

# Granite Creek Copper Ltd. (TSXV: GCX) – Targeting a Billion Pound Resource at Brownfield Copper Project



## Investment Highlights

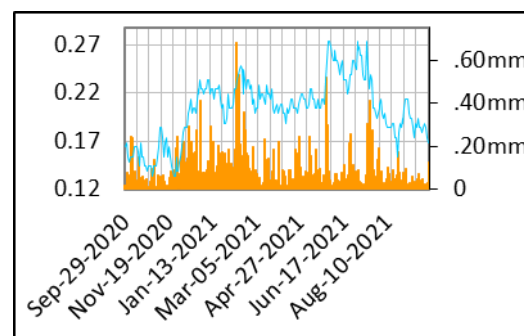
- **Granite Creek Copper Ltd. (TSXV: GCX)** (“GCX”, or “Company”) is a copper explorer with a focus on the Yukon. The company’s Carmacks Copper Project is a brownfield property with an existing resource and previously designed development plan.
- **Aggressive Exploration Initiatives Underway:** GCX has plans to develop Carmacks into a minimum one-billion-pound resource, which it wants to do via expanding existing deposits and discovering new resources. It is currently wrapping up a 13,000-meter drilling program, with a third phase of drilling recently completed.
- **New Mine Plan Currently Being Considered:** GCX’s consultants are looking at optimizing mining methodology, metallurgy, and evaluating ore sorting and alternative leaching technologies to facilitate processing of the different oxide and sulphide material.
- **New PEA Expected in Q1 2022:** GCX intends to update the previous PEA from 2017 with optimized parameter forecasts and a potentially larger resource base (as a result of concurrent drilling work).
- **On Trend with Significant Regional Producer:** GCX’s project is on trend with the Minto Copper Mine, a currently producing mine with a long track record of copper production and some of the highest grades in Western Canada.
- **Based on our analysis and valuation models, we are initiating coverage with a BUY rating and a fair value per share estimate of \$0.26 per share.**

<b>Current Price (C\$):</b>	\$	0.16
<b>Fair Value (C\$):</b>	\$	0.26
<b>Projected Upside:</b>		59.68%
<b>Action Rating:</b>		BUY
<b>Perceived Risk:</b>		VERY HIGH

<b>Shares Outstanding:</b>	120,220,000
<b>Market Capitalization (C\$):</b>	\$ 19,235,200
<b>P/E</b>	-
<b>P/B</b>	2.86
<b>YoY Return</b>	6.25%
<b>YoY TSXV Return</b>	24.21%

\*Note all \$ amount are C\$ unless otherwise stated.

## TSXV: GCX Price and Volume History



## Key Financial Data (FYE - May 31)

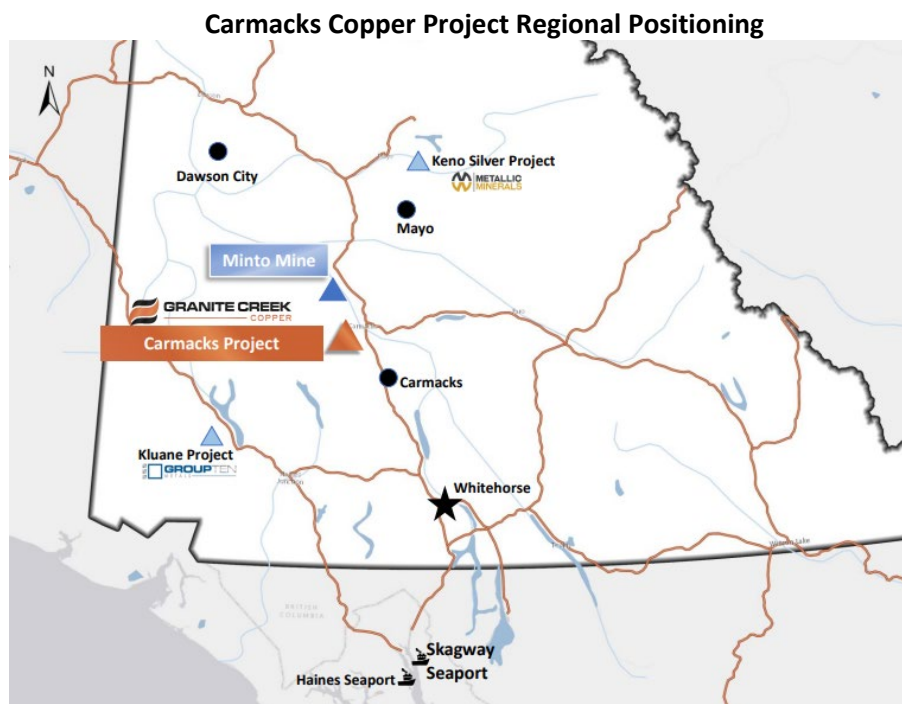
(C\$)		Q3-2020	Q3-2021
Cash	\$	164,865	\$ 582,939
Working Capital	\$	(1,209)	\$ (1,016,582)
Mineral Assets	\$	237,557	\$ 8,530,420
Total Assets	\$	1,100,007	\$ 9,366,480
Net Income (Loss) for the 9M	\$	(1,260,046)	\$ (722,094)
EPS for the 9M	\$	(0.04)	\$ (0.01)

September 29, 2021

GCX is a copper explorer with a focus on the Yukon, a premier Canadian mining jurisdiction with both new and existing mineral asset potential. In particular, the company's strategy is to acquire brownfield assets with existing development work, from which GCX can drive value via leveraging additional exploration under its own tenure. At current, GCX's mineral asset portfolio is the Carmacks Copper Project, a consolidated property that the company built out of a transformative acquisition it completed in 2020. The asset has an existing PEA, filed in 2017, which was built on the existing oxide resource currently identified at Carmacks. With the goal of building a billion-pound copper resource at Carmacks in the short-term, and potentially taking it to production or acquisition in the long-term, GCX has initiated aggressive exploration campaigning. With the copper markets remaining at elevated levels, we believe that GCX's pipeline of catalysts could potentially drive value accretion as it continues to develop the Carmacks Project into a higher tier asset.

### ***The Carmacks Copper Project***

Located in the Dawson Range, approximately 220 km north of the city of Whitehorse and 38 km northwest of the village of Carmacks, the Carmacks Project comprises 17,600 hectares of copper-prospective, drill-ready property area. The company's project and its regional positioning is outlined in the map below:



*Source: Company*

The Carmacks Project is in the vicinity of the Minto Copper Mine, a regionally significant mine that has a proven production track record and boasts some of the highest copper grades on mined ore, nationally. Originally running from 2007 through 2018, the mine was temporarily under care and maintenance, before being acquired by Pembroke Resources PLC (LSE: PERE) and other investors and resuming milling operations in 2019. Most recently the mine produced 8,323 wet metric tonnes of copper concentrate (Q2-2021), which fuelled US\$26 million in payments from PERE's offtaker, Sumitomo Corp. (TYO: 8053). The Minto Mine is currently being assessed for mine life extension initiatives, which comes as projected mine life remaining continues to dwindle and the existing resource continues to be exhausted. Because Carmacks sits on trend with the Minto Mine and shares geological features that point to potential similarities in mineralization, we believe the project could

grow into a significant development asset, assuming similarities to the Minto Mine are more than anecdotal. The Minto Mine relies on barge and ice road to move concentrate and supplies across the Yukon River whereas Carmacks is accessible by road and trail.

### The Minto Copper Mine



Minto Mine Resources and Reserves *					Minto Mine Contained Metal		
	Tonnes (M)	Cu %	Au g/t	Ag g/t	CuEq % **	Mlbs Cu	Moz Au
P&P	3.40	1.66	0.60	5.00	2.06	124	0.07
M&I	16.50	1.42	0.55	4.80	1.79	517	0.29
Total	19.90	1.46	0.56	4.80	1.84	641	0.36

References to adjoining properties are for illustrative purposes only and are not necessarily indicative of the exploration potential, extent or nature of mineralization or potential future results of the Company's projects. Granite Creek QP did not independently verify this information.

