formation (BIF). Most notable is the Hemlo deposit, which has produced over 21Moz of gold. Big Bear and Jackfish Lake lie close to the northern shore of Lake Superior and are about 14km apart.



Fulcrum’s Schreiber-Hemlo Project – geology and licence boundaries. Source: Company

Big Bear

This property covers an area of 113km² and has seen a history of exploration and small-scale gold mining since the late 19th century. Historic production includes the Cook Lake Gold Mines, which developed into the Johnston-Mckenna property, where 32 tons of ore were extracted at 0.802oz/ton (27.5g/t) gold. Also, the Schreiber Pyramid Gold Mine was developed in the 1930s, where six gold veins, including visible gold, were identified and associated with copper and zinc mineralisation. One hundred and fifty tons of gold were mined at 0.51oz/ton (17.6g/t).

The licence area has only seen minimal drilling, with the best results from Zenmac Metal Mines Ltd's 1969 drilling programme. This reported a base metal showing located to the north of the #1 Vein Adit, which returned 4.6% copper and 19.2% zinc over 0.55m from vein #2. Fulcrum's work at Big Bear started with a property-wide exploration programme to attempt to take a prospect-wide view of the full potential of this large licence area with a fresh set of eyes.

Following the AIM admission, Big Bear was Fulcrum's initial focus. In March 2023, the company reported the results of a prospecting programme centred around the Schreiber area, covering five historic mineral occurrences and old gold workings. Out of 45 rock samples, the best included 45g/t gold and 33.6g/t gold, with five over 10g/t gold and nine over 1g/t gold. Detailed mapping suggests a much larger structure than had been previously highlighted.

The plan was to advance the project to a drilling stage by Q3 2023. Further sampling, geological mapping, and geophysical surveys were planned to meet this goal and in all 141 rock samples taken, reporting up to 17.6g/t gold. Integrating Fulcrum's newly acquired airborne data with previous magnetic and Electromagnetic (EM) data over the full Big Bear claim block has significantly enhanced the prospectivity of the property. New data led to the number of geophysical anomalies increasing from 191 to 441 and priority ones from 17 to 71 from which the drill sites are chosen.

Jackfish Lake

The Jackfish Lake property differs from Big Bear as no BIF-associated mineralisation has been reported in metavolcanic or metasediments. Gold and silver were produced from 2 adits between 1882-90. Subsequently, shafts have been sunk and adits driven, but no production records exist. The previous operator, Santana Resources, thought the mineralisation was orogenic gold and carried out an unsuccessful 6-hole drill programme (930m). However, a geophysical survey did indicate some anomalies, which were interpreted to be batholith (large igneous rock intrusions) contact zones.

Fulcrum started with a two-phase exploration programme around known mineralisation zones to delineate potential drill targets. Grab samples were taken at 312 sites, ranging from 0.003 to 39.8g/t gold. June 2023 saw ground works commence along the prospective, but little explored, eastern and northern volcanic contact zone. Minimal previous exploration has demonstrated the potential to host significant gold mineralisation with grab samples of up to 39.8g/t gold.

Tocheri Lake Dayohessarah	Versatile Time Domain Electromagnetic (VTM) airborne geophysical survey conducted over the SW corner of the property in March 2023 identified a weak electromagnetic conductor, which may indicate buried mineralisation in addition to several magnetic targets. Adjoins GT Resources regionally significant Tyco I nickel-copper project.
Carib Creek Winston Lake	A copper exploration target was identified with historic rock samples of up to 1.35% and soil samples of up to 1,100ppm. Additional soil sampling in 2023 returned strongly anomalous copper results of up to 747ppm, with more than 25% of samples over 50ppm and anomalous zinc soil samples of up to 236ppm Zn.
Dog Lake Wawa	Limited rock sampling programmes across 2022/23 returned several strongly anomalous samples of up to 2,740ppm nickel (0.27%), confirming the mineralisation of the intrusive rocks. Nearby operators include Alamos Gold.

In Ontario, three non-core projects are also available for option, JV or sale. Source: Company

