TITAN MINING CORPORATION
MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEAR ENDED DECEMBER 31, 2022

This Management's Discussion and Analysis ("MD&A") is intended to help the reader understand Titan Mining Corporation ("Titan", "we", "our" or the "Company"), our operations, financial performance, and current and future business environment. This MD&A is intended to supplement and complement our audited consolidated financial statements for the year ended December 31, 2022, prepared in accordance with International Financial Reporting Standards ("IFRS").

Additional information regarding Titan, including the risks related to our business and those that are reasonably likely to affect our financial statements in the future, is contained in our continuous disclosure materials, including our most recent Annual Information Form ("AIF"), consolidated financial statements and Management Information Circular, which are available on the Company's website at www.titanminingcorp.com and under the Company's profile on the SEDAR website at www.sedar.com.

This MD&A is dated March 31, 2023. All dollar amounts reported herein are in US dollars unless otherwise indicated.

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(In thousands of US Dollars, unless otherwise indicated)

OUR BUSINESS

Titan Mining Corporation is a natural resource company engaged in the acquisition, exploration, development and production of mineral properties. Our corporate office is in Vancouver, British Columbia, and our shares are listed on the Toronto Stock Exchange under the symbol "TI".

The Company's principal asset is a group of 100%-owned, high-grade zinc mines located in the Balmat–Edwards mining district in northern New York State, near Gouverneur and 35 miles south of the Port of Ogdensburg. These past-producing operations (the Empire State Mine's #2, #3, #4, Hyatt, Pierrepont and Edwards mines, collectively the "Empire State Mine" or "ESM"), were acquired on December 30, 2016, and had been on care and maintenance since 2008. Titan declared commercial production at ESM on January 1, 2020. The Company also continues to maintain its unpatented mining claims in New Mexico, USA.

STRATEGY AND OUTLOOK

Titan's mission is to deliver extraordinary shareholder value through exploration, development and operational excellence.

Titan believes that the district surrounding ESM remains underexplored despite the long operating history of ESM. The Company is focused on discovering and developing additional high-grade, low-cost mineral resources to feed the mill at ESM. ESM's #4 mine is connected to its #2 mine, and there is potential for significant resource expansion which is expected to support production growth. Other historic mines and new targets within the district will be a focus for Titan's exploration team.

Mining and milling activities at ESM continued to increase during the past year with a record 52.5 million payable pounds of zinc produced. Increased productivities are expected to continue into 2023 and have better positioned the mine for future success. The decision to mine underground at the near-mine, fully permitted Sphaleros project rather than mine Hoist House, Turnpike and Pumphouse as smaller open pits will improve operating efficiencies by adding incremental ore feed to the mill and allow for longer-lived production from the historic #2 mining zone.

In addition, the Company continues to examine various financing options to bolster the Company's treasury.

FINANCIAL AND OPERATIONAL SUMMARY

	Three months ended December 31,			Year ended December 31,		
Financial Performance	**2022**	**2021**	**Change**	**2022**	**2021**	**Change**
Net income (loss) before tax	$ (4,014)	$ 1,385	$(5,399)	$ (870)	$ 754	$ 1,624
Operating cash inflow (outflow) before changes in non-cash working capital	$ 2,315	$ 6,326	$(4,011)	$ 15,055	$14,111	$ 944

Financial Condition	**December 31, 2022**	**December 31, 2021**
Cash and cash equivalents	$ 6,720	$ 6,041
Working capital	$ 7,289	$ 10,796
Total assets	$ 65,999	$ 77,625
Equity	$ 10,513	$ 17,023

(In thousands of US Dollars, unless otherwise indicated)

	Three months ended December 31,			Year ended December 31,		
Operating Data	**2022**	**2021**	**Change**	**2022**	**2021**	**Change**
Payable zinc produced (mlbs)	14.4	12.2	2.2	52.5	47.5	5.0
Payable zinc sold (mlbs)	13.0	12.7	0.3	51.1	48.3	2.8
Average provisional zinc price (per lb)	$ 1.36	$ 1.44	$ (0.08)	$ 1.55	$ 1.34	$ 0.21

HIGHLIGHTS

Significant events and operating highlights for the fourth quarter and year ended December 31, 2022 and up to the date of this MD&A include the following:

- Consistent safety performance year over year with a total recordable injury frequency rate of 4.8
- Produced a record 52.5 million payable pounds of zinc in 2022
- Received permit to allow for expanded mining operations in the Sphaleros area and related access roads, and announced that construction will begin on the Sphaleros project
- Maintained quarterly cash dividend of C$0.01 per share throughout 2022
- Closed a $40 million credit facility with National Bank, consolidating the Company's debts with Augusta Investments Inc. and Bank of Nova Scotia
- Extended maturity date on the credit facility to December 6, 2024 and made a $5 million payment against the National Bank credit facility in Q4 2022
- In the first quarter of 2023, entered into a fixed zinc pricing arrangement for approximately 30% of the Company's forecasted zinc production for the remainder of 2023. The arrangement is for an eleven-month period covering February 2023 to December 2023 at a price of $1.55 per pound of zinc.
- On March 7, 2023 the Company declared a cash dividend of C$0.01 per share payable on April 14, 2023 to shareholders of record as of the close of business on March 31, 2023.
- In March 2023, the Company entered into a settlement agreement with the plan trustee of Star Mountain providing for, among other things, a one-time payment of $5,900 in full satisfaction and release of all claims asserted by the plan trustee in its complaint. The settlement remains subject to final approval by the Arizona Bankruptcy Court.

		2022				
		FY [1]	Q4	Q3	Q2	Q1
Production						
Ore mined	tons	419,104	111,213	107,437	111,758	88,696
Ore milled	tons	425,022	112,751	109,587	110,416	92,268
Feed grade	zn%	7.5	7.9	6.5	9.1	6.7
Recovery	%	96.4	96.2	96.3	96.5	96.3
Payable zinc	mlbs	52.5	14.4	11.6	16.5	10.1
Concentrate grade	zn %	58.8	58.2	58.0	60.4	58.2
Zinc concentrate produced	tons	52,547	14,573	11,744	16,040	10,191
Sales						
Payable zinc	mlbs	51.1	13.0	12.6	15.0	10.4
Average provisional zinc price	$/lb	$1.55	$1.36	$1.49	$ 1.74	$ 1.57
C1 cash cost per payable zinc pound sold [2]	$/Ib	$1.11	$1.06	$1.26	$ 0.93	$ 1.25
Sustaining capital expenditures [2]	$/lb	$0.05	$0.02	$0.02	$ 0.01	$ 0.17
AISC[2]	$/lb	$1.16	$1.08	$ 1.28	$ 0.94	$ 1.42

(In thousands of US Dollars, unless otherwise indicated)

		2021				
		FY [1]	Q4	Q3	Q2	Q1
Production						
Ore mined	tons	390,632	107,932	105,483	88,022	89,194
Ore milled	tons	387,438	106,270	105,854	90,249	85,064
Feed grade	zn%	7.5	7.0	7.6	7.3	8.3
Recovery	%	96.5	96.5	96.5	96.4	96.4
Payable zinc	mlbs	47.5	12.1	13.2	10.6	11.5
Concentrate grade	zn %	59.3	58.9	59.6	59.7	59.1
Zinc concentrate produced	tons	47,066	12,125	13,016	10,469	11,456
Sales						
Payable zinc	mlbs	48.3	12.7	12.7	11.0	11.9
Average provisional zinc price	$/lb	$1.34	$1.44	$1.35	$1.35	$1.25
C1 cash cost per payable zinc pound sold [2]	$/Ib	$0.93	$0.96	$0.86	$0.88	$0.99
Sustaining capital expenditures [2]		$0.07	$0.05	$ 0.14	0.12	0.01
AISC[2]	$/lb	$ 1.00	$ 1.01	$ 1.00	$ 1.00	$ 1.00

[1] The full-year figure may not equal the sum of the quarters due to rounding.
[2] C1 cash cost, All-In Sustaining Cost ("AISC") per payable pound sold and Sustaining Capital Expenditures are non-GAAP measures. These terms are not standardized financial measures under IFRS and might not be comparable to similar financial measures disclosed by other issuers. See *Non-GAAP Performance Measures* below for additional information.

OPERATIONS REVIEW

Mining efforts throughout 2022 and the fourth quarter of 2022 focused on the Mahler, New Fold, Mud Pond and N2D zones. Waste development continued to advance on the New Fold and Mahler ramp systems to access high grade material that was mined in the fourth quarter of 2022 and will continue into 2023. The long hole stoping program for New Fold commenced in the fourth quarter of 2022 and will provide higher grade ore to the mill throughout 2023. The Mahler White Dolomite zone also contributed strong grades to the mill through the fourth quarter of 2022.

Work on projects focused mainly on design and planning of the Sphaleros underground project as well as completion of the base layer of the haul road that will connect to the Sphaleros project to the mill site. Final road capping will occur in 2023. There were no equipment purchases in the fourth quarter of 2022. The Company's decision to commence construction at the Sphaleros project was not based on a technical report. See the risk factor titled "Construction at Sphaleros" in the risk factors section of this MD&A.

EXPLORATION UPDATE

Empire State Mine

Historic Data

The review, compilation, digitization, and modelling of historic data collected over approximately 100 years by the previous operators of ESM continues to contribute to the exploration success at ESM, with several near-mine mineralized zones identified, including the N2D zone and four zones of near-surface mineralization (Hoist House, Turnpike, Pumphouse, and West Ridge). Hoist House is interpreted to be the unmined extension of the historic #2 zone. Turnpike is interpreted to be the unmined extension of the historic #1 zone. Pumphouse is interpreted as being an unmined lens of mineralization adjacent to the historic #2 zone, and West Ridge is interpreted to be the remnant #2 crown pillar. All four zones are located on ESM surface and mineral tenure.

These zones as well as the adjacent and underlying unmined mineralization are grouped into the singular Sphaleros Project footprint which is located one mile south of the ESM #4 milling complex.

Titan's exploration team has continued to generate additional near-mine and district targets using historic soil, stream sediment, drilling, and geophysical data. These historic data sets are also being utilized to identify as well as look for additional near-surface mineralization in the vicinity of the other historic mining areas (Hyatt, Pierrepont, Edwards, and Rossie-Macomb), which are being prioritized for drill testing in 2023. The team continues to research and consolidate mineral rights interests in high priority target areas. Surface sampling and mapping is scheduled to continue in these priority areas in 2023.

Historic documentation of graphite bearing lithologies within St. Lawrence county, and elsewhere in New York state is under review. Drilling in the fourth quarter of 2022 successfully tested mineralized units the company's Bostwick Target.