Metals	Copper (Cu), Gold (Au), Silver (Ag)
<b>Resources</b>	15mt Measured & Indicated at 1.4% Cu, 0.5g/t Au, 4.8g/t Ag 6mt Inferred at 1.4% Cu, 0.5g/t Au, 4.8g/t Ag (May 2019)
<b>Mineralisation</b>	Bornite, Chalcocopyrite, Chalcocite
<b>Mining Method</b>	Modified room & pillar, long-hole stope retreat
<b>Reserve Grade</b>	1.7% Cu, 0.6g/t Au, 6g/t Ag (May 2019)
<b>Mill Capacity</b>	4,000tpd
<b>Concentrate Grade</b>	circa 40% Cu
<b>Export Terminal</b>	Skagway, Alaska
<b>Streaming Agreement</b>	Wheaton Precious Metals (Au & Ag)
<b>Offtake Agreement</b>	Sumitomo Corporation, Japan

Source: Company

GCX came into control of the Carmacks Project when it acquired previous project owner Copper North Mining Corp. in November 2020, amalgamating the project area covered in a 2017 PEA with the Copper North's Carmacks North Project into a single property. Prior to GCX's tenure, exploration at Carmacks can be traced back to the 1800's, though the majority of exploration activity and drilling happened under previous operator Western Copper Holdings Ltd. The drilling history of Carmacks is outlined below:

### Carmacks Project Historical Drilling

Operator	Year	Holes Drilled	Meters
Historical	1971	25	5,290
Historical	1972	8	631
Western Copper	1991	36	4,461
Western Copper	1992	8	1,191
Western Copper	1992	11	856
Western Copper	1995	10	185
Western Copper	1996	12	489
Western Copper	2006	34	7,101
Western Copper	2006	61	1,235
Western Copper	2007	123	17,845
Western Copper	2007	36	866
Western Copper	2008	12	1,923
Western Copper	2008	4	460
Copper North	2014-2015	50	4,358
<b>Total</b>		<b>430</b>	<b>46,891</b>

Source: Company, Couloir Capital

As a result of the historical exploration at Carmacks, there have been multiple Technical Reports and resource estimations filed in the project. Major historical resource estimates (excluding a 2012 FS and 2017 PEA) are summarized in the table below:

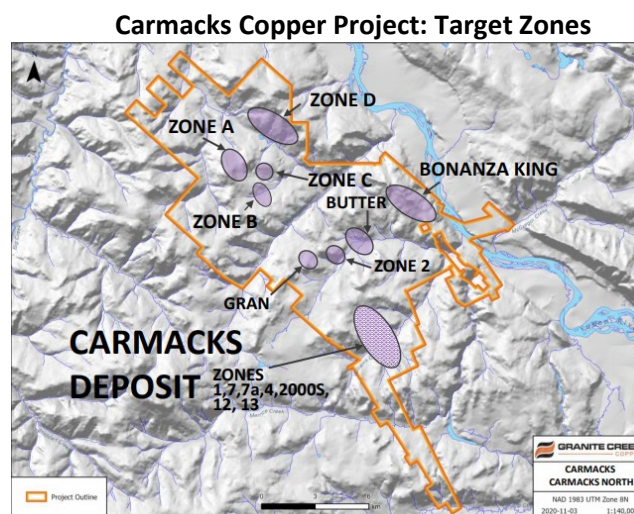
**Carmacks Project Historical Resource Estimates**

Year	Source	Tonnes	CuOx %	Cu %	Au oz/t	Comments
1991	MPH Consulting Ltd. (Zone 1)	14,564,600	0.9	1.05	-	Conventional by section 76% proven, 13% probable
1991	MPH Consulting Ltd. (Zone 1)	14,564,600	0.88	1	-	IDS block model 78% proven, 10% probable
1993	Western Copper Audited by Kilborn	12,984,240	0.911	1.195	0.016	Measured and Indicated at cut-off of 0.8% total copper
1993	Western Copper Audited by Kilborn	15,867,140	0.829	1.096	0.014	Measured and Indicated at cut-off of 0.5% total copper
1993	Western Copper Audited by Kilborn	19,062,390	0.725	0.972	0.013	Measured and Indicated at cut-off of 0.01% total copper
1997	Western Copper Audited by Kilborn/SNC	13,300,000	-	0.97	-	Cut-off grade 0.29%T Cu Mine use 4.6:1 strip ratio
2007	Wardrop (Zones 1, 4 and 7)	10,000,000	0.96	1.13	0.017	Oxide Resource, Measured and Indicated at cut-off of 0.25% total copper

*Source: Company*

The Carmacks Deposit is enclosed within the Early Jurassic Granite Mountain Batholith. The mineralization is hosted by amphibolite, gneisses, and intrusive rocks that range from granodiorite to diorite. In terms of regional geology, the Carmacks Project is hosted in the Minto Copper Belt, a 180 km long and 60 km wide belt that also hosts the earlier mentioned Minto Mine. More broadly speaking, the Minto Copper Belt trends to the northwest and hosts a series of intrusion-related, high-grade copper-gold-silver deposits within the Dawson Range in the Central Yukon. At Carmacks, the mineralization is similar to the Minto Mine located 50 km to the northwest, with the main difference being that the Minto Mine is flat lying and primarily sulphide material. The key similarity between Carmacks' deposit and the Minto Deposit is that the copper mineralization at Carmacks is contained in foliated to gneissic material.

At the project, the mineralization is subdivided into several zones outlined in the map below, with the bulk of the existing resource concentrated in the oxide resources of Zones 1, 4, 7, 7a and 12. Deep oxidation of the deposit more generally has led to the formation of an oxide cap that can be as thick or thicker than 200 meters.



*Source: Company*

The Carmacks Project has an existing mineral resource statement that predates GCX, which comprises both oxide and sulphide mineralized material. The oxide ore is considered higher grade and more economically feasible to extract and forms the basis for prior Technical Reports on the deposit. The existing resource is shown in the table below.

**Carmacks Copper Project Resource Estimate**

	<b>Class</b>	<b>Tonnes (000)</b>	<b>Total Cu (%)</b>	<b>Soluble Cu (%)</b>	<b>Au (g/t)</b>	<b>Ag (g/t)</b>	<b>Sulphide Cu (%)</b>
Oxide and Transition mineralization	Measured	6,484	0.86	0.69	0.41	4.24	0.17
	Indicated	9,206	0.97	0.77	0.36	3.8	0.2
	Measured + Indicated	15,690	0.94	0.74	0.38	3.97	0.2
	Inferred	913	0.45	0.3	0.12	1.9	0.15
Sulphide mineralization	Measured	1,381	0.64	0.05	0.19	2.17	0.59
	Indicated	6,687	0.69	0.04	0.17	2.34	0.65
	Measured + Indicated	8,068	0.68	0.05	0.18	2.33	0.65
	Inferred	8,407	0.63	0.03	0.15	1.99	0.61

*Source: Company*

In terms of road accessibility and local infrastructure, the Freegold Road connects the project site to regional road infrastructure. A 13 km access trail connects the Carmacks Copper Project to the Freegold Road, which runs southeast for 34 km before leading to the village of Carmacks. The access trail is narrow, with steep sections that require 4x4 vehicle capabilities to drive on, and an overhaul of the access road has been proposed. From the village of Carmacks, a 175 km paved road runs south through to the provincial capital, Whitehorse. From Whitehorse, Carmacks has access to an international airport that runs daily flights to other provinces in Canada such as British Columbia and Alberta. With regards to port access, there are a number of key ports Carmacks is close to, which can facilitate the import of key equipment needs and export of future copper concentrate. Carmacks can access:

- Anchorage in Alaska, by way of 1,133 km of all-weather highway running west from Whitehorse.
- Skagway in Alaska, by way of 180 km of all-weather highway running south from Whitehorse.
- Port Stewart in British Columbia, by way of 1,043 km of all-weather highway running south from Whitehorse.
- Port Rupert in British Columbia, by way of 1,373 km of all-weather highway running south from Whitehorse.

The village of Carmacks, which has a population of under 1,000, can provide essentials such as accommodation and restaurants. However, the local labour pool is limited, and appropriately skilled labour will need to be imported. For more specialized labour and mining equipment needs, GCX would likely need to consider looking for suitable arrangements at Whitehorse or importing such needs via regional ports. Power needs in the future could be addressed via the erection of a permanent substation at the Carmacks site, which would require a 34.5 kV transmission line running overhead for 11 km to connect with the McGregor Creek power grid.

Climate-wise, the property area is characterized by warm summers and cold winters, with temperatures ranging from -30°C in January through to 12°C in July. The winter season occurs in November-March, which is defined as the period where daytime maximum temperatures average below 0°C. Because of this, construction activity is most optimal in the April through October period. Precipitation is typically light with moderate snowfall, and around 30% of the average annual precipitation of 346.5 mm falls as snow. The heaviest rainfall typically occurs in the summer months,



with July being the wettest month. Outside of extreme cold snaps, mining activities can typically take place year-round, which several key mining operations in the vicinity of Carmacks have historically proven. In terms of physiography, elevations range from 485 meters to 1,000 meters, with topographic relief for the entire Carmacks Property at 515 meters.

