MANAGEMENT'S DISCUSSION AND ANALYSIS
YEAR ENDED DECEMBER 31, 2021

This Management's Discussion & Analysis ("MD&A") is dated as of February 24, 2022 and should be read in conjunction with our audited consolidated financial statements for the year ended December 31, 2021. In this MD&A, a reference to "Trevali", the "Company", "us", "we" or "our" refers to Trevali Mining Corporation and its subsidiaries. Additional information about us, including our Annual Information Form and Management Information Circular, is available on SEDAR at www.sedar.com.

This MD&A contains certain forward-looking information and forward-looking statements. Please refer to the cautionary language under the heading "Notes to Reader".

FINANCIAL AND OPERATIONAL HIGHLIGHTS

- **Reduced significant incidents by 30% during 2021 compared to 2020.** Total recordable injury frequency increased to 8.8 as compared to 4.5 in 2020.
- **Achieved 2021 payable zinc production of 316.2 million payable pounds following a final adjustment downward of 6.2 million pounds at Perkoa**, below revised guidance of 325 to 350 million pounds of payable zinc normalized for the sale of Santander.
- **2021 revenues[2] increased 61% to $343.7 million compared to the prior year** due to a 32% strengthening of the average annual zinc price and a 47% decrease in treatment charges.
- **C1 Cash Cost[1] of $0.91 per pound and AISC[1] of $1.05 per pound,** flat relative to the prior year. AISC[1] was above revised guidance of $0.89 to $0.97 per pound.
- **Adjusted EBITDA[1] of $102.3 million, an $83.3 million increase over the prior year** and $25.2 million for Q4 2021, a 23% and 25% increase over prior quarter and Q4 2020, respectively.
- **Operating cash flows before changes in working capital of $90.8 million for 2021,** due to strengthened zinc, lead and silver prices and reduced zinc treatment charge rate.
- **Net Debt[1] reduction of $27.0 million during the year to $78.0 million as at December 31, 2021 with a $4.0 million reduction during Q4 2021,** a result of the operating profit.
- **RP2.0 Feasibility Study published in August 2021 and commenced financing efforts with good progress to-date.** Non-binding expressions of interest have been received from several capital providers.
- **Successfully restarted Caribou operations in March 2021** with a 21-month fixed-pricing arrangement at $1.25 per pound for 115 million payable pounds of zinc.
- **Issued 3rd Annual Sustainability Report in June covering new performance targets and disclosures.**
- **Santander sale finalized on December 3, 2021, together with a 10:1 share consolidation**. The sale resulted in a non-cash $19.2 million gain on disposal.

		2021	2020	YoY	Q4'21	Q3'21	Q4'20	Q4'21 vs Q3'21	Q4'21 vs Q4'20
Zinc payable production	Mlbs	316.2	313.0	1%	71.8	82.4	74.2	–13%	–3%
Lead payable production	Mlbs	39.3	29.9	31%	11.9	11.8	8.4	1%	42%
Silver payable production	Moz	0.9	0.8	13%	0.1	0.3	0.3	–67%	–67%
Revenue[2]	$	343,653	212,884	61%	90,781	79,811	68,086	14%	33%
Adjusted EBITDA[1,2]	$	102,291	18,960	440%	25,226	20,532	20,101	23%	25%
Operating cash flows before working capital[2]	$	90,797	10,497	765%	23,320	18,495	20,945	26%	11%
Net income (loss)	$	26,672	(245,606)	111%	19,552	5,752	(51,742)	240%	138%
Net income (loss) per share	$	0.27	(3.00)	109%	0.20	0.07	(0.60)	186%	133%
C1 Cash Cost[1]	$/lb	0.91	0.90	1%	1.09	0.85	0.87	28%	25%
AISC[1]	$/lb	1.05	1.02	3%	1.29	0.99	0.97	30%	33%
Sustaining capital[1]	$	38,574	32,887	17%	12,992	9,720	6,561	34%	98%
Expansionary capital[1]	$	13,215	6,174	114%	4,155	1,350	1,247	208%	233%
Exploration expenditure	$	6,331	4,278	48%	762	2,068	550	–63%	39%

[1] See "Use of Non-IFRS Financial Performance Measures".
[2] Amounts include both continued and discontinued operations

Conversion of tonnes to pounds, 1 tonne = 2,204.62 pounds or lbs.

BUSINESS OVERVIEW

Trevali is a global base-metals mining company, headquartered in Vancouver, Canada. The bulk of the Company's revenue is generated from base-metals mining at the 90%-owned Perkoa mine in Burkina Faso, the 90%-owned Rosh Pinah mine in Namibia, the wholly-owned Caribou mine in New Brunswick and the formerly owned Santander mine in Peru (which was sold on December 3, 2021). In addition, Trevali owns the Halfmile and Stratmat properties and the Restigouche deposit in New Brunswick, Canada, and the past producing Ruttan mine in northern Manitoba, Canada. The Caribou mine was placed on care and maintenance on March 26, 2020; on January 15, 2021, the Company restarted operations with zinc payable production resuming on March 25, 2021. Trevali also owns an effective 44% interest in the Gergarub project in Namibia, as well as an option to acquire a 100% interest in the Heath Steele deposit located in New Brunswick, Canada. The shares of the Company are listed on the TSX (symbol TV), the OTCQX (symbol TREVF), the Lima Stock Exchange (symbol TV), and the Frankfurt Exchange (symbol 4TI). For further details on Trevali, readers are referred to the Company's website (www.trevali.com) and to Canadian regulatory filings on SEDAR at www.sedar.com.

FINANCING INITIATIVE

The Company is currently working to secure project financing for the RP2.0 expansion project and to refinance both the existing Corporate Revolving Credit Facility and Glencore Facility which mature in September 2022. The Company is targeting a comprehensive financing package totalling approximately $200 million to refinance existing debt and fund the RP2.0 project.

Endeavour Financial appointed in September 2021

Endeavour Financial is a leading mining financial advisory firm, with a record of success in the mining industry and specializing in arranging multi-sourced funding solutions for development-stage companies.

The Company is considering several opportunities for the financing package including project finance debt, subordinated debt and a silver stream on Rosh Pinah's silver production.

Non-Binding Expressions of Interest

The Company has received non-binding expressions of interest from several capital providers about participating in the financing process, including commercial banks, streaming and royalty companies, and mining focused alternative lenders, as well as from Rosh Pinah's concentrate offtaker, with an affiliate of Glencore plc ("Glencore").

Glencore conditional support of $33 million

Glencore has indicated its support for the project by proposing an aggregate $33 million financing package, which may include an extension to the existing Glencore Facility of $13 million, subordinated to traditional project finance debt and contingent on the remainder of the required financing package being secured as well as negotiation of satisfactory terms and conditions.

(in United States dollars, tabular amounts in thousands except where noted)

FINANCIAL AND OPERATIONAL SUMMARY

		2021	2020	YoY	**Q4'21**	Q3'21	Q4'20	Q4'21 vs Q3'21	Q4'21 vs Q4'20
Production									
Ore mined	t	2,540,119	2,399,931	6%	611,049	668,362	567,071	–9%	8%
Ore milled	t	2,610,526	2,376,829	10%	613,225	676,289	560,898	–9%	9%
Zinc head grade		7.6%	8.1%	–7%	7.6%	7.5%	8.1%	1%	–6%
Lead head grade		1.5%	1.2%	26%	1.8%	1.7%	1.4%	6%	29%
Silver head grade	(ozs/t)	1.2	1.0	20%	1.2	1.3	0.8	–8%	50%
Zinc recovery		87.6%	88.2%	–1%	87.1%	87.6%	88.9%	–1%	–2%
Lead recovery		68.3%	73.4%	–7%	70.8%	70.4%	75.7%	1%	–6%
Silver recovery		44.6%	51.4%	–13%	43.8%	44.4%	61.9%	–1%	–29%
Zinc payable	Mlbs	316.2	313.0	1%	71.8	82.4	74.2	–13%	–3%
Lead payable	Mlbs	39.3	29.9	31%	11.9	11.8	8.4	1%	42%
Silver payable	Moz	0.9	0.8	13%	0.1	0.3	0.3	–67%	–67%
Sales									
Zinc payable	Mlbs	304.1	303.5	0%	78.6	66.6	74.8	18%	5%
Lead payable	Mlbs	33.5	25.0	34%	5.3	12.9	8.8	–59%	–40%
Silver payable	Moz	0.9	0.7	29%	0.2	0.3	0.2	–33%	0%
Cost per unit									
C1 Cash Cost[1]	$/lb	0.91	0.90	1%	1.09	0.85	0.87	28%	25%
AISC[1]	$/lb	1.05	1.02	3%	1.29	0.99	0.97	30%	33%

Consolidated annual production of 316.2 million pounds of payable production an increase of 1% compared to the prior year due to the restart of the Caribou mine in March 2021 resulting in nine months of operations in 2021 versus three months in 2020, mostly offset by decreased production at Santander due to lower grades as per mine plan and the sale on December 3, 2021. Sales volumes were consistent with production year on year.

A final payable production adjustment was recorded following a final metal reconciliation (zinc concentrate weights and assays in final sales invoices versus preliminary invoices). The result was a 6.2 million pound final adjustment recorded in Q4 2021, decreasing 2021 payable zinc production at the Perkoa mine versus preliminary figures announced January 24, 2022. Management is conducting a review of this adjustment to mitigate such adjustments in the future.

Annual C1 Cash Cost[1] and AISC[1] for the group remained relatively consistent in 2021 compared to the previous year with increases of 1% and 3%, respectively, primarily as a result of increased on-site operating costs and freight costs and a weaker U.S. dollar, mostly offset by decreased treatment charge rates and increased by-product sales.

Consolidated quarterly production for Q4 2021 of 71.8 million pounds of payable production was a decrease of 13% compared to the prior quarter due to Caribou production challenges, the reconciliation adjustment at the Perkoa mine and the sale of the Santander mine completed on December 3, 2021. Sales volumes in Q4 2021 increased by 18% and 5% compared to the previous quarter and Q4 2020, respectively, due to timing of shipments at the Rosh Pinah and Perkoa mines.

C1 Cash Cost[1] and AISC[1] for Q4 2021 increased by 28% and 30%, respectively, as compared to Q3 2021 primarily due to the delay of a lead concentrate shipment at Rosh Pinah to Q1 2022 and reduced production volumes due to decline in grades and production challenges at the Caribou mine and the reconciliation adjustment at the Perkoa mine.

[1] *See "Use of Non-IFRS Financial Performance Measures".*

(in United States dollars, tabular amounts in thousands except where noted)

		2021	2020	YoY	Q4'21	Q3'21	Q4'20	Q4'21 vs Q3'21	Q4'21 vs Q4'20
Revenues[2]	$	343,653	212,884	61%	90,781	79,811	68,086	14%	33%
Zinc payable sales	Mlbs	304.1	303.5	0%	78.6	66.6	74.8	18%	5%
Average zinc LME price	$/lb	1.36	1.03	32%	1.53	1.36	1.19	13%	29%
EBITDA[1,2]	$	97,183	(198,664)	149%	24,058	27,068	(34,832)	–11%	–169%
Adjusted EBITDA[1,2]	$	102,291	18,960	440%	25,226	20,532	20,101	23%	25%
Net income (loss)	$	26,672	(245,606)	111%	19,552	5,752	(51,742)	240%	138%
Earnings (loss) per share basic and diluted	$	0.27	(3.00)	109%	0.20	–	(0.60)	100%	133%
Adjusted earnings (loss) per share[1]	$	0.13	(0.30)	143%	0.01	–	–	100%	100%

The increase in revenues in Q4 2021 to $90.8 million is attributable to the 13% increase in zinc price as compared to Q3 2021 as well as the 18% increase in payable sales volumes as a direct result of the timing of shipments.

