UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16 UNDER THE SECURITIES EXCHANGE ACT OF 1934

For the month of February 2021

Commission File Number 001-12284

GOLDEN STAR RESOURCES LTD.

(Translation of registrant's name into English)

333 Bay Street
Suite 2400
Toronto, Ontario
M5H 2T6
Canada
(Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F ☐ Form 40-F ☑

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): ____

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): ____

INCORPORATION BY REFERENCE

Exhibits 99.1 and 99.2 included in this report on Form 6-K are each hereby incorporated by reference in the Registration Statements on Form S-8 of the Registrant, as each may be amended from time to time (File Nos. 333-105820, 333-105821, 333-118958, 333-169047, 333-175542, 333-211926 and 333-218064), and Form F-10 of the Registrant, as may be amended from time to time (File No. 333-234005), to the extent not superseded by documents or reports subsequently filed by us under the Securities Act of 1933 or the Securities Exchange Act of 1934, in each case as amended.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

GOLDEN STAR RESOURCES LTD.

Date: February 24, 2021

(signed) Paul Thomson

Paul Thomson
Executive Vice President and Chief Financial Officer

EXHIBIT INDEX

Exhibit	Description of Furnished Exhibit
99.1	Management's Discussion and Analysis for the year ended December 31, 2020
99.2	Consolidated Financial Statements for the year ended December 31, 2020 and December 31, 2019
99.3	Consent of PricewaterhouseCoopers LLP

GOLDEN STAR

Management's Discussion and Analysis

For the Year Ended December 31, 2020

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MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") provides information that management ("Management") of Golden Star Resources Ltd. and its subsidiaries ("Golden Star" or the "Company" or "we" or "our") believes is relevant to an assessment and understanding of the consolidated financial condition and results of operations of the Company. This MD&A should be read in conjunction with the Company's consolidated financial statements and related notes for the year ended December 31, 2020 (the "Financial Statements"), which are prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board ("IFRS"). This MD&A includes information available to, and is dated, February 24, 2021. Unless noted otherwise, all currency amounts are stated in U.S. dollars and all financial information presented in this MD&A is prepared in accordance with IFRS.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING INFORMATION

This MD&A contains "forward-looking information" within the meaning of applicable Canadian securities laws and "forward-looking statements" within the meaning of the United States Private Securities Litigation Reform Act of 1995 concerning the business, operations and financial performance and condition of Golden Star. Generally, forward-looking information and statements can be identified by the use of forward-looking terminology such as "plans", "expects", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates", "believes" or variations of such words and phrases (including negative or grammatical variations) or statements that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur" or "be achieved" or the negative connotation or grammatical variation thereof. Forward-looking information and statements in this MD&A include, but are not limited to, information or statements with respect to: gold production, cash operating costs, and AISC (as defined hereinafter) estimates and guidance for 2021; sustaining and expansion capital expenditure estimates and guidance for 2021 and the relative funds allocated thereto and the timing for incurring such expenditures; the Company's achievement of 2021 guidance; the ability to expand the Company and its production profile through the exploration and development of its existing mine; expected grade and mining rates for 2021; estimated costs and timing of the development of new mineral deposits and sources of funding for such development; the sources of gold production at Wassa Underground during 2021; the anticipated delivery of ore pursuant to delivery obligations under the RG Stream Agreement; the ability to continue to refine doré at the South African refinery and ship gold across borders; the processing of low grade stockpiles at Wassa; Wassa production contribution from stockpiles and the processing grade thereof in 2021; expectations regarding the sustainability of current gold prices; implementation of exploration programs at Wassa, including the focus on near mine targets in and around Wassa and on regional exploration targets within the Wassa-HBB area, and the timing thereof; the acceleration of the growth and development of the resource base at Wassa; the investment in drilling and development in 2020 resulting in increased mining rates; the timing for the paste fill plant project to become operational; the ability to identify opportunities to further expand Golden Star's business; the ability to materially increase production at Wassa through development capital investments; the use of the non-hedge gold collar contracts; the intended reduction of costs for the next twelve months; the delivery of a range of operational initiatives that improve the consistency of the operations and visibility of the longer-term potential of the operations; the timing for rehabilitation work and the expected discounted rehabilitation costs; the ability of the Company to repay the Convertible Debentures when due or to restructure them or make alternate arrangements; the securing of adequate supply chains for key consumables; the Company having sufficient cash available to support its operations and mandatory expenditures for the next twelve months; the extension of the Company's gold price protection hedging program into 2021 and 2022; the acceleration of growth and development of the large resource base at the Wassa mine; the Company increasing exploration activities in the wider Wassa-HBB project area and looking for other opportunities to further expand our business; planned exploration at Wassa, including portable x-ray and air core drilling, and the timing and budget thereof; the ability to continue as a going concern; the ability to generate sufficient free cash flow, raise additional financing or establish refinancing options for the Company's current debt; the timing, duration and overall impact of the COVID-19 pandemic ("COVID-19") on the Company's operations and the ability to mitigate such impact; the quantum of cash flow from the sale of Prestea and the anticipated receipt and timing thereof; the receipt of the Contingent Payment (as defined hereinafter), and the timing and amount thereof; Future Global Resources' ability to deliver the Bogoso Sulfide Project; the outcome of the Prestea severance claim; the availability of mineral reserves in 2021 based on the accuracy of the Company's updated mineral reserve and resource models; the timing for the release of the results of the Company's PEA (as defined hereinafter) and the results of the PEA; the ability to expand the mineral reserves of the Company through further drilling; the potential to increase the Company's mineral resources outside of its existing mineral resources footprint; the anticipated impact of increased exploration on current mineral resources and mineral reserves; identification of acquisition and growth opportunities; the Company's plans for settling UK PSUs in common shares; relationships with local stakeholder communities; and the potential incurrence of further debt in the future.

Forward-looking information and statements are made based upon certain assumptions and other important factors that, if untrue, could cause the actual results, performance or achievements of Golden Star to be materially different from future results, performance or achievements expressed or implied by such statements. Such statements and information are based on numerous assumptions regarding present and future business strategies and the environment in which Golden Star will operate in the future, including the price of gold, anticipated costs and ability to achieve goals. Certain important factors that could cause actual results, performances or achievements to differ materially from those set forth in the forward-looking information and statements include, among others, gold price volatility, discrepancies between actual and estimated production, mineral reserves and resources, metallurgical recoveries, mining operational and development risks, litigation risks, liquidity risks, suppliers suspending or denying delivery of products or services, regulatory restrictions (including environmental regulatory restrictions and liability), actions by governmental authorities (including changes in taxation), adverse results of tax audits, currency fluctuations, the speculative nature of gold exploration, ore type, the global economic climate including as a result of the continuing impact of COVID-19, dilution, share price volatility, the availability of capital on reasonable terms or at all, local and community impacts and issues, results of pending or future feasibility studies, competition, loss of key employees, additional funding requirements and defective title to mineral claims or property. Although Golden Star has attempted to identify important factors that could cause actual results, performance or achievements to differ materially from those described in forward-looking information and statements, there may be other factors that cause actual results, performance or achievements not to be as anticipated, estimated or intended.

Forward-looking information and statements are subject to known and unknown risks, uncertainties and other important factors that may cause the actual results, performance or achievements of Golden Star to be materially different from those expressed or implied by such forward-looking information and statements, including but not limited to: risks related to international operations, including economic and political instability in foreign jurisdictions in which Golden Star operates; risks related to current global financial conditions; actual results of current exploration activities; the risk of the Company having a single producing mine following the sale of Prestea, including the potential impact of any disruption in Wassa's operations to the Company's operating and financial results; environmental risks; future prices of gold; possible variations in mineral reserves and mineral resources, grade or recovery rates; mine development and operating risks; an inability to obtain power for operations on favorable terms or at all; mining plant or equipment breakdowns or failures; an inability to obtain supplies or services for operations or mine development from vendors and suppliers on reasonable terms, including pricing, or at all; public health pandemics such as COVID-19, including risks associated with reliance on suppliers, the cost, scheduling and timing of gold shipments, uncertainties relating to its ultimate spread, severity and duration, and related adverse effects on the global economy and financial markets; accidents, labor disputes and other risks of the mining industry; delays in obtaining governmental approvals or financing or in the completion of development or construction activities; risks related to indebtedness and the service of such indebtedness, as well as those factors discussed in the section entitled "Risk Factors" in Golden Star's Annual Information Form for the year ended December 31, 2019 (filed on March 27, 2020). Although Golden Star has attempted to identify important factors that could cause actual results, performances and achievements to differ materially from those contained in forward-looking information and statements, there may be other factors that cause results, performance and achievements not to be as anticipated, estimated or intended. There can be no assurance that such statements will prove to be accurate, as actual results, performance, achievements and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking information and statements. Forward-looking information and statements are made as of the date hereof and accordingly are subject to change after such date. Except as otherwise indicated by Golden Star, these statements do not reflect the potential impact of any non-recurring or other special items or of any dispositions, monetizations, mergers, acquisitions, other business combinations or other transactions that may be announced or that may occur after the date hereof. Forward-looking information and statements serve to provide information about Management's current expectations and plans and to allow investors and others to get a better understanding of the Company's operating environment. Golden Star does not undertake to update any forward-looking information and statements that are included in this MD&A, except as required by applicable securities laws.

CAUTIONARY NOTE REGARDING RESERVES AND RESOURCES

Scientific and technical information contained in this MD&A was reviewed and approved by S. Mitchel Wasel, Vice President Exploration of Golden Star, and Matthew Varvari, Vice President, Technical Services of Golden Star, each of whom is a Qualified Person pursuant to National Instrument 43-101 ("NI 43-101"). All mineral reserves and mineral resources were calculated in accordance with the standards of the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") and the requirements of NI 43-101. All mineral resources are reported inclusive of mineral reserves and investors are reminded that mineral resources which are not mineral reserves do not have demonstrated economic viability. Information on data verification performed on, and other scientific and technical information relating to, the Wassa mineral property mentioned in this MD&A that is considered to be a material mineral property of the Company is included in the technical report titled "NI 43-101 Technical Report on Resources and Reserves, Golden Star Resources, Wassa Gold Mine, Ghana" effective date December 31, 2018, available at www.sedar.com.

CAUTIONARY NOTE TO U.S. INVESTORS

This MD&A has been prepared in accordance with the requirements of the securities laws in effect in Canada, which differ materially from the requirements of United States securities laws applicable to U.S. companies. Information concerning our mineral properties has been prepared in accordance with the requirements of Canadian securities laws, which differ in material respects from the requirements of the United States Securities and Exchange Commission (the "SEC") set forth in Industry Guide 7. Under the SEC's Industry Guide 7, mineralization may not be classified as a "reserve" unless the determination has been made that the mineralization could be economically and legally produced or extracted at the time of the reserve determination, and the SEC does not recognize the reporting of mineral deposits which do not meet the SEC Industry Guide 7 definition of "Reserve". Pursuant to NI 43-101, the terms "mineral reserve", "proven mineral reserve", "probable mineral reserve", "mineral resource", "measured mineral resource", "indicated mineral resource" and "inferred mineral resource" are defined in accordance with CIM standards. While the terms "mineral resource", "measured mineral resource", "indicated mineral resource" and "inferred mineral resource" are recognized and required by NI 43-101, the SEC does not recognize them under SEC Industry Guide 7. Investors are cautioned that, except for that portion of mineral resources classified as mineral reserves, mineral resources do not have demonstrated economic viability. Inferred mineral resources have a high degree of uncertainty as to their existence and as to whether they can be economically or legally mined. It cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category. Therefore, investors are cautioned not to assume that all or any part of an inferred mineral resource exists, that it can be economically or legally mined, or that it will ever be upgraded to a higher category. Likewise, investors are cautioned not to assume that all or any part of measured mineral resources or indicated mineral resources will ever be upgraded into mineral reserves.

SEC Industry Guide 7, the existing disclosure standard for the SEC, is in the process of being replaced by new sub-part 1300 of Regulation S-K under the United States Securities Act of 1933, as amended, which will be mandatory for most issuers subject to U.S. reporting standards for the first fiscal year beginning on or after January 1, 2021. None of the reserve or resource estimates presented in this MD&A have been prepared in accordance with the new SEC disclosure standards.

OVERVIEW OF GOLDEN STAR

Golden Star is an established, African-focused gold producer that holds a 90% interest in the Wassa gold mine (“Wassa”) through its 90% owned Ghanaian subsidiary, Golden Star (Wassa) Limited (“Golden Star (Wassa)”). The remaining 10% interest in Wassa is held by the Government of Ghana in accordance with applicable laws.

Development of the Wassa underground mine (“Wassa Underground”) commenced in July 2015 and commercial production was achieved on January 1, 2017. In January 2018, Wassa transitioned to an underground-only operation with low-grade surface stockpiles processed when economic. Golden Star is focused on delivering strong margins and free cash flow from the Wassa mine.

Until September 30, 2020, the Company also held a 90% interest in Golden Star (Bogoso/Prestea) Limited (“GSBPL”) that owns and operates the Bogoso/Prestea property (“Prestea”), which contains the Prestea underground gold mine (“Prestea Underground”), the Prestea open pit gold mine (“Prestea Open Pits”) and satellite pits including Prestea South and Mampon, the Bogoso/Prestea refractory deposits (which have been on care and maintenance since the third quarter of 2015) and the Bogoso/Prestea processing plants. Further details relating to the sale of Prestea are detailed below under “Corporate Developments”.

As a recipient of several industry awards on environmental, social and governance, Golden Star is committed to leaving a positive and sustainable legacy in its areas of operation.

The Company is a reporting issuer or the equivalent in all provinces of Canada, in Ghana and in the United States, and files disclosure documents with securities regulatory authorities in Canada and Ghana, and with the SEC in the United States.

CORPORATE DEVELOPMENTS

Updated Wassa Technical Report

The Company is finalizing a technical report prepared in accordance with National Instrument 43-101 which will include an updated mineral reserve and mineral resource estimates on Wassa and a preliminary economic assessment (“PEA”) on the development of the southern extension of the Wassa ore body. The study is intended to lay out a roadmap for the infrastructure and investment required for the potential expansion of the mining operation into the inferred resource areas. The Company anticipates announcing the results and filing of the technical report in March 2021.

Sale of Prestea - Discontinued Operation

On July 26, 2020, the Company and its wholly-owned subsidiary, Caystar Holdings (“Caystar”), entered into a share purchase agreement (the “SPA”) with Future Global Resources Limited (“FGR”), a subsidiary of Blue International Holdings (“BIH”), providing for the sale by Caystar and the purchase by FGR of all the issued and outstanding share capital of Bogoso Holdings (“Bogoso”), the holder of 90% of the shares of GSBPL.

Consideration

On September 30, 2020, the Company completed the sale of its 90% interest in Prestea to FGR for a deferred consideration of $34.3 million which is guaranteed by BIH and payable by FGR to Golden Star in the following tranches:

- $5 million in cash to be paid on the earlier of (i) the date at which FGR puts in place a new reclamation bond with the Environmental Protection Agency of Ghana in relation to Prestea, and (ii) March 30, 2021;
- $10 million in cash and the net working capital adjusted balancing payment (as described in the SPA) which as at the date hereof amounts to $4.3 million to be paid on July 31, 2021; and
- $15 million in cash to be paid on July 31, 2023.

Management has calculated the net working capital adjusted balancing payment of the deferred consideration in accordance with the terms of the SPA and is not expecting any material adjustments to the balance.

Contingent Payment

In addition to the deferred consideration, a contingent payment of up to $40 million may become payable by FGR to Golden Star conditional upon the occurrence of the milestones set out hereinafter in respect of the development of the Bogoso Sulfide Project (the “Contingent Payment”). The triggering event for the Contingent Payment is the earlier of (i) the date of FGR’s formal decision to proceed with the Bogoso Sulfide Project is made, or (ii) the date on which an aggregate of 5% of the sulfide mineral resources as stated at the end of 2019, being 1.76 million ounces of measured and indicated resources and 0.07 million ounces of inferred resource, has been extracted (the earlier of (i) and (ii) being the "Decision to Proceed"). The quantum of the Contingent Payment is determined by reference to the average spot gold price for the 90-day period preceding the date of the Decision to Proceed and shall amount to:

- $20 million, if the average spot gold price is less than or equal to $1,400 per ounce ("/oz");
- $30 million, if the average spot gold price is greater than $1,400/oz but less than or equal to $1,700/oz; or
- $40 million, if the average spot gold price is greater than $1,700/oz.

The Contingent Payment is payable in two tranches:

- 50% at the time of (i) the Decision to Proceed, or (ii) declaration that 5% of the sulfide mineral resources have been extracted; and
- 50% at the time of the first anniversary of (i) achieving commercial production following the Decision to Proceed, or (ii) the declaration that 5% of the sulfide mineral resources have been extracted.

Modification of the Royal Gold Streaming Agreement

Concurrent with the completion of the sale of Prestea, Caystar Finance Co. ("Caystar Finance"), a wholly-owned subsidiary of Golden Star, and RGLD Gold AG, an affiliate of Royal Gold, Inc., entered into an amended and restated streaming agreement (the "RG Streaming Agreement") to inter alia assign and transfer the rights and obligations of Caystar Finance under the previous stream agreement as they pertain to Bogoso, GSBPL and Prestea to FGR and Bogoso. As a result of the latter, Wassa now retains the remaining Tier One streaming obligation toward RGLD Gold AG, which relates to the delivery of gold at a rate of 10.5% of production with a cash purchase price of 20% of the spot price until 240,000 ounces have been delivered. Following the delivery of the remaining Tier One obligation, the streaming obligation at Wassa will transition into the Tier Two structure, pursuant to which Golden Star will deliver to RGLD Gold AG 5.5% of its gold production with a cash purchase price of 30% of the spot price.

Sale impact

The financial results of Prestea for the period to the date of sale, as well as the comparative periods, have been presented as discontinued operations in the financial results and cash flows of the Company.

The sale of Prestea strengthened Golden Star's balance sheet as it eliminated the negative net working capital position, deferred revenue and rehabilitation liabilities, as they relate to Prestea, from the balance sheet, and is expected to provide a cash inflow in excess of $30 million by 2023. Given the resulting improvement in its financial position, the Company is planning to accelerate the growth and development of the large resource base at Wassa, increase exploration activities in the wider Wassa-HBB project area and focus additional resources on identifying opportunities to further expand the business.

Severance claim

On September 15, 2020, certain employees of GSBPL initiated proceedings before the courts in Ghana, claiming that the completion of the transaction for the sale of the Bogoso shares to FGR would trigger the termination of their existing employments, entitling them to severance payments. GSBPL retained legal counsel to defend the claim given no employment contracts were severed, amended or modified upon the completion of the sale transaction on September 30, 2020 and GSBPL continues to operate with existing employment contracts and contractual terms being honored.

On September 22, 2020, GSBPL filed an application in court for an order striking out the plaintiffs' statement of claim for lack of standing or capacity and disclosing no reasonable cause of action. On February 16, 2021, the court ruled in favor of GSBPL that the plaintiffs' pleadings disclosed no reasonable cause of action and were therefore frivolous, vexatious, and scandalous. Accordingly, the plaintiffs lacked the requisite standing or capacity to institute the action. In accordance with applicable laws, the plaintiffs have three months from the date of the ruling to file an appeal.

Modification of the Macquarie Credit Facility

On October 9, 2020, the Company announced it had entered into an amended and restated credit facility (the "Macquarie Credit Facility") with Macquarie Bank Limited ("Macquarie") pursuant to which Macquarie upsized the credit facility to $70 million that allowed the Company to re-draw $10 million principal repayments that were made in June and September 2020 and draw an additional $10 million of new capacity which will be made available in conjunction with the redemption of the 7% convertible debentures maturing in August 2021 (the "Convertible Debentures"). The amendment of the Macquarie Credit Facility includes a rescheduled amortization profile which defers the next quarterly principal repayment of $5 million to March

2022. Should the Company elect to draw the additional $10 million at the time it becomes available, the next quarterly principal repayment will be brought forward to September 2021. These quarterly principal repayments of $5 million will then continue to December 2023 when the remaining balance of the Macquarie Credit Facility will be settled by a $25 million bullet payment.

As a condition of amending the Macquarie Credit Facility, the Company extended its gold price protection hedging program into 2021 and 2022 by entering into zero cost collars with Macquarie for an additional 87,500 ounces with a floor price of $1,600/oz and a ceiling of $2,176/oz in 2021 and a ceiling of $2,188/oz in 2022. These additional positions will mature at a rate of 10,937.5 ounces per quarter from March 2021 to December 2022.

The upsizing of the Macquarie Credit Facility and deferral of the principal repayments schedule created $35 million of additional liquidity ahead of the maturity of the Convertible Debentures in August 2021.

At The Market Equity Program

On October 28, 2020, the Company entered into an "at the market" sales agreement (the "Sales Agreement") with BMO Capital Markets Corp. ("BMO") relating to Golden Star common shares. In accordance with the terms of the Sales Agreement, we may distribute shares of common stock having a maximum aggregate sales price of up to $50 million from time to time through BMO as agent for the distribution of shares or as principal. The proceeds from the Sales Agreement will be used for discretionary growth capital at Wassa, exploration, general corporate purposes and working capital. As at February 24, 2021, no shares of common stock had been sold under the Sales Agreement.

Exploration Update

Exploration activity during the year ended December 31, 2020 was limited. As a consequence of measures implemented in response to the COVID-19 pandemic, the Company scaled back field exploration activities from March 2020. Activities focused on the delineation and refinement of exploration targets across Golden Star's tenement package, with the compilation and continued review of historic surface geochemical and drilling information, as well as, the updating of geological and geophysical interpretations, and the design of future field-based follow-up programs.

Field work resumed in the third quarter of 2020 and activities were further ramped up during the fourth quarter of 2020 ("Q4 2020"). Work during Q4 2020 included further soil sampling on regional targets and surface drilling at Wassa testing up-dip and down-dip extensions of mineralization. Exploration expenditures for Q4 2020 were $2.2 million of which $1.1 million was expensed and $1.1 million was capitalized. For the year ended December 31, 2020 exploration expenditure amounted to $4.2 million of which $2.7 million was expensed and $1.5 million was capitalized.

Wassa Drilling

During Q4 2020, a total of five holes were drilled (totaling 3,417 meters) to test for the extension of mineralization above and below the existing underground mining areas. Four holes tested the potential for up-dip extensions of mineralization and one hole tested for the extension of the Hanging wall ("HW") zone and the down-dip extension of the B-Shoot.

These gold intercepts demonstrate the potential to increase the size of the Wassa ore body with extensions to the main B-Shoot, the HW zone and a new Foot wall ("FW") target. These newly identified zones are all within 200 meters of existing mining infrastructure and planned development which is positive from both a cost to access as well as timing perspective:

- **BSDD20-001** (up-dip) targeted mineralization below historical open pits and intersected 3.6m at 5.7g/t. This narrow zone of mineralization sits approximately 300m up-dip of the known mineralized zones, within 150m of surface. Further follow up drilling (shown on the section above) is planned to test the extents of this mineralization down-dip towards the deeper B-Shoot horizon which remains open up-dip between these two intercepts.
- **BSDD20-003** (up-dip) intersected 20.9m at 6.9g/t and successfully demonstrated a potential extension of the B-Shoot structure 125m up-dip of the last hole drilled on this fence (BSDD19-407 intersected 6.2m at 6.8g/t). This zone was closed off 150m up-dip with hole BSDD20-002 which intersected altered diorite and no significant mineralization.
- **BSDD20-004** (up-dip) intersected 6.4m at 5.4g/t in a newly defined foot wall zone. Further drilling is required to determine the extent of this new mineralized zone.
- **BSDD20-005** (down-dip) tested two zones of mineralization by targeting (i) an extension of the hanging wall zone that has previously been mined and (ii) the down-dip extension of B-Shoot.

- Hanging wall target - This hole intersected 4.2m at 4.7g/t and 3.5m at 2.4g/t in an area that extends the strike length of this zone by 75m south and 100m down-dip where previous drilling intersected 13.5m grading 3.4 g/t in hole BSDD293.
- Down-dip B Shoot extension target - This hole was also successful in extending the B-Shoot mineralization below the current planned stoping area, where an 18m zone grading 3.6g/t was intersected 65m below hole BSDD293 which intersected 35.6m grading 3.1g/t. This hole also intersected a 7.5m foot wall zone at depth, grading 3.3g/t. Further work on these targets is already underway and a wedge has been set with a daughter hole being drilled to test the zone c.100m down-dip where it remains open.

HBB regional programs

The Company's implementation of strict COVID-19 protocols and procedures has enabled exploration field work within the HBB concessions to recommence during the latter parts of the third quarter of 2020 ("Q3 2020"), with five targets being prioritized and sampled. Results received from all five of the targets tested have confirmed the gold in soil anomalies and helped to better define these targets. During Q4 2020, the targets were visited by Golden Star geologists and initial mapping and prospecting evaluations were conducted over the gold in soil anomalies. The mapping and infill soil sampling has been used to budget and plan the follow-up ground geophysics and air core drilling to be conducted in 2021.

Safety

For continuing operations, the all-injury frequency rate (AIFR) as at December 31, 2020 was 2.57 and the total recordable injury frequency rate (TRIFR) was 0.34, based on a 12-month rolling average per million hours worked. This compares favorably to the continuing operations AIFR of 3.55 and TRIFR of 0.53 as at September 30, 2020 and continuing operations AIFR of 4.23 and TRIFR of 0.53 at December 31, 2019.

Although not directly comparable, as the dataset included the Prestea safety performance, the December 31, 2020 performance for continuing operations illustrates an improvement over the September 30, 2020 AIFR of 5.19 and TRIFR of 1.00, as well as against the December 31, 2019 AIFR of 8.75 and TRIFR of 1.79 reflecting the change in risk profile for the Company.

Despite the improvement in injury frequency rates, 2020 was marred by a fatal incident at Prestea in March 2020, when an employee was tragically killed in a derailment incident. Corrective actions to prevent recurrence were implemented at the operations and incorporated findings of the investigation by the Ghanaian Inspectorate Division of the Minerals Commission. This incident reinforced our deeply held belief that everyone must go home safely every day and with this intent, the Company continued the implementation of its safety strategy, with a focus on critical risk controls, throughout the year.

In November 2020, Golden Star (Wassa) was announced as the Best Performer in Occupational Health and Safety at the annual Ghana Mining Industry Awards for the second year in succession and for the third time in the last four years.

COVID-19 pandemic

COVID-19 was declared a worldwide pandemic by the World Health Organization ("WHO") on March 11, 2020. In respect of the Company's operations, Golden Star has been proactive in its response to the potential threats posed by COVID-19 and has implemented a range of policies, procedures and practices to protect the health and well-being of its employees and host communities whilst continuing to operate, to the extent possible, in the ordinary course of business.

As at February 18, 2021, the Ghana Health Services had reported 80,253 known cases of COVID-19 in Ghana of which there are 73,018 recoveries, 577 deaths and 6,658 active cases. The majority of active cases as at February 18, 2021 (48%) were identified from the Greater Accra Region. A total of 4,742 positive cases were confirmed in the Western Region, where the Wassa mine is located, of which 429 are active cases as at February 18, 2021. Testing and contact tracing are strictly controlled by the Government of Ghana through the Ghana Health Service. Ghana's COVID-19 case rates increased post the annual holiday season, although not to the peaks experienced in 2020, and the Government of Ghana subsequently reinstituted prohibitions on gatherings and other controls to minimize transmission. The Company continues to closely monitor the situation and its management controls on this basis.

During 2020, our operations in Ghana had experienced some 320 personnel that were suspected or volunteered for COVID-19 testing with 63 confirmed cases including GSBPL employees until the time of sale to FGR. The Company's in-house Polymerase Chain Reaction ("PCR") testing capability allows for rapid diagnosis and management response. This significantly reduced the number of people required to isolate as a result of contact tracing, supporting business continuity throughout the pandemic. As a major employer and therefore catalyst for rural economic stimulus in the host communities, we understand that our continuing operations are critical to the health and well-being of our workforce and the thousands of people that they support, both directly and indirectly. Given the relatively low number of suspect COVID-19 cases in the Company's workforce, the operational impact during Q4 2020 was limited. As at December 31, 2020, there were zero suspected or confirmed COVID-19 cases in our workforce, which had been the status for the entire month of December 2020. During the course of the year, six personnel from the Wassa operations were admitted to hospital for COVID-19 case management and all have recovered.

To reduce risk to potentially vulnerable individuals, the Company has implemented a major program of workforce medical surveillance for potentially at-risk personnel, with 107 personnel medically assessed and 77 placed under individual management plans. Of these, 28 individuals were required to work from home (2) or shelter (26) for case management and all have now returned to work as a result of management of their pre-existing conditions and associated improvement in health status.

Whilst Ghana's international borders re-opened in September 2020 following closure in March 2020, the situation is dynamic and global transport remains challenged, potentially affecting expatriate movement. With the border re-opening, we have been able to recommence transportation of gold doré from Ghana to the refining facilities in South Africa via commercial flights. The refinery in South Africa has continued operations largely unaffected. The Company continues to monitor and manage the supply chain risk closely and remains in regular contact with key suppliers and stakeholders. Detailed business continuity planning has been conducted based on a range of scenarios and potential outcomes which could materialize as the situation continues to evolve.