### ***Mine Economics & Operational Characteristics***

At current, GCX is actively working on developing a new PEA for Carmacks, with a focus on updating the 2017 PEA on the project with an expanded resource base and optimizing key operational parameters to yield more robust project economics. The 2017 PEA envisioned a two-stage agitated tank leaching operation at Carmacks, with the study only considering the project's oxide resource concentrated in Zones 1, 4 and 7. As a result, Carmack's sulphide resource and oxide resources outside the zones of focus were omitted from the 2017 PEA, which had the effect of limiting project economics and mine life. Moving forward, key opportunities to improve Carmack's economics include:

- Optimizing the metallurgical process, including maximizing recoveries, assessing alternative technologies, evaluating leaching parameters and reagent usage. This could have the impact of reducing CAPEX and OPEX estimates.
- Extending projected mine life by conducting exploratory drilling.
- Extending projected mines life by evaluating the project's sulphide resource for inclusion into future mining feedstock.

The 2017 PEA was focused on studying the viability of a tank leaching operation, using copper-gold oxide resources as plant feed to produce copper cathode and dore bars (from gold-silver byproduct). Only the Measured and Indicated oxide resource categories were included as the feedstock base, and the resulting projected mine life was estimated at 7 years, of which 6.5 years could be considered the mine's commercial production life. The PEA assumed the mining plan earlier developed by a 2012 FS on the project, and as a result built the production plan around a conventional open-pit oxide mining operation. Under the assumptions from the PEA, the Carmacks Deposit would be mined in four phases, with a mineralized material throughput of 4,860 tpd. Total material to be moved was projected at 70 Mt throughout the mine life, with peak tonnages moved at 13.5 Mt, and a LOM strip ratio estimated to average 5.1x.

### ***Key Recent Events and Upcoming Catalysts***

Prior to the consolidation of the Carmacks Project with the Carmacks North Project in late 2020, GCX conducted inaugural drilling at Carmacks North that amounted to 1,067 meters over five holes. The purpose of the program was to develop the Zone A Target towards a maiden resource whilst simultaneously expanding the sulphide mineralization at the Zone 13 Target. Key results from the maiden drilling campaign were announced in February 2021, with highlights including:

- 127 meters of continuous copper mineralization in hole CRM20-001 at Zone 13, which returned 0.85% Cu Eq., including 28.65 meters of 1.74% Cu Eq. and 19.2 meters of 1.19% Cu Eq.
- STU20-003 drilled at Zone A returning 25 meters of 1.27% Cu Eq., including 10.28 meters of 1.93% Cu Eq.
- Significant molybdenum content in assays at Zone 13.

### Carmacks North 2020 Drill Program Highlights

Drillhole	From (m)	To (m)	Length* (m)	Cu (%)	Mo (%)	Au (g/t)	Ag (g/t)	CuEq <sup>1</sup> (%)
CRM20-001	102.85	230.12	127.27	0.61	0.028	0.131	2.14	0.85
including	104.85	133.5	28.65	1.03	0.014	0.202	3.09	1.28
including	157.75	176.95	19.2	0.71	0.1043	0.14	2.32	1.19
CRM20-002	174	187.8	13.80	0.37	0.009	.08	1.45	0.49
STU20-001	151.60	172.52	20.92	0.31		0.138	2.87	0.46
STU20-002	27.37	32	4.63	4.63		3.41	23.78	7.51
STU20-003	11.30	36.30	25	0.97		0.315	2.91	1.27
including	11.30	21.58	10.28	1.21		0.77	5.78	1.93

<sup>1</sup>Copper equivalent (Cu Eq) values assume Cu \$3/lb, Au \$1800/oz, Ag \$18/oz, Mo \$10/lb and 100% recovery.

Source: Company

Looking out to the near future, GCX's main objective in the short-term is to bring Carmacks' copper resource base to a minimum of one billion pounds in the ground. To expand the existing resource base, GCX has initiated an extensive drilling program, which is expected to total 10,000 meters of diamond drilling and 3,000 meters of RC drilling. The key objectives of the program include:

- **Resource Expansion:** Upgrading inferred resources to the indicated category and discovering new resources.
- **Zone A:** Building on historical drilling and the 2020 drill program assays to advance the target to a maiden resource, which could support the current Carmacks resource.
- **Zones B & C:** IP surveying is being planned to help identify and delineate drill targets at these zones, which could guide future drilling.
- **Zone D:** Trenching work to identify initial mineralization prospects.
- **Zones 1-7, 12 & 13:** Drilling to further develop sulphide resources at these sites. This is expected to further grow the brownfield resource at the project.

The program has been split into three phases, with the first phase having started in May 2021. The first phase, which finished in July 2021, comprised 6,355 meters of diamond drilling over 19 holes, which targeted Zones 1, 2000S and 13. The company has also finished the second phase drilling, which was comprised of approximately 3,000 meters over 20 holes of RC drilling. A third phase is now wrapping up and completed an additional 2,700 meters of diamond drilling. The goal of the third phase is to expand the known resources and confirm the geometry in Zone 2000S to support the development of a mine plan for the sulphide portion of the deposit. A new mine plan is currently being worked on Sedgman and Mining Plus and will include the sulphide resources. According to management, the Company adjusted the third phase to return to Zone 2000S where they see substantial opportunity to define additional new areas of mineralization outside the current resource model. Bringing new sulphide material into the model is expected to increase the current NI 43-101

mineral resource estimate in their planned update, with a view to a potentially significant extension of the projected mine life in an updated PEA expected in Q1 2022.

Results from the first phase of drilling have already started to roll in, with initial assays from Zone 1 and Zone 2000S having been announced recently. Zone 1 hosts a portion of the current resource estimate for Carmacks and remains open at depth and along strike, offering an opportunity for resource expansion and upgrading. Specifically, at Zone 1 only around half the sulphide resource is in the measured & indicated category, whilst the oxide resource at the zone is well defined in the measured & indicated class. As part of the first phase, GCX drilled eight holes at Zone 1, with key assay results outlined in the table below.

**Carmacks 2021 First Phase Drilling: Initial Assay Results (Zone 1)**

Drillhole	From (m)	To (m)	Length* (m)	Cu (%)	Mo (%)	Au (g/t)	Ag (g/t)	CuEq** (%)	Zone
CRM21-004	323.50	367.00	43.50	1.12	0.03	0.20	3.41	1.40	Zone 1
Including	338.50	367.00	28.50	1.57	0.04	0.29	4.53	1.96	
and including	352.00†	367.00	15.00	1.80	0.07	0.33	4.81	2.31	
CRM21-007	222.52	226.60	4.08	0.91	0.01	0.19	6.32	1.13	
CRM21-010	450.00	513.40	63.40	0.27	BDL	0.08	1.31	0.35	
Including	450.00	482.25	32.25	0.30	BDL	0.08	1.41	0.39	
Including	478.32	482.25	3.93	0.58	0.01	0.20	2.85	0.78	
Including	488.90	513.40	24.50	0.30	BDL	0.09	1.47	0.39	
including	502.90	509.75	6.85	0.41	0.01	0.16	1.93	0.57	

*Source: Company*

In addition to Zone 1, GCX also drilled at Zone 2000S, with key assay results shown in the table below. The zone was also a contributor to the existing resource statement for the Carmacks Project, with shy of two million tonnes in both sulphide and oxide material (across categories) currently identified. GCX are currently interested in the continuity of bornite-chalcopryrite (sulphide mineral with high copper content) mineralization at the zone, which it investigated via the drilling of six diamond core holes. Based on the results, the company confirmed the continuation of the mineralization as well as its extension at depth beyond its current block models. In addition, the significant molybdenum intercepts were encountered, suggesting additional mineralization upside at the target zone.



**Carmacks 2021 First Phase Drilling: Initial Assay Results (Zone 2000S)**

									2000 S
CRM21-003	<b>146.35<sup>†</sup></b>	<b>214.50</b>	<b>68.15</b>	<b>0.59</b>	<b>0.03</b>	<b>0.14</b>	<b>3.69</b>	<b>0.830</b>	
Including	<b>161.40</b>	<b>179.80</b>	<b>18.04</b>	<b>0.81</b>	<b>0.03</b>	<b>0.21</b>	<b>4.80</b>	<b>1.13</b>	
CRM21-005	<b>137.05</b>	<b>179.80</b>	<b>43.24</b>	<b>0.74</b>	<b>0.05</b>	<b>0.16</b>	<b>3.82</b>	<b>1.06</b>	
Including	<b>142.05</b>	<b>158.40</b>	<b>16.35</b>	<b>1.20</b>	<b>0.03</b>	<b>0.26</b>	<b>6.11</b>	<b>1.58</b>	
CRM21-006	<b>194.40</b>	<b>278.20</b>	<b>83.80</b>	<b>0.64</b>	<b>0.01</b>	<b>0.13</b>	<b>3.23</b>	<b>0.81</b>	
Including	229.20	278.20	49	0.87	0.02	0.17	3.88	1.10	
Including	<b>248.76</b>	<b>266.20</b>	<b>17.44</b>	<b>1.21</b>	<b>0.03</b>	<b>0.22</b>	<b>5.11</b>	<b>1.53</b>	
CRM21-008	195.80	228.40	32.6	0.80	0.02	0.17	3.88	1.02	
Including	<b>201.55</b>	<b>215.55</b>	<b>14</b>	<b>1.10</b>	<b>0.02</b>	<b>0.24</b>	<b>4.86</b>	<b>1.40</b>	
CRM21-009	190.50	243.85	53.35	0.59	0.01	0.14	2.71	0.75	
Including	191.30	201.70	10.4	0.87	BDL	0.25	3.70	1.09	
and including	209.00	225.95	16.95	0.62	0.01	0.13	2.76	0.77	
and Including	229.90	235.25	5.35	1.21	0.06	0.28	4.88	1.68	