Q4 2021 Adjusted EBITDA[1] of $25.2 million improved from $20.5 million in Q3 2021 due primarily to the increase in revenues. EBITDA[1] and Adjusted EBITDA[1] during Q4 2021 are similar as a result of fewer adjusting items in contrast to comparative periods which included more significant mark-to-market adjustments and an impairment of property, plant and equipment at the Santander mine in Q4 2020.

MARKET OUTLOOK

Management of the Company believes that the outlook for the zinc market remains strong. The base metals sector has generally performed well through to the end of 2021, however, the pace of interest rate increases has heightened the concern about the direction of near-term price trends and added to the volatility into year-end. In our view, the overriding backdrop of an extended positive price cycle remains as global economic activity intensifies with infrastructure spending, pent-up demand growth and metal supply constraints. Although risks of higher energy prices, supply chain challenges and associated manufacturing and production shortages may result in operating cost pressure and price volatility, the post-pandemic economic environment is anticipated to be much more commodity intensive versus recent cycles. In effect, we believe that the global economy and various “green energy” initiatives have some catching up to do after the pandemic slowdown. In our view, the expected ongoing structural changes have positive implications and provide opportunities for our business, but will also carry risks that will require careful management.

The zinc spot price started Q4 2021 at $1.35 per pound and ended the quarter at $1.63 per pound and traded in a very wide $0.40 per pound range, a trading range of 5.0x the previous quarter and 1.5x the first three quarters of 2021. In early October, the London Metals Exchange (“LME”) cash zinc price rallied to $1.74 per pound on the back of zinc smelter curtailments largely due to electricity cost pressure in Europe and power availability issues in China. Further, the International Lead and Zinc Study Group reduced its expectation for global refined zinc surplus for 2021 to 217,100 tonnes on October 7, 2021, versus the prior expectation of 353,000 tonnes announced in April. LME zinc stocks closed the year at 199,575 tonnes, having peaked in April at 298,025 tonnes and down from the January open of 202,075 tonnes, despite China releasing 180,000 tonnes of zinc from its strategic reserve across four market auctions.

[1] See “Use of Non-IFRS Financial Performance Measures”.
[2] Amounts include both continued and discontinued operations.

Global manufacturing, though expanding, has witnessed some mixed improvement. In December 2021, Euro area manufacturing sector conditions continued to disappoint with output growth remaining unchanged from November 2021, which was the second weakest seen since production growth resumed in July 2020. The final reading of the IHS Markit Eurozone Manufacturing PMI for December 2021 was 58.0. The data also showed a further easing of the supply chain crisis as average lead times lengthened to the smallest extent since February 2021. The manufacturing PMI for Japan came in at 54.3 in December 2021, a slight softening from 54.5 in November 2021. Global production increased for the third consecutive month, though growth eased to a more moderate pace. The Chinese manufacturing sector rose in December 2021 after some weakness in November 2021. At 50.9 in December 2021, the headline seasonally adjusted general manufacturing PMI in China was up from 49.9 posted in the prior month. The higher headline index figure was partly driven by a stronger increase in production at the end of 2021. Although business confidence remained strong overall in December 2021, the degree of optimism slipped to a 20-month low. The ongoing global pandemic, and its uncertain trajectory, as well as strained supply chains were cited as key challenges for the year ahead. Finally, in the USA, the seasonally adjusted US Manufacturing PMI posted 57.7 in December 2021, down from 58.3 in November 2021. Manufacturers noted constraints on production due to severe material shortages and input delivery delays.

As reported previously, the annual benchmark contract treatment charge for zinc concentrate was agreed to in Asia and Europe at $159 per tonne in 2021 versus $300 per tonne in 2020. The treatment charge benchmark has yet to be determined for 2022. Treatment charges for the Company are determined by reference to the annual benchmark treatment charges, in accordance with concentrate off-take agreements. Although market expectations are for zinc concentrate supply to expand in the coming quarters, the anticipated rate of increase may continue to fall short. The supply of zinc has implications for treatment charges. According to Wood Mackenzie, the indicative spot treatment charge for December 2021 is $85 per tonne CIF into China. Spot rates have ranged from $75 to $90 per tonne into December and are well below the Chinese spot averages of $285 and $209 per tonne in 2019 and 2020, respectively.

During Q4 2021, the LME zinc price averaged $1.52 per pound, maintaining its improvement from its pandemic low of $0.82 per pound reached back in March 2020. Management expects to see fundamental support for zinc prices in the medium term and believes demand will outweigh supply as global economic activity expands and infrastructure spending and green energy initiatives make an impact.

LME exchange inventories decreased to 199,575 tonnes by the end of Q4 2021 versus 208,875 tonnes on September 30, 2021. Shanghai Futures Exchange (“SHFE”) zinc stocks increased to 57,917 tonnes versus 54,750 tonnes at the end of Q3 2021. Although total exchange stocks rose at the end of 2021 to the equivalent of 7 days of global consumption, they remain low by historical standards and do not provide much of a buffer against any further supply disruptions to smelter production.

Relatively low zinc stocks and robust demand continue to put upward pressure on spot zinc premiums which are moving higher. In the US, high freight costs have pushed spot premiums as high as $400 per tonne ($0.18 per pound), while in Europe they are in the region of $260 per tonne, up from $150 per tonne in September 2021 and in SE Asia spot premiums are approximately $145 per tonne, up $25 per tonne from September 2021.

CORPORATE DEVELOPMENTS

On January 15, 2021, the Company announced the planned restart of its Caribou mine which had been on a care and maintenance program since March 2020. The Company has reduced its exposure to commodity price fluctuations during the initial two-year plan by entering into a 21-month fixed-pricing arrangement Glencore for 115 million pounds of payable zinc production from Caribou, at an average price of $1.25 per pound.

On January 18, 2021, the Company announced the appointment of Jeane Hull to its Board of Directors effective February 1, 2021.

On February 26, 2021, the Company announced that it had entered into a binding term sheet that sets out the terms for an exploration joint venture with Arrow Minerals (ASX: AMD), wherein both parties agreed to grant the other reciprocal exploration rights to their exploration permits in the Boromo gold belt in Burkina Faso which the Company believes is underexplored for base metals.

On March 30, 2021, the Company announced that it had trucked its first ore concentrate from the Caribou mine since announcing the planned restart of operations on January 15, 2021.

On March 31, 2021, the Company reported its Mineral Reserves and Mineral Resources statements as of December 31, 2020. Proven and Probable Mineral Reserves have increased globally and grades have reduced marginally due to an increase in Net Smelter Return value resulting from reduced offsite costs and increased metal price forecasting. For further information, refer to the March 31, 2021 press release entitled “Trevali Reports 2020 Mineral Reserves and Resources; Increasing Mineral Reserves at Rosh Pinah and Caribou Mine”.

In April 2021, the 2021 annual treatment charge benchmark rates were agreed for both zinc and lead. Zinc treatment charges were set at $159 per tonne and lead treatment charges were set at $136 per tonne, decreases of 47% and 26%, respectively compared to the 2020 benchmark. Trevali’s concentrate off-take agreements reference the annual benchmark treatment charge rates. These rates are retroactive and apply to concentrate produced during 2021, regardless of when the sale occurs.

On April 7, 2021, the Company announced it had entered into a 15-year renewable power purchase agreement with Emerging Markets Energy Services Company (“EMESCO”) for the supply of solar power to the Rosh Pinah mine. The Company has previously committed to achieving an overall Green House Gas (“GHG”) emission reduction target of 25% by 2025 from its 2018 baseline. This agreement with EMESCO is anticipated to deliver 30% of Rosh Pinah's power requirements during the life of the agreement and reduce GHG emissions at the Company level by 6%.

On May 12, 2021, the Company announced the results of the Annual General Meeting with shareholders voting in favour of all items of business: the election of Directors, reappointment of auditors and advisory vote on Trevali’s approach to executive compensation.

On May 26, 2021, the Company announced the appointment of David Schummer as Chief Operating Officer effective August 30, 2021.

On June 3, 2021, the Company published its 2020 Sustainability Report, the third annual report covering new performance targets and disclosures.

On August 3, 2021, the Company announced that a pilot plant testing program using Caribou run-of-mine and milled material at FLSmidth’s Rapid Oxidative Leach (“ROL”) process testing facility in Salt Lake City, Utah, is underway. If the pilot plant testing program indicates that the ROL technology has the potential to be successfully implemented at Caribou, it may allow Trevali to replace the existing flotation circuit at Caribou with atmospheric leach vessels and potentially an SX/EW train, introducing the possibility of producing base and precious metals on-site and thereby save transport costs and offsite treatment costs.

On August 17, 2021, the Company announced positive results from the Rosh Pinah Expansion (“RP2.0”) NI 43-101 Feasibility Study. Refer to the “Development and Exploration Projects” section of this MD&A for more details.

On December 3, 2021, the Company finalized the sale of the Santander mine to Cerro de Pasco Resources Inc. (“CDPR”). Under the terms of the share purchase agreement, Trevali received 10 million common shares of CDPR, $0.8 million in cash (subject to a working capital adjustment), and a 1% net smelter return royalty on certain areas of the Santander mine site. The sale was originally announced on November 8, 2021.

(in United States dollars, tabular amounts in thousands except where noted)

On December 3, 2021, the Company completed a share consolidation on the basis of one post-consolidation common share for every ten pre-consolidation common shares. The consolidation reduced the number of common shares issued and outstanding from 989,464,731 common shares to 98,946,187 common shares. The approval for share consolidation plan was originally announced on November 8, 2021.

On December 16, 2021, the Company announced that David Schummer, the Company's Chief Operating Officer, resigned and Derek du Preez, the Chief Technology Officer was appointed as Interim Chief Operating Officer.

On January 20, 2022, the Company announced that Trevali is currently working toward securing project financing for the RP2.0 expansion project and refinancing both the existing corporate revolving credit facility (the "Facility") and the secured facility agreement with Glencore (the "Glencore Facility"), maturing in September 2022. In parallel, an early works program has commenced for RP2.0.

On January 24, 2022, the Company announced preliminary 2021 full year and Q4 production results and 2022 operating, capital and exploration expenditure guidance.

On January 24, 2022 and February 4, 2022, the Company announced that the Perkoa mine in Burkina Faso was unaffected by and was continuing to closely monitor the ongoing political situation.

CONSOLIDATED FINANCIAL RESULTS

The following table summarizes the change in net loss for 2021 and the quarter:

		2020 vs 2021	Q4'20 vs Q4'21
Net loss for the 2020 period	$	(245,606)	(51,742)
Increase in revenues		125,536	10,745
Expense components:			
Increase in Mine operating expenses		(65,792)	(13,497)
Decrease in General and administrative		417	111
Decrease in Impairment		130,217	43,589
Decrease in Other items		10,841	10,170
Increase in Income tax expense		(21,658)	(2,388)
Increase in net income (loss) after tax for the period from discontinued operations		92,717	22,564
Net increase	$	272,278	71,294
Net income for the 2021 period	$	26,672	19,552

Net income increased in 2021 compared to 2020 primarily due to the increase in revenues due to the higher zinc price, no impairment charge versus the prior year where a $130.2 million impairment of property, plant and equipment and exploration properties was recorded and an increase in the net income from discontinued operations due to the $19.2 million gain on disposal of the Santander mine in 2021 and the $66.8 million impairment recognized in 2020. In addition, part of the increases to both revenues and mine operating expenses was due to the Caribou mine restarting operations in March 2021 after being on care and maintenance since end of March 2020.

Net income increased in Q4 2021 compared to the corresponding quarter of 2020 primarily due to the $43.6 million impairment of property, plant and equipment at the Santander mine recognized in Q4 2020, the $19.2 million gain on disposal of the Santander mine recorded in Q4 2021 and positive mark-to-mark adjustments. The increase in revenues is primarily due to the higher zinc price which was largely offset by the increase in operating expenses primarily due to the Caribou mine being on care and maintenance in Q4 2020 compared to regular operations in 2021.