TIMMINS TULLY GOLD PROJECT

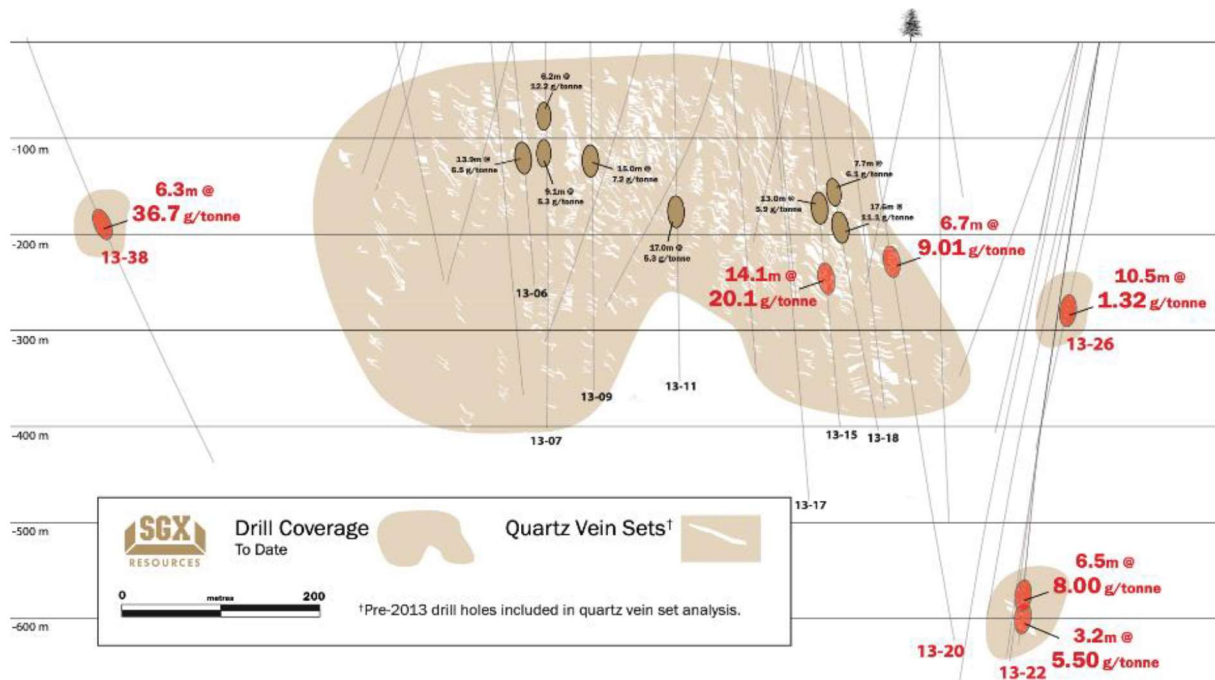
The Tully Gold Project lies in Ontario's prolific Timmins porcupine gold camp, which has produced more than 70Moz of gold over the years. The project is an advanced gold exploration project with an estimated NI 43-101 compliant 107,000oz gold resource (2013) at 6g/t gold over 600m of a proven 1,600m strike length. This remains open to expansion, plus there are several untested prospective structures.

Fulcrum acquired the Tully Gold Project in August 2023 from 1911 Gold Corp for C\$800,000 in cash and granted the vendor a 1.5% NSR., with 1% NSR available to be repurchased for C\$600,000. Fulcrum raised the funds by issuing £520,000 of unsecured convertible loan notes, to which certain directors contributed £195,000.

Tully is in an established mine camp with excellent infrastructure. The historical gold resource of 107,000oz includes 76,000oz at 6.56g/t gold in the Indicated category and 31,000oz at 5.17g/t gold in the Inferred category. Grades are considered to be economical for underground mining.

The resource is constrained by drilling over c.600m of this strike length and to c.400m depth. The resource is not only open for expansion through infill drilling but also drilling along strike and at depth, as demonstrated by drilling in 2013 by SGX, which reported 9.01g/t gold over 6.7m and 8.0g/t gold over 6.5m, the latter at c.600m depth. Interestingly enough, drilling in 1997 reported bonanza-style grades up to 2,555.5g/t gold over 0.5m within an intersection of 322.02g/t gold over 5.7m from 215.7m.

Timmins gold deposits tend to run deep. Tully Gold had little drill testing at depth and remains a relatively shallow ore body, although it is likely to be a ladder-style stacked vein system (short, rather regularly spaced parallel fractures). Other million-ounce gold deposits within 30km of Tully Gold seem to run to a depth of 1,000m or more.



*Timmins Tully Gold – composite section looking north showing 2013 drilling by SGX Resources.
Source: Company*

Fulcrum has been involved in pre-drilling activities, which include: comprehensive data reviews, 3D targeting, further site visits, establishment of potential new collar locations, reviewing historic drill holes and re-sampling of drill core/reject material. These are planned before finalising the drilling programme, which was planned for winter 2024, although priorities have since changed.

URANIUM INVESTMENT

On listing, Fulcrum had uranium and gold projects in the Northern Athabasca Basin region of Saskatchewan, Canada, totalling 136km². Originally consisting of the Charlot-Neely and Fontaine Lake projects, which were then expanded. Subsequently, the portfolio increased by adding the Snowbird, and South Pendleton projects. Northern Saskatchewan is home to the world's largest and highest-grade uranium deposits and supplies some 20% of global uranium.