2022 Drill Programs

Underground:

Drill programs in 2022 targeted Mahler, Mud Pond Main, Mud Pond Apron, N2D, New Fold, and Fowler. Underground drilling totalled 57 drillholes and 30,828ft. Of these, 17 were completed in the fourth quarter of 2022 totalling 12,425 ft drilled. Drilling is continuing in N2D and in Lower Mahler in the first quarter of 2023. Results from the definition programs will be used to refine the current mine plan in preparation for development in 2023 and beyond.

Additionally, seven underground exploration holes were completed totaling 8,173 ft. The program is targeting a previously untested area down dip of the New Fold ore body. The drilling intercepted mineralization between the New Fold and Mahler ore bodies (see the Company's news release titled "Titan Mining Announces Discovery of New Zone of Near-Mine Mineralization Including 48.7 ft at 23.91% Zinc" dated January 31, 2023, for additional information). In the fourth quarter four holes were completed totalling 3,802 ft drilled. Exploration drilling will continue to target this area in 2023.

Surface:

Surface exploration programs in 2022 focused on delineating the extent of near surface mineralization at Sphaleros (formerly identified separately as Pump House, Hoist House, Turnpike, and West Ridge) and testing the near mine exploration target (Abbott). Additionally, four regional targets were drill tested (Beaver Creek, Morrison Road, North Gouverneur, and Bostwick). A total of 59 exploration holes were drilled, totaling 29,402 ft of which 9,340 ft was completed in the fourth quarter.

Near mine drilling in the first quarter of 2022 focused on delineation of near surface mineralization at Hoist House, Pump House, and Turnpike. It also identified previously untested near surface mineralization in the West Ridge target (see the Company's news release titled "Titan Announces Significant High Grade Drill Extensions to ESM Open Pit Project" dated May 25th, 2022 for additional information). All four targets have been incorporated into the Sphaleros project area. A total of 9,229 ft was drilled on surface at Sphaleros, with 3,445 ft were completed in the fourth quarter 2022.

In the second quarter of 2022 one 3,487 ft hole was drilled testing the near mine Abbott target. Anomalous zinc was intercepted in Unit 2 of the upper marble. This unit also contained graphitic carbon mineralization which is under further review.

A total of 17 holes were drilled testing regional zinc targets, totalling 16,685 ft. This includes seven drill holes totalling 5,894 ft drilled in the fourth quarter of 2022.

Regional drilling started with a four hole program at the Beaver Creek prospect in the second and third quarters. The target was historically mined for lead with zinc as documented waste and had no modern exploration. Drilling resulted in anomalous zinc intercepts, in total 4,444 ft were drilled. Follow up work will be determined from the results of the 2022 surface sampling program which included the Beaver Creek prospect. Similar structures were tested at the North Gouverneur prospect in the third and fourth quarters. A total of six holes were drilled totalling 4,707 ft. Mineralization of a similar nature was intercepted, however overall concentrations were lower than at Beaver Creek. Drill testing of the Morrison Road prospect was completed in the third quarter of 2022, the program was targeting favourable lithologies with historically documented mineralization. Four holes were drilled, totalling 3,845 ft.

The final regional target tested in 2022 was Bostwick. Drilling here was focused on geophysical anomalies indicative of graphite mineralization. The three holes completed each intercepted trace zinc mineralization and zones with encouraging percentages of graphitic carbon. A total of 3,690ft was drilled. Follow up drilling is being planned for 2023.

Drilling in the first quarter of 2023 will be focused on delineating mineralization at Streeter within the Sphaleros Mine area. Regional drilling will begin in the second quarter and will continue through the end of 2023. Approximately 40,000 ft of drilling has been budgeted for near mine and regional drilling.

2022 Surface Sampling:

In the fourth quarter, a third party was contracted to collect surface samples from seven regional prospects, Bostwick, Beaver Creek, Maple Ridge, North Gouverneur, Morrison Road, Moss Ridge, and Pork Creek. A total of 1,981 samples were collected, and assay analysis is pending. The program results will be used to inform future exploration activities.

Permitting:

Modification to the Mine Land Use Plan ("MLUP") and mine permit for planned open pit mining and construction of a new haul road was approved by the New York State Department of Environmental Conservation in August.

New Mexico

The Company began prospecting for base metals in an area of New Mexico in 2017. In 2018, the Company completed the first phase of its drilling program and was encouraged by the results. Annual claim maintenance fees have been renewed since allowing the Company to maintain control of the current land position while evaluating future exploration activities. No additional exploration activities were performed on the property during 2022.

(In thousands of US Dollars, unless otherwise indicated)

TREND ANALYSIS

Selected Annual Information

	Year ended December 31,		
	2022	2021	2020
Revenue	$ 62,061	$ 55,594	$ 32,638
Net income (loss) before tax	$ (870)	$ 754	$ (13,668)
Basic & diluted income (loss) per share	$ (0.01)	$ 0.01	$ (0.11)
Total assets	$ 65,999	$ 77,625	$ 78,896
Total non-current financial liabilities	$ 45,185	$ 53,909	$ 45,106
Dividends declared per share	C$ 0.04	C$ 0.02	C$ -

Summary of Quarterly Results

	2022				2021			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Revenue ($)	13,945	14,025	20,128	13,963	16,399	14,985	13,265	10,945
Net income (loss) before tax ($)	(4,014)	(161)	5,924	(2,618)	1,385	(1,458)	1,963	(1,136)
Basic & diluted income (loss) per share ($)	(0.03)	-	0.04	(0.02)	0.01	(0.01)	0.01	(0.01)
Cash and cash equivalents ($)	6,720	13,568	11,021	3,236	6,041	5,357	6,163	5,882
Total assets ($)	65,999	78,199	78,497	74,755	77,625	77,810	75,340	75,683
Total liabilities ($)	55,486	62,147	59,095	60,352	60,602	60,814	58,202	60,198

Note: The sum of the quarters in the table above may not equal the full-year amounts disclosed elsewhere in this document due to rounding.

Seasonality has a limited impact on the Company's operating results.

Total assets decreased in the second quarter of 2021 compared to the first quarter of 2021 due to a reduction in mineral properties, plant and equipment, and other current assets. Total assets increased in the third quarter of 2021, mainly due to increase of trade and other receivables, inventories, and other current assets, offset by decrease of cash and cash equivalents, mineral properties, plant and equipment, and right-of-use assets. Total assets increased in the fourth quarter of 2021, mainly due to increase of cash and cash equivalents, trade and other receivables, prepaid expenses, and other non-current assets, offset by decrease of inventories, mineral properties, plant and equipment, and right-of-use assets.

Total assets decreased in the first quarter of 2022 mainly due to a decrease of cash, mineral properties, plant and equipment, trade and other receivables, and right-of-use assets, net of additions of inventories and other current assets. Total assets increased in the second quarter of 2022 mainly due to an increase of cash and cash equivalents and inventory, offset by decrease of trade and other receivables, other current assets, mineral properties, plant and equipment, and right-of-use assets. Total assets decreased in the third quarter of 2022 mainly due to a decrease of trade and other receivables, inventories, other current assets, mineral properties, plant and equipment, and right-of-use assets, partially offset by an increase of cash and cash equivalents, derivative asset, and restricted cash. Total assets decreased significantly in the fourth quarter of 2022 mainly due to a decrease of cash and cash equivalents, derivative asset, other current assets, mineral properties, plant and equipment, and right-of-use assets, partially offset by an increase of trade and other receivable and inventories.

Net loss in the first quarter of 2021 turned to income in the second quarter of 2021 as a result of higher realized zinc prices and lower concentrate treatment charges and the forgiveness of the Company's Paycheck Protection Program loan ("PPP loan"), partially offset by higher operating, exploration and evaluation and depreciation and depletion expenses. Net income turned to net loss in the third quarter of 2021 as a result of higher general and administration expenses and foreign exchange loss, partially offset by lower exploration and evaluation expenses. Net loss turned to net income again in the fourth quarter of 2021 as a result of higher realized zinc prices and lower general & administration expenses and foreign exchange loss.

Net income turned to net loss in the first quarter of 2022 as a result of a decrease in zinc concentrate sold, and an increase of the operating expenses and foreign exchange loss. Net loss turned to income in the second quarter of 2022 as a result of higher realized zinc prices and lower general and administration expenses and foreign exchange loss, partially offset by higher operating, exploration and evaluation expenses and interest and other finance expenses. Net income turned to net loss again in the third quarter of 2022 as a result of lower realized zinc prices and higher operating, depreciation and depletion, exploration and evaluation expenses, and general and administration expenses, partially offset by higher foreign exchange gain, gain on derivative, and lower interest and other finance expenses. Net loss increased further in the fourth quarter of 2022 as a result of lower realized zinc prices and higher operating expenses, exploration and evaluation expenses, share based compensation, interest and other finance expenses, general and administration expenses, unrealized loss on derivative, loss on settlement, and lower foreign exchange gain, partially offset by realized gain on derivative and gain on modification.

Cash and cash equivalents increased in the second quarter of 2021 compared to the first quarter in 2021 as a result of zinc sales at a higher average provisional price and a lower per pound cost of zinc sold. It decreased again in the third quarter of 2021 due to capital asset additions at ESM. Cash and cash equivalents increased in the fourth quarter of 2021 due to higher provisional price, net cash provided in operating activities, and less cash spent on capital assets, partially offset by repayment of debt and dividend distribution.

Cash and cash equivalents decreased in the first quarter of 2022 as a result of a decrease in zinc concentrate sold and an increase of operating expenses. Cash and cash equivalents increased in the second quarter of 2022 as a result of an increase in zinc concentrate sold and a decrease of operating expenses and fewer capital additions at ESM. Cash and cash equivalents increased in the third quarter of 2022 as a result of higher working capital generated from trade and other receivables, inventories, and accounts payable and accrued liabilities, partially offset by a loss for the period and higher cash used in financing and investing activities. Cash and cash equivalents decreased significantly in the fourth quarter of 2022 as a result of lower working capital generated from trade and other receivables, inventories, accounts payable and accrued liabilities, and higher cash used in financing and investing activities.

FINANCIAL REVIEW

Financial Results

($000's)		Three months ended December 31		Year ended December 31
Net income (loss) for the 2021 period	$	1,385	$	754
Changes in components of income:				
Revenues increase (decrease)		(2,454)		6,467
Cost of sales increase		(616)		(8,454)
Other expenses decrease (increase)		(2,329)		363
Net income (loss) before tax for the 2022 period	$	(4,014)	$	(870)

During the year ended December 31, 2022, revenues increased compared to the same period in 2021 as a result of higher volume of zinc concentrate sold at a higher average provisional price (2022 – 51.1 mlbs at $1.55/lb vs. 2021 – 48.3 mlbs at $1.34/lb), partially offset by negative provisional pricing adjustments (2022 – negative $2,851 vs. 2021 – $689).

During year 2022, cost of sales increased with the increased volume of tons milled and inflationary operating expenditure increases.