Direct and indirect tax contributions

Golden Star's contribution to the Ghanaian economy in 2020 continued to increase significantly via an increase in direct and indirect tax payments by the Company. During the year ended December 31, 2020, the Company paid $25.8 million (2019 - $5.5 million) of corporation tax in Ghana, $13.3 million (2019 - $10.0 million) of royalties and $2.8 million (2019 - $0.3 million) of mining license and permits. In addition, the Company also paid $13.2 million of corporation tax in relation to Q4 2020 that only cleared during January 2021 and if included, meant total direct taxes in relation to 2020 amounted to $50.0 million.

During the year ended December 31, 2020, the Company also remitted to the Ghanaian government employment taxes of $10.7 million (2019 - $10.4 million), withholding taxes of $3.3 million (2019 - $1.9 million), import duties of $3.8 million (2019 - $2.5 million) and stamp duties of $1.0 million (2019 - $nil).

Changes to Executive Team and Relocation of Corporate Office

Philipa Varris, who had previously served as the Company's Vice President, Corporate Responsibility in Ghana, was appointed Executive Vice President, Head of Sustainability of Golden Star effective January 1, 2020.

Paul Thomson joined Golden Star on January 27, 2020 and was appointed Executive Vice President and Chief Financial Officer following the transition of the prior Chief Financial Officer's responsibilities from André van Niekerk, who left the Company on March 31, 2020.

Peter Spora, Executive Vice President, Growth and Discovery, tragically passed away on December 9, 2020. He was a huge proponent for diversity in the mining industry and generously gave his time to help guide, support and mentor his younger colleagues and individuals entering the mining industry throughout his career. We intend to continue these efforts in his memory.

The Company completed the relocation of its corporate office from Toronto, Canada to London, United Kingdom on April 30, 2020.

Appointment to Board of Directors

On February 3, 2020, the Company announced that Karim Nasr had been appointed to the Board, replacing Naguib Sawiris as a nominee of La Mancha Holding S.à r.l., who stepped down from the Board due to other commitments.

Class Action Complaint

On April 1, 2020, the Company received notification of a United States federal securities class action complaint that had been filed against it on behalf of persons or entities that purchased or otherwise acquired the Company's common stock on the NYSE American exchange from February 20, 2019 through July 30, 2019 inclusive. Also named as defendants are the Company's

Chief Executive Officer and Director Andrew Wray, the Company's former President and Chief Executive Officer Samuel Coetzer, the Company's former President Daniel Owiredu and the Company's former Executive Vice President and Chief Financial Officer Andre van Niekerk. The complaint alleged that the Company published false and misleading statements to artificially inflate the price of its common shares in violation of the US Securities Exchange Act of 1934.

On September 14, 2020, the lead plaintiff filed a voluntary dismissal of his complaint.

HUMAN CAPITAL

Our employees are critical to all that we do. We are committed to becoming a high performing organization with a defined culture which creates an environment where all our employees feel safe, respected, able to perform their best and reach their full potential.

Consistent and transparent communication of our Vision, Mission and Values are critical to ensure that every employee feels involved and engaged in our future. During 2020, we clearly defined the behaviors underpinning our Values and through training open to all employees have provided more clarity on the 'Golden Star Way' and what behaviors are needed to drive the change for us to become a high performing organization. We conducted an employee engagement survey in 2020 to further understand how employees feel about the Company and its direction and achieved a high participation rate of 61%. We also have a range of activities aimed at improving employee communications including regular video messages from the Executive team and 'Durbars' with senior management.

Inclusion and Diversity are an essential foundation to a high performing organization. We will continue to focus our attention on fairness and representation, ensuring employees feel they can perform their best irrespective of their gender, religion, ethnicity, age, sexual orientation or disability. Our Inclusion and Diversity Policy is an important part of our strategy to create a workplace where all our employees can realize their full potential. Historically women have been underrepresented in the mining industry and we are looking to address such underrepresentation through mentorships and internships, and through our work with Women in Mining, we are providing new opportunities for women to excel in a mining career. Of the total mining workforce, 8% are currently women and the Company has committed to a female diversity target of 20% by 2025.

We place a strong emphasis on recruiting and developing talent with the right skill levels, underpinned by sound accountability management systems. We recruit wherever possible from the communities which surround Wassa and where skills are not available in the local communities, look to the wider region before considering expatriate recruitment. There is a localization plan in place which identifies and creates development opportunities for local people. In 2020, 98% of the total workforce was Ghanaian and 58% of the workforce came from local communities. The Company is committed to providing a wide range of training and development opportunities focused on health and safety, leadership and technical skills. In 2020, we provided over 53,000 hours of training collectively, representing 60 hours of training annually for each employee.

We are committed to building a reward structure that is aligned to roles and accountabilities at Golden Star. A total rewards framework and principles have been developed to guide the continuous improvement and alignment of our reward systems to the objective of being a high performing organization. Leadership incentive programs are determined based on performance scorecards which reflect the business priorities of cost, production and safety and sustainability and thereby drive the right behaviors aligned to our business strategy.

SUMMARY OF OPERATING AND FINANCIAL RESULTS

		Three Months Ended December 31,		Year Ended December 31,	
		2020	2019 [1]	2020	2019 [1]
CONTINUING OPERATIONS - WASSA ONLY					
Key operational and financial performance data					
Ounces produced	oz	40,931	41,335	167,648	156,166
Ounces sold	oz	43,559	41,890	167,527	156,489
Revenue	$'000	68,791	53,551	272,481	203,820
Mine operating profit	$'000	28,417	20,067	124,332	76,563
Mine operating margin[2]	%	41	37	46	38
EBITDA[2] from continuing operations	$'000	28,534	9,490	119,609	59,175
Adjusted EBITDA[2] from continuing operations	$'000	36,476	25,994	131,635	78,340
Adjusted EBITDA[2] margin	%	53	49	48	38
Net income/(loss) from continuing operations attributable to Golden Star shareholders[2]	$'000	8,201	(1,245)	38,518	5,317
– Basic income/(loss) per share	$/share	0.07	(0.01)	0.35	0.05
Adjusted net income attributable to Golden Star shareholders[2]	$'000	12,723	7,991	44,608	17,455
– Basic income per share	$/share	0.11	0.07	0.40	0.16
Total capital used by continuing operations	$'000	14,753	21,667	45,224	60,123
Average realized price	$/oz	1,579	1,278	1,626	1,302
Cost of sales per ounce[3]	$/oz	927	799	884	813
Cash operating cost per ounce[3]	$/oz	680	615	653	633
All-in sustaining cost[3 4]	$/oz	1,069	968	1,003	938
Key other expense/(income) items					
Corporate and administrative expenses[5]	$'000	4,528	3,177	18,718	14,679
Finance (income)/expense, net	$'000	(1,133)	(5,016)	9,463	4,615
Income taxes	$'000	12,278	9,715	48,266	27,439
Other expenses[5]	$'000	2,214	7,882	4,849	11,887
(Gain)/loss on fair value of financial instruments	$'000	(2,243)	2,986	(794)	1,642
TOTAL INCLUDING DISCONTINUED OPERATIONS[1] - WASSA AND PRESTEA					
Key operational and financial performance data					
Ounces produced	oz	40,931	52,671	189,977	203,769
Ounces sold	oz	43,559	53,413	189,492	204,189
Net loss from discontinued operations	$'000	(1,682)	(69,493)	(56,434)	(87,962)
Net income/(loss) for the period attributable to Golden Star shareholders	$'000	6,519	(62,434)	(52,140)	(67,434)
– Basic income/(loss) per share	$/share	0.06	(0.57)	(0.47)	(0.62)
Total capital	$'000	14,753	26,056	52,220	73,141
Average realized price	$/oz	1,579	1,237	1,627	1,297
Cost of sales per ounce[3]	$/oz	927	1,080	1,045	1,055
Cash operating cost per ounce[3]	$/oz	680	831	813	832
All-in sustaining cost[3 4]	$/oz	1,069	1,227	1,174	1,159

[1] Prestea has been presented as discontinued operations and as a result, the results of Prestea have been restated as if Prestea had been discontinued from the start of the comparative period.

[2] See "Non-GAAP Financial Measures" section for Mine operating margin, EBITDA, Adjusted EBITDA, Adjusted EBITDA margin and a reconciliation of net income attributable to Golden Star shareholders to adjusted net income attributable to Golden Star shareholders.
[3] See "Non-GAAP Financial Measures" section for a reconciliation of cost of sales per ounce, cash operating cost per ounce and all-in sustaining cost per ounce to cost of sales excluding depreciation and amortization.
[4] Following the sale of Prestea, the comparative numbers in 2019 for all-in sustaining costs have been restated to fully allocate to Wassa the corporate general and administrative costs that relate to the Canada and UK offices. Prior to the sale, corporate general and administrative expenses were allocated to Wassa and Prestea based on the ounces of gold sold during the period.
[5] The prior year number has been restated to reclassify the corporate severance costs to other expenses and excludes share-based compensation within corporate general and administrative expenses.

Continuing operations - Wassa only

Key operational and financial performance data

- Gold production of 40,931 ounces for Q4 2020 was slightly below 41,335 ounces produced for the fourth quarter of 2019 ("Q4 2019"). For the year ended December 31, 2020, production totaled 167,648 ounces which represents a 7% increase to the 2019 gold production**.** The full year increase follows increased underground mining volumes due to improved productivities and the processing of lower grade stockpile material in part offset by lower grades realized from the underground operations. Gold sales for Q4 2020 include 2,488 ounces that rolled over from Q3 2020 primarily as a result of a change in the revenue recognition date due to the impact of COVID-19 enforced changes. On a full year basis, sales and production aligned and we had no significant finished gold ounces on hand as at December 31, 2020.
- Gold revenue totaled $68.8 million in Q4 2020, $15.2 million higher than $53.6 million in Q4 2019 due to a 24% increase in the average realized gold price to $1,579/oz and a 4% increase in gold ounces sold driven by higher sales that included ounces rolled over from Q3 2020. The realized gold price per ounce for spot sales averaged $1,873 in Q4 2020 (Q4 2019 - $1,479), which increased year-on-year partly due to the continuing macro-economic developments associated with COVID-19 related uncertainty and the associated global economic impact. This was in part offset by the negative adjustment in the average realized gold price of $796/oz (Q4 2019 - $247/oz) achieved relating to the RG Streaming Agreement due to a non-cash variable consideration adjustment following the remeasurement of the deferred revenue liability for the updates associated with the latest long-term mine plans of $8.0 million (Q4 2019 - $5.6 million).

	Three Months Ended December 31, 2020			**Three Months Ended December 31, 2019**		
	$'000	**Ounces**	**Realized price per ounce**	**$'000**	**Ounces**	**Realized price per ounce**
Revenue - Spot sales	72,602	38,770	1,873	54,756	37,014	1,479
Cash proceeds	1,788			1,437		
Deferred revenue recognized	2,372			2,993		
Variable consideration adjustment	(7,971)			(5,636)		
Revenue - Streaming Agreement	(3,811)	4,789	(796)	(1,206)	4,876	(247)
Total	**68,791**	**43,559**	**1,579**	**53,551**	**41,890**	**1,278**

- Gold revenues for 2020 amounted to $272.5 million, 34% higher compared to $203.8 million in 2019 driven by higher gold spot prices and increased volumes. The Company's average realized gold price was $1,626/oz, 25% higher than the average realized gold price in 2019 while the realized gold price per ounce for spot sales averaged $1,770/oz, 27% higher than 2019. These increases were predominantly driven by the changing global macro-economic factors following uncertainty around the COVID-19 pandemic. Gold sold increased by 7% to 167,527 due to improved production rates and the processing of lower grade stockpiles. This was in part offset by the lower average realized price of $393/oz achieved in relation to the RG Streaming Agreement compared to $552/oz in 2019 that included a negative adjustment in relation to the non-cash variable consideration adjustment following the remeasurement of the deferred revenue liability for the updates associated with the latest long-term mine plans of $8.0 million (2019 - $5.6 million).

	For the Year Ended December 31, 2020			For the Year Ended December 31, 2019		
	$'000	Ounces	Realized price per ounce	$'000	Ounces	Realized price per ounce
Revenue - Spot sales	265,593	150,016	1,770	194,626	139,842	1,392
Cash proceeds	6,197			4,610		
Deferred revenue recognized	8,662			10,220		
Variable consideration adjustment	(7,971)			(5,636)		
Revenue - Streaming Agreement	6,888	17,511	393	9,193	16,647	552
Total	**272,481**	**167,527**	**1,626**	**203,820**	**156,489**	**1,302**

- Mine operating profit amounted to $28.4 million in Q4 2020, an increase of 42% on the mine operating profit of $20.1 million generated in Q4 2019 while mine operating margin improved from 37% to 41% for the same period comparatives. On a full year basis, mine operating profit increased by 62% or $47.8 million to $124.3 million while the mine operating margin increased from 38% to 46%. These increases were driven by higher gold spot markets which, in combination with higher sales volumes, translated into higher revenues. This was in part offset by higher mine operating costs predominantly due to (i) higher variable costs associated with increased mining volumes and plant throughput driven by increased mining rates and the processing of lower grade stockpiles; (ii) increased royalties driven by higher revenues, (iii) increased labor and related costs due to a combination of higher headcount and year on year increases; and (iv) increased depreciation costs as a function of the higher capital base and increased production volumes.

- EBITDA (see "Non-GAAP Financial Measures") from continuing operations amounted to $28.5 million for Q4 2020 (Q4 2019 - $9.5 million) and $119.6 million for the full year (2019 - $59.2 million). When adjusted for the gain/loss on fair value of financial instruments, other expenses and the variable component adjustment, the Company generated an Adjusted EBITDA from continuing operations of $36.5 million for Q4 2020, an increase of 40% compared to Q4 2019, and $131.6 million for 2020, an increase of 68% compared to 2019. These increases are due to the significant improvement in mine operating profits following from higher ounces sold and increased realized gold prices which was in part offset by a higher operating cost base. Adjusted EBITDA margin (see "Non-GAAP Financial Measures") compared favorably at 53% for Q4 2020 (Q4 2019 - 49%) and 48% for the full year (2019 - 38%) against comparative periods.

- Net income from continuing operations attributable to Golden Star shareholders for Q4 2020 amounted to $8.2 million or $0.07 basic income per share compared to a net loss of $1.2 million or $0.01 basic loss per share in Q4 2019. The full year net income from continuing operations attributable to Golden Star shareholders totaled $38.5 million or $0.35 basic income per share, compared to a net income of $5.3 million or $0.05 basic income per share in 2019. Both Q4 2020 and full year 2020 have shown an improved performance resulting from improved mine operating profit driven predominantly by higher revenues and lower other expenditure incurred that was in part offset by resulting increased income taxes, higher corporate general and administrative expenses and increased finance expenses.

- Adjusted net income attributable to Golden Star shareholders (see "Non-GAAP Financial Measures") was $12.7 million or $0.11 basic income per share in Q4 2020 compared to the adjusted net income attributable to Golden Star shareholders of $8.0 million or $0.07 basic income per share in Q4 2019. Adjusted net income attributable to Golden Star shareholders was $44.6 million or $0.40 basic income per share in 2020 compared to $17.5 million or $0.16 basic income per share in 2019. The increase during Q4 2020 and full year 2020 compared to the comparative periods in 2019 was primarily due to the higher mine operating profit on the back of improved sales volumes and gold prices partly offset by the resulting increased income tax expense.

- Capital expenditures from continuing operations for Q4 2020 totaled $14.8 million compared to $21.7 million in Q4 2019 while capital expenditures for 2020 amounted to $45.2 million compared to $60.1 million in 2019. Capital expenditure in 2019 was marked by a significant focus around the exploration drilling and expansion capital projects of which some ran over into 2020 while the focus in 2020 shifted predominantly to critical sustaining capital projects. Capital expenditure in Q4 2020 when compared to prior quarters in 2020 increased due to the improved financial position of the business and the sustained increase in the gold price that allowed the Company to accelerate waste development and diamond drilling during Q4 2020 and into 2021.

- All-in sustaining cost ("AISC") (see "Non-GAAP Financial Measures") of $1,069/oz for Q4 2020 reflects an increase of 10% compared to the Q4 2019 reported AISC of $968/oz. AISC also increased by 7% from $938/oz in 2019 to $1,003/oz in 2020. The increase during Q4 2020 and full year 2020 were driven by higher cash operating costs, higher royalties driven by increased revenues, increased corporate general and administrative costs and higher sustaining capital incurred. Cash operating cost (see "Non-GAAP Financial Measures") per ounce of $680 for Q4 2020 reflects a 11% increase over Q4 2019 of $615/oz while cash operating cost per ounce for the full year increased from $633/oz in 2019 to $653/oz in 2020. These increases were primarily due to higher operating costs as a result of increased mining and processing volumes in combination with lower underground mining grades and higher labor costs driven primarily by year on year increases in part offset by the increased sold ounce base.

Key Other Expense/Income items

- Corporate general and administrative expense totaled $4.5 million in Q4 2020 compared to $3.2 million in the same period in 2019, the increase being primarily due to higher insurance and labor costs. Corporate general and administrative expenses for 2020 amounted to $18.7 million, a 28% increase compared to $14.7 million in 2019 due primarily to non-recurring costs incurred as part of the relocation of the corporate office, increased insurance expenditure and increased labor costs.

- The Company incurred net finance income of $1.1 million in Q4 2020 compared to a net finance income of $5.0 million in the same period in 2019. Net finance expense amounted to $9.5 million for full year 2020 which was 105% higher than 2019 which amounted to $4.6 million. The higher finance expense in 2020 has been primarily driven by (i) the lower credit adjustment at the end of 2020 of $1.5 million (2019 - $6.2 million) as a result of the change in the variable component of the deferred revenue liability; (ii) the reclassification of interest expense of principal debt at Prestea to loss from discontinued operations for 2019 for $2.7 million preceding the refinancing exercise in Q4 2019 which primarily marked site level financing arrangements being replaced with the group-held Macquarie Credit Facility; (iii) a gain on the modification of the Macquarie Credit Facility in Q4 2020 of $3.0 million and (iv) lower interest income earned due to lower average cash on hand and declining interest rates. These increases were partly offset by interest on the financing component of deferred revenue for 2020 which reduced by $1.2 million compared to 2019 following the variable component adjustment in Q4 2019.

- The Company recorded a net gain of $2.2 million on the fair value of financial instruments in Q4 2020 compared to a $3.0 million loss in the same period in 2019 that included (i) a $4.3 million unrealized revaluation gain (Q4 2019 - $2.5 million loss) on the embedded derivative liability of the Convertible Debentures and (ii) a $2.1 million unrealized revaluation loss (Q4 2019 - $0.5 million loss) on the non-hedge gold collar contracts. The gain on fair value of financial instruments for 2020 amounted to $0.8 million compared to a loss of $1.6 million in 2019 and comprised of (i) an unrealized revaluation gain on the embedded derivative liability of $3.0 million (Q4 2019 - loss of $1.4 million) and (ii) unrealized revaluation loss on the non-hedge gold collar contracts of $2.2 million (Q4 2019 - loss of $0.2 million). The movement in Q4 2020 and 2020 is due to the decrease in the fair value of its conversion feature of the Convertible Debentures and due to primarily the revaluation of the option and time value features of the non-hedge gold collar contracts.

- Other expenses amounted to $2.2 million in Q4 2020 compared to other expenses of $7.9 million for the same period in 2019 and includes corporate transaction and other costs of $2.2 million. Other expenses for the full year of $4.8 million includes (i) realized losses on non-hedge gold hedges of $2.5 million, (ii) corporate office relocation costs of $0.4 million and (iii) corporate transaction and other costs of $1.9 million. Comparative 2019 costs comprised mostly of corporate severance and restructuring costs and other non-recurring expenses.

- Income tax expense amounted to $12.3 million in Q4 2020 compared to $9.7 million for the same period in 2019. Income tax expense for the full year amounted to $48.3 million compared to $27.4 million in 2019. The income tax expense is primarily driven by the taxable income of Wassa and has increased primarily as a function of higher mine operating profits following predominantly higher revenues.

Total including discontinued operations from Prestea

- Prestea has been classified as a discontinued operation following the sale completion on September 30, 2020 and as such total production for Q4 2020 aligns with production from continuing operations compared to 52,671 ounces in Q4 2019 that included 11,336 ounces from Prestea. The Company produced 189,977 ounces in 2020, including production from Prestea up to September 30, 2020 of 22,329 ounces, compared to 203,769 ounces for the full year 2019 that included 47,603 ounces from Prestea. Prestea ceased open pit activities during Q2 2020 resulting in a significantly lower ounce production base when compared to 2019.

- The net loss from discontinued operations amounted to $1.7 million in Q4 2020 (Q4 2019 - $69.5 million) and is comprised of additional transaction-related costs and transition charges incurred. The net loss from discontinued operations for the full year of $56.4 million (Q4 2019 - $88.0 million) comprises mainly of a mine operating loss of $14.2 million, Prestea general and administrative expenses of $1.0 million, the loss on sale of Prestea of $36.6 million and related transaction costs specific to the disposal of Prestea and other expenses of $4.9 million. The net loss from discontinued operations for 2019 relates mainly to mine operating loss of $27.2 million and an impairment charge of $56.8 million.

- The total net income attributable to Golden Star shareholders, which amounted to $6.5 million (Q4 2019 - net loss of $62.4 million) or a $0.06 basic income per share for Q4 2020 (Q4 2019 - basic loss per share of $0.57), is the first quarter post the disposal transaction that excludes the mine operating losses of Prestea. The full year net loss attributable to Golden Star shareholders of $52.1 million (2019 - net loss of $67.4 million) or a $0.47 basic loss per share for 2020 (Q4 2019 - basic loss per share of $0.62) is net of the income of $38.4 million that was allocated to the non-controlling interest following the intergroup debt restructuring that was executed as a condition precedent to the completion of the sale of Prestea. Furthermore, the total net loss has been adversely impacted by the loss from discontinued operations.

- AISC per ounce amounted to $1,069/oz for Q4 2020, a reduction of 13% compared to $1,227/oz for Q4 2019, which included the AISC of Prestea. AISC per ounce amounted to $1,174/oz for the full year which was slightly higher than $1,159/oz for 2019 following significantly lower production volume from Prestea in combination with the increased cost base of Wassa.

OUTLOOK FOR 2021

Production and cost guidance

	Gold production	Cash operating costs[1]	All-in sustaining costs[1]
	’000 ounces	$ per ounce	$ per ounce
Continuing operations - Wassa	165 - 175	660 - 700	1,000 - 1,075

Capital expenditure guidance

	Sustaining	Expansion[2]	Total
	$ millions	$ millions	$ millions
Continuing operations - Wassa	26.0 - 28.0	19.0 - 22.0	45.0 - 50.0

[1] See “Non-GAAP Financial Measures” section below for the definition of cash operating costs and all-in sustaining costs.
[2] Expansion capital are those costs incurred at new operations and costs related to major projects at existing operations where these projects are expected to materially increase production. All other costs relating to existing operations are considered sustaining capital.

Production guidance

Wassa is expected to produce between 165,000 to 175,000 ounces in 2021. This is in line with the 2020 production performance, which benefited from an increase in the underground mining rates and an estimated 7,000 ounces of production from the processing of low-grade stockpiles. The contribution from stockpiles is expected to continue throughout 2021 with a little under 1,000 tonnes per day (“tpd”) of stockpiled material expected to be processed at a grade of approximately 0.6 grams per tonne (“g/t”). This initiative remains subject to gold prices sustaining near current levels. We expect mining rates for 2021 to be in excess of 4,500 tpd, in line with the 4,469 tpd achieved in 2020. The investment in drilling and development in 2020 is anticipated to unlock further increases in the mining rates in the future. Underground mined grades are expected to remain in line with the average grade achieved in 2020. The infill drilling program continued to progress during 2020, and as a result, 90% of the 2021 mine plan comprises of high confidence ounces.

Cost guidance

The $660/oz to $700/oz cash operating cost guidance for 2021 shows a slight increase over 2020 due to the planned commissioning of the paste fill plant in Q1 2021. The plant will add $5 to $7 per tonne to the mining cost once operational and this cost will be offset by the benefits associated with an increase in the recovery of the ore body.

The 2021 AISC guidance at Wassa increases relative to 2020 due to the continued investment in underground development which is reflected in higher sustaining capital partly offset by reduced power cost from GENSER as discussed below.

Capital expenditure

The capital programs at Wassa are expected to total $45.0 to $50.0 million in 2021. This is in line with the $45.2 million invested in Wassa in 2020 which focused on major infrastructure projects. With those now complete, the investment in 2021 will primarily focus on drilling and development. In order to ensure a robust balance sheet through the repayment of the Convertible Debentures in August 2021, and to allow for a ramp up in drilling and development activities, 40% of the spend is budgeted for the first half of 2021 and the remaining 60% during the second half of 2021.

Sustaining capital is expected to total $26.0 to $28.0 million, of which $16.0 million is allocated to capitalized development and $4.0 to $5.0 million to the expansion of the tailing storage facilities. Expansion capital is expected to total $19.0 to $22.0 million, of which $7.0 to $8.0 million is allocated to capitalized drilling, $7.0 million to ventilation infrastructure and $4.0 million to capitalized development.

In accordance with IFRS 16 - Leases accounting standard, the completion of the construction of the Genser power plant will result in the inclusion in the consolidated financial statements of a non-cash $33.5 million right-to-use asset addition to property, plant and equipment and the recognition of a corresponding lease liability during Q1 2021. An element of the cost of power supplied by the Genser plant will be accounted for as depreciation of the capital asset and as a finance expense. Approximately $20/oz of the power cost will therefore not be allocated to cash operating costs or AISC.

2021 exploration budget and programs

A $15.0 million exploration budget has been approved for 2021 of which $7.0 million will be invested in and around the Wassa mine. This work will include the continued wide spaced drilling up-dip and down-dip of the current resources and reserves as well as drill testing of seven targets to the south and east of the Main Wassa deposit. Approximately 28,000 meters of combined diamond and reverse circulation drilling has been planned. In addition, 9,000 meters of air core drilling has been planned to test the coincidental geophysical and geochemical anomaly over the eastern fold closure target.

$6.0 million has been allocated for further testing of the five HBB targets followed up in 2020 as well as five additional targets along the HBB corridor. Approximately 50,000 meters of air core drilling will be conducted over the soil geochemical anomalies defined last year and in past programs. Several of these targets will be further delineated with ground geophysics prior to drilling. Pending positive results from the air core drilling, approximately 15,000 meters of deeper reverse circulation with diamond core tails has been planned for initial follow up. Several of the historical open pits within Benso mining lease have never had any drilling beneath them and these deposits have higher grade cores that could potentially form underground targets. In light of this, 12,000 meters of reverse circulation and diamond core tails has been budgeted to test below these pits on wide spacing.

The Abura project operates under an earn-in agreement between the Company and a Ghanaian concession owner. This project is located to the south west of the HBB concessions and has been drilled with shallow rotary air blast holes which returned some positive results which require follow-up with deeper reverse circulation and diamond drilling. The 2021 budget has 5,000 meters of drilling planned with approximately $0.7 million being allocated to this program.

These “regional” exploration programs have been designed to move the various prospects up the exploration pipeline, with positive results potentially justifying further work in 2022 and beyond. Prospects which do not generate positive results will be divested or dropped altogether.

CONTINUING OPERATIONS - WASSA

		Three Months Ended December 31,		For the Years Ended December 31,	
		2020	2019	2020	2019
WASSA FINANCIAL RESULTS					
Revenue	$’000	68,791	53,551	272,481	203,820
Mine operating expenses	$’000	28,053	26,182	107,400	98,722
Severance charges	$’000	—	—	45	225
Royalties	$’000	4,058	3,060	14,883	10,877
Operating costs to metals inventory	$’000	1,575	(414)	1,918	299
Inventory write-off	$’000	17	—	176	—
Cost of sales excluding depreciation and amortization	$’000	33,705	28,828	124,422	110,123
Depreciation and amortization	$’000	6,670	4,657	23,727	17,134
Mine operating profit	$’000	28,417	20,066	124,332	76,563
Sustaining capital	$’000	8,606	8,517	24,651	22,014
Expansion capital	$’000	6,472	13,150	20,504	38,109
Capital expenditures	$’000	15,077	21,667	45,155	60,123
WASSA OPERATING RESULTS					
Ore mined - Underground	t	384,139	375,958	1,635,680	1,421,742
Waste mined - Underground	t	164,230	121,861	587,274	363,004
Material mined - Underground	t	548,369	497,819	2,222,954	1,784,746
Ore processed - Main Pit/Stockpiles	t	110,246	40,282	348,235	160,581
Ore processed - Underground	t	384,007	349,133	1,662,550	1,387,905
Ore processed - Total	t	494,253	389,415	2,010,785	1,548,486
Grade processed - Main Pit/Stockpiles	g/t	0.67	0.68	0.65	0.65
Grade processed - Underground	g/t	3.38	3.78	3.13	3.57
Grade processed - Total	g/t	2.77	3.46	2.70	3.27
Recovery	%	94.6	95.4	94.9	95.6
Gold produced - Main Pit/Stockpiles	oz	2,552	738	7,276	3,250
Gold produced - Underground	oz	38,379	40,597	160,372	152,916
Gold produced - Total	oz	40,931	41,335	167,648	156,166
Gold sold - Total	oz	43,559	41,890	167,527	156,489
Cost of sales per ounce[1]	$/oz	927	799	884	813
Cash operating cost per ounce[1]	$/oz	680	615	653	633
All-in sustaining cost per ounce[1 2]	$/oz	1,069	968	1,003	938

[1] See “Non-GAAP Financial Measures” section for a reconciliation of cost of sales per ounce, cash operating cost per ounce and all-in sustaining cost per ounce to cost of sales excluding depreciation and amortization.