These projects now cover some 59,000 hectares (590km²), and the focus was on structure, as they not only lie on trend with historic mines but also on trend with projects that have attracted significant investment. There have been some impressive discoveries which have proved the concept of exploring along structures outside of the Athabasca basin, such as the Arrow discovery 4.3Mt at 0.83% U3O8 and the Triple R discovery 2.7Mt at 1.94% U3O8

In July 2024, Fulcrum optioned out the uranium portfolio to Terra Balcanica Resources (CSE:TERA) over a 4-year term for C\$3.36 million in cash and shares, C\$3.25 million in work expenditures and a 1% NSR to Fulcrum with a half buy back available for C\$1 million.

Strategy for Growth

Fulcrum Metals joined the market less than two years ago as an early-stage exploration company with the traditional business model for small-cap resource stocks. The team worked hard to mobilise the work necessary to establish a high-grade gold corridor and delineate drill locations at Big Bear. While Fulcrum waited for the permits to drill, the team looked around at how to add value. Directors Ryan Mee (CEO) and Aidan O'Hara (Corporate Development Officer) saw an opportunity to use a new powerful technology, Extrakt, to process gold tailings, a waste product from previous mining. There is no shortage of gold tailings in North America, some of which might even pose an environmental problem that needs cleaning up. Ryan and Aidan have a good business relationship with Extrakt and its CEO, William Florman, which stems from 2018. Back then, the pair first encountered this technology being used to extract oil from tar sands, but where is the interest in such projects today with oil at US\$70 a barrel? However, they monitored the development of Extrakt, which was shown to offer big advantages over cyanide-based leaching on gold projects.

Extrakt was not developed in a garage. William Florman is a scion of the wealthy Reynolds Metals dynasty. Reynold Metals was the third-biggest aluminium company in the world before being acquired by Alcoa in 2000. Extrakt has been created and developed by William, and exclusively backed through c.10 years of technological research, with no venture capitalists able to get a look in. In February 2024, Extrakt signed a new strategic global alliance with Bechtel Energy Technologies & Solutions, Inc., part of Bechtel, which reported global revenues of US\$20.2 billion in 2023. This move allows for the commercialisation of Extrakt's solid-liquid separation technology, known as TNS™, by leveraging Bechtel's trusted experience in engineering. Extrakt is a non-cyanide leaching process which scores highly from an ESG standpoint as mining projects worldwide increasingly have to operate throughout the project life cycle (including tailings retreatment) in accordance with international best practices like World Bank/IFC Performance Standards.

Sensibly, Fulcrum started seeking tailings projects in Canada's biggest gold-producing area, the Kirkland Lake gold camp. Having acquired the Teck-Hughes Gold Tailings Project in late 2023, the team wasted no time sampling with metallurgical testing starting in May 2024. Over the years, many highly impressive tailings projects have often disappointed due to leaching problems. A particular problem in gold tailing is refractory ores, which are ultra-fine gold particles naturally resistant to recovery by standard cyanidation and carbon absorption. So, there is a good reason why this gold-rich material has been dumped as waste. Extrakt's strongly globally patented TNS™ technology is based on a reagent, which is an ionic solution with no acidity and no cyanide. It is very neutral but works on the action of positive and negatively charged ions – that is how it has been described. Operators struggle to get a 30% recovery with cyanide, but at Teck-Hughes, Extrakt's leaching process delivered a 59.4% recovery rate from an unoptimised circuit. It should be noted that the big boys spend a lot on the front end to pre-process gold ore before leaching it.

The disruptive nature of the Extrakt technology is glaringly obvious as it has the power to unlock resources lost in tailings. It is possible to make some interesting parallels between Fulcrum's tailing projects and the Poseidon Nickel (ASX:POS) Windarra Gold Tailings Project in Western Australia. In the Feasibility Study (July 2021) for Windarra, there is an ore reserve of 5.54 – 5.73Mt depending on mining method grading at 0.84g/t gold and 2.1g/t silver for around 150koz of contained gold and 375koz of contained silver. Estimated recovery rates for gold at the three tailings dams at Windarra vary but seem to average around 35% with leach times of 16-24 hours using cyanide. By comparison, Fulcrum's Teck-Hughes has 6.5Mt at 0.66g/t – although resampling by the company shows this is 16% higher, suggesting an overall grade of 0.77g/t gold. However, Fulcrum's unoptimised leach testing with non-toxic Extrakt hit 59.4% over 3-6 hours leach time, so with optimisation of the chemistry, they could be targeting 70-80% plus there is the addition of Extrakt's dewatering technology and other innovations yet to be considered. Traditional cyanide-based leach tests at Sylvanite resulted in an average of 30% gold recovery over 48 hours of leach time. Teck-Hughes and Sylvanite are refractory ore tailings that are notoriously difficult to leach gold out of, hence remaining unprocessed since the 1920s.