During the year ended December 31, 2022, other income increased compared to the same period of 2021 due to foreign exchange income, realized and unrealized gain on derivative, gain on loan modification, decrease of exploration and evaluation expenses, interest and other finance expenses, share based compensation, which were partially offset by an increase of professional fees, other income, and loss on settlement.

Revenue

	Three months ended December 31,			Year ended December 31,		
($000's)	**2022**	**2021**	**Change**	**2022**	**2021**	**Change**
Zinc concentrate sales	$ 17,698	$ 18,335	$ (637)	$78,957	$64,841	$ 14,116
Zinc concentrate provisional pricing adjustments	(113)	652	(765)	(2,851)	689	(3,540)
Smelting and refining charges	(3,640)	(2,588)	(1,052)	(14,045)	(9,936)	(4,109)
Revenue, net	$ 13,945	$ 16,399	$ (2,454)	$62,061	$55,594	$ 6,467

Revenues were lower in the fourth quarter of 2022 than the same period of 2021 due to lower realized zinc prices. Specifically, revenues for the three months ended December 31, 2022 include sales of 13.0 million payable pounds of zinc (Q4 2021 – 12.7 million) at an average realized price per pound of $1.36 (Q4 2021 – $1.44).

Revenues were higher in year 2022 than the same period of 2021 due to higher realized zinc prices on a higher number of zinc pounds sold. Specifically, revenues for the year ended December 31, 2022 include sales of 51.1 million payable pounds of zinc (YTD 2021 – 48.3 million) at an average realized price per pound of $1.55 (YTD 2021 – $1.34).

Cost of sales

	Three months ended December 31,			Year ended December 31,		
($000's)	**2022**	**2021**	**Change**	**2022**	**2021**	**Change**
Operating expenses	$ 10,501	$ 8,879	$ 1,622	$ 40,662	$ 32,571	$ 8,091
Transportation costs	829	641	188	3,191	1,967	1,224
Royalties	21	9	12	44	37	7
Depreciation and depletion	3,130	3,076	54	11,922	11,396	526
Change of Inventory	(1,092)	167	(1,259)	(1,146)	248	(1,394)
Total	$ 13,389	$12,772	$ 617	$54,673	$ 46,219	$ 8,454

In the three months ended December 31, 2022, cost of sales increased compared to the same period in 2021 due to inflationary increases in operating expenses, transportation costs, royalties, and depreciation, partially offset by a lower value of change of inventory. The increase of operating expenses was due to a higher number of tons milled (Q4 2022- 113,000 tons vs. Q4 2021 – 106,000 tons) and inflationary pressures. Depreciation and depletion expense increased comparatively due to a higher number of tons mined.

In the year ended December 31, 2022, cost of sales increased compared to the same period in 2021 due to inflationary increases in operating expenses, transportation costs, royalties, and depreciation, partially offset by lower value of change of inventory. The increase of operating expenses was due to a higher number of tons milled (2022- 425,000 tons vs. 2021 – 387,000 tons) and inflationary pressures. Depreciation and depletion expense increased comparatively due to a higher number of tons mined.

The impact of inflation on the Company's financial position, operational performance, or cash flows over the next twelve months cannot be determined with any degree of certainty.

(In thousands of US Dollars, unless otherwise indicated)

	Three months ended December 31,				Year ended December 31,			
	2022	**2021**	**Change**	**%**	**2022**	**2021**	**Change**	**%**
G&A expenses:								
Salaries and benefits	$ 203	$ 196	$ 7	4	$ 1,166	$1,106	$ 60	5
Share-based compensation	114	23	91	>100	174	269	(95)	(35)
Professional fees	504	580	(76)	(13)	2,689	1,898	791	42
Office and administration	221	(17)	238	<(100)	691	696	(5)	(1)
Investor relations	17	6	11	>100	52	32	20	63
	$ 1,059	$ 788	$ 271	34	$ 4,772	$ 4,001	$ 771	19
Exploration and evaluation ("E&E") expenses:								
Salaries and benefits	$ 133	$ 103	$ 30	29	$ 475	$ 710	$ (235)	(33)
Drilling	-	-	-	NA	-	561	(561)	(100)
Assay and analyses	37	6	31	>100	142	473	(331)	(70)
Contractors and consultants	542	289	253	88	1,452	1,519	(67)	(4)
Other	81	81	-	-	235	509	(274)	(54)
	$ 793	$ 479	$ 314	66	$ 2,304	$ 3,772	$ (1,468)	(39)

G&A expenses for the three months ended December 31, 2022 have increased by 34% compared to the same period ended December 31, 2021 as a result of increases in share-based compensation due to issuance of stock options, office and administration expenses due to a reclassification in the fourth quarter of 2021, and investor relations expenses, partially offset by decreases of professional fees due to timing of expenditures.

G&A expenses for the year ended December 31, 2022 have increased by 19% compared to the year ended December 31, 2021 as a result of increases in professional fees due to increased expenditures related to Star Mountain litigation, salaries and benefits, and investor relations expenses, which are partially offset by decreases of share based compensation and office and administration expenses.

E&E expenses for the three months ended December 31, 2022 increased 66% compared to the same period in 2021 as a result of more exploration activities performed in Empire State Mine. E&E expenses for the year ended December 31, 2022 decreased 39% compared to the year ended December 31, 2021 as a result of ceasing exploration activities at Mineral Ridge.

Other expenses

Three months ended December 31,				Year ended December 31,			
2022	**2021**	**Change**	**%**	**2022**	**2021**	**Change**	**%**
$ 2,720	$ 975	$ 1,745	>100	$ 1,182	$ 848	$ 334	39

For the three months ended December 31, 2022, other expenses increased compared to the same period of 2021. The increase was primarily due to increases in loss on settlement, unrealized loss on derivative, and accretion expense, partially offset by realized gain on derivative, gain on loan modification, foreign exchange gain, interest income, and lower interest and other finance expenses. During the year ended December 31, 2022, other expenses increased compared to the same period of 2021. The increase was due to increases of loss on settlement, accretion expense and a decrease of other income, which were partially offset by foreign exchange gain, gain on loan modification, realized and unrealized gain on derivative, interest income, and a decrease of interest and other finance expenses.

LIQUIDITY AND CAPITAL RESOURCES

Credit Facilities

Bank of Nova Scotia

On January 21, 2019, the Company and the Bank of Nova Scotia ("Lender") amended the $15,000 secured credit agreement (the "BNS Credit Facility") whereby a maximum of $10,000 (the "Available Credit") was available to the Company on a revolving basis. Prior to March 31, 2019, the Lender was permitted to reduce the maximum amount available to $6,000, subject to the business and financial plan provided by the Company. The interest rate on the Available Credit is either LIBOR plus 4.25% or the Lender's base rate plus 3.25%, and the standby fee is 0.8% of the unadvanced portion of the BNS Credit Facility. If the amount available is reduced to $6,000, the interest rate changes to LIBOR plus 2.25% or the Lender's base rate plus 1.25%, and the standby fee is 0.5625% of the unadvanced portion of the BNS Credit Facility. A $6,000 guarantee was provided by a company controlled by Titan's Executive Chairman.

On May 31, 2019, the Company and the Lender further amended the BNS Credit Facility whereby the Available Credit limit continues as $10,000 and the maturity date was extended to April 3, 2021. The interest rate on the Available Credit was changed to LIBOR plus 2.25% or the Lender's base rate plus 1.25%. In addition, the financial covenant requirement on the BNS Credit Facility was removed.

In connection with the amendment, a $10,000 guarantee has been provided by a company controlled by Titan's Executive Chairman (the "Guarantor"), replacing the original $6,000 guarantee. In consideration for the guarantee, the Company issued 3,000,000 common shares with a fair value of $979 and 3,000,000 share purchase warrants with each warrant exercisable for one common share at price of $0.50 per share for a period of five years from the date of issuance with a fair value of $543 at the guarantee effective date for a total fair value of $1,522 recorded as borrowing costs. Such common shares and share purchase warrants were issued on June 14, 2019. The fair market values on the issuance date were $919 and $493, respectively. The difference of $110 was recorded as a gain on derivative liability during the year ended December 31, 2019.

As a result of the amendment, the Company extinguished the face value of the loan prior to the amendment and recorded the fair value of the new loan as at May 31, 2019. A $1,702 loss on the extinguishment of debt was recorded during the year ended December 31, 2019.

On January 8, 2021, the Company and the Lender further amended the $15,000 BNS Credit Facility whereby the Available Credit limit continues as $10,000 and the maturity date was extended to April 3, 2022.

On December 20, 2021 the Company and the Lender further amended the $15,000 BNS Credit Facility whereby the Available Credit limit continues as $10,000 and the maturity date was extended to April 3, 2023. A $2,000 payment was made against the Facility in the fourth quarter reducing the principal value to $8,000 leaving the Company with $2,000 of available credit as at December 31, 2021.

On June 6, 2022 the Company repaid the balance of the BNS Credit Facility and associated interest and retired the loan.

Loan from Related Party

On November 30, 2018, the Company entered a credit agreement with a company controlled by Titan's Executive Chairman, to establish a $18,710 subordinate general security credit facility ("Loan"). The initial advance of $3,710 bears interest at 8% per annum and advances on the subsequent $15,000 bear interest at a floating rate equal to 7% plus the greater of (i) LIBOR and (ii) 1%, per annum. Interest is payable in cash or shares of the Company. The Loan is subject to mandatory prepayment if the Company closes one or more financings that exceeds $30,000 in the aggregate or upon the occurrence of a change of control of the Company. The Loan is a non-revolving facility, and any repayment under the Loan shall not be re-borrowed. The Company is subject to certain general covenants with respect to the Loan.

Pursuant to the Loan, the Company was required to issue the related party 2,500,000 warrants. Each warrant entitles the holder to acquire one common share at a price of C$1.40 per share.

On January 21, 2019, the Company issued 2,500,000 warrants to a company controlled by Titan's Executive Chairman pursuant to the credit agreement. The fair market value of these warrants was $1,099 as at December 31, 2018 and was recorded as a warrant derivative liability and borrowing costs. The fair market value on the issuance date on January 21, 2019 was $1,028. The difference between December 31, 2018 and the issuance date was recorded as a gain on derivative liability of $71 during the year ended December 31, 2019.

On August 21, 2019, the Company entered an addendum to its Loan which made an additional $1,000 available to the Company under the same terms as the original agreement. As such, the Loan was increased to a total of $19,710.

On February 6, 2020, the Company was advanced an additional $1,000 under the same terms as the original agreement. As such, the Loan was increased to a total of $20,710.