[2] Following the sale of Prestea, the comparative numbers in 2019 for all-in sustaining costs have been restated to fully allocate to Wassa the corporate general and administrative costs that relate to the Canada and UK offices. Prior to the sale, corporate general and administrative expenses were allocated to Wassa and Prestea based on the ounces of gold sold during the period.

For the three months ended December 31, 2020 compared to the three months ended December 31, 2019

Production

Gold production from Wassa totaled 40,931 ounces for Q4 2020, a slight decrease from the 41,335 ounces produced during Q4 2019. Lower grades from Wassa Underground as well as the additional processing of low grade stockpile material had an adverse impact on overall feed grade which decreased from 3.46 g/t in Q4 2019 to 2.77 g/t in Q4 2020. As a consequence, gold recovery rate also reduced to 94.6% for Q4 2020 compared to 95.4% achieved for the same period in 2019. These were offset by higher throughput as reflected by the 27% increase from 389,415 tonnes in Q4 2019 to 494,253 tonnes in Q4 2020 as a result of increased Wassa Underground volumes driven by improved productivities and additional processing of low grade stockpile material.

Wassa Underground

Wassa Underground produced 38,379 ounces of gold (or approximately 94% of Wassa's total production) in Q4 2020, compared to 40,597 ounces in Q4 2019 (or approximately 98% of Wassa's total production). This 5% decrease in production was mainly due to an 11% reduction in average feed grade to 3.38g/t as a consequence of dilution in combination with slower development rates earlier in the year due primarily to the unavailability of expat operators due to COVID-19 enforced travel restrictions which had an adverse impact on the availability of higher grade stoping areas. When compared to earlier quarters in 2020, underground grades improved which allowed for an increase in development activities as marked by higher waste volume mined resulting in slightly lower underground mining rates of 4,175 tpd in Q4 2020, which is only 2% higher than the mining rate of 4,087 tpd achieved in the same period in 2019.

Wassa Main Pit/Stockpiles

Low grade stockpiles from the Wassa main pit of 110,246 tonnes with an average grade of 0.67 g/t were blended with the Wassa Underground ore during Q4 2020 and yielded 2,552 ounces of gold, compared to 738 ounces in Q4 2019. The Company will continue to process low grade stockpiles in 2021 should the current gold price environment continue.

Gold revenue

Gold revenue for Q4 2020 was $68.8 million, $15.2 million higher than the $53.6 million achieved in Q4 2019. Gold sold increased by 4% to 43,559 ounces for Q4 2020, which included 2,488 ounces from Q3 2020 production, compared to 41,890 ounces in Q4 2019. The average realized gold price, including the unwinding of the deferred revenue from the RG Streaming Agreement and the non-cash variable consideration adjustment on deferred revenue, increased 24% to $1,579/oz for Q4 2020 compared to $1,278/oz in Q4 2019.

Cost of sales excluding depreciation and amortization

Cost of sales excluding depreciation and amortization was $33.7 million for Q4 2020 compared to $28.8 million for Q4 2019. Mine operating expenses increased by $1.9 million to $28.1 million due to (i) higher variable costs resulting from additional mining and processing volumes relating predominantly to plant reagents and consumables; (ii) increased labor costs due to increased headcount, inflationary increases year-on-year and the higher performance incentives; and (iii) higher mine site general and administrative costs. Royalties of $4.1 million increased from $3.1 million in Q4 2019 in line with higher gold revenue. The operating costs to metals inventory charge of $1.6 million relates primarily to the ounces sold in excess of production of 2,488 ounces.

Depreciation and amortization

Depreciation and amortization expense increased to $6.7 million for Q4 2020 compared to $4.7 million for Q4 2019 mainly due to the significantly higher capital cost base when compared to the 2019 base following additions in the past two years.

Costs per ounce

Cost of sales per ounce increased 16% to $927 for Q4 2020 compared to Q4 2019 mainly due to increased mine operating costs, metal inventory charge, royalties, corporate general and administrative costs and depreciation costs that was partly offset by higher sales volumes.

Cash operating cost per ounce increased 11% to $680 for Q4 2020 compared to Q4 2019 mainly due to increased processing costs, metal inventory charge and site overheads partly offset by higher sales volumes.

AISC per ounce increased 10% to $1,069 for Q4 2020 compared to Q4 2019 due to increases in cash operating cost, royalties, corporate general and administrative expenses and sustaining capital partly offset by higher sales volumes.

Capital expenditures

Capital expenditures for Q4 2020 totaled $15.1 million compared with $21.7 million incurred during Q4 2019 as we continued to invest heavily on infrastructure required to support increased throughput and future production growth from the underground operation. Key capital spending included (i) sustaining capital of $4.1 million on capitalized underground development activities, $0.8 million on mobile equipment, $1.1 million on mobile equipment capital spares, $0.5 million on processing plant improvements and $0.5 million new underground engineering workshop; and (ii) expansion capital of $2.6 million on the paste fill plant project which is expected to be operational during Q1 2021, $1.1 million on capitalized exploration drilling, development costs for increased future production of $0.9 million and expansion of the tailings storage facility of $0.7 million.

Capital expenditures for Q4 2019 totaled $21.7 million that included (i) expansion capital of $2.1 million of development costs for increased future production, $5.4 million for the paste fill plant, $2.1 million on mobile equipment purchases and $2.3 million relating to electrical upgrades in support of the paste fill project; and (ii) sustaining capital of $2.0 million capitalized underground development activities, $1.6 million on mobile equipment purchases, $0.7 million of mobile equipment capital spares, $1.1 million relating to the pumping station project, $1.0 million of processing plant improvements and $0.9 million of IT and systems upgrade.

For the year ended December 31, 2020 compared to the year ended December 31, 2019

Production

Gold production from Wassa totaled 167,648 ounces for the year, a 7% improvement from the 156,166 ounces produced during 2019. The Wassa processing plant milled a total of 2,010,785 tonnes in 2020, 30% higher than the throughput of 1,548,486 tonnes in 2019. Overall feed grade decreased from 3.27 g/t in 2019 to 2.70 g/t in 2020 due to a higher proportion of low grade stockpile ore being processed and lower grades achieved from Wassa Underground. Recovery, as a result of lower grades, decreased slightly from 95.6% in 2019 to 94.9% in 2020.

Wassa Underground

Wassa Underground produced 160,372 ounces of gold in 2020 compared to 152,916 ounces in 2019. This 5% improvement was mainly due to increased throughput to 1,662,550 tonnes compared to 1,387,905 tonnes in 2019 as a consequence of improved mining productivity partly offset by a lower feed grade of 3.13 g/t compared to 3.57 g/t in 2019 due to the mining of lower grade areas. Wassa Underground mining rates increased to an average of 4,469 tpd in 2020, 15% higher than the mining rate of 3,895 tpd achieved in 2019.

Wassa Main Pit/Stockpiles

The processing of low grade stockpile from the Wassa main pit of 348,235 tonnes with an average grade of 0.65 g/t during the year contributed 7,276 ounces of gold. This compares to 3,250 ounces in 2019 from the processing of 160,581 tonnes at a similar grade. The processing of low grade stockpile utilizes the latent capacity in the Wassa processing plant which will continue to contribute additional cash flows, albeit at a slightly higher cost than achieved by the processing of Wassa Underground ore.

Gold revenue

Gold revenue for 2020 was $272.5 million, 34% higher than the $203.8 million achieved in 2019. Gold sold increased by 7% to 167,527 ounces driven by higher production. The average realized gold price, including unwinding of the deferred revenue from the RG Streaming Agreement and the non-cash variable consideration adjustment on deferred revenue, was 25% higher at $1,626/oz for 2020 compared to $1,302/oz in 2019.

Cost of sales excluding depreciation and amortization

Cost of sales excluding depreciation and amortization was $124.4 million for 2020 compared to $110.1 million for 2019. Mine operating expenses increased by $8.7 million to $107.4 million due to (i) additional reagent, drilling and plant consumables costs in line with increased mining and processing volumes; (ii) increased labor costs due to increased headcount, inflationary increases year-on-year and higher performance incentives; (iii) higher maintenance costs as a function of higher production rates and larger fixed and mobile capital base; and (iv) increased site general and administrative costs associated with mining license fees, insurance and gold transportation. Royalties increased by $4.0 million in line with the higher revenue base.

Depreciation and amortization

Depreciation and amortization expense increased to $23.7 million for 2020 compared to $17.1 million for 2019 mainly due to an increase in units-of-production based depreciation resulting from higher production volumes and the higher depreciable capital cost base for 2020.

Costs per ounce

Cost of sales per ounce increased 9% to $884 in 2020 compared to 2019 mainly due to higher mine operating expenses driven by increased mining and processing volumes and increased labor costs, increased royalties and higher depreciation cost partly offset by higher ounces of gold sold.

Cash operating cost per ounce increased slightly to $653 in 2020 compared to $633 in 2019 primarily due to higher mine operating expenses following increased mining and processing costs driven by higher mining and processing volumes and higher general and administrative costs in part offset by the increased ounces sold.

AISC per ounce increased 7% to $1,003 in 2020 compared to 2019 due to the combination of (i) increased royalties, (ii) increased corporate general and administrative costs, (iii) increased mine operating expenses as a function of higher mining and processing volumes and higher labor costs, and (iv) higher sustaining capital expenditure which was in part offset by higher gold sales.

Capital expenditures

Capital expenditures for 2020 amounted to $45.2 million compared to $60.1 million incurred during 2019. Key capital spending in 2020 included (i) sustaining capital of $14.1 million on capitalized underground development activities, $3.2 million on mobile equipment and $3.0 million on capital spare replacements; and (ii) expansion capital of $12.1 million on the paste fill plant project, $3.5 million in relation to long term capitalized underground development, and $1.5 million capitalized exploration drilling.

Capital spending in 2019 was marked by (i) expansion capital of $16.5 million relating to capitalized exploration drilling, $7.0 million for the paste fill plant, $4.2 million mobile equipment, $2.4 million in electrical upgrades in support of the paste fill project, $2.0 million for the ventilation raise project and $3.0 million relating to the tailings storage facility; and (ii) sustaining capital of $9.5 million of capitalized underground development activities, $2.7 million in mobile equipment purchases, $2.5 million for the pumping station project, $2.1 million for processing plant improvements and $1.8 million in relation to capital spare replacements.

DISCONTINUED OPERATIONS - PRESTEA (DISCONTINUED FROM SEPTEMBER 30, 2020)

		Three Months Ended December 31,		For the Years Ended December 31,	
		2020	2019 [1]	2020	2019 [1]
PRESTEA FINANCIAL RESULTS[1]					
Revenue	$'000	—	12,510	35,731	60,917
Mine operating expenses	$'000	—	18,549	46,604	71,427
Other operating expenses	$'000	—	—	(3,031)	—
Severance charges	$'000	—	31	37	143
Royalties	$'000	—	1,586	1,899	4,083
Operating costs to metals inventory	$'000	—	73	(1,943)	(652)
Inventory net realizable value adjustment	$'000	—	165	1,071	1,216
Cost of sales excluding depreciation and amortization	$'000	—	20,404	44,637	76,217
Depreciation and amortization	$'000	—	3,807	5,249	11,920
Mine operating loss	$'000	—	(11,701)	(14,155)	(27,220)
Net loss on discontinued operations	$'000	(1,682)	(69,493)	(56,434)	(87,962)
Sustaining capital	$'000	—	4,104	5,438	12,031
Expansion capital	$'000	—	285	1,559	987
Capital expenditures	$'000	—	4,389	6,997	13,018
PRESTEA OPERATING RESULTS					
Ore mined - Open pits	t	—	112,419	138,464	493,924
Ore mined - Underground	t	—	34,426	104,214	152,330
Ore mined - Total	t	—	146,845	242,678	646,254
Waste mined - Open pits	t	—	207,322	268,850	749,660
Waste mined - Underground	t	—	9,111	37,112	17,446
Waste mined - Total	t	—	216,433	305,962	767,106
Total material mined - Open pits	t	—	319,741	407,314	1,243,584
Total material mined - Underground	t	—	43,537	141,326	169,776
Total material mined - Total	t	—	363,278	548,640	1,413,360
Ore processed - Open pits	t	—	117,404	137,819	567,119
Ore processed - Underground	t	—	34,426	102,994	152,330
Ore processed - Total	t	—	151,830	240,813	719,449
Grade processed - Open pits	g/t	—	1.45	1.48	1.56
Grade processed - Underground	g/t	—	6.87	5.74	5.58
Grade processed - Total	g/t	—	2.68	3.30	2.41
Recovery	%	—	86.0	86.4	85.7
Gold produced - Open pits	oz	—	4,781	5,112	23,422
Gold produced - Underground	oz	—	6,555	17,217	24,181
Gold produced - Total	oz	—	11,336	22,329	47,603
Gold sold - Total	oz	—	11,523	21,965	47,700
Cost of sales per ounce[2]	$/oz	—	2,101	2,271	1,848
Cash operating cost per ounce[2]	$/oz	—	1,616	2,033	1,484
All-in sustaining cost per ounce[2 3]	$/oz	—	2,167	2,477	1,885

[1] Prestea has been presented as discontinued operations and as a result, the results of Prestea have been re-presented as if Prestea had been discontinued from the start of the comparative period.
[2] See "Non-GAAP Financial Measures" section for a reconciliation of cost of sales per ounce, cash operating cost per ounce and all-in sustaining cost per ounce to cost of sales excluding depreciation and amortization.
[3] Following the sale of Prestea, the comparative numbers in 2019 for all-in sustaining costs have been restated to fully allocate to Wassa the corporate general and administrative costs that relate to the Canada and UK offices. Prior to the sale, corporate general and administrative expenses were allocated to Wassa and Prestea based on the ounces of gold sold during the period.

As discussed in the "Corporate Developments" section, the Company completed the sale of its 90% interest in Prestea to FGR on September 30, 2020. The net loss from discontinued operations of $1.7 million in Q4 2020 comprises of additional transaction-related costs incurred during the quarter.

For the year ended December 31, 2020 compared to the year ended December 31, 2019

Production

Gold production from Prestea decreased to 22,329 ounces for the period to September 30, 2020 compared to 47,603 ounces produced for the year ended December 31, 2019 of which production from Prestea Open Pits totaled 5,112 ounces (full year 2019 - 23,422 ounces) and production from Prestea Underground totaled 17,217 ounces (full year 2019 - 24,181 ounces). The 53% decrease is mainly attributable to the inclusion of only nine months of production in 2020 compared to a full year in 2019 in combination with the cessation of open pit operations in May 2020.

Gold revenue

Gold revenue for the period to September 30, 2020 was $35.7 million, a 41% reduction to the $60.9 million reported for full year 2019. Gold sold decreased 54% to 21,965 ounces for the nine month period to September 30, 2020 compared to 47,700 ounces for full year 2019 as a result of a decrease in gold production from the Prestea Open Pits and Prestea Underground. This was partly offset by a 22% increase in the average realized gold price to $1,627/oz for the period to September 30, 2020 compared to $1,334/oz in 2019.

Cost of sales excluding depreciation and amortization

Cost of sales excluding depreciation and amortization amounted to $44.6 million for the period to September 30, 2020 compared to $76.2 million in 2019. Mine operating expenses of $46.6 million decreased by $24.8 million compared to full year 2019 primarily due to the cost base reflecting only nine months of costs compared to a full year in 2019 and lower open pit mining costs and variable processing costs incurred following the cessation of open pit operations in May 2020. Cost of sales excluding depreciation and amortization for the period to September 30, 2020 include a credit to other operating expenses of $3.0 million for a change in estimates of accrued energy and staff costs. Royalties decreased by $2.2 million to $1.9 million in line with reduced gold revenue.

Depreciation and amortization

Depreciation and amortization expense decreased to $5.2 million for the period to September 30, 2020 compared to $11.9 million for the full year 2019 due to a combination of the impairment charge of $56.8 million in Q4 2019 resulting in a lower depreciable cost base rolling into 2020 and lower production volumes in 2020.

Costs per ounce

Cost of sales per ounce increased by 29% to $2,271, cash operating cost per ounce increased by 41% to $2,033 and AISC per ounce increased by 38% to $2,477 for the period to September 30, 2020 compared with full year 2019 mainly due to the lower gold sales base.

Capital expenditures

Capital expenditures for the period to September 30, 2020 totaled $7.0 million compared to $13.0 million incurred in 2019. Key sustaining capital during the period to September 30, 2020 included lateral and decline development of Prestea Underground ($3.2 million) and drilling and mining equipment ($2.3 million) relating to long hole conversion on 17 Level.

SUMMARIZED QUARTERLY FINANCIAL RESULTS[1]

(Stated in thousands of U.S dollars except per share data)	Q4 2020	Q3 2020	Q2 2020	Q1 2020	Q4 2019	Q3 2019	Q2 2019	Q1 2019
Revenues	68,791	74,235	75,368	54,087	53,551	48,384	47,893	53,992
Cost of sales excluding depreciation and amortization	33,705	31,137	33,564	26,017	28,828	27,373	27,141	26,781
Net income/(loss) from continuing operations attributable to Golden Star shareholders	8,201	14,851	9,257	6,209	(1,245)	6,409	(2,443)	2,596
Net income/(loss) attributable to Golden Star shareholders	6,519	(67,261)	7,773	829	(62,434)	5,960	(9,036)	(1,924)
Adjusted net income from continuing operations attributable to Golden Star shareholders[1]	12,723	18,592	11,055	2,238	7,991	1,939	854	6,672
EBITDA[2] from continuing operations	28,534	31,167	35,247	24,661	9,490	19,745	11,204	18,736
Adjusted EBITDA[2] from continuing operations	36,476	37,531	36,381	21,247	25,994	15,280	14,484	22,582
Net income/(loss) from continuing operations per share attributable to Golden Star shareholders - basic	0.07	0.13	0.08	0.06	(0.01)	0.06	(0.02)	0.02
Net income/(loss) from continuing operations per share attributable to Golden Star shareholders - diluted	0.06	0.13	0.08	0.03	(0.01)	0.03	(0.02)	0.02
Adjusted net income from continuing operations per share attributable to Golden Star shareholders - basic[2]	0.11	0.17	0.10	0.02	0.07	0.02	0.01	0.06

[1] Prestea has been presented as discontinued operations and as a result, the results of Prestea have been restated as if Prestea had been discontinued from the start of the comparative period.

[2] See "Non-GAAP Financial Measures" section for a reconciliation of adjusted net income attributable to Golden Star shareholders and adjusted income per share attributable to Golden Star shareholders (basic) to net loss attributable to Golden Star shareholders and reconciliation of net income/(loss) to EBITDA and Adjusted EBITDA.

SELECTED ANNUAL INFORMATION

(Stated in thousands of U.S. dollars except per share data)	As of December 31, 2020	As of December 31, 2019	As of December 31, 2018
Cash and cash equivalents	60,809	53,367	96,507
Working capital[1]	4,638	(16,557)	5,850
Total assets	343,861	372,608	417,987
Long-term debt	55,732	90,782	73,224
Equity/(deficit)	25,774	(32,123)	42,037

	For the years ended December 31,		
	2020	2019	2018
Revenue	272,481	203,820	183,078
Net income/(loss) from continuing operations attributable to Golden Star shareholders	38,518	5,317	(18,123)
Income per share attributable to Golden Star shareholders - basic	0.35	0.05	0.09
Income per share attributable to Golden Star shareholders - diluted	0.34	0.05	0.06

[1] Working Capital is calculated as Current Assets minus Current Liabilities as disclosed on the Consolidated Balance Sheet.

LIQUIDITY AND FINANCIAL CONDITION

		December 31, 2020	December 31, 2019
Cash and cash equivalents	$'000	60,809	53,367
Debt	$'000	105,763	106,769
Net debt	$'000	44,954	53,402

		For the Years Ended December 31,	
		2020	2019 [1]
Cash provided by continuing operations before working capital changes and tax[2]	$'000	113,472	58,530
Changes in working capital and income taxes paid	$'000	(29,468)	(8,409)
Net cash provided by operating activities of continuing operations	$'000	84,004	50,121
Net cash used in investing activities of continuing operations	$'000	(47,225)	(56,488)
Free cash flow[2] from continuing operations	$'000	36,779	(6,367)
Net cash used by operating and investing activities of discontinued operations	$'000	(31,390)	(38,203)
Total Free cash flow[2]	$'000	5,389	(44,570)
Net cash provided by financing activities	$'000	2,053	1,430
Increase/(decrease) in cash and cash equivalents	$'000	7,442	(43,140)
Cash and cash equivalents, beginning of period	$'000	53,367	96,507
Cash and cash equivalents, end of period	$'000	60,809	53,367
Cash provided by continuing operations before working capital changes and tax - basic[2]	$/share	1.03	0.54
Net cash provided by operating activities of continuing operations[2]	$/share	0.76	0.46

[1] Prestea has been presented as discontinued operations and as a result, the cash flows of Prestea have been restated as if it had been discontinued from the start of the comparative period.
[2] See "Non-GAAP Financial Measures" section for description of Net cash provided by operating activities before working capital changes and tax per share and Net cash provided by operating activities of continuing operations per share and Free cash flow.

The Company held $60.8 million in cash and cash equivalents as at December 31, 2020 compared to $53.4 million in cash and cash equivalents as at December 31, 2019. Improved mine operating profits on the back of primarily higher realized prices and increased production volumes provided cash of $84.0 million (2019: $50.1 million) or $0.76 (2019: $0.46) per basic share from operating activities by continuing operations and generated free cash flow from continuing operations of $36.8 million (2019: outflow of $6.4 million) after investing activities of $47.2 million (2019: $56.5 million). Net cash used by operating and investing activities of discontinued operations amounted to $31.4 million in 2020 compared to $38.2 million for 2019. Total free cash flow generated during 2020 amounted to $5.4 million compared to a total free cash outflow of $44.6 million in 2019.

Working capital used for continuing operations including tax payments amounted to $29.5 million during the year ended December 31, 2020 compared to $8.4 million in 2019. The working capital changes in 2020 comprise primarily of (i) $25.8 million income tax payments at Wassa (compared to $5.5 million in 2019); and (ii) a $4.1 million increase in prepaids and other mainly due to the impact of insurance and staff benefit prepayments (compared to an outflow of $1.2 million in 2019). 2019 included a cash settlement of a share-based incentive included in other liability for $6.4 million which was offset by a buildup in accruals and payables of $9.1 million (inflow of $1.6 million in 2020).

Cash used by investing activities for continuing operations amounted to $47.2 million during the year ended December 31, 2020, which included $12.1 million on the Wassa paste fill project, $17.6 million capitalized development of Wassa Underground and $7.2 million mobile equipment and spares at Wassa. Included in investing activities is (i) an outflow for $1.0 million relating to the working capital related payables which compared to an inflow of $1.2 million in the previous year; and (ii) an outflow in relation to restricted cash of $1.0 million following the annual renewal of the rehabilitation bonds (2019: inflow of $2.4 million).
Financing activities provided $2.1 million during the year ended December 31, 2020 compared to $1.4 million provided in 2019. Financing activities in 2020 comprised of $9.1 million net proceeds from refinancing of the Macquarie Credit Facility

and $4.7 million proceeds from exercise of share-based incentives offset by $10.0 million principal repayments to the Macquarie Credit Facility and $1.7 million repayment of finance leases. Financing activities in 2019 included the debt refinancing that provided net proceeds from the Macquarie Credit Facility of $57.4 million which was used to repay the previous debt agreements with Ecobank and VRA of $1.4 million and exercise of share-based incentives of $1.3 million.

Net debt decreased to $45.0 million as at December 31, 2020 from $53.4 million as at December 31, 2019 following an increase in cash and cash equivalents.

GOING CONCERN AND LIQUIDITY OUTLOOK

As at December 31, 2020 the Company had cash and cash equivalents of $60.8 million, net current assets excluding deferred revenue and embedded derivative liability of $15.6 million and net cash provided by operations before working capital changes for the year then ended of $113.5 million. As at December 31, 2020, the Company was compliant with its debt covenants.

To date, the Company has been able to continue operations largely unaffected since the outbreak of the COVID-19 pandemic and gold production and shipments have continued without any material disruptions. However, the Company cannot provide any assurances that its planned operations, production and capital expenditure for the foreseeable future will not be delayed, postponed or cancelled as a result of the COVID-19 pandemic or otherwise. The COVID-19 pandemic could (i) continue to affect financial markets, including the price of gold and the trading price of the Company's shares, (ii) adversely affect the Company's ability to raise capital, and (iii) cause continued interest rate volatility and movements that could make obtaining financing or refinancing debt obligations more challenging or more expensive or unavailable on commercially reasonable terms or at all. Furthermore, the Company may also experience regional risks which include, but are not limited to, a possible shut-down of the gold refining facility in South Africa where the Company delivers its gold production, an inability to ship gold across borders, delays in the supply chain of critical reagents, consumables and parts, and the impact on the delivery of critical capital projects. Any of these events or circumstances could have a material adverse effect on the Company's business, financial condition and results of operations.

Management has prepared detailed cash flow forecasts to assess the economic impact of COVID-19 from a going concern and viability perspective. Based on these detailed cash flow forecasts, including any reasonably possible changes in the key assumptions on which the cash flow forecasts are based and assess various scenarios related to COVID-19, Management believes that the Company will have adequate resources to continue as a going concern for the foreseeable future, and at this point in time there are no material uncertainties regarding going concern. Management has concluded that it is appropriate to prepare the condensed interim consolidated financial statements on a going concern basis.

CONTRACTUAL OBLIGATIONS

As at December 31, 2020, the Company is committed to the following:

	Payment due by period				
(Stated in thousands of U.S dollars)	Less than 1 Year	1 to 3 years	4 to 5 years	More than 5 Years	Total
Accounts payable and accrued liabilities	41,297	—	—	—	41,297
Debt[1]	51,795	60,606	578	—	112,979
Interest on debt	6,517	4,636	28	—	11,181
Current income tax liabilities	12,774	—	—	—	12,774
Purchase obligations	10,109	—	—	—	10,109
Rehabilitation provisions[2]	2,024	10,136	4,778	813	17,751
Total	124,516	75,378	5,384	813	206,091

[1] Includes the outstanding repayment amounts from the Convertible Debentures, finance leases and the Macquarie Credit Facility.
[2] Rehabilitation provisions indicates the expected undiscounted cash flows for each period.

RELATED PARTY TRANSACTIONS

There were no material related party transactions for the years ended December 31, 2020 and 2019 other than compensation of key management personnel which is presented in Note 22 of the Financial Statements. Key management personnel is defined as members of the Golden Star board of directors (the "Board") and certain senior officers of the Company. Compensation of key management personnel is made on terms approximately equivalent to those prevailing in an arm's length transaction.

OFF-BALANCE SHEET ARRANGEMENTS

The Company has no material off-balance sheet arrangements.

NON-GAAP FINANCIAL MEASURES

In this MD&A, we use the terms “cost of sales per ounce”, “cash operating cost”, “cash operating cost per ounce”, “all-in sustaining costs”, “all-in sustaining costs per ounce”, “adjusted net income attributable to Golden Star shareholders”, “adjusted income per share attributable to Golden Star shareholders - basic”, “cash provided by operations before working capital changes and tax”, “cash provided by operations before working capital changes per share - basic”, “free cash flow”, “EBITDA”, “Adjusted EBITDA”, “Adjusted EBITDA margin”, “Mine operating margin”, “Net cash provided by operating activities before working capital changes and tax per share” and “Net cash provided by operating activities of continuing operations per share”.

“Cost of sales excluding depreciation and amortization” as found in the statements of operations includes all mine-site operating costs, including the costs of mining, ore processing, maintenance, work-in-process inventory changes, mine-site overhead as well as production taxes, royalties, severance charges and by-product credits, but excludes exploration costs, property holding costs, corporate general and administrative expenses, foreign currency gains and losses, gains and losses on asset sales, interest expense, gains and losses on derivatives, gains and losses on investments and income tax expense/benefit.

“Cost of sales per ounce” is equal to cost of sales excluding depreciation and amortization for the period plus depreciation and amortization for the period divided by the number of ounces of gold sold during the period.