(in United States dollars, tabular amounts in thousands except where noted)

Revenues

		2021	2020	YoY	Q4'21	Q3'21	Q4'20	Q4'21 vs Q3'21	Q4'21 vs Q4'20
Revenues									
Zinc revenue	$	399,649	316,217	26%	110,126	86,823	90,917	27%	21%
Lead and silver revenue		57,138	34,799	64%	10,439	20,289	11,467	-49%	–9%
Smelting and refining costs		(113,134)	(138,132)	–18%	(29,784)	(27,301)	(34,297)	9%	–13%
Net revenue	$	343,653	212,884	61%	90,781	79,811	68,086	14%	33%
Average zinc LME price	$/lb	1.36	1.03	32%	1.53	1.36	1.19	13%	29%
Average lead LME price	$/lb	1.00	0.83	20%	1.06	1.06	0.86	0%	23%
Average silver LBMA price	$/oz	25.17	20.51	23%	23.32	26.70	24.39	–13%	–4%
Sales quantities									
Payable zinc	Mlbs	304.1	303.5	0%	78.6	66.6	74.8	18%	5%
Payable lead	Mlbs	33.5	25.0	34%	5.3	12.9	8.8	–59%	–40%
Payable silver	Mozs	0.9	0.7	29%	0.2	0.3	0.2	–33%	0%

The average zinc price in Q4 2021 as quoted on the LME of $1.53 per pound increased by 13% when compared to the previous quarter and 29% compared to Q4 2020. The price of lead remains unchanged and increased 23% over the comparative periods, respectively.

Payable zinc sales volumes in Q4 2021 increased by 18% over the prior quarter to 78.6 million pounds due to timing of shipments, partially offset by the 13% decrease in payable production resulted in a 12% increase to zinc revenues. Smelting and refining costs are consistent as the increase in zinc volumes was more than offset by the decrease in lead volumes.

Payable zinc sales volumes increased compared to the corresponding quarter in the prior year due to the Caribou mine operating at full capacity in Q4 2021 while it was on care and maintenance in Q4 2020. Smelting and refining costs decreased by 13% due primarily to the decreased treatment charge benchmark from 2020 to 2021, partially offset by higher freight charges.

Lead and silver revenues of $10.4 million decreased by 49% from the prior quarter due to decreased lead sales quantities. The lower sales quantities of lead in Q4 2021 is due to the timing of lead shipments at the Rosh Pinah mine whose third annual lead shipment was forecast for Q4 2021 but was delayed due to shipping logistics to January 2022. By-product revenues decreased compared to the corresponding quarter in the prior year due to the aforementioned lead shipment delay at the Rosh Pinah mine that was partially offset by due to the Caribou mine being on care and maintenance in Q4 2020 compared to regular operations in Q4 2021.

Settlement Mark-to-Market

		Zinc	Lead
Spot 3-month future price as at September 30, 2021	$/lb	1.37	1.05
Provisionally priced metal – September 30, 2021	Mlbs	10.5	16.6
Average 3-month future price for September 2021	$/lb	1.39	1.01
Average Q4 LME price	$/lb	1.53	1.06
Provisionally priced metal – December 31, 2021	Mlbs	39.2	14.8
Average 3-month future price for December 2021	$/lb	1.52	1.03
Spot 3-month future price as at December 31, 2021	$/lb	1.61	1.04

All the Company’s zinc and lead concentrate sales contracts provide for final commodity pricing in a future month nominated at the time of shipment and based on quoted LME monthly average zinc and lead prices. The Company recognizes revenues at the time of shipment based on estimated final pricing, with mark-to-market adjustments made each subsequent period until final pricing on the date of settlement. Concentrate smelting and refining charges and freight from the loading port to the receiving smelter are included within smelting and refining costs.

(in United States dollars, tabular amounts in thousands except where noted)

The $3.8 million settlement mark-to-market gain for Q4 2021 primarily reflects the increase in the estimated final zinc pricing from $1.39 per pound to $1.52 per pound at December 31, 2021, compared to the average zinc prices during Q3 2021 and Q4 2021 of $1.36 and $1.53 per pound, respectively. This is also impacted by the quantity of provisionally priced metal at various stages during the quarter and the timing of sales weighted towards the end of the quarter with 46% of Q4 2021 zinc sales occurring during the month of December.

Each $0.05 change in the zinc price per pound realized from the provisional price recorded of $1.52 per pound as at December 31, 2021 is estimated to result in a change of approximately $2.0 million on the 2021 settlement mark-to-market and EBITDA[1].

Other Items

		2021	2020	YoY	**Q4'21**	Q3'21	Q4'20	Q4'21 vs Q3'21	Q4'21 vs Q4'20
Settlement mark-to-market (gain) loss	$	(4,803)	1,534	413%	(3,780)	(1,288)	(1,047)	193%	261%
Mark-to-market (gain) loss on financial instruments		(267)	7,318	104%	1,100	(2,565)	6,032	–143%	82%
Loss (gain) on foreign exchange		1,919	2,470	–22%	1,353	(1,606)	1,987	–184%	–32%
Interest expense		10,789	10,262	5%	2,475	2,720	2,808	–9%	–12%
Mine restart expenses		6,338	–	100%	–	–	–	0%	0%
Restructuring expenses		–	5,428	–100%	–	–	–	0%	0%
Impairment		–	197,008	–100%	–	–	43,589	0%	–100%
Other expense (income)		1,920	3,866	–50%	2,494	(1,077)	4,372	332%	–43%
	$	15,896	227,886	–93%	3,642	(3,816)	57,741	195%	–94%

Other items decreased to a net loss position during Q4 2021, with the increase compared to the prior quarter due to the mark-to-market loss on financial instruments and unfavourable foreign exchange movements compared to September 30, 2021, while the primary decrease in other expenses compared to the corresponding quarter of the prior year is due to the $43.6 million impairment of property, plant and equipment related to the Santander mine recorded in Q4 2020.

Mine restart expenses in 2021 are related to restarting the Caribou mine following a period of being on care and maintenance while restructuring expenses for the 2020 year of $5.4 million related to the change in executive management and the Caribou mine's transition to care and maintenance.

Income Taxes

		2021	2020	YoY	**Q4'21**	Q3'21	Q4'20	Q4'21 vs Q3'21	Q4'21 vs Q4'20
Current income tax expense (recovery)	$	7,438	1,088	584%	1,539	4,238	(10)	–64%	15491%
Deferred income tax expense (recovery)		4,664	(14,294)	133%	1,967	248	740	693%	166%
	$	12,102	(13,206)	192%	3,506	4,565	730	–23%	380%

The current income tax expense in Q4 2021 reflects mining taxes and income taxes resulting from increased profitability and increasing commodity prices. Deferred income tax expense for Q4 2021 has increased from comparative quarters due to higher foreign exchange revaluations.

The deferred income tax recovery of $14.3 million during the 2020 year is primarily the tax impact of the impairments related to the Santander mine and Gergarub project recorded in Q1 2020.

(in United States dollars, tabular amounts in thousands except where noted)

ROSH PINAH MINE, NAMIBIA

		2021	2020	YoY	Q4'21	Q3'21	Q4'20	Q4'21 vs Q3'21	Q4'21 vs Q4'20
Production									
Ore mined	t	696,985	710,924	–2%	176,537	182,819	176,946	–3%	0%
Ore milled	t	700,519	708,700	–1%	183,408	179,729	169,524	2%	8%
Zinc head grade		6.9%	7.5%	–9%	7.5%	7.0%	7.2%	7%	4%
Lead head grade		2.0%	1.7%	18%	2.7%	2.3%	2.7%	17%	0%
Silver head grade	oz/t	0.7	0.7	0%	0.9	0.8	0.8	17%	13%
Zinc recovery		85.8%	87.0%	–1%	84.4%	85.2%	86.2%	–1%	–2%
Lead recovery		71.2%	74.5%	–4%	73.8%	74.9%	75.0%	–1%	–2%
Silver recovery		45.8%	52.3%	–12%	50.5%	48.3%	66.8%	5%	–24%
Zinc concentrate grade		49.4%	50.6%	–2%	48.9%	48.1%	49.8%	2%	–2%
Lead concentrate grade		50.7%	49.9%	2%	53.6%	50.9%	51.0%	5%	5%
Zinc payable	Mlbs	76.1	85.6	–11%	21.1	19.7	19.4	7%	9%
Lead payable	Mlbs	21.0	18.2	15%	7.7	6.3	7.0	22%	10%
Silver payable	Moz	0.2	0.2	0%	0.2	0.2	–	0%	100%
Sales									
Zinc payable	Mlbs	74.6	80.5	–7%	18.5	17.3	20.0	7%	–8%
Lead payable	Mlbs	15.7	12.9	22%	0.1	6.6	7.4	–98%	–99%
Silver payable	Moz	0.1	0.2	–50%	–	–	0.1	0%	–100%
C1 Cash Cost[1]	$/lb	0.78	0.70	11%	0.90	0.61	0.63	48%	43%
AISC[1]	$/lb	1.06	0.86	23%	1.24	0.88	0.78	41%	59%
FINANCE									
Revenues, net	$	85,398	59,036	45%	17,583	22,664	21,354	–22%	–18%
Mine operating expenses		47,729	36,759	30%	10,489	12,344	9,378	–15%	12%
Adjusted EBITDA[1]		37,669	22,277	69%	7,094	10,320	11,976	–31%	–41%
Impairment		–	31,524	–100%	–	–	–	0%	0%
Other (income) expense		(3,391)	(126)	–2591%	(1,748)	(2,680)	8,409	–35%	–121%
EBITDA[1]		41,060	(9,121)	550%	8,842	13,000	3,567	–32%	148%
Depreciation, depletion & amortization		18,313	18,396	0%	3,713	4,904	4,936	–24%	–25%
EBIT[1]	$	22,747	(27,517)	183%	5,129	8,096	(1,369)	–37%	475%

Payable zinc production for Q4 2021 was 21.1 million pounds, 7% and 9% higher than the prior quarter and the corresponding quarter in 2020, respectively. The increase in production is due to higher head grades in accordance with the mine plan and an increase in ore milled as a result of a lower blend of microquartzite. Positive results were delivered during the quarter in efforts to reduce dilution, combined with an optimized blended feed to the mill by utilizing our digitization investments. This is expected to improve process plant stability and increase ore processing rates.

Payable zinc volumes sold for Q4 2021 increased compared to the prior quarter due to increased production and timing of shipments. The decrease in zinc sales volumes from the corresponding quarter in 2020 is due to the timing of shipments and reduction of inventory build-up in Q4 2020. There are typically two annual lead shipments, however, there were three planned for 2021 though the third shipment was delayed and was completed in January 2022 which equated to a by-product credit of $8.7 million.

Q4 2021 C1 Cash Cost[1] and AISC[1] increased by 48% and 41%, respectively, compared to the prior quarter, which is as a direct result of the delayed lead shipment and decreased by-product credits as it would have improved the quarterly metrics by $0.41 per pound. Sustaining capital expenditure was higher during the quarter due to the timing of projects. When compared to the corresponding quarter in 2020, C1 Cash Cost[1] and AISC[1] increased by 43% and 59%, respectively, due to the delayed lead shipment but also the strengthening of the Namibian dollar exchange rate and increased shipping rates, partially offset by the decrease in treatment charge rates.

Adjusted EBITDA[1] in Q4 2021 decreased by $3.2 million compared to the prior quarter owing to the delayed lead shipment. Similarly, the decrease compared to the corresponding quarter in 2020 is mainly due to lead shipment as well as Q4 2020 also include a lead sale.

2021 zinc production was within the upper end of revised guidance and the mid-range for both lead and silver production. C1 Cash Cost[1] and AISC[1] were above revised cost guidance due to a lead sale that was delayed from December 2021 into January 2022 which would have improved both metrics by $0.11 per pound for the year.