On October 13, 2020, the Company repriced 2,500,000 warrants held by a company controlled by Titan's Executive Chairman in connection with the Credit Agreement between the Company and the lender pursuant to which the lender advanced to the Company a second-ranking secured non-revolving credit facility of up to $20,710. The exercise price of the warrants was repriced from C$1.40 to C$0.75. In consideration for the repricing, the due date for repayment of the Facility was extended by one additional year from November 30, 2020 to November 30, 2021. On December 31, 2020 the lender agreed to extend the term of the credit facility to April 5, 2022. An extension fee of $71 was paid by the Company and was recorded in the Consolidated Statement of Income (Loss) and Other Comprehensive Income (Loss) for the year ended December 31, 2020. $291 was recorded as an incremental borrowing cost related to the warrant repricing of the credit agreement which will be amortized over the remaining term of the agreement. As at December 31, 2020, the balance of this incremental borrowing costs was adjusted to $338 after the loan extension.

On December 20, 2021 the lender agreed to further extend the term of the credit facility to April 5, 2023. An extension fee of $75 was paid by the Company and was recorded in the Consolidated Statement of Income (Loss) and Other Comprehensive Income (Loss) for the year ended December 31, 2021. The incremental borrowing costs from the 2020 loan extension were amortized during the year and the balance was $76 as of December 31, 2021.

On June 6, 2022 the Company repaid the balance of the Loan and associated interest and retired the loan.

National Bank of Canada

On June 6, 2022, the Company entered into a secured credit agreement for $40,000 (the "Credit Facility") with National Bank of Canada. The Credit Facility is secured by a general charge on the assets of the Company, and was used to consolidate the existing Bank of Nova Scotia and Related Party Loans (13a) and is available to the Company on a revolving basis to finance the working capital and general corporate requirements. In addition to the Credit Facility, National Bank provided the Company with an up to US$15 million treasury line enabling additional access to funds for future zinc contract commitments. Terms of the Credit Facility include the following:

- The Credit Facility will bear interest at the Secured Overnight Financing Rate plus 2.25% or National Bank's base rate plus 1.25%;
- The Company is required to pay a standby fee on the unadvanced portion of the Credit Facility at a rate of 0.5625% per annum;
- The maturity date is December 6, 2023 and includes an annual extension option; the maturity date was subsequently extended to December 6, 2024 on December 20, 2022.
- The Credit Facility is subject to covenants that require the Company to maintain interest coverage ratio of not less than 4.0 to 1.0 and a total leverage ratio of not more than 3.0 to 1.

(In thousands of US Dollars, unless otherwise indicated)

A guarantee for the Credit Facility was provided by a company controlled by Titan's Executive Chairman with a standby charge applicable to the $40,000 amount at an annual rate of 1.125%. The guarantee was extended to December 6, 2024 concurrent with the extension of the maturity date of the Credit Facility. Total standby charge of $226 was paid in 2022, and $31 was accrued as of December 31, 2022.

$8,730 of the Credit Facility was undrawn as of December 31, 2022.

Paycheck Protection Program Loan ("PPP")

On April 21, 2020, the Company's wholly owned subsidiary Empire State Mines, LLC applied for and received a loan totaling $2,409 under the U.S. Small Business Administration Paycheck Protection Program. Proceeds from this program have been used to assist U.S. small businesses during the COVID-19 pandemic in an effort to keep employees on the payroll and to contribute to utilities, rent and mortgage costs. The Company submitted the application for loan forgiveness in October 2020, and the loan and interest forgiveness were granted on June 10, 2021. The total of $2,437 is included in Other Income of The Statements of Income and Other Comprehensive Income (Loss) in 2021.

Financial Condition

		December 31, 2022		December 31, 2021
Cash and cash equivalents	$	6,720	$	6,041
Total debt	$	30,032	$	34,712
Net debt (cash)[1]	$	23,312	$	28,671
Working capital	$	7,289	$	10,796

[1] Net debt is a non-GAAP measure. This term is not a standardized financial measure under IFRS and might not be comparable to a similar financial measure disclosed by other issuers. See "Non-GAAP performance measures" of this MD&A for a discussion of non-GAAP performance measures.

Cash and cash equivalents as at December 31, 2022 increased by $679 compared to December 31, 2021. Higher cash generated from trade and other receivable, other current assets, and accounts payable and accrued liabilities, partially offset by higher cash used in inventories, result in positive operating cash flows before changes in working capital of $15,055 during the year ended December 31, 2022 (2021 –$14,111) and cash inflow from changes in non-cash working capital of $612 (2021 – negative $6,854). Cash outflow related to financing activities was $10,873 (2021 - $4,061). The Company received proceeds from bank indebtedness of $35,779 in the second quarter of 2022. The positive cash inflow was also offset by retirements of original bank indebtedness and a related party loan and associated interest payments, repayment of loan, and dividends paid. Additional spending related to investing activities of $4,309 (2021 - $4,586) and the effect of foreign exchange of $194 (2021 – negative $71) on cash and cash equivalents.

At December 31, 2022, the Company's debt was comprised of a loan from the Credit Facility of $30,016, and equipment loans of $16. The Company accrued interest of $168 and amortized borrowing cost of $162 related to the Credit Facility for the year ended December 31, 2022.

Working capital decreased for the year ended December 31, 2022 compared to December 31, 2021 as a result of lower trade and other receivables, other current assets, and higher accounts payable and accrued liabilities, current portion of debt, and settlement provision, partially offset by higher cash and cash equivalents, inventories, and derivative asset.

(In thousands of US Dollars, unless otherwise indicated)

Cash Flows

	Year Ended December 31, 2022	2021	Change
Operating cash flows before changes in working capital	$ 15,055	$ 14,111	$ 944
Changes in working capital	612	(6,854)	7,466
Net cash flows generated by operating activities	15,667	7,257	8,410
Net cash flows used in financing activities	(10,873)	(4,061)	(6,812)
Net cash flows generated by (used in) investing activities	(4,309)	(4,586)	277
	$ 485	$ (1,390)	$ 1,875

Net cash flows generated from operating activities were higher in year 2022 than 2021 as a result of the cash generated from increased zinc sales at a higher average price and higher volume of zinc pounds sold, partially offset by cash flows used in operating activities, which reflect the cash components of the inventories, G&A and finance expenses. A discussion of the changes from period to period is set out above under "Financial Results" and "Other Operating Expenses".

Net cash flows used in investing activities in the year ended December 31, 2022 were lower compared with year 2021 as the Company spent less on capital equipment.

Net cash flows used in financing activities during the year ended December 31, 2022 reflect $35,779 of bank indebtedness proceeds, $13,000 of bank indebtedness repayment, $20,710 of related party loan repayment, $4,104 of dividends paid, $8,211 of associated interest payments, $421 of payments made on lease liabilities, and $6 of repayment of equipment loans. For comparison, Net cash flows used in financing activities by the Company in 2021 reflect $2,000 of bank indebtedness, $1,096 of dividends paid, $354 of associated interest payments, $496 of payments made on lease liabilities, and $115 of repayment of equipment loans.

Capital Expenditures

The Company invested $4,309 in capital assets in year 2022 compared to $4,586 capital expenditures made in the same period of 2021. A new scooptram, an underground halt truck, an exploration drill, and a replacement cage were added to the milling mobile equipment fleet and additional expenditures were made on development of the #2 pit, primarily road building.

Liquidity

As at December 31, 2022, the Company had total liquidity of $6,720 in cash and cash equivalents and $8,730 undrawn on its Credit Facility with National Bank of Canada. The Company had working capital of $7,289 and a deficit of $57,067. For the year ended December 31, 2022, the Company had positive operating cash flows before changes in working capital of $15,055 and a net loss before tax of $870.

As at December 31, 2021, the Company had total liquidity of $6,041 in cash and cash equivalents. The Company had working capital of $10,796 and a deficit of $51,896. For the year ended December 31, 2021, the Company had positive operating cash flows before changes in working capital of $14,111 and a net profit before tax of $754.

Capital Management

The Company's objectives when managing capital are to safeguard the Company's ability to continue as a going concern in order to pursue the development and exploration of its mineral properties and pay dividends to its shareholders and to maintain a flexible capital structure, which optimizes the costs of capital to an acceptable risk.

(In thousands of US Dollars, unless otherwise indicated)

The capital structure of the Company currently consists of common shares, loans, debt and the balance of the acquisition obligations. The Company manages the capital structure and adjusts it in response to changes in economic conditions, its expected funding requirements, and risk characteristics of the underlying assets. The Company's funding requirements are based on cash forecasts. In order to maintain or adjust the capital structure, the Company may issue new debt, new shares and/or consider strategic alliances. Management reviews its capital management approach on a regular basis. The Company anticipates being able to generate sufficient amounts of cash and cash equivalents, in the short and long term, to maintain the Company's capacity and to fund development activities.

Contractual obligations and commitments

The Company's contractual obligations and commitments as at December 31, 2022 and their approximate timing of payment are as follows:

	<1 year	1 – 3 years	4 – 5 years	>5 years	Total
Debt:					
Repayment of principal	$ -	$ 29,848	$ -	$ -	$ 29,848
Repayment of interest	168	-	-	-	168
Leases	109	99	-	-	208
Capital Expenditure	8	7	-	-	15
Reclamation and remediation provision	-	-	-	15,233	15,233
	$ 285	$ 29,954	$ -	$ 15,233	$ 45,472

Off-Balance Sheet Arrangements

The Company does not have any off-balance sheet arrangements.

Outstanding Securities

As of the date of this MD&A, the Company had 138,978,357 common shares issued, and 22,503,798 warrants and 8,735,000 options outstanding.

RELATED PARTY TRANSACTIONS

Related Party Loan

On November 30, 2018, the Company entered a credit agreement with a company controlled by Titan's Executive Chairman, to establish a $18,710 subordinate general security credit facility ("Loan"). The initial advance of $3,710 bears interest at 8% per annum and advances on the subsequent $15,000 bear interest at a floating rate equal to 7% plus the greater of (i) LIBOR and (ii) 1%, per annum. Interest is payable in cash or shares of the Company. The Loan is subject to mandatory prepayment if the Company closes one or more financings that exceeds $30,000 in the aggregate or upon the occurrence of a change of control of the Company. The Loan is a non-revolving facility, and any repayment under the Loan shall not be re-borrowed. The Company is subject to certain general covenants with respect to the Loan.

Pursuant to the Loan, the Company was required to issue the related party 2,500,000 warrants. Each warrant entitles the holder to acquire one common share at a price of C$1.40 per share.

(In thousands of US Dollars, unless otherwise indicated)

On January 21, 2019, the Company issued 2,500,000 warrants to a company controlled by Titan's Executive Chairman pursuant to the credit agreement. The fair market value of these warrants was $1,099 as at December 31, 2018 and was recorded as a warrant derivative liability and borrowing costs. The fair market value on the issuance date on January 21, 2019 was $1,028. The difference between December 31, 2018 and the issuance date was recorded as a gain on derivative liability of $71 during the year ended December 31, 2019.

On August 21, 2019, the Company entered an addendum to its Loan which made an additional $1,000 available to the Company under the same terms as the original agreement. As such, the Loan was increased to a total of $19,710.