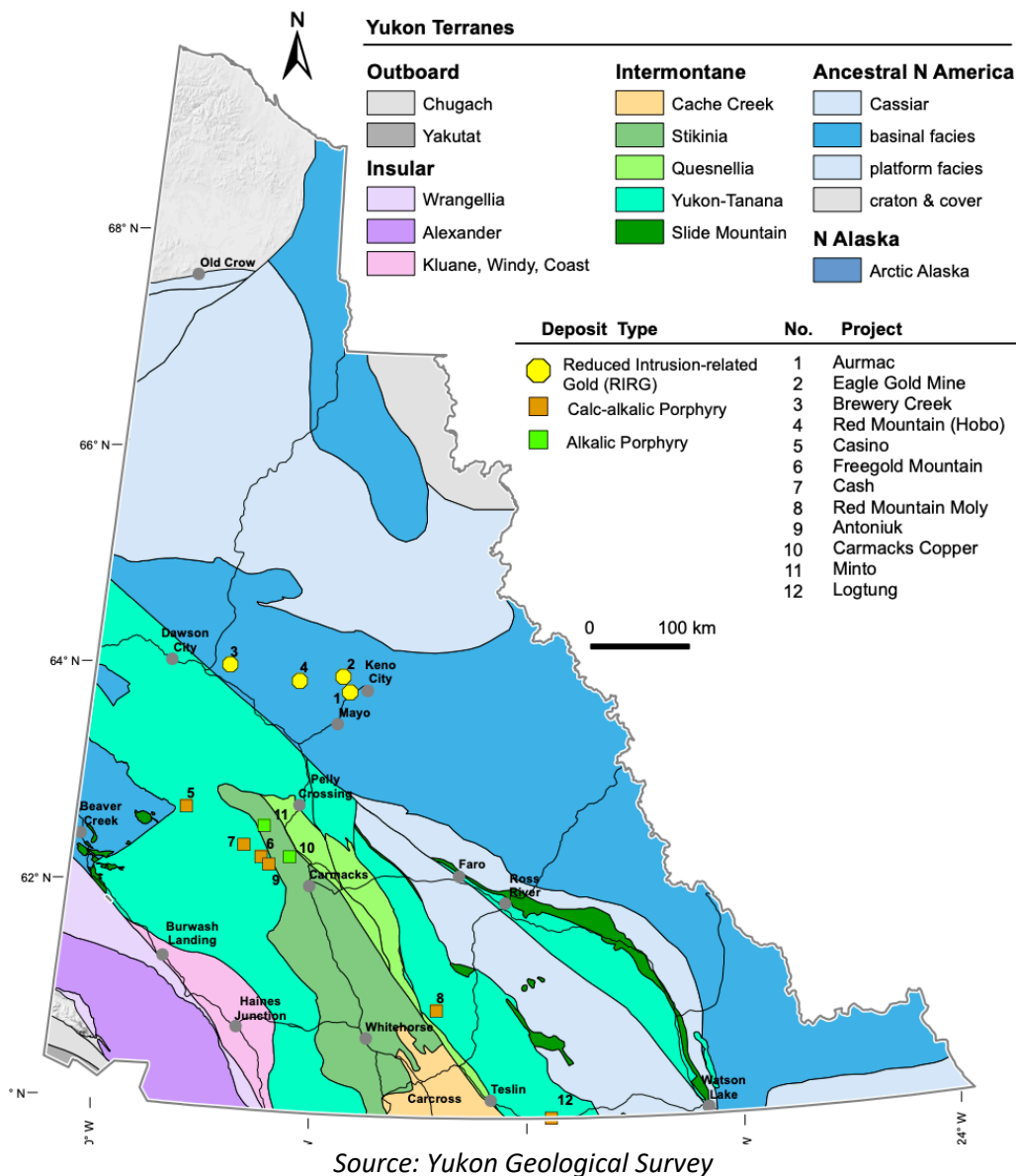
*Source: Company*

Apart from drilling and exploration initiatives, GCX is also looking to further develop the Carmacks Project, which includes updating the previous PEA from 2017 with optimized parameter forecasts and a potentially larger resource base (as a result of concurrent drilling work). As part of this dual objective, GCX has begun working on mineral mining and processing optimization, hiring consultants to conduct trade-off studies on the Carmacks Deposit. As part of the study, GCX's consultants will look at optimizing mining methodology, metallurgy, and evaluating ore sorting and alternative leaching technologies to facilitate processing of the different oxide and sulphide material at Carmacks. The company expected the study to be complete within weeks. With both exploration and development catalysts in the pipeline for the near-term, we expect there to be potential growth drivers on the horizon for GCX, as drill assays from phases 2 and 3 reported to the market on a rolling basis. Strong intercepts may be materially value accretive, as mineralization expansion could lead to growth in the Carmacks resource, which in turn could result in an upgrade to projected mine economics.

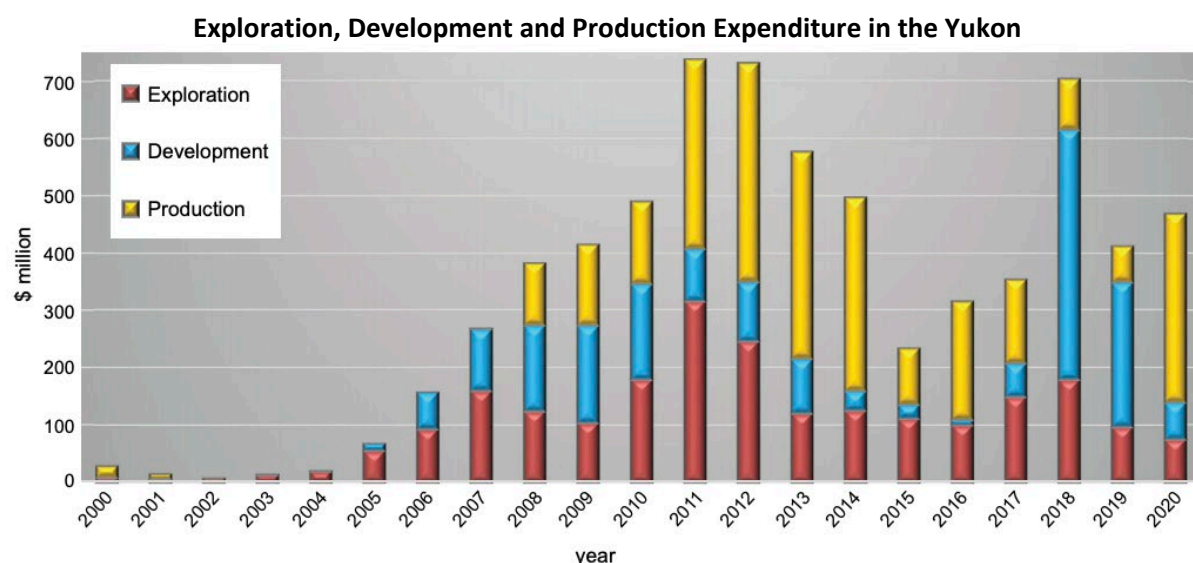
## Industry Outlook

A historically prolific producer of multiple commodities, the Yukon Territory has long been a popular region for mineral exploration and development given its demonstrated mineral abundance. As early as 1896, placer gold was found in the famous Klondike District, setting off the equally famous Klondike Gold Rush. Since then, mining activity has been an important contributor to the province's economic output, with the expectation of multiple major production operations opening up in the near-to-medium term driving the province's forecasted economic growth. Despite the Yukon's history of mineral abundance, it is still relatively underexplored, with less than 20% of the Yukon having been staked to date.