[1] *See "Use of Non-IFRS Financial Performance Measures".*

(in United States dollars, tabular amounts in thousands except where noted)

PERKOA MINE, BURKINA FASO

		2021	2020	YoY	**Q4'21**	Q3'21	Q4'20	Q4'21 vs Q3'21	Q4'21 vs Q4'20
Production									
Ore mined	t	699,713	778,904	–10%	175,871	170,677	191,365	3%	–8%
Ore milled	t	759,717	748,482	2%	171,027	187,025	187,571	–9%	–9%
Zinc head grade		12.5%	12.0%	4%	11.9%	13.0%	12.0%	–8%	0%
Zinc recovery		89.6%	89.5%	0%	90.5%	90.3%	89.5%	0%	1%
Zinc concentrate grade		50.6%	51.8%	–2%	50.7%	51.1%	50.4%	–1%	–1%
Zinc payable[2]	Mlbs	155.0	150.0	3%	31.2[2]	40.9	37.2	–24%	–16%
Sales									
Zinc payable	Mlbs	147.6	145.9	1%	39.2	29.1	37.5	35%	5%
C1 Cash Cost[1]	$/lb	0.96	0.95	1%	1.27	0.87	0.97	46%	31%
AISC[1]	$/lb	1.03	1.05	–2%	1.36	0.94	1.09	45%	25%
FINANCE									
Revenues, net	$	148,286	91,635	62%	43,567	29,004	30,766	50%	42%
Mine operating expenses		100,537	82,190	22%	29,027	22,870	21,572	27%	35%
Adjusted EBITDA[1]		47,749	9,445	406%	14,540	6,134	9,194	137%	58%
Other expenses (income)		4,359	1,167	274%	2,139	1,233	(5,659)	74%	138%
EBITDA[1]		43,390	8,278	424%	12,401	4,901	14,853	153%	–17%
Depreciation, depletion & amortization		31,821	22,248	43%	8,685	4,765	6,821	82%	27%
EBIT[1]	$	11,569	(13,970)	183%	3,716	136	8,032	2632%	–54%

[2] *Zinc payable production reported for Q4 2021 includes the 6.2 million pound downward adjustment creating a difference from the head grade, recovery and concentrate grade during the quarter.*

Payable zinc production for Q4 2021 was 31.2 million pounds, a 24% decrease over the prior quarter due to a negative 6.2 million pound reconciliation adjustment and a 8% decrease in zinc head grade, in line with the mine plan. Similarly, the payable zinc production was 16% lower compared to the corresponding quarter in 2020 due primarily to the reconciliation adjustment. The current proven and probable Mineral Reserve is limited. Exploration continues. The extraction of the crown pillar commenced during Q4 2021 with the first stope successfully mined from the open pit, as part of the plan to mine the remaining Proven and Probable Mineral Reserves. While the Company is doing work to evaluate the cost structure of the operation in the current zinc price environment, and further exploration work as described below, it is not currently anticipated that there will be a material conversion of existing Measured and Indicated Mineral Resources to Mineral Reserves in 2022. Further information will be provided in the annual Mineral Reserves and Mineral Resource statement update expected to be published at the end of Q1 2022.

A detailed reconciliation between the reported payable production and sales completed in February 2022 identified a discrepancy in concentrate zinc assays and tonnes measured at the mine site when compared to final weight measurements at the discharge port and subsequent independent metal assays. The outcome was a 6.2 million pound adjustment recorded in Q4 2021, decreasing Perkoa's payable zinc production from the 2021 preliminary production results reported on January 24, 2022. Management is conducting a review of this adjustment to mitigate such adjustments in the future.

Payable zinc volumes sold for Q4 2021 increased by 35% over the prior quarter with the reduction in inventory during Q4 2021 as a result of the timing of shipments and the exercise of the title transfer option at port. Similarly, the increase of 1.7 million pounds of zinc payable sold or 5% from the corresponding quarter in 2020 is due to the delay in a planned shipment that could not berth due to congestion at the Abidjan port from Q3 2021 into Q4 2021.

C1 Cash Cost[1] and AISC[1] in Q4 2021 increased by 46% and 45%, respectively, compared to the prior quarter lower production volumes primarily due to the 6.2 million zinc payable pound reconciliation adjustment as well as higher sales volumes through the reduction in inventories and increased freight distances to destination ports, both of which result in higher smelting and refining costs. The C1 Cash Cost[1] and AISC[1] increased by 31% and 25% compared to the corresponding quarter in 2020 for the same reasons however Q4 2021 benefited from a 47% decrease in the treatment charge rate. Additionally, the heavy fuel oil generator rebuild was completed in Q4 2021 which will ensure a more stable and lower cost power supply beginning in Q1 2022.

(in United States dollars, tabular amounts in thousands except where noted)

Adjusted EBITDA[1] in Q4 2021 increased compared to the prior quarter and the corresponding quarter in 2020 by 137% and 58%, respectively. The increase is primarily due to higher revenues related to improved zinc prices and higher payable zinc sales.

2021 production was below revised guidance by 8 million pounds of zinc payable and as a result, C1 Cash Cost[1] and AISC[1] increased and exceeded the revised guidance range. Zinc payable was lower primarily due to head grade and recoveries being lower than planned and the reconciliation adjustment.

Recently, Burkina Faso has experienced varying degrees of civil unrest that has not impacted operations to date, however, it may have a material affect on the Perkoa mine's future performance.

CARIBOU MINE, CANADA

		2021	2020	YoY	**Q4'21**	Q3'21	Q4'20	Q4'20 vs Q3'20	Q4'20 vs Q4'19
Production									
Ore mined	t	518,639	191,817	170%	132,717	176,139	–	–25%	100%
Ore milled	t	518,541	195,305	166%	133,698	172,145	–	–22%	100%
Zinc head grade		5.5%	5.5%	0%	5.4%	5.3%	0.0%	2%	100%
Lead head grade		2.1%	2.1%	0%	2.0%	2.0%	0.0%	0%	100%
Silver head grade	oz/t	2.1	1.9	11%	2.1	2.0	–	5%	100%
Zinc recovery		78.4%	78.1%	0%	77.1%	80.1%	0.0%	–4%	100%
Lead recovery		61.7%	62.2%	–1%	64.5%	63.0%	0.0%	2%	100%
Silver recovery		34.3%	33.0%	4%	35.2%	34.7%	0.0%	1%	100%
Zinc concentrate grade		47.2%	45.6%	4%	45.3%	48.3%	0.0%	–6%	100%
Lead concentrate grade		37.3%	36.0%	4%	37.7%	37.3%	0.0%	1%	100%
Zinc payable	Mlbs	40.6	15.4	164%	10.2	13.5	–	–24%	100%
Lead payable	Mlbs	13.4	5.0	168%	3.4	4.4	–	–23%	100%
Silver payable	Moz	0.4	0.1	300%	0.2	0.1	–	100%	100%
Sales									
Zinc payable	Mlbs	38.0	16.1	136%	12.1	12.2	–	–1%	100%
Lead payable	Mlbs	13.0	5.4	141%	4.6	5.1	–	–10%	100%
Silver payable	Moz	0.4	0.1	300%	0.2	0.1	–	100%	100%
C1 Cash Cost[1]	$/lb	0.86	1.42	–39%	0.98	0.84	–	17%	100%
AISC[1]	$/lb	1.16	1.71	–32%	1.44	1.10	–	31%	100%
FINANCE									
Revenues, net	$	54,408	11,884	358%	17,679	18,538	(33)	–5%	100%
Mine operating expenses		40,755	16,486	147%	15,029	13,181	–	14%	100%
Care and maintenance		386	7,351	–95%	–	–	1,741	0%	–100%
Adjusted EBITDA[1]		13,267	(11,953)	211%	2,650	5,357	(1,774)	–51%	249%
Impairment		–	56,780	–100%	–	–	–	0%	0%
Other (income) expense		6,880	4,263	61%	625	(1,020)	949	161%	–34%
EBITDA[1]		6,387	(72,996)	109%	2,025	6,377	(2,723)	–68%	174%
Depreciation, depletion & amortization		12,372	2,764	348%	4,187	3,416	–	23%	100%
EBIT[1]	$	(5,985)	(75,760)	92%	(2,162)	2,961	(2,723)	–173%	21%

Payable zinc production for Q4 2021 was 10.2 million pounds, a decrease compared to the prior quarter primarily due to lower ore availability and decreased zinc recoveries due to lower than planned head grades. Underground production was impacted due to the temporary closure of a production area caused by localized ground conditions in an area where, historically, ground activity and failures were not encountered. A third-party ground control assessment was subsequently completed which confirmed that this is not a pervasive stability issue.

The mine area is under review to determine the best path forward for the impacted zone and realignment of the mine plan. Meanwhile, additional production areas are being brought on-line as a substitute for this area, including the development of a bypass to unlock tonnage and gain more flexibility in the mining sequence.

Payable zinc volumes sold for Q4 2021 are consistent with the prior quarter despite a 24% decrease in payable production due to the liquidation of inventory during the quarter.

[1] *See "Use of Non-IFRS Financial Performance Measures".*

(in United States dollars, tabular amounts in thousands except where noted)

C1 Cash Cost[1] increased by 17% compared to the prior quarter primarily due to the impact of the decrease in zinc payable production. Additionally, the AISC[1] increased by 31% due to the increased C1 Cash Cost[1] and additional capital spend on mine development.

Adjusted EBITDA[1] in Q4 2021 decreased by $2.7 million due to an increase in operating costs and decrease in lead payable sales. The operation was on care and maintenance in the comparative quarter in the prior year.

The Company restarted operations at the Caribou mine in late March 2021 with an initial two-year operating plan that included a 21-month fixed-pricing arrangement for 115 million pounds of payable zinc production from Caribou, at a zinc price of $1.25 per pound. The restart resulted in costs of $6.3 million, in line with the restart plan to transition the operation from care and maintenance to full production.

The Caribou mine was placed on care and maintenance on March 26, 2020 in response to adverse market conditions, combined with high concentrate treatment charge rates. The change in operational status triggered an impairment review which resulted in a non-cash impairment charge of $56.8 million that was recorded in Q1 2020.

During the care and maintenance period from April 2020 to March 2021, Caribou's care and maintenance costs were disclosed separately within operating expenses on the consolidated statement of operations.

SANTANDER MINE, PERU

		2021	2020	YoY	**Q4'21**	Q3'21	Q4'20	Q4'21 vs Q3'21	Q4'21 vs Q4'20
Production									
Ore mined	t	624,782	718,286	–13%	125,924	138,727	198,760	–9%	–37%
Ore milled	t	631,750	724,341	–13%	125,092	137,391	203,802	–9%	–39%
Zinc head grade		4.1%	5.2%	–21%	4.2%	3.4%	5.2%	24%	–19%
Lead head grade		0.5%	0.6%	–17%	0.4%	0.5%	0.4%	–20%	0%
Silver head grade	oz/t	1.0	1.0	0%	0.8	1.0	0.8	–20%	0%
Zinc recovery		94.2%	89.8%	5%	95.2%	94.5%	90.6%	1%	5%
Lead recovery		77.9%	81.3%	–4%	74.6%	80.0%	79.5%	–7%	–6%
Silver recovery		62.1%	60.1%	3%	57.2%	65.4%	58.1%	–13%	–2%
Zinc concentrate grade		47.6%	47.7%	0%	47.3%	47.1%	47.8%	0%	–1%
Lead concentrate grade		47.8%	50.4%	–5%	48.4%	46.2%	50.0%	5%	–3%
Zinc payable	Mlbs	44.6	62.0	–28%	9.1	8.2	17.6	11%	–48%
Lead payable	Mlbs	4.9	6.7	–27%	0.8	1.2	1.4	–33%	–43%
Silver payable	Moz	0.4	0.4	0%	0.1	0.1	0.1	0%	0%
Sales									
Zinc payable	Mlbs	43.9	61.0	–28%	8.9	7.9	17.3	13%	–49%
Lead payable	Mlbs	4.8	6.7	–28%	0.7	1.2	1.4	–42%	–50%
Silver payable	Moz	0.4	0.4	0%	0.1	0.1	0.1	0%	0%
C1 Cash Cost[1]	$/lb	1.02	0.92	11%	1.00	1.35	0.95	–26%	5%
AISC[1]	$/lb	1.04	0.99	5%	1.03	1.36	0.95	–24%	8%
FINANCE									
Revenues, net	$	55,561	50,329	10%	11,950	9,606	15,999	24%	–25%
Mine operating expenses		42,380	41,105	3%	7,780	9,641	11,923	–19%	–35%
Adjusted EBITDA[1]		13,181	9,224	43%	4,170	(35)	4,076	12014%	2%
Impairment		–	66,790	–100%	–	–	43,589	0%	–100%
Other (income) expense		(1,903)	2,295	183%	(603)	(1,192)	1,679	–49%	136%
EBITDA[1]		15,084	(59,861)	125%	4,773	1,157	(41,192)	313%	112%
Depreciation, depletion & amortization		3,336	5,568	–40%	803	772	1,411	4%	–43%
EBIT[1]	$	11,748	(65,429)	118%	3,970	385	(42,603)	931%	109%

The sale of the Santander mine was finalized on December 3, 2021 and resulted in a gain on disposal of $19.2 million. As a result, the operating results for Q4 2021 represent only 2 months of operations, the period prior to the sale.