On February 6, 2020, the Company was advanced an additional $1,000 under the same terms as the original agreement. As such, the Loan was increased to a total of $20,710.

On October 13, 2020, the Company repriced 2,500,000 warrants held by a company controlled by Titan's Executive Chairman in connection with the Credit Agreement between the Company and the lender pursuant to which the lender advanced to the Company a second-ranking secured non-revolving credit facility of up to $20,710. The exercise price of the warrants was repriced from C$1.40 to C$0.75. In consideration for the repricing, the due date for repayment of the Facility was extended by one additional year from November 30, 2020 to November 30, 2021. On December 31, 2020 the lender agreed to extend the term of the credit facility to April 5, 2022. An extension fee of $71 was paid by the Company and was recorded in the Consolidated Statements of Income and Other Comprehensive Income (Loss) for the year ended December 31, 2020. $291 was recorded as an incremental borrowing cost related to the warrant repricing of the credit agreement which will be amortized over the remaining term of the agreement. As at December 31, 2020, the balance of this incremental borrowing costs was adjusted to $338 after the loan extension.

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On June 6, 2022 the Company repaid the balance of the Loan and associated interest of $6,980 and retired the loan.

	Principal	Interest and borrowing costs	Total
Balance, January 1, 2021	20,710	$ 3,572	$ 24,282
Accrued interest	-	2,065	2,065
Amortization of borrowing costs	-	262	262
Balance, December 31, 2021	$ 20,710	$ 5,899	$ 26,609
Accrued interest	-	1,005	1,005
Accrued interest and borrowing costs paid	-	(6,980)	(6,980)
Amortization of borrowing costs	-	76	76
Repayment of loan	(20,710)	-	(20,710)
Balance, December 31, 2022	$ -	$ -	$ -

	December 31 2022	December 31 2021
Non-current	$ -	$ 26,609
	$ -	$ 26,609

(In thousands of US Dollars, unless otherwise indicated)

Management company (Manco)

The Company shares office space, equipment, personnel, consultants and various administrative services with other companies related by virtue of certain directors and management in common. These services have been provided through a management company equally owned by each company party to the arrangement. Costs incurred by the management company are allocated and funded by the shareholders of the management company based on time incurred and use of services. If the Company's participation in the arrangement is terminated, the Company will be obligated to pay its share of the rent payments for the remaining term of the officed space rental agreement. The Company's obligation for future rental payments December 31, 2022 was approximately $164, determined based on the Company's average share of rent paid in the immediately preceding 12 months. The Company has $183 of other assets classified as property, plant and equipment in connection with this arrangement.

The Company was charged for the following with respect to this arrangement in the year ended December 31, 2022.

	Year ended December 31,			
	2022		2021	
Salaries and benefits	$	453	$	532
Office and other		177		265
Marketing and travel		27		17
	$	657	$	814

Key management personnel compensation

Key management personnel include those persons having authority and responsibility for planning, directing and controlling the activities of the Company, and comprises the Company's Executive Chairman, President and Chief Executive Officer, Chief Financial Officer, and Directors.

		As at December 31, 2022		As at December 31, 2021
Salaries and benefits	$	735	$	710
Consulting fees		269		338
Share-based compensation		147		141
Directors' fees		219		213
	$	1,370	$	1,402

Consulting fees are related to a consulting arrangement entered by the Company with Augusta Capital Corporation ("ACC"), a private company 100% beneficially held by the Titan's Executive Chairman in 2021. $269 was paid by the Company to ACC during 2022 (2021- $388) as noted in the table above.

The following amounts are outstanding as at December 31, 2021 and 2022, are included in accounts payable and accrued liabilities above.

		December 31, 2022		December 31, 2021
Salaries and benefits payable	$	406	$	434
Termination benefits payable – current		-		125
	$	406	$	559

ACCOUNTING CHANGES AND CRITICAL ESTIMATES

Estimates and judgments

The preparation of consolidated financial statements in accordance with IFRS requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the year. Actual outcomes could differ from these estimates. These consolidated financial statements include estimates which, by their nature, are uncertain. The impacts of such estimates are pervasive throughout the financial statements and may require accounting adjustments. Revisions to accounting estimates are recognized in the period in which the estimate is revised and future years if the revision affects both current and future years.

These estimates are based on historical experience, current and future economic conditions and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

Significant assumptions and judgments about the future and other sources of estimation uncertainty that management has made at the end of the reporting period, which could result in a material adjustment to the carrying amounts of assets and liabilities, in the event that actual results differ from assumptions made, relate to the following areas:

- Estimated mineral resources;
- Revenue recognition
- Reclamation and remediation provision;
- Impairment;
- Fair value measurement
- Determination of useful life of assets for depreciation purposes;
- Share-based compensation;
- Taxation

See note 3 of our 2022 annual audited consolidated financial statements for a detailed discussion of these accounting estimates and judgments.

DISCLOSURE CONTROLS AND PROCEDURES AND INTERNAL CONTROL OVER FINANCIAL REPORTING

The Company's management, under the supervision of the Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"), have designed disclosure controls and procedures ("DC&P") and internal control over financial reporting ("ICFR"), as defined in National Instrument 52-109, *Certification of Disclosure in Issuers' Annual and Interim Filings*, based on the 2013 control framework developed by the Committee of Sponsoring Organizations of the Treadway Commission.

The DC&P have been designed to provide reasonable assurance that material information relating to the Company is made known to the CEO and CFO, particularly during the period in which the interim filings are prepared and the information required to be disclosed by the Company in its annual filings, interim filings or other reports filed or submitted by it under securities legislation is recorded, processed, summarized and reported within the time periods specified. The ICFR has been designed to provide reasonable assurance regarding the reliability of financial reporting for external purposes in accordance with international financial reporting standards. Due to the inherent limitations associated with any such controls and procedures, management recognizes that, no matter how well designed, they may not prevent or detect misstatements on a timely basis.

CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING

NI 52-109 also requires Canadian public companies to disclose any changes in ICFR during the most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, ICFR. No material changes were made to internal controls in the year ended December 31, 2022.

NOTES TO READER

Cautionary note regarding forward-looking information

Certain information contained in this document constitutes forward-looking statements. All statements, other than statements of historical facts, are forward looking statements, including but not limited to that Titan believes that the district surrounding ESM remains underexplored despite the long operating history of ESM; the nature, extent, location, and timing of future exploration and testing at ESM; the timing and results of construction and mining at the Sphaleros project, including that the decision to mine underground at the near-mine, fully permitted Sphaleros project rather than mine Hoist House, Turnpike and Pumphouse as smaller open pits will improve operating efficiencies by adding incremental ore feed to the mill and allow for longer-lived production from the historic #2 mining zone ; production guidance; that the Company continues to examine various financing options to bolster the Company's treasury; that the Company may require additional funding in the next twelve months; and that the Company expects that it will continue to obtain funding through similar or other means depending on market conditions and other relevant factors at the time. Forward-looking statements are often, but not always, identified by the use of words such as may, will, seek, anticipate, believe, plan, estimate, budget, schedule, forecast, project, expect, intend, or similar expressions.

The forward-looking statements are based on a number of assumptions which, while considered reasonable by the Company, are subject to risks and uncertainties. The Company cautions readers that forward-looking statements involve and are subject to known and unknown risks, uncertainties and other factors which may cause actual results, performance or achievements to differ materially from those expressed in or implied by such forward looking statements and forward-looking statements are not guarantees of future results, performance or achievement. The Company has made assumptions based on or related to many of these risks, uncertainties and factors. These risks, uncertainties and factors include general business, economic, competitive, political, regulatory and social uncertainties; actual results of exploration activities and economic evaluations; fluctuations in currency exchange rates; changes in project parameters; changes in costs, including labour, infrastructure, operating and production costs; future prices of zinc and other minerals; variations of mineral grade or recovery rates; operating or technical difficulties in connection with exploration, development or mining activities, including the failure of plant, equipment or processes to operate as anticipated; delays in completion of exploration, development or construction activities; changes in government legislation and regulation; the ability to maintain and renew existing licenses and permits or obtain required licenses and permits in a timely manner; the ability to obtain financing on acceptable terms in a timely manner; contests over title to properties; employee relations and shortages of skilled personnel and contractors; the speculative nature of, and the risks involved in, the exploration, development and mining business; and the factors discussed in the section entitled "Risks Factors" in the Company's most recent annual information form filed on SEDAR.

Although the Company has attempted to identify important risks, uncertainties and other factors that could cause actual performance, achievements, actions, events, results or conditions to differ materially from those expressed in or implied by the forward-looking information, there may be other risks, uncertainties and other factors that cause performance, achievements, actions, events, results or conditions to differ from those anticipated, estimated or intended. Unless otherwise indicated, forward-looking statements contained herein are as of the date hereof and the Company disclaims any obligation to update any forward-looking statements, whether as a result of new information, future events or results or otherwise, except as required by applicable law.

Risk Factors

The Company's activities and related results are subject to a number of different risks at any given time. Exploration and development of mineral resources involves a high degree of risk. A summary of the Company's financial instruments risk exposure is provided in the Financial Instruments section of the Company's 2022 Annual Financial Statements. The following are additional risk factors which the Company's management believes are most important in the context of the Company's business. It should be noted that this list is not fully comprehensive and that other risk factors may apply.

The Company has a limited operating history

The Company has a limited operating history upon which an evaluation of the Company, its current business and its prospects can be based. Further, its sole production mineral property, ESM's #4 mine, was on care and maintenance since 2008 until recommencing operations in 2017. If the Company is unable to generate significant revenues from ESM's #4 mine, it will not be able to earn profits or continue operations. There can be no assurance that the Company will be successful in ever achieving profitable operations. The Company has a limited operating history from which its business and prospects can be evaluated, and forecasts of any potential growth of the business of the Company are difficult to evaluate. The Company's prospects must be considered in light of the risks, expenses and difficulties frequently encountered by single asset companies in the early stages of development, including under-capitalization, cash shortages, limitations with respect to personnel, financial and other resources, and lack of revenues.

Dependence on ESM's #4 mine

The only mineral producing property the Company has is the ESM #4 mine. Because ESM's #4 mine has a limited life based on mineral resource estimates, now that the Company has re-commenced production at ESM's #4 mine, the Company will be required to replace and expand its mineral resources. In the absence of additional producing mineral projects, the Company will be solely dependent upon ESM's #4 mine for its revenue and profits, if any, and the Company's ability to maintain or increase its annual production will be dependent in significant part on its ability to expand its mineral resource base at ESM's #4 mine and increase throughput at ESM's #4 mine mill above its initially targeted rate.