### Major Intrusion-Related Projects in the Yukon

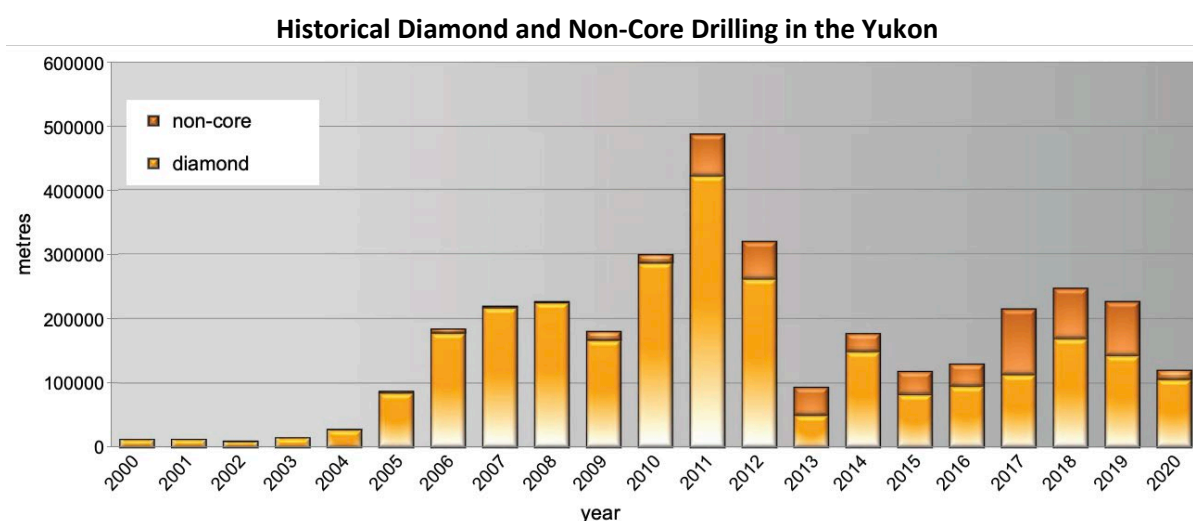


In 2020, mining-related expenditures across exploration, development and production values grew YoY, roughly above \$450 million and reflecting an improvement from 2019 where expenditures were closed to \$400 million. Exploration expenditures were down to \$70-80 million from \$117 million in 2019, largely due to pandemic restrictions, whilst development expenditures for the province sharply dropped from \$225 million in 2019 to \$65 million in 2020. The big drop in development spending came as the Eagle Gold Mine finished construction, and bullish commodities pricing starting in the summer spurred a substantial boost in mine production value across the province. Currently, production in the province comes from Eagle Gold, the Minto Mine, and the Keno Silver Mines.



*Source: Yukon Geological Survey*

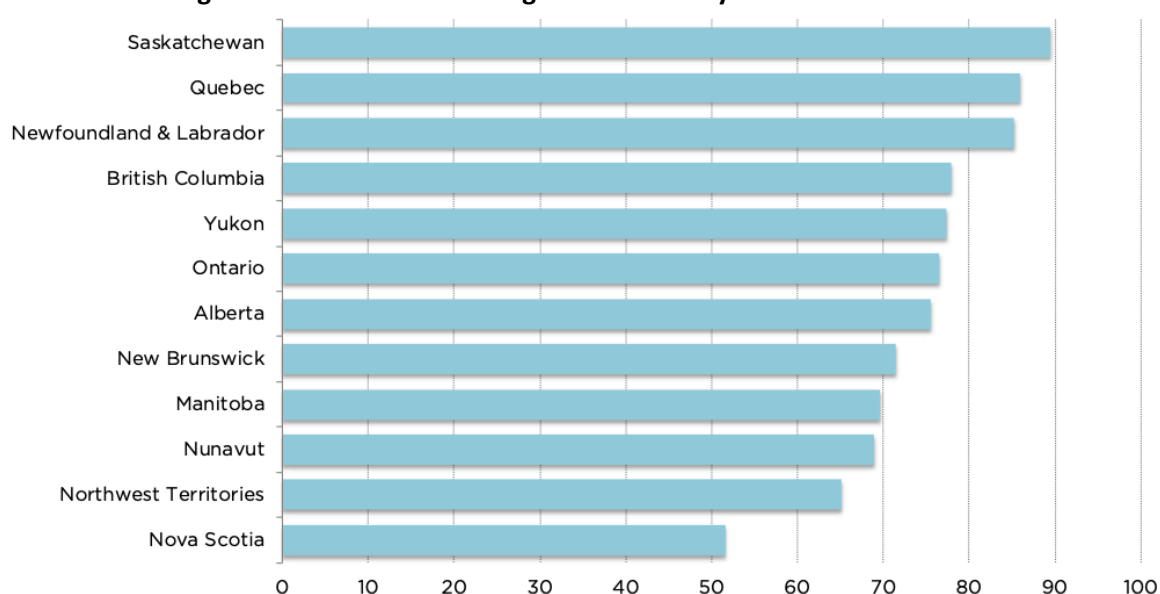
Regarding exploration activity in the province, active exploration dropped significantly from 146 in 2019 to 93 in 2020, which we again attribute to the restrictions in place during the early pandemic period. Of these active projects, the majority (58%) were focused on gold exploration, with 18% focused on copper. Claim staking was fairly level on a YoY basis, but drilling meters were far lower compared to 2019, which was likely due to difficulties in mobilizing drill rigs during the dislocations brought about by the pandemic. Drilling in the Yukon amounted to 120,000 meters in 2020, compared to 226,250 meters in 2019.



*Source: Yukon Geological Survey*

The Yukon has consistently been recognized as one of the world's most attractive mining jurisdictions from a project investment perspective. The below chart demonstrates that in the Fraser Institute's most recent annual mining survey, the Yukon ranked 18th out of 77 surveyed mining jurisdictions for the institute's 2020 investment attractiveness index. In addition, the Yukon ranked in the top half of all Canadian jurisdictions surveyed, and has consistently been in the top half of all surveyed jurisdictions since at least 2016. 2020's index score represents a significant increase in the territory's investment attractiveness index relative to 2019, when it was considered the 23rd most attractive mining jurisdiction in the world for investment. However, permitting approval timelines are still considered a major concern, as reported by the survey's respondents.

### Ranking of North American Mining Jurisdictions by Investment Attractiveness

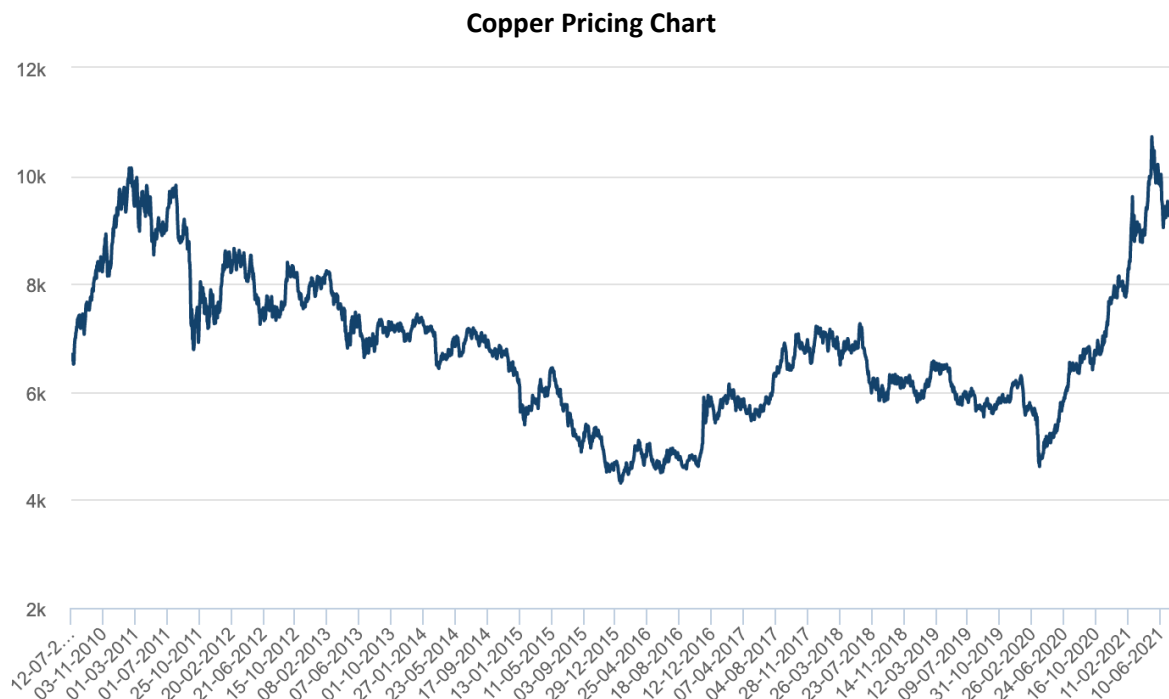


Source: Fraser Institute

Despite the noted attractiveness of the Yukon as a mining jurisdiction with a regime favoring mineral exploration, the territory does exhibit operating challenges that can lead to issues in the exploration and development cycle. These challenges largely revolve around the scale of the province, infrastructure connectivity, minimal population density and the knock-on impacts of exploration expenditure decline. Due to the sheer size of the province, companies without self-sufficient mine camps are forced to transport key capital equipment and personnel over large distances, which can lead to significant cash drain on top of acquisition costs and ongoing charges related to said items or people. On the subject of personnel, the lack of major populated settlements outside of Whitehorse is also an issue, as lack of labor not only leads to skilled labor scarcity but also wage inflation in order to secure necessary local talent for critical roles. Lastly, and potentially most significantly, the mining value chain in the Yukon is quite large – it consists of elements such as testing labs, geological consultancies, local equipment distributors and other services providers tailored to mineral producers and explorers. During cyclical drop offs in mineral exploration expenditure, there is the potential that the mining value chain in the Yukon may come under pressure. As a result, we see one risk in the Yukon being the local mining ecosystem's sensitivity to funding shocks.