“Cash operating cost” for a period is equal to “cost of sales excluding depreciation and amortization” for the period less royalties, the cash component of metals inventory net realizable value adjustments, materials and supplies write-offs, other operating expenses and severance charges, and “cash operating cost per ounce” is that amount divided by the number of ounces of gold sold during the period. We use cash operating cost per ounce as a key operating metric. We monitor this measure monthly, comparing each month’s values to prior periods’ values to detect trends that may indicate increases or decreases in operating efficiencies. We provide this measure to investors to allow them to also monitor operational efficiencies of the Company’s mines. We calculate this measure for both individual operating units and on a consolidated basis. Since cash operating costs do not incorporate revenues, changes in working capital or non-operating cash costs, they are not necessarily indicative of operating profit or cash flow from operations as determined under IFRS. Changes in numerous factors including, but not limited to, mining rates, milling rates, ore grade, gold recovery, costs of labor, consumables and mine site general and administrative activities can cause these measures to increase or decrease. We believe that these measures are similar to the measures of other gold mining companies but may not be comparable to similarly titled measures in every instance.

“All-in sustaining costs” commences with cash operating costs and then adds the cash component of inventory net realizable value adjustments, royalties, sustaining capital expenditures, corporate general and administrative costs (excluding share-based compensation expenses and severance), and accretion of rehabilitation provision. Following the sale of Prestea, the comparative numbers in 2019 for all-in sustaining costs have been restated to fully allocate to Wassa the corporate general and administrative costs that relates to the Canada and UK offices. Prior to the sale of Prestea, corporate general administrative costs were allocated to Wassa and Prestea based on the ounces of gold sold during the period in calculating the mine site all-in sustaining costs. “All-in sustaining costs per ounce” is that amount divided by the number of ounces of gold sold during the period. This measure seeks to represent the total costs of producing gold from current operations, and therefore it does not include expansion capital expenditures attributable to development projects or mine expansions, exploration and evaluation costs attributable to growth projects, changes to the rehabilitation provision, income tax payments, interest costs or dividend payments. Consequently, this measure is not representative of all of the Company’s cash expenditures. In addition, the calculation of all-in sustaining costs does not include depreciation expense as it does not reflect the impact of expenditures incurred in prior periods. Therefore, it is not indicative of the Company’s overall profitability. Share-based compensation expenses are also excluded from the calculation of all-in sustaining costs as the Company believes that such expenses may not be representative of the actual payout on equity and liability-based awards.

The Company believes that “all-in sustaining costs” will better meet the needs of analysts, investors and other stakeholders of the Company in understanding the costs associated with producing gold, understanding the economics of gold mining, assessing the operating performance and the Company’s ability to generate free cash flow from current operations and to generate free cash flow on an overall Company basis. Due to the capital-intensive nature of the industry and the long useful lives over which these items are depreciated, there can be a disconnect between net earnings calculated in accordance with IFRS and the amount of free cash flow that is being generated by a mine. In the current market environment for gold mining equities, many investors and analysts are more focused on the ability of gold mining companies to generate free cash flow from current operations, and consequently the Company believes these measures are useful non-IFRS operating metrics (“non-GAAP measures”) and supplement the IFRS disclosures made by the Company. These measures are not representative of all of Golden Star’s cash expenditures as they do not include income tax payments or finance costs. Non-GAAP measures are intended to provide additional information only and do not have standardized definitions under IFRS and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS. These measures are not necessarily indicative of operating profit or cash flow from operations as determined under IFRS. The tables below reconcile these non-GAAP measures to the most directly comparable IFRS measures and, where applicable, previous periods have been recalculated to conform to the current definition.

Free cash flow is equal to net cash flow provided by/(used in) operating activities less net cash flow provided by/(used in) investing activities. Certain investors use free cash flow to assess the Company's ability to generate and manage liquid resources. Free cash flow is intended to provide additional information and does not have any standardized meaning under IFRS and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS. This measure is not necessarily indicative of operating profit or cash flow from operations as determined under IFRS. This is a non-GAAP financial measure and other companies may calculate these measures differently.

The Company calculates EBITDA as net income or loss for the period excluding finance expense, income tax expense and depreciation and amortization. EBITDA does not have a standardized meaning prescribed by IFRS and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS. EBITDA excludes the impact of cash costs of financing activities and taxes and the effects of changes in working capital balances and therefore is not necessarily indicative of operating profit or cash flow from operations as determined under IFRS. Other companies may calculate EBITDA differently. Adjusted EBITDA is a non-IFRS financial measure calculated by excluding one-off costs or credits relating to non-routine transactions from EBITDA. It excludes other credits and charges, that individually or in the aggregate, if of a similar type, are of a nature or size that requires explanation in order to provide additional insight into the underlying business performance. Examples of items excluded from Adjusted EBITDA are impairment charges, gain or loss from sale of assets, gain or loss on fair value of financial instruments, variable component adjustment on revenue and other expense/income as presented in the consolidated statements of operations. Other companies may calculate Adjusted EBITDA differently.

Adjusted EBITDA margin is calculated as a percentage of Adjusted EBITDA over gold revenues. Mine operating margin is calculated as a percentage of Mine operating profit over gold revenues.

The following table reconciles the cost of sales excluding depreciation and amortization to cost of sales per ounce, cash operating cost per ounce and AISC per ounce for the continuing operations of Wassa:

Continuing operations - Wassa

	Three Months Ended December 31,		For the Years Ended December 31,	
(Stated in thousands of U.S dollars except cost per ounce data)	2020	2019	2020	2019
Cost of sales excluding depreciation and amortization	33,705	28,828	124,422	110,123
Depreciation and amortization	6,670	4,657	23,727	17,134
Cost of sales	40,375	33,485	148,149	127,257
Cost of sales excluding depreciation and amortization	33,705	28,828	124,422	110,123
Severance charges	—	—	(45)	(225)
Royalties	(4,058)	(3,060)	(14,883)	(10,877)
Inventory write-downs	(17)	—	(176)	—
Cash operating costs	29,630	25,768	109,318	99,021
Royalties	4,058	3,060	14,883	10,877
Inventory write-downs	17	—	176	—
Accretion of rehabilitation provision	39	48	155	191
Corporate general and administrative costs	4,528	3,177	18,718	14,679
Sustaining capital expenditures	8,606	8,517	24,651	22,014
Corporate capital expenditures	(325)	—	69	—
All-in sustaining costs	46,553	40,570	167,970	146,782
Ounces sold	43,559	41,890	167,527	156,489
Cost of sales per ounce	927	799	884	813
Cash operating cost per ounce	680	615	653	633
All-in sustaining cost per ounce	1,069	968	1,003	938

The following table reconciles the cost of sales excluding depreciation and amortization to cost of sales per ounce, cash operating cost per ounce and AISC per ounce for the discontinued operations of Prestea:

Discontinued operations - Prestea

	Three Months Ended December 31,		For the Years Ended December 31,	
(Stated in thousands of U.S dollars except cost per ounce data)	2020	2019	2020	2019
Cost of sales excluding depreciation and amortization	—	20,404	44,637	76,217
Depreciation and amortization	—	3,807	5,249	11,920
Cost of sales	—	24,211	49,886	88,137
Cost of sales excluding depreciation and amortization	—	20,404	44,637	76,217
Other operating expenses	—	—	3,031	—
Severance charges	—	(31)	(37)	(143)
Royalties	—	(1,586)	(1,899)	(4,083)
Inventory net realizable value adjustment and write-off	—	(165)	(1,071)	(1,216)
Cash operating costs	—	18,622	44,661	70,775
Royalties	—	1,586	1,899	4,083
Inventory net realizable value adjustment and write-off	—	165	1,071	1,216
Accretion of rehabilitation provision	—	136	290	539
Corporate general and administrative costs	—	356	1,050	1,293
Sustaining capital expenditures	—	4,104	5,438	12,031
All-in sustaining costs	—	24,969	54,409	89,937
Ounces sold	—	11,523	21,965	47,700
Cost of sales per ounce	—	2,101	2,271	1,848
Cash operating cost per ounce	—	1,616	2,033	1,484
All-in sustaining cost per ounce	—	2,167	2,477	1,885

The following table reconciles the cost of sales excluding depreciation and amortization to cost of sales per ounce, cash operating cost per ounce and AISC per ounce for the combined continuing operations of Wassa and discontinued operations of Prestea:

Wassa and Prestea

	Three Months Ended December 31,		For the Years Ended December 31,	
(Stated in thousands of U.S dollars except cost per ounce data)	**2020**	**2019**	**2020**	**2019**
Cost of sales excluding depreciation and amortization	33,705	49,232	169,059	186,340
Depreciation and amortization	6,670	8,464	28,976	29,054
Cost of sales	40,376	57,696	198,036	215,394
Cost of sales excluding depreciation and amortization	33,705	49,232	169,059	186,340
Other operating expense adjustment	—	—	3,031	—
Severance charges	—	(31)	(82)	(368)
Royalties	(4,058)	(4,646)	(16,782)	(14,960)
Inventory net realizable value adjustment and write-off	(17)	(165)	(1,247)	(1,216)
Cash operating costs	29,630	44,390	153,980	169,796
Royalties	4,058	4,646	16,782	14,960
Inventory net realizable value adjustment and write-off	17	165	1,247	1,216
Accretion of rehabilitation provision	39	184	445	730
Corporate general and administrative costs	4,528	3,533	19,768	15,972
Sustaining capital expenditures	8,606	12,621	30,088	34,045
Corporate capital expenditures	(325)	—	69	—
All-in sustaining costs	46,553	65,539	222,379	236,719
Ounces sold	43,559	53,413	189,492	204,189
Cost of sales per ounce	927	1,080	1,045	1,055
Cash operating cost per ounce	680	831	813	832
All-in sustaining cost per ounce	1,069	1,227	1,174	1,159

"Cash provided by continuing operations before working capital changes and tax" is calculated by subtracting the "changes in working capital and tax" from "net cash provided by operating activities of continuing operations" as found in the statements of cash flows. "Cash provided by continuing operations before working capital changes per share - basic" is "Cash provided by operations before working capital changes" divided by the basic weighted average number of shares outstanding for the period. Net cash provided by operating activities of continuing operations per share is calculated by dividing the amount with the basic weighted average number of shares outstanding used in the calculation of basic (loss)/income per share.

We use cash operating cost per ounce and cash provided by operations before working capital changes as key operating metrics. We monitor these measures monthly, comparing each month's values to the values in prior periods to detect trends that may indicate increases or decreases in operating efficiencies. These measures are also compared against budget to alert Management of trends that may cause actual results to deviate from planned operational results. We provide these measures to investors to allow them to also monitor operational efficiencies of the mines owned by the Company.

Cash operating cost per ounce and cash provided by operations before working capital changes and tax should be considered non-GAAP financial measures as defined in Canadian securities laws and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS. There are material limitations associated with the use of such non-GAAP measures. Since these measures do not incorporate revenues, changes in working capital or non-operating cash costs, they are not necessarily indicative of operating profit or cash flow from operations as determined under IFRS. Changes in numerous factors including, but not limited to, mining rates, milling rates, ore grade, gold recovery, costs of labor, consumables and mine site general and administrative activities can cause these measures to increase or decrease. We believe that these measures are similar to the measures of other gold mining companies but may not be comparable to similarly titled measures in every instance.

Adjusted net income attributable to Golden Star shareholders

The following table shows the reconciliation of net income/(loss) for the period to adjusted net income/(loss) attributable to Golden Star shareholders and adjusted income/(loss) per share attributable to Golden Star shareholders:

	Three Months Ended December 31,		For the Years Ended December 31,	
(Stated in thousands of U.S dollars except per share data)	2020	2019	2020	2019
Net income/(loss) from continuing operations attributable to Golden Star shareholders	8,201	(1,245)	38,518	5,317
Add back/(deduct):				
(Gain)/loss on fair value of financial instruments	(2,243)	2,986	(794)	1,642
Severance charges	—	—	45	225
Corporate office relocation costs	—	3,177	407	7,221
Variable consideration adjustment on deferred revenue	6,437	3,073	6,437	3,073
Tax effect of adjustments	364	—	—	—
	12,759	7,991	44,613	17,478
Adjustments attributable to non-controlling interest	(36)	—	(5)	(23)
Adjusted net income from continuing operations attributable to Golden Star shareholders	12,723	7,991	44,608	17,455
Net loss from discontinued operations attributable to Golden Star shareholders	(1,682)	(61,189)	(90,658)	(72,751)
Add back/(deduct):				
Severance charges	—	31	37	143
(Loss)/gain on change in asset retirement obligations	—	(906)	1,979	(179)
Impairment charges	—	56,762	—	56,762
Loss on sale of Prestea	(308)	—	36,567	—
	(1,990)	(5,302)	(52,073)	(16,025)
Adjustments attributable to non-controlling interest	—	(5,589)	(202)	(5,673)
Adjusted net loss from discontinued operations attributable to Golden Star shareholders	(1,990)	(10,891)	(52,275)	(21,698)
Adjusted net income/(loss) attributable to Golden Star shareholders	10,733	(2,900)	(7,667)	(4,243)
Weighted average shares outstanding - basic (millions)	111.9	109.4	110.3	109.0
Adjusted net income/(loss) per share attributable to Golden Star shareholders - basic				
- From continuing operations	0.11	0.07	0.40	0.16
- From discontinued operations	(0.02)	(0.10)	(0.47)	(0.20)
Total	0.09	(0.03)	(0.07)	(0.04)

The Company uses "Adjusted net income/(loss) attributable to Golden Star shareholders" for its own internal purposes. Management's internal budgets and forecasts and public guidance do not reflect the items which have been excluded from the determination of Adjusted net income/(loss) attributable to Golden Star shareholders. Consequently, the presentation of Adjusted net income/(loss) attributable to Golden Star shareholders enables shareholders to better understand the underlying operating performance of our core mining business through the eyes of Management. Management periodically evaluates the components of adjusted net earnings based on an internal assessment of performance measures that are useful for evaluating the operating performance of our business and a review of non-GAAP measures used by mining industry analysts and other mining companies.

“Adjusted net income/(loss) attributable to Golden Star shareholders - basic” is calculated by adjusting net loss attributable to Golden Star shareholders for net loss from discontinued operations attributable to Golden Star shareholders, loss from sale of an operation, gain/loss on fair value of financial instruments, severance charges, loss/(gain) on change in estimate of rehabilitation provision, non-cash cumulative adjustment to revenue and finance costs related to the Streaming Agreement and impairment charges. The Company has excluded the non-cash cumulative adjustment to revenue from adjusted net income as the amount is non-recurring, the amount is non-cash in nature and Management does not include the amount when reviewing and assessing the performance of the operations. “Adjusted net income/(loss) per share attributable to Golden Star shareholders” for the period is “Adjusted net income/(loss) attributable to Golden Star shareholders” divided by the weighted average number of shares outstanding using the basic method of earnings per share.

Effective January 1, 2020, share-based compensation expense and deferred income tax expense are included in the determination of Adjusted net income/(loss) attributable to Golden Star shareholders and the tax effect of change in estimates of rehabilitation assets is excluded from the determination of Adjusted net income/(loss) attributable to Golden Star shareholders following Management’s most recent evaluation.

Adjusted net income/(loss) attributable to Golden Star shareholders and adjusted income/(loss) per share attributable to Golden Star shareholders should be considered non-GAAP financial measures as defined in the Canadian securities laws and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with GAAP. There are material limitations associated with the use of such non-GAAP measures. Since these measures do not incorporate all non-cash expense and income items, changes in working capital and non-operating cash costs, they are not necessarily indicative of operating profit or cash flow from operations as determined under IFRS. Changes in numerous factors including, but not limited to, our share price, risk-free interest rates, gold prices, mining rates, milling rates, ore grade, gold recovery, costs of labor, consumables and mine site general and administrative activities can cause these measures to increase or decrease. The Company believes that these measures are similar to the measures of other gold mining companies but may not be comparable to similarly titled measures in every instance.

EBITDA and Adjusted EBITDA

The following table shows the reconciliation of net income from continuing operations to EBITDA and Adjusted EBITDA:

	Three Months Ended December 31,		For the Years Ended December 31,	
(Stated in thousands of U.S dollars)	2020	2019	2020	2019
Net income from continuing operations	10,719	134	38,153	9,988
Add back/(deduct):				
Finance (income)/expense, net	(1,133)	(5,016)	9,463	4,615
Income tax expense	12,278	9,715	48,266	27,439
Depreciation and amortization	6,670	4,657	23,727	17,134
EBITDA from continuing operations	**28,534**	**9,490**	**119,609**	**59,176**
Add back/(deduct):				
(Gain)/loss on fair value of financial instruments	(2,243)	2,986	(794)	1,642
Other expense	2,214	7,882	4,849	11,887
Variable component adjustment on revenue	7,971	5,636	7,971	5,636
Adjusted EBITDA from continuing operations	**36,476**	**25,994**	**131,635**	**78,341**
EBITDA from discontinued operations	(1,682)	(64,107)	(51,427)	(73,033)
Total EBITDA	**26,852**	**(54,617)**	**68,182**	**(13,857)**
Adjusted EBITDA from discontinued operations	—	(4,625)	(9,956)	(12,967)
Total Adjusted EBITDA	**36,476**	**21,369**	**121,679**	**65,374**

Corporate severance charges of $3.7 million for the three months ended June 30, 2019, $0.3 million for the three months ended September 30, 2019 have been reclassified from the corporate general and administrative expenses line into other income/(expense) for the corresponding three months then ended to align with the classification of corporate severance charges for the year ended December 31, 2019. The sum of these corporate severance charges of $4.0 million has been reversed in the three months ended December 31, 2019 to reflect the correct timing of the charges.

OUTSTANDING SHARE DATA

As of February 24, 2021, there were 111,313,595 common shares of the Company issued and outstanding, 849,912 stock options outstanding, 1,359,457 deferred share units outstanding, 209,377 share units of 2017 performance and restricted share units outstanding, 1,555,213 share units of UK performance share units ("UK PSUs") outstanding and the Convertible Debentures which are convertible into an aggregate of 11,444,000 Golden Star common shares.

CRITICAL ACCOUNTING JUDGMENTS, ESTIMATES AND ASSUMPTIONS

The critical accounting judgments, estimates and assumptions are disclosed in Note 4 of the Financial Statements for the year ended December 31, 2020.

CHANGES IN ACCOUNTING POLICIES

The Company has adopted the following revised accounting standard effective January 1, 2020. The changes were made in accordance with the applicable transitional provisions.

Definition of a Business (Amendments to IFRS 3)

The amendments in Definition of a Business (Amendments to IFRS 3) are changes to Appendix A Defined terms, the application guidance, and the illustrative examples of IFRS 3 only. It:

- clarifies that to be considered a business, an acquired set of activities and assets must include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create outputs;
- narrow the definitions of a business and of outputs by focusing on goods and services provided to customers and by removing the reference to an ability to reduce costs;
- add guidance and illustrative examples to help entities assess whether a substantive process has been acquired;
- remove the assessment of whether market participants are capable of replacing any missing inputs or processes and continuing to produce outputs; and
- add an optional concentration test that permits a simplified assessment of whether an acquired set of activities and assets is not a business.

There was no accounting impact to the Financial Statements on adoption of this standard.

The Company will adopt the following revised accounting standard effective January 1, 2021, with no accounting impact to the consolidated financial statements for the year ended December 31, 2020.

IBOR Reform - phase 2 amendments

In August 2020, the IASB published Phase 2 of its amendments to IFRS 9, IFRS 7 and IFRS 16 to address issues that impact financial reporting at the time of IBOR replacement with alternative rates. The amendments provide a practical expedient to ease the potential burden of accounting or changes in contractual cash flows, provide relief from specific hedge accounting requirements, and add disclosure requirements, at the time of IBOR replacement. The amendments are effective for annual reporting periods beginning on or after January 1, 2021, with early adoption permitted. The Company is currently evaluating the impact of these amendments on its consolidated financial statements.

The Company adopted the following new accounting policies during the year ended December 31, 2020.

Revenue recognition

Revenue from the sale of metal is recognized when the Company transfers control over to a customer. The Company's spot sales of gold are transported to a gold refiner who locates a buyer and arranges sale of the gold. Effective March 20, 2020 and until recommencement of commercial flights between Ghana and South Africa, the sale generally completes on the day of arrival of gold at the refinery in South Africa as a consequence of the change in shipment logistics due to COVID-19. Previously, the sale of gold completed on the same day the gold was shipped from the mine site. The sales price is generally set with reference to the London A.M. or P.M. fix on the day of arrival of gold at the refinery.

UK Performance Share Unit Plan

In February 2020, the Company adopted a new UK Performance Share Unit Plan ("UK PSU Plan") as approved by Golden Star shareholders on May 7, 2020. Under the UK PSU Plan, UK PSUs may be issued to UK resident employees of the Company or its designated affiliates. UK PSUs may be redeemed for: (i) Golden Star common shares issued from treasury; (ii) Golden Star common shares purchased in the secondary market at the election of the participant and subject to consent of the Company; (iii) a cash payment at the election of the participant and subject to consent of the Company; or (iv) a combination of (i), (ii) and (iii).

Each UK PSU represents one notional common share that is redeemed for common shares or common shares and/or cash subject to the consent of the Company based on the value of a common share at the end of a three-year performance period, to the extent performance and vesting criteria have been met. UK PSUs vest at the end of a three-year performance period. The award is determined by multiplying the number of UK PSUs by the performance adjustment factor, which ranges from 0% to 200%.

The performance adjustment factor is determined by comparing the Company's share price performance to the share price performance of a peer group of companies determined by the Compensation Committee of the Board. The Company plans to settle these awards in common shares of the Company and so they are accounted for as equity awards with corresponding compensation expense recognized.

Discontinued operation

A discontinued operation is a component of the Company's business, the operations and cash flows of which can be clearly distinguishable from the rest of the Company and which:

- represents a separate major line of business or geographic area of operations;
- is part of a single coordinated plan to dispose of a separate major line of business or geographic area of operations; or
- is a subsidiary acquired exclusively with a view to re-sale.

When an operation is classified as a discontinued operation, the comparative Consolidated Statement of Operations is re-presented as if the operation had been discontinued from the start of the comparative year.

Deferred consideration

Where settlement of any part of cash consideration is deferred, the amounts receivable in the future are discounted to their present value as at the date of disposal.

The fair value of any contingent consideration is determined based on present value and the discount rate used is adjusted for counterparty or own credit risk. Any changes in fair value are recognized in the Consolidated Statements of Operations and Comprehensive (Loss)/Income.

FINANCIAL INSTRUMENTS

(Stated in thousands of U.S dollars)	Fair value at December 31, 2020	Basis of measurement	Associated risks
Cash and cash equivalents	60,809	Amortized cost	Interest/Credit/Foreign exchange
Accounts and other receivables	36,361	Amortized cost	Foreign exchange/Credit
Non-hedge derivative liability	2,382	Fair value through profit and loss	Market price
Trade and other payables	36,380	Amortized cost	Foreign exchange/Interest
Finance leases	1,481	Amortized cost	Interest
7% Convertible Debentures	49,735	Amortized cost	Interest
Macquarie Credit Facility	54,547	Amortized cost	Interest
Derivative liability	2,643	Fair value through profit and loss	Market price

Amortized cost - Cash and cash equivalents, accounts and other receivables, trade and other payables, 7% Convertible Debentures, the Macquarie Credit Facility and the finance leases approximate their carrying values as the interest rates are comparable to current market rates.

Fair value through profit or loss - The fair value of the derivative liability relating to the 7% Convertible Debentures is estimated using a convertible note valuation model. For the three months ended December 31, 2020, a gain of $4.3 million (year ended December 31, 2020 - gain of $3.0 million) was recorded to the Consolidated Statement of Operations. The non-hedge derivative liability relating to collar contracts is estimated using pricing models that utilize a variety of observable inputs that are a combination of quoted prices, applicable yield curves and credit spreads. As at December 31, 2020, these costless collars consist of puts and calls on 87,500 ounces with a floor price of $1,600 per ounce and a ceiling price of $2,176 per ounce in 2021 and a ceiling price of $2,188 per ounce in 2022 maturing at a rate of 10,937.5 ounces per quarter from March 2021 to December 2022. For the three months ended December 31, 2020, the Company recognized an unrealized loss of $2.1 million (year ended December 31, 2020 - unrealized loss of $2.2 million) and realized loss of $nil (year ended December 31, 2020 - realized loss of $2.5 million) in Other expenses.

DISCLOSURES ABOUT RISKS

The Company is exposed to significant risks including, without limitation to risks associated with changes in interest rates on existing debt obligations, changes in foreign currency exchange rates, commodity price fluctuations, as well as, capital risk, liquidity risk and credit risk. Moreover, in recognition of the Company's outstanding accounts payable, the Company cannot guarantee that vendors or suppliers will not suspend or deny delivery of products or services to the Company. Such risks include:

Single asset risk

Following the completion of the sale of Prestea, Wassa has become Golden Star's sole source of production, revenue, mineral reserve and resource. Although Golden Star's regional exploration projects provide a well-balanced pipeline with potential to add incremental shareholder value by increasing the Company's mineral reserve and resource base, until such time as any of these projects materializes and growth beyond Wassa is realized, it should be expected that disruptions in Wassa's operations may adversely impact the Company's operating and financial results and position.

Possible adverse effects of the COVID-19 pandemic on future operating results

Refer to the "Going Concern and Liquidity Outlook" section of this MD&A for a discussion of the possibility of operational disruptions as a result of COVID-19.

For a detailed discussion of these and other risks relating to the Company, refer to the Company's Annual Information Form for the year ended December 31, 2019 available on SEDAR at www.sedar.com and/or updated risk factors, if applicable, will be included in the Company's annual information form for the year ended December 31, 2020, which will be filed on SEDAR at www.sedar.com.

CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

The Company's management, with the participation of its President and Chief Executive Officer and Executive Vice President and Chief Financial Officer, has evaluated the effectiveness of the Company's disclosure controls and procedures. Based upon the results of that evaluation, the Company's President and Chief Executive Officer and Executive Vice President and Chief Financial Officer have concluded that, as of December 31, 2020, the Company's disclosure controls and procedures were effective to provide reasonable assurance that the information required to be disclosed by the Company in reports it files is recorded, processed, summarized and reported, within the appropriate time periods and is accumulated and communicated to management, including the President and Chief Executive Officer and Executive Vice President and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Management's Report on Internal Control Over Financial Reporting

The Company's management, with the participation of its President and Chief Executive Officer and Executive Vice President and Chief Financial Officer, are responsible for establishing and maintaining adequate internal control over financial reporting. Under the supervision of the President and Chief Executive Officer and Executive Vice President and Chief Financial Officer, the Company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with IFRS. The Company's internal control over financial reporting includes policies and procedures that:

- pertain to the maintenance of records that accurately and fairly reflect, in reasonable detail, the transactions and dispositions of assets of the Company;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with IFRS and that the Company's receipts and expenditures are made only in accordance with authorizations of management and the Company's directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the Company's consolidated financial statements.

The Company's management, including the President and Chief Executive Officer and Executive Vice President and Chief Financial Officer, believes that any disclosure controls and procedures or internal control over financial reporting, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, they cannot provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been prevented or detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by unauthorized override of the control. The design of any control system also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Accordingly, because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

Changes in Internal Control Over Financial Reporting

There has been no change in the Company's design of internal controls and procedures over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting during the period covered by this MD&A.

RISK FACTORS AND ADDITIONAL INFORMATION

The risk factors for the year ended December 31, 2020 are substantially the same as those disclosed and discussed under the headings "Risk Factors - General Risks", "Risk Factors - Governmental and Regulatory Risks" and "Risk Factors - Market Risks" in the Company's Annual Information Form for the year ended December 31, 2019 available on the Company's profile on SEDAR at www.sedar.com. Additional and/or updated risk factors, if applicable, will be included in the Company's annual information form for the year ended December 31, 2020, which will be filed on SEDAR at www.sedar.com.

GOLDEN STAR

Consolidated Financial Statements

For the Years Ended December 31, 2020 and December 31, 2019

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL STATEMENTS

The accompanying consolidated financial statements of Golden Star Resources Ltd. (the “Company”) and all information in this financial report are the responsibility of the Company's management ("Management"). The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board ("IFRS") and, where appropriate, include Management’s best estimates and judgments.

Management maintains a system of internal control designed to provide reasonable assurance that assets are safeguarded from loss or unauthorized use, and that financial information is timely and reliable. However, any system of internal control over financial reporting, no matter how well designed and implemented, has inherent limitations and may not prevent or detect all misstatements.

The Board of Directors is responsible for ensuring that Management fulfills its responsibilities for financial reporting and is ultimately responsible for reviewing and approving the consolidated financial statements.

The Board carries out this responsibility principally through its Audit Committee. The Board of Directors appoints the Audit Committee, and all of its members are independent directors. The Audit Committee meets periodically with Management and the Auditors to review internal controls, audit results, accounting principles and related matters. The Board of Directors approves the consolidated financial statements on recommendation from the Audit Committee.