Construction at Sphaleros

On January 25, 2023, the Company announced that it will begin construction of the Sphaleros project. The production decision for the Sphaleros project was not based on a feasibility study of mineral reserves, demonstrating economic and technical viability, and, as a result, there may be an increased uncertainty of achieving any particular level of recovery of minerals or the cost of such recovery, including increased risks associated with developing a commercially mineable deposit. Historically, such projects have a much higher risk of economic and technical failure. There is no guarantee that production will begin as anticipated or at all or that anticipated production costs will be achieved. Failure to commence production could have a material adverse impact on the Company's ability to generate revenue and cash flow to fund operations. Failure to achieve the anticipated production costs could have a material adverse impact on the Company's cash flow and future profitability. No mining study has been completed in respect of the economic feasibility of the Sphaleros project. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no certainty that the economic and technical viability of the Sphaleros project will be realized.

Limited Supplies, Supply Chain Disruptions, and Inflation

Our operations require skilled personnel and a supply of other resources, such as natural gas, diesel, oil and electricity. Supply may be interrupted due to a shortage or the scarce nature of inputs. Supply might also be interrupted due to transportation and logistics associated government restrictions or regulations which delay importation of necessary items. COVID-19 has had a significant impact on global supply chains, which has impacted our ability to source supplies required for our operations and has increased the costs of those supplies. Global supply chains have been further strained by the current conflict between Russia and the Ukraine and could be strained further by any exacerbation of this conflict. Any interruptions to the procurement and supply of resources, or the availability of skilled personnel, as well as increasing rates of inflation, could have an adverse impact on our future cash flows, earnings, results of operations, and financial condition.

There may be requirements for additional capital in the future

Any future mining, production, processing, development and exploration by the Company may require substantial additional financing, including capital for the continuation or expansion of mining operations at ESM's #4 mine. Failure to obtain sufficient financing may result in delaying or indefinite postponement of the Company's business plans. There can be no assurance that additional capital or other types of financing will be available if needed or that, if available, the terms of such financing will be favourable to the Company. This uncertainty casts doubt about the Company's ability to continue as a going concern.

Financial leverage and restrictive covenants may restrict our current and future operations

The Company and its subsidiaries have agreed to various restrictive covenants with its lender under its Credit Facility including to maintain certain interest coverage and total leverage ratios, make payments of interest and principal when due, to conduct its operations subject to certain restrictions and to comply with restrictions governing current and future indebtedness.

These restrictions prohibit or limit the Company's and its subsidiaries' ability to, among other things, incur additional debt, provide guarantees for indebtedness, create liens, dispose of assets, liquidate, dissolve, wind up, or assign or surrender a material contract. These restrictions may restrict the Company's ability to refinance its existing indebtedness. If the Company defaults in respect of its obligations under its Credit Facility, including without limitation servicing existing indebtedness, or if it is unable to refinance any such indebtedness, its lenders may be entitled to demand repayment and enforce their security against certain assets.

If there is any event of default under any its Credit Facility, the principal amount owing, plus accrued and unpaid interest, may be declared immediately due and payable. If such an event occurs, or if any extended default under such agreements is ongoing, it could have a material negative impact on the Company financially.

In addition, the degree to which the Company and its subsidiaries are leveraged could have important consequences to shareholders, including: (i) the Company's ability to obtain additional financing for working capital, capital expenditures, acquisitions or other project developments in the future may be limited; (ii) a significant portion of the Company's cash flows from operations may be dedicated to the payment of the principal and interest on their indebtedness, thereby reducing funds available for future operations and flexibility to take advantage of business opportunities; (iii) the Company may be unable to refinance its existing indebtedness on terms favourable to the Company, if at all, and the consequences arising therefrom; and (iv) the Company may be more vulnerable to economic downturns and be limited in its ability to withstand competitive pressures. The inability to meet these debt covenants or obtain lenders' consent to carry out restricted activities could materially and adversely affect the business and results of operations of the Company.

Ramping up mining operations

As Titan continues to ramp up commercial production, several risks remain for the Company, including: (i) Titan may encounter unforeseen obstacles or costs in operating the mine, some of which may be material and could cause Titan's estimates of time and costs to ramp up production to be significantly understated, (ii) certain lower levels of the mine are considered unsafe, (iii) some equipment may be more unreliable as operations ramp-up, and (iv) production rates and ore grades may not be as predicted. Any of these factors may adversely affect Titan's ability to ramp up commercial production and could place Titan in a position where it has insufficient cash resources to continue mining operations, or which could result in mining operations being uneconomic.

The Company's current production projections and cost estimates for ESM's #4 mine may prove to be inaccurate

A reduction in the amount of, or a change in the timing of, the zinc production as compared to the Company's current projections for ESM's #4 mine may have a material adverse impact on the Company's anticipated future cash flows. The actual effect of such a reduction of the Company's cash flow from operations would depend on the quantity and timing of any such changes in production and on actual prices and costs. A change in the timing of these projected cash flows due to production shortfalls or labour disruptions would result in delays in receipt of such cash flows and in using such cash to fund operating activities and, as applicable, reduce debt levels or fund capital expenditures. This could result in the Company being required to raise additional equity capital or incur additional indebtedness to finance capital expenditures in the future.

The level of production and capital and operating cost estimates which are used for determining and obtaining financing and other purposes are based on certain assumptions and are subject to considerable uncertainties. Actual results of operations at ESM's #4 mine are likely to differ from the Company's current estimates, and these differences may be significant. Moreover, experience from actual mining or processing operations may identify new or unexpected conditions that could decrease production below, and/or increase capital and/or operating costs above, the current estimates. If actual results are less favourable than the Company currently estimates, the Company's business, results from operations, financial condition and liquidity could be materially adversely affected.

Profitability of the Company

There can be no assurance that the Company's business and strategy will enable it to become profitable or sustain profitability in future periods. The Company's future operating results will depend on various factors, many of which are beyond the Company's direct control, including the Company's ability to develop its mining projects and commercialize its mineral resources, its ability to control its costs, the demand and price for zinc and general economic conditions. If the Company is unable to generate profits in the future, the market price of the Common Shares could decline.

Mining is inherently risky and subject to conditions or events beyond the Company's control

The development and operation of a mine or mine property is inherently dangerous and involves many risks that the Company may not be able to overcome, including:

- unusual or unexpected geological formations;
- metallurgical and other processing problems;
- metal losses;
- environmental hazards;
- power outages;
- labour disruptions;
- industrial accidents;
- periodic interruptions due to inclement or hazardous weather conditions;
- flooding, explosions, fire, rockfalls, rockbursts, cave-ins and landslides;
- ground or soil conditions including seismic activity;
- mechanical equipment and facility performance problems;
- poor ventilation in all or part of ESM; and
- the availability of materials and equipment.

These risks could result in damage to, or destruction of, mineral properties, production facilities or other properties, personal injury or death, including to the Company's employees, environmental damage, delays in mining, increased production costs, asset write downs, monetary losses and legal liability. The Company may not be able to obtain insurance to cover these risks at economically feasible premiums, or at all, or it may choose not to insure against these risks. Insurance against certain environmental risks, including potential liability for pollution and other hazards as a result of the disposal of waste products occurring from production, is not generally available to companies in the mining industry. The Company may suffer a material adverse effect on its business if the Company incurs losses related to any significant events that are not covered by the Company's insurance policies.

Mineral resource calculations are only estimates based on interpretation and assumptions

Any figures presented for mineral resources will only be estimates. There is a degree of uncertainty attributable to the calculation of mineral resources. Until mineralized material is actually mined and processed, the quantity of metal and grades must be considered as estimates only and no assurances can be given that the indicated levels of metals will be recovered. In making determinations about whether to advance any of its projects to development, the Company must rely upon such estimated calculations as to the mineral resources and grades of mineralization on its properties.

The estimation of mineral resources is a subjective process that relies on the judgment of the persons preparing the estimates. The process relies on the quantity and quality of available data and is based on knowledge, mining experience, analysis of drilling results and industry practices. Estimates made at a given time may significantly change when new information becomes available. By their nature, mineral resource estimates are imprecise and depend, to a certain extent, upon analysis of drilling results and statistical inferences that may ultimately prove to be inaccurate.

Estimated mineral resources may have to be recalculated based on changes in mineral prices, further exploration or development activity or actual production experience. This could materially and adversely affect estimates of the volume or grade of mineralization, estimated recovery rates or other important factors that influence mineral resource estimates. The extent to which mineral resources may ultimately be reclassified as mineral reserves is dependent upon the demonstration of their profitable recovery. Any material changes in mineral resource estimates and grades of mineralization will affect the economic viability of placing a property into production and a property's return on capital. The Company cannot provide assurance that mineralization can be mined and processed profitably.

The Company's mineral resource estimates have been determined and valued based on assumed future prices, cut-off grades and operating costs that may prove to be inaccurate. Extended declines in market price for zinc may render portions of the Company's mineralization uneconomic and result in a reduction in reported mineral resources, which in turn could have a material adverse effect on the Company's results of operations, financial condition or the market price of the Common Shares. The Company cannot provide assurance that mineral recovery rates achieved in small scale tests will be duplicated in large scale tests under on-site conditions or in production scale. In addition, if the Company's projects produce concentrate for which there is no market, this may have an impact on the economic model for ESM.

Production based on mineral resources

The Company based its production decision on the results of a preliminary economic assessment and not on a feasibility study of mineral reserves demonstrating economic and technical viability, and as a result there is increased uncertainty and there are multiple technical and economic risks of failure which are associated with this production decision. These risks, among others, include areas that would be analysed in more detail in a feasibility study, such as applying deeper economic analysis to mineral reserves and mineral resources, more detailed metallurgy and a number of specialized studies in areas such as mining and recovery methods, market analysis, and environmental and community impacts.

Uncertainty exists related to inferred mineral resources

There is a risk that inferred mineral resources referred to in the ESM Technical Report cannot be converted into measured or indicated mineral resources as there may be limited ability to assess geological continuity. Due to the uncertainty related to inferred mineral resources, there is no assurance that inferred mineral resources will be upgraded to mineral resources with sufficient geological continuity to constitute mineral reserves as a result of continued exploration and economic evaluation.

Title

There is no guarantee that the Company's title to its properties will not be challenged or impugned. The Company's claims may be subject to prior unregistered agreements or transfers and title may be affected by unidentified or unknown defects. If title to the Company's properties is disputed, it may result in the Company paying substantial costs to settle the dispute or clear title and could result in the loss of the property, which events may affect the economic viability of the Company.