### Copper Outlook

Copper, one of the most broadly consumed industrial metals globally, has seen a marked increase in interest as measured by its market pricing, with recent LME copper pricing at around US\$9,300 per tonne or around US\$4.22 per pound. This marks a major uplift relative to a low of around US\$2.1 per pound in late March 2020, with the bearish sentiment at the onset of the coronavirus pandemic having been replaced with widespread optimism around copper's future demand. Major short-term drivers of bullish copper pricing movement include a weak dollar as well as recovering global demand, led primarily by China, which has outperformed most other global economies in its pandemic recovery.



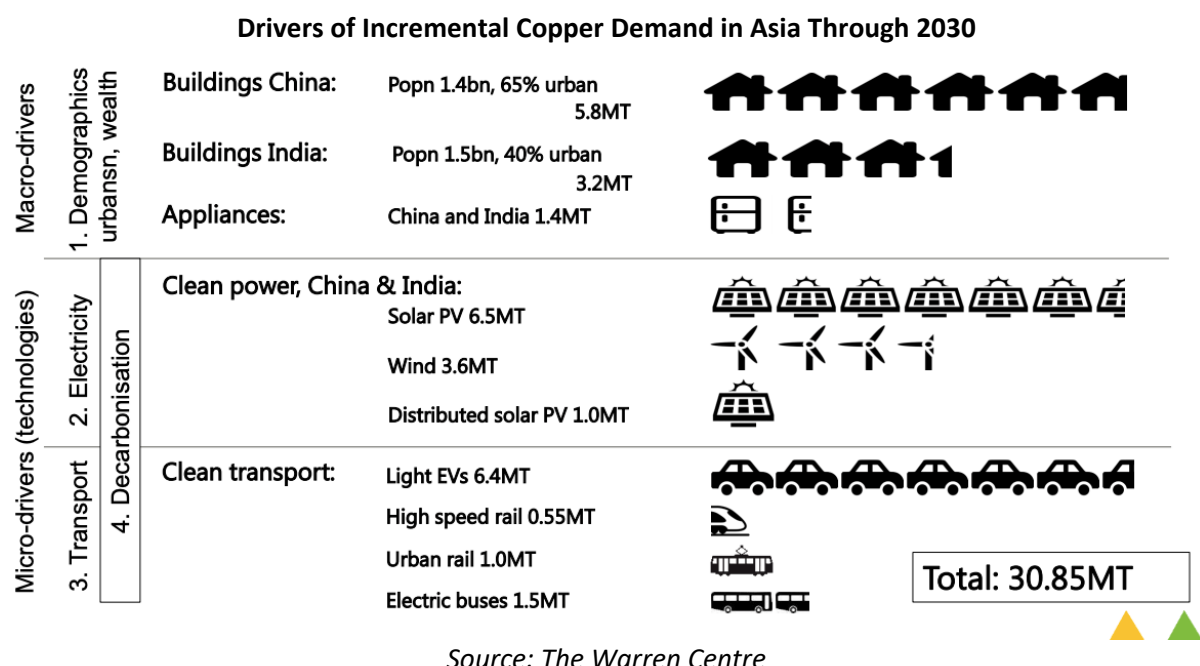
*Source: London Metals Exchange*

Recent pricing momentum is expected to continue over the near-term, with an initial strong recovery in economic activity out of China spreading to other major economies as the world begins to open up in the wake of widespread population vaccinations. Being highly geared to economic activity and cyclical factors, we expect pent up demand across most major economies and the activity driven by infrastructure initiatives announced by multiple governments to support copper demand throughout 2021. Whilst there are questions around the sustainability of the copper rally given potential tightening of demand due to the Chinese government's recent scrutiny of domestic materially intensive industries, and increased supply from Chinese reserve destocking, we think that consumption will continue to heat up on global growth following a broader unlocking of economies.

Longer-term, demand for copper is expected to grow considerably, as a number of factors together combine to contribute to what Roskill estimates will be 38 million tonnes of copper demand in 2030, a 28% increase compared to 2020's consumption of just under 30 million tonnes. Asia alone is expected to drive an estimated incremental 30.85 million tonnes of copper consumption demand by 2030, according to the Warren Centre. The major projected drivers of copper demand include:

- Demographic changes and population growth, especially in Asia.
- Electrification and the move to renewables.
- Passenger transportation growth and vehicle electrification.
- Broader decarbonization and move to clean economies.





Source: The Warren Centre

Despite the strong demand picture for copper over the long-term, supply has remained tight, with global copper production having only grown at a CAGR of 2.19%. In 2020, the US Geological Survey ("USGS") estimated world copper production at approximately 20 million tonnes, with mine production coming short of global copper demand by almost 10 million tonnes. This of course does not reflect the actual supply gap – copper can be recycled and even substituted in some applications for metals like aluminium if copper prices become prohibitively high. However, the supply gap is nonetheless expected to grow, with estimates by CRU group putting the annual supply gap at 4.7 million tonnes by 2030. The gap may further grow to 10 million tonnes by that year if no new mines are built, according to Trafigura Group. Despite there being clear incentive to bring forward production and invest in new copper mines with prices at over US\$4 per pound, miners face clear challenges in bringing new capacity online. Apart from increasing technical difficulties in developing viable ore bodies, approvals have become increasingly onerous to the point that Bloomberg Intelligence estimates lead times on new mines have increased from 4 years (in previous commodities cycles) to 14 years at current.

**Global Copper Production (Thousands of Metric Tons)**

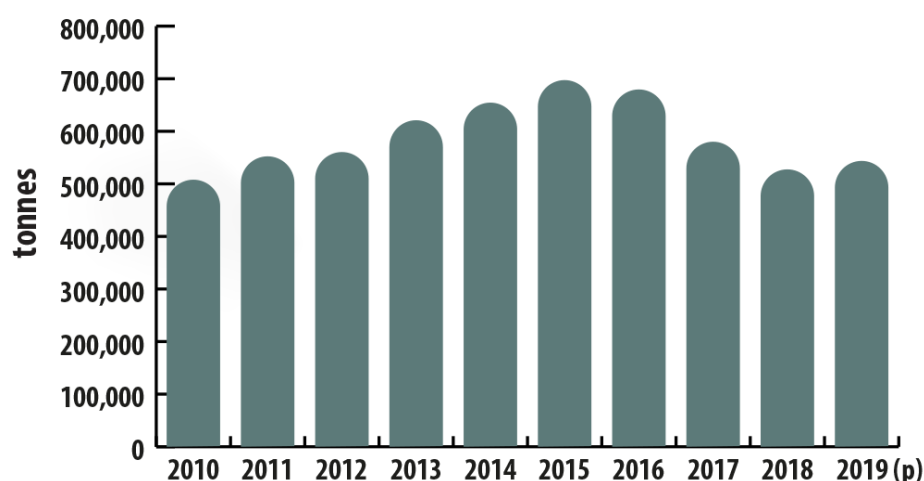
	2010	2011	2012	2013	2014	2015
Chile	5420	5,260	5,430	5,780	5,750	5,760
Peru	1250	1,240	1,300	1,380	1,380	1,700
China	1190	1,310	1,630	1,600	1,760	1,710
Congo	343	520	600	970	1,030	1,020
US	1110	1,110	1,170	1,250	1,360	1,380
Australia	870	958	958	990	970	971
Russia	703	713	883	833	742	732
Zambia	690	668	690	760	708	712
Mexico	260	443	440	480	515	594
Canada	525	566	579	632	696	697
<b>Total</b>	<b>15900</b>	<b>16,100</b>	<b>16,900</b>	<b>18,300</b>	<b>18,500</b>	<b>19,100</b>

	2016	2017	2018	2019	2020	CAGR
Chile	5,550	5,500	5,830	5,790	5,700	0.81%
Peru	2,350	2,450	2,440	2,460	2,200	5.90%
China	1,900	1,710	1,590	1,680	1,700	2.64%
Congo	846	1,090	1,230	1,290	1,300	9.60%
US	1,430	1,260	1,220	1,260	1,200	0.78%
Australia	948	860	920	934	870	-0.96%
Russia		705	751	801	850	1.77%
Zambia	763	794	854	797	830	2.20%
Mexico	752	742	751	715	690	4.53%
Canada	708			573	570	0.07%
<b>Total</b>	<b>20,100</b>	<b>20,000</b>	<b>20,400</b>	<b>20,400</b>	<b>20,000</b>	<b>2.19%</b>

Source: USGS, Couloir Capital

Against the tight copper supply, there are opportunities for Canadian miners to bring forward incremental mining capacity. With the 777 Copper Mine set to close, Canada is seeing its list of major copper mines nationally dwindle and its aggregate copper output stagnate. This is despite the country hosting abundant copper reserves, with the USGS estimating that Canada has 9 million tonnes of copper reserves. With prices approaching highs not seen since 2011, we believe that explorers with promising deposits viable for development and production could see significant reward. With tight supply set to get tighter without additional production capacity, the copper market's dynamics look highly favourable for successful mine builders.