Despite the shorter production period, payable zinc production was 9.1 million pounds in Q4 2021, an increase of 11% compared to the prior quarter as mining rates and milling throughput increased over Q3 2021 due to the new mining contractor ramping up and achieving steady state operations halfway through Q3 2021, resulting in higher mining rates and mill throughput in Q4 2021. Payable zinc production

[1] *See "Use of Non-IFRS Financial Performance Measures".*

decreased by 48% when compared to the corresponding quarter in 2020 due to the lower zinc grade stopes mined.

Payable zinc volumes sold for Q4 2021 improved when compared to the prior quarter and were down 49% from the corresponding quarter in 2020, in line with production.

C1 Cash Cost[1] and AISC[1] in Q4 2021 decreased by 26% and 24%, respectively, compared to the prior quarter primarily due to low payable production in Q3 2021 caused by the slow mobilization of the new mining contractor. C1 Cash Cost[1] and AISC[1] increased by 5% and 8%, respectively, compared to the corresponding quarter in 2020 due to a decrease in the rate of zinc payable production due to the 19% decrease in zinc head grade which was partially offset by reduced capital development expenditures in line with the operational plan.

Adjusted EBITDA[1] in Q4 2021 increased compared to the prior quarter due to higher revenue from improved zinc prices and higher zinc volumes while it is comparable to the corresponding quarter in 2020 primarily as a net result of higher zinc prices and lower treatment charges mostly offsetting decreased sales volumes and increased freight charges.

During Q4 2020, the Company recorded an additional non-cash impairment charge of the property, plant and equipment at the Santander mine of $43.6 million, a direct result of the revised operational plan in which mining operations at the Magistral deposit were expected to be suspended at the end of 2021.

During Q1 2020, the Company recorded a non-cash impairment charge of the property, plant and equipment at the Santander mine of $23.2 million (which included exploration and evaluation assets of $7.7 million and excludes $4.2 million deferred tax recovery), as a result of the adverse change to the business environment caused by the COVID-19 pandemic.

The Santander mine was below 2021 revised production guidance due to 11 months of production as a result of the disposal on December 3, 2021 and delays in Q3 2021 resulting from the slow ramp up of mining activities following the mobilization of a new mining contractor. However, production cost metrics C1 Cash Cost[1] and AISC[1] were above revised guidance due to the 19% decrease in zinc head grades, partially offset by reduced capital development expenditures in line with the operational plan.

DEVELOPMENT AND EXPLORATION PROJECTS

RP2.0 Project, Rosh Pinah

Following the announcement of positive results from the Rosh Pinah Expansion "RP2.0" National Instrument 43-101 (“NI 43-101”) Feasibility Study on August 17, 2021, certain aspects of RP2.0 continue to be advanced to maintain the project schedule and to mitigate risks associated with the project as outlined in the Feasibility Study. Of the $111 million expansionary capital, $20m forecast to be spent in 2022 as part of the previously announced early works program.

The following aspects were advanced as part of the early works program announced on January 20, 2022:

- Selection of contractor and issuing of a Limited Notice to Proceed for the management of engineering, procurement and construction management ("EPCM”) services for the project;
- Cost and schedule control aspects were finalized with the EPCM aligned with internal processes;
- Inquiries were sent out for selected long lead items on the paste and backfill plant;
- Designs and enquires for the earthworks and civils for the new box cut and portal were completed;
- Procurement of mobile equipment to enable the increased development rates required for the new WF3 trucking decline; and
- Completion of successful negotiations with the local power provider regarding the upgrade of the bulk power supply and the subsequent signing of a power supply agreement.

[1] *See “Use of Non-IFRS Financial Performance Measures”.*

Rapid Oxidative Leach Program, Caribou

Following positive results from the ROL pilot plant trial at FLSmidth's Research Center in Salt Lake City, the pilot plant was commissioned at Caribou Mine on November 8, 2021 as well as the construction of a new fire assay laboratory to allow for gold analysis onsite. Base metal leach test work was concluded for fresh ore feed and tailings material on November 15, 2021 and the pyrite leach for precious metals on tailings material was finalized on December 11, 2021. Pilot plant test work is expected to be completed in February 2022. Indications suggest that the Caribou pilot plant results are expected to continue to be on par or marginally better than results from the pilot at FLSmidth's facility.

Throughout Q4 2021, work has continued to advance the completion of an 43-101 technical report in relation to the evaluation at a preliminary economic assessment ("PEA") level of the viability of ROL for Trevali's properties in the Bathurst area. The project remains on track with the results of the PEA expected to be released during H1 2022.

Exploration Program

The 2021 exploration program objectives were to continue to focus on advancing near-mine exploration targets towards the development of new mineral resources located within trucking distance of existing mines at Perkoa, Rosh Pinah and Santander, while also maintaining necessary expenditures on regional programs to make new discoveries. In New Brunswick, minimal exploration expenditures have been allocated to maintain the concessions in good standing while the company works to compile a PEA on the application of the ROL process.

Perkoa Exploration, Burkina Faso

During Q4, drilling continued on the Perkoa Gap anomaly which is located directly North and along strike of the Perkoa mine and the T3 horizon. A total of four holes were drilled on the anomaly during H2 2021 targeting a combination of electromagnetic ("EM") anomalies and surface geochemistry located between 300 to 500 meters North of the T3 horizon. The second hole drilled at the gap anomaly intersected a narrow volcanogenic massive sulphide ("VMS") horizon made mostly of pyrrhotite suggesting that the T3 horizon extends a further 300 meters to the North of the current T3 drilling.

Ground fluxgate EM surveys continued in Q4 2021 on volcano-sedimentary sequences located East and North of the Perkoa granite. Multiple regional EM targets were generated with the 2021 ground fluxgate surveys; these targets are planned for drill testing in Q1 2022.

Drilling is also scheduled to resume in H1 2022 on the T3 horizon once the underground ramp has reached the deepest level which will provide better drilling angles at depths. If underground exploration success is achieved, it is likely to include a suspension of operations and a period of care and maintenance prior to mining due to the need for additional drilling and underground development.

Rosh Pinah Exploration, Namibia

Drilling from underground continued during Q4 2021 along the Western Orefield, targeting the Northern extension and on the AAB deposits targeting areas at depth for mineral resource conversion.

Regional drilling programs were suspended in Q3 2021 due to an increase of COVID-19 infections in Namibia but resumed in late Q4 2021 targeting the Omuramba anomaly located North of the Rosh Pinah mine.

Regional surface EM fluxgate surveys continued at Rosh Pinah during the quarter. The 2021 newly defined EM anomalies are expect to be drill tested in H1 2022.

Santander Exploration, Peru

Regional drilling was suspended at the end of Q3 2021. Trevali sold the Santander mine on December 3, 2021 and has no current plans to further explore in Peru at this time.

(in United States dollars, tabular amounts in thousands except where noted)

Bathurst Camp Exploration, New Brunswick

The exploration program in Bathurst continued in Q4 2021 with mapping and prospecting of the southern camp concessions following the completion of an air drone magnetic survey in Q3 2021.

LIQUIDITY AND CAPITAL RESOURCES

Balance Sheet Review

		December 31, 2021	December 31, 2020	Change
Cash and cash equivalents	$	30,724	33,500	–8%
Other current assets		91,261	108,252	–16%
Non-current assets		411,064	430,272	–4%
Total Assets		533,049	572,024	–7%
Current debt		107,976	16,840	–541%
Accounts payable and accrued liabilities		49,841	56,261	11%
Non-current liabilities		140,309	272,760	49%
Non-controlling interests		(12,602)	(13,257)	5%
Equity attributable to owners of Trevali		247,525	239,420	3%
Total Liabilities and Equity		533,049	572,024	–7%

The 8% decrease in cash is described in the “Cash Flows” section while the other current assets decreased by 16%, primarily due to the disposal of the Santander mine ($12.7 million), decreases in inventory, increases in settlement and other receivables due to the timing of shipments and increased commodity prices.

Non-current assets decreased by $19.2 million, a net impact of the disposal of the Santander mine ($9.2 million), depreciation charged during the period and the reclassification of the remaining non-current value-added taxes (“VAT”) receivable balance to current, partially offset by capital additions.

The $91.1 million increase in current debt is due to the reclassification of $101.8 million relating to the Facility and the Glencore Facility from non-current debt as a result of the maturity date in September 2022 partially offset by mandatory debt repayments totalling $16.3 million and settlement of the receivables factoring facility.

Accounts payable and accrued liabilities have decreased since year-end as a net result the disposal of the Santander mine ($11.4 million) and the restart of operations at the Caribou mine which was on care and maintenance program at the end of 2020.

Similar to the change in current debt, the $115.4 million decrease in non-current liabilities is primarily due to the reclassification of the Facility and Glencore Facility and a $15.0 million reduction of reclamation and rehabilitation provision due to the disposal of the Santander mine.

(in United States dollars, tabular amounts in thousands except where noted)

Financial Condition and Liquidity

		December 31, 2021	December 31, 2020	Change
Total debt	$	108,744	138,532	–22%
Cash and cash equivalents		30,724	33,500	–8%
Net Debt[1]		78,020	105,032	–26%
Working capital		(31,797)	73,046	–144%

The Company's primary sources of liquidity and capital resources are cash, cash flow provided from operations and amounts available under credit agreements. The financial position and liquidity of the Company continued to improve during Q4 2021, coinciding with the continually increasing zinc and lead prices and lower 2021 treatment charge benchmark following a challenging year in 2020, largely due to the COVID-19 pandemic which resulted in low zinc and lead prices for the majority of 2020.

As at December 31, 2021, the Company was in full compliance with all covenant obligations and had $53.6 million of available liquidity, comprised of cash and cash equivalents of $30.7 million and $22.9 million of available liquidity from the Facility. The Company's working capital position at December 31, 2021 is negative as a direct result of the classification of $101.8 million of debt as current due to the maturity dates of the debt facilities which are less than one year. The Company expects to fund its current liabilities from cash flows generated by operating activities and to renegotiate the debt facilities with current and new prospective lenders, a process which is underway.

When evaluating the Company's current financial position, operating plan, current forecast for key assumptions and hedging transactions that impact 2022, the Company believes that it has sufficient liquidity to meet its minimum obligations and satisfy the covenant requirements related to the Facility and the Glencore Facility for a period of at least 12 months from the balance sheet date. This is contingent on successful completion of the refinancing currently in progress (see section titled "Financing Initiative" for details).