Comprehensive drilling and sampling of the gold tailings at Teck-Hughes and Sylvanite could make for good reading. Historical data seems to provide the low case for the resources and ounces of gold contained by the initial results from the company's sampling at Teck-Hughes. One thing is for sure: there will be honeypots at Teck-Hughes, as one auger hole from the 1980s found 70g/t gold in tailings. At Sylvanite, they have resampled seven historic areas, and grades have been on par with the past results, but Fulcrum has not been sampled to the bottom of the holes where the higher-grade waste from the earliest mining is to be found. On top of that, at the extremity of the Sylvanite tailings body, there is a washout zone which is not as thick as the main body but provides an additional 2m layer to be considered. One thing is for sure: early production will be targeted on these honeypots and other high-grade areas, which could allow for a much greater project NPV and an accelerated payback. The feasibility study will most likely look at a modular 1,000 – 5,000t per day operation initially, which, even at a 70% recovery, could roughly produce 15 – 75 ounces of gold a day (4,500 – 22,500oz per annum, generating US\$1.2 million to US\$5 million a month in revenue. To which, additional modules could be added to scale up the project.

Ryan and Aidan have far higher targets than setting up a gold tailing reprocessing operation at Teck-Hughes and Sylvanite. The pair have made no secret in their goal of gaining an exclusive Extrakt licence for reprocessing tailings covering the whole of Timmins and Kirkland Lake – which represent two of the largest gold camps in Ontario and, indeed, Canada. To put it mildly, massive amounts of tailings have stemmed from large-scale mining since the 1920s. However, Fulcrum will not run before they can walk, so the immediate plan is to develop their projects with a good chance of Teck-Hughes or Sylvanite [JAH1]being in production in 1.5 to 3 years. This will provide proof of concept and a blueprint for rolling out copycat operations across the region. Indeed, the initial tailings reprocessing operation would make a fine window display for elicit expressions of interest. With exclusivity for Extrakt in the Timmins & Kirkland Lake, neighbouring gold mining companies should be beating a path to Fulcrum's door. So, the company could get more tailings through M&A deals for nothing. At the same time, the company has strong partners in Extrakt and Bechtel, in whose interests it is for Fulcrum to be successful and prosper. You cannot beat having wealthy and established partners helping to guide your growth.

Extrakt technology has enormous potential, so it is no surprise that Fulcrum will not own the IP. There are big benefits in not owning the IP as they do not need to fund the ongoing development of the technology. *"So how much per ounce will Extract cost?"*, we asked the board. One thing is for sure: whatever the all-in-sustaining Cost (AISC) average for the North American gold mining industry, whether it is US\$1,300 per ounce or slightly more these days, Extrakt/Bechtel will want a competitive cost base for adoption. So, there will be a sensible cost, giving Fulcrum an attractive margin, primarily as the tailings have already been mined and are just sitting on the surface. Fulcrum is seeking to create a brand and has already built up the interest of the First Nations in tailing reprocessing. When looking outside at additional projects, people will come to them as, by that time, Fulcrum could be a proven gold tailings reprocessing brand, which could no doubt provide some form of protection aside from the exclusivity.

The market has seemingly ignored Fulcrum's changing fortunes. Perhaps investors have been unaware of the move into gold tailings, which brings with it the promise of early cash flow. Such an essential strategic move means that the company will be valued based on its potential significant revenue and earnings rather than some incrementally increasing asset valuation, which is always at the whim of the market. The truth is that once one of these tailing projects is up and running, no other fundraising might be needed again, and their strategic options open right up. With a solid cash flow behind them, management can do anything that could encompass big projects well, given the scale of the team's ambitions. The board is very focused on leveraging the powerful TNS™ technology. Realising that Extrakt has a wide range of applications, we will not be surprised if 2025 is the year that sees Fulcrum beginning to lift the veil on some of these other opportunities. Having completed the business restructuring to suit the early cash flow requirements of today's investors, the board is now trying to ensure that the market begins to look at Fulcrum properly.

Financials & Current Trading

Fulcrum started life as a traditional mineral exploration company but has quickly pivoted towards becoming a sustainable gold tailings processing business.

Y/E 31 December £'000s	2022A	2023A
Revenue	-	-
Pre-tax loss	(620)	(1,714)
Total comprehensive loss for the year	(629)	(1,722)

Fulcrum Metals' two-year trading history. Source: Company accounts

2023 results

The twelve months ended 31st December 2023 saw the company listed on AIM and conducting successful exploration programmes across the Schreiber-Hemlo Gold Project, Ontario, and the Charlotte-Neely and Fontaine Lake Uranium Projects in Saskatchewan. For the year the company reported a pre-tax loss of £1.714 million and a basic loss per share of 0.037p.

2024 interim results

The six months to 30th June 2024 saw the company's continued strategic shift into gold tailings with the beginning of a phased programme at the Teck-Hughes Gold Tailings Project to evaluate the efficiency of the Extrakt leaching technology in recovering gold and other by-products. With so much going on, the board did well to limit administration expenses to £0.47 million, and the financial loss for the period came out at £0.512 million. The loss per share came out at 1.0p.