### Canadian Historical Copper Production



Source: Natural Resources Canada

## Management Overview

Management and directors own a total of 3.14% of outstanding shares. We see insider shareholding as a positive indicator, as it implies that management and the board are likely to be aligned with investors in their interests and motivations. Generally speaking, insider share ownership above 10% is seen as relatively high. The table below outlines insider and key investor shareholding:

### Management & Director Shareholding

Name	Position	Shares	% of Total
Tim Johnson	CEO, President & Director	2,228,997	1.85%
Rebecca Moriarty	CFO	14,900	0.01%
Michael Rowley	Independent Director	1,030,416	0.86%
Francois Lalonde	Independent Director		0.00%
John Cumming	Independent Director	420,000	0.35%
Loy Chunpongton	Independent Director	84,259	0.07%
			<b>3.14%</b>

*Source: SEDI, Couloir Capital*

The biographies of key management individuals (as provided by the company) are outlined below.

#### **Tim Johnson – CEO, President & Director**

Mr. Johnson has over 25 years of experience in the mineral exploration industry ranging from grassroots prospecting to consulting company operation and public company management. As a founder and manager of Arcmin Enterprises he helped a northern British Columbia First Nation build a labour service company employing over 180 people providing entry level and skilled workers to exploration and development projects in BC's golden triangle. Mr. Johnson is also a director of Mosaic Minerals.

#### **Rebecca Moriarty – CFO**

Ms. Rebecca Moriarty is a Chartered Professional Accountant with over 20 years of experience in the mining industry. Her background includes a unique combination of technical and business accounting expertise, having received a degree in geology from Queens University and a CPA designation. Ms. Moriarty is supported by the Malaspina Consultants team, a Vancouver-based financial consulting and advisory firm staffed with highly experienced accounting personnel. Prior to joining Malaspina, Ms. Moriarty worked with PricewaterhouseCoopers LLP where she was a manager working exclusively with resource companies.

#### **Michael Rowley – Independent Director**

Michael Rowley has over 25 years executive experience in the exploration, mineral testing, and mine environmental industries, including capital markets and operations. Mr. Rowley is President & CEO of fellow Metallic Group company, Group Ten Metals, and is active in other publicly-traded companies.

#### **Francois Lalonde – Independent Director**

Mr. Lalonde holds a B.Sc. in Civil Engineering from Concordia University in Montreal and has been a member of the Order of Engineers of Quebec since 1984. He is an independent consulting civil engineer and has worked for and consulted to multinational engineering and construction companies such as SNC-Lavalin (Canadian company based in Montreal) and Bouygues Travaux Publics (French firm based in Saint-Quentin-en-Yvelines). Mr. Lalonde has also participated in international business development for the Quebec firm Pomerleau Construction. He has in-depth knowledge of markets in Canada, United States, Middle East and Africa, where he most notably participated in large-scale energy, motorway and other infrastructure development projects. Mr. Lalonde is also a director of Stellar AfricaGold Inc. (TSXV: SPX). He was formerly a director of Algold Resources LTD. (TSXV: ALG)

#### **John Cumming – Independent Director**

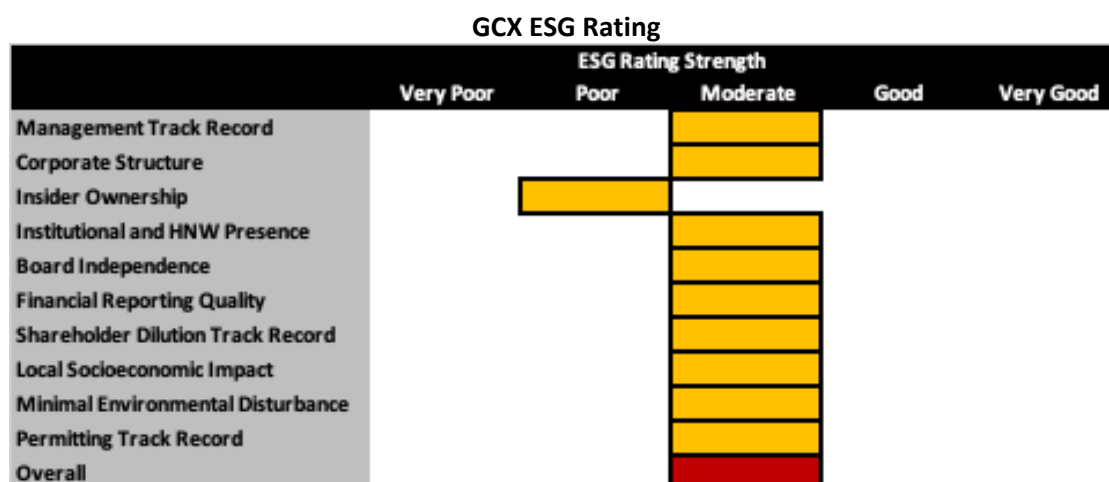
Mr. Cumming, a corporate, securities and mining lawyer and businessman, has been active in the Canadian securities markets and resource exploration sector for 40 years. He was the Senior Securities and Mining Law Partner at a mid-sized Vancouver law firm until 1992, and was a founding shareholder

of St. Philips Resources Inc. which, in joint venture with the Hunter Dickinson Group, discovered the Kemess Gold Copper Mine. Both joint venture companies were sold in 1996 in a \$200 million take-over bid, and the Kemess Mine subsequently became the principal asset of Northgate Minerals Corporation. From 2005 to 2017 Mr. Cumming was Vice-President and CFO of Merrex Gold Inc. during which tenure he was lead negotiator successfully concluding the Earn-in Option and joint venture deal with IAMGOLD Corporation on Merrex's Siribaya gold project in Mali. The joint venture exploration team found the Diakha gold deposit at Siribaya and, in 2017, Mr. Cumming led the negotiations which culminated in the sale of Merrex to IAMGOLD.

### Loy Chunpongtong – Independent Director

Mr. Chunpongtong is a mining engineer with 25 years of experience in mine planning-scheduling, pit optimization, pit design, ore-grade control planning, and advanced geo-statistical modelling. He is a professional engineer and holds a bachelor's degree in mine engineering and a master's degree in economics, both from Chulalongkorn University in Thailand. Loy is the Surface Mining Society Peer Review Chair for the CIM Journal and is an Executive Officer of the CIM Surface Mining Society.

In addition to our review of the company's management and directorship, the below table outlines our ESG rating parameters for GCX. Note that this is a largely qualitative rating measure based on publicly available information – it may not fully reflect the company's true governance strength. Particularly strong governance ratings can positively impact our corporate valuations, whilst weak ratings call for a discount in our framework.



*Source: Couloir Capital*

## Financials Overview

At the end of Q3-FY2022, the company had cash and working capital of \$0.58 million and -\$1.02 million, respectively. The company's current ratio of 0.42x implies the inability of current assets to sufficiently cover current liabilities, implying a poor liquidity position at the end of February 2021. However, as the company completed a private placement subsequent to the period, we believe the most recent financials do not accurately reflect the company's liquidity position, and post-financing GCX is likely to have adequate liquidity. Monthly cash burn (negative free cash flow) for the nine months ended Q3-FY2022 was \$0.25 million, higher than the comparative period in 2020, which we attribute to more exploration activity. The company has debt inherited from the Copper North Acquisition, which consists of a promissory note bearing a 10% interest rate and principal value of \$220,000, and another promissory note of \$100,000 bearing a 5% interest rate.

The following table summarizes the company's liquidity position:

<b>Key Financial Data (FYE - May 31)</b>			
<b>(C\$)</b>		<b>Q3-2020</b>	<b>Q3-2021</b>
Cash	\$	164,865	\$ 582,939
Working Capital	\$	(1,209)	\$ (1,016,582)
Current Ratio		1.00	0.42
Debt	\$	116,038	\$ 1,062,613
Monthly Cash Burn (9M)	\$	(80,618)	\$ (253,773)
Cash from Financing Activities	\$	521,550	\$ 2,702,027

*Source: Company, Couloir Capital*

The following table outlines the company's outstanding options. The company has 8.76 million options (weighted average exercise price of \$0.13 per share) and 51.46 million warrants (weighted average exercise price of \$0.20) outstanding. We estimate that potential cash proceeds from ITM options could total \$2.20 million, if all ITM options and warrants were exercised.