PricewaterhouseCoopers LLP ("PwC" or "Auditors"), an independent firm of Chartered Professional Accountants, was appointed by the shareholders at the last annual meeting to examine the consolidated financial statements and provide an independent audit opinion. PricewaterhouseCoopers LLP has full and free access to the Audit Committee.

"Andrew Wray"	*"Paul Thomson"*
Andrew Wray	Paul Thomson
President and Chief Executive Officer	Executive Vice President and Chief Financial Officer

London, England
February 24, 2021

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Golden Star Resources Ltd.

Opinions on the Financial Statements and Internal Control over Financial Reporting
We have audited the accompanying consolidated balance sheets of Golden Star Resources Ltd. and its subsidiaries (together, the Company) as of December 31, 2020 and 2019, and the related consolidated statements of operations and comprehensive loss, cash flows and changes in shareholders' equity for the years then ended, including the related notes (collectively referred to as the consolidated financial statements). We also have audited the Company's internal control over financial reporting as of December 31, 2020, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and its financial performance and its cash flows for the years then ended in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2020, based on criteria established in *Internal Control – Integrated Framework* (2013) issued by the COSO.

Basis for Opinions
The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Company's internal control over financial reporting. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgements. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Loss on sale of the Company's 90% interest in Prestea and classification of discontinued operation

As described in Notes 4 and 5 to the consolidated financial statements, on September 30, 2020 the Company completed the sale of its 90% share of Golden Star (Bogoso/Prestea) Limited (Prestea) to Future Global Resources Limited (FGR) for a deferred consideration of $34 million, and a contingent payment of up to $40 million, which resulted in a loss on sale of Prestea of $37 million. Concurrent with the completion of the sale of Prestea, the Company entered into an amended and restated streaming agreement to assign and transfer the obligation to deliver Prestea gold production ultimately to FGR. Management has applied significant judgements when determining the loss on sale of Prestea, specifically when determining the consideration to be allocated to the remaining obligations relating to the ounces to be delivered from Golden Star (Wassa) Limited (Wassa) in the streaming arrangement, with reference to the underlying life of mine plans. Management's estimates of life of mine plans are tied to the reserves and resources estimates which are reviewed and approved by qualified persons (management's specialists). Further, management has applied significant judgement in determining whether the sale of

Prestea represents a separate major line of business or geographic area and therefore meets the criteria of a discontinued operation.

The principal considerations for our determination that performing procedures relating to the loss on sale of the Company's 90% interest in Prestea and the classification as a discontinued operation as a critical audit matter are (i) significant audit effort was required in evaluating the reasonableness of the significant judgements applied by management in determining the loss on sale of Prestea, specifically when determining the consideration to be allocated to the remaining obligations relating to the ounces to be delivered from Wassa in the streaming arrangement, with reference to the underlying life of mine plans; and (ii) the significant judgements by management when determining whether the sale of Prestea meets the criteria of a discontinued operation.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the transaction in the period end and financial close process, including controls over the determination of the loss on sale of Prestea. These procedures also included, among others: the work of management's specialist was used in performing procedures to evaluate the reasonableness of the reserves and resources estimates included in the life of mine plans, which was used in determining the consideration allocated to the remaining performance obligations relating to the ounces to be delivered from Wassa in the streaming arrangement. As a basis for using this work, the management's specialists' qualifications were understood and the Company's relationship with the management's specialists was assessed. The procedures performed also included evaluation of the methods and assumptions used by the management's specialists, tests of the data used by the management's specialists, an evaluation of the management's specialists' findings and reading the purchase agreement and assessing management's judgements regarding whether Prestea represents a separate major line of business or geographic area and accordingly whether the criteria for classification as a discontinued operation is met.

/s/ PricewaterhouseCoopers LLP

Chartered Professional Accountants, Licensed Public Accountants

Toronto, Canada
February 24, 2021

We have served as the Company's auditor since at least 1992. We have not been able to determine the specific year we began serving as auditor of the Company.

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GOLDEN STAR RESOURCES LTD.
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(Stated in thousands of U.S. dollars except shares and per share data)

	Notes	For the Years Ended December 31, 2020	2019 [1,2]
Revenue	7	272,481	203,820
Cost of sales excluding depreciation and amortization	8	124,422	110,123
Depreciation and amortization		23,727	17,134
Mine operating profit		124,332	76,563
Other expenses/(income)			
Exploration expense		2,682	3,194
Corporate general and administrative expense		18,718	14,679
Share-based compensation expense	21	2,995	3,119
Other expense, net	9	4,849	11,887
(Gain)/loss on fair value of derivative financial instruments, net	24	(794)	1,642
Income before finance and tax		95,882	42,042
Finance expense, net	10	9,463	4,615
Income from continuing operations before tax		86,419	37,427
Income tax expense	11	48,266	27,439
Net income and comprehensive income from continuing operations		38,153	9,988
Net loss and comprehensive loss from discontinued operations	5	(56,434)	(87,962)
Net loss and comprehensive loss		(18,281)	(77,974)
Net income/(loss) and comprehensive income/(loss) attributable to non-controlling interest		33,859	(10,540)
Net loss and comprehensive loss attributable to Golden Star shareholders		(52,140)	(67,434)
		(18,281)	(77,974)
Net income from continuing operations per share attributable to Golden Star shareholders	12		
Basic		$ 0.35	$ 0.05
Diluted		$ 0.34	$ 0.05
Net loss from discontinued operations per share attributable to Golden Star shareholders	12		
Basic		$ (0.82)	$ (0.67)
Diluted		$ (0.82)	$ (0.67)
Net loss per share attributable to Golden Star shareholders	12		
Basic		$ (0.47)	$ (0.62)
Diluted		$ (0.47)	$ (0.62)

[1] The results of Prestea operation for the period to the date of sale, as well as the restated comparative period, have been presented as discontinued operations. Refer to Note 5.

[2] Please refer to Note 28 for information on revised prior period comparatives.

The accompanying notes are an integral part of the consolidated financial statements.

GOLDEN STAR RESOURCES LTD.

CONSOLIDATED BALANCE SHEETS
(Stated in thousands of U.S. dollars)

	Notes	As of December 31, 2020	As of December 31, 2019[1]
ASSETS			
CURRENT ASSETS			
Cash and cash equivalents		60,809	53,367
Accounts and other receivables	13	23,759	6,503
Inventories	14	30,600	38,860
Prepaids and other		6,548	7,107
Total Current Assets		121,716	105,837
RESTRICTED CASH		2,131	2,082
ACCOUNTS AND OTHER RECEIVABLES	13	12,602	—
MINING INTERESTS	15	207,412	264,689
Total Assets		343,861	372,608
LIABILITIES			
CURRENT LIABILITIES			
Accounts payable and accrued liabilities	16	41,297	88,368
Current portion of rehabilitation provisions	17	2,018	5,826
Current portion of deferred revenue	18	7,646	11,191
Current portion of long-term debt	19	50,031	15,987
Current portion of derivative liability	24	3,312	211
Current income tax liabilities		12,774	811
Total Current Liabilities		117,078	122,394
REHABILITATION PROVISIONS	17	15,550	62,609
DEFERRED REVENUE	18	96,916	102,784
LONG TERM DEBT	19	55,732	90,782
DERIVATIVE LIABILITY	24	1,713	5,608
DEFERRED TAX LIABILITY	11	31,098	20,554
Total Liabilities		318,087	404,731
SHAREHOLDERS' EQUITY			
SHARE CAPITAL			
First preferred shares, without par value, unlimited shares authorized. No shares issued and outstanding		—	—
Common shares, without par value, unlimited shares authorized	20	918,013	910,205
CONTRIBUTED SURPLUS		38,769	38,964
DEFICIT		(950,919)	(898,779)
Shareholders' equity attributable to Golden Star shareholders		5,863	50,390
NON-CONTROLLING INTEREST		19,911	(82,513)
Total Equity		25,774	(32,123)
Total Liabilities and Shareholders' Equity		343,861	372,608

The accompanying notes are an integral part of the consolidated financial statements.

[1] Please refer to Note 28 for information on revised prior period comparatives.

See Note 2 Basis of Presentation.

Signed on behalf of the Board,

"Timothy C. Baker"
Timothy C. Baker, Director

"Robert E. Doyle"
Robert E. Doyle, Director

GOLDEN STAR RESOURCES LTD.

CONSOLIDATED STATEMENTS OF CASH FLOWS
(Stated in thousands of U.S. dollars)

	Notes	For the Years Ended December 31, 2020	2019 [1]
OPERATING ACTIVITIES:			
Net income from continuing operations		38,153	9,988
Reconciliation of net income to net cash provided by operating activities:			
Depreciation and amortization		24,241	17,511
Share-based compensation expense	21	2,995	3,119
Income tax expense	11	48,266	27,439
(Gain)/loss on fair value of derivative financial instruments, net	24	(794)	1,642
Deferred revenue recognized	7	(8,662)	(10,220)
Reclamation expenditures	17	(1,233)	(1,202)
Other non-cash items	26	10,506	10,253
Changes in working capital and taxes paid	26	(29,468)	(8,409)
Net cash provided by operating activities of continuing operations		84,004	50,121
Net cash used in operating activities of discontinued operations	5	(23,915)	(27,280)
Net cash provided by operating activities		60,089	22,841
INVESTING ACTIVITIES:			
Additions to mining interests	15	(45,224)	(60,123)
Change in accounts payable and deposits on mine equipment and material		(960)	1,217
(Increase)/decrease in restricted cash		(1,041)	2,418
Net cash used in investing activities of continuing operations		(47,225)	(56,488)
Net cash used in investing activities of discontinued operations	5	(7,475)	(10,923)
Net cash used in investing activities		(54,700)	(67,411)
FINANCING ACTIVITIES:			
Proceeds from debt facilities, net	19	9,114	57,386
Principal payments on debt facilities	19	(10,000)	(55,784)
Principal payments on lease liabilities	19	(1,694)	(1,416)
Exercise of stock options and DSUs and settlement of PRSUs		4,653	1,269
Net cash provided by financing activities of continuing operations		2,073	1,455
Net cash used in financing activities of discontinued operations	5	(20)	(25)
Net cash provided by financing activities		2,053	1,430
Increase/(decrease) in cash and cash equivalents		7,442	(43,140)
Cash and cash equivalents, beginning of period		53,367	96,507
Cash and cash equivalents, end of period		60,809	53,367

[1] The cash flows of Prestea operation for the period to the date of sale, as well as the restated comparative period, have been presented as discontinued operations. Refer to Note 5.

See Note 26 Supplemental cash flow information.

The accompanying notes are an integral part of the consolidated financial statements.

GOLDEN STAR RESOURCES LTD.

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY
(Stated in thousands of U.S. dollars except share data)

	Number of Common Shares	Share Capital	Contributed Surplus	Deficit	Non-Controlling Interest	Total Shareholders' Equity
Balance at January 1, 2019	**108,819,009**	**908,035**	**37,258**	**(831,345)**	**(71,973)**	**41,975**
Issued on exercise of stock options	437,772	2,054	(784)	—	—	1,270
Issued on settlement of PRSUs, net of tax	128,282	116	(681)	—	—	(565)
Options granted, net of forfeitures	—	—	1,890	—	—	1,890
Deferred share units granted	—	—	689	—	—	689
Performance and restricted share units granted	—	—	592	—	—	592
Net loss	—	—	—	(67,434)	(10,540)	(77,974)
Balance at December 31, 2019	**109,385,063**	**910,205**	**38,964**	**(898,779)**	**(82,513)**	**(32,123)**
Balance at January 1, 2020	**109,385,063**	**910,205**	**38,964**	**(898,779)**	**(82,513)**	**(32,123)**
Issued on exercise of DSUs	135,557	176	(281)	—	—	(105)
Issued on exercise of stock options	1,711,680	7,376	(2,723)	—	—	4,653
Issued on settlement of PRSUs, net of tax	81,295	256	(296)	—	—	(40)
Options granted, net of forfeitures	—	—	438	—	—	438
Deferred share units granted	—	—	663	—	—	663
Performance and restricted share units granted	—	—	394	—	—	394
UK performance share units granted	—	—	1,610	—	—	1,610
Derecognition following the sale of Prestea (Note 5)	—	—	—	—	68,565	68,565
Net (loss)/income	—	—	—	(52,140)	33,859	(18,281)
Balance at December 31, 2020	**111,313,595**	**918,013**	**38,769**	**(950,919)**	**19,911**	**25,774**

The accompanying notes are an integral part of the consolidated financial statements.

1. NATURE OF OPERATIONS

Golden Star Resources Ltd. ("Golden Star" or "the Company" or "we" or "our") is an international gold mining and exploration company incorporated under the *Canada Business Corporations Act.* The Company's shares are listed on the Toronto Stock Exchange under the symbol GSC, the NYSE American exchange (formerly NYSE MKT) under the symbol GSS and the Ghana Stock Exchange under the symbol GSR. The Company's registered office is located at 333 Bay Street, Suite 2400, Toronto, Ontario, M5H 2T6 Canada, and the Company has corporate offices in London, United Kingdom and Accra, Ghana.

Through our 90% owned subsidiary, Golden Star (Wassa) Limited, we own and operate the Wassa underground mine and a carbon-in-leach processing plant (collectively "Wassa"), located northeast of the town of Tarkwa, Ghana. Until September 30, 2020 and as further discussed in Note 5, we owned and operated the Bogoso gold mining and processing operations, the Prestea open pit mining operations and the Prestea underground mine (collectively "Prestea") located near the town of Prestea, Ghana. The Company also holds and manages interests in several gold exploration projects in Ghana.

2. BASIS OF PRESENTATION

Statement of compliance

The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS"), as issued by the International Accounting Standards Board ("IASB") and with interpretations of the International Financial Reporting Interpretations Committee ("IFRIC") which the Canadian Accounting Standards Board has approved for incorporation into Part 1 of the CPA Canada Handbook – Accounting.

These consolidated financial statements were approved by the Company's Board of Directors on February 24, 2021.

Basis of presentation

These consolidated financial statements include the accounts of the Company and its subsidiaries, whether owned directly or indirectly. The financial statements of the subsidiaries are prepared for the same period as the Company using consistent accounting policies for all periods presented, except for the changes in accounting policies described in Note 3.

All inter-company balances and transactions have been eliminated. Subsidiaries are entities controlled by the Company. Non-controlling interests in the net assets of consolidated subsidiaries are a separate component of the Company's equity.

The consolidated financial statements have been prepared on a historical cost basis, except for derivative financial instruments and contingent consideration which are measured at fair value through profit or loss.

Going concern

As at December 31, 2020, the Company had cash and cash equivalents of $60.8 million, net current assets excluding deferred revenue and the embedded derivative liability of $15.6 million and net cash provided by operations before working capital changes for the year then ended of $113.5 million. As at December 31, 2020, the Company was compliant with its debt covenants (refer to Note 25).

To date, the Company has been able to continue operations largely unaffected since the outbreak of the COVID-19 pandemic and gold production and shipments have continued without any significant disruptions. However, the Company cannot provide any assurances that its planned operations, production and capital expenditure for the foreseeable future will not be delayed, postponed or cancelled as a result of the COVID-19 pandemic or otherwise. The COVID-19 pandemic could (i) continue to affect financial markets, including the price of gold and the trading price of the Company's shares, (ii) adversely affect the Company's ability to raise capital, and (iii) cause continued interest rate volatility and movements that could make obtaining financing or refinancing debt obligations more challenging or more expensive or unavailable on commercially reasonable terms or at all. Furthermore, the Company may also experience regional risks which include, but are not limited to, a possible shut-down of the gold refining facility in South Africa where the Company delivers its gold production, an inability to ship gold across borders, delays in the supply chain of critical reagents, consumables and parts, and the impact on the delivery of critical capital projects. Any of these events or circumstances could have a material adverse effect on the Company's business, financial condition and results of operations.

Management has prepared detailed cash flow forecasts to assess the economic impact of COVID-19 from a going concern and viability perspective. Based on these detailed cash flow forecasts, including any reasonably possible changes in the key assumptions on which the cash flow forecasts are based and assess various scenarios related to COVID-19, Management believes that the Company will have adequate resources to continue as a going concern for the foreseeable future, and at this point in time there are no material uncertainties regarding going concern. Management has concluded that it is appropriate to prepare the consolidated financial statements on a going concern basis.

3. SUMMARY OF ACCOUNTING POLICIES

Cash and cash equivalents

Cash includes cash deposits in any currency residing in chequing and sweep accounts. Cash equivalents consist of money market funds and other highly liquid investments purchased with maturities of three months or less. Investments with maturities greater than three months and up to one year are classified as short-term investments, while those with maturities in excess of one year are classified as long-term investments. Cash equivalents and short-term investments are stated at amortized cost, which typically approximates market value.

Restricted cash

Cash balances that are subject to legal or contractual obligations are classified separately on the consolidated balance sheets as restricted cash.

Inventories

Inventory classifications include "stockpiled ore," "in-process inventory," "finished goods inventory" and "materials and supplies". The stated value of all production inventories includes direct production costs and attributable overhead and depreciation incurred to bring the materials to their current point in the processing cycle. General and administrative costs for corporate offices are not included in any inventories.

Stockpiled ore represents coarse ore that has been extracted from the mine and is stored for future processing. Stockpiled ore is measured by estimating the number of tonnes (by physical surveys) added to, or removed from the stockpile, the number of contained ounces (based on assay data) and estimated gold recovery percentage. Stockpiled ore value is based on the costs incurred (including depreciation and amortization) in bringing the ore to the stockpile. Costs are added to the stockpiled ore based on current mining costs per tonne and are removed at the average cost per tonne of ore in the stockpile.

In-process inventory represents material that is currently being treated in the processing plants to extract the contained gold and to transform it into a saleable product. The amount of gold in the in-process inventory is determined by assay and by measure of the quantities of the various gold-bearing materials in the recovery process. The in-process gold is valued at the average of the beginning inventory and the cost of material fed into the processing stream plus in-process conversion costs including applicable mine-site overheads, depreciation and amortization related to the processing facilities.

Finished goods inventory is saleable gold in the form of doré bars. Included in the costs are the direct costs of the mining and processing operations as well as direct mine-site overheads, amortization and depreciation.

Materials and supplies inventories consist mostly of equipment parts and other consumables required in the mining and ore processing activities.

All inventories are valued at the lower of average cost or net realizable value.

Property, plant and equipment

Property, plant and equipment assets, including machinery, processing equipment, mining equipment, mine site facilities, buildings, vehicles and expenditures that extend the life of such assets, are initially recorded at cost including acquisition and installation costs. Property, plant and equipment are subsequently measured at cost, less accumulated depreciation and accumulated impairment losses.

The costs of self-constructed assets include direct construction costs and direct overhead costs during the construction phase. Indirect overhead costs are not included in the cost of self-constructed assets.

Depreciation for mobile equipment and other assets having estimated lives shorter than the estimated life of the ore reserves is calculated using the straight-line method at rates which depreciate the cost of the assets, less their anticipated residual values, if any, over their estimated useful lives. Mobile mining equipment is amortized over a five-year life. Assets, such as processing plants, power generators and buildings, which have an estimated life equal to or greater than the estimated life of the ore reserves, are amortized over the life of the proven and probable reserves of the associated mining property using a units-of-production amortization method, less their anticipated residual values, if any. The net book value of property, plant and equipment assets is charged against income if the mine site is abandoned and it is determined that the assets cannot be economically transferred to another project or sold.

The residual values, useful lives and method of depreciation of property, plant and equipment are reviewed at each reporting period end and adjusted prospectively, if appropriate.

Gains and losses on the disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount and are recognized net in the consolidated statement of operations.

Mining properties

Mining property assets, including property acquisition costs, tailings storage facilities, mine-site development and drilling costs where proven and probable reserves have previously been established, pre-production waste stripping, condemnation drilling, roads, feasibility studies and wells are recorded at cost. The costs of self-constructed assets include direct construction costs, direct overhead costs and allocated interest during the construction phase. Indirect overhead costs are not included in the cost of self-constructed assets.

Mining property assets are amortized over the life of the proven and probable reserves to which they relate, using a units-of-production amortization method. At open pit mines the costs of removing overburden from an ore body in order to expose ore during its initial development period are capitalized.

Underground mine development costs

Underground mine development costs include development costs to build new shafts, drifts and ramps that will enable the Company to physically access ore underground. The time over which the Company will continue to incur these costs depends on the mine life. These underground development costs are capitalized as incurred. Capitalized underground development costs incurred to enable access to specific ore blocks or areas of the underground mine, and which only provide an economic benefit over the period of mining that ore block or area, are depreciated on a units-of-production basis, whereby the denominator is estimated ounces of gold in proven and probable reserves and the portion of resources within that ore block or area that is considered probable of economic extraction. If capitalized underground development costs provide an economic benefit over the entire mine life, the costs are depreciated on a units-of-production basis, whereby the denominator is the estimated ounces of gold in total accessible proven and probable reserves and the portion of resources that is considered probable of economic extraction.

Borrowing costs

Borrowing costs attributable to the acquisition, construction or production of a qualifying asset are capitalized. Qualifying assets are assets that require a significant amount of time to prepare for their intended use, including projects that are in the exploration and evaluation, development or construction stages. Capitalized borrowing costs are considered an element of the cost of the qualifying asset which is determined based on gross expenditures incurred on an asset. Capitalization ceases when the asset is substantially complete or if active development is suspended or ceases. Where the funds used to finance a qualifying asset form part of general borrowings, the amount capitalized is calculated using a weighted average of rates applicable to the relevant borrowings during the period. Where funds borrowed are directly attributable to a qualifying asset, the amount capitalized represents the borrowing costs specific to those borrowings. Other borrowing costs are recognized as an expense in the period in which they are incurred.

Impairment of long-lived assets

The Company assesses at each reporting period whether there is an indication that an asset or group of assets may be impaired. When impairment indicators exist, the Company estimates the recoverable amount of the asset and compares it against the asset's carrying amount. The recoverable amount is the higher of its fair value less cost of disposal ("FVLCD") and the asset's value in use ("VIU"). If the carrying amount exceeds the recoverable amount, an impairment loss is recorded in the consolidated statement of operations.

In assessing VIU, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset not already reflected in the estimates of future cash flows. The cash flows are based on best estimates of expected future cash flows from the continued use of the asset and its eventual disposal.

FVLCD is best evidenced if obtained from an active market or binding sale agreement. Where neither exists, the fair value is based on the best estimates available to reflect the amount that could be received from an arm's length transaction.

Future cash flows are based on estimated quantities of gold and other recoverable metals, expected price of gold (considering current and historical prices, price trends and related factors), production levels and cash costs of production, capital and reclamation costs, all based on detailed engineered life-of-mine plans.

Numerous factors including, but not limited to, unexpected grade changes, gold recovery variances, shortages of equipment and consumables, and equipment failures could impact our ability to achieve forecasted production schedules from proven and probable reserves. Additionally, commodity prices, capital expenditure requirements and reclamation costs could differ from the assumptions used in the cash flow models used to assess impairment. The ability to achieve the estimated quantities of recoverable minerals from exploration stage mineral interests involves further risks in addition to those factors applicable to mineral interests where proven and probable reserves have been identified, due to the lower level of confidence that the identified mineralized material can ultimately be mined economically.

If an impairment loss reverses in a subsequent period, the carrying amount (post reversal) of the related asset is increased to the revised estimate of recoverable amount to the extent that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset previously. Reversals of impairment losses are recognized in the consolidated statement of operations in the period the reversals occur.

Material changes to any of the factors or assumptions discussed above could result in future asset impairments.

Rehabilitation provisions

The Company records a liability and corresponding asset for the present value of the estimated costs of legal and constructive obligations for future site reclamation and closure where the liability is probable, and a reasonable estimate can be made of the obligation. The estimated present value of the obligation is reassessed on a periodic basis or when new material information becomes available. Increases or decreases to the obligation usually arise due to changes in legal or regulatory requirements, the extent of environmental remediation required, methods of reclamation, cost estimates, inflation rates, or discount rates. Changes to the provision for reclamation and remediation obligations related to operating mines, which are not the result of current production of inventory, are recorded with an offsetting change to the related asset. Changes to the provision for reclamation and remediation obligations related to suspended mine operations are recognized in the consolidated statements of operations. The present value is determined based on current market assessments of the time value of money using discount rates based on the risk-free rate maturing approximating the timing of expected expenditures to be incurred and adjusted for country related risks. The periodic unwinding of the discount is recognized in the consolidated statement of operations as a finance expense.

Deferred revenue

Deferred revenue consists of: (i) initial cash payments received by the Company for future delivery of payable gold under the terms of the Company’s Streaming Agreement as defined in Note 18, Deferred Revenue, and (ii) a significant financing component of the Company’s Streaming Agreement. Deferred revenue is increased as interest expense is recognized based on the implicit interest rate of the discounted cash flows arising from the expected delivery of ounces under the Company’s Streaming Agreement.

The amount by which the deferred revenue balance is reduced and recognized into revenue is based on a rate per ounce of gold delivered under the Streaming Agreement. This rate per ounce of gold delivered relating to the payments received by the Company is based on the remaining deferred revenue balance divided by the ounces that are expected to be delivered over the term of the Stream Agreement.

As the Company’s Streaming Agreement contains a variable component, IFRS 15 requires that the transaction price be updated and re-allocated on an ongoing basis. As a result, the deferred revenue recognized per ounce of gold delivered under the Streaming Agreement will require an adjustment each time there is a significant change in the underlying gold production profile of a mine. Should a change in the transaction price be necessary, a cumulative catch-up adjustment to revenue will be made in the period in which the change occurs, to reflect the updated production profile expected to be delivered under the Streaming Agreement.

Foreign currency transactions

The Company's presentation currency of its consolidated financial statements is the U.S. dollar, as is the functional currency of its operations. The functional currency of all consolidated subsidiaries is the U.S. dollar. All values are rounded to the nearest thousand, unless otherwise stated.

Monetary assets and liabilities denominated in foreign currencies are translated into U.S. dollars at period end exchange rates. Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are translated into U.S. dollars at the exchange rate at the date that the fair value was determined. Income and expense items are translated at the exchange rate in effect on the date of the transaction. Exchange gains and losses resulting from the translation of these amounts are included in net loss, except those arising on the translation of equity investments at fair value through other comprehensive income that are recorded in other comprehensive income. Non-monetary assets and liabilities denominated in foreign currencies that are measured at historical cost are translated at the exchange rate in effect at the transaction date.

Income taxes

Income taxes comprise the provision for (or recovery of) taxes actually paid or payable (current taxes) and for deferred taxes.

Current taxes are based on taxable earnings in the year. Current tax is calculated using tax rates and laws that were enacted or substantively enacted at the balance sheet date in the respective jurisdictions.

Current income tax assets and current income tax liabilities are only offset if a legally enforceable right exists to offset the amounts and the Company intends to settle on a net basis or to realize the asset and settle the liability simultaneously.

Deferred income tax assets and liabilities are recognized for the expected future tax consequences attributable to temporary differences between the tax basis of assets and liabilities and their reported amounts in the financial statements. Deferred income tax assets and liabilities are computed using enacted or substantially enacted income tax rates in effect when the temporary differences are expected to reverse. The effect on the deferred tax assets and liabilities of a change in tax rates is recognized in the period of substantial enactment. The provision for or the recovery of deferred taxes is based on the changes in deferred tax assets and liabilities during the period.

The carrying amount of deferred income tax assets or liabilities are reviewed at the end of each reporting period and recognized to the extent that it is probable that taxable earnings will be available against which deductible temporary differences can be utilized.

Net income/(loss) per share

Basic income/(loss) per share of common stock is calculated by dividing income available to Golden Star's common shareholders by the weighted average number of common shares issued and outstanding during the period. In periods with earnings, the calculation of diluted net income per common share uses the treasury stock method to compute the dilutive effects of stock options, convertible debentures and other potentially dilutive instruments. In periods of loss, diluted net loss per share is equal to basic loss per share.

Revenue recognition

Revenue from the sale of gold is recognized when the Company transfers control over to a customer. The Company’s spot sales of gold are transported to a gold refiner who locates a buyer and arranges sale of the gold. Effective March 20, 2020, the sale generally completes on the day of arrival of gold at the refinery in South Africa as a consequence of the change in shipment logistics due to the COVID-19 pandemic. Previously, the sale of gold completed on the same day the gold was shipped from the mine site. The sales price is generally set with reference to the London A.M. or P.M. fix on the day of arrival of gold at the refinery.

Revenue recognition for the Company’s Streaming Agreement is disclosed in the accounting policy for deferred revenue.

Share-based compensation

Under the Company's Fourth Amended and Restated 1997 Stock Option Plan, common share options may be granted to executives, employees, consultants and non-employee directors. Compensation expense for such grants is recorded in the consolidated statements of operations, with a corresponding increase recorded in the contributed surplus account in the consolidated balance sheets. The expense is based on the fair value of the option at the time of grant, measured by reference to the fair value determined using a Black-Scholes valuation model, and is recognized over the vesting periods of the respective options on a graded basis. Consideration paid to the Company on exercise of options is credited to share capital.