Recent developments

In October 2024, Fulcrum updated the market on the progress of the gold tailings projects. At Teck-Hughes, additional auger hole sampling was underway targeting 16 site locations to expand the project database and understanding of gold grades across the tailings body. At Sylvanite, Phase 1 testing is also proceeding using Extrakt's proprietary technology on tailings material samples from eight site locations.

November 2024 brought news on the assays and progress on the gold tailings projects. At Teck-Hughes, four new auger sites reported an average of 0.65g/t gold, 1.3g/t silver and 13g/t tellurium, which could provide by-credits and enhance the projects' economics. At Sylvanite, six new auger sites reported an average of 0.58g/t gold, 1.1g/t silver and 13.9g/t tellurium – which were duplicates of seven resampled sites sent to Extrakt for phase 1 processing test work.

December 2024 saw Fulcrum participating in Resourcing Tomorrow, a global mining conference in London. CEO Ryan Mee's investor presentation entitled "Turning Waste into Gold" was well received at the conference.

Mid-December 2024, the board updated investors on the Teck-Hughes and Sylvanite gold tailings projects with news that Extrakt technology had increased gold recovery of the Sylvanite gold tailings by up to 63% whilst at the same time reducing leach times by 94%.

Risks

Geological risks

A series of technical risk factors concern the level of understanding of the tonnage, grade, distribution and dimensions of the tailings.

Metallurgical risks

There are technical risks associated with gaining good recovery rates that are economical.

Metal price risks

Metal prices are highly cyclical and changes in the price of gold could have a negative or positive impact on the valuation of the company's projects and revenue from the sales of metals.

Exchange rate risks

Movements in the value of currencies will affect the company's accounts on translation from Canadian and US dollars into sterling. Fluctuations in the value of the Canadian dollar, along with the US dollar against sterling, may influence the valuation that the company is awarded by the market.

Future funds

Recently, the ratcheting of political tensions concerning Ukraine and Israel/Gaza, along with prevailing high interest rates, has set the scene and made the market turn its back on risky plays. This has made it difficult for small-cap resource plays to raise reasonable sums of fresh cash, with several recent fundraisings in the sector seeing share prices being undermined by incoming investors demanding 30-50% discounts to provide the necessary capital.

Board of Directors

Alan Mooney - Interim Chairman

Alan has an extensive experience of over 30 years of accounting and auditing. Previously, he was CFO of Cove Energy plc and Orogen Gold plc, both of which were exploration companies listed on the AIM market during his tenure. Alan is a Chartered Accountant and has an MBA from University College Dublin.

Ryan Mee – Chief Executive Officer

Ryan co-founded Fulcrum Metals and is an experienced serial private investor in the natural resources space turned entrepreneur with extensive knowledge of exploration companies. He has a wealth of knowledge in business and commercial acumen, raising funds, investment, strategic and business planning. Ryan earned a BA (Hons) degree in Economics and has over 16 years in senior positions for an industry-leading audit and consultancy company.

Aidan O’Hara – Corporate Development Director

Aidan is an experienced investor within the stock market and highly experienced and successful in private business leadership and enterprise, having founded a number of companies, including successful property businesses and a private mining company in West Africa. He is also a co-founder of Fulcrum.

John Hamilton – Chief Financial Officer

John has extensive accounting and wider business services experience in SME and international companies, including natural resources. He was a Partner, Shareholder and Director of accountancy practice LHM Casey McGrath and investment property companies for over 30 years, acting as Managing Partner during key reorganisations.

John is a fellow of the Association of Chartered Certified Accountants (FCCA) and a member of the Institute of Directors in Ireland. He has a wealth of regulatory knowledge, having previously been an Independent Panel Member on a committee of the Association of Chartered Certified Accountants (ACCA) London.

Mitchell Smith – Non-Executive Director

Mitchell has over 15 years of executive leadership, entrepreneurship, and capital markets experience at all stages of the junior mining lifecycle and is experienced with companies in diverse industries both private and public. He currently serves as President & CEO of Global Energy Metals Corporation, Director of Battery Metals Association of Canada (BMAC).

Mitchell is an accomplished executive with deep knowledge of the natural resource space, specifically the battery and energy metals sector. He has been quoted in many notable news sources and ranked fourth globally in 2020 in the top ten most influential people and companies in the battery minerals sector on social media.

Senior Management & Consultants

Steven Flank, P.Geo, M.Sc – Technical Adviser

Steven is a professional Geoscientist with more than 10 years of experience in the mineral exploration industry, focusing on multi-commodity prospect generation, project management and project design. He is an expert in magmatic Ni-Cu-PGE exploration with a proven track record of discovery. In 2014 he was a co-recipient of the Northwestern Ontario Prospectors Association Discovery of the Year award for the discovery of the Sunday Lake PGE deposit. Steven completed a Master of Science in Mineral Exploration at Laurentian University in 2017 and an Honours Bachelor of Science Degree in Geology at Lakehead University in 2011.