<b>Options</b>	<b>Strike</b>	<b>Exercise Value</b>
44,000	\$ 0.50	\$ 22,000
20,000	\$ 0.25	\$ 5,000
80,000	\$ 0.21	\$ 16,800
2,899,000	\$ 0.15	\$ 434,850
750,000	\$ 0.15	\$ 112,500
3,150,000	\$ 0.10	\$ 315,000
1,820,000	\$ 0.14	\$ 254,800
<b>Warrants</b>	<b>Strike</b>	<b>Exercise Value</b>
1,643,636	\$ 0.25	\$ 410,909
23,925,000	\$ 0.20	\$ 4,785,000
3,000,000	\$ 0.15	\$ 450,000
2,941,175	\$ 0.20	\$ 588,235
3,139,293	\$ 0.25	\$ 784,823
698,691	\$ 0.25	\$ 174,673
651,033	\$ 0.25	\$ 162,758
3,799,800	\$ 0.08	\$ 284,985
3,324,600	\$ 0.08	\$ 249,345
7,537,500	\$ 0.30	\$ 2,261,250
800,000	\$ 0.13	\$ 100,000

*Source: Company, Couloir Capital*

## Revenue and EPS Forecasts

As GCX is still in the project development phase and are looking to update existing parameters for a potential operation at Carmacks, we believe that the development horizon for the company's project is still beyond a few years. We typically only provide earnings guidance for companies with production milestones within two years, who have an appropriate degree of certainty around the likelihood of reaching production (i.e. project is financed, fully or close to fully permitted, and construction is underway).



## Net Asset Valuation Model

Though GCX does have an existing PEA on its Carmacks Project, management has advised that it intends to take a different approach with the mine's development, relative to the scheduling projected in the previous PEA. As a result, we will refrain from applying a NAV to the Carmacks Copper Project until an updated PEA is released to the market.

## Comparables Valuation

As our other source of valuation, we consider GCX's relative valuation against other mining companies that we believe to be comparable. The table below outlines our peer group selection:

Company	Location	Stage	Net Resources (lb)	Enterprise Value (\$)	EV/ Net Resource (\$/lb)
Granite Creek Copper Ltd.	Yukon	Development	649,666,223	\$ 20,917,074	\$ 0.03
Western Copper and Gold Corp.	Yukon	Development	17,664,357,143	\$ 280,481,057	\$ 0.02
Rockridge Resources Ltd.	Saskatchewan & Ontario	Exploration	144,500,000	\$ 5,639,558	\$ 0.04
Foran Mining Corp.	Saskatchewan	Development	1,579,557,143	\$ 487,858,029	\$ 0.31
Callinex Mines Inc.	Manitoba & New Brunswick	Development	366,614,286	\$ 33,562,026	\$ 0.09
Rockcliff Metals Corp.	Manitoba	Development	589,800,000	\$ 33,627,243	\$ 0.06
Abacus Mining & Exploration Corp.	British Columbia & Nevada	Development	667,780,192	\$ 29,228,062	\$ 0.04
Kutcho Copper Corp.	British Columbia	Development	1,289,168,509	\$ 101,055,191	\$ 0.08
Dore Copper Mining Corp.	Quebec	Exploration	242,164,286	\$ 21,710,947	\$ 0.09
Eagle Mountain Mining Ltd.	Arizona	Exploration	365,067,841	\$ 138,100,783	\$ 0.38
<b>Average (Excluding Outliers)</b>					<b>\$ 0.06</b>

*Source: Couloir Capital, Public Disclosures*

Based on the above metrics, we believe that GCX should be trading at a valuation of \$35.86 million or \$0.26 per share on an EV/Net Resource basis, implying that the company is trading at a discount to its fair value. Note that there is significant upside left out of our model, as the more expensive multiples that lay significantly outside the peer average were excluded. These could feasibly be re-introduced as GCX accomplishes exploration and development milestones whilst maintaining solid financial stability, which would likely attract equity investment.

## Conclusion

**After accounting for our valuation models, we have arrived at fair value per share estimate of \$0.26 per share.** We are initiating coverage on GCX with a BUY rating, and expect the following catalysts to materially impact our valuation estimate:

- Any news regarding further assay results from phase 1 drilling at Carmacks, with a focus on strong intercepts.
- Any news regarding phases 2 and 3 of the 2021 Carmacks drilling program.
- Any news regarding development initiatives and updating of the Carmacks 2017 PEA.
- Any news suggesting a delay in exploration, development and/ or permitting timelines.
- Financing-related news that in any way significantly alters the company's capital structure.

## Risks

The following outlines some of the key risk considerations that investors should keep in mind when evaluating GCX as an investment opportunity:

- **Unproven Economics and Forecast Error:** Though the company has an asset with multiple development studies completed, any projections of future mine economics are subject to significant estimation error. Recoveries have not been proven at commercial scale, production scheduling is approximated and other key inputs to modelling may be impacted by biases or errors of various kinds.
- **Poor Drilling Results:** Because a key driver of the company's near-term success will be its ability to expand the existing resource at Carmacks, poor assays from current drilling activity could point to inferior mineral potential at the project. This could have a big impact on the asset's upside, especially given the 2017 PEA projected poor returns characteristics (albeit lower pricing assumptions than currently seen in the market).
- **Project Financing Risk:** High CAPEX needs are likely for any future operation at the Carmacks project, especially in relation to the company's current market cap. Pure equity-funded development would likely incur outsized dilution, so it is likely the company will need to secure a line of debt / other project financing in order to execute on the project construction, in the future.
- **Market Price Exposure and Impact on Execution Risk:** GCX's exploration and development activities will be sensitive to market pricing during the resource expansion and development stage given its reliance on markets for funding needs.
- **Capital Structure Deterioration Related to Ongoing Cash Burn:** There is the potential that the company's cash burn could sap liquidity to the point of the company needing to raise capital. Assuming no cash flows, there is a chance that GCX would do so via equity issuance. Depending on the price of the issuance, such issuance could be dilutive to existing shareholders.

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*Each company within an analyst's universe, or group of companies covered, is assigned:*

- 1. A recommendation or rating, usually BUY, HOLD, or SELL;*
- 2. A 12-month target price, which represents an analyst's current assessment of a company's potential stock price over the next year; and*
- 3. An overall risk rating which represents an analyst's assessment of the company's overall investment risk.*

*These ratings are more fully explained below. Before acting on a recommendation, we caution you to confer with your investment advisor to determine the suitability of our recommendation for your specific investment objectives, risk tolerance and investment time horizon.*

**Couloir Capital's recommendation categories include the following:**

**Buy**

The analyst believes that the security will outperform other companies in their sector on a risk adjusted basis or for the reasons stated in the research report the analyst believes that the security is deserving of a (continued) BUY rating.

**Hold**

The analyst believes that the security is expected to perform in line with other companies in their sector on a risk adjusted basis or for the reasons stated in the research report the analyst believes that the security is deserving of a (continued) HOLD rating.

**Sell**

Investors are advised to sell the security or hold alternative securities within the sector. Stocks in this category are expected to under-perform other companies on a risk adjusted basis or for the reasons stated in the research report the analyst believes that the security is deserving of a (continued) SELL rating.

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The analyst is recommending that investors tender to a specific offering for the company's stock.

**Research Comment**

An analyst comment about an issuer event that does not include a rating.

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The above ratings are determined by the analyst at the time of publication. On occasion, total returns may fall outside of the ranges due to market price movements and/or short-term volatility.

**Overall Risk Rating**

**Very High Risk:** Venture type companies or more established micro, small, mid or large cap companies whose risk profile parameters and/or lack of liquidity warrant such a designation. These companies are only appropriate for investors who have a very high tolerance for risk and volatility and who can incur temporary or permanent loss of a very significant portion of their investment capital.

**High Risk:** Typically, micro or small cap companies which have an above average investment risk relative to more established or mid to large cap companies. These companies will generally not form part of the broad senior stock market indices and often will have less liquidity than more established mid and large cap companies. These companies are only appropriate for investors who have a high tolerance for risk and volatility and who can incur a temporary or permanent loss of a significant portion of their investment capital.

**Medium-High Risk:** Typically, mid to large cap companies that have a medium to high investment risk. These companies will often form part of the broader senior stock market indices or sector specific indices. These companies are only appropriate for investors who have a medium to high tolerance for risk and volatility and who are prepared to accept general stock market risk including the risk of a temporary or permanent loss of some of their investment capital

**Moderate Risk:** Large to very large cap companies with established earnings who have a track record of lower volatility when compared against the broad senior stock market indices. These companies are only appropriate for investors who have a medium tolerance for risk and volatility and who are prepared to accept general stock market risk including the risk of a temporary or permanent loss of some of their investment capital.