Under the Company's Deferred Share Unit ("DSU") plan, DSUs may be granted to executive officers and directors. Compensation expense for such grants is recorded in the consolidated statements of operation with a corresponding increase recorded in the contributed surplus account in the consolidated balance sheets. The expense is based on the fair values at the time of grant and is recognized over the vesting periods of the respective DSUs. Upon exercise the Company's compensation committee may, at its discretion, issue cash, shares or a combination thereof.

The Company's Share Appreciation Rights ("SARs") plan allows SARs to be issued to executives, employees and directors. These awards are settled in cash on the exercise date equal to the Company's stock price less the strike price. Since these awards are settled in cash, the Company marks-to-market the associated expense for each award at the end of each reporting period using a Black-Scholes model. The Company accounts for these as liability awards and marks-to-market the fair value of the award until final settlement.

Under the Company's Performance Share Units ("PSU") plan, PSUs may be granted to executives, employees and non-employee directors. Each PSU represents one notional common share that is redeemed for cash based on the value of a common share at the end of the three-year performance period, to the extent performance and vesting criteria have been met. The PSUs vest at the end of a three-year performance. The cash award is determined by multiplying the number of units by the performance adjusting factor, which ranges from 0% to 200%. The performance factor is determined by comparing the Company's share price performance to the share price performance of a peer group of companies as listed in the PSU plan. As the Company was required to settle these awards in cash, they were accounted for as liability awards with corresponding compensation expense recognized. The final PSU grant vested on December 31, 2018 and as a result the Company did not recognize a PSU expense in 2019 and 2020.

Under the Company's 2017 performance and restricted share unit plan (the "2017 PRSU Plan"), performance share units ("2017 PSUs") and restricted share units ("2017 RSUs" and, together with the 2017 PSUs, the "Share Units") may be issued to any employee or officer of the Company or its designated affiliates. Share Units may be redeemed for: (i) common shares issued from treasury; (ii) common shares purchased in the secondary market; (iii) a cash payment; or (iv) a combination of (i), (ii) and (iii).

Each PRSU represents one notional common share that is redeemed for common shares or common shares plus cash subject to the consent of the Company based on the value of a common share at the end of the three-year performance period, to the extent performance and vesting criteria have been met. The PRSUs vest at the end of a three-year performance period. The award is determined by multiplying the number of Share Units by the performance adjustment factor, which ranges from 0% to 200%. The performance adjustment factor is determined by comparing the Company's share price performance to the share price performance of a peer group of companies as listed in the 2017 PRSU Plan. As the Company has a practice of settling these awards in common shares, they are accounted for as equity awards with corresponding compensation expense recognized.

In February 2020, the Company adopted a new UK Performance Share Unit Plan ("UK PSU Plan") which was approved by Golden Star shareholders on May 7, 2020. Under the UK PSU Plan, performance share units ("UK PSUs") may be issued to UK resident employees of the Company or its designated affiliates. UK PSUs may be redeemed for: (i) common shares issued from treasury; (ii) common shares purchased in the secondary market at the election of the participant and subject to consent of the Company; (iii) a cash payment at the election of the participant and subject to consent of the Company; or (iv) a combination of (i), (ii) and (iii).

Each UK PSU represents one notional common share that is redeemed for common shares or common shares and/or cash subject to the consent of the Company based on the value of a common share at the end of the three-year performance period, to the extent performance and vesting criteria have been met. UK PSUs vest at the end of a three-year performance period. The award is determined by multiplying the number of UK PSUs by the performance adjustment factor, which ranges from 0% to 200%.

The performance adjustment factor is determined by comparing the Company's share price performance to the share price performance of a peer group of companies determined by the Compensation Committee of the Board of Directors. The Company plans to settle these awards in common shares of the Company and so they are accounted for as equity awards with corresponding compensation expense recognized.

Right of use asset and lease liabilities

The lease liability is initially measured as the present value of future lease payments discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, each operation’s applicable incremental borrowing rate. The incremental borrowing rate is the rate which the operation would have to pay to borrow, over a similar term and with a similar security, the funds necessary to obtain an asset of similar value to the right-of-use asset in a similar economic environment.

Lease payments included in the measurement of the lease liability comprise the following: fixed payments, including in-substance fixed payments, less any lease incentives receivable, variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date, amounts expected to be payable by the Company under residual value guarantees, the exercise price of a purchase option if the Company is reasonably certain to exercise that option, and payments of penalties for terminating the lease, if the Company expects to exercise an option to terminate the lease.

The lease liability is subsequently measured by increasing the carrying amount to reflect interest on the lease liability, reducing the carrying amount to reflect lease payments made, and remeasuring the carrying amount to reflect any reassessment or lease modifications.

The lease liability is remeasured when there is a change in future lease payments arising from a change in an index or rate, if there is a change in the Company’s estimate of the amount expected to be payable under a residual value guarantee, or if the Company changes its assessment of whether it will exercise a purchase, extension or termination option.

The right-of-use asset is initially measured at cost, which comprises the following: the amount of the initial measurement of the lease liability, any lease payments made at or before the commencement date, less any lease incentives received, any initial direct costs incurred by the Company, and an estimate of costs to be incurred by the Company in dismantling and removing the underlying asset, restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease, unless those costs are incurred to produce inventories.

The right-of-use asset is subsequently measured at cost, less any accumulated depreciation and any accumulated impairment losses, and adjusted for any remeasurement of the lease liability. It is depreciated in accordance with the Company’s accounting policy for plant and equipment, from the commencement date to the earlier of the end of its useful life or the end of the lease term.

Each lease payment is allocated between the lease liability and finance cost. The finance cost is charged to consolidated statements of operations over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period.

On the consolidated balance sheets, right-of-use assets and lease liabilities are reported in mineral properties, plant and equipment and debt and lease liabilities, respectively.

Financial instruments

Financial assets

The Company recognizes all financial assets initially at fair value and classifies them into one of the following measurement categories: fair value through profit or loss (“FVTPL”), fair value through other comprehensive income (“FVOCI”) or amortized cost, as appropriate.

The Company assesses credit risk on accounts and other receivables at the end of each reporting period, measuring expected credit losses using a provision based matrix based on factors that are specific to the respective trade receivables, and changes in credit risk since the initial recognition of the respective financial instrument.

Financial liabilities

The Company recognizes all financial liabilities initially at fair value and classifies them as either FVTPL or loans and borrowings, as appropriate. The Company has not classified any of its derivatives as hedging instruments in an effective hedge.

Derivatives

From time to time the Company may utilize foreign exchange and commodity price derivatives to manage exposure to fluctuations in foreign currency exchange rates and gold prices, respectively. The Company does not employ derivative financial instruments for trading purposes or for speculative purposes. Derivative instruments are recorded on the balance sheet at fair value with changes in fair value recorded in the consolidated statements of operations. The Company did not have any foreign exchange derivatives outstanding at December 31, 2020.

7% Convertible Debentures embedded derivative

The Company's 7% Convertible Debentures embedded derivative is considered a financial instrument at FVTPL. The embedded derivative was recorded at fair value on the date of debt issuance. It is subsequently remeasured at fair value at each reporting date, and the changes in the fair value are recorded in the consolidated statements of operations. The fair value of the embedded derivative is determined using a convertible note valuation model, using assumptions based on market conditions existing at the reporting date.

Non-hedge derivative contracts

The non-hedge accounted costless collar contracts are considered FVTPL financial instruments with fair value determined using pricing models that utilize a variety of observable inputs that are a combination of quoted prices, applicable yield curves and credit spreads. The non-hedge derivative contracts are included within derivative liabilities on the balance sheet, with liabilities for positions expiring within one year classed as current derivative liabilities.

Share capital

Common shares are classified as equity. Costs directly attributable to the issue of new shares or share options are shown in equity as a deduction, net of tax, from the gross proceeds.

Discontinued operation

A discontinued operation is a component of the Company's business, the operations and cash flows of which can be clearly distinguishable from the rest of the Company and which:

- represents a separate major line of business or geographic area of operations;
- is part of a single coordinated plan to dispose of a separate major line of business or geographic area of operations; or
- is a subsidiary acquired exclusively with a view to re-sale.

When an operation is classified as discontinued, the comparative consolidated statement of operations is re-presented as if the operation had been discontinued from the start of the comparative year.

Deferred consideration

Where settlement of any part of cash consideration is deferred, the amounts receivable in the future are discounted to their present value as at the date of disposal.

The fair value of any contingent consideration is determined based on present value and the discount rate used is adjusted for counterparty or own credit risk. Any changes in fair value are recognized in the consolidated statement of operations.

Changes in accounting policies

The Company has adopted the following revised accounting standard effective January 1, 2020. The changes were made in accordance with the applicable transitional provisions.

Definition of a Business (Amendments to IFRS 3)

The amendments in Definition of a Business (Amendments to IFRS 3) are changes to Appendix A Defined terms, the application guidance, and the illustrative examples of IFRS 3 only. It:

- clarifies that to be considered a business, an acquired set of activities and assets must include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create outputs;
- narrow the definitions of a business and of outputs by focusing on goods and services provided to customers and by removing the reference to an ability to reduce costs;
- add guidance and illustrative examples to help entities assess whether a substantive process has been acquired;
- remove the assessment of whether market participants are capable of replacing any missing inputs or processes and continuing to produce outputs; and
- add an optional concentration test that permits a simplified assessment of whether an acquired set of activities and assets is not a business.

There was no accounting impact to the consolidated financial statements on adoption of this standard.

The Company will adopt the following revised accounting standard effective January 1, 2021, with no accounting impact to the consolidated financial statements for the year ended December 31, 2020.

IBOR Reform - phase 2 amendments

In August 2020, the IASB published Phase 2 of its amendments to IFRS 9, IFRS 7 and IFRS 16 to address issues that impact financial reporting at the time of IBOR replacement with alternative rates. The amendments provide a practical expedient to ease the potential burden of accounting or changes in contractual cash flows, provide relief from specific hedge accounting requirements, and add disclosure requirements, at the time of IBOR replacement. The amendments are effective for annual reporting periods beginning on or after January 1, 2021, with early adoption permitted. The Company is currently evaluating the impact of these amendments on its consolidated financial statements.

4. CRITICAL ACCOUNTING JUDGEMENTS, ESTIMATES AND ASSUMPTIONS

Preparation of our consolidated financial statements in conformity with IFRS requires Management to make judgments, estimates and assumptions that can affect reported amounts of assets, liabilities, revenues and expenses and the accompanying disclosures. Estimates and assumptions are continuously evaluated and are based on Management's historical experience and on other assumptions we believe to be reasonable under the circumstances. However, uncertainty about these judgments, estimates and assumptions could result in outcomes that require a material adjustment to the carrying amount of assets or liabilities affected in future periods.

Deferred revenue

Significant judgment is required in determining the appropriate accounting for the Streaming Agreement that has been entered into. Management has determined that the Company assumes significant business risk associated with the timing and amount of ounces of gold ounces being delivered. As such, the deposits received have been recorded as deferred revenue liabilities in the consolidated balance sheet. The amount of gold ounces expected to be delivered can increase or decrease from previous estimates.

The amount by which the deferred revenue balance is reduced and recognized into revenue is based on a rate per ounce of gold delivered under the Streaming Agreement. This rate per ounce of gold delivered relating to the payments received by the Company is based on the remaining deferred revenue balance divided by the ounces that are expected to be delivered over the term of the Streaming Agreement.

As the Company's Streaming Agreement contains a variable component, IFRS 15 requires that the transaction price be updated and re-allocated on an ongoing basis. As a result, the deferred revenue recognized per ounce of gold delivered under the Streaming Agreement will require an adjustment annually and each time there is a significant change in the underlying forecast gold production profile of a mine. Should a change in the transaction price be necessary, a cumulative catch-up adjustment to revenue will be made in the period in which the change occurs, to reflect the updated forecast production profile expected to be delivered under the Streaming Agreement.

Discontinued operations

Significant judgement was applied regarding classification of Prestea as a discontinued operation and whether the sale of Prestea represents a separate major line of business or geographical area. Management has considered that Prestea represents a separate major line of business considering Prestea is a separate segment and legal entity that has its own management team, employees, books and records and has a separate operating mine, processing plant and a different mining process than the Wassa mine and does not blend any of its gold inventories with Wassa. Further, the operating mine and processing plant are located in different geographic areas in Ghana. Accordingly, it was classified as a discontinued operation.

Mineral reserves and resources

Determining mineral reserves and resources is a complex process involving numerous variables and is based on a professional evaluation using accepted international standards for the assessment of mineral reserves. Estimation is a subjective process, and the accuracy of such estimates is a function of the quantity and quality of available data, the assumptions made and judgments used in engineering and geological interpretation. Mineral reserve estimation may vary as a result of changes in the price of gold, production costs, and with additional knowledge of the ore deposits and mining conditions.

Differences between Management's assumptions, including economic assumptions such as metal prices and market conditions, could have a material effect in the future on the Company's results and financial position, particularly a change in the rate of depreciation and amortization of the related mining assets and the recognition of deferred revenue.

Units of production depreciation

The mineral properties and a large portion of the property, plant and equipment is depreciated/amortized using the units of production method over the expected operating life of the mine based on estimated recoverable ounces of gold, which are the prime determinants of the life of a mine. Estimated recoverable ounces of gold include proven and probable mineral reserves. Changes in the estimated mineral reserves will result in changes to the depreciation charges over the remaining life of the operation. A decrease in the mineral reserves would increase depreciation and amortization expense and this could have a material impact on the operating results. The amortization base is updated on an annual basis based on the new mineral reserve and resource estimates.

Carrying value of assets and impairment charges

The Company undertakes a review of its assets at each reporting period to determine whether any indication of impairment exists. Where an indicator of impairment exists, a formal estimate of the recoverable amount of the asset or cash-generating unit ("CGU") is made, which is considered to be the higher of its FVLCD and VIU. An impairment loss is recognized when the carrying value of the asset or CGU is higher than the recoverable amount. In undertaking this review, Management is required to make significant estimates of, amongst other things, discount rates, future production and sale volumes, metal prices, reserves and resource quantities, future operating and capital costs and reclamation costs to the end of the mine's life. These estimates are subject to various risks and uncertainties, which may ultimately have an effect on the expected recoverability of the carrying values of the asset or CGU. In determining a CGU, Management has examined the smallest identifiable group of assets that generates cash inflows that are largely independent of cash inflows from other assets or group of assets.

Assessment of impairment and reverse impairment indicators

Management applies significant judgment in assessing whether indicators of impairment or reverse impairment exist for an asset or group of assets which would necessitate impairment testing. Internal and external factors such as significant changes in the use of the asset, commodity prices and production costs are used by Management in determining whether there are any indicators.

Rehabilitation provisions

Environmental reclamation and closure liabilities are recognized at the time of environmental disturbance, in amounts equal to the discounted value of expected future reclamation and closure costs. The estimated future cash costs of such liabilities are based primarily upon environmental and regulatory requirements in the jurisdictions in which we operate as well as any other constructive obligations that exist. The liability represents Management's best estimates of cash required to settle the liability, inflation, assumptions of risks associated with future cash flows and the applicable risk-free interest rates for discounting the future cash outflow. The liability is reassessed and remeasured at each reporting date.

Fair value of financial instruments, including embedded derivatives

Where the fair value of financial assets and financial liabilities recorded in the financial statements cannot be derived from active markets, their fair value is determined using valuation techniques including the discounted cash flow model. The inputs to these models are taken from observable markets where possible, but where this is not feasible, a degree of judgment is required in establishing fair values. The judgments include considerations of inputs such as liquidity risk, credit risk and volatility. Changes in assumptions about these factors could affect the reported fair value of financial instruments.

When measuring the fair value of an asset or liability, the Company uses observable market data to the greatest extent possible. Fair values are categorized into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows:

Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities

Level 2: inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices)

Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs)

Income taxes

We deal with uncertainties and judgments in the application of complex tax regulations in the various jurisdictions where our properties are located. The amount of taxes paid is dependent upon many factors, including negotiations with taxing authorities in the various jurisdictions and resolution of disputes arising from our international tax audits. We recognize potential liabilities and record tax liabilities for anticipated tax audit issues in our various tax jurisdictions based on our best estimate of additional taxes payable. We adjust these tax estimates in consideration of changing facts and circumstances, however, due to the complexity of some of these uncertainties, the ultimate resolution may result in payment that is materially different from our estimates of our tax liabilities. If our estimate of tax liability proves to be less than the ultimate assessment, an additional charge to expense would result. If the estimate of tax liabilities proves to be greater than the ultimate assessment, a tax benefit is recognized.

A deferred tax asset is recognized to the extent that it is probable that taxable earnings will be available against which deductible temporary differences can be utilized.

Expected credit losses

Significant judgement is required in determining the recoverability of deferred consideration recognized from the sale of Prestea (Note 5). Specifically, Management is required to estimate the probability of default and the loss given default, at the end of each reporting period. Management assesses the credit risk by taking into account factors that are both specific to the receivable and the general economic environment in which the relevant parties operate.

5. SALE OF PRESTEA

On July 26, 2020, the Company and its wholly-owned subsidiary, Caystar Holdings (“Caystar”), entered into a share purchase agreement (the "SPA") with Future Global Resources Limited ("FGR"), a subsidiary of Blue International Holdings (“BIH”), providing for the sale by Caystar and the purchase by FGR of all the issued and outstanding share capital of Bogoso Holdings ("Bogoso"), the holder of the 90% shares of Golden Star (Bogoso/Prestea) Limited (“GSBPL”).

Consideration

On September 30, 2020, the Company completed the sale of its 90% interest in Prestea to FGR for a deferred consideration of $34.3 million which is guaranteed by BIH and payable by FGR to Golden Star in the following tranches:

- $5 million of cash to be paid on the earlier of (i) the date at which FGR puts in place a new reclamation bond with the Environmental Protection Agency of Ghana in relation to Prestea, (ii) March 30, 2021;
- $10 million of cash and the net working capital adjusted balancing payment (as described in the SPA) which as at the date hereof amounts to $4.3 million to be paid on July 31, 2021; and
- $15 million of cash to be paid on July 31, 2023.

At the time of the sale, the $15 million consideration due on July 31, 2023 was discounted at the weighted average cost of capital of 7% (Note 13). Management has calculated the net working capital adjusted balancing payment of the deferred consideration in accordance with the terms of the SPA and is not expecting any material adjustments to the balance.

Contingent Payment

In addition to the deferred consideration, a contingent payment of up to $40 million may become payable by FGR to Golden Star conditional upon the occurrence of the milestones set out hereinafter in respect of the development of the Bogoso Sulfide Project (the "Contingent Payment"). The triggering event for the Contingent Payment is the earlier of (i) the date of FGR’s formal decision to proceed with the Bogoso Sulfide Project is made, or (ii) the date on which an aggregate of 5% of the sulfide mineral resources as stated at the end of 2019, being 1.76 million ounces of measured and indicated resources and 0.07 million ounces of inferred resource has been extracted (the earlier of (i) and (ii) being the “Decision to Proceed”). The quantum of the Contingent Payment is determined by reference to the average spot gold price for the 90-day period preceding the date of the Decision to Proceed and shall amount to:

- $20 million, if the average spot gold price is less than or equal to $1,400 per ounce ("/oz");
- $30 million, if the average spot gold price is greater than $1,400/oz but less than or equal to $1,700/oz; or
- $40 million, if the average spot gold price is greater than $1,700/oz.

The Contingent Payment is payable in two tranches:

- 50% at the time of (i) the Decision to Proceed, or (ii) declaration that 5% of the sulfide mineral resources have been extracted; and
- 50% at the time of the first anniversary of (i) achieving commercial production following the Decision to Proceed, or (ii) the declaration that 5% of the sulfide mineral resources have been extracted.

The amount recognized for the Contingent Payment on completion of the sale of Prestea is $nil as there has been no occurrence of the aforementioned milestones upon which the Contingent Payment is payable.

Modification of the Royal Gold Streaming Agreement

Concurrent with the completion of the sale of Prestea, Caystar Finance Co. ("Caystar Finance"), a wholly-owned subsidiary of Golden Star, and RGLD Gold AG, an affiliate of Royal Gold, Inc., entered into an amended and restated Streaming Agreement (the “RG Streaming Agreement”) to inter alia assign and transfer the rights and obligations to deliver Prestea gold production from Caystar Finance to Bogoso. As a result of the latter, Wassa now retains the remaining Tier One streaming obligation toward RGLD Gold AG, which relates to the delivery of gold at a rate of 10.5% of production with a cash purchase price of 20% of the spot prices until 240,000 ounces have been delivered. Following the delivery of the remaining Tier One obligation, the streaming obligation at Wassa will transition into the Tier Two structure, pursuant to which Golden Star will deliver to RGLD Gold AG 5.5% of its gold production with a cash purchase price of 30% of the spot price.

Significant judgment was required when determining the amount of the consideration to be allocated to the remaining performance obligations relating to the remaining Tier One ounces and the subsequent delivery of the Tier Two ounces from Wassa in the Streaming Agreement, with reference to the underlying life of mine plans and the corresponding derecognition of the deferred revenue balance relating to the remaining Prestea ounces. Management's estimates of life of mine plans are tied to the reserves and resources estimates which are reviewed and approved by the Company's Qualified Persons pursuant to National Instrument 43-101 ("NI 43-101").

The carrying amounts of the Prestea net liabilities as at the date of sale (September 30, 2020), including the deferred revenue relating to the Prestea portion of the previous stream agreement, and the resulting loss on sale are as follows:

Cash and cash equivalents	1,692
Accounts receivable	1,727
Inventories	12,653
Prepaids and other	1,399
Restricted cash	991
Mining interests	82,648
Total assets	101,110
Accounts payable	(39,475)
Rehabilitation provisions	(52,867)
Deferred revenue	(9,072)
Debt	(15)
Total liabilities	(101,429)
Carrying value of net liabilities	(319)
Fair value of deferred consideration (Note 13)	31,679
Gain on sale of Prestea before non-controlling interest	**31,998**
Derecognition of non-controlling interest	(68,565)
Loss on sale of Prestea	**(36,567)**

The financial results of Prestea for the period to the date of sale (September 30, 2020), as well as the restated comparative period, have been presented as discontinued operations in the consolidated statements of operations and the consolidated statements of cash flows. The components of net loss from discontinued operations and cash flow information for the years ended December 31, 2020 and December 31, 2019 were as follows:

	For the Years Ended December 31,	
	2020	2019
Revenue	35,731	60,917
Cost of sales excluding depreciation and amortization	44,637	76,217
Depreciation and amortization	5,249	11,920
Mine operating loss	(14,155)	(27,220)
Prestea general and administrative expense	1,050	1,293
Other expense, net	4,904	(322)
Impairment charges	—	56,762
Loss on sale of Prestea	36,567	—
Loss before finance and tax	(56,676)	(84,953)
Finance (income)/expense, net	(242)	3,009
Net loss from discontinued operations	(56,434)	(87,962)
Net income/(loss) and comprehensive loss from discontinued operations attributable to non-controlling interest	34,224	(15,211)
Net loss and comprehensive loss from discontinued operations attributable to Golden Star shareholders	(90,658)	(72,751)

In 2019, Management observed a decrease in the Prestea mine's cash flow reflecting adjustments to key mine planning, cost and working capital assumptions following the conclusion of the independent review of the underground operations at Prestea which resulted in a trigger for an impairment test.

The recoverable amount of the Prestea CGU of $nil was determined based on a discounted cash flow analysis of an indicative life of mine model. This life of mine model is management's best estimate of the recoverable amount of Prestea's assets at December 31, 2019.

The impairment test concluded that the recoverable amount of the Prestea CGU using a value in use model was lower than its carrying value as at December 31, 2019. This resulted in an impairment charge of $56.8 million to the consolidated statement of operations and a reduction in the carrying value of Prestea's assets.

The key assumptions used in determining the recoverable amount of the Prestea CGU included a long term gold price of $1,400 per ounce, discount rate of 7% and life of mine of seven years.

Included in Other expenses for the year ended December 31, 2020 are transition-related expenses and transaction-related costs pertaining to the sale of Prestea of $3.3 million.

	For the Years Ended December 31,	
	2020	2019
Net cash used in operating activities	(23,915)	(27,280)
Net cash used in investing activities	(7,475)	(10,923)
Net cash used in financing activities	(20)	(25)
Net cash used by discontinued operations	(31,410)	(38,228)

6. SEGMENTED INFORMATION

Segmented revenue and results

The Company has reportable segments as identified by the individual mining operations. During 2020 the Company has classified Prestea as a discontinued operation and has revised the disclosure below to not present Prestea as a segment. Segments are operations reviewed by Management. Each segment is identified based on quantitative and qualitative factors.

For the Years Ended December 31,	Wassa	Other	Corporate	Total
2020				
Revenue	272,481	—	—	272,481
Mine operating expenses	107,400	—	—	107,400
Severance charges	45	—	—	45
Operating costs from metal inventory	1,918	—	—	1,918
Inventory write-off	176	—	—	176
Royalties	14,883	—	—	14,883
Cost of sales excluding depreciation and amortization	124,422	—	—	124,422
Depreciation and amortization	23,727	—	—	23,727
Mine operating profit	124,332	—	—	124,332
Income tax expense	48,266	—	—	48,266
Net loss from continuing operations attributable to non-controlling interest	(365)	—	—	(365)
Net income/(loss) from continuing operations attributable to Golden Star	71,213	(1,153)	(31,542)	38,518
Capital expenditures	45,155	—	69	45,224
2019				
Revenue	203,820	—	—	203,820
Mine operating expenses	98,722	—	—	98,722
Severance charges	225	—	—	225
Operating costs from metal inventory	299	—	—	299
Royalties	10,877	—	—	10,877
Cost of sales excluding depreciation and amortization	110,123	—	—	110,123
Depreciation and amortization	17,134	—	—	17,134
Mine operating profit	76,563	—	—	76,563
Income tax expense	27,439	—	—	27,439
Net income from continuing operations attributable to non-controlling interest	4,671	—	—	4,671
Net income/(loss) from continuing operations attributable to Golden Star	35,357	1,190	(31,230)	5,317
Capital expenditures	60,123	—	—	60,123

Segmented Assets

The following table presents the segmented assets:

	Wassa	Prestea	Other	Corporate	Total
December 31, 2020					
Total assets	285,573	—	378	57,910	343,861
December 31, 2019					
Total assets	232,182	94,453	2,951	43,022	372,608

7. REVENUE

Revenue includes the following components:

	For the Years Ended December 31,	
	2020	2019
Revenue - Spot sales	265,593	194,626
Cash payment proceeds	6,197	4,610
Deferred revenue recognized	8,662	10,220
Variable consideration adjustment	(7,971)	(5,636)
Revenue - Streaming Agreement	6,888	9,194
Total revenue	272,481	203,820

Information about major customers

During the year ended December 31, 2020, approximately 90% (year ended December 31, 2019 - 90%) of our gold production was sold through a gold refinery located in South Africa. Except for the sales to RGLD Gold AG as part of the Streaming Agreement, the refinery arranges for the sale of gold typically on the day the gold doré arrives at the refinery and the Company receives payment for the refined gold sold two working days after the gold doré arrives at the refinery (Note 3 *Revenue Recognition* for a description of the change to the sale of gold doré effective as of March 20, 2020). Previously, the sale of gold completed on the same day the gold was shipped from the mine site.

The global gold market is competitive with numerous banks and gold refineries willing to buy refined gold and gold doré on short notice. Therefore, we believe that the loss of one of our current customers would not materially delay or disrupt revenue.

8. COST OF SALES EXCLUDING DEPRECIATION AND AMORTIZATION

Cost of sales, excluding depreciation and amortization, include the following components:

	For the Years Ended December 31,	
	2020	2019
Contractors	8,671	11,133
Electricity	9,427	10,219
Fuel	5,449	5,744
Raw materials and consumables	22,217	17,702
Salaries and benefits	37,806	33,152
Maintenance parts and consumables	14,714	12,103
General and administrative overheads	7,714	8,023
Sales-related costs	1,402	646
Mine operating expenses	107,400	98,722
Severance charges	45	225
Operating costs to metal inventory	1,918	299
Inventory write-downs (Note 14)	176	—
Royalties	14,883	10,877
	124,422	110,123

9. OTHER EXPENSE, NET

Other expense includes the following components:

	For the Years Ended December 31,	
	2020	2019
Realized loss on non-hedge derivative contracts (Note 24)	2,476	—
Corporate office relocation costs	407	7,221
Loss/(gain) on disposal of assets	40	(13)
Other expenses	1,926	4,679
	4,849	11,887

10. FINANCE EXPENSE, NET

Finance expense and income include the following components:

	For the Years Ended December 31,	
	2020	2019
Interest expense on principal debt	7,106	4,767
Interest on financing component of deferred revenue (Note 18)	3,026	4,288
Accretion of 7% Convertible Debentures discount (Note 19)	2,733	2,390
Amortization of deferred financing fees	1,020	642
Net foreign exchange loss/(gain)	439	(45)
Accretion of rehabilitation provision (Note 17)	155	191
Gain on modification of Macquarie Credit Facility (Note 19)	(2,973)	—
Variable adjustment component (Note 18)	(1,534)	(6,189)
Accretion of long-term receivables discount (Note 13)	(220)	—
Interest income	(289)	(1,429)
	9,463	4,615

On October 17, 2019, the Company closed a $60 million senior secured credit facility with Macquarie Bank Limited (“Macquarie”) (the Credit Facility") as further discussed in Note 19. The Company used the proceeds from the group-held Macquarie Credit Facility to repay site-level financing arrangements. Interest expense on principal debt held by Prestea and included in loss on discontinued operations for the year ended December 31, 2019 amounted to $2.7 million (Note 5).