Revolving Credit Facility

The Company's credit agreement with a syndicate of lenders for the Facility that was last renegotiated on August 6, 2020 had a limit of $135.0 million, bears interest at a rate of LIBOR plus 5.5% and commitment fees for the undrawn portion of the Facility at 1.3%. The Facility was permanently reduced to $117.0 million as at December 31, 2021, through mandatory repayments of $6.4 million in 2020 and $16.3 million in 2021. The Facility matures on September 18, 2022.

The Company has letters of credit, issued under the Facility, totaling $4.4 million (December 31, 2021 – $6.5 million) in various reclamation bonding requirements and the new mining contractor for the Caribou mine.

As at December 31, 2021, the Company was in full compliance with all covenant obligations and in mid February 2022 completed another principal repayment of $5.1 million, in accordance with the terms of the agreement requiring minimum repayments based on excess cash generated on a quarterly basis. Following this mandatory prepayment, the credit limit under the revolving facility will be permanently reduced by the payment amount to $111.9 million. At December 31, 2021, the carrying balance has been classified as current as the maturity date is less than one year.

The amount available to the Company under the Facility as of December 31, 2021 was $23.0 million.

Glencore Facility

On August 6, 2020, the Company entered into a second lien secured facility agreement with Glencore up to a maximum of $20.0 million (the "Glencore Facility"). Under the terms of the agreement, Glencore would advance to the Company amounts equal to the volume of dry metric tonnes of zinc concentrate delivered to Glencore in a given month, up to December 2020, multiplied by the difference between the annual benchmark treatment charge ("TC") and the average monthly spot TC.

Advances under the Glencore Facility were applicable to deliveries of zinc concentrate between June 2020 and December 2020. Amounts outstanding under the Glencore Facility bear interest at the same rate as the Facility. The Glencore Facility ranks subordinate to the Facility and has a maturity date of September 18, 2022.

(in United States dollars, tabular amounts in thousands except where noted)

On December 2, 2020, the Glencore Facility was reduced by $7.0 million in connection with Glencore's participation in the share unit offering, including a resulting repayment of $1.8 million on the facility. The amount available to the Company under the Glencore Facility as of December 31, 2021 was nil as the full $13.0 million limit under the agreement has been drawn. At December 31, 2021, the carrying balance has been classified as current as the maturity date is less than one year.

Other Debt

In June 2020, the Company received a $2.9 million loan for working capital requirements under the Peruvian government-backed liquidity program launched in response to the COVID-19 pandemic. The loan bears interest at 1.15% and is repayable over a 24-month period beginning in June 2021. The loan was disposed of with the sale of the Santander mine finalized on December 3, 2021.

In addition to the guarantees linked to the Facility, Trevali has also arranged a $5.3 million surety bond to support reclamation bonding requirements with the Caribou mine. The balance has been reduced by $11.5 million relating to the previous financial guarantee to support reclamation bonding requirements with the Company's Santander mine prior to its disposal.

Total debt at December 31, 2021 includes leases of $7.0 million. In February 2021, a new lease was entered into with the mining contractor at the Caribou mine as part of the restart. The lease runs until December 31, 2022 and a corresponding lease liability of $7.5 million was recognized in February 2021 as the present value of future payments using an implied interest rate of 8%.

Cash Flows

		2021	2020	YoY	**Q4'21**	Q3'21	Q4'20	Q4'21 vs Q3'21	Q4'21 vs Q4'20
Operating cash flows before changes in working capital	$	90,797	10,497	765%	23,320	18,495	20,945	26%	11%
Changes in working capital		16,419	(26,991)	161%	2,290	26,113	(8,660)	–91%	–126%
Net cash provided by (used in) operating activities		107,216	(16,494)	750%	25,610	44,608	12,285	–43%	108%
Net cash used in investing activities		(64,626)	(47,777)	–35%	(20,989)	(15,420)	(10,159)	–36%	–107%
Net cash (used in) provided by financing activities		(44,450)	73,678	–160%	(13,577)	(16,569)	19,418	18%	–170%

The increase in cash generated from operating activities before changes in working capital in Q4 2021 compared to the prior quarter and the corresponding quarter of 2020 is due to higher realized zinc prices and increased sales volumes. Changes in working capital in Q4 2021 from the prior quarter are primarily due to an increase in settlement receivables due to timing of shipments, the increase in zinc price and sales volumes.

Investing activities in Q4 2021 consisted primarily of capital and exploration expenditures and the $9.3 million cash change resulting from the disposal of the Santander mine. Excluding the disposal, the amount spent during the quarter was 24% less than the prior quarter due to timing of project cashflow but similar to the corresponding quarter of 2020. Expansionary capital of $3.5 million incurred during Q4 2021 related to the early works for the RP2.0 expansion project.

Cash used in financing activities during Q4 2021 consists primarily of mandatory Facility repayments of $10.0 million compared to the prior quarter where there was no repayment other than a $12.7 million repayment of the settlement receivable facility. During Q4 2020, there was the $25.1 million equity financing (net of transaction costs) which closed in December 2020 and $9.4 million draw on the Glencore Facility which was partially offset by the $10.0 million voluntary Facility repayment. Other amounts consisting of lease and interest payments remain consistent with prior quarters.

(in United States dollars, tabular amounts in thousands except where noted)

CONTRACTUAL OBLIGATIONS AND COMMITMENTS

In the normal course of business, the Company enters into contracts that give rise to commitments for future minimum payments. The following table summarizes the approximate timing of payment of the remaining maturities of the Company's commitments at December 31, 2021 in undiscounted cash flows:

		2022	2023	2024	2025	2026+	**Total**
Accounts payable and due to related parties	$	45,806	–	–	–	–	**45,806**
Debt		102,601	–	–	–	–	**102,601**
Lease commitments		6,192	768	–	–	–	**6,960**
Purchase commitments		63,134	1,012	98	201	–	**64,445**
Reclamation and rehabilitation		–	9,200	4,008	–	32,543	**45,751**
	$	**217,733**	**10,980**	**4,106**	**201**	**32,543**	**265,563**

The Company enters into commitments for capital expenditures in advance of the expenditures being incurred. Approvals are obtained prior to expenditure being incurred in line with the Company's capital budget.

ANNUAL AND QUARTERLY FINANCIAL RESULTS

The following table sets forth selected consolidated financial information and the payable sales of zinc for each of the three most recent completed years:

	2021	2020	2019
Revenues	343,653	212,884	386,110
Zinc sales (Mlbs payable)	304.1	303.5	440.1
EBITDA[1]	97,183	(198,664)	71,787
Adjusted EBITDA[1]	102,291	18,960	106,864
Net income (loss)	26,672	(245,606)	(35,411)
Income (loss) per share – basic and diluted	0.27	(3.00)	(0.40)
Adjusted earnings (loss) earnings per share[1]	0.13	(0.30)	0.00
Total assets	533,049	572,024	744,570

Revenue in the table above has been restated for 2019 to reflect the Company's change in accounting policy.

The primary factors causing variation to the annual metrics are the commodity price volatility (zinc, lead and silver), non-cash impairments of property, plant and equipment and exploration and evaluation assets recorded in 2020 and operational changes such as the Caribou mine's transition to a care and maintenance program in March 2020 and the restart of operations in March 2021.

The following table sets forth selected consolidated financial information and the payable sales of zinc for each of the eight most recently completed quarters:

	Q4'21	Q3'21	Q2'21	Q1'21	Q4'20	Q3'20	Q2'20	Q1'20
Revenues	90,781	79,811	101,105	71,956	68,086	50,157	42,689	51,952
Zinc sales (Mlbs payable)	79	67	86	73	75	65	72	91
EBITDA[1]	24,058	27,068	30,113	15,944	(34,832)	15,368	(4,312)	(174,888)
Adjusted EBITDA[1]	25,226	20,532	32,042	24,491	20,101	11,214	(5,709)	(6,646)
Net income (loss)	19,552	5,752	3,877	(2,510)	(51,742)	1,122	(19,381)	(175,605)
Income (loss) per share – basic and diluted	0.20	0.07	0.00	0.00	(0.60)	0.00	(0.20)	(2.20)
Adjusted earnings (loss) per share[1]	0.01	0.00	0.06	0.06	0.00	0.00	(0.25)	(0.05)

The primary factors causing variation to the quarterly metrics are the commodity price volatility (zinc, lead and silver), the timing of shipments and operational disruptions. At the end of March 2020, the Caribou mine was placed on a care and maintenance program resulting in a decrease to zinc sales and operating results. The Caribou mine was then restarted in late March 2021, resulting in an increase to zinc sales and operating results. There were non-cash impairments of property, plant and equipment and exploration and evaluation assets recorded in Q1 and Q4 of 2020.

FINANCIAL RISK MANAGEMENT

Liquidity risk is the risk that the Company will be unable to satisfy financial obligations as they fall due. The Company manages its liquidity risk by optimizing its cash holdings, forecasting cash flows required by operations and anticipated investing and financing activities.

The Company's operating cash flows are very sensitive to variations in the price of zinc and lead, foreign exchange rates and ore grades, and any cash flow outlook provided may vary significantly to actual results. Spending and capital investment plans may be adjusted in response to changes in operating cash flow expectations. An increase in average zinc and lead prices from current levels may result in an increase in planned expenditures and, conversely, weaker average zinc and lead prices could result in a reduction of planned expenditures.

Hedging

The Company has entered into hedging arrangements in respect to a portion of its forecast zinc production. These hedging arrangements consist of a combination of forward swaps, put options and fixed-pricing arrangements which combine to provide stability, predictability and insurance in the current volatile zinc price environment. In accordance with the Company's hedging policy, the hedged amounts represent less than 50% of forecast production. There are no hedges in place related to lead or silver. The following is a summary of the various arrangements:

- In early October 2020, the Company entered into zinc price forward swaps for 3.75 million pounds of payable zinc per month (approximately 15% of zinc production) for six months from October 1, 2020 to March 31, 2021 at a price of $1.10 per pound;
- In addition, zinc price put options at $1.04 per pound for 6.25 million pounds of payable zinc per month at a price of $0.03 per pound (approximately 25% of zinc production across the group) were entered into for the same six-month period, providing downside zinc price protection;
- In late October 2020, the Company entered into additional zinc price forward swaps for 2.50 million pounds of payable zinc per month (approximately 10% of zinc production) for five months from November 1, 2020 to March 31, 2021 at a price of $1.12 per pound;
- In November 2020, the Company entered into a 9-month fixed-pricing arrangement covering the period from April 2021 to December 2021 for 59.5 million pounds of payable zinc produced at Perkoa and Rosh Pinah at a price of $1.23 per pound; and
- In mid-January 2021, the Company entered into a 21-month fixed-pricing arrangement covering the period from April 2021 to December 2022 for 115 million pounds of payable zinc produced at Caribou, which represents approximately 80% of forecast zinc production from Caribou, at a price of $1.25 per pound.

As noted in the Market Outlook, the Company remains positive in the longer-term demand outlook for zinc and lead; however, global economic uncertainty and COVID-19 had a significant negative effect on commodity demand and prices during 2020. The extent and duration of impacts that COVID-19 may have on demand and zinc and lead prices, on the Company's suppliers and employees and on global financial markets going forward is not known at this time, but could be material.

[1] *See "Use of Non-IFRS Financial Performance Measures".*

RISKS AND UNCERTAINTIES

The mining industry involves many risks which are inherent to the nature of the business, global economic trends and economic, environmental and social conditions in the geographical areas of operation. As a result, the Company is subject to a number of risks and uncertainties, each of which could have an adverse effect on our operating results, business prospects or financial position. The Company continuously assesses and evaluate these risks and attempts to mitigate them by implementing operating standards and processes to identify, assess, report and monitor risks across our organization.