Fluctuations in demand for, and prices of, zinc

As the Company's sole source of revenue is the sale of zinc in separated and/or mixed form, changes in demand for, and the market price of, zinc are expected to have a significant effect on the Company's revenues and results of operations. The value and price of the Common Shares and the Company's financial results may be significantly adversely affected by declines in the prices of zinc. The price of zinc is influenced by many factors beyond the control of the Company. The level of interest rates, the rate of inflation, global and regional consumption patterns, the world supply of and demand for zinc, including zinc's intermediate and end product uses, market behaviour of current supply sources for zinc and the variation in exchange rates can all cause significant fluctuations in prices of zinc. Such external economic factors are in turn influenced by changes in international investment patterns, monetary systems and political developments. The effect of these factors cannot be accurately predicted. The price of zinc and mineral commodities more generally has fluctuated widely in the past decade and future declines in the price of zinc received could cause commercial production to become uneconomic, thereby having a material adverse effect on the Company's business and financial condition and the value and price of the Common Shares. ESM's #4 mine was closed and placed on care and maintenance in the fall of 2008 in the face of a general economic turndown and resulting fall in zinc prices. The Company's results of operations will also be heavily dependent on the costs of consumables, particularly fuel, energy, chemical reagents and other products which may be required to be used in future exploration, development, mining and treatment operations.

A prolonged or significant economic contraction worldwide could put further downward pressure on market prices of zinc. Protracted periods of low prices for zinc could significantly reduce revenues and the availability of required development funds in the future. This could impair asset values and reduce the Company's mineral resources.

In contrast, extended periods of high commodity prices may create economic dislocations that may be destabilizing to supply and demand of zinc and ultimately to the broader markets. Strong prices for zinc may create economic pressure to identify or create alternate technologies using substitutes for zinc that ultimately could depress future long-term demand for zinc, and at the same time may incentivize development of otherwise marginal mining properties that would compete with the Company.

The Company may experience difficulty attracting and retaining qualified management and employees to sustain and grow its business

The Company is dependent on the services of key executives and its skilled employees to advance its corporate objectives and to identify new opportunities for growth and funding. The loss of any executive of the Company and the Company's inability to attract and retain a suitable replacement, or additional highly skilled employees required for the Company's activities, would have a material adverse effect on the Company's business and financial condition.

Competition

The Company competes with other mining companies, many of which are better capitalized, have greater financial resources, operational experience and technical capabilities or are further advanced in their development or are significantly larger and have access to mineral reserves, for the acquisition of mineral claims, leases and other mineral interests as well as for the recruitment and retention of qualified employees and other personnel. If the Company requires and is unsuccessful in acquiring additional mineral properties or qualified personnel, the Company will not be able to grow at the rate it desires, or at all.

Significant governmental regulations

The Company's mining activities are subject to extensive federal, state and local laws, regulations and policies governing various matters, including:

- environmental protection, including regulations with respect to processing concentrates;
- the management and use of toxic substances and explosives;
- the management of natural resources and land;
- the exploration of mineral properties;
- exports;
- price controls;
- taxation and mining royalties;
- labour standards and occupational health and safety, including mine safety; and
- historic and cultural preservation.

Failure to comply with applicable laws and regulations may result in civil or criminal fines or penalties or enforcement actions, including orders issued by regulatory or judicial authorities enjoining or curtailing operations or requiring corrective measures, installation of additional equipment or remedial actions, any of which could result in significant expenditures. The Company may also be required to compensate private parties suffering loss or damage by reason of a breach of such laws, regulations or permitting requirements. It is also possible that future laws and regulations, or more stringent enforcement of current laws and regulations by governmental authorities, could cause the Company to incur additional expenses or capital expenditure restrictions, or suspensions of the Company's activities and delays in the exploration and development of its properties.

Market events and general economic conditions

Adverse events in global financial markets can have profound impacts on the global economy. Many industries, including the zinc mining industry, are affected by these market conditions. Some of the key effects of the financial market turmoil experienced over the past decade include contraction in credit markets resulting in a spread of credit risk, devaluations, high volatility in global equity, commodity, foreign exchange and precious metal markets, and a lack of market liquidity. A continued or worsened slowdown in the financial markets or other economic conditions, including but not limited to, consumer spending, employment rates, business conditions, inflation, fuel and energy costs, consumer debt levels, lack of available credit, the state of the financial markets, interest rates and tax rates, may adversely affect the Company's growth and profitability, financial liabilities and *results* of operations.

Environmental laws and regulations

All of the Company's exploration, development and production activities are subject to regulation by governmental agencies under various environmental laws. These laws address emissions into the air, discharges into water, management of waste, management of hazardous substances, protection of natural resources, antiquities and endangered species and reclamation of lands disturbed by mining operations. Environmental legislation is evolving and the general trend has been towards stricter standards and enforcement, increased fines and penalties for non-compliance, more stringent environmental assessments of proposed projects and increasing responsibility for companies and their officers, directors and employees. Compliance with environmental laws and regulations may require significant capital outlays on the Company's behalf and may cause material changes or delays in the Company's intended activities. Future changes in these laws or regulations could have a significant adverse impact on some portion of the Company's business, requiring the Company to re-evaluate those activities at that time. Non-compliance thereof may result in significant penalties, fines and/or sanctions imposed on the Company by the relevant environmental regulatory authority resulting in a material adverse effect on the Company's reputation and results of its operations.

Threat of legal proceedings

Due to the nature of its business, the Company may be subject to numerous regulatory investigations, civil claims, lawsuits and other proceedings in the ordinary course of its business. The results of these legal proceedings cannot be predicted with certainty due to the uncertainty inherent in litigation, the difficulty of predicting decisions of regulators, judges and juries and the possibility that decisions may be reversed on appeal. The Company's efforts to respond to the legal proceedings could result in a diversion of management time and attention from revenue-generating activities. There can be no assurances that these matters will not have a material adverse effect on the Company's business. See "*Title*", above and "*Legal Proceedings*".

Rights, concessions and permits

The Company's current and anticipated future operations, including further exploration, development and production on its mineral properties, including ESM's #4 mine, require concessions and permits from various governmental authorities.

Obtaining or renewing governmental concessions and permits is a complex and time-consuming process. The duration and success of efforts to obtain and renew permits are contingent upon many variables not within the Company's control. The Company cannot provide assurance that all rights, concessions and permits that it requires for its operations will be obtainable or renewable on reasonable terms, or at all. Delays or a failure to obtain or renew such required concessions and permits, or the expiry, revocation or failure to comply with the terms of any such concessions and permits that the Company has obtained, would adversely affect the Company's business.

Social and environmental activism can have a negative effect on exploration, development and mining activities

There is an increasing level of public concern relating to the effects of mining on the natural landscape, on communities and on the environment. Certain non-governmental organizations, public interest groups and reporting organizations ("NGOs") who oppose resource development can be vocal critics of the mining industry. In addition, there have been many instances in which local community groups have opposed resource extraction activities, which have resulted in disruption and delays to the relevant operation. Local communities in St. Lawrence County, NGOs or local community organizations could direct adverse publicity and/or disrupt the operations of the Company in respect of ESM or another of the Company's properties, regardless of its successful compliance with social and environmental best practices, due to political factors, activities of unrelated third parties on lands in which the Company has an interest or the Company's operations specifically. Any such actions and the resulting media coverage could have an adverse effect on the reputation and financial condition of the Company or its relationships with the communities in which it operates, which could have a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects.

Land reclamation requirements for the Company's properties may be burdensome

Land reclamation requirements are generally imposed on companies with mining operations or mineral exploration companies in order to minimize long term effects of land disturbance. Reclamation may include requirements to:

- control dispersion of potentially deleterious effluents; and
- reasonably re-establish pre-disturbance land forms and vegetation.

In order to carry out reclamation obligations imposed on the Company in connection with exploration, development and production activities, the Company must allocate financial resources that might otherwise be spent on exploration and contemplated development programs. If the Company is required to carry out unanticipated reclamation work or provide security for further reclamation work, the Company's financial position could be adversely affected.

Tailings management facility and environmental reclamation

The embankment for the tailings management facility ("TMF") at ESM's #4 mine will need to be raised to fully contain the estimated tonnage for ESM's#4 mine as set out in the current mine plan. The Company is not certain how the native surface of the TMF was prepared, what design features were included, what sub-surface conditions existed prior to construction or the material properties of the fill used for construction. If the Company is unable to complete the embankment raise at the TMF, or if the TMF were to subsequently breach, the Company would be required to delay or cease operations at ESM's #4 mine for a significant period of time. This may also necessitate extensive response and rehabilitation activities. The Company may not receive approvals and consents necessary to proceed with the remaining rehabilitation plans in a timely manner. The Company cannot anticipate the timing and amount of the costs and the liabilities relating to any such TMF failure, or whether such failure would result in the Company being subject to regulatory charges or claims, fines and penalties or the potential quantum thereof.

Insurance

ESM's #4 mine is subject to numerous risks and hazards. Such risks could result in personal injury, environmental damage, damage to and destruction of the facilities, delays in production and liability. For some of these risks, the Company maintains insurance to protect against these losses at levels consistent with industry practice. However, the Company may choose not to insure certain risks or may not be able to maintain current or desired levels of insurance coverage, particularly if there is a significant increase in the cost of premiums. The Company's current policies may not cover all losses and the Company currently does not have specific coverage for environmental risk. Moreover, in the event that the Company is unable to fully pay for the cost of remedying damages, particularly environmental problems, the Company might be required to suspend or significantly curtail its activities or enter into other interim compliance measures.

Health & safety

Mining, like many other extractive natural resource industries, is subject to potential risks and liabilities due to accidents that could result in serious injury or death. The impact of such accidents could affect the profitability of the operations, cause an interruption to operations, lead to a loss of licenses, affect the reputation of the Company and its ability to obtain further licenses, damage community relations and reduce the perceived appeal of the Company as an employer.

There is no assurance that the Company has been or will at all times be in full compliance with all laws and regulations or hold, and be in full compliance with, all required health and safety permits. The potential costs and delays associated with compliance with such laws, regulations and permits could prevent the Company from proceeding with the development of a project or the operation or further development of a project, and any non-compliance therewith may adversely affect the Company's business, financial condition and results of operations.

Amendments to current laws, regulations and permits governing operations and activities of mining companies, or more stringent implementation thereof, could have a material adverse impact on the Company and cause increases in exploration expenses, capital expenditures or production costs, reduction in levels of production at producing properties, or abandonment or delays in development of new mining properties.

The Company is dependent on information technology systems

The Company's operations depend, in part, upon information technology systems. The Company's information technology systems are subject to disruption, damage or failure from a number of sources, including, but not limited to, computer viruses, security breaches, natural disasters, power loss and defects in design. Although to date the Company has not experienced any material losses relating to information technology system disruptions, damage or failure, there can be no assurance that it will not incur such losses in future. Any of these and other events could result in information technology systems failures, operational delays, production downtimes, destruction or corruption of data, security breaches or other manipulation or improper use of the Company's systems and networks, any of which may result in a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects.

Fixed zinc pricing arrangements

The Company has entered into fixed zinc pricing arrangements in respect of a material amount of its forecasted zinc production. The use of these arrangements involves certain inherent risks including the risk of default on amounts owing to the Company by the counterparties with which the Company has entered into such transactions. In the event that such any such risks materialize, the Company's future cash flows, profitability, results of operations and financial condition could be materially and adversely affected.