11. INCOME TAXES

We recognize deferred tax assets and liabilities based on the difference between the financial reporting and tax basis of assets and liabilities using the tax rates enacted or substantively enacted when the temporary differences are expected to reverse. Deferred tax assets are fully recognized when we conclude sufficient positive evidence exists to demonstrate that it is probable that a deferred tax asset will be realized. These factors included, but are not limited to, (a) historic and expected future levels of taxable income; (b) tax plans that affect whether tax assets can be realized; and (c) the nature, amount and expected timing of reversal of taxable temporary differences. Levels of future income are affected by market price of gold, forecast future costs of production and quantities of proven and probable gold reserves. If these factors or other circumstances changes, the Company records an adjustment to the recognition of deferred tax asset to reflect the Company's latest assessment of the amount of deferred tax asset that is probable to be realized.

Our net deferred tax liabilities at December 31, 2020 and 2019 include the following components:

	December 31, 2020	December 31, 2019
Deferred tax assets		
Deductible temporary differences relating to provisions	5,608	4,672
Deferred tax liabilities		
Mine property costs	36,706	25,226
Net deferred tax liabilities	31,098	20,554

The composition of our unrecognized deferred tax assets by tax jurisdiction is summarized as follows:

	December 31, 2020	December 31, 2019
Deductible temporary differences		
Canada	4,521	7,006
Ghana	824	1,859
	5,345	8,865
Tax losses		
Canada	67,818	60,195
Other	2,396	334
	70,214	60,529
Total unrecognized deferred tax assets		
Canada	72,339	67,201
Ghana	824	1,859
Other	2,396	334
	75,559	69,394

At December 31, 2020, the Company had a tax pool of $43.7 million which has no expiry date and loss carryovers of $246.7 million which expires between 2026 and 2040.

The income tax expense includes the following components:

	For the years ended December 31, 2020	For the years ended December 31, 2019
Current tax expense		
Current tax on net earnings	36,748	6,291
Adjustments in respect to prior year	973	—
	37,721	6,291
Deferred tax expense		
Originating and reversal of temporary differences in the current year	10,545	21,148
Income tax expense	48,266	27,439

During the current year, current income taxes amounting to $25.8 million (2019 - $5.5 million) was paid and a further $13.2 million was paid subsequent to the financial year in relation to the Q4 2020 period.

A reconciliation of expected income tax on net loss before minority interest at statutory rates with the actual income tax expense is as follows:

	For the Years Ended December 31,	
	2020	2019
Income from continuing operations before tax	86,419	37,427
Statutory tax rate	26.5 %	26.5 %
Tax benefit at statutory rate	22,901	9,918
Foreign tax rates	17,238	7,252
Permanent differences	451	1,880
Change in unrecognized deferred tax assets due to exchange rates	(1,209)	(2,424)
Change in unrecognized deferred tax assets	8,885	10,813
Income tax expense	48,266	27,439

In 2019, the Ghana Revenue Authority ("GRA") issued a tax assessment to Golden Star (Wassa) Limited, relating to the 2014-2016 periods that claimed a reduction in the attributable tax losses by $29 million which following our appeal was reduced to $4 million during the course of 2020. Management still believes that the majority of the matters noted in the updated assessment are either incorrect or unsubstantiated and has filed a second appeal in an attempt to resolve these matters.

Subsequent to the financial year ended December 31 2020, the GRA issued a tax assessment to Golden Star (Wassa) Limited, relating to the 2017-2018 periods that claimed a reduction in the attributable tax losses by $4 million. Management believes that the majority of the matters in the assessment are either incorrect or unsubstantiated and has filed an appeal in an attempt to resolve these matters.

As Golden Star (Wassa) Limited utilized all its tax loss carry forwards in the year ending December 31, 2019, if the above audit assessments were to be upheld there would be a cash tax exposure of approximately $3 million.

Overall, it is the Company's current assessment that the relevant assessments and claims by the GRA are in most cases unsubstantiated and without merit. No amounts have been recorded for any potential liability associated with the above amounts and the Company intends to defend any follow up in relation to this matter should it arise. The amount of loss, if any, cannot be determined at the current time.

12. INCOME/(LOSS) PER COMMON SHARE

The following table provides a reconciliation between basic and diluted loss per common share:

	For the Years Ended December 31, 2020	For the Years Ended December 31, 2019
Net income/(loss) attributable to Golden Star shareholders used in calculating basic income/(loss) per share:		
From continuing operations	38,518	5,317
From discontinued operations (Note 5)	(90,658)	(72,751)
	(52,140)	(67,434)
Diluted income/(loss)		
Net income from continuing operations attributable to Golden Star shareholders:		
Used in calculating basic income/(loss) per share	38,518	5,317
Adjustments:		
Interest expense on 7% Convertible Debentures	3,615	—
Accretion of 7% Convertible Debentures discount (Note 10)	2,733	—
Gain on fair value of 7% Convertible Debentures embedded derivative (Note 24)	(2,965)	—
Used in calculating diluted income/(loss) per share	41,901	5,317
Net loss from discontinued operations attributable to Golden Star Shareholders	(90,658)	(72,751)
Loss attributable to Golden Star shareholders used in calculating diluted income/(loss) per share	(48,757)	(67,434)
Weighted average number of basic shares (millions)	110.3	109.0
Dilutive securities:		
Options	0.1	0.8
Deferred share units	1.3	1.2
Performance and restricted share units	0.4	1.0
UK performance share units	1.3	—
7% Convertible Debentures	11.4	—
Weighted average number of diluted shares (millions)	124.8	112.0
Basic income/(loss) per share		
From continuing operations	$ 0.35	$ 0.05
From discontinued operations	$ (0.82)	$ (0.67)
Basic loss per share attributable to Golden Star shareholders	$ (0.47)	$ (0.62)
Diluted income/(loss) per share		
From continuing operations	$ 0.34	$ 0.05
From discontinued operations	$ (0.82)	$ (0.67)
Diluted loss per share attributable to Golden Star shareholders	$ (0.47)	$ (0.62)

13. ACCOUNTS AND OTHER RECEIVABLES

The following table summarizes the components of the Company's current and long-term accounts receivables:

	As of December 31, 2020	As of December 31, 2019
Current:		
Deferred consideration for the sale of Prestea (Note 5)	19,297	—
Gold sales receivable	174	1,206
Indirect taxes	1,579	3,649
Other	2,710	1,648
	23,759	6,503
Long-term:		
Deferred consideration for the sale of Prestea (Note 5)	12,602	—
	12,602	—

As discussed in Note 5, the Company completed the sale of Prestea to FGR for a deferred consideration which is guaranteed by BIH. The current portion of the receivable from FGR includes the $5 million payable no later than March 30, 2021, the $10 million payable on July 31, 2021 and a net working capital adjusted balancing payment of approximately $4.3 million, also payable on July 31, 2021. Management has calculated the net working capital adjusted balancing payment of the deferred consideration in accordance with the terms of the SPA and is not expecting any material adjustments to the balance. During the year ended December 31, 2020, the Company recognized interest on the non-current portion of the receivable $0.2 million (Note 10).

14. INVENTORIES

Inventories include the following components, net of provisions:

	As of December 31, 2020	As of December 31, 2019
Stockpiled ore	6,706	7,578
In-process ore	1,057	2,721
Finished goods	449	394
Materials and supplies	22,388	28,167
	30,600	38,860

The cost of inventories expensed for the year ended December 31, 2020 was $109.5 million (year ended December 31, 2019 - $99.2 million).

Write-downs of materials and supplies of $0.2 million were recorded for the year ended December 31, 2020 (year ended December 31, 2019 - $nil) (Note 8).

The finished goods inventory as of December 31, 2020 of $0.4 million is carried at net realizable value.

15. MINING INTERESTS

The following table shows the breakdown of the cost, accumulated depreciation and net book value of plant and equipment, mining properties and construction in progress:

	Plant and equipment	Mining properties	Construction in progress	Total
Cost				
As of December 31, 2018	478,760	930,230	28,569	1,437,559
Additions	238	288	72,615	73,141
Right of use asset additions	2,631	—	—	2,631
Transfers	11,586	71,337	(82,923)	—
Change in rehabilitation provision estimate	—	4,830	—	4,830
Disposals and other	(621)	—	—	(621)
Balance at December 31, 2019	492,594	1,006,685	18,261	1,517,540
Additions	69	—	52,151	52,220
Right of use asset additions	599	—	—	599
Transfers	22,526	39,602	(62,128)	—
Change in rehabilitation provision estimate	—	2,215	—	2,215
Derecognized on sale of Prestea (Note 5)	(226,396)	(244,612)	(4,598)	(475,606)
Disposals and other	(301)	—	—	(301)
Balance at December 31, 2020	289,091	803,890	3,686	1,096,667
Accumulated depreciation				
As of December 31, 2018	432,799	734,120	—	1,166,919
Depreciation and amortization	10,582	19,044	—	29,626
Disposals and other	(456)	—	—	(456)
Impairment charges	7,338	49,424	—	56,762
Balance at December 31, 2019	450,263	802,588	—	1,252,851
Depreciation and amortization	11,986	17,596	—	29,582
Derecognized on sale of Prestea (Note 5)	(210,594)	(182,364)	—	(392,958)
Disposals and other	(220)	—	—	(220)
Balance at December 31, 2020	251,435	637,820	—	889,255
Carrying amount				
Balance at December 31, 2019	42,331	204,097	18,261	264,689
Balance at December 31, 2020	37,656	166,070	3,686	207,412

Additions to mining interests are presented inclusive of discontinued operations, whereas additions per the consolidated statement of cash flows and the segment information (Note 6) are presented excluding discontinued operations. The following table presents the split of additions:

	Year ended December 31, 2020	Year ended December 31, 2019
Continuing operations	45,224	60,123
Discontinued operations	6,996	13,018
	52,220	73,141

As at December 31, 2020, the right-of-use assets had net carrying amounts of $2.7 million (December 31, 2019 - $3.3 million). The total minimum lease payments are disclosed in Note 19 - Debt.

16. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

Accounts payable and accrued liabilities include the following components:

	As of December 31, 2020	As of December 31, 2019
Trade and other payables	20,026	42,232
Accrued liabilities	14,137	35,921
Payroll-related liabilities	4,917	7,780
Accrued interest payable	2,217	2,435
	41,297	88,368

See Note 28 for a reclassification of accounts payable and accrued liabilities as of December 31, 2019.

17. REHABILITATION PROVISIONS

At December 31, 2020, the estimated total undiscounted amount of future cash for rehabilitation of Wassa was estimated to be $17.8 million. A discount rate assumption of 0.3%, an inflation rate assumption of 1.7% and a risk premium of 5% were used to value the rehabilitation provisions as at December 31, 2020. This compares to a discount rate assumption of 2%, an inflation rate assumption of 2% and a risk premium of 5% used as at December 31, 2019. The Company expects the payments for reclamation to be incurred between 2021 and 2027. The changes in the carrying amount of the rehabilitation provisions are as follows:

	For the Year Ended December 31, 2020	For the Year Ended December 31, 2019
Beginning balance	68,435	66,225
Accretion of rehabilitation provisions (Note 10)	444	730
Changes in estimates	4,188	4,651
Cost of reclamation work performed	(2,632)	(3,171)
Derecognized on sale of Prestea (Note 5)	(52,867)	—
Balance at the end of the period	17,568	68,435
Current portion	2,018	5,826
Long term portion	15,550	62,609
	17,568	68,435

For the year ended December 31, 2020, the accretion of the rehabilitation provision for Prestea of $0.2 million was included in the net loss for discontinued operations (Note 5) and the accretion of the rehabilitation provision for Wassa of $0.2 million was included in finance expenses (Note 10). The cost of reclamation work performed for Prestea for the year ended December 31, 2020 of $1.4 million (2019 - $1.9 million) was included within net cash used in operating activities of discontinued operations. The remaining cost of reclamation work for the year ended December 31, 2020 of $1.2 million (2019 - $1.2 million) pertains to work performed for Wassa and is included within net cash provided by operating activities of continuing operations.

Changes in estimates for the year ended December 31, 2020 comprised $0.9 million of charges relating to Wassa (2019 - $1.6 million) and $3.3 million relating to Prestea up until the point of sale (2019 - $3.1 million). Changes in estimates of $2.0 million (2019 - ($0.2 million)) relates to discontinued refractory operations at Prestea and is included in Other expenses within net loss from discontinued operations in the consolidated statement of operations (Note 5). The remaining change in estimates of $2.2 million (2019 - $4.8 million) relating to non-refractory operations is included with mining interests (Note 15).

18. DEFERRED REVENUE

In May 2015, the Company through its subsidiary Caystar Finance Co. completed a $145 million gold purchase and sale agreement (“Streaming Agreement”) with RGLD Gold AG which provides that Golden Star will deliver 10.5% of gold production from Wassa and Prestea at a cash purchase price of 20% of spot gold until 240,000 ounces have been delivered. Thereafter, 5.5% of gold production will be delivered from Wassa and Prestea at a cash purchase price of 30% of spot gold price. As at December 31, 2020 the Company had delivered a total of 119,997 ounces of gold to RGLD Gold AG since the inception of the Streaming Agreement.

Following the sale of Prestea and as discussed in Note 5, the Streaming Agreement has been restructured to separate Prestea from the current arrangement. Wassa will now deliver the remainder of the Tier One streaming obligation and thereafter Wassa will transition into the Tier Two structure, which delivers 5.5% of gold production at a cash purchase price of 30% of spot gold price.

The changes in the carrying value of deferred revenue are as follows:

	For the Year Ended December 31, 2020	For the Year Ended December 31, 2019
Beginning balance	113,975	119,948
Deferred revenue recognized before cumulative catch-up adjustment	(9,804)	(13,334)
Variable consideration adjustment	6,437	3,073
Interest on financing component of deferred revenue (Note 10)	3,026	4,288
Derecognized on sale of Prestea (Note 5)	(9,072)	—
Balance at the end of the period	104,562	113,975
Current portion	7,646	11,191
Long term portion	96,916	102,784
Total	104,562	113,975

During the year ended December 31, 2020, the Company sold 19,816 (2019 - 21,720) ounces of gold to RGLD Gold AG. Revenue recognized on the ounces sold from Wassa production to RGLD Gold AG during the year ended December 31, 2020 consisted of $6.2 million (2019 - $4.6 million) of cash payment proceeds and $8.7 million (2019 - $10.2 million) of deferred revenue recognized (Note 7). Revenue recognized on the ounces sold from Prestea production to RGLD Gold AG during the year ended December 31, 2020 and recognized in Discontinued operations (Note 5) consisted of $0.8 million (2019 - $1.4 million) of cash payments proceeds and $1.1 million of deferred revenue recognized (2019 - $3.1 million).

As the Company's Streaming Agreement contains a variable component, each time there is a significant change in the underlying gold production of the Company's mines a cumulative catch-up adjustment to revenue is required. In 2020, the Company realized an adjustment to revenue and finance costs due to an increase in the Company's mineral resource and reserve estimates related to Wassa as reflected in the latest life of mine plans. The result of the adjustment was to reduce revenue by $8.0 million (2019 - $9.3 million of which $3.7 million has been allocated to discontinued operations), reduce finance expense by $1.5 million (2019 - $6.2 million) and increase deferred revenue by $6.4 million (2019 - $3.1 million).

19. DEBT

The following table summarizes the components of the Company's current and long-term debt:

	As of December 31, 2020	As of December 31, 2019
Current debt:		
Lease liabilities	296	987
7% Convertible Debentures	49,735	—
Macquarie Credit Facility	—	15,000
	50,031	15,987
Long-term debt:		
Lease liabilities	1,185	1,394
7% Convertible Debentures	—	47,002
Macquarie Credit Facility	54,547	42,386
	55,732	90,782

Lease liabilities

Lease liabilities as at December 31, 2020 include equipment lease agreements totaling $0.1 million (2019 - $0.6 million) and a corporate office lease of $1.4 million (2019 - $1.8 million) which has a remaining lease term of five years. Short-term lease payments for the period ended December 31, 2020 were $1.7 million (2019 - $1.4 million).

Macquarie Credit Facility

On October 17, 2019, the Company closed the $60 million senior secured Macquarie Credit Facility. The interest rate is 4.5% plus the applicable USD LIBOR rate. Certain subsidiaries of the Company are guarantors under the Macquarie Credit Facility, namely, Caystar Holdings, Wasford Holdings, Golden Star (Wassa) Limited, and Caystar Finance Co.

On October 9, 2020, the Company entered into a modified and restated credit agreement with Macquarie pursuant to which Macquarie upsized the credit facility to $70 million representing a $20 million increase on the outstanding balance of $50 million. This allowed the Company to re-draw the two $5 million principal repayments that were made in June and September 2020 and provided an additional $10 million of new capacity which will be made available in conjunction with the redemption of the 7% Convertible Debentures maturing in August 2021.

The modification of the Macquarie Credit Facility included a rescheduled amortization profile which defers quarterly repayments of $5 million per quarter to March 2022. The quarterly principal repayments will continue to December 2023 when the remaining balance of the Macquarie Credit Facility will be settled by a $25 million bullet payment. Should the Company elect to draw the additional $10 million at the time it becomes available, the next quarterly principal repayment will be brought forward to September 2021.

The modification of the Macquarie Credit Facility resulted in a gain on modification of $3.0 million and is reflected in Finance expense, net (Note 10).

The Macquarie Credit Facility includes covenant clauses requiring the Company to maintain certain key financial ratios. There were no changes to the covenant clauses as a result of the modification, refer to note 25.

7% Convertible Debentures

The 7% Convertible Debentures were issued on August 3, 2016, in the amount of $65.0 million due August 15, 2021. The Company entered into exchange and purchase agreements with two holders of its 5% Convertible Debentures due June 1, 2017 to exchange $42.0 million principal amount of the outstanding 5% Convertible Debentures for an equal principal amount of 7% Convertible Debentures (the "Exchange"), with such principal amount being included in the issuance of the $65.0 million total aggregate principal amount of the 7% Convertible Debentures. The Company did not receive any cash proceeds from the Exchange. The 7% Convertible Debentures are governed by the terms of an indenture dated August 3, 2016, by and between the Company and The Bank of New York Mellon, as indenture trustee.

The 7% Convertible Debentures are senior unsecured obligations of the Company, bear interest at a rate of 7.0% per annum, payable semi-annually on February 1 and August 1 of each year, beginning on February 1, 2017, and will mature on August 15, 2021, unless earlier repurchased, redeemed or converted. Subject to earlier redemption or purchase, the 7% Convertible Debentures are convertible at any time until the close of business on the third business day immediately preceding August 15, 2021 at the option of the holder, and may be settled, at the Company's election, in cash, common shares of the Company, or a combination of cash and common shares based on an initial conversion rate. The initial conversion rate of the 7% Convertible Debentures, subject to adjustment, is approximately 222 common shares of the Company per $1,000 principal amount of 7% Convertible Debentures being converted, which is equivalent to an initial conversion price of approximately $4.50 per common share. The initial conversion rate is subject to adjustment upon the occurrence of certain events.

Prior to August 15, 2019, the Company could not redeem the 7% Convertible Debentures except in the event of certain changes in applicable tax law. On or after August 15, 2019, the Company may redeem all or part of the outstanding 7% Convertible Debentures at the redemption price, only if the last reported sales price of the Company's common shares for 20 or more trading days in a period of 30 consecutive trading days ending on the trading day prior to the date the Company provides the notice of redemption to holders exceeds 130% of the conversion price in effect on each such trading day. The redemption price is equal to the sum of (i) 100% of the principal amount of the 7% Convertible Debentures to be redeemed, (ii) any accrued and unpaid interest to, but excluding, the redemption date, and (iii) a redemption make-whole payment, payable in cash, common shares of the Company or a combination thereof, at the Company's election, equal to the present value of the remaining scheduled payments of interest that would have been made on the 7% Convertible Debentures to be redeemed had such debentures remained outstanding from the redemption date to August 15, 2021 (excluding interest accrued to, but excluding, the redemption date, which is otherwise paid pursuant to the preceding clause (ii)).

The conversion feature referred to above is an embedded derivative. The Company selected to bifurcate the conversion feature from the host instrument, thereby separating it from the debt component. The debt component is recorded at amortized cost and the embedded derivative is accounted for at fair value. At December 31, 2020, the fair value of the embedded derivative was $2.6 million (December 31, 2019 - $5.6 million). The revaluation gain of $3.0 million is recorded in the consolidated statement of operations (year ended December 31, 2019 - revaluation loss of $1.4 million).

There were no conversions of the 7% Convertible Debentures during the years ended December 31, 2020 and 2019. As at December 31, 2020, $51.5 million principal amount of 7% Convertible Debentures remains outstanding.

The changes in the carrying amount of the 7% Convertible Debentures are as follows:

	For the Year Ended December 31, 2020	For the Year Ended December 31, 2019
Beginning balance	47,002	44,612
Accretion of 7% Convertible Debentures discount (Note 10)	2,733	2,390
Balance at the end of the period	49,735	47,002

Schedule of payments on outstanding debt as of December 31, 2020:

	Year ending December 31, 2021	Year ending December 31, 2022	Year ending December 31, 2023	Year ending December 31, 2024	Year ending December 31, 2025	Maturity
Lease liabilities						
Principal	297	303	303	323	255	2025
Interest	81	62	43	24	4	
7% Convertible Debentures						
Principal	51,498	—	—	—	—	2021
Interest	3,605	—	—	—	—	
Macquarie Credit Facility						
Principal	—	20,000	40,000	—	—	2023
Interest	2,831	2,595	1,936	—	—	
Total principal	51,795	20,303	40,303	323	255	
Total interest	6,517	2,657	1,979	24	4	
	58,312	22,960	42,282	347	259	

20. SHARE CAPITAL

	Number of Common Shares	Share Capital
Balance at December 31, 2018	**108,819,009**	**908,035**
Issued on exercise of DSUs	437,772	2,054
Issued on exercise of stock options	128,282	116
Balance at December 31, 2019	**109,385,063**	**910,205**
Issued on exercise of DSUs	135,557	176
Issued on exercise of stock options	1,711,680	7,376
Issued on settlement of PRSUs, net of tax	81,295	256
Balance at December 31, 2020	**111,313,595**	**918,013**

On October 28, 2020, the Company entered into a $50 million “at the market” sales agreement. The use of proceeds from the “at the market” sales agreement is for discretionary growth capital at Wassa, exploration, general corporate purposes and working capital. As at February 24, 2021, no shares of common stock had been sold under the "at the market" sales agreement.

21. SHARE-BASED COMPENSATION

Share-based compensation expenses recognized in the consolidated statements of operations include the following components:

	For the Years Ended December 31,	
	2020	2019
Stock options	438	1,890
Deferred share units	518	689
Share appreciation rights	35	(52)
Performance and restricted share units	394	592
UK performance share units	1,610	—
	2,995	3,119

Stock options

Under the Fourth Amended and Restated 1997 Stock Option Plan (the "Stock Option Plan"), the Company may grant stock options to employees, consultants and directors of the Company or its subsidiaries of up to 7,000,000 shares. Stock options granted are non-assignable and are exercisable for a period of 10 years or such other period as is stipulated in a stock option agreement between Golden Star and the optionee.

The exercise price of each option is not less than the closing price of our shares on the Toronto Stock Exchange on the day prior to the date of grant. Stock options typically vest over periods ranging from immediately to four years from the date of grant. Vesting periods are determined at the discretion of the Compensation Committee.

As of February 22, 2020, the Company no longer grants stock options under the existing Stock Option Plan.

The fair value of option grants is estimated at the grant dates using the Black-Scholes option-pricing model. Fair values of stock options granted during the year ended December 31, 2020 and 2019 were based on the weighted average assumptions noted in the following table:

	For the Years Ended December 31,	
	2020	2019
Expected volatility	56.69%	51.20%
Risk-free interest rate	1.41%	1.73%
Expected lives	1.1 years	5.7 years

The weighted average fair value per stock option granted during the year ended December 31, 2020 was $0.96 CAD (year ended December 31, 2019 - $2.55 CAD). As at December 31, 2020, there was $0.1 million of share-based compensation expense (December 31, 2019 - $0.5 million) relating to the Company's stock options to be recorded in future periods. For the year ended December 31, 2020, the Company recognized an expense of $0.4 million (year ended December 31, 2019 - $1.9 million).

A summary of stock option activity under the Company's Stock Option Plan during the year ended December 31, 2020 is as follows:

	Options ('000)	Weighted–average exercise price (CAD$)	Weighted–average remaining contractual life (Years)
Outstanding as of December 31, 2018	3,498	5.28	6.3
Granted	806	5.21	9.2
Exercised	(438)	3.82	7.3
Forfeited	(35)	5.49	7.7
Expired	(55)	8.50	—
Outstanding as of December 31, 2019	3,776	5.39	4.7
Granted	57	3.99	9.2
Exercised	(1,712)	3.68	6.0
Forfeited	(574)	6.03	4.0
Expired	(698)	7.94	—
Outstanding as of December 31, 2020	849	6.21	5.3
Exercisable as of December 31, 2019	3,320	5.41	4.1
Exercisable as of December 31, 2020	711	6.40	4.7

The number of stock options outstanding by strike price as of December 31, 2020 is shown in the following table:

	Options outstanding			Options exercisable	
Range of exercise price (CAD$)	Number outstanding at December 31, 2020 ('000)	Weighted-average remaining contractual life (Years)	Weighted-average exercise price (CAD$)	Number outstanding at December 31, 2020 ('000)	Weighted-average exercise price (CAD$)
3.51 to 4.50	137	3.1	4.31	131	4.32
4.51 to 5.50	432	7.7	5.14	306	5.09
5.51 to 7.50	116	4.2	6.41	110	6.46
7.51 to 10.50	121	1.8	9.36	121	9.36
10.51 to 14.15	43	0.3	13.59	43	13.59
	849	5.3	6.21	711	6.40

The number of stock options outstanding by strike price as of December 31, 2019 is shown in the following table:

	Options outstanding			Options exercisable	
	Number outstanding at December 31, 2019	Weighted-average remaining contractual life	Weighted-average exercise price	Number outstanding at December 31, 2019	Weighted-average exercise price
Range of exercise price (CAD$)	('000)	(Years)	(CAD$)	('000)	(CAD$)
1.50 to 2.50	581	3.7	1.90	581	1.90
2.51 to 3.50	373	5.7	2.82	373	2.82
3.51 to 4.50	605	3.0	4.34	588	4.35
4.51 to 5.50	1,187	7.3	5.03	782	4.96
5.51 to 7.50	482	4.6	6.46	448	6.47
7.51 to 10.50	322	2.0	9.67	322	9.67
10.51 to 17.65	226	0.6	14.92	226	14.92
	3,776	4.7	5.39	3,320	5.41

Deferred share units ("DSUs")

The Company's Deferred Share Unit Plan (the "DSU Plan") was adopted on March 9, 2011 and was amended and restated as of March 14, 2016 (the "Restatement Effective Date"). Pursuant to the DSU Plan, directors may elect to receive all or part of their retainer fee in DSUs having a market value equal to the portion of the retainer to be received in that form, subject to such limits as the Compensation Committee may impose. The Compensation Committee may also grant to any director or executive officer, in each year, DSUs having a market value not greater than the total compensation payable to such director or executive officer for that year, including any salary or bonus but excluding any director's retainer. The number of DSUs to be issued is determined by dividing the amount of the retainer or base salary determined as the basis for the award by the volume-weighted average trading price of a Common Share (as reported by the NYSE American) for the 20 trading days immediately preceding the date the DSUs are awarded. The vesting schedule of the DSUs is determined at the discretion of the Compensation Committee, but generally in the case of DSUs granted to directors in lieu of director retainers, the DSUs vest immediately on the award date. DSUs otherwise awarded to directors and officers as part of total compensation payable generally vest one-third on each of the first three anniversaries of the award date.

At the election of the Compensation Committee in its sole discretion, each DSU granted after the Restatement Effective Date may be redeemed for: (a) cash payment equal to the market value of one Common Share on the date of redemption (the "Redemption Value"), after deduction of applicable taxes and other source deductions required by applicable laws; (b) such number of common shares purchased by the Company on the public market as having an aggregate market value equal to the Redemption Value; or (c) any combination of the foregoing, so long as the aggregate redemption price has a fair market value equal to the Redemption Value. In addition to the foregoing, the Compensation Committee in its sole discretion, may redeem DSUs granted prior to the Restatement Effective Date for common shares issued by the Company from treasury.