For a comprehensive list of other risks and uncertainties affecting our business, please refer to the section entitled "Risk Factors" in our most recent Annual Information Form, as supplement by risk factors contained in any of the following documents filed by the Company with securities commissions or similar authorities in Canada after the date of this annual MD&A, which is available at www.sedar.com; material change reports; business acquisitions reports; interim financial statements; and interim management's discussion and analysis.

CRITICAL ACCOUNTING ESTIMATES AND JUDGMENTS

The preparation of financial statements in accordance with IFRS requires significant assumptions and judgments about the future and other sources of estimation uncertainty that management has made at the end of the reporting year, which could result in a material adjustment to the carrying amounts of assets and liabilities within the next twelve months, in the event that actual results differ from assumptions made.

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.

a) COVID-19 Economic Uncertainty

In March 2020, the World Health Organization declared a global pandemic related to COVID-19. To date there has been significant volatility in commodity and foreign exchange markets, restrictions on the conduct of business in many jurisdictions and disruption in stock markets while the global movement of people and some goods has become restricted.

There is significant ongoing uncertainty surrounding COVID-19 and the extent and duration of the impacts that it may have on the demand and the price of zinc and lead, suppliers, employees and on global financial markets. The Company continues to follow published guidance from governments and public health authorities to protect the safety and health of our employees, contractors and the communities in which we operate, while closely monitoring any potential impact on the Company's operations that may include the operating plans and production, supply chain or maintenance activities.

b) Assessment of Impairment and Impairment Reversal Indicators

Judgment is required in assessing whether certain factors would be considered an indicator of impairment or impairment reversal. Both internal and external information are considered when determining whether there is an indicator of impairment or impairment reversal present and, accordingly, whether impairment testing is required. The information considered in assessing whether there is an indicator of impairment or impairment reversal includes, but is not limited to, market transactions for similar assets, commodity prices, interest rates, inflation rates, market capitalization, reserves and resources, mine plans and operating results.

The following factor was considered an impairment indicator as of December 31, 2021:

- The mine plan for Perkoa was updated due to escalating mine operating costs.

c) Impairment testing

Impairment assessments require the use of estimates and assumptions such as future zinc, lead and silver metal prices (considering current and historical prices, price trends and related factors), operating and capital costs, discount rates, foreign exchange rates, closure and rehabilitation costs, estimated life-of-mines, mineral reserves and resources including exploration potential and operating performance (which includes production and sales volumes). These estimates and assumptions are subject to risk and uncertainty.

There is a possibility that changes in circumstances will impact these projections, which may impact the recoverable amount of assets and/or cost generating units (“CGUs”). Such circumstances may give rise to an impairment or a reversal of previous impairments with the impact recognized in the statement of operations.

For the year ended December 31, 2021, no impairment was identified.

d) Income taxes

Judgment is required to determine which arrangements are considered to be a tax on income as opposed to an operating cost. Judgment is also required to determine whether deferred tax assets are recognized in the statement of financial position. Deferred tax assets, including those arising from unutilized tax losses, require the Company to assess the likelihood that it will generate sufficient taxable earnings in future periods, in order to utilize recognized deferred tax assets. Judgment is also required in respect of the application of existing tax laws in each jurisdiction.

Assumptions about the generation of future taxable profits depend on management’s estimates of future cash flows. These estimates of future taxable income are based on forecast cash flows from operations (which are impacted by production and sales volumes, commodity prices, reserves, operating costs, closure and rehabilitation costs, capital expenditure, and other capital management transactions). To the extent that future cash flows and taxable income differ significantly from estimates, the Company may have the ability to realize deferred tax assets not recorded at the reporting date.

e) Reclamation and rehabilitation provisions

The ultimate costs for reclamation and rehabilitation are uncertain, and cost estimates can vary in response to many factors, including estimates of the nature, extent and timing of rehabilitation activities, technological changes, regulatory changes, cost increases as compared to inflation rates, the risk-free interest rate for discounting future cash flows, foreign exchange rates, and estimates of the underlying currencies in which the provisions will ultimately be settled. The Company estimates its costs based on studies using current restoration standards and techniques, and the provision at the reporting date represents management’s best estimate of the present value of the future rehabilitation costs required.

f) Useful lives of mineral properties, plant and equipment

Estimated mineral resources are used in determining the depreciation of certain assets. This results in depreciation expense proportional to the depletion of the anticipated remaining life-of-mine production. The estimate of the remaining lives of the Company’s producing mineral properties is based on a combination of quantitative and qualitative factors including historical production and financial results, mineral resources reported under NI 43-101, estimates of ore mineral feed production from areas not included in the NI 43-101 reports, and management’s intent to operate the property. The estimated remaining lives of the producing mineral properties are used to calculate amortization and depletion expense, forecast the timing of the payment of reclamation and remediation costs and perform impairment or impairment reversal testing to review the carrying value of asset and/or CGUs.

There are numerous uncertainties inherent in estimating the remaining lives of the producing mineral properties, and assumptions that are valid at the time of estimation may change significantly when new information becomes available. Changes in the forecast prices of commodities, exchange rates, or production costs may change the economic status of the mineral resources, estimates of production from areas not included in the NI 43-101 reports, and management's intent to operate the property, and may ultimately have a material impact on the estimated remaining lives of the properties.

g) Exploration and evaluation assets and expenditures

Judgment is required in evaluating whether expenditures meet the criteria to be capitalized, including the probability that future economic benefits will be generated. Determination of probable future economic benefit is based on management's evaluation of the technical feasibility and commercial viability of the geological properties of a given ore body based on information obtained through evaluation activities, including metallurgical testing, mineral resource and reserve estimates and the economic assessment of whether the ore body can be mined economically.

ACCOUNTING CHANGES

There have been no changes in accounting policy or new standards and interpretations adopted during 2021 that had a significant impact on the Company's consolidated financial statements. Certain pronouncements have been issued by the International Accounting Standards Board that are mandatory for accounting periods after December 31, 2021. There are currently no such pronouncements that are expected to have a significant impact on the Company's consolidated financial statements upon adoption.

OUTSTANDING SHARE DATA

The Company's authorized capital consists of an unlimited number of common shares without par value, of which 98,946,187 are issued and outstanding as of the date of this MD&A.

In addition, there were 4.4 million employee stock options outstanding, with exercise prices ranging between C$1.70 and C$15.90 per share and 93 million common share purchase warrants outstanding with an exercise price of C$0.23 each. More information on these instruments, and the terms of their conversion, is set out in Notes 14 and 10, respectively, to our 2021 audited annual consolidated financial statements.

OFF-BALANCE SHEET ARRANGEMENTS

The Company currently has no off-balance sheet arrangements.

(in United States dollars, tabular amounts in thousands except where noted)

RELATED PARTY TRANSACTIONS AND BALANCES

Glencore

As of December 31, 2021, Glencore owned 25,983,592 Trevali common shares representing approximately 26.3% of the total issued and outstanding common shares.

Glencore purchases all of the Company's concentrate production under separate off-take agreements with each of its mines which were entered into before Glencore was a related party of the Company.

In addition, pursuant to a Services Agreement dated August 31, 2017 between the Company and Glencore, Glencore provides certain technical, financial and other advisory services to the Company, which are provided on a cost-recovery basis.

The Company has entered into the following transactions with Glencore:

		2021	2020	YoY	**Q4'21**	Q3'21	Q4'20	Q4'21 vs Q3'21	Q4'21 vs Q4'20
Net revenue on concentrate sales	$	343,653	212,884	61%	90,781	79,811	68,086	14%	33%
Settlement mark-to-market (gain) loss		(4,803)	1,534	413%	(3,780)	(1,288)	(1,047)	193%	261%
Other income[1]		–	3,075	–100%	–	–	–	0%	0%
Interest expense		738	252	193%	252	182	195	–38%	29%

		December 31, 2021	December 31, 2020
Settlement receivable from Glencore	$	35,531	51,311
Payable to Glencore		–	48
Glencore Facility[2]	$	13,000	13,000

[1] Relates to the settlement of the fixed pricing arrangement for the Caribou and Santander mines.
[2] Balance excludes capitalized transaction fees.

Key management compensation

The compensation for key management recognized in the statement of operations is summarized in the table below. Key management includes our directors and chief officers.

	Year ended December 31,			
		2021		**2020**
Short-term employee benefits	$	3,906	$	3,266
Share-based payments		659		1,825
Termination benefits		284		2,967
Other short-term benefits		192		279
	$	5,041	$	8,337

USE OF NON-IFRS FINANCIAL PERFORMANCE MEASURES

This MD&A refers to the following non-IFRS financial performance measures: Earnings before interest, taxes, depreciation and amortization ("EBITDA"), Earnings before interest and taxes ("EBIT"), Adjusted EBITDA, Adjusted Earnings per Share, Net Debt, C1 Cash Cost and All-In Sustaining Cost ("AISC").

These measures are not recognized under IFRS as they do not have any standardized meaning prescribed by IFRS and are therefore unlikely to be comparable to similar measures presented by other issuers. Trevali uses these measures internally to evaluate the underlying operating performance of the Company for the reporting periods presented. The use of these measures enables the Company to assess performance trends and to evaluate the results of the underlying business. Trevali understands that certain investors, and others who follow the Company's performance, also assess performance in this way.

The Company believes that these measures reflect our performance and are useful indicators of our expected performance in future periods. This data is intended to provide additional information and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS.

(in United States dollars, tabular amounts in thousands except where noted)

EBITDA and EBIT

EBITDA provides insight into overall business performance. This measure assists readers in understanding the ongoing cash generating potential of the business including liquidity to fund working capital, service debt, and fund capital expenditures and investment opportunities. EBITDA is profit attributable to shareholders before net finance expense, income taxes and depreciation, depletion, and amortization. EBIT is EBITDA after depreciation, depletion, and amortization. Other companies may calculate EBIT and EBITDA differently.

Adjusted EBITDA, Adjusted EBIT and Adjusted Earnings per Share

Adjusted EBITDA consists of EBITDA less the impact of impairments or reversals of impairment and other non-cash and non-recurring expenses and recoveries. Adjusted EBIT consists of EBIT less the impact of impairments or reversals of impairment and other non-cash and non-recurring expenses and recoveries. These expenses and recoveries are removed from the calculation of EBITDA and EBIT as the Company does not believe they are reflective of the Company's ability to generate liquidity and its core operating results.

Adjusted Earnings per Share consists of net income or loss in the period less the impact of impairments or reversals of impairment, settlement mark-to-market, fair value (gain) loss on financial instruments, (gain) loss on foreign exchange, restructuring expenses and other income or expenses.

		2021	2020	Q4'21	Q4'20
Net income (loss)	$	26,672	(245,606)	19,553	(51,742)
Current income tax expense (recovery)		7,438	1,088	1,539	(10)
Deferred income tax expense (recovery)		4,664	(14,294)	1,967	739
Interest expense		10,789	10,262	2,475	2,808
Discontinued operation – other income		(19,248)	–	(19,248)	–
EBIT		30,316	(248,550)	6,286	(48,205)
Depreciation, depletion and amortization		66,867	49,886	17,772	13,373
EBITDA		97,183	(198,664)	24,058	(34,832)
Settlement mark-to-market (gain) loss		(4,803)	1,534	(3,780)	(1,047)
Fair value (gain) loss on financial instruments		(267)	7,318	1,100	6,032
Other expense		1,920	3,866	2,494	4,372
Restructuring expenses		6,338	5,428	–	–
Impairment		–	197,008	–	43,589
Loss on foreign exchange		1,921	2,470	1,354	1,987
Adjusted EBITDA	$	102,291	18,960	25,226	20,101
Net income (loss)	$	26,672	(245,606)	19,553	(51,742)
Discontinued operation – other income		(19,248)	–	(19,248)	–
Loss on foreign exchange		1,919	2,470	1,353	1,987
Impairment		–	197,008	–	43,589
Restructuring expenses		1,920	5,428	2,494	–
Other expense		6,338	3,866	–	4,372
Fair value (gain) loss on financial instruments		(267)	7,318	1,100	6,032
Settlement mark-to-market (gain) loss		(4,803)	1,534	(3,780)	(1,047)
Adjusted net income (loss)	$	12,532	(27,982)	1,473	3,191
Earnings per Share	$	0.27	(3.00)	0.20	(0.60)
Adjusted Earnings (Loss) per Share	$	0.13	(0.30)	0.01	0.04
Weighted average number of shares outstanding – basic ('000)		98,946	81,734	98,921	86,135

(in United States dollars, tabular amounts in thousands except where noted)

Net Debt

Net Debt demonstrates how the Company's debt is being managed and is defined as total current and non-current portions of debt and lease liabilities less cash and cash equivalents.