Edward Slowey – Technical Adviser (Consultant)

Ed holds a BSc degree in Geology from the National University of Ireland and is a founder member of The Institute of Geology of Ireland. Ed has more than 40 years of experience in mineral exploration, mining and project management, including work as a mine geologist at the Navan zinc-lead mine in Ireland and as exploration manager for Rio Tinto in Ireland, leading to the discovery of the Cavanacaw gold deposit. He has worked in Africa, Europe, America and the FSU in the areas of JV negotiation, exploration planning and feasibility study management for a range of commodities. Consulting work included completion of CPR's and 43-101 technical reports for stock exchange listings and fundraising. Ed currently serves as technical director at AIM-listed Galileo Resources and Bezant Resources.

Forecasts

We initiate coverage of Fulcrum with forecasts for the full years ending 31st December 2024 and 2025. The year to 31st December 2024 saw the company acquire the Sylvanite Gold Tailing Project and begin a sampling programme. At Teck-Hughes, positive initial results from sampling and impressive results from Phase 1 leaching tests with Extrakt have been delivered, with project expenses estimated at £0.15 million. For this period, we estimate that administration expenses will remain pretty well unchanged at £1.0 million. After finance income/costs the loss before and after tax is forecast to be £1.23 million, with a loss per share of 2.33p.

Year End 31 December (£'000s)	FY 2022a	FY 2023a	FY 2024e	FY 2025e
Turnover	-	-	-	-
Administration expenses	(254)	(986)	(1,000)	(1,000)
Project expenses	-	-	(150)	(550)
Exceptional Item	(268)	(647)	-	-
Operating loss	(522)	(1,632)	(1,150)	(1,250)
Finance income	-	56	20	50
Finance costs	(97)	(138)	(100)	(150)
Loss before taxation	(620)	(1,714)	(1,230)	(1,650)
Tax on loss	-	-	-	-
Loss for the financial year	(620)	(1,714)	(1,230)	(1,650)
Foreign currency translation of foreign subsidiaries	(9)	(8)	(10)	(10)
Total comprehensive loss for the year	(629)	(1,722)	(1,240)	(1,660)
Loss attributable to:				
Continuing operations	(629)	(1,722)	(1,240)	(1,660)
	(629)	(1,722)	(1,240)	(1,660)
Earnings share (p)	(7.20)	(3.70)	(2.33)	(2.56)
Weighted average number	8,617,944	46,104,782	53,216,806	64,849,162
Total shares plus options, warrants and convertible loan notes	21,314,231	59,722,022	69,024,860	69,024,860

Source: Company/Optimo Research

In the year to 31st December 2025, Fulcrum is expected to complete the four-phase programme at both the Teck-Hughes and Sylvanite gold tailings projects and prepare for construction. This process will involve completing the work required to design the recovery process, which maximises recovery, as well as the drilling and geophysics to define the resources on the projects. This is likely to total C\$1 million or £0.550 million, which has been included as a project cost. The company is expected to be working towards amplifying the opportunity to scale the opportunity with an exclusive master licence from Extrakt to use its gold leach technology covering Timmins and Kirkland Lake. After finance income/costs, the loss before tax is forecast to be £1.66 million. The loss per share comes out at 2.56p.

Valuation

We have set out to determine a meaningful valuation for Fulcrum Metals to calculate a realistic target price that makes sense in today's market. This has been based on valuing the component parts by a mixture of peer group comparisons along with actual and expected deal values.

Gold tailings leaching projects

Fulcrum's focus is now on the gold-leaching projects, which management seeks to swiftly move up the valuation curve. We have already touched on the interesting comparison with Poseidon Nickel's Windarra Gold Tailings Project in Western Australia. The Windarra Feasibility Study (July 2021) looked at a project that would produce around 54koz gold over a 45-month period, using low-cost, low-risk tailings mining methods and a conventional 1.5Mtpa modular designed processing facility. At 2021 prices, the NPV(8) was A\$21.7 million with an IRR of 50.6% based on an assumed gold price of US\$1,750/oz.

The AISC was A\$1,393/oz or US\$961/oz using the then prevailing exchange rate of A\$1.00 = US\$0.69). The board of Poseidon was right in believing that the results from the DFS demonstrated a robust and profitable mining project. Windarra's AISC were attractively low at the time, and since then, all mining costs have risen significantly. But gold is now almost US\$1,000/oz higher, and Fulcrum's tailings projects have the potential to have 2X the recovery and 75% less leaching time. All would suggest that Feasibility Studies for Fulcrum's gold tailings assets could demonstrate highly profitable projects and provide the basis for a much more accurate valuation. Poseidon's management has sought out JV partners to develop their project so they can focus on the company's strategic plan, which demonstrates that opportunities are available to specialist tailings players.