For the year ended December 31, 2020, the DSUs that were granted vested immediately and a compensation expense of $0.5 million was recognized for these grants (year ended December 31, 2019 - $0.7 million). As of December 31, 2020, there was no unrecognized compensation expense related to DSUs granted under the Company's DSU Plan.

The DSU activity during the year ended December 31, 2020 and 2019 can be summarized as follows:

	For the Years Ended December 31,	
	2020	2019
Number of DSUs, beginning of period ('000)	1,274	1,086
Granted	214	188
Exercised	(136)	—
Forfeited	(30)	—
Number of DSUs, end of period ('000)	1,322	1,274

Share appreciation rights ("SARs")

On February 13, 2012, the Company adopted a Share Appreciation Rights ("SARs") Plan. The plan allows SARs to be issued to executives, employees and directors that vest after a period of three years. These awards are settled in cash on the exercise date equal to the Company's stock price less the strike price. Since these awards are settled in cash, the Company marks-to-market the associated expense for each award at the end of each reporting period using a Black-Scholes model. The Company accounts for these as liability awards and marks-to-market the fair value of the award until final settlement.

As of December 31, 2020, there was approximately $0.1 million of total unrecognized compensation cost related to unvested SARs (December 31, 2019 - $0.1 million). For the year ended December 31, 2020, the Company recognized $0.04 million expense related to these cash-settled awards (year ended December 31, 2019 - credit of $0.05 million).

The SARs activity during the year ended December 31, 2020 and 2019 can be summarized as follows:

	For the Years Ended December 31,	
	2020	2019
Number of SARs, beginning of period ('000)	593	674
Granted	240	285
Exercised	(225)	(203)
Forfeited	(57)	(160)
Expired	(113)	(3)
Number of SARs, end of period ('000)	438	593

2017 Performance and restricted share units ("PRSUs")

On May 4, 2017, the Company adopted a 2017 performance and restricted share unit plan (the "2017 PRSU Plan"). Pursuant to the 2017 PRSU Plan, performance share units ("2017 PSUs") and restricted share units ("2017 RSUs" and, together with the 2017 PSUs, the "Share Units") may be issued to any employee or officer of the Company or its designated affiliates. Share Units may be redeemed for: (i) common shares issued from treasury; (ii) common shares purchased in the secondary market; (iii) a cash payment; or (iv) a combination of (i), (ii) and (iii). Under the 2017 PRSU plan, the Company may grant up to a maximum of 2,200,000 common shares. As at December 31, 2020, 1,242,155 share units were available for grant.

Each PRSU represents one notional common share that is redeemed for common shares or common shares plus cash subject to the consent of the Company based on the value of a common share at the end of the three-year performance period, to the extent performance and vesting criteria have been met. The PRSUs vest at the end of a three-year performance period. The award is determined by multiplying the number of Share Units by the performance adjustment factor, which ranges from 0% to 200%. The performance adjustment factor is determined by comparing the Company's share price performance to the share price performance of a peer group of companies as listed in the 2017 PRSU Plan. As the Company has a practice of settling these awards in common shares, they are accounted for as equity awards with corresponding compensation expense recognized.

For the year ended December 31, 2020, the Company recognized $0.4 million expense (year ended December 31, 2019 - $0.6 million). The PRSU activity during the year ended December 31, 2020 and 2019 can be summarized as follows:

	For the Years Ended December 31,	
	2020	2019
Number of PRSUs, beginning of period ('000)	634	791
Granted	—	561
Settled	(95)	(324)
Forfeited	(329)	(394)
Number of PRSUs, end of period ('000)	210	634

Performance share units ("PSUs")

On January 1, 2014, the Company adopted a Performance Share Unit ("PSU") Plan. Each PSU represented one notional common share that was redeemed for cash based on the value of a common share at the end of the three-year performance period, to the extent performance and vesting criteria had been met. The PSUs vested at the end of a three-year performance period. The cash award was determined by multiplying the number of units by the performance adjustment factor, which ranged from 0% to 200%. The performance adjustment factor was determined by comparing the Company's share price performance to the share price performance of a peer group of companies as listed in the PSU Plan. As the Company was required to settle these awards in cash, they were accounted for as liability awards with corresponding compensation expense recognized.

The final PSU grant vested on December 31, 2018 and, as a result, the Company did not recognize a PSU expense in 2019 or 2020. As of December 31, 2019 there is no longer a PSU liability recognized on the consolidated balance sheet.

A summary of the PSU activity during the year ended December 31, 2020 and 2019:

	For the Years Ended December 31,	
	2020	2019
Number of PSUs, beginning of period ('000)	—	1,173
Settled	—	(1,173)
Number of PSUs, end of period ('000)	—	—

UK performance share units

In February 2020, the Company adopted a new UK Performance Share Unit ("UK PSU") Plan which was approved by the shareholders of the Company in May 2020. Pursuant to the UK PSU Plan, performance share units may be issued to any employee or officer of the Company or its designated affiliates. UK PSUs may be redeemed for: (i) common shares issued from treasury; (ii) common shares purchased in the secondary market; (iii) a cash payment; or (iv) a combination of (i), (ii) and (iii). Under the UK PSU Plan, there are 4,568,506 share units available for grant as at December 31, 2020.

Each UK PSU represents one notional common share that is redeemed for common shares or common shares plus cash subject to the consent of the Company based on the value of a common share at the end of the three-year performance period, to the extent performance and vesting criteria have been met. The UK PSUs vest at the end of a three-year performance period. The award is determined by multiplying the number of UK PSUs by the performance adjustment factor, which ranges from 0% to 200%. The performance adjustment factor is determined by comparing the Company's total shareholder return performance to the total shareholder return performance of a peer group of companies as determined by the Compensation Committee. The Company expects to settle these awards in common shares so they are accounted for as equity awards with corresponding compensation expense recognized.

For the year ended December 31, 2020, the Company recognized $1.6 million expense (year ended December 31, 2019 - $nil).

The UK PSU activity during the year ended December 31, 2020 and 2019 can be summarized as follows:

	For the Years Ended December 31,	
	2020	2019
Number of UK PSUs, beginning of period ('000)	—	—
Granted	1,555	—
Settled	—	—
Forfeited	—	—
Number of UK PSUs, end of period ('000)	1,555	—

22. RELATED PARTY TRANSACTIONS

There were no material related party transactions for the years ended December 31, 2020 and 2019 other than the items disclosed below.

Key management personnel

Key management personnel are defined as members of the Board of Directors and certain senior officers of the Company. Compensation of key management personnel is as follows:

	For the Years Ended December 31,	
	2020	2019
Salaries, wages, and other benefits	4,282	5,469
Bonuses	1,895	1,947
Share-based compensation	2,313	2,547
	8,490	9,963

23. PRINCIPAL SUBSIDIARY INFORMATION

The consolidated financial statements include the accounts of the Company and all of its subsidiaries at December 31, 2020. The principal operating subsidiary is Wassa at December 31, 2020 and until September 30, 2020, Wassa and Prestea. The Company has a 90% ownership interest in Wassa and had a 90% ownership in Prestea until September 30, 2020.

Set out below is summarized financial information for each subsidiary that has non-controlling interests that are material to the group. The amounts are disclosed on a 100% basis and disclosure for each subsidiary are based on those included in the consolidated financial statements before inter-company eliminations.

Summarized statement of financial position

	Wassa As of December 31,		Prestea As of December 31,	
	2020	2019	2020	2019
Non-controlling interest percentage	10 %	10 %	10 %	10 %
Current assets	77,835	142,603	—	14,623
Current liabilities	116,469	163,640	—	1,267,815
	(38,634)	(21,037)	—	(1,253,192)
Non-current assets	206,950	182,982	—	79,788
Non-current liabilities	46,648	37,327	—	45,871
	160,302	145,655	—	33,917
Net assets/(liabilities)	121,668	124,618	—	(1,219,275)
Non-controlling interest	19,911	20,275	—	(102,788)

Summarized income statement

	Wassa For the Years Ended		Prestea For the Periods Ended	
	December 31, 2020	December 31, 2019	September 30, 2020	December 31, 2019
Revenue	297,468	216,678	37,959	66,820
Net (loss)/income and comprehensive (loss)/income	(3,654)	46,691	342,238	(152,106)

The net loss for the year ended December 31, 2020 for Wassa includes the write-off of intercompany loan receivables from Prestea of $93.7 million agreed as part of the sale of Prestea. Concurrently, the net income for the period ended September 30, 2020 for Prestea includes the forgiveness of intercompany loans payable to Golden Star and its subsidiaries of $390.6 million agreed as part of the sale of Prestea.

Summarized cash flows

	Wassa For the Years Ended		Prestea For the Periods Ended	
	December 31, 2020	December 31, 2019	September 30, 2020	December 31, 2019
Cash flows provided by/(used in) operating activities	132,659	78,809	(17,738)	(88,883)
Cash flows used in investing activities	(47,258)	(49,622)	(5,785)	(10,685)
Cash flows (used in)/provided by financing activities	(55,516)	(26,993)	23,314	98,994

24. DERIVATIVE FINANCIAL INSTRUMENTS

The following table illustrates the classification of the Company's recurring fair value measurements for derivative financial instruments within the fair value hierarchy and their carrying values and fair values as at December 31, 2020 and December 31, 2019:

		December 31, 2020		December 31, 2019	
	Level	Carrying value	Fair value	Carrying value	Fair value
Financial liabilities					
Fair value through profit or loss					
7% Convertible Debentures embedded derivative (Note 19)	3	2,643	2,643	5,608	5,608
Non-hedge derivative contracts	2	2,382	2,382	211	211
		5,025	5,025	5,819	5,819

There were no non-recurring fair value measurements of derivative financial instruments as at December 31, 2020.

The three levels of the fair value hierarchy are:

Level 1 - Unadjusted quoted prices in active markets for identical assets or liabilities;
Level 2 - Inputs other than quoted prices that are observable for the asset or liability either directly or indirectly; and
Level 3 - Inputs that are not based on observable market data.

The following table provides a reconciliation of derivative liability opening and closing balances as presented on the consolidated balance sheets:

	For the Years Ended December 31,	
	2020	2019
Opening balance	5,819	4,177
(Gain)/loss on fair value of 7% Convertible Debentures embedded derivative	(2,965)	1,431
Unrealized loss on fair value of non-hedge derivative contracts	2,171	211
(Gain)/loss on fair value of derivative financial instruments	(794)	1,642
Closing balance	5,025	5,819
Current portion of derivative liability:		
7% Convertible Debentures embedded derivative	2,643	—
Non-hedge derivative contracts	669	211
	3,312	211
Long term portion of derivative liability:		
7% Convertible Debentures embedded derivative	—	5,608
Non-hedge derivative contracts	1,713	—
	1,713	5,608

The valuation techniques that are used to measure fair value are as follows:

7% Convertible Debentures embedded derivative

The debt component of the 7% Convertible Debentures is recorded at amortized cost using the effective interest rate method and the conversion feature is classified as an embedded derivative measured at fair value through profit or loss.

The embedded derivative was valued at December 31, 2020 and December 31, 2019 using a convertible note valuation model. The significant inputs used in the convertible note valuation are as follows:

	December 31, 2020	December 31, 2019
Embedded derivative		
Risk premium	5.9 %	5.3 %
Borrowing costs	7.5 %	7.5 %
Expected volatility	45.0 %	45.0 %
Remaining life (years)	0.6	1.6

If the risk premium increases by 10%, the fair value of the 7% Convertible Debentures embedded derivative would decrease and the related gain in the consolidated statements of operation would increase by $0.01 million at December 31, 2020.

If the borrowing costs increases by 10%, the fair value of the 7% Convertible Debentures embedded derivative would decrease and the related gain in the consolidated statements of operation would increase by $0.04 million at December 31, 2020.

If the expected volatility increases by 10%, the fair value of the 7% Convertible Debentures embedded derivative would increase and the related gain in the consolidated statements of operation would decrease by $0.59 million at December 31, 2020.

Non-hedge derivative contracts

The non-hedge accounted collar contracts are considered fair value through profit or loss financial instruments with fair value determined using pricing models that utilize a variety of observable inputs that are a combination of quoted prices, applicable yield curves and credit spreads.

During the year ended December 31, 2019, the Company entered into costless collars consisting of puts and calls, on 50,000 ounces of gold with a floor price of $1,400 per ounce and a ceiling price of $1,750 per ounce, with maturity dates ranging from October 2019 to September 2020. In February 2020, the Company entered into additional costless collars at a rate of 4,200 ounces per month for the period October 2020 to December 2020 consisting of puts and calls with a floor price of $1,500 per ounce and a ceiling price of $1,992 per ounce. During the year ended December 31, 2020, the Company recognized in relation to these positions realized losses of $2.5 million on call options in excess of the ceiling price of $1,750/oz (refer to Note 9).

In October 2020, the Company entered into additional costless collars consisting of puts and calls on 87,500 ounces with a floor price of $1,600 per ounce and a ceiling price of $2,176 per ounce for positions expiring in 2021, and a ceiling price of $2,188 per ounce for positions expiring in 2022. The additional positions will mature at a rate of 10,937.5 ounces per quarter from

March 2021 to December 2022. During the year ended December 31, 2020, in relation to these positions, the Company recognized an unrealized loss of $2.2 million.

Contingent consideration

The fair value of the contingent consideration on completion of the sale of Prestea and as at December 31, 2020 is $nil.

25. FINANCIAL RISK MANAGEMENT

Liquidity risk

Liquidity risk is the risk that the Company will encounter difficulty in meeting obligations associated with financial liabilities that are settled by delivering cash or another financial asset. We manage the liquidity risk inherent in these financial obligations by preparing monthly financial summaries, monthly and quarterly forecasts and annual long-term budgets which forecast cash needs and expected cash availability to meet future obligations. Typically, these obligations are met by cash flows from operations and from cash on hand. Scheduling of capital spending and acquisitions of financial resources may also be employed, as needed and as available, to meet the cash demands of our obligations.

Our ability to repay or refinance our future obligations depends on a number of factors, some of which may be beyond our control. Factors that influence our ability to meet these obligations include general global economic conditions, credit and capital market conditions, results of operations, mineral reserves and resources and the price of gold.

The Company's treasury policy specifies that cash is to be held in banks with a rating of A or higher by Moody's Investors Service or Standard & Poor's Financial Services LLC. In addition, the Company's investment policy allows investment of surplus funds in permitted investments consisting of US treasury bills, notes and bonds, government sponsored agency debt obligations, corporate debt or municipal securities with credit rating of at least AA. All investments must have a maximum term to maturity of one year.

Macquarie Credit Facility Financial Covenants

The Macquarie Credit Facility includes covenant clauses requiring the Company to maintain certain key financial ratios. The Company must maintain a Debt Service Coverage Ratio of greater than 1.20:1, tested quarterly on a rolling four-quarter basis as at the end of each of the fiscal quarters beginning with the fiscal quarter ended June 30, 2020; maintain a ratio of Net Debt to EBITDA of less than 3.00:1, tested quarterly on a rolling four-quarter basis as at the end of each of the fiscal quarters; demonstrate, on the basis of the consolidated financial statements and annual consolidated corporate budget, that from December 31, 2020 and for each fiscal quarter thereafter, the Convertible Debentures can be repaid in full in cash by the maturity in August 2021 while maintaining (after giving effect to such repayment in cash) a positive cash position (excluding restricted cash) of $25 million; and ensure that at all times the sum of aggregate indebtedness does not exceed $135 million.

The following table shows our contractual obligations as at December 31, 2020:

	Payment due by period				
(Stated in thousands of U.S dollars)	Less than 1 Year	1 to 3 years	4 to 5 years	More than 5 Years	Total
Accounts payable and accrued liabilities	41,297	—	—	—	41,297
Debt[1]	51,498	60,000	—	—	111,498
Lease liabilities	297	606	578	—	1,481
Interest on debt and lease liabilities	6,517	4,636	28	—	11,181
Current income tax liabilities	12,774	—	—	—	12,774
Purchase obligations	10,109	—	—	—	10,109
Rehabilitation provisions[2]	2,024	10,136	4,778	813	17,751
Total	124,516	75,378	5,384	813	206,091

[1] Includes the outstanding repayment amounts from the 7% Convertible Debentures maturing on August 15, 2021 and the Macquarie Credit Facility.

[2] Rehabilitation provisions indicates the expected undiscounted cash flows for each period.

As at December 31, 2020, the Company has current assets of $121.7 million compared to current liabilities of $117.1 million. As at December 31, 2020, the Company had a cash balance of $60.8 million.

The Company expects to meet its short-term financial needs through its cash on hand and cash flow from operations. The Company has an undrawn amount of $10 million on the Macquarie Credit Facility which is available in conjunction with the redemption of the Convertible Debentures maturing in August 2021. Also, the Company entered into a sales agreement relating to a $50 million “at the market” equity program of which the proceeds can be used for discretionary growth capital, exploration, general corporate purposes and working capital. As at February 24, 2021, no shares of common stock had been sold under the "at the market" sales agreement.

Capital risk

The Company manages its capital in a manner that will allow it to continue as a going concern while maximizing the return to shareholders through the optimization of the debt and equity balance.

In the management of capital, the Company includes the components of equity, long-term debt, net of cash and cash equivalents.

	As of December 31, 2020	As of December 31, 2019
Equity/(deficiency)	25,774	(32,123)
Long-term debt	55,732	90,782
	81,506	58,659
Cash and cash equivalents	(60,809)	(53,367)
	20,697	5,292

The Company manages its capital structure and adjusts it in light of changes in economic conditions and the risk characteristics of the underlying assets. In doing so, the Company may issue new shares, restructure or issue new debt and acquire or dispose of assets.

Our exposure to market risk includes, but is not limited to, the following risks: changes in interest rates on our debt, changes in foreign currency exchange rates and commodity price fluctuations.

Interest rate risk

Interest rate risk is the risk that the future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Macquarie Credit Facility incurs interest at 4.5% plus the applicable USD LIBOR rate per annum. Based on our current $60.0 million outstanding balance, a 100 basis point change in the USD LIBOR rate would result in a change in interest expense of $0.6 million. We have not entered into any agreements to hedge against unfavorable changes in interest rates but may do so in the future to actively manage our exposure to interest rate risk.

Foreign currency exchange rate risk

Currency risk is risk that the fair value of future cash flows will fluctuate because of changes in foreign currency exchange rates. In addition, the value of cash and cash equivalents and other financial assets and liabilities denominated in foreign currencies can fluctuate with changes in currency exchange rates.

Since our revenues are denominated in U.S. dollars and our operating unit transacts much of its business in U.S. dollars, we are typically not subject to significant impacts from currency fluctuations. However, certain purchases of labor, operating supplies and capital assets are denominated in Ghana cedis, Euros, British pounds, Australian dollars, South African rand and Canadian dollars. To accommodate these purchases, we maintain operating cash accounts in non-US dollar currencies and appreciation of these non-US dollar currencies against the U.S. dollar results in a foreign currency gain and a decrease in non-U.S. dollar currencies results in a loss. During 2020 and 2019, we had no currency-related derivatives. At December 31, 2020 and December 31, 2019, we held cash and cash equivalents denominated in foreign currency of $20.6 million and $6.1 million, respectively.

Commodity price risk

Gold is our primary product and, as a result, changes in the price of gold can significantly affect our results of operations and cash flows. Based on our gold production in the year, a $100 per ounce increase in gold price would have resulted in approximately a $15.4 million and $13.0 million increase in our sales revenues and operating cash flows, respectively. To reduce gold price volatility, we have entered into costless collars consisting of put and call options as discussed in Note 24. A $100 per ounce change to the year end gold spot price of $1,891/oz (LBMA AM fix as at December 31, 2020) would have no impact to the year end costless collar positions expiring in 2021 and 2022. During the year ended December 31, 2020, the Company recognized unrealized losses of $2.2 million and realized losses of $2.5 million on non-hedge accounted collar contracts.

Credit risk

Credit risk is the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation. Our credit risk is primarily associated with the deferred consideration for the sale of Prestea (Note 5), liquid financial assets and derivatives.

We limit exposure to credit risk on liquid financial assets by holding our cash, cash equivalents, restricted cash and deposits at highly-rated financial institutions. Management closely monitors its financial assets and does not have any significant concentration of credit risk other than the unsecured non-interest bearing receivable balances owed from FGR. The credit risk associated with the deferred consideration from the sale of Prestea has been managed through the due diligence process that considered the financial standing of the counter party and is supported by an unsecured parent guarantee. Risks associated with gold trade receivables is considered minimal as we sell gold to a credit-worthy buyer who settles promptly within two days of receipt of gold bullion.

26. SUPPLEMENTAL CASH FLOW INFORMATION

During the year ended December 31, 2020, the Company paid interest of $7.1 million (year ended December 31, 2019 - $7.1 million).

Changes in working capital and taxes paid for the years ended December 31, 2020 and 2019 are as follows:

	For the Years Ended December 31,	
	2020	2019
Increase in prepaids and other	(4,069)	(1,230)
Increase in inventories	(899)	(2,261)
Increase in accounts receivable and other receivables	(319)	(2,108)
Decrease in other liability	—	(6,410)
Increase in accounts payable and accrued liabilities	1,578	9,069
Total changes in working capital	(3,709)	(2,940)
Income tax liabilities paid	(25,759)	(5,469)
Total changes in working capital and taxes paid	(29,468)	(8,409)

Other non-cash items include the following components:

	For the Years Ended December 31,	
	2020	2019
Variable consideration adjustment (Note 18)	6,437	3,073
Interest on financing component of deferred revenue (Note 10)	3,026	4,288
Accretion of 7% Convertible Debentures discount (Note 10)	2,733	2,390
Amortization of financing fees (Note 10)	1,020	642
Inventory write-off	176	—
Accretion of rehabilitation provisions (Note 10)	155	191
Interest on lease obligations	98	22
Loss/(gain) on disposal of assets	40	(13)
Loss on fair value of marketable securities	14	9
PRSU settlement, net of tax	—	(349)
Accretion of long-term receivables discount (Note 10)	(220)	—
Gain on modification of Macquarie credit facility (Note 19)	(2,973)	—
	10,506	10,253

Reconciliation of debt arising from financing activities during the years ended December 31, 2020 and 2019:

	Lease liabilities	Ecobank Loan III	Ecobank Loan IV	Vendor Agreement	7% Convertible Debentures	Macquarie Credit Facility	Total
December 31, 2018	1,683	19,935	17,700	16,776	44,612	—	100,706
Cash flows							
Proceeds from debt agreements	—	—	—	—	—	60,000	60,000
Capitalized loan fees	—	—	—	—	—	(2,614)	(2,614)
Principal payments on debt facilities		(20,277)	(18,000)	(17,507)	—	—	(55,784)
Principal payments on lease liabilities	(1,416)	—	—	—	—	—	(1,416)
Principal payments on lease liabilities (discontinued operations)	(25)	—	—	—	—	—	(25)
Non-cash changes							
Additions to lease liabilities	2,116	—	—	—	—	—	2,116
Accretion of debt	23	342	300	731	2,390	—	3,786
December 31, 2019	2,381	—	—	—	47,002	57,386	106,769
Cash flows							
Proceeds from debt modification	—	—	—	—	—	10,000	10,000
Capitalized loan fees	—	—	—	—	—	(886)	(886)
Principal payments on debt facilities	—	—	—	—	—	(10,000)	(10,000)
Principal payments on lease liabilities	(1,694)	—	—	—	—	—	(1,694)
Principal payments on lease liabilities (discontinued operations)	(20)	—	—	—	—	—	(20)
Non-cash changes							
Gain on modification of credit facility	—	—	—	—	—	(2,973)	(2,973)
Amortization of deferred financing fees	—	—	—	—	—	1,020	1,020
Additions to lease liabilities	599	—	—	—	—	—	599
Accretion of debt	98	—	—	—	2,733	—	2,831
Foreign exchange loss	132	—	—	—	—	—	132
Derecognized on the sale of Prestea (Note 5)	(15)	—	—	—	—	—	(15)
December 31, 2020	1,481	—	—	—	49,735	54,547	105,763

27. COMMITMENTS AND CONTINGENCIES

The Company has capital and operating commitments of $0.3 million and $9.8 million respectively, all of which are expected to be incurred within the next year.

Due to the nature of the Company's operations, various legal matters from time to time arise in the ordinary course of business. The Company accrues for such items when a liability is both probable and the amount can be reasonably estimated. In the opinion of Management, these matters will not have a material effect on the consolidated financial statements of the Company.

As part of the Prestea disposal transaction, the Company has provided indemnification to FGR for legal and tax matters that have arisen prior to the date of completion of the sale of Prestea. The Company continues to hold the view that no provision is required in respect of GRA demand notices against GSBPL for an amount of $2.3 million relating to customs-related findings, and that the Company complied with all requirements.

Our commitments and contingencies include the following items:

Environmental bonding in Ghana

The Ghana Environmental Protection Agency ("EPA") requires environmental compliance bonds that provide assurance for environmental remediation at our Wassa mining operation. To meet this requirement the Company placed environmental bonds in the form of bank guarantees totaling $13.7 million with a commercial bank in Ghana. These bonds are guaranteed by Golden Star Resources Ltd. The Company also held cash deposits of $2.1 million which is recorded as restricted cash on the consolidated balance sheets.

Government of Ghana's rights to increase its participation

Under Act 703, the Government of Ghana has (i) the right to acquire a special share in our Ghanaian subsidiaries at any time for no consideration or such consideration as the Government of Ghana and such subsidiaries might agree, and (ii) a pre-emptive right to purchase all gold and other minerals produced by such subsidiaries. A special share carries no voting rights and does not participate in dividends, profits or assets. If the Government of Ghana acquires a special share, it may require the Company to redeem the special share at any time for no consideration or for consideration determined by the Company. To date, the Government of Ghana has not sought to exercise any of these rights at our properties.

Royalties

Government of Ghana

The Government of Ghana receives a royalty equal to 5% of mineral revenues earned by Wassa.

Legal proceedings

On September 15, 2020, certain employees of GSBPL initiated proceedings before the courts in Ghana, claiming that the completion of the transaction for the sale of the Bogoso shares to FGR would trigger the termination of their existing employments, entitling them to severance payments. GSBPL retained legal counsel to defend the claim given no employment contracts were severed, amended or modified upon the completion of the sale transaction on September 30, 2020 and GSBPL continues to operate with existing employment contracts and contractual terms being honored.

On September 22, 2020, GSBPL filed an application in court for an order striking out the plaintiffs' statement of claim for lack of standing or capacity and disclosing no reasonable cause of action. On February 16, 2021, the court ruled in favor of GSBPL that the plaintiffs' pleadings disclosed no reasonable cause of action and were therefore frivolous, vexatious, and scandalous. Accordingly, the plaintiffs lacked the requisite standing or capacity to institute the action. In accordance with applicable laws, the plaintiffs have three months from the date of the ruling to file an appeal.

On April 1, 2020, the Company received notification of a United States federal securities class action complaint (the "Complaint") that was filed against it on behalf of persons or entities that purchased or otherwise acquired the Company's common stock on the NYSE American exchange from February 20, 2019 through July 30, 2019 inclusive. Also named as defendants were the Company's Chief Executive Officer and Director Andrew Wray, the Company's former President and Chief Executive Officer Samuel Coetzer, the Company's former President Daniel Owiredu and the Company's former Executive Vice President and Chief Financial Officer Andre van Niekerk. The Complaint alleged that the Company published false and misleading statements to artificially inflate the price of its common shares in violation of the US Securities Exchange Act of 1934. In September 2020, the Complaint was voluntarily dismissed by the plaintiff.

The Company is involved in other legal proceedings, from time to time, arising in the ordinary course of its business. It is not expected that any material liability will arise from current legal proceedings or have a material adverse effect on the Company's future business, operations or financial condition.

28. PRIOR PERIOD COMPARATIVES

Certain balances in the consolidated balance sheet as at December 31, 2019 have been reclassified to reflect the appropriate classification of income tax and derivative liabilities due to their materiality in the current reporting period. The effect of the reclassifications is to decrease prepaids and other by $1.5 million, decrease accounts payable and accrued liabilities by $2.5 million, increase current income tax liabilities by $0.8 million and increase current portion of derivative liabilities by $0.2 million as at December 31, 2019. The reclassifications have no impact to the consolidated statement of operations and comprehensive loss, consolidated statement of cash flows and consolidated statement of changes in equity for the year ended December 31, 2019.

Effective January 1, 2020, share-based compensation is excluded from corporate general and administrative expenses and as a result, the corporate general and administrative expenses for the year ended December 31, 2019 reduced by $3.1 million with share-based compensation of $3.1 million presented as a separate line in the consolidated statement of operations and comprehensive loss.

Exhibit 99.3

Consent of independent registered public accounting firm

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (Nos. 333-105820, 333-105821, 333-118958, 333-169047, 333-175542, 333-211926 and 333-218064) and Form F-10 (No. 333-234005) of Golden Star Resources Ltd. of our report dated February 24, 2021 relating to the consolidated financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 6-K.

/s/ PricewaterhouseCoopers LLP

Chartered Professional Accountants, Licensed Public Accountants

Toronto, Ontario
February 24, 2021