		December 31, 2021	December 31, 2020
Revolving Credit Facility, net of fees	$	88,909	104,287
Glencore facility, net of fees		12,875	12,707
Other loans		–	3,810
Receivables factoring facility		–	12,650
		101,784	133,454
Leases		6,960	5,078
Total debt	$	108,744	138,532
Less: cash and cash equivalents		30,724	33,500
Net Debt	$	78,020	105,032

C1 Cash Cost

This measures the estimated cash cost to produce a pound of payable zinc. This measure includes mine operating production expenses such as mining, processing, administration, indirect charges (including surface maintenance and camp), and smelting, refining and freight, distribution, royalties, and by-product metal revenues divided by pounds of payable zinc produced. C1 Cash Cost per pound of payable zinc produced does not include depreciation, depletion, and amortization, reclamation expenses, capital sustaining and exploration expenses.

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 produced. All-In Sustaining Cost per pound of zinc payable produced does not include depreciation, depletion, and amortization, reclamation and exploration expenses.

		Q4 2021				
		Perkoa	**Rosh Pinah**	**Santander**	**Caribou**	**Total**
Mine operating expenses	$	21,572	10,109	7,636	12,470	51,787
Smelting and refining		13,889	6,864	3,049	3,527	27,329
Distribution		3,074	1,210	259	192	4,735
Royalties		1,111	928	31	–	2,070
Less: By-product revenues		–	24	(1,809)	(6,200)	(7,985)
C1 total costs		39,646	19,135	9,166	9,989	77,936
Sustaining CAPEX		2,096	7,221	219	3,471	13,007
Lease payments		481	–	–	1,213	1,694
AISC total costs	$	42,223	26,356	9,385	14,673	92,637
Pounds of zinc payable produced	Mlbs	31.2	21.2	9.1	10.2	71.8
C1 Cash Cost	$/lbs	1.27	0.90	1.00	0.98	1.09
AISC	$/lbs	1.36	1.24	1.03	1.44	1.29

		2021				
		Perkoa	**Rosh Pinah**	**Santander**	**Caribou**	**Total**
Mine operating expenses	$	81,244	40,236	40,611	41,189	203,280
Smelting and refining		49,422	24,546	14,970	11,329	100,267
Distribution		12,622	4,029	1,458	703	18,812
Royalties		4,736	4,774	140	–	9,650
Less: By-product revenues		–	(14,272)	(11,708)	(18,291)	(44,271)
C1 total costs		148,024	59,313	45,471	34,930	287,738
Sustaining CAPEX		8,228	21,158	1,051	8,151	38,588
Lease payments		2,673	–	–	4,160	6,833
AISC total costs	$	158,925	80,471	46,522	47,241	333,159
Pounds of zinc payable produced	Mlbs	155.0	76.1	44.6	40.6	316.2
C1 Cash Cost	$/lbs	0.96	0.78	1.02	0.86	0.91
AISC	$/lbs	1.03	1.06	1.04	1.16	1.05

(in United States dollars, tabular amounts in thousands except where noted)

		Q4 2020				
		Perkoa	Rosh Pinah	Santander	Caribou	Total
Mine operating expenses	$	13,011	7,211	10,334	–	30,556
General and administrative		3,181	748	948	–	4,877
Smelting and refining		16,246	7,730	7,620	–	31,596
Distribution		2,891	1,091	655	–	4,637
Royalties		641	1,255	39	–	1,935
Less: By-product revenues		–	(5,871)	(2,926)	33	(8,764)
C1 total costs		35,970	12,164	16,670	33	64,837
Sustaining CAPEX		3,596	2,998	(33)	–	6,561
Lease payments		860	–	–	–	860
AISC total costs	$	40,426	15,162	16,637	33	72,258
Pounds of zinc payable produced	Mlbs	37.2	19.4	17.6	–	74.2
C1 Cash Cost	$/lbs	0.97	0.63	0.95	–	0.87
AISC	$/lbs	1.09	0.78	0.95	–	0.97

		2020				
		Perkoa	Rosh Pinah	Santander	Caribou	Total
Mine operating expenses	$	52,591	26,893	33,770	14,469	127,723
General and administrative		14,803	5,018	4,092	1,771	25,684
Smelting and refining		60,743	31,167	27,889	9,561	129,360
Distribution		12,135	3,557	2,436	354	18,482
Royalties		2,287	3,432	116	–	5,835
Less: By-product revenues		–	(10,301)	(11,478)	(4,248)	(26,027)
C1 total costs		142,559	59,766	56,825	21,907	281,057
Sustaining CAPEX		11,193	13,892	4,859	2,943	32,887
Lease payments		4,229	–	–	28	4,257
AISC total costs	$	157,981	73,658	61,684	24,878	318,201
Pounds of zinc payable produced	Mlbs	150.0	85.6	62.0	15.4	313.0
C1 Cash Cost	$/lbs	0.95	0.70	0.92	1.42	0.90
AISC	$/lbs	1.05	0.86	0.99	1.71	1.02

Sustaining capital expenditures are defined as those expenditures which do not increase payable mineral production at a mine site and exclude all expenditures at the Company's projects and certain expenditures at the Company's operating sites which are deemed expansionary in nature. The following table reconciles sustaining capital expenditures to the Company's total capital expenditures:

	2021	2020	Q4'21	Q4'20
Additions to property, plant and equipment	59,857	42,793	17,199	8,221
Sustaining capital expenditures	38,588	32,887	13,007	6,561
Non-operational capital expenditures[1]	–	1,351	–	413
Expansionary capital expenditures	13,215	6,174	4,155	1,247
Right-of-use assets and other	8,054	2,381	37	–

[1] *Comprised of capital expenditures for Corporate and Caribou during the period of care and maintenance.*

MANAGEMENT'S REPORT ON INTERNAL CONTROLS

Disclosure Controls and Procedures ("DC&P")

Management, under the supervision of the President and Chief Executive Officer and the Chief Financial Officer, has designed DC&P which provide reasonable assurance that material information related to Trevali is identified and communicated on a timely basis.

As of December 31, 2021, Trevali's management evaluated the effectiveness of its disclosure controls. Based on that evaluation, the CEO and the CFO have concluded that Trevali's disclosure controls were effective. There have been no changes in our internal control over financial reporting during the year ended December 31, 2021 that have materially affected, or are reasonably likely to materially affect, internal control over financial reporting.

Internal Control over Financial Reporting ("ICFR")

The CEO and the CFO, with the assistance of management, conducted an evaluation of the effectiveness of the Company's internal control over financial reporting as at December 31, 2021. Based on the evaluation, the CEO and the CFO have concluded that as at December 31, 2021, the Company's internal control over financial reporting is effective, based on the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") on Internal Control — Integrated Framework (2013).

Our internal control system over disclosure controls and procedures is designed to provide reasonable assurance that material information relating to the Company is made known to management and disclosed to others and information required to be disclosed by the Company in our annual filings, interim filings or other reports filed or submitted by us under securities legislation is recorded, processed, summarized and reported within the time periods specified in the securities legislation.

The inherent limitations in all control systems are such that they can provide only reasonable, not absolute, assurance that all control issues and instances of fraud or error, if any, within the Company have been detected. Therefore, no matter how well-designed, ICFR has limitations and can provide only reasonable assurance with respect to financial statement preparation and may not prevent and detect all misstatements.

Management is responsible for establishing and maintaining adequate ICFR. Any system of ICFR, no matter how well designed, has inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

NOTES TO READER

Cautionary Note Regarding Forward-Looking Information and Statements

This MD&A contains "forward-looking information" within the meaning of Canadian securities legislation and "forward-looking statements" within the meaning of the United States Private Securities Litigation Reform Act of 1995 (collectively, "forward-looking statements"). Forward-looking statements are based on the beliefs, expectations and opinions of management of the Company as of the date the statements are published, and the Company assumes no obligation to update any forward-looking statement, except as required by law.

Forward-looking statements relate to future events or future performance and reflect management's expectations or beliefs regarding future events including, but not limited to, statements with respect to the Company's growth strategies, expected annual savings from capital projects, anticipated effects of commodity prices on revenues, estimation of mineral reserves and mineral resources, the realization of mineral reserve estimates, the timing and amount of estimated future production, costs of production and capital expenditures, success of mining operations, environmental risks, unanticipated reclamation expenses, title disputes or claims, future anticipated property acquisitions, the content, cost, timing and results of future exploration programs and life of mine expectancies. In certain cases, forward-looking statements can be identified by the use of words such as "plans", "expects", "outlook", "guidance", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "believes", or variations of such words and phrases or statements that certain actions, events or results "may", "could", "would", "might", "will be taken", "occur" or "be achieved" or the negative of these terms or comparable terminology. By their very nature, forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Such factors include, among others, risks related to actual results of current exploration activities; changes in project parameters as plans continue to be refined; future prices of zinc, lead, silver and other minerals and the anticipated sensitivity of our financial performance to such prices; increases to interest rates that may adversely affect the Company's growth, profitability and ability to secure financing; the Company's ability to obtain equity or debt financing in the future on terms favourable to the Company or at all; possible variations in ore reserves, grade or recoveries; dependence on key personnel; potential conflicts of interest involving our directors and officers; labour pool constraints; labour disputes; availability of infrastructure required for the development of mining projects; delays or inability to obtain governmental and regulatory approvals for mining operations or financing or in the completion of development or construction activities; counterparty risks; increased operating and capital costs; foreign currency exchange rate fluctuations; operating in foreign jurisdictions with risk of changes to governmental regulation; compliance with governmental regulations; compliance with environmental laws and regulations; land reclamation and mine closure obligations; challenges to title or ownership interest of our mineral properties; maintaining ongoing social license to operate; impact of climatic conditions on the Company's mining operations; corruption and bribery; limitations inherent in our insurance coverage; compliance with debt covenants; competition in the mining industry; our ability to integrate new acquisitions into our operations; cybersecurity threats; litigation; and other risks of the mining industry including, without limitation, other risks and uncertainties that are more fully described in the "Risks and Uncertainties" section of this MD&A and the "Risk Factors" section of our most recently filed Annual Information Form, as supplemented by risk factors contained in any of the following documents filed by the Company with securities commissions or similar authorities in Canada after the date of this annual MD&A, which are available at www.sedar.com: material change reports; business acquisitions reports; interim financial statements; and interim management's discussion and analysis. Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. Trevali provides no assurance that forward-looking statements will prove to be accurate, as actual results and future events may differ from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements.

Qualified Person and Quality Control/Quality Assurance

Yan Bourassa, Vice President, Technical Services of the Company, is a qualified person as defined by National Instrument 43-101 – Standards of Disclosure for Mineral Projects of the Canadian Securities Administrators and has supervised and approved the preparation of the scientific and technical information that forms the basis for this MD&A.

For a description of the key assumptions, parameters and methods used to estimate mineral reserves and resources, as well as data verification procedures and a general discussion of the extent to which the estimates of scientific and technical information may be affected by any known environmental, permitting, legal title, taxation, sociopolitical, marketing or other relevant factors, please see the technical reports for our material properties as filed by us on SEDAR at www.sedar.com.