At present, there is insufficient data to create an economic model of Teck-Hughes and Sylvanite and determine an NPV which we would then risk. So, in search of a valuation for the core business, we have chosen to look at peer group comparisons. We have ruled out Poseidon Nickel as the strategic focus is on its nickel projects. The closest of the peer group comparison would seem to be ES Gold Corp (CSE:ESAU) which has a 100% interest in the Montauban Mine Property in Quebec. This was mined intermittently from 1910 to 1990 (when c.150koz gold was mined), resulting in several tailings piles that the company plans to reprocess using modern milling techniques, thus remediating the site. MRE for the Montauban and the Notre-Dame-de-Montauban tailings is shown below. The company also has a historic resource from 2003, which is the near-surface potential at Montauban (2003) of 1Mtons+ at a grade of 3.6g/t+ gold and 29g/t+ for silver for 125,000oz gold and 817,000oz silver.

Asset	Gold g/t	Silver g/t	GoldEq g/t	Tonnes	Gold oz	Silver oz	GoldEq oz
Montauban tailings							
Indicated	0.40	31	0.78	603,700	7,800	610,350	15,000
Inferred	0.34	28	0.67	292,000	3,150	258,900	6,400
Notre-Dame-de-Montabaun tailings							
Inferred	1.21	137	2.84	27,300	1,050	120,200	2,500
Total Indicated	0.40	31.45	0.77	603,700	7,800	610,350	15,000
Total Inferred	0.41	36.93	0.87	319,300	4,200	379,100	8,900

Tailings MRE(2023) for the Montauban and the Notre-Dame-de-Montauban. Source: ES Gold Corp

An Updated Preliminary Economic Analysis (PEA – or Scoping Study) of the tailings project at Montauban was published in November 2024, which highlighted a pre-tax NPV(5) of C\$57.5 million with an impressive internal rate of return (IRR) of 142% and a payback period of less than one year. The PEA investigated a project with four years of mine life, processing 923,000 tonnes of tailings at 0.41g/t gold 33.34g/t silver and recovering 57,187 tonnes of mica. Estimated revenue is C\$111.5 million over the life of the mine, with a life of mine capital cost of C\$17.3 million. The operational cost per tonne of tailings is C\$29.83. ES Gold plans to be producing gold and silver in Q2 2025.

ES Gold is currently trading at C\$0.23 and has a market capitalisation of C\$10.67 million with an Enterprise Value of C\$10.26 million. Seeking to adjust for the value in the historic non-compliant resources that were independently assessed more than 20 years ago, we have valued these at C\$1.92 million, based on 135koz equivalent gold and a ballpark figure of US\$10/oz or C\$14.23/oz. This gives us a valuation for the tailings of C\$10.26 million – C\$1.92 million = C\$8.34 million. Adding together the total Indicated and total Inferred gold equivalent ounces of the tailings gives a figure of 23.9koz. On this basis, the EV/oz figure for the tailings project would come out at C\$349/oz.

Fulcrum's Teck-Hughes project has 6.5Mt at 0.66g/t for 138koz (although resampling by the company shows this grade to be 16% higher, which might give further upside) and 67koz gold at Sylvanite, which is 205koz. On this basis, the company's two gold tailings ought to be valued at 205Koz x C\$349 = C\$71.55 million or £39.76 million when they have brought the project up to the PEA stage and, like ES Gold, are six months away from production. With this in mind, we have chosen to risk this figure by 60% and carry a figure of £15.90 million into our SOTP table. We realise it places little value on the growing relationship with Extrakt and how this leaching technology can dramatically transform recovery rates, which could vastly improve economic returns. This will be revealed in Fulcrum's feasibility studies.

Uranium portfolio

Fulcrum's portfolio of uranium projects consisted of highly prospective assets in Northern Saskatchewan, which is home to the largest and highest-grade uranium deposits in the world and supplies some 20% of global uranium. In July 2024, the company optioned out the uranium portfolio to Terra Balcanica Resources (CSE:TERA) over a 4-year term for C\$3.36 million in cash and shares, C\$3.25 million in work expenditures and a 1% NSR to Fulcrum with a half buy back for C\$1 million. Although in these sorts of deals often the second ½% NSR is more expensive to buy back, we have assumed that a value for each ½% of C\$1 million, making a total of C\$2 million. Added to the C\$3.36 million suggests a total valuation of C\$5.36 million or £2.98 million, which we have used in our further analysis.

Gold exploration projects

We see the opportunity of doing a similar deal for the gold exploration interests at Tully Gold Mine and Big Bear, which have been smartly brought to a pre-drill stage, as had been achieved for the uranium assets. Other gold exploration interests are at a more early stage. Currently, the board is in discussions with interested parties. Unlike the uranium deal, Fulcrum is keen to retain an equity stake in the Tully Gold Mine and Big Bear, so the team is likely negotiating an earn-in deal with joint venture partners. The board is seeking to do a deal or deal with partners who are prepared to fund a substantial drilling programme. With its compliant 107,000oz gold resource, Tully is seen by the company's consultants as a mine in waiting. Fulcrum would really relish drilling Tully, but this no longer fits in with the corporate strategy. So, getting the right partners with the cash to fund drilling seems more important than the acquisition price because Fulcrum is likely to get a good value uplift from successful drilling results and the development of these projects. The company does not need to fire sale these assets as the work requirements to maintain these licences are not too onerous. We have

assumed that the company gains a similar amount from this deal as was achieved for the uranium interests.