Conflicts of Interest

Certain of the Company's directors also serve or may serve as directors or officers of, or have significant shareholdings in, other companies involved in natural resource exploration, development and production or mining-related activities, including in other companies involved in the exploration, development and production of zinc. To the extent that such other companies may participate in ventures in which the Company may participate, or in ventures which the Company may seek to participate in, the Company's directors and officers may have a conflict of interest in negotiating and concluding terms respecting the extent of such participation. In all cases where the Company's directors and officers have an interest in other companies, such other companies may also compete with the Company for the acquisition of mineral property investments. Such conflicts of the Company's directors and officers may result in a material and adverse effect on the Company's profitability, results of operation and financial condition. As a result of these conflicts of interest, the Company may miss the opportunity to participate in certain transactions, which may have a material adverse effect on the Company's financial position.

Risks inherent in acquisitions

The Company may actively pursue the acquisition of exploration, development and production assets consistent with its acquisition and growth strategy. From time to time, the Company may also acquire securities of or other interests in companies with respect to which it may enter into acquisitions or other transactions. Acquisition transactions involve inherent risks, including but not limited to:

- accurately assessing the value, strengths, weaknesses, contingent and other liabilities and potential profitability of acquisition candidates;
- ability to achieve identified and anticipated operating and financial synergies;
- unanticipated costs;
- diversion of management's attention from existing business;
- potential loss of the Company's key employees or key employees of any business acquired;
- unanticipated changes in business, industry or general economic conditions that affect the assumptions underlying the acquisition; and
- decline in the value of acquired properties, companies or securities.

Any one or more of these factors or other risks could cause the Company not to realize the anticipated benefits of an acquisition of properties or companies, and could have a material adverse effect on its financial condition.

Labour and employment retention relations

Production at ESM's #4 mine will be dependent upon the ability of the Company to hire qualified employees and to maintain good relations with its employees. In addition, relations between the Company and its employees may be impacted by changes in the scheme of labour relations which may be introduced by the relevant governmental authorities in the United States. Adverse changes in such legislation or in the relationship between the Company and its employees or the ability to attract employees to ESM's #4 mine may have a negative impact on the Company's business, results of operations and financial condition.

Anti-corruption and bribery regulation, including the Canadian Extractive Sector Transparency Measures Act ("ESTMA") reporting

The Company is required to comply with anti-corruption and anti-bribery laws in Canada and the United States. In recent years, there has been a general increase in both the frequency of enforcement and the severity of penalties under such laws, resulting in greater scrutiny and punishment of companies convicted of violating anti-corruption and anti-bribery laws. Furthermore, a company may be found liable for violations by not only its employees, but also by its contractors and third-party agents. Although the Company has adopted a Code of Conduct that addresses these matters, no assurance can be given that the Company, or its employees, contractors or third-party agents will comply strictly with such laws. If the Company is the subject of an enforcement action or in violation of such laws, it may result in significant penalties, fines and/or sanctions imposed on the Company resulting in a material adverse effect on the Company's reputation and results of its operations.

In addition, ESTMA requires public disclosure of payments to governments by mining and oil and gas companies engaged in the commercial development of oil, gas and minerals who are either publicly listed in Canada or with business or assets in Canada. Mandatory annual reporting is required for extractive companies with respect to payments made to foreign and domestic governments at all levels, including entities established by two or more governments, and including aboriginal groups. ESTMA requires reporting on the payments of any taxes, royalties, fees, production entitlements, bonuses, dividends, infrastructure improvement payments, and any other prescribed payment over C$100,000. Failure to report, false reporting or structuring payments to avoid reporting may result in fines of up to C$250,000 (which may be concurrent). The Company commenced reporting in 2017. If the Company finds itself subject to an enforcement action or in violation of ESTMA, this may result in significant penalties, fines and/or sanctions imposed on the Company resulting in a material adverse effect on its reputation.

Infrastructure

Mining, processing, development and exploration activities depend on the availability of adequate infrastructure. Reliable roads, bridges and power sources are important factors that affect capital and operating costs. Sabotage, government or other interference in the maintenance or provision of such infrastructure could adversely affect the Company's operations, financial condition and results of operations.

Enforceability of judgments

Certain directors of the Company reside outside of Canada. As a result, holders of Common Shares may not be able to effect service of process within Canada to such directors, or to enforce Canadian court judgments obtained against such directors in jurisdictions outside of Canada, including those predicated upon the civil liability provisions of applicable Canadian securities laws. Furthermore, it may be difficult for the holders of Common Shares to enforce, in original actions brought in courts in jurisdictions outside of Canada, liabilities predicated upon Canadian securities laws.

Global Outbreaks and Coronavirus

The Company's business could be significantly adversely affected by the effects of any widespread global outbreak of contagious disease. A significant outbreak of contagious diseases in the human population could result in a widespread health crisis that could adversely affect the economies and financial markets of many countries, resulting in an economic downtown that could affect demand for the Company's products and likely impact operating results. In particular, the recent outbreak of the novel coronavirus ("COVID-19") has had a negative impact on the Company's business and global financial conditions. The Company cannot accurately predict the impact COVID-19 will have on the Company to obtain financing or third parties' ability to meet their obligations with the Company, including due to uncertainties relating to the ultimate geographic spread of the virus, the severity of the disease, the duration of the outbreak, and the length of travel and quarantine restrictions imposed by governments of affected countries. In the event that the prevalence of the coronavirus continues to increase (or fears in respect of the coronavirus continue to increase), governments may increase regulations and restrictions regarding the flow of labour or products, and travel bans, and the Company's operations, suppliers, customers and distribution channels, and ability to advance its projects, could be adversely affected. In particular, should any employees or consultants of the Company become infected with COVID-19 or similar pathogens, it could have a material negative impact on the Company's operations and prospects.

Russia-Ukraine Conflict

In late February 2022, Russia launched a large-scale military attack on Ukraine. The invasion significantly amplified already existing geopolitical tensions among Russia, Ukraine, Europe, NATO and the West, including Canada. In response to the military action by Russia, various countries, including Canada, the United States, the United Kingdom and European Union issued broad-ranging economic sanctions against Russia. Such sanctions (and any future sanctions) and other actions against Russia may adversely impact, among other things, the Russian economy and various sectors of the economy, including but not limited to, financials, energy, metals and mining. Accordingly, the actions discussed above and the potential for a wider conflict could increase financial market volatility and cause severe negative effects on regional and global economic markets. As a result, the Company's business, financial condition, and results of operations may be negatively affected by economic and other consequences from Russia's military action against Ukraine and the sanctions imposed in response to that action.

Qualified Person

The technical and scientific information in this MD&A has been reviewed and approved by Donald R. Taylor, MSc., PG, President and Chief Executive Officer of the Company, a qualified person for the purposes of NI 43-101. Mr. Taylor has more than 25 years of mineral exploration and mining experience and is a Registered Professional Geologist through the SME (registered member #4029597).

For additional information, please see the technical report titled "Empire State Mines 2021 NI 43-101 Technical Report" (Amended) with an effective date of February 24, 2021, filed on SEDAR at www.sedar.com.

Non-GAAP performance measures

This document includes non-GAAP performance measures, discussed below, that do not have a standardized meaning prescribed by IFRS. The performance measures may not be comparable to similar measures reported by other issuers. The Company believes that these performance measures are commonly used by certain investors, in conjunction with conventional GAAP measures, to enhance their understanding of the Company's performance. The Company uses these performance measures extensively in internal decision-making processes, including to assess how well the Empire State Mine is performing and to assist in the assessment of the overall efficiency and effectiveness of the mine site management team. The table below provides a reconciliation of these non-GAAP measures to the most directly comparable IFRS measures as contained within the Company's issued financial statements.

C1 cash cost per payable pound sold

C1 cash cost per payable pound sold is a non-GAAP measure. C1 cash cost represents the cash cost incurred at each processing stage, from mining through to recoverable metal delivered to customers, including mine site operating and general and administrative costs, freight, treatment and refining charges.

The C1 cash cost per payable pound sold is calculated by dividing the total C1 cash costs by payable pounds of metal sold.

All-In Sustaining Cost (AISC)

This measures the estimated cash costs to produce a pound of payable zinc plus the estimated capital sustaining costs to maintain the mine and mill. This measure includes the C1 cash cost per pound and capital sustaining costs divided by pounds of payable zinc sold. All-In Sustaining Cost per payable pound of zinc sold does not include depreciation, depletion, amortization, reclamation and exploration expenses.

(In thousands of US Dollars, unless otherwise indicated)

	Three months ended December 31, 2022		2021		Year ended December 31, 2022		2021	
C1 cash cost per payable pound	Total	Per pound	Total	Per pound	Total	Per pound	Total	Per pound
Pounds of payable zinc sold (millions)		13.0		12.7		51.1		48.3
Operating expenses and selling costs	$ 10,259	$0.78	$ 9,697	$0.76	$42,752	$0.83	$34,823	$0.72
Concentrate smelting and refining costs	3,639	0.28	2,588	0.20	14,045	0.28	9,935	0.21
Total C1 cash cost	$ 13,898	$1.06	$12,285	$0.96	$56,797	$1.11	$44,758	$0.93
Sustaining Capital Expenditures	$ 229	$0.02	$ 582	$0.05	$2,372	$0.05	$3,996	$0.07
AISC	$14,127	$1.08	$12,867	$1.01	$59,169	$1.16	$48,754	$1.00

Sustaining capital expenditures

Sustaining capital expenditures are defined as those expenditures which do not increase payable mineral production at a mine site and excludes all expenditures at the Company's projects and certain expenditures at the Company's operating sites which are deemed expansionary in nature. Expansionary capital expenditures are expenditures that are deemed expansionary in nature. The following table reconciles sustaining capital expenditures and expansionary capital expenditures to the Company's additions to mineral, properties, plant and equipment (or total capital expenditures):

	Year ended December 31, 2022	Year ended December 31, 2021
Sustaining capital expenditures	$ 2,372	$ 3,996
Expansionary capital expenditures	2,237	590
Additions to mineral, properties, plant and equipment	$ 4,609	$ 4,586

Net Debt

Net debt is calculated as the sum of the current and non-current portions of long-term debt, net of the cash and cash equivalent balance as at the balance sheet date. A reconciliation of net debt is provided below.

	Year ended December 31, 2022	Year ended December 31, 2021
Current portion of debt	$ 176	$ 95
Non-current portion of debt	29,856	34,617
Total debt	$ 30,032	$ 34,712
Less: Cash and cash equivalents	(6,720)	(6,041)
Net debt	$ 23,312	$ 28,671

(In thousands of US Dollars, unless otherwise indicated)

Free Cash Flow

	Year ended December 31, 2022	Year ended December 31, 2021
Net cash provided by operating activities	$ 15,667	$ 7,257
Less: Capital expenditures	(4,309)	(4,586)
Free cash flow	$ 11,358	$ 2,671