Sum-of-the-parts table

Asset	£million
Gold tailing projects	15.90
Gold exploration projects	3.00
Uranium portfolio	2.98
Sub-total	21.88
Per share	
Based on the number of shares in issue (61,825,943)	35.38p
Fully diluted basis	
Funds coming from warrants being exercised	0.82
Total	22.70
Based on the number of shares on a fully diluted basis (69,024,860)	32.89p

Valuation and the determination of a target price. Source: Optimo Research

Adding together the value of the assets gives a figure of £21.88 million. Based on the number of shares expected to be in issue (61,825,943), the per-share valuation would be 35.38p. Using the same assumptions, on the current fully diluted basis (69,024,860), we added the funds resulting from the exercised warrants of £0.82million. This gives a total of £22.70 million, or a share price of 32.89p, which we have adopted as our highly conservative initial target price.

Expiry	Price (p)	Warrants shares	Value if converted (£)
February 2025	17.5	3,501,726	612,802
August 2026	18.5	263,513	48,750
February 2026	26.25	595,839	156,408
Total		4,361,079	£817,960

Warrants in issue. Source: Company

Whilst acknowledging the seeming punchy price uplift relative to the current market cap, as evidenced in our breakdown analysis on a SOTP basis, we believe that this valuation figure is, in fact, highly conservative. The board is working hard on a well-designed plan with a target of getting the project into production in H2 2026. We look forward to revisiting our valuation as the various elements of the feasibility studies are completed, and improved valuation can be placed on the gold exploration interest. In addition, the value might result from holding an MLA from Extrakt, which covers some of the largest gold camps in Canada.

As illustrated in our key risks section, the “devil”, of course, in this is the listing basis of the shares in the UK, which has become not just difficult for pre-revenue resources stocks but, in some instances, a veritable graveyard given the inability to access capital on economic terms. The risk to our valuation is if Fulcrum is forced to carry out a capital raise before achieving self-sustaining revenues and/or if the largest holder of the stock Panther Metals decides to offload their shares as they have their own capital needs.

Conclusion

Gold tailings potentially represent a large unexploited economic resource that many have tried to crack over the years. Leaching is the key to unlocking the vast potential that lies in tailings that result from decades of past mining activity. Fulcrum has moved rapidly to tie up gold tailings projects that result from two large notable gold mines in the Kirkland Lake gold camp in Ontario. This a smart move as these tailings result from high-grade underground gold mines that have operated successfully for decades. Even more importantly, the company has developed a close relationship with Extrakt, undertaking trials using its non-toxic leaching technology, with far higher recoveries and much shorter leach times than traditional cyanide. There is no doubt that this highly disruptive leach technology provides Fulcrum with a powerful, environmentally sensitive alternative to cyanide, which is traditionally used by the mining industry.

In the small-cap arena, management is probably as, if not more, important than the projects. Ryan Mee and Aidan sleep and breathe Fulcrum and have painstakingly crafted the business and have supported all the fundraisings at various prices. This is not to be confused with some lame salary sacrifice scheme. The pair know how to make money, which is well demonstrated by the building and sale of the uranium portfolio. Ryan and Aidan are entrepreneurial and always looking for potential partners and projects. It has not been easy - they have seen just how tough the exploration market has been since listing and done something about it. It has to be said that the pair have sacrificed a lot to make this happen, which probably explains why Fulcrum has one of the lowest-cost boards on the market of less than £250,000 a year.

An enviable newsflow looks to be on the cards, with the four-phase programme at the Teck-Hughes tailings project and negotiating the JV deals for the Tully Mine and Big Bear gold exploration project. The next few months are expected to see news of the likely Extrakt deal coming together, followed by the conceptual study and compliant resource for the tailings. This means that in the early months of 2025, Phase 2 will have rapidly been ticked off. This is to be followed by Phase 3, involving detailed sampling and Extrakt leach test work, followed by Phase 4, including the Economic Study, which is a Preliminary Feasibility Study in all but name only.

Needless to say, management is well on top of the necessary environmental work, with work already being undertaken by Ontario-based Blue Heron. Blue Heron works with a lot of large companies and was on-site in October 2024 along with First Nations, who are following Fulcrum's progress with great interest. All these four phases are expected to be completed by the end of 2025, which means that the project will then be construction-ready. The plan is to be in production six months later, as early as H2 2026, provided permitting allows. **As all these Phases are ticked off, we see excellent opportunities being created for investors and thus initiate coverage of Fulcrum Metals with an initial price target of 32.89p